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PCP CALL FOR TENDERS (CFT)

CODICE CIG N. 7750344A30

PCP CALL FOR TENDERS

[POSIDON] — [POLLUTED SITE DECONTAMINATION PCP]

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1. General context & background

In case of discrepancy, the documents shall prevail in the following order:
- PCP Call for Tenders;
- Framework Agreement;
- Other Tender Documents and Annexes.

1.1 Terms and conditions - List of acronyms

As used in this document, the following capitalized terms and expressions shall have the meaning ascribed to them below:

"Assessment" / "Evaluation"	means the process of analysis to determine whether the specific requirements relating to a process, system, product, person or body are fulfilled;
"Award Criteria"	means, for each Phase, the criteria used to identify the most economically advantageous tender;
"Common Challenge"	means the shared need / problem identified by the procurers in the POSIDON Buyers Group for which a common solution is sought, namely, the development of a new remote reader system which is capable of real-time reading and of bi-directional communication, and complete daily data transmission while complying with open standards, in line with the provisions of the PCP Call for Proposals
"Completion Date"	means the date for the completion of an individual Phase or for the Project as whole;
"Confidential Information"	means any and all information (including, without limitation, documents, presentations, evaluations, drafts, outlines, notes, methodologies of technical, financial or other business nature) transmitted in whatever form or mode of communication, which is disclosed by one party to the other party in connection with the Project during and/or for the purpose of its implementation, and which has been explicitly marked as "confidential" or ought to be considered as confidential in the normal course of business at the time of disclosure (regardless of the way in which it is conveyed or on whatever media it is stored);
"Contractor"	means the entity/entities which have been successful in the Pre-Commercial Procurer;
"Contractor's staff"	means the Contractor's representative and all employees, consultants, agents and directors of the Contractor as well as any subcontractors which the Contractor engages in relation to the Project and their employees, consultants, agents and directors;
"Day(s)"	means calendar Days save where the context otherwise requires;
"Data"	means any documents, reports, databases, and other information resulting from, collected or developed in the performance of the Project, and/or used for the purposes of the Project, which can be processed manually, electronically or by other means;
"Evaluation committee"	means a committee of experts in the field of the Project, and/or technical experts, and/or general business experts, appointed by the Lead Procurer in its sole discretion;
"End of Phase Report"	means a report in written form to be submitted by the Contractor for that particular Phase to the Lead Procurer after each completed Phase of the Project, containing all information that is required in the End of Phase Report Form;

"Fair and reasonable market conditions"	means appropriate conditions, including financial terms, or royalty-free conditions for licensing a patented solution, taking into account the specific circumstances of the request for access (for example, the actual or potential value of the results or background to which access is requested and/or the scope, duration or other characteristics of the exploitation envisaged);
"Framework Agreement"	means agreement in its entirety and any and all of the documents forming an integral and substantial part thereof, resulting from this Joint Pre-Commercial Procurement procedure, signed by the Contractor and the Lead Procurer, the latter acting on its own account and on behalf of the POSIDON Procurers;.
"Failure to commercially exploit Results"	means not marketing a commercial application of the Results (directly or indirectly, through a subcontractor or licensee).
"Functional requirements"	means the specifications set out in the POSIDON PCP Call for Tenders document defining the required characteristics and set of functions and performance levels of the outcome of the Project;
"Generated in the PCP"	means activities described in the PCP framework agreement or specific contracts
"H2020"	means the Horizon 2020 Programme of the European Union;
"Intellectual Property Rights"	means any and all patent rights (including but not limited to, extensions, improvement patents, supplementary protection certificates), inventions (whether or not patentable or capable of registration), trademarks, service marks, copyrights, topography rights, design rights and Database rights, (whether or not any of them are registered or registerable and including applications for registration, renewal or extension of any of them), trade secrets and rights of confidence, trade or business names and domain names and including applications for registration, renewal or extension of any of them, and any other rights or forms of protection of a similar nature which have an equivalent or similar effect to any of them which may now or in the future exist anywhere in the world;
"Internal use"	means usage of data, software or other products produced/developed during the Project for evaluation and research purposes;
"Key staff"	means the staff employed or sub-contracted by the Contractor for the purpose of delivering the R&D services under the Framework Agreement;
"Language"	means the English Language unless otherwise agreed;
"Material"	means any report, executive summary, paper, abstract or other document or media provided by the Contractor;
"Minimum quality of a report"	means: - the report can be read by somebody who is familiar with the topic, but not an expert. - the report gives insight in the tasks performed in, and the results of, the project. - the report is made using the End of Phase Report Form or (if applicable) the milestone report form, and the requirements of this form have been met. - the report contains all information and data as required in the relevant Tender Documents.
"Minimum quality of a demonstration"	means: - the demonstration can be understood by somebody who is familiar with the topic, but not an expert. This could, for instance, be somebody with operational but not technical knowledge;

	- the demonstration shows how the innovation works, how it can be used and (if applicable) how it is operated and maintained; - the demonstration is accessible to parties appointed by the public procurer, unless these are direct competitors of the Contractor (as agreed between the Parties, acting reasonably);
"Month"	means calendar month;
'Not generated in the PCP'	means not generated in activities described in the PCP framework agreement or specific contracts;
"PCP"	means Pre-Commercial Procurement as defined by the European Commission Communication COM (2007) 799 final, 14.12.2007;
"Performance Conditions"	means the Contractual obligations of the Tenderer as set out in the Framework Agreement;
"Personal Data"	has the meaning given to it in section 1 of the Data Protection Directive (officially Directive 95/46/EC) and its successor the Data Protection Regulation (EU) 2016/679;
"Phase"	means an individual and separate part of the Project, where Phase 1 comprises solution exploration, Phase 2 comprises prototyping, and Phase 3 comprises original development of a limited volume of first products or Services in the form of a test series;
"Pre-existing rights" (i.e., background)	means any data, know-how or information — whatever its form or nature (tangible or intangible), including any attached rights such as intellectual property rights ('background IPRs') — that is held prior to the signing of the framework agreement, identified by the parties involved in the PCP as background and needed to implement the PCP or exploit the results of the PCP;
"Price"	means the total Price (excluding VAT) agreed between the parties for each Phase of the Project, to be paid by the Lead Procurer to the Tenderer for each such Phase, subject to the terms and conditions of this Agreement;
"Project"	means the Research and development Services as well as deliver a highly interoperable software solution that are required by Tenderers to complete Phases 1, 2 and 3 and to generate the Results;
"Project Intellectual Property Rights"	means new Intellectual Property Rights arising from the Services and/or the Results and excluding Sideground and Pre-existing rights;
"PCP Request for Tender document"	means the invitation documents on which the tenders for the award of the work order for Phase 1 were submitted;
"Results" (i.e., foreground)	means any tangible or intangible output, such as data, knowledge or information, that is generated in the PCP, whatever its form or nature, whether or not it can be protected, as well as any rights attached to it, including intellectual property rights ('attached IPRs' or 'IPRs attached to the results');
"Satisfactory completion of a Phase"	means: - that the work proposed in the submitted tender has been carried out; - that the funds have been allocated and the work has been carried out according to the planned objectives and to the on/off award criteria (place of performance, public funding and R&D definition criteria); - that the required reports/demonstrations for that phase have been submitted on time;

	- that the required reports/demonstrations for that phase are delivered at minimum quality levels; and - that the work has been carried out in compliance with the provisions of the contract (including in particular verification if the contractor has duly protected and managed IPRs generated in the respective phase);
"Services" and also "R&D Services"	means the Services being provided by the Contactor in fulfilment of the Framework Agreement and any work order issued through it;
"Sideground"	means any data, know-how or information — whatever its form or nature (tangible or intangible), including any attached rights such as intellectual property rights ('Sideground IPRs') — that is generated during the timespan of the PCP but not in the PCP and needed to implement the PCP or to exploit the results of the PCP;
"Sub-Contract"	any contract or agreement or proposed contract or agreement between the Contractor and any third party (the "subcontractor") whereby that third party agrees to provide to the Contractor the Services or any part thereof or facilities or services necessary for the provision of the Services or any part thereof or necessary for the management, direction or control of the Services or any part thereof;
"Successful completion of a Phase"	means: - that the contractor has satisfactorily completed all milestones of that particular PCP Phase; and - that the R&D results meet the minimum functionality/performance requirements of the challenge description (i.e. the minimum quality/efficiency improvements which the procurers set forward for the innovative solutions to achieve); and - that the results of the R&D are considered to be promising, where '*Promising'* means: - for phase 1, that the feasibility is convincing - for phase 2, that the feasibility, the applicability in an operational setting and the potential impact of the product is convincing;
"Tender Documents"	means all documents issued or published by the Lead Procurer as part of the PCP process and made available on its website and on TED, including without limitation the Contract Notice (TED notice), the Tender Regulation, the Technical Specifications, the Framework Agreement, the subsequent Phase Contracts (to the extent these are awarded to the Contractor) and any annexes thereto. In particular, Terms and conditions of the tendering subject are set out in the "Contract Notice" (TED Notice), in the Tender Regulation and in this Framework Agreement". For each specific lot, the technical specification, the required research and development services, the general and specific technical requirements are contained in the document "Technical Specifications". This document Framework Agreement" refers to the specific type of research and development service, with the attached documentation, for each type of service.
"Tender Notice"	means the POSIDON PCP Tender Notice date, which was made available on TED (Tenders Electronic Daily) at […];

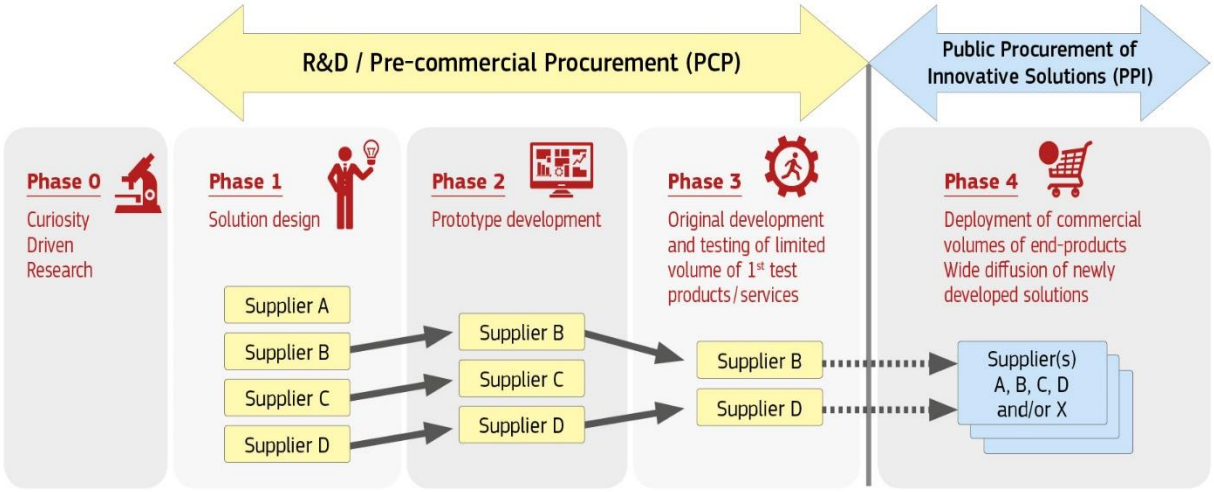
"in-situ technology"	technology capable of decontaminating soil without having to remove it from its location. No excavation works are needed.
"on-site technology"	ex-situ technology performed at the contaminated soil. It will be applied in the same site where the contamination has occurred but it needs the soil to be dug from its location and then treated (for example mobile plants, ripening during temporary disposal, etc… Transportations of soil are limited inside the utility area).
"off-site technology"	ex-situ technology that includes excavation of contaminated soil, which is then transported to an external site/plant for the decontamination treatment.

Acronyms	Explanation
ANAC	National Anti-Corruption Authority
Art.	Article
Artt.	Articles
D.Lgs.	Legislative Decree
D.P.R.	Presidential Decree
EEIG	European economic interest grouping
EU	European Union
GPA	Government Procurement Agreement
IPRs	Intellectual Property Rights
KOM	Kick-off meeting
L.	Law
LCC	Life-cycle cost
OMC	Open Market Consultation
PCP	Pre-Commercial Procurement
PPI	Public Procurement of Innovative Solutions
Q&A	Questions and Answers
R&D	Research and Development
SME's	Small and Medium Enterprises
VAT	Value Added Tax
WTO	World Trade Organisation
ADSP MAO	The Port Network Authority of the Eastern Adriatic Sea – Port of Trieste, acting in the role of lead procurer
ESPD	European Single Procurement Document

1.2 General context & background

This POSIDON procurement is a **pre-commercial procurement (PCP)**.

PCP means that public procurers challenge innovative players on the market, via an open, transparent and competitive process, to develop new solutions for a technologically demanding mid- to long-term challenge that is in the public interest and requires new R&D services.



PCP is characterised by the following four **features**:

- ✕ Competitive development in phases to identify the solutions offering the best value for money

PCP targets situations that require radical innovation or R&D and for which there are typically no solutions on or close to the market yet. Different competing providers may have different ideas for solutions to the problem. As R&D is yet to take place, there is not yet any proof as to which of these potential alternative solutions would best meet customers' needs.

PCP therefore awards R&D contracts to a number of competing contractors at the same time, in order to compare different approaches to solving the problem. It thus offers innovators an opportunity to show how well their solution compares with others. It also allows a first customer test reference to be obtained from countries of the procurers that will test the solutions.

The R&D is split into **3 phases** (solution design, prototyping, original development and testing of a limited set of 'first' products or services). Evaluations after each phase progressively identify the solutions that offer the best value for money and meet the customers' needs. This phased approach allows successful contractors to improve their offers for the next phase based on lessons learnt and feedback from procurers in the previous phase. Using a phased approach with gradually growing contract sizes per phase also makes it easier for smaller companies to participate in the PCP and enables SMEs to grow their business step-by-step with each phase.

Depending on the outcome of the PCP, procurers may or may not decide to follow-up the PCP with a public procurement to deploy the innovative solutions (PPI).

- ✕ Public procurement of R&D services

PCP addresses mid- to long-term public procurement needs for which either no commercially stable solutions yet exist on the market, or existing solutions exhibit structural shortcomings that it requires further R&D to resolve. PCP is a way for procurers to trigger the market to develop new solutions that address these shortcomings. PCP focuses on specific identified needs and provides customer feedback to businesses from the early stages of R&D. This improves the likelihood of commercial exploitation of the newly developed solutions.

PCP is explained in the PCP communication COM/2007/799 and the associated staff working document SEC/2007/1668. The R&D services can cover research and development activities ranging from solution exploration and design, to prototyping, right through to the original development of a limited set of 'first' products or services in the form of a test series. Original development of a first product or service may include limited production or supply in order to incorporate the results of field-testing and demonstrate that the product or service is suitable for production or supply in quantity to acceptable quality standards. R&D does not include quantity production or supply to establish the commercial viability or to recover R&D costs.[1] It also excludes commercial development activities such as incremental adaptations or routine or periodic changes to existing products, services, production lines, processes or other operations in progress, even if such changes may constitute improvements.

✕ Open, transparent, non-discriminatory approach — No large-scale deployments

PCP is open to all operators on equal terms, regardless of the size, geographical location or governance structure. There is, however, a place of performance requirement that they must perform a predefined minimum percentage of the contracted R&D services in EU Member States or Horizon 2020 associated countries.

Any subsequent public procurement of innovative solutions (PPI), for the supply of commercial volumes of the solutions, will be carried out under a separate procurement procedure. Providers that did not take part in this PCP (or were not chosen to go through as far as the last phase) will thus still be able to compete on an equal basis in any subsequent procurement looking for contractors to provide a solution on a commercial scale.

✕ Sharing of IPR-related risks and benefits under market conditions

PCP procures R&D services at market price, thus providing contractors with a transparent, competitive and reliable source of financing for the early stages of their research and development. Giving each contractor the ownership of the IPRs attached to the results it generates during the PCP means that they can widely exploit the newly developed solutions commercially. In return, the tendered price must contain a financial compensation for keeping the IPR ownership compared to the case where the IPRs would be transferred to the procurers (the tendered price must be the 'non-exclusive development price'). Moreover, the procurers must receive rights to use the R&D results for internal use and licensing rights subject to certain conditions.

ⓘ For more information, *see PCP on the Europa website*.

✕ Exemption from EU public procurement directives, the WTO Government Procurement Agreement (GPA) and EU state aid rules

PCP procurements are exempted from the **EU public procurement directives** because the procurers do not retain all the benefits of the R&D (the IPR ownership stays with the contractors).[2]

They are also exempted from the **WTO Government Procurement Agreement (GPA)** because this Agreement does not cover R&D services[3] (the PCP being limited to such services — and any subsequent PPI procurements relating to commercial-scale supply of such solutions not being part of the PCP procurement).

PCP procurements do not constitute state aid under the **EU state aid rules**[4] if they are implemented as defined in the PCP communication[5], namely by following an open, transparent, competitive procedure with risk- and benefit-sharing at market price. (The division of all rights and obligations *(including IPRs)* and the selection and award criteria for all phases must be published at the outset; the PCP must be limited to R&D services and clearly separated from any potential follow-up PPI procurements; PCP contractors may not be given any preferential

1 See also Article XV(1)(e) WTO GPA 1994 and the Article XIII(1)(f) of the revised WTO GPA 2014.
2 See Article 16(f) of Directive 2004/18/EC (Article 14 of Directive 2014/24/EU), Article 24(e) of Directive 2004/17/EC (Article 32 of Directive 2014/25/EU) and Article 13(f)(j) of Directive 2009/81/EC.
3 See the EU's Annex 4 of Appendix I to the WTO GPA.
4 See Point 33 of the Commission Communication on a framework for state aid for research and development and innovation (C(2014) 3282).
5 Commission Communication: Pre-Commercial Procurement: driving innovation to ensure sustainable, high quality public services (COM(2007) 799) and PCP staff working document (SEC(2007)1668).

treatment in a subsequent procurement for provision of the final products or services on a commercial scale.)

✕ Open market consultation

The start of this PCP procurement was preceded by an open market consultation phase, which were advertised online, through the publication of a Prior Information Notice (PIN -document number 197574-20182018/S) in the European Tenders Electronic Daily and have been carried out in 3 different Member States' locations, based on the nationalities of the Buyers belonging to the Consortium.

The POSIDON OMCs were held in the following dates:

- 7th of June 2018 in Trieste (Italy)
- 21st June 2018 in Bilbao (Spain)
- 25th September 2018 in Brussels (Belgium).

Other 2 promoting specialized events have been organized during and in the premises of RemTech Expo in Ferrara (Italy) - the permanent international event dedicated to reclamation of contaminated sites, environmental and natural hazards, safety, maintenance and upgrading of the territory, climate changes and circular chemistry - in order to broaden the footprint of the initiative and get a strong visibility on a larger market.

The OMCs offered information about:

- POSIDON joint cross-border PCP schema, its phases and main contractual & procedural aspects;
- POSIDON problem and innovation challenge, common need related to European industrial contaminated soils (recapped in POSIDON Technical Prospectus published on line);
- POSIDON brownfields/sites' description and characterizations (recapped in POSIDON Technical Prospectus published on line);
- and the possibility to industries and research sector to present their state of the art technologies, like innovative and advanced commercial solutions and relevant R&D&I projects in the decontamination field.

To complement the analysis an on-line open market consultation survey has been prepared and published in POSIDON website to collect relevant information about the technological State-of-the –art and feedback from the market about the scope, the challenge and set-up of POSIDON Pre-Commercial Procurement (PCP).

In particular, the purpose of this survey was to get knowledge about the already existing technologies for soil (and eventually groundwater) remediation new, life-cycle, cost-effective technology, preferred as in-situ (and eventually on-site), to be capable of decontaminating heterogeneous anthropic soils in brownfield, composed by a mixture of industrial waste (like filling soils highly polluted by Petroleum Hydrocarbons and heavy metals) and soils consisting on clays and sands, highly polluted by Petroleum hydrocarbons (TPHs) and PAHs.

In the survey, 28 technical questions were investigated. The survey was structured with multiple choices questions and a closed list of possible answers derived from the main items related to POSIDON challenge, KPI and uncovered functionalities.

The OMCs events organized have attracted a significant number of economic operators and stakeholders in the field of soil decontamination. In total 57 companies and economic operators participated (22 in Trieste, 15 in Bilbao and 20 in Brussels). Representatives of the sector's leading companies, rather than specialized research centers, attended the events in addition to the project partners and other potential procurers interested in the POSIDON challenge.

During the OMCs the aforementioned different international economic operators participated actively and presented their state of the art technologies like innovative and advanced commercial solutions and relevant R&D&I projects in the field. The technology proposed were promising and advanced (in line with the emerging trends registered also in POSIDON patent

search and market analysis) and confirmed:

- a continued increase in research and development of sustainable remediation technologies;
- the continued decline (proportionally) of the popularity of ex-situ technologies, such as excavation and incineration, and a greater preference or requirement for use of less impactful in-situ methods;
- some of the most active areas of currently available technologies that are being improved upon include bioremediation and phytoremediation;
- some of the most promising areas of new technological development in the industry come from nanotechnology applications to environmental remediation;
- a need to continue to seek examples of cross-industry transfer or application of technologies or processes that may have important implications for remediation technologies.

Nevertheless, a serial of innovation gaps have been identified by the comparison with POSIDON sites' common need at specific requirements level that range from in-situ approaches for the combination of organic/inorganic pollutants, to treatments for both soils and groundwater.

The participating companies unanimously confirmed the absence of suitable technologies on the market and the nature of R&D services required.

Due to the relevant challenge posed by POSIDON and the heterogeneous composition of the involved sites, the market provided as main feed-back the need for a longer execution time, with reference to all the 3 phases.

The OMCs organized in fact confirmed the strategic value of the project, but highlighted the need to reschedule the PCP phases timing.

Moreover they explicitly required to have, also in Phase I, the possibility to conduct their own analysis (characterization) in the POSIDON testing soils to be able to develop the solution and execute the test lab. Each bidder is expected to have specific parameters to be analyzed, depending on the novel concept developed.

For the above motivations, the POSIDON Consortium assumed the decision to extend the foreseen schedule timing for the design and testing of new solutions, as provided in section 2.6.

These open market consultations have been organized and regulated with due regard to the principles of openness, transparency, non- discrimination and equal treatment, without any advantage or disadvantage to any supplier / group of suppliers to the detriment of others.

All the proceedings of the three OMCs and Q&A have been published also on the project web site and are consequently available to all OMCs participants and other interested stakeholders in the "Open Market Consultation/Events" section of POSIDON website (www.posidonproject.eu).

At the same time, the presentations illustrated by the economic operators involved in the events, that actively animated the session "The state of the art: presentation of innovative and advanced commercial solution and relevant R&D&I projects in the field" are also available online (if publication was allowed by the speakers).

Participation in the open market consultation is not a condition for submitting a tender and participating to the PCP competitive and open public procurement procedure in object.

✕ EU funding

This PCP procurement is part of a project that is funded by the European Union's Horizon 2020 Research and Innovation Programme, under grant agreement No [776838] — [POSIDON] (see www.posidonproject.eu).

The contracts will therefore be subject to additional rules that come from the EU grant(s).

ⓘ For more information, *see 'innovation procurement' and 'links to regional policy' in the Participant Portal Online Manual*.

⚠ **Attention:** The EU is not participating as a contracting authority in this procurement.

1.3 Applicable laws and regulations

1.3.1 Italy

Main Italian public procurement laws and public contracts laws:

- art. 158 (Research and development services), art. 4 (Principles relating to the awarding of public contracts excluded) and other articles referred to in the text below of Legislative Decree (D.Lgs.) n. 50/2016 e s.m.i. *Codice dei contratti pubblici*
- Legislative Decree (D.Lgs.) n. 159/2011 e s.m.i. *Codice Unico Antimafia*
- Law (Legge) n. 190/2012 e s.m.i. *Disposizioni per la prevenzione e la repressione della corruzione e dell'illegalità nella pubblica amministrazione*
- Legislative Decree (D.Lgs.) n.231/2001 e s.m.i. *Disciplina della responsabilità amministrativa delle persone giuridiche, delle società e delle associazioni anche prive di personalità giuridica*
- Italian Civil Code - Royal Decree (R.D.) n. 262/1942 *Codice civile*
- Italian Penal Code - Royal Decree (R.D.) n. 1398/1930 *Codice penale*
- Italian Code of Civil Procedure - Royal Decree (R.D.) n. 1443/1940 *Codice di Procedura Civile*
- Legislative Decree (D.Lgs.) n.196/2003 e s.m.i. *Codice in materia di protezione dei dati personali*
- Decree of The President of the Italian Republic (D.P.R.) n. 131/1986 e s.m.i. *Testo unico delle disposizioni concernenti l'imposta di registro*
- Decree of The President of the Italian Republic (D.P.R.) n. 642/1972 e s.m.i. *Disciplina dell'imposta di bollo*

Main Italian Environmental laws and guidelines

- Decree Law (D.Lgs.) 152/2006 e s.m.i. *Norme in materia ambientale* (see in particular *Parte Quarta: Norme in materia di gestione dei rifiuti e di bonifica dei siti inquinati*)
- Decree of Environmental Ministry (D.M.) 5.2.1998 *Individuazione dei rifiuti non pericolosi sottoposti alle procedure semplificate di recupero ai sensi degli articoli 31 e 33 del decreto legislativo 5 febbraio 1997, n. 22*
- Decree of Environmental Ministry (D.M.) 186/2006 *Regolamento recante modifiche al decreto ministeriale 5 febbraio 1998 «Individuazione dei rifiuti non pericolosi sottoposti alle procedure semplificate di recupero, ai sensi degli articoli 31 e 33 del decreto legislativo 5 febbraio 1997, n. 22»*
- Decree of The President of the Italian Republic (D.P.R.) 13 giugno 2017, n. 120 *Regolamento recante la disciplina semplificata della gestione delle terre e rocce da scavo*
- Decree of Environmental Ministry (D.M.) 27 settembre 2010 *Criteri di ammissibilità dei rifiuti in discarica* as modified by the Decree of Environmental Ministry (D.M.) 24 giugno 2015
- ARPA FVG (ENVIRONMENTAL PROTECTION AGENCY OF FRIULI VENEZIA GIULIA REGION) *Linee guida campionamento di terre da scavo nei piccoli cantieri* 20/12/2017 http://www.arpa.fvg.it/export/sites/default/tema/rifiuti/dati_ambientali/allegati-terre-rocce/Campionamento-terre-e-rocce-scavo-piccoli-cantieri.pdf
- ISTITUTO SUPERIORE PER LA PROTEZIONE E LA RICERCA AMBIENTALE (ISPRA) *Manuale per le indagini ambientali nei siti contaminati* http://www.isprambiente.gov.it/it/pubblicazioni/manuali-e-linee-guida/manuale-per-le-indagini-ambientali-nei-siti

- ISTITUTO SUPERIORE PER LA PROTEZIONE E LA RICERCA AMBIENTALE (ISPRA) *Criteri tecnici per stabilire quando il trattamento non e' necessario ai fini dello smaltimento dei rifiuti in discarica ai sensi dell'art. 48 della L.28 Dicembre 2015 n.221* http://www.isprambiente.gov.it/it/pubblicazioni/manuali-e-linee-guida/criteri-tecnici-per-stabilire-quando-il-trattamento-non-e2019-necessario-ai-fini-dello-smaltimento-dei-rifiuti-in-discarica-ai-sensi-dell2019art.-48-della-l.28-dicembre-2015-n.221

Italian Work health and safety law

- Decree Law (D.Lgs.) 81/2008 *Testo Unico sulla Sicurezza sul Lavoro*

1.3.2. Spain

Main Spanish environmental laws

- Ley 22/2011, de 28 de julio, de residuos y suelos contaminados.
- Ley 5/2013, de 11 de junio, por la que se modifican la Ley 16/2002, de 1 de julio, de prevención y control integrados de la contaminación y la Ley 22/2011, de 28 de julio, de residuos y suelos contaminados.
- Real Decreto 9/2005, de 14 de enero, por el que se establece la relación de actividades potenvialmente contaminantes del suelo y lños criterios y estándares para la declaración de suelos contaminados.
- Real Decreto 1481/2001, de 27 de diciembre, por el que se regula la eliminación de residuos mediante depósito en vertedero,
- Orden AAA/661/2013, de 18 de abril, por la que se modifican los anexos I, II y III del Real Decreto 1481/2001, de 27 de diciembre, por el que se regula la eliminación de residuos mediante depósito en vertedero
- REGLAMENTO (UE) No 1357/2014 DE LA COMISIÓN de 18 de diciembre de 2014 por el que se sustituye el anexo 111 de la Directiva 2008/98/CE del Parlamento Europeo y del Consejo, sobre los residuos y por la que se derogan determinadas Directivas.

Main Basque environmental laws and guidelines

- Ley 3/1998, de 27 de febrero, general de protección del medio ambiente del País Vasco.
- Ley 4/2015, de 25 de junio, para la prevención y corrección de la contaminación del suelo
- Decreto 165/2008, de inventario de suelos que soportan o han soportado actividades o instalaciones potencialmente contaminantes del suelo.
- Decreto 49/2.009, de 27 de febrero, por el que se regula la eliminación de residuos mediante depósito en vertedero y la ejecución de los rellenos.
- Decreto 199/2.006, de 10 de Octubre, por el que se establece el sistema de acreditación de entidades de investigación y recuperación de la calidad del suelo y se determina el contenido y alcance de las investigaciones de la calidad del suelo a realizar por dichas entidades.
- Guías Metodológicas para la Investigación de la Contaminación del Suelo publicadas por IHOBE, S.A. En lo relativo a las excavaciones, es de aplicación la Guía de excavaciones selectivas en el ámbito de los suelos contaminados publicada por IHOBE, S.A. (2.015).

Spanish work health and safety law

- Ley 31/19995, de 8 de noviembre, de prevención de riesgos laborales

1.3.2. Belgium[6]

Main Belgian environmental laws

- March 1, 2018. - Decree on Soil Management and Soil Remediation
- June 14, 2001 - Order of the Walloon Government favoring the recovery of certain waste (the excavated land comes out of this legislation 1/11/19)

[6] The Belgium legal system has to be considered in case of replacement of one planned testing site for phase III execution, as explained in paragraph 2.4

- July 5, 2018 - Order of the Walloon Government on land management and traceability (application 1/11/19)

Belgian Work health and safety law

- Royal Decree of 25 January 2001 concerning temporary or mobile worksites (M.B. 7.2.2001)
- Act of 4 August 1996 on the welfare of workers in the performance of their work (M.B. 18.9.1996)
- Code of well-being at work - entered into force on 12/06/2017
- Royal Decree of 19 January 2005 - Royal Decree on the Protection of Workers against Tobacco Smoke
- Royal Defense of 16 March 2006 on risks related to exposure to asbestos.

1.4. Responsible for the procedure

The person deemed solely responsible for the procedure (Responsabile Unico del Procedimento) will be eng. Eric Marcone of The Port Network Authority of the Eastern Adriatic Sea - Trieste (ADSP MAO).

2. Tender profile: Services to be procured, tender closing time, procurers, contracting approach, budget, timetable and IPRs

2.1 Description of services to be procured

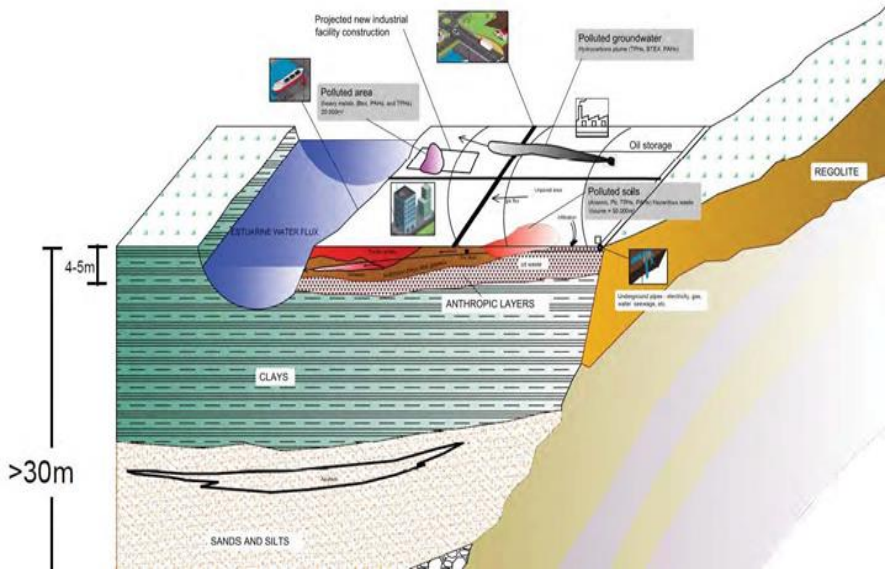
Starting from the remediation and decontamination problems and ambitions of all the selected sites engaged in POSIDON (Trieste, Bilbao, Vitoria-Gasteiz, Lisbon and one site located in Belgium that will be chosen within the 22nd of February 2019 among the sites listed at the bottom of the page[7]) the characterization data of the brownfields has been harmonized and their common points assessed from a soil quality and hydrogeological point of view in order to identify a single common conceptual model that integrates all the sites in a "Common Site" or "virtual brownfield" built on the sites' common characteristics (such as soil types, average anthropic thickness, main pollutants, aquifer existence, etc.), as in the picture hereunder.
A heterogeneous anthropic soil is present, composed by different layers of industrial wastes (basically construction & demolition wastes, slags, and ashes), and soils consisting of clays and sands. Main contamination is related to the occurrence of petroleum hydrocarbons (particularly heavy fractions, i.e. C>12), PAHs, and heavy metals (mainly containing Pb). The polluted materials are embedded in anthropic backfills ranging from 2 to 10 m, which lays over alluvial sediments >20 m thick.
The brownfields are located close to river estuary environments, but not significantly affected by tidal effects (groundwater level or water salinity). Average groundwater level ranges from 1 to 3 m, and soil permeability is medium to low.

The assessment set specific functional and performance requirements to detail POSIDON common need for site decontamination on such virtual common brownfield. Normalized format databases, Geographical Information System (GIS) and comparative matrixes were utilized in order to

[7] List of possible Belgian sites in Wallonia, presented since one of these will be selected as a potential replacement site:
1. "Laminoir de la Rochette" in Chaudfontaine, in the province of Liège (B)
2. "Cristalleries du Val-Saint-Lambert" located between the municipality of Seraing and the municipality of Flémalle, in Province of Liege (B)
3. "LBP" in Chênée (B) commune in the province of Liège (B)
4. "Forte Taille" in Montigny-le-Tilleul, in province of Hainaut (B)

Among these, by 22 February 2019, a unique site will be definitively selected as potential substitute site for POSIDON field testing and its characterization data and first indications regarding work, health and safety will be published as an integration of this Call for Tender.

establish a common set of demands that can be addressed in a joint and cross-border pre-commercial public procurement (PCP).



PCP common challenge

The common challenge faced by the POSIDON buyers' group is identifying a soil both unsaturated and saturated (and potentially groundwater) remediation new, **cost-effective** technology, preferred as **in-situ** (and potentially on-site), to be capable of decontaminating **both organic and inorganic contaminants** in **heterogeneous anthropic soils** in brownfield, composed by a **mixture of industrial wastes** (like **filling soils, construction & demolition wastes, slags, and ashes polluted** by petroleum hydrocarbons and lead) and **soils consisting of clays and sands**, mainly **polluted by heavy fractions of petroleum hydrocarbons, PAHs and lead**. The desired solutions should be able to reduce the **arsenic** contaminant if present.

KPIs - Key Performance Indicators

Main goal of POSIDON PCP is to seek an alternative for the management of contaminated soils competing (as possible) with traditional practices of excavation and landfilling.
KPI (Key Performance Indicators)'s and outcome & evidence-based objectives will be assessed throughout the project, in a comparative way.
The **main relevant KPIs** that will be analysed to demonstrate how effectively new in situ technologies will achieve the POSIDON challenge are:

KPI	**Today (business as usual)**	**POSIDON targets**
Decontamination cost (euros/ton):	Landfill rate* (20-200 euros/ton)	Be competitive with the landfilling rate in each country. Comparative unit: euros/ton
Time to clean up (months or year):	Landfill: weeks In-situ: 1-3 years On-site: 6-12 months	In-situ technologies: <1 year On-site technologies: <6 months
Sustainability (mix of indicators):	Site-specific, but not commonly requested or considered	Sustainable measures should be stated (not in a quantitative way), as described in awarding criteria

* It depends on the country and the type of hazardousness of the waste:

Uncovered functionalities

The original solution to be developed should address particular functionalities as described below. While current commercially available technologies can cover one or some of these functionalities, the main challenge to be faced lies on the accomplishment of all of them simultaneously.

PCP aims at developing solutions for covering functionalities currently not provided by commercially available solutions and representing a competitive soil remediation alternative to landfilling in terms of technical capabilities, time, costs and sustainability.

Accordingly, following capabilities are addressed by POSIDON PCP:

- F1.1. capability to reduce contaminants concentrations of different chemical families (i.e., organic and inorganic compounds) in the same intervention, involving heavy fractions of petroleum hydrocarbons, PAHs, lead (an arsenic if present).
  Target concentration levels for all of them will be based on the future land-use of POSIDON brownfields. Limit values for different national/regional regulation are compiled in the following table, as well as a reference value defined within the framework of POSIDON project. Solutions achieving more stringent values (i.e., enabling a wider range of land-uses for the brownfields) will be preferred, meaning that the higher the concentration of pollutants is reduced the better will be scored;

Threshold limit values:

Threshold Limit Values:	for residential use in Italy (I) (mg/kg s.s.)	for industrial use in Italy (I) (mk/kg s.s.)	for residential use in Basque Country (E) (mg/kg)	for residential use in Belgium (B) (mg/kg)	**POSIDON PCP**
main inorganic metals					
As, Arsenic	20	50	30	40	**30**
Pb, Lead	100	1000	150	200	**150**
other inorganic metals					
Cd	2	15	8	3	**8**
Cu	120	600	>10.000	110	**110**
Cr (total)	150	800	200	125	**200**
Cr (VI)	2	15	8	4	**8**
Hg	1	5	4	1	**4**
Mo	not present	not present	75	not present	**75**
Ni	120	500	150	150	**150**
Zinc	150	1500	>10.000	230	**230**
main organic					
TPH (heavy C>12)	50	750	50	40 (C>12-16)	**50**
Pyrene	5	50	60	3.6	**50**
benzo (a) anthracene	0.5	10	2	9.5	**2**
chrysene	5	50	100	9.7	**50**
benzo (b) fluoranthene	0.5	10	2	0.3	**2**

Threshold Limit Values:	for residential use in Italy (I) (mg/kg s.s.)	for industrial use in Italy (I) (mk/kg	for residential use in Basque	for residential use in Belgium (B)	**POSIDON PCP**
benzo (k) fluoranthene	0.5	10	20	1.3	**10**
benzo (a) pyrene	0.1	10	0,2	0.5	**0,2**
indeno (1,2,3-c, d) pyrene	0.1	5	3	0.2	**3**
dibenzo (a, h) anthracene	0.1	10	0,3	0.6	**0,3**
Total PAH (sum)	10	100	not present	not present	**100**

- F1.2. capability to decontaminate soil (involving anthropic layers of industrial wastes historically used as backfilling materials), both unsaturated and saturated and potentially groundwater, or a combination of these in a given site;
- F1.3 ability of the proposed solution and process to minimize the remediation whole life-cycle cost;
- F1.4 ability to complete the remediation goals in a time frame as stated in the KPI targets for a medium to big brownfield (10-100 Ha),
- F1.5 ability to decontaminate with an in-situ approach (preferred), or potentially on-site (with the final goal of providing a competitive alternative to other common practices of polluted soils management, involving in most of the cases landfilling);
- F1.6 ability to, in addition to the target pollutants identified in the project brownfields, to reduce also other pollutants (e.g. PCBs, VOCs, cadmium, copper, chromium, etc.);
- F1.7 ability to be flexible to adapt to different environmental conditions and robust in terms of potential changing environmental conditions (e.g., pH variations, range of temperatures, aerobic/anaerobic conditions, etc.);
- F1.8 capability to operate the rehabilitation in medium to big scale site remediation areas (10-50Ha);
- F1.9 ability to treat different fractions with different particle size distribution of soils (fine and coarse grain materials), making it as versatile as possible;
- F1.10 capability to operate on a wide range of soil permeability values;
- F1.11 capability to work on different pollution depth, up to 5 m below surface;
- F1.12 ability to minimize the footprint:
    - reducing, reusing, and recycling materials;
    - reducing air emissions of dust, volatile organic compounds (VOCs), nitrogen oxides (NOx), sulfur oxides (SOx), and greenhouse gases (GHG);
    - minimizing impacts on water resources;
    - minimizing emissions to soil (meaning not side-effects in the soil, e.g. preserving indigenous biology). Overall, it should aim at preserving soil properties and functionalities as far as possible, always under a cost-benefit balance for brownfields where the degradation of the soil might be currently very high;
    - conserving natural resources;
- F1.13 capability to minimize impacts related to social aspects, including:
    - dust emissions,
    - noise,
    - vibrations,
    - visual impacts,
    - road accesses limitation,
    - effects on public health associated with remediation activities.

For a detailed characterization and technical description of POSIDON contaminated soils in brownfield, please see Annex 3 - "Technical specification and field testing sites description".

POSIDON PCP doesn't include the purchase of a limited set of prototype(s) resulting from the R&D, but depending on the outcome of the PCP, procurers may have the need to carry out further testing of the newly developed solutions after the PCP is finished, remaining the contractors free to accept the extension or not, without additional charges for the POSIDON buyers group.

Depending on the outcome of the PCP, procurers may or may not decide to follow-up the PCP with a public procurement to deploy the innovative solutions (PPI).

Expected outcomes (per phase)

The objectives, their associated output and results and the tasks to be carried out (milestones and deliverables) for each of the 3 phases are described below.

Expected outcomes				
Phase 1: Original solution exploration and design, based on a feasibility study				
Objective:	Perform research to: 1. elaborate the solution design and determine the approach to be taken to develop and implement such solutions and 2. demonstrate the technical, financial and commercial feasibility of the proposed solution(s) and explain how it meets the procurement requirements			
Output and results:	A feasibility study will describe the financial and the technical justifications to carry on the project challenge. A complete dossier will describe the solution design, the testing plan and the risk management and mitigation plan.			
Milestones and deliverables		**By when?**	**How?**	**Output and results**
Milestones:	M1.1) Phase 1 Kick-off	24/06/2019 (to be confirmed)	Contract assignment and KOM (kick-off meeting)	
	M1.2) Project Phase Abstract delivered	22/07/2019	Delivery of the document (see deliverable section)	
	M1.3) Technical inspections conducted	05/07/2019	Visits (in Bilbao, Trieste and potentially in Belgium) to execute additional measurement and solution specific soil characterization activities on site	
	M1.4) Feasibility Study delivered	10/10/2019	Delivery of the document (see related deliverable section)	Description of a practical implementation of the solution considering technical and financial aspects and the potential impact on the buyer's organisation.
	M1.5) IPRs management described	10/10/2019	Delivery of the document (see related deliverable	Description of the foreground IPRs and measures conceived to protect the IPRs and the

			section)	results of this Phase. List the names and location of personnel that carried out the R&D activities.
	M1.6) Phase Results Summary delivered	10/10/2019	Delivery of End of Phase Report - Phase 1	see End of Phase Report template
	M1.7) Final project design delivered and submitted	25/11/2019	Delivery of the Dossier to be submitted to the Italian Ministry (only the awardee of Phase 2 will submit the dossier to the Ministry requiring the authorization for field test)	Description of the solution technical basis, including the testing plan and risk management plan
Deliverables:	D1.1) Project Phase Abstract	22/07/2019	in the format required by the EU for publication	
	D1.2) Feasibility Study	10/10/2019		To be included in the Dossier to be presented to the Italian Ministry
	D1.2a) Technical Feasibility	10/10/2019		To be included in the Dossier to be presented to the Italian Ministry
	D1.2b) Financial Feasibility	10/10/2019		
	D1.3) Final project design	10/10/2019		To be included in the Dossier to be presented to the Italian Ministry
	D1.4) Dossier to be presented to the Italian Ministry	25/11/2019		Description (as detailed as possible) of the solution design, the field testing plan to be implemented in Italy during Phase 3 and the risk and mitigation plan
	D1.5) IPRs Management Annex	10/10/2019	Report	See the related Milestone
	D1.6) End of Phase Report	10/10/2019	Report	Completion of End of Phase Report (see template) List the names and location of personnel that carried out the R&D activities. Evidences of allocation of financial resources (to verify the R&D service contract minimum requirement)

Phase 2: Prototyping				
Objective:	Develop, demonstrate and validate prototypes in lab conditions			
Output and results:	A working prototype solution to submit a test bench in laboratory for verification against Phase 1 functional and performance requirements and expected KPIs			
Milestones and deliverables		**By when?**	**How?**	**Output and results**
Milestones:	M2.0) Phase 2 Kick-off	15/04/2020	Contract assignment and KOM (kick-off meeting)	
	M2.1) Solution Prototype Development Medium Term Stage demonstration	07/07/2020	By means of labs work in progress components able to simulate the complete solution	Medium term stage version of an operational prototype of the solution, to demonstrate its capacity to answer to the buyers' needs.
	M2.2) Solution Prototype Development Final Stage demonstration	10/11/2020	By means of labs work in progress components able to simulate the complete solution	Final stage version of an operational prototype of the solution, to demonstrate its capacity to answer to the users' needs.
	M2.3) Prototype Solution testing and validation	18/12/2020	Lab work completed providing enough results for solution assessment.	Testing and validation process completed
	M2.4) IPRs management described	18/12/2020	Delivery of the document (see related deliverable section)	Description of the foreground IPRs and measures conceived to protect the IPRs and the results of this Phase.
	M2.5) Phase Results Summary delivered	18/12/2020	Delivery of End of Phase Report – Phase 2	see End of Phase Report template
Deliverables:	D2.1) Solution Prototype development medium term stage	07/07/2020	Mid-term prototype	
	D2.2) Video showing prototype development medium term stage	10/11/2020	Video recordings for demo presentation	Video material to check the progress of the development
	D2.3) Solution Prototype development final stage	18/12/2020	Final prototype	
	D2.4 a) Prototype Solution functional,	18/12/2020	Lab tests	

	and security testing (components test)			
	D2.4 b) Prototype Solution functional, and security testing (integration test)	18/12/2020	Lab tests	
	D2.5) IPRs Management Annex	20/01/2021	Report	See the related milestone
	D2.6) Preliminary Business Plan	20/01/2021		Updated cost/benefits evaluation
	D2.7) End of Phase Report	20/01/2021	Report	see End of Phase Report template
<u>Phase 3:</u> Original development of test series and field testing in 2 sites.				
Objective:	Original development and field-testing in 2 Countries of a limited while functionally complete set of first test series			
Output and results:	Comparative analysis of the full feature set and performances of different solutions in real-life operational conditions (residential and industrial sites), in 2 Countries.			
Milestones and deliverables		**By when?**	**How?**	**Output and results**
Milestones:	M3.0) Phase 3 Kick-off	10/08/2021	KOM (kick-off meeting)	
	M3.1) Project Phase Abstract delivered	10/01/2022	Delivery of the document (see deliverable section)	
	M3.2) Solution Pilot Site description	10/01/2022	See delivery section	Detailed Remediation Plan in both field testing sites (Bilbao and Trieste or, eventually, in Belgium)
	M3.3) Solution Pilot Deployment	01/03/2022	See delivery section	Operational trial version of the solution, to demonstrate its capacity to answer to the buyers' needs in real-life operational conditions deployed.
	M3.4) Solution Pilot Assessment of successful completion	29/08/2022	See delivery section	Reports with evidences and measurements for solution assessment.
	M3.5) IPRs management described	29/08/2022	Delivery of the document (see related deliverable section)	Description of the foreground IPRs and measures conceived to protect the IPRs and the results of this Phase. List the names and location of personnel that carried out the R&D activities.
	M3.6) Phase Results Summary delivered	29/08/2022	Delivery of End of Phase Report – Phase 3	see End of Phase Report template

			(in the format required by the EU for publication)	
Deliverables	D3.1) Updated Project Phase Abstract	10/01/2022	in the format required by the EU for publication	
	D3.2) Solution Pilot and field testing description	10/01/2022	Report: Remediaton Plan	Detailed Remediation Plan in both field testing sites (Bilbao and Trieste or, eventually, in Belgium)
	D3.3) Solution Pilot Deployment	29/07/2022	Solution deployment in both field tests	Operational trial version of the solution, to demonstrate its capacity to answer to the buyers' needs in real-life operational conditions deployed.
	D3.4) Solution Pilot testing and validation Report	29/08/2022	Field testing execution	Reports with evidences and measurements for solution assessment.
	D3.5) Final Business plan	29/08/2022	Report	
	D3.6) IPRs Management Annex	29/08/2022	Report	See the related milestone
	D3.7) End of Phase Report	29/08/2022	in the format required by the EU for publication	Completion of End of Report (see template), including the summary of overall lessons learnt and results achieved from the PCP, for publication

All the Deliverables should be delivered to The Protocol Office of the Lead Procurer, also in digital format.

2.2 Tender closing time will be: [01 April 2019, 12.00h]

2.3 Procurer(s) and other parties involved in the PCP

This procurement relates to a joint PCP that will be carried out by the following **lead procurer**:

Port Network Authority of the Eastern Adriatic Sea - Trieste (ADSP MAO), Italy

The lead procurer is appointed to coordinate and lead the joint PCP, and to sign and award the framework agreement and the specific contracts for all phases of the PCP, in the name and on behalf of the following **buyers group**:

- Ayuntamiento de Bilbao, Spain
- Centro de Estudios Ambientales Ayuntamiento de Vitoria-Gasteiz, Spain
- Spaque S.A., Belgium
- Baja do Tejio S.A., Portugal

The lead procurer, namely the Port Network Authority of the Eastern Adriatic Sea - Trieste (ADSP MAO), is part of the buyers group and is appointed by the buyers group to organise and lead the joint PCP procurement.

The procurers in the buyers group have the following background:

- **The Port Network Authority of the Eastern Adriatic Sea - Trieste (ADSP MAO), Italy**
  It is a public body having as its primary task to direct, plan, coordinate, promote and control port operations and commercial and industrial activities in the port.
  Located at the intersection between the Baltic-Adriatic and Mediterranean TEN-T core network corridors, the Trieste is an international hub for overland and sea trade with the dynamic markets of Central and Eastern Europe, and it is the top ranking Italian port for total throughout, with more than 61 million tons (2017) as well as for intermodal trains – more than 8,600 train (2017).
  ADSP MAO is the Lead Procurer within the Buyers' Group, in charge of hosting one of the two field testing activities in Phase 3.

- **Ayuntamiento de Bilbao (AdB), Spain**
  It is a local public authority administering the City of Bilbao, located on the Eastern Atlantic seaboard, in the Spanish State, stands 19 m above sea level, covering a surface area of 41.6 km2. The capital of Bizkaia/Biscay stands at the heart of a metropolis with over 1,000,000 inhabitants. Founded in 1300, it is the main axis of socio-economic development and the key factor in the modernization of the territory. Endowed with the responsibilities and powers that Spanish legislation bestows on "Big Cities", it has played a pivotal role in the strategic project for the transformation of Bilbao. As part of its urban planning responsibilities, it is currently carrying out the development project for the "Zorrotzaurre peninsule", soon to be an island.
  It is a member of the Buyer's Group, in charge of hosting one of the two field testing activities in Phase 3.

- **Spaque S.A. (SPAQUE), Belgium**
  Established in 1991, SPAQuE is today the consultancy firm reference on issues concerning landfills rehabilitation, brownfields decontamination and environmental expertise. Due to this experience, the company is recognized as a turn-key operator and main contractor at the international level for its scientific environmental approach. SPAQuE offers the essential tools and techniques for the implementation of an environmental and health quality management policy based on sustainable development principles. SPAQuE rehabilitated more than 800 ha of contaminated sites.
  It is a member of the Buyer's Group, possibly in charge of hosting in Belgium the Phase 3 field testing activities in place of Trieste.

- **Centro de Estudios Ambientales Ayuntamiento de Vitoria-Gasteiz (CEA), Spain**
  The CEA - Environmental Studies Centre is a municipal autonomous entity whose mission is to look out for the sustainability in Vitoria-Gasteiz, fostering the Vitoria-Gasteiz municipality's sustainable development not only as an isolated unit, but linked to its bioregion, the Alava Plains. With the aim of enhancing Vitoria-Gasteiz municipality's sustainability, the aims of CEA are the following:
  - Guide the gathering, management, and use and analysis of the best information available for the formulation of more efficient urban and territorial policies.
  - Analyse the operation of the municipality (and its bioregion) as an environmental, social, and economic system, and utilize this knowledge for more efficient local and regional planning.
  - Strengthen the municipal plans and programs directed towards the proposal and planning of new more sustainable scenarios in the city and territory.
  - Promote the education, information, awareness and participation of citizens on the subject of urban and territorial sustainability, ensuring the participation of all social and economic agents involved.

  It is a member of the Buyer's Group, giving in-kind contribution to the joint implementation of the procurement, that is not supposed to have Phase 3 experimentation and field testing in their own sites within POSIDON execution.

- **Baja do Tejio S.A. (BDT), Portugal**
  Baía do Tejo is a Portuguese State owned company, whose mission is to enhance and develop its properties, through urban and environmental requalification, while managing 3 Business Parks in the metropolitan Areas of Lisbon and Oporto. Baía do Tejo also coordinates

Lisbon South Bay, a project promoted with the cities of Almada, Barreiro and Seixal for the requalification, development and promotion of 3 riverside areas, empowering this territories with urban plans and urban requalification, improving the current infrastructures for new business and new urban areas.
It is a member of the Buyer's Group, giving in-kind contribution to the joint implementation of the procurement, that is not supposed to have Phase 3 experimentation and field testing in their own sites within POSIDON execution.

The following entities are not in the buyers group but participate as **third parties giving in-kind contributions** to the procurers for the purpose of carrying out the PCP:

- Area Science Park (POSIDON Project Coordinator, without any rights to PCP results or IPRs)
- Fundacion Tecnalia Research & Innovation (technical expert on soil decontamination, participating to PCP monitoring, evaluation and implementation such as testing, without any rights to PCP results or IPRs),
- Sara Bedin (independent expert and specialist on PCP, assisting the buyers group in PCP implementation, without any rights to PCP results or IPRs)
- Sociedad Publica Gestion Ambiental IHOBE S.A. (regulator in the environmental domain monitoring the phase III testing in Bilbao (Spain), without any rights to PCP results or IPRs)
- Moragues and Scade Abogados S.A. (communication tasks with the external demand side network, without any rights to PCP results or IPRs)

The following entities are intervening as **stakeholder** with surveillance and monitoring tasks in the PCP, but without being part of the buyers group or giving in-kind contributions for carrying out the PCP:

- Friuli Venezia Giulia Region, that have a special monitoring interest and task in closely following the PCP.
- Ministero dell'Ambiente e della Tutela del Territorio e del Mare, that have a special task of approval and prior authorization of the Phase III field testing activities in Trieste (Italy).

2.4 Contracting approach

The PCP will be implemented by means of a **framework agreement** with call-offs for **specific contracts** for each of the 3 R&D phases (altogether 'contracts').

Following the tendering stage, a framework agreement and a specific contract for phase 1 will be awarded to an expected minimum of **[6]** contractors.

A call-off will be organised for phase 2, with the aim of awarding a minimum of **[4]** expected phase 2 contracts. Only offers from contractors that successfully completed phase 1 will be eligible for phase 2. The procurers will validate the phase 2 prototypes in the contractors' lab.

A second call-off will be organised for phase 3, with the aim of awarding a minimum of **[2]** expected phase 3 contracts. Only offers from contractors that successfully completed phase 2 will be eligible for phase 3. **Phase 3 field-testing is expected to take place,** not obligatory in parallel**, at the 2 sites in Bilbao (Spain) and in Trieste (Italy),** where respectively the Ayuntamiento de Bilbao (ES) and The Port Network Authority of the Eastern Adriatic Sea –Trieste (IT) of the buyers group are based. Both the approaches of sequential testing in both sites and simultaneous testing are admitted, if properly justified.

Under particular circumstances, as expressed in the following section 2.5, **the second field testing activity in Trieste (Italy) may be replaced by a different site in Belgium, without additional budget.** The name of the selected Belgian site (and all the related technical information) will be given within the 22nd February 2019.

The framework agreement will set all the framework conditions for the entire duration of the PCP (covering all the phases). There will be no renegotiation. The framework agreement will remain binding for the duration of all phases for which contractors remain in the PCP. Tenderers that are awarded a framework agreement will also be awarded a specific contract for phase 1 (evaluation of tenders for the framework agreement and phase 1 are combined). Tenderers are therefore asked not only to submit their detailed offer for phase 1, but also to state their goals, and to outline their

plans *(including price conditions)* for phases 2 and 3 — thus giving specific details of the steps that would lead to commercial exploitation of the R&D results.

- → **Phase 1 duration**: 5 months enabling bidders to conduct an additional concept-specific characterization of the soils at their expenses. Planned phase start date: 24/06/2019 phase end date: 25/11/2019.
- → **Phase 2 duration:** 10,5 months (allowing the bidders to the prototype development and to obtain, the authorization for field testing in Italy). Planned phase start date: 30/03/2020 phase end date: 15/02/2021.
- → **Phase 3 duration:** 14 months (allowing the monitoring and assessment of the two tested technologies in the two selected fields to demonstrate the robustness of the solutions/technologies, proving the performance under different conditions along the testing period). Planned phase start date: 21/07/2021 phase end date: 13/09/2022.

An overview of the overall timing of the PCP is provided in section 2.6 below.

The offers for the next phase will be requested only after the end-of phase deliverables of the previous phase and after the contractors have been informed of successful completion of the previous phase. In this case only the contractors that successfully completed the previous phase will be invited to make offers for the next phase.

2.5 Total budget and budget distribution (per phase)

The total budget available to fund POSIDON PCP contracts is 4.192.426,58 Euro (*excluding VAT but including any other taxes and duties*). All prices and payments will be in Euro. The project expected duration is until 13 September 2022.

The total budget is divided into three PCP phases and distributed as follows:

		Maximum Duration per phase *	**Expected "minimum" number of contractors that are expected to be selected**	**Maximum budget per contractor**	**Maximum total budget per phase**
Phase 1	Original solution exploration and design, based on a feasibility study	5 months	**6**	€ 82.109,74	€ 492.658,42
Phase 2	Prototyping	10,5 months	**4**	€ 374.323,80	€ 1.497.295,21
Phase 3	Original development of test series and field testing in 2 sites **	14 months	**2**	€ 1.101.236,48	€ 2.202.472,95
	TOTAL *excluding VAT but including any other taxes and duties*			**€ 1.557.670,02**	**€ 4.192.426,58**
	Applicable VAT				*€ 147.573,42*
	TOTAL *including VAT and any other taxes and duties*				**€ 4.340.000,00**

⚠ **Attention:**
Non-Italian contractors should not apply VAT.
Italian contractors should apply in their invoices the non-taxability regime of art. 72, comma 3, n.3 D.P.R. 633/1972, declaring that the transaction is not taxable at 84% pursuant to art. 72, paragraph 3, no. 3 D.P.R. 633/1972. This should be done by applying VAT to only 16% of the invoiced amount and annotating in the invoice:
"L'operazione è non imponibile al 84%% ai sensi dell'art. 72, comma 3, n.3 D.P.R. 633/1972".

* The indicated durations include administrative tasks to be performed by the Buyers' group to assess and evaluate the phase contractual execution.

** **The execution of Phase 3 in Trieste (Italy) is subordinated to the authorization for experimentation in the field by the Ministero dell'Ambiente e della Tutela del Territorio e del Mare. The (Italian) Lead procurer assumes no responsibility for the approval times, which are independent of his work. The risk of non-approval remains with the bidder.**

If the Italian Ministry will not approve the phase III experimentation in the (second selected) site in Trieste, as well as for unpredictable causes that are not under control of the buyers group or causes of force majeure the field testing activities will be not possible in one out of the two planned sites (in Bilbao and Trieste), then a replacement site will be identified in Belgium by Spaque, that is a member of the Buyer's Group, to enable the field testing activities in a second site in place of the planned one.

The replacement site will be identified by Spaque among those listed and described in the Annex 3 - Technical Specifications and field testing sites description.

In case of replacement of the second testing site, the maximum total budget per phase III, referred to both testing activities, remains € 1.101.236,48 and the payment for phase III will correspond to the price offered for the testing activities in the two confirmed sites.

Depending on the possible reduction of testing sites for experimentation, the payment for phase III will consequently be reduced by the cost offered for the site specific field testing activities that will not be carried out.

Contractors need to set aside resources for testing the solutions on the premises of two procurers (sequentially or in parallel at the different sites).

It is charged to the contractor:

- the costs deriving from the preparation of the site and therefore will not be recognized, as included in the tender price, requests for additional compensation for difficulties related to the formation of the site, transport, movement and storage of materials;
- the total and exclusive responsibility of the materials and equipment deposited on the site;
- the custody and protection of the site and of all the existing materials
- security and day and night surveillance within 24 hours per day as well as the burden of all personnel necessary for this purpose;
- the supply and maintenance of warning signs, night-time signal lights in the prescribed points and anything else indicated by the provisions in force for security purposes, as well as the night-time lighting of the site;
- all interventions aimed at minimizing damage to the natural environment and all the necessary measures to restore the natural environment disturbed by the aforementioned activities;
- all the charges deriving from the disposal of the materials deriving from the activities and the waste disposal charges removed for site preparation or execution of the Phase 3 field testing activities.

The bidder must follow all the rules on the safety of work and the regulations in force in the involved buyers' Countries, concerning the approval, the revision and the safety requirements of all the means of work and equipment of the site.

This PCP will result in a Framework Agreement with three phases:

Phase 1 Original solution exploration and design, based on a feasibility study;
Phase 2 Prototyping ;
Phase 3 Original development of test series and field testing in 2 sites.

For Phases 1, contracts are funded until the remaining budget is insufficient to fund the next best tender. The exact number of contracts finally awarded will thus depend on the prices offered and the number of awarded tenders passing the evaluation. As leftover budget from the previous phase will be transferred to the next phase, the total budget available for phases 2 and 3 may eventually be higher than stated here (**but the maximum budget per contractor for phases 2 and 3 will remain the same, as expressed above**). The lower the average price of tenders, the more contracts can be awarded. The total value of the contracts awarded can also be lower than initially expected if there are fewer tenders than expected that meet the minimum evaluation criteria.
This PCP expects to have a number of 6 suppliers in Phase 1, a number of 4 suppliers in Phase 2 and a number of 2 suppliers in Phase 3.

The descriptions of the phases are as follows:

- **Phase 1 - Original solution exploration and design, based on a feasibility study** is intended to demonstrate the feasibility of proposed concepts for new solutions. Phase 1 will have a total duration of 5 months, out of which 3,5 months will be fully allocated to the work to be completed by the Phase 1 Contractors. Each Phase 1 contract is valued up to a maximum of € 82.109,74 (excluding VAT but including any other taxes and duties) against a total budget of €492.658,42. An expected number of **6** R&D service suppliers will be awarded Phase 1 contracts. The expected output from Phase 1 R&D service suppliers is an end of phase report including the results of the detailed feasibility study and a complete dossier to be presented to the Italian Ministry (Ministero dell'Ambiente e della Tutela del Territorio e del Mare), including the (final) solution design.

- **Phase 2- Prototyping** is intended for the development and evaluation of prototypes from the more promising concepts in Phase 1. Participation in Phase 2 is dependent upon successful completion of Phase 1.
More specifically, selected Contractors will each develop a prototype based on the results of their feasibility study. The aim is to verify to what extent the prototype's main features meet the functional and performance requirements set in the POSIDON challenge description. Participating Contractors are expected to deliver a prototype specification during lab demonstration, as well as a plan for original development of a limited volume of first solutions and field-testing, and an updated cost/benefits evaluation including a preliminary business plan.
Contractors are expected to create an 'artificial soil' with high concentrations of pollutants in order to prove that the test technology work properly even in real condition in Phase 3.
Phase 2 will have a total duration of 10,5 months, out of which 8,5 months will be fully allocated to the work to be completed by the Phase 2 Contractors. Each Phase 2 contract is valued up to a maximum of € 374.323,80 (excluding VAT but including any other taxes and duties) against a total budget of € 1.497.295,21. An expected number of **4** R&D service suppliers will be awarded Phase 2 contracts.

- **Phase 3: Original development of a test series and field testing in 2 sites** is intended for the original development of a limited volume of first products test series necessary to execute field testing activities in two countries.
More specifically, it aims to verify and compare the full feature set and performance of different solutions in real-life operational conditions (residential and industrial sites). The aim is to verify to what extent the prototype's main features meet the functional and performance requirements set in the challenge. **The tests will be carried out in 2 different sites, in Bilbao (Spain) and in Trieste (Italy) indicated to the bidders by the Lead Procurer,** (for more general information see the Annex 3 and project website www.posidonproject.eu) **ensuring that a performance comparison can be made between the various environmental, legal and contamination conditions**.
Participation in Phase 3 is dependent upon successful completion of Phase 2.
Execution of Phase 3 in Trieste (Italy) is also subordinated to the authorization for experimentation in the field by the Italian Ministry (Ministero dell'Ambiente e della Tutela del Territorio e del Mare).
If the Italian Ministry will not approve the phase 3 experimentation in the (second selected) site in Trieste, as well as for unpredictable causes that are not under of the control of the buyers group or

causes of force majeure the field testing activities will be not possible in one out of the two planned sites (in Bilbao and Trieste), then a replacement site will be identified in Wallonia (Belgium) by Spaque

Phase 3 will have a total duration of 14 months, out of which 11,5 months will be fully allocated to the work to be completed by the Phase 3 Contractors. Each Phase 3 contract is valued up to a maximum of € 1.101.236,48 each (excluding VAT but including any other taxes and duties) against a total budget of € 2.202.472,95. An expected number of **2** R&D service suppliers will be awarded Phase 3 contracts. The expected output from Phase 3 R&D service suppliers is an end of phase report including the results of the field testing and the final commercialization plan.

⚠ **Attention:** The execution of Phase 3 in Trieste (Italy) is subordinated to the authorization for experimentation in the field by the Ministero dell'Ambiente e della Tutela del Territorio e del Mare.
The lead procurer assumes no responsibility for the approval times, which are independent of his work. The risk of non-approval remains with the bidder.

For phase 3, there are 3 possible scenarios, which will be managed as follows.

- Scenario 1
  The Italian Ministry authorizes in time (within the end of phase 2) the proposed solution and planned experimentation presented at the end of Phase 1 by the contractor and the field testing in Trieste can be performed. The concerned awardee will test its solution/technology in Bilbao and Trieste (in sequential or parallel testing).
- Scenario 2
  The Italian Ministry doesn't approve the proposal (or doesn't approve the proposed solution and testing activities in time within the end of phase 2 or approves the project with significant and expensive prescriptions that can't be implemented in time) and the field testing in Trieste cannot be performed. The concerned awardee will choose to test its solution/technology in Bilbao and in Belgium (in sequential or parallel testing) or to have the field testing only in Bilbao and reducing the foreseen Phase III payment by the cost offered for the testing activities that will not be carried out in Trieste.
- Scenario 3
  If the field testing activities will be not possible in one or more of the identified sites, for unpredictable causes that are not under of the control of the buyers group or causes of force majeure, the concerned contractors will test their solutions/technologies in one and up to two of the available sites (in Bilbao and/or Trieste and/or in Belgium) indicated by the Lead Procurer and in case of only one single field testing site available (in one Country) the payment will correspond to the site-specific price offered for the field testing activities as part of the "actual economic price".

The timeline of the payments is as follows:

	Phase 1	Phase 2	Phase 3
Prepayment	20%	20%	20%
Second payment	0%	0%	20%
Final Payment after (satisfactorily) completion of the phase	80%	80%	60%
Total	100%	100%	100%

The payment is subordinated to satisfactorily completion of phased R&S services, as described in the Framework Agreement (Annex 2).

2.6 Time schedule

The planned time schedule is defined as follows, any changes will be communicated by the Lead Procurer.

Date	Activity
02/01/2019	Publication of contract notice in TED
08/03/2019	Deadline for submitting questions about tender documents
tbd	Visits to pilot sites (no technical characterization is permitted)
15/03/2019	Deadline for lead procurer to publish replies to questions (Q&A document)
01/04/2019	**Deadline for submission of tenders for the framework agreement and phase 1**
03/04/2019	Opening of tenders
10/05/2019	Tenderers notified of decision on awarding contracts
14/06/2019	Stand & still period
20/06/2019	Signing of framework agreements and phase 1 specific contracts
24/06/2019	Publication of contract award notice in TED
24/06/2019	**Start of phase 1**
tbd not later than 22/07/2019	Names of winning phase 1 contractors and their project abstracts sent to EU and published on POSIDON PCP project website
04/06/2019	Pre-payment for Phase 1
to be defined 24/06/2019 - 10/07/2019	Remote KOM and visit of phase 1 contractors to the premises of the front-runner procurers in Bilbao and Trieste to make additional technical inspections and soil characterization, in order to learn about the operational boundary conditions governing the design of targeted solutions
10/10/2019	**Deadline for phase 1 final milestone(s)/final report/deliverable(s)**
11/11/2019	Assessment of phase 1 final milestone(s)/final report/deliverable(s)
20/11/2019	Phase 1 contractors notified as to whether they have completed this phase satisfactorily and successfully
25/11/2019	**End of phase 1**
20/12/2019	Payment of balance for phase 1 to contractors that completed this phase satisfactorily
09/12/2019	**Launch call-off for phase 2 (only offers from contractors that successfully completed phase 1 are eligible)**
22/01/2020	Deadline for submitting questions on phase 2 call-off documents
27/01/2020	Deadline for lead procurer to circulate replies to questions to phase 2 bidders
07/02/2020	**Deadline for submitting phase 2 offers**
10/02/2020	Opening of phase 2 offers
09/03/2020	Contractors notified of decision on awarding phase 2 contracts
24/03/2020	Stand & still period
30/03/2020	Signing of phase 2 specific contracts
30/03/2020	**Start of phase 2**
tbd not later than 30/04/2020	Names of winning phase 2 contractors and their project abstracts published on POSIDON PCP project website and sent to EU
09/04/2020	Pre-payment for phase 2
to be defined 30/03/2020 - 15/04/2020	Remote KOM and /or meeting with 'phase 2' contractors to one of the premises of the procurers to be decided and communicated by the lead procurer (Trieste, Bilbao or Brussels)
07/07/2020	Deadline for phase 2 interim milestone(s)/deliverable(s)

22/07/2020	Feedback from phase 2 supervisor/monitoring team on phase 2 interim milestone(s)/deliverable(s)
10/11/2020	Video / demo presentation of the lab testing of the prototype developed during phase 2
20/11/2020	Feedback from phase 2 supervisor/monitoring team on field-testing of the products/services
tbd around 18/12/2020	**Demonstration of prototype for the EU technical review of phase 2**
20/01/2021	Assessment of phase 2 final milestone(s)/final report/deliverable(s)
15/02/2021	Phase 2 contractors notified as to whether they have completed this phase satisfactorily and successfully
15/02/2021	**End of phase 2**
17/03/2021	Payment of balance for phase 2 to contractors that completed this phase satisfactorily
03/03/2021	**Launch call-off for phase 3 (only offers from contractors that successfully completed phase 2 are eligible)**
03/05/2021	Deadline for submitting questions about phase 3 call-off documents
10/05/2021	Deadline for lead procurer to circulate replies to questions to phase 3 bidders
20/05/2021	**Deadline for submitting phase 3 offers**
24/05/2021	Opening of phase 3 offers
25/06/2021	Contractors notified of decision to award phase 3 contracts
10/07/2021	stand & still period
21/07/2021	Signing of phase 3 specific contracts
21/07/2021	**Start of phase 3**
31/07/2021	Names of winning phase 3 contractors and their project abstracts published on POSIDON PCP project website and sent to EU
02/08/2021	Pre-payment for phase 3
tbd 02/08/2021-10/08/2021	Remote KOM and /or meeting with phase 3 contractors to one of the premises of the procurers (Trieste, Bilbao or Brussels)
10/01/2022	Deadline for phase 3 interim milestone(s)/deliverable(s)
27/01/2022	Feedback from phase 3 monitoring supervisor/monitoring team on phase 3 interim milestone(s)/deliverable(s)
01/03/2022	Work progress monitoring on-line meeting during phase 3
16/03/2022	Feedback from phase 3 supervisor/monitoring team on the work in progress
22/03/2022	Second payment for phase 3
Tbd 15/06/2022	**(Eventual) Deadline for submission of phase 3 final milestone(s)/final report/ deliverable(s)**
tbd 29/07/2022	Final demonstration of products/services developed during phase 3 (including to EU representatives)
29/08/2022	Assessment of phase 3 final milestone(s)/final report/deliverable(s)
13/09/2022	Phase 3 contractors notified as to whether they have completed this phase satisfactorily and successfully
13/09/2022	**End of phase 3**
28/10/2022	Summary of the lessons learnt and the results achieved by each contractor during the PCP sent to EU for publication purposes.
14/10/2022	Payment of balance for phase 3 to contractors that completed this phase satisfactorily

2.7 IPR issues

Ownership of results (foreground)

Each Contractor will keep ownership of the IPRs attached to the results it generates during the PCP implementation. Each contractor is responsible for the management (including protection) of its IPRs and bears the costs associated with this. The tendered price is expected to take this into account.

The ownership of the IPRs will be subject to the following.

The members of the POSIDON **Buyer´s group** have:

- the right to monitor the management of the IPRs;
- access rights to use the results (for IPRs until their expiry date) for their own purposes, on an irrevocable, world-wide, royalty-free, non-exclusive, not on acommercial basis and at no additional cost. This includes all Intellectual Property Rights of what has been developed as part of the solution design (Phase 1) and the prototype development (Phase 2) and the original development of a test series and field testing (Phase 3), and the pre-existing rights that are needed to perform the POSIDON Project for the purpose of executing the POSIDON Project as well as for non-commercial research purposes;
- the right to grant (or to require the Contractors to grant) non-exclusive licences to third parties allowing them to exploit the results under fair and reasonable conditions (without the right to sub-license), if the Contractor fails to commercially exploit the results of the R&D within 4 (four) years after the end of the framework agreement;
- the right to require the Contractors to transfer to them ownership of the IPRs if the Contractor does not seek for protection for results that should be protected or fails to comply with their obligation to commercially exploit the results or in case they use the results to the detriment of the public interest *(including security interests)*.

The contractor:

- may transfer ownership of its results — unless this is prohibited (or restricted) by the security obligations and provided that it ensures that its obligations (in respect of the results) apply to the new owner and that this new owner is obliged to pass them on in any subsequent transfer (by including a requirement to do so in their arrangements with the new owner);
- the contractor must give the buyers group at least 45 days advance notice of its intention to transfer ownership of the results and that this notification must include sufficient information on the new owner to enable the procurers to assess the effects on their access rights. A procurer can object within 30 days of receiving notification, if it can show that the transfer would adversely affect its access rights. Should an objection be raised, the transfer may not take place until agreement has been reached between the parties concerned.

Commercial exploitation of results

The contractor must inform the buyers group (via the lead procurer) of results that can be **exploited**, regardless of whether they can be protected or not, within [10] days from when they are generated. The information submitted to the lead procurer must include information about the contents of the results, the confirmation by the contractor to protect them and the planned timing for protection.

The contractor shall undertake activities beyond product development (e.g. certification) and take measures to ensure that its results are exploited commercially (directly or indirectly) at the latest 4 (four) years after the end of the framework agreement.

To assure commercial exploitation of the R&D results the members of the POSIDON Buyer´s group themselves plan to undertake activities to help remove barriers to the introduction onto the market of the solutions to be developed during the PCP, promoting R&D results among other public procurers, providing evidences to the EU certification and standardization bodies, as well as to national regulation bodies, so to pave the way for market penetration.
Procurers will themselves investigate opportunities in procuring the resulting solution e.g. through a PPI project.

The feasibility of the business plan to commercially exploit the R&D results will be assessed as part of the award criteria (see section 3.5). A business plan (in draft and final version) is expected as a deliverable in phases 2 and 3.

POSIDON potential market dimension

A new report on "The status of soil contamination in Europe" from the JRC in collaboration with the European Information and Observation Network-Eionet (2018)[8] estimates that polluting activities potentially took place in 2.8 million sites in the EU and finds that there are more than 650,000 officially registered contaminated sites across Europe. Municipal and industrial wastes contribute most to soil contamination (38%), followed by the industrial/commercial sector (34%). Mineral oil and heavy metals are the main contaminants contributing around 60% to soil contamination.

More than 170,000 sites still to be investigated, 68000 are currently under investigation and more than 125,000 sites need or might need remediation, while 65500 sites have already been remediated or are under aftercare measures.

An average of 3.6 contaminated sites per square kilometer of artificial surface are registered in the country inventories of EU Member States. Countries like the Netherlands, Germany, the UK, and the Flanders region in Belgium who have been tackling the problem of soil contamination for at least three decades, are focusing their efforts on remediating those sites where they have identified that polluting activities took or are taking place. Countries that have more recently started to address soil contamination are currently focusing on the identification of contaminated sites. Poland and Portugal are preparing their inventory, which will be managed at regional and at national level, respectively. Since 2011, Cyprus has developed its national register of contaminated sites and Malta is currently collecting information on contaminated sites.

The EU's Seventh Environment Action Programme recognizes that soil degradation is a serious challenge. It provides that by 2020 land is managed sustainably in the EU, soil is adequately protected, and the remediation of contaminated sites is well underway. It also commits the EU and Member States to increasing efforts to reduce soil erosion, increase soil organic matter and to remediate contaminated sites.

The average of the overall expenditures for the management of contaminated sites varies in a significant way across Europe. The industrial past, the number of sites where polluting activities took/are taking place, the existence of a legal framework on soil contamination, the availability of technologies and techniques for remediation, and the existence of well-defined procedures to investigate and remediate contaminated sites are aspects that determine the total budget needed for a complete risk management.

On the basis of the available data provided, the median overall expenditure for assessing and remediating soil contamination amounts to EUR 4.5 billion . The median cost of remediation per site varies from country to country, representing a cost of EUR 124,000 per site. The average investment for investigation and remediation of contaminated is EUR 618 per capita.

[8] "The status of soil contamination in Europe report", 2018, JRC in collaboration with the European Information and Observation Network-Eionet

Country	Overall management costs (EUR million)	Site Status 1 (registered)	Cost per site (EUR)	Cost per capita (EUR)
Austria	12 000	68 569	175 006.2	1 373.1
Belgium (Flanders)	7 000	68 000	102 941.2	1 081.6
Switzerland	4 700	38 000	123 684.2	564.4
Hungary	3 330	5 375	619 534.9	338.7
Slovakia	2 790	1 906	1 463 798.5	514.2
Estonia	8.75	300	29 166.7	6.6
Lithuania	1 300	12 341	105 339.9	450.1
Average	4 447	27 784	124 000 (1)	618.4

(1) The median is more representative in this case than the average due to the existence of significant outliers.

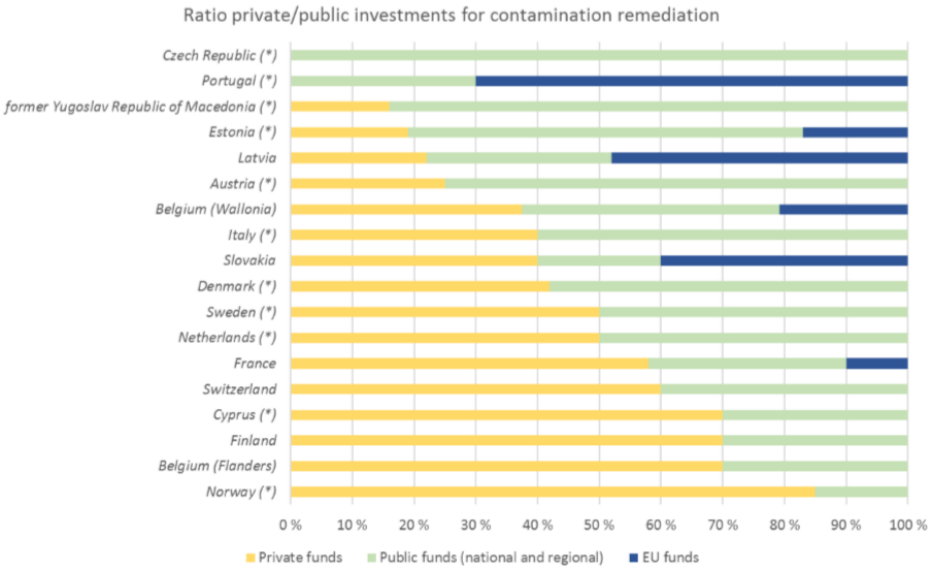
Estimated cost for site investigations and remediation measures.

The cost of site-based remediation varies from EUR 30,000 per site in Estonia to EUR 620,000 per site in Hungary, although the size and level of contamination are not the same in all cases. The report confirms that the Polluter Pays Principle (PPP) is applied; however, on average more than 43 % of total expenditure comes from the public budget. In some cases, EU-funding mechanisms (such as Interreg or the ERDF) are used to finance soil remediation. The liability for contaminated site management generally has the following hierarchy: 1. the polluter, 2. the landowner and, ultimately, the liability lies with the local municipalities or state. There are some countries with a more complex system for ensuring the availability of funds for remediation.

Due to the lack of specific European legislation, that would ensure contaminated sites investigation and remediation, other national, regional and local policy strategies have been designed for management of contaminated land. In Europe, the costs of investigation-and-remediation projects typically range from EUR 5,000 to EUR 50 million, and some macrosite-remediation projects exceed EUR 100 million. Normally, remediation projects require between EUR 50,000 to EUR 500,000. Large remediation projects, that represent the 8 % of the cases reported for Europe in 2012, usually require investments that exceed EUR 5 million (JRC, 2014).

An overall estimate of the annual cost for contaminated-soil remediation was made in the proposal for a soil framework directive. The investment needed by each Member State accounted for EUR 290 million per year for the first 25 Member States of the EU (EU-25) in the first 5 years and up to EUR 240 million per year in the following 20 years. The total costs for CS remediation were estimated at EUR 119 billion, considering the average costs of remediation related to the size of the CSs (EU, 2006). The broad study on soil-contamination expenditures in Europe undertaken by Ernst & Young (2013) has shown a disparity across Member States in contaminated-soil management. In this study, the expenditures on remediation were calculated as EUR 2.75 billion per year to EUR 4.6 billion per year, and an estimate of the overall expenditures of EUR 46 billion over 25 years.

Figure below shows the relationship between investments made by the private and public subsidy sectors, and European subsidies where they are present, in different countries to investigate, manage and remediate contaminated sites. Some countries have made special efforts to estimate the overall costs that contaminated soil management (investigation and remediation when necessary) has represented so far and how much it will represent for their national budget in the future. Countries were asked to provide estimates of total expenditures and to comment on whether they have been incorporated in their national budget and development strategy for the coming decades.



Investment of public, private and EU funds to finance the remediation of contaminated sites in some countries of Europe.

For example, in Austria, two scenarios have been set up for estimating the costs of contaminated sites (CS) management. First, considering that no legal improvements at national level have been achieved since 2007 the overall costs were estimated between EUR 10 000 and EUR 12 000 million. Where legal amendments were adopted, or new national legislation was approved, including guidelines on risk management as binding statutes, the estimated expenditures decrease by EUR 5,000-6,000 million, as it has been reported in the Austrian questionnaire (2016).

The public budget for remediation measures of 21 large-scale projects in lignite and uranium mining in Germany have gone upwards to EUR 19.5 billion. Information about Laender and private expenditures is not available at this moment. The responsibility for the technical and economic management of CSs in Belgium has been transferred to regional governments.

Thus, in Flanders, the total remediation cost is estimated to be EUR 7 000 million, of which, circa 70 % is expected to come from private investment. However, in Wallonia a great effort to identify every CS is been carried out, making it difficult to predict the overall cost. Estimates of EUR 31,000 to EUR 145,000 per site, including orientation and characterisation study, development of the remediation plan and the remediation works for those CSs are managed with private funds. For those biggest polluted sites, the estimates provided by SPAQuE (Wallonia) vary from EUR 207,000 per site for soil investigations to EUR 108/m2 of remediated soil. In Brussels-Capital, the annual budget allocated to soil-contamination management account for EUR 2 million coming from public funds and EUR 28 million provided by the private sector. The ratio public/private in Brussels-Capital is 6/94. Of the investment, 85 % goes to remediation while the other 15 % is utilised in the investigation process.

The overall estimated costs for CS management in Switzerland is roughly EUR 4.7 billion (approximately CHF 5 000 million). The estimated ratio public/private is about 60 % public and 40 % private (Figure 13).

When the national environmental remediation programme (OKKP) was initiated in 1996 by the Hungarian government, experts estimated the total cost at EUR 3,330 million. New estimates have not been made since then.

The total cost of orphan sites in Denmark was estimated at EUR 1 800 million in 2012. There is no estimate of the expected private sector equivalent total, as liability and management of orphan sites is entirely public in Denmark. It has been estimated (data from 2013) that the total turnover

of the soil-remediation sector (including public spending, which is roughly half) was EUR 1,200-1,400 million per year.

In 2008, when systematic CS identification started in Slovakia the first estimate on the overall CS management cost was EUR 1,716-2,553 million. In 2015, EUR 78 million was spent within the framework of the operational programme environment (public). This investment included detailed investigation of 138 sites (105 PCSs and 33 CSs), remediation of 19 sites and monitoring of 161 sites (all from European Union funds under the operational programme environment), as well as public awareness, education and publicity on CSs. At the present time, 950 sites are in need of detailed investigation and 956 sites need (or might need) remediation or RRM (Risk-reduction measures) in Slovakia. Estimate of the overall management cost in 2015 was ca. EUR 2 580 million (public + private). The latest estimate of the cost of addressing CSs according to the state CS remediation program for period 2016-2021 is EUR 210 million, which refers only to public funds, which represent the 20 % of the investment. 50 % of these expenditures are expected to come from European Programmes and the remaining 30 % must be provided by private companies.

The overall management cost from Czech state budget (including EU funds) is estimated to be EUR 2,000 million, but there is no information available on private funds.

France does not have information about the overall expenses for CS remediation. However, when analysing available information from years 2012 and 2013, the tendency appears to be positive. In 2013, the cost of cleaning up soil and aquatic environments (groundwater and surface water) increased by 4 % compared to the previous year. Expenditures related to the protection and cleaning of soil, groundwater and surface waters amounted to EUR 1.6 billion in 2013. According to the European Cepa nomenclature, the expenditure breaks down as follows: EUR 807 million for soil- and water-contamination audit and remediation, EUR 616 million for water and soil-contamination prevention, EUR 89 million for financing the measurement and monitoring network, and EUR 75 million for erosion control and other physical degradation. In 2013, the private and public sectors financed 58 % and 32 % of the expenditure on prevention and protection of soil and water, respectively. The rest is financed by European funds (Service de l'observation et des statistiques, 2015).

The Dutch national inventory has been updated in 2016 with more detailed questions on costs (both public and private). Considering most of CSs in the Netherlands have been remediated during the last 30 years, accounting for EUR 300 million per year (EUR 100 million per year from public budget and EUR 200 million per year from private investments), and further CS management will be carried out during next years, an overall estimate of national (public and private) investment in CS management may account for EUR 10 billion.

The overall management costs in Finland vary considerably each year. The overall management cost has not been assessed, but a rough estimate is EUR 50-100 million per year. The remediation costs are mainly borne by companies and others from the private sector, whose investment is approximately 70 % of the costs, the remaining expenses come from municipalities and the state.

In Portugal, due to a lack of a comprehensive CS inventory, solely information about public investment to remediate orphan sites is available. The estimated cost of remediation of old mining areas amounts to EUR 90 million, from which ca. EUR 88 million has already been invested since 2001.

Latvian legislation does not embrace the obligation to report private expenditures on CS remediation. Information about public investment for remediation of four megasites has been reported (namely Incukalns acid-tar ponds, Olaine hazardous-waste storage, Jelgava hazardous-waste storage and Sarkandaugava oil-polluted site), which account to circa EUR 71 million. In these projects, the Latvian state is financing 30 % of the total cost, 22 % is provided by Switzerland finances and 48 % comes from the European Regional Development Fund (ERDF).

Lithuania has provided a rough estimate about the overall CS management cost at high and very high risk, which account to circa EUR 1,300 million. EUR 19 million from the EU CF has been designated for the treatment of the 36 historically contaminated sites on state land for the period 2013-2020. Information about contribution of private and public sector is not available.

Estonia plans for an overall management expenditure of EUR 53 million to investigate and remediate 78 sites where polluting activities took/are taking place and are in need of RRM (Risk-reduction measures).

In Bulgaria two different budgets are planned to deal with soil contamination in coming years. Firstly, EUR 263 376 (BGN 515 119) of public budget is planned to be spent for ensuring the remediation of one site with historic contamination in the period between 2018 and 2020. For the same period, EUR 30 693 (BGN 60 000) is planned to be spent for the preparation of the reports on a determination of remedial measures for cases where the operator is unknown and a factual complexity exists and/or the need for additional analyses, according to the liability for preventing and remedying environmental damage act (Lepreda).

The estimate of remediation costs for former landfills in Ireland are dependent on the sites status set out following the guides provided by the Irish environmental protection agency (91). These oscillate between EUR 200 000-350 000 per hectare for those sites with high risk (Class A) to EUR 10 000-140 000 per hectare to remediate those sites with low risk (Class C) (see explanation of the classes in the Annex 1, question 4).

In Sweden, there is no estimate of the overall costs for CS remediation; however, the budget for 2017 was approximately EUR 87 million, including a special section of EUR 30 million for the remediation of residential construction. According to the government budget not yet approved, the annual budget for remediation of contaminated land is approximately EUR 87 million per year 2018, in which the budget for remediation for residential construction has been reduced to EUR 20 million and a new special section for sediment remediation has been added (EUR 8 million). In 2019 the budget is expected to increase to a total of approximately EUR 98 million. For investigations, the budget for 2018 is EUR 22 million. About EUR 230 000 is spent annually on maintaining the national CS register.

Switching perspectives, at a global level, the total market for remediation technologies is expected to grow at a modest but healthy compound annual growth rate (CAGR) of 4.0% from 2017 through 2022. With this growth rate, the total market should expand from nearly € 56,2 billion in 2017 to € 71,3 billion in 20229.

The highest total growth will still come from the market's powerhouses in North America and Europe. With an expected combined $7.4 billion in total growth coming from North America and Europe between 2017 and 2022, these two markets together would represent 42% of the total expected growth in the markets over the next five years.

The European market for remediation technologies and services should remain relatively strong, growing at a modest CAGR of 1.5% to approximately € 15,7 billion by the end of 2022. The fastest-growing applications for remediation technologies within Europe should be seen in the manufacturing and the landfill markets, each of which should grow at a CAGR of 2% through 2022.

Within Europe, the largest national markets for remediation technologies and services will continue to be found in Germany, France, and the United Kingdom, in that order. Growth in demand in each of these countries will be close, if not slightly slower than, that of Europe at-large. Though smaller in total market size, the fastest-growing markets for remediation technologies and services within Europe may be found to the east, in Poland, the Balkan states, Bulgaria, and Romania.

[9] "Global Markets for Environmental Remediation Technologies" 2017, BCC Research

At all levels of government throughout Europe, from local to national to regional (European Union), commitment to strong environmental protections continues both in the form of investments in cleanup, and in the form of strong regulations and legislation mandating cleanup of sites by private parties.

By 2022, the second-largest industrial application in Europe can be expected to be application of remediation technologies to sites associated with manufacturing or industrial uses. With a higher CAGR of 2.0%, this market segment should represent one of the strongest and most attractive opportunities for remediation technology and service companies seeking to do business in an otherwise slow-growth Europe. The fastest-growing market segment in the region will come from commercial applications (growing at a CAGR of 2.2% from 2016 through 2022), to include remediation of contaminated urban sites such as gas stations for urban brownfield infield real estate redevelopment. However, although this segment will be the fastest- growing, it also will remain the smallest in total size by 2022.

France, although featuring one of the lowest expected growth rates for remediation technologies, is an important country in the wider industry because of its large market size, strong per-capita spending for remediation projects, and its historic role as a leading nation in the development and commercialization of the industry's technology. The French market is estimated to represent $3.3 billion in 2017, growing at a below-average rate of approximately 1.3% to more than $3.5 billion in 2022. Despite its expected slow growth, the French market should retain its place as the world's fourth-largest country-level market in 2022, and as Europe's second largest.

Germany is both a regional and global leader in the remediation technology industry, with strong government, public and private sector support for continued development of the technological foundations of the industry as well as a recognition of the need to internationalize and commercialize such technologies. The country has the second-most per-capita spending for environmental remediation technologies in Europe—only slightly lagging behind France. Several hundred companies involved in the design, production and/or distribution of remediation technologies and associated services were identified as being currently active in Germany.

With its country-level market constituting an estimated $3.7 billion in 2017, the German market should grow through 2022at a rate in line with that of Europe at-large (1.5%) from 2017 through 2022, to more than $4 billion. By the end of 2022, Germany should represent the third-largest country-level market in the world for remediation technologies, behind only the U.S. and China, and ahead of other countries such as the U.K., Canada and Australia. This large market may equal as much as 20% of the entire European market in 2022, and 5% of the total global market.

Important market segments in Germany for application of remediation technologies include sites associated with manufacturing or industrial uses and with nuclear and radioactive waste as the country continues to phase out use of various nuclear energy reactors. Another important market segment is for sites associated with the oil and gas industries (although in Germany, whose relatively low annual oil production ranks the country somewhere in the 40th to 50th range globally, these sites are more closely associated with transportation and processing of oil and gas).

The manufacturing and industrial market segment is one of the most important in Germany for remediation technologies. Across the country, hundreds of sites of all sizes feature contamination of soil, water, or both as a result of Germany's storied industrial past: Industries as diverse as electroplating, household goods manufacture, heavy machinery production and textile production have all left their mark on the country's environmental health. Correspondingly, many major remediation projects have been undertaken in Germany in past years to clean sites associated with contaminated manufacturing or industrial sites. Markets for remediation of municipal sites, such as current or former landfills, and of commercial sites such as dry-cleaning operations and gas station sites with underground storage tanks also constitute an important market segment for remediation technologies in Germany.

Within Germany, relative to the global market as a whole, there tends to be a preference for in situ technologies, with strong historic and current application of such methods as in situ stripping, chemical or UV oxidation, air sparging and bioremediation and phytoremediation methods. Companies seeking to enter or expand in the German remediation technology market may do well to approach the industrial segments previously outlined through application of innovative, in situ remediation technology.

Although the quantitative effect of such initiatives are captured in the markets elsewhere in the world's regions and discussed in their respective sections of this report, an interesting aside related to Germany that should be noted involves the several government agencies or organizations affiliated with the German government (most notably the Deutsche Gesellschaft für Internationale Zusammenarbeit GIZ GmbH, or simply GIZ) as well as numerous private German environmental remediation companies. These groups have, for more than 20 years, been significant players in the adoption and application of remediation technologies around the world, particularly in emerging economies.

The Dutch market for remediation technologies should approach $1.1 billion in 2017, and near $1.2 billion in 2022. The Netherlands was one of the first European nations to recognize the vital need for remediation of contaminated soils and water, and to implement measures for the same. The Dutch Standards—guidelines for target soil and water contaminant levels, including metals, pesticides, hydrocarbons and all other major contaminant categories, that are based on an environmental risk assessment—are some of the most widely used and adopted as a model across Europe.

Other European countries that are significant either for their technological contributions to the development of the industry or for their market demands include Spain, Italy, Norway and Switzerland.

In Spain, significant remediation projects have been undertaken related to the mining, manufacturing and industrial segments, among others.

In Italy, governmental environment agencies estimate that roughly one-third of that country's water resources are contaminated and require remediation, together with tens of thousands of acres of sites with contaminated soils. Eni (one of the world's largest international oil companies) dedicates significant financial and technical resources each year to ongoing remediation of more than a dozen contaminated sites associated with its business operations. Remediation of former industrial and manufacturing sites in the country is significant, and has been particularly prevalent in the country's more industrialized northern areas.

The Norwegian Environment Agency lists nearly 400 heavily contaminated sites (and more than 4,000 additional sites that are suspected of being contaminated) within the country's borders, requiring cleaning because of contamination associated with mining, oil and gas, and landfills.

Switzerland boasts a vibrant ecosystem of companies that have developed new technologies or improved upon existing methods for remediation of contaminated sites. Brownfield remediation of sites associated with industrial uses (especially chemical production and processing, one of the country's most important industries) has been spurred by demand for additional development space in the tiny and geographically challenging country.

Declaration of pre-existing rights (background)

The ownership of pre-existing rights will remain unchanged.

In order to be able to distinguish clearly between results and pre-existing rights (and to establish which pre-existing rights are held by whom):

- tenderers are requested to list the pre-existing rights for their proposed solution in their offers;

- contractors will be required within 2 weeks from the signing of the PCP framework agreement to provide the lead procurer with a list of the pre-existing rights it holds and/or has access to (e.g. via its subcontractors) (at the date of the agreement) and a list of the software necessary for the operation of the prototype and first pilot testing solution that will be developed during the PCP, specifying which software is closed source software.

An updated list (to the extent necessary) must be provided with each bid for the next phase.

The procurers and third parties providing in-kind contributions to the PCP do not hold any pre-existing rights relevant to the PCP contracts.

The contractors must grant pre-existing rights and sideground for carrying out the tasks assigned to them in the PCP and for using the results to the buyers group.

3. Evaluation of tenders

3.1 Eligible tenderers, joint tenders and subcontracting

The subjects referred to in this section must complete also the declaration in the form of Annex 10.

Participation in the tendering procedure is **open** on equal terms to **all types of economic operators from any country,** regardless of their geographic location, size or governance structure.
The economic operator, as defined in art. 3, comma 1, lett. p), D.Lgs. 50/2016 and in art. 2, par 1, n. 10 is any natural or legal person or public entity or group of such persons and/or entities, including any temporary association of undertakings, which offers the execution of works and/or a work, the supply of products or the provision of services **on the market**)

Availment

According to art. 89, D.Lgs. 50/2016, with regard to criteria relating to economic and financial standing and to criteria relating to technical and professional ability tenderers may, where appropriate and for a particular contract, rely on the capacities of other entities, regardless of the legal nature of the links which it has with them. With regard to criteria relating to the educational and professional qualifications or to the relevant professional experience, economic operators may however only rely on the capacities of other entities where the latter will perform the works or services for which these capacities are required. Where tenderers want to rely on the capacities of other entities, it shall prove to the contracting authority that it will have at its disposal the resources necessary, for example, by producing a commitment by those entities to that effect.

