Summary of OMC Questions and Answers (Copy of D2.4)

Questions and answers during OMC's

Referring to the Annex I presentation and to the consequent meeting discussions, additional questions arose by the participants.

Referred to a specific slide of the presentation, in the following two paragraphs are included the further information provided during the slideshow to better specify the subjects:

1. General information about the Funded Project and related issues

   a. Intellectual Property Rights (IPR)

2. Solution Delivery: architectural infrastructure, technical characteristics, functional requirements

General information

Rif Slide 5 - Finance

The European Commission provides funds to support solutions required and defined by buyers and identified and then proposed by vendors.

Rif Slide 10 – PCP Pre-Commercial Procurement

PCPs allocate the ownership of Foreground Intellectual Property Rights (IPR) generated by participating R&D providers to those R&D providers themselves. All Background IPR remains normally the property of the party that generated it. However, there may be licensing obligations relating to Background Intellectual Property Rights in a PCP. Since the purpose of PCP is to encourage both the development and diffusion of innovative solutions, PCP contracts often include an obligation to commercialize the R&D results generated in the PCP. A so called 'IPR call-back provision' provides that, if an R&D provider that participated in the PCP would abuse or would fail to commercialize the R&D results that it generated in the PCP (foreground IPR) against the public interest (within a certain time-frame defined in the PCP contract) the ownership of foreground IPR shall revert to the public procurer.

All possible results arising from Phase I activities and their intellectual property rights that could be the first step of a possible solution, or part thereof, will remain belonging to the vendor company. SmartMet Partners are obliged to publish an abstract of the solution presented, as agreed with each coordinator, as well as the PCP results not covered by IPR's. All the contractual conditions will be explicitly clarified beforehand in the Call for Tender (CfT). In general term, there is an obligation for the project to assure dissemination of an abstract of the solutions selected, as agreed with each contractor, as well as the PCP results not covered by IPRs. In any case, it is a precise task of each single contractor to protect his own generated IPRs.

As a consequence, any contractor is allowed to exploit commercially its newly developed solutions.. In return, the price defined in the tender must contain any financial compensation in the case where the IPRs would be transferred to The Procurers.

In return, the tendered price must contain a financial compensation for keeping the IPR ownership compared to the case where the IPRs would be fully transferred to the Procurers. Moreover, the Procurers must receive rights to use the R&D results for internal use and licensing rights basing on certain conditions. For the avoidance of doubt, the PCP supplier will retain the ownership of the IPR developed during the PCP, The Procurer will retain a right to use the IPR after the PCP (not paying for the IPR again, should the specific solution be procured in a post-PCP public procurement), and the Contractor shall for its retained ownership to the IPR offer a Price for the PCP services including a discount.

Rif Slide 10-12 – PCP Pre-Commercial Procurement / Timeline / Milestones

The SmartMet Project will be developed following the rules of a PCP framework.

PCP awards R&D contracts to a number of competing contractors at the same time, in order to evaluate and compare different approaches to solve the problem. It thus offers innovators an opportunity to show how well their solution performs against the competitor's one. The R&D is split into three phases (solution design – Phase I-, prototyping – Phase II-, and original development & testing – Phase III-). Evaluations after each phase progressively identify the solutions that offer the best value for money and meet the customers' needs. This phased approach allows selected successful contractors to improve their offers for the next phase based on lessons learnt and feedback from procurers in the previous phase.

Rif Slide 36 – More information?

All SmartMet materials will be published also on the project web site and consequently available to all OMCs participants.

Solution Delivery: architectural infrastructure, technical characteristics, functional requirements

Rif Slide 6 – Expected benefits

SmartMet-TAC (The Technical Assessment Committee) defined 10 €/year per meter as acceptable maximum operating cost per unit.

Rif Slide 17 – SmartMet general reference functional architecture

Referring to the possibility to apply to the tender as a procurer of a specific components of the entire solution, the SmartMet project underlines that is not possible.

Rif Slide 18 – SmartMet Innovation Need

Meters must be compliant with quality standards already defined by European Commission. Moreover, when the tender will be issued, a detailed specification list of mandatory and optional additional requirements will be available.

Referring to the presence of possible restrictions or preferences on measurement technologies on board the meter, SmartMet project states that any metering technology complying with the existing metrics and technical legislation can be used.

The additional requirement is that the sensor and the transceiver units have to be in two separate and distinct components, even if integrated into the same device. This solution allows to change the transceiver unit in case of new transmission protocols needs or technology update without interfering with metrological constraints or technical regulation infringements of the meter.

SmartMet project does not require any acoustic sensor for leakage detection on board the meter. The capabilities to set the frequency of the daily transmissions (how many times per day) and to synchronize meters clocks to a reference master clock valid throughout the three architectural layers (Smart meter layer, Data Transfer Layer, Control Room Layer) allows to perform flawlessly a leakage detection functional process and many other functionalities whose execution or monitoring may require time accuracy if not even event synchronisation.

Rif Slide 18 – SmartMet Innovation Need

The update of the firmware on board the meter must be performed remotely by the AMR/AMM application.

Rif Slide 19 – SmartMet Innovation Need

The transmission of the data from meter to AMR/AMM Utility Service Providers (see Figure 3 - Functional Architecture) must be from 1 to 4 times in a day. This frequency must set by AMR/AMM application.

The meter must record, in a specific inner on-board persistent memory storage:

- The measurement data at least every 15 minutes;
- At least the last 20 alert events data.

The inner memory storage has to be large enough to preserve data for at least a rolling window of 2 months of elapsed time with no possibility to be erased or overwritten.

The inner memory storage must be transmitted on request to AMR/AMM application.

Better performances of the meter in terms of Data Measurement Recording Frequency, number of alert events and memory storage capacity of the database have to be deeply balanced with the direct consequences on the battery lifecycle duration.

Rif Slide 20 – SmartMet Innovation Need

Battery lifetime should be as long as the lifetime of the meter, that is 16 years.

The SmartMet project encourages the development of battery re-charging mechanisms to contribute to guarantee the 16 years meter battery lifecycle duration.

Rif Slide 23 – SmartMet Innovation Need

The SmartMet project requires that the smart meter will be capable to perform autonomously reverse flow detection. In this case the meter, when the reverse flow occurs, must automatically close immediately the valve, wake up the transmission module and send a specific alert to AMM/AMR application in the Control Room.

Rif Slide 25 – SmartMet Innovation Need

Regarding open protocols, the open standard will be chosen and adopted among those already available or defined from scratch. Security protocols in communications have to be defined or took from those already available and used for smart metering in gas o electricity services .

Moreover, it is required a bidirectional communication between Smart Meters and Control Room.

In the tender documents, all specific needs of such protocols will be defined.

The European Commission does not perform a specific evaluation and approval task on protocols, but will assess the overall solution, including protocols.

Rif Slide 28 – SmartMet Innovation Need

Before tender publication, SmartMet Project Committee will decide whether or not to include specific water quality parameters sensors into the meter requirements. At the moment those sensors are not considered as required.

Rif Slide 33 – Functional requirements

All the metrological characteristics will be compliant with the existing legal requirements and sector regulations.

Rif Slide 26 – SmartMet Innovation Need

Detailed requirements for the AMM/AMR application are not yet defined.