

Annex02

Terms of Reference

Frontex/OP/451/2020/ZB

**Multiple Framework Contracts in cascade
for the provision of Research and
Innovation Assistance and Advisory
Services**

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Terms and Definitions

The terms in the table below, appearing either in the complete or in the abbreviated form, when used in this document and its appendices, shall be understood to have the following meaning:

Term	Abbreviation	Meaning
Research and Innovation Assistance and Advisory Services	Services	<p>Include 3 lots:</p> <p>Lot 1. <u>Research and innovation expertise and technical advice support services</u>, consisting in contracted services for the provision to Frontex of high-quality professional assistance and advice for the efficient and effective management and conduction of its activities, in scientific and technological domains pertaining to the Research and Innovation Thematic Areas. The services to be provided shall be content-oriented, not including logistic tasks. These services will deliver expertise and technical advice to support among others:</p> <ul style="list-style-type: none"> a) Conferences, seminars, meetings and workshops; b) Working groups and networks of stakeholders. <p>Lot 2. <u>Research and innovation studies, analyses and evaluations</u>, consisting in contracted services for the provision to Frontex of high-quality tailored and systematic studies, analyses, evaluations and methodologies in support of its activities, in scientific and technological domains pertaining to the Research and Innovation Thematic Areas. These services might include:</p> <ul style="list-style-type: none"> a) Research studies; b) Technical studies; c) Technological gap analysis studies; d) Review of research and innovation projects. <p>Lot 3. <u>Research and innovation support to field activities</u>, consisting in contracted services for the provision to Frontex of high-quality professional technical assistance for conducting its projects aimed at selecting, testing, validating and establishing novel technological solutions in operational (or near to operational) environments, in technological domains pertaining to the Research and Innovation Thematic Areas. Technical activities on-the field, providing hands-on expertise will represent a significant component of these services. These services might include:</p> <ul style="list-style-type: none"> a) Support to pilot projects; b) Support to technology demonstration projects; c) Support to technical assistance projects; d) Development and implementation of performance assessment methodologies for the operational performance of technological systems.
Shall, Should, May, Shall Not		The terms shall be used in specification of requirements in line with RFC2119 ¹ .
European Border and Coast Guard Regulation 2.0	EBCG 2.0	Regulation (EU) 2019/1896 of the European Parliament and of the Council of 13 November 2019 on the European Border and Coast Guard and repealing Regulations (EU) no 1052/2013 and (EU) 2016/1624.

¹<https://www.ietf.org/rfc/rfc2119.txt>

Member States	MSs	Member States of the European Union.
Schengen Associated Countries	SACs	Countries being associated members of the Schengen Area but not members of the European Union.
Framework Contract	FWC	Framework Contract laying down the terms for issuance of future Order Forms.
Order Form	OF	Each service execution will imply the execution of an Order Form: the best ranked Contractor will receive a request to submit an offer. The specific Terms of Reference from Frontex to the Contractor will set out the specifications for each service, the place of delivery, the outputs, and the timing required.
Research and Innovation Unit	RIU	The Frontex Research and Innovation Unit.
Research and Innovation Thematic Areas	TAs	Those listed in Table 2.1 - Research and Innovation Thematic Areas and Topics , with main reference to applications in the security sector.

1. General Information

1.1. Frontex

The European Border and Coast Guard (EBCG) Agency (Frontex) is governed by the Regulation (EU) 2019/1896 of the European Parliament and of the Council of 13 November 2019 on the European Border and Coast Guard (OJ L 295, 14.11.2019, p. 1). Frontex promotes, coordinates and develops European border management in line with the EU fundamental rights charter and the concept of Integrated Border Management.

Within Frontex, the Research and Innovation Unit (RIU) participates and contributes to the development of technology, operational and border security research. It actively introduces and promotes innovation and provides for standardisation and harmonization of border management capabilities, including the support to developing the capacities of third countries. The ultimate goal is to consistently develop the capabilities of the European Border and Coast Guard in line with the Capabilities Development Plan (CDP), which includes those of the Member States and of the Agency itself.

The main tasks of the Research and Innovation Unit include:

- a) developing and promoting a European border security research capability for the Agency;
- b) developing and driving innovation in methodologies, processes, procedures and technical solutions for border management, testing and validating these through relevant pilot projects, collecting ideas by deploying Innovation Cells that capture and inspire further research;
- c) conducting operational assessments on the effectiveness of border control processes, systems and technical solutions, thereby supporting the operational activities of the Member States and of the operational units of the Agency, including on the acquisition of technical equipment by Frontex, EU Member States and/or third countries in close cooperation with the International and European Cooperation Division;
- d) harmonising requirements for border management capabilities, in accordance with the EBCG Regulation, by establishing benchmarks and developing best practices for border management, in line with the CDP;
- e) supporting the implementation and exploitation of EU-funded research and innovation related activities relevant to border management.

The Research and Innovation Unit is also strongly committed to mobilise research and foster innovation to accelerate the shift of the Agency towards piloting green technological solutions to be implemented into its operations, in-line with policies and measures needed to achieve the European Green Deal². Conscious that digital technologies are a critical enabler for attaining the sustainability goals of the Green deal in many different sectors, the Research and Innovation Unit intends to explore measures to ensure that digital technologies can accelerate and maximise the impact of policies to deal with climate change and protect the environment.

Further information about Frontex can be found on the Agency's web site www.frontex.europa.eu.

1.2. Contract Type

This procurement procedure aims to conclude multiple Framework Contracts (FWCs) in cascade for the provision of Research and Innovation Advisory and Assistance Services to Frontex. The FWCs will then be implemented through Order Forms.

These Terms of Reference will become an integral part of each of the Framework Contracts that may be awarded as a result of this open tender procedure.

² See the "Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions - The European Green Deal", COM(2019) 640 final, 11.12.2019 - https://ec.europa.eu/info/sites/info/files/european-green-deal-communication_en.pdf.

1.3. Working Environment and Conditions

Frontex will provide to the Contractor access to all necessary documentation and information in its possession that are necessary to conduct the tasks.

The Contractor must ensure that its Experts are adequately supported and equipped. In particular it must ensure that there is sufficient administrative and secretarial provision to enable Experts to concentrate on their primary responsibilities. It must also transfer funds as necessary to support their work under the contract and to ensure that its employees are paid regularly and in a timely fashion.

2. Subject and Background

2.1. Subject

The contract seeks to acquire Research and Innovation Assistance and Advisory Services in 3 lots:

- **Lot 1: Research and innovation expertise and technical advice support services;**
- **Lot 2: Research and innovation studies, analyses and evaluations;**
- **Lot 3: Research and innovation support to field activities.**

The FWC will be in a cascade system with up to 3 Contractors in each lot.

Each Tenderer is invited to submit offers for one or more lots. However, for each lot, all items required under the given lot should be offered and partial offers will not be accepted.

The services provided under this FWC aim to support or improve activities related to the responsibilities and mission of Frontex in the area of Research and Innovation³. This contract should allow Frontex to commission high-quality support and technical advice, in an open and transparent manner, within a number of areas relevant to Frontex research and innovation activities, through services delivered with proven high-quality expertise on often short deadlines. This FWC is a mechanism to ensure value for money in procuring high quality science, evidence and assistance to Frontex research and innovation activities.

The Research and Innovation Thematic Areas (TAs) and Topics to be covered by this FWC, with main reference to applications in the security sector, include, but are not limited to, those summarized in the in Table 2.1 below:

Table 2.1 - Research and Innovation Thematic Areas and Topics	
Thematic Areas (TAs)	Topics
1. Technologies for Border Checks	<ul style="list-style-type: none"> ▪ integrated systems for border checks ▪ handheld and mobile solutions ▪ specific sensors for border checks ▪ Automated Border Control (ABC) systems ▪ self-service kiosks ▪ biometric capture and verification devices ▪ document security, document readers, document verification and fraud detection ▪ analytics systems for traveller analysis and intelligence, ETIAS, OSINT, processing advance information (API, PNR, etc.) ▪ artificial intelligence for border checks ▪ cybersecurity for border check systems ▪ technical standardization for border checks
2. Technologies for Border Surveillance	<ul style="list-style-type: none"> ▪ border surveillance systems ▪ command and control solutions (and related data links) ▪ situation awareness solutions ▪ sensors (including radars, cameras, etc.) ▪ naval/ground/aerial/space vehicles ▪ integrated platforms <ul style="list-style-type: none"> ○ manned platforms ○ unmanned aerial, surface or underwater systems (UXS) ○ autonomous systems and robotics ○ swarm robotics ○ remotely piloted aircraft systems (RPAS) ○ high-altitude pseudo-satellites (HAPS) ○ satellites ▪ artificial intelligence for border surveillance ▪ cybersecurity for border surveillance systems ▪ logistics and maintenance optimization ▪ technical standardization for border surveillance

³ Regulation (EU) 2019/1896 of the European Parliament and of the Council of 13 November 2019, article 66.

3. Information and Communication systems	<ul style="list-style-type: none"> ▪ interoperability between information systems ▪ communications network management ▪ mobile devices ▪ 5G ▪ advanced voice and data communication systems ▪ big data ▪ data fusion ▪ data exploitation ▪ analytics systems ▪ technical standardization
4. Emerging and Key Enabling Technologies	<ul style="list-style-type: none"> ▪ artificial intelligence ▪ quantum technologies ▪ internet of things (IoT) ▪ augmented and virtual reality ▪ smart wearables and smart textiles ▪ advanced human interface devices
5. Futures research	<ul style="list-style-type: none"> ▪ technology foresight ▪ horizon scanning ▪ technology watch ▪ technology roadmapping ▪ technology taxonomies
6. EU-funded Research and Innovation programmes	<ul style="list-style-type: none"> ▪ Horizon 2020 R&I Framework Programme ▪ Horizon Europe R&I Framework Programme ▪ Internal Security Fund ▪ high-priority research themes to be addressed in the next EU framework programmes for research and innovation.

The need for similar services within any other thematic area and/or topics of Research and Innovation may arise therefore, as it is stated above, the services to be provided are not limited to the listed Thematic Areas and Topics.

In rendering these services, outputs may take the form of reports, research and technical studies and reports, advice, opinions, alternatives, analyses, evaluations, impact assessments, recommendations, and ad-hoc support to personnel needed for the successful performance of specific Frontex research and innovation activities.

The precise type, timing and volume of the services will be specified in the relevant Order Forms.

3. Specific Requirements

3.1. Description of the Lots

All Research and Innovation Advisory and Assistance Services are classified in the following lots:

Lot 1. Research and innovation expertise and technical advice support services, consisting in contracted services for the provision to Frontex of high-quality professional assistance and advice for the efficient and effective management and conduction of its activities, in scientific and technological domains pertaining to the Research and Innovation Thematic Areas. The services to be provided shall be content-oriented, not including logistic tasks. These services will deliver expertise and technical advice to support among others:

- a) Conferences, seminars, meetings and workshops;
- b) Working groups and networks of stakeholders.

Lot 2. Research and innovation studies, analyses and evaluations, consisting in contracted services for the provision to Frontex of high-quality tailored and systematic studies, analyses, evaluations and methodologies in support of its activities, in scientific and technological domains pertaining to the Research and Innovation Thematic Areas. These services might include:

- a) Research studies;
- b) Technical studies;
- c) Technological gap analysis studies;
- d) Review of research and innovation projects;

Lot 3. Research and innovation support to field activities, consisting in contracted services for the provision to Frontex of high-quality professional technical assistance for conducting its projects aimed at selecting, testing, validating and establishing novel technological solutions in operational (or near to operational) environments, in technological domains pertaining to the Research and Innovation Thematic Areas. Technical activities on-the field, providing hands-on expertise will represent a significant component of these services. These services might include:

- a) Support to pilot projects;
- b) Support to technology demonstration projects;
- c) Support to technical assistance projects;
- d) Development and implementation of performance assessment methodologies for the operational performance of technological systems.

The following requirements shall be obligatory for the Contractor, and the Tenderer is required to declare compliancy with these requirements in its offer. The different types of services listed in the following paragraphs (3.1.1, 3.1.2 and 3.1.3) are to be intended as typical examples only, as they might not represent an exhaustive list of all the possible services, nor the exact type of services that Frontex intends to implement under the FWC. Also, some of the described examples of services are of a permanent or cyclical nature, while others may be one-off. The examples do not refer to any specific procurement procedure ongoing or planned.

3.1.1. Lot 1 - Research and Innovation Expertise and Technical Advice Support Services

a) General Description

The Contractor shall provide Frontex with high-quality professional assistance and advice for the efficient and effective management and conduction of its activities, in scientific and technological domains pertaining to the Research and Innovation Thematic Areas.

The services to be provided shall be content-oriented, not including logistic tasks.

Typical examples of services that might be requested within this lot are:

- **Support to conferences and seminars.**

This service shall support Frontex on content-related matters for conferences and seminars at international level, and might include, but is not limited to, the following:

- Providing recommendations on the structure and the programme of specific R&I activities;
- Preparing read-ahead packages;
- Providing support in preparing documents, presentations and materials;
- Performing quality control and releasing periodical status reports;
- Identifying the possible external (non-EBCG) target groups/participants, experts, key note speakers as well as industry and research panellists;
- Supporting the moderation of conference sessions;
- Supporting the organization of exhibition(s) and the identification of exhibitors;
- Producing the conference proceedings;
- Producing the follow-up package (including feedbacks, collection of documents, lessons learned, etc.).

- **Support to technical meetings and workshops.**

This service shall provide expert support to Frontex in implementing technical meetings and workshops, focusing on content-related matters and on methodological approaches. Some examples of meetings and workshops might be the following:

- thematic workshops on technologies and research areas relevant for border security;
- meetings or workshops involving national or international institutional entities, industries, academia, research and technology organizations, networks of stakeholders;
- workshops involving teams of Member States' specialists in order to analyse and define joint requirements for specific technological solutions.

- **Support to working groups and networks of stakeholders.**

This service shall support Frontex in designing, establishing, facilitating and managing theme-specific working groups and networks of stakeholders that might comprise members of national and international institutions, research and technology organizations, academies and industries. The requested support might include, but is not limited to:

- Providing content-related expertise for all aspects of network analysis (e.g. social network analysis, mapping of stakeholders, creation of databases, etc.);
- Advising on the design of the network (e.g. setting up the mission, vision, objectives and deliverables);
- Supporting its establishment and development (e.g. moderating specific technical sessions involving the members of the network, preparing content, giving presentations).

For the expertise and technical advice support services, in general the Contractor must, among other:

- Follow an appropriate structured project management methodology;
- Demonstrate strong capacities to manage a network of national and international theme-specific nodes of stakeholders;
- Use up-to-date data and information based on reliable, objective, accurate and traceable sources and collection methods;
- Provide credible, comprehensive and valid findings and conclusions derived from a sound analysis of the gathered data;
- Produce high-quality reports;
- Consider that most of the events foreseen in these services will bring together policy-makers, research and innovation specialists as well as relevant stakeholders in fields related to the mentioned TAs.

b) Deliverables

The deliverables to be provided during the execution of the FWC shall include, among other:

- Draft planning and scoping documents;
- Meeting minutes;
- Presentations;
- Reports;
- Production of documents (e.g. read-ahead packages, presentations, reports, technical dissemination and communication documentation).

And, as appropriate and upon request by Frontex:

- Relevant progress reports (monthly, quarterly, ad hoc, close-out) as defined in the relevant OF;
- Event reports created in the format and including the content as defined in the relevant OF;
- Justification timesheets;
- Updated lists of the documents received from Frontex, and transmitted to Frontex;
- Any other documents deemed necessary by Frontex in relation to the management of the aforementioned services, as specified in the relevant OF.

3.1.2. Lot 2 - Research and Innovation Studies, Analyses and Evaluations

a) General description

The Contractor shall provide Frontex with high-quality tailored and systematic studies, analyses, evaluations and methodologies in support of its activities, in scientific and technological domains pertaining to the Research and Innovation Thematic Areas.

Typical examples of services that might be requested within this lot are:

- **Research studies.**

This service shall provide expert support to Frontex by producing high-quality research studies to address specific scientific and/or technological topics, issues or needs relevant to research and innovation in border security, defined by Frontex Research and Innovation Unit. Research studies might include the development of models, methodologies, guidelines and best practices or support other studies, analyses or evaluations.

- **Technical studies.**

This service shall assist and advise Frontex by producing high-quality technical studies for the identification of the range of technically feasible options and alternatives in relation to specific technological, operational or business processes needs including, but not limited to:

- The review of preliminary technical documentation when available, assessing the suitability and completeness of preliminary or related technical studies, verifying the adequacy, pertinence, quality and completeness of existing technical designs, cost estimates and tender documents;
- The analysis of their potential impact on the Agency's operational capacities and capabilities, in terms of strengths, weaknesses, opportunities, and threats factors, in relation to their implementation in the relevant operational environments;
- The costs-benefit and risk analyses;
- The definition of technical standards and procedures;
- Harmonising requirements for border management capabilities, establishing benchmarks and developing best practices and guidelines for border management.

- **Technological gap analysis studies.**

These are studies intended to assist Frontex in identifying, analysing, evaluating and prioritizing the technological needs of the relevant community of practitioners (primarily MSs border guard authorities), in order to make sure that research and innovation gives the proper contribution to the capability development process. These studies might include assisting Frontex in:

- Involving the relevant community of practitioners to identify those research activities potential to address capability gaps through research;
- Translating capability gaps into user requirements for solutions to be developed through research;
- Contributing to the development of solutions by facilitating their operational testing and validation;
- Monitoring the outcomes of research and assessing their continued operational relevance;
- Disseminating and exploiting successful results, thus facilitating their market uptake and deployment;
- Providing feedback of research results into the wider capability development process, thus leading to the achievement of targeted capabilities and the fulfilment of associated user requirements.

- **Review of research and innovation projects.**

This type of service shall support Frontex in the review and assessment of the outcomes and the evolution of border security research projects, and provide advice on:

- How the projects have progressed with regard to the initial objectives and work plan;
- The status of deliverables and milestones, and the quality of the deliverables produced;
- The planned and used resources;
- The risks and contingency plans to be devised and implemented in case the project is not performing as expected, including possible corrective and preventive actions;
- The status and the quality of management procedures and methods;
- The potential impact in technological and operational terms;
- The plans for the exploitation and dissemination of project results;
- Possible options and action plans for the uptake and exploitation at EU level of the project results beyond the project lifetime (especially in case of EU-funded research projects).

For the studies, analyses and evaluations performed, the Contractor must, among other:

- Follow an appropriate research design and methodology and, when necessary or required, an appropriate structured project management methodology ;
- Use up-to-date data and information based on reliable, objective, accurate and traceable sources and collection methods;
- Provide credible, comprehensive and valid findings and conclusions derived from a sound analysis of the gathered data;
- Produce high-quality reports;
- Consider that these services might also include, among the requested tasks, workshops to properly validate hypothesis, requirements, results and methodologies.

b) Deliverables

The deliverables to be supplied during the execution of the FWC shall include, among other:

- Studies;
- Reports;
- Reviews;
- Evaluations;
- Methodological tools;
- Projects outlines.

And, as appropriate and upon request by Frontex:

- Relevant progress reports (monthly, quarterly, ad hoc, close-out) as defined in the relevant OF;
- Justification timesheets;
- Updated lists of the documents received from Frontex, and transmitted to Frontex.
- Any other documents deemed necessary by Frontex in relation to the management of the aforementioned services, as specified in the relevant OF.

3.1.3. Lot 3 - Research and innovation Support to Field Activities

a) General Description

The Contractor shall provide Frontex with high-quality professional technical assistance for conducting its projects aimed at selecting, testing, validating and establishing novel technological solutions in operational (or near to operational) environments, in technological domains pertaining to the Research and Innovation Thematic Areas. Technical activities on-the field, providing hands-on expertise will represent a significant component of these services.

The requested services would normally include supporting the main phases of field activities:

- Initiation: Support to business case development, including the tasks of fixing the scope and identifying stakeholders;
- Planning: support the work plan creation, ascertaining resources needed, and estimating the budget;
- Execution: support field activities in Europe, as directed;
- Closure: support analysis of project and team results, document the project closure and evaluation.

Typical examples of services that might be requested within this lot are:

- **Support to pilot projects.**

This service shall provide support to Frontex for initiating, planning, executing and evaluating pilot projects for the assessment (for a limited period of time) of emerging or improved technologies.

An example could be supporting Frontex in organizing a pilot project for RPAS (Remotely Piloted Aircraft Systems) flights demonstrations in Greece.

In general, a pilot aims to validate the technical, organizational and economic viability of a new or improved technology, product, process, service or solution in an operational (or near to operational) environment, involving the deployment and trial of a prototype or demonstrator with a minimum maturity level corresponding to Technology Readiness Level (TRL) 7 (ready for demonstration in operational environment).

Normally, a separate public procurement procedure is launched by Frontex to establish a Pilot Project Service Contract to deploy, operate and assess, for a certain period of time, specific technological solutions needed to carry out the pilot project, with the involvement of a host Member State that will manage, together with Frontex, the service delivery.

A service to support pilot projects might include the following activities:

- Perform desk research and analyses to map the existing state-of-the-art technological solutions suitable to satisfy specific operational needs, and identify the best suitable alternatives to be tested, evaluated, validated and compared during the execution of the pilot;
 - Define a framework (criteria, benchmarks, key performance indicators, use-case scenarios, operational environments to conduct the trials, etc.) for the assessment (test, evaluation, validation and comparison) of the performance of the different technological solutions;
 - Support Frontex and the host Member State to identify potential deployment sites and plan the required local logistic support to the deployment of the envisaged technological solutions;
 - Support Frontex in drafting the Terms of Reference and Tender Specifications to procure the Pilot Project Service Contract;
 - Support in the organization of project meetings from the point of view of 'content' not 'logistics';
 - Support Frontex on the technical evaluation of the results obtained during the execution of the pilot.
- **Support to technology demonstration projects.**

This service shall provide support to Frontex for initiating, planning, executing and closing projects for the live demonstration and the assessment of capabilities of emerging or improved technologies in an operational (or near to operational) environment.

In general, a technology demonstration consists of a short-term event (typically 1-3 days), usually accompanied by a workshop, where selected companies are invited to deploy and operate their technical solutions in order to perform a real-world live demonstration and assessment of the capabilities of a specific technological solution, and followed by a technical analysis of the information gathered during the event. The objective of the event is to allow end-users and policy-makers to get a first-hand experience on the use of the specific technology being demonstrated. In addition, this type of event gives industry the chance to demonstrate the capabilities of their technical solutions. A technology demonstration could, in some cases, have the format of a prized competition.

The technology demonstration events are normally attended by representatives of EU Member States, Schengen Associated Countries, EU Agencies and Institutions and invited industries.

A service to support technology demonstrations might include the following activities:

- Perform desk research and analysis to map the existing state-of-the-art technological solutions suitable to satisfy specific operational needs, and identify the most suitable alternatives and related manufacturing industries to be considered for the execution of the technology demonstration;

- Support Frontex on the tasks to define the place, the scenarios, the operational environments and the logistic requirements to conduct the live demonstrations, suitable for the assessment of the capabilities of the technological solutions;
 - Support Frontex on the definition of the thematic content and the structure of the demonstration event and the associated workshop, the programmes and the promotion strategy;
 - Prepare read-ahead packages;
 - Support Frontex in producing the final demonstration report of the event with a detailed technical analysis of the capabilities of the demonstrated technologies, and a follow-up package (including feedbacks, collection of documents, lessons learned, etc.).
- **Support to technical assistance projects.**

A technical assistance project typically aims at responding to a direct request of a Member State or a partner non-EU country to implement a targeted project involving innovative border control processes, systems and technical solutions, usually with a focus on building specific capacities, thereby supporting the operational activities of the requesting Country.

Technical assistance projects usually facilitate the transfer and implementation of the Integrated Border Management principles through development-oriented technical activities, thus leading to the achievement of targeted capabilities and the fulfilment of associated user requirements.

A service to support technical assistance projects might include supporting Frontex in performing the following activities:

- Define the technical specifications of the required solutions on the basis of the analysis of the user requirements from the technical and operational point of views;
 - Map the existing technological solutions suitable to satisfy the specific technical and operational needs and identify the most relevant ones;
 - Define a framework (criteria, key performance indicators, use-case scenarios, operational environments, etc.) for the assessment (test, evaluation and validation) of the operational performance of the technological solutions to be acquired;
 - Support Frontex in drafting the plan for the technical assistance project, aimed at the acquisition, installation, testing and operational assessment of the technological solutions;
 - Support Frontex in drafting the Terms of Reference and the Tender Specifications for the acquisition of the identified technological solutions;
 - Draft a final technical report based on the whole set of information gathered during the assistance project implementation and produce a follow-up package (including feedbacks, collection of documents, lessons learned, etc.).
- **Development and implementation of performance assessment methodologies for the operational performance of technological systems.**

The overall objective of this type of service is to assist Frontex in the definition, development and implementation of performance assessment methodologies (or to further develop and validate existing methodologies) i.e. of methodologies for testing and evaluating (qualitatively and quantitatively) the overall operational performances of specific technological systems. The implementation phase includes the practical operational testing of the methodologies, with the aim to develop and specify clear and definitive test cases for the specific technological systems.

The developed performance assessment methodologies might complement existing test procedures and shall allow for a thorough quantitative analysis of performance data, which should be reliable and valid, and able to demonstrate the appropriate use of the technological systems in full compliance with the relevant legal provisions.

This service might include the following activities:

- Desk research and analysis of existing performance assessment methodologies and identification of the best suitable framework, criteria, metrics and level of assessment for the performance assessment methodology;
- Define a comprehensive set of relevant and measurable performance indicators and targets, design the performance assessment methodology for the specific technological system based on

those pre-defined indicators and targets, and set out the procedure for the practical operational testing of the methodology;

- Testing the developed performance assessment methodology in an operational environment against a pre-defined set of relevant performance criteria, including the comparative evaluations between different alternative methodologies if necessary, as to assure that the methodology is effective, standardized, repeatable, fine-tuned and properly documented with findings and recommendations;
- Assuring that the developed methodology is suitable for the deployment at different types of border crossing points and according to the different types of operational scenarios (provided the technological system is the same/serves the same function) and can be used independently by Member States as a practical tool to test/asses performance of technological systems in operational use.

For the above mentioned research and innovation support to field activities, the Contractor must, among other:

- Follow appropriate research and project management methodologies;
- Use up-to-date data and information based on reliable, objective, accurate and traceable sources and collection methods;
- Provide credible, comprehensive and valid findings and conclusions derived from a sound analysis of the gathered data;
- Produce high-quality reports.

b) Deliverables

The deliverables to be supplied during the execution of the FWC shall include, among other:

- Draft planning and scoping documents;
- Meeting minutes;
- Presentations;
- Draft reports;
- Draft tender documents;
- Production of documents for project meetings, workshops and events (e.g. read-ahead packages, presentations, reports, technical dissemination and communication documentation);
- Draft business plans and project documentation, including interim and final reports for the evaluation of the outcomes of the projects (comprising at least an overview and analysis of the technologies involved, time-cost-quality analyses, progress review and assessment of results, risk assessment, recommendations for future directions).

And, as appropriate and upon request by Frontex:

- Relevant progress reports (monthly, quarterly, ad hoc, close-out) as defined in the relevant OF;
- Event reports created in the format and including the content as defined in the relevant OF;
- Justification timesheets;
- Updated lists of the documents received from Frontex, and transmitted to Frontex;
- Any other documents deemed necessary by Frontex in relation to the management of the aforementioned services, as specified in the relevant OF.

3.2. Profiles of Experts

All the Experts proposed by the Tenderer must demonstrate the expertise and knowledge needed for the delivery of the research and innovation assistance and advisory services described in paragraphs 3.1.1 (for Lot 1), 3.1.2 (for Lot 2) and 3.1.3 (for Lot 3). In particular, the involvement of subject matter Experts in the TAs relevant to the FWC is considered instrumental in the achievement of the purpose of the FWC.

The following requirements apply to all the Experts required to carry-out the services listed in paragraphs 3.1.1, 3.1.2, 3.1.3, for each lot separately, as also summarized in Table 3.1 below.

a. Categories of Experts:

Three categories of Experts must be provided by the Contractor to carry out the services:

- **Category “J” (Junior level Expert):** minimum 1 year,
- **Category “M” (Medium level Expert):** minimum 5 years,
- **Category “S” (Senior level Expert):** minimum 10 years,

of demonstrable full-time professional experience, acquired after the university diploma was awarded, in the Areas of Expertise identified below;

b. Qualifications and certifications required:

- **Level of Education:**
 - **For Lot 1 and 2:** All the Experts must possess a level of education which corresponds to completed university studies of (at least) four years attested by university diploma(s) of MSc (Master of Science) or MBA (Master of Business Administration);
 - **For Lot 3:** All the Experts must possess a level of education which corresponds to completed university studies of (at least) four years attested by university diploma(s) of MSc (Master of Science).
- **Obligatory professional certifications:**
 - The Experts of Category “S” must hold a certification in the field of project management at least at a practitioner level (e.g. PRINCE 2 Practitioner or PMP certification or equivalent).
- **Language Skills:**
 - All the Experts must be fluent in written and spoken English (native-speaker level, C2). They shall demonstrate their English language skills through a suitable certification or relevant experience.

c. Areas of expertise:

- **Basic expertise (for all Lots):** the Experts must demonstrate the following basic expertise, acquired and/or applied during the above mentioned minimum number of years of full-time professional experience:
 - Expertise in research methodologies and business processes (required to all Experts): sound knowledge and experience in applying qualitative and quantitative research methodologies, development of technical specifications, business process analysis, operational research, as well as proven experience in drafting scientific and technical research studies and reports, in applied science, technology and engineering.
 - Expertise in project management (required only to Experts of Category “S”): sound knowledge in project management, including financial management of projects;
 - Expertise in coordination activities (required only to Experts of Category “S”): professional experience in leading or managing international working groups, in leading or managing projects and in being integrated in working groups;

- **Subject matter expertise for Lot 1 and Lot 2:**

- All the Experts proposed must demonstrate the above mentioned minimum number of years of full-time professional experience in providing scientific and/or technical consultancy (i.e. support and/or advisory) in the context of services similar to those described in paragraphs 3.1.1 (for Lot 1) and 3.1.2 (for Lot 2), in at least one of the Thematic Areas listed in Table 2.1⁴;
- The Medium and Senior Experts shall jointly cover all the 6 Thematic Areas listed in Table 2.1 with their professional experience.

- **Subject matter expertise for Lot 3:**

- All the Experts proposed must demonstrate the above mentioned minimum number of years of full-time operational and technical professional hands-on experience in at least one of the following fields⁵, having provided consultancy (i.e. support and/or advisory) in the context of services similar to those described in paragraphs 3.1.3:
 - a) Border checks systems: technological solutions for border checks, including:
 - Large Scale IT systems in use in the EU;
 - Systems for the acquisition, storage and use of data, including biometric data;
 - System integration, testing and evaluation.
 - b) Border surveillance systems: technological platforms (fixed and mobile) and sensors for border surveillance, including:
 - Deployment of fixed-wing and rotary-wing aerial platforms;
 - Sensors, especially radar, cameras (optical and IR) and border-crossing underground sensors;
 - System integration, testing and evaluation.
 - c) Communication systems for border control: communication systems relevant for border control applications, including:
 - Communication infrastructures (fixed and mobile) to support information collection and dissemination;
 - Secure and reliable exchange of data (i.e. text, voice, image, video);
 - Cybersecurity;
 - Techniques for data/information fusion and analytics.
- The Medium and Senior Experts shall jointly cover all the 3 fields a), b), c) listed above with their hands-on experience.

- d. Number of Experts available

For each lot, for the execution of OFs during the FWC implementation, the Contractor shall provide at least the **minimum number of Senior, Medium, and Junior Experts**, as specified in Table 3.1 below, whose List and CVs were included in the original Offer for entering the FWC according to the modalities described in the Tender Specifications.

Depending on the type of service and the tasks foreseen to be performed in an OF under this FWC:

⁴ In case an Expert has full-time professional experience in more than one Thematic Area, the years of professional experience are intended as the combination of those in the different Thematic Areas. For example, an Expert with 6 years of full-time professional experience in Technologies for Border Checks and then, separately, another 5 years of full-time professional experience in Technologies for Border Surveillance, meets the requirements of the Senior Expert, having in total 11 years of full-time professional experience in at least 1 (in this case 2) of the Thematic Areas.

⁵ In case an Expert has full-time professional experience in more than one field, the years of professional experience are intended as the combination of those in the different fields. For example, an Expert with 6 years of full-time professional experience in Border checks systems and then, separately, another 5 years of full-time professional experience in Border surveillance systems, meets the requirements of the Senior Expert, having in total 11 years of full-time professional experience in at least 1 (in this case 2) of the 3 listed fields.

- a) in some cases, the requirements about the number of Experts in each category and their profiles might be defined in advance by Frontex in the Terms of Reference annexed to the corresponding Request for Service (see paragraph 5.1);
- b) in some other cases, Frontex might request the Contractor to propose the optimum number of Experts in each category and their profiles to perform the tasks foreseen in the OF.

In any of those cases, in its Offer in response to the Request for Service, the Contractor must always propose at least 2 best possible candidates for each of the Experts to be involved, between whom Frontex can choose, with the mechanism described in paragraph 5.1.

The Tenderer must be aware that additional Experts (i.e. more or different than the minimum number specified in Table 3.1 and proposed by the Tenderer in its original Offer for entering the FWC) might be needed in various situations including, but not limited to, the following:

- a) The mentioned minimum number of Experts is not sufficient to carry out all the tasks foreseen in OFs requested to a Contractor under this FWC.
- b) The implementation of an OF might require the involvement of one or more **Specialized Experts**, i.e. Experts having a proven subject matter expertise in one or more of the specific Topics listed in Table 2.1. In this case, if the competence of the Experts proposed by the Contractor in its Tender Offer is deemed by Frontex not sufficient to appropriately fulfil the scientific/technological requirements of the said OF, the Contractor shall make available additional Specialized Experts, with CVs demonstrating subject-matter expertise on the specific Topics, to be assigned by the Contractor to the execution of the OF.

Whenever additional Experts are needed for any reasons to properly perform the tasks foreseen in an OF, these must be made timely available, in a suitable number, by the Contractor with no costs in addition to those corresponding to the Daily Rates (see paragraph 3.3) of the additional Experts needed.

CVs and profiles of the additional Experts must meet all the requirements for the Profiles of Experts stated above as well as the applicable selection criteria as described in the Annex I-Tender Specifications (Technical and professional capacity - Criterion related to personnel capacity) and the requirements in the OF.

