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smart_{met} 

REQUEST FOR TENDERS

Codice CIG n. 75400928C0

Applicable to the "Smart.met" project as referred to the action entitled 'PCP for Water Smart Metering – SMART.MET as described in the Grant Agreement No 731996 associated with document Ref. Ares(2016)6330258 - 09/11/2016 available on the EU Commission participant portal

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Il Presidente

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Table of contents

Table of contents	2
Annex	4
1.1 General context & background	5
1.2 Pre-commercial procurement	6
1. Competitive development in phases to identify the solutions offering the best value for money	6
2. Public procurement of R&D services	7
3. Open, transparent, non-discriminatory approach – No large-scale deployments	7
4. Sharing of IPR-related risks and benefits under market conditions	7
5. Ownership of the results (foreground), pre-existing rights (background) and side-ground (including intellectual and industrial property rights)	8
6. Exploitation of Intellectual Property Rights	8
7. Commercial exploitation of results	9
8. Ownership of the Results and access rights to Results	10
1.3 Exemption from EU public procurement directives, the WTO Government Procurement Agreement (GPA) and EU state aid rules	11
1.4 Terms and conditions - List of acronyms	11
Definitions	11
Acronyms	16
1.5 Applicable legislation	16
1.6 Responsible for the procedure	18
1.7 EU funding	18
2.1 Description of services to be procured	19
Motivation for the PCP	19
Preparation for the PCP	20
Open market consultation	20
PCP common challenge	21
Expected outcomes (per phase)	22
Phase 1:	29
Phase 2:	30
Phase 3:	31
2.2 Tender closing time	33
2.3 Procurer(s) [and other parties involved in the PCP]	33
2.4 Contracting approach	36
2.5 Total budget and budget distribution (per phase)	37
2.6 Time schedule	39
2.7 IPR issues	41
3.1 Eligible tenderers, network, joint tenders, Consortia, EEIGs and subcontracting	42
3.2 Exclusion criteria	48
3.3 Selection criteria	50
3.4 Compliance criteria	51
3.5 Award criteria	56
Weighted award criteria	56
3.6 Evaluation procedure: Opening of tenders & evaluation	60
Appointment of the Evaluation Committees	60
Opening of tenders	60
3.7 Evaluation of tenders	61
3.8 Candidates not established in Italy	62
3.9 Final ranking	63
4.1 Format	63
4.2 Administrative section	64
4.3 Technical section	64
4.4 Financial section	65
4.5 Deposit	66

5.1 Language.....	68
5.2 Tender constitutes binding offer	68
5.3 Unauthorized communication – Questions.....	69
5.4 Confidentiality.....	69
5.5 Contract implementation.....	69
Monitoring	69
Payments based on satisfactory completion of milestones and deliverables of the phase.....	70
Eligibility for the next phase based on successful completion of the phase.....	71
Finalisation of phase 3: Possible follow-up PPI procurements	72
5.6 Cancellation of the tender procedure	72
5.7 Procedures for appeal	72
5.8 Processing of personal data	73

Annex

Annex 1	Model framework agreement
Annex 2	Model specific contracts for phases 1, 2 and 3
Annex 3	Technical specification
Annex 4	Templates for exclusion
Annex 5	Tender form and on/off award criteria
Annex 6	Template for reports or deliverables (end of phase report)
Annex 7	Statement of joint and several liability
Annex 8	Economic offer Form
Annex 9	Templates for selection criteria
Annex 10	Declaration on the form of participation and on subcontractors

1. General context & background

1.1 General context & background

In the water sector, smart metering can lead to more efficient management, through automatic reading and billing, real time leak detection, identification of abnormal consumption patterns and detection of failures in user-meters. There is a big need for better solutions to tackle these challenges.

These challenges are shared by water companies across the European Union. Against this background, several water operators from different Member States (mentioned under point 2.3 below) joined forces and established the SMART.MET Consortium, with the purpose to identify possible solutions to tackle the above mentioned challenges.

The Smart.Met Consortium partners have performed an extensive search to discover possible solutions that can cover these challenges and that are currently available on the market. The outcome of this search showed that the solutions present on the market fail to meet all the needs of water operators, regarding interoperability among systems, non-proprietary technology, battery lifetime, radio signal coverage and two-way communication.

The objective of the SMART.MET PCP is to develop a new cost-effective, efficient interoperable and based on open standard Water Smart Metering System.

The Smart.Met's objectives can be described in the following 'performance indicators':

1. a new remote reader system which is capable of:
 - a. real-time reading (within 1 minute); and
 - b. bi-directional communication; and
 - c. completing daily data transmission (by the end of the day may be once or may be transmitted in batches); and
 - d. complying with open standards (in data, security and radio protocols)
2. The real-time reading and the daily transmission should not affect the 16 years life-time of the self-powering meter (e.g. whether it is achieved by re-charging the battery or by creating a more performing battery etc.).
3. The meter should be capable of real-time reading for 2 weeks per year.
4. The developed solution should enable the procurers to activate on-demand the real-time data reading for the purpose of investigation or studies of consumption patterns, events occurrence (e.g. water pollution, network damages, general condition for maintenance planning etc.).
5. The list of functional requirements is described in detail in Annex 3 "Technical Specifications".

For detailed information see Annex 3 - Technical specification.

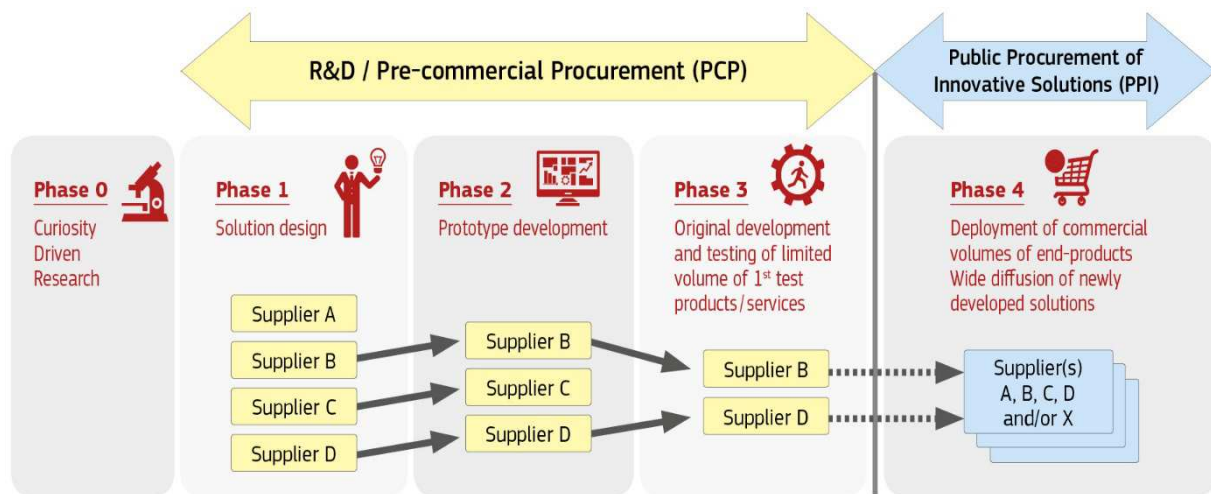
All the documentation based on the tender can be viewed and downloaded in full and free of charge by accessing: http://www.viveracqua.it/area_riservata.asp

- **codice invito:** smart.met.EU
- **password:** 3YFA55257J54

1.2 Pre-commercial procurement

The start of this PCP procurement was preceded by an open market consultation (see summary and Q&A on <http://www.smart-met.eu/open-market-consultation>). Since the Open Market Consultation did not reveal the existence of commercially available solutions that fully address the above described common challenge, the Smart.Met Consortium partners have decided to deploy this procurement as 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**:

1. 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 procurers' 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).

2. 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. PCP 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.

3. 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.

4. 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.

¹ See also Article XV(1)(e) [WTO GPA 1994](#) and the Article XIII(1)(f) of the [revised WTO GPA 2014](#).

5. Ownership of the results (foreground), pre-existing rights (background) and side-ground (including intellectual and industrial property rights)

All Pre-existing rights (Background IPR) and sideground IPR remain the property of the Party introducing the same (the Lead Procurer, SMART.MET Procurers or any third party supplier that owns it) and nothing contained in the Framework Agreement or any license contract pertaining or pursuant to the Project shall affect the ownership rights of either party (or any third party) in its Pre-existing rights.

The Contractor shall within [2] weeks of the signing of the Framework Agreement provide the Lead Procurer with (i) full information in writing about what relevant and significant Intellectual Property Rights it (and/or any of its subcontractors) holds or is using or has access to (e.g., via its sub-contractors) at the date of the Framework Agreement that pertains or may pertain to the SMART.MET PCP Project or any part thereof and (ii) a list of the software necessary for the operation of the prototype and first test series products 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 proposal for the next Phase. The Contractor must duly inform the Lead Procurer about the generation of/changes in pre-existing rights and Side-ground within [5] days from the generation /change.

The Contractor shall, upon request of the Lead Procurer or any of the SMART.MET Procurers, provide the latter non-exclusive license to use the relevant and significant Pre-existing (Background) IPR rights that are needed for using the Results and for the purpose of executing the Project as well as for non-commercial research purposes, including (clinical) trials set up to test the validity of the Results. Such licensing shall be done on fair, reasonable and non-discriminatory (FRAND) terms.

The Results and Intellectual Property Rights generated by the Contractor in the course of this agreement (Foreground IPR) shall belong to the Contractor. The Contractor will provide each of the SMART.MET Procurers an irrevocable, indefinite, worldwide, royalty-free, non-exclusive license to use, non-commercially and at no additional cost, all Project Results, including Project Intellectual Property Rights of what has been achieved with regard to the implementation of the solution design (Phase I), the prototype development (Phase II) and the original development of a limited volume of first products (Phase III). In case of Results that constitute software, the non-commercial research license will extend to all updates and upgrades thereof during the trials set up to test the validity of the Results.

If the Contractor (or any of its sub-Contractors) generates Project Intellectual Property Rights, whether the Contractor (or sub-Contractors) intends to file for protection of it or not, the Contractor shall, within 30 days from such generation, inform the Lead Procurer about the contents of such Project Intellectual Property Rights.

The Project Intellectual Property Rights shall remain vested within the Contractor. Subject to next point 7 "Commercial exploitation of results", the Lead Procurer or any of the SMART.MET Procurers shall enjoy the right to require the Contractor, upon express request from the Lead Procurer, to transfer the ownership of the Results to the Lead Procurer free of costs or to grant non-exclusive licenses to third parties on the Results and Foreground IPR developed in the Project, at fair and reasonable market conditions. The Contractor and these third parties are responsible for establishing the fair market conditions.

6. Exploitation of Intellectual Property Rights

The Contractor shall inform the Lead Procurer of any Results which are capable of commercial exploitation, whether patentable or not, within 30 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.

Unless otherwise provided in the Agreement and subject to next point 7 "Commercial exploitation of results", the Contractor shall take all appropriate and necessary measures to ensure the proper management and protection of the Project Intellectual Property Rights.

The Contractor shall at its own costs be responsible for the application, examination, grant, maintenance, management and defence of the Project Intellectual Property Rights in the Results and in particular, but without limitation, it shall ensure that:

- a) the Results of the Project are identified, recorded and carefully distinguished from the outputs of other Research and development activities not covered by the Project;
- b) prior to any publication on the Project, patentable inventions arising from the Results are identified, duly considered for patentability and, where it is reasonable so to do, patent applications in respect thereof are filed at the relevant Member State or European Patent Office; and
- c) all such patent applications are diligently executed and prosecuted having regard to all relevant circumstances.

If the Contractor becomes aware of any product or activity of any third party that involves or may involve infringement or other violation of the Project Intellectual Property Rights, or any other proprietary right on the Results, the Contractor shall promptly notify the Lead Procurer of the infringement or violation.

Unless otherwise provided in this Agreement or unless the Project Intellectual Property Rights are assigned to the Lead Procurer and the SMART.MET Procurers pursuant to next point 7 "Commercial exploitation of results", the Contractor shall take all appropriate measures to protect or defend said Project Intellectual Property Rights, or any other proprietary right on the Results. The Contractor shall have the conduct and bear the costs of such proceedings. The Lead Procurer shall however:

- a) have a monitoring/audit right on the conduct of the proceedings and the Contractor agrees to take the Lead Procurer's comments on the conduct of the proceedings in due consideration, and
- b) provide reasonable assistance to the Contractor with respect to bringing any action.

If the Contractor does not seek protection for Project Intellectual Property Rights, or any other proprietary right on the Results that should be protected, the Lead Procurer has the right to request that the results are transferred to the SMART.MET Procurers.

The Contractor shall permit the Lead Procurer to monitor the operation and effectiveness of the Contractor's procedures for the management of Project Intellectual Property Rights in such a way as the Lead Procurer considers reasonably necessary.

The Contractor shall ensure the good management of Project Intellectual Property Rights consistent with the terms and conditions of the present Agreement:

- the Contractor shall promote the dissemination of the Results of the Project; and
- where they are capable of exploitation, exploit commercially the Project Intellectual Property Rights as well as the other Results (even if they cannot be protected by Intellectual Property Rights) to generate revenue by marketing commercial applications thereof; and
- the Contractor shall refer to its participation to the project, the means of PCP related to the project and the H2020 grant of the European Commission.

7. Commercial exploitation of results

The Contractor shall take measures to ensure that Project Results are exploited commercially for at least four years after the end of the Framework agreement.

The Lead Procurer has the right to monitor how the Contractor will commercially exploit the Project Results during the 4 year period aforementioned.

If the Contractor fails to commercially exploit the Results within this period, or uses the Results to the detriment of the public interest, the Contractor shall, according to the provisions of previous point 5 "Ownership of the results (foreground), pre-existing rights (background) and side-ground (including intellectual and industrial property rights)", at the Lead Procurer's request, transfer the ownership of the Results to the Lead Procurer free of costs or sub-licenses IPRs to third parties indicated by the Lead Procurer.

8. Ownership of the Results and access rights to Results

Subject to the terms and conditions of this section, the Material shall be the sole property of the Contractor and shall be subject to the Contractor's use, commercially or otherwise, including use in publications, communications or in submissions to any governmental agency.

Delivery of hardware, software, and reports

Delivery of the solution is, where applicable, used in the sense of delivery of developed software and hardware in and for the SMART.MET PCP Project, and installation comprising all necessary components, enabling an evaluation of a working prototype and pre-series model. Technical support and adequate instruction by the manufacturer are also mandatory.

In Phase I, a delivery of hardware and/or software is not applicable. However, a feasibility study/solution exploration study and an end of Phase report are necessary.

The delivery described above is also applicable for Phase II. A sufficient number of prototype models have to be delivered by the Contractor to be able to test in all 5 locations mentioned in the PCP Call for Tender.

The delivery described above is also applicable for Phase II. A sufficient number of pre-series models have to be delivered by the Contractor to be able to test in all 5 locations mentioned in the PCP Call for Tender.

The Project Intellectual Property Rights on the aforementioned prototypes or pilot systems shall be vested in the Contractor, who shall license them to the Lead Procurer and the other SMART.MET Procurers, in accordance with point 5 "Ownership of the results (foreground), pre-existing rights (background) and side-ground (including intellectual and industrial property rights)" above.

Ownership of the Results and access rights to Results after Phase III

In case of Results that are an implementation of design specifications into simulations, prototypes, demonstrators or first products /services, the access rights are limited to a duration of the project (until June 30th 2021) and to the following purposes for fulfilling the R&D objectives of the PCP: to develop a new cost effective, efficient, interoperable, based on open standard (drinking) Water Smart Metering System; such a solution must be capable to identify performance issues, improve customer service, optimize the supply of water to the consumers. It should work both way, (i) reduction of consumption decided and operated by the consumer (receiving real time data) and (ii) decided and operated by the suppliers adapting the network to real time demand.

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 (e.g. by including a requirement to do so in their arrangements with the new owner).

In case there are procurers in the SMART.MET Procurers group that still have (or may still request) access rights to the Results, the Contractor must give them at least 45 days advance notice of its intention to transfer ownership of the results. This notification must include sufficient information on the new owner to enable the interested 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.

The Contractor is required to deposit copies of results (e.g. the source code and design specifications), under an ESCROW agreement designed to guarantee the SMART.MET Procurers group continued access to results in the case of financial bankruptcy of the Contractor (or any of its subcontractors).

1.3 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 services³ (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 communication⁵, 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 treatment in a subsequent procurement for provision of the final products or services on a commercial scale).

1.4 Terms and conditions - List of acronyms

Definitions

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

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 IV 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).

	economically advantageous tender;
“Common Challenge”	means the shared need / problem identified by the procurers in the Smart.Met 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 Procurement;
“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 SMART.MET Procurers;.
“Failure to commercially exploit Results”	means not marketing a commercial application of the Results (directly or indirectly, through a subcontractor or licensee).
“Functional Specifications”	means the specifications set out in the SMART.MET PCP Request 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: <ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> - 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

	<p>knowledge;</p> <ul style="list-style-type: none"> - 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');

<p>"Satisfactory completion of a Phase"</p>	<p>means:</p> <ul style="list-style-type: none"> - 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);
<p>"Services" and also "R&D Services"</p>	<p>means the Services being provided by the Contractor in fulfilment of the Framework Agreement and any work order issued through it;</p>
<p>"Sideground"</p>	<p>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;</p>
<p>"Sub-Contract"</p>	<p>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;</p>
<p>"Successful completion of a Phase"</p>	<p>means:</p> <ul style="list-style-type: none"> - 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 '<i>Promising</i>' means: <ul style="list-style-type: none"> - 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;
<p>"Tender Documents"</p>	<p>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</p>

	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 SMART.MET PCP Tender Notice date, which was made available on TED (Tenders Electronic Daily) at [...];

Acronyms

Acronyms	Explanation
AI	Artificial Intelligence
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
IPR	Intellectual Property Rights
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

1.5 Applicable legislation

This PCP project, the entire PCP procedure and the subsequent contract implementation will be carried out in full compliance with the provisions under Italian law and in line with the European legal framework governing pre-commercial procurement. This PCP

project will also follow the rules established under the [PCP communication COM/2007/799](#) and the associated [Staff Working Document SEC/2007/1668](#).

The law currently regulating public procurement in Italy is the Legislative Decree. n. 50 of 18 April 2016 (Code of Public Contracts). However, in the Italian regulatory context, PCP is covered by a specific exemption from the application of the Code of Public Contracts. Accordingly, pursuant to art. 158, paragraph 2 of the Code of Public Contracts, which regulates the implementation of pre-commercial procurement as outlined by the Communication of the European Commission no. 799/2007, this pre-commercial procurement is subject solely to the observance of the principles established by art. 4 of the same law. Specifically, art. 4 of the Code of Public Contracts (principles relating to excluded contracts), as mentioned in the "Comunicato del Presidente ANAC del 9 marzo 2016" (*In English: Communication of the President of the National Anti-Corruption Authority of 9 March 2016*), requires that the award of public contracts that are not or not fully subject to the provisions thereof, shall take place in accordance with the general principles of economy, effectiveness, impartiality, equal treatment, transparency, proportionality, publicity, environmental protection and energy efficiency.

Therefore, this PCP shall be solely subject to the general principles of public procurement set out above and will be awarded following an open procedure. Further provisions contained in the Code of public contracts shall only apply when specifically mentioned in this PCP Request for Tenders and by additional tender documents which, in their unity, constitute the *lex specialis* of the tender; if such specific provisions refer to further legal provisions, the latter shall also only apply if these are specifically mentioned in this PCP Request for Tenders.

Furthermore, given the above mentioned legal qualifications, the Smart.Met PCP project is also subject to the provisions of the European Treaty for the Functioning of the European Union, as confirmed by the European Court of Justice in the Commission's Interpretative Communication on the law applicable to procurement contracts not or only partially regulated by the "public procurement" directive. (2006 / C 179/02).

In addition to the above, the following legal deeds shall also apply to this PCP:

- Legge 7 agosto 1990, n. 241 Nuove norme in materia di procedimento amministrativo e di diritto di accesso ai documenti amministrativi. (GU Serie Generale n.192 del 18-08-1990)- D.P.R. 28 dicembre 2000, n. 445 Testo unico delle disposizioni legislative e regolamentari in materia di documentazione amministrativa. (Testo A). (GU Serie Generale n.42 del 20-02-2001 - Suppl. Ordinario n. 30) (*in English: Law of 7 August 1990 n. 241 regarding the general law on administrative proceedings and Presidential Decree of 28 December 2000 n. 445 regarding the consolidated text of the laws and regulations on administrative documentation*);
- D.Lgs. 2 luglio 2010, n. 104 Attuazione dell'articolo 44 della legge 18 giugno 2009, n. 69, recante delega al governo per il riordino del processo amministrativo. (10G0127) (GU Serie Generale n.156 del 07-07-2010 - Suppl. Ordinario n. 148) (*in English: Legislative Decree of 2 July 2010, n. 104 on the reform of administrative judicial procedure*),
- D.Lgs. 6 settembre 2011, n. 159 Codice delle leggi antimafia e delle misure di prevenzione, nonché nuove disposizioni in materia di documentazione antimafia, a norma degli articoli 1 e 2 della legge 13 agosto 2010, n. 136. (11G0201) (*in*

English: Legislative Decree of 6 September 2011 n. 159 regarding anti-mafia legislation);

- D.Lgs. 18 April 2016, n. 50 Implementation of directives 2014/23/EU, 2014/24/EU and 2014/25/EU on the awarding of concession contracts, on public procurement and procurement procedures of entities operating in the water, energy sectors , transport and postal services, as well as for the reorganization of the current legislation on public contracts relating to works, services and supplies - Code of public contracts);
- D.Lgs. 9 aprile 2008, n. 81 Attuazione dell'articolo 1 della legge 3 agosto 2007, n. 123, in materia di tutela della salute e della sicurezza nei luoghi di lavoro. (GU Serie Generale n.101 del 30-04-2008 - Suppl. Ordinario n. 108) (*in English*: Legislative Decree of 9 April 2008 n. 81 on the protection of health and safety at work);
- Legge 22 aprile 1941, n. 633 Protezione del diritto d'autore e di altri diritti connessi al suo esercizio (modifiche introdotte dalla Legge 248/200, dal D.Lgs. 95/2001, dal D.Lgs. 68/2003, dal D.L. 72/2004, dal D.L. 7/2005, dal D.Lgs. 118/2006, dal D.Lgs. 140/2006 e dalla Legge 9 gennaio 2008, n. 2) (*in English*: Law of 22 April 1941 n. 633 and Legislative Decree of 10 February 2005 n. 30 on the protection of copyright and other rights related to its operation);
- D.Lgs. 10 febbraio 2005, n. 30 "Codice della proprietà industriale, a norma dell'articolo 15 della legge 12 dicembre 2002, n. 273" pubblicato nella Gazzetta Ufficiale n. 52 del 4 marzo 2005 - Supplemento Ordinario n. 28 (*in English*: Legislative Decree 10 February 2005, n. 30 "Code of industrial property");
- Legge 13 agosto 2010, n. 136 Piano straordinario contro le mafie, nonché delega al Governo in materia di normativa antimafia. (10G0162) (GU Serie Generale n.196 del 23-08-2010) (*in English*: Act of 13 August 2010 n. 136 on the traceability of payments).

Tenderers are required to read, be aware of and comply with all the above mentioned legislation.

1.6 Responsible for the procedure

The person deemed solely responsible for the procedure (Responsabile Unico del Procedimento) will be dott. Diego Macchiella of Viveracqua.

1.7 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 731996 - SMART.MET (see www.smart-met.eu).

The procurement must therefore comply with the rules imposed by the EU Horizon 2020 grant agreement, in addition to the rules under the legal framework mentioned at point 1.5 above.

① 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.

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

2.1 Description of services to be procured

Motivation for the PCP

SMART.MET will drive the development of advanced smart water metering technologies through a joint Pre-Commercial Procurement (PCP), initiated and carried out by a group of public water operators having established the SMART.MET Consortium. PCP helps to improve the quality of public services through innovative solutions, increases the efficiency of R&D expenditures, reduces the supplier lock-in and speeds-up the time-to-market for firms.

The PCP launched by the water public operators within the SMART.MET Consortium aims at the development of a new cost-effective, efficient, interoperable and based on open standard Water Smart Metering System. The PCP initiative will allow to identify performance issues, improve customer service and optimize the supply and consumption, both by the water consumer (adapting consumption according to real time data) and by the water supplier (adapting water supply and the network to real time demand), provide end-users/citizens with real time data of their individual water consumption patterns as a demand management strategy to affect these patterns and reduce individual consumption.

The common challenge has been identified, defined and assessed by the procurers within the Smart.Met Consortium. Once this step has been completed, an extensive open market consultation was organized to verify these initial findings and to share the identified common need with the industry and research sector with the purpose of validating that the innovation need is suitable to be tackled with a PCP and to design properly the procurement model. The open market consultation comprised of (i) an initial questionnaire published on the project website (<http://www.smart-met.eu/omc-survey/>), inviting potential vendors to provide written contributions and (ii) Four Open Market Consultation (OMC) Meetings which were organized in four different European Member States (Italy, Spain, Belgium and Hungary). The outcome of the OMCs showed that a number of requirements are not covered by any solution found on the market while none of the identified solutions on the market covers all the other commercial requirements. An in-depth analysis has been performed, by consultation of scientific and technical publications and a prior patent search. The conclusions about the innovation need to build an innovative solution able to meet uncovered functionalities and a shared open protocol are justified by the results of the preliminary activities.

In light of the above, Pre-Commercial Procurement (PCP) seemed to best meet the objectives of the Consortium in the Smart.Met project, as this innovation procurement methodology allows for the necessary R&D for a truly novel smart metering solution to be procured in the most efficient and competitive way and with the least amount of fragmentation.

In the innovation cycle designing the transformation of an idea into a marketable product or service, PCP entails the use of competitive development in phases, which

refers to the competitive approach used in PCP by procurers to buy R&D from several competing R&D providers in parallel to compare and identify the best value for money solutions on the market to address the PCP challenge.

Preparation for the PCP

Several steps have been undertaken for a proper preparation of this PCP project (including the setting up of a Technical Assessment Committee, the training of the water companies' staff regarding the use and implementation of PCP, the identification and assessment of the common challenge and the follow-up verification through a patent search and an open market consultation).

Open market consultation

The project has benefited from an analysis of the state-of-the-art conducted by the Consortium partners in 2017, aiming at detecting innovation gaps. The study has been the starting point of the technology scanning and analysis of the state-of-the-art. Furthermore, as preparation for this PCP, a prior information notice (PIN) was published (<http://www.smart-met.eu/omc-announcement>) and an open market consultation was organized. The Smart.Met market consultation comprised of a questionnaire (<https://www.surveymonkey.com/r/WM5GFDQ>) and four market consultation events with the purpose to inform the market on the upcoming planned PCP to develop an innovative smart metering solution, to convey the Smart.Met vision for this solution and to receive feedback on the goals of the project, the feasibility and the current technological status regarding the identified common challenge (see summary and Q&A on <http://www.smart-met.eu/open-market-consultation>).

During the OMC events, the Smart.Met Consortium initiated an open dialogue with the participants (which included the following categories: potential suppliers, technology vendors/developers and water industry stakeholders), during which the market was provided with information regarding our envisaged project and given the possibility to give feedback regarding the feasibility and other aspects of the proposed project. A total number of 90 companies participated in the OMC.

Following the results of all the Open Market Consultation activities, the Smart.Met Project had a better picture of which functional requirements vendors consider achievable with currently available technologies and which instead could apply to be considered effectively an uncovered requirement. Overall it clearly emerged that the identified common challenge cannot be integrally covered with currently available solutions or solutions ready for market introduction and thus a Beyond-State-of-the-Arts Solution is needed.

The first and most relevant outcome was the lack of a unique, common, open, free accessible communication and application protocol enabling a EU-wide accepted standard. Such a protocol is the fundamental condition to ensure interoperability between solution components developed by different vendors competing on the same open market and also open the door to the interchangeability concept.

Furthermore, the following requirements following the OMC activities, are considered to be uncovered by currently available Solutions:

- a) Smart Meter Centralised Back-up and Synching
- b) Smart Meter Schedulable On-demand Bi-Directional Communication
- c) Smart Meter Self Diagnostic Alerting Functions
- d) Network Sided Leakage Detection
- e) Smart Meter Remote Firmware Update

It should be reminded that none of the currently available solutions cover all the other functional requirements that have been identified to provide for a proper solution of the Need.

For a detailed description of the technical and functional requirements, please see Annex 3 - "Technical Specification".

PCP common challenge

This procurement is for **R&D services** to develop **solutions** to tackle the following **common challenge**: there is a clear need for the development of a new cost effective, efficient, interoperable, based on open standard (drinking) Water Smart Metering System. Such a solution must be capable to identify performance issues, improve customer service, optimize the supply of water to the consumers. It should work both way, allowing for a reduction of consumption (i) decided and operated by the consumer (receiving real time data) and (ii) decided and operated by the suppliers adapting the network to real time demand. The solution will allow to decrease operating costs and better prioritize and plan infrastructure investments, preventing contractor and technology lock-in situation in the market and long-term dependency of water operators on technology providers.

Beside some unmet needs that will be addressed by the 'common challenge' to offer innovative services to better understand water consumption by Distributor and end-user, there are more advanced and uncommon functionalities described below.

Leakage detection and investigation: The potential availability of daily water consumption data will give the possibility to improve awareness of usage. The utilities will be informed of water consumption data. They will be able to compare data among different meters: water pumped into the main pipes and water used by customers. In order to detect where a possible leakage is, we need to compare the total amount of water flowing in with the total amount of water flowing out at a certain time on the network portion we are considering. This means that the clocks that are on-board on each meter need to be synchronized with a master reference clock. Through a real-time measure of flows on different portions of the meshed network and the real-time transmission of those information, it will be possible to analyse and identify the leakage point with a certain approximation. This should solve leakages detection on the network pipes, while for those to find by the final user household, very often, new meters already have a special detection algorithm based on the sensing of a continuous water flow for long periods and an alerting system to notify the problem.

Reverse Flow detection and alerting: the possibility to detect a reverse flow in the pipes that could arise from a flood incoming somewhere in the network area, it is a functionality that can be delivered by means of a human supervised control and management approach or a totally automated solution that could involve an A.I.(Artificial Intelligence) algorithmic solution. In both cases, regardless the

automation level the system could feature, an action must be carried out to close or limit the incoming potentially polluting reverse flow by means of a valve closure.

From a technical point of view, both those functional challenges involve a bi-directional transmission capability of the solution.

For a detailed description of the common challenge focus, please see Annex 3 - "Technical Specification".

The Smart.Met’s objectives can be described in the following `performance indicators’:

1. a new remote reader system which is capable of:
 - a. real-time reading (within 1 minute); and
 - b. bi-directional communication; and
 - c. completing daily data transmission (by the end of the day may be once or may be transmitted in batches); and
 - d. complying with open standards (in data, security and radio protocols)
2. The real-time reading and the daily transmission should not affect the 16 years life-time of the self-powering meter (e.g. whether it is achieved by re-charging the battery or by creating a more performing battery etc.).
3. The meter should be capable of real-time reading for 2 weeks per year.
4. The developed solution should enable the procurers to activate on-demand the real-time data reading for the purpose of investigation or studies of consumption patterns, events occurrence (e.g. water pollution, network damages, general condition for maintenance planning etc.).
5. The list of functional requirements is described in detail in Annex 3 "Technical Specifications".

With technology currently in use, there is no way to timely detect and intercept reverse flow events. If it happens it’s always too late to take an action to prevent or even to recover from such a problem.

Likewise, leakage detection, with the state of the art technology currently available on the market, is carried out by field technicians by means of noise sensors manually applied and moved along the water pipes. This process allows to get closer and closer to the noise sourced by the leakage itself until its detection.

The Smart.Met project is seeking a beyond-state-of-the-art solution to tackle all these challenges in an innovative way, to improve the quality of the service to end-users (e.g. reverse flow detection and valve closure) and to ensure efficiency improvement (e.g. through fully automated leakage detection) in terms of process innovation, execution time and lower costs.

Expected outcomes (per phase)

Here we describe the objectives, their associated output and results and the tasks to be carried out (milestones and deliverables) for each of the three phases:

Expected outcomes

Phase 1: Solution Design				
Objective:	Perform research to: 1. elaborate the solution design and determine the approach to be taken to develop the new solutions and 2. demonstrate the technical, financial and commercial feasibility of the proposed concepts and approach to meet the procurement need			
Output and results:	The technical and functional specification of the solution will be delivered along with a reference architecture. A feasibility study will describe the financial and the technical justifications to carry on the project challenge.			
Milestones and deliverables	By when?	How?	Output and results	
Milestones:	M1.1) Phase 1 Kick-off	20/12/2018	Solution design start	
Milestones:	M1.2) Feasibility Study Delivered	20/02/2019	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.
	M1.3) IPRs management	20/02/2019	Delivery of the document (see related deliverable section)	Description of the 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
	M1.4) <i>Project Phase Abstract and Phase Results Summary</i>	Respectively at the beginning of Phase 1 and within 60 days from assignment date	Delivery of the document (see related deliverable section)	Description of two more abstracts that must be enclosed to the documents of each Phase

Deliverables:	D1.1) Project Phase Abstract	See the related milestone		
	D1.2) Feasibility Study	See the related Milestone		See the related Milestone
	D1.2a) Technical Feasibility			
	D1.2b) Financial Feasibility			
	D1.2c) General Related Process reference framework			
	D1.3) IPRs Management Annex	See the related Milestone		See the related Milestone
	D1.4) End of Phase Report	See the related Milestone		See the related Milestone

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 specifications and expected costs			
Milestones and deliverables	By when?	How?	Output and results	
Milestones:	M2.0) Phase 2 Kick-off	19/07/2019	Contract assignment and Prototype Development start	
	M2.1) Solution Prototype Development Medium Term Stage demonstration	17/10/2019	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 users' needs.

	M2.2) Solution Prototype Development Final Stage demonstration	20/01/2020	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	02/03/2020		Testing and validation process completed
	M2.4) General Related Process reference framework update or confirmation			Delivery of a document containing a description of possible changes in process map due to minor changes in the final release
	M2.5) Project Phase Abstract and End of Phase Report	Respectively at the beginning and at the end of Phase 2		Delivery of two documents the abstracts of the activities of Phase 2
Deliverables:	D2.1) Solution Prototype development medium term stage	17/10/2019		
	D2.1a) Video showing Meter prototype development medium term stage	20/01/2020		Delivery of the Meter component prototype medium term release
	D2.1b) Communication Infrastructure prototype development medium term stage	20/01/2020		Delivery of the communications infrastructure component prototype medium term release

	D2.1c) Control System Software prototype development medium term stage	20/01/2020		Delivery of the Control Room software component prototype medium term release
	D2.2) Solution Prototype development final stage	02/03/2020		Delivery of the prototype components final stage release
	D2.2a) Meter prototype development final stage	02/03/2020		Delivery of the Meter component prototype final stage release
	D2.2b) Communication Infrastructure prototype development final stage	02/03/2020		Delivery of the communications infrastructure component prototype final stage release
	D2.2c) Control System prototype development final stage	02/03/2020		Delivery of the Control Room software component prototype final stage release
	D2.3) Prototype Solution testing and validation	13/03/2020		Testing and validation process completed
	D2.3a) Prototype functional, security and performance testing (component test)	13/03/2020		Component Testing and validation process for functional, security and performance completed
	D2.3b) Prototype functional, security and performance testing (integration test)	13/03/2020		Integration Testing and validation process for functional, security and performance completed

	D2.4) General Related Process reference framework update or confirmation	13/03/2020		Delivery of the document containing an updated process map
	D2.5) Project Phase Abstract and End of Phase Report	See the related milestones	Delivery of the document (see art. 4.1).	
Points to be addressed in report:				
<u>Phase 3: Pilot development and testing</u>				
Objective:	Original development and field-testing of a limited while functionally complete set of first smart metering test series			
Output and results:				
Milestones and deliverables		By when?	How?	Output and results
Milestones:	M3.0) Phase 3 Kick-off	16/07/2020	Pilot Project start	
	M3.1) Solution Pilot Site description	31/08/2020	See delivery section	
	M3.2) Solution Pilot Deployment	09/10/2020	See delivery section	Operational trial version of the solution, to demonstrate its capacity to answer to the users' needs in real world conditions deployed.
	M3.3) Progress report on research and development for new open standards	09/10/2020	See delivery section	
	M3.4) Solution Pilot Assessment of	22/03/2021	See delivery section	Assessment process completed through a final

	successful completion			demo with EU representatives
	M3.5) General Related Process reference framework update or confirmation	02/02/2021	See delivery section	Description of possible changes in process map due to minor changes in the Solution Pilot context delivered
	M3.6) IPR Management Annex	By 02/02/2021	Delivery of the document (see art. 4.1)	See the Delivery Section. Document Delivered.
	M3.7) Project Phase Abstract and End of Phase Report	Respectively at the beginning of Phase 3 and within 02/02/2021	Delivery of the document (see art. 4.1)	See the Delivery Section. Document delivered.
Deliverables:	D3.1) Solution Pilot Site description	31/08/2020		On the basis of the sites established by the Buyers, provide a detailed description of the planned works and the infrastructures involved (communication ...) and any other relevant information
	D3.2) Solution Pilot Deployment	09/10/2020	By means of trial components able to demonstrate in limited scale size the complete solution	Deployment of an operational trial version of the solution, to demonstrate its capability to answer to the users' needs in real world conditions.
	D3.3) Progress report on research and development for new open	09/10/2020		Recommendation on interoperability and standardization issues

	standards			
	D3.4) Solution Pilot testing and validation	22/03/2021		Testing and validation process completed
	D3.5 General Related Process reference framework update or confirmation			Description of possible changes in process map due to minor changes in the Solution Pilot context.
	D3.5a) Business case of the proposed and tested solution	02/02/2021		Description of the estimated costs for the implementation of the proposed and tested solution in this phase, with the Life-cycle cost (LCC) and related Business case.
	D3.6) IPR Management Annex	Within 02/02/2021	Delivery of the document (see art. 4.1)	Description of the measures conceived to protect the IPR the results of this Phase. Featuring a list with the names and location of personnel that carried out the R&D activities.
	D3.7) Project Phase Abstract and End of Phase Report	Respectively at the beginning of Phase 3 and within 02/02/2021	Delivery of the document (see art. 4.1)	Preparation of two abstracts that must be enclosed to the documents of Phase 3.

Phase 1:

M1.2) This milestone is about the description of a practical implementation of the solution, although as a pilot, along with a deeper insight on the technical and financial aspects of the real implementation.

This document outlines a feasibility study carried on by the contractor whose outcome is a preliminary verdict whether or not the solution is technically and financially viable. A much clearer indication of critical technical issues with their answer and a framework of planned cost to implement will be provided.

Beside this, a general organisational impact will be considered. Old processes will be reviewed and reshaped to adapt to the innovation brought by the solution. Brand new processes will be designed to keep up with the introduction of new functionalities never seen before.

The document will reserve a section with a summary of the main results achieved by the contractor and conclusions from Phase 1

M1.3) Every Phase must be supplemented by an annex dealing with the way IPR should be managed. In this Phase is very simple since the material to protect is just a feasibility study. Nevertheless the document will keep track of the people that have been participating in the study and the location they have been working from.

M1.4) *Project Phase Abstract* and *Phase Results Summary* are two more abstracts that must be enclosed to the documents of each Phase.

1. *Project Phase Abstract* being the goal set for the project phase within the whole project plan. The approach to follow to get there will be also part of the document. This Annex will be delivered at the beginning of Phase 1.
2. *End of Phase Report* is meant to collect all the results achieved and to compare the expected results against the actual achievements. The document will be a useful starting point for the phase next to come. It will be delivered at the end of Phase 1.

Phase 2:

M.2.0) The contract for prototype development are assigned to the selected candidates and the development activities start.

M2.1) The objective of this milestone is to demonstrate the medium term stage prototype in all of its components to be showed in lab at the contractor's premises. The procurers will come and visit the contractor lab to check the intermediate prototype capabilities and to provide possible guidance and minor correction to the work in progress prototypes.

M2.2) Likely the previous milestone, this one is meant to demonstrate the final stage of prototype in all of its functionalities, security features and performance at contractor lab premises. The procurers will attend a demonstration meeting to complete the final stage before the official testing and validation activity.

M2.3) This milestone is about the achieved completion of prototype testing and validation activity.

M2.4) Here a possible change or confirmation of the reference process framework derived from the prototype delivery.

M2.5) *Project Phase Abstract* and *End Phase Results Summary*, just like it has been seen for Phase 1, are two abstracts that must be enclosed to the documents of each Phase.

1. *Project Phase Abstract* reporting the goal set for the project phase within the whole project plan. The approach to follow to get there will be also part of the document. This Annex will be delivered at the beginning of the Phase 2.
2. *End of Phase Report*, is meant to collect all the results achieved and to compare the expected results against the actual achievements. In this Phase, the abstract must contain also the lessons learned and the technical conclusions arisen from the activities carried out. The document will be a useful starting point for the phase next to come. It will be delivered at the end of Phase 2.

D2.1) Development of the medium term stage prototype in all of its components to be showed, at the end of the development stage itself in lab at the contractor's premises. The procurers will come and visit the contractor lab to check the intermediate prototype capabilities and to provide possible guidance and minor correction to the work in progress prototypes. See related milestone section. The prototype delivery can be performed also module by module and showcased in different separate sessions.

D2.2) Demonstration of the final stage prototype in all of its components, at the end of the development stage in lab at the contractor's premises. The procurers will come and visit the contractor lab to check the final prototype capabilities and to provide possible guidance and minor correction to the work in progress prototypes. See related milestone section. The prototype delivery can be performed also module by module and showcased in different separate sessions. This activity will be followed by a thorough testing and validation step that will affect each module and the solution as a whole.

D2.3) Prototype solution testing and validation activity. This action starts from the results of the medium term and final stages and the related corrections and further guidance. It will cover functional aspects verifying the compliance of the delivered tools to the initial requirements and the ongoing corrections and guidance indications. Also security and performance will be assessed since are both a critical point for the viability of the solution. The test bed for these latter aspects will just be a laboratory and will not be a real reference test for the solution. The prototype will be tested both into its single parts (unit test) and as whole (integration test). The test must be passed in both configurations to be considered positively executed.

D2.4) An analysis will be performed about possible changes or confirmation of the reference process framework derived from the prototype evolution along the delivery lifecycle.

D2.5) Here the two standard document: *Project Phase Abstract* and *End Phase results Summary* will be written and delivered (see the related Milestone Section).

Phase 3:

M.3.0) The contract for pilot development are assigned to the selected candidates and the development and testing activities start.

M3.1) Solution Pilots Deployment of an operational trial version of the solution, to demonstrate its capacity to answer the user's needs in real world conditions. Meters will

be installed with a proper initialisation (included security aspects), communications infrastructure set up and tested, Control Room system installed and configured with security enabled.

M3.2) Deployment activity carried out installing the components of the solution coming out of the lab test Phase 2 on the pilot site to show its capability to fulfil the user's requirements.

M3.3) Progress report on research and development for new open standards.

M3.4) Assessment of successful completion process. All the test cases will be executed on site and remotely, validating the solution component through integration test and long term monitored running.

M3.5) Process Framework will be updated, changed or just confirmed following the test results and possible minor changes in the Solution Pilot Context.

M3.6) IPR management system defined for the specific Phase 3 deliverables and results.

M3.7) *Project Phase Abstracts* and *End Phase results Summary Annex* will be delivered.

1. *Project Phase Abstracts* reporting the goal set for the project phase within the whole project plan. The approach to follow to get there will be also part of the document. This Annex will be delivered at the beginning of Phase 3.
2. *End of Phase Report*, is meant to collect all the results achieved and to compare the expected results against the actual achievements. Even in this Phase 3, the *Results Summary* must contain also the lessons learned and the technical conclusions arisen from the activities carried out. It will be delivered at the end of Phase 3.

D3.1) Solution Pilots will require a detailed and exhaustive description of how to host both the meters, the possible communication infrastructure, the application systems for the Control Room

D3.2) Test and validation process will be executed respecting the test case document. All the test cases will be executed both on site and remotely, validating the solution component through unit test and integration test. Test will be carried on every sort of component: meters, communications infrastructure and application system of Control Room. A long term running period will be performed and monitored for solution performance, reliability and quality of Service.

D.3.3) Progress report on research for new open standards aimed to interoperability.

D3.4) Solution Pilot testing and validation: Testing and validation process completed.

D3.5) A document will be prepared with a new version of Process Framework. It will be updated, changed or just confirmed following the test results and as a consequence of possible minor changes in the Solution Pilot Context.

D3.5a) Business case of the proposed and tested solution. The business case is looking for the reasoning for starting an investment. It will must provide the justification for the investment. Provide a summary of the initial cost estimates and the strengths and

weaknesses of each option. To develop the Business case consider using the most reliable international guides (where there will be set at least: Benefits, Total Costs over n Years, NPV, Implementation Costs, Ongoing Costs, Implementation Risk, Conclusion).

D3.6) A document will be prepared about IPR management system defined for the specific Phase deliverables and results. It will be delivered as specified in art. 4.1.

D3.7) Here the two standard document: Project Phase Abstract and End Phase results Summary will be written and it will be delivered as specified in art. 4.1.

2.2 Tender closing time

Tender closing time will be: **20/09/2018 12.00h CET.**

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**: VIVERACQUA SCARL, Lungadige Galtarossa, 8 - 37133 Verona - 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 its name and in the name and on behalf of the following **buyers group**:

- CONSORCIO PARA LA GESTION DE SERVICIOS MEDIOAMBIENTALES DE LA PROVINCIA DE BADAJOZ (PROMEDIO) – SPAIN
- EAU DE PARIS – FRANCE
- SYNDICAT DES EAUX ET DE L'ASSAINISSEMENT ALSACE MOSELLE (SDEA) - FRANCE
- COMPAGNIE INTERCOMMUNALE LIEGEOISE DES EAUX (CILE) SCRL – BELGIUM
- VIVAQUA – BELGIUM
- FŐVÁROSI VÍZMŰVEK ZRT. (BUDAPEST WATERWORKS PLC.) – HUNGARY

The lead procurer is part of the buyers group.

The procurers in the buyers group have the following background/profile:

VIVERACQUA S.c.a.r.l. - ITALY

VIVERACQUA is a Public Equivalent Body established in 2011 that plays an overarching role in the water management of the Veneto Region in Italy. It is a consortium of 12 Integrated Water Management Public entities of the Veneto Region that identified the need to jointly manage part of their activities. VIVERACQUA covers all the Veneto Region area and manages a catchment area of 593 municipalities and 4.8 million inhabitants, with revenues of over 680 million Euros per year and plans for investment over the next 20 years estimated around 4 billion euro. VIVERACQUA is central to the sustainability of water resources in the region. In fact, its main objective is to reduce the final cost paid by users of the integrated water service, increase the quality of service and the environmental sustainability of the operations and water resources. In this context, research activities are performed to advance the quality of the service and the conservation of water. VIVERACQUA is a member of "Aqua Publica Europea", an international association of public water service companies, which work to bring the attention of the European Institutions to the needs of the operators of public water services, and to communicate with the similar companies to other EU countries.

VIVERACQUA is the Lead Procurer within the Buyers' Group.

CONSORCIO PARA LA GESTION DE SERVICIOS MEDIOAMBIENTALES DE LA PROVINCIA DE BADAJOZ (PROMEDIO) – SPAIN

PROMEDIO, Environmental Management Consortium of the Provincial Government of Badajoz, was created in order to implement strategic planning in the mid/long-term for contributing to sustainable development of the province, giving high-quality response to immediate and future environmental needs. PROMEDIO provides its services to towns under 20,000 inhabitants, which means the 93% of the towns in the area, with a total population of 372,000, more than the 50% of the provincial total, on an area, and here is the challenge, of 21,766 km².

Therefore, PROMEDIO is created with the aim of establishing itself as a municipal manager of those services concerning the environment, both urban and rural, with emphasis on those activities related both to the Integrated Water Cycle (collection, purification, distribution and Wastewater Treatment) and with the complete cycle of collection and transportation of all types of waste, Municipal Solid Waste (MSW) from all of its members.

PROMEDIO is a member of the Buyers' Group.

EAU DE PARIS – FRANCE

Since 1 January 2010, Eau de Paris is the public company in charge of the production and the distribution of water in Paris. As the sole interlocutor of users and subscribers, Eau de Paris manages the entire water circuit, from capture to the tap of consumers. It also guarantees the quality and the pressure of the water. Eau de Paris samples, transports, treats and distributes on average 483,000 cubic meters of drinking water every day to 3 million users. She manages customer relations and raises public awareness of water issues. It takes care of maintaining its heritage and keeping itself at the forefront of research. It also offers businesses and communities alternatives to drinking water through unsafe water supplies. Paris's drinking water network represents 2,000 km of pipelines, 70% of which are on the right bank of the Seine and 30% on the left bank. 95% of drinking water pipes are in sewers or galleries and can be visited on foot.

The unique structure of this network as well as the various annual campaigns of verification of the pipes make it possible to detect and to repair very quickly any leak. Paris thus has one of the best drinking water networks in France with a yield of over 92%.

EAU DE PARIS is a member of the Buyer's Group.

SYNDICAT DES EAUX ET DE L'ASSAINISSEMENT ALSACE MOSELLE (SDEA) – FRANCE

Formed in 1939, the SDEA is a "syndicat mixte", an authority associating municipalities and intermunicipal cooperation bodies, the Urban Community of Strasbourg and the Bas-Rhin department, the French subnational authority between region and municipality. Overall, the SDEA operates on behalf of almost 500 municipalities and 800,000 inhabitants with a budget of 200 million of euros in 2014 and employing 550 people. The members of the SDEA transfer all or part of their competence regarding the management of water i.e. drinking water production, transport and supply, wastewater and rainwater collection and treatment. As members, these local authorities elect their representatives to the deliberative and decision-making bodies governing at local, territorial and global levels.

SDEA is a member of the Buyer's Group.

COMPAGNIE INTERCOMMUNALE LIEGEOISE DES EAUX (CILE) SCRL – BELGIUM

CILE (Compagnie Intercommunale Liégeoise des Eaux) is the second biggest public operator in Wallonia in charge of the production and distribution of drinking water for about 600.000 people living in the 24 municipalities constituting the company. The individualization of the consumption is one of the multiple obligations of the distributor of water in this Region. So more than 250.000 meters are now in place and the reading is annual either by a manual control either by transmission of the information by the consumer himself.

By using a smart metering technology, it would be probably possible to reduce the unrecorded volumes and the leaks thanks to a continuous management of the distribution networks. Moreover, it would offer a better service to the consumer by informing him for an abnormal consumption. And finally it would allow to protect the local network of the company from a reverse flow (by transmitting this information to the general dispatching service and/or coupling the meter with an automatic valve).

CILE is a member of the Buyer's Group.

VIVAQUA SCRL – BELGIUM

VIVAQUA (Brussels water distribution and sewerage inter municipality) is a cooperative company owned exclusively by the 19 municipalities of Brussels. The Brussels Intercommunal authority manages the drinking water supply network and sewage network. VIVAQUA is the only drinking water supplier of the Brussels Region. The Brussels Intercommunal is also in charge of flood protection. The flood protection is managed in collaboration with the SBGE, the Brussels public urban wastewater treatment company.

VIVAQUA carries out studies, research, development and construction of drinking water and sewage networks. In the Brussels Region, it currently has 339,126 traditional meters for 1,175,173 inhabitants and 625,105 housing. 2/3 meters serve several households. Indeed, in the Region, the buildings are usually old and only 1/3 of the households has its own meter. It is also common that households and small businesses share a same meter. 2/3 housing share meters which is an obstacle for the development of a responsible consumption. In 2015, the "typical" household (2 people) having its own meter consumes 30-35 m³/pers./year. The "typical" household delivered by a shared meter consumes 40 m³/pers./year. The meter reading is annual. VIVAQUA is looking for a smart metering technology which can

transmit data once or twice per day. Thanks to that daily reading, we would be able to:

- reduce the unrecorded volumes, for instance, detecting leaks (13 % in 2015);
- warn consumers of high consumptions, repair quickly any potential water leak and

adapt the interim invoices;

- reduce the number of unpaid invoice (€ 656,343 of bad debts in 2015).

VIVAQUA is a member of the Buyer's Group.

FŐVÁROSI VÍZMŰVEK ZRT. (BUDAPEST WATERWORKS PLC.) – HUNGARY

Budapest Waterworks is a 148 years old water utility company serving 2,3 million customers in the Hungarian capital – the 9th biggest city of Europe – and several settlements in the agglomeration of the city. Apart of water extraction, distribution and supply, there are several sewage treatment plants in the portfolio of the company. The

ownership is distributed among the served municipalities, with a vast majority of Budapest. The water supply is based on 740 river bank filtration wells along the river Danube. The water distribution is ensured through a 5.200 km long network that is split into more than 90 pressure zones. The production capacity reaches 1 million m³ per day, the annual water supply is more than 16 million m³. The customer portfolio covers 260.000 connections with main meters and more than a million sub-meters that belong to the accounting base. One of the main achievements of the company is the reduction and maintenance of non-revenue water below 16%. Apart of serving the customer base with outstanding quality water, the company is active on external markets with improvement of operational processes (e.g. network management, non- revenue water optimization), managing construction activities (e.g. water treatment plants) and other water engineering activities. Budapest Waterworks is actively participating in the activities of several local and international organizations.

- VIZMUVEK is a member of the Buyer's Group.

PCP: the following entities are not involved in the buyer group and will not take ownership rights or intellectual property rights:

- OIEau FRANCE [coordination]
- ARAGON PARTNERS SRL - ITALY [technical expert]
- UNIVERSITE DE LIMOGES - FRANCE [technical expert]
- FOUNDATION NUEVA CULTURE OF THE AGUA -SPENIA [technical expert]
- AQUA EUROPEAN PUBLIC - BELGIUM [Dissemination]
- BEDIN SARA - ITALY [PCP expert]

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 (governing all 3 Phases, as further detailed below) and a specific contract for phase 1 will be awarded to an estimated number of 8 contractors, provided there is a sufficient number of eligible proposals.

A call-off will be organised for phase 2, with the aim of awarding a minimum of 4 phase 2 contracts, provided there is a sufficient number of eligible proposals. 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 contractor's labs.

A second call-off will be organised for phase 3, with the aim of awarding a minimum of 2 phase 3 contracts, provided there is a sufficient number of eligible proposals. Only offers from contractors that successfully completed phase 2 will be eligible for phase 3. Phase 3 field-testing is expected to take place at 5 locations, which will timely be decided by the procurers in the Smart.Met Consortium.

The framework agreement sets 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.

A brief 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 report and deliverables of the previous phase have been evaluated by the Evaluation Committee and after the contractors have been informed of successful completion of the previous phase. Accordingly, only the contractors that *successfully* completed the previous phase will be invited to make offers for the next phase. More details are provided in section 5.5.

2.5 Total budget and budget distribution (per phase)

The total budget available to fund Smart.Met PCP contracts is 3.240.000,00 euro (VAT excluded). All prices and payments will be in Euro. The project expected duration is until May 2021.

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

		Expected number of contractors	Maximum budget per contractor	Maximum total budget per phase
Phase 1	Solution design	8	30.000,00€	240.000,00€
Phase 2	Prototyping	6	250.000,00€	1.500.000,00€
Phase 3	Field testing	3	500.000,00€	1.500.000,00€
Total				3.240.000,00€

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 90% pursuant to art. 72, paragraph 3, no. 3 D.P.R. 633/1972. This should be done by applying VAT to only 10% of the invoiced amount and annotating in the invoice: "*L'operazione è non imponibile al 90% ai sensi dell'art. 72, comma 3, n.3 D.P.R. 633/1972*".

This PCP will result in a Framework Agreement with three phases: Phase 1 Solution design and feasibility study; Phase 2 Prototyping; and Phase 3 Original Development of test series and field testing. For Phase 1, a maximum budget of 240.000,00 EUR (excl. VAT) is available, for Phase 2 a maximum budget of 1.500.000,00 EUR (excl. VAT) is available and for Phase 3 a maximum budget of 1.500.000,00 EUR (excl. VAT) is available.

For Phases 1 and 2, 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 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). 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 8 suppliers in Phase 1, a number of 6 suppliers in Phase 2 and a number of 3 suppliers in Phase 3.

Timeline of the payments:

	Pre-payment	Payment after completion of the phase	Total
Phase 1	10%	90%	100%
Phase 2	20%	80%	100%
Phase 3	30%	70%	100%

The phases

Descriptions and phases are as follows:

- Phase 1 - Solution exploration and design** is intended to demonstrate the feasibility of proposed concepts for new solutions. Phase 1 will have a total duration of 4 months, out of which 3 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 30.000,00€ (excluding VAT) against a total budget of 240.000,00€. An expected number of 8 R&D suppliers will be awarded Phase 1 contracts. The expected output from Phase 1 R&D suppliers is an end of phase report describing the results of the feasibility study.
- Phase 2- Prototyping** is intended for the development and evaluation of prototypes from the more promising concepts in 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 challenge. 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. Participation in Phase 2 is dependent upon successful completion of Phase 1. Phase 2 will have a total duration of 7 months, out of which 6 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 250.000,00€ (excluding VAT) against a total budget of 1.500.000,00€. An expected number of 6 R&D suppliers will be awarded Phase 2 contracts.
- Phase 3: Original development of a test series and field testing** is intended for the original development of a limited volume of first products test series and field testing activities. More specifically, it aims to verify and compare the full feature set and performance of different solutions in real-life operational conditions (urban, rural and mixed). 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 5 different sites, indicated to the

bidders by the Lead Procurer, each in a different country (in the territories where Buyers operate in France, Italy, Spain, Hungary, Belgium - for more general information see the Buyers websites) ensure that a performance comparison can be made between the various environmental and infrastructural conditions. Participation in Phase 3 is dependent upon successful completion of Phase 2. Phase 3 will have a total duration of 12 months, out of which 10 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 500.000,00€ each (excluding VAT) against a total budget of 1.500.000,00€. An expected number of 3 R_D suppliers will be awarded Phase 3 contracts.

2.6 Time schedule

Planned time schedule	
Date	Activity
27/06/2018	Publication of contract notice in TED
10/09/2018	Deadline for requesting tender documents
04/09/2018	Deadline for submitting questions about tender documents and for requiring technical inspection
14/09/2018	Technical inspections in the pilot sites, under request
10/09/2018	Deadline for lead procurer to publish replies to questions (Q&A document)
20/09/2018	Deadline for submission of tenders for the framework agreement and phase 1
24/09/2018	Opening of tenders
23/10/2018	Tenderers notified of decision on awarding contracts
27/11/2018	Stand & still period
07/12/2018	Signing of framework agreements and phase 1 specific contracts
07/12/2018	Issue of the invoice for the Pre-payment for Phase 1 as detailed in the framework agreement
11/12/2018	Publication of contract award notice in TED
11/12/2018	Start of phase 1
20/12/2018	Names of winning phase 1 contractors and their project abstracts sent to EU and published on SMART.MET PCP project website
20/12/2018	Remote KOM and/or visit of phase 1 contractors to the premises(s) of the lead procurer to learn about the operational boundary conditions governing the design of targeted solutions
20/02/2019	Deadline for phase 1 final milestone(s)/final report/deliverable(s)
27/03/2019	Phase 1 contractors notified as to whether they have completed this phase satisfactorily and successfully
27/03/2019	End of phase 1
27/03/2019	Payment of balance for phase 1 to contractors that completed this phase satisfactorily

08/04/2019	Launch call-off for phase 2 (only offers from contractors that successfully completed phase 1 are eligible)
29/04/2019	Deadline for submitting questions on phase 2 call-off documents
06/05/2019	Deadline for lead procurer to circulate replies to questions to phase 2 bidders
13/05/2019	Deadline for submitting phase 2 offers
14/05/2019	Opening of phase 2 offers
28/05/2019	Contractors notified of decision on awarding phase 2 contracts
27/06/2019	Stand & still period
04/07/2019	Signing of phase 2 specific contracts
04/07/2019	Issue of the invoice for the Pre-payment for Phase 2 as detailed in the framework agreement
04/07/2019	Start of phase 2
12/07/2019	Names of winning phase 2 contractors and their project abstracts published on SMART.MET PCP project website and sent to EU
19/07/2019	Remote KOM and /or visits of phase 2 contractors to the premises(s) of the procurer(s), where applicable
17/10/2019	Deadline for phase 2 interim milestone(s)/deliverable(s)
20/01/2020	Video of the lab testing of the prototype developed during phase 2
02/03/2020	Deadline for submission of phase 2 final milestone(s)/final report /deliverable(s)
09/03/2020	Demonstration of prototype for the EU technical review of phase 2
26/03/2020	Phase 2 contractors notified as to whether they have completed this phase satisfactorily and successfully
03/04/2020	End of phase 2
03/04/2020	Payment of balance for phase 2 to contractors that completed this phase satisfactorily
08/04/2020	Launch call-off for phase 3 (only offers from contractors that successfully completed phase 2 are eligible)
29/04/2020	Deadline for submitting questions about phase 3 call-off documents
04/05/2020	Deadline for lead procurer to circulate replies to questions to phase 3 bidders
15/05/2020	Deadline for submitting phase 3 offers
16/05/2020	Opening of phase 3 offers
15/06/2020	Contractors notified of decision to award phase 3 contracts
08/07/2020	Stand & still period
13/07/2020	Signing of phase 3 specific contracts
13/07/2020	Issue of the invoice for the Pre-payment for Phase 3 as detailed in the framework agreement
13/07/2020	Start of phase 3

13/07/2020	Names of winning phase 3 contractors and their project abstracts published on SMART.MET PCP project website and sent to EU
16/07/2020	Remote KOM and/or Visit of phase 3 contractors to premises(s) of procurer(s), where applicable
31/08/2020	Deadline for phase 3 interim milestone(s)/deliverable(s)
09/10/2020	Field-testing of products/services developed during phase 3
02/02/2021	Deadline for submission of phase 3 final milestone(s)/final report/ deliverable(s)
22/03/2021	Final demonstration of products/services developed during phase 3 (including to EU representatives)
14/05/2021	Phase 3 contractors notified as to whether they have completed this phase satisfactorily and successfully
14/05/2021	End of phase 3
30/06/2021	Summary of the lessons learnt and the results achieved by each contractor during the PCP sent to EU for publication purposes.
20/05/2021	Payment of balance for phase 3 to contractors that completed this phase satisfactorily

2.7 IPR issues

This paragraph should be read together with the information included in section 1.2 points 5, 6, 7 and 8 above.

Ownership of results (foreground)

Each Contractor will keep ownership of the IPRs attached to the results it generates during the PCP implementation. 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 Smart.Met Buyer’s group have the right to:
 - access results, on a royalty-free basis, for their own use, non-commercially 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 limited volume of first products (Phase 3), and the pre-existing rights that are needed to perform the Project for the purpose of executing the Project as well as for non-commercial research purposes+
 - grant (or to require the Contractors to grant) non-exclusive licences to third parties 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 members of the Smart.Met Buyer’s group have the right to require the Contractors to transfer ownership of the IPRs if the Contractors fail to comply with their obligation to commercially exploit the results (*see below*) or in case they use the results to the detriment of the public interest (*including security interests*).

Commercial exploitation of results

The contractors are expected to commercially exploit the results of the R&D undertaken in the PCP within a period of 4 (four) years after the end of the framework agreement.

To assure commercial exploitation of the R&D results the members of the Smart.Met 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 and providing evidences to the EU standardization bodies*, so to pave the way for open standards. 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.

Declaration of pre-existing rights (background)

The ownership of pre-existing rights will remain unchanged.

The framework agreement contains a provision that describes in more detail the rights and obligations of the different parties regarding the pre/existing rights and results.

3. Evaluation of tenders

3.1 Eligible tenderers, network, joint tenders, Consortia, EEIGs 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 operators from any country**, regardless of their geographic location, size or governance structure.

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 not participating to the tender may submit an offer, for the same tender, as single entities or in a joint bid.

According to the provisions of article 45, paragraph 2, letters b) and c) of the Code for Public Contracts, when submitting a bid in response to this Cal 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 from the procedure of both the consortium and the company belonging to the consortium; non-

compliance with these provisions will also trigger the application of article 353 of the Italian Penal Code.

In case of a tender submitted by a consortium, according to the provisions of Article 45, paragraph 2, letters b) and c) of the Code for Public Contracts, 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.

Joint tenderers/Temporary Association of Companies/Consortia, EEIGs and Business Networks

A) In case of **temporary association of companies already established** in the forms of law, each of the associated companies must present all the documentation and all the required declarations.

It should be noted that the mandate must result from authenticated private deed and the special power of attorney must be conferred to the legal representative of the parent company in the form of law. The mandate and the special power of attorney are also admitted, both of which are the only deed drawn up by means of a notarial deed.

The power of attorney should follow the national legislations⁶.

B) The participation of **temporary associations pursuant to art. 45 paragraph 2 letter d), Legislative Decree 50/2016, not yet established** in the forms of law.

In this case, the documentation presented must provide:

- the indication of the company qualified as the future leader Company;
- the declaration of commitment that, in case of award of the tender, the same companies will confer in the form of law special collective mandate with representation to the mandatory Company, which will stipulate the contract in the name and on its own behalf other participants;
- an indication of the specific services object of the assignment, or parts of them, that the single grouping companies undertake to perform;

And they will necessarily have to regulate, under penalty of exclusion from the tender procedure, the following aspects:

- project management, such as those on the governance structure and decision-making procedures;
- intellectual property such as provisions on the transfer of results, their protection, use and right of access to pre-existing know-how;
- duration of the agreement, which must be at least equal to that foreseen for the conclusion of all the phases of this procedure;
- technicians such as the roles of each partner, the description of the resources made available to the partners and the work planning;
- procedures and conditions relating to the access of new partners and/or changes in the grouping (eg cases in which a partner leaves or a new one is added);
- law to be applied in case of conflict, with the election of the competent court and the penalties that derive for non-compliance with the contract.

Furthermore, the following contents must be present:

⁶ 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.

- special and exclusive collective mandate, with representation, even of a trial, of the groupings against one of them, said representative. This act is irrevocable and its revocation for just cause has no effect on the Lead Procurer. The Lead Procurer, however, can directly assert the responsibilities of the principals;
- acceptance of the obligation of joint and several liability towards the Lead Procurer, as well as towards the subcontractor (if the recourse to the subcontracting institute is allowed by the tender rules) and suppliers;
- acceptance of the prohibition to participate in the present competition with more offers, whether they are presented individually or in an associated form.

The signing of the contract of all group members, carried out by the respective legal representatives, whether Italian or European Union citizens or foreigners legally residing in Italy, will be certified according to the form of art. 21 co.1 Presidential Decree 445/2000; if instead these subjects were foreigners not regularly residing in Italy and not citizens of the European Union, the administrative authentication is necessary.

The technical/economic offer 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.

C) Consortia, EEIGs and Business Networks are allowed to participate in tenders under the same conditions as temporary associations of companies.

In the case of consortia and EEIGs already established in the form of law, the declarations requested to the mandatory company of a temporary association already established in the form of law, may be presented by the legal representative or procurator of the consortium or EEIG.

In the case of consortia and EEIGs already established in the forms of law, the deed of incorporation of the consortium or of the EEIG in original must be produced in support of the administrative documentation, or in authentic copy pursuant to the D.P.R. 445/2000, or in copy accompanied by a declaration with which the legal representative certifies its conformity to the original.

Groupings of companies (Consortia) may participate in this PCP tender procedure, provided that their participation is in accordance with the principles of EU and applicable national competition law. The following requirements apply for joint tenders:

- The members of a Consortium must jointly appoint a lead contractor and a party authorized to act in the name and on their behalf; For that purpose we recommend to sign a consortium agreement upfront;
- All members of the Consortium are individually tested against the Exclusion Criteria.
- The members of the Consortium must jointly meet the Selection Criteria.
- All members of the Consortium must accept joint and several liability by completing and adding '**Annex 7 - Statement of joint and several liability**';

- Each member of the Consortium must be listed in the professional register or trade register or a foreign equivalent in accordance with the legislation in force in the country where it is established;
- the tendering board may exceptionally authorise changes in the composition of a Consortium during the time of the Framework Agreement and/or the formation of a new Consortium different from the one that tendered at the beginning of the tendering process. Nevertheless, any such authorisation, to be provided in writing at the lead procurer's discretion, shall not apply if:
 - It implies the entry of new participants different from those tendering individually or jointly at the beginning of the SMART.MET Procedure, or of participants previously withdrawn or excluded from said procedure or in default under the framework agreement or under the phase contracts.
 - It leads to a reduction of the SMART.MET 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 individual entities or to join other consortia).
 - The new bidder resulting from the change no longer meets the selection criteria required under section 3.3. SMART MET – PCP Request for tenders
 - It occurs during the execution of the relevant phase contract. Notwithstanding, a change during the execution of the phase contracts could exceptionally be allowed by the procuring authority in the event of the insolvency of one of the members of the consortium or of corporate restructuring operations affecting one or several of the members of the tendering group, owing to the merger, take-over, transformation or assignment of a company or business unit.

The aggregations of companies belonging to a business network, as provided by art. 45, paragraph 2, lett. f) of the Code for Public Contracts, must comply with the regulations regarding temporary business groupings. Specifically:

- a) **if the network has a common body with power of representation and own legal personality (so-called partnership-entity)**, the aggregation of network companies takes part through the common body, which will be the mandatary, if the related requirements will be met. The common body may indicate only few of the companies belonging to the partnership as tender participants, however, it must be one of them;
- b) **if the network has a common body with power of representation but without own legal personality (so-called partnership-agreement)**, the aggregation of network companies takes part through the common body, which will be the agent, if it meets the requirements needed for the agent and if the network agreement mandates the common body to take part or submit bids for certain types of tender procedures. The common body may indicate only few of the companies belonging to the partnership as tender participants, however, it must be one of them;
- c) **if the network has a common body without the power of representation or if the network does not have a common body, or if the common body does not have the necessary qualification requirements**, the aggregation of network companies takes part as constituted or constituting temporary business groupings, and must fully comply with the related rules (see National Anti-Corruption Authority determination n. 3 of 23 April 2013).

The role of principal/appointed representative of a temporary business partnership can also be taken by a consortium, as provided by art. 45, paragraph 1, lett. b), c) or by a sub-association, as temporary business partnership or constituted ordinary consortium or an aggregation of network companies.

For this purpose, if the network is endowed with a common body with representation power (with or without legal personality), this body will take the form of a legally appointed representative of the sub-association. If, instead, the network is endowed with a common body without the power of representation or without a common body, the sub-association legally appointed representative role is taken by the companies belonging to the partnership that are taking part to the tender, entitled by a mandate, as of art. 48 paragraph 12 of the Code, giving evidence of the shares distribution.

For subcontracting (Phases 1, 2 and 3):

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.

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 procurer 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 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.
- 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 SMART.MET 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

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 of a subcontractors number of less than three;
- 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.

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 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.

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	A) Declaration of honour (Annex 4)
B) Exclusion grounds as defined in Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014	B) Declaration of honour (Annex 4)
C) Exclusion grounds as defined in article 80 of Legislative Decree 50/2016	C) 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 fulfil the selection criteria must provide also declaration on honour 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 grounds as defined in Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014

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 and included in Annex 4.

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	Proof regarding enrolment in one of the professional or trade registers kept in their Member State of establishment.
B) Ability to perform R&D up to original development of the first products or services	Declaration of the capacity (i.e., R&D staff), materials and equipment that are available to the tenderer for research, prototyping and limited production and supply of the first set of products or services. Description of previous experience in similar projects in the last 10 years.
C) Ability to commercially exploit the results of the PCP, <i>including intangible results in particular IPRs</i>	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

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.

B) Ability to perform R&D up to original development of the first products or services

Tenderers must have:

- the capacity (i.e., R&D staff), tools, material and equipment to:
 - carry out research and lab prototyping
 - 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 a description of relevant reference and /or previous projects (executed during the last 10 years) which reflect the competences and capacity of the Tenderer in the different phases and domains of the SMART.MET project, such as research, development, prototyping and testing. These references will be based on previous experience of the proposed team of the Tenderers and /or other members of the joint consortia and/or subcontractors who will be working on the project, in similar projects.
- Provide proof of the capacity, tools, materials and equipment available to carry out research and lab prototyping and proof the capacity to produce and supply a limited set of first products or services, as well as demonstrate that these products or services 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 Compliance criteria

Tenders must comply with the following compliance criteria:

Compliance criteria	Evidence
A) Compliance with the definition of R&D services	Tender form (Annex 5)
B) Compatibility with other public financing	Tender form (Annex 5)

C) Compliance with the requirements regarding the place of performance of the contract	Tender form (Annex 5)
D) Compliance with ethics requirements	Tender form (Annex 5)
E) Compliance with security requirements	Tender form (Annex 5)

The offers for each phase will be evaluated against these criteria.

 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. The R&D services need to be in compliance with requirements on Research and development Services as defined in the most recent version of the Frascati Manual (Proposed Standard Practice for Surveys on Research and Experimental Development OECD, 6th Edition, 2002, ISBN 978-92-64- 19903-9, pp 29-50).

R&D covers fundamental research, industrial research and experimental development, as per the definition given in the [EU R&D&I state aid framework](#)⁷. 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.⁸ 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 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. The purchase of commercial volumes of products or services is not permitted. This could be the scope of a follow-up PPI procurement project which is a completely separate project from the present Smart.Met PCP Project.

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 evidence is 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;
- 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 three phases may include only items needed to address the challenge in question and to deliver the R&D services described in the request for tenders

⁷ See Point 15 of the [Commission Communication on a framework for state aid for research and development and innovation](#) (C(2014) 3282).

⁸ See Article XV(1)(e) [WTO GPA 1994](#) and the Article XIII(1)(f) of the [revised WTO GPA 2014](#).

- the offers for all three phases must offer services matching the R&D definition above

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*.

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 51% 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 51% 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](#)⁹.

The following evidence is required:

- the financial 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
- 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

⁹ [List of H2020 associated countries.](#)

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

D) Ethics and research integrity

Tenders will be excluded if they:

- do not comply with the following rules:
 - ethical principles (*including the highest standards of research integrity, notably as set out in the [European Code of Conduct for Research Integrity](#)¹⁰, and, in particular, avoiding fabrication, falsification, plagiarism and other research misconduct*)
 - applicable international, EU and national law
- include plans to carry out activities in a country outside the EU if they are prohibited in all Member States
- include activities that do not focus exclusively on civil applications
- do not comply with the following ethics requirements:
 - The real time gathering of the personal water consumption could allow the tracking of personal behaviour, indirect identification of persons in home etc. Security in AMR is about encrypted consumption data transmission and anti-tampering countermeasures.

Citizens will be recruited for the field testing activities via the procurers who will ask their individual clients to consider voluntary enrolment. During the PCP's Phase 3, the tested solutions will be verified and scored on accuracy for purpose by the procurers and other concerned final end-users in real-life operational conditions. Field testing will be undertaken at five sites established by the procurers, in Europe. No personal data shall be exchanged with or transferred to non-EU countries. Likewise, no personal data shall be exchanged with or transferred to EU countries either. Previously collected data will NOT be used in the field tests. The consortium confirms that the ethical standards and guidelines of Horizon 2020 will be rigorously applied, regardless of the country in which the research is carried out. Furthermore, copies of the relevant ethics approvals from the host EU country and non-EU country will be submitted to the Commission. Tenderers must be aware of this procedure and respect it.

- Informed consent procedures: Copies of templates of Informed Consent Forms and Information Sheets will be provided to the Commission by the procurers. These must be drafted in a language and terms understandable to the citizens involved.

If the tender involves activities that raise ethical issues, the tenderer must submit an ethics self-assessment that:

- describes how the tender meets the legal and ethical requirements of the country or countries where the tasks raising ethical issues are to be carried out
- explains in detail how the tenderer intends to address the ethical issues identified, in particular as regards:
 - objectives (*e.g. dealing with vulnerable populations and dual-use goods*¹¹)
 - methodology (*e.g. involvement of children and related consent procedure and protection of data collected*)

¹⁰ The [European Code of Conduct for Research Integrity](#) of ALLEA (All European Academies).

¹¹ See Article 2(1) EU Export Control Regulation No [428/2009](#).

- the potential impact (e.g. issues relating to the dual use of goods, environmental damage, stigmatisation of particular social groups, political or financial retaliation, benefit-sharing and malevolent use of results).

① For information on ethics issues, see the guidance for EU grant beneficiaries [How to complete your ethics self-assessment](#).

⚠ Attention:

Call-offs for phases 2 and 3 may request that this information be updated in the offers submitted for these phases.

Before starting the particular task that raises ethical issues, contractors must provide a copy of:

- any ethics committee opinion required under national law; and
- any notification or authorisation for activities raising ethical issues required under national law.

The framework agreement contains a provision on ethics.

E) Compliance with security requirements

Tenders will be excluded if they do not:

- comply with EU, national and international law on dual-use goods or dangerous materials and substances
- comply with data protection requirements as provided under the new GDPR.

Tenders themselves must not contain any classified information.

If the output of activities or results proposed in the tender raise security issues or uses EU-classified information, the tenderer must show that these issues are being handled correctly. In such a case, tenderers are required to ensure and to provide evidence of the adequate clearance of all relevant facilities. They must examine any issues (*such as those relating to access to classified information or export or transfer control*) with the national authorities before submitting their offer. Tenders must include a draft security classification guide (SCG), indicating the expected levels of security classification.

⚠ Attention:

If necessary for the tender procedure or for performing the contract itself, contractors will be requested to ensure appropriate security clearance for third parties (e.g. for personnel).

Call-offs for phases 2 and 3 may request that this security information be updated in the offers submitted for that phase.

Before starting the particular task that raises security issues, contractors must provide a copy of any export or transfer licences required under EU, national or international law.

The framework agreement and/or the specific contracts contain a provision on security.

① For information on security, see the guidance for EU grant beneficiaries: [Guidelines for the handling of classified information in EU research projects](#).

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

3.5 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 compliance criteria (section 3.4), and the administrative instructions (section 4).

Tenders that meet all the requirements, will be assessed to determine which tenders are the most promising and will be invited to participate in the next phase. This will be determined by assessing the offer based on the following award criteria as specified below. These criteria will guide assessors through evaluation of delivered results. It is to show tenderers what the main criteria are and how the results will be evaluated and scored. However, a detailed description of the Smart.Met challenge and specifications can be found in the common challenge & functional specifications document (Annex 3). Please read carefully.

The evaluation of the received tenders will be based on technical, economic and organizational feasibility of the tenders. We will award the contract 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 the 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, the level of completeness and responsiveness of the solution to meet the functional requirements, technical validity and robustness of the solution proposed, the commercial and standardization potential, the ability to minimize the whole life-cycle cost, the quality of the risk management and mitigation plan, Consistency and quality of the work organization in relation to the goals.

Weighted award criteria

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 SUBCRITERIA		Coefficient
Poor	The sub-criterion has not been analyzed and/or no aspect concerning the sub-criteria has been sufficiently analyzed.	<i>0,00</i>
Insufficient	Some aspects concerning the sub-criteria have not been sufficiently analyzed.	<i>0,25</i>
Fair	All aspects concerning the sub-criteria have been sufficiently analyzed.	<i>0,50</i>
Good	All aspects concerning the sub-criteria were analyzed in a clear and exhaustive way.	<i>0,75</i>
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.	<i>1,00</i>

- 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 Selection Board 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 assessors 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 assessors 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.

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

Where:

- 20,00 = maximum number of assignable economic points;
- V_{O_i} = 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 (less than or equal to: Phase 1 € 30,000.00; Phase 2 € 250,000.00; Phase 3 € 500,000.00) 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 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	20	
B) level of completeness and responsiveness of the solution to meet the functional requirements	20	
C) technical validity and robustness of the solution proposed	20	
D) commercial and standardization potential	10	
E) ability to minimize the whole life-cycle cost	5	
F) quality of the risk management and mitigation plan	5	
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	15	
B) level of completeness and responsiveness of the solution to meet the functional requirements	20	
C) technical validity and robustness of the solution proposed	20	
D) commercial and standardization potential	10	
E) ability to minimize the whole life-cycle cost	10	
F) quality of the risk management and mitigation plan	5	
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	15	
B) level of completeness and responsiveness of the solution to meet the functional requirements	20	
C) technical validity and robustness of the solution proposed	15	
D) commercial and standardization potential	10	
E) ability to minimize the whole life-cycle cost	10	
F) quality of the risk management and mitigation plan	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 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: Opening of tenders & evaluation

Appointment of the Evaluation Committees

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 evaluators, including at least one expert in Italian procurement law.
 - ii. Evaluators 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 award criteria.
- b) **Technical Committee** for the evaluation of tenders based on the award criteria. The committee shall be composed of 5 evaluators 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.

Opening of tenders

The tenders will be opened on 24 September 2018, 12.00h CET.

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

Step 1 - checking whether the tender has been received in due time

Step 2 – checking 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 - Checking whether the tenderer is not in one of the situations covered by the exclusion criteria

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

Step 5 - For tenderers passing Step 4, evaluating the tender based on the compliance criteria

Step 6 - For tenders passing Step 5, submitting the tender to the Technical Evaluation Committee, which shall proceed to evaluate the tender based on the award criteria.

Step 7 - excluding any tenders that fail to comply with the selection criteria or that are in a situation to meet any of the exclusion criteria mentioned in this Call for Tender.

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 Viveracqua 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 Viveracqua at least ten (10) minutes before the times set for the opening session, in order to allow Viveracqua 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.

3.7 Evaluation of tenders

Tenders shall be evaluated in a non-discriminatory manner, in accordance with all the legal requirements provided for in article 77 of the Legislative Decree nr. 50/2016.

All valid tender submissions that have passed the administrative evaluation will be evaluated by the Technical Evaluation Committee against the award criteria stated in the previous section

Each Evaluation Committee (Administrative and Technical) shall respect the general principles agreed upon with the acceptance of the assignment the aforementioned commissioners will produce, pursuant to art. 47 of the D.P.R. n. 445/2000, the declaration on the non-existence of the causes of incompatibility and abstention pursuant to art. 77, paragraphs 4, 5, 6 and 9 of Legislative Decree no. 50/2016 and s.m.i., as well as art. 35-bis, paragraph 1, lett. C), of Legislative Decree n.165 / 2001, introduced by art. 46, paragraph 1, of Law n. 190/2012 as well as art. 51 of the Regio

Decreto 28 October 1940, n. 1443 Code of Civil Procedure, as well as a declaration on the absence of conflicts of interest.

Each member of the Technical Evaluation Committee will receive the technical proposals and will first evaluate the tenders on paper individually. After individual assessment on paper, the technical evaluation committee will come together physically and compare their evaluation per tender. The scoring system and procedure is described in par. 3.5. The criteria and the method for evaluating the bids for Phase 2 and 3 will essentially be based on the criteria and the method used in evaluating the original tenders, but may be elaborated or developed in further detail within those frames. The evaluation committee and this procedure will be the same for the evaluation of bids for Phase 2 & 3.

Once the evaluation of the technical offers has been completed, a specific public session will be scheduled by the Lead Procurer, with prior notice, during which the Technical Evaluation Committee will communicate the technical scores assigned to the tenderers, followed by the opening of the financial offers and the reading of prices offered by the tenderers. In the event of failure to subscribe the Financial Offer, which is in any case attributable to the tenderer, or other non-essential elements, the Lead Procurer will request the necessary regularization.

In the same session, the Technical Evaluation Committee will proceed to the evaluation of the financial offers, according to the criteria and procedures described in section 3.5 above, proceeding to the allocation of the scores by applying the formula indicated in the section 3.5 above and to draw up the provisional ranking list.

The provisional award will be made to the tenderers who submitted the most economically advantageous tender, i.e., they will have obtained the highest overall scores following the sum of the overall scores awarded, resulting from the Technical Offer and the Financial Offer.

In the event that the tenders of two or more tenderers obtain the same overall score, but partial scores for the price and for all the other different evaluation elements, the tenderer who obtained the best score on the Technical Offer will be placed first in the ranking.

In the event that the tenders of two or more tenderers obtain the same overall score and the same partial scores for the Technical Offer and the Financial Offer, the Technical Evaluation Committee will define the final ranking through a draw in a public session.

Tenders will be considered valid and binding for a period of 180 (one hundred and eighty) days from the expiration of the date set for receipt. Viveracqua may ask the tenderers to extend this initial term.

3.8 Candidates not established in Italy

If the information concerns a candidate established outside Italy, Viveracqua 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 Contracting Authority 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 competitor to the last one.

The ranking will be scrolled until the possible maximum number of successful bidders is reached.

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 section 4.2 of the present Specifications bearing the words "Envelope A - SMART.MET - 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 in the form of Annex 5 – Tender form, bearing the words "Envelope B - SMART.MET - 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 8 – Economic offer, bearing the words "Envelope C - SMART.MET - offer economic "

4. The envelope containing the envelopes A - B - C must bear the words "SMART.MET", 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.

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 Viveracqua Protocol will prevail). The envelopes received after the aforementioned deadline will not be taken into consideration.

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

Tenders that do not comply with the formal requirements will automatically be rejected.

All the Deliverables should be delivered to The Protocol Office that has the following schedule: from Monday to Friday: 8:30 am to 5:00 pm.

The Lead Procurer may request clarification or additional evidence where there is any doubt.

More detailed information about the final layout requirements for the phase 2 and 3 offers will be provided in the call-off for that specific phase.

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 form attached to the tender documents - Annex 4, attesting: respect to the exclusion criteria and absence of conflict of interest, stating that there are no exclusion clauses
- b) Declaration using the form attached to the tender documents - Annex 9, attesting:
 - Suitability to pursue the professional activity;
 - 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.
- 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, in case of Subcontracting and/or Groups of economic operators - temporary associations.

4.3 Technical section

Tenders must include a technical offer, containing:

- a technical plan that outlines:
 - o 1. the tenderer's idea for addressing all the requirements given in the PCP challenge description, relating both to functionality and performance; and
 - o 2. technical details of how this would be implemented. Constraints and dependencies that should be taken care of. Critical aspects or expected issues that should be promptly prevented.
 - o 3. A technical delivery plan describing, per Phase, the implementation activities highlighting possible dependencies among activities themselves, durations, resources involved, milestones.
 - o A test plan proposal methodology which can adapt to each Phase to match with the objectives of the specific Phase.
- a draft business plan that explains the proposed approach to commercially exploit the results of the PCP and to bring a viable product or service onto the market
- a list of the pre-existing rights (background), if ever, relevant to the tenderer's proposed solution, in order to allow IPR dependencies to be assessed
- a risk assessment and risk mitigation strategy

- a reply to the question "Does this tender involve ethical issues? (YES/NO)" and if YES, an ethics self-assessment, with explanations how the ethical issues will be addressed (see section 4.2)
- a reply to the question "Does this tender involve: activities or results that may raise security issues and/or **EU-classified information**¹² as background or results? (YES/NO)" and if YES information on how these issues will be addressed (see section 4.2)

To facilitate the bidding process for both bidders and evaluators it is recommended to use the attached Annex 5.

Attention:

Tenders failing to meet these requirements will be excluded.

The technical part must provide a *detailed* technical offer for phase 1 (*including an explanation of the methodology, a work plan and details of deliverables and milestones*), and must specify the plans for and objectives of the subsequent phases 2 and 3 and beyond (*including a plan for commercial exploitation of the results*).

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

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.

4.4 Financial section

The tender must include a detailed **economic offer** specifying:

- 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 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*).

In addition, the financial section must include:

- 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 in 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)
- 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:

¹² See [Decision 2015/444/EC, Euratom](#) on the provisions on security of EU-classified information.

- 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.

⚠ 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 following the form in Annex 8.

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*).

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

More detailed information for the phase 2 and 3 offers will be provided in the call-off. 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.

4.5 Deposit

In order to be able to sign the Framework Agreement, the awarded tenderers shall provide, as a guarantee of the obligation undertaken with the Framework Agreement, a deposit. Such a deposit must be provided before the conclusion of the framework agreement and must be kept in force for the entire duration thereof.

The deposit is released in accordance with the specific provisions of article 103 of the Code of public contracts. For the purpose of signing the Framework Agreement, the Contractors will be asked to guarantee a deposit equal to the 10% of the contractual amount related to Phase I only. Furthermore, a deposit shall be guaranteed also for each subsequent Phase Contract for phase II and III, in each lot, equal to the 10% of the amount of the relevant lot. Viveracqua will then release the deposit guaranteed by the Contractor in the previous phase.

The surety guarantee must expressly provide for the waiver of the prior enforcement of the principal debtor, the waiver of the exception referred to in Article 1957, second paragraph, of the Civil Code, as well as the operation of the same guarantee within fifteen days, on simple request written by the contracting authority.

Guarantees and insurance policies must comply with the standard schemes approved by the Minister of Economic Development in agreement with the Minister of Infrastructure and Transport and previously agreed with the banks and insurance companies or their representatives.

The deposit will be constituted to the benefit Viveracqua - p.i. 04042120230 – and must be issued by insurance companies duly authorized, pursuant to Law 348/1982 subsequent amendments and additions, or by financial intermediaries registered in the special list (Legislative Decree 1/9/1993 n.385 - article 107), which perform exclusively or predominantly issuing guarantees, authorized by the Ministry of the Economy and Finance.

The following provisions must be included:

- "the guarantee provided with this deposit is valid until Viveracqua releases the principal debtor and arrange the consequent restitution of the original deposit";
- "the guarantor is jointly and severally obliged with the principal debtor to the payment of the guaranteed debt, without any benefit of prior enforcement of the principal debtor; furthermore, the guarantor undertakes to pay, without any previous consent from the guaranteed debtor, which will not be entitled to rise any objections about the payment, and within the limits of the guaranteed amounts, when formally requested by Viveracqua, by registered letter with acknowledgment of receipt; the guarantor waives to rise any exception in relation to the same payment. The payment shall be executed within 15 days from the date of receipt of the request for payment, given that for each day of delay in the payment, in addition to the guaranteed amounts, interest at the statutory rate in force shall be paid";
- "no failure to pay the premium, the premium surcharges, nor any fees agreed for the deposit release can be claimed on Viveracqua";
- "the competent court for the settle of any dispute arising against Viveracqua is the one in which Viveracqua has its registered office"

The proof of the deposit must be presented within 35 days from the Viveracqua request. The non-submission of the final guarantee, the presentation of a guarantee of a lower value or without one or more of the characteristics indicated above, can be remedied through the procedure of preliminary investigation. In particular, the Lead Procurer assigns to the tenderer a term, not exceeding ten days, for the presentation, integration or regularization of the deposit.

In case of failure by the Contractor to remedy the Lead Procurer will proceed to the exclusion of the tenderer from the tender procedure and to the award of the framework agreement and/or phase contract to the tenderer who follows in the list.

The mentioned deposit cover the charges for lack of, or improper, performance, and it will be released in full, at the contractual expiration, upon the provided request that the exact fulfilment of all the obligations arising from the relevant Phase Contract has been verified.

The deposit may be reduced pursuant to art. 93 paragraph 7 of Legislative Decree no. 50/2016 smi. It is specified that pursuant to art. 93 paragraph 7 above, the reductions, if cumulative, are to be calculated by applying the first reduction on the total amount of the deposit, while the further reductions must be applied to the remaining amount. In order to take advantage of the reductions, the certificates must be presented, in certified copy, issued by the certifying subject.

In the case of micro-enterprises, small and medium-sized enterprises and joint tenders or ordinary consortia consisting exclusively of micro-enterprises, small and medium-sized companies, the deposit will be reduced by 50%.

In the event the deposit is reduced pursuant to art. 93 paragraph 7 of Legislative Decree no. 50/2016, the same must be accompanied by the relative certifications / requirements in the course of validity in original or authentic copy pursuant to art. 18 of Presidential Decree 445/00 smi or a copy pursuant to art. 19 or of the art. 19 bis same decree or self-declaration signed in simple form by the owner or by the legal representative or by the attorney of the company or by each grouping company certifying the possession of these certifications / requirements with attached photocopy of an identity document of the subscriber.

Should the amount of the deposit be reduced due to the application of penalties, or for any other cause, the successful tenderer will have to provide for the reintegration.

In the case of tenders submitted by consortia of operators, the provisional deposit is presented, on an irrevocable mandate, by the lead tenderer in the name and on behalf of all the tenderers in the consortium, without prejudice to the joint and several liability of all the members of the team.

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. This documentation must be inserted in the generic area enclosed with the "Qualification or Technical or Economic Response" of interest.

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 <http://www.smart-met.eu/open-market-consultation>.


The summary of all questions and answers will be presented in an anonymised Q&A document that will be published on <http://www.smart-met.eu> in English (final version planned for). For phases 2 and 3, the answers will not be published, but 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.

Any additional information and/or clarifications can be requested only in writing, by mail, at smartmet.procurement@viveracqua.it by **04/09/2018**.

All the documentation based on the tender and any questions and related answers can also be viewed and downloaded in full and free of charge by accessing: http://www.viveracqua.it/area_riservata.asp

- codice invito: smart.met.EU
- password: 3YFA55257J54

 **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 information¹³).

5.5 Contract implementation

After the assessment of the tenders in response to this 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 Smart.Met Consortium and the R&D 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.

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

At the beginning of Phase 2, each contractor will be assigned a main contact person (their supervisor) from the monitoring team 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 team.

The meetings will take place physically during every deliverable 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 team or supervisor could visit the contractor's premises to periodically monitor progress; the contractors could visit the procurer's premises (in particular at the start of a phase to get to know better the operational environment that solutions need to be designed for). The contractor must cover its own costs and thus foresee personnel and travel budgets in its offer.

The monitoring team 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 Evaluation committee in order to determine whether the Contractor has complied with the Common Challenge and the Functional Specifications.

The Evaluation committee 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 monies have been allocated to the planned objectives
- if the monies 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 operated and maintained
- 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 Assessment Committee 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 Assessment Committee 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:

- 10% at the beginning of Phase 1.
- 90% 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 two parts: 30% at the assignment to Phase 3 and 70% 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 assessment 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 the feasibility, the applicability in an operational setting and the potential impact of the product 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 a *commercial volume* of the innovative solutions developed in this PCP procurement will be subject to a new call for tenders.

5.6 Cancellation of the tender procedure

The Smart.Met procurers may, at any moment, at their sole discretion, stop the tender procedure and cancel it.

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

The procurers are not liable for any expense or loss the tenderers may have incurred in preparing their offer.

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 Regionale del Veneto (Administrative Law Court of Veneto) – pursuant to the Legislative Decree of 2 July 2010 n. 104, Codice del Processo Amministrativo (Code of Administrative Procedure).

The Tribunale Ordinario de Verona (Civil Law Court of Verona) 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 guarantees 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 Viveracqua 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 Viveracqua;
- at any time the competitor can exercise his / her rights towards the data controller, pursuant to article 7 of Legislative Decree no. 196/2003.