Specific rules for participation and causes of exclusion

Tenders may be submitted by a **single entity** or in collaboration with others. The latter can involve either submitting a **joint tender** or **subcontracting**, or a combination of the two approaches.

It is forbidden for bidders to take part to the tender as member of more than one temporary business grouping or ordinary consortium or aggregations of companies belonging to a business network (hereinafter aggregation of network companies).

It is forbidden for bidders that participate to this tender procedure in partnership with other bidders or as members of ordinary consortia, to also participate individually.

It is forbidden for bidders that participate to this tender procedure as members of aggregation of network companies to also participate individually.

Companies belonging to the partnership <u>not participating</u> to the tender may submit an offer, for the same tender, as single entities or in a joint bid.

When submitting a bid in response to this Call for Tender, **a consortium must specify on behalf of which companies belonging to the consortium the latter is bidding; therefore, these companies cannot participate to this tender procedure in any other manner. Failure to comply with this obligation will result in the exclusion form the procedure of both the consortium and the company belonging to the consortium;**

In case of a tender submitted by a consortium**, the companies belonging to the consortium that have been appointed by the consortium for executing the agreement cannot, in turn, appoint another entity for accomplishing the task.**

All members of the Joint tenderers/Temporary Association of Companies/Consortia must complete **Annex 10** – Declaration on the form of participation, specifying the form of participation and attaching the related documents.

All members of the Joint tenderers/Temporary Association of Companies/Consortia must accept joint and several liability by completing and adding **'Annex 7 - Statement of joint and several liability'.**

The technical offer (Annex 5), the economic offer (Annex 8) and the Annexes nr. 4, 7, 9 and 10 must be signed by the person(s) empowered to represent the economic operator of all the companies that will constitute the Joint tenderers/Temporary Association of Companies/Consortia, under penalty of exclusion.

In the case of Joint tenderers/Temporary Association of Companies/Consortia, each of the companies wishing to group together must present the documentation and all the declarations required in Annex 10.

<u>For subcontracting (Phases 1, 2 and 3)</u>:
Subcontracting refers to any contract or agreement between the tenderer and any third party whereby that third party agrees to provide services to the tenderer to enable or assist the tenderer to provide the services or any part thereof to the procurers, to comply with the rights and obligations under the Framework Agreement.
It should be noted that it constitutes subcontracting any contract involving activities carried out wherever they require the use of labor, if individually exceeding 2% of the amount of the services provided or amount higher than € 100,000.00 and if the cost of labor and personnel is higher than 50% of the contract amount to be awarded.
The subcontract declaration must be presented in the first phase and will be binding throughout the duration of the procedure.

The following rules apply:

- The contractors remain fully liable to the lead contractor for the performance of the contract;
- when intending to subcontract part of the work, both tenderers and subcontractors shall complete and sign a subcontracting statement stating:
  - which parts of the contract will be subcontracted;
  - that the subcontracting does not exceed 30% of the amount of R&D services performed during the Framework Agreement and each of the PCP phases and that a minimum of 70% of the overall R&D services in each phase will be performed by the Tenderer or the Contractor or at least by full/subsidiary companies thereof; in the absence of such indications, subcontracting is prohibited.
  - their reliance on the capacities of the proposed subcontractors to perform part of the work
  - every subcontractor must draw up a separate ESPD.

- Subcontractor(s) must declare that:
  - they are aware of the provisions set out in this Call for Tender (in particular in relation to IPRs).
  - they meet the qualification requirements for the subcontracted services.
  - they have their resources at the tenderer's disposal for the full duration of the contract

- they fully meet the requirements under the Call for Tender, including as relates to the place of performance, the definition of R&D services, confidentiality, results and IPRs, the visibility of EU funding, conflicts of interest, language, obligation to provide information and keep records, audits and checks by the EU, the processing of personal data, liability for damages and ethics and security requirements).
- the execution of the tasks assigned to a subcontractor shall not be the subject of further subcontracting.

- If the contractor subsequently needs to change or add new subcontractors, a new subcontracting statement with the same content described in the paragraph above must be provided. Nevertheless, no change in subcontractor shall be possible if:
  - It leads to a reduction of the POSIDON participants throughout the PCP Procedure below the minimum number of bidders set in Section 2.4.
  - It leads, according to an independent legal report, to IPR/confidentiality issues (i.e. if associated participants selected for Phase 1 decide to continue as subcontractor for another bidder).
  - It prevents the tenderer from meeting the selection criteria required under section 3.3.

The Contractor aware of the obligations and obligations imposed by Law 136/2010 on the subject of traceability of financial flows, carries out financial transactions with subcontractors in full compliance with the aforementioned law and provides in the subcontracting agreements a specific clause with which the parties assume the obligations of traceability of the financial flows relating to the contract in question, as per Law 136/2010.

It does not constitute a reason for exclusion but implies, for the bidder, the subcontract prohibition:

- **the omitted statement of the subcontractors under the conditions set out in article 105, paragraph 6, of Legislative Decree n. 50/2016;**
- **the indication (for the execution of each kind of homogeneous assigned task) of a subcontractors number of less than three, according to art. 105, paragraph 6, of Legislative Decree n. 50/2016;**
- **the subcontractor has participated in this procedure.**

The indication of the same subcontractor in several tenders of different bidders is permitted.
The subcontractors must not meet any of the exclusion criteria foreseen at section 3.2 lett. C. In case of failure to meet this requirement, the bidder is required to substitute the subcontractor (within the presented list of three).

Participation in the **open market consultation** is not a condition for submitting a tender.

Attention:
There will, however, be a requirement relating to the place of performance of the R&D services *(see below)*.
For phases 2 and 3, participation is limited to tenderers that successfully completed the preceding phase.

3.2 Exclusion criteria

The exclusion criteria are as follows:

Exclusion criteria	Evidence
A) Conflict of Interest	Declaration of honour (Annex 4)
B) Exclusion criteria as defined in Directive 2014/24/EU	Filled ESPD (template available for download here: https://ec.europa.eu/tools/espd)
C) Other Exclusion criteria as defined in article 80 of Legislative Decree 50/2016	Declaration of honour (Annex 4)

Tenderers shall explicitly declare that they are not subject to any of the exclusion criteria listed above by presenting a duly signed and stamped declaration of honour, using for this purpose the template provided in **Annex 4.**

In case of joint tenders, all members of the consortium or group of bidders must sign and stamp the declaration of honour provided **in Annex 4**.

In case of subcontracting, all subcontractors must provide the declarations on honour in **Annex 4**, signed by an authorised representative.

All subcontractors whose share of the contract is above 10% or whose capacity is necessary to fulfill the selection criteria must provide also declaration on honour provided in **Annex 4**.
Should there be any doubt as to any of these criteria, bidders may be requested to provide additional information and/or evidence.

⚠ **Tenderers that do not comply with these criteria will be excluded.**

A) Conflict of interest

Tenderers that are subject to a conflict of interest may be excluded. If there is a potential conflict of interest, tenderers must immediately notify the lead procurer in writing.

A conflict of interest covers both personal and professional conflicts.

Personal conflicts are any situation where the impartial and objective evaluation of tenders and/or implementation of the contract is compromised for reasons relating to economic interests, political or national affinity, family, personal life *(e.g. family of emotional ties)* or any other shared interest.

Professional conflicts are any situation in which the contractor's (previous or ongoing) professional activities affect the impartial and objective evaluation of tenders and/or implementation of the contract.

⚠ **Attention:** If an actual or potential conflict of interest arises at a later stage *(i.e. during the implementation of the contract)*, the contractor must contact the lead procurer, who is required to notify the EU and to take steps to rectify the situation. The EU may verify the measures taken and require additional information to be provided and/or further measures to be taken.

B) Exclusion criteria as defined in Directive 2014/24/EU

Grounds relating to criminal convictions

The lead procurer shall exclude a bidder if it has been the subject of a conviction by final judgement for one of the following reasons:

- Participation in a criminal organisation, as defined in Article 2 of Council Framework Decision 2008/841/JHA;
- Corruption, as defined in Article 3 of the Convention on the fight against corruption involving officials of the European Communities or officials of Member States of the European Union and Article 2 of Council Framework Decision 2003/568/JHA (34), as well as corruption as defined in the national law of the lead procurer or the economic operator;
- Fraud within the meaning of Article 1 of the Convention on the protection of the European Communities' financial interests;
- Terrorist offences or offences linked to terrorist activities, as defined in Articles 1 and 3 of Council Framework Decision 2002/475/JHA, respectively, or inciting or aiding or abetting or attempting to commit an offence, as referred to in Article 4 of the aforesaid Framework Decision;
- Money laundering or terrorist financing, as defined in Article 1 of Directive 2005/60/EC of the European Parliament and of the Council;

- Child labour and other forms of trafficking in human beings as defined in Article 2 of Directive 2011/36/EU of the European Parliament and of the Council. The obligation to exclude a bidder shall also apply where the person convicted by final judgement is a member of the administrative, management or supervisory body of that bidder or has powers of representation, decision or control therein.

Grounds relating to the payment of taxes or social security contributions

- A bidder shall be excluded from participation in this procurement procedure where the lead procurer is aware that the bidder is in breach of its obligations relating to the payment of taxes or social security contributions, and where this has been established by a judicial or administrative decision having final and binding effect in accordance with the legal provisions of the country in which it is established or with those of the Member State of the lead procurer.
- Furthermore, the lead procurer may exclude from participation in this procurement procedure a bidder where the lead procurer can demonstrate by any appropriate means that the bidder is in breach of its obligations relating to the payment of taxes or social security contributions. This paragraph shall no longer apply when the bidder has fulfilled its obligations by paying or entering into a binding arrangement with a view to paying the taxes or social security contributions due, including, where applicable, any interest accrued or fines.

Grounds of insolvency or professional misconduct

The lead procurer may exclude a bidder in any of the following situations:

- Where the bidder is bankrupt or is the subject of insolvency or winding-up proceedings, where its assets are being administered by a liquidator or by the court, where it is in an arrangement with creditors, where its business activities are suspended or it is in any analogous situation arising from a similar procedure under national laws and regulations;
- Where the lead procurer can demonstrate by appropriate means that the bidder is guilty of grave professional misconduct, which renders its integrity questionable; Where the lead procurer has sufficiently plausible indications to conclude that the bidder has entered into agreements with other economic operators with the intention of distorting competition;
- Where a conflict of interest cannot be effectively remedied by other less intrusive measures;
- Where a distortion of competition from the prior involvement of the bidder in the preparation of this procurement procedure cannot be remedied by other, less intrusive measures;
- Where the bidder has shown significant or persistent deficiencies in the performance of a substantive requirement under a prior public contract, a prior contract with a contracting entity or a prior concession contract which led to early termination of that prior contract, damages or other comparable sanctions;
- Where the bidder has been guilty of serious misrepresentation in supplying the information required for the verification of the absence of grounds for exclusion or the fulfilment of the selection criteria.
- Where the bidder has undertaken to unduly influence the decision-making process of the lead procurer, to obtain confidential information that may confer upon it undue advantages in the procurement procedure, or to negligently provide misleading information that may have a material influence on decisions concerning exclusion, selection or award.

C) Exclusion grounds as defined in article 80 of Legislative Decree 50/2016

The lead procurer may exclude a bidder in any of the following situations:

1) the bidder itself or any person who is a member of its administrative, management or supervisory body or has powers of representation, decision or control therein has been the subject of a conviction by final judgment, by a conviction rendered at the most five years ago or in which an exclusion period set out directly in the conviction continues to be applicable for the following crimes:
    a) crimes, consummated or attempted, as defined in articles 416, 416-bis of the Italian Penal code or crimes committed by making use of the conditions provided for by the aforementioned art. 416-bis or in order to facilitate the activities of the associations

provided for in the same article, as well as for the crimes committed or attempted, as provided for by art. 74 of the Decree of the President of the Republic October 9, 1990, n. 309, from the art. 291-quater of the decree of the President of the Republic January 23, 1973, n. 43 and from the art. 260 of the legislative decree 3 April 2006, n. 152, as referable to participation in a criminal organization, as defined in art. 2 of the Council Framework Decision 2008/841 / JHA;

b) crimes, consummated or attempted, referred to in articles 317, 318, 319, 319-ter, 319-quater, 320, 321, 322, 322-bis, 346-bis, 353, 353-bis, 354, 355 and 356 of the penal code as well as art. 2635 of the civil code;

b-bis) false financial statements referred to in articles 2621 and 2622 of Italian Civil Code;

c) fraud, as defined by Article 1 of the Convention on the protection of the European Communities' financial interests;

d) terrorist offences or offences linked to terrorist activities, as defined in Articles 1 and 3 of Council Framework Decision of 13 June 2002 on combating terrorism (OJ L 164, 22.6.2002, p. 3). (This exclusion ground also includes inciting or aiding or abetting or attempting to commit an offence, as referred to in Article 4 of that Framework Decision)

e) money laundering or terrorist financing and offences referred to in articles 648 bis, 648 ter, 648 ter.1 of Italian Penal Code and terrorist financing as defined in article 1 of Legislative Decree no. 109/2007;

f) exploitation of child labor and other forms of trafficking in human beings defined by Legislative Decree 4 March 2014, n. 24;

g) any other offence that determined an incapacity to contract with the public administration as a ancillary punishment.

2) the bidder itself or any person who is a member of its administrative, management or supervisory body or has powers of representation, decision or control therein has been the subject of application of measures referred to in art. 67 of Legislative Decree No. 159/2011 or the existence of an attempt of mafia infiltration as defined in art. 84, paragraph 4 thereof;
3) the bidder has breched its obligations relating to the payment of social security, both in the country in which it is established and in Member State of the contracting authority or contracting entity if other than the country of establishment;
4) the bidder has committed serious infringements duly established to the rules on health and safety at work as well as the obligations under art. 30, paragraph 3 of Legislative Decree 50/2016;
5) the bidder is in a state of bankruptcy, compulsory liquidation, of an arrangement with creditors, except in the case of a business continuity agreement, and that no procedure is in progress for the declaration of one of these situations, without prejudice art. 110 of Legislative Decree 50/2016;
6) the bidder has been guilty of serious professional misconduct, such as to make his integrity or reliability questionable;
7) the bidder has attempted to unduly influence the decision-making process of the contracting authority or obtain confidential information for the purpose of your own benefit or have not provided, even by negligence, false or misleading information likely to influence decisions on exclusion, selection or exclusion the award, or not to have omitted the information due to the correct execution of the selection procedure;
8) the bidder has demonstrated significant or persistent deficiencies in the execution of a previous contract or concession contract that caused the termination due to non-compliance or the sentence for damages or other comparable penalties;
9) the bidder carries out a distortion of competition deriving from the previous involvement in the preparation of the procurement procedure pursuant to art. 67 of Legislative Decree 50/2016 which can not be resolved by less intrusive measures;
10) the bidder has been subject to interdictory sanction referred to in art. 9, paragraph 2, letter c) of the legislative decree 8 June 2001, n. 231 or other sanction that involves the prohibition of contracting with the public administration, including the disqualification provisions set forth in art. 14 of the legislative decree 9 April 2008, n. 81;
11) the bidder has presented in the ongoing tender procedure and in the assignments of subcontracts, documentation or untruthful declarations;
12) the bidder is mentioned within the ANAC Record for having supplied false information or submitted false documentation in order to get a qualification certificate;
13) the bidder has violated the prohibition of fiduciary registration pursuant to art. 17 of the Law of 19 March 1990, n. 55;

14) the bidder is not compliant with the rules governing the right to work for the disabled (law 12 March 1999, No. 68);
15) the bidder has been a victim of the crimes defined by the articles 317 and 629 of the penal code aggravated pursuant to art. 7 of the Decree-Law of May 13, 1991, n. 152, converted, with modifications, from the law 12 July 1991, n. 203 without reporting the facts to the judicial authority or recourse the cases provided for by art. 4, first paragraph, of the law November 24th 1981, n. 689;
16) the bidder in one of the situations referred to in art. 80, paragraph 1 of Legislative Decree No. 50/2016, limited to the cases in which the final sentence imposed a custodial sentence not exceeding 18 months or recognized the mitigating nature of the collaboration as defined for the individual offenses, or in the paragraph 5 of the aforementioned art. 80, has not indemnified or committed to compensate any damage caused by the crime or the offense and has adopted the following concrete technical, organizational and personnel-related measures to prevent further crimes or offenses.
17) the bidder is in relation to another participant in the same procedure of assignment, in a control situation referred to in Article 2359 of the Italian Civil Code or in any report, even de facto, if the control situation or relationship involves that the offers are attributable to a single decision-making center.

The exclusion criteria will remain unchanged for the entire duration of the PCP, thus applying also for the call-offs for Phases 2 and 3.

3.3 Selection criteria

The selection criteria are as follows:

Selection criteria	Evidence
A) Suitability to pursue the professional activity in the domain of soil decontamination	Proof regarding enrolment in one of the professional or trade registers kept in their Member State of establishment. Proof regarding registration and/or authorization to/by the Registry/Authority in the country of origin, with specific reference to the possession of requirements for the execution of site-decontamination interventions.
B) Ability to perform R&D up to original development of the first set of technologies and/or services in the domain of soil decontamination	Declaration of the capacity (i.e., R&D staff, materials and equipment that are available to the tenderer) for research, prototyping and development of the first set of technologies and/or services. Min number of 3 researchers involved in the team, with documented specializations in soil remediation, in waste management and prototyping demonstrated in their CVs (provided in EU pass format) by previous experiences in relevant and similar projects in the last 3 years.
C) Ability to commercially exploit the results of the PCP, *including intangible results in particular IPRs*	Declaration of the availability of financial and organisational structures for management, exploitation and transfer of IPRs and for generating revenue by marketing commercial applications of the results.

⚠ Tenderers that do not comply with these criteria will be excluded.

A) Suitability to pursue the professional activity in the decontamination domain

Tenderers must provide evidence regarding their suitability to pursue the professional activity, namely evidence of their enrolment in one of the professional or trade registers kept in their Member State of establishment.

Tenderers must also provide evidence that they are registered and/or authorized to/by the Registry/Authority in their country of origin, with specific reference to the possession of requirements for the execution of site-decontamination (in case thresholds are required, they must be indicated in the registration/authorization).

In case of inexistence of such Registry or Authority in the Country entitled to verify the possession of the environmental requirements related to soil-decontamination and to provide authorization / registration, the operator must register to the Italian "Albo Gestori Ambientali", managed by the Italian Ministry (Ministero dell'Ambiente e della Tutela del Territorio e del Mare).

For any information, please check: https://www.albonazionalegestoriambientali.it/Home.aspx

If justified, the lead procurer reserves the right to accept (exclusively for phase 1) that this requirement is proven with the attestation of the filling of the registration application a date before submitting phase 1 tender. The requirement must necessarily be proven with the certificate of registration when the phase 2 offer is presented.
This particular requirement must be referred to the specific tenderer or member of the joint consortia who will conduct the field activities on the testing sites and can't be accomplished by subcontractors.

B) Ability to perform R&D up to original development of the first products or services specifically related to the decontamination domain in the countries

Tenderers must have:

- the capacity (i.e., R&D staff), tools, material and equipment to:
  - carry out research, prototype development and lab and field testing;
  - produce and supply a limited set of first products or services and demonstrate that these products or services are suitable for production or supply in quantity and to quality standards defined by the procurers.

To measure this criterion, tenderers are asked to provide the following evidences:

- Provide at least 3 CVs in EU pass format, with a description of relevant references, experiences and /or previous projects (during the last 3 years) executed by the team of at least 3 researchers involved in the POSIDON project which reflects the minimum competences and capacity of the Tenderer in all the different domains of the POSIDON project, such as soil remediation, waste management and prototyping. These references will be based on previous experience of the proposed team of the Tenderers (composed of at least 3 researchers) who will be concretely working on the POSIDON project.
- Provide proof of the capacity, tools, materials and equipment available to carry out research, prototyping, lab and field testing and proof the capacity to produce and supply a limited set of first technologies and/or services, as well as demonstrate that these are suitable for production or supply in quantity and to quality standards defined by the procurers.

C) Ability to commercially exploit the results of the PCP, including intangible results in particular IPRs

Tenders must have:

- the financial and organisational structures to
  - manage, exploit and transfer or sell the results of the PCP *(including tangible and intangible results, such as new product designs and IPRs)*

- generate revenue by marketing commercial applications of the results *(directly or through subcontractors or licensees)*.

⚠ **Attention:** Should there be any doubt as to any of these criteria, tenderers may be requested to provide additional information.

The selection criteria will remain unchanged for the entire duration of the PCP, thus applying also for the call-offs for Phases 2 and 3.

3.4 Award criteria: on/off award criteria

There are 2 types of award criteria (on/off criteria and weighted criteria).

Tenders must comply with the following on/off award criteria, that can have value 0 or 1 and the score of the other award criteria must be multiplied by this value (so that the total score becomes 0 if a tender scores 0 on an on-off award criterion).

On/off award criteria	Evidence
A) Compliance with the definition of R&D services	Declaration of honour (Annex 8B)
B) Compatibility with other public financing	Declaration of honour (Annex 9)
C) Compliance with the requirements regarding the place of performance of the contract	Declaration of honour (Annex 8B)

⚠ Tenders that do not comply with these criteria will be excluded.

A) Compliance with the definition of R&D services

Tenders that go beyond the provision of R&D services will be excluded.

R&D covers fundamental research, industrial research and experimental development, as per the definition given in the EU R&D&I state aid framework[10]. It may include exploration and design of solutions and prototyping up to the original development of a limited volume of first products or services in the form of a test series. Original development of a first product or service may include limited production or supply in order to incorporate the results of field-testing and to demonstrate that the product or service is suitable for production or supply in quantity to acceptable quality standards.[11] R&D does not include quantity production or supply to establish commercial viability or to recover R&D costs. It also excludes commercial development activities such as incremental adaptation or routine or periodic changes to existing products, services, production lines, processes or other operations in progress, even if such changes may constitute improvements. The purchase of commercial volumes of products or services is not permitted.

The definition of services means that the value of the total amount of products covered by the contract must be less than 50% of the total value of the PCP framework agreement.

The following evidences are required:

- the financial part of the offer for the framework agreement must provide binding unit prices for all foreseeable items for the duration of the whole framework agreement;

[10] See Point 15 of the Commission Communication on a framework for state aid for research and development and innovation (C(2014) 3282).
[11] See Article XV(1)(e) WTO GPA 1994 and the Article XIII(1)(f) of the revised WTO GPA 2014.

- the financial part of the offer for each phase must give a breakdown of the price for that phase in terms of units and unit prices for every type of item in the contract, distinguishing clearly the units and unit prices for items that concern products;
- the offers for all 3 phases may include only items needed to address the challenge in question and to deliver the R&D services described in the call for tenders;
- the offers for all 3 phases must offer services matching the R&D definition above;
- the total value of products offered in phase 1 respectively phase 2 must be less than 50 % of the value of the phase 1 respectively phase 2 contract and the total value of products offered in phase 3 must be so that the total value of products offered in all phases (1,2 and 3) is less than 50% of the total value of the PCP framework agreement.

As evidence, tenders must produce a declaration of honour using for this purpose the template provided in **Annex 8B** to be included in the envelope C - economic.

B) Compatibility with other public financing

Tenders that receive public funding from other sources will be excluded if this leads to double public financing or an accumulation of different types of public financing that is not permitted by EU legislation, *including EU state aid rules*.

As evidence, tenders must produce a declaration of honour using for this purpose the template provided in **Annex 9** to be included in the envelope A - administrative.

C) Compliance with requirements relating to the place of performance of the contract

Tenders will be excluded if they do not meet the following requirements relating to the place of performance of the contract:

- at least [65%] of the total value of activities covered by each specific contract for PCP phase 1 and 2 must be performed in the EU Member States or in H2020 associated countries. The principal R&D staff working on each specific contract must be located in the EU Member States or H2020 associated countries.

- at least [65%] of the total value of activities covered by the framework agreement *(i.e. the total value of the activities covered by phase 1 + the total value of the activities covered by phase 2 + the total value of the activities covered by phase 3)* must be performed in the EU Member States or H2020 associated countries. The principal R&D staff working on the PCP must be located in the EU Member States or H2020 associated countries.

The percentage is calculated as the part of the total monetary value of the contract that is allocated to activities performed in the EU Member States or in other countries associated to Horizon 2020. All activities covered by the contract are included in the calculation *(i.e. all R&D and operational activities that are needed to perform the R&D services, e.g. research, development, testing and certifying solutions)*. This includes all activities performed under the contract by contractors and, if applicable, their subcontractors.

The principal R&D staff are the main researchers, developers and testers responsible for leading the R&D activities covered by the contract.

The countries associated to Horizon 2020 are those listed as associated countries in the Participant Portal Online Manual[12].

The following evidence is required:

- the economic part of the offer must provide binding unit prices for all foreseeable items for the duration of the whole framework agreement and give a breakdown of the price for the current phase in terms of units and unit prices *(hours and unit price per hour)*, for every type of item in the contract *(e.g. junior and senior researchers)*
- a list of staff working on the specific contract *(including for subcontractors)*, indicating clearly their role in performing the contract *(i.e. whether they are principal R&D staff or not)* and the location *(country)* where they will carry out their tasks under the contract

[12] List of H2020 associated countries.

- a confirmation or declaration of honour that, where certain activities forming part of the contract are subcontracted, subcontractors will be required to comply with the place of performance obligation to ensure that the minimum percentage of the total amount of activities that has to be performed in the EU Member States or in countries participating in Horizon 2020 is respected.

As evidence, tenders must produce a declaration of honour using for this purpose the template provided **in Annex 8B** to be included in the envelope *C – economic*.

⚠ **Attention:** Should there be any doubt as to any of these criteria, tenderers may be requested to provide additional information.

3.5 Award criteria: weighted award criteria

The tenders will be evaluated as set forth below, only if the tenderer is not subject to any of the exclusion criteria (section 3.2), and only if they fulfil the requirements in the selection criteria (section 3.3), the on/off award criteria (compliance criteria) (section 3.4) and the administrative instructions (section 4).
Tenders that meet all the requirements, will be assessed by examining the written tender (and/or whether specifically required) on the basis of hearings with or presentations to the evaluation committee based on the following award criteria as specified below. A detailed description of the POSIDON challenge, requirements and specifications can be found in the "Technical specifications and field testing sites descriptions" document (Annex 3). Please read carefully.

The evaluation of the tenders will be based on the most economically advantageous tender award criteria, in compliance with art. 95, paragraph 2 of Legislative Decree no. 50/2016. In addition to price, the award criteria includes qualitative technical aspects.

Assessment Criteria	Maximum Score
Technical Offer (TS)	80,00
Economic Offer (ES)	20,00
Total (S_{TOT})	100,00

The Total Score (S_{TOT}) will be determined as specified below:

$$S_{TOT} = TS + ES$$

Where:

a) TS = sum of the points attributed to the Technical Offer;
b) ES = sum of the points attributed to the Economic Offer.

TECHNICAL SCORE (TS)
Regarding the evaluation criterion of the Technical Offer, the Technical Score (TS) is determined by the sum of the scores attributed to the tender based on the sub-criteria indicated below in tables.
The assignment of the technical score will be as follows: each assessor will assign a summary judgment, which corresponds to a coefficient between 0 and 1 (see table below), for each element of evaluation of the parameters indicated in the tables below. Then the assessors will calculate the average of the coefficients assigned by the individual components for each sub-criteria. This average will be multiplied by the maximum score available for each qualitative element.

JUDGMENT ASSIGNED TO EACH SUB-CRITERIA		*Coefficient*
Poor	The sub-criterion has not been analyzed and/or no aspect concerning the sub-criteria has been sufficiently analyzed.	*0,00*
Insufficient	Some aspects concerning the sub-criteria have not been sufficiently analyzed.	*0,25*
Fair	All aspects concerning the sub-criteria have been sufficiently analyzed.	*0,50*
Good	All aspects concerning the sub-criteria were analyzed in a clear and exhaustive way.	*0,75*
Excellent	All aspects concerning the sub-criteria were analyzed in a particularly clear and exhaustive way, also providing qualifying elements not expressly requested that create added value to the solution.	*1,00*

All scores will be rounded to the second decimal digit.
Each supplier participating in the tender must obtain a minimum Technical Score of 48 points, otherwise it will be excluded from the tender.
At the end of the technical score assignment step, the Technical Evaluation Committee will proceed in the following terms:

1. The tender participants that have not achieved a technical score of at least 48 points out of 80 points available will be declared not admitted to the subsequent stages of the tender;
2. subsequently, only for the bidders that have exceeded the thresholds described above, the Selection Board will proceed with the reassignment of the score for each sub-criteria if none of tender participants have achieved the maximum Technical Score for each of them; in this case the maximum technical score for each criteria and sub-criteria will be awarded to the bidder that has achieved the highest score while the remaining bidders will be awarded the score in proportional form;
3. then, the evaluators will proceed to reassign the total score of 80 points if none of the tender participants have achieved 80 points; in this case 80 points will be awarded to the bidder that achieves the highest score while the remaining bidders will be awarded the score in proportional form;
4. finally, the evaluators will proceed with the drawing up the total Technical scores (TS) resulting for each admitted bidder.

ECONOMIC SCORE (ES)

The maximum score of 20 points will be awarded to the bidder who will offer the lower total amount.

$$20{,}00 \times \frac{V_{min}}{V_{Oi}}$$

Where:
- 20,00 = maximum number of assignable economic points;
- V_{Oi} = Total value offered by the bidder *i* (the value that will be taken into consideration is the total price offered)
- V_{min} = Minimum Total value offered among the admitted bidders; the value that will be taken into consideration is the lower total amount.

Each total price offered must be VAT excluded but other taxes and duties included (less than or equal to: Phase 1 € 82.109,74; Phase 2 € 374.323,8; Phase 3 € 1.101.236,48) and in any case it will be considered as such, taking into account that the Lead Procurer will consider decimals up to the fifth digit after the decimal point without proceeding to any rounding (eg, € xxx,1234567= € xxx,12345).

Tender offers equal to zero (=0,00000 €) or above the auction basis (max available budget per contractor listed in section 2.5) **will not be accepted.**

The Lead procurer reserves itself the right to evaluate the congruity of the total price offered, through the prospectus attached to the economic offer.

The grids shown below contain the assessment criteria that will be used in the evaluation of the Technical Offers.

Weighted award criteria	Maximum points		Thresholds
PHASE 1			
A) level of originality and innovativeness of the proposed solution and ability of generating a technological advance that could go beyond the state-of-the-art technology	8		
B) level of completeness and responsiveness of the solution to meet the functional requirements	33		
F1.1. capability to reduce contaminants concentrations of different chemical families (i.e., organic and inorganic compounds) in the same intervention, involving heavy fractions of petroleum hydrocarbons, PAHs, lead (an arsenic if present).	*(5)*		
F1.2. capability to decontaminate soil (involving anthropic layers of industrial wastes historically used as backfilling materials), both unsaturated and saturated and potentially groundwater, or a combination of these in a given site;	*(3)*		
F1.3 ability of the proposed solution and process to minimize the remediation whole life-cycle cost;	*(4)*		
F1.4 ability to complete the remediation goals in a time frame as stated in the KPI targets for a medium to big brownfield (10-100 Ha),	*(3)*		
F1.5 ability to decontaminate with an in-situ approach (preferred), or potentially on-site (with the final goal of providing a competitive alternative to other common practices of polluted soils management, involving in most of the cases landfilling);	*(5)*		
F1.6 ability to, in addition to the target pollutants identified in the project brownfields, to reduce also other pollutants (e.g. PCBs, VOCs, cadmium, copper, chromium, etc.);	*(2)*		
F1.7 ability to be flexible to adapt to different environmental conditions and robust in terms of potential changing environmental conditions (e.g., pH	*(1)*		

variations, range of temperatures, aerobic/anaerobic conditions, etc.);			
F1.8 capability to operate the rehabilitation in medium to big scale site remediation areas (10-50Ha);	*(1)*		
F1.9 ability to treat different fractions with different particle size distribution of soils (fine and coarse grain materials), making it as versatile as possible;	*(2)*		
F1.10 capability to operate on a wide range of soil permeability values;	*(1)*		
F1.11 capability to work on different pollution depth, up to 5 m below surface;	*(2)*		
F1.12 ability to minimize the footprint	*(2)*		
F1.13 capability to minimize impacts related to social aspects	*(2)*		
C) technical validity and robustness of the solution proposed	12		
D) sustainability and sense of reality of the industrialization and commercialization plan	10		
E) quality and level of clarity, detail and concreteness of the testing plan in lab condition	n.a		
F) effectiveness and concreteness of the field testing plan and the proposed method to analyse the results	5		
G) quality and completeness of the risk management and mitigation plan	6		
H) quality of the project work organization and completeness of the profiles and expertise additionally involved in the research team	6		
TOTAL TECHNICAL QUALITY CRITERIA	**80**		**48**
ECONOMIC SCORE	**20**		
PHASE 2			
A) level of originality and innovativeness of the proposed solution and ability of generating a technological advance that could go beyond the state-of-the-art technology	8		
B) level of completeness and responsiveness of the solution to meet the functional requirements	25		

C) technical validity and robustness of the solution proposed	10		
D) sustainability and sense of reality of the industrialization and commercialization plan	8		
E) quality and level of clarity, detail and concreteness of the testing plan in lab condition	10		
F) effectiveness and concreteness of the field testing plan and the proposed method to analyse the results	5		
G) quality and completeness of the risk management and mitigation plan	8		
H) quality of the project work organization and completeness of the profiles and expertise additionally involved in the research team	6		
TOTAL TECHNICAL QUALITY CRITERIA	**80**		**48**
ECONOMIC SCORE	**20**		
PHASE 3			
A) level of originality and innovativeness of the proposed solution and ability of generating a technological advance that could go beyond the state-of-the-art technology	5		
B) level of completeness and responsiveness of the solution to meet the functional requirements	20		
C) technical validity and robustness of the solution proposed	12		
D) sustainability and sense of reality of the industrialization and commercialization plan	8		
E) quality and level of clarity, detail and concreteness of the testing plan in lab condition	n.a		
F) effectiveness and concreteness of the field testing plan and the proposed method to analyse the results	15		
G) quality and completeness of the risk management and mitigation plan	10		
H) quality of the project work organization and completeness of the profiles and expertise additionally involved in the research team	10		

TOTAL TECHNICAL QUALITY CRITERIA	**80**		**48**
ECONOMIC SCORE	**20**		

⚠ **Attention:** Additional sub-criteria may be added for the call-offs for phases 2 and 3, as a way of making the award criteria more precise, provided that they do not substantially change the existing criteria. **Weighting of the criteria and sub-criteria may also be changed for the call-offs for phases 2 and 3.**

Should there be any doubt as to any of these criteria, tenderers may be requested to provide additional information.

3.6 Evaluation procedure

For the purpose of the evaluation of the received tenderers, the Lead Procurer shall appoint the following Evaluation Committees:

a) An **Administrative Committee** for the selection of tenders based on exclusion and selection criteria. The composition and working method of this committee will take into account the following rules:

   i. The administrative committee will be composed by 3 assessors.

   ii. Assessors shall open tenders. Only tenders that satisfy the provided requirements, which means that are not excluded based on the exclusion criteria and that meet the selection criteria, shall be considered admissible for evaluation under the weighted award criteria.

b) **Technical Evaluation Committee** for the evaluation of tenders based on the on/off and award criteria and the financial tender. The committee shall be composed of 5 evaluators appointed by the buyers group who are experts in the specific field covered by the scope of the contract.

In order to guarantee fairness and transparency, the evaluator's appointment and the establishment of the Evaluation Committees shall take place after the expiry of the deadline for the submission of tenders.

Members of the Evaluation Committees nominated or designated by the Lead Procurer and the Procurers shall be appointed *ad personam*. When carrying out their tasks, they shall not seek or take instructions from the Lead Procurer institutions, bodies, offices or agencies, from any government of a Procurer or from any other body.

The Procurers undertake to respect this principle and not seek to influence the members of the Evaluation Committees in the performance of their tasks.

Each member of the Evaluation Committees shall sign Declaration of absence of conflict of interest and protection of confidentiality.

3.7 Opening of tenders & evaluation

The tenders will be opened on 03 April 2019, 12.00h CET.

The Administrative and Evaluation Committees will respectively open and evaluate the tenders, carrying out the following steps:

Step 1 - Administrative Committee checks whether the tender has been received in due time;

Step 2 – Administrative Committee checks the integrity of the envelopes containing the tenders and, once opened, the completeness and formal correctness of the tender procedure; in case of lack of documents, incompleteness and any other non-essential irregularities of the tender, the

Administrative Evaluation Committee will request the necessary additions and clarifications from the tenderers, by placing the notice to the tenderers, who will be admitted with reserve;

Step 3 - Administrative Committee checks whether the tenderer is not in one of the situations covered by the exclusion and selection criteria;

Step 4 - For tenderers passing Step 3, Administrative Committee assesses whether the tenderer has the capacities necessary to perform the contract, on the basis of the selection criteria;

Step 5: Admissions and Exclusion of the bidders will be published on the website of ADSP MAO www.porto.trieste.it and on the website of Posidon Project: www.posidonproject.eu;

Step 6 - For tenders passing Step 4, submitting the tender to the Technical Evaluation Committee, which shall proceed to evaluate the tender based on the on-off compliance and weighted award criteria.

Step 7 – The Technical Evaluation Committee will open the envelope C – economic, referred to those have achieved the minimum technical score.

Step 8 – The Technical Evaluation Committee will draw up the final ranking.

The evaluation of offers for phase 2 has (potentially) 4 steps:

Step 1 – (In case of phase 1 verification of the selection criterion related to the registration to the Albo dei Gestori Ambientali or other Registry based on the application form), assessing whether the tenderer has the possession of requirements for the execution of site-decontamination necessary to perform the field testing activities, on the basis of the certificate of registration and/or authorization to/by the competent Registry/Authority (like the Italian "Albo Gestori Ambientali", managed by the Italian Ministry (Ministero dell'Ambiente e della Tutela del Territorio e del Mare).

Step 2 - evaluating the offers based on the weighted award criteria.

Step 3 – The Technical Evaluation Committee will open the envelope C – economic, referred to those have achieved the minimum technical score.

Step 4 – The Technical Evaluation Committee will draw up the final ranking.

The evaluation of offers for phase 3 has 4 steps:

Step 1 – assessing whether the Italian Ministry (Ministero dell'Ambiente e della Tutela del Territorio e del Mare) authorized the Phase III field testing activities, based on the evaluation of the complete dossier, including the final project design, the testing plan and the risk management plan, presented to the competent authority at the end of phase 1.

Step 2 - evaluating the offers based on the weighted award criteria.

Step 3 – The Technical Evaluation Committee will open the envelope C – economic, referred to those have achieved the minimum technical score.

Step 4 – The Technical Evaluation Committee will draw up the final ranking.

A representative of each tenderer may participate in the opening sessions of the Administrative Evaluation Committee. Each tenderer must communicate the name of its representative via e-mail at the address indicated in the Contract notice within the day preceding the session date, and a copy of an identification document with a photograph.

The access and attendance of the tenderer representative at the premises where the opening procedures will take place are subject to the observance of ADSP MAO access and safety procedures regulations, and to the exhibition of an original identification document (i.e. no copy).

The person in charge of the tenderer shall arrive at the premises of ADSP MAO at least ten (10) minutes before the times set for the opening session, in order to allow ADSP MAO staff to proceed to its identification.

During the opening session, the Administrative Evaluation Committee will open the technical offers, to verify their formal regularity, and to submit them in the course of the same meeting to the Technical Evaluation Committee, for the allocation of scores assignment for the awarding purposes.

3.8 Candidates not established in Italy

The registration in the National Register "Albo dei Gestori Ambientali" is possible for economic operators not established in Italy following the instructions available here: https://www.albonazionalegestoriambientali.it/Home.aspx or to be required at support@albogestoririfiuti.it, or by telephone, calling +39 051 631 67 77 (Tuesday and Thursday from 14.00 to 18.00).

If the information concerns a candidate established outside Italy, the Lead Procurer may request the cooperation of the competent authorities. Depending on the national law of the Member State in which the applicants are established, the applications will concern legal persons and / or natural persons, including, where appropriate, managers or any person exercising the power of representation, decision or candidate's control.

Attention: if deemed appropriate, the Lead Procurer may ask the Contractors to present a sworn statement or documents or certificates produced by the local Authorities, accompanied by an Italian translation.

3.9 Final ranking

At the end of the evaluation procedure, a ranking will be drawn up, in which the tenders will be inserted based on the overall score achieved, in descending order; this ranking list will not include those that have not achieved the minimum technical score.

The award of the contract will take place in the order of the ranking, starting from the first bidders to the last one, until the remaining budget is insufficient to fund the next best tender. The ranking will be scrolled until the possible maximum number of successful bidders is reached within the available budget.

Contracts will be awarded at the price offered by each tenderer.

4. Content & format of tenders

4.1 Format

The presentation of the offer and of the documents must take place in compliance with the following requirements:

1. Envelope A, closed and appropriately countersigned and sealed on the closing flaps, containing the administrative documentation required by sections 3.2 and 3.3. bearing the words "Envelope A - POSIDON - administrative documentation",
2. Envelope B, closed and appropriately countersigned and sealed with adhesive tape on the closing flaps, under penalty of exclusion from the tender, containing the technical offer and the documentation required by section 3.4 in the form of **Annex 5** – Phase 1 Tender form, bearing the words "Envelope B – POSIDON - technical offer" ,
3. Envelope C, closed and appropriately countersigned and sealed with adhesive tape on the closing flaps, under penalty of exclusion from the tender, containing the economic offer in the form of **Annex 8a,b** – Economic offer, bearing the words "Envelope C - POSIDON – economic offer"

4. The envelope containing the envelopes A - B - C must bear the words "POSIDON" – "DO NOT OPEN – NON APRIRE", and must be countersigned and properly sealed with adhesive tape on the closing flaps and carry the name of the Competitor outside the relative address, telephone number, e-mail address, VAT number. In the case joint tenders indications of all the components of the joint tenders must be reported.
5. The envelope (containing the A-B-C envelopes) must be received, under penalty of exclusion from the tender and at the sole risk of the sender, by the date and at the address indicated in the Contract Notice (the stamp of arrival and registration of the Lead Procurer's Protocol office will prevail). The envelopes received after the aforementioned deadline will not be taken into consideration.
6. The tenders must be signed and have a 180 days of minimum validity period.

More detailed information about the final requirements for the phase 2 and 3 offers will be provided in the call-off(s).

The tenders must be submitted to the Protocol Office of the Lead Procurer at the following address Autorità di Sistema Portuale del Mare Adriatico Orientale – Direzione Tecnica – Area Servizi Forniture ed Affidamenti - via Karl Ludwig von Bruck n. 3, 34144 Trieste (Italia).

The Protocol Office has the following schedule: from Monday to Friday: 8:30 am to 5:00 pm.

⚠ **Attention:** Tenders that do not comply with the formal requirements will be rejected**.**

4.2 Administrative section

In order to participate in the present Call for tender, each tenderer must verify possession of the requirements listed below and the absence of exclusion clauses.

The information that must be included in this section of the tender are:

a) Declaration using the **ESPD template** available for download here: https://ec.europa.eu/tools/espd and the form attached to the tender documents - **Annex 4**, attesting: respect to the absence of conflict of interest and the exclusion criteria and, stating that there are no exclusion clauses, as defined in Directive 2014/24/EU and additionally in in article 80 of Legislative Decree 50/2016;
Applicants in tender procedures must submit the European Single Procurement Document ("ESPD") in electronic form using a template provided by the European Commission. Therefore bidders must fill the form available at the above mentioned link, generate a .pdf file and save it in digital support such as CD, DVD or USB device.

b) Declaration using the form attached to the tender documents - **Annex 9**, attesting:

- Suitability to pursue the professional activity, also attaching the proof of registration and/or authorization to/by the Registry/Authority in the country of origin, with specific reference to the possession of requirements for the execution of site-decontamination interventions;
- Ability to perform R&D up to original development of the first products or services;
- Ability to commercially exploit the results of the PCP, including intangible results in particular IPRs.
- Declaration about compatibility with other public financing (on/off criterion B).

c) In case of grouping of companies, the tenders should fill the **Annex 7** Statement of joint and several liability.

d) Declaration using the form attached to the tender documents - **Annex 10**.

4.3 Technical section

Tenders must include a **technical offer** (using the form attached in **Annex 5**), containing:

- a technical project design that outlines:
    - 1. the technological advancement beyond the state-of-the-art assured by the proposed solution;
    - 2. the tenderer's idea for addressing all the requirements given in the PCP challenge description, relating both to functionality and performance;
    - 3. technical details of how this would be implemented, providing a preliminary solution design;
    - 4. technical delivery plan describing, per each Phase, the implementation activities highlighting possible dependencies among activities themselves, durations, resources involved, milestones.
- a list of the pre-existing rights *(background)* relevant to the tenderer's proposed solution, in order to allow IPR dependencies to be assessed;
- a draft business plan that explains the proposed approach to industrialize and commercially exploit the results of the PCP and to bring a viable product or service onto the market;
- a field testing proposal methodology and plan to match with the objectives of the specific Phase II and III.
- a risk assessment and risk mitigation strategy;
- a description of the research work organization and the profiles of the team members involved, based on CVs in EU pass format;
- **a digital support with the technical documentation (listed in points above) saved in pdf format;**

The information and contents provided in the technical section of the tender will be used to evaluate the tenders, on the basis of the technical award criteria.

More detailed information for the phase 2 and 3 offers (in particular on the technical implementation plan, updated business plan and list of IPRs) will be provided in the call-offs.

⚠ **Attention:** Tenders failing to meet the formal requirements will be excluded.

4.4 Financial section

The tender must include a detailed **economic offer (Annex 8a and 8b)** specifying:

- a fixed **total price** for phase 1 and an estimated total price for phases 2 and 3, broken down to show unit prices and the number of each unit needed to carry out phase 1 *(given in euros, excluding VAT but including any other taxes and duties)*,
- the **financial compensation** valuing the benefits and risks of the allocation of ownership of the **IPRs** to the contractor *(i.e. IPRs generated by the contractor during the PCP)*, either:
    - by giving an absolute value for the price reduction between the price offered in the tender compared to the exclusive development price *(i.e. the price that would have been quoted were IPR ownership to be transferred to the procurers)* in order to ensure compliance with the EU R&D&I state aid framework.

- binding **unit prices** for all items needed for carrying out phase 1 and for items that are expected to be needed for phases 2 and 3 *(given in euros, excluding VAT but including any other taxes and duties)*
- a **price breakdown** that shows the price for R&D services and the price for supplies of products (to demonstrate compliance with the definition of R&D and on/off award criterion A)
- a **price breakdown** that shows the location or country in which the different categories of activities are to be carried out *(e.g. x hours of senior researchers in country L at y euro/hour; a hours of junior developers in country M at b euro/hour)* (to demonstrate compliance with the requirement relating to place of performance in on/off award criterion C)

⚠ **Attention:** The unit prices quoted for each category of items *(e.g. hourly rates for junior and senior researchers, developers and testers)* remain binding for all phases *(i.e. for the duration of the framework agreement)*.

The economic offer should be written and justified following the form in Annex 8a and 8b.

The financial compensation for IPRs must reflect the market value of the benefits received (i.e. the opportunity that the IPRs offer for commercial exploitation) and the risks assumed by the contractor *(e.g. the cost of maintaining IPRs and bringing the products onto the market)*.

Note that when the value of the risks equals or exceeds the value of the benefits, the financial compensation offered by vendors may be zero.

The information provided in the financial section of the tender will be used to evaluate the tenders on the basis of the price award criteria.

More detailed information for the phase 2 and 3 offers will be provided in the subsequent mini-call-off(s). The price for phase 2 and 3 offers must be based on the binding unit prices in the tender and the price conditions set out in the framework agreement. Where new units/unit prices *(e.g. for new tasks or equipment)* are subsequently added to the phase 2 or 3 offers, they will become binding for the remaining phases.

Similar price breakdowns will be requested for the call-offs for phase 2 and 3.

The economic offers must be signed on each sheet by the legal representative or in any case by a person with suitable powers, under penalty of nullity.

If the competitor is a temporary association of companies, or a consortium not yet constituted in the forms of law, the technical and economic offer must be signed by all the subjects that belong to the competitor, under penalty of exclusion from the tender.

If the competitor is a temporary association of companies, or a consortium already established in the form of law, the technical and economic offer can be signed by the sole legal representative or by the procurator of the mandatory company or the consortium.

The applicable VAT regime will be that of the Lead Procurer.

4.5 Guarantees

Before the start of the Phase III, the contractor will take all responsibility in case of accidents or damage caused to persons or property of both the Authority and third parties, depending on shortcomings or negligence in the Phase III execution. In this regard, the contractor will sign the insurance covering, for the entire period of execution of the interventions, all damages suffered by

the buyers group due to damage or total or partial destruction of plants and works for a total insured value of Euro 1,0 Million (onemillioneuro/00).
The awarded tenderers shall provide, before the signature of the contract of Phase III, a liability insurance to cover any environmental damages caused during the execution of the contract for an amount equal to € 1,5 Million. Such insurance must be kept in force for the entire contractual duration thereof.

5. Miscellaneous

5.1 Language

All communication (relating to either the tender procedure or the implementation of the contract) must be carried out in English.

Tenders for phase 1 as well as offers for phase 2 and 3 call-offs must be submitted in English.

Deliverables must be submitted in English.

Any documentation in a foreign language must be accompanied by a translation in English "certified according to the original text" by the competent consular diplomatic representation or by an official translator to whom the court is to be attached.

5.2 Tender constitutes binding offer

A signed tender will be considered to constitute a firm, irrevocable, unchangeable and binding offer from the tenderer.

The signature of an authorised representative will be considered as the signature of the tender (and will be binding on the tenderer or, for joint tenders, the group of tenderers).

5.3 Unauthorized communication — Questions

The Q&A from the open market consultation can be found on and www.posidonproject.eu.

All the tender documentation and any questions and related answers can be viewed and downloaded free of charge here: www.posidonproject.eu/call-for-tender/

Any additional information and/or clarifications can be requested only in writing, by e-mail, at gare@porto.trieste.it in English until [08 March 2019].

The summary of all questions and answers will be presented in an anonymised Q&A document that will be published in the dedicated session of the project's website.www.posidonproject.eu.in english (final version planned for 15 March 2019). For phases 2 and 3, the answers will not be distributed to all contractors that successfully completed the previous phase.

Unless otherwise instructed, please do not use any other contact addresses or contact any other persons in connection with this procurement.

⚠ **Attention:** All other contacts (or attempted contacts) will be considered unauthorised and may lead to the exclusion of your tender.

5.4 Confidentiality

Tenderers must keep confidential any information obtained in the context of the tender procedure *(including EU-classified information[13])*.

5.5 Contract implementation

After the evaluation of the tenders in response to this POSIDON PCP Call for Tender, successful tenderers will be requested to sign both a framework agreement and the specific contract for phases 1 *(see the models given in Annexes 1 and 2)*. To further advance to Phase 2 and, respectively, to Phase 3, call-offs for each phase will be organized.

Monitoring

During each phase, contract implementation will be monitored periodically and reviewed against the expected outcomes *(milestones, deliverables and output or results)* for the phase. The intensity of monitoring and communication between the POSIDON Monitoring Board and the R&D services providers will increase from Phase 1 to Phase 3. In Phase 1, contractors will be asked once to shortly report their status and the issues that they are facing in the development of their solution design (milestones, deliverables and output) on paper and in meetings conducted remotely/at the Lead Procurer premises.

At the beginning of Phase 2, each contractor will be assigned a main contact person (their supervisor) from the Monitoring Board appointed by the procurers.

In Phases 2 and 3, where solutions need to be developed, there will be regular monitoring meetings between the contractor and the Monitoring Board.

The meetings will take place physically when milestones are achieved or/and when necessary, after formal communication. The contractors could be asked to discuss the results achieved in the preceding period and present their updated work plan; the monitoring board or the appointed supervisor could visit the contractor's premises to periodically monitor progress; the contractors could visit the procurer's premises when planned and specifically authorized (in particular at the start of a phase 1 to get to know better the operational environment that solutions need to be designed for and during phase 2). The contractor must cover its own costs and thus foresee personnel and travel budgets in its offer and they must be explicitly authorized for any intended technical inspections at the sites identified for the testing during the period(s) planned and communicated by the Lead Procurer.

The Monitoring Board will provide regular feedback to contractors after meetings or visits.

Payments based on satisfactory completion of milestones and deliverables of the phase

Payments corresponding to each PCP phase will be subject to the *satisfactory* completion of the deliverables and milestones for that phase.

On the Completion Date of Phase I, the Tenderer shall submit to the Lead Procurer an "End of Phase Report" regarding such Phase together with the deliverables belonging to Phase I, which shall thereupon be reviewed and assessed by the Monitoring Board in order to determine whether the Contractor has complied with the Common Challenge and the Functional requirements.

[13] Commission Decision 2015/444/EC, Euratom of 13 March 2015 on the security rules for protecting EU-classified information.

The Monitoring Board shall issue its decision regarding the satisfactory or successful completion of every Phase, within 3 weeks after the Completion Date of the Phase. In case the volume of Contractors leads to a longer evaluation process the Tenderers will be informed.

Satisfactory completion will be assessed according to the following requirements:

- if the work corresponding to that milestone / deliverable has been carried out
- if a reasonable minimum quality has been delivered
- if the reports have been submitted on time
- if the financial resources have been allocated to the planned objectives
- if the financial resources have been allocated and the work has been carried out according to the on/off award criteria (place of performance, public funding and R&D definition criteria) and
- if the work has been carried out in compliance with the provisions of the contract (including in particular verification if the contractor has duly protected and managed IPRs generated in the respective phase).

'Reasonable minimum quality' of a report means that:

- the report can be read by somebody who is familiar with the topic, but not an expert
- the report gives insight in the tasks performed in and the results
- the report is made using the end of phase report form or (if applicable) the milestone report form and the requirements of this form have been met

Reasonable minimum quality' of a demonstration (for phase 2 or 3) means:

- the demonstration can be understood by somebody who is familiar with the topic, but not an expert (for instance, somebody with operational but not technical knowledge)
- the demonstration shows how the innovation works, how it can be used and (if applicable) how it is applicable
- the demonstration is accessible to parties appointed by the procurers, unless these are direct competitors of the contractor

Satisfactory completion in each of the phases does not mean successful completion.
The assessment will consider the efforts made by contractors to take into account the feedback from the supervisor or the monitoring team.

Where the Monitoring Board judges the completion of deliverables or milestones to be unsatisfactory, the contractors can be required for clarification and to resubmit the deliverables in (1) week. In case of confirmed unsatisfactory deliverables or milestones, the Monitoring Board will communicate the rejection and the pre-payments made to the benefit of the Contractors at the beginning of a phase shall be reimbursed in full and the Framework agreement and respective Phase contract shall be terminated.

Invoices must be submitted to the Lead Procurer.

Contractors' invoices must provide:

- a **price breakdown** showing the price for R&D services and the price for supplies of products (in order to demonstrate compliance with the definition of R&D in compliance criteria A)
- a **price breakdown** showing the location or country in which the different categories of activities were performed *(e.g. x hours of senior researchers in country L at y euro/hour, a hours of junior developers in country M at b euro/hour)* (in order to demonstrate compliance with the requirement relating to the place of performance in compliance criteria C).

Payment schedule for Phase 1 will be 100% after completion of the solution design and feasibility studies (Phase 1).

Payment for Phase 2 will be split in two parts: 20% at the assignment to Phase 2 and 80% at the end of Phase 2, after the End of Phase 2 Report has been approved.
Payment for Phase 3 will be split in three parts: 20% at the assignment to Phase 3, 20% at the installation of the test series in the pilot sites and 60% after inspection and testing of test series products developed during Phase 3, after the End of Phase 3 Report has been approved.

Eligibility for the next phase based on successful completion of the phase

Eligibility for participation in the next phase will be subject to *successful* completion of the current phase.

Successful completion of a phase will be assessed by the Technical Evaluation committee against the following requirements:

- if all milestones have been successfully completed;
- if the R&D results meet the minimum functionality/performance requirements of the challenge description *(i.e. the minimum quality/efficiency improvements which the procurers set forward for the innovative solutions to achieve)*;
- if the results of the R&D are considered to be promising.

'Promising' means:

- for phase 1, that the feasibility is convincing,
- for phase 2, that based on the project feasibility, the applicability in an operational setting and the potential impact of the solution is convincing.

Please note that there is a difference between satisfactory completion and successful completion: a satisfactory completion is a requirement to receive the payment for that phase. Satisfactory completion includes completion of all the deliverables & milestones in the specific phase, and meeting minimum requirements set for that phase.

A successful completion is a prerequisite for passing from one phase to the next and includes the same aspects as satisfactory completion, but will also depend on the assessment of how promising the R&D is.

Finalisation of phase 3: Possible follow-up PPI procurements

Follow-up PPI procurements for the implementation of the innovative solutions developed in this PCP procurement to conduct the remediation intervention in the sites involved and potentially others in addition, will be subject to a new call for tenders.

5.6 Cancellation of the tender procedure

The procurers may, at any moment, cease to proceed with the tender procedure and cancel it.

The procurers reserve the right not to award any contracts at the end of the tender procedure.

The Lead procurer and the buyers group are not liable for any expense or loss the tenderers may have incurred in preparing their phase 1, 2 and/or 3 offers, in case of rejection or lack of timely and explicit authorization by the Italian Ministry to perform the Phase III field testing activities in Italy and in case of in progress replacement of the (second) testing site.

5.7 Procedures for appeal

Any legal claim, petition or application for judicial review, with regard to the present procurement procedure, whether before civil law courts or administrative courts, shall be made in Italy. By submitting a proposal, the tenderer accepts the exclusive jurisdiction of Italian courts.

Appeal procedures against decisions taken during the tendering stage and with regard to the selection of tenderers in between the different phases may be lodged with the Tribunale Amministrativo della Regione Autonoma Friuli Venezia Giulia (Administrative Law Court of Friuli Venezia Giulia) – pursuant to the Legislative Decree of 2 July 2010 n. 104, Codice del Processo Amministrativo (Code of Administrative Procedure).

The Tribunale Ordinario di Trieste (Civil Law Court of Trieste) shall have exclusive jurisdiction for any dispute or claim arising out of or in connection with the execution of the agreement entered into between the Procuring Entity and the Contractor, pursuant to the Royal Decree of 28 October 1940, n. 1443, Codice di Procedura Civile (Code of Civil Procedure).

5.8 Processing of personal data

Legislative Decree 30 June 2003, n. 196 and the ***General Data Protection Regulation (n. 2016/679)*** guarantee that the processing of data is carried out in compliance with the fundamental rights and freedoms, as well as the dignity of the data subject with particular reference to confidentiality, personal identity and the right to data protection.

The processing of data that ADSP MAO intends to carry out will be based on lawfulness and correctness in the full protection of its rights and its confidentiality pursuant to Article 13 of Legislative Decree No. 196/2003.

Therefore, the competitors are informed of the procedure that:

- the data provided by the participants will be treated exclusively with reference to the procedure for which they submitted the documentation;
- the treatment will be carried out with paper and / or IT support;
- the provision of data is mandatory to give effect to the procedure that affects competitors in the tender for the assignment of activities;
- the data controller is ADSP MAO;
- at any time the competitor can exercise his / her rights towards the data controller, pursuant to article 7 of Legislative Decree no. 196/2003.