Validation and Prioritization of the EPOS Service Provision

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The EPOS infrastructure is halfway in its implementation phase and several results, crucial to progress toward the pre-operational and testing phase, have been achieved so far.

These achievements have been presented and discussed within the EPOS community during a recent event held in Bucharest (Romania) from October 3rd to October 6th 2017. This event encompassed the EPOS Annual Meeting (October 3rd and 4th), the Implementation Phase Council (IPC) meeting (October 4th), the Validation Workshop (October 4th and 5th), and the Service Coordination Board (SCB) meeting (October 6th), all together bringing along more than 100 scientists actively contributing to the EPOS Implementation Phase.

The EPOS IP project is dedicated to the implementation of the EPOS data and service provision through a sustainable architecture that takes into account technical, legal, governance, and financial point of views. According to the EPOS IP roadmap, the first two years of the project were dedicated to the integration and development of the Thematic Core Services (TCS) and Integrated Core Services (ICS) ensuring interoperability and constructing the EPOS delivery framework (Figure 1). The EPOS data and service provision has been described in terms of the Data, Data-products, Services and Software (DDSS) elements that each TCS has identified to characterize its offer to users and stakeholders through the novel EPOS hub, namely the ICS-C.

In particular, during the Annual and the IPC meetings intense debates have created awareness on the EPOS impact and highlighted the efficiency and success of the EPOS functional architecture and of the adopted IT solutions for TCS-ICS interoperability. The meetings also provided the opportunity to discuss the forthcoming challenges EPOS has to tackle to succeed its implementation phase and move toward the operational one. The
third year of the EPOS IP timeline, indeed, is dedicated to validate the data and service provision (Figure 2). This Validation Phase, foreseen since the design of EPOS IP, will serve to identify which services, being validated from a technical, legal and financial perspective will enter in the pre-operational phase becoming financially eligible for the General Assembly of the future EPOS-ERIC. The others will remain in the TCS roadmaps for further developments and future validations.

The Validation Phase started in October 2017 and comprises three checkpoints distributed over one year. The first checkpoint, scheduled on November 2017, will initiate the whole procedure; the second one, in March/April 2018, has been planned as a mid-term action; the third one, expected in August/September 2018, will conclude the validation phase.

The entire validation process has been largely discussed and agreed within the whole EPOS community since the EPOS IP project kick-off in October 2015 and in many subsequent meetings involving the scientific and IT communities and the governing bodies, e.g. the Project Development Board, the Board of National Scientific Representatives, the Board of Governmental Representatives. The latter, actually accepted to be the final decision body for validating the EPOS service provision.

During the summer, before the beginning of the validation phase, a Technical Readiness Assessment has been undertaken. This has been an internal verification action to identify those DDSS elements declared “ready for validation” by each TCS community and their consequent implementation to the Integrated Core Services, as well as recognizing those remaining on the roadmap. The Technical Readiness Assessment also allowed the adoption of a focused approach to TCS-ICS interoperability accelerating the implementation of the EPOS metadata catalogue. The current implementation of DDSS elements includes 55 web-services. This service prioritization will be repeated during the validation phase to validate those services kept on assessment during the Technical Readiness Assessment. In practice, this internal verification allowed EPOS to address the validation phase by joining a bottom up approach with top down indications to prioritize services and determine the contents of the validation process.

Validation is a key step toward the operation of the EPOS research infrastructure. Therefore, a dedicated event, the Validation Workshop, has been organized to finalize the validation methodology, timeline and criteria. The workshop represented a unique opportunity to agree within the whole EPOS community the roadmap of the validation phase and to distinguish between the internal verification aimed at checking the fitness for use of the services under implementation and the external validation aimed at proving the fitness for purpose (i.e., utility) of the EPOS research infrastructure. This distinction is crucial because it will also allow
performing an internal verification of the contents of the prioritized DDSS and services. The way to design, discuss, share and adopt this strategy among Project Development Board, Service Coordination Board and Board of National Scientific Representatives is a demonstration of the effectiveness of the EPOS management procedures.

During the Validation Workshop and the subsequent SCB Meeting (attended by all TCS and ICS work package leaders and by coordinators of the legal, financial, