

Supply, Installation and Training of an Emergency
Response Center Solution

Grant No: ***TF-B5236***

RFB No: ***GZ-MTIT-325743-GO-RFB***

***item-by-item commentary on the
Purchaser's Technical Requirements***

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1 Introduction

This document constitutes part of the answer to the tender *“Supply, Installation and Training of an Emergency Response Center Solution”* (Grant No.: TF-B5236, RFB No: GZ-MTIT-325743-GO-RFB).

This document corresponds to the requirement expressed on chapter Section 2 – Instructions to Bidders – 16.2 C an item-by-item commentary on the Purchaser’s Technical Requirements, demonstrating the substantial responsiveness of the Information System offered to those requirements. For elaborating this document the Sample Bidding Forms on Section IV – Technical Responsiveness Checklist (Format) on page 118 has been used.

The table of contents structure corresponds to the Section VII – Requirements of the information System. In this way it will be easier for the reader to map requirements and demonstration of responsiveness.

2 Acronym

ACD	Automatic Call Distribution	MoI	Ministry of Interior
AAA	Authentication, Authorization, Accounting	MMOA	Monitoring, Maintenance, Operation, Administration
AED	Automatic External Defibrillator	MOTS	Modified off-the-Shelf
AML	Advanced Mobile Location	MSTP	Multiple Spanning Tree Protocol
API	Application programming interface	MTBF	Mean Time Before Failure
AVL	Automatic Vehicle Location	NAT	Network Address Translation
BI	Business Intelligence	NAS	Network Attached Storage
BCF	Border Control Functions	NGE	Next-Generation Encryption
BCP	Business Continuity Plan	NGIPS	Next-Generation Intrusion Prevention System
BC	Border Control	NENA	Nat. Emergency Number Association
BoQ	Bill of Quantities	NG	Next Generation
BTU	British Thermal Units	NFV	Network Function Virtualization
C&C	Command and Control	NMS	Network Management System
CAP	Common Alerting Protocol	NTLM	New Technology LAN manager
CCTV	Closed Circuit TV	NTP	Network Time Protocol
CDR	Call-Detail Records	O/M/A	Operations, Maintenance, Administration
CLI	Calling Line Identification	OSPF	Octal Small Formfactor Pluggable (module)
CN	Comfort Noise	QD	Quick Disconnect
COP	Common Operational Picture	QoS	Quality of Service
COTS	Commercial Off-the-Shelf	P(A)BX	Private (Automatic) Branch Exchange
CPU	Central Processor Unit	PBR	Policy-Based Routing
CR	Change Request	PCM	Pulse code modulation
CRM	Customer Relation Management	PEI	Peripheral Equipment Interface

CSD	Conceptual System Design	PIM SM	Protocol-Independent Multicast Sparse Mode
CTI	Computer Telephony Integration	PIM SSM	Protocol Independent Multicast Source Specific Multicast
DBMS	Database Management System	PIDF	Presence Information Data Format
DC	Data Center	PIDF-LO	Presence Information Data Format Location Object
DHCP	Dynamic Host Configuration Protocol	PoE	Powering over Ethernet
DMVPN	Dynamic Multipoint VPN	POI	Point of Interest
DNS	Dynamic Name Server	PSO	Public Safety Organization
DRC	Disaster Recovery Centre	PSAP	Public Safety Answering Point
DRP	Disaster Recovery Plan	PSTN	Public Switched Telephone Network
DSCP	differentiated services code point	RAID	Redundant Array of Independent Disks
DSD	Detailed System Design	RBAC	Role Based Access Control
DSP	Digital Signal Processor	RFC	Request for Comments
DTMF	Dual-tone multi-frequency signaling	RR	Repair Requests
ELS	Emergency Location Services /google	RTP	Real-time Transport Protocol
EECC	European Electronic Communications Code	RTCP	Real Time Transport Control Protocol
EENA	European Emergency Number Ass.	RTT	Round-Trip Time
EMC		SAN	Storage area network
ERC	Emergency Response Centre	SAS	Software as a Service
ESInet	Emergency Services IP Network	SATA	Serial Advanced Technology Attachment
ETSI	European Telecommunications Standards Institute	SBC	Session Border Control
EU	European Union	SC	Special Conditions
FO	Fiber Optic	SDP	Session Description Protocol
FW	Firewall	SIP	Session Initiation Protocol
GDPR	General Data Protection Act	SFP	Small Form-factor Pluggable (module)
GIS	Geographical Information system	SFTP	SSH File Transfer Protocol
GPS	Global Positioning System	SLA	Service Level agreement
GSM	Groupe Speciale Mobile (3GPP)	SMPP	Short Message Peer-to-Peer
GUI	Graphical User Interface	SMS	Short Message Service
HA	High Availability	SMTP	Simple Mail Transfer Protocol
HELD	Http Enabled Location Delivery	SNMP	Simple Network Management Protocol
HLD	High Level Design	SOP	Standard Operating Procedure
HVAC	Heating, ventilation, air-conditioning	SPoC	Single Point of Contact
HTTP	Hyper Text Transfer Protocol	S RTP	Secure Real-time Transport Protocol
HW	Hardware	SSD	Solid State Drive
HQ	Headquarter	SSH	Secure Shell
IETF	Internet Engineering Task Force	STP	Shielded twisted pair

IGMP	Internet Group Management Protocol	TCP	Transmission Control Protocol
IPS	In-Plane Switching	TCL	Tool Command Language
ISP	Internet Service Provider	TDMA	Time-division multiple access
IS-IS	System-to-Intermediate System	TK	Telecommunications
ITC	Information and Telecommunication	TLS	Transport Layer Security
ITU	International Telecommunications Union	TS	Technical Specification
IVR	Interactive Voice Response	UDP	User Datagram Protocol
KPI	Key Performance Indicator	UPS	Uninterrupted power supply system
LAN	Local Area Network	URI	Uniform Resource Identifier
LACP	Link Aggregation Control Protocol	VESA	Video Electronics Standards Association
LDAP	Lightweight Directory Access Protocol	VoIP	Voice over Internet Protocol
LIS	Location Information Server	VLAN	Virtual -LAN
MAC	media access control	VPN	Virtual Private Network
MAP	Mobile Application Part	WAN	Wide Area Network
		WSDL	Web Service Description Language
		XML	Extensible Markup Language

3 Functional, Architectural and Performance Requirements

3.1 Legal and Regulatory Requirements to be met by the implementer of the Information System

The solution will adhere and comply with the mentioned laws and regulations mentioned in the RFB-PART-2-Supply_Installation_and_Training_of_an_Emergency_Response_Center_Solution.pdf.

3.2 Business Function Requirements to be met by the Information System

3.2.1 High level call processes to be implemented

Tech. Requ. No. 3.2.1.1	Technical Requirement: The system must receive all emergency and non- emergency calls terminated by the providers on the NG-911 system SIP interfaces
Bidder's technical reasons supporting compliance: The system is designed to receive and process all emergency and non-emergency calls, based upon the sizing provided in this Tender document, using interfaces based on the technology described in the Tender's Annexes and in the High-level system description in this Tender document.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication Platform section	

Tech. Requ. No. 3.2.1.2	Technical Requirement: All Calls must be processed by the NG-911 Communication System
Bidder's technical reasons supporting compliance: All calls are directed automatically to the Communication system once they are accepted and processed by the BCF, located at the edge of the system architecture.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication Platform section	

Tech. Requ. No. 3.2.1.3	Technical Requirement: All calls must be processed by the Interactive Voice Response System
Bidder's technical reasons supporting compliance: The PABX platform is configured to use the Internal Voice Recorder as the customer sees most fit, for the principles of managing emergency calls.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication Platform section VoiceBeat datasheet	

Tech. Requ. No. 3.2.1.4	Technical Requirement: All calls must be processed by the Automatic Call distribution
Bidder's technical reasons supporting compliance: The Automatic Call Distribution mechanism, belonging automatically to the PABX and CTI platform, will be performed upon every incoming call	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication Platform section	

Tech. Requ. No. 3.2.1.5	Technical Requirement: All calls must be primary displayed within the individual Computer Telephony Integration (CTI) client of the individual call taker, and only secondary signaled on the associated desktop VoIP phone (as a fallback routing step).
Bidder's technical reasons supporting compliance: The CTI client application of the call taker is used as primary display of the incoming call, desktop voip phone is used as fallback.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication Platform section	

Tech. Requ. No. 3.2.1.6	Technical Requirement: The CTI must contain the calling queue of the individual client.
Bidder's technical reasons supporting compliance: The CTI client application of the call taker displays for each incoming call the queue of the individual client	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication Platform section	

Tech. Requ. No. 3.2.1.7	Technical Requirement: The CTI must have direct interaction with the Incident Creation Application.
Bidder's technical reasons supporting compliance: The CTI platform and the Incident Creation Application are deeply integrated, and the latter can directly control the former, for all the typical daily operations of call taker (Make Call, Hang up, Answer Call, Transfer Call, etc.).	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1 st Call Taking (incident creation) section	

Tech. Requ. No. 3.2.1.8	<p>Technical Requirement:</p> <p>The NG-911 Communication system must retrieve / collect / query all available call associated data at the individual databases or connected systems. The collection of this data shall be done in an asynchronous way so that the call can be processed by the corresponding client immediately, whereas additional data can be added to the call as it becomes available (in case the query of an external system lasts longer).</p>
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Bidder's technical reasons supporting compliance:

Despite the deep integration with surrounding environments, The Incident Creation Application and the Incident Management Application are completely independent from other subsystems when performing retrieve/collect/query operations towards any third-party or external platform. Call answer is performed in parallel to any query or data retrieval from any number of external or internal databases, and one operation does not block the other.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, The Phonebook section

Tech. Requ. No. 3.2.1.9	<p>Technical Requirement:</p> <p>The NG-911 Communication System must forward / display all call associated data at the individual sections of the incident creation application</p>
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Bidder's technical reasons supporting compliance:

The Incident Creation Application is designed to include all data associated with a call, both the geographical data and the other metadata related to it. The position of these data can be customised according to the Customer's needs.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st Call Taking (incident creation) section

Tech. Requ. No. 3.2.1.10	<p>Technical Requirement:</p> <p>The NG-911 Communication System respective the Incident Creation Application has to ensure that geographical data in connection with the call is being displayed by the Geographical Information system (GIS).</p>
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Bidder's technical reasons supporting compliance:

The GIS platform is part of the overall Incident Management and Incident Creation software application. All data is passed directly between them. Any geolocation information retrieved by the Incident Creation Application is automatically shared with the GIS application and displayed to all concerned and authorized users.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st Call Taking (incident creation) and GIS and map viewer sections

Tech. Requ. No. 3.2.1.11	Technical Requirement: All calls of the NG-911 Communication System must be recorded (voice as well as related meta- data).
Bidder's technical reasons supporting compliance: We confirm that all calls involving NG-911 Communication System will be recorded; this applies to both incoming and outgoing calls. Basing on configurations of the voice recorder component and depending on the Customer's needs, it will be possible to switch off recording of non-emergency calls (e.g. incoming calls directed to non-emergency numbers). Each call recording file will be stored with its relevant metadata, e.g. unique incident ID, unique call taker ID, timestamp of the call, calling number, called number, ...	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform section VoiceBeat datasheet	

Tech. Requ. No. 3.2.1.12	Technical Requirement: All calls must be processed in the incident creation system by the call-takers.
Bidder's technical reasons supporting compliance: By default, the Incident Creation Application will give a feedback to the Call Taker for any incoming element, being it a call, an SMS, an eCall, a fire alarm or another input associated with an emergency	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1 st Call Taking (incident creation) section	

Tech. Requ. No. 3.2.1.13	Technical Requirement: The incident creation application must provide support functionality to the Call-taker. This shall include at least a support in the verification of the location, the type of incident and the responsible PSO for that incident.
Bidder's technical reasons supporting compliance: The Incident Creation Application is designed to support the typical workflow of 112 Call Takers: manage incoming calls; precisely locate the call with the help of several geolocation sources; qualify the reason of the call; define as combination of geolocation and reason, the most appropriate PSO for that incident. In addition the Call Taker can also be made available with a predefined list of to-do tasks that depends on the specific nature and/or location of the incident, in order to instruct him/her on how to proceed to the response as effectively as possible. The user interface clearly defines these operations, whose look & feel can be customized by the Client	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1 st Call Taking (incident creation) section	

Tech. Requ. No. 3.2.1.14	Technical Requirement: The incident creation application must provide together with the NG-
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	911 Communication system the function of engaging a second person (specialist) in the ongoing call. (supervisor-assist)
Bidder's technical reasons supporting compliance: This function is implemented through the use of the call conference or barge-in function. The functionality about second person engagement will be present directly in the Incident Creation Application interface, and will be integrated with the CTI interface of the NG-911 communication platform.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Incident creation section	

Tech. Requ. No. 3.2.1.15	Technical Requirement: A second person (specialist) must be able to intervene in an NG-911 Call actively (barge-in). For this, the incident creation system must ensure all collected data is available at all clients filtered by location, type of call /incident and user rights.
Bidder's technical reasons supporting compliance: The Incident Creation Application features a series of filters based on virtually any parameter on the screen, including location, type of incident and many more, customizable by the Customer. All parameters are visible based on user's rights. Location filters are applied when a call taker determines the location of the event. If the event is passed onto a PSO, and the location changes, the new PSO selected to manage the incident, will see the same data as the previous one, inheriting the responsibility.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Incident creation section	

Tech. Requ. No. 3.2.1.16	Technical Requirement: When the incident creation is concluded or the collected data is sufficient for the definition of the responsible PSO the incident must be ready for coordination displayed at the respective incident management clients.
Bidder's technical reasons supporting compliance: The software is multi-tenant. It means that multiple tenants (or agencies) can use the same platform, with a shared database, by keeping a level of data segregation and privacy, based on user roles, user profiles and user rights to access such data. This architecture does not need data transfer between agencies and simply requires adaptation of rights on the database, once an Incident Card is created and passed to a PSO. The delays are reduced to zero. As soon as the minimum set of data is inserted in the incident and saved by the call-taker, this form will appear in real time at the PSO screen. "minimum set of data" is intended by default as "location & reason of the call". The Client can change this set, adding more values before committing the incident to a PSO.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1 st Call Taking (incident creation) section	

Tech. Requ. No. 3.2.1.17	Technical Requirement:
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	The incident management application has to support the coordinator in the selection of the correct PSO respective resource.
Bidder's technical reasons supporting compliance: The Incident Creation Application is designed to propose the most appropriate PSO to the Call Taker. This suggestion is configured through the application of procedures decided by the Client. Also, the results are accessible from the Administrator's user interface and can be changed with no software development or intervention from the developer	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Incident creation section	

Tech. Requ. No. 3.2.1.18	Technical Requirement: The incident management application has to provide the display of all relevant geographical assigned data of the incident but also of selectable PSO or resources on the GIS.
Bidder's technical reasons supporting compliance: Any type of geolocated data is accessible from the GIS. They are identified as "static data" (hospitals, fire station, pharmacies, etc.) and "dynamic data" (incident location, police car location, ambulance location, etc.).	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, GIS and map viewer section	

Tech. Requ. No. 3.2.1.19	Technical Requirement: Other supplementary objects in relation to the individual incident (based on type) shall be displayed on the GIS (e.g. CCTV, AED, First Aid posts, equipment deposits, first responders, etc.). These elements as well as the different types shall be configurable by an administrator of the system in order to optimize/enhance the system by his own during live operations.
Bidder's technical reasons supporting compliance: Any POI (Point of Interest) can be added to the Incident Management Software database to be displayed on the map. The definition of type of object to be displayed is performed by the configuration interface. Some objects defined in the database (such as hydrants, AED etc. can be included in the dispatching proposal, extending the capabilities of this software compared to others, which are usually limited to the selection of vehicles from a list.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, GIS and map viewer section	

Tech. Requ. No. 3.2.1.20	Technical Requirement: The coordinator must be able to assign the needed PSO respective resources to the incident.
Bidder's technical reasons supporting compliance:	

The Incident Management Application shows a list of available resources, using the emergency procedures created by the Customer through the configuration interface. The Coordinator can then select the resources to be assigned to the incident, from the list provided by the Application, that match the currently engaged PSO.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st dispatching (incident management) section

Tech. Requ. No. 3.2.1.21	<p>Technical Requirement:</p> <p>The incident management system must initialize the defined communication channels (e.g. email, SMS, SDS, voice via PEI, voice via outbound call,) to ensure the assigned PSO, respective resource is being informed on the new assigned incident.</p>
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Bidder's technical reasons supporting compliance:

All communication channels connected to the Incident Management Application can be activated simultaneously to inform the proper PSO of a new incident.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st dispatching (incident management) section

Tech. Requ. No. 3.2.1.22	<p>Technical Requirement:</p> <p>The incident management system must manage the individual status of the incident. This status must also be able to be changed by 3rd party systems (e.g. Field Record Management applications, Radio Status, GIS settings)</p>
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Bidder's technical reasons supporting compliance:

The status of the incident can be changed by the Application, as well as from an external source (e.g. radio status transmitted by a TETRA terminal, or e.g. by email by configuration interface) The Client can also configure the sequence of incident status progression, for each type of emergency service (Fire, Ambulance, Police, etc.).

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st dispatching (incident management) section

Tech. Requ. No. 3.2.1.23	<p>Technical Requirement:</p> <p>For all calls a detailed Statistic function must be available (Call Detail Records). This shall include at a minimum (but not be limited to) statistics by</p> <ul style="list-style-type: none"> o Called number o Date/Time o Combination of those two criteria <p>The Statistics function shall include an open and documented interface + data Modell in order to setup individual reports based on the collected data.</p>
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Bidder's technical reasons supporting compliance:

All Call Detail Record (CDR) are saved in the PABX database/storage area. A specific web interface is available for consultation. A documented REST WebApi interface is available for integration.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform statistics section

Tech. Requ. No. 3.2.1.24

Technical Requirement:

The individual system status (e.g. load, waiting time, logged in Agents (free/busy/pause) of the NG-911 Communication system has to be displayed in a simple graphical web form, filtered by attribute (e.g. Location, called number, timeframe,) to inform the personnel and supervisors.

Bidder's technical reasons supporting compliance:

The proposed PABX web based client user interface display both for the whole communication system and for each single queues, the following information

- calls received
- calls handled
- logged in agents
- available agents
- paused agents

and for each call currently handled

- caller and called phone number, origin (trunk) duration, status (paused etc...)

The user interface can be customized in the detail specification phase.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform/Phone system section

3.2.2 NG-911 Communications Function – Telephony Exchange Service

Tech. Requ. No. 3.2.2.1

Technical Requirement:

The system shall support basic VoIP PBX functions, minimum (but not limited to) to the following functions:

Bidder's technical reasons supporting compliance:

The system will support basic VoIP PBX functions, minimum (but not limited to) to the following functions described in the following requirements.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications Platform

Tech. Requ. No. 3.2.2.1.1	Technical Requirement: <ul style="list-style-type: none"> Termination of SIP Trunks, provided by the fixed and mobile telco-providers
Bidder's technical reasons supporting compliance: The proposed PABX/Unified communication system support termination of multiple SIP trunks both for incoming and outgoing calls	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications Platform	

Tech. Requ. No. 3.2.2.1.2	Technical Requirement: <ul style="list-style-type: none"> Support of incoming as well as outgoing calls via the provided SIP-trunks
Bidder's technical reasons supporting compliance: The proposed PABX/Unified communication system support termination of multiple SIP trunks both for incoming and outgoing calls	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications Platform	

Tech. Requ. No. 3.2.2.1.3	Technical Requirement: <ul style="list-style-type: none"> Internal trunking capabilities in order to allow automatic switching to another telco- SIP-trunk if not available of capacity reached without any user/administrator interaction
Bidder's technical reasons supporting compliance: The proposed PABX/Unified communication system support setting capacity on single trunks and failover trunks when capacity is reached	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications Platform/Call routing architecture	

Tech. Requ.No. 3.2.2.1.4	Technical Requirement: <ul style="list-style-type: none"> Classification of calls, according to the following criteria: <ul style="list-style-type: none"> Called number Calling number (like prefix, user part, etc.)
Bidder's technical reasons supporting compliance: The proposed PABX/Unified communication system allow matching of calls and decision on routing (trunks, ACD, queues, forwarding, etc...) based on both caller and calling number with matching based on regular expressions that include prefix, user part, etc...	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, High level emergency management process/Communications	

Tech. Requ. No. 3.2.2.1.5	Technical Requirement: <ul style="list-style-type: none"> • Configuration and definition of routing targets according to the dialed number. These targets shall be: <ul style="list-style-type: none"> - Users - Roles or skills - Working Positions - IVR-Targets / ACD Targets (in order to start an emergency procedure like announcements, etc.)
Bidder's technical reasons supporting compliance: The proposed PABX/Unified communication system allow matching of calls and decision on routing (trunks, ACD, queues, forwarding, etc...) based on both caller and calling number with matching based on regular expressions and includes prefix, user part etc... Users and agent can be assigned specific roles and skills and target and call distribution can be configured based on these	
Bidder's technical reasons supporting compliance: Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, High level emergency management process/Communications	

Tech. Requ. No. 3.2.2.1.6	Technical Requirement: <ul style="list-style-type: none"> • The assignment of number plans to above described targets shall be configurable by a system administrator and applied as the configuration is set active for the next new call (started routing process).
Bidder's technical reasons supporting compliance: The configuration of the proposed PABX/Unified is accessible via a secured web interface. Web administrator role is capable of modifying the number plans and the configuration can be applied at run time without interruption / delay of operations.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Configuration Interface/IP PBX configuration environment	

Tech. Requ. No. 3.2.2.1.7	Technical Requirement: <ul style="list-style-type: none"> • The IP PABX system shall at least (but not limited to) support the following agent functions (also used for CTI-clients) <ul style="list-style-type: none"> - Call queues (display all routed / pending calls to the assigned client) - Accept calls - Terminate calls (also if the external party ends the call) - Transfer calls <ul style="list-style-type: none"> o Supervised transfers (talk to the transfer target upfront without being heard by the caller prior call transfer) o Unsupervised transfer (directly transferring the call without any further interaction with the transfer target) - Hold Calls - Conferences (see further down) - Toggle calls (switch from one call to another one, by
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	automatically putting the currently active call on hold)
Bidder's technical reasons supporting compliance: The proposed PABX/Unified Calling Solution natively support: <ul style="list-style-type: none"> • Queues • Conference bridge • Ring groups • Announcements • Unlimited extensions • Interactive Voice Response • Call transfer (attended and unattended) • Call waiting and toggle calls • Three-way calling support and conferences 	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, High level emergency management process/Communications 26a Emergency Response Software Solution, Communications Platform Voicebeat datasheet	

Tech. Requ. No. 3.2.2.2	Technical Requirement: The necessary amount of internal or external extensions for dial in or routing targets shall not be limited by any number and included within the offered licenses.
Bidder's technical reasons supporting compliance: The proposed PABX/Unified Calling Solution natively support unlimited extensions included in the offered licenses.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications Platform Voicebeat datasheet	

Tech. Requ. No. 3.2.2.3	Technical Requirement: The IP PBX system shall support the use of an CTI application and log into the PBX core to control the different actions of the core.
Bidder's technical reasons supporting compliance: The PABX/Unified Calling solution provides means to access the PBX core functionality by an external CTI application that can control the different actions of the PBX core. Access to the PBX core is via a specific API accessible via TCP/IP	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications Platform 26a Emergency Response Software Solution, High level emergency management process	

26a Emergency Response Software Solution, Life 1st CAD platform/ Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.2.2.4	<p>Technical Requirement:</p> <p>The IP PBX shall support standard VoIP Phones as secondary routing targets for failover mechanisms if the CTI application is not available anymore.</p>
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Bidder's technical reasons supporting compliance:

The PABX supports multiple routing targets and will be configured in order to provide failover mechanism when the CTI application is not available.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications Platform/The phone system

Tech. Requ. No. 3.2.2.5	<p>Technical Requirement:</p> <p>If the CTI or ACD Function is not available / reachable the IP PBX shall route the calls according to configurable routing roles, so that calls can still be processed and handled by the same staff (but potentially without sophisticated voice announcement or routing capabilities like time/skill-based routing).</p>
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Bidder's technical reasons supporting compliance:

The PABX can be configured to support different routes according to specific business rules, such rules include availability of the CTI application.

A specific 'degraded' route can be configured that will direct calls to a specific set or sets of phones with minimal routing/integration capabilities.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications Platform/The phone system

Tech. Requ. No. 3.2.2.6	<p>Technical Requirement:</p> <p>A "text before answer" functionality enables the playback of text messages for waiting calls. Principally, all callers receive an announcement, so that they know that they have dialed correctly and are taken care of. It shall be configurable if the call shall be routed after the text was played ("intro announcement") or if routing shall be already starting during the text announcement is played to the caller ("ringing announcement")</p>
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Bidder's technical reasons supporting compliance:

The proposed PABX/Unified Calling Solution natively support announcements to be played on waiting calls. Announcements are configurable via the admin interface and can be both played entirely (intro announces) or while the call is routed (on hold/ringing announcements)

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, High level emergency management process/Communications

26a Emergency Response Software Solution, Communications Platform/The phone system

Tech. Requ. No. 3.2.2.7	<p>Technical Requirement:</p> <p>The announcement shall be able to be changed with immediate effect. The predefined standard announcement texts that can only be changed by the administrator must be provided. In addition, at least five freely recordable announcement texts shall be able to be recorded and activated by users.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>Announcements are configurable via the admin interface and can be created from standard WAV or MP3 audio files. There is no logical limit to the number of announcements in the system (except by memory/storage limits).</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>26a Emergency Response Software Solution, High level emergency management process/Communications</p> <p>26a Emergency Response Software Solution, Communications Platform/The phone system</p> <p>26a Emergency Response Software Solution, Configuration interface/ IP PBX configuration environment</p>	

Tech. Requ. No. 3.2.2.8	<p>Technical Requirement:</p> <p>The text-before-answer functionality shall be able to be switched on and off, line-specifically (e.g. Number or for SIP).</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>Announcements are configurable via the admin interface and can be applied to any voice routing function, specifically announcements can be applied to specific route defined by a combination of regular expression on calling/called number.</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>26a Emergency Response Software Solution, High level emergency management process/Communications</p> <p>26a Emergency Response Software Solution, Communications Platform/The phone system</p> <p>26a Emergency Response Software Solution, Configuration interface/ IP PBX configuration environment</p>	

Tech. Requ. No. 3.2.2.9	<p>Technical Requirement:</p> <p>The Communication System must be provided with an own system telephone directory controlled through Role Based Access Control (RBAC) mechanisms. Names stored in the telephony directory must be shown as text on incoming calls (resolution via CLI)</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>Announcements are configurable via the admin interface and can be applied to any voice routing function, specifically announcements can be applied to specific route defined by a combination of regular expression on calling/called number.</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p>	

26a Emergency Response Software Solution, Life 1st CAD platform/The phonebook

Tech. Requ. No. 3.2.2.10	<p>Technical Requirement:</p> <p>The system telephone directory is fed through the data provisioning from different data sources (NG-911 call-taking, personal database, public telephone directories, telephone directories of the connected telephone systems, etc.) and serves above all for the purpose of being able to provide the telephone directory functionality also in the isolated operation of the NG-911 Communication System.</p>
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Bidder's technical reasons supporting compliance:

The phone directory of the platform serves as a unique point of contacts, gathered from various sources. It is fed by external sources, but does not depend on them (I.e. it works offline, locally). The phone directory is shared between Incident Management PABX, for a unique point of information. External databases, regardless of their numbers, will be all linked by the Incident Management Application, to which the PABX is always connected. The phonebook has several technological possibilities to be interconnected to external sources, including xml, json, http, REST/SOAP, etc.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform/The phonebook

Tech. Requ. No. 3.2.2.11	<p>Technical Requirement:</p> <p>There must be the function of a "blind" telephone directory, which is not visible or searchable for call-taker or operators but stored data shall be still displayed if the CLI is recognized. (Government Functions, VIPs,)</p>
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Bidder's technical reasons supporting compliance:

The phonebook and its properties can be managed from the database, deciding the visibility of each field, thanks to a series of permissions, which may be set to "not readable by anyone", still keeping the information of the caller, for real time caller recognition.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform/The phonebook

Tech. Requ. No. 3.2.2.12	<p>Technical Requirement:</p> <p>The software must have a "blacklist" of phone numbers and manage the function to refer calls to the answering machine or choose a different time interval till processing (playing a pre-recorded announcement for a given time towards the call). An administrator shall be allowed without any additional programming edit and create different time intervals.</p>
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Bidder's technical reasons supporting compliance:

Specific phone numbers can be tagged as belonging to a 'black list' group. Specific call routes can be configured via the admin interface for the handling of such number. Call routes include announcements,

specific queues, IVR, and time of day.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform/The phonebook

Tech. Requ. No. 3.2.2.13

Technical Requirement:

The NG-911 Communication System must be provided with a conference function. Conferences with up to ten parties each must be possible. Random NG-911 Communication System parties (internal, emergency operations center, connected telephone systems, mobile network, landline network, etc.) shall be able to take part in conferences.

Bidder's technical reasons supporting compliance:

The proposed PABX module contains a specific conference function. Conference are configured as specific destination number/extension, any party of the communication system can take part to a conference.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications platform

Tech. Requ. No. 3.2.2.14

Technical Requirement:

The conference module of the NG-911 Communication System must function modelled as virtual conference rooms. The virtual conference rooms must be accessible by means of dialing an extension number and secured by access codes. They must be able to be set up and configured from the supervisor or administrator workplaces.

Bidder's technical reasons supporting compliance:

The conference function can be configured from the PABX web interface by an administrator. Conference 'rooms' can be configured with or without access code.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications platform

Tech. Requ. No. 3.2.2.15

Technical Requirement:

The following functions must be offered by the conference module:

- The query of number of parties dialled in with DTMF tone (one keystroke), output as voice announcement,
- blocking of conference room by means of DTMF tone (one keystroke),
- announcement of a dial-in attempt in the case of a blocked conference room,
- attention tone to the conference when a party joins or leaves the conference,
- mute switch of individual parties by the party itself by means of a DTMF tone (one keystroke) with robust DTMF recognition,
- o robust echo compensation also in the case of background noises.

Bidder's technical reasons supporting compliance:

The proposed PABX conference module supports by default the following in conference menu, the default functionality can be changed at detailed design time but as is convers the required functions:

- 1 Mute/Un-Mute Self
- 2 Lock/Unlock Conference (Admin)
- 3 Eject last user who joined conference (Admin)
- 4 Decrease Listen Volume of Conference
- 5 Resets the caller's listening volume to the default level.
- 6 Increase Listen Volume of Conference
- 7 Play Number of users
- 8 Leave Menu
- 9 Increase Talk volume
- 0 Allows an Admin to mute/unmute all non-admin participants in the conference
- * Play menu options
- # Leave Conference Leave Conference

Announcement are played when users join or leave the conference or when an attempt to join a locked conference is made.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications platform

VoiceBeat datasheet

Tech. Requ. No. 3.2.2.16	Technical Requirement: An answering machine functionality must be provided for freely configurable extension numbers.
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Bidder's technical reasons supporting compliance:

The proposed PABX voicemail module is included and voicemail functionality can be configured via the admin web interface. Voicemail can be configured on any extension

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications platform / The phone system

VoiceBeat datasheet

Tech. Requ. No. 3.2.2.17	Technical Requirement: The answering machines must be able to be operated via telephone and through a Web client. Authorizations must be able to be provided for access. The Web client must offer the full functions, the telephone operation only as far as this can be mapped reasonable through DTMF.
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	The operator guidance must be coordinated in the detailed specification / final design.
Bidder's technical reasons supporting compliance: The voicemail module includes both a web client interface and telephone interface that can be used via DTMF	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications platform / The phone system VoiceBeat datasheet	

Tech. Requ. No. 3.2.2.18	Technical Requirement: The announcement texts must both be able to be recorded via the relevant allocated telephones as well as imported in the form of .WAV or MP3 files, whereby access must be protected by passwords.
Bidder's technical reasons supporting compliance: Announcements can be recorded via telephone or loaded via the web interface. Client web interface is protected by password.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications platform / The phone system VoiceBeat datasheet	

Tech. Requ. No. 3.2.2.19	Technical Requirement: Received messages shall be able to be delivered to an e-mail address as .WAV files or as MP3 files.
Bidder's technical reasons supporting compliance: An email address can be configured for each single voicemail mailbox. New messages will be delivered as mp3 files to the email address	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications platform / The phone system VoiceBeat datasheet	

Tech. Requ. No. 3.2.2.20	Technical Requirement: A remote inquiry functionality shall be available. Access for recording must be protected by passwords.
Bidder's technical reasons supporting compliance: Remote telephone access to voicemail is protected by a configurable individual PIN	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications platform / The phone system	

VoiceBeat datasheet

Tech. Requ. No. 3.2.2.21	Technical Requirement: At least the following functions shall be available for the users: <ul style="list-style-type: none"> - recording of announcements, - change of announcements, - copying of .MP3 files with the text announcements, - deletion of announcements.
Bidder's technical reasons supporting compliance: Announcements can be recorded, deleted and changed via both the web client interface and the telephone interface. Loading of MP3 files as announcements is supported via the web client interface	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications platform / The phone system VoiceBeat datasheet	

Tech. Requ. No. 3.2.2.22	Technical Requirement: The administrator of the client shall be able to configure the general and individual limitation of the recording time of the answering machine for the purpose of limiting the necessary memory.
Bidder's technical reasons supporting compliance: Administrator can configure the default and specific maximum recording length of recorded messages in the voicemail	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications platform / The phone system VoiceBeat datasheet	

3.2.3 NG-911 Communication Function - Computer Telephony Integration (CTI)

Tech. Requ. No. 3.2.3.1	Technical Requirement: A clear call ID must be allocated to every call by the NG-911 Communication System. The call ID must serve for clear identification of the call, so that it can be referenced to and so that the call can be associated with a case/action number of the 9-1-1 Data Collection or an NG-911 Communication System file, among other things. Calls that were merely signaled but not attended to must also receive a call ID.
Bidder's technical reasons supporting compliance: Each call in the proposed PABX is identified by a single and unique id (call_id) and is associated in the CAD module to the case/action. All calls including accepted calls receive a call_id	

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications platform / The phone system

Tech. Requ. No. 3.2.3.2

Technical Requirement:

The NG-911 Communication System must monitor independently that every region is allocated to at least one active workplace, i.e. one at which an agent is logged on, at all times. If an agent wishes to deselect a region that would no longer be allocated to an active workplace afterwards, this circumstance must be pointed out to the user by a warning message to be confirmed manually.

Bidder's technical reasons supporting compliance:

In the CTI client the agent will be able to select and deselect a region. In the case th3 agent is the last agent enabled on that region a dialog will be displayed requiring manual confirmation

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications platform / The phone system

Tech. Requ. No. 3.2.3.3

Technical Requirement:

By means of call associated data in relation to a call -beyond the Call ID- shall be determined and provided for display for external applications (e.g. the incident creation application). This data shall be able to be queried from applications or databases (if not provided via push) by the Communication System through the Communication System interface and displayed in the user software and/or in waiting lists.

Bidder's technical reasons supporting compliance:

The PABX have a dedicated plugin to communicate with external platforms and provide metadata about a call can be queried from an external application at a later time

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, High level emergency management process/ Incident creation

Tech. Requ. No. 3.2.3.4

Technical Requirement:

Metadata associated to voice calls shall be retrieved through queries to the appropriate platform (e.g. AML, telco operator provided location, , etc.) and processed accordingly. The data shall be transferred to the incident application at request and displayed.

Bidder's technical reasons supporting compliance:

The Incident Management and Creation Applications have a dedicated plugin to communicate with external platforms who provide metadata, primarily geolocation data, but not only. This data is matched with the incoming call through CLI comparison or more in general with caller Identification, when the incident is not a regular phone call.

The provided system including ESInet NG911 component, is already certified for reading SIP metadata,

according to the NG991 standard.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Automatic caller localization

Tech. Requ. No. 3.2.3.5	<p>Technical Requirement:</p> <p>The interface shall be able to process further call associated information to be defined in the detailed specification phase / final design phase. As data structure, for example, a container may be realized in a defined, human as well as machine readable format, which contains the following elements:</p> <ul style="list-style-type: none"> • call ID • general information: <ul style="list-style-type: none"> - time, date of the beginning of the call, - workplace at which it was answered, - ID related to voice documentation file - optionally link to voice documentation file, - list of other optional data elements, • CLI: <ul style="list-style-type: none"> - CLI E164 - 'calling line information', - IMEI if delivered (SIM-less calls) - SIP address, - extension, - caller name resolution (if known) • e-call: <ul style="list-style-type: none"> - as defined in the standards,
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Bidder's technical reasons supporting compliance:

The PABX have a dedicated plugin to communicate with external platforms and provide metadata – metadata about a call can be queried from an external application at a later time. Metatada information about a call includes but is not limited to:

Call ID

Start and end of call

Answering point

Sip address

Address book related information.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Business Intelligence / Communications platform statistics

Tech. Requ. No. 3.2.3.6	<p>Technical Requirement:</p> <p>The interface shall be able to process further call associated information to be defined in the detailed specification phase / final design phase. As data structure, for example, a container may be realized in XML format or similar, which contains the following elements:</p>
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	<ul style="list-style-type: none"> • Information on location (if delivered): <ul style="list-style-type: none"> - address of the subscriber, - coordinates (e.g. geo-referenced cellular information of GSM networks for caller localization or GPS coordinates of appropriately equipped mobile telephones, etc.), - specification of accuracy, - source of the coordinates (landline, mobile network, etc.), • Reverse look-up in the public telephone directory (if available): <ul style="list-style-type: none"> - name, - address, - other data related to the entry in the telephone directory, • Reverse look-up in the telephone directory of the telephone systems <ul style="list-style-type: none"> - name, - other data related to the entry in the telephone directory
Bidder's technical reasons supporting compliance: The incident management application has a dedicated space to obtain call related information, including: <ul style="list-style-type: none"> - geolocation from multiple sources (network based, AML, etc.) - call metadata (eCall MSD, smartphone app user information, such as name, last name, age, gender, language, etc.) - other parameters belonging to network-based custom data from the Republic North Macedonia databases and telecommunication operators. 	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1 st CAD platform / Automatic caller localization 26a Emergency Response Software Solution, Life 1 st CAD platform / The phonebook	

Tech. Requ. No. 3.2.3.7	Technical Requirement: There shall be no difference distinguished between the signalization on the client of voice call, data events triggering a communication (SMS, SDS, ..) or multimedia calls
Bidder's technical reasons supporting compliance: As explained in 3.2.3.4, the Incident Creation Application has plugins to handle metadata. Any communication with extra information (SMS, with text format information, or eCalls with MSD data) are considered "metadata" in terms of platform management, and treated as such: this data is processed by the appropriate plugin and inserted into new incidents, displayed on the Call Taker user interface. Operators will be notified of incoming alerts regardless of the fact that they are incoming calls (including eCalls) or SMS. Notification will be both visual and based on a configurable sound	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1 st CAD platform	

Tech. Requ. No. 3.2.3.8	Technical Requirement:
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	The communication operator client shall also be designed so that it can optionally also be installed on a touch screen in addition or alternatively to the emergency operations control computer.
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Bidder's technical reasons supporting compliance:

The agent CTI client is a web application and can be installed and operated from touch screens

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications platform

Tech. Requ. No. 3.2.3.9	<p>Technical Requirement:</p> <p>The user interface of the Communication operator client shall be structured clearly and easy to operate.</p>
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Bidder's technical reasons supporting compliance:

The agent CTI client is a modern web application and is already in use in call taking scenario and has been designed and developed with usability in emergency call taking operation

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

VoiceBeat datasheet

Tech. Requ. No. 3.2.3.10	<p>Technical Requirement:</p> <p>The configuration of the user interface as well as various types of signalizations to the user (flashing keys, color change of operating elements in the case of status changes, etc.) shall be defined by the Supplier jointly with the user organizations within the course of the detailed design phase.</p>
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Bidder's technical reasons supporting compliance:

The agent CTI client is a componentized web application, the different part of the application can be configured and modified during the detailed design phase.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

26a Emergency Response Software Solution, Life 1st CAD platform

Tech. Requ. No. 3.2.3.11	<p>Technical Requirement:</p> <p>The elements of the user interface and their display shall be configurable. Changes and adaptations shall be able to be performed by the administrator of the client without laborious programming.</p>
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Bidder's technical reasons supporting compliance:

The agent CTI client is a componentized web application, the different part of the application can be configured and modified. Single element ad disposition in the UI can be modified by configuration.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system
 26a Emergency Response Software Solution, Life 1st CAD platform

Tech. Requ. No. 3.2.3.12	<p>Technical Requirement:</p> <p>The following areas shall be available:</p> <ul style="list-style-type: none"> • main operating field for telephony incl. numeric dialing pad and the most important controls, • conference facility, • operation of the short-term voice documentation: selection of a call (file), start, stop, 'fast forward', 'fast backward', pause, export as .WAV file, etc., • log data of the workplace in relation to incoming, accepted, and outgoing calls • functional status of the NG-911 communication system (faults) as well as key figures of the NG-911 communication system, such as e.g. call times and waiting times primarily as numerical values, but possibly in the form of bars or graphs for the purpose of faster identification of the displayed information (equivalent to green, orange, red area).
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Bidder's technical reasons supporting compliance:

The agent CTI client includes different functional areas and components:

- telephony area (number dialing, dialing pad, name lookup)
- Listening of recent audio calls
- Current call area with indication of timing of the call, name of other party if known, other call participants in case of conference

List of current calls in the system with priority, tags, name of caller and other call metadata including wait duration

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform

26a Emergency Response Software Solution, Life 1st CAD platform / The phone system

Tech. Requ. No. 3.2.3.13	<p>Technical Requirement:</p> <p>The keypad must be designed like the standard telephone keypad and serve for the entry of call numbers.</p>
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Bidder's technical reasons supporting compliance:

The Agent CTI Client have a keypad configured as a phone keypad

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

Tech. Requ. No. 3.2.3.14	<p>Technical Requirement:</p> <p>The following visual displays must be available:</p>
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	<ul style="list-style-type: none"> • status of own telephone, • active call data incl. duration of call as well as telephone number of the caller and queried call associated data in relation to the caller, • ringing.
Bidder's technical reasons supporting compliance: The current call Agent CTI Client component provides visual information about current call and status of the phone interface (ringing etc.)	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform / The phone system	

Tech. Requ. No. 3.2.3.15	Technical Requirement: A display field must be available to control numerical entries. The display must show the call numbers and, if known, the names of callers for incoming calls starting with the call signalization (ringing) up to the end of the call.
Bidder's technical reasons supporting compliance: The list of calls Agent CTI Client component in the User Interface display information and metadata about calls in the system including matched names from the address book	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform / The phone system 26a Emergency Response Software Solution, Life 1 st CAD platform / The phonebook	

Tech. Requ. No. 3.2.3.16	Technical Requirement: Furthermore, display fields must be provided for the last calls made (incoming and outgoing). In addition, the queried data must be displayed for these calls and it must be possible to set up the displayed calls again from the list.
Bidder's technical reasons supporting compliance: A specific component that displays <ul style="list-style-type: none"> • Past calls (incoming and outgoing, both answered and not answered) • Missed calls. Each number in the list can be dialled again.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform / The phone system	

Tech. Requ. No. 3.2.3.17	Technical Requirement: An agent shall be able to accept any call from his waiting list, even if the call is signalized at another workplace or is not ordered next in the waiting list.
Bidder's technical reasons supporting compliance:	

The list of calls Agent CTI Client component permit picking of a single call regardless the priority or order (cherry picking)

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, High level emergency management process / Communications

Tech. Requ. No. 3.2.3.18	Technical Requirement: The waiting list shall always be fully visible and operable, irrespective of other windows opened or the selected tabulator fields.
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Bidder's technical reasons supporting compliance:

The list of calls Agent CTI Client component is always visible

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

VoiceBeat datasheet

Tech. Requ. No. 3.2.3.19	Technical Requirement: This operating window/section shall make all telephony functions accessible. The following keys must be provided: <ul style="list-style-type: none"> o call accept o call terminate , o forwarding, call transfer (internal and external using the same key) o listening in (supervisor assist / barge in) o alphanumerical telephone directory, o multiple destination ringing keys that can be arranged in a structured way o microphone mute, whereby the status of the microphone (switched to mute/on) must be displayed very clearly o activate/deactivate external loudspeaker, whereby the status of the external loudspeaker (switched to mute/on) must be displayed very clearly, o volume control for acoustic call signalization (ringing), o pause function.
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Bidder's technical reasons supporting compliance:

The telephony Agent CTI Client component allows for the following operations:

- Volume control
- Pause
- Activate and deactivate other audio devices (loudspeakers etc..)
- Microphone muting
- Barge in
- Phone directory access

Call accept, terminate, forward (assisted and not assisted)

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

VoiceBeat datasheet

Tech. Requ. No. 3.2.3.20

Technical Requirement:

Calls in the waiting list shall be marked in different colors by category, whereby the following categories must be differentiated:

- o emergency calls (e.g. red),
- o non-emergency calls (e.g. black),
- o calls for other workplaces (e.g. grey).

Bidder's technical reasons supporting compliance:

The list of calls Agent CTI Client component can be configured to provide different colour, ringing tones, and icons for calls according to established priority. The logic behind the prioritization of calls can be configured at run time.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

VoiceBeat datasheet

Tech. Requ. No. 3.2.3.21

Technical Requirement:

All calls waiting for the emergency operations center shall be marked in color, together with the information at which workplaces they are signaled.

Bidder's technical reasons supporting compliance:

The list of calls Agent CTI Client component can be configured to provide different colour, ringing tones, and icons for calls according to established priority. Call metadata can be displayed, including signaled workplace and the data will be available to the supervisor, monitoring the Control Room queue status.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

VoiceBeat datasheet

Tech. Requ. No. 3.2.3.22

Technical Requirement:

The NG-911 Communication System operator client shall offer a window or an interface in which the audio signals from varying sources can be switched to the varying output devices.

Bidder's technical reasons supporting compliance:

The Agent CTI client provides a specific window to switch audio signals from and to varying sources

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

Tech. Requ. No. 3.2.3.23	Technical Requirement: The relevant active loudspeaker(s) shall be able to be switched to mute easily.
Bidder's technical reasons supporting compliance: In the Agent CTI client specific window for handling audio devices (audio mixing) loudspeakers can be disabled with a single button click.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform / The phone system	

Tech. Requ. No. 3.2.3.24	Technical Requirement: The short-term voice documentation system is operated in this tab.
Bidder's technical reasons supporting compliance: In the agent CTI client a specific component for the listening of recorded voice message is available. Operators can also access short-term recordings from Life 1 st CAD Depending on their role, end users are entitled to access just recordings of calls they managed or the whole set of recordings	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform / The phone system 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)	

Tech. Requ. No. 3.2.3.25	Technical Requirement: A separate area must be provided for conference management for the setup and management of telephone conferences
Bidder's technical reasons supporting compliance: There is a specific web interface for the setup and management of phone conferences	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Configuration interface / IP PBX configuration environment	

Tech. Requ. No. 3.2.3.26	Technical Requirement: The audio switching matrix must be controlled by the software client of the NG-911 Communication System.
Bidder's technical reasons supporting compliance: The Agent CTI client provides a specific window to switch audio signals from and to varying sources	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform / The phone system	

Tech. Requ. No. 3.2.3.27	Technical Requirement: The following audio services are connected to the audio switching matrix: .1 VoIP Telephone / Handset .2 workplace computer (computer tones), .3 headset Quick Disconnect (QD), .4 external loudspeaker of the workplace, .5 jack for monitoring loudspeaker .6 voice documentation system.
	Bidder's technical reasons supporting compliance: The Agent CTI client provides a specific window to switch audio signals from and to varying sources any audio source recognized by the operating system can be used
	Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform / The phone system

3.2.4 NG-911 Communication Function–Interactive Voice Response/Automatic Call Distribution

Tech. Requ. No. 3.2.4.1	Technical Requirement: The NG-911 Communication System must support call profiles. The option must be provided at the workplaces to select or deselect individual emergency calls from single regions.
	Bidder's technical reasons supporting compliance: The PABX and CTI integration supports call profiles as follows: Upon reception of the call (signalling) data (source and destination number but also information gathered from the address book) a match against a set of rules configured via the admin interface is performed. This set of rules: <ul style="list-style-type: none"> • enrich the metadata associated to the call • determine the group of users or groups of users to which the call is routed and the priority assigned to it For example: regional codes, postal codes and similar, are all valid parameters for call routing functions.
	Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, High level emergency management process / Communications

Tech. Requ. No. 3.2.4.2	Technical Requirement: The ACD core function shall signalize incoming calls or display them in waiting lists exactly at those main workplaces at which they shall be handled.
	Bidder's technical reasons supporting compliance: Following what is described in point 3.2.4.1 above calls are directed toward specific workplaces-queues. Calls from different queues/workplaces are shown in the Client UI with the appropriate metadata, for any

type of user of the Contact Center.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

26a Emergency Response Software Solution, High level emergency management process / Communications

Tech. Requ. No. 3.2.4.3

Technical Requirement:

Emergency calls and other calls must be allocated according to operator profiles. Each operator has a standard profile selected when the relevant agent logs on to a workplace. In addition, it must be definable in the operator profiles (applied for the workplace for the time the agent is logged in) from which regions calls are allocated and from which regions calls can be picked up.

Bidder's technical reasons supporting compliance:

Each agent can be configured as belonging to a specific profile. Profiles include which workplace or queues an agent is allowed to answer/interact.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

26a Emergency Response Software Solution, High level emergency management process / Communications

Tech. Requ. No. 3.2.4.4

Technical Requirement:

A sorted waiting list shall be generated for every workplace based on the operator profile. Principally, all calls can be seen by all workplaces, whereby a filter can be activated for the individual workplaces that orders the calls of selected regions first. Emergency forces returning calls must be identified.

Bidder's technical reasons supporting compliance:

In the Agent CTI client, a specific component is used to display calls in the system. The order in which the calls are shown is configurable at the client side.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

26a Emergency Response Software Solution, High level emergency management process / Communications

Tech. Requ. No. 3.2.4.5

Technical Requirement:

The ACD shall provide generation and management of agent-specific / role-specific waiting lists.

Bidder's technical reasons supporting compliance:

The PABX-CTI can define specific queues. A queue can be assigned to a specific agent or role.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

26a Emergency Response Software Solution, High level emergency management process / Communications

Tech. Requ. No. 3.2.4.6	Technical Requirement: The ACD shall provide intelligent waiting list management by ordering waiting calls from all voice interfaces jointly, namely from <ul style="list-style-type: none"> o emergency call lines, o non-emergency calls, o extensions of the NG-911 Communication System, o other SIP calls
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Bidder's technical reasons supporting compliance:

Following what is described in point 3.2.4.1 the list of the calls in the client can be configured to be sorted by different combination of metadata attributes.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

Tech. Requ. No. 3.2.4.7	Technical Requirement: The system shall support sequencing of incoming calls by <ul style="list-style-type: none"> o priority, o caller (if he can be identified by means of the caller associated data), e.g. to order calls from own emergency forces first, o for emergency calls: region from which the call was made (if identifiable from the CLI), and o arrival of the call request (waiting time).
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Bidder's technical reasons supporting compliance:

Following what is described in point 3.2.4.1 the list of the calls in the client can be configured to be sorted by different combination of metadata attributes, including region or area codes or other geographical boundary parameter. This sorting order can take into account call waiting time

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

Tech. Requ. No. 3.2.4.8	Technical Requirement: Incoming calls shall be managed and ordered through waiting lists (calling queue) at the workplaces.
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Bidder's technical reasons supporting compliance:

Following what is described in point 3.2.4.1 calls can be routed to queues according to metadata values. This method is achieved by the combination of ESRP Policy based routing, which will address specific PABX queues, according to the parameters decided by the Beneficiary.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

Tech. Requ. No. 3.2.4.9	Technical Requirement: The allocation and ordering of calls to the workplace(s) shall be performed according to an allocating algorithm – defined in detail with the customer- which takes the priorities of the calls as well as the allocation method desired by the users into account. Waiting calls shall be shown in the waiting list at every workplace from which calls can also be picked-up actively.
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Bidder's technical reasons supporting compliance:
 Following what is described in point 3.2.4.1 the list of the calls in the client and in the workplaces can be configured to be sorted by different combination of metadata attributes. Calls can be both distributed automatically to agents enabled in a single queue or workplace or can be handpicked. The NG911 infrastructure allows dynamic distribution of calls, based on several parameters that can be allocated by the Beneficiary.

Bidder's cross references to supporting information in Technical Bid:
 26a Emergency Response Software Solution, Communication platform / The phone system

Tech. Requ. No. 3.2.4.10	Technical Requirement: Calls shall be allocated to the workplaces switched active and agent logged in. For this purpose, allocating algorithms must be implemented, which can be predefined and activated by the administrator of the client in any free configuration. The change of the allocating algorithm shall become effective immediately (for the next call entering the system).
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Bidder's technical reasons supporting compliance:
 Different allocating algorithm are configurable in the admin interface, changes in the algorithm can be immediately applied

Bidder's cross references to supporting information in Technical Bid:
 26a Emergency Response Software Solution, Configuration interface / IP PBX configuration environment

Tech. Requ. No. 3.2.4.11	Technical Requirement: At least two allocating algorithms shall be pre- configured, namely o allocation of the call waiting longest with highest priority to the main workplace that is free longest, and o allocation of the call waiting longest with highest priority to the first free main workplace along a sequence of workplaces.
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Bidder's technical reasons supporting compliance:
 In the list of available algorithms are available both for longest free workplace or in a round robin fashion between free workplaces

Bidder's cross references to supporting information in Technical Bid:
 26a Emergency Response Software Solution, Communication platform / The phone system

26a Emergency Response Software Solution, Configuration interface / IP PBX configuration environment

Tech. Requ. No. 3.2.4.12	Technical Requirement: After a lapse of time (approx. 10 sec), a waiting call shall be signalized at the next main workplace logged on in accordance with the active allocating algorithm.
Bidder's technical reasons supporting compliance: During automatic distribution of calls to workplace a timeout can be set for the signalling of the call to the next available agent/workplace	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform / The phone system	

Tech. Requ. No. 3.2.4.13	Technical Requirement: Workplaces shall be able to be switched to pause. No calls are allocated in this condition. When switched to pause, it must be checked in analogy to the logoff of a workplace whether the workplace is the last of his role/function and the pause switch must be rejected with a qualified warning information, where applicable.
Bidder's technical reasons supporting compliance: A single agent/workplace can be switched to pause using the agent CTI client. If the agent is the last in a given queue/function a dialog box is shown, and the pause is rejected.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform / The phone system	

Tech. Requ. No. 3.2.4.14	Technical Requirement: After every emergency call, no new calls shall be allocated to a main workplace during a configurable follow-up/wrap-up time. If all operator's consoles in question are engaged, the call shall be allocated to the operator's console that has been free longest. In the case that a longer follow-up time or pause etc. is required, operator's consoles shall be able to be switched to "not available" manually.
Bidder's technical reasons supporting compliance: Each queue-function can be configured with a 'wrap-up time' that is a time where no calls are forwarded to an agent following the termination of a call. Single agent can be placed manually on 'not available'	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform / The phone system	

Tech. Requ. No. 3.2.4.15	Technical Requirement: Re-callers, i.e. callers with the same CLI on the same call number within a configurable time (e.g. last 120 minutes) shall be identified by the
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	Communication system, e.g. by means of the own log data, and allocated to the main workplace from which the call was attended to the last time, insofar as this workplace is still switched active with the same agent. (last agent routing)
Bidder's technical reasons supporting compliance: The PAB-CTI solution implements "last agent" routing within each queue/function. That is if a call from a previously answered number is receive and the agent that has previously answered the call is available, the call is routed to that agent with a visual attribute indicating he/she had been the "last agent".	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform / The phone system	

Tech. Requ. No. 3.2.4.16	Technical Requirement: Callers of emergency calls that were ended by the caller before they were accepted in the emergency operations center must also be added to the waiting list (incl. the allocation of a call ID) and marked as such. When the call is processed by the agent, it shall be set up outgoing to the telephone network, irrespective of the fact that the call was ended by the caller himself, as an emergency case may be on hand In addition, the option shall be provided to delete the unattended call without a call setup (rejected).
Bidder's technical reasons supporting compliance: In the agent CTI client interface, a specific area contains the list of 'missed calls' that is calls that where ended before being answered. Missed calls can be immediately redialled. Missed calls can be deleted from the list.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform / The phone system	

Tech. Requ. No. 3.2.4.17	Technical Requirement: An incoming call shall be given priority based on the call number dialed or the recall identified by the Voice Communication. At least ten priorities must be provided. The allocation of priorities shall be able to be configured without limitation and easily by the administrator of the client. Calls must be ordered by priority and within the priority as they come in.
Bidder's technical reasons supporting compliance: Following what is described in point 3.2.4.1 a priority can be assigned to call according to different rule, the ability to assign priority based on the number called is between these rules. Calls are ordered first by priority than by waiting time. There are 10 level or priority numbered 0 to 9	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform / The phone system	

Tech. Requ. No. 3.2.4.18	Technical Requirement: For every waiting list, a configurable time criterion shall be definable, after the expiry of which an unattended call is rowed one step higher in the priority. This way, it shall be ensured that calls with a low priority do not keep rowed to the back permanently.
Bidder's technical reasons supporting compliance: For each queue a configurable time in second can be specified where the priority of the call is increased	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform / The phone system	

Tech. Requ. No. 3.2.4.19	Technical Requirement: After a priority-specific configurable emergency case timeout (e.g. 30 s for emergency calls, three minutes for calls, five minutes for internal calls, etc.), call shall be escalated and signalized at all workplaces where an agent is logged in, irrespective of the busy/ pause status. In addition, the incident shall be reported to the network management system as fault.
Bidder's technical reasons supporting compliance: A timeout based on call metadata can be specified. When a call is not answered after this timeout a specific call routing can be invoked to distribute the call to other workplaces. When such an event occurs is logged and signalled to the NMS system	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform / The phone system	

Tech. Requ. No. 3.2.4.20	Technical Requirement: The parameters of the NG-911 communication system in relation to processed as well as waiting calls shall be assessed continuously and monitored for configurable threshold values.
Bidder's technical reasons supporting compliance: A specific module is present to provide real-time monitoring of calls in the system that includes waiting/handled/disconnected calls. And this user interface will be available on the supervisor screen.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Business Intelligence / Communication platform statistics	

3.2.5 NG-911 Communication Function – Recording Service

Tech. Requ. No. 3.2.5.1	Technical Requirement: A short-term voice documentation system shall be accessible centrally and offer playback of conversations that happened minimum 12 hours before.
Bidder's technical reasons supporting compliance: In the proposed solution a voice recorder functionality is present. All calls are recorded and associated to a	

unique id that allows matching with the case and all agents that worked on the call. Calls can be accessed with different rules and authentication.

Short-term calls are accessible from both the VoiceBeat softphone and from Life 1st CAD application.

Long-term recordings can be accessed for replay or download by entitled users accessing to the recorder web based console

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.2.5.2

Technical Requirement:

At every workplace, the most recent conversations held there, e.g. within a period of 12 hours, must be able to be played back at any time. This way, the emergency operations center staff have the option to research information that was not or badly understood by them during the acceptance of emergency calls.

Bidder's technical reasons supporting compliance:

The call recordings are accessible from the CTI client according to authentication and business rules. A rule that allow an agent to listen to previous call in the past 12 hours will be part of the solution

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.2.5.3

Technical Requirement:

For confidentiality reasons, the playback of voice recordings shall be secured by an authority-controlled access.

Bidder's technical reasons supporting compliance:

Voice recording are accessible via authentication only

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.2.5.4

Technical Requirement:

A short-time voice documentation system shall record and play back all conversations of a workplace since the logon at the workplace.

Bidder's technical reasons supporting compliance:

The call recordings are accessible from the CTI client according to authentication and business rules, on a

single workstation recording since the last logon will be accessible

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.2.5.5 Technical Requirement:

The playback of a short-time voice documentation system must be able to be performed directly at the main workplaces (headsets, loudspeakers etc.).

Bidder's technical reasons supporting compliance:

Playback of voice recordings is routed to the generic audio matrix and is therefore available to different audio devices

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.2.5.6 Technical Requirement:

The short-term voice documentation must be operated through a tab area of the Voice Communication operator client.

Bidder's technical reasons supporting compliance:

Playback of voice recordings is part of the agent CTI client

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.2.5.7 Technical Requirement:

Direct search in the short-time voice documentation system, of a conversation based on the call number, the time, etc. shall be possible.

Bidder's technical reasons supporting compliance:

The voice recording allows search on different parameters of the call, like time, called and calling number etc...

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communication platform / The phone system

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

VoiceBeat datasheet

Tech. Requ. No. 3.2.5.8	Technical Requirement: Simple skipping forward and backward between the recorded conversations shall be possible in the short-time voice documentation system.
Bidder's technical reasons supporting compliance: A simple but complete user interface similar to a playback controller is provided for the call playback	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Communication platform / The phone system	
26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)	

Tech. Requ. No. 3.2.5.9	Technical Requirement: The option to move 'forward' and 'fast forward' as well as 'backward' and 'fast backward' shall exist in the short-time voice documentation system.
Bidder's technical reasons supporting compliance: The playback interface includes controls to fast forward and back in the call and to set a specific time of the playback	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform / The phone system 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)	

Tech. Requ. No. 3.2.5.10	Technical Requirement: Targeted skipping to a specific time in the conversation just heard must be possible (e.g. "2.15 after the beginning of the conversation"), whereby the time position shall be controllable by the operator.
Bidder's technical reasons supporting compliance: Time position in the playback controller can be set both with a slider and by entering a specific time position	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform / The phone system 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)	

Tech. Requ. No. 3.2.5.11	Technical Requirement: The individual voice recordings must be able to be exported in the form of .MP3 or .WAV files so that the recordings are managed in the
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	archiving system.
Bidder's technical reasons supporting compliance: Recordings can be exported in mp3 format	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform / The phone system	

Tech. Requ. No. 3.2.5.12	Technical Requirement: All exports and access to individual voice recordings must be logged.
Bidder's technical reasons supporting compliance: Access to recordings is logged by the phone system	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Communication platform / The phone system	

Tech. Requ. No. 3.2.5.13	Technical Requirement: The long-term voice documentation shall be supported in order to offer a complete court- utilizable operational documentation of all conversations held via the NG-911 communication system within the scope of inquiry and reasoning
Bidder's technical reasons supporting compliance: In the proposed solution a voice recorder functionality is present. All calls are recorded and associated to a unique id that allows matching with the case and all agents that worked on the call. Calls can be accessed with different rules and authentications. Long term recordings which are related to archived CFS can be accessed via the recorder web console	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform / The phone system VoiceBeat datasheet	

Tech. Requ. No. 3.2.5.14	Technical Requirement: All recordings incl. provided meta-data shall be stored for at minimum 5 years. Within this timeframe, the record itself shall be shown for any matching query within the long-term voice documentation application. As the threshold of 5 years is reached, all records older than that shall be deleted automatically (incl. provided meta-data).
Bidder's technical reasons supporting compliance: A configurable threshold for the conservation of the recording is present in the proposed solution and will be configured to a 5-year period.	
Bidder's cross references to supporting information in Technical Bid:	

26a Emergency Response Software Solution, Solution Sizing

Tech. Requ. No. 3.2.5.15	Technical Requirement: The voice documentation system must support different search functions, e.g. by record ID, date, time, call ID, operation number of the NG-911 Personnel, attributes of the call, etc..
Bidder's technical reasons supporting compliance: The voice recording allows search on different parameters of the call, like time, called and calling number and other attributes and metadata of the call.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communication platform / The phone system VoiceBeat datasheet	

3.2.6 Incident Creation function

Tech. Requ. No. 3.2.6.1	Technical Requirement: The incident creation application is the central software platform for processing incidents. It must support the call center agent in all aspects of processing incidents, starting with the acceptance of an incidents over alarming up to documentation. A geographic information system (GIS) that supports the call center agent visually in their activities must be integrated in the NG-911. Functionalities in the incident creation application and GIS must be integrated functionally and contextually.
Bidder's technical reasons supporting compliance: The proposed solution is a bundle including Incident Creation, Incident Management and GIS solution whose focus is support call centre agents in all aspects of processing incidents. The integration among these components is native and bi-directional.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, High level emergency management process 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation) 26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer	

Tech. Requ. No. 3.2.6.2	Technical Requirement: The incident creation application shall be operated through the workplaces in the emergency operations center and the remote workplaces at the PSO.
Bidder's technical reasons supporting compliance: The proposed solution is fully web based. As a consequence, it is possible to operate both in the workplaces	

in the emergency operations centre and the remote workplaces at the PSO.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, High level emergency management process

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.6.3

Technical Requirement:

The incident creation application shall include the usual basic functionalities for the operation of an emergency operations center in the area of police, fire brigade, ambulance services and civil protection.

Bidder's technical reasons supporting compliance:

The incident creation application can be tailored for specific needs of police, fire brigade, ambulance services and civil protection. Its fully customizable interface can adapt to respond to any kind of emergency management process.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, High level emergency management process

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.6.4

Technical Requirement:

A new incident with an associated entry mask must be opened automatically upon

- acceptance of a verbal emergency call (e.g. telephone, mobile network),
- receipt of a message from alarm indication facilities (e.g. fire alarm analysis center) or a danger indication system,
- Emergency call SMS.

Bidder's technical reasons supporting compliance:

Once an alarm of any kind is received and accepted by the operator the incident data entry mask is opened automatically and filled with the appropriate information, depending on the source.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, High level emergency management process

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.2.6.5

Technical Requirement:

The mask for opening an incident must also be able to be opened manually and start the creation of an incident as well.

Bidder's technical reasons supporting compliance:

Upon call pick up or reception of an incoming alarm the proposed application automatically opens a new

incident form already filled-in with relevant information concerning the received call or alarm. Nonetheless, an operator is always enabled, under any circumstance, to manually open a new (blank) incident by clicking the specific button on the application main screen or using the configured keyboard shortcut

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, High level emergency management process

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.2.6.6

Technical Requirement:

The primary information required for response to the incident in accordance with stored alarming plans (mandatory fields) must be able to be entered or amended quickly in a simple way.

Bidder's technical reasons supporting compliance:

All the important elements on the screen can be entered through menu inputs, checkboxes, and other guided menus, according to the type of data and user's preference.

For text fields within the incident record such as incident classification and localization, the end user is assisted by the application that suggests in real time the possible entries depending on characters/numbers already typed in by the operator (assisted typing).

Multi-layered fields, for example incident classifications, are automatically filtered by the application once one layer has been committed by the user. In a scenario of a three-layered classification tree, as soon as the operator commits one layer (not necessarily the upmost), the other two are automatically filtered in order to provide only the set of entries admitted for the inserted layer. The same happens once the operator has filled in and committed the second layer.

Regardless of the number of layers, however, the software can be configured to connect a specific alert plan (URL link, or files in PDF, JPG, word, and other formats), to that specific combination of parameters. The Client can configure the attached procedures from the configuration menu.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, High level emergency management process

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.2.6.7

Technical Requirement:

All available caller information must be taken up in the mask for acceptance of incidents during the acceptance of emergency calls. All databases available connected to the system (address database in the incident creation application, address directories, etc.) must be used for the caller identification.

Bidder's technical reasons supporting compliance:

The information related to the calling party is entered in the incident mask through the integration with Communication Database, external Address database and plugins for interpretation of data (e.g. AML content, fire sensors metadata, etc.). Operators are given the possibility to check the correctness of imported data before promoting them as incident data; this is helpful whenever more than one database

provides caller information, and the operator has to determine the most precise/trustable one.

All data received from external databases are nonetheless kept in a specific section of the user interface even after the “promotion” of one of them into the incident.

Caller location data provided by external systems are also checked against the application geo-DB both in case of coordinates (reverse geo-coding, or address match)

Bidder’s cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, High level emergency management process

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.2.6.8

Technical Requirement:

The proposed incident creation application must be able to retrieve caller location data from the location servers if available on the ESInet.

Bidder’s technical reasons supporting compliance:

The ESInet is directly integrated with Incident Creation Application, through the LIS component – Location Information Service, developed according to NG112 ESInet standards. While the LIS component has a standard NG112 interface, based on the HELD format, towards the SIP Proxy (ESRP), it has a custom interface to read data from external geolocation sources that will feed it. Namely, the LIS will be adapted to read data from formats of location coming from sources such as, e.g. Cell ID data or similar, available in the country.

Bidder’s cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications platform / The Location Information Function

Tech. Requ. No. 3.2.6.9

Technical Requirement:

The proposed incident creation application must be able to import multiple location data (i.e. data originated from multiple sources) from the location servers

Bidder’s technical reasons supporting compliance:

The Agents has on his/her left the localization of the caller. There is a label indicating the source of the location data. It is sufficient to select the best location and import it into the incident section.

Bidder’s cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Automatic caller localization

26a Emergency Response Software Solution, Communications platform / The Location Information Function

30b Screenshot annex paragraph 3.2.6.9

Tech. Requ. No. 3.2.6.10

Technical Requirement:

The proposed incident creation application must be able to rebid location information to the location servers

Bidder's technical reasons supporting compliance:

The incident location tab has a dedicated button to refresh the geolocation by submitting a new query to geolocation services.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Automatic caller localization

Tech. Requ. No. 3.2.6.11

Technical Requirement:

The caller location must be displayed on maps (GIS) as soon as it is received. It must be possible to choose which data to display on maps if data are from multiple sources

Bidder's technical reasons supporting compliance:

The caller location is displayed on maps as soon as it is received. It is possible to show all the positions coming from different sources and to hide specific sources. The different localization sources are represented on maps with different, configurable icons

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Automatic caller localization

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.6.12

Technical Requirement:

Should the location servers provide no localization, the operator must be put in the conditions of being supported by multi-layered maps in figuring it out basing on caller's provided information

Bidder's technical reasons supporting compliance:

If no localization is provided the operator can ask for localization information. The GIS system will support him in the identification of caller's position through a search bar that uses a google-like search engine for free search inside the Application geo database.

Operators can freely add additional custom or public layers on top of base maps in order to specialize the search of a location; additional thematic maps may be based on anything that can be geo-coded, for example main roads hectometers/junctions/bridges, mountain trails, POI-based, ...

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.6.13

Technical Requirement:

Once a localization has been defined on maps, it must be possible to import coordinates and reverse geo-code them into the incident record

Bidder's technical reasons supporting compliance:

The incident can be created starting from the map. In this case the operator imports in the incident mask, the coordinates and the address is proposed as "the closest address to those coordinates" through reverse geocoding performed against the application geo-DB.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.6.14	<p>Technical Requirement:</p> <p>If the caller location corresponds to the incident location, the incident creation application must allow the automatic import of relevant data from the former to the latter</p>
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Bidder's technical reasons supporting compliance:

Once the location of the caller is identified, it is possible with a click of a button on the screen, to import the address as incident address.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.2.6.15	<p>Technical Requirement:</p> <p>The incident management must allow the possibility to attach relevant documents to an incident location (* .pdf, * .xlsx, * .docx, * .odf, * .odt, * .ods, * .html files, images, internal and/or external URLs)</p>
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Bidder's technical reasons supporting compliance:

It is possible to attach relevant information to an incident. All mentioned formats are supported.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.2.6.16	<p>Technical Requirement:</p> <p>All available information must be taken up in the mask for acceptance of an incidents during the signalization by an alarm indication facility or danger indication system (fire, burglar, sensor, CCTV).</p>
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Bidder's technical reasons supporting compliance:

The Application uses sensor information in the same way of emergency calls. There is no limit to the type of sources of alerts. All available information coming from an alarm system are showed in the mask for acceptance and are imported in the incident.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st CAD platform / Integration with 3rd Parties' applications

Tech. Requ. No. 3.2.6.17	<p>Technical Requirement:</p> <p>The incident creation application must be provided with an address verification. If operations are accepted, the address allocated to the operation must be verified through an address database. During entry of</p>
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	the address, proposals must be made by the incident creation application for the correct address, which can be accepted by pressing a key (e.g. tabulator) or by a mouse click.
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Bidder's technical reasons supporting compliance:

If the address is created by the operator, this address is verified by the address database and composed in a Google-like style: with progressive suggestions. Suggestions are accepted by the tab or enter key.

Should the operator be in need of reverting the Google-like representation into the classical structured schema (address/civic number/borough/city/county/...), the application provides the relevant button on the user interface to switch back and forth between the two.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

30b Screenshot annex v1 paragraph 3.2.6.17

Tech. Requ. No. 3.2.6.18	Technical Requirement: A phonetic check of the entry with the stored address data shall be possible during the address verification.
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Bidder's technical reasons supporting compliance:

Thanks to the embedded use of wildmasks, geoDB queries performed in the call taking screen are assisted by the application which dynamically suggests best matches while the operator is typing the address to be searched.

The search engine is built with robustness: if typos are done during the entry of the address, the system suggests best matching results, automatically checking the potential mistakes.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.2.6.19	Technical Requirement: The address section of the incident record must include the following information: <ul style="list-style-type: none"> o county o municipality; o postal-code (ZIP code) o district o street 1; o street 2 (for intersections); o civic number; o free text data (e.g. buzzer number, apartment number, floor, ...) o Latitude (decimal or sexagesimal coordinates must be supported) o Longitude (decimal or sexagesimal coordinates must be supported)
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Bidder's technical reasons supporting compliance:

All the requested information is present in the incident mask. The composition of addresses structure in terms of fields can be customized and constitutes a typical step of the system configuration phase

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

30b Screenshot annex v1 paragraph 3.2.6.19

Tech. Requ. No. 3.2.6.20

Technical Requirement:

If an address cannot be verified correctly because this address does not exist in the stored address data, the next higher or next lower house number available in the system (respectively for even or odd house numbers) shall be proposed with a relevant remark.

Bidder's technical reasons supporting compliance:

It is possible to create incident with a non-existing address. In this case a remark is presented and a selection with the best near match -also on the base of civic numbers- is presented.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.6.21

Technical Requirement:

The proposed solution must integrate the what3words service (please refer to www.what3words.com for details) for geolocating calls. The software must be able to use the combinations of words from the what3words service in the same input line where the caller address is inserted, without the necessity for the call taker to require a switch of input line or without invoking another service. The input from manual address typing to what3words typing must be seamless

Bidder's technical reasons supporting compliance:

The operator can insert the 3 words instead of inserting the address and the Incident management platform will retrieve the coordinates.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.2.6.22

Technical Requirement:

All caller information taken up or amended in the course of acceptance of the incident (that is at least the first name, surname, complete address, telephone number(s)) must be saved in the database and must be available for a renewed address verification.

Bidder's technical reasons supporting compliance:

Should a CFS be localized with an address which is not available in Life 1st geoDB, the operator is still entitled to insert this address which will be saved in the CFS record together with all remaining incident data. At a later stage the system provides entitled users (e.g. admin, supervisors, ...) to review and commit the new address into the geoDB; in this way the new address is made available to operators for future use for localization purposes

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.2.6.23

Technical Requirement:

A defined incident code (respond code) must be able to be allocated to the incident. An unlimited number of incident codes must be definable. A later amendment and change of the incident codes by the users must be possible.

Bidder's technical reasons supporting compliance:

An incident code is defined accordingly to the qualification information. This code concurs in the identification of the most effective response to do the incident and the responsible agency. There is also the possibility to amend the incident code by the operator. All codes are customized from the configuration interface with no limitations.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.2.6.24

Technical Requirement:

The proposed incident applications must provide operators with the list of measures that have to be undertaken to meet ERC / PSO standard operating procedures. Measures are the "To Do List" which must be composed by at least the following actions: "send mail to", "make a call to", "read instructions", "send a SMS to". Measures must be configurable and the list must be dynamically composed basing on the incident type, location and time of creation. For a single measure it must be possible to configure whether it is mandatory and the operator must be put in the position to append narratives for each of them

Bidder's technical reasons supporting compliance:

The incident application provides the operators with a list of measures (i.e. to-do list) according of the Incident Type and Incident Type detail, incident location and time of creation. These elements composing the To-Do list are virtually unlimited and completely customizable. The software contains a default set of elements to be chosen from, among the most frequent actions (send SMS, send email, make a call, set incident severity, informational instructions etc.). Each measure that has been fulfilled by the operator is displayed with a different color.

It is possible for more than one operator to manage the same incident, this holds true also for measures fulfilment.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

30b Screenshot annex v1 paragraph 3.2.6.24

Tech. Requ. No. 3.2.6.25	Technical Requirement: The proposed incident applications must provide incident classification as a tree shaped structure where a main classification can be associated to up to five sub-classifications. Incident priority must be automatically assigned once the classification has been entered
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Bidder's technical reasons supporting compliance:

The Incident applications provides incident classification as a tree shaped structure. The Client may customize from the Configuration interface, each element of the structure, combining also inter-dependencies.

These levels of qualification are not limited only to menus, but can include also check buttons, radio buttons, free text, etc.

The number of sub-qualifications can be defined by the customer.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

30b Screenshot annex v1 paragraph 3.2.6.25

Tech. Requ. No. 3.2.6.26	Technical Requirement: It must be possible to nominate (configure) a role for a particular geographic area; e.g. a coordinator with competence on region "A" must access different data than a coordinator with competence on region "B"
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Bidder's technical reasons supporting compliance:

Thanks to the multi-tenant nature of the Application, it is possible to configure different rights for different Agencies, including rights on geographical areas.

It is also possible, within the same Agency (Tenant), to create different roles with rights over different geographical areas: the area of competence can be used as one factor for the definition of rights. In this case two users sharing the same role but with competence over different regions are given different rights (for example in accessing specific set of data).

Roles and rights (and users) configuration are made possible via the web based configuration interface of the proposed application

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Configuration interface / Tenancies, roles and users creation

Tech. Requ. No. 3.2.6.27	Technical Requirement: It must be possible to specialize a role for a particular PSO; e.g. a Fire personnel must access different data from medical personnel
Bidder's technical reasons supporting compliance: For the same concept expressed in 3.2.6.26, multi-tenant architecture allows configuration of users and roles rights based on type of agency and/or jurisdiction.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Configuration interface / Tenancies, roles and users creation	

Tech. Requ. No. 3.2.6.28	Technical Requirement: Incident data access must be made possible to supervisors and to call-takers/specialists or coordinators that have been actually involved in the incident. The incident management application must make it possible to create multi- agency incidents, e.g. incident for which Fire and Medical PSO's are simultaneously involved
Bidder's technical reasons supporting compliance: The incident management application can create multi-agency incidents. The PSOs involved can be predefined on the bases of the incident classification and localizazion, decided by the Customer's own operating procedures, or manually selected to "override" the Application proposal, in case of exceptional unforeseen situations. In responding to a multi-agency incidents, each PSO is entitled to access only data of its own competence as defined at the configuration level of the application.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, High level emergency management process/Incident creation 30b Screenshot annex v1 paragraph 3.2.6.28	

Tech. Requ. No. 3.2.6.29	Technical Requirement: The input mask of the incident creation system must be configurable per PSO or type of incident
Bidder's technical reasons supporting compliance: The input mask of the incident creation system is configurable per PSO or type of incident in term of field and even of layout of the incident mask. Agent Role can also be used to configure the mask UI, according to Customer's preferences. All layouts are saved in the software for reuse.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture 26a Emergency Response Software Solution, Configuration interface / Tenancies, roles and users creation 30b Screenshot annex v1 paragraph 3.2.6.29	

Tech. Requ. No. 3.2.6.30	Technical Requirement: All data used for the incident handling have to be freely manageable by the administrator of the system
Bidder's technical reasons supporting compliance: There's a web user interface for administration purpose from where it's possible to manage the data used for the incident handling. Virtually any parameter of the Incident Management Application is configurable from here, including classifiers, procedures, to-do lists, etc.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Configuration interface / CAD Application	

Tech. Requ. No. 3.2.6.31	Technical Requirement: It must be possible to allocate an alarm level (at least 1 to 5 or a textual equivalent → "alarm code") to the incident in order to inform the coordinator on the urgency of the incident.
Bidder's technical reasons supporting compliance: The level of severity of an incident classification can be configured into the system which then automatically applies the priority once the classification of the incident is complete; five priority levels are supported. The operator can manually change the system-provided priority on the basis of the information collected during the phone interview. Also the Q&A that can be made available to call takers can automatically change the priority basing on the provided answers. As all other incident-related data the severity is made available to all concerned (and authorized) users, including the possible aforementioned changes.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation) 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching 30b Screenshot annex v1 paragraph 3.2.6.31	

Tech. Requ. No. 3.2.6.32	Technical Requirement: An automatic link between the incident code and an allocated alarm level shall be possible.
Bidder's technical reasons supporting compliance: As stated the incident code (or classification) is linked to a pre-configured severity. Additional incident attributes can be linked to its code such as measures, procedures, agencies to be involved and units deployment plans. All links are determined at the configuration level of the Application.	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)	

Tech. Requ. No. 3.2.6.33	Technical Requirement: It must be possible to add notes to an incident in a free text field.
Bidder's technical reasons supporting compliance: It's possible for each agent to insert free text in the appropriate space inside the Incident mask ("narratives" feature).	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation) 30b Screenshot annex v1 paragraph 3.2.6.33	

Tech. Requ. No. 3.2.6.34	Technical Requirement: An automatic identification and visualization of neighboring incident (within a certain radius around the new incident location) shall be given.
Bidder's technical reasons supporting compliance: The connectable events are at the bottom of the incident mask. This window will propose all events that are potentially matched by the current event, being close in terms of distance type of event, or caller party number. It is possible also to select the radius in meters or in hours for which the Application will search for potential matches.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation) 30b Screenshot annex v1 paragraph 3.2.6.34	

Tech. Requ. No. 3.2.6.35	Technical Requirement: An automatic verification for possible multiple alarming or simultaneous past incident with the same incident location, etc. shall be performed for a configurable radius of location of the currently created incident.
Bidder's technical reasons supporting compliance: Please refer to 3.2.6.34 for connectable events mechanism description. The software highlights the cases that potentially match, creating a visual warning that two cases must be connected. The operator can further investigate during the phone call and decide to connect them or not.	
Bidder's cross references to supporting information in Technical Bid 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)	

Tech. Requ. No. 3.2.6.36	Technical Requirement: Data entered must be visible for other clients instantly, based on user rights and filter (location, incident type, caller ID.).
Bidder's technical reasons supporting compliance: The system is web-based and, thanks to the use of the open source .Net software library called "signalR",	

each web-client is automatically updated without the need of manual refresh. As soon as an input is entered by a user, another user on the same incident, will see the new information appearing on his screen.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, High level emergency management process/Incident creation

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.2.6.37

Technical Requirement:

An interaction as assist/specialist request (CTI Function barge-in, supervisor assistance) on that incident must be possible from other clients.

Bidder's technical reasons supporting compliance:

The Contact Center overview window, available to all operators, including supervisor, is provided with the barge-in function.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, High level emergency management process/Incident creation

Tech. Requ. No. 3.2.6.38

Technical Requirement:

The incident application must provide the possibility for multiple call takers to work on the same incident, in particular it must be possible for more than one call taker to work on incident measures

Bidder's technical reasons supporting compliance:

Multiple call takers can work on the same incident, seeing real-time changes in the fields. Everyone can contribute by creating new text notes, work on incident measures (to-do list), manage and track units dispatch.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, High level emergency management process/Incident creation

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.2.6.39

Technical Requirement:

There shall be a possibility to copy & duplicate incidents.

Bidder's technical reasons supporting compliance:

An existing incident can be copied into new one, they can be duplicated and associated with one another through dedicated buttons on the Incident mask.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution chapter 2.2

Tech. Requ. No. 3.2.6.40	Technical Requirement: A phonetic and logical check of the entries for consistency with the information of the databases and configuration files stored in the system shall be possible.
Bidder's technical reasons supporting compliance: As with geographical data, also with other data the phonetic and logic check of entries is done to correct mistakes and errors.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)	

Tech. Requ. No. 3.2.6.41	Technical Requirement: The takeover of the incident into the system and the release for coordination must not be performed until all mandatory fields in the mask for acceptance of an incident are completed. This does not exclude the function of the pre-alert to the coordinator (pre-alert: info to coordinator about likely happening of a critical incident in his area, enabling him to trigger an alarm reducing the intervention time)
Bidder's technical reasons supporting compliance: The mandatory attribute of fields of the incident and dispatch forms can be customized. The software will accordingly prevent the operator to hand the incident over or close it unless these fields have been filled in. Pre-alerting the coordinator is done through the selection of the appropriate PSO. It is not directly related to the completion of mandatory fields.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, High level emergency management process/Incident creation 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation) 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching	

Tech. Requ. No. 3.2.6.42	Technical Requirement: Any new incident must be identified using an identification number that is clear & unique within the entire system, as well as the date and the time.
Bidder's technical reasons supporting compliance: Each incident is identified by a unique alphanumeric ID. The date and the time of creation date is also available and not modifiable.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, High level emergency management process/Incident creation 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)	

Tech. Requ. No. 3.2.6.43	Technical Requirement: It must also be possible to determine the location/ workplace & user creating the
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	incident from the identification.
Bidder's technical reasons supporting compliance: The identity of the operator is shown in each incident as well as the time/date of creation	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, High level emergency management process/Incident creation 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)	

Tech. Requ. No. 3.2.6.44	Technical Requirement: The incident waiting for coordination must be displayed in a separate window (operational overview). A differentiation of incident by color (e.g. by type of operation, alarm level) must be provided for easier orientation of the call center agent.
Bidder's technical reasons supporting compliance: The Application proposes a view of all active incidents, with colour depending on their status (draft, open, dispatched, etc.) colours are customizable. This view can be made available to users basing on associated permissions. In the list of active incidents, it is also possible to create a tab specific for the CFS status which in this case would be status different than dispatched	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation) 26a Emergency Response Software Solution, Life 1st CAD platform / User interface/ The event list	

Tech. Requ. No. 3.2.6.45	Technical Requirement: The selected – in incident creation fields displayed - incident must be identified (marked) in the waiting for coordination display in the separate window (operational overview)
Bidder's technical reasons supporting compliance: The Application proposes a view of all active incidents, with colour depending on their status. A not dispatched CFS is still a draft or open CFS and can be marked with specific colours (system configuration)	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation) 26a Emergency Response Software Solution, Life 1st CAD platform / User interface/ The event list	

Tech. Requ. No. 3.2.6.46	Technical Requirement: The created incident must also be displayed in the GIS and identified by color or different symbols and with their incident number and code. The color display must be consistent with
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	the color selection in the tabular display.
Bidder's technical reasons supporting compliance: The GIS icons and colours are customizable by the Customer, to decide what kind of icons should represent an incident and which colour it has to take. Metadata of each incident are made available into maps, as well, as they are real-time imported from the incident creation system	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation) 26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer	

Tech. Requ. No. 3.2.6.47	Technical Requirement: The links with calls shall be able to be performed automatically by selection during the conversation or immediately afterwards.
Bidder's technical reasons supporting compliance: Each call is automatically linked to a new incident and the data automatically imported in the Incident mask. If the incident is related to an existing one, the two incidents can be linked together. A link is also automatically created between the CFS and the call recording.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)	

Tech. Requ. No. 3.2.6.48	Technical Requirement: The links to the voice recording shall be taken over into the operational log automatically.
Bidder's technical reasons supporting compliance: All the voice recordings within a specific incident are accessible from the incident mask, through the appropriate button integrated with the call recording platform.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)	

Tech. Requ. No. 3.2.6.49	Technical Requirement: It must be possible to allocate an incident journal to every incident, in which the inputs & changes taken by the agent during the relevant incident creation are recorded chronologically (operationally-related part of the logging). The incident journal must be able to be supplemented by manual entries and notes. A manual link with calls and related to this operation as well as a link to the voice recording must be possible.
Bidder's technical reasons supporting compliance: The journal is provided by the means of a timeline in human-readable format. Each action performed by	

users of the platform is included in this timeline and shows the complete history of changes done since the beginning of the incident.

Recordings are accessible through the timeline by the means of a URL link to the recording platform and all data shown can be copy-pasted, for example into reports or similar.

The timeline includes every single action done in the incident, in chronological order.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

30b Screenshot annex v1 paragraph 3.2.6.49

3.2.7 Geographical Information functions

Tech. Requ. No. 3.2.7.1	<p>Technical Requirement:</p> <p>The geographical information system (GIS) must be able to display location-related data clearly and thus to give the personnel a quick overview of the current situation.</p>
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Bidder's technical reasons supporting compliance:

Purpose of the GIS application is to display data clearly and to give an overview of the current situation, including several types of dynamic and static geo-coded elements (e.g. incidents, POIs, caller location and several other geographical elements that can be either locally stored or imported from an external platform).

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

30b Screenshot annex v1 paragraph 3.2.7.1

Tech. Requ. No. 3.2.7.2	<p>Technical Requirement:</p> <p>The GIS shall be closely linked with the other NG- 911 applications. The context menu of individual objects available in the incident management application must also be retrievable from the GIS. As a result, it must be possible e.g. to alarm a fire brigade through the context menu of a symbol in the GIS.</p>
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Bidder's technical reasons supporting compliance:

The two applications are strictly connected. In fact, the GIS is a web-based window embedded in the Incident Creation and Management software, sharing the same list of functions and data. Some example follow:

- Directly from maps it is possible to view details an open incident and dispatch
- Directly from maps it is possible to create an incident
- Directly from maps it is possible to dispatch units
- Directly from maps it is possible to consult POI details that are stored in the incident management system geo-DB

- It is possible to import [X;Y] coordinates from maps into the incident management system

It is possible to focus a map on a given location directly from the incident management system

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.7.3

Technical Requirement:

The maps viewer module must provide the possibility for personnel to freely open and close all available geo-coded layers

Bidder's technical reasons supporting compliance:

All available layers are accessible from a menu on the GIS UI, for each user of the platform. Unlimited layers can be superimposed one on another in order to enhance the level of details of displayed maps.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.7.4

Technical Requirement:

The caller location must be displayed on maps (GIS) as soon as it is received.
 For AML as radius with the option to rebid from the AML server respective to switch the source of AML (GPS, WIFI, network)
 For Cell ID as sector where possible respective cone of main cell direction.
 For other apps delivering location information together with the call: radius respective pin- point.
 It must be possible to choose which data to display on maps if data are from multiple sources

Bidder's technical reasons supporting compliance:

The GIS automatically displays calling party's position on the map, as soon as it is received. Multiple sources are represented with different colours and icons, and the operator can turn them on and off, through the Application interface.

If the reported position is not a point in space (i.e. [X;Y] coordinates) but it is a likelihood area, it is represented as a subdued shape on maps

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.7.5

Technical Requirement:

It must be possible to zoom over various maps or scales continuously.

Bidder's technical reasons supporting compliance:

Zoom-in and zoom-out feature is available either through buttons in the UI or by using the mouse wheel.

Icons represented in maps are accordingly adjusted when zooming in or out in order to preserve the overall readability of the map

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.7.6

Technical Requirement:

Imprints and symbols must be adjusted automatically during zooming in accordance with the selected display.

Bidder's technical reasons supporting compliance:

To avoid occlusion and bad readability of the map, the software used a clustering algorithm, that merge together several elements with high zooms of the map, keeping the map clean.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

30b Screenshot annex v1 paragraph 3.2.7.6

Tech. Requ. No. 3.2.7.7

Technical Requirement:

The application offered for the GIS shall support the following tools:

- drawing in of stretches and polygons,
- measurement of distances,
- measurement of surfaces,
- determination of the access route.

Bidder's technical reasons supporting compliance:

All the designing tools requested in the requirement are present through the GIS interface.

Given an area drawn in the GIS module, it is also made possible to create the relevant geoJSON file. This file can be used, for example, as a input condition to calculate incident measures, dispatch proposals, provide operators with extra information regarding the area (i.e. attachments),

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

30b Screenshot annex v1 paragraph 3.2.7.7

Tech. Requ. No. 3.2.7.8

Technical Requirement:

A tight link must exist between the mask-oriented activities during coordination and incident processing and the graphical display of the situation.

Bidder's technical reasons supporting compliance:

During coordination and incident processing the GIS map shows the situation related to the incident in real-time. Incidents area, vehicles dispatched, relevant area are shown to give the dispatcher a better view of what is going on and is updated with every action of the operator.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

26a Emergency Response Software Solution chapter 7

Tech. Requ. No. 3.2.7.9

Technical Requirement:

For this purpose, major aspects during incident management must also be displayed in the GIS (e.g. operational location, responsible organization, alarmed organization, etc.). Updates must also be carried out in near real time in the GIS area (without manual refresh of the application).

Bidder's technical reasons supporting compliance:

Within the GIS it is possible to show not only dynamic information (e.g. incidents operation location, vehicles positions) but also static information (e.g. hectometers, hospitals, hydrants, landing pads for helicopters, etc.).

Dynamic information is updated in the GIS through web socket: they are shown in real-time as soon as the new information is received.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.7.10

Technical Requirement:

When objects or symbols are clicked in the GIS, the stored data information must be able to be retrieved and displayed from various databases.

Bidder's technical reasons supporting compliance:

It is possible to click on the objects in the GIS obtaining information about the object. These pieces of information are retrieved from the Incident creation and management system in the form of "floating widgets", not to interfere with the Application activities or display.

The GIS module can also retrieve such information from WFS external sources

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

30b Screenshot annex v1 paragraph 3.2.7.10

Tech. Requ. No. 3.2.7.11

Technical Requirement:

It must be possible from the GIS to create an incident at any location (incl. transfer of calling place into the mask for incident acceptance).

Bidder's technical reasons supporting compliance:

By right clicking on the map it is possible to select the option "Create Incident". The selected point-in-space is then used as the location for the new incident.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.7.12	Technical Requirement: When an incident is created at a free determined location, the associated address, coordinates, or an associated point of interest (POI) should be transferred as calling place, where applicable.
Bidder's technical reasons supporting compliance: When an incident is created from maps, the inherent location is transferred into the incident management system and used as the incident location. By matching this location with the geo-DB, the incident form is automatically filled-in with the best match which can be: <ul style="list-style-type: none"> • An address or an approximation based on the nearest address • the corresponding POI coordinates 	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer	

Tech. Requ. No. 3.2.7.13	Technical Requirement: Address visualization during the entry into the incident creation application (for known addresses in accordance with the stored address data) must be provided.
Bidder's technical reasons supporting compliance: When an incident is created from the Creation and Management Incident System, the GIS system focuses the map on the inserted location. The same happens whenever an ongoing or closed incident form is opened; directly from the incident management system, the operator can center the map on the incident location	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation) 26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer	

Tech. Requ. No. 3.2.7.14	Technical Requirement: An address visualization for untraceable address objects should be possible in as much as that the next higher or next lower (either even or odd) known address is displayed, in order to at least be able to set the map sector to the correct area this way.
Bidder's technical reasons supporting compliance: The GIS and the Incident Creation Application offer a Google-like search bar, typing the location description. In case of non-existing address, the best match is shown and the closest address is displayed on maps	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)	

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.7.15	Technical Requirement: Determination of the responsible PSO Intervention Location (Station with Resources) from the area maps must be possible. The responsible PSO Location determined in this way must be able to be transferred into the incident management application and the relevant alarming plan must be launched.
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Bidder's technical reasons supporting compliance:

By selecting a PSO from the map, the correspondent action plan is displayed in the widget window (refer to 3.2.7.10) and it can be associated to the Incident from there.

PSO competence areas can be made available in maps as a specific layer (shapefile)

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.7.16	Technical Requirement: It must be possible to create different alarm areas in the GIS (polygons). It must also be possible to define geographically limited exceptions with other responsibilities ("overlapping alarm layer") within an alarm area or to define different responsibilities based on time.
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Bidder's technical reasons supporting compliance:

Multiple shapes representing competence area for a specific agency can be inserted in the GIS. These shapes can also be overlapping, generating a time-division competency for different PSOs on the same territory

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer
30b Screenshot annex v1 paragraph 3.2.7.16

Tech. Requ. No. 3.2.7.17	Technical Requirement: GIS must be able to provide status display and position of <ul style="list-style-type: none"> - organizational units - operational resources (salvaging shears, crane, etc.)
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Bidder's technical reasons supporting compliance:

These elements are treated as data layers by the GIS, that can be local or uploaded into the GIS from any source and format.

Each geo-coded object in maps can be associated to its relevant details that are accessible from the aforementioned widgets. Directly from GIS it is also possible to open attachments related to the specific PoI

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.7.18	Technical Requirement: GIS must be able to provide display of hazards, treats, cautions and other object related data
Bidder's technical reasons supporting compliance: These elements are treated as data layers by the GIS, that can be local or uploaded into the GIS from any source and format. Each geo-coded object in maps can be associated to its relevant details that are accessible from the aforementioned widgets. Directly from GIS it is also possible to open attachments related to the specific Pol	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer	

Tech. Requ. No. 3.2.7.19	Technical Requirement: The proposed solution must integrate public available data from "Waze". The GIS must be able to show data from "Waze" using the original colors and icons provided by "Waze". The data to be represented includes at minimum: <ul style="list-style-type: none"> - roadblocks - traffic jams - traffic conditions
Bidder's technical reasons supporting compliance: The GIS system is integrated with Waze through API.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer	

Tech. Requ. No. 3.2.7.20	Technical Requirement: GIS must be able to provide display of alarm indication facilities incl. alarming plan for this alarm indication facility
Bidder's technical reasons supporting compliance: Facilities equipped with automatic alarm systems can be made available as a specific map layer. As said every object that is displayable on maps can also be accompanied by widgets containing relevant details, including alarm plans. Whenever an alarm is received by the Incident Creation and Management system it automatically instructs the GIS to center the map on the specific location and activate the afore-mentioned layer. In this way the operator is quickly made available of a complete graphic visualization of the alarm source. the visualization of the video streaming will be configured in order to avoid any interference with the incident creation and management system and GIS and will not prevent operators to stay focused and work on the incident creation and management main screens Also, additional documentation made available to operators by the system will not interfere with the incident creation and management system and GIS and will not prevent operators to stay focused and work	

on the incident creation and management main screens

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.2.7.21

Technical Requirement:

GIS must be able to provide display of CCTV Camera Location incl. a link to access the CCTV to open if permitted

Bidder's technical reasons supporting compliance:

It is possible to insert a layer dedicated to the CCTV Camera. By Clicking on each icon representing the camera, it will be possible to view the stream of the camera (web-based streaming). Also, the URL to access the camera device can be made available. According to the user profile it is possible to access to the content of the camera or not.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.7.22

Technical Requirement:

GIS must be able to provide display of PSO Intervention Locations as, police stations, fire brigade houses, etc.

Bidder's technical reasons supporting compliance:

Areas of jurisdictions can be visualized in the GIS (see also 3.2.7.15 and 3.2.7.16)

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.7.23

Technical Requirement:

GIS must be able to provide display of operational areas along with operating PSOs

Bidder's technical reasons supporting compliance:

We confirm that GIS can display only PSOs' competence areas, just PSOs or both simultaneously.

Please refer to 3.2.7.15 and 3.2.7.16 for area of jurisdiction/intervention of PSO

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.7.24

Technical Requirement:

GIS must provide regional and provincial overviews

Bidder's technical reasons supporting compliance:

GIS can be configured with an additional layer showing regional and provincial borders as additional map layers, in several formats.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.7.25	<p>Technical Requirement:</p> <p>GIS must be able to provide context menu functionality</p> <ul style="list-style-type: none"> - POI features - alarming plans for buildings, homes, etc.
<p>Bidder's technical reasons supporting compliance:</p> <p>Dedicated widgets are present in the GIS application. These widgets provide context menu functionality. Please also refer to 3.2.7.10</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)</p>	

Tech. Requ. No. 3.2.7.26	<p>Technical Requirement:</p> <p>GIS must provide query and search option by</p> <ul style="list-style-type: none"> - operational resources - special operational resources - operational resources not in operation within a specific radius of a calling place.
<p>Bidder's technical reasons supporting compliance:</p> <p>The Incident Creation and Management Application provide this functionality directly displaying results into the GIS screen</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer</p>	

Tech. Requ. No. 3.2.7.27	<p>Technical Requirement:</p> <p>It must be possible to administer "pseudo names" (locally well-known names for a specific location) for points of interest (POI), characteristic points, town parts, buildings, road junctions, path sections and names of persons, land names, etc.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>POIs are created in the Incident Creation and Management System and then they are immediately available in the GIS as a separate layer. The same happens for characteristic points, town parts, buildings, road junctions, path sections and names of persons, land names. The geo-DB and the search function is configured also to work with "pseudo names", obsolete names or alternative spellings to find matches.</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer</p>	

Tech. Requ. No. 3.2.7.28	<p>Technical Requirement:</p> <p>In the course of an alarming, it must be checked whether any other unit than the responsible one is located better geographically, so that the journey time can be reduced. The check should also include units that do not appear in the alarming proposal.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>All units and resources are displayed in the GIS; it is possible to create a specific layer for only dispatched unit, a layer specific for only available units or a comprehensive layer representing all units regarding their status.</p> <p>Given that also the incident location is represented on maps, the operator is then enabled to visually assess whether other resources, different from those suggested in the deployment proposal, can be dispatched to an incident.</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer</p>	

Tech. Requ. No. 3.2.7.29	<p>Technical Requirement:</p> <p>It must be possible for the users to create separate layers with specific information or with linked information from the basic layers. The number of additional layers must not be limited.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>The Customer is enabled to create all geo-coded layers as required. Each layer is treated separately and independently but layers can be superimposed one another to increase maps level of detail.</p> <p>Access to layers and the possibility to edit them will be based on configurable role privileges</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer</p>	

Tech. Requ. No. 3.2.7.30	<p>Technical Requirement:</p> <p>Any newly created layer must be able to be distributed to all workplaces through the system.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>Any new layer is created at server site, so the distribution to all workplaces is automatic.</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer</p>	

Tech. Requ. No. 3.2.7.31	<p>Technical Requirement:</p> <p>A proposal for the route to the incident location shall be determined by the GIS. This shall be able to be printed out in a simple way and exported into graphic format.</p>
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Bidder's technical reasons supporting compliance:

The Incident Management Application has the intelligence to provide navigation and routing functionalities and it's able to suggest the best route to get to the incident. The GIS displays such route. Route calculation takes into account road blocks, one-way lanes, ...

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.7.32	Technical Requirement: It must be possible to send the determined incident location to the responsible organization or unit by operations printer, e-mail, SMS and must be considered as measure in the alarming plan.
Bidder's technical reasons supporting compliance: The incident location can be sent via mail or SMS in the following ways: <ul style="list-style-type: none"> • As a measure (send_mail or send_SMS measure); the measure fulfilment is a manual operation required from the operator • Automatically at the CFS dispatch; the delivery occurs in the background and there is no need for the operator to carry out any action • As a xls, doc, pdf report to be manually extracted by the operator from the CFS record and than sent (mail only) <p>The incident record can be printed using a configured network printer directly from the call taking and dispatch screens "print" button</p>	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation) 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching	

Tech. Requ. No. 3.2.7.33	Technical Requirement: The geographic data of the streets and motorways in the State of Palestine are characterized by permissions and restrictions of different levels (A, B, C zones), that allow or deny transit to any vehicle, or require special authorizations to be presented at passage. (sector and/or time depending) The proposed GIS software must include a mechanism that takes in consideration this characteristic of the street database, when calculating the best route for vehicles to be dispatched during an incident and present to the dispatcher not only the shortest path, but also the clearest path (i.e. the path with less restrictions). As a consequence, for each dispatch, the incident management must be able to create the proper procedure to generate the permission request (or requests) corresponding to the path calculated. These procedures to generate permissions might imply printing of documents, making phone calls, e-mail, etc..
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Bidder's technical reasons supporting compliance:

The GIS platform has been customized to respond to this criterium: when calculating the shortest path for every resources to be engaged in an incident, the GIS platform, properly integrated with the existing system that manages permissions and restrictions, will use the information related to permission type, to provide a "weight" to the calculated route, as well as indicating which levels of security were used in that route. In this way, the information related to the permissions to be generated for that dispatch, will be passed to the CAD and elaborated to provide the most appropriate form of permission request.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.7.34

Technical Requirement:

It must be possible to display a situation report for the entire region or for the individual operational areas at any time from the information of the incident management application and the data in the GIS.

Bidder's technical reasons supporting compliance:

The incident list window in the Incident Management Application can invoke the GIS map to centre it and regulate zoom to view all existing incidents and have a global situation of ongoing emergencies.

This particular map view can be exported in PDF or image format, for reporting.

The list of all active events, begin a database view, can be exported as CSV file.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.7.35

Technical Requirement:

A filter and authorized based situation report must furthermore show the entire operational situation with all ongoing operations and associated units as well as enable the selection of a specific incident and the operational forces involved thereby.

Bidder's technical reasons supporting compliance:

We confirm that GIS can both display a filtered set of incidents and associated dispatched resources and a single incident with its dispatched resources. These different visualizations are triggered by the end user by acting on the user interface

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.7.36

Technical Requirement:

Map surfing (shifting, zooming, etc.) must be simple and intuitive, similar to over-the-top map viewers such as Google Maps, Bing Maps, etc.

Bidder's technical reasons supporting compliance:

The Map surfing has been designed to be simple and intuitive. Panning, zooming, etc. can be all operated through mouse wheel or dragging map on the screen, exactly like the most common web mapping systems.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

3.2.8 Incident Management function

Tech. Requ. No. 3.2.8.1

Technical Requirement:

The PSO responsible for the incident and/or also the nearest response team must be determined on the basis of the geographical allocation of the incident location. This proposal must be able to be changed by the coordinator, where applicable.

Bidder's technical reasons supporting compliance:

The PSO responsible for the incident can be determined based on a combination of geographical position of the incident and incident classification. It is possible to configure the system to allow the modification of this proposal from the Configurator interface.

During an emergency response the coordinator is anyhow enabled to change or extend the list of automatically proposed PSOs; these changes are logged into the system

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.2.8.2

Technical Requirement:

The following features already required for the incident creation application, are also required for the incident management application:

- o access to ERC/PSO operating procedures
- o measure lists
- o assisted data input
- o scheduled incidents
- o incident location extra documentation (attachments)

Bidder's technical reasons supporting compliance:

The Incident Creation and the Incident Management are the same application. All the features available for the incident creation are also available in the incident management context. Once dispatchers get the "ready to dispatch" CFS, they are enabled to access the whole set of information gathered during the call taking stage, including standard operating procedures.

Additional measures can be activated for dispatchers basing on the resources they have engaged for the emergency.

Assisted data input for dispatchers revolves around the possibility to pick resources outside the response plan suggested by the system, append the most correct dispatch disposition whenever needed, manually change the dispatch status whenever needed, ...

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, High level emergency management process/Dispatch of field resources

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.2.8.3

Technical Requirement:

The incident management application must provide the possibility for multiple coordinators to work on the same incident, in particular it must be possible for more than one coordinator to work on incident coordination activities

Bidder's technical reasons supporting compliance:

We confirm that it's possible for different coordinators to work on the same incident. In particular it is made possible for more than one operator to jointly work on measures, dispatches and to exchange narratives. Changes into the incident form are display in real time to all involved operators.

Is it also possible to subscribe to an incident (or to a number of incidents); in this case, even if the subscribed user is working on other emergencies, he/she can be immediately notified upon any change that has occurred in incidents for which he/she subscribed

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.2.8.4

Technical Requirement:

It must be possible to assign the incident to multiple PSO if the incident code is proposing to do so or if manually set.

Bidder's technical reasons supporting compliance:

It is possible to configure the system to assign the competence for a specific incident to more than one PSO; or the operator can manually add further PSO as competent whenever the situation dictates such an exception from the system suggested response plan

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, High level emergency management process/Incident creation

Tech. Requ. No. 3.2.8.5

Technical Requirement:

Generation of a coordination proposal on the basis of the incident code, alarm level, incident location and responsible PSO /PSOs must be performed. The coordination proposal must be based on the alarming plans available and/or stored in the incident creation application. Both regional as well as object alarm plans must be supported.

Bidder's technical reasons supporting compliance:

The Coordination proposal is done through the definition of the responsible PSO/PSOs, the identification of the proper measures and of the best resources/vehicles to assign to the incident. Measures and Responsible PSO are decided on the base of incident classification, time and incident location, by default. Other parameters (e.g. time of day, weather conditions, etc.) can be added as input parameters of the

coordination proposal configuration.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.2.8.6

Technical Requirement:

In addition to the direct involved PSOs, at least the following elements must be supported in the coordination proposal as incident resources:

- other organizations (e.g. utilities, water rescue service, mountain rescue service, etc.
- individual vehicles,
- individual persons,
- groups of persons,
- special equipment or special incident resources

Bidder's technical reasons supporting compliance:

Other than PSOs, other Agencies can be added by system configuration into the coordination proposal; in this case these Agencies are typically involved just to make them aware of the ongoing emergency without any further coordination with PSOs.

Incident details can be made available to these external Agencies in different ways: for example via read-only access to a specific user interface reporting just incidents that involve that Agency, via APIs, via SEND_MAIL measures, or producing a report of the incident which is sent by the system as an email body or attachment.

In other previous responses to requirements we have been talking about resources and not just units that can be dispatched (involved) into an incident response. Resources is a more general term including vehicles, equipment, professional staff, stations, ... all of them can be subject to a coordination proposal suggested by the system on the basis of the incident characteristics.

Depending on the standard operating procedures of the Customer resources may also include people who are not PSO's first responders (e.g. volunteers) and public equipment (e.g. public AEDs - Automated External Defibrillator)

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

30b Screenshot annex v1 paragraph 3.2.8.6

Tech. Requ. No. 3.2.8.7

Technical Requirement:

At least the following elements must be executable in the coordination proposal as measures:

- SMS send,
- SDS send,
- telephone calls and radio calls,
- sending of structured e-mails

	- sending of editable e-mails
Bidder's technical reasons supporting compliance: The required Item are executable as "measures" in the To-Do list: Specific dispatch-generated measures can be configured by Life 1 st admins and made available to dispatchers whenever a determined resource of type of resource has been engaged in a incident response	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching	

Tech. Requ. No. 3.2.8.8	Technical Requirement: The coordination proposal must be able to be adjusted by the coordinator, where applicable (removal of individual incident resources or supporting measures, addition of other incident resources or supporting measures, discard of complete proposal).
Bidder's technical reasons supporting compliance: The coordinator has the possibility to adjust the coordinator proposal. It's possible to add additional measures, or modify the proposed set of resources suggested for the on-site response. All these adjustments are made possible from the dispatch screen	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching	

Tech. Requ. No. 3.2.8.9	Technical Requirement: The individual generation of a coordination proposal by the coordinator shall be possible. For this purpose, it must be possible to conduct at least the following searches: <ul style="list-style-type: none"> - information about access ways - search for neighboring incident organization - search in the equipment (e.g. vehicles, equipment, special equipment items, etc.) - search by persons (e.g. fire brigade, other support organizations, administration, army, etc.) - important addresses (e.g. fire brigades, rescue stations, hospitals, district administrations, etc.) - locations of special operational resources (e.g. salvaging shears, crane, etc.)
Bidder's technical reasons supporting compliance: All mentioned searches are possible through the appropriate function. In the event/dispatch list view, resource's view, alarms view, etc., a filter corresponding to several parameters is present, as well as a free search tool that allows search through all fields.	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching 26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer	

30b Screenshot annex v1 paragraph 3.2.7.9

Tech. Requ. No. 3.2.8.10	Technical Requirement: It must be possible to use the search results directly in order to implement alarming or to call a telephone number. If needed, for example, it must be possible to add the operating utility directly to an incident.
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Bidder's technical reasons supporting compliance:

The search function automatically updates the real time views of the Application. All the information displayed is associated with regular functions of calling, alerting, dispatching, etc.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.2.8.11	Technical Requirement: The coordination proposal shall take the availability of special incident resources (e.g. special vehicles, special equipment at fire brigades, request of a helicopter, etc.) under national responsibility into account.
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Bidder's technical reasons supporting compliance:

It is possible to configure resources to be available in specific event types. These special resources will be part of the coordination proposal only in predefined case (incident location, classification, time of occurrence), specified by the Customer in the application configuration environment.

It is also possible to include in the coordination plan resources which are not under the direct control of the Customer, provided that the availability status of such resources is kept updated by the owning Agency using Life 1st standard APIs.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.2.8.12	Technical Requirement: Both a work-off of the coordination proposal in single steps by the coordinator as well as an automatic work-off of the entire proposal at a start of the coordination must be possible during alarming.
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Bidder's technical reasons supporting compliance:

Resource dispatch as well as PSO engagement can be fulfilled by the operator either dispatching/engaging a single resource/PSO at a time or accepting the proposal as a whole and hence dispatching/engaging resources/Agencies with a single click of the mouse.

In either circumstance the operator is entitled to change the proposal by adding further resources/Agencies to the plan; in the step-by-step scenario the operator is also entitled to skip the dispatch/engagement of one or more system-suggested resources/Agencies

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, High level emergency management process/Dispatch of field

resources

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.2.8.13

Technical Requirement:

An interruption of an ongoing alarming by e.g. a more important incident in terms of operational tactics should be possible. After completed alarming for the stopped incident, the interrupted incident should be able to be continued on request.

Bidder's technical reasons supporting compliance:

In incident creation phase, the ongoing incident can be saved and put on "hold" to be taken on later. In dispatching phase, resources that are busy in low priority situations can be intercepted for high priority cases, if needed. The Customer can configure all the rules of engagement of such resources.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.2.8.14

Technical Requirement:

It must be possible to cancel an ongoing alarming manually at any time after a safety prompt by the system.

Bidder's technical reasons supporting compliance:

Alarming can be cancelled at any time, with the appropriate dispose button, before committing the disposal of the dispatch the user is asked for confirmation.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.2.8.15

Technical Requirement:

Pre-scheduled incidents must appear on the coordinator screen a certain amount of time in advance with respect of their schedule. Once a scheduled incident is on screen the coordinator must be entitled to manage it

Bidder's technical reasons supporting compliance:

Scheduled activities will appear on the incidents screen ahead of their due time. It is possible to configure the system in order for operators to be alerted with a sound and visual notification.

The timing of the activity appearance on screen is configurable, together with the sound that is played to operators.

It is also possible to specialize a tab of the user interface to display just scheduled activities; this helps operators in distinguishing such incidents from impromptu emergencies.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.2.8.16	Technical Requirement: The proposed incident application must warn coordinators with an audible and visible alarm whenever predefined (configurable) thresholds have been exceeded in relation to the incident management (e.g. the incident has not reached the "coordination" status within a predetermined time)
Bidder's technical reasons supporting compliance: Audible and visible alarms, which are totally configurable, are used to alert concerned operators as soon as predetermined thresholds have been reached; some examples follow: <ul style="list-style-type: none"> - time exceeded for an incident to be promoted from "draft" to "ready to be dispatched" status - time exceeded for resources dispatch - time exceeded for resources to acknowledge a received dispatch - time exceeded in completing a specific measure - ... 	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching	

Tech. Requ. No. 3.2.8.17	Technical Requirement: A watchdog must exist for the call-out of an alarmed incident of any part of the PSO / resource. If a specific time period is exceeded without feedback, a message must be displayed by the incident management system for the coordinator.
Bidder's technical reasons supporting compliance: As stated in 3.2.8.16 the acknowledge of the dispatch by engaged resources can be monitored and a visual and audible alarm is triggered as soon as the specified time threshold has been exceeded. The same applies also to other response steps, such as the time to reach the target by dispatched units.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching	

Tech. Requ. No. 3.2.8.18	Technical Requirement: PSO alarmed or called out already must be identified as such, if another alarming is required in the course of a new incident. The identification must be possible to reach up to the level of operational resources (e.g. called out vehicles, special equipment).
Bidder's technical reasons supporting compliance: When a resource is alarmed, it is notified as "busy" and it is accordingly displayed in the dispatch screen as well as in the GIS maps. The same applies to PSO which can be represented on screen according to their actual involvement in	

ongoing emergencies

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / User interface / The resources list

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.2.8.19	<p>Technical Requirement:</p> <p>When the alarming is implemented, the most important alarming details must be sent to the affected responding organizations or individual persons from the PSO. At least the following must be considered:</p> <ul style="list-style-type: none"> - incident location, - incident code, - alarm level, - caller information (e.g. name, address, telephone number), - additional information (e.g. information regarding access), - other information regarding the target object (e.g. special hazards, exposition of harmful substances, precautions).
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Bidder's technical reasons supporting compliance:

When the alarming is implemented, a copy of the incident is sent to the PSO. All the information available to the Operator are made available to the Coordinator of the responding organization, basing on role permissions as defined by the end Customer.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.2.8.20	<p>Technical Requirement:</p> <p>At least the following elements must be definable in the alarming as automatic executed message with the before named data:</p> <ul style="list-style-type: none"> - SMS send, - SDS send, - sending of structured e-mails
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Bidder's technical reasons supporting compliance:

As soon as the dispatcher commits a response plan it is possible to configure the system to send a mail, a SMS or a SDS to a predefined list of recipients. This occur transparently to operators who are not asked to perform any further action

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.2.8.21	<p>Technical Requirement:</p> <p>The incident location and the ERC/PSOs or resources allocated to the incident as well as vehicles and equipment must be marked in the incident creation application as being in operation and displayed in the GIS accordingly as logically belonging together (e.g. incident</p>
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	number).
Bidder's technical reasons supporting compliance: The GIS displays the incident location together with PSOs and resources allocated to that incident with an icon representing the progress of the incident. They are also shown in the resources list and in the dispatch list, with appropriate progress bar.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / User interface / The resources list 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching 26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer	

Tech. Requ. No. 3.2.8.22	Technical Requirement: With the successful alarming of an incident, it must be identified in the incident overview as an ongoing incident.
Bidder's technical reasons supporting compliance: Alarmed incidents are marked as "dispatched" in the progress bar. Incident statuses, including "dispatched" can be customized according to Customer's specifications.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / User interface / The dispatch list	

Tech. Requ. No. 3.2.8.23	Technical Requirement: If necessary, it must be possible to raise an alarm level for an incident with subsequent re- alarming. Thereby, the additional incident resources or measures required in accordance with the stored alarming plan must be displayed and worked off in analogy to an initial alarming.
Bidder's technical reasons supporting compliance: It is possible to do subsequent re-alarming by modifying the incident code or by raising its severity. New measures and new suggested resources are automatically made available for the incident, according to the new incident characteristics.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, High level emergency management process/Incident creation 26a Emergency Response Software Solution, High level emergency management process/Dispatch of field resources 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching	

Tech. Requ. No. 3.2.8.24	Technical Requirement: Multiple alarming of PSO Locations or incident resources already in operation within the course of any re-alarming must be checked and an appropriate information issued to the call center agent and /or coordinator where
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	applicable.
Bidder's technical reasons supporting compliance: When there is a re-alarm due to the modification of the incident code, the PSOs and the resources in operation are warned of the change with appropriate information, in a similar way as the normal alarming, except that the incidents are updated rather than created from scratch.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching	

Tech. Requ. No. 3.2.8.25	Technical Requirement: An incident marked as ongoing must be able to be amended by comments or additional information by the coordinator at any time based on feedback by the operational forces on site.
Bidder's technical reasons supporting compliance: Ongoing incidents can be amended by comments or additional information by coordinator including feedback by the operational forces on site. It is possible to provide unstructured data (narratives) or structured data (e.g. status of operation of the resources in operation). These changes are made available to all other entitled operators that are working on the same incident	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching	

Tech. Requ. No. 3.2.8.26	Technical Requirement: It must be possible to allocate an incident journal to every incident, in which the actions and measures taken by the coordination agent during the relevant incident are recorded chronologically (operationally-related part of the logging). The incident journal must be able to be supplemented by manual entries and notes. A manual link with calls and radio conversations related to this operation as well as a link to the voice recording must be possible.
Bidder's technical reasons supporting compliance: The incident journal is an available feature and it's called "timeline" in the Application (ref. 3.2.6.49). It is also possible to have a timeline based on each resource managed by the PSAP; by accessing this resource timeline it is possible to verify all activities it has been involved in	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation) 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching	

Tech. Requ. No. 3.2.8.27	Technical Requirement: The incident journal must contain filter function per PSO and deliver a chronological closed numbering schema for each PSO.
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Bidder's technical reasons supporting compliance:

The journal or "timeline" contains all filters per user or PSO and every action is defined with a chronological order, with schema of actions, for each subject that participated in that incident. Every single change, input, action taken during the incident management or dispatch, will be reported here, with name of the operator and data changed (previous value, new value).

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.2.8.28

Technical Requirement:

It must be possible to cancel operations in a simple way if the alarmed unit/PSO is not available. An appropriate remark must be able to be added in the logging and the incident must be ready for new proposal.

Bidder's technical reasons supporting compliance:

If the alarmed unit is not available, it is possible to mark it as not available.

It is possible for the operator to add a justification for the disposal of a dispatch; disposal reasons can be both preconfigured or manually typed.

In the logging system it is recorded both the first request and the correction.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.2.8.29

Technical Requirement:

The incident management application must be provided with object-related, locality-related and time-related search functions. At least the following search functions must be able to be called in:

- search by persons (names, addresses, reach abilities),
- search by PSO,
- search by vehicles,
- search by operational resources,
- search by operation number,
- search by operations where specific operational resources were used,
- time-based search (time period since a specific point in time),
- location-based search.

Bidder's technical reasons supporting compliance:

It is possible to perform all these searches. The system makes it possible to carry out advanced searches on incidents, resources (units, equipment and first responders, PSOs, address-book contacts).

Advanced searches are performed by compiling the specific filter mask through which it is possible to select the desired time range, location (including an area), resource types or codes, incidents and dispatches unique IDs

The logics of search are described in 3.2.8.9

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, High level emergency management process/Dispatch of field resources

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.2.8.30

Technical Requirement:

It must be possible to log, keep and update the status messages for operational resources in incident processing. This relates in particular to the following operational resources:

- operational organizations
- vehicles
- special equipment or special operational resources
- persons

Bidder's technical reasons supporting compliance:

For each resource it is possible to configure status messages to send in the incident processing. To each status for a better understanding is associated an icon so the coordinator can have immediately an overview of the status of all resources. All status changes are logged and available also in the timeline.

An automatic check is performed by the system in order to intercept and block status incoherences.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

30b Screenshot annex v1 paragraph 3.2.8.30

Tech. Requ. No. 3.2.8.31

Technical Requirement:

The status messages are processed manually by the coordinator. However, the incident management application must include an automated analysis and update of the status messages for the later introduction of a status reporting system.

Bidder's technical reasons supporting compliance:

Status messages can be processed manually by the coordinator or automatically by an integration with radio systems or tablet devices (Life 1st mobile CAD solution) that can report in real time the status progress.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.2.8.32

Technical Requirement:

Access to all stored contact data and reachabilities in the system must be possible in the course of operation processing. The initiation of telephone and

	radio calls from the incident management application must be possible.
Bidder's technical reasons supporting compliance: It's possible to start radio and telephone calls from the application by clicking a button on the incident form, or directly in the resource screen, or even from the GIS. All contact data are searchable in the application in course of operation processing.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching	

Tech. Requ. No. 3.2.8.33	Technical Requirement: It must be possible to display files with additional information for the coordination agent (e.g. PDF and text documents, contents of a dangerous goods database, etc.) in the course of incident processing. For this purpose, a function for the automatic start of external applications incl. the handover of command line parameters (e.g. file location or web URL) must be implemented in the incident management application.
Bidder's technical reasons supporting compliance: The system provides this functionality. It is possible to associate attachments (PDF, text documents, multimedia files, URLs etc.) to incidents in relation to their classification /location/ time of occurrence. The system can be configured to open procedures automatically or to give the operator to choose whether consult these attachments.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching 30b Screenshot annex v1 paragraph 3.2.8.33	

Tech. Requ. No. 3.2.8.34	Technical Requirement: The incident management application must allow an incident record closure only if predetermined conditions have been met, in particular: <ul style="list-style-type: none"> - all resources have communicated their return to the station - an incident coordination has been appended to the incident
Bidder's technical reasons supporting compliance: It is possible to configure the incident management application in a way that an incident record closure is not possible if predetermined conditions are not met. The requested conditions are supported, plus others (e.g. all mandatory measures have been fulfilled)	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, High level emergency management process/Dispatch of field resources 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching	

Tech. Requ. No. 3.2.8.35	Technical Requirement: After the entry of all return reports, the incident management application
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	must conclude the incident automatically and issue a relevant message to the coordination agent. The manual closure of an incident (also in the case of incomplete return reports) must be possible and it must be possible to add a relevant remark.
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Bidder's technical reasons supporting compliance:

It is possible to configure the incident management application in a way that incidents are automatically closed after the entry of all return reports. Manual closure can be configured to require a reason for closure, selectable from a list of configurable reasons, or manually typed by the operator.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, High level emergency management process/Dispatch of field resources

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.2.8.36	Technical Requirement: All actions and processes in the course of the acceptance of an incident, coordination, alarming and operation processing (e.g. reception of emergency call, creation of incident, all operationally relevant actions, status changes, alarming, re-alarming, etc.) must be recorded with a time stamp (consisting of the date and time), the associated user, as well as the relevant workplace under the observation of data-protection-relevant standards.
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Bidder's technical reasons supporting compliance:

All actions are logged with timestamp, recorded in the logs of the system and also reported in the human-readable timeline, with the name of the operator who performed the action. In case of modification of information, the previous and current values are also reported.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.2.8.37	Technical Requirement: The operational log must be prepared automatically by the incident management application
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Bidder's technical reasons supporting compliance:

The log is generated automatically; no further operation is needed. This also applies to the incident timeline.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.2.8.38	Technical Requirement:
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	The records must not get lost in the event of system failures. A retrospective change of recorded data must be made impossible.
Bidder's technical reasons supporting compliance: Through replication and backup of databases, records are never lost. Logs can be accessed only by authorized users and in read-only mode. No change is whatsoever allowed on logs.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching	

Tech. Requ. No. 3.2.8.39	Technical Requirement: Retrospective logging of incidents must be possible, in order to enter incidents into the system retrospectively that could not be recorded immediately. It must be possible to amend incomplete entries with a reference to retrospective completion.
Bidder's technical reasons supporting compliance: Not urgent data input into incidents can be done retrospectively. A delayed completion of non critical data into an incident can be remarked using for example appropriate "tags" made available by the system.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation) 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching	

Tech. Requ. No. 3.2.8.40	Technical Requirement: The logging must be performed centrally within the system. It must be possible to process log entries beyond day limits. Temporary log entries or files (for queuing or caching) must be removed from the hard disk after a configurable time period and a completed archiving.
Bidder's technical reasons supporting compliance: The system is a web-based application. All logs are stored centrally within the system. Temporary, "run time" log entries are removed after a configurable time.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture	

Tech. Requ. No. 3.2.8.41	Technical Requirement: The log data must be held in the system for a period of 2 years, in order to enable a quick access to data from this time period in the case of need.
Bidder's technical reasons supporting compliance: The system is provided with enough disk space to keep data for such amount of time. Databases do not have a limitation and can be configured to provide any data retention that is needed.	
Bidder's cross references to supporting information in Technical Bid:	

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

Tech. Requ. No. 3.2.8.42	Technical Requirement: A search in the log for e.g. incomplete operational data or the time sequence of operations with a change of operation processing should be possible.
Bidder's technical reasons supporting compliance: Log searches are possible both at application log level and at the timeline level. Logs can be searched for using any of their standard fields (timestamp, userID, incident ID, ...)	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation) 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture	

Tech. Requ. No. 3.2.8.43	Technical Requirement: A simple administrative option (time or occasion- related search and analysis function) of the log should be provided for any query or reconstruction of operations at a later stage
Bidder's technical reasons supporting compliance: The administrator can utilize search and analysis of the log and reconstruct the operation of a later stage. The incident timeline is designed to help administrators look through an incident history in a easier way than a regular text log file.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture	

Tech. Requ. No. 3.2.8.44	Technical Requirement: A printout of the logging data must also be provided on request, either in incremental form (related to all new data sets since the last printout) or all data sets within a specific period of time selectable by the user.
Bidder's technical reasons supporting compliance: Logs can be exported/printed in both required ways: incrementally or full export/print over a given timespan	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture	

Tech. Requ. No. 3.2.8.45	Technical Requirement: An export of the log or the search results in a data format that is readable for an office program for takeover and further processing
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	must be provided.
Bidder's technical reasons supporting compliance: It is possible to export the log in csv format in order to provide further processing. Also, APIs can be used by a third party software to extract log data and timeline data in XML or JSON formats.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture	

Tech. Requ. No. 3.2.8.46	Technical Requirement: The recordings of the voice documentation allocated to an operation should be able to be retrieved through the incident management application
Bidder's technical reasons supporting compliance: The Incident Creation and Management Application possesses an automatic tag to link a recording to an incident and a button representing the integration for playback.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)	

Tech. Requ. No. 3.2.8.47	Technical Requirement: The loggings of the incident management application in conjunction with the operationally-related voice recording of the NG- 911 communication system must result in a full documentation of all operationally-relevant activities of the emergency operations center.
Bidder's technical reasons supporting compliance: The Incident Management and Creation Application represent the core platform where all data are aggregated. Geolocation, recordings, Alarms, etc. are connected to the incident through software integrations, and help reconstructing every step taken for the creation and resolution of an incident.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture	

3.2.9 Field Records Management

Tech. Requ. No. 3.2.9.1	Technical Requirement: The Application must support at least Google Android and Apple iOS operative systems
Bidder's technical reasons supporting compliance: The Field Records Management is available for both Google Android and Apple iOS devices	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Mobile CAD	

Tech. Requ. No. 3.2.9.2	Technical Requirement: There must be no license-limitations on the number of installations respective active applications
Bidder's technical reasons supporting compliance: We confirm that the proposal does not include any limit for the Field Records Management solution in terms of number of mobile devices and number of concurrent sessions	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Mobile CAD	

Tech. Requ. No. 3.2.9.3	Technical Requirement: The Supplier must provide a Mobile Device Management (MDM) platform software, for the remote management of tablets linked to the ERC
Bidder's technical reasons supporting compliance: Mobile Device Management (MDM) Software gives you control to secure, manage and monitor any mobile devices that access corporate data.	
Bidder's technical reasons supporting compliance: Mobile Device Manager Plus - Datasheet	

Tech. Requ. No. 3.2.9.4	Technical Requirement: It must be able to store data locally, in cases of loss of 3G/4G/Wi-Fi connection
Bidder's technical reasons supporting compliance: The App can store data locally. In case of loss of 3G/4G/Wi-Fi the last data saved are still displayed.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Mobile CAD	

Tech. Requ. No. 3.2.9.5	Technical Requirement: It must be associated with a vehicle using the vehicle's identification number
Bidder's technical reasons supporting compliance: The login to the app requires the end user to identify the vehicle to which the app has to be associated till next logout.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Mobile CAD / End user login	

Tech. Requ. No. 3.2.9.6	Technical Requirement: It must allow user access via username, password and vehicle code
Bidder's technical reasons supporting compliance: The login to the app requires the end user to identify the vehicle to which the app has to be associated till next logout.	

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Mobile CAD / End user login

Tech. Requ. No. 3.2.9.7

Technical Requirement:

It must be able to receive incident information via push notification, with minimum

- location of the incident
- motivation of the incident
- information about the caller
- any note taken at the dispatching center in the given incident

Bidder's technical reasons supporting compliance:

The mobile CAD app can receive data from the CAD system both via web services and push notification information. All the required set of information is made available to app end users who are dispatched to the emergency.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Mobile CAD / Dispatch notification and ancillary functions

Tech. Requ. No. 3.2.9.8

Technical Requirement:

It must be able to navigate the vehicle where the tablet is installed using the vehicle's GPS coordinates and the incident destination address

Bidder's technical reasons supporting compliance:

Upon accepting a dispatch, the app provides turn-by-turn GPS navigation for the resource to reach the incident's location

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Mobile CAD / Dispatch notification and ancillary functions

Tech. Requ. No. 3.2.9.9

Technical Requirement:

It must be able to add notes to the incident form received by the dispatching center and send back the added information to the Dispatching center as enrichment of the incident data.

Bidder's technical reasons supporting compliance:

It's possible to add notes from the App and send them to the PSAP under the form of narratives

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Mobile CAD / Dispatch notification and ancillary functions

Tech. Requ. No. 3.2.9.10	Technical Requirement: It must be able to send dispatch status advancement reports via encoded statuses. <ul style="list-style-type: none"> - Encoded statuses must correspond to what is currently available in the existing incident management software - Encoded statuses must be configurable, using the master configurator interface of the current existing incident management software - Encoded statuses must be represented by a graphical icon and a text line describing the status that is being sent to the current existing incident management software - Encoded statuses must be sent in real time, with the appropriate time stamp. In case of loss of 3G/4G/Wi-Fi connection, the status message must be stored temporarily on the device, to be sent when the connection is re-established, but maintaining the correct time-stamp of origin
Bidder's technical reasons supporting compliance: The encoded status are configured in the incident management application and are send to the App after the authentication. In this way the encoded status correspond always to what is currently available in the incident management software. The status are represented by icon on the App.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Mobile CAD/ Dispatch notification and ancillary functions	

Tech. Requ. No. 3.2.9.11	Technical Requirement: It must be able to capture pictures and videos to be attached to the incident and send them to the existing incident management software
Bidder's technical reasons supporting compliance: The mobile CAD app can capture videos and pictures and send them to the incident management software.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Mobile CAD / Dispatch notification and ancillary functions	

Tech. Requ. No. 3.2.9.12	Technical Requirement: It must include a list of cases managed by the vehicle where the tablet is installed, with their current status, for at least the last 24 hours of service
Bidder's technical reasons supporting compliance: The case managed are available for a configurable period of time	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Mobile CAD / Dispatch notification and ancillary functions	

Tech. Requ. No. 3.2.9.13	<p>Technical Requirement:</p> <p>It must include a customizable template for reports. The template has to have at least the following features:</p> <ul style="list-style-type: none"> ■ It must be editable by the tablet user, using fields such as: <ul style="list-style-type: none"> - Radio buttons - Check buttons - Drop-down menus - Free text boxes - Speech-to-text functionality for free text boxes - Custom reports such as colored fields, etc. ■ It must correspond to the original paper reports, structured in editable fields <ul style="list-style-type: none"> - Each currently used reporting will be analyzed by the Supplier and be transported digitally, using the template inside the tablet app - The digitalized report must be attached to the incident and sent to the existing incident management software - The digitalized report must be in PDF format, and printable on any printer
<p>Bidder's technical reasons supporting compliance:</p> <p>During the configuration phase it will be possible to configure the report template according to the pdf template provided by the customer.</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / Mobile CAD / Dispatch notification and ancillary functions</p>	

Tech. Requ. No. 3.2.9.14	<p>Technical Requirement:</p> <p>It must include a chat functionality to allow the vehicle crew members to chat with the Dispatching center, through the existing incident management software and with other crew members from other vehicles, associated to the same incident.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>A chat functionality is included. The chat is integrated with the incident management software.</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / Mobile CAD / Dispatch notification and ancillary functions</p>	

3.2.10 Quality management support functions

Tech. Requ. No. 3.2.10.1	<p>Technical Requirement:</p> <p>The software must have a quality control (audit) function that allows evaluation of the incident information according to the set criteria, both before the incident is closed and when the incident is closed.</p>
<p>Bidder's technical reasons supporting compliance:</p>	

The software solution allows you to perform searches and reports through the proposed business intelligence environment. Through this functionality it will be possible to check how effectively incidents have been managed over a chosen timeframe.

From the quality assurance perspective it has to be highlighted that operators (call takers and dispatchers) are not entitled to modify admin-defined attributes of incidents:

- incident classification layers' taxonomies cannot be modified
- Q&A scripts cannot be modified
- Measures cannot be modified
- Resources cannot be deleted or created
- Addresses are input assisted; nonetheless it is possible for an end user to input an address which does not exist in the geoDB. The system automatically marks this address as an exception; only entitled users (e.g. admins) can lately add the new geo-coded object into the geoDB
- ...

At the system level, it is possible to define which fields of the CFS record have to be considered compulsory; if any of these fields has not filled in by operators, the CAD system does not allow the CFS closure presenting the end user with the relevant warning on missing data.

Furthermore, the CFS tagging functionality has been devised to provide PSAP with an additional tool that helps in assessing when and where exceptions have been applied to standard operating procedures.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

26a Emergency Response Software Solution, Business intelligence

Tech. Requ. No. 3.2.10.2	Technical Requirement: The quality control (audit) function (completed forms) shall not affect (e.g. change or delete) the information and timestamps recorded on the incident.
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Bidder's technical reasons supporting compliance:

Functionalities mentioned in 3.2.10.1 do not interfere with core CAD services, hence they do not affect emergency management processes.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

26a Emergency Response Software Solution, Business intelligence

Tech. Requ. No. 3.2.10.3	Technical Requirement: The quality control (audit) function shall be able to be performed at shift level (e.g. shift manager), unit level (e.g. E-1Ma unit manager or authorized employee) and centrally (e.g. quality control unit employee).
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Bidder's technical reasons supporting compliance:

Access to the platform for quality control can be very granular in terms of user profiles and for each user or group of users.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

26a Emergency Response Software Solution, Business intelligence

Tech. Requ. No. 3.2.10.4

Technical Requirement:

The quality control (audit) function shall be able to process the data at least from the following sources:

- call history data
- incident creation data (incident classification, incident location, caller location)
- assistance history
- appropriateness of incident data (rate of proper incident classification, incident modification history)

Bidder's technical reasons supporting compliance:

The solution ensures data processing for the all the data sources mentioned in the requirement

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

26a Emergency Response Software Solution, Business intelligence

Tech. Requ. No. 3.2.10.5

Technical Requirement:

The quality control (audit) function shall be able to provide report at least about the following levels:

- general (full ERC) quality / performance report
- group quality / performance report (based on selected group characteristics, e.g. site, skill or language, shift etc.)
- individual quality / performance report per user
- process appropriateness report (e.g. the ration of modified incidents by coordinator vs. completed incidents)

Bidder's technical reasons supporting compliance:

The solution offers the possibility of correlate data of different kind to generate various types of quality controls. By accessing to the full stack of logs produced by the Incident Management platform, quality analysis can be set up to aggregate data in the forms required by the requirement, plus other combinations of reporting. Examples of KPIs that can be monitored via the proposed quality monitor system follow:

- Call pick-up time
- Call duration

- Time to dispatch CFS to PSOs
- Time for PSOs to dispatch units
- Time for units to fulfil assigned tasks
- Incorrect classifications applied to CFS
- Accuracy of incident localization
- ...

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Business intelligence

Tech. Requ. No. 3.2.10.6	Technical Requirement: The reporting tool itself can be combined with the tool supporting the monitoring and alarm handling function (item 3.4.1), but its inputs, algorithms, functions, report formats, presentation mode shall be separately configurable for system monitoring and quality management purposes.
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Bidder's technical reasons supporting compliance:

The quality management solution is independent from the monitoring solution and alarm handling, but it can combine data inputs from several sources to perform the quality analysis required by the Client.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Business intelligence

3.3 Architectural Requirements to be met by the Information System

3.3.1 Incident Creation and Management

Tech. Requ. No. 3.3.1.1	Technical Requirement: The incident creation and management application must use a Data base management System (DBMS) which is centrally located on the to be provided servers.
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Bidder's technical reasons supporting compliance:

The proposed database is Microsoft SQL Server Standard Edition. The DBMS will be centrally located on the provided servers.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

26a Emergency Response Software Solution, Communications platform / NG-911 Communications functions

Tech. Requ. No. 3.3.1.2	<p>Technical Requirement:</p> <p>With the DBMS sufficient licensing to support all functions and applications provided within this Service must be included. The licensing must also cover any upgrade/update free of charge of the DBMS when required for the operation of the provided software. Software assurance control must be provided.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>The proposed database is Microsoft SQL Server Standard Edition. The DBMS will be centrally located on the provided servers.</p>	
<p>Bidder's technical reasons supporting compliance:</p> <p>26a Emergency Response Software Solution</p>	

Tech. Requ. No. 3.3.1.3	<p>Technical Requirement:</p> <p>The incident creation and management DBMS has to support all functions as specified under 1.2.6 and 1.2.8</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>The incident creation and management DBMS support all the features made available by the incident creation and management application</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture</p>	

Tech. Requ. No. 3.3.1.4	<p>Technical Requirement:</p> <p>The DBMS must ensure that a malfunction of any component of the hardware will not result in a malfunction of the DBMS and will not cause a malfunction of the software nor the need for users to re-connect to the software.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>We will use Microsoft SQL Server Standard Edition. The configuration of the database will include a shared-disks cluster architecture with active node + standby node with automatic failover between nodes.</p> <p>One DB node will be hosted in a server different than the server that hosts the second DB node; in this way a server failure will not result in the complete unavailability of the DBMS.</p> <p>Microsoft SQL Server AlwaysOn Failover Cluster is the SQL native feature that will be used to setup the cluster</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>please refer to https://docs.microsoft.com/en-us/sql/sql-server/failover-clusters/windows/always-on-failover-cluster-instances-sql-server?view=sql-server-ver15</p>	

Tech. Requ. No. 3.3.1.5	<p>Technical Requirement:</p> <p>The DBMS architecture must ensure that the second data-center contains a secondary DBMS that operates analogously and parallel manner to the host and has all the relevant software information provided by asynchronous</p>
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	replication. Information replication delay in the absence of network failures shall not exceed 1 minute. The software shall use the primary DBMS in normal mode and only automatically breaks down to use the secondary DBMS if it fails.
Bidder's technical reasons supporting compliance: The secondary site database will be an asynchronous replica of the primary site DB thanks to SQL native feature SQL Basic Availability Group. In case of primary database unavailability, the proposed system will revert to the secondary site database and preserve the possibility for 911 operators to manage emergency calls.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.1.6	Technical Requirement: The type of DBMS must be licensed to support the under 1.3.1.6 described functions, e.g. offering full capability of clustering and replication (e.g. enterprise version)
Bidder's technical reasons supporting compliance: The proposed edition of DBMS technology ensures the possibility to simultaneously have a shared disks clustering architecture and a replica of data towards the remote secondary site	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.1.7	Technical Requirement: DBMS must ensure a remote backup DB (DB snapshots) which provides storage of at least 7 days of DB copies.
Bidder's technical reasons supporting compliance: This requirement is fulfilled using the backup native engine of SQL. Backup jobs will be scheduled and retained using SQL backup engine and according to the requirement.	
Bidder's cross references to supporting information in Technical Bid: Please refer to https://docs.microsoft.com/en-us/sql/t-sql/statements/backup-transact-sql?view=sql-server-ver15	

3.3.2 GIS System Requirements

Tech. Requ. No. 3.3.2.1	Technical Requirement: The GIS shall use different offline as well as online data sources (open street maps, google, as well as customer provided datasets)
Bidder's technical reasons supporting compliance:	

The proposed GIS uses public online data sources (OpenStreet maps, Google maps, etc. are included) and local sources as well (TomTom maps are supported). It's possible to easily add Customer's own layers of several formats, both online and offline.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

30b Screenshot annex v1 paragraph 3.3.2.1

Tech. Requ. No. 3.3.2.2

Technical Requirement:

The GIS System must be installed in a redundant way, following the failover/redundancy concept so that a failure in one server site does not affect the overall availability of GIS related functions. .

Bidder's technical reasons supporting compliance:

The GIS component will seat behind load balancers leveraging their capability of applying high availability on real servers. Please note that the use of virtualization will also provide hypervisor HA protection to all real servers.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / CAD sizing and recovery architecture

Tech. Requ. No. 3.3.2.3

Technical Requirement:

A GIS System must be delivered which support all functional requirements as defined in item 1.2.7.

Bidder's technical reasons supporting compliance:

All required functionalities are supported

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.3.2.4

Technical Requirement:

A check and enhancement by the administrator of address or other permanent / semi-permanent layer data must be possible before the layer is imported into and activated by the GIS Application for the users. Amendments may include e.g. scanned or digitally available building site charts, fire protection plans, ground plans of major buildings, etc.

Bidder's technical reasons supporting compliance:

A phase of pre-loading and data elaboration before the loading of new layers is foreseen by the GIS. In this phase, the Customer may carry out amendments and changes to elements of the map layer

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.3.2.5	<p>Technical Requirement:</p> <p>The software must identify incoming AML messages (in both Binary and ASCII formats) from HTTP, SMS, SIP, Android and iOS sources, decode them, and provide the calling operator with additional caller location information, graphically represented on the map, and the coordinates in the text field on the event log</p>
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<p>Bidder's technical reasons supporting compliance:</p> <p>The identification of AML messages from HTTPS, SMS, Android, and iOS sources and its decoding, is a functionality provided by the Geolocation plugin of the Incident Creation and Management Application.</p> <p>The Incident Application, integrated with the GIS, sends any Geolocation data to be represented on the map, to the GIS application. AML geolocation data is included among the sets of data shared between the two applications. The GIS system represents geolocation on the map.</p> <p>Bidder's cross references to supporting information in Technical Bid:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / Automatic caller localization</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer</p>	
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Tech. Requ. No. 3.3.2.6	<p>Technical Requirement:</p> <p>The software must accept Network based location mobile network operators provided statements (Push) and queries (Pull) supplying the emergency number location using the signal propagation time methods (e.g. Cell ID Timing Advance GSM 2G network, Cell ID Round Trip Time, UMTS 3G and LTE 4G), process and store in a database, and visualize depending on the data received by displaying a caller location on a digital map in a point, circle, arch or other forms at the workstation where the specific emergency call was answered. This requirement also applies to the location of SMS senders received within the scope of the Pull requests.</p>
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<p>Bidder's technical reasons supporting compliance:</p> <p>Geolocation data is managed by the Incident Application, as part of Incident creation and management. The GIS is capable of representing any geolocation source, in any shape provided by the source (circles, semi-circles, points, etc.).</p> <p>Bidder's cross references to supporting information in Technical Bid:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / Automatic caller localization / Network based location (ALI)</p>	
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Tech. Requ. No. 3.3.2.7	<p>Technical Requirement:</p> <p>The GIS module of the proposed system must support both raster and vector data</p> <p>Bidder's technical reasons supporting compliance:</p> <p>GIS supports both raster and vector data. For example, the TomTom local maps are usually provided in</p>
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vector format and represented on the map, graphically

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.3.2.8

Technical Requirement:

The module must be compatible with WGS84 coordinates system (and variants)

Bidder's technical reasons supporting compliance:

The system uses WGS84 coordinates system as well as other formats, through the use of a converter tool.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.3.2.9

Technical Requirement:

The maps viewer must support the following digital map formats:

- o GIF (Graphics Interchange Format);
- o SID (Multiresolution Seamless Image Database);
- o TIFF (Tagged Image File);
- o JPEG (Joint Photographic Experts Group);
- o PNG (Portable Network Graphics);
- o and other digital maps formats

Bidder's technical reasons supporting compliance:

The proposed GIS platform supports the required formats

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.3.2.10

Technical Requirement:

Automated rendering of ESRI shapefile (*.shp) format data on a digital map must be ensured. The GIS shall also allow the import/export of Google KMZ and KML files to share enhanced data.

Bidder's technical reasons supporting compliance:

The proposed GIS platform supports the required formats

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

Tech. Requ. No. 3.3.2.11

Technical Requirement:

A search function for addresses, localities and point of interests (PoI) must be available; the search must be possible by inserting the target object in one unstructured line (as for example in Google Maps, Bing Maps, ...).

Bidder's technical reasons supporting compliance:

- Google Like search (default)- it is possible to carry out the toponymy search made available by Google. In the field you can enter locations, toponyms, other types of POIs. On the map the search result point will be highlighted by a special marker. There are also option to give priority to the match coming from the POI.
- The standard toponymy search tool alternative to Google like search allows to search by entering the location and toponym. It is also possible to specify the house number or a second toponym for the determination of the intersection. By clicking on the search button, the map moves to the selected toponym and the list of house numbers is shown. By selecting a group of house numbers it is also possible to activate the route calculation, using the selected section as the starting point or activate the Street View display.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

30b Screenshot Annex v1

Tech. Requ. No. 3.3.2.12

Technical Requirement:

Possible matches must be offered in a list that is dynamically updated along with search line insertion completion. The operator must be able to select the required object from the provided list. When selecting an object, it must be possible to move structured address information, including the location of the object found, to the location of the event or the location of the caller.

Bidder's technical reasons supporting compliance:

The google-like search with automatic completion is described in 3.2.11 As for the centering and selection of location, the selected element is displayed with coordinates and a button to import data in the incident form open inside the Incident Creation Application.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

30b Screenshot annex v1 paragraph 3.3.2.12

Tech. Requ. No. 3.3.2.13

Technical Requirement:

Maps scale ratios must be at least the following: 1: 2,000,000, 1: 1000000, 1: 500000, 1: 250000, 1: 100000, 1: 50000, 1: 25000, 1: 10000, 1: 5000, 1: 2000.

Bidder's technical reasons supporting compliance:

It is possible to have all these scale ratios using the zoom in- zoom out functions. The GIS system has 18 level of zooms. If needed it is possible to correct the scale of the zoom levels, during the configuration phase.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer

30b Screenshot annex v1 paragraph 3.3.2.13

Tech. Requ. No. 3.3.2.14	Technical Requirement: GIS file formats must be readable from other GIS systems in order to perform conversions between different formats.
Bidder's technical reasons supporting compliance: The GIS file formats are described in the referenced document below. The GIS proposed does not have any proprietary format, because it is based on an open source platform: all formats are readable and convertible in the most used GIS formats from other platforms.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution chapter 7.1 26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer	

Tech. Requ. No. 3.3.2.15	Technical Requirement: Geographic information and information management must comply to ISO TC211 and recommended CEN TC287 standards.
Bidder's technical reasons supporting compliance: The proposed GIS is developed using an opensource Geoserver as basis of development. This GeoServer provides functionalities to create interoperable Spatial Data Infrastructures (SDI) according to standards edited by Open Geospatial Consortium (OGC) and ISO Technical Committee 211 (ISO TC 211) and CEN TC287. GeoServer has been created to ingest, manage and serve geospatial data both vector (called feature by OGC) and raster (called gridcoverage by OGC) as well as to create and disseminate georeferenced maps obtained by overlaying rendered versions of the above mentioned data according to styling rules coded following specific standards.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer	

Tech. Requ. No. 3.3.2.16	Technical Requirement: The GIS system must offer the basic data layers including projection, scale, accuracy, and resolution.
Bidder's technical reasons supporting compliance: All base layers provide the parameters of accuracy, projection and scale and resolution on the screen.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer	

Tech. Requ. No. 3.3.2.17	Technical Requirement: Real time mapping of geospatial data must be enabled in order to offer the
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	best understanding of the geographic patterns.
Bidder's technical reasons supporting compliance: The GIS is capable of importing data layers that are updated in real time and can be used for analysing geographic patterns. An example of this, is the Waze application integration: Waze is used by drivers for car navigation functions. It can also be used to register incidents on the streets and roadblocks. The GIS can collect these data and display them on the screen for a projection of real-time traffic scenarios and a prediction of potential trafficked areas in certain moments of the day.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer 30b Screenshot annex v1 paragraph 3.3.2.17	

Tech. Requ. No. 3.3.2.18	Technical Requirement: The module must use Palestine_1923 digital raster and orthophotography maps when provided by ERC in the format of georeferenced spatial data sets.
Bidder's technical reasons supporting compliance: It is possible to use orthophotography; Palestine_1923 digital raster will be added to the layer set available to operators once they are provided by ERC	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / GIS and maps viewer	

3.3.3 Network management, system monitoring and system administration solution

Tech. Requ. No. 3.3.3.1	Technical Requirement: A Network management, system monitoring and system administration solution must be provided to fulfil all required functions as specified in 1.2. and described for all network equipment and modules as a parts of entire 9-1-1 System.
Bidder's technical reasons supporting compliance: Junos Space	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution - 7.3 Network component	

Tech. Requ. No. 3.3.3.2	Technical Requirement: The solution must be available from the administration workstations as well as from other workplaces depending on the rights of the person logged in.
Bidder's technical reasons supporting compliance:	

Junos Space provides web access for administration and rules per user

Bidder's technical reasons supporting compliance:
26a Emergency Response Software Solution - 7.3 Network component

Tech.
Requ.
No. 3.3.3.3

Technical Requirement:
The solution shall be available for 6 concurrent users.

Bidder's technical reasons supporting compliance:
Junos Space provides unlimited number of users

Bidder's technical reasons supporting compliance:
26a Emergency Response Software Solution - 7.3 Network component

Tech.
Requ.
No. 3.3.3.4

Technical Requirement:
The access authority system shall support different user categories that can be allocated to individual users and based on which it is defined what functionalities can be inspected and/or changed by certain users.

Bidder's technical reasons supporting compliance:

The offered solution supports different roles that can be assigned to individual users. Each role can have a specific functionality depending on the customer's needs

Bidder's technical reasons supporting compliance:

System Center 2019 Datasheet

UniNMS – Datasheet

Junos Space Datasheet

Tech.
Requ.
No. 3.3.3.5

Technical Requirement:
At least the following user categories shall be possible:
- system engineer
- system administrator
- administrator (administration)

Bidder's technical reasons supporting compliance:
Each role or category and access rights can be defined by the customer. Initially the system will be configured with the following categories:

- system engineer
- system administrator
- administrator (administration)

Bidder's technical reasons supporting compliance:

System Center 2019 Datasheet

UniNMS – Datasheet

Junos Space Datasheet

Tech.
Requ.
No. 3.3.3.6

Technical Requirement:

The solution must be operable through menus and menu structures. Need for command line entries for operation of the abovementioned functions should be avoided.

Bidder's technical reasons supporting compliance:

The offered solution is operable through menus and menu structures. Command line for operation of the abovementioned functions will not be permissible.

Bidder's technical reasons supporting compliance:

System Center 2019 Datasheet

UniNMS – Datasheet

Junos Space Datasheet

Tech.
Requ.
No. 3.3.3.7

Technical Requirement:

The solution shall also be able to be operated via remote access.

Bidder's technical reasons supporting compliance:

The offered solution can be accessed and operated via remote access

Bidder's technical reasons supporting compliance:

System Center 2019 Datasheet

UniNMS – Datasheet

Junos Space Datasheet

Tech.
Requ.
No. 3.3.3.8

Technical Requirement:

Fault conditions shall be communicated by means of SNMP traps. All identified faults in all components of the system shall be logged using the time stamp of their occurrence and disappearance as well as stating the type of fault in plain text.

Bidder's technical reasons supporting compliance:

Fault conditions will be communicated by means of SNMP traps. All identified faults in all components of the system will be logged using the time stamp of their occurrence and disappearance as well as stating the type of fault in plain text.

Bidder's technical reasons supporting compliance:
 System Center 2019 Datasheet

UniNMS – Datasheet

Junos Space Datasheet

Tech. Requ. No. 3.3.3.9	Technical Requirement: Specific fault conditions configurable by the client must be displayed at the main workplaces (Communication system operator client).
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Bidder's technical reasons supporting compliance:
 Bidder's technical reasons supporting compliance:
 Specific fault conditions can be configured and displayed at the main workplaces in specific

Bidder's technical reasons supporting compliance:
 System Center 2019 Datasheet

UniNMS – Datasheet

Junos Space Datasheet

Tech. Requ. No. 3.3.3.10	Technical Requirement: E-mail and SMS messages shall be sent to a group of persons configurable by the client (e.g. system administrators) automatically by the system if specific faults or fault conditions configurable by the client occur. For this purpose, the solution should be provided with an interface to the e-mail server and to the SMS gateway.
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Bidder's technical reasons supporting compliance:
 Bidder's technical reasons supporting compliance:
 A specific notification channel will be created for E-mail and SMS messages that will be sent to group of persons configurable by the client (e.g. system administrators). The notifications are sent automatically by the system if specific faults or fault conditions configurable by the client occur. The solution has an interface with the ability to connect to e-mail server and to the SMS gateway.

Bidder's technical reasons supporting compliance:
 System Center 2019 Datasheet

UniNMS – Datasheet

Junos Space Datasheet

Tech. Requ. No. 3.3.3.11	Technical Requirement: The details of the monitored fault conditions as well as the escalations must be defined in the detailed design with rules and procedures assigned to the specific categories and roles.
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Bidder's technical reasons supporting compliance:

Bidder's technical reasons supporting compliance:

The details of the monitored fault conditions as well as the escalations will be defined in the detailed design with rules and procedures assigned to the specific categories and roles

Bidder's technical reasons supporting compliance:

System Center 2019 Datasheet

UniNMS – Datasheet

Junos Space Datasheet

3.3.4 Logging

Tech. Requ. No. 3.3.4.1	<p>Technical Requirement:</p> <p>The basic data of all calls through the Voice Communication as well as all fault conditions are logged in the NMS.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>Information on each call and the associated metadata will be logged by the PABX module, logs are stored both locally and sent to a configurable syslog facility</p> <p>Unlogged will accept, collect, store and analyses log data.</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>Datasheet-UniLoggerA4.pdf</p>	

Tech. Requ. No. 3.3.4.2	<p>Technical Requirement:</p> <p>All call-related parameters for all call types must be computed and stored. The following information should be recorded at least for every voice call:</p> <ul style="list-style-type: none"> • call type (emergency call, telephone call, VoIP call, etc.), • time of the beginning and the end of outgoing and incoming calls, • reason for the end of the call (hang-up of either party, expiry of a timer, etc.), • waiting time of incoming calls from signalization at an incoming interface to acceptance by an agent, • workplace at which an incoming call was processed and/or from which an outgoing call was set up incl. information about the agent logged in there, • the caller data of incoming calls identified by the Voice Communication.
<p>Bidder's technical reasons supporting compliance:</p> <p>A specific configuration is implemented for call logging at the CTI/PABX level. Such configuration allows the definition of which attribute or metadata attribute shall be logged. All attribute indicated are available.</p> <p>UniLogger will accept, collect and stored those data.</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>Datasheet-UniLoggerA4.pdf</p>	

Tech. Requ. No. 3.3.4.3	Technical Requirement: Logging should be performed in the form of SysLog. The information must be stored in access- protected files and/or databases.
Bidder's technical reasons supporting compliance: Logging in PABX and CTI can be configured to forward to Syslog servers. UniLogger accept, collects, stores log data in access-protected files/database and analyses log data	
Bidder's cross references to supporting information in Technical Bid: Datasheet-UniLoggerA4.pdf	

Tech. Requ. No. 3.3.4.4	Technical Requirement: All information must be logged in plain text.
Bidder's technical reasons supporting compliance: All logged information is in plain text	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture 26a Emergency Response Software Solution, Communications platform / The phone system	

3.3.5 Quality management solution

Tech. Requ. No. 3.3.5.1	Technical Requirement: A Quality management solution shall be delivered, providing all required functions as specified
Bidder's technical reasons supporting compliance: The quality management solution will be compliance with requirement specified in 3.2.10	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Business intelligence	

Tech. Requ. No. 3.3.5.2	Technical Requirement: The solution must be available from the administration workstations as well as from other workplaces depending on the rights of the person logged in.
Bidder's technical reasons supporting compliance: The solution is web based and will be available from the administration workstations as well as from other workplaces depending on the rights of the person logged in	
Bidder's cross references to supporting information in Technical Bid:	

26a Emergency Response Software Solution, Business intelligence

Tech. Requ. No. 3.3.5.3	Technical Requirement: The solution shall be available for 2 concurrent users
Bidder's technical reasons supporting compliance: The license of the solution is independent from the number of the concurrent users, which have no limitation.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution.docx chapter 9	

Tech. Requ. No. 3.3.5.4	Technical Requirement: The access authority system shall support different user categories that can be allocated to individual users and based on which it is defined what functionalities can be inspected and/or changed by certain users.
Bidder's technical reasons supporting compliance: You can assign roles to users that determine the level of access to the platform and the tasks that they can perform. The platform comes with a set of default roles, and you can also create your own custom roles, tailored to the needs of your organization. Roles can contain one or more capabilities that provide access to specific parts of the platform. A user that has a role assigned to them receives all of the capabilities that are associated with the role. Roles can inherit capabilities from other roles	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Business intelligence	

Tech. Requ. No. 3.3.5.5	Technical Requirement: At least the following user categories shall be possible: <ul style="list-style-type: none"> • system engineer • quality analyst • quality manager • supervisor
Bidder's technical reasons supporting compliance: By default, the platform comes with the roles predefined, like admin and so on. You can create custom roles that inherit from the built-in roles and modify the custom roles as required.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Business intelligence	

Tech. Requ. No. 3.3.5.6	Technical Requirement: The solution must be operable through menus and menu structures. Command line entries for operation of the abovementioned functions are not permissible.
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Bidder's technical reasons supporting compliance:

Web interface is the primary interface for searching, problem investigation, reporting on results, and administrating the platform. The initial page is an interactive portal to the data and applications that you can access. The main parts is the Home page, the Explore panel, and the bar. The menu bar is customizable.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Business intelligence

Tech. Requ. No. 3.3.5.7

Technical Requirement:

The solution shall also be able to be operated via remote access.

Bidder's technical reasons supporting compliance:

The solution provided is a web application, therefore accessible from anywhere within the Client's network.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Business intelligence

Tech. Requ. No. 3.3.5.8

Technical Requirement:

The solution shall contain an intelligent data analysis and report generation tool, which physically may be common with the reporting tool of the Network management, system monitoring and system administration solution, but functionally separate. The Bidder is expected to describe its proposed solution

Bidder's technical reasons supporting compliance:

The quality management solution is a separate function from the network and IT environment management/monitoring/admin consoles. Following the need-to-know principle, quality managers may or may not be entitled to access also to reports regarding the underlying infrastructure, and viceversa.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Business intelligence

3.3.6 Basic system requirements and basic system architecture

Tech. Requ. No. 3.3.6.1

Technical Requirement:

The NG-911 system shall operate as a single virtual operation center for the entire State

Bidder's technical reasons supporting compliance:

Given the full IP nature of the proposed system and the presence of a shared DB engine among Agencies, the whole NG-911 system has been designed with a national scope. Some examples follows:

- All incoming calls will be delivered to the centralized ESINET SBC function, regardless of the origin of the call; all outbound calls will exit from the centralized ESINET SBC function, regardless of the destination of the call
- The same CAD and Communication systems will be used by all involved Agencies, each of which represents a Tenant of these applications; mutual data exchange will be defined on the basis of

actual needs of Agencies according to the “need-to-know” practices

- All centers (national a regional) of an Agency may share a subset of CAD data (e.g. the phonebook, incident classifications, Q&A scripts, measures, ...) and, in case of specific jurisdictions to be applied, other sets of data (e.g. resources) may be configured to be used by just entitled end users
- Depending on each Agency’s operating procedures, the assigned emergency call queues may differ on a regional basis in a way that a call originated within a certain region will be presented to that region’s operators first, and to the national center and/or other regions as a fall back or during specific time of the day or day of the week in which regional centers are not staffed or under-staffed

Bidder’s technical reasons supporting compliance:

26a Emergency Response Software Solution, High level emergency management process

Tech. Requ. No. 3.3.6.2

Technical Requirement:

The NG-911 system shall have geo-redundancy. The central emergency system NG-911 has to be located in a primary and remote secondary geographical location, as business contingency site.

Bidder’s technical reasons supporting compliance:

The proposed solution includes the disaster recovery architecture for all components of the NG911 platform: the CAD system, the ESINet and the IP PBX/CTI/Recording function

Bidder’s technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / CAD sizing and recovery architecture

Tech. Requ. No. 3.3.6.3

Technical Requirement:

The proposed NG-911 system must be a Modified off-the-Shelf (MOTS) based on COTS (commercial off-the-shelf) software

Bidder’s technical reasons supporting compliance:

We confirm that the proposal is based on a MOTS application

Bidder’s technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

Tech. Requ. No. 3.3.6.4

Technical Requirement:

The NG-911 system shall be based on TCP/IP Network concept (ESInet).

Bidder’s technical reasons supporting compliance:

ESINet is among the main components of the proposed NG-911 solution

Bidder’s technical reasons supporting compliance:

26a Emergency Response Software Solution, High level emergency management process / Communications

26a Emergency Response Software Solution, Communications platform

Tech. Requ. No. 3.3.6.5	Technical Requirement: The NG-911 system must support to interface with the telecom service providers via dedicated SIP Trunk connections (Pure IP-System)
Bidder's technical reasons supporting compliance: The ESINet includes the SBC function whose purpose is to terminate SIP trunks to/from Service Providers. All subsequent call signaling and media exchange within the NG-911 system are kept IP based	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, High level emergency management process / Communications 26a Emergency Response Software Solution, Communications platform	

Tech. Requ. No. 3.3.6.6	Technical Requirement: The NG-911 system must be able to handle different types of incoming calls, as minimum 5 different emergency numbers which might be split each to local level (prefix based) and at least 10 different service numbers (non-emergency) again split on local level.
Bidder's technical reasons supporting compliance: The proposed system is able to manage different emergency and non-emergency numbers, there is no limit on their quantity. Depending on the format used by Service providers in delivering emergency calls, each B-number can be used by the ESINet and subsequently by the IP PBX to define the correct call queue / ACD rule to be applied	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, High level emergency management process/Communications 26a Emergency Response Software Solution, High level emergency management process/Incident creation	

Tech. Requ. No. 3.3.6.7	Technical Requirement: The NG-911 system must be able to handle different types of outgoing calls with individual CLIs (calling line identifications) settings so that the called party can determine which organization (e.g. with a dedicated head-number) is calling. Each organization will use specific CLIs. All outgoing calls must be handled via dedicated SIP trunks – whereas therefore the number per SIP trunk has to be set to a specific number.
Bidder's technical reasons supporting compliance: The proposed communication platform dial plan will be designed to identify Agencies via their associated extension range. Digit translation into public numbers in case of outgoing calls or incoming service calls will be based on the same Agency-driven pattern; in this case the entitled service provider is asked to provide Agency-specific public number ranges. We confirm that the proposed system will route outgoing calls over SIP trunks via SBC.	
Bidder's technical reasons supporting compliance: Configuration interface / IP PBX configuration environment / Dial plan - example	

Tech. Requ. No. 3.3.6.8	<p>Technical Requirement:</p> <p>The provided solutions shall be IP/VoIP based such that all communication between applications and components shall be by means of IP communication. The primary connection of each system is IP. Voice, Audio and Video data shall be transmitted between the systems by means of standardized protocols.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>All traffic exchanged between system's component is TCP / IP, including API/CTI integrations, call signaling (SIP), media exchange (RTP and WebRTC), SMS ingestion and delivery (SMPP)</p>	
<p>Bidder's technical reasons supporting compliance:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture</p> <p>26a Emergency Response Software Solution, Communications platform</p>	

Tech. Requ. No. 3.3.6.9	<p>Technical Requirement:</p> <p>All proposed IP systems have to be at least IPv4 (optional IPv6) capable and are required to support quality of service (QoS) for VoIP and other critical network protocols.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>All traffic exchanged between system's component is TCP / IP (version 4). IP Ver.6 is supported, as well.</p> <p>The LAN and WAN design will assure QoS for real time traffic.</p>	
<p>Bidder's technical reasons supporting compliance:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture</p> <p>26a Emergency Response Software Solution, Communications platform</p>	

Tech. Requ.No. 3.3.6.10	<p>Technical Requirement:</p> <p>All emergency services (police, medical, fire and civil protection) will use the single call handling, incident creation, geographical information system and incident management service platform of the NG-9-1-1 system.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>Agencies involved in NG-911 will be different Tenants of the same application; this holds true for both the communication platform and for the CAD system</p>	
<p>Bidder's technical reasons supporting compliance:</p> <p>26a Emergency Response Software Solution, High level emergency management process</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture</p> <p>26a Emergency Response Software Solution, Communications platform</p>	

Tech.	Technical Requirement:
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Requ. No. 3.3.6.11	The NG-911 system shall support working places for Call-Takers, emergency service coordinators (dispatcher), supervisor, of each special emergency service - police, emergency medical services, fire and civil protection services.
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Bidder's technical reasons supporting compliance:

All working places and user roles depicted in the "REQUIREMENTS OF THE INFORMATION SYSTEM" documentation are managed by the same platform composed by the communication platform and for the CAD system. From the Authentication and Authorization perspective the two platforms will use the same Identity Management module, namely Life 1st Identity Manager based on OAuth2 standard.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, High level emergency management process 26a Emergency Response Software Solution, Configuration interface / Tenancies, roles and users creation

Tech. Requ. No. 3.3.6.12	<p>Technical Requirement:</p> <p>The software platform must have dedicated user groups and follow the multitenancy logics (one platform to be used by any user belonging to any group), keeping data protected by appropriate data access rules and user rights for both read and write or exchange operations.</p>
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Bidder's technical reasons supporting compliance:

The same CAD and Communication systems will be used by all involved Agencies, each of which represents a Tenant of these applications; mutual data exchange will be defined on the basis of actual needs of Agencies according to the "need-to-know" practices

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, High level emergency management process

Tech. Requ. No. 3.3.6.13	<p>Technical Requirement:</p> <p>The proposed system must allow the creation of at least the following user groups (roles) with appropriate sets of authorizations:</p> <ul style="list-style-type: none"> - System administrator/engineer: It is the highest category of users that can create other categories, add user groups to the system, assign them relevant functions; - Supervisor: Can view and manage events of assigned emergency call operators within the same organization; - NG-911 Call-taker: Receiving calls and collect incident data - Specialist Call Taker: PSO Personnel, as support and observer to the NG-911 Call- Taker - Coordinator/ Dispatcher: PSO Personnel which manages the incident after creation - Specialist Call Taker and Coordinator – combined PSO Function - External user. Read-only access to the system possibly filtered on the geographical area of competence
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Bidder's technical reasons supporting compliance:

Life 1st Identity Manager allows to create all roles that are needed each of them with its own specific

characteristics in terms of privileges that are object of system level configurations.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

26a Emergency Response Software Solution, Configuration interface / Tenancies, roles and users creation

Tech. Requ. No. 3.3.6.14	<p>Technical Requirement:</p> <p>The proposed system must be designed according to the following principles:</p> <ul style="list-style-type: none"> - must have a Web-service architecture with stateless services; - must micro service architecture - must support virtualization of application servers - must rely on load-balancing mechanisms
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Bidder's technical reasons supporting compliance:

The proposed solution is compliant with this requirement

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

26a Emergency Response Software Solution, Communications platform

Tech. Requ. No. 3.3.6.15	<p>Technical Requirement:</p> <p>The communication system shall serve any type of communication, CTI and desktop phone, SMS communicator, ACD, IVR and the recording of any communication.</p>
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Bidder's technical reasons supporting compliance:

The communication system is compliant with this requirement

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Communications platform

Tech. Requ. No. 3.3.6.16	<p>Technical Requirement:</p> <p>The NG-911 system shall assure customized display and data entry for each emergency service.</p>
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Bidder's technical reasons supporting compliance:

Tenant based configurations are possible both in the CAD system and, thanks to use of OAuth2 claims, they can also be applied to the IP PBX in order for example to limit call queues and recordings visibility when not authorized

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

26a Emergency Response Software Solution, Communications platform / The phone system

Tech. Requ. No. 3.3.6.17	Technical Requirement: The NG-911 system shall assure agency specific coordination and dispatching functions.
Bidder's technical reasons supporting compliance: Standard operating procedures and operational data are Tenant based, this means that each PSO is allowed to access its own data and procedures. Should exceptions be requested, it is possible to configure the CAD system to fulfil them.	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Configuration interface / Tenancies, roles and users creation 26a Emergency Response Software Solution, Configuration interface / CAD Application	

Tech. Requ. No. 3.3.6.18	Technical Requirement: The NG-911 system shall assure controlled and coordinated responses of all assigned emergency services.
Bidder's technical reasons supporting compliance: 911 operating procedures can include the involvement of more than one PSO for specific incidents localization and/or classification, and/or time of occurrence	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation) 26a Emergency Response Software Solution, Configuration interface / CAD Application	

Tech. Requ. No. 3.3.6.19	Technical Requirement: The NG-911 system incident management shall assure real-time sharing of any updates applied on incidents or responses from all included emergency services.
Bidder's technical reasons supporting compliance: Incident attributes synchronization among users, including users belonging to different Tenants in case of parent/child CFS, is made possible via the use of Websocket protocol	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation) 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture	

Tech. Requ. No. 3.3.6.20	Technical Requirement: The NG-911 system shall assure logging of every data change made by the user, connected systems or interfaces.
Bidder's technical reasons supporting compliance: The proposed CAD system is compliant with this requirement	
Bidder's technical reasons supporting compliance:	

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

Tech. Requ. No. 3.3.6.21	Technical Requirement: The NG-911 system shall assure a clear presentation of the changes in the incident record made by the users, connected systems or interfaces.
Bidder's technical reasons supporting compliance: Life 1 st timeline assures end users to access all updates a CFS underwent throughout its lifespan	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation) 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching	

Tech. Requ. No. 3.3.6.22	Technical Requirement: The emergency system NG-911 shall assure analytics of the basic activities with a capability to be upgraded in later stages to more sophisticated ones.
Bidder's technical reasons supporting compliance: Statistics and reports are provided to quality managers in order to improve overall services governance	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Business Intelligence	

Tech. Requ. No. 3.3.6.23	Technical Requirement: The system shall be designed in a modular manner such that expansion and upgrades of the system are easily done.
Bidder's technical reasons supporting compliance: The proposed solution is based on web applications which allows horizontal scalability; thanks to the underlying virtualization layer it will be possible to increase system performances by adding the needed virtual machines for just the micro-services that have to be improved	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture 26a Emergency Response Software Solution, Communications platform	

Tech. Requ. No. 3.3.6.24	Technical Requirement: All data transmitted in the systems shall be delivered from the origin service to the destination services (push services).
Bidder's technical reasons supporting compliance: The proposed solution is compliant with this requirement.	
Bidder's technical reasons supporting compliance:	

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

Tech. Requ. No. 3.3.6.25	<p>Technical Requirement:</p> <p>The software platform must be based on a Service- Oriented Architecture (SOA), which provides open Application Programming Interfaces (APIs) and is accessible through Chrome and Firefox or equivalent web browsers. No software (with the purpose of managing any functions of the system) shall be installed in the computer work stations. Compatibility with different platforms must be ensured (e.g. Windows computers, Linux computers or equivalent).</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>The proposed solution is compliant with this requirement.</p>	
<p>Bidder's technical reasons supporting compliance:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture</p>	

3.3.7 Basic technologies requirements

Tech. Requ. No. 3.3.7.1	<p>Technical Requirement:</p> <p>All systems and selected components shall fulfil the requirements of “green ICT” as far as this is technical possible. The goals of green ICT are to reduce the use of hazardous materials, maximize energy efficiency during the product's lifetime, and promote the recyclability or biodegradability of defunct products and factory waste.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>All used equipment comply with international standards for green ICT</p>	
<p>Bidder's technical reasons supporting compliance:</p>	
Tech. Requ. No. 3.3.7.2	<p>Technical Requirement:</p> <p>All components which are installed close the working places shall be as silent as possible. In other words, reduced noise (optional fan less) (solid state) devices which allow non-stop operation shall be selected if it is technical possible.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>All components which are installed close the working places will be as silent as possible. The desktops are TCO Certified which helps meet environmental and social challenges associated with electronics.</p>	
<p>Bidder's technical reasons supporting compliance:</p> <p>ThinkStation_P360_Ultra_Datasheet_-_Final</p>	

Tech. Requ. No. 3.3.7.3	<p>Technical Requirement:</p> <p>All used displays shall be usable under daylight and faint light conditions.</p>
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	Therefore, all displays must be non-reflecting, shall provide optimum contrast levels and must have adjustable brightness optional automatically depending on light conditions.
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Bidder's technical reasons supporting compliance:

All used displays will be usable under daylight and faint light conditions. All displays are non-reflecting, and will provide optimum contrast levels and have adjustable brightness.

Bidder's technical reasons supporting compliance:

Samsung T45F 24" Business Monitor Datasheet

Tech. Requ. No. 3.3.7.4	Technical Requirement: Hardware shall be designed for 24h / 7 days operation.
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Bidder's technical reasons supporting compliance:

All hardware is designed for 24h / 7 days operation in controlled conditions.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Configuration interface

Tech. Requ. No. 3.3.7.5	Technical Requirement: Each application shall be synchronized via an NTP Server which must be delivered incl. all accessories on each Server Site.
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Bidder's technical reasons supporting compliance:

Each application and system will be synchronized with the domain controller which will be placed in the domain network on the primary and secondary site. The domain controller has the ability to synchronize with an outside approved NTP server and set the time on all local systems within the network.

Bidder's technical reasons supporting compliance:

ae.pool.ntp.org

Tech. Requ. No. 3.3.7.6	Technical Requirement: It shall be possible that different User Interfaces are available depending on the experience of the user which is working on the system.
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Bidder's technical reasons supporting compliance:

The software is designed to be customized in terms of graphical user interface, so different types of users can see their information represented in the most appropriate way.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

26a Emergency Response Software Solution, Configuration interface / Tenancies, roles and users creation

Tech. Requ. No. 3.3.7.7	Technical Requirement: Special attention shall be paid to simple operation of the operations control
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	<p>system. For this purpose, the following must be fulfilled:</p> <ul style="list-style-type: none"> - clearly structured contents, reduced number of windows, - continuous display and color concept (same items and functionalities are displayed in the same way in different windows), - expressive captions of fields, keys, command buttons, column headers, etc. - no overload by e.g. overlapping windows
<p>Bidder's technical reasons supporting compliance:</p> <p>Microsoft Fluent UI practices have been applied in the design of the user interface. They take into consideration all elements mentioned in the requirement, for the best user interface for web pages, Windows applications and others, as well</p>	
<p>Bidder's technical reasons supporting compliance:</p> <p>https://developer.microsoft.com/en-us/fluentui#/</p>	

Tech. Requ. No. 3.3.7.8	<p>Technical Requirement:</p> <p>The basic functionalities (at least NG-911 call- taking and incident creation) of the operations control system shall also be able to be operated by persons who are not on duty regularly.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>The basic functionalities of a call taking form are all contained in a single interface, with an intuitive workflow and online help to be carried out.</p>	
<p>Bidder's technical reasons supporting compliance:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / User interface</p>	

Tech. Requ. No. 3.3.7.9	<p>Technical Requirement:</p> <p>The software user computerized workstation interface design shall be consistent with Microsoft Fluent Design System, ISO 9241 or other similar recommendations.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>Please refer to req. no. 3.3.7.7</p>	
<p>Bidder's technical reasons supporting compliance:</p> <p>Please refer to req. no. 3.3.7.7</p>	

Tech. Requ. No. 3.3.7.10	<p>Technical Requirement:</p> <p>The applications shall have the possibility to print out the information from the screen to a configured printer.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>It is possible from the proposed applications to extract data in a predefined template and launch a print job from within the UI.</p>	
<p>Bidder's technical reasons supporting compliance:</p>	

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

3.3.8 Compliance with standards

Tech. Requ. No. 3.3.8.1	<p>Technical Requirement:</p> <p>All client PCs of the specific workstation/user group (e.g. call-taker, coordinator, ...) shall be built with identical hardware and software, all servers shall be based on the same hardware platform.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>All client PCs of the specific workstation/user group (e.g. call-taker, coordinator, ...) will be built with identical hardware and software.</p> <p>All servers will be based on the same hardware platform</p>	
<p>Bidder's technical reasons supporting compliance:</p> <p>ThinkStation_P360_Ultra_Datasheet</p> <p>Lenovo ThinkSystem SR630 v2</p>	

Tech. Requ. No. 3.3.8.2	<p>Technical Requirement:</p> <p>The system shall be compliant to the following IETF RFCs:</p> <p>RFC3261 Session Initiation Protocol RFC2327 Session Description Protocol</p> <p>RFC2976 The SIP INFO Method</p> <p>RFC3262 Reliability of Provisional Responses in the Session Initiation Protocol (SIP)</p> <p>RFC3311 The Session Initiation Protocol (SIP) UPDATE Method</p> <p>RFC3264 An Offer/Answer Model with the Session Description Protocol (SDP)</p> <p>RFC 1889 RTP: A Transport Protocol for Real-Time Applications</p> <p>RFC 1890 RTP Profile for Audio and Video Conferences with Minimal Control</p> <p>RFC 3389 Real-time Transport Protocol (RTP) Payload for Comfort Noise (CN)</p> <p>RFC 3550 RTP: A Transport Protocol for Real-Time Applications</p> <p>RFC 2833 RTP Payload for DTMF Digits, Telephony Tones and Telephony Signals</p> <p>RFC3863 Presence Information Data Format (PIDF)</p> <p>RFC4479 A Data Model for Presence</p> <p>RFC4119 A Presence-based GEOPRIV Location Object Format</p> <p>RFC5491 GEOPRIV Presence Information Data Format Location Object (PIDF-LO) Usage Clarification, Considerations, and Recommendations</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>The proposed system which includes the ESINet and the IP PBX is SIP based and is compliant with RFC3261, RFC2327 (and subsequent RFC 4566), RFC2976, RFC3262, RFC3311, RFC3264 and for RTP/Voice transport is</p>	

compliant with RFC1889, RFC1890 (and subsequent RFC 3551), RFC3389, RFC3550 (which obsoletes 1889). DTMF (tone) transmission is compliant with RFC2833 and subsequent RFC 4733.

The PABX module has been used at the plug-tests organised at ETSI premises, in France, with the scope of getting approved for standard compliancy with all the NG112 protocols and is compliant with the RFC regarding position, presence e geolocalization, notably RFC3863, RFC4479, RFC4119 and RFC5491

Bidder's technical reasons supporting compliance:

Cisco Catalyst 8200

26a Emergency Response Software Solution, Communications platform

NextGen ESInet specifications

Tech. Requ. No. 3.3.8.3

Technical Requirement:

The system shall be compliant to the following ITU recommendations:

G.711 Pulse code modulation (PCM) of voice frequencies

G.729 Coding of speech at 8 kbit/s using conjugate-structure algebraic-code-excited linear-prediction T.38 Procedures for real-time Group 3

facsimile communication over IP networks Optional: G.168 Digital network echo cancellers

Bidder's technical reasons supporting compliance:

The proposed system supports different types of codecs including G.711, G.729 and fax via T.38 and can be configured to provide echo cancellation via G.168

Bidder's technical reasons supporting compliance:

Cisco Catalyst 8200

VoiceBeat Datasheet

Tech. Requ. No. 3.3.8.4

Technical Requirement:

The system shall be compliant to the following documents:

3GPP TS 26.267 Release 14; Data Transfer by ETSI Short Message Peer to Peer (SMPP) Release v3.4; EENA supporting documents on functioning of a Public Safety Answering service; Directives 2002/EC/22 and 2009/EC/136; European Electronic Communications Code EECC;

Bidder's technical reasons supporting compliance:

The proposed system is compliant with the required standard:

- 3GPP TS 26.267 Release 14 - eCall data transfer
- Short Message Peer to Peer (SMPP) Release v3.4; it will be used as the front end interface by the proposed SMS gateway
- Directives 2002/EC/22 and 2009/EC/136
- European Electronic Communications Code EECC
- EENA supporting documents on functioning of a Public Safety Answering service

Bidder's technical reasons supporting compliance:

Evidence is provided throughout the attached document "26a Emergency Response Software Solution"

3.3.9 Environmental Requirements

Tech. Requ. No. 3.3.9.1	Technical Requirement: All servers shall be mounted at the server areas provided. The server rooms will maintain proper climate and power supplies
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Bidder's technical reasons supporting compliance:
 Server rooms must be equipped with cooling devices and proper power supplies for the servers to function properly.

Bidder's technical reasons supporting compliance:
 Server rooms infrastructure is out of scope, only the server equipment mentioned in the RFP will be provided.

Tech. Requ. No. 3.3.9.2	Technical Requirement: The operational rooms of the NG-911 system will have acoustic noise reducing elements, the provided equipment shall comply and seamless fit into the given environment.
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Bidder's technical reasons supporting compliance:
 Server rooms infrastructure is out of scope, only the server equipment mentioned in the RFP will be provided.

Bidder's technical reasons supporting compliance:
 Server rooms infrastructure is out of scope, only the server equipment mentioned in the RFP will be provided.

Tech. Requ. No. 3.3.9.3	Technical Requirement: The operational rooms of the NG-911 system will have a controlled climate, the provided system shall support this environment.
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Bidder's technical reasons supporting compliance:
 Server rooms infrastructure is out of scope, only the server equipment mentioned in the RFP will be provided.

Provided systems will operate in standard data center environment. No special requirement for the environment is needed.

Bidder's technical reasons supporting compliance:

Tech. Requ. No. 3.3.9.4	Technical Requirement: All systems and components are required to be able to operate non-
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	stop under typical climatic conditions (ambient temperature range from 10°C up to 35°C and humidity range from 20% to 80%).
Bidder's technical reasons supporting compliance: All equipment will function within required climatic conditions	
Bidder's technical reasons supporting compliance: Refer to equipment data sheets.	

Tech. Requ. No. 3.3.9.5	Technical Requirement: The individual PSO will each operate their own environment (locations), which will be a standard office setup without special IT conditions (e.g. No Air Conditioning, or Filter of Air), the system shall support that operations mode.
Bidder's technical reasons supporting compliance: equipment are designed to run in a standard office environment	
Bidder's technical reasons supporting compliance:	

3.3.10 Reliability and availability, redundancy policy

Tech. Requ. No. 3.3.10.1	Technical Requirement: The service of the whole system shall be available 24/7 without any interruption. The availability requirement from total system point of view, shall be at least 99.99%. This requirement is to be interpreted as follows: The probability of total system break down due to any failure/error of any system components must not be more than 0.01%, i.e. the cumulative down time of the total system due to failure must not exceed 52 minutes in a year.
Bidder's technical reasons supporting compliance: The system is designed without a single point of failure and will be available 24/7 without any interruption. The resulting availability from the total system point of view (hardware and software), will be at least 99.99%.	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture 26a Emergency Response Software Solution, Communications platform	

Tech. Requ. No. 3.3.10.2	Technical Requirement: All system critical components shall provide high availability by implementing the components as a distributed system which shares the work load among the installed components. The system shall not contain standby components (either hot or cold) which need to be manually
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	activated in case of failure of the primary system.
Bidder's technical reasons supporting compliance: The architecture of the proposed systems (ESINet, CAD) is based on load-sharing principles with an intelligent load balancer function orchestrating the establishment of sessions. In such cases where a active/hot standby cluster is present (IP PBX, ESRP, DB), the fail-over among nodes is automatic with no need to any manual local recovery activity	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture 26a Emergency Response Software Solution, Communications platform	

Tech. Requ. No. 3.3.10.3	Technical Requirement: If the distributed system falls apart due to loss of connectivity or any other reason ("split brain"), then there has to be a simple and automatic process of re-joining the separated subsystems once the connectivity is restored. This process of joining the subsystems has to be without service interruption and shall not have any impact on the service availability for the user.
Bidder's technical reasons supporting compliance: The technology used to limit occurrences of split-brain situations and to recover from such situation is Microsoft Failover Cluster Microsoft System Center supports recovery procedure.	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / CAD sizing and recovery architecture	

Tech. Requ. No. 3.3.10.4	Technical Requirement: Network services, like time synchronization, access control, monitoring, component management etc. must be able to operate independently for each service and must also be synchronized over the whole system.
Bidder's technical reasons supporting compliance: Network services will be configured to run independently and also synchronized over the whole system.	
Bidder's technical reasons supporting compliance:	

Tech. Requ. No. 3.3.10.5	Technical Requirement: Updates and patches must be installed and tested on an independent test environment before applied to the live environment.
Bidder's technical reasons supporting compliance: A test/training environment has been included in the overall solution sizing; this environment will also be	

used to run pre-production tests on software updates

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / CAD sizing and recovery architecture

Tech. Requ. No. 3.3.10.6

Technical Requirement:

In case of system failures after updates or changes of the configuration it must be possible to restore the last tested and operational software version and configuration.

Bidder's technical reasons supporting compliance:

In case of system failures after updates or changes of the configuration the system will have the possibility to roll-back to the last tested and operational software version and configuration.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

Tech. Requ. No. 3.3.10.7

Technical Requirement:

The system shall be configured that in case of a failure of a single component the alternate components- if available- takes over automatically without human intervention (automated failover).

Bidder's technical reasons supporting compliance:

Applications modules are compliant with this requirement since they are designed as clusters of microservices either working in load balancing mode or in active/standby mode with automatic failover.

Data center components are designed in a high availability topology.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

26a Emergency Response Software Solution, Communications platform

Tech. Requ. No. 3.3.10.8

Technical Requirement:

All critical system components shall have a typical Mean Time Before Failure (MTBF) of at least 5 years. For components and parts which cannot fulfil this requirement individual redundancy has to be installed.

Bidder's technical reasons supporting compliance:

All critical system components will have a typical Mean Time Before Failure (MTBF) of at least 5 years. For components and parts which cannot fulfil this requirement individual redundancy will be installed.

Bidder's technical reasons supporting compliance:

30a Emergency Response Software Solution

3.3.11 IP Based Telephony exchange service (multimedia), CTI, ACD and IVR

Tech. Requ. No. 3.3.11.1	Technical Requirement: The servers and databases of the Communication system shall be installed at 9-1-1 Server areas as described in the Site Table. The servers must be monitored and, in the event of a failure of the servers and/or databases, the Voice Communication must continue to operate automatically and without interruption using the servers of a different server location. Manual switching must not be necessary in the event of a failure.
Bidder's technical reasons supporting compliance: Communication platform modules are compliant with this requirement since they are designed as clusters of microservices either working in load balancing mode or in active/standby mode. Both modes imply automatic failover based on a monitoring that is performed by the load balancer in the first case and by cluster-internal logics in the second case. The database is provided in active/stand-by cluster with automatic failover; monitoring is performed by Microsoft Failover Clustering.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture 26a Emergency Response Software Solution, Communications platform	
Tech. Requ. No. 3.3.11.2	Technical Requirement: The databases of the Voice Communication at the locations must have exactly the same data status at any point in time. Data must therefore always be written into the databases of both locations. Short-term differences in the data records are permissible, insofar as the system integrity is not endangered thereby. However, the interval for data matching between the two databases must not be greater than one minute.
Bidder's technical reasons supporting compliance: Database is continuously replicated from main to secondary site. Replication delay is typically less than a minute.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications platform / DB CLUSTERING AND REPLICATION	

Tech. Requ. No. 3.3.11.3	Technical Requirement: If calls are handed over through media gateways, then these must be implemented redundantly using automatic switching.
Bidder's technical reasons supporting compliance: According to requirements, all calls (inbound and outbound) are SIP based. This means that no media gateway is made necessary at the border of the NG-911. The proposed solution does not require internal media gateways either. At protection of the NG-911 perimeter SBC are deployed, as a clustered (high availability) pair of devices in each data center.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications platform	

Tech. Requ. No. 3.3.11.4	Technical Requirement: The multiple connections from the telecom provider to the peering points of the ESInet provide redundancy for call delivery. In principle all calls shall be delivered to the server site which is active for the call processing. If this is not possible due to problems with the connection the call has to be automatically routed to the other site so that emergency calls are always delivered to the center even if some of the connections are broken (provider handover). This holds also true if some of the Telecom Gateways have a failure or the connections to a single center are overloaded.
Bidder's technical reasons supporting compliance: The SIP infrastructure is configured at the SBC level in order to provide automatic failover to a different server location in case of trunks unavailability or in case a Service Provider's location becomes unavailable. Monitoring of trunks health is performed using SIP methods	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications platform / The Border Gateway Function	

Tech. Requ. No. 3.3.11.5	Technical Requirement: Any duplication of hardware at the locations beyond that should not be required. The components for which duplication is nevertheless required or expedient must be offered in duplicate design and this circumstance must be pointed out clearly in the offer.
Bidder's technical reasons supporting compliance: Hardware components that have been duplicated are those that concur to meet requirement no. 3.3.10.1 and similar: SBC, servers, LAN switches, firewalls, load balancers, SAN switches.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Data Center infrastructure	

Tech. Requ. No. 3.3.11.6	Technical Requirement: The NG-911 communication system must be able to monitor the availability of every external telecommunications connection – especial the telecom provider interfaces- and switch to the backup levels automatically in the event of any failure.
Bidder's technical reasons supporting compliance: Health-checks of SIP trunks will be performed by SBC using SIP methods, namely SIP OPTIONS. Same health-checks will be performed by SBC towards ESRP and IP PBX.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications platform / The Border Gateway Function	

Tech. Requ. No. 3.3.11.7	Technical Requirement: In the case of a limited external connection, the access authorizations for external calls must be limited for extensions. In this case only the coordinators of the PSO Location shall be able set up external/outgoing calls.
Bidder's technical reasons supporting compliance: The PABX can be configured in order to allow only a certain number of outbound calls, when this number is reached only extensions with specific privileges are allowed to place calls	
Bidder's cross references to supporting information in Technical Bid: VoiceBeat Datasheet	

Tech. Requ. No. 3.3.11.8	Technical Requirement: Limitations of the external connection must be signaled on the user interfaces of the workplaces. In addition, an error message must be sent to the NMS (network management system) with the information about the limited reachability of the emergency operations center. Upon re-availability of the external telecommunications connection, this condition must be signaled in the same way.
Bidder's technical reasons supporting compliance: When the configured limit of external connections (see req. no. 3.3.11.7) is met, a notification is presented to end users' phonebar	
Bidder's cross references to supporting information in Technical Bid: VoiceBeat Datasheet	

Tech. Requ. No. 3.3.11.9	Technical Requirement: The Voice Communication is controlled and managed by a switching server, which must be designed redundantly. Call setups between any terminals (between internal VoIP devices respective from/to external VoIP telephones, for example) are signaled and initiated through the switching server.
Bidder's technical reasons supporting compliance:	

The IP PBX (supported by ESRP for incoming calls) play the role depicted in the requirement	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications platform / The phone system 26a Emergency Response Software Solution, Communications platform / The Emergency Service Routing Proxy	

Tech. Requ. No. 3.3.11.10	Technical Requirement: The switching servers must be designed in such a way that one of the servers can fail and the other server takes over all of the tasks of the failed server fully automatically. The hardware of the switching servers must be monitored by the NMS.
	Bidder's technical reasons supporting compliance: As all solution's modules, the IP PBX and ESRP have been proposed as composed by a cluster of components with automatic failover. These elements can be object to monitoring for real time or near real time notifications in case of fault/anomalies.
	Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications platform / The phone system 26a Emergency Response Software Solution, Communications platform / The Emergency Service Routing Proxy

Tech. Requ. No. 3.3.11.11	Technical Requirement: The SIP proxy server shall be used for VoIP telephony in the Internet, in order to accept emergency calls from VoIP telephones directly in the Internet in future without the detour via multiple intermediate networks. The SIP proxy serves as application layer firewall and is realized outside of the firewall of the emergency operations center LAN. The hardware of all SIP proxy servers must be monitored by the NMS.
	Bidder's technical reasons supporting compliance: The SIP Proxy server, also called ESRP is part of the design of the ESInet and is developed and standardized to recognize multiple sources of VoIP calls, including the future full VoIP telephony over internet. For security purposes ESRP is accompanied by the SBC which constitutes the actual border element of the infrastructure. These elements can be object to monitoring for real time or near real time notifications in case of fault/anomalies.
	Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications platform / The Border Gateway Function 26a Emergency Response Software Solution, Communications platform / The Emergency Service Routing Proxy

3.3.12 Recording System

Tech. Requ. No. 3.3.11.12	<p>Technical Requirement:</p> <p>The general hardware specifications apply for the other servers of the NG-911 communication system. The hardware of all servers must be monitored by the NMS. The Bidder must specify which other servers are used and which applications run on these servers.</p>
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Bidder's technical reasons supporting compliance:

The IP PBX suite which includes the recording function are virtual machines hosted in the virtualized infrastructure that can be monitored via SNMP. Standard monitoring systems, such as those proposed for NG-911, can then be used to keep these components monitored

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Communications platform / The phone system

Tech. Requ. No. 3.3.12.1	<p>Technical Requirement:</p> <p>A single – redundant recording platform has to be delivered</p>
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Bidder's technical reasons supporting compliance:

The proposed recording function is duplicated in active/standby cluster in each site. It constitutes a single platform together with the IP PBX and CTI server

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Communications platform / The phone system

Tech. Requ. No. 3.3.12.2	<p>Technical Requirement:</p> <p>The Recoding system has to support all functions as specified in item 3.2.5.</p>
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Bidder's technical reasons supporting compliance:

The Recoding system support all functions as specified in item 3.2.5

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications platform / The phone system

Tech. Requ. No. 3.3.12.3	<p>Technical Requirement:</p> <p>The voice documentation system must permanently record all conversations.</p>
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Bidder's technical reasons supporting compliance:

All calls involving an IP PBX extension will be recorded, should they be internal or external calls and regardless of their direction. Media acquisition is based on network level configurations (i.e. mirror ports on LAN switches)

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications platform / The phone system

Tech. Requ.No. 3.3.12.4	Technical Requirement: All access to the recording data must be logged in an unchangeable form.
Bidder's technical reasons supporting compliance: Access to recordings is logged	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications platform / The phone system	

Tech. Requ. No. 3.3.12.5	Technical Requirement: Short-term and long-term voice documentation must be supported.
Bidder's technical reasons supporting compliance: Recording can be used for both short term and long term, according to user rights	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications platform / The phone system	

Tech. Requ. No. 3.3.12.6	Technical Requirement: All voice recordings shall be kept for a defined period of time (initially 5 years) and the storage capacity has to support that.
Bidder's technical reasons supporting compliance: Storage capacity as been defined for a 5 year retention period with the required call volumes. Addition of storage can be performed without redesign of the solution.	
Bidder's cross references to supporting information in Technical Bid: Data Center infrastructure / Storage component 26a Emergency Response Software Solution, Communications platform / SAN Storage	

Tech. Requ. No. 3.3.12.7	Technical Requirement: The long-term documentation must be recorded, encrypted and access to the recordings must be confirmed respectively by authorized staff using a strong authentication method (dual factor authentication or 4 eyes principle).
Bidder's technical reasons supporting compliance: All audio recorded in long term format is encrypted and stored in the NAS storage. Access to files can be subject to MFA (SMS as the second authentication factor).	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications platform / The phone system	

Tech. Requ. No. 3.3.12.8	Technical Requirement: The long-term documentation system must offer the possibility to define the recording time in years.
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Bidder's technical reasons supporting compliance:

Retention period is configurable with voice recording administration rights

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications platform / The phone system

Tech. Requ. No. 3.3.12.9	Technical Requirement: In the long-term documentation system, the deletion of recordings must be prevented.
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Bidder's technical reasons supporting compliance:

Deletion of recordings is not allowed in the voice recording UI

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications platform / The phone system

Tech. Requ. No. 3.3.12.10	Technical Requirement: The documentation of the data must be compliant to the statutory provisions (Data Protection Act, GDPR, Telecommunications Act, and Criminal Code).
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Bidder's technical reasons supporting compliance:

All elements included in the recording and in the database of the platform are secured and inaccessible, following the privacy directives mentioned in the requirement.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications platform / The phone system

Tech. Requ. No. 3.3.12.11	Technical Requirement: The voice documentation system must support export to, DVD, hard-drive and external USB hard drive or optical disk only for the purpose of archiving.
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Bidder's technical reasons supporting compliance:

The voice recording can be downloaded and exported by entitled users.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications platform / The phone system

Tech. Requ. No. 3.3.12.12	Technical Requirement: The individual voice recordings must be able to be exported in the form of .MP3 or .WAV files so that the recordings are managed in the archiving system
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The voice recording can be downloaded and exported by entitled users in the required format

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications platform / The phone system

Tech. Requ. No. 3.3.12.13	Technical Requirement: In the voice documentation system, the playback and export activities must be logged unchangeable.
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Bidder's technical reasons supporting compliance:

Access to recordings is logged

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications platform / The phone system

3.3.13 Interfaces and gateways

Tech. Requ. No. 3.3.13.1	Technical Requirement: The Bidder must offer SIP interfaces to the providers with full IETF-ECRIT/NG911 support
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Bidder's technical reasons supporting compliance:

The proposed SBC component is compliant with this requirement

Bidder's technical reasons supporting compliance:

Cisco Catalyst 8200 - Datasheet

Tech. Requ. No. 3.3.13.2	Technical Requirement: The SIP interfaces to the providers have to support at least the given number of calls /connections as specified.
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Bidder's technical reasons supporting compliance:

The proposed SBC component is compliant with this requirement

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Data Center infrastructure / Session Border Controller

Tech. Requ. No. 3.3.13.3	Technical Requirement: The SIP interfaces shall be located at the premises of the individual 9-1-1 server-sites and installed there. An IP-connection to the ESInet of the solution shall be provided.
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Bidder's technical reasons supporting compliance:

The proposed solution includes the positioning of NG-911 SBC component in both two server sites. IP

communications with the remaining ESINet and Voice platform components is performed via LAN

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Communications platform

Tech. Requ. No. 3.3.13.4	Technical Requirement: The interfaces must support Calling/Called Line Identification (The phone number of the caller and calling party)
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Bidder's technical reasons supporting compliance:

A-number and B-number are managed and can be used as attributes to determine call queuing / ACD rules

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, High level emergency management process / Communications

Tech. Requ. No. 3.3.13.5	Technical Requirement: The interfaces must support telephone user (owner) data according the individual CRM database of the provider containing Location Information according to the IETF (Either the physical address of the calling party for fixed lines or a proximate location of the calling party for mobile phones)
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Bidder's technical reasons supporting compliance:

The following localization services are supported in the proposed solution: AML, ALI for fixed lines, ALI for mobile lines.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Automatic caller localization

Tech. Requ. No. 3.3.13.6	Technical Requirement: The interfaces must support Location information according AML format (http(s) and respective SMS or SIP for applicable smartphones.
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Bidder's technical reasons supporting compliance:

Compliant. Please refer to req. no. 3.3.13.5

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Automatic caller localization

Tech. Requ. No. 3.3.13.7	Technical Requirement: The Calling Line Identification has to be transmitted in-line with the call, directly in the protocol of the used transport technology. The location information may either be transmitted inline if the transport protocol supports this (e.g. SIP) and by means of an additional web-based service where the 9-1-1-emergency center can automatically lookup the information immediately with the delivery of the call (EECC). The technical protocol for the transmission of the location information will be agreed
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	between the telecom operators, preferable HTTP and HTTP Enabled Location Delivery (HELD). This shall be also discussed during the detail design phase.
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Bidder's technical reasons supporting compliance: The CLI delivered by Service providers in the SIP signalling of incoming calls is preserved and used by the ESRP/phone system to define routing rules for calls. SIP conveyed PIDF-LO is also supported by the ESINet as a possible source of callers' localization, otherwise AML and ALI can be used. HELD is the reference protocol internally used by the ESINet.

Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, High level emergency management process / Communications 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation) 26a Emergency Response Software Solution, Life 1st CAD platform / Automatic caller localisation 26a Emergency Response Software Solution, Communications platform / The Location Information Function
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Tech. Requ. No. 3.3.13.8	Technical Requirement: If for handling of the location data a separate location information server (LIS) is needed the Bidder has to include it in the offer
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Bidder's technical reasons supporting compliance: The LIS server is included in the proposal
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Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Communications platform / The Location Information Function

Tech. Requ. No. 3.3.13.9	Technical Requirement: The Voice Communication must support provider handover
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Bidder's technical reasons supporting compliance: Compliant. Please refer to req. no. 3.3.11.4
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Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Communications platform / The Border Gateway Function

Tech. Requ. No. 3.3.13.10	Technical Requirement: The system has to support the Digital Radio Peripheral Interface Standard as defined in ETSI EN 300 392-5
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Bidder's technical reasons supporting compliance: Compliant. Radio network integration will be provided via radio sets equipped with PEI interface connected
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to operators' workstations

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Radio integration

Tech. Requ. No.
3.3.13.11

Technical Requirement:

The interconnection between the NG-911 system and the Digital Radio Service shall be realized at – during the detailed design - defined coordinator working positions

Bidder's technical reasons supporting compliance:

The radio integration will be extended to all operators' workstations attached to radio devices via PEI

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Radio integration

Tech. Requ. No.
3.3.13.12

Technical Requirement:

The system shall support the following PEI- features (if also radio system supported), acting as mobile within the given Digital Radio network:

- Group call (transmitting & receiving) incl. Speaker ISSI
- Half and full individual call (incoming & outgoing)
- Send and receive SDS to ISSIs and GSSIs
- Send & Receive status messages
- Send & Receive Location reports
- Receive Emergency calls & handles those calls

Bidder's technical reasons supporting compliance:

The requested services are supported by the proposed solution

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Radio integration

Tech. Requ. No. 3.3.13.13

Technical Requirement:

The software must provide a feature that allows free text to be sent an unlimited number of times by SDS message, both to the individual service unit (Digital Radio terminal) assigned to each emergency event and to the resources assigned to the event (Digital Radio mobiles). (if also radio system supported

Bidder's technical reasons supporting compliance:

Life 1st CAD includes SDS among the communication channels towards field resources; this messages can be sent as a dispatch engagement (predefined content), as a measure (either predefined or free text)

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Radio integration

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.3.13.14	Technical Requirement: The software must be able to display received SDS messaged from the direct connected Digital Radio Terminal, analogue to received SMS messages. (if also radio system supported)
Bidder's technical reasons supporting compliance: The proposed "PEI" integration allows SDS received by the control room's radio devices to be displayed to operators in the CAD screen. A typical application are dispatch statuses	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Radio integration 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching	

Tech. Requ. No. 3.3.13.15	Technical Requirement: The software must have the capability to send an alarm signal to Digital Radio terminals when an appropriate unit or group of forces is alerted. During an alarm, an SDS message of the specified format with the event information is sent. Event information must be configurable at the administrator level. (if also radio system supported)
Bidder's technical reasons supporting compliance: Compliant. Please refer to req. no. 3.3.13.13	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Radio integration 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching	

Tech. Requ. No. 3.3.13.16	Technical Requirement: The software must include a feature that allows to initiate an outgoing telephone and Digital Radio voice call with a responding unit telephone number or Digital Radio terminal by clicking on the respective resource icon optionally in the resource group or Digital Map and without copying a number from one software field to another subsystem or module. (if also radio system supported)
Bidder's technical reasons supporting compliance: Coordinators can make contact with field resources in different ways, including radio calls or phone calls triggered from within the CAD screen	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching	

Tech. Requ. No. 3.3.13.17	Technical Requirement: The SMS gateway must provide the possibility to be deployed in a geographic redundant configuration with robust failover and failback mechanisms between system nodes. Failover between nodes shall be done automatically
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	without any manual interaction / configuration. The system must support at least the estimated volume of messages as required
Bidder's technical reasons supporting compliance: The proposed SMS gateway is composed by two virtual machines sized to manage the requested volume of incoming / outgoing SMS. Each VM will be hosted in a data center forming an active/active geographical cluster	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Communications platform / The SMS gateway	

Tech. Requ. No. 3.3.13.18	Technical Requirement: The SMS gateway must be able to receive and send messages over MAP, SIP, SMPP and SMTP interfaces
Bidder's technical reasons supporting compliance: The proposed SMS gateway can be deployed as the termination point for Telco service providers' networks which make use of the required protocols	
Bidder's technical reasons supporting compliance: HighConn SMS Gtw Datasheet	

Tech. Requ. No. 3.3.13.19	Technical Requirement: The SMS gateway must support the following protocols and standards: - SMPP (v3.3 & v3.4) - SMTP (RFC 5321) - SIGTRAN M3UA (RFC 4666) - EIA/TIA 41 (ANSI-41D) - 3GPP2 C.S0015-B (IS-637) - 3GPP (TS 23.040, TS 24.011, TS 29.002, TS 23.849) - TDMA - SIP/IMS (RFC 3261, RFC 3428, 3GPP TS 24.341, 3GPP TS 23.204) - Diameter Base (RFC 3588) - Sh/Diameter (3GPP TS 29.329) - Prepaid via Diameter (RFC 4006, TS 32.299) - Prepaid via LDAP - SNMP - HTTPS, SSH, TLS - IPv4 and IPv6
Bidder's technical reasons supporting compliance: The proposed SMS gateway can be deployed as the termination point for Telco service providers' networks which make use of the required protocols	
Bidder's technical reasons supporting compliance: HighConn SMS Gtw Datasheet	

Tech. Requ. No. 3.3.13.20	<p>Technical Requirement:</p> <p>The software must accept SMS messages from SMS centers of mobile networks using the Short Message Peer-to-Peer (SMPP) protocol. The reception of messages must be continuous, not based on periodic polling of SMS centers, but on the continuous monitoring of messages from SMS centers and downloading of messages as soon as information about the “SMS message received” in the SMS center is received. Receiving of SMS messages from mobile networks must be implemented using Transceiver type SMS receiving and sending function.</p> <p>Note: The Contracting Authority will only provide secure network connectivity (Mobile Connectivity) with mobile networks based on SMPP protocol.</p>
<p>Bidder’s technical reasons supporting compliance:</p> <p>SMPP is among protocols supported by the proposed SMS gateway; SMPP bindings will be used to interconnect with service providers’ SMSC</p>	
<p>Bidder’s technical reasons supporting compliance:</p> <p>HighConn SMS Gtw Datasheet</p> <p>26a Emergency Response Software Solution, Communications platform / The SMS gateway</p>	
Tech. Requ. No. 3.3.13.21	<p>Technical Requirement:</p> <p>The SMS gateway must provide an open API towards external application, the incident management system in particular, to be able to use (i.e. send and receive) text messages within emergency management processes.</p>
<p>Bidder’s technical reasons supporting compliance:</p> <p>Thanks to its native parsing functionality, the proposed SMS gateway is able to distinguish emergency SMS from AML SMS. The former will be sent to the CAD application via API. The same API set will make it possible for CAD end users to send SMS originated by the CAD application itself</p>	
<p>Bidder’s technical reasons supporting compliance:</p> <p>26a Emergency Response Software Solution, Communications platform / The SMS gateway</p>	
Tech. Requ. No. 3.3.13.22	<p>Technical Requirement:</p> <p>Operations, Administration, Maintenance, and Provisioning capabilities must be feasible with a sophisticated web-based user interface that makes it easy for the operator to diagnose operational problems, monitor long-term traffic and performance trends, and engineer the service for growth.</p>
<p>Bidder’s technical reasons supporting compliance:</p> <p>All proposed applications, including the SMS gateway, are equipped with a web based administration environment</p>	
<p>Bidder’s technical reasons supporting compliance:</p> <p>26a Emergency Response Software Solution, Configuration interface</p>	

Tech. Requ. No. 3.3.13.23	Technical Requirement: All system configurations must be tightly controlled through RoleBased Access Control (RBAC) mechanisms. Independent user accounts if required must be linked to the overall system user management.
Bidder's technical reasons supporting compliance: The Identity Manager module manage end users access via OAUTH2 framework; accesses and relevant privileges are role based	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Configuration interface / Tenancies, roles and users creation	

Tech. Requ. No. 3.3.13.24	Technical Requirement: The SMS gateway must provide statistics to the administrator via a graphical web-based interface, an interactive command line, or an automated bulk export.
Bidder's technical reasons supporting compliance: The SMS gateway provides a reporting tool that can be accessed via web browsers. It allows to export statistics on the managed traffic	
Bidder's technical reasons supporting compliance: HighConn SMS Gtw Datasheet	

Tech. Requ. No. 3.3.13.25	Technical Requirement: The SMS gateway system must be integrated into the NMS and should report events to the NMS system.
Bidder's technical reasons supporting compliance: As virtual machines, it will be possible to monitor the health and performances of SMS gateways via the NMS system	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Communications platform / The SMS gateway	

Tech. Requ. No. 3.3.13.26	Technical Requirement: Secure protocols SSH, SFTP, HTTPS, and TLS must be supported.
Bidder's technical reasons supporting compliance: Communications among modules which compose the overall proposed solution will be encrypted using https	
Bidder's technical reasons supporting compliance: The evidence of the use of secure communication protocols among application modules can be retrieved throughout the "26a Emergency Response Software Solution" attached document	

Tech. Requ. No. 3.3.13.27	Technical Requirement: The SMS gateway must self-monitor potential points of congestion.
Bidder's technical reasons supporting compliance: The SMS gateway has a self-monitoring function to detect congestion events.	
Bidder's technical reasons supporting compliance: HighConn SMS Gtw Datasheet	

Tech. Requ. No. 3.3.13.28	Technical Requirement: The SMS gateway must provide the ability to block retransmitted and/or resubmitted messages from being processed for delivery.
Bidder's technical reasons supporting compliance: The SMS gateway has the capability to monitor retransmissions and to be configured to act accordingly, for example, blocking the processing of the repeated data. This cannot be applied to AML SMS since all retransmissions must be delivered to the LIS since they may carry a more precise localization; thanks to its native parser, the SMS gateway is capable of recognizing AML SMS and hence to switch-off the block just for them.	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Communications platform / The SMS gateway HighConn SMS Gtw Datasheet	

Tech. Requ. No. 3.3.13.29	Technical Requirement: The SMS gateway must provide flexible configuration of SMS relay retry policies
Bidder's technical reasons supporting compliance: The SMS gateway is programmed for configuring the retry mechanisms. By default, this parameter is 3 retries.	
Bidder's technical reasons supporting compliance: HighConn SMS Gtw Datasheet	

Tech. Requ. No. 3.3.13.30	Technical Requirement: The system shall include the necessary software and licenses for simultaneous connection to two SMS centers of telecom operators.
Bidder's technical reasons supporting compliance: The SMS gateway can connect to multiple telecom operators, as the licensing does not have a limitation on the number of operators to be connected	
Bidder's technical reasons supporting compliance: HighConn SMS Gtw Datasheet	

Tech. Requ. No. 3.3.13.31	Technical Requirement: The Bidder must provide an API which allows the Beneficiary and User-Organizations to develop a custom incident application user interface by its own. Complete API documentation is considered as part of the application itself and must be provided (in English language) upon Contracting Authority request.
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Bidder's technical reasons supporting compliance:

The proposed CAD system is based on micro-services built on REST APIs; this makes it possible for end customers to develop their own user interface.

Life 1st API specifications can be made available to end customers.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

Tech. Requ. No. 3.3.13.32	Technical Requirement: The application must provide web based open interfaces to receive or relay incidents from/to external systems (e.g. other incident management platforms)
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Bidder's technical reasons supporting compliance:

Life 1st APIs make it possible to bi-directionally integrate the CAD system with external applications aimed for example at exchanging data on CFS.

Life 1st API specifications can be made available to end customers.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Integration with 3rd Parties' applications

Tech. Requ. No. 3.3.13.33	Technical Requirement: The incident application system must provide open API web services able to integrate with external application and also be sufficiently flexible to integrate using legacy or Third Parties' proprietary protocols (e.g. CTI, radio infrastructures)
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Bidder's technical reasons supporting compliance:

In case Life 1st has to be integrated with systems which have proprietary application interfaces, custom software plug-ins are used and mounted on Life 1st gateway module

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

26a Emergency Response Software Solution, Life 1st CAD platform / Radio integration

Tech. Requ. No. 3.3.13.34	Technical Requirement: The software must have an integration interface (API) and be capable of both sending messages to external systems and receiving messages from
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	external systems through its APIs.
Bidder's technical reasons supporting compliance: Compliant. Same APIs are used as those referenced to in req. no. 3.3.13.32	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture	

Tech. Requ. No. 3.3.13.35	Technical Requirement: The delivery shall include redundant email servers (SMTP relay) within the provided server areas capable of handling emails via SMTP to support the requirements as specified further down.
Bidder's technical reasons supporting compliance: The offered solution will include redundant email servers (SMTP relay) within the provided server areas capable of handling emails via SMTP to support the requirements as specified further down	
Bidder's technical reasons supporting compliance: exchange-servertoc-exchserver-2019 - Datasheet	

Tech. Requ. No. 3.3.13.36	Technical Requirement: The SMTP relays have to process all email communications for all applications. Only the SMTP relays are allowed to make SMTP connections, other SMTP connections must be blocked by the firewalls.
Bidder's technical reasons supporting compliance: The SMTP relays will process all email communications for all applications. Only the SMTP relays will be allowed to make SMTP connections, other SMTP connections must be blocked by the firewalls.	
Bidder's technical reasons supporting compliance: exchange-servertoc-exchserver-2019 - Datasheet	

Tech. Requ. No. 3.3.13.37	Technical Requirement: The SMTP relays must handle the mail forwarding list for all internal email addresses. Mail for recipients which doesn't exist in this forwarding list must be rejected.
Bidder's technical reasons supporting compliance: The SMTP will handle all mail forwarding list for all internal email addresses. Mail for recipients which doesn't exist in this forwarding list will be rejected.	
Bidder's technical reasons supporting compliance: exchange-servertoc-exchserver-2019 - Datasheet	

Tech. Requ. No. 3.3.13.38	Technical Requirement: The SMTP relays must use the protocol as recommended in RFC 5321.
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Bidder's technical reasons supporting compliance:

The SMTP relays will use protocols as recommended in RFC 5321

Bidder's technical reasons supporting compliance:

exchange-servertoc-exchserver-2019 - Datasheet

Tech. Requ. No. 3.3.13.39

Technical Requirement:

The SMTP relays must use security mechanisms like virus and malware detection to protect the system. The SMTP relay shall as well support SMTPS.

Bidder's technical reasons supporting compliance:

The SMTP server will use security mechanisms like virus and malware detection to protect the system, as well as secure smtp connections.

Bidder's technical reasons supporting compliance:

exchange-servertoc-exchserver-2019 - Datasheet

Tech. Requ. No. 3.3.13.40

Technical Requirement:

The SMTP relays must monitor and report any abnormality to the monitoring system.

Bidder's technical reasons supporting compliance:

The SMTP server will monitor and report any abnormality to the monitoring system using the predefined management pack for Exchange Server.

Bidder's technical reasons supporting compliance:

exchange-servertoc-exchserver-2019 - Datasheet

Tech. Requ. No. 3.3.13.41

Technical Requirement:

The SMTP relay shall support text for a standard format on mail (form generator) 3rd party systems, as of supporting multiple formats based on incident type. This shall be used for sending structured emails to external recipients (Police, EMS) where incident related data as well as an incident ID for further communication can be provided, filled and processed by the external system (Record Management)

Bidder's technical reasons supporting compliance:

The Life 1st CAD application provides the possibility for end users to send mails which can be structured (predefined) or free text. Recipient lists are also configurable from within Life 1st admin environment (e.g. SEND MAIL measures, DISPATCH mails), or they can be filled in by end users (e.g. SEND CFS REPORT VIA MAIL)

The SMTP relay's role is to forward Life 1st generated emails to the correct range of recipients

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching
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Tech. Requ.mNo. 3.3.13.42	Technical Requirement: Forms/texts must be freely configurable by the administrator
Bidder's technical reasons supporting compliance: Mails pertaining to standard operation procedures can be configured by administrators in terms of the body, subject and recipient list.	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation) 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching 26a Emergency Response Software Solution, Configuration interface	

Tech. Requ. No. 3.3.13.43	Technical Requirement: The forms shall allow the setup as XML message according to a defined data model.
Bidder's technical reasons supporting compliance: Predefined mails bodies are stored in Life 1 st DB under the form of XML structures. This applies for example to mail messages that are automatically sent upon a dispatch	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture	

Tech. Requ. No. 3.3.13.44	Technical Requirement: Detailed description on the forms will be set in the Detail design phase.
Bidder's technical reasons supporting compliance: Mail messages structures will be agreed with the Beneficiary and involved Agencies during the design stage of the project	
Bidder's technical reasons supporting compliance: Preliminary Project Plan / Detailed System Design	

Tech. Requ. No. 3.3.13.45	Technical Requirement: The system shall use of contact lists or individual email-addresses as part of the contact information for sending messages.
Bidder's technical reasons supporting compliance: Recipient lists can be composed by either group-addresses, single mail addresses or both	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation) 26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching	

26a Emergency Response Software Solution, Configuration interface

Tech. Requ. No. 3.3.13.46	Technical Requirement: The system shall support acknowledgment of returning mails to an incident via specified identifier (ID). This information shall be received, logged and processed (as part of the incident handling process)
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Bidder's technical reasons supporting compliance:

Mail delivery acknowledgements are made graphically available and logged as associated to the incident

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.3.13.47	Technical Requirement: The system shall support reception of alarm messages of sensors or fire alarm system.
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Bidder's technical reasons supporting compliance:

Life 1st APIs are meant to be used also to receive notifications from external systems, including alarm /fire systems

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Integration with 3rd Parties' applications

Tech. Requ. No. 3.3.13.48	Technical Requirement: It shall be possible to link a dedicated alarm sensor to a configured address within the system.
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Bidder's technical reasons supporting compliance:

Sensors are geo-coded object for the proposed Incident Creation Application; hence they can be accompanied by their position/address. This implies that, if a certain sensor is mapped in the Application, it will be possible to automatically retrieve and display its position.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Integration with 3rd Parties' applications

Tech. Requ. No. 3.3.13.49	Technical Requirement: The system shall create an incident based on the received alarm message and use the configured address of this alarm sensor as incident address.
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Bidder's technical reasons supporting compliance:

Whenever Life 1st receives an alarm, a CFS record is created and automatically populated with relevant data

delivered by the alarm system.

As far as the sensor position is concerned, the system is compliant, please refer to req. no. 3.3.13.48

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Integration with 3rd Parties' applications

Tech. Requ. No. 3.3.13.50

Technical Requirement:

The system shall use data received as part of the incident data:

- Incident code based on the alarm message priority (configurable by administrator)
- Number of triggered sensors within the object (1 or many) – if multiple alarms are received within a configurable timespan this shall enhance the incident data but not create a new incident.
- Line information on which the alarm was received.

Bidder's technical reasons supporting compliance:

The Incident Creation Application is completely configurable in terms of fields and values to be included and displayed during Incident Creation, including data carried within the alarm payload and data that are locally stored in the application. Multiple alarm notifications correlation is also an available feature

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Integration with 3rd Parties' applications

Tech. Requ. No. 3.3.13.51

Technical Requirement:

The system shall allow to share incident as well as COP related information via a standardized and documented interface, at least CAP

Bidder's technical reasons supporting compliance:

The Incident Creation and Management Application is compliant with CAP protocol and it can be used to import/export incidents from/to other third-party platforms compatible with CAP

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Integration with 3rd Parties' applications

Tech. Requ. No.
3.3.13.52

Technical Requirement:

It shall allow to manually and automatically export incidents and transport this information via defined communication methods (e.g. email)

Bidder's technical reasons supporting compliance:

CFS data can be made available to Third Parties via different communication channels, including mail, SMS, SDS

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st dispatching

Tech. Requ. No. 3.3.13.53	Technical Requirement: It shall allow to manually and automatically receive, import, process and visualize incidents and COP related information. (e.g. reception via email)
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Bidder's technical reasons supporting compliance:

The following incoming notifications trigger the creation of a CFS record in Life 1st:

- CFS creation upon SMS
- CFS creation upon API
- CFS creation upon email (the email can also be attached to the CFS record)

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.3.13.54	Technical Requirement: The system shall allow to automatically create incident(s) based on the received information, whereas the mapping of defined fields (e.g. sender, status, msg Type, etc.) shall be configurable by the administrator (in order to adopt to further changes during the lifetime of the system)
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Bidder's technical reasons supporting compliance:

Compliant. Please refer to req. no.3.3.13.50. UI and relevant fields are configurable at system level.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / CAD sizing and recovery architecture

3.3.14 Workplaces

Tech. Requ. No. 3.3.14.1	Technical Requirement: The workplace shall consist of COTS components designed under the aspect that the PC shall fit to named software within this specification.
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Bidder's technical reasons supporting compliance:

The workplace will consist of COTS components designed under the aspect that the PC shall fit to named software within this specification.

Lenovo TS P360 Ultra – Desktop Workstation

Samsung T45F 24" Business Monitor

IP Phone SIP-T43U

Headset VT5000M

Bidder's technical reasons supporting compliance:

ThinkStation P360 Ultra

Samsung T45F 24" Business Monitor

Yealink-SIP-T43U-Datasheet

VT5000 Series Headset datasheet

Tech. Requ. No. 3.3.14.2	Technical Requirement: Moving components (e.g. fans,) shall be avoided where technically possible.
Bidder's technical reasons supporting compliance: Moving components will be avoided where technically possible.	
Bidder's technical reasons supporting compliance: All components which are installed close the working places will be as silent as possible.	

Tech. Requ. No. 3.3.14.3	Technical Requirement: Preferable terminal -PC with a minimized footprint (dimensions) are used
Bidder's technical reasons supporting compliance: Desktop Dimensions (WxDxH) (mm): 87 x 223 x 202 (inches): 3.4 x 8.7 x 7.9 Weight Starting at: 3.96lbs (1.8kg)	
Bidder's technical reasons supporting compliance: ThinkStation_P360_Ultra	

Tech. Requ. No. 3.3.14.4	Technical Requirement: Noise emission for the equipment shall be maximal 30 dB during normal operation.
Bidder's technical reasons supporting compliance: All components which are installed close the working places will be as silent as possible. Lenovo ThinkStation P360 Ultra is TCO Certified 9.0, thus provide environmental protection to the end user (starting from ergonomic, sound, emission, electrical safety...) thus meet environmental and social challenges associated with electronics Equipment is also Energy star qualified	
Bidder's technical reasons supporting compliance: ThinkStation_P360_Ultra	

Tech. Requ. No. 3.3.14.5	Technical Requirement: All computers on all workplaces must be installed at least with an Operating System, Anti-Virus Software and PDF-Reader function.
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Bidder's technical reasons supporting compliance:

All computers on all workplaces will be installed at least with an Operating System, Anti-Virus Software and PDF-Reader function.

Offered is Microsoft Windows 11 Pro Operating System,

SOPHOS as Anti-Virus Software and PDF Reader

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

Tech. Requ. No. 3.3.14.6	Technical Requirement: At the working positions UPS respective Generator supported power with 230V, 50Hz will be provided on Type C, respective Type H. At least 2 RJ45 outlets per working position must provide PoE (Power over Ethernet).
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Bidder's technical reasons supporting compliance:

At least 2 RJ45 outlets per working position will provide PoE (Power over Ethernet) and UPS respective Generator supported power with 230V, 50Hz will be provided on CEE7 (EU1-16)

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

Tech. Requ. No. 3.3.14.7	Technical Requirement: These computers must be powerful enough to provide instantaneous responsive user interfaces for all used client applications like NG-911, Incident Applications, GIS, CTI.
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Bidder's technical reasons supporting compliance:

The computers will be powerful enough to provide instantaneous responsive user interfaces for all used client applications

Bidder's technical reasons supporting compliance:

ThinkStation_P360_Ultra

Tech. Requ. No. 3.3.14.8	Technical Requirement: The desktop configuration of the operation system and the configuration of the applications at the client computers must be user/user-group based and not client based.
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Bidder's technical reasons supporting compliance:

The desktop configuration of the operation system and the configuration of the applications at the client computers will be user based and not client based.

Roaming profiles will be configured, which will allow users to get the same experience on every workstation they login.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

Tech. Requ. No. 3.3.14.9

Technical Requirement:

The underlying client system image must be identical and convertible for all clients within the system. This general client system image must be up to date at any time and locally available at every center.

Bidder's technical reasons supporting compliance:

The underlying client system image will be identical and convertible for all clients within the system. This general client system image will be up to date at any time and locally available at every centre through Microsoft System Center Configuration Manager

Bidder's technical reasons supporting compliance:

System Center 2019 Datasheet

Tech.
Requ.
No. 3.3.14.10

Technical Requirement:

An easy mechanism must be available to install remotely the general client system image to a new client computer.

Bidder's technical reasons supporting compliance:

An easy mechanism will be available to install remotely the general client system image to a new client computer.

Bidder's technical reasons supporting compliance:

System Center 2019

Tech. Requ. No.
3.3.14.11

Technical Requirement:

All IP devices must use the basic network services (DHCP, DNS, NTP).

Bidder's technical reasons supporting compliance:

All IP devices will use the basic network services (DHCP, DNS, NTP).

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

Tech. Requ. No.
3.3.14.12

Technical Requirement:

All IP devices shall be integrated into the IT management system.

Bidder's technical reasons supporting compliance:

All IP devices will be integrated into the IT management system through Microsoft System Center set of tools

Bidder's technical reasons supporting compliance:

System Center 2019

Tech. Requ. No. 3.3.14.13	Technical Requirement: All IP devices must report events to the IT management system.
Bidder's technical reasons supporting compliance: All IP devices will report events to the IT management system. through Microsoft System Center	
Bidder's technical reasons supporting compliance: System Center 2019	

Tech. Requ. No. 3.3.14.14	Technical Requirement: Monitors for all workplaces must have a size of at least 24"
Bidder's technical reasons supporting compliance: Offered monitor have 24" size	
Bidder's technical reasons supporting compliance: Samsung T45F 24" Business Monitor Datasheet	

Tech. Requ. No. 3.3.14.15	Technical Requirement: The video card in the computer should be able to connect up to 4 monitors (based on the actual setup) with a resolution of full HD each
Bidder's technical reasons supporting compliance: The offered video card in the computer will be able to connect up to 4 monitors with a resolution of full HD	
Bidder's technical reasons supporting compliance: nvidia-T1000-datasheet	

Tech. Requ. No. 3.3.14.16	Technical Requirement: The monitor matrix must be LCD technology supporting - Matrix format 16:9 or 16:10 - Screen resolution, pixel, at least 1920x1080
Bidder's technical reasons supporting compliance: The offered monitor have aspect ratio of 16:9, and maximum resolution of 1920x1080	
Bidder's technical reasons supporting compliance: Samsung T45F 24" Business Monitor Datasheet	

Tech. Requ. No. 3.3.14.17	Technical Requirement: Monitors for all workplaces must have at least a brightness of 300 cd/qm, a contrast ratio of at least 1000:1 and a response time of maximum 5 ms.
Bidder's technical reasons supporting compliance:	

The offered monitor have brightness of 300cd/m2, contrast ratio 1000:1 and fast response time of 5ms

Bidder's technical reasons supporting compliance:

Samsung T45F 24" Business Monitor Datasheet

Tech. Requ. No. 3.3.14.18	Technical Requirement: The offering of a single wide screen where multiple screens are defined is acceptable if the overall useable area (sqcm) does meet or exceed the sum area of comparable individual screens.
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Bidder's technical reasons supporting compliance:

We are offering multiple screens

Bidder's technical reasons supporting compliance:

Samsung T45F 24" Business Monitor Datasheet

Tech. Requ. No. 3.3.14.19	Technical Requirement: Monitors for all workplaces must be designed for 24/7 usage.
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Bidder's technical reasons supporting compliance:

The monitors are designed for 24/7 usage

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

Tech. Requ. No. 3.3.14.20	Technical Requirement: All monitors must support mounting with a VESA Standard mounting kit.
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Bidder's technical reasons supporting compliance:

The offered monitors support mounting with a VESA Standard mounting kit.

Bidder's technical reasons supporting compliance:

Samsung T45F 24" Business Monitor Datasheet

Tech. Requ. No. 3.3.14.21	Technical Requirement: The height and angle of the monitors needs to be adjustable towards the surface of the table. Electrical height adjustment is not necessary. A VESA Arm has to be provided if not already pre-installed at the work-desk and has to be used during setup of the working position. The setting of the VESA must allow a "gap free" screen installation,
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Bidder's technical reasons supporting compliance:

The height and angle of the monitors will be adjustable towards the surface of the table. If a VESA Arm is already pre-installed at the work-desk this will be used during setup of the working position

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

Tech. Requ. No. 3.3.14.22	Technical Requirement: It must be considered that working desks might have a height adjustable option to enable sitting and standing operations. The provided cables must have a sufficient length to support that.
Bidder's technical reasons supporting compliance: The provided cables will have sufficient length to support sitting and standing operations	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.14.23	Technical Requirement: At installing at the individual desks all cables must be finally stored in order. No extensive (overlength) cable are allowed on the desk surface and must be secured under the desk (out of visible area).
Bidder's technical reasons supporting compliance: All cables will be finally stored in order. No extensive (over-length) cable will be used on the desk surface and they will be secured under the desk	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.14.24	Technical Requirement: Where multiple cables are running in parallel they must be fixed together (pandoid, velcro or spiral).
Bidder's technical reasons supporting compliance: All multiple cables will be fixed together	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.14.25	Technical Requirement: The Quick Disconnect Cable for the headset must be run under the surface of the desk, in order to avoid obstruction on the desk. The cable must be secured from hanging down or being out of ease access for the personnel.
The Quick Disconnect Cable for the headset will be run under the surface of the desk, in order to avoid obstruction on the desk. The cable will be secured from hanging down or being out of ease access for the personnel	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.14.26	Technical Requirement: On locations with a Multi-Functional Printer, based on Color Laser technology – incl RJ45 network interface were provided by the user organizations. Those printers must be connected to the ESInet via Ethernet RJ45 and support Network Fax/Printing/Scan from the individual applications and services
Bidder's technical reasons supporting compliance: Multi-functional printers will be connected to the ESINet via Ethernet RJ45 and support Network Fax/Printing/Scan from the individual applications and services	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.14.27	Technical Requirement: All printers must be integrated in the Network Management
Bidder's technical reasons supporting compliance: All printers will be integrated in the Network Management	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.14.28	Technical Requirement: Support characters, base import but must be Arabic (ISO 8859-6) and English (ISO 8859-1) and at least for administrative issues in English. Output must be primary in Arabic
Bidder's technical reasons supporting compliance: Proposed systems UI will be in Arabic with the possibility to switch them into English for support purposes	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution / 4.4 User interface	

Tech. Requ. No. 3.3.14.29	Technical Requirement: The Call Taker Workplace must be equipped with 2 monitors.
Bidder's technical reasons supporting compliance: The Call Taker Workplace will be equipped with 2 monitors.	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.14.30	Technical Requirement: The Call Taker Workplace must be equipped with a VoIP phone, installed Quick-Disconnect (QD) cable for the Headset, mouse, and keyboard.
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Bidder's technical reasons supporting compliance:

The Call Taker Workplace will be equipped with a VoIP phone, installed Quick-Disconnect (QD) cable for the Headset, mouse and keyboard.

Bidder's technical reasons supporting compliance:

Yealink SIP-T43U - Datasheet

Tech. Requ. No. 3.3.14.31

Technical Requirement:

Each call-taker workplace equipment must be connected to the provided 230V outlets, and RJ45 Ethernet Outlet. If UPS (un-interrupted) respective Generator powered outlets are available the connection must support a continuous operation.

Bidder's technical reasons supporting compliance:

Each call-taker workplace equipment will be connected to the provided 230V outlets, and RJ45 Ethernet Outlet. If UPS (un-interrupted) respective Generator powered outlets are available the connection will support a continuous operation.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

Tech. Requ. No. 3.3.14.32

Technical Requirement:

In addition, high load workplaces must be provided as eventual positions permitting additional workplaces or alternative operating options to be put into short-term operation in special cases (e.g., capacity increase, emergency operation in the event of a failure of workplaces, etc.).

Bidder's technical reasons supporting compliance:

High load workplaces will be provided as eventual positions permitting additional workplaces or alternative operating options to be put into short-term operation in special cases (e.g., capacity increase, emergency operation in the event of a failure of workplaces, etc.).

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

Tech. Requ. No.
3.3.14.33

Technical Requirement:

The high-load call taker working place must be equipped with 1 monitor.

Bidder's technical reasons supporting compliance:

The high-load call taker working place will be equipped with 1 monitor.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

Tech. Requ. No. 3.3.14.34

Technical Requirement:

The high-load Call taker Workplace must be equipped with a VoIP phone,

	installed QuickDisconnect (QD) cable for the Headset, mouse, and keyboard.
Bidder's technical reasons supporting compliance: The high-load Call taker Workplace will be equipped with a VoIP phone, installed Quick-Disconnect (QD) cable for the Headset, mouse and keyboard.	
Bidder's technical reasons supporting compliance: Yealink SIP-T43U - Datasheet	

Tech. Requ. No. 3.3.14.35	Technical Requirement: Each high-load call taker workplace equipment must be connected to the provided 230V outlets, and RJ45 Ethernet Outlet. If UPS (un-interrupted) respective Generator powered outlets are available the connection must support a continuous operation.
Bidder's technical reasons supporting compliance: Each high-load call taker workplace equipment will be connected to the provided 230V outlets, and RJ45 Ethernet Outlet. If UPS (un-interrupted) respective Generator powered outlets are available the connection will support a continuous operation.	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.14.36	Technical Requirement: The Coordinator Workplace must be equipped with 3 monitors
Bidder's technical reasons supporting compliance: The Coordinator Workplace will be equipped with 3 monitors	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.14.37	Technical Requirement: The Coordinator Workplace must be equipped with a VoIP phone, installed Quick-Disconnect (QD) cable for the Headset, mouse and keyboard.
Bidder's technical reasons supporting compliance: All SIP Phones and Headsets will be equipped with QD Cable.	
Bidder's technical reasons supporting compliance: Yealink SIP-T43U - Datasheet	

Tech. Requ. No. 3.3.14.38	Technical Requirement: Each Coordinator workplace equipment must be connected to the provided 230V outlets, and RJ45 Ethernet Outlet. If UPS (un-interrupted) respective Generator powered outlets are available the connection must support a
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	continuous operation
Bidder's technical reasons supporting compliance: Each Coordinator workplace equipment will be connected to the provided 230V outlets, and RJ45 Ethernet Outlet. If UPS (un-interrupted) respective Generator powered outlets are available the connection will support a continuous operation	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.14.39	Technical Requirement: Some of the Coordinator positions will be equipped with fixed Digital Radio terminal connected to the workstation through PEI interface. The exact positions where the Digital Radio terminals must be installed will be determined during detailed design.
Bidder's technical reasons supporting compliance: Coordinator positions that are equipped with fixed Digital Radio terminal connected to the workstation through PEI interface will be defined during the design stage of the project	
Bidder's technical reasons supporting compliance: Preliminary Project Plan / Detailed System Design	

Tech. Requ. No. 3.3.14.40	Technical Requirement: The Supervisor workplace must be equipped with 4 monitors.
Bidder's technical reasons supporting compliance: The supervisor workplace will be equipped with 4 monitors	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.14.41	Technical Requirement: The supervisor workplace must be equipped with a VoIP phone, installed Quick-Disconnect (QD) cable for the Headset, mouse, and keyboard.
Bidder's technical reasons supporting compliance: All SIP Phones and Headsets will be equipped with QD Cable.	
Bidder's technical reasons supporting compliance: Yealink SIP-T43U - Datasheet	

Tech. Requ. No. 3.3.14.42	Technical Requirement: The supervisor workplace equipment must be connected to the provided 230V outlets, and RJ45 Ethernet Outlet. If UPS (un-interrupted) respective Generator powered outlets are available the connection must support a continuous
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	operation.
Bidder's technical reasons supporting compliance: The supervisor workplace will be equipped with a VoIP phone, installed Quick-Disconnect (QD) cable for the Headset, mouse and keyboard	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.14.43	<p>Technical Requirement:</p> <p>The VoIP telephones must support the following functions and/or comply with the following specifications.</p> <ul style="list-style-type: none"> - call acceptance and termination, holding, brokering, consultation, forwarding (call transfer), pickup for sets in the same room. - Display (preferably in color, grey levels or B/W is permissible) for showing at least 10 lines of text at 40 characters each for the display of status information by symbols, of call numbers, as well as for leafing through the telephone directory etc., display size: at least 5x5cm, the display must be able to be lighted from the back for night time operations and dimmable. - External loudspeaker that can be switched on and off, whereby the status must be signalized clearly, e.g. using a LED, - connection for headsets (Quick Disconnect), - hands free operation, - volume control and mute switch for receiver, headset, and external loudspeaker, - echo cancellation, - changeable ringtone (either from a list or possibly using .WAV file), - volume control for the ringtone.
Bidder's technical reasons supporting compliance: Provided SIP phone supports all requirements under section 3.3.14.43	
Bidder's technical reasons supporting compliance: Yealink SIP-T43U - Datasheet	

Tech. Requ. No. 3.3.14.44	<p>Technical Requirement:</p> <p>With each VoIP Phone a Quick Disconnect Cable Extension must be provided to be installed on the working positions</p>
Bidder's technical reasons supporting compliance: Quick disconnect cable will be provided with each headset.	
Bidder's technical reasons supporting compliance: VT5000 USB02 datasheet	

Tech. Requ. No. 3.3.14.45	Technical Requirement: The configuration shall be entirely centrally controllable, local configuration changes should only be possible by logging in, if at all
Bidder's technical reasons supporting compliance: Fully compliant The configuration will be entirely centrally controllable, local configuration changes should only be possible by logging in.	
Bidder's technical reasons supporting compliance: Yealink-SIP-T43U-Datasheet	

Tech. Requ. No. 3.3.14.46	Technical Requirement: The VoIP phone needs to have the possibility to add an extended keypad which can be programmed individually by the system administrator for shortcut dialing numbers, selection of profiles, etc.
Bidder's technical reasons supporting compliance: Expansion module can be added	
Bidder's technical reasons supporting compliance: Yealink SIP-T43U - Datasheet	

Tech. Requ. No. 3.3.14.47	Technical Requirement: The VoIP Phone must use VoIP protocol: SIP
Bidder's technical reasons supporting compliance: Fully compliant The VoIP Phone use VoIP protocol: SIP	
Bidder's technical reasons supporting compliance: Yealink SIP-T43U - Datasheet	

Tech. Requ. No. 3.3.14.48	Technical Requirement: The VoIP Phone must logon to system secured by certificate.
Bidder's technical reasons supporting compliance: SIP phone supports login with secured certificate	
Bidder's technical reasons supporting compliance: Yealink SIP-T43U - Datasheet	

Tech. Requ. No. 3.3.14.49	Technical Requirement: The VoIP Phone must support audio codecs: G.711, G.729A, G.726.
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Bidder's technical reasons supporting compliance:

All SIP Phones provided support:

Narrowband codec: AMR-NB (optional), Opus, G.711(A/μ), G.723.1, G.729AB, G.726, iLBC

Bidder's technical reasons supporting compliance:

Yealink SIP-T43U - Datasheet

Tech. Requ. No.
3.3.14.50

Technical Requirement:

The VoIP Phone must support power supply through PoE (802.11af or 802.3af) and/or power supply unit.

Bidder's technical reasons supporting compliance:

PoE Supported

Power over Ethernet (IEEE 802.3af), Class 2

Power consumption (PoE): 1.5-3.2W

Bidder's technical reasons supporting compliance:

Yealink SIP-T43U - Datasheet

Tech. Requ. No.
3.3.14.51

Technical Requirement:

The VoIP Phone must support LAN: 10/100/1000 Base.

Bidder's technical reasons supporting compliance:

Dual-port Gigabit Ethernet

Bidder's technical reasons supporting compliance:

Yealink SIP-T43U - Datasheet

Tech. Requ. No.
3.3.14.52

Technical Requirement:

The VoIP Phone must have VLAN support, QoS support 802.1q.

Bidder's technical reasons supporting compliance:

QoS: 802.1p/Q tagging (VLAN), Layer 3 ToS DSCP

Bidder's technical reasons supporting compliance:

Yealink SIP-T43U - Datasheet

Tech. Requ. No.
3.3.14.53

Technical Requirement:

The VoIP Phone must have 2nd switched Ethernet port integrated.

Bidder's technical reasons supporting compliance:

Dual-port Gigabit Ethernet

Bidder's technical reasons supporting compliance:

Yealink SIP-T43U - Datasheet

Tech. Requ. No. 3.3.14.54	Technical Requirement: Single type of devices must be provided.
Bidder's technical reasons supporting compliance: Yealink SIP-T43U IP phone will be provided for all operators	
Bidder's technical reasons supporting compliance: Yealink SIP-T43U - Datasheet	

Tech. Requ. No. 3.3.14.55	Technical Requirement: The VoIP Phone must have a footprint max. 30x20cm.
Bidder's technical reasons supporting compliance: Dimension (W*D*H*T): 224.9mm*206.2mm*174.9mm*52mm	
Bidder's technical reasons supporting compliance: Yealink SIP-T43U - Datasheet	

Tech. Requ. No. 3.3.14.56	Technical Requirement: Wired headsets shall provide for the integrated call-taker, dispatcher, and supervisor workplace, but defined for individual/personal use (hygienic).
Bidder's technical reasons supporting compliance: Each operator will have their own headset	
Bidder's technical reasons supporting compliance: VT5000 Series Headset datasheet	

Tech. Requ. No. 3.3.14.57	Technical Requirement: Headsets must be delivered in Monaural and Binaural setup, according the given numbers in the list of Quantities
Bidder's technical reasons supporting compliance: Two types of headsets will be provided based on requirements VT5000 NC VT5000 NC-D	
Bidder's technical reasons supporting compliance: VT5000 Series Headset datasheet	

Tech. Requ. No.	Technical Requirement:
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3.3.14.58	All headsets must be provided with the same QD plug-type (quick-disconnect), to be connected to the described cable on individual working positions.
Bidder's technical reasons supporting compliance: Connection Type: Quick Disconnect	
Bidder's technical reasons supporting compliance: VT5000 Series Headset datasheet	

Tech. Requ. No. 3.3.14.59	Technical Requirement: All Headsets must be lightweight, robust and reliable for professional office or call center use. It must deliver high level of audio with wideband mode and DSP control to reduce noise echo.
Bidder's technical reasons supporting compliance: Speaker Impedance(Mono/DUO): 150Ω±15%/300Ω±15% Speaker Sensitivity@ 1kHz (Mono/DUO): 103±3dB/98±3dB Microphone Sensitivity@ 1kHz: -41±3 dB	
Bidder's technical reasons supporting compliance: VT5000 Series Headset datasheet	

3.3.15 Networking requirements

Amendment of original RFB ref. Amendment 2-RFB - April 3th, 2023: Secondary Power Supply is required for core equipment Firewall and Switches while Core Firewalls and Core Switch no need for PoE, Remote site redundant power supply not mandatory but PoE is required on firewall or separated Switch

Routers/Switches/Firewalls/SBCs - Basic quality/performance requirements of the devices to be delivered. **For Central Server Site Equipment (Primary and Secondary)**

Tech. Requ. No. 3.3.15.1	Technical Requirement: Rack mountable Chassis in 19" Rack, maximum 2RU
Bidder's technical reasons supporting compliance: All Network equipment 1 Rack Unit (1RU)	
Bidder's technical reasons supporting compliance: Please see network equipment data sheets	

Tech. Requ. No. 3.3.15.2	Technical Requirement: Power Supply 220-240V AC, 50Hz,
Bidder's technical reasons supporting compliance: Power-supply options	

Internal: AC Power Supply 220-240V AC, 50Hz,

Bidder's technical reasons supporting compliance:

Please see network equipment data sheets

Tech. Requ. No.
3.3.15.3

Technical Requirement:
Working Temperature 0° to +40 °C

Bidder's technical reasons supporting compliance:

Operating temperature conditions

32 to 104°F (0 to 40°C)

Bidder's technical reasons supporting compliance:

Please see network equipment data sheets

Tech. Requ. No.
3.3.15.4

Technical Requirement:
EMC Regulatory and Compliance:

- EN 60950-1
- EN 55032 Class A
- EN 300-386
- EN 61000
- EN 55024
- 47 CFR, Part 15 Or equivalent

Bidder's technical reasons supporting compliance:

EMC Regulatory and Compliance:

- EN 60950-1
- EN 55032 Class A
- EN 300-386
- EN 61000
- EN 55024
- 47 CFR, Part 15 Or equivalent

Bidder's technical reasons supporting compliance:

Juniper - Agency Approvals data sheet

Tech. Requ. No.
3.3.15.5

Technical Requirement:
Min. 2 x WAN Ethernet interfaces, multifunctional GE RJ-45 of which at least 1 is multifunctional RJ45 and SFP, 1x USB Console Port,
Min 6 LAN ethernet GE PoE+ and Min 2 G SFP port
Min 1 x Serial Console port

Bidder's technical reasons supporting compliance:

Supported

SRX4100 + EX3400-24p

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

Refer to:

JNP-SRX4100_4200-EN Datasheet

JNP-EX3400-ENT Datasheet

Tech. Requ. No. 3.3.15.6	Technical Requirement: Min. 4 GB Flash and min. 4 GB DRAM (memory) min.128 GB SSD Local storage, min. 100 Mbps capability of Data Traffic and possibility to be upgraded to min 200mbps with additional license
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Bidder's technical reasons supporting compliance:

System memory (RAM) 64 GB

Secondary storage (SSD) 240 GB with 1+1 RAID

Bidder's technical reasons supporting compliance:

JNP-SRX4100_4200-EN Datasheet

Tech. Requ. No. 3.3.15.7	Technical Requirement: At least the following routing protocols must be supported: <ul style="list-style-type: none"> • Static Routing IPv4 and IPv6 • RIPv1, RIPv2, RIP for IPv6, • OSPFv2 and OSPFv3 • BGP4 • System-to-Intermediate System (IS-IS) • Multicast Internet Group Management Protocol Version 3 (IGMPv3) • Multicast Routing with PIM SM and PIM SSM • Policy Based routing application by SDWAN • Built in Firewall
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Bidder's technical reasons supporting compliance:

Routing Protocols:

- IPv4, IPv6, static routes, RIP v1/v2
- OSPF/OSPF v3
- BGP with route reflector
- IS-IS
- Multicast: Internet Group Management Protocol (IGMP) v1/v2; Protocol Independent Multicast (PIM) sparse mode (SM)/ source-specific multicast (SSM); Session Description Protocol (SDP); Distance Vector Multicast Routing Protocol (DVMRP); Multicast Source Discovery Protocol (MSDP); reverse path forwarding (RPF)
- Encapsulation: VLAN, Point-to-Point Protocol over Ethernet (PPPoE)

- Virtual routers
- Policy-based routing, source-based routing
- Equal-cost multipath (ECMP)

Firewall Services

- Stateful and stateless firewall
- Zone-based firewall
- Screens and distributed denial of service (DDoS) protection
- Protection from protocol and traffic anomalies
- Unified Access Control (UAC)

Bidder's technical reasons supporting compliance:

JNP-SRX4100_4200-EN Datasheet

Tech. Requ. No. 3.3.15.8	Technical Requirement: The following QoS functionalities must be supported at least: <ul style="list-style-type: none"> • Weighted Fair Queueing that uses user- based traffic classes based on different criteria (protocols, access lists, input interface), • Weighted Random Early Detection, • Hierarchical QoS, Policy-Based Routing (PBR)
Bidder's technical reasons supporting compliance: QoS Features <ul style="list-style-type: none"> • Support for 802.1p, DiffServ code point (DSCP), EXP • Classification based on VLAN, data-link connection identifier (DLCI), interface, bundles, or multifield filters • Marking, policing, and shaping • Classification and scheduling • Weighted random early detection (WRED) • Guaranteed and maximum bandwidth • Ingress traffic policing • Virtual channels 	
Bidder's technical reasons supporting compliance: JNP-SRX4100_4200-EN Datasheet	

Tech. Requ. No.	Technical Requirement:
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3.3.15.9	<p>Device needs to support minimum of following management protocols:</p> <ul style="list-style-type: none"> • Console access, • HTTP and HTTPS • RMON • IPv4/v6 ping • SSHv2 and SNMPv3 • Open APIs • IP Flow Information Export (IPFix) <p>Device needs to have all appropriate licenses for usage of above-mentioned protocols</p>
<p>Bidder's technical reasons supporting compliance: Management, Automation, Logging, and Reporting</p> <ul style="list-style-type: none"> • SSH, Telnet, SNMP • Smart image download • Juniper CLI and Web UI • Juniper Networks Junos Space Security Director • Python • Junos events, commit and OP scripts • Application and bandwidth usage reporting • Debug and troubleshooting tools 	
<p>Bidder's technical reasons supporting compliance: JNP-SRX4100_4200-EN Datasheet</p>	

Tech. Requ. No. 3.3.15.10	<p>Technical Requirement: Network Security Support for:</p> <ul style="list-style-type: none"> • Zone-Based Firewall • Auto Discovery / Dynamic VPN • IPS with signature subscription license • WAN MACsec with separate module • Encrypted Threat Analytics capability for export either via enhanced Netflow telemetry or J-Flow
<p>Bidder's technical reasons supporting compliance: Firewall Services</p> <ul style="list-style-type: none"> • Stateful and stateless firewall • Zone-based firewall • Screens and distributed denial of service (DDoS) protection • Protection from protocol and traffic anomalies 	

- Unified Access Control (UAC)

Application Security Services³

- Application visibility and control
- Application-based firewall
- Application QoS
- Advanced/application policy-based routing (APBR)
- Application Quality of Experience (AppQoE)
- Application-based multipath routing
- User-based firewall

Threat Defense and Intelligence Services³

- Intrusion prevention system
- Antivirus
- Antispam
- Category/reputation-based URL filtering
- SSL proxy/inspection
- Protection from botnets (command and control)
- Adaptive enforcement based on GeoIP
- Juniper Advanced Threat Prevention, a cloud-based SaaS

offering, to detect and block zero-day attacks

- Adaptive Threat Profiling
- Encrypted Traffic Insights
- SecIntel to provide threat intelligence
- Juniper ATP Appliance, a distributed, on-premises advanced threat prevention solution to detect and block zero-day attacks

VPN Features

- Tunnels: Site-to-Site, Hub and Spoke, Dynamic Endpoint, AutoVPN, ADVPN, Group VPN (IPv4/ IPv6/ Dual Stack)

- Juniper Secure Connect: Remote access / SSL VPN
- Configuration payload: Yes
- IKE Encryption algorithms: Prime, DES-CBC, 3DES-CBC, AECCBC, AES-GCM, SuiteB
- IKE authentication algorithms: MD5, SHA-1, SHA-128, SHA-256, SHA-384
- Authentication: Pre-shared key and public key infrastructure (PKI) (X.509)
- IPsec (Internet Protocol Security): Authentication Header (AH) / Encapsulating Security Payload (ESP) protocol
- IPsec Authentication Algorithms: hmac-md5, hmac-sha-196, hmac-sha-256
- IPsec Encryption Algorithms: Prime, DES-CBC, 3DES-CBC, AEC-CBC, AES-GCM, SuiteB
- Perfect forward secrecy, anti-reply
- Internet Key Exchange: IKEv1, IKEv2
- Monitoring: Standard-based dead peer detection (DPD) support, VPN monitoring
- VPNs GRE, IP-in-IP, and MPLS

Bidder's technical reasons supporting compliance:

JNP-SRX4100_4200-EN Datasheet

Tech. Requ. No. 3.3.15.11	<p>Technical Requirement:</p> <p>Min Firewall Performance</p> <ul style="list-style-type: none"> • IPv4/IPv6 Firewall Throughput (64 byte) min 70 Gbps • IPS Throughput min 14 Gbps • NGFW Throughput min 11 Gbps • Threat Protection Throughput min 10 Gbps • IPsec VPN Throughput min 50 Gbps <p>Requirement amendment (ref. Amendment 2-RFB - April 3th, 2023)</p> <p>Min Firewall Performance</p> <ul style="list-style-type: none"> • IPv4/IPv6 Firewall Throughput (64 byte) min 30 Gbps • IPS Throughput min 10 Gbps • NGFW Throughput min 5 Gbps
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- **IPsec VPN Throughput min 10 Gbps**

Bidder's technical reasons supporting compliance:

	SRX4100
Firewall throughput	40 Gbps
Firewall throughput—IMIX	22.5 Gbps
Firewall throughput with application security	27.5 Gbps
IPsec VPN throughput-IMIX/1400 B	12.5/19 Gbps
Intrusion prevention	15 Gbps
NGFW ² throughput	10 Gbps
Connections per second	250,000
Maximum session	5 million

Bidder's technical reasons supporting compliance:

JNP-SRX4100_4200-EN Datasheet

Tech. Requ. No. 3.3.15.12	Technical Requirement: Min Session Performance
	<ul style="list-style-type: none"> • Concurrent Sessions (TCP) min 8 M • New Sessions/Second (TCP) min 0.5 M <p>Requirement amendment (ref. Amendment 2-RFB - April 3th, 2023)</p> <p>Min Session Performance</p> <ul style="list-style-type: none"> • Concurrent Sessions (TCP) min 2 M • New Sessions/Second (TCP) min 0.25 M

Bidder's technical reasons supporting compliance:

	SRX4100
Firewall throughput	40 Gbps
Firewall throughput—IMIX	22.5 Gbps
Firewall throughput with application security	27.5 Gbps
IPsec VPN throughput-IMIX/1400 B	12.5/19 Gbps
Intrusion prevention	15 Gbps
NGFW ² throughput	10 Gbps
Connections per second	250,000
Maximum session	5 million

Bidder's technical reasons supporting compliance:

JNP-SRX4100_4200-EN Datasheet

Tech. Requ. No. 3.3.15.13	Technical Requirement:
	<p>Minimum of 3 years of the Security Feature included</p> <ul style="list-style-type: none"> • Application control • NGIPS

Bidder's technical reasons supporting compliance:

The following license will be included with the hardware
 S-SRX4100-A1-3 SW, A1, IPS, AppSecure, content security, 3 year

Bidder's technical reasons supporting compliance:

Routers/Switches/Firewalls/SBCs - Basic quality/performance requirements of the devices to be delivered. **For Remote Site Equipment**

Tech. Requ. No. 3.3.15.14	Technical Requirement: Power Supply 220-240v AC, 50Hz
Bidder's technical reasons supporting compliance: Power-supply options Internal: AC Power Supply 220-240V AC, 50Hz,	
Bidder's technical reasons supporting compliance: Please see network equipment data sheets	

Tech. Requ. No. 3.3.15.15	Technical Requirement: Working Temperature 0° to +40 °C
Bidder's technical reasons supporting compliance: Operating temperature conditions 32 to 104°F (0 to 40°C)	
Bidder's technical reasons supporting compliance: Please see network equipment data sheets	

Tech. Requ. No. 3.3.15.16	Technical Requirement: EMC Regulatory and Compliance: <ul style="list-style-type: none"> • EN 60950-1 • EN 55032 Class A • EN 300-386 • EN 61000 • EN 55024 Or equivalent
Bidder's technical reasons supporting compliance: EMC Regulatory and Compliance: <ul style="list-style-type: none"> • EN 60950-1 • EN 55032 Class A • EN 300-386 • EN 61000 • EN 55024 	

- 47 CFR, Part 15 Or equivalent

Bidder's technical reasons supporting compliance:

Juniper - Agency Approvals data sheet

Tech. Requ. No. 3.3.15.17	Technical Requirement: Min. 3 x WAN Ethernet interfaces, multifunctional GE RJ-45 of which at least 1 is multifunctional RJ45 and SFP, 1x USB Console Port, Min 6 LAN ethernet GE PoE+ and Min 2 G SFP port Min 1 x Serial Console port <i>Requirement amendment (ref. Amendment 2-RFB - April 3th, 2023)</i> <i>Min 6 LAN ethernet GE PoE+ can be in separate switch If proper mounted and connected in the under 3.3.5.23 described wall mountable rack</i>
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Bidder's technical reasons supporting compliance:

Supported

SRX300 + EX2300-C-12P

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

Refer to:

JNP-SRX300-EN Datasheet

JNP-EX2300-C-ENT Datasheet

Tech. Requ. No. 3.3.15.18	Technical Requirement: Min. 4 GB Flash and min. 4 GB DRAM (memory) Min. 30 Mbps capability of Data Traffic and possibility to be upgraded to min 70Mbps with additional license
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Bidder's technical reasons supporting compliance:

System memory (RAM) 4 GB

Storage 8 GB

Bidder's technical reasons supporting compliance:

JNP-SRX300-EN Datasheet

Tech. Requ. No. 3.3.15.19	Technical Requirement: At least the following routing protocols must be supported: <ul style="list-style-type: none"> • Static Routing IPv4 and IPv6 • RIPv1, RIPv2, RIP for IPv6 • OSPFv2 and OSPFv3 • BGP4 • System-to-Intermediate System (IS-IS)
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- Multicast Internet Group Management Protocol Version 3 (IGMPv3)
- Multicast Routing with PIM SM and PIM SSM
- Policy Based routing
- Built-in Firewall

Bidder's technical reasons supporting compliance:

Routing Protocols

- IPv4, IPv6, ISO, Connectionless Network Service (CLNS)
- Static routes
- RIP v1/v2
- OSPF/OSPF v3
- BGP with Route Reflector
- IS-IS
- Multicast: Internet Group Management Protocol (IGMP) v1/v2,

Protocol Independent Multicast (PIM) sparse mode (SM)/dense mode (DM)/source-specific multicast (SSM), Session

Description Protocol (SDP), Distance Vector Multicast Routing

Protocol (DVMRP), Multicast Source Discovery Protocol

(MSDP), Reverse Path Forwarding (RPF)

- Encapsulation: VLAN, Point-to-Point Protocol (PPP), Frame Relay, High-Level Data Link Control (HDLC), serial, Multilink Point-to-Point Protocol (MLPPP), Multilink Frame Relay (MLFR), and Point-to-Point Protocol over Ethernet (PPPoE)

- Virtual routers
- Policy-based routing, source-based routing
- Equal-cost multipath (ECMP)

Enhanced SD-WAN Services

- Application-based advanced policy-based routing (APBR)
- Application-based link monitoring and switchover with

Application quality of experience (AppQoE)

Bidder's technical reasons supporting compliance:

JNP-SRX300-EN Datasheet

Tech. Requ. No. 3.3.15.20	Technical Requirement: The following QoS functionalities must be supported at least: <ul style="list-style-type: none"> • Weighted Fair Queueing that uses user- based traffic classes based on different criteria (protocols, access lists, input interface), • Weighted Random Early Detection, • QoS, Policy-Based Routing (PBR)
Bidder's technical reasons supporting compliance: QoS Features <ul style="list-style-type: none"> • Support for 802.1p, DiffServ code point (DSCP), EXP • Classification based on VLAN, data-link connection identifier (DLCI), interface, bundles, or multifield filters • Marking, policing, and shaping • Classification and scheduling • Weighted random early detection (WRED) • Guaranteed and maximum bandwidth • Ingress traffic policing • Virtual channels • Hierarchical shaping and policing 	
Bidder's technical reasons supporting compliance: JNP-SRX300-EN Datasheet	

Tech. Requ. No. 3.3.15.21	Technical Requirement: Device needs to support minimum of following management protocols: <ul style="list-style-type: none"> • Console access, • HTTP and HTTPS • RMON • IPv4/v6 ping • SSHv2 и SNMPv3 • IP Flow Information Export (IPFix) Device needs to have all appropriate licenses for usage of above-mentioned protocols
Bidder's technical reasons supporting compliance: Management, Automation, Logging, and Reporting <ul style="list-style-type: none"> • SSH, Telnet, SNMP • Smart image download • Juniper CLI and Web UI • Mist AI 	

- Simplified management
- WAN Assurance
- Junos Space and Security Director
- Python
- Junos OS event, commit, and OP script
- Application and bandwidth usage reporting
- Auto installation
- Debug and troubleshooting tools
- Zero-Touch Provisioning with Contrail Service Orchestration

Bidder's technical reasons supporting compliance:

JNP-SRX300-EN Datasheet

Tech. Requ. No. 3.3.15.22	Technical Requirement: Network Security Support for: <ul style="list-style-type: none"> • Zone-Based Firewall • Auto Discovery / Dynamic VPN • IPS with signature subscription license • WAN MACsec with separate module • Encrypted Threat Analytics capability for export either via enhanced Netflow telemetry or J-Flow
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Bidder's technical reasons supporting compliance:

Firewall Services

- Stateful and stateless firewall
- Zone-based firewall
- Screens and distributed denial of service (DDoS) protection
- Protection from protocol and traffic anomaly
- Integration with Pulse Unified Access Control (UAC)
- Integration with Aruba Clear Pass Policy Manager
- User role-based firewall
- SSL Inspection (Forward-proxy)

VPN Features

- Tunnels: Site-to-Site, Hub and Spoke, Dynamic Endpoint, AutoVPN, ADVPN, Group VPN (IPv4/ IPv6/ Dual Stack)

- Juniper Secure Connect: Remote access / SSL VPN
- Configuration payload: Yes
- IKE Encryption algorithms: Prime, DES-CBC, 3DES-CBC, AECCBC, AES-GCM, SuiteB
- IKE authentication algorithms: MD5, SHA-1, SHA-128, SHA-256, SHA-384
- Authentication: Pre-shared key and public key infrastructure (PKI) (X.509)
- IPsec (Internet Protocol Security): Authentication Header (AH) / Encapsulating Security Payload (ESP) protocol
- IPsec Authentication Algorithms: hmac-md5, hmac-sha-196, hmac-sha-256
- IPsec Encryption Algorithms: Prime, DES-CBC, 3DES-CBC, AEC-CBC, AES-GCM, SuiteB
- Perfect forward secrecy, anti-reply
- Internet Key Exchange: IKEv1, IKEv2
- Monitoring: Standard-based dead peer detection (DPD) support, VPN monitoring
- VPNs GRE, IP-in-IP, and MPLS

Application Security Services¹

- Application visibility and control
- Application-based firewall
- Application QoS
- Application-based advanced policy-based routing
- Application quality of experience (AppQoE)

Threat Defense and Intelligence Services¹

- Intrusion prevention
- Antivirus

- Antispam
- Category/reputation-based URL filtering
- Protection from botnets (command and control)
- Adaptive enforcement based on GeoIP
- Juniper Advanced Threat Prevention to detect and block zeroday

attacks

- Adaptive Threat Profiling
- Encrypted Traffic Insights
- SecIntel to provide threat intelligence

Bidder's technical reasons supporting compliance:

JNP-SRX300-EN Datasheet

Tech. Requ. No. 3.3.15.23	Technical Requirement: Per location provision of min 6 HU wall mountable 19" IT Rack. lockable with glass front. Each rack must contain 1HU 24 port RJ-45 patch- field and 1HU Power Distribution Unit with build in surge protector
Bidder's technical reasons supporting compliance: 9 HU 19" Rack	
Bidder's technical reasons supporting compliance:	

Routers/Switches/Firewalls/SBCs - Basic quality/performance requirements of the devices to be delivered. **For larger sites**

Tech. Requ. No. 3.3.15.24	Technical Requirement: Duplication of equipment according bidder information "LAN of ERC and larger Sites"
Bidder's technical reasons supporting compliance: Refer to LAN of ERC.	
Bidder's technical reasons supporting compliance:	

Tech. Requ. No. 3.3.15.25	Technical Requirement: Installation of separate switching equipment according bidder information "LAN of ERC and larger Sites" meeting the requirements as of Switches at ERC operators' LANs except Req. 1.3.15.26 for min 24 connections
Bidder's technical reasons supporting compliance:	

EX3400-24P Provides 24 port PoE per each physical network group

Bidder's technical reasons supporting compliance:

JNP-EX3400-ENT Datasheet

Routers/Switches/Firewalls/SBCs - Basic quality/performance requirements of the devices to be delivered. **Switches** at ERC operators' LANs

Tech. Requ. No. 3.3.15.26	Technical Requirement: Provide RJ45 ports for at least 80 Connections to the individual Working Desks within the ERC main floor
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Bidder's technical reasons supporting compliance:

2x EX3400-24P per each physical network group. Total 96 port

Bidder's technical reasons supporting compliance:

JNP-EX3400-ENT Datasheet

Tech. Requ. No. 3.3.15.27	Technical Requirement: Each component shall be L2/L3 switch with full L3 functionality of maximum 24 ports with PoE and power budget min 700W with redundant power supply <i>Requirement amendment (ref. Amendment 2-RFB - April 3th, 2023)</i> <i>Each component shall be L2/L3 switch with full L3 functionality of maximum 24 ports with PoE and power budget min 700W power supply</i>
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Bidder's technical reasons supporting compliance:

EX3400-24P 24 ports up to 30W up to 15.4W with PoE+ Power Budget up to 720W

Two redundant, field-replaceable power supplies

L2/L3 switch with full L3 functionality

Bidder's technical reasons supporting compliance:

JNP-EX3400-ENT Datasheet

Tech. Requ. No. 3.3.15.28	Technical Requirement: Ports must support 24 GE RJ-45 PoE, and 2x10G Bidder's technical reasons supporting compliance: EX3400-24P: up to 30 ports (24 PoE+ host ports + four 1/10 GbE and two 40GbE uplink ports) per each switch Bidder's technical reasons supporting compliance: JNP-EX3400-ENT Datasheet
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Tech. Requ. No. 3.3.15.29	Technical Requirement: Switching Bandwidth Min 120 Gbps Stacking Bandwidth Min 80 Gbps Forwarding Rate: 64-Byte Packet Min 90 Mbps
Bidder's technical reasons supporting compliance: Switching Bandwidth: 288 Gbps (bidirectional) Stacking Bandwidth: up to 160 Gbps (with QSFP+ ports) Forwarding Rate: 214 Mpps	
Bidder's technical reasons supporting compliance: JNP-EX3400-ENT Datasheet	

Tech. Requ. No. 3.3.15.30	Technical Requirement: Min 32000 MAC addresses
Bidder's technical reasons supporting compliance: MAC addresses per system: 32,000	
Bidder's technical reasons supporting compliance: JNP-EX3400-ENT Datasheet	

Tech. Requ. No. 3.3.15.31	Technical Requirement: Min 1000 VLAN ID's upgradable to 4000
Bidder's technical reasons supporting compliance: Number of VLANs supported: 4,096	
Bidder's technical reasons supporting compliance: JNP-EX3400-ENT Datasheet	

Tech. Requ. No. 3.3.15.32	Technical Requirement: Min 14000 IPv4 routes (direct and indirect)
Bidder's technical reasons supporting compliance: Maximum number of IPv4 unicast routes in hardware: 14,000 prefixes; 36,000 host routes Maximum number of ARP entries: 16,000	
Bidder's technical reasons supporting compliance: JNP-EX3400-ENT Datasheet	

Tech. Requ. No. 3.3.15.33	Technical Requirement: Support for Jumbo Frames of 9198 bytes
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Bidder's technical reasons supporting compliance:

Jumbo frames: 9216 bytes

Bidder's technical reasons supporting compliance:

JNP-EX3400-ENT Datasheet

Tech. Requ. No. 3.3.15.34	Technical Requirement: Future support of software-defined networking (SDN).(License not include) Future support of spine-leaf architecture 2-Tier
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Bidder's technical reasons supporting compliance:

this feature is not applicable for branch offices,

This feature could be supported in datacenter

Bidder's technical reasons supporting compliance:

JNP-EX3400-ENT Datasheet

Tech. Requ. No. 3.3.15.35	Technical Requirement: The switches shall support the following functions too: <ul style="list-style-type: none"> • IP unicast routing protocols static, RIPv1, and RIPv2, RIPv6 • Policy-Based Routing PBR • 802.1w, MSTP, 802.1q
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Bidder's technical reasons supporting compliance:

- Routing Protocols: RIP v1/v2, OSPF v2
- Routing protocols: RIPv6, OSPF v3
- Static routing
- Layer 3 redundancy: VRRP
- IP directed broadcast—traffic forwarding
- Virtual router (VRF-Lite) supporting RIP, OSPF
- Routing policy
- Filter-based forwarding (FBF)
- Unicast reverse-path forwarding
- IEEE 802.1w: Rapid Spanning Tree Protocol (RSTP)
- IEEE 802.1s: Multiple Spanning Tree Protocol (MSTP)
- Number of MST instances supported: 64
- IEEE 802.1Q: VLAN tagging

Bidder's technical reasons supporting compliance:

JNP-EX3400-ENT Datasheet

Tech. Requ. No. 3.3.15.36	Technical Requirement: Compliance of <ul style="list-style-type: none"> • FCC Part 15 (CFR 47) Class A • ICES-003 Class A • EN 55022 Class A
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	<ul style="list-style-type: none"> • CISPR 22 Class A • VCCI Class A • EN 55024, EN300386, EN 50082-1, UL 60950-1, CAN/CSA-C22.2 No. 60950-1, EN 60950-1, IEC 60950-1,
Bidder's technical reasons supporting compliance: Safety Certifications <ul style="list-style-type: none"> • UL-UL60950-1 (Second Edition) • C-UL to CAN/CSA 22.2 No.60950-1 (Second Edition) • TUV/GS to EN 60950-1 (Second Edition), Amendment • A1-A4, A11 • CB-IEC60950-1, (Second Edition with all country deviations) • EN 60825-1 (Second Edition) 	
Bidder's technical reasons supporting compliance: JNP-EX3400-ENT Datasheet	

Routers/Switches/Firewalls/SBCs - Basic quality/performance requirements of the devices to be delivered. **Aggregator for Mol Locations and interconnect to Mol Network**

Tech. Requ. No. 3.3.15.37	Technical Requirement: Rack mountable Chassis in 19"Rack, maximum 2RU
Bidder's technical reasons supporting compliance: All Network equipment 1 Rack Unit (1RU)	
Bidder's technical reasons supporting compliance: Please see network equipment data sheets	

Tech. Requ. No. 3.3.15.38	Technical Requirement: Power Supply 220-240v AC, 50Hz,
Bidder's technical reasons supporting compliance: Power-supply options Internal: AC Power Supply 220-240V AC, 50Hz,	
Bidder's technical reasons supporting compliance: Please see network equipment data sheets	

Tech. Requ. No. 3.3.15.39	Technical Requirement: Working Temperature 0° to +40 °C
Bidder's technical reasons supporting compliance: Operating temperature conditions 32 to 104°F (0 to 40°C)	

Bidder's technical reasons supporting compliance:

Please see network equipment data sheets

Tech. Requ. No. 3.3.15.40	Technical Requirement: EMC Regulatory and Compliance: <ul style="list-style-type: none"> • EN 60950-1 • EN 55032 Class A • EN 300-386 • EN 61000 • EN 55024 Or equivalent
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Bidder's technical reasons supporting compliance:

EMC Regulatory and Compliance:

- EN 60950-1
- EN 55032 Class A
- EN 300-386
- EN 61000
- EN 55024
- 47 CFR, Part 15 Or equivalent

Bidder's technical reasons supporting compliance:

Juniper - Agency Approvals data sheet

Tech. Requ. No. 3.3.15.41	Technical Requirement: Min. 3 x Ethernet interfaces, multifunctional 10/100/1000 RJ-45 of which is at least 1 is multifunctional RJ45 and SFP, 1x USB Console Port, 1 x Serial Console RJ45 port Possibility to be upgraded with minimum one additional module. Min. 6 port GE PoE+ and 2 port G SFP internal LAN switch integrated on the main chassis <i>Requirement amendment (ref. Amendment 2-RFB - April 3th, 2023)</i> <i>Min 6 LAN ethernet GE PoE+ can be in separate switch If proper mounted and connected in the under 3.3.5.23 described wall mountable rack</i>
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Bidder's technical reasons supporting compliance:

Supported

SRX4100 + EX3400-24p

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

Refer to:

JNP-SRX4100_4200-EN Datasheet

Tech. Requ. No. 3.3.15.42	Technical Requirement: Min. 4 GB Flash and min. 4 GB DRAM (memory) Min. 30 Mbps capability of Data Traffic and possibility to be upgraded to min 70Mbps with additional license
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Bidder's technical reasons supporting compliance:

System memory (RAM) 4 GB
 Storage 8 GB
 Routing with packet mode (IMIX packet size): 800 Mbps
 Stateful firewall (IMIX packet size): 500 Mbps

Bidder's technical reasons supporting compliance:

JNP-SRX300-EN Datasheet

Tech. Requ. No. 3.3.15.43	Technical Requirement: At least the following routing protocols must be supported: <ul style="list-style-type: none"> • Static Routing IPv4 and IPv6 • RIPv1, RIPv2, RIP for IPv6 • OSPFv2 and OSPFv3 • BGP4 • System-to-Intermediate System (IS-IS) • Multicast Internet Group Management Protocol Version 3 (IGMPv3) • Multicast Routing with PIM SM and PIM SSM • Policy Based routing Built-in Firewall
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Bidder's technical reasons supporting compliance:

Routing Protocols

- IPv4, IPv6, ISO, Connectionless Network Service (CLNS)
- Static routes
- RIP v1/v2
- OSPF/OSPF v3
- BGP with Route Reflector
- IS-IS
- Multicast: Internet Group Management Protocol (IGMP) v1/v2, Protocol Independent Multicast (PIM) sparse mode (SM)/dense mode (DM)/source-specific multicast (SSM), Session Description Protocol (SDP), Distance Vector Multicast Routing Protocol (DVMRP), Multicast Source Discovery Protocol (MSDP), Reverse Path Forwarding (RPF)
- Encapsulation: VLAN, Point-to-Point Protocol (PPP), Frame Relay, High-Level Data Link Control (HDLC), serial, Multilink Point-to-Point Protocol (MLPPP), Multilink Frame Relay (MLFR), and Point-to-Point Protocol over Ethernet (PPPoE)

- Virtual routers
- Policy-based routing, source-based routing
- Equal-cost multipath (ECMP)

Enhanced SD-WAN Services

- Application-based advanced policy-based routing (APBR)
- Application-based link monitoring and switchover with Application quality of experience (AppQoE)

Bidder's technical reasons supporting compliance:

JNP-SRX300-EN Datasheet

Tech. Requ. No. 3.3.15.44	Technical Requirement: The following QoS functionalities must be supported at least: <ul style="list-style-type: none"> • Weighted Fair Queueing that uses user- based traffic classes based on different criteria (protocols, access lists, input interface), • Weighted Random Early Detection, • Hierarchical QoS, Policy-Based Routing (PBR)
Bidder's technical reasons supporting compliance: QoS Features <ul style="list-style-type: none"> • Support for 802.1p, DiffServ code point (DSCP), EXP • Classification based on VLAN, data-link connection identifier (DLCI), interface, bundles, or multifield filters • Marking, policing, and shaping • Classification and scheduling • Weighted random early detection (WRED) • Guaranteed and maximum bandwidth • Ingress traffic policing • Virtual channels • Hierarchical shaping and policing 	
Bidder's technical reasons supporting compliance: JNP-SRX300-EN Datasheet	

Tech. Requ. No. 3.3.15.45	Technical Requirement: Device needs to support minimum of following management protocols: <ul style="list-style-type: none"> • Console access, • HTTP and HTTPS • RMON • IPv4/v6 ping • SSHv2 и SNMPv3 • IP Flow Information Export (IPFix) Device needs to have all appropriate licenses for usage of above-mentioned protocols
Bidder's technical reasons supporting compliance: Management, Automation, Logging, and Reporting	

- SSH, Telnet, SNMP
- Smart image download
- Juniper CLI and Web UI
- Mist AI
- Simplified management
- WAN Assurance
- Junos Space and Security Director
- Python
- Junos OS event, commit, and OP script
- Application and bandwidth usage reporting
- Auto installation
- Debug and troubleshooting tools
- Zero-Touch Provisioning with Contrail Service Orchestration

Bidder's technical reasons supporting compliance:

JNP-SRX300-EN Datasheet

Tech. Requ. No. 3.3.15.46	Technical Requirement: Network Security Support for: <ul style="list-style-type: none"> • Zone-Based Firewall • Auto Discovery / Dynamic VPN • IPS with signature subscription license • WAN MACsec with separate module • Encrypted Threat Analytics capability for export either via enhanced Netflow telemetry or J-Flow
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Bidder's technical reasons supporting compliance:

Firewall Services

- Stateful and stateless firewall
- Zone-based firewall
- Screens and distributed denial of service (DDoS) protection
- Protection from protocol and traffic anomaly
- Integration with Pulse Unified Access Control (UAC)
- Integration with Aruba Clear Pass Policy Manager
- User role-based firewall
- SSL Inspection (Forward-proxy)

VPN Features

- Tunnels: Site-to-Site, Hub and Spoke, Dynamic Endpoint, AutoVPN, ADVPN, Group VPN (IPv4/ IPv6/ Dual Stack)
- Juniper Secure Connect: Remote access / SSL VPN
- Configuration payload: Yes
- IKE Encryption algorithms: Prime, DES-CBC, 3DES-CBC, AECCBC, AES-GCM, SuiteB
- IKE authentication algorithms: MD5, SHA-1, SHA-128, SHA-256, SHA-384
- Authentication: Pre-shared key and public key infrastructure (PKI) (X.509)

- IPsec (Internet Protocol Security): Authentication Header (AH) / Encapsulating Security Payload (ESP) protocol
- IPsec Authentication Algorithms: hmac-md5, hmac-sha-196, hmac-sha-256
- IPsec Encryption Algorithms: Prime, DES-CBC, 3DES-CBC, AEC-CBC, AES-GCM, SuiteB
- Perfect forward secrecy, anti-reply
- Internet Key Exchange: IKEv1, IKEv2
- Monitoring: Standard-based dead peer detection (DPD) support, VPN monitoring
- VPNs GRE, IP-in-IP, and MPLS

Application Security Services¹

- Application visibility and control
- Application-based firewall
- Application QoS
- Application-based advanced policy-based routing
- Application quality of experience (AppQoE)

Threat Defense and Intelligence Services¹

- Intrusion prevention
- Antivirus
- Antispam
- Category/reputation-based URL filtering
- Protection from botnets (command and control)
- Adaptive enforcement based on GeoIP
- Juniper Advanced Threat Prevention to detect and block zeroday attacks
- Adaptive Threat Profiling
- Encrypted Traffic Insights
- SecIntel to provide threat intelligence

Bidder's technical reasons supporting compliance:

JNP-SRX300-EN Datasheet

General requirements of the LAN/WAN/BCF/Firewall/Load Balancer - Local Area Network (LAN)

Tech. Requ. No. 3.3.15.47	Technical Requirement: The local area network (LAN) must be a redundant and high available Ethernet network for the connection of all IT components.
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Bidder's technical reasons supporting compliance:

The local area network (LAN) will be a redundant and high available Ethernet network for the connection of all IT components (e.g. core, aggregate and edge switches)

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

Tech. Requ. No. 3.3.15.48	Technical Requirement: In the main ERC site and the large sites of PSOs (Ambulance, Police, and civil Defense services) the workplace clients must be subdivided in at least two physical groups (LAN segments: LAN A and LAN B) Each workplace group has its own LAN switch.
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Bidder's technical reasons supporting compliance: In the ERC site and the large sites of PSOs (Ambulance, Police, and civil Defense services) the workplace clients will be subdivided in a two physical groups (LAN segments: LAN A and LAN B) Each workplace group has its own LAN switch.	
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Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	
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Tech. Requ. No. 3.3.15.49	Technical Requirement: The interconnection of the LAN switches with WAN network equipment, must be realized in a way, that a failure of one LAN switch does not cause a full functional disruption of the center. Impacts which cause a reduced availability and a reduced system performance are acceptable only temporary.
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Bidder's technical reasons supporting compliance: The interconnection of the LAN switches with WAN network equipment, will be realized in a way, that a failure of one LAN switch does not cause a full functional disruption of the center. Impacts which cause a reduced availability and a reduced system performance are acceptable only temporary.	
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Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	
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Tech. Requ. No. 3.3.15.50	Technical Requirement: To manage and control the network traffic for different applications and VLANs services, must be set up and QoS. All VLANs are tagged and must use on the same redundant physical LANs.
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Bidder's technical reasons supporting compliance: To manage and control the network traffic for different applications and VLANs services, must be set up and QoS. All VLANs are tagged and must use on the same redundant physical LANs.	
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Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	
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Tech. Requ. No. 3.3.15.51	Technical Requirement: Each application or service VLAN must be marked with a different QoS parameter and classified with specific rules for required network resources reservations.
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Bidder's technical reasons supporting compliance:	
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Each application or service VLAN must be marked with a different QoS parameter and classified with specific rules for required network resources reservations.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

Tech. Requ. No. 3.3.15.52	Technical Requirement: For each VLAN applications required resources need to be reserved. Different QoS parameters should be set and specific filters rules must be configured according the offered applications.
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Bidder's technical reasons supporting compliance:

For each VLAN applications will be reserved required resources. Up to 1000 QoS parameters will be set and specific filters rules will be configured according the offered applications.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

Tech. Requ. No. 3.3.15.53	Technical Requirement: It must be possible to monitor all traffic on any selected physical port for debugging purpose. Tools for monitoring and debugging of the LAN traffic must be delivered to the local maintenance staff.
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Bidder's technical reasons supporting compliance:

The offered solution allows monitoring all traffic on any selected physical port for debugging purpose. Tools for monitoring and debugging of the LAN traffic will be delivered to the local maintenance staff.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

UniNMS datasheet

Junos Space Platform datasheet

Tech. Requ. No. 3.3.15.54	Technical Requirement: All components at workplaces and in the server, rooms must be connected by at least Category 6 at least STP cables and patch cords.
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Bidder's technical reasons supporting compliance:

All network components at workplaces also the network components in the server rooms will be connected by at least Category 6 at least STP cables and patch cords.

Bidder's technical reasons supporting compliance:

Tech. Requ. No. 3.3.15.55	Technical Requirement: Supported Ethernet standards must be at least 1000BASE-TX, but still must support and lower Ethernet standards like 100BASE-TX or T
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Bidder's technical reasons supporting compliance:

All switches will be supported 10/100/1000 Ethernet standards for downlinks

Bidder's technical reasons supporting compliance:

EX3400-24P datasheet

Tech. Requ. No. 3.3.15.56

Technical Requirement:

The connection between the switches is designed for an appropriate bandwidth (e.g., 10GBASE-FX or stacked). The provided setup and cables have to support that.

Bidder's technical reasons supporting compliance:

The connection between the switches is designed for an 10Gbps uplink bandwidth with 4x10G SFP card and 2x40G QSFP ports populated with necessary SFP transceivers and DAC which is also included as a cable and patch cords

Bidder's technical reasons supporting compliance:

EX3400-24P datasheet

26a Emergency Response Software Solution

Tech. Requ. No. 3.3.15.57

Technical Requirement:

All connectivity between the switches should be designed to not degrade the throughput. Provided solution/model/chassis should support 10GBASE- FX connectivity or ability to work Stacked as a single unit.

Bidder's technical reasons supporting compliance:

will be designed, delivered, and installed to not degrade the throughput. Provided solution/model/chassis will support 10GBASE-FX and 40GBASE-FX connectivity or ability to work Stacked as a single unit.

Bidder's technical reasons supporting compliance:

EX3400-24P datasheet

26a Emergency Response Software Solution

Tech. Requ. No. 3.3.15.58

Technical Requirement:

Each routing system regardless of its positioning (i.e., main sites or ERC) must be possible to be connected fully redundant in order to prevent any kind of single point of failure from interrupting IP geographical connectivity

Bidder's technical reasons supporting compliance:

Each routing system regardless of its positioning will be fully redundant in order to prevent any kind of single point of failure from interrupting IP geographical connectivity

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

Tech. Requ. No.

Technical Requirement:

The proposed routing solution must support IPv4 (RFC791) and IPv6

3.3.15.59	(RFC2460).
Bidder's technical reasons supporting compliance: The proposed routing solution will be support IPv4 (RFC791) and IPv6 (RFC2460).	
Bidder's technical reasons supporting compliance: EX3400-24P datasheet	

Tech. Requ. No. 3.3.15.60	Technical Requirement: The proposed routing solution must support unicast and multicast routing. Unicast routing must include static routes and dynamic routing protocols (distance vector, link state, hybrid)
Bidder's technical reasons supporting compliance: The proposed routing solution will be supporting 18,000 host routes and 2,000 multicast routes. Unicast routing will include static routes and dynamic routing protocols	
Bidder's technical reasons supporting compliance: EX3400-24P datasheet	

Tech. Requ. No. 3.3.15.61	Technical Requirement: The proposed routing solution must support QoS mechanisms aimed at providing VoIP traffic priority over data traffic
Bidder's technical reasons supporting compliance: The proposed routing solution support QoS mechanisms aimed at providing various traffic types priority over data traffic	
Bidder's technical reasons supporting compliance: EX3400-24P datasheet	

Tech. Requ. No. 3.3.15.62	Technical Requirement: The uplink between the routing function and local LAN switches must be at least 1Gbps with RJ45 or SFP.
Bidder's technical reasons supporting compliance: The uplink between the routing devices and local LAN switches will be 10Gbps by default and also will support 1Gbps with RJ45 or SFP.	
Bidder's technical reasons supporting compliance: EX3400-24P datasheet	

Tech. Requ. No. 3.3.15.63	Technical Requirement: The Workstations and Servers must have assigned IP-Addresses in addition a DHCP (RFC 2131, and RFC3315) service must be provided to the automatic assignment of the network configuration (IP addresses of client, gateways, name server, proxy, NTP-Server, DNS-server) to clients. The permanent
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	assigned network numbering range must be excluded from the DHCP service. Different VLANs should be capable to get different DHCP credentials
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Bidder's technical reasons supporting compliance:

The Workstations and Servers will have assigned IP-Addresses in addition a DHCP (RFC 2131, and RFC3315) service will be provided to the automatic assignment of the network configuration (IP addresses of client, gateways, name server, proxy, NTP-Server, DNS-server) to clients. The permanent assigned network numbering range will be excluded from the DHCP service. Different VLANs will be capable to get different DHCP credentials

Bidder's technical reasons supporting compliance:

EX3400 datasheet

SRX300 datasheet

26a Emergency Response Software Solution

Tech. Requ. No. 3.3.15.64	Technical Requirement: DNS (RFC 1034, RFC 1035, RFC 3596) provides the translation between domain names and IP addresses for internal and external resources to the network clients. Each VLAN should be a possibility to resolve different info according the internal policies.
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Bidder's technical reasons supporting compliance:

Each VLAN will have a possibility to resolve different DNS (RFC 1034, RFC 1035, RFC 3596) info according the internal policies for internal and external resources to the network clients.

Bidder's technical reasons supporting compliance:

EX3400 datasheet

Srx300 datasheet

26a Emergency Response Software Solution

Tech. Requ. No. 3.3.15.65	Technical Requirement: At least NTPv4 (RFC 5905) allows the time synchronization within a network. Each network device, client and server or network device in the system should synchronize the time via NTP. Virtual Servers may get the time from the host system which is synchronized over NTP.
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Bidder's technical reasons supporting compliance:

The offered designed solution provide NTPv4 (RFC 5905) capability for each network device, client and server or network device in the system to synchronize the time via NTP. Virtual Servers will get the time from the host system which is synchronized over NTP.

Bidder's technical reasons supporting compliance:

EX3400 datasheet

Sx300 datasheet

26a Emergency Response Software Solution

General requirements of the LAN/WAN/BCF/Firewall/Load Balancer - Wide Area Network

Tech. Requ. No. 3.3.15.66	Technical Requirement:
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	The WAN it extends over a large geographical area for the primary purpose of connecting and integrate all POPs of the
Bidder's technical reasons supporting compliance: Proposed solution will connect all sites and buildings offices through the required mediums, links, and available service providers	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.15.67	Technical Requirement: The WAN platform/infrastructure shall consolidate and manage all various traffic streams (voice, video a collaborations data) among the main DC, DRC and all country sites.
Bidder's technical reasons supporting compliance: The WAN infrastructure will consolidate and thru the established WAN will be managed all types of traffic streams (voice, video, collaborations data etc..) between the main DC, DRC and all country sites	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.15.68	Technical Requirement: The system shall be providing system and service continuity with possibilities to redundancy across the routers 99.9% availability.
Bidder's technical reasons supporting compliance: The system is designed to provide system and service continuity with possibilities to redundancy across the routers with 99.9% availability (less than 9 hours in a year)	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.15.69	Technical Requirement: The proposed platform shall be capable to aggregate multiple WAN connection and network services
Bidder's technical reasons supporting compliance: The proposed platform will be capable to aggregate multiple WAN connection and network services as a standard and custom ISP services, VPN tunnels from other private networks, lease line and dark fiber in the same time by priority conditions	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No.	Technical Requirement: The platform shall be designed to offers hardware and software redundancy
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3.3.15.70	at the same time
Bidder's technical reasons supporting compliance: The offered platform will be designed to achieve hardware and software redundancy at the same time	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.15.71	Technical Requirement: All services shall be able to operate without the need for additional hardware or chassis.
Bidder's technical reasons supporting compliance: All services on the offered platform will be operate with no need of additional hardware or chassis.	
Bidder's technical reasons supporting compliance: Noted, 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.15.72	Technical Requirement: The solution shall support flexible licensing to support business needs and access to updates and upgrades of all vendor technologies.
Bidder's technical reasons supporting compliance: The solution will support flexible licensing to support business needs and access to updates and upgrades of all vendor technologies.	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.15.73	Technical Requirement: The access to the IT management system must be protected by authentication mechanisms.
Bidder's technical reasons supporting compliance: The access to the IT management system will be protected by authentication mechanisms locally on each device thru the Telnet, SSH or WebGUI protected with username and password	
Bidder's technical reasons supporting compliance: Junos Space platform datasheet SRX4100 datasheet 26a Emergency Response Software Solution	

General requirements of the LAN/WAN/BCF/Firewall/Load Balancer - Border Control Function/Device (BCF)

Tech. Requ. No. 3.3.15.74	Technical Requirement: BCF shall be deployed as Virtual Network Function or rack mountable chassis
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	form factor.
Bidder's technical reasons supporting compliance: The proposed BCF (SBC) is a standard rack-mountable hardware appliance	
Bidder's technical reasons supporting compliance: Cisco Catalyst 8200 Rack mount kit - 19" 1R Cisco Catalyst 8200 Datasheet	

Tech. Requ. No. 3.3.15.75	Technical Requirement: BCF must have possibility to be deployed in High- Availability cluster, based on RG infrastructure. Active-Standby nodes switchover inside cluster must not have an impact on active call sessions
Bidder's technical reasons supporting compliance: Two SBCs will be present in each central server site configured in a active/hot standby cluster. Active-Standby nodes switchover inside cluster will not have an impact on active call sessions	
Bidder's technical reasons supporting compliance: Cisco Catalyst 8200 Datasheet Cisco Unified Border Element Datasheet	

Tech. Requ. No. 3.3.15.76	Technical Requirement: BCF must provide full topology hiding to prevent any analysis of service provider internal VoIP infrastructure from untrusted area by removing any vendor fingerprints from the signaling messages and replace the IP addressing scheme
Bidder's technical reasons supporting compliance: The SBC acts as a back-to-back user agent and SIP firewall, it completely hides internal NG911 network from external and, viceversa, hides Service Providers' environments from NG911 internal network	
Bidder's technical reasons supporting compliance: Cisco Catalyst 8200 Datasheet Cisco Unified Border Element Datasheet 26A EMERGENCY RESPONSE SOFTWARE SOLUTION	

Tech. Requ. No. 3.3.15.77	Technical Requirement: The BCF shall support SIP protocol.
Bidder's technical reasons supporting compliance: Compliant. The SBC is a SIP back-to-back user agent	
Bidder's technical reasons supporting compliance: Cisco Catalyst 8200 Datasheet	

Cisco Unified Border Element Datasheet

Tech. Requ. No. 3.3.15.78	Technical Requirement: The Media support shall be RTP/RTCP and BFCP pass-through
Bidder's technical reasons supporting compliance: The Media will be support RTP/RTCP and BFCP pass-through	
Bidder's technical reasons supporting compliance: Cisco Unified Border Element Datasheet	

Tech. Requ. No. 3.3.15.79	Technical Requirement: The Signaling transport mode shall be TCP/UDP and TCP2UDP interwork
Bidder's technical reasons supporting compliance: The Signalling transport mode will be TCP/UDP and TCP2UDP interwork	
Bidder's technical reasons supporting compliance: Cisco Unified Border Element Datasheet	

Tech. Requ. No. 3.3.15.80	Technical Requirement: The BCF shall support Fax via Fax pass-through and T.38 fax relay
Bidder's technical reasons supporting compliance: The BCF will support Fax via Fax pass-through and T.38 fax relay	
Bidder's technical reasons supporting compliance: Cisco Unified Border Element Datasheet	

Tech. Requ. No. 3.3.15.81	Technical Requirement: The BCF shall support dual-tone multi frequency (DTMF) via H.245, RFC 2833, RFC 4733, KPML and all shall be interworking between the individual RFCs
Bidder's technical reasons supporting compliance: The BCF will support dual-tone multi frequency (DTMF) via H.245, RFC 2833, RFC 4733, KPML and will be interworking between the all individual RFCs	
Bidder's technical reasons supporting compliance: Cisco Unified Border Element Datasheet	

Tech. Requ. No. 3.3.15.82	Technical Requirement: The BCF shall support Supplementary services as Call hold, call transfer, call forwarding for SIP and/or Multicast MoH
Bidder's technical reasons supporting compliance: The BCF will support Supplementary services as Call hold, call transfer, call forwarding for SIP and/or Multicast MoH	
Bidder's technical reasons supporting compliance: Cisco Unified Border Element Datasheet	

Tech. Requ. No. 3.3.15.83	Technical Requirement: The call dialing shall be via E164 and URI options
Bidder's technical reasons supporting compliance: The call dialling will be via E164 and URI options	
Bidder's technical reasons supporting compliance: Cisco Unified Border Element Datasheet	

Tech. Requ. No. 3.3.15.84	Technical Requirement: The BCF shall support the following call routing options: <ul style="list-style-type: none"> • Destination-based or source-based routing • Dial Peer Groups (Trunk Groups) (outbound routing determined by inbound dial pattern) • Server Groups to define order of selection of alternative or backup routing paths for outbound routing • Routing based on duple header variables (both AND OR logic) • Refer and call redirect consumption and pass-through • Outbound call load distribution with random or round robin schemes • Call re-routing based on network errors or error responses
Bidder's technical reasons supporting compliance: The BCF will support the following call routing options: <ul style="list-style-type: none"> • Destination-based or source-based routing • Dial Peer Groups (Trunk Groups) (outbound routing determined by inbound dial pattern) • Server Groups to define order of selection of alternative or backup routing paths for outbound routing • Routing based on duple header variables (both AND OR logic) • Refer and call redirect consumption and pass-through • Outbound call load distribution with random or round robin schemes 	

- Call re-routing based on network errors or error responses

Bidder's technical reasons supporting compliance:

Cisco Unified Border Element Datasheet

<p>Tech. Requ. No. 3.3.15.85</p>	<p>Technical Requirement: The BCF shall provide the voice quality statistics via RTCP data from incoming and outgoing call legs used:</p> <ul style="list-style-type: none"> • Packet loss, jitter, and Round-Trip Time (RTT) • Per-call leg call-quality statistics
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Bidder's technical reasons supporting compliance:

The BCF will provide the voice quality statistics via RTCP data from incoming and outgoing call legs used:

- Packet loss, jitter, and Round-Trip Time (RTT)

Per-call leg call-quality statistics

Bidder's technical reasons supporting compliance:

Cisco Unified Border Element Datasheet

<p>Tech. Requ. No. 3.3.15.86</p>	<p>Technical Requirement: QoS required is Per-call QoS packet marking and IP precedence and DSCP marking</p>
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Bidder's technical reasons supporting compliance:

QoS required is

Per-call QoS packet marking

and IP precedence and DSCP marking

Bidder's technical reasons supporting compliance:

Cisco Unified Border Element Datasheet

<p>Tech. Requ. No. 3.3.15.87</p>	<p>Technical Requirement: The Network Address Translation (NAT) traversal shall support NAT traversal and stateful NAT traversal</p>
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Bidder's technical reasons supporting compliance:

The Network Address Translation (NAT) traversal will support

AT traversal and

stateful NAT traversal

Bidder's technical reasons supporting compliance:

Cisco Unified Border Element Datasheet

Tech. Requ. No. 3.3.15.88	Technical Requirement: The BCF shall support network hiding for: <ul style="list-style-type: none"> • IP network privacy and topology hiding • IP network security boundary • Intelligent IP address translation for call media and signaling • Back-to-back user agent, replacing all SIP- embedded IP addressing • History information-based topology hiding and call routing
Bidder's technical reasons supporting compliance: Technical Requirement: The BCF shall support network hiding for: <ul style="list-style-type: none"> • IP network privacy and topology hiding • IP network security boundary • Intelligent IP address translation for call media and signaling • Back-to-back user agent, replacing all SIP- embedded IP addressing • History information-based topology hiding and call routing 	
Bidder's technical reasons supporting compliance: Cisco Unified Border Element Datasheet	

Tech. Requ. No. 3.3.15.89	Technical Requirement: The BCF shall support Number translation rules for Voice-over-IP (VoIP) numbers Via URI-based dialing translations
Bidder's technical reasons supporting compliance: The BCF shall support Number translation rules for Voice-over-IP (VoIP) numbers Via URI-based dialing translations	
Bidder's technical reasons supporting compliance: Cisco Unified Border Element Datasheet	

Tech. Requ. No. 3.3.15.90	Technical Requirement: The BC shall support the following codecs: G.711 mu-law and a-law, G.722, G.723, G.726, G.729
Bidder's technical reasons supporting compliance: The BC will support the following codecs: G.711 G.722, G.723, G.726, G.729 mu-law and a-law,	
Bidder's technical reasons supporting compliance: Cisco Unified Border Element Datasheet	

Tech. Requ. No.	Technical Requirement:
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3.3.15.91	<p>The BCF shall support the following minimum- security functions:</p> <ul style="list-style-type: none"> • Rogue SIP invites and rogue RTP packet detection • Alerts for rogue packet activity • Configurable RTP port range • IP security (IPsec) • SRTP flow-through • Transport Layer Security (TLS) version 1.2, with exclusivity • SRTP-to-RTP and STRP-to-SRTP interworking with Next-Generation Encryption (NGE) cipher suites • Configurable SIP listening port • Disable unused transport mechanisms • SIP registration and digest authentication support • Various mechanisms for control of RTP and UDP packet flooding • Voice security policy application integration (via HTTP API) • Peer whitelisting / IP Trusted List • Silent discard of SIP messages from untrusted peers • Compatible with IOS Zone Based Firewall
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<p>Bidder's technical reasons supporting compliance:</p> <p>The BCF will support the following minimum-security functions:</p> <ul style="list-style-type: none"> • Rogue SIP invite and rogue RTP packet detection • Alerts for rogue packet activity • Configurable RTP port range • IP security (IPsec) • SRTP flow-through • Transport Layer Security (TLS) version 1.2, with exclusivity • SRTP-to-RTP and STRP-to-SRTP interworking with Next-Generation Encryption (NGE) cipher suites • Configurable SIP listening port • Disable unused transport mechanisms • SIP registration and digest authentication support • Various mechanisms for control of RTP and UDP packet flooding 	
<p>Bidder's technical reasons supporting compliance:</p> <p>Cisco Unified Border Element Datasheet</p>	

Tech. Requ. No. 3.3.15.92	<p>Technical Requirement:</p> <p>Authentication, Authorization, and Accounting (AAA) shall be supported with RADIUS. BCF must support accounting information sending to one or more RADIUS servers as well as store it locally as CDR data.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>Authentication, Authorization, and Accounting (AAA) will be supported with RADIUS. BCF will support</p>	

accounting information sending to one or more RADIUS servers as well as store it locally as CDR data.

Bidder's technical reasons supporting compliance:

Cisco Unified Border Element Datasheet

Tech. Requ. No. 3.3.15.93	Technical Requirement: Voice media applications: <ul style="list-style-type: none"> • Tool Command Language (TCL) scripts support for application customization • Web-based API to monitor and control signaling and media traffic (for external policy control)
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Bidder's technical reasons supporting compliance:

Voice media applications:

- Tool Command Language (TCL) scripts support for application customization

Web-based API to monitor and control signalling and media traffic (for external policy control)

Bidder's technical reasons supporting compliance:

Cisco Unified Border Element Datasheet

Tech. Requ. No. 3.3.15.94	Technical Requirement: The BCF shall have a web-based API compatible with Web Service Description Language (WSDL) development tools to support call monitoring and control, Call-Detail Records (CDRs), and serviceability attribute interaction with external application; specifically designed for voice-policy applications
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Bidder's technical reasons supporting compliance: The BCF will have a web-based API compatible with Web Service Description Language (WSDL) development tools to support call monitoring and control, Call-Detail Records (CDRs), and serviceability attribute interaction with external application; specifically designed for voice-policy applications

Bidder's technical reasons supporting compliance:

Cisco Unified Border Element Datasheet

Tech. Requ. No. 3.3.15.95	Technical Requirement: BCF must support SNMPv2, SNMPv3 polling and traps to be used for sending events to operations monitoring system
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Bidder's technical reasons supporting compliance:

BCF will support SNMPv2, SNMPv3 polling and traps to be used for sending events to operations monitoring system NMS

Bidder's technical reasons supporting compliance:

Cisco Unified Border Element Datasheet

Tech. Requ. No. 3.3.15.96	Technical Requirement: The BCF shall support Line-side Registration Proxy by: <ul style="list-style-type: none"> • Proxy registration of endpoints using the standard SIP registration process (including third-party SIP endpoints) for connecting with third-party hosted call-control services • Local and PSTN survivability in the event of loss of WAN connectivity to a hosted call control • Proxy endpoint registration with 10 endpoints per SIP registration event
Bidder's technical reasons supporting compliance: The BCF will support Line-side Registration Proxy by: <ul style="list-style-type: none"> • Proxy registration of endpoints using the standard SIP registration process (including third-party SIP endpoints) for connecting with third-party hosted call-control services • Local and PSTN survivability in the event of loss of WAN connectivity to a hosted call control Proxy endpoint registration with 10 endpoints per SIP registration event	
Bidder's technical reasons supporting compliance: Cisco Unified Border Element Datasheet	

Tech. Requ. No. 3.3.15.97	Technical Requirement: The network management shall provide Manageability, serviceability, and troubleshooting by: <ul style="list-style-type: none"> • Resource usage monitoring over SIP trunk • SIP session ID for end-to-end call tracing • SNMP per-call quality traps • SNMP and syslog SIP trunk status messages • DEBUG commands allowing user-selectable levels of debug information, from critical to verbose • DEBUG commands allowing user-selectable information for specific call characteristics
Bidder's technical reasons supporting compliance: The network management shall provide Manageability, serviceability, and troubleshooting by: <ul style="list-style-type: none"> • Resource usage monitoring over SIP trunk • SIP session ID for end-to-end call tracing • SNMP per-call quality traps • SNMP and syslog SIP trunk status messages • DEBUG commands allowing user-selectable levels of debug information, from critical to verbose DEBUG commands allowing user-selectable information for specific call characteristics	
Bidder's technical reasons supporting compliance: Cisco Unified Border Element Datasheet	

Tech. Requ. No. 3.3.15.98	Technical Requirement: Media gateway shall have IP-to-IP gateway function with minimum of 100 concurrent SIP trunk sessions for PSTN access
Bidder's technical reasons supporting compliance:	
Bidder's technical reasons supporting compliance: Cisco Unified Border Element Datasheet	

Tech. Requ. No. 3.3.15.99	Technical Requirement: The BCF shall support high availability via Use of port channels to allow a connection to redundant switches
Bidder's technical reasons supporting compliance: The BCF will support high availability via Use of port channels to allow a connection to redundant switches	
Bidder's technical reasons supporting compliance: Cisco Unified Border Element Datasheet	

Tech. Requ. No. 3.3.15.100	Technical Requirement: BCF must protect internal VoIP infrastructure from DoS attacks or Distributed DoS attacks, overloads and other non-malicious events such as registration flood. Border Control Device must ensure continued service availability by identifying DoS and DDoS attacks and appropriately throttling or blocking traffic.
Bidder's technical reasons supporting compliance: BCF will protect internal VoIP infrastructure from DoS attacks or Distributed DoS attacks, overloads and other non-malicious events such as registration flood. Border Control Device will ensure continued service availability by identifying DoS and DDoS attacks and appropriately throttling or blocking traffic	
Bidder's technical reasons supporting compliance: Cisco Unified Border Element Datasheet	

Tech. Requ. No. 3.3.15.101	Technical Requirement: BCF must be able to normalize protocol differences on-demand, to resolve such variances among VoIP networks like disparate services or vendor incompatibility
Bidder's technical reasons supporting compliance: BCF will be able to normalize protocol differences on-demand, to resolve such variances among VoIP networks like disparate services or vendor incompatibility	
Bidder's technical reasons supporting compliance: Cisco Unified Border Element Datasheet	

Tech. Requ. No. 3.3.15.102	Technical Requirement: BCF must be able to provide end-to-end authentication and encryption of signaling messages. TLSv1 and TLSv1.2 must be supported
Bidder's technical reasons supporting compliance: BCF will be able to provide end-to-end authentication and encryption of signalling messages. TLSv1 and TLSv1.2 must be supported	
Bidder's technical reasons supporting compliance: Cisco Unified Border Element Datasheet	

Tech. Requ. No. 3.3.15.103	Technical Requirement: BCF must be able to limit the number of allowed resources such as bandwidth, number of sessions, sessions rate to abide by customer SLA and avoid abuse
Bidder's technical reasons supporting compliance: BCF will be able to limit the number of allowed resources such as bandwidth, number of sessions, sessions rate to abide by customer SLA and avoid abuse	
Bidder's technical reasons supporting compliance: Cisco Unified Border Element Datasheet	

Tech. Requ. No. 3.3.15.104	Technical Requirement: BCF must support SNMPv2, SNMPv3 polling and traps to be used for sending events to operations monitoring system
Bidder's technical reasons supporting compliance: BCF will support SNMPv2, SNMPv3 polling and traps to be used for sending events to operations monitoring system	
Bidder's technical reasons supporting compliance: Cisco Unified Border Element Datasheet	

Tech. Requ. No. 3.3.15.105	Technical Requirement: All Calls must be replicated to a single point within the system for the possible use of lawful interception – this can be in the framework of the recording system
Bidder's technical reasons supporting compliance: The BCF supports lawful intercept by provision of replicated packets to third-party mediation device	
Bidder's technical reasons supporting compliance: Cisco Unified Border Element Datasheet	

Tech. Requ. No. 3.3.15.106	Technical Requirement: BCF must support at least 450 Concurrent Sessions with extension possibility
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Bidder's technical reasons supporting compliance:

Compliant. The proposed SBC will be licensed to support the given number of concurrent sessions. Extension of the number of simultaneous calls will be possible via license upgrade

Bidder's technical reasons supporting compliance:

Cisco Unified Border Element Datasheet

Tech. Requ. No. 3.3.15.107	Technical Requirement: Support for data traffic up to 480 Mbps, with possibility to increase performance in future to 900 Mbps with additional performance license
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Bidder's technical reasons supporting compliance:

The proposed device will be support by default 500 Mbps data traffic, with possibility to increase performance in future to 1Gbps with additional performance license

Bidder's technical reasons supporting compliance:

Cisco Unified Border Element Datasheet

General requirements of the LAN/WAN/BCF/Firewall/Load Balancer -Firewall

Tech. Requ. No. 3.3.15.108	Technical Requirement: The proposal must include firewalls in both main sites; the proposed firewall solution must be deployable as an active/active (respective active/standby -if the proposed solution is offering an active/active function for incoming calls) cluster
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Bidder's technical reasons supporting compliance:

The proposed solution will include by two firewalls in each main site and will be deployed as an active/active High Availability mode

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution
 SRX4100 datasheet

Tech. Requ. No. 3.3.15.109	Technical Requirement: The active/active cluster must be deployable also as a geo-cluster in order to allow the main sites active/active (respective active/standby -if the proposed solution is offering an active/active function for incoming calls) pattern described in the "Infrastructure" section
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Bidder's technical reasons supporting compliance:

The proposed solution will be deployed to achieve all necessary requirements describe in the infrastructure section for all active services and links on the both geographical sites

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

Tech. Requ. No. 3.3.15.110	Technical Requirement: The active/active (respective active/standby -if the proposed solution is offering an active/active function for incoming calls) cluster must include the mirroring of all sessions between the two nodes
Bidder's technical reasons supporting compliance: The proposed solution will be allowing the mirroring of all sessions between the two nodes	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.15.111	Technical Requirement: The firewall solution shall be integrated into the IT management system and should report events to the IT management system. Faults and anomalies should be communicated by means of SNMP traps.
Bidder's technical reasons supporting compliance: The firewall solution will be integrated into the IT management NMS system and will report events to the IT management system. Faults and anomalies will be communicated by means of SNMP traps.	
Bidder's technical reasons supporting compliance: Junos Network Management and Monitoring 26a Emergency Response Software Solution SRX 4100 datasheet Junos space platform datasheet	

Tech. Requ. No. 3.3.15.112	Technical Requirement: Firewall shall act as a VPN concentrator and support crypto based access security, with min 1800 IPSec tunnels and minimum 1,5 Gbps encrypted throughput
Bidder's technical reasons supporting compliance: Firewall has an embedded VPN feature and support crypto based access security, with 7,500 IPSec tunnels and up to 10.6 Gbps encrypted throughput	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution SRX 4100 datasheet	

Tech. Requ. No. 3.3.15.113	Technical Requirement: Firewalls must support network-layer and the application-layer deep packet inspections to protect the network against viruses, Trojans, malware, hacker attacks etc.
Bidder's technical reasons supporting compliance: Firewalls will support network-layer and the application-layer deep packet inspections to protect the network against various threats and attacks, the provided license includes: SecIntel, IDP, and Application Security (application visibility and control through unified policy for next-gen firewall capabilities as well as enables SD-WAN capabilities with Advanced policy-based routing (APBR) and Application Quality of	

Experience (AppQoE).)
Bidder's technical reasons supporting compliance: SRX 4100 datasheet flex-license-for-srx-series-devices

Tech. Requ. No. 3.3.15.114	Technical Requirement: Firewalls must be installed to monitor and control the traffic between specific VLANs between PSAPs and data centers and to/from the Internet.
Bidder's technical reasons supporting compliance: Firewalls will be installed to monitor and control the entire traffic between specific VLANs between PSAPs, data centers from and to the Intranet and Internet also.	
Bidder's technical reasons supporting compliance: SRX 4100 datasheet 26a Emergency Response Software Solution	

Tech. Requ. No. 3.3.15.115	Technical Requirement: Firewall must support throughput of 2 Gbps with application control and NGIPS
Bidder's technical reasons supporting compliance: Firewall will support firewall throughput up to 40 Gbps with Application visibility and control of 28.75 Gbps and up to 17.5Gbps of IPS	
Bidder's technical reasons supporting compliance: SRX 4100 datasheet	

Tech. Requ. No. 3.3.15.116	Technical Requirement: The system must be designed to support for at least 2.000.000 concurrent sessions
Bidder's technical reasons supporting compliance: The system will be designed to support up to 5 million of concurrent sessions	
Bidder's technical reasons supporting compliance: SRX 4100 datasheet	

Tech. Requ. No. 3.3.15.117	Technical Requirement: The system must support at least 80,000 new connections/sec with application visibility and control
Bidder's technical reasons supporting compliance: The system will support 280,000 new connections/sec with application visibility and control	
Bidder's technical reasons supporting compliance: SRX 4100 datasheet	

Tech. Requ. No. 3.3.15.118	Technical Requirement: The firewall system must have support for at least 3000 VLAN interfaces
Bidder's technical reasons supporting compliance:	

The firewall system will support 4,000 VLAN interfaces

Bidder's technical reasons supporting compliance:

SRX 4100 datasheet

EX3400 datasheet

26a Emergency Response Software Solution

Tech. Requ. No. 3.3.15.119 Technical Requirement:

The firewall management platform must be capable of logging all administrator activities, both locally and to a remote log server and should be support multiple mechanisms for issuing alerts (e.g., SNMP, e-mail, SYSLOG).

Bidder's technical reasons supporting compliance:

The firewall management platform will be capable of logging all administrator activities, locally and remote, log server and will be supporting multiple mechanisms for issuing alerts (e.g., SNMP, e-mail, SYSLOG)

Bidder's technical reasons supporting compliance:

SRX 4100 datasheet

Junos Space platform datasheet

General requirements of the LAN/WAN/BCF/Firewall/Load Balancer - HTTP/HTTPS Proxy / Load Balancer

Tech. Requ. No. Technical Requirement:

3.3.15.120

The HTTP proxy must act as an intermediary server for requests from clients seeking resources from other servers.

Bidder's technical reasons supporting compliance:

Compliant,

offered A10 Thunder ADC is a Load Balancer solution whose elementary feature is to act as HTTP proxy

Bidder's technical reasons supporting compliance:

A10-DS-Thunder-ADC datasheet

Tech. Requ. No. Technical Requirement:

3.3.15.121

Direct HTTP connections to the internet from any client or service within the network should be prohibited.

Bidder's technical reasons supporting compliance:

Compliant,

A10 Thunder ADC will be placed as a front element ahead of the servers and will hold the service addresses

Bidder's technical reasons supporting compliance:

A10-DS-Thunder-ADC datasheet

Tech. Requ. No. Technical Requirement:

3.3.15.122

The HTTP proxy must use security mechanisms like virus and malware detection to protect the system.

Bidder's technical reasons supporting compliance:

Compliant,

A10 Thunder ADC has strong web application security capabilities to address all the relevant threats and risks

Bidder's technical reasons supporting compliance:

A10-DS-Thunder-ADC datasheet

Tech. Requ. No. 3.3.15.123	Technical Requirement: The proposed load balancing solution must be deployable as an active/active cluster in order in which part of the exposed services are published by the first node and part of them is exposed by the second cluster node. In case of failure of one node, all services migrate and get exposed on the surviving device.
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Bidder's technical reasons supporting compliance:

Compliant,

A10 Thunder ADC can be deployed as an active/active cluster – Service HA Mode

Bidder's technical reasons supporting compliance:

A10-DS-Thunder-ADC datasheet

Tech. Requ. No. 3.3.15.124	Technical Requirement: The load balancer must monitor determined operating threshold such as number of hits per second, CPU and bandwidth consumption, and in case one or more of these thresholds are exceeded, an alert (email) must be generated to a predefined list of recipients
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Bidder's technical reasons supporting compliance:

Compliant,

A10 Thunder ADC offers a wide range of health checking mechanisms. Using SNMP health checks virtually any parameter can be monitored and used for operating thresholds. A10 Thunder ADC can generate email alerts, but the proposed way is to use notification mechanisms which also include escalations on the NMS system, The notification is provided in integration with the NMS system.

Bidder's technical reasons supporting compliance:

A10-DS-Thunder-ADC datasheet

Tech. Requ. No. 3.3.15.125	Technical Requirement: The load balancing solution shall be integrated into the NMS and shall report events to the IT management system. Faults and anomalies shall be communicated.
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Bidder's technical reasons supporting compliance:

Compliant.

A10 Thunder ADC will be integrated with NMS based on SNMP protocol.

Bidder's technical reasons supporting compliance:

A10-DS-Thunder-ADC datasheet

Tech. Requ. No. 3.3.15.126	Technical Requirement: As a future improvement, the proposed load balancers shall include the
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	possibility to perform advanced cyber-security tasks such as DOS/DDOS detection and mitigation
Bidder's technical reasons supporting compliance: Compliant. A10 Thunder ADC is shipped with a "Security" package/license which targets advanced cyber security risks such as Integrated DDoS protection for application services and Hardware-based DDoS protection and more	
Bidder's technical reasons supporting compliance: A10-DS-Thunder-ADC datasheet	

Tech. Requ. No. 3.3.15.127	Technical Requirement: Load balancers must provide logging, trace and debugging functionalities together with an integrated dashboard aimed at supervising real time status of the clustered devices
Bidder's technical reasons supporting compliance: Compliant. Load balancers provides logging, trace and debugging functionalities together with an integrated dashboard aimed at supervising real time status of the clustered devices	
Bidder's technical reasons supporting compliance: A10-DS-Thunder-ADC datasheet	

Tech. Requ. No. 3.3.15.128	Technical Requirement: The Bidder is asked to size load balancers in accordance with the actual needs dictated by the proposed application platforms under the assumption of all positions required within the project (i.e. call takers, overload call takers, dispatchers, administrators) connected and working.
Bidder's technical reasons supporting compliance: Compliant. The sizing of load balancers is accordance with the actual needs by proposed application platforms. The proposed A10 Thunder 940 ADC has up to 2 x 10 Gbps/ 7.5 Gbps capacity	
Bidder's technical reasons supporting compliance: A10-DS-Thunder-ADC datasheet	

3.4 Systems Administration and Management Functions Required to be met by the Information System

3.4.1 System management, monitoring, operation and administration (M/M/O/A) functions

Tech. Requ. No. 3.4.1.1	Technical Requirement: The system shall provide the necessary functions to manage, monitor, operate and administer the entire NG-911 system, following the redundancy and
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	security concept.
Bidder's technical reasons supporting compliance: The proposed incident management application and communication platform will be delivered in a full redundant architecture in which all microservices and software modules are duplicated and, depending on the specific components, made available either in an active/standby or in a balanced active/active operating mode. Both applications and the underlying infrastructure (i.e. operating systems, virtualization platform, backup application and hardware platform) offer secure monitoring and administrative tools to allow the Customer to hold a tight control on the proposed infrastructure. Access to the management environment of the platform is always subject to user authentication and authorization; web accesses are https based.	
Bidder's technical reasons supporting compliance: Veeam – Datasheet System Center 2019 26a Emergency Response Software Solution, configuration interface section	

Tech. Requ. No. 3.4.1.2	Technical Requirement: The system shall allow the operator to organize the clients in a centralized or distributed way. Different levels and rights (e.g. system administrator, system engineer etc.) have to be allocated to the different clients based on the profile of the operator logged in on the given client.
Bidder's technical reasons supporting compliance: The use of web clients allows an extremely flexible way of distributing and managing roles and profiles. Regardless of the actual physical position of a user (remote or local to the centralized server farm) the overall platform works as a single virtual control room. Each operator, regardless of its role may open a web interface to login into the Incident Management and Creation application from virtually anywhere inside the E-112 network, as defined by Customer's security policies. All users are associated to a role and access is always subject to username and passwords authentication. User profiles and roles are assigned and modified by a centralized configuration interface.	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, configuration interface section	

Tech. Requ. No. 3.4.1.3	Technical Requirement: The system shall provide a user-friendly GUI to perform all relevant MMOA functions.
Bidder's technical reasons supporting compliance: Configurations are made possible by the Beneficiary's functional managers through the relevant web	

environments of the Incident Creation and Management Application and the IP PBX platform.

Configurator web interfaces are simple to be used and do not require specific IT skills. They are completely graphical, following the same Microsoft Fluid UI standards of interface design.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, configuration interface section

Tech. Requ. No. 3.4.1.4	Technical Requirement: The system shall include on-line help functionality giving context sensitive help on how to use each function as well as general information on the functions.
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Bidder's technical reasons supporting compliance:

The software, being organized as a website, includes online help, for each UI screen, describing the functions on the screen and hyperlinking other online help pages, with related functions.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

Tech. Requ. No. 3.4.1.5	Technical Requirement: The system shall provide all security management functions which are necessary to manage all security functions defined above.
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Bidder's technical reasons supporting compliance:

Security management at various levels (Operating Systems, Virtualisation Platform, Database, Incident Management Application, Communications platform) are all accessible through appropriate management interfaces, which are part of the proposal of this tender solution.

Bidder's technical reasons supporting compliance:

Veeam – Datasheet

System Center 2019

26a Emergency Response Software Solution, configuration interface section

Tech. Requ. No. 3.4.1.6	Technical Requirement: The basic functions to be provided by the system shall include (but not limited to): <ul style="list-style-type: none"> o System inventory functions o Business and System operation Management functions o Monitoring functions o Alarm and fault handling functions o Administration, statistics and Reporting functions
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Bidder's technical reasons supporting compliance:

Microsoft System Center 2019 is a set of integrated tools which provide basic and advanced functions,

including:

- System inventory functions
- Business and System operation Management functions
- Monitoring functions
- Alarm and fault handling functions

Administration, statistics and Reporting functions

Bidder's technical reasons supporting compliance:

System Center 2019

Tech. Requ. No. 3.4.1.7

Technical Requirement:

The system must handle and provide an accurate and up-to-date database (list) of all components, including

- o physical IT and network devices (centralized, peripheral)
- o all cabling and passive elements
- o virtual machines
- o software
- o services
- o functions/applications

Bidder's technical reasons supporting compliance:

Microsoft System Center handles and provides accurate and up-to-date database of all components, including:

- physical IT and network devices (centralized, peripheral)
- all cabling and passive elements
- virtual machines
- software
- services
- functions/applications

Bidder's technical reasons supporting compliance:

System Center 2019

Tech. Requ. No. 3.4.1.8

Technical Requirement:

The component database shall contain all component data which is required for maintenance (ID, manufacturer, type, software version, support contact, etc.).

Bidder's technical reasons supporting compliance:

The offered solution builds asset intelligence catalogue which contain all data required for maintenance (ID, manufacturer, type, software version, support contact, etc.).

Bidder's technical reasons supporting compliance:

System Center 2019

Tech. Requ. No. 3.4.1.9	Technical Requirement: All components must be prominently labelled with a unique ID, component type, MAC and IP addresses.
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Bidder's technical reasons supporting compliance:

All components will be prominently labelled with a unique ID, component type, MAC and IP addresses.

Bidder's technical reasons supporting compliance:

System Center 2019

Tech. Requ. No. 3.4.1.10	Technical Requirement: In case of tangible elements, the ID has to be printed on the label in a human readable form and if requested as a machine-readable code.
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Bidder's technical reasons supporting compliance:

The offered solution through integration with a third-party add-in will have the functionality to have the ID printed in human readable form and if requested it will generate a machine-readable code.

Bidder's technical reasons supporting compliance:

System Center 2019

Tech. Requ. No. 3.4.1.11	Technical Requirement: All cables must be labelled on each end with the component and port it has to be connected to. Cables longer than 10m must be labelled with a unique ID every 5 meter.
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Bidder's technical reasons supporting compliance:

All cables will be labelled on each end with the component and port it has to be connected to. Cables longer than 10m will be labelled with a unique ID every 5 meter.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution

Tech. Requ. No. 3.4.1.12	Technical Requirement: In case of system/version upgrades/updates, replacements, the update of the database shall be supported.
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Bidder's technical reasons supporting compliance:

All updates will be controlled from a central console which will download the updates, notify the administrators and based on certain criteria can be automatically installed or pushed by the administrator

Bidder's technical reasons supporting compliance:

System Center 2019

Tech. Requ. No. 3.4.1.13	Technical Requirement: The access to this database must be protected by the authentication mechanisms.
Bidder's technical reasons supporting compliance: Microsoft System Center has a role-based access, which allows users to access the system through the same console but see only what the role is configured to manage.	
Bidder's technical reasons supporting compliance: System Center 2019	

Tech. Requ. No. 3.4.1.14	Technical Requirement: All changes of the system inventory database must be logged in the system.
Bidder's technical reasons supporting compliance: All changes to the inventory or the system itself are logged in and can be accessed later for review or audit.	
Bidder's technical reasons supporting compliance: System Center 2019	

Tech. Requ. No. 3.4.1.15	Technical Requirement: The business operation management functions must include at least the following: <ul style="list-style-type: none"> • configuration and parametrization of the entire ESInet, and Communication system (including Automatic Call distribution and Recording function) • adding, moving, withdrawing workstations and/or changing/updating their role • defining, modifying user groups • adding/deleting user, setting/modifying user professional profiles • performing numbering/routing changes • address book management • performing workflow changes, creation of new or withdraw of obsolete workflows • performing questionnaire/template changes, creation of new or withdraw of obsolete questionnaire, workflows • performing definition/changes of automatic announcements, implementation of new announcements • handling GIS maps, defining/deleting layers
Bidder's technical reasons supporting compliance: Each component proposed in the tender response possesses a web-based configuration interface, (E-112 Communication Platform, Incident Creation and Management Application, GIS and auxiliary tools for Business Intelligence, etc.).	

The requested features for operation management, are all included in the proposed functions from the configuration interfaces.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, configuration interface section

Tech. Requ. No. 3.4.1.16

Technical Requirement:

System operation related management functions shall include at least the following:

- handling of system inventory
- updating firmware and software (after thorough test of them)
- access/authorization management
- user management (adding, deleting, modifying, password rules etc.)
- log management
- data incident management

Bidder's technical reasons supporting compliance:

The offered solution provides a set of tools which communicate and share information between each other making it easier for administrators to

- handle system inventory
- update firmware and software
- manage access and authorization
- user management
- log management
- data incident management

Bidder's technical reasons supporting compliance:

System Center 2019

UniLogger - Datasheet

Tech. Requ. No. 3.4.1.17

Technical Requirement:

The system monitoring functions must include at least the following:

- continuous checking the status of all system components
- checking the overall and actual load/traffic/utilization of the relevant system components
- checking the overall and actual traffic of the voice communications network
- checking the overall and actual performance of the relevant system components
- generating the necessary information to maintain the systems proactively before failures are recognized by the users

Bidder's technical reasons supporting compliance:

As part Microsoft System Center comes Operations Manager (SCOM) and its primary role is to monitor the health of every component in the system and helps ensure the predictable performance and availability of vital applications and offers comprehensive monitoring for the datacenter.

Among other functions, the offered solution will be configured to monitor:

- continuously monitor the status of all system components
- monitor the overall and actual load/traffic/utilisation of the relevant system components
- monitor the overall and actual traffic of the voice communications network
- monitor the overall and actual performance of the relevant system components

generate the necessary information to maintain the systems proactively before failures are recognized by the users

Bidder's technical reasons supporting compliance:

System Center 2019

Tech. Requ. No. 3.4.1.18

Technical Requirement:

The system components included into the monitoring process shall contain at least:

- all active components
- hardware
- software.
- networks
- connections
- functions and applications, as well as
- environmental conditions the system can detect/measure via sensors (e.g. overheating any system HW. components)

Bidder's technical reasons supporting compliance:

The offered solution allows for monitoring of specific equipment or software through the installation of management packs which are developed by each vendor and allow the monitoring system to gather all required information from:

- all active components
- hardware
- software
- networks
- connections
- functions and applications
- environmental conditions

Bidder's technical reasons supporting compliance:

System Center 2019

Tech. Requ. No. 3.4.1.19	Technical Requirement: The system shall send status messages / alarms to authorized persons on the status of the monitored elements based on pre-defined thresholds.
Bidder's technical reasons supporting compliance: The system will send status messages / alarms to authorized personnel on the status of the monitored elements based on predefined thresholds. Notifications can be sent to different groups of people based on the role they have in the organization	
Bidder's technical reasons supporting compliance: System Center 2019	

Tech. Requ. No. 3.4.1.20	Technical Requirement: Selected status information shall be able to be displayed on selected status display.
Bidder's technical reasons supporting compliance: All status information can be displayed across a set of views each tailored to client's specific needs.	
Bidder's technical reasons supporting compliance: System Center 2019	

Tech. Requ. No. 3.4.1.21	Technical Requirement: All monitoring data shall be available for further processing in order to perform statistics and generating reports.
Bidder's technical reasons supporting compliance: All monitoring data is available at any time and can be used to perform statistics and generate reports	
Bidder's technical reasons supporting compliance: System Center 2019	

Tech. Requ. No. 3.4.1.22	Technical Requirement: Alarms shall be generated for at least in the following cases: <ul style="list-style-type: none"> malfunction of any of the system components – recognized by the monitoring system critical status of any of the system components – recognized by the monitoring system admin defined thresholds
Bidder's technical reasons supporting compliance: The offered solution will be configured to generate alarms when a: <ul style="list-style-type: none"> malfunction of any of the system components – recognized by the monitoring system 	

- critical status of any of the system components – recognized by the monitoring system
- admin defined thresholds

Additionally, alarms will be configured according to the needs of the organization

Bidder's technical reasons supporting compliance:

System Center 2019

Tech. Requ. No. 3.4.1.23

Technical Requirement:

The system shall present graphical display showing the alarm status of the different system components

Bidder's technical reasons supporting compliance:

The offered solution will present graphical display showing the alarm status of the different system components

Bidder's technical reasons supporting compliance:

System Center 2019

Tech. Requ. No. 3.4.1.24

Technical Requirement:

At least three severity alarm classes have to be defined and shown with different colors on the alarm display.

Bidder's technical reasons supporting compliance:

The offered solution has three severity alarm classes shown in different colour

Healthy – Green

Warning – Yellow

Error - Red

Bidder's technical reasons supporting compliance:

System Center 2019

Tech. Requ. No. 3.4.1.25

Technical Requirement:

Alarm filtering shall be possible based on different criteria, like severity, system component, time of occurrence, frequency of occurrence etc.

Bidder's technical reasons supporting compliance:

The offered solution allows for alarm filtering based on different criteria, like severity, system component, time of occurrence, frequency of occurrence etc

Bidder's technical reasons supporting compliance:

System Center 2019

Tech. Requ. No. 3.4.1.26

Technical Requirement:

	Alarm correlation check shall be possible.
Bidder's technical reasons supporting compliance: Alarm correlation will be possible through the creation of dynamic groups based on user specified criteria	
Bidder's technical reasons supporting compliance: System Center 2019 Datasheet	

Tech. Requ. No. 3.4.1.27	Technical Requirement: Alarm explanation text shall be made available, giving possible roots of the alarm and possible further effects of the fault causing the alarm. System administrator/engineer shall be allowed to add text to the default explanation based on their own operational experiences
Bidder's technical reasons supporting compliance: Alarm explanation text will be made available, giving possible roots of the alarm and possible further effects of the fault causing the alarm. System administrator/engineer will be allowed to add text to the default explanation based on their own operational experiences thus building the knowledge base covering the entire system	
Bidder's technical reasons supporting compliance: System Center 2019 Datasheet	

Tech. Requ. No. 3.4.1.28	Technical Requirement: The alarms shall generate sound and/or visual signals and shall activate SMS/message sending to pre-defined addresses – based on flexible settings by the system administrator.
Bidder's technical reasons supporting compliance: The offered solution generates sound and visual signals and has the capability to send email, instant messages, and sms messages to pre-defined addresses	
Bidder's technical reasons supporting compliance: System Center 2019 Datasheet	

Tech. Requ. No. 3.4.1.29	Technical Requirement: For trouble shooting purposes it shall be possible to run system component diagnostic tests originated even remotely.
Bidder's technical reasons supporting compliance: For trouble shooting purposes the offered solution will allow administrators to run system component diagnostic tests originated even remotely by executing specific tasks which gather diagnostic data	
Bidder's technical reasons supporting compliance: System Center 2019 Datasheet	

Tech. Requ. No. 3.4.1.30	Technical Requirement: The system shall support generating fault tickets, based on <ul style="list-style-type: none"> alarms proven by the system administrator/engineer as failure fault announcements by any users of the system proven as failures by the helpdesk
Bidder's technical reasons supporting compliance: The system supports generating fault tickets, based on <ul style="list-style-type: none"> alarms proven by the system administrator/engineer as failure fault announcements by any users of the system proven as failures by the helpdesk 	
Bidder's technical reasons supporting compliance: System Center 2019 Datasheet	

Tech. Requ. No. 3.4.1.31	Technical Requirement: It shall be possible to annex to fault tickets the results of the diagnosis.
Bidder's technical reasons supporting compliance: The offered solution offers the capability to annex to fault tickets the results of the diagnosis.	
Bidder's technical reasons supporting compliance: System Center 2019 Datasheet	

Tech. Requ. No. 3.4.1.32	Technical Requirement: All alarms, actions taken by the system administrators/engineers, all generated fault tickets must be logged too.
Bidder's technical reasons supporting compliance: All alarms, actions taken by the system administrators/engineers, all generated fault tickets will be logged and later used for reporting, review or audit.	
Bidder's technical reasons supporting compliance: System Center 2019 Datasheet	

Tech. Requ. No. 3.4.1.33	Technical Requirement: Such type of logs must be made accessible for authorized personnel and authorized 3rd party system support expert for evaluation and quality improvement purposes too.
Bidder's technical reasons supporting compliance: All logs will be made accessible for authorized personnel and authorized 3rd party system support expert for evaluation and quality improvement purposes too.	
Bidder's technical reasons supporting compliance: System Center 2019 Datasheet	

Tech. Requ. No. 3.4.1.34	Technical Requirement: The system shall provide statistical functions by which automated daily, monthly and annual reports with regard to the load statuses of the Voice Communication and its interfaces can be prepared.
Bidder's technical reasons supporting compliance: The proposed IP PBX solution comes with an analytics module that generate reports and statistics with daily/monthly/yearly updates.	
Bidder's technical reasons supporting compliance: VoiceBeat Datasheet.pdf 26a Emergency Response Software Solution, Business Intelligence section	

Tech. Requ. No. 3.4.1.35	Technical Requirement: The statistics shall be suitable to illustrate the load statuses in a machine-readable way in graphs and figures.
Bidder's technical reasons supporting compliance: The proposed solution generates graphs such as histograms, cumulative graphs and other types of output	
Bidder's technical reasons supporting compliance: VoiceBeat Datasheet.pdf 26a Emergency Response Software Solution, Business Intelligence section	

Tech. Requ. No. 3.4.1.36	Technical Requirement: It must be possible to distinguish between different call types in the statistics (emergency calls, telephone calls, SIP calls, radio calls).
Bidder's technical reasons supporting compliance: The analytics module of the IP PBX allows to access to CDR-level data (Call Detailed Records) on a single call basis	
Bidder's technical reasons supporting compliance: VoiceBeat Datasheet.pdf 26a Emergency Response Software Solution, Business Intelligence section	

Tech. Requ. No. 3.4.1.37	Technical Requirement: The statistics shall permit a breakdown of key data by districts for individual districts, district groups and/or all districts.
Bidder's technical reasons supporting compliance: Geographical BI is part of the proposed solution, determining density of events and calls on a geographical basis, concerning provinces, districts, municipalities, etc	
Bidder's technical reasons supporting compliance: Life1st 112 App PowerBI User Manual.pdf	

26a Emergency Response Software Solution, Business Intelligence section

Tech. Requ. No. 3.4.1.38	Technical Requirement: The statistics should be retrievable both as PDF files as well as graphical and text files and e.g. also be able to be shown continuously on monitors of the visualization system.
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Bidder's technical reasons supporting compliance:

For the Incident Management Application, the proposed reporting solution is based on Microsoft PowerBI which allows to export data in different formats: excel, pdf, powerpoint

For the IP PBX platform, the proposed embedded reporting solution allows to export data in different formats: excel, pdf,

Bidder's technical reasons supporting compliance:

Life1st 112 App PowerBI User Manual.pdf

26a Emergency Response Software Solution, Business Intelligence section

VoiceBeat Datasheet.pdf

Tech. Requ. No. 3.4.1.39	Technical Requirement: The Bidder must enclose a Concept – Voice Communication Statistics with his offer. The concept shall list the available Voice Communication statistics and include exemplary screenshots.
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Bidder's technical reasons supporting compliance:

the required evidence documentation is attached to the present technical offer

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Business Intelligence section

VoiceBeat Datasheet.pdf

Tech. Requ. No. 3.4.1.40	Technical Requirement: An intelligent reporting system has to be included in the offer, translating the results of the monitoring and alarm and fault handling functions into well-structured reports.
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Bidder's technical reasons supporting compliance:

Alarms, faults can be transformed into reports by the Incident Management and Creation Application, and can be included in email reports, to be sent to the appropriate responsible on duty.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Business Intelligence section

Tech. Requ. No. 3.4.1.41	Technical Requirement:
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	Different levels of report shall be able to define and presented both in a pre-set based automatic way or a case specific, supported by the report generating functions.
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Bidder's technical reasons supporting compliance:

The platform offers the possibility of correlate data of different kind to generate various types of reports. More basic data will be used for simple reports, while more complex statistics can be achieved by data correlation from different sources

Bidder's technical reasons supporting compliance:

Life1st 112 App PowerBI User Manual.pdf

VoiceBeat Datasheet.pdf

26a Emergency Response Software Solution, Business Intelligence section

Tech. Requ. No. 3.4.1.42	<p>Technical Requirement:</p> <p>To simplify the user interface only one flexible configurable reporting tool (providing different presentation possibilities, like high level dashboard, KPI system making zooming in possible etc.) should be used for processing and reporting the collected data. The tool itself can be combined with the tool supporting the quality management function, but its inputs, algorithms, functions, report formats, presentation mode shall be separately configurable for system monitoring and quality management purposes.</p>
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Bidder's technical reasons supporting compliance:

The proposed platform for reporting based on Microsoft PowerBI is a open and flexible solution used in many fields of application, with plugins and integration capabilities with external services. Through the creation of ETL procedures, one single interface can be used to configure statistics from multiple sources, importing data directly into the Reporting system provided

Bidder's technical reasons supporting compliance:

Life1st 112 App PowerBI User Manual.pdf

26a Emergency Response Software Solution, Business Intelligence section

Tech. Requ. No. 3.4.1.43	<p>Technical Requirement:</p> <p>The reporting tool shall be web-based to provide simple access from everywhere - for authorized personnel.</p>
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Bidder's technical reasons supporting compliance:

The proposed analytics platform is web-based and accessible from any point of the Client's network, according to configurations.

Bidder's technical reasons supporting compliance:

Life1st 112 App PowerBI User Manual.pdf

VoiceBeat Datasheet.pdf

3.4.2 Security Functions

Tech. Requ. No. 3.4.2.1	<p>Technical Requirement:</p> <p>In the software, the user must authenticate itself with own username and password or other means of authentication.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>User authentication into the system is performed by unique username and password. Basing on the configuration more than one role (e.g. call taker, dispatcher, both of them) can be associated to the user; in this case the user is prompted to choose the correct role he or she is logging in.</p> <p>Based on Oauth2 standard, the Application also supports integration into customer's existing Single Sign On platforms</p>	
<p>Bidder's technical reasons supporting compliance:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / CAD deployment scenarios</p>	

Tech. Requ. No. 3.4.2.2	<p>Technical Requirement:</p> <p>In the software, the user must be able to change the login password.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>The Application Identity Manager module supports the possibility for a user to change his password before its natural expiration; for security purposes the password change process requires the submission of the password that has to be changed</p>	
<p>Bidder's technical reasons supporting compliance:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture</p>	

Tech. Requ. No. 3.4.2.3	<p>Technical Requirement:</p> <p>In the software, user names and passwords must be protected with proper access control and information encryption (e.g. passwords must be encrypted, etc.).</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>The Application Identity Manager database is encrypted; Microsoft SQL TDA encryption will be used in this specific project.</p> <p>Https is also supported for connections between the browser and the application and for connections between Identity Manager and the SSO authoritative system, if present</p>	
<p>Bidder's technical reasons supporting compliance:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture</p>	

Tech. Requ. No. 3.4.2.4	<p>Technical Requirement:</p> <p>The software must include a feature that allows the administrator to set and</p>
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	change the user login password expiration date.
Bidder's technical reasons supporting compliance: The Application Identity Manager web user interface is accessible to entitled users (administrators) and provides the possibility to create roles, users and relevant rights associated to them. Password validity (time) is among the parameters that identify a role/user configuration and it can be set (first password) or changed by the administrator.	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture	

Tech. Requ. No. 3.4.2.5	Technical Requirement: The software must include a feature that allows the administrator to set a minimum length for the user login password. It must be possible to change the password length value.
Bidder's technical reasons supporting compliance: The Application Identity Manager web user interface provides means for the configuration of passwords security enforcement policies in terms of length, composition (e.g. minimum number of special characters, capitals, ...), expiration, difference with previously used passwords. The same possibility is maintained within more complex SSO contexts	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture	

Tech. Requ. No. 3.4.2.6	Technical Requirement: The software must include a feature that allows the administrator to set and change the complexity of the user login password.
Bidder's technical reasons supporting compliance: The software includes a feature that allows the administrator to set and change the complexity of the user login password. Please refer to 3.4.2.5	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture	

Tech. Requ. No. 3.4.2.7	Technical Requirement: The software must have a feature that allows you to manage the history of recent user passwords. The software must include a feature that prohibits the use of pre-existing passwords. The number of disallowed passwords must be defined by a freely adjustable parameter. There must be a function to change the value of the parameter.
Bidder's technical reasons supporting compliance: The Application Identity Manager web user interface provides means for the configuration of passwords	

security enforcement policies in terms of length, composition (e.g. minimum number of special characters, capitals, ...), expiration, difference with previously used passwords. As far as the password history is concerned, it is possible to configure the number of most recent passwords that cannot be re-used by the user.

The same possibility is maintained within more complex SSO contexts

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

Tech. Requ. No. 3.4.2.8	Technical Requirement: The software must provide a feature that lets the administrator to set the maximum potential user attempts to connect. Where the excess of the user's login name to be blocked. The number of connections must be defined by a parameter. It must be possible to change the value of a parameter.
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Bidder's technical reasons supporting compliance:

In the Application Identity Manager module it is possible to configure whether a user must be prevented from trying access to the system after a configurable number of consecutive login failures. A blocked user can be again granted access into The Application only by an administrator intervention.

Any login attempt is logged by the system. Upon detecting the maximum allowed number of failed sequential login attempts, the application can also be configured to notify a preconfigured list of recipients by email reporting the blocked username

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

Tech. Requ. No. 3.4.2.9	Technical Requirement: The software must include a feature that requires first time users to log on to the software to change the administrator-provided primary password.
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Bidder's technical reasons supporting compliance:

At first login new users are compelled to reset their password that has been assigned to them and configured by the administrator. Password reset is subject to the already described strength enforcement policies

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

Tech. Requ. No. 3.4.2.10	Technical Requirement: The software must not allow the typed password characters to be displayed.
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Bidder's technical reasons supporting compliance:

Life1st login page includes the anonymized password field; when typing in the password, characters are not visible; an optional "show password" button can be made available (based on system configuration). By

clicking the button, typed characters can be made visible to the user

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

Tech. Requ. No. 3.4.2.11

Technical Requirement:

The software must not be allowed to provide assistance refer to the software user guessing passwords.

Bidder's technical reasons supporting compliance:

To the aforementioned security policies related to password strength, the Application Identity Manager also includes the possibility to configure a password black-list avoiding the use of passwords composed by easily predictable strings. Furthermore, no dictionary predictive typing feature is active in the user password field

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

Tech. Requ. No. 3.4.2.12

Technical Requirement:

The software must not allow automatic password storage.

Bidder's technical reasons supporting compliance:

The Application disables the possibility for the browser to automatically store the password and propose it to the user logging in

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

Tech. Requ. No. 3.4.2.13

Technical Requirement:

The software must include a feature that allows to create and send an automatic notification to the administrator about users who have not used the software for a certain amount of time set by the administrator.

Bidder's technical reasons supporting compliance:

The Application Identity Manager includes an anomalies detection engine; in a previous description the sequential failed logins anomaly has been mentioned. Identity Manager keeps also track of application usage by each single user and provides notification if a specific username has not logged in for a preconfigured span of time. Notifications are sent via email to a predefined list of recipients. This functionality is used to decommission profiles of no more existing users (e.g. retired, resigned)

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

Tech. Requ. No. 3.4.2.14

Technical Requirement:

	Software users must not be allowed to deactivate or bypass security settings.
Bidder's technical reasons supporting compliance: There is no possibility for end users to access the application security configuration section. The Application has been tested against well-known OWASP vulnerabilities list	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture	

Tech. Requ. No. 3.4.2.15	Technical Requirement: The software must be protected against: - unauthenticated access; - unauthorized user session interception; - unauthorized interception or insertion, - modification or deleting of data
Bidder's technical reasons supporting compliance: The Application access is always granted via user authentication; this holds true for any user profile configured in the system, including read-only users. As mentioned, The Application successfully passed an OWASP Assessment which certifies the absence of vulnerabilities to attacks of the like of cross-site scripting or SQL injection. HTTPS is also supported to secure data exchanged between users and The Application.	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture	

Tech. Requ. No. 3.4.2.16	Technical Requirement: Depending on the architecture, the Bidder must provide the required number of certificates that will be used to encrypt the information transmitted / received by all users;
Bidder's technical reasons supporting compliance: It will be a responsibility of the Contractor to provide all SSL/TLS certificates needed for the implementation of HTTPS connections between users and applications	
Bidder's technical reasons supporting compliance: Use of https is mentioned throughout the 26a Emergency Response Software Solution attached document	

Tech. Requ. No. 3.4.2.17	Technical Requirement: The certificate used for encryption must be verified by a qualified certificate (such as Veri Sign or similar) that can be automatically checked by popular web browsers, meaning that the workplace user does not need to independently add the certificate to the trusted certificate store of the browser or operating system.
Bidder's technical reasons supporting compliance: It is confirmed that the provided certificates will be issued by a well known, authorized Certification Authority.	

Bidder's technical reasons supporting compliance:

Use of https is mentioned throughout the 26a Emergency Response Software Solution attached document

Tech. Requ. No. 3.4.2.18

Technical Requirement:

The certificate provided by the provider must be valid for at least two years.
The certificate must be supported for at least two years.

Bidder's technical reasons supporting compliance:

It is confirmed that the provided certificates will have a validity of two years and will be supported for two years

Bidder's technical reasons supporting compliance:

Use of https is reported throughout the 26a Emergency Response Software Solution attached document

Tech. Requ. No. 3.4.2.19

Technical Requirement:

Backups of all configuration data and data generated by the system have to be made on a with the customer configurable cycle, based on the detailed design.

Bidder's technical reasons supporting compliance:

Backup jobs cycles of all configuration data and data generated by the system will be defined together with the Beneficiary during the solution design stage and configured accordingly

Bidder's technical reasons supporting compliance:

Veeam - Datasheet

Tech. Requ. No. 3.4.2.20

Technical Requirement:

In case of data loss or corruption there has to be a simple and easy to handle process to restore the lost data and to recover normal operation. The consistency and validity of the backups has to be tested regularly.

Bidder's technical reasons supporting compliance:

Veeam offers simple and easy way to restore the lost data and recover normal operation in case of a data loss or corruption. The consistency and validity of the backups will be tested regularly.

Bidder's technical reasons supporting compliance:

Veeam - Datasheet

Tech. Requ. No. 3.4.2.21

Technical Requirement:

The consistency and validity of the data and the backup must also be ensured between the server sites.

Bidder's technical reasons supporting compliance:

Secondary copies of backup data will be made on secondary site, consistency and validity can be ensured between the server sites.

Bidder's technical reasons supporting compliance:

Tech. Requ. No. 3.4.2.22	Technical Requirement: All runtime messages of all systems and components must be stored locally and delivered to the logging database.
Bidder's technical reasons supporting compliance: Logs generated by the system will be locally stored in the relevant database and retained for the time required by the Customer. This holds true for all the three categories of logs that will be managed: <ul style="list-style-type: none"> • Database Audit • Functional Log • Application Log 	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture	

Tech. Requ. No. 3.4.2.23	Technical Requirement: Each logging record contains at least: UTC time stamp, device id, service id, user id, action,
Bidder's technical reasons supporting compliance: Each log generated by the system comprises the following information: <ul style="list-style-type: none"> • Timestamp registered using UTC time standard • Originating system (in case of Third Party system invoking a The Application service) • Originating user • Service invoked • Type of action and its final outcome, e.g. in case of an update of an incident attribute (location, classification, ...) the value before and after the update 	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture	

Tech. Requ. No. 3.4.2.24	Technical Requirement: The log-level (debug, warnings, info's, errors, etc.) must be configurable for all components and systems. During standard operation the log-level must be reduced to minimize the network traffic and data quantity. Higher log-levels shall only be used temporary in case of system debugging for dedicated systems.
Bidder's technical reasons supporting compliance: The proposed system allows to escalate log production and in particular enables maintenance and support level logs activation which turned off by default and switched on whenever a deeper level of troubleshooting analysis is needed. Logging escalation is allowed to only entitled users (superusers).	
Bidder's technical reasons supporting compliance:	

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

Tech. Requ. No. 3.4.2.25	Technical Requirement: The access to all systems and services (particularly databases, applications, logging system, surveillance systems, call recording, etc.) must be controlled and managed by a central access control system. Each access (grant or deny) must be logged.
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Bidder's technical reasons supporting compliance:

The Application Identity Manager module acts as a centralized access control entity; the standard framework used to grant access to the proposed system is OAuth2

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

Tech. Requ. No. 3.4.2.26	Technical Requirement: All data, stored or transmitted, must be protected against unauthorized access. All data which is stored or transmitted outside the premises of the system must be protected by strong cryptographic systems.
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Bidder's technical reasons supporting compliance:

As already mentioned, HTTPS is supported for client-to-server and server-to-server data exchange; it holds true also for external systems integration since The Application APIs are REST based.

Data at rest are encrypted using Database native encryption (Transparent Data Encryption in the case of Microsoft SQL); database encryption also extends to DB backups.

Bidder's technical reasons supporting compliance:

Use of https is reported throughout the 26a Emergency Response Software Solution attached document

26a Emergency Response Software Solution

Tech. Requ. No. 3.4.2.27	Technical Requirement: The Bidder has to assure, that during the design and implementation of the system he will follow the applicable rules of the GDPR and local Law on Personal data protection and will apply the concept of "data protection by design" and "data protection by default". To demonstrate this, the Bidders are requested to present their concept of meeting the data protection regulations. Some minimum requirements are described below:
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Bidder's technical reasons supporting compliance:

Given its very nature as an Incident Management System for public safety services, the Application has been designed to fulfil personal and sensitive data protection resulting in a GDPR compliant application. In particular the following principles and features are granted:

1. Support of secure protocols for data transmission, namely https. https is supported on both client (browser) to server communications and on server to server communications

2. Life1st supports the use of DB encryption

3. The Application has been built upon the “Least to know” principle (by default):

3a. Whenever a new user role is created in Life1st, it is by default generated by the system as “EMPTY”, meaning that the role has no access to either functions or data. The actual construction of the user role is performed by activating the access to specific functions and data

3b. User Interface side: data (including personal and sensitive data) made available to users within incident/activity records are displayed only if it is allowed for the specific role the user has been logged in with

3c. Data (including personal and sensitive data) exported to external systems via API are subject to a filter applied by Life1st. The filter is the result of configurations on Life1st that are specific for that specific target external system

3d. Data searches: incident/activity data (including personal and sensitive data) searchable by users are filtered according to the specific role the user has been logged in with

4. Upon configuration it is possible to prevent that specific data (including personal and sensitive data) are exported in reports (xls, word, pdf, ...), even if these data are visible to the given user role at the User Interface Level

5. Upon configuration it is possible to prevent that specific data (including personal and sensitive data) are exported to external systems via API, even if these data are visible to the given user role at the User Interface Level

Bidder’s technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

Tech. Requ. No. 3.4.2.28

Technical Requirement:

The software has to prevent any unauthenticated downloading, saving, exporting, forwarding, printing of any data/information/communication linked to natural persons onto uncontrolled external devices (e.g. USB drives, CD, device not part of the system delivered, addresses etc.)

Bidder’s technical reasons supporting compliance:

User roles are defined by configurations which include also each atomic feature or accessible data that are to be made available for that specific role. In addition, it is also possible to apply a privacy tag on specific data preventing them to be exported in reports; in this case an allowed user can still produce a report but the privacy tagged data result to be redacted.

The same applies to non-human users of The Application such as external systems using The Application native API.

In addition to this, call takers, dispatchers, coordinators and supervisors workstations will be hardened by disabling the possibility for them to use USB pen drives and the optical disc drive; since reports produced from The Application incident records can also be sent via email directly from with the application user interface it is possible to configure white lists containing addresses or addresses wildcards that are authorized to receive these data.

There’s no way for users to upload content into systems different than those that have been explicitly allowed and configured, typically trusted NAS storages.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

Tech. Requ. No. 3.4.2.29

Technical Requirement:

The system has to log any attempts of downloading, saving, exporting, forwarding, printing of any data/information/communication linked to natural persons onto uncontrolled external devices (e.g. USB drives, CD, device not part of the system delivered, addresses etc.)

Bidder's technical reasons supporting compliance:

Given the already stated impossibility for an end user to upload or save any application generated content into a not authorized repository or memory device, any action performed into the application is logged including reports issue or printing command

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

Tech. Requ. No. 3.4.2.30

Technical Requirement:

The system has to assure, that for testing, fault handling and training purposes only de- personalized data could be used. If – in exceptional cases - this cannot be assured (like fault tracing in special cases), the system shall present a logged warning message.

Bidder's technical reasons supporting compliance:

The training and testing environment will not share the same database with the Production environment; hence, under normal conditions training and test sessions involving this environment will not use real incidents data.

Should a real incident been imported into the test&training environment, it is possible to tag it and display a configurable warning to users as soon as they open the record.

Furthermore, test users can be configured as a special category under the multi-tenant logic, to make them restricted to read personal data of any incident

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.4.2.31

Technical Requirement:

The system shall support the identification and tracking of any (personal) data incidents.

Bidder's technical reasons supporting compliance:

Personal and in general sensitive data within an incident correspond to well identified fields (structured data) in the relevant application incident record; upon configuration these fields can be tagged as privacy tagged, meaning that they will undergo specific protection measures such as anonymization (if required) whenever a report is produced for this incident or whenever the incident is passed over to an external

system.

Privacy tag can also be applied to free text notes; in this case it is up to the end user who inserted the free text note to tag it as under privacy policies.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Life 1st Call Taking (incident creation)

Tech. Requ. No. 3.4.2.32

Technical Requirement:

If any portable device will be a part of the delivery and/or can have access to the system (like service laptop), all (personal) data stored on it shall be protected by encryption and access control.

Bidder's technical reasons supporting compliance:

The Application platform also include a mobile CAD solution accessible from Android and iOS tablets equipped with The Application apps.

Apps for both Android and iOS have been designed with intrinsic security criteria such as:

- Data stored in the App are encrypted
- Data exchanged with PSAPs undergo a double encryption: first encryption is performed at the app level, data are then decrypted by the centralized server application. The second encryption occur at TCP/IP layer 4 since https is used as transport protocol
- Access to the app by end user requires authentication; the Identity Manager application is in charge of managing authentication and authorization, hence for the mobile app authentication the same features apply as those that have already been described at the beginning of the present chapter

Access to The Application from remote PCs (either laptops or desktop PCs) undergoes the same authentication and authorization policies already described in relation to the Identity Manager module and encrypted https communications, as well. No personal or in general sensitive data are locally stored on PCs in this case since all data are retained server-side.

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Mobile CAD

Tech. Requ. No. 3.4.2.33

Technical Requirement:

The system has to prevent displaying any (personal) data on screens of workplaces not actively used by an authorized user.

Bidder's technical reasons supporting compliance:

Workstations for which no login has been performed into the Application (hence not actively used by an operator) do not display any CAD screen.

Workstations will be configured with a time threshold after which position's screens will be blacked-out

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

3.5 Performance Requirements of the Information System

3.5.1 System Performance

Tech. Requ. No. 3.5.1.1	<p>Technical Requirement:</p> <p>The system shall be able to handle at least the following call parameter:</p> <ul style="list-style-type: none"> - Expected emergency call average duration: 45 seconds. - Expected number of emergency calls per day: 6000 calls per day - Expected peak-emergency calls per hour (standard): 600 calls - Expected peak emergency calls per hour (crisis): 900 calls - Expected outgoing/incoming service call average duration: 120 seconds - Expected number of outgoing/incoming service calls per day: 500 calls per day - Expected peak-hour outgoing/incoming service calls per hour: 30 calls - Expected outgoing SMS per day: 2400
<p>Bidder's technical reasons supporting compliance:</p> <p>The proposed platform has been sized to support the expected traffic depicted in this requirement.</p>	
<p>Bidder's technical reasons supporting compliance:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / CAD sizing and recovery architecture</p>	

Tech. Requ. No. 3.5.1.2	<p>Technical Requirement:</p> <p>The system must support at least the minimal:</p> <ul style="list-style-type: none"> - Number of necessary interfaces (SIP trunks/licenses): as 150 per provider (three providers) – in total 450 concurrent SIP-calls - Number of different kinds of work positions at 9-1-1, Police, Fire, Ambulance, Civil protection: approx. 90 - Number of test and training positions (concurrent users): 10 - Number of O/M/A positions : 6 (concurrent users)
<p>Bidder's technical reasons supporting compliance:</p> <p>The proposed platform has been sized to support the traffic and user distribution depicted in this requirement</p>	
<p>Bidder's technical reasons supporting compliance:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / CAD sizing and recovery architecture</p> <p>Total CUBE Standard Trunk Session License 450 concurrent SIP-calls.</p>	

Tech. Requ. No. 3.5.1.3	<p>Technical Requirement:</p> <p>The system performance shall not depend on the system load. Therefore the system shall be designed and sized for the maximum expected workload (all workplaces occupied, all telephone lines busy, etc.) This shall also be valid in case of partly outages and server failover mode.</p>
<p>Bidder's technical reasons supporting compliance:</p>	

The proposed platform has been sized and designed to fulfill tech. req. 3.5.1.2 and 3.5.1.3 with no performance degradation even under fail-over status

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / CAD sizing and recovery architecture

Tech. Requ. No. 3.5.1.4

Technical Requirement:

The system shall deliver all results of queries to databases and GIS as they are available (asynchronous). If a query lasts longer than 5 seconds a progress indication/"pending state" shall be displayed to the user allowing him to cancel the request at any time.

Bidder's technical reasons supporting compliance:

The incident management system implements data management based on caching pre-rendered data into core microservices, for ultra-fast access by software users. In occasions of exceptional delays, the software GUI provides a "cancel" button to stop queries and let the operator work with cached data

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

Tech. Requ. No. 3.5.1.5

Technical Requirement:

The final ESInet shall provide non-blocking service to high priority traffic.

Bidder's technical reasons supporting compliance:

The proposed ESInet has been designed and sized to provide non-blocking call routing service for high priority traffic

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Communications platform

Tech. Requ. No. 3.5.1.6

Technical Requirement:

Network design shall take into account not only current requirements but future ones as well, such as video.

Bidder's technical reasons supporting compliance:

The design of the networks considers not only current requirements but future ones as well, such as video

Bidder's technical reasons supporting compliance:

Tech. Requ. No. 3.5.1.7

Technical Requirement:

The design for future video use shall not exceed the formula of the determined bandwidth of 2Mbps per location + 2Mbps per operator position that will take video.

Bidder's technical reasons supporting compliance:

PABX/Unified communication solution proposed support video codecs that conform to the client

requirement
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Communications platform

Tech. Requ. No. 3.5.1.8	Technical Requirement: Quality of Service (QoS) setting shall provide different priorities to different data flows & data classes.
Bidder's technical reasons supporting compliance: PABX/Unified communication solution proposed supports setting of QoS in IP packets	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Communications platform	

Tech. Requ. No. 3.5.1.9	Technical Requirement: Performance Requirements on created Packet loss by the delivered system shall meet: - Packet loss shall be under standard conditions at 1% , in special situations it is acceptable till maximal 2,5%.
Bidder's technical reasons supporting compliance: Performance Requirements on created Packet loss by the delivered system will meet: • Packet loss will be under standard conditions at 1% , in special situations it is acceptable till maximal 2,5%. Note: Public ISP/MOI infrastructure dependent	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Communications platform	

Tech. Requ. No. 3.5.1.10	Technical Requirement: Performance Requirements on created Jitter by the delivered system: - Jitter shall be bounded to less than 30 ms.
Bidder's technical reasons supporting compliance: Performance Requirements on created Jitter by the delivered system: • Jitter will be bounded to less than 30 ms. Note: Public ISP/MOI infrastructure dependent	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution, Communications platform	

Tech. Requ. No. 3.5.1.11	Technical Requirement: Performance Requirements on created Latency by the delivered system: - Mouth to ear latency must not exceed 250 ms, to keep full duplex
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conversation possible.
- The latency in ESInet has to be kept less than 20 ms.

Bidder's technical reasons supporting compliance:

Performance Requirements on created Latency by the delivered system:

- Mouth to ear latency will not exceed 250 ms, to keep full duplex conversation possible.
- The latency in ESInet will be kept less than 20 ms.

Note: Public ISP/MOI infrastructure dependent

Bidder's technical reasons supporting compliance:

26a Emergency Response Software Solution, Communications platform

4 SERVICE SPECIFICATIONS – SUPPLY & INSTALL ITEMS

4.1 System Analysis, Design and Customization/Development

Tech. Requ. No. 4.1.5.1	<p>Technical Requirement:</p> <p>The Bidder shall assure and clearly state that his planned design activity will cover the complete scope of this supply and will assure the functional, technical and operational completeness of the system to be delivered. In order to demonstrate this the Bidders are requested to describe in their Offer the proposed</p> <ul style="list-style-type: none"> • design phases, including (but not limited to): <ul style="list-style-type: none"> o High Level Design (HLD) o Detailed System Design (DSD) o Test Design o Design of migration. commissioning and operational launch • the content of the different designs, taking into consideration the indicative description above “Information to Bidders” and Bidder’ best practices • the proposed timing of the design • the indicative list of necessary inputs to be provided by the Contracting Authority/Consultant.
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Bidder’s technical reasons supporting compliance:

Please refer to the document 19 Preliminary Project Plan

Bidder’s cross references to supporting information in Technical Bid:

19 Preliminary Project Plan Chapter 4

Tech. Requ. No. 4.1.5.2	<p>Technical Requirement:</p> <p>The Bidder shall assure that the high level and detailed process design will reflect on the operational needs of the Beneficiary and User organizations, and therefore he shall include in his Offer at least 10 workshop days with the experts of the Beneficiary and User organizations and Consultant. The Bidders are expected to describe in their Offer</p> <ul style="list-style-type: none"> • a preliminary workshop programs • the expected preparation of the participants
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Bidder’s technical reasons supporting compliance:

Please refer to the document 19 Preliminary Project Plan chapter 3.8 where the program of the foreseen workshops has been defined.

Bidder’s cross references to supporting information in Technical Bid:

19 Preliminary Project Plan Chapter 3.8

4.2 Software Customization / Development

Tech. Requ. No. 4.2.1.1	<p>Technical Requirement:</p> <p>The software platform must be based on a Service- Oriented Architecture (SOA), which provides open Application Programming Interfaces (APIs) and is accessible through Chrome and Firefox or equivalent web browsers. No software (with the purpose of managing any functions of the system) shall be installed in the computer work stations. Compatibility with different platforms must be ensured (e.g. Windows computers, Linux computers or equivalent).</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>The software platform is based on Service Oriented Architecture and micro services concept. The solution is entirely web based.</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture</p>	

Tech. Requ. No. 4.2.1.2	<p>Technical Requirement:</p> <p>The Software based on Web Services as technology that must be used to expose on the Web, in a secure and transparent way, the business logic located within the entire system</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>The software platform is based on Service Oriented Architecture and micro services concept. The solution is entirely web based.</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture</p>	

Tech. Requ. No. 4.2.1.3	<p>Technical Requirement:</p> <p>The application logic must be encapsulated the and presented externally as a set of services, or search and subscription to other services and exchange information with the enterprise layer</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>The software platform is based on Service Oriented Architecture and micro services concept. The solution is entirely web based.</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture</p>	

Tech. Requ. No. 4.2.1.4	<p>Technical Requirement:</p> <p>The Web Services must be a valid tool for promoting interaction between applications (business to business), and minimizing inefficiencies due to human intervention</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>The software platform is based on Service Oriented Architecture and micro services concept. The solution is</p>	

entirely web based.

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Life 1st CAD platform / Application design and architecture

Tech. Requ. No. 4.2.1.5

Technical Requirement:

The software architecture must be based on agile software development structures:

- The software architecture must include an enterprise solution delivery to ensure a continuous delivery pipeline mapped on an implementation roadmap
- The software must be customer centric using and agile product delivery
- The supplier must show an organizational agility with a lean agile leadership continuous learning structure

Bidder's technical reasons supporting compliance:

The solution delivery is based on agile methodology

Bidder's cross references to supporting information in Technical Bid:

19 Preliminary Project Plan chapter 4

4.3 System integration

Tech. Requ. No. 4.3.1.1

Technical Requirement:

The Supplier must integrate the SIP interfaces to the providers with full IETF-ECRIT/NG911-9-1-1 support

Bidder's technical reasons supporting compliance:

The proposed ESInet solution is compliant with the required standards falling within Emergency Context Resolution with Internet Technologies

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications platform

ETSI plugtests certificate

Tech. Requ. No. 4.3.1.2

Technical Requirement:

The SIP interfaces shall be located at the premises of the individual server sites and installed there. An IP-connection to the ESInet of the solution shall be provided.

Bidder's technical reasons supporting compliance:

The BCF elements will be placed in the two NG911 server sites

Bidder's cross references to supporting information in Technical Bid:

26a Emergency Response Software Solution, Communications platform / NG-911 Communications

functions

Tech. Requ. No. 4.3.1.3	Technical Requirement: The Supplier must integrate the Digital Radio Peripheral Interface Standard as defined in ETSI EN 300 392-5
Bidder's technical reasons supporting compliance: Compliant	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / Radio integration	

Tech. Requ. No. 4.3.1.4	Technical Requirement: The integration between the NG-911 system and the Digital Radio Service shall be realized at – during the detailed design - defined coordinator working positions
Bidder's technical reasons supporting compliance: Compliant	
Bidder's cross references to supporting information in Technical Bid: 19 Preliminary Project Plan	

Tech. Requ. No. 4.3.1.5	Technical Requirement: The Supplier must integrate the SMS gateway to be deployed in a geographic redundant configuration with robust failover and failback mechanisms between system nodes. Failover between nodes shall be done automatically without any manual interaction / configuration.
Bidder's technical reasons supporting compliance: Compliant.	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications platform / The SMS gateway	

Tech. Requ. No. 4.3.1.6	Technical Requirement: The SMS gateway system must be integrated into the NMS and should report events to the NMS system.
Bidder's technical reasons supporting compliance: As a virtual machine installed in the NG911 environment, the SMS gateways will be subject to monitoring performed by the management tools included in the proposal	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Communications platform / The SMS gateway	

Tech. Requ. No. 4.3.1.7	<p>Technical Requirement:</p> <p>The Supplier must integrate the system to include necessary software and licenses for simultaneous connection to two SMS centers of telecom operators.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>The number of SMPP bindings is not subject to licenses in the SMS gateway, this also applies to the number of connected Service Providers</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>26a Emergency Response Software Solution, Communications platform / The SMS gateway</p>	

Tech. Requ. No. 4.3.1.8	<p>Technical Requirement:</p> <p>The Supplier must integrate redundant email servers (SMTP relay) within the provided server areas capable of handling emails via SMTP to support the requirements as specified further down.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>The offered solution will include redundant email servers (SMTP relay) within the provided server areas capable of handling emails via SMTP to support the requirements as specified further down</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>exchange-servertoc-exchserver-2019</p>	

Tech. Requ. No. 4.3.1.9	<p>Technical Requirement:</p> <p>The Supplier must integrate reception of alarm messages of sensors or fire alarm system.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>Compliant. Integration is made possible via open APIs</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / Integration with 3rd Parties' applications</p>	

Tech. Requ. No. 4.3.1.10	<p>Technical Requirement:</p> <p>The Supplier must integrate a system to share incident as well as COP related information via a standardized and documented interface, at least CAP</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>Compliant. Common Alerting Protocol is supported as an alternative to Life 1st native APIs</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>26a Emergency Response Software Solution, Life 1st CAD platform / Integration with 3rd Parties' applications</p>	

4.4 Training and Training Materials

Tech. Requ. No. 4.4.1.1	<p>Technical Requirement:</p> <p>The Bidder shall include in his Offer at least the following types of trainings:</p> <ul style="list-style-type: none"> • Management training • Call taker / Specialist • Coordinator / Dispatcher • Administrator • System Administrator / Engineer of the NG-911System
<p>Bidder's technical reasons supporting compliance:</p> <p>Please refer to 19 Preliminary Project Plan</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>19 Preliminary Project Plan chapter 8.3</p>	

Tech. Requ. No. 4.4.1.2	<p>Technical Requirement:</p> <ul style="list-style-type: none"> • The Bidder has to assure and clearly state that trainings offered cover the entire scope of the supply and are sufficient to prepare the staff of the Beneficiary and User organizations to successfully participate the different tests and successfully use the functions offered by the system as well as effectively administer, monitor, operate and maintain the system. To demonstrate this, the Offer shall contain preliminary training programs as specified in the following items. • The Supplier shall consult the training program with the user organizations and consultant, and shall finalize it in the project design phase of the implementation period. The final training program shall be submitted for approval to the Contracting Authority. • The language of the training materials, handouts, trainer manuals have to follow the language of the training. • Training materials have to serve as operational guides during live operation, therefore they have to be well organized into a knowledge data-base, searchable and on-line available too, updatable when changes are made in the system. • The trainings have to be held in the Beneficiary country, using the facilities and basic presentation tools provided by the Beneficiary and User organizations. Practical trainings (except the on-the-job trainings) have to be held on the test/training environment, configured specifically for the training needs, assuring person-by-person practical training. • In the preliminary programs the basic input conditions of the trainees shall be proposed by the Bidder.
<p>Bidder's technical reasons supporting compliance:</p> <p>We are compliant with the above requirement. Please refer to 19 Preliminary Project Plan</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>19 Preliminary Project Plan chapter 8.</p>	

Tech. Requ. No. 4.4.2.1	<p>Technical Requirement:</p> <p>The Bidder shall include in his Offer a Call taker / Specialist training program. The Call taker / Specialist training shall be organized on a “train the trainers” basis. The training to be provided directly by the Supplier shall theoretically and practically prepare the participants to use the call taking, incident creation and incident management functions according to the processes defined and programmed in the implementation phase.</p> <ul style="list-style-type: none"> • Indicative number of participants: at least 20 (call taker) + 10 (specialist) persons, organized in effective groups. • At least 5 persons from the most successful trainees has to get an additional training to get key users and trainers of next training groups. • Language of the training shall be Arabian. However, parts of the training dealing with the screens and questionnaires in English language shall be organized for the specific group of English speaking trainees.
<p>Bidder’s technical reasons supporting compliance:</p> <p>We are compliant with the above requirement. Please refer to 19 Preliminary Project Plan</p>	
<p>Bidder’s cross references to supporting information in Technical Bid:</p> <p>19 Preliminary Project Plan chapter 8.3.2</p>	

Tech. Requ. No. 4.4.2.2	<p>Technical Requirement:</p> <p>The Bidder shall include in his Offer a Coordinator training program. The Coordinator training shall be organized on a “train the trainers” basis. The training to be provided directly by the Supplier shall theoretically and practically prepare the participants to understand and process the incidents delivered by the system as well as using the system functions relevant for the management and handling the incidents in their specific organization.</p> <ul style="list-style-type: none"> • Trainings shall be organized on a User organization basis, taking into consideration the specificities of the different PSOs. • Indicative number of participants: 20 persons, organized in effective groups • At least 2 persons of the most successful trainees from each User organizations have to get an additional training to get key users and trainers of next training groups. • Language of the training shall be Arabic.
<p>Bidder’s technical reasons supporting compliance:</p> <p>We are compliant with the above requirement. Please refer to 19 Preliminary Project Plan</p>	
<p>Bidder’s cross references to supporting information in Technical Bid:</p> <p>19 Preliminary Project Plan chapter 8.3.3</p>	

Tech. Requ. No. 4.4.3.1	<p>Technical Requirement:</p> <p>The Bidder shall include in his Offer an Administrator training program. The</p>
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	<p>training to be provided directly by the Supplier shall theoretically and practically prepare the participants to use the system's administrative, statistical, reporting and BI functions as well as process/workflow definition function of the system.</p> <ul style="list-style-type: none"> • Indicative number of participants: up-to 6 persons • Language of the training shall be Arabian
Bidder's technical reasons supporting compliance: We are compliant with the above requirement. Please refer to 19 Preliminary Project Plan	
Bidder's cross references to supporting information in Technical Bid: 19 Preliminary Project Plan chapter 8.3.4	

Tech. Requ. No. 4.4.3.2	<p>Technical Requirement:</p> <p>The Bidder shall include in his Offer a System administrator / Engineer training program. The training to be provided directly by the Supplier shall theoretically and practically prepare the participants to monitor, operate, maintain and administer the system and to provide help-desk and user support services.</p> <ul style="list-style-type: none"> • A basic system training – prior to the factory acceptance tests – shall be included. • Indicative number of participants: up to 8 persons have to be trained to System administrator level. • At least 3 from the most successful trainees have to be further educated to reach system engineer level. <p>Language of the training shall be English and/or Arabian.</p>
Bidder's technical reasons supporting compliance: We are compliant with the above requirement. Please refer to 19 Preliminary Project Plan	
Bidder's cross references to supporting information in Technical Bid: 19 Preliminary Project Plan chapter 8.3.5	

Tech. Requ. No. 4.4.4.1	<p>Technical Requirement:</p> <p>The Bidder shall include in his Offer a Management training program. The Management training shall provide a basic system knowledge to the leaders of the Beneficiary and User organizations directly not involved in the daily operation of the system but leading the users of the system.</p> <ul style="list-style-type: none"> • Indicative number of participants: up-to 16 persons. • Language of the training shall be Arabian
Bidder's technical reasons supporting compliance: We are compliant with the above requirement. Please refer to 19 Preliminary Project Plan	
Bidder's cross references to supporting information in Technical Bid: 19 Preliminary Project Plan chapter 8.3.1	

4.5 Data Conversion and Migration

Tech. Requ. No. 4.5.1.1	Technical Requirement: Provide data conversion and importing of customer provided files (xls, doc,.shp.) for at least but not limited to: <ul style="list-style-type: none"> • Users • Phonebook • POI • Measures • Types of incidents • Questions and Answers • Resources • Mapping details
Bidder's technical reasons supporting compliance: We are compliant with the above requirement. Please refer to 19 Preliminary Project Plan	
Bidder's cross references to supporting information in Technical Bid: 19 Preliminary Project Plan chapter 4	

4.6 Documentation Requirements

Tech. Requ. No. 4.6.1.1	Technical Requirement: The Supplier shall prepare and submit the following design documents before starting the delivery and installation: <ul style="list-style-type: none"> • High Level Design (HLD) – it shall be submitted latest 30 days after project commencement • Detailed System Design (DSD) – it shall be submitted latest 60 days after approval of HLD • Test design – it shall be submitted min. 30 days prior to the specific test starts • Design of migration, commissioning and operational launch – it shall be submitted latest 60 days after approval of DSD.
Bidder's technical reasons supporting compliance: We are compliant with the above requirement. Please refer to 19 Preliminary Project Plan	
Bidder's cross references to supporting information in Technical Bid: 19 Preliminary Project Plan chapter 6 and chapter 9	

Tech. Requ. No. 4.6.1.2	Technical Requirement: All these designs must be submitted to the contracting authority/consultant/beneficiary for review in electronic format. The review period of the documents shall not exceed 15 calendar days. Within this period the contracting authority shall send in writing its comments and shall set the
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	deadline for making the required corrections. The updated design documents shall be considered final subject to contracting authority's approval and consultant's/beneficiary's agreement
Bidder's technical reasons supporting compliance: We are compliant with the above requirement. Please refer to 19 Preliminary Project Plan chapter 3.4	
Bidder's cross references to supporting information in Technical Bid: 19 Preliminary Project Plan chapter 3.4	

Tech. Requ. No. 4.6.1.3	Technical Requirement: Final approved design documents shall be re- submitted in electronic format to the contracting authority/consultant/beneficiary and one printed version to the contracting authority.
Bidder's technical reasons supporting compliance: We are compliant with the above requirement. Please refer to 19 Preliminary Project Plan	
Bidder's cross references to supporting information in Technical Bid: 19 Preliminary Project Plan chapter 4	

Tech. Requ. No. 4.6.1.4	Technical Requirement: Weekly progress reports (in electronic format) to the contracting authority, beneficiary and consultant, to be delivered from the 5th week of the implementation period until the end of the implementation period (describing the progress vs plan in the field of design, production, delivery, installation/construction, testing, fixing issues found during inspections, plans for the next week(s), problems, requests for help). The weekly reports shall be the basis of the regular weekly operative meeting of the Supplier, beneficiary and consultant, and shall be accepted by the contracting authority
Bidder's technical reasons supporting compliance: We are compliant with the above requirement. Please refer to 19 Preliminary Project Plan	
Bidder's cross references to supporting information in Technical Bid: 19 Preliminary Project Plan chapter 6 and chapter 9.2	

Tech. Requ. No. 4.6.1.5	Technical Requirement: Monthly progress summary to the contracting authority, beneficiary and consultant with the same content requirements as the weekly reports. The monthly progress summary shall be the basis of the regular monthly progress meeting of the contracting authority, Supplier, beneficiary and consultant, and shall be accepted by the contracting authority
Bidder's technical reasons supporting compliance: We are compliant with the above requirement. Please refer to 19 Preliminary Project Plan	

Bidder's cross references to supporting information in Technical Bid:

19 Preliminary Project Plan chapter 6 and chapter 9.2

Tech. Requ. No. 4.6.1.6	<p>Technical Requirement:</p> <p>The Supplier shall present Final System Documentation that includes all modifications of documentation provided during the contract execution minimum 10 days before provisional acceptance procedure commencement.</p> <p>Final System Documentation shall contain at least:</p> <ul style="list-style-type: none"> a) A list of all licenses and the license certificates b) The HLD and DSD documents, updated with all changes during the implementation phase c) A complete inventory of all hardware and software components (as specified under item 5 of the technical specifications), including a complete list of equipment per site and updated list of equipment/devices necessary for the system operation – provided by the Beneficiary before project implementation. It shall include name, type, quantity and serial number(s). d) COTS component documentations e) Proposed system level inputs to DRP and BCP f) Description of all external interfaces of the system. g) Documentation related to all software included with the system, with clear identification on versions h) All test reports as well as certificates and compliance statements by the manufacturers and Supplier. i) All change requests scheduled for a later date than Provisional Acceptance j) Detailed description and user manual for the process (incl. questionnaire and template) development, testing and migration environment k) Detailed description and user manual of the BI and workflow engine functions l) All user documents, manuals, O/M/A guides m) Full training documents (presentations, narrative and CD/DVDs) for all of the training programs. n) List of proposed spare units o) Draft SLA for the Warranty period p) Proposed SLA/System support agreement for the period after the Warranty period
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Bidder's technical reasons supporting compliance:

We are compliant with the above requirement. Please refer to 19 Preliminary Project Plan chapter 9.3 where the Final system documentation is described.

Bidder's cross references to supporting information in Technical Bid:

19 Preliminary Project Plan chapter 9.3

4.7 Requirements of the Supplier's Technical Team

Tech. Requ. No. 4.7.1.1	Technical Requirement:
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	<p>Project Team Leader: must have experience as project manager on at least one similar type emergency response center project (multi agency / multi locations). The Supplier must provide certification from at least one customer of emergency services stating that the position has been performed successfully</p>
<p>Bidder's technical reasons supporting compliance: The appointed Project Team Leader's experience meets the requirements.</p>	
<p>Bidder's technical reasons supporting compliance: Please refer to the attached document <i>"EXP 2.4.2- SPECIFIC EXPERIENCE - BETA80 - 1"</i> that includes the signed reference of a customer where the Project Team Leader was successfully employed.</p> <p>Please also refer to document <i>"CANDIDATE SUMMARY + CODE OF CONDUCT FOR SUPPLIER'S PERSONNEL FORM Francesco Rango"</i></p>	
Tech. Requ. No. 4.7.1.2	<p>Technical Requirement: Incident Management Software Expert: Software developer with experience on SOA architectures.</p> <p>The Supplier must provide certification from at least two reference customers of emergency services stating that the position has been performed successfully</p>
<p>Bidder's technical reasons supporting compliance: The appointed Software Expert's experience meets the requirements</p>	
<p>Bidder's technical reasons supporting compliance: Please refer to the attached document <i>"EXP 2.4.2- SPECIFIC EXPERIENCE - BETA80 - 1"</i> and <i>"EXP 2.4.2- SPECIFIC EXPERIENCE - BETA80 - 2"</i> that includes the signed reference of two customers where the proposed Incident Management Software Expert was successfully employed.</p> <p>Please also refer to document <i>"CANDIDATE SUMMARY + CODE OF CONDUCT FOR SUPPLIER'S PERSONNEL FORM Matteo Galliani"</i></p>	
Tech. Requ. No. 4.7.1.3	<p>Technical Requirement: Emergency Contact Center Expert: VoIP contact center expert with experience on emergency contact centers.</p> <p>The Supplier must provide certification from at least one customer of emergency services stating that the position has been performed successfully</p>
<p>Bidder's technical reasons supporting compliance: We provided an Emergency Contact Center Expert's CV that is compliant with the requirements.</p>	
<p>Bidder's technical reasons supporting compliance: Please refer to the attached document <i>"EXP 2.4.2- SPECIFIC EXPERIENCE - BETA80 - 1"</i> that includes the signed reference of a customer where the Emergency Contact Center Expert was successfully employed.</p> <p>Please also refer to document <i>"CANDIDATE SUMMARY + CODE OF CONDUCT FOR SUPPLIER'S PERSONNEL FORM Leonardo Jervis"</i></p>	

Tech. Requ. No. 4.7.1.4	<p>Technical Requirement:</p> <p>ESInet – NG911 solution expert with experience on actual implementation of a ESInet with pure NG911/112.</p> <p>The Supplier must provide certification from at least one customer of emergency services stating that the position has been performed successfully</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>The appointed ESInet – NG911 Solution Expert's experience meets the requirements</p>	
<p>Bidder's technical reasons supporting compliance:</p> <p>Please refer to the attached document “<i>EXP 2.4.2- SPECIFIC EXPERIENCE - BETA80 - 1</i>” that includes the signed reference of a customer where the ESInet – NG911 solution expert was successfully employed.</p> <p>Please also refer to document “<i>CANDIDATE SUMMARY + CODE OF CONDUCT FOR SUPPLIER'S PERSONNEL FORM Davide Corda</i>”</p>	
Tech. Requ. No. 4.7.1.5	<p>Technical Requirement:</p> <p>Network and Communications Expert with experience on the design and installation of LAN/WAN for critical operation.</p> <p>The Supplier must provide certificates that the expert has all vendor qualifications for installing and activations of the offered network equipment.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>The appointed Network and Communications Expert's experience meets the requirements</p>	
<p>Bidder's technical reasons supporting compliance:</p> <p>Please refer to document “<i>CANDIDATE SUMMARY + CODE OF CONDUCT FOR SUPPLIER'S PERSONNEL FORM Ahmad Abu Eid</i>” at its attached product certifications with the proposed network equipment.</p>	
Tech. Requ. No. 4.7.1.6	<p>Technical Requirement:</p> <p>Implementation / Delivery Expert with experience in the rollout of a multi-agency / multi locations ERC software.</p> <p>The Supplier must provide certification from at least one customer of emergency services stating that the position has been performed successfully</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>The appointed Delivery Expert's experience meets the requirements</p>	
<p>Bidder's technical reasons supporting compliance:</p> <p>Please refer to the attached document “<i>EXP 2.4.2- SPECIFIC EXPERIENCE - BETA80 - 1</i>” that includes the signed reference of a customer where the Implementation/Delivery expert was successfully employed.</p> <p>Please also refer to document “<i>CANDIDATE SUMMARY + CODE OF CONDUCT FOR SUPPLIER'S PERSONNEL FORM Matteo Riva</i>”</p>	
Tech. Requ. No. 4.7.1.7	<p>Technical Requirement:</p> <p>Training Expert, training expert/engineer with Arabic language proficiency with</p>

	experience and at least one certified reference
Bidder's technical reasons supporting compliance: The appointed Training Expert's experience meets the requirements	
Bidder's technical reasons supporting compliance: Please refer to the attached document " <i>EXP 2.4.2- SPECIFIC EXPERIENCE - BCI</i> " that includes the signed reference of a customer where the Training expert with Arabic language was successfully employed. Please also refer to document " <i>CANDIDATE SUMMARY + CODE OF CONDUCT FOR SUPPLIER'S PERSONNEL FORM Iyad Nubani</i> "	

5 TECHNOLOGY SPECIFICATIONS – SUPPLY & INSTALL ITEMS

Tech. Requ. No. 5.0.1.1	Technical Requirement: Graphical user interfaces in Arabian and English languages, designed, delivered, installed, integrated, tested and commissioned
Bidder's technical reasons supporting compliance: The user interface will be both in English and Arabian	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / User interface	

Tech. Requ. No. 5.0.1.2	Technical Requirement: Support characters, base import but must be Arabic (ISO 8859- 6) and English (ISO 8859-1) and at least for administrative issues in English. Output must be primary in Arabic
Bidder's technical reasons supporting compliance: The user interface will be both in English and Arabian	
Bidder's cross references to supporting information in Technical Bid: 26a Emergency Response Software Solution, Life 1st CAD platform / User interface	

Tech. Requ. No. 5.0.2.1	Technical Requirement: All active (powered) equipment must operate on 220-240V, 50Hz
Bidder's technical reasons supporting compliance: Confirmed	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 5.0.2.2	Technical Requirement: All active equipment must include power plugs standard in the State of Palestine (Type C, respective Type H)
Bidder's technical reasons supporting compliance: Confirmed	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 5.0.2.3	Technical Requirement: All server connecting cables must be provided according IEC 60320 C13/14
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	respective C15 /C16
Bidder's technical reasons supporting compliance: Confirmed	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 5.0.3.1	Technical Requirement: Unless otherwise specified, all equipment must operate in environments of 10°C up to 35°C
Bidder's technical reasons supporting compliance: All systems and components will operate non-stop under typical climatic conditions (ambient temperature range from 10°C up to 35°C and humidity range from 20% to 80%).	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 5.0.3.2	Technical Requirement: Unless otherwise specified, all equipment must operate in environments 0-40 grams per cubic meter of dust
Bidder's technical reasons supporting compliance: The system will operate in standard office setup without special IT conditioning	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 5.0.3.3	Technical Requirement: Unless otherwise specified, all equipment must operate in environment humidity range from 20% to 80%
Bidder's technical reasons supporting compliance: The system will operate in standard office setup without special IT conditioning	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 5.0.4.1	Technical Requirement: Noise emission for the equipment outside the server areas shall be maximal 30 dB during normal operation
Bidder's technical reasons supporting compliance: All components which are installed close the working places will be as silent as possible.	
Bidder's technical reasons supporting compliance:	

5.1 Computing Hardware Specifications

Tech. Requ. No. 5.1.1.1	Technical Requirement: It is expected that the system is based on INTEL Processor structure with at least 2 processors Intel Xeon 3rd generation (24 core) 2,60 GHz at least
Bidder's technical reasons supporting compliance: 2x 3rd generation Intel® Xeon® Scalable processors 24 cores, Processor Base Frequency 2.80 GHz and Max Turbo Frequency 3.50 GHz	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 5.1.1.2	Technical Requirement: The RAM Memory per server must be minimum 1024 GB
Bidder's technical reasons supporting compliance: 1024 GB DDR4 RAM is installed per server.	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 5.1.1.3	Technical Requirement: The local disk must be at least 2x 480GB SSD/ NVMe mirror RAID
Bidder's technical reasons supporting compliance: 2x 480GB SSD per server	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 5.1.1.4	Technical Requirement: The Network interconnect must include at least; 1GE and 2x 10/25Gbit, dual ports HBA Fiber Channel 32Gbps
Bidder's technical reasons supporting compliance: 1GE and 2x 10/25Gbit, dual ports HBA Fiber Channel 32Gbps per server	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ.No. 5.1.1.5	Technical Requirement:
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	As operating system an compatible with CAD system in turnkey basis should be included
Bidder's technical reasons supporting compliance: Windows Server 2022 installed on each server	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 5.1.1.6	Technical Requirement: Advanced/Enterprise dedicated 1GE port for embedded remote management Systems Management Enterprise
Bidder's technical reasons supporting compliance: Advanced/Enterprise dedicated 1GE port for embedded remote management Systems Management Enterprise per server	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 5.1.1.7	Technical Requirement: Each server must provide a redundant power supply
Bidder's technical reasons supporting compliance: 2x 1100W (230Vac/115Vac) Platinum Hot Swap Power Supply	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 5.1.1.8	Technical Requirement: If server virtualization is used all needed licenses for full operations must be included
Bidder's technical reasons supporting compliance: Microsoft Hyper-V virtualization platform will be used for the system solution	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

5.2 Ancillary Hardware Specification

Tech. Requ. No. 5.2.1.1	Technical Requirement: For the SAN switching it is expected that at least two SAN switches each of them with minimal 12 licensed Fibre Channel 32Gbps ports are being
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	provided
Bidder's technical reasons supporting compliance: 24x 32Gb SWL SFPs	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 5.2.1.2	Technical Requirement: For the SAN server storage the overall usable capacity must be at least 9,12TB with minimal:
Bidder's technical reasons supporting compliance: Confirmed – total Usable Capacity 8.3TB HDD + 2.37TB SSD = 10.67TB (after RAID5 with HotSpare on DE4000H)	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 5.2.1.3	Technical Requirement: At least six (6) Drive Type#1 400GB FLASH2, RAID5 (4+1) plus one (1) hot spare and
Bidder's technical reasons supporting compliance: 6x 800GB 3DWD 2.5" SSD 2U24 (2.37TB Usable capacity)	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 5.2.1.4	Technical Requirement: At least ten (10) Drive Type#2 1.2TB SAS 10K, RAID5 (8+1) plus one (1) hot spare
Bidder's technical reasons supporting compliance: 10x 1.2TB 10K 2.5" HDD 2U24 (8.3TB usable capacity)	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 5.2.1.5	Technical Requirement: Internal redundancies in terms of processors and power supplies must be included
Bidder's technical reasons supporting compliance: Controller: 2x Lenovo ThinkSystem DE4000 Controller 32GB Gen2	
Bidder's technical reasons supporting compliance:	

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Tech. Requ. No. 5.2.2.1	Technical Requirement: For the NAS Storage the overall usable capacity must be at least 15,3TB with minimal:
Bidder's technical reasons supporting compliance: Total NAS Usable capacity: 20.57TB (after RAID-DP with HotSpare) Note: DM5000H support "RAID-DP with HotSpare" which is much better technology than RAID5 with HotSpare (RAID-DP is like enhanced version of RAID6)	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 5.2.2.2	Technical Requirement: At least six (6) Drive Type#1 400GB FLASH2, RAID5 (4+1) plus one (1) 1 hot spare and
Bidder's technical reasons supporting compliance: 12x 960GB, 2.5", Non-SED, SSD (6.28TB usable capacity) Note: DM5000H support "RAID-DP with HotSpare" which is much better technology than RAID5 with HotSpare (RAID-DP is like enhanced version of RAID6)	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 5.2.2.3	Technical Requirement: At least seven (7) Drive Type#2 4TB 7.2K, min. RAID5 (5+1) plus one (1) hot spare
Bidder's technical reasons supporting compliance: 12x 4TB Non-SED, NLSAS HDD (14.29TB usable capacity) Note: DM5000H support "RAID-DP with HotSpare" which is much better technology than RAID5 with HotSpare (RAID-DP is like enhanced version of RAID6)	
Bidder's technical reasons supporting compliance: 26a Emergency Response Software Solution	

Tech. Requ. No. 5.2.3.1	Technical Requirement: Laser MFP Printer for printing and Scanning at least A3 Multifunctional Printer with Scan, Copy, Fax function
Bidder's technical reasons supporting compliance: TASKalfa 5054ci: A3 Colour Multifunctional	

Bidder's technical reasons supporting compliance:
 KYOCERA TASKalfa Laser Colour Multifunctional datasheet

Tech. Requ. No. 5.2.3.2	Technical Requirement: Printing/Copy/Scan with at least 600x600dpi and 46/46 S/ Pages per min (ISO) (A4) Paper storage of at least 1500 Sheets in min 3 different storage units, DADF with 200 sheets Duplex-unit
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Bidder's technical reasons supporting compliance:

Kyocera TASKalfa 5054ci, Color MFP:

Resolution: 4800dpi equivalent x 1200dpi (print) 600 dpi × 600 dpi (scan/copy)

Engine speed: Up to 50/25 pages A4/A3 per minute

Paper capacity 1,000 sheets, 150 sheets multipurpose tray in addition PF-7140 Paper feeder: extra 2 x 500 sheets drawers.

4x Storage units

DP-7160: Document Processor (one-path duplex scanning), 320 sheets at 50 - 80 g/m2, 35–220 g/m2 (simplex), 50–220 g/m2 (duplex), A6R–A3, Banner up to 1,900 mm

Bidder's technical reasons supporting compliance:

KYOCERA TASKalfa Laser Color Multifunctional datasheet

26a Emergency Response Software Solution

Tech. Requ. No. 5.2.3.3	Technical Requirement: Storage at least 3GB (RAM), 500GB (HDD) Min USB 2.0, Gb LAN, 1x USB 2.0 (Host) Connections Display color min 8", Touchscreen
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Bidder's technical reasons supporting compliance:

Hard Drive / Memory: Standard 4GB + 64GB SSD + HD-16: additional HDD 1 TB

4x USB 2.0 (Hi-Speed), USB Host 2.0, Ethernet

Operation panel: 256.5 mm (10.1 inch) full-colour touch panel

display, speaker for job notification, 15° - 90° swivel mounted

Bidder's technical reasons supporting compliance:

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KYOCERA TASKalfa Laser Color Multifunctional datasheet

Tech. Requ. No. 5.2.3.4	Technical Requirement: Emulation at least in PCL 5c, PCL 6, PostScript 3, PDF 1.7 4 color system with 4 separate cartridges
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Bidder's technical reasons supporting compliance:

Emulations: PCL6 (PCL5c / PCL-XL), KPDL3 (PostScript 3 compatible), PDF Direct Print, XPS Direct Print and OpenXPS.

4 Set of Ink cartridges

Bidder's technical reasons supporting compliance:

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KYOCERA TASKalfa Laser Color Multifunctional datasheet

5.3 Consumables

Tech. Requ. No. 5.3.1.1	Technical Requirement: Toner cartridges for under 3.2.3 offered Laser MFP Printer set of 4 color cartridges
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Bidder's technical reasons supporting compliance:

4 Set of Ink cartridges

Bidder's technical reasons supporting compliance:

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Tech. Requ. No. 5.3.1.2	Technical Requirement: Supply lasting for at least 150.000 pages A4 S/W and 50.000 pages A4 color
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Bidder's technical reasons supporting compliance:

4 sets of ink cartridges to last for at least 150.000 pages A4 S/W and 50.000 pages A4 color

Bidder's technical reasons supporting compliance:

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6 TESTING AND QUALITY ASSURANCE REQUIREMENTS

6.1 Inspections

We confirm that we are compliant with the requirement of chapter 6.1 expressed in RFB-Part 2_Supply_Installation_and_Training_of_an_Emergency_Response_Center_Solution.pdf.

The Test Plan is fully described in the document 19 Preliminary Project Plan

6.2 Pre-Commissioning Tests

Tech. Requ. No. 6.2.1.1	<p>Technical Requirement:</p> <p>The Bidder shall assure and clearly state that his planned test activity will cover the complete scope of this supply and will assure the functional, technical and operational compliance of the system to be delivered. In order to demonstrate this the Bidders are requested to describe in their Offer the proposed</p> <ul style="list-style-type: none"> • the proposed high-level commissioning procedure • high level test program, including (but not limited to): <ul style="list-style-type: none"> o Factory test o On-site developers' tests o Functional, performance, interoperability and system management tests o User tests o Trial Operation • the proposed duration and timing of the test phases • the proposed involvement of the Beneficiary, User organizations and Consultant • the proposed mode of test management, RR and CR handling.
<p>Bidder's technical reasons supporting compliance:</p> <p>We are compliant to the above requirement, please consider document 19 Preliminary Project Plan. In particular the test methodology is described in paragraph 3.9.2</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>19 Preliminary Project Plan paragraph 3.9.2</p>	

Tech. Requ. No. 6.2.1.2	<p>Technical Requirement:</p> <p>The proposed test methodology shall be able to justify, that the system meets the availability, performance and traffic handling requirements. In order to demonstrate this the Bidders are requested to describe their test methodologies and testing tools.</p>
<p>Bidder's technical reasons supporting compliance:</p> <p>Test methodology and testing tool are described in 19 Preliminary Project Plan paragraph 3.9.2</p>	
<p>Bidder's cross references to supporting information in Technical Bid:</p> <p>19 Preliminary Project Plan chapter 9 paragraph 3.9.2</p>	

6.3 Operational Acceptance Tests

Please refer to the 19 Preliminary Project Plan where it's specified that a 3 months' operational period will be used as trial operation. The relevant paragraph is 5.1.12

7 SERVICE SPECIFICATIONS – RECURRENT COST ITEMS

7.1 Warranty Defect Repair

The requirement is fulfilled.

Please refer to the document “*PRELIMINARY PROJECT PLAN*” / Chapter 12-13

7.2 Technical Support

Tech. Requ. No. 7.2.1.1	Technical Requirement: User support / hot line provision of a 2nd level support hotline reachable 24/7 as defined under the warranty conditions
Bidder’s technical reasons supporting compliance: The requirement is fulfilled.	
Bidder’s cross references to supporting information in Technical Bid: Please refer to the document “ <i>PRELIMINARY PROJECT PLAN</i> ” / Chapter 12-13	

Tech. Requ. No. 7.2.1.2	Technical Requirement: Technical Assistance on Hardware and Software issues as defined under the warranty conditions
Bidder’s technical reasons supporting compliance: The requirement is fulfilled.	
Bidder’s cross references to supporting information in Technical Bid: Please refer to the document “ <i>PRELIMINARY PROJECT PLAN</i> ” / Chapter 12-13	

Tech. Requ. No. 7.2.1.3	Technical Requirement: Post-Warranty Maintenance Services including replacement of hardware
Bidder’s technical reasons supporting compliance: The requirement is fulfilled.	
Bidder’s cross references to supporting information in Technical Bid: Please refer to the document “ <i>PRELIMINARY PROJECT PLAN</i> ” / Chapter 12-13	

7.3 Requirements of the Supplier’s Technical Team

Tech. Requ. No. 7.3.1.1	Technical Requirement: Incident Management Software Expert: Software developer with experience on SOA architectures, The Supplier must provide certification from at least one customer of emergency services stating that the position has been performed successfully
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Bidder's technical reasons supporting compliance:

The appointed Incident Management Software Expert's experience meets the requirements.

Bidder's technical reasons supporting compliance:

Please refer to the attached document "EXP 2.4.2- SPECIFIC EXPERIENCE - BETA80 - 1" and "EXP 2.4.2- SPECIFIC EXPERIENCE - BETA80 - 2" that includes the signed reference of two customers where the proposed Incident Management Software Expert was successfully employed.

Please also refer to document "CANDIDATE SUMMARY + CODE OF CONDUCT FOR SUPPLIER'S PERSONNEL FORM Matteo Galliani"

Tech. Requ. No. 7.3.1.2

Technical Requirement:

Emergency Contact Center Expert: VoIP contact center expert with experience on emergency contact centers.

The Supplier must provide certification from at least one customer of emergency services stating that the position has been performed successfully

Bidder's technical reasons supporting compliance:

The appointed Emergency Contact Center Expert's experience meets the requirements.

Bidder's technical reasons supporting compliance:

Please refer to the attached document "EXP 2.4.2- SPECIFIC EXPERIENCE - BETA80 - 1" that includes the signed reference of a customer where the Emergency Contact Center Expert was successfully employed.

Please also refer to document "CANDIDATE SUMMARY + CODE OF CONDUCT FOR SUPPLIER'S PERSONNEL FORM Leonardo Jervis"

Tech. Requ. No. 7.3.1.3

Technical Requirement:

ESInet – NG911 solution expert with experience on actual implementation of a ESInet with pure NG911/112

The Supplier must provide certification from at least one customer of emergency services stating that the position has been performed successfully

Bidder's technical reasons supporting compliance:

The appointed ESInet – NG911 solution expert's experience meets the requirements.

Bidder's technical reasons supporting compliance:

Please refer to the attached document "EXP 2.4.2- SPECIFIC EXPERIENCE - BETA80 - 1" that includes the signed reference of a customer where the ESInet – NG911 solution expert was successfully employed.

Please also refer to document "CANDIDATE SUMMARY + CODE OF CONDUCT FOR SUPPLIER'S PERSONNEL FORM Davide Corda"

Tech. Requ. No. 7.3.1.4

Technical Requirement:

Network and Communications Expert with experience on the design and installation of LAN/WAN for critical operation.

	The Supplier must provide certificates that the expert has all vendor qualifications for installing and activations of the offered network equipment.
Bidder's technical reasons supporting compliance: The appointed Network and Communications Expert's experience meets the requirements	
Bidder's technical reasons supporting compliance: Please refer to document " <i>CANDIDATE SUMMARY + CODE OF CONDUCT FOR SUPPLIER'S PERSONNEL FORM Ahmad Abu Eid</i> " at its attached product certifications with the proposed network equipment.	

Tech. Requ. No. 7.3.1.5	Technical Requirement: Implementation / Delivery Expert with experience in the rollout of a multi-agency / multi locations ERC software. The Supplier must provide certification from at least one customer of emergency services stating that the position has been performed successfully
Bidder's technical reasons supporting compliance: The appointed Implementation / Delivery Expert's experience meets the requirements	
Bidder's technical reasons supporting compliance: Please refer to the attached document " <i>EXP 2.4.2- SPECIFIC EXPERIENCE - BETA80 - 1</i> " that includes the signed reference of a customer where the Implementation/Delivery expert was successfully employed. Please also refer to document " <i>CANDIDATE SUMMARY + CODE OF CONDUCT FOR SUPPLIER'S PERSONNEL FORM Matteo Riva</i> "	

Tech. Requ. No. 7.3.1.6	Technical Requirement: Service, Helpdesk and Warranty Expert, with experience in setup and operation of post operational acceptance assistance
Bidder's technical reasons supporting compliance: The appointed Service, Helpdesk and Warranty expert experience meets the requirements	
Bidder's technical reasons supporting compliance: Please refer to document " <i>CANDIDATE SUMMARY FORM Rami AbuEid</i> "	

8 Implementation Schedule

The implementation schedule has been detailed in the document 19 -Preliminary Project Plan chapter 5 and chapter 6. Please refer to this topic for all the aspects related to this topic.

Line Item No.	Subsystem / Item	Delivery (Bidder to specify in the Preliminary Project Plan)	Liquidated Damages Milestone
0	Design Period		
	Project Plan	WEEK 5	
	High Level Design	WEEK 10	
	Detail System Design	WEEK 18	
	Test Design	WEEK 18	
1	Delivery period		
	System Implementation	WEEK 24	
	Factory Testing	WEEK 25	
	Server Sites Setup	WEEK 25	
	Admin Training	WEEK 30	
	Developers' on-site tests	WEEK 28	
	Roll-out Ramallah Locations	WEEK 25	
	Functional Test	WEEK 30	
	User Training Ramallah	WEEK 30	
	User Testing	WEEK 30	
	Go Live Testing	WEEK 28	
3	Implementation period		
	Go live Ramallah	WEEK 31	
	Roll out to regional locations	WEEK 32	
	User Training regional	WEEK 32	
	Go -Live regional	WEEK 32	
4	Operational Acceptance of the System as an integrated whole		
5	Recurrent Cost Items – Warranty Period		