Table 3.1 Profiles of Experts - For each lot separately

Categories of Experts		Minimum number of Experts required to be available for each lot			Qualifications and certifications required			Areas of expertise			
Category	Years of full-time professional experience in the Thematic Areas	Lot 1	Lot 2	Lot 3	Level of education		Level of written and spoken English	Obligatory certifications	Basic Expertise for all Lots	Subject matter Expertise for Lot 1 and Lot 2	Subject matter Expertise for Lot 3
					Lot 1 Lot 2	Lot 3					
Junior	≥1	2	4	3	Completed university studies of (at least) four years attested by university diploma(s) of MSc (Master of Science) or MBA (Master of Business Administration)	Completed university studies of (at least) four years attested by university diploma(s) of MSc (Master of Science)	C2	None	● Expertise in research methodologies and business processes.	● All the Experts proposed must demonstrate the specified minimum number of years of full-time professional experience in providing scientific and/or technical consultancy (i.e. support and/or advisory) in the context of services similar to those described in paragraphs 3.1.1 (for Lot 1) and 3.1.2 (for Lot 2), <u>in at least one of the Thematic Areas listed in Table 2.1.</u> ● The Medium and Senior Experts shall <u>jointly cover all the 6 Thematic Areas listed in Table 2.1 with their professional experience.</u>	● All the Experts proposed must demonstrate the specified minimum number of years of full-time operational and technical professional hands-on experience <u>in at least one of the following fields</u> (see more details in par 3.2), having provided consultancy (i.e. support and/or advisory) in the context of services similar to those described in paragraphs 3.1.3: a) Border checks systems b) Border surveillance systems c) Communication systems for border control. ● The Medium and Senior Experts shall <u>jointly cover all the 3 fields a), b), c) listed above with their hands-on experience.</u>
Medium	≥5	4	8	6			C2				
Senior	≥10	2	4	3			C2	Certification in Project Management at least at a practitioner level			

3.3. Estimated Resources and Daily Rates of Experts

During the implementation of the FWC including all possible extensions, Frontex expects to request Assistance and Advisory Services that would approximately need, for each type of Experts, the indicative amount of full-time working days⁶ listed in Table 3.2 below.

With regard to the place of performance (see par. 4.4), the following distinctions have been made:

- a) **Remote Services:** performed at Contractor's premises;
- b) **On-Site Internal Services:** performed at Frontex premises in Warsaw - Poland;
- c) **On-Site External Services:** performed in the territory of any of the European Countries, including those which are not members of the EU.

In principle, any combination of those types of work is possible in any of the Assistance and Advisory Services acquired within the FWC. *For example, an OF for a Pilot Project might include: an initiation phase which may involve on-site meetings at Frontex (On-Site Internal Services), a planning phase carried out remotely at the Contractor's premises (Remote Services), and an execution phase to be performed in a European country (On-Site External Services).*

The quantities indicated in Table 3.2 are for an indicative estimated overall consumption and, although realistic and based on previous experience, they may vary considerably depending on the variability of Frontex work programmes, and do not oblige Frontex to order services for the indicated amounts and proportions. In fact, Frontex does not provide any guarantee to the Contractors on the use of the FWC.

Once the FWC is in place, the total price of an OF under the FWC will be composed based only on:

- a) the number and categories of Experts involved;
- b) the estimated number of days of work for each category of Experts in the different places of performance;
- c) the percentage of part-time workload foreseen for each category of Experts;
- d) unit prices represented by the **Daily Rates of Experts**, which are the all-inclusive flat-rate prices per working day in EUR including any and all the possible costs of the OF for each category (Junior, Medium, Senior) of Experts, considering that 1 working day of an Expert includes 8 hours of full-time work, and 1 working year of an Expert includes 1720 hours, corresponding to 215 8-hour working days per year.

The figures in Table 3.2 represent the **Total Volume Scenario for all services under Lot 1, Lot 2 and Lot 3** for the overall maximum 4 years duration of this FWC, to be used for the Financial Proposal, and the following apply to the **Maximum Daily Rates of Experts** proposed by the Tenderer in its Financial Proposal (in the List of Unit Prices) for each type of Expert and place of performance in relation to this scenario:

- The Maximum Daily Rates of Experts will be firm and fixed and binding for the contractor throughout the duration of the FWC.
- The Maximum Daily Rates of Experts are understood to be all-inclusive flat-rate prices per working day in EUR, including any and all the possible costs of the services. No additional costs will be reimbursed by Frontex under any circumstances for any of the services performed. In particular, all the remote and on-site work Maximum Daily Rates of Experts shall include all allowances which the contractor usually pays to its staff in these situations, as Frontex will not pay any allowances. In addition, if the deliverables incorporate pre-existing rights, the Tenderers should factor, into their Maximum Daily Rates of Experts price, the cost of licensing those pre-existing rights to Frontex.
- As indicated above, when composing the total price of an OF under the FWC, the Contractors will be allowed to only and exclusively use Daily Rates of Experts (no other costs can be considered and no additional costs will be reimbursed by Frontex under any circumstances for the execution of the OF), and the Daily Rates of Experts offered by the Contractor for implementing an OF in response to a

⁶ One (1) Expert working day includes 8 hours of full-time work. One (1) working year of an Expert includes 1720 hours, corresponding to 215 8-hour working days/year.

Request for Service cannot exceed (must equal to, or lower than) the Maximum Daily Rates of Experts specified in their Financial Offer.

- In most cases, during the implementation of an OF, the Experts, although assigned to the service for its entire duration, will be involved on a part-time basis, with a certain percentage of part-time workload. In this case, the Daily Rates of the Experts will be modified (reduced) in proportion to the percentage of part-time workload. *For example, if the full-time (8 hours) Daily Rate of an Expert is A, the corresponding daily cost for its involvement in a 9-month service with a 40% part-time workload will be $A \times 0.4$.*

Nothing in this FWC shall prevent the Contractor from being engaged, concerned or having a financial interest in any other business, trade or profession or occupation, provided that the Experts shall not undertake any activity or be involved with any other business, trade, profession or occupation which in any way would or might constitute a conflict of interest with Frontex and/or its activities.

Table 3.2 - Total Volume Scenario for all services under Lot 1, Lot 2 and Lot 3 for the overall maximum 4 years duration of the FWC. Estimated indicative number of days (8 hours full-time) of Assistance and Advisory Services foreseen to be needed during the FWC implementation and corresponding maximum value estimated.					
	Type of Expert	Number of days (8 hours full-time) of Remote Services (at Contractor's premises)	Number of days (8 hours full-time) of On-Site Internal Services (at Frontex premises in Warsaw - Poland)	Number of days (8 hours full-time) of On-Site External Services (in European Countries)	Maximum value estimated for the whole duration of the framework contract
LOT 1	Junior	180	20	20	EUR 700,000
	Medium	360	40	40	
	Senior	180	20	20	
LOT 2	Junior	650	70	70	EUR 2,400,000
	Medium	1300	140	140	
	Senior	650	70	70	
LOT 3	Junior	200	40	200	EUR 1,400,000
	Medium	400	80	400	
	Senior	200	40	200	

3.4. Continuity and Replacement of Experts

The Contractor must ensure the continuity of service necessary for performing tasks foreseen under OFs. Under no circumstances shall the Contractor invoke a change in personnel to justify a failure to comply with contractual obligations, in particular compliance with deadlines and quality requirements.

Once an Expert is assigned to the implementation of an OF, it is assumed that she/he remains assigned to the same OF for the whole duration of the OF also in consideration of the fact that some of the deliverables might require continuity as they may be built on the outcome of previous tasks. It is therefore important that the Contractor presents, in the Technical Proposal, a consistent plan for the Team Availability Management (see the Annex 01 - Tender Specifications) that describes, among other, the procedures that will be put in place in case the replacement of Experts is needed during the execution of the FWC.

In general, the replacement of one or more Experts during the execution of an OF might be necessary in the following situations:

1. Upon request of Frontex in case of underperformance of the Expert.
If an Expert, during the implementation of an OF doesn't meet the expectations of Frontex, Frontex can suspend the OF execution and request a new Expert to be proposed by the Contractor within 3 working days.
2. Upon request of Frontex in case of temporary unavailability of the Expert.
In case an Expert becomes temporarily unavailable, due to holidays or other periods of planned absences, Frontex may request the Contractor to provide an adequate replacement of the Expert, should the period of unavailability be impactful on the execution of the OF.
3. Based on the needs of the Contractor in case of illness and short-term absences, planned absences, long-term or permanent unavailability of the Expert.
In case an Expert is taken ill or, for any other reasons, becomes temporarily (for a short-term) unavailable to perform office work (either for remote or on-site services), the Contractor shall notify, by e-mail, Frontex Contract Manager before h 09:00 on the first day of suspension of the provision of services, and shall indicate when services will resume. Should the period of unavailability be impactful on the execution of the OF, Frontex can proceed according to point 2 above.
In any cases the Contractor intends to replace an Expert in a Team, permanently or for a medium/long-term (e.g. in case an Expert has planned absences, becomes for whatever reasons unavailable for a long-term or permanently, in case of redundancy or personnel turn-over), the Contractor shall give at least 1 month prior notice to Frontex. The prior written approval of Frontex must be obtained, and this approval shall only be granted where there are imperative reasons.

Any time an Expert needs to be replaced, the Contractor shall timely notify Frontex in writing and propose a replacement by providing at least 2 best possible candidates (and their CVs) between whom Frontex can choose, who shall have the same profile as the replaced Expert, in line with the requirements of the tender documentation. In particular the newly proposed Expert must meet all the requirements stated in paragraph 3.2, the applicable Selection Criteria as described in the Annex I-Tender Specifications (Technical and professional capacity - Criteria related to personnel capacity), and the requirements in the OF.

Frontex can assess the profile and the technical competences of the proposed replacement candidates through the analysis of their CVs, tele/videoconference interviews and/or referral to previous clients. Frontex may either accept the replacements, or request the Contractor to provide alternative CVs to the ones proposed. Once the replacement Expert is agreed, the Contractor must ensure that the new Expert has received adequate training in order to guarantee that she/he is sufficiently prepared and ready to work on the contract as soon as the original Expert leaves, thus guaranteeing the continuity of the service provided to Frontex.

Any of such replacements of Experts must be carried out by the Contractor with no additional costs to Frontex.

3.5. Security and Declaration of Confidentiality

During the execution of the OFs, the information to be handled by the Contractor is expected to be marked, at the most, as “SENSITIVE”⁷, non-classified according to the Commission Decision (EU, Euratom) 2015/444 of 13 March 2015 on the security rules for protecting EU classified information.

The Contractor involved in the execution of the OF, its sub-contractors (if any) and the Experts assigned to the implementation of the same OF shall sign a Declaration of Confidentiality (see Appendix 01) as attached to the Order Form, prior the start date of their direct involvement therein.

⁷ A document marked as “**SENSITIVE**” can only be released on a need-to-know basis and cannot be released outside the EU institutions and Member States public administrations. The document may not be released to third parties or published either in physical or electronic form without the express written consent of the European Border and Coast Guard Agency (Frontex).

4. General Requirements

4.1. Duration and Schedule

The duration of this FWC is two (2) years with the possibility of tacit renewal for additional two (2) years, no more than one (1) time under the same conditions, unless one of the parties informs the other of its intention not to extend the FWC and such notification is received by the party to which it is addressed, no later than three months before the contract expires. The overall duration of the FWC including any potential renewal, may in no event exceed four 4 years.

The FWC enters into force on the date on which it is signed by the last contracting party.

The Contractor shall start executing tasks immediately after the signing of any Order Form, or at a later date if so agreed in writing.

The Order Forms shall be signed by both parties before the FWC expires and can include work to be performed after the end of the FWC until up to 6 months after its expiry. The FWC shall continue to apply to such Order Forms after its expiry.

4.2. Deliverables and Tasks

4.2.1. Quality of Deliverables and Tasks

The deliverables have to meet the quality criteria and levels, all the terms and conditions, as well as goals and approaches as specified in the Terms of Reference annexed to the specific Order Form (see section 5).

The tasks requested in any Order Form must be performed in a professional manner, in a way and at performance levels not lower than those offered by the Contractor in its Technical Proposal submitted for this tender.

4.2.2. Deliverables Format and Disclaimer

Unless otherwise specified by Frontex, for each task, and, where relevant, for each associated subtask included in an OF, the Contractor shall deliver at least one (1) paper copy of the final versions of the deliverables and annexes, and at least one (1) electronic copy of each deliverable with all relevant data.

Upon completion of each OF, the Contractor shall deliver to Frontex two (2) pen-drives containing all the deliverables and one (1) hard copy of them. Each pen-drive shall also include a registry file (an excel table) reporting, for each deliverable, the task to which the deliverable belongs, the reference number, the issue number, the classification, the date of release, the title, and the html-linked document (all versions).

All the deliverables shall be submitted in English.

Frontex reserves the right to request the Contractor to include specific disclaimers in all the documents and publications produced within this FWC.

4.2.3. Acceptance Criteria for Deliverables and Tasks

Frontex will have thirty (30) calendar days from the receipt of the deliverables to assess their quality, also in accordance with the provision of paragraph 5.2.1, and approve or reject them in full or in part. Upon reception by the Contractor of the comments and/or requests for clarification from Frontex, the Contractor will have fifteen (15) calendar days to complete, adapt and correct the deliverables and submit additional information and/or another report and/or clarifications.

The acceptance of all the deliverables and tasks shall be confirmed by handing over of an Acceptance Form signed by a Frontex representative. The model form is available in Appendix 02 - Model of Task and Deliverable Acceptance Form and might be subject to modifications by Frontex.

Any Order Forms awarded on the basis of this FWC will be considered fulfilled upon Frontex's written acceptance of all the deliverables and tasks required, and the evaluation of the overall quality of the services against the thresholds for the acceptance of service quality performances as set in paragraph 5.2.

In fact, in addition to the task-specific and deliverable-specific acceptance criteria, Frontex will monitor the overall quality of the services provided by the Contractor in response to an OF as explained in paragraph 5.2.

4.3. Intellectual Property Rights

In addition to the provisions of the draft Contract (Annex 03 to the Invitation to Tender), results of the activities performed under the FWC may be published or released by Frontex to third parties. For this purpose, the Contractor must ensure that there are no restrictions based on confidentiality and/or intellectual property rights imposed by third parties. Should the Contractor intend to use data produced within the execution of a service that cannot be published, such limitation must be explicitly mentioned in the Contractor's Offer in response to a Request for Service (see paragraph 5.1).

It is under the Contractor's responsibility to obtain the necessary rights and ensure that all sources utilized for producing the deliverables of the present FWC may be used by Frontex with unlimited access. All costs incurred in the licensing of the necessary property rights shall be included in the price of the service.

The owner of all the documents produced within the FWC and of the associated intellectual property rights will be Frontex. Frontex reserves the right to publish these documents (including but not limited to deliverables, reports, studies, presentations, etc.) under its own name.

4.4. Place of Performance

Any tasks carried out by a Contractor under an Order Form, should be performed in the place defined in the specific Order Form. As a general rule, these tasks could be performed as:

- a) **Remote Services:** at Contractor's premises;
- b) **On-Site Internal Services:** at Frontex premises in Warsaw - Poland;
- c) **On-Site External Services:** in the territory of any of the European Countries, including those which are not members of the EU.

Communication and collaboration with Frontex can be done in presence or via technical means like online working spaces, web-meetings and email.

All meetings between Frontex and the Contractor for the management of the contract should take place:

- in presence, at Frontex premises located in Warsaw-Poland, or, in some occasions, in the territory of any of the European Countries, including those which are not members of the EU, or
- by conference call or remote videoconference sessions.

As already described in paragraph 3.3, no additional costs will be reimbursed by Frontex under any circumstances for travel, accommodation and subsistence of the Contractor's team of Experts.

With regard to the security situation, the contracting authority reserves the right to request background security checks for personnel of the Contractor providing services which require regular access to Frontex premises or any other location.

4.5. Language

All the implementation of the FWCs in terms of communication and documentation (both in paper and electronic form) and any other deliverables, shall be in English and adhere to a high standard appropriate for technical documentation, ideally without ambiguities and no mistakes in grammar or spelling. All members of the Contractor's staff allocated to the execution of any Order Form shall speak and write in

English at C2 level, according to the Common European Framework of Reference for Languages: (http://www.coe.int/t/dg4/linguistic/Manuel1_EN.asp).

4.6. Documentation

All applicable tools and standards to be used for the documents to be delivered shall be mutually agreed between Frontex and the Contractor.

Frontex requires that all documents created maintain a high quality by:

- using a document structure, i.e. the organisation of the document into chapters, sections, subsections etc. in a clear way;
- the compliance with standards and a writing style that supports a consistent structure, form and style of documents;
- the completeness of documents, i.e. the complete presentation of the entire scope of the described matter without clear and evident omissions;
- the consistency and coherence of documents, i.e. ensuring mutual accordance of all types of information and lack of logical contradictions of information between the submitted documents or between parts of the same document;
- the proper identification of its title, scope, authors, reviewers, related dates, status, versions, history log, audience, quality or acceptance criteria (if the document is subject to acceptance).

The documentation shall be delivered in editable electronic format and in printed format as described in paragraph 4.4.2. Editable source files for all files shall be supplied.

4.7. Climate and Environmental-Related Conditions

During the implementation of the FWC, the Contractors are required to take into proper consideration the European Green Deal (see paragraph 1.1), recently set out by the European Commission as an important commitment to tackle climate and environmental-related challenges, by at least:

- demonstrating a strong commitment towards implementing, during the execution of the FWC, environmentally sustainable business processes, capable to reduce as much as possible any impacts of its own operations on climate and environmental-related issues;
- making sure that the deliverables provided as output to the contracted services contain, whenever possible, information about any viable scientific and technological solutions potential to be implemented by the Agency through Research and Innovation to contribute to its policies and measures to achieve the European Green Deal.

5. Implementation of the FWC

5.1. Procedure for Issuing Order Forms

The FWC consists of 3 lots:

- Lot 1: Research and innovation expertise and technical advice support services;
- Lot 2: Research and innovation studies, analyses and evaluations;
- Lot 3: Research and innovation support to field activities.

The FWC will be concluded with the maximum of three Tenderers per each lot, ranked best as the result of the evaluation of admissible tenders. The FWC shall be implemented by means of the cascade system: a list of Contractors in descending order will be drawn up based on the award criteria set out in the Tender Specification; when a Request for Service is issued by Frontex, if the first Contractor is unavailable to carry out the work within the set time limits or in the event of underperformance, as described in section 5.5, the Request for Services will be automatically sent to the next Contractor on the list, in descending order.

For each service execution within the FWC, Frontex will follow this procedure:

a. Issue of a Request for Service.

The best ranked Contractor will receive a Request for Service from Frontex via email. The e-mail will contain a request and a Specific Terms of Reference for the assignment. The Specific Terms of Reference will set out the specifications for the service, identifying at least:

- the maximum available budget
- the subject and the objectives of the service;
- the main requirements for the team of Experts to be involved (these might include the minimum number of Experts, their categories, the areas of expertise and the foreseen workload);
- the maximum available budget;
- the main requirements for the methodology and the time schedule to be proposed by the Contractor;
- the required outputs and deliverables;
- the location where the service shall be delivered;
- payment and invoicing rules

The maximum available budget for the requested service will be, in each and every case, specified by Frontex in its Request for Service.

The Contractor must send as soon as possible, but not later than in two (2) calendar days from the sent date of the request, by e-mail, an acknowledgement of receipt of the request.

b. Submission of a Contractor's Offer in response to a Request for Service.

The Contractor should respond to a Request for Service sent to him by Frontex, by submitting an Offer.

The Contractor will be required to confirm his availability to perform the requested services, at a price not higher than the indicated maximum available budget, within seven (7) calendar days from the sent date of the request, certifying absence of conflicts of interest. Within twenty-one (21) calendar days (counted from the sent date of the request), Frontex shall receive, preferably by email, the Contractor's Offer. Shorter deadlines might be requested by Frontex in particularly urgent cases.

If clarifications are required on the Request for Service, the Contractor may consult Frontex by e-mail within seven (7) calendar days from the receipt of the request. Frontex must reply as rapidly as possible by sending the answers to the questions or requests for clarification to the Contractor. Frontex may fix a new deadline

for submission of the Offer if a delay is justified by the type of problem raised and its impact on the preparation of the Offer.

In the event of failure to observe these deadlines or refusal to make an Offer, or if the price offered by the Contractor is higher than the indicated maximum available budget, which should be duly justified, the Contractor will be considered unavailable to perform the services and Frontex will be entitled to send a Request for Service to the next Contractor in cascade on the list for the specific lot, in descending order.

The Contractor's Offer must contain clear information, in line with the requirements indicated in the Specific Terms of Reference, including at least:

- a work organisation plan;
- the proposed team of Experts:
 - the profiles and CVs of all the Experts required to carry-out the assignment, their workload and their tasks;
 - the Contractor must propose at least 2 best possible candidates (and their CVs) for each Expert to be involved, between whom Frontex can choose;
- the cost of the service:
 - this may not exceed the maximum available budget specified in the Request for Service; however, the Contractor may offer discounts;
 - a budget breakdown (in terms of the Daily Rates of Experts) must be provided that allows to identify the costing structure; the cost of the service must be all-inclusive and no separate reimbursable expenses will be accepted;
 - as explained in paragraph 3.3, when composing the cost of the service, the Contractor will be allowed to only and exclusively use the Daily Rates of Experts (no other costs can be considered), and the values of the Daily Rates offered by the Contractor cannot exceed (must be the same as or lower than) those specified in their Financial Proposal to enter the FWC;
- the methodology and the time schedule;
- any foreseen subcontracting;
- any other information as required in the Specific Terms of Reference annexed to the Request for Service.

The proposed Experts must be available, upon Frontex request, for tele/videoconference interviews with 2 working day notice; the objective of the interviews is to assess the technical competences of the Experts against the requirements of the service to be executed. If the proposed Experts do not meet Frontex expectations, Frontex might request different Experts to be proposed by the Contractor within 3 working days.

The Contractor is liable for the accuracy of the information contained in the Offer. In case of a Consortium, the quality and accuracy of the Offer lies ultimately with the leading partner of the Consortium.

c. Admissibility of the Contractor's Offer and ranking procedure.

Only an admissible Offer will be taken into consideration by Frontex. The criteria of admissibility of the Offers are cumulative, as follows:

- the respect of the deadline for the submission of the Offer;
- the service price is within the maximum available budget specified in the Specific Terms of Reference;
- the respect of the requirements stated in the Specific Terms of Reference.

In case of a non-admissible Offer or if the Contractor is considered unavailable to perform the requested services, Frontex will contact the next Contractor on the list in descending ranking order.

d. Assignment implementation by issuing the Order Form.

If Frontex considers the received Offer admissible, the required services will be contracted by Frontex via an OF. An OF will be drafted by Frontex and sent to the Contractor by email. A template of an Order Form is available in Appendix 03.

Each OF will specify:

- the matter for which the Research and Innovation Assistance and Advisory Services are needed;
- the Terms of Reference (as an annex to the OF);
- the price for the requested services.

Within seven (7) calendar days of an OF being sent by Frontex to the Contractor, Frontex shall receive it back from the Contractor, duly signed and dated.

The period allowed for the execution of the required services shall start to run on the date indicated in the OF after the signature of both parties. On taking up the duties, each Contractor's individual shall be required to sign the Declaration of Confidentiality (Appendix 01).

The Contractor, who is notified that his Offer is accepted in the form of an OF, is fully responsible for

- all administration in relation to the assignment;
- ensuring that all logistic aspects of the assignment are correctly carried out;
- the quality of the outputs required.

When applicable, documents will be delivered physically by and under the responsibility of the Contractor. In the case of a Consortium, quality control is the ultimate responsibility of the leading partner.

5.2. Service Quality Assessment

5.2.1. Quality Performance Indicators and Requirements

The services carried out by the Contractor under this FWC shall meet high standards of quality that will be measured by Frontex based on the following **Quality Performance Indicators, during the implementation of any OF as specified in paragraph 5.2.2 and 5.2.3:**

1) Understanding of the requirements for the service.

- Capacity of the Contractor to properly understand and address the objectives of the Service, as well as to understand the context of research and innovation in the border security domain and of the work to be carried out. Capacity to seek agreement with Frontex on objectives, resources, timing and deliverables, adjusting them when needed and showing a professional attitude towards Frontex and its stakeholders.

2) Application of a proper methodology for the delivery of the service.

- **Quality of Planning, Executing, Monitoring and Controlling.** Quality of the methodology, tools and processes that have been applied by the Contractor to: analyse the technical documentation and collect data related to the service, plan the service ensuring that the resulting work plan is sufficiently accurate and realistic, execute the service to produce the required deliverables, monitor the progress of work, control the service execution and manage changing situations and contingency needs. Quality of the components (documents) that have been included in the service plan.
- **Quality of Communications.** Quality of the strategy used by the Contractor for consultations and communications (communication plans) within its Team, with Frontex and with the stakeholders for controlling the service execution and for managing changing situations and contingency needs.

- **Quality of Risk Management.** Quality of the methodology applied by the Contractor for performing the risk analysis for the services provided, i.e. for identifying the potential risks that might have impacted the quality and timely completion of the expected results and deliverables, and the measures put in place to mitigate these risks, as well as for assessing if deliverables were realistic to be achieved. Contractor's ability to achieve continuous improvement by timely identify shortcomings and root causes, reporting them in progress reports and meetings, proposing solutions, and effectively implementing them.
- **Quality Assurance and Quality Control.** Effectiveness of the Quality Assurance methodology that the Contractor applied for the delivery of the requested services, and of the Quality Control processes that have been put in place in order to ensure and measure the required performance levels in the execution of tasks and quality level in the production of deliverables. Effectiveness of the criteria applied to control the quality of draft deliverables before they were released, as well as to handle (and, when required or necessary to remedy) non-conformities, comments and corrections received from the main stakeholders (either at interim or at final stage).
- **Quality of Knowledge Management.** Quality of the methodology and tools applied by the Contractor to ensure the transfer of knowledge to Frontex when requested, to allow Frontex personnel to acquire future autonomous operational capabilities in relation to the service performed, leveraging on the outcomes of the service provided.
- **Quality of Resource management.** Effectiveness of the approach applied by the Contractor for the allocation of time and resources to the service, with special attention to the approach applied for selecting, assigning and coordinating the Experts involved, in order to ensure they had the correct competence (training, experience and knowledge), roles, responsibilities and workload, and they were immediately effective since the start of the service and suitable to execute the planned activities.
- **Quality of Team organisation.** Quality of the proposed team of Experts, effectiveness of their distribution among the work areas or tasks identified under the service, and of the reporting strategy in relation to the competences and responsibilities of each role, as well as correctness of the balanced allocation to the specific tasks between senior, medium and junior Experts for ensuring appropriate thematic coverage, and the presence and involvement of the senior staff at any stage of reviews.

3) Technical Excellence and relevance and completeness of the deliverables.

- **Quality of Technical knowledge and skills.** Level of experience demonstrated by the Contractor, technical knowledge and skills in the execution of the service. Capacity of the Contractor to provide state of the art research and innovation advisory and assistance services that are targeted to the context and issues related to this FWC. Quality of the methodology used by the Contractor to establish and maintain a technology watch and foresight system to keep abreast with the most recent innovations in technologies relevant for border security and identify trends.
- **Quality of the produced deliverables.** Acceptability of the deliverables, and capacity of the Contractor to make sure that the quality of deliverables are in-line with Frontex requirements as specified in the Specific Terms of Reference annexed to the Request for Service. Capacity of the Contractor to produce deliverable of such a quality that they can be used to support policy- and decision-making and directly published by Frontex as a part of its official publications. Capacity of the Contractor in establishing robust means to ensure the reliability, validity and comparability of the information collected as well as the high-quality of its analysis and of its reporting, including a full and standard referencing of the sources used.
- **Clarity of Reports and Presentations.** Capacity of the Contractor to effectively communicate the results (interim and final) of the Service to the requested audiences by reports and presentations.
- **Performance of the Experts.** Capacity of each of the Contractor's Experts involved in the execution of the OF to effectively demonstrate and implement their basic and subject-matter technical/scientific expertise. Other aspects that will be evaluated include: the ability of the

Expert to maintain appropriate relations with Frontex and its stakeholders, abilities in written and verbal communications, drive and determination, job management abilities.

4) Ability to document the work.

- **Quality of Document and Data Management.** Reliability and efficiency of the document management system and procedures put in place by the Contractor. Quality of the methods, tools and procedures applied by the Contractor to collect, classify, analyse and handle data and information during the execution of the service in order to produce the deliverables. Effectiveness of the methodology used by the Contractor to systematically gather information about the most recent innovations and trends in science and technologies relevant for border security.

5) Respect of deadlines.

- **Capability to react to the Request for Service.** Effectiveness of the Contractor's processes in responding to the Request for Service and execute the OF upon short notice from Frontex.
- **Quality of Time Management.** Capacity of the Contractor to timely achieve the planned milestones and comply with the schedule of production of deliverables. Capacity to implement a timely and transparent reporting process, by ensuring that any deviations (change of resource, scope, schedule, planning etc.) is timely identified and reported to Frontex.

5.2.2. Quality Performance Evaluation

The output of the service delivered under each OF will be subject to a written quality assessment performed by Frontex according to the Quality Performance Indicators described in paragraph 5.2.1 and the Evaluation Grid below. The indicators and the grid may be changed or adapted in accordance with Frontex quality evaluation standards in place or depending on the requirements in the Specific Terms of Reference. This will be communicated to the Contractor when the OF execution starts.

The current Quality Performance Evaluation Grid for the evaluation of the delivered services is the following:

- 1) **Understanding of the requirements for the service:** maximum 10 points;
- 2) **Application of a proper methodology for the delivery of the service:** maximum 20 points;
- 3) **Technical Excellence and relevance and completeness of the deliverables:** maximum 30 points;
- 4) **Ability to document the work:** maximum 20 points;
- 5) **Respect of deadlines:** maximum 20 points.

5.2.3. Acceptance Criteria for Services

For any OF, the official acceptance of the service delivered will take place at pre-defined milestones, at the start, during the implementation, and at the completion of each OF. It shall be conducted against the **Quality Performance Indicators** set in paragraph 5.2.1 and the Evaluation Grid in paragraph 5.2.2 above. The thresholds for the acceptance of service quality performances are set as follows:

- A score not lower than 50% of the maximum points in each of the above mentioned indicators;
- A **Total Quality Score** (sum of the scores in each indicators mentioned in paragraph 5.2.2) not lower than 60.

5.3. Reporting and Payments

The Contractor shall document all services performed under the Order Forms and, after the final delivery of each service (or any other time if requested), shall provide the Agency with short factual reports in English detailing the service provided under the contract, substantiated by detailed timesheets of the Contractor's staff involved in the execution of the contract. The reports are to be submitted to the Agency's **Project Manager** (identified in the Specific Terms of Reference annexed to the OF), who is responsible for approving them. An acceptable report is a precondition for having the corresponding invoice approved and thus enabling payment of the balance.

If the duration of the Order Form exceeds 2 months, one or more interim payments may be introduced (in total up to 50% of the total value of that Order Form). Where an interim payment is expressly provided for in the Order Form, the Contractor shall submit a relevant detailed invoice, indicating the reference number of the Contract, of the Order Form and related financial commitment number to which they refer, accompanied by:

- if required, an interim/progress report or any other document as may be required by, and in accordance with the instructions laid down in the relevant Order Form;
- the breakdown of services provided;
- relevant timesheets of the Contractor's staff involved in the performance of the Contract for the tasks subject to interim payment;
- any other substantiation as may be required in the Order Form.

The Agency shall make the interim payment only after the acceptance of the above mentioned accompanying documentation submitted by the Contractor. In case additional information or corrections, a new interim/progress report or other documents are requested by Frontex, the Contractor shall submit them within seven working days from Frontex request.

5.4. Underperformance

5.4.1. Framework Contract Termination

Frontex reserves the right to terminate the FWC with a particular Contractor, in line with the provisions of the FWC, in case the Contractor:

- is not respecting its contractual obligations under the FWC (fails to provide the service required), or
- is not responding to Requests for Service (fails to reply to Frontex Requests for Service for the third time), or
- is not submitting admissible offers against Requests for Service (i.e. its Offers have been considered non-admissible for the third time).

5.4.2. Reduction of Payments

In line with the provisions of the draft contract, the quality of the outputs of an OF will be assessed on the basis of the **Total Quality Score** (see paragraph 5.2.3), up to a maximum of 100 points. If the Total Quality Score is less than 60 points, it will be considered as a case of underperformance. In these circumstances, the following will apply:

- Frontex will notify the failures to the Contractor and will set a deadline for the Contractor to remedy.
- If no satisfactory remedy is produced by the Contractor within the deadline set by Frontex (satisfactory implies achieving a Total Quality Score ≥ 60), a reduction of payments up to 100% may be applied, proportional to the scale of the failure, as follows:
 - if Total Quality Score = 0 - 20, a reduction of payment of 100%;
 - if Total Quality Score = 21 - 40, a reduction of payment of 70%;
 - if Total Quality Score = 41 - 50, a reduction of payment of 50%;
 - if Total Quality Score = 51 - 59, a reduction of payment of 40%.

5.5. Escalation

The Contractor shall continuously monitor the progress of work and the risks of underperformance. In case the Contractor registers underperformance or assesses the risk of underperformance under an acceptable

tolerance level, the Contractor must report it to Frontex according to the reporting procedures agreed for the OF.

In case Frontex observes serious underperformance or a risk of serious underperformance of the Contractor, Frontex may escalate this observation to the Contractor by means of Registered Communications and this requires that the Contractor higher management representative will be available to report on the issue to Frontex and propose countermeasures at short notice.

5.6. Confirmation of Absence of Conflict of Interests

In the Specific Terms of Reference annexed to an OF, the Contractor might be required to provide a proof of absence of conflict of interests, including but not limited to the case of previous, current or anticipated involvement of the Contractor in the commercialisation of border control or border checks technologies or equipment.

Upon assessment of the above documents, Frontex may exclude from the execution of the OF the Contractor whose analysis, justification or presentation regarding conflict of interests will be considered insufficient, inadequate or irrelevant.

5.7. Points of Contact

Each FWC Contractor will nominate a **FWC Officer** who shall act, for the entire duration of the FWC, as a single contact point vis-a-vis Frontex for the FWC matters, and must be available for Frontex requests. All the contractual correspondence and related coordination will be addressed to this person.

Each FWC Contractor will nominate a **FWC Executive** who will be ultimately representing the Contractor and subcontractors vis-a-vis Frontex for the supervision of all the OFs granted to the Contractor, the overall performance of the Contractor, the change management and escalation of issues not solved at the level of the individual contracts.

Frontex will nominate a **Framework Contract Manager**, who will be the single contact point for all the matters related to the FWC implementation, as well as responsible for the initiation, monitoring of consumption of the value, duration and ex-post evaluation of the FWC.

For each OF implemented under this FWC, Frontex will also nominate a **Project Manager** (identified in the Specific Terms of Reference annexed to the OF), who will be the single contact point for all the matters related to the implementation of the OF, including, but not limited to, the initiation, monitoring and evaluation of the services provided by the Contractor under the OF, as well as the approval of all the related tasks, deliverables and reports.

Appendices

The following Appendices are included:

Appendix 01 - Declaration of Confidentiality

Appendix 02 - Model of Task and Deliverable Acceptance Form

Appendix 03 - Order Form Template