RFP A211007351-2022

EXHIBIT A - TECHNICAL REQUIREMENTS

CA Next Generation 9-1-1 Data Analytics Services

February 15, 2022

Issued by:

STATE OF CALIFORNIA

California Governor's Office of Emergency Services

Disclaimer: The original version and any subsequent addendums of the RFP released by the Procurement Official, remain the official version. In the event of any inconsistency between the Bidder's versions, articles, attachments, specifications or provisions which constitute the Contract, the official State version of the RFP in its entirety shall take precedence.

CA NG9-1-1 Data Analytics Services Instructions

Bidders shall submit their narrative response to describe how the Technical Requirements in the A.0-Narrative Requirements Tab are met per the instructions in RFP Part 1 Section 4.2.1, Technical Requirements instructions and submission requirements.

Bidder shall submit the narrative response in the form provided in RFP, ATTACHMENT 20 - Technical Requirement Response Template. The Bidder is responsible to ensure their response is contained within that two (2) page document for each requirement.

Bidder may submit no more than three (3) pages of diagrams to support each narrative response. The diagrams shall be a visual representation of the narrative response and will be limited to no more than 100 words per page, which will include diagram labels.

Any typed information that goes beyond the 2nd page of the Technical Requirement Response Template will not be considered as a part of this evaluation.

Bidder shall provide response, Yes "Y" or No "N", to the 'Service Provider Agreement' on each tab in Exhibit A.

CA NG9-1-1 - Data Analytics Services

A.0 Narrative Requirements
A.1 Data Analytics Requirements

EXHIBIT A
Narrative Requirements

Requirement	**Contractor must provide a written narrative for the requirements noted in Exhibit A and include with its Final Bid submission in accordance with Section 6. Proposal Format and Submission Requirements.**	**Service Provider Agrees to meet the Requirement YES/NO**
A.0.1	The Contractor shall provide the leadership, project management and support needed to perform all tasks associated with this service at no additional cost to the CA 9-1-1 Branch or the PSAP. Describe how the contractor will meet this requirement for all aspects of the project.	
A.0.2	Describe how the Data Analytics platform will gather the information needed from the CPE and the NGCS providers. The description shall include the interface requirements and assumptions needed to support the service.	
A.0.3	Describe the key success factors for the service deployment, to include the initial deployment of Data Analytics. The description must include challenges and mitigation strategies that may impact the project's critical path.	
A.0.4	Describe how the service shall be configured to avoid all single points of failure within the system and to ensure 99.9% availability.	
A.0.5	Describe how the service shall scale to meet expected demand over time, without limitation of any physical onsite hardware, human intervention, licensing, number of positions, NENA i3 versions, during every day use, during disasters or during high demand events while maintaining 99.9% availability for PSAPs deployed on your platform.	
A.0.6	Describe how the service shall maintain trouble ticket e-bonding with RNSP and PNSP using standardized API developed by PNSP. Description shall include the integration of system monitoring with the data delivered from each RNSP and the PNSP.	
A.0.7	Describe how the system monitoring dashboard will display and report the health of the Service. Description shall include how the dashboard will monitor the health of service solution and any PSAP equipment to ensure that SLAs are being met.	
A.0.8	Describe service dashboard and how it provides near real time service monitoring and reporting to support the description provided in Exhibit 21 and the SOW. Description shall include a definition of near real time. Description shall also include how CA 9-1-1 Branch will access the dashboard monitor, this shall include statistical data, printable reports, and outage notifications with duration.	

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A.0.9	Describe how the analytics solution will gather data from legacy CPE, Cloud CPE, NGCS, carriers and other data sources to support the technical requirements in Exhibit 21	
A.0.10	Describe how all updates, fixes, upgrades, patches, etc. shall be executed in the cloud or data centers and pushed out to each PSAP in a manner consistent with evergreen support. Description shall include how your solution will roll back to previous versions if updates or changes cause unintended failures or performance problems at any PSAP.	
A.0.11	Describe how the service will utilize an open standards methodology where ever possible. Description shall include how proprietary standards and or protocols are minimized within the proposed system and shall address any limitations that may result from those proprietary components. Finally, where the system utilizes customized solutions, the description shall identify the standard or protocol substituted and provide a descriptive narrative with regard to meeting NENA i3 standards.	

EXHIBIT A
Technical Requirements

Requirement	Mandatory Data Analytics Reporting Functional Requirements	Service Provider Agrees to meet the Requirement YES/NO
A.1.1	Call Summary: Service shall provide a listing of all of the calls answered and abandoned by call type (e.g. "9-1-1" or "10 digit emergency") for each day of the selected time frame	
A.1.2	System shall provide ability to generate ad hoc reports by PSAP, Date, inbound/outbound by call type, Hour, Busy Hour, Avg Call Duration, Answer Time, Ring Time, Class of Service, Transfer, and other PSAP programmable data that is provided by CPE and NGCS.	
A.1.3	System shall provide ability to generate reports and output by user selectable PSAP groups, counites, and user selectable time blocks, agents, or positions.	
A.1.4	Calls Per Hour: Service shall provide a listing of the number of calls delivered to the CPE controller each hour of each day for the selected time frame	
A.1.5	Service provider shall develop an additional basic reports not included in the initial Data Analytics SOW that aligns to cost workbook element 22.5.2 at the request of the PSAP with direction from Cal OES to support a one time 1-3 month development . Cal OES will be the sole arbiter to determine if the API needed is basic, intermediate, or complex.	
A.1.6	Service Provider shall develop an additional intermediate reports not included in the initial Data Analytics SOW that aligns to cost workbook element 22.5.3 at the request of the PSAP with direction from Cal OES to support a one time 3-6 month API development outside of NENA i3 and SOW requirements. Cal OES will be the sole arbiter to determine if the API needed is basic, intermediate, or complex.	
A.1.7	Service Provider shall develop an additional complex reports not included in the initial Data Analytics SOW that aligns to cost workbook element 22.5.4 at the request of the PSAP with direction from Cal OES to support a one time 6-9 month API development outside of NENA i3 and SOW requirements. Cal OES will be the sole arbiter to determine if the API needed is basic, intermediate, or complex.	
A.1.8	Top Busiest Hours: Service shall provide a listing of the top 20 busiest hours for each month during the past 18 months (default) or any other selected timeframe that includes the call count and average call duration	

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A.1.9	Average Call Duration: Service shall provide a listing of the number of calls each hour during the selected time frame with the queue time (average duration from trunk seizure at the PSAP to ring start), ring time (average duration from ring start to answer time), hold time (average duration calls are on hold during that hour), and talk time (average duration from answer time to disconnect time).	
A.1.10	Calls by Circuit: Service shall provide a listing of the number of calls received on each circuit each day during the selected timeframe. Listing shall separate NG 911 calls from legacy 911 calls	
A.1.11	Circuit Utilization: Service shall provide the percentage of time that a given number of incoming trunks were engaged at the same time within each trunk group. Provides statistics on trunk groups with more than two trunks allowing management to identify trunk groups that are over or under trunked. For NG 9-1-1 connect CPE, service shall provide statistics that indicate if incoming calls exceeded NG 9-1-1 connectivity capability	
A.1.12	PSAP Answer Time: Service shall provide the number of calls that were answered in a user selectable range from 10, 15, or 20 seconds or less, and other answer times for each hour of the selected timeframe. The summary information includes the number of calls in each answer time category, when call was presented to CPE, when call was answered by CPE, and the percentage for each category.	
A.1.13	PSAP Ring Time: Service shall provide an average duration from ring start to answer time	
A.1.14	Last 12 Month Answer Time: Service shall provide summary information for each month within a 12 month period including the number (and corresponding percentage) of calls answered in a user selectable range from 10, 15, or 20 seconds or less.	
A.1.15	Class of Service: Service shall provide a listing of the number of calls for the selected timeframe broken down by the various classes of service from the ALI / PIDF data string including but not limited to business, residential, Centrex, PBX, pay phone, VoIP, or wireless phase 1 or phase 2 and all NENA i3 defined classes of service that exist in current and future NENA i3 standards.	
A.1.16	Agent Speed of Answer: Service shall provide a listing of all of the calls answered and abandoned by call type (e.g. “9-1-1” or “10 digit emergency”) for each day of the selected time frame. Service shall include timestamps for duration of call, hold times, calls waiting, and other ACD statistics.	

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A.1.17	Calls by Agent: Service shall provide ability to produce all reports by agent logged into the CPE. Service shall support ability to determine if agent was not ready for a call, ready for a call, and was actually on a call or text session with timestamps.	
A.1.18	Call Transfer Count: Service shall provide details regarding every call that was transferred to or from the PSAP during the selected timeframe. Details include NENA i3 data or ANI information, trunk seizure time of call(s) at each PSAP and other relevant call information.	
A.1.19	Initial Station Total Calls: Service shall provide a listing of the number of calls received each hour at each answering position during the selected timeframe.	
A.1.20	Calls Per Hour by Day of Week: Service shall provide a listing of the number of calls delivered to the CPE controller each hour of each day for the selected time frame.	
A.1.21	Top ESN or URI Report: Service shall provide a listing of the top ESNs or URIs where calls were transferred from the initial answering PSAP to another specific PSAP during the selected timeframe.	
A.1.22	System shall provide ability to repot Queue Call details for an Automatic Call Distribution (ACD) environment. For any given call, the report shall include all positions that were presented the call, queue data for each position, agent logged in, ring time, call indicators, and agent details.	
A.1.23	Outage Reports: Service shall provide a listing of the trouble tickets logged during the selected month for the PSAP or group of PSAPs selected.	
A.1.24	Unparsed Data Report: Service shall provide a listing of the raw data for each call that failed to meet predetermined business rules for their specific CPE manufacturer (i.e., raw data reflects disconnecting the call multiple times even though it is only answered once), raw CDR data, and raw i3 logs.	
A.1.25	System shall provide data that can be used to manage the 9-1-1 CPE efficiency, including but not limited to: Trunk Group Utilization, Answer Time, Ring Time, Outage, 10 Digit, Unparsed Data, User Login, Routing, Transfers, and ENS / URI.	

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A.1.26	Day-in-Review: Service shall provide •Number of 9 1 1, NG 9-1-1, Admin calls received •Number of 9 1 1, NG 9-1-1, Admin calls answered •Number of 9 1 1, NG 9-1-1, admin calls abandoned •Average duration of the 9 1 1, NG 9-1-1, Admin calls •Statistics on answer time performance •Listing of the five busiest hours of the day and the number of calls each of those hours	
A.1.27	Call Disconnect Report: System shall include ability to determine who ended the call, either the 9-1-1 caller, PSAP released call, or system disconnected the call. Report shall include other data available in the system including but not limited to agent, PSAP, system time, date, and time in seconds between when 1st party disconnects and all other parties disconnect.	
A.1.28	Missing Location Report: Service shall provide details regarding every call that was delivered to the CPE without location information.	
A.1.29	Wireless Transfer Summary: Service shall provide a listing of the wireless cell sectors where an unusual percentage of calls were transferred from the initial answering PSAP to another specific PSAP during the selected timeframe.	
A.1.30	Call Transfer: Service shall provide details regarding every call that was transferred to or from the PSAP during the selected timeframe. Details include NENA i3 data or ANI information, trunk seizure time of call(s) at each PSAP and other relevant call information.	
A.1.31	Trunk Group Utilization: Service shall provide a list of the trunk groups with more than two trunks where not all trunks were engaged at the same time during the selected month. The intent of this report is to identify trunk groups that may be over trunked.	
A.1.32	NG 911 Trunk Utilization: Service shall provide a statistics on the bandwidth utilization or throughput being used by the CPE. The intent of this report is to identify if the NG 9-1-1 connectivity to the PSAP meets the call volume needs.	
A.1.33	ANI / LDB report: System shall provide ability to report call data by ANI / LDB entry.	
A.1.34	10-Digit Emergency Calls: Service shall provide a listing of the 10-digit emergency circuits that exceed a predetermined level of utilization as a percentage of total 9 1 1 and 10-digit emergency calls.	

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A.1.35	System shall support all reports for Text to 9-1-1 as outlined for 9-1-1 calls. The information available in the report includes but is not limited to Sessions per hour, messages per hour, messages by carrier, messages by agent, avg answer speed, single session info, session transcript, busy hour, sessions by MDN, User login info, SMS attempts, carrier, denied messages, SMS-to-TTY sessions, transfers, average messages per session, and summary data.	
A.1.36	Text Messages per Hour: Service shall list the number of text messages completed, denied, with no location, by policy, PSAP offline in any user defined hour.	
A.1.37	Text Messages per Hour by Carrier: Service shall list the number of text messages completed in any user defined hour by carrier.	
A.1.38	Text Messages by Initial Operator: Service shall list the number of text sessions completed in any user defined hour by initial Operator.	
A.1.39	Text Initial Operator Average Speed of Answer: Service shall provide the average speed of answer for the initial text message measured from time text is displayed on the screen to when the initial response is sent by the PSAP.	
A.1.40	Text Messages per Session Profile: Service shall list the number of text sessions completed by any user profile for any text session.	
A.1.41	Text Operator Average Speed of Response: Service shall provide the average speed of answer for each text message measured from time text is displayed on the screen to when the response is sent by the PSAP.	
A.1.42	Text Operator Single Session Average Response: Service shall provide the average speed of answer for each text session by the PSAP.	
A.1.43	Text Average Session Duration: Service shall provide the average time for each text session measured from time the initial text is displayed on the screen to when the session is ended by the by the PSAP.	
A.1.44	Text Session Transcript: The service shall provide a transcript of the text session.	
A.1.45	Service shall display the Top Busiest Hours for SMS text Sessions from Same MDN	
A.1.46	Service shall display the SMS text Sessions from Same MDN per Hour	
A.1.47	System shall provide wireless routing data needed for Cal OES and CHP to comply with legislative mandates on 9-1-1 call routing.	

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A.1.48	System shall provide wireless data that includes but is not limited to call volume, importing shape files, carrier data, routing sheets, tower volume, tower sector volume, and transfers that can be used to comply with statutory requirements and operational needs.	
A.1.49	System shall provide a map interface that supports the wireless reporting and routing decision process by plotting the information needed to make routing decisions as directed by Cal OES.	
A.1.50	Wireless Call Sector: Service shall provide a listing of the wireless cell sectors where an unusual percentage of any calls were transferred from the initial answering PSAP to another specific PSAP during the selected timeframe. Note: any calls refers to 911 calls, text, NG 911 calls, Admin, and 10 digit.	
A.1.51	Wireless Transfer Summary: Service shall provide a listing of the calls transferred by ESN or other means for each wireless cell sector based on a user defined percentage of calls transferred where calls were transferred from the initial answering PSAP to another specific PSAP during the selected timeframe.	
A.1.52	Wireless New Tower Report: Service shall provide ability to produce Wireless call transfer reports by cell tower.	
A.1.53	Wireless ESN Tracking Report: Service shall provide ability to track wireless call received or transferred by Wireless ESN.	
A.1.54	Wireless Field Testing Report: Service shall be able to track wireless field testing from specific devices at user defined towers or geographic areas.	
A.1.55	Wireless Color Coding and Map Color Key: Service shall use data produced from reports to display maps that use color and other map display technologies that allows users to interpret the data.	
A.1.56	Wireless ADA Color Palette: The colors displayed by the service shall conform to the ADA color palette.	
A.1.57	Wireless Change colors of ESN: The service shall provide the ability for the user to select the colors used in all displays.	
A.1.58	Wireless Change Cell Sector Border Weight: The service shall allow the user to select the weight of the border.	
A.1.59	Wireless Slider for Transparency: The service shall allow the user to select the transparency for colors used on all displays.	

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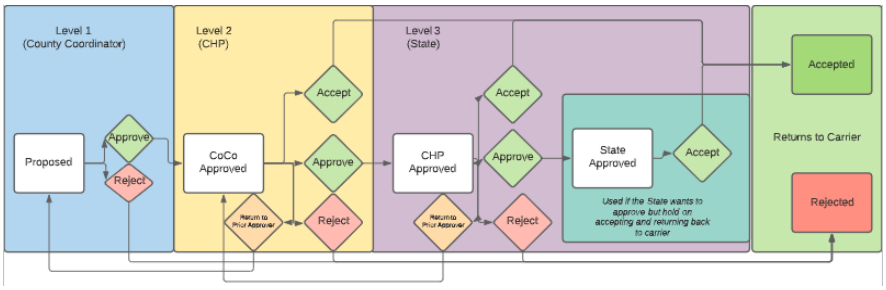
A.1.60	Service shall support the workflow process used by Cal OES, County Coordinators, and CHP for wireless call routing decisions. 	
A.1.61	Service Provider shall provide the leadership, project management and support needed to perform all tasks associate with this service at no additional cost to the CA 9-1-1 Branch or the PSAP.	
A.1.62	Service Provider shall provide ad hoc reporting capability through an intuitive user friendly interface. Reports can be extracted on every field from the PSAP profiles or the CDR data. Users have the option of having any ad hoc results delivered via e-mail if the query involves searching a great deal of data. Users have the ability to save and share all custom ad-hoc reports with their peers	
A.1.63	Service Provider shall provide remote monitoring and on-site support for the DIAS components including software upgrades and enhancements, remote monitoring of the data sharing connections, on-site remedial maintenance, and full trouble ticket management services.	
A.1.64	Service Provider shall provide a system monitoring and trouble ticket system for the service components. The trouble ticket management application shall be available to authorized users through a secure login with all incidences available at any time from one source. The trouble ticket management system shall provide information on who worked on the issue, status changes with associated dates and relevant notes.	
A.1.65	Service Provider shall provide notice to the affected PSAP(s) any time a problem is detected. Trouble tickets are initiated and trouble reports shall be made to the appropriate third party (ILEC and/or CPE vendor). Direct Technology monitors the status of trouble resolution with the third party and updates the trouble ticket log until the problem is resolved	
A.1.66	Service Provider shall use NG 9-1-1 Connections to the PSAP to transfer all data needed for analytics.	

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A.1.67	Service Provider shall provide all equipment, connections wiring and resources needed to connect to CPE and NG 9-1-1 service providers at each PSAP	
A.1.68	Service Provider shall provide all equipment, connections, wiring, and resources needed to connect to the NG 9-1-1 trunks and NG 9-1-1 service providers.	
A.1.69	Service shall provide a secure analytics application with the ability to report on individual PSAPs, countywide, state-wide, or for any other jurisdiction with the same level of simplicity.	
A.1.70	Service shall provide a staffing forecast module using call data collected from each PSAPs to provide general staffing level forecasts.	
A.1.71	Service shall provide a staffing forecast module that includes but is not limited to: 1) Ability to generate staffing forecasts based on each PSAPs historical call data. 2) Ability to specify PSAP's desired Service Level Goal (the percentage of calls Customer would like answered in a Service shall provide given time), and its desired Answer Time Goal (time frame Customer wants its calls answered within). 3) Ability to generate Staffing Forecasting for both existing National Emergency Number Association (NENA) and National Fire Protection Association (NFPA) call handling standards, as well as, custom-defined levels using call data collected from each PSAPs to provide general staffing level forecasts.	
A.1.72	Data Analytics shall process all potential NENA i3 9-1-1 traffic from multiple NG 9-1-1 service providers.	
A.1.73	Service shall provide the ability to export data in multiple formats, including but not limited to web interface, .CSV, .XML, or .PDF.	
A.1.74	Service shall provide the training that includes webinars, one-on-one, and access to pre-recorded training sessions so that PSAP personnel have access to the training 24/7/365.	
A.1.75	Service shall provide the ability to compare location accuracy received by 911, NG 911 and supplemental location data.	
A.1.76	Service shall provide the ability to integrate detailed call data from CPE, CAD record data pushed from the Cal OES Data Sharing Service, and supplemental data to provide centralized data for post-processing that can be used by the PSAP or Cal OES to perform analytics related to call answering and dispatch.	

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A.1.77	Service shall provide the ability to integrate detailed call data from CPE, CAD record data pushed from the Cal OES Data Sharing Service, and supplemental data to provide centralized data for post-processing that can be used by the PSAP or Cal OES to perform analytics related to call answering and dispatch.	
A.1.78	Service shall provide the ability to upload data from the existing statewide reporting system, ECaTS, using a format defined by Cal OES.	
A.1.79	Each PSAP will be required to provide rack space for the equipment needed to support the Service. The proper installation and operation of the on-site hardware is the responsibility of the service provider. Service provider shall provide a list of the facility requirements required at each PSAP. Requirements for upgrades or enhancements to on site-facilities will be submitted to the Cal OES Project Manager for approval. Once approved, the Contractor will coordinate and manage the installation and acceptance of the facility upgrades. The Cal OES will reimburse the Contractor for all pre-approved facility upgrades and modifications.	
A.1.80	Service shall incorporate time synchronization. Shall sync up with both the RNSP and PNSP as well as the PSAP with a stratum 0 clock in UTC format.	
A.1.81	The Authorization Levels will be classified into one of the following categories: Service shall support specific access based on profiles that are defined by Cal OES and include, but may not be limited to, PSAP Access: PSAP representatives will have access to the Preconfigured Reports for their specific PSAP only, but not the Management Reports or the Ad Hoc capability. County Coordinator Access: County coordinators will have access to the Preconfigured Reports for all of the PSAPs in their assigned county only. State Access: Cal OES personnel will have access to all the Preconfigured Reports for all PSAPs, all Management Reports and Ad Hoc capability for all PSAPs.	

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A.1.82	All data collected, stored, and processed with this service is the property of Cal OES and the Public Safety Answering Points. The service shall provide ability for Cal OES to extract all data from the system using an automated process. The service shall store all data for a minimum of two years, unless the services needs additional data retention to support needs of Cal OES and the PSAP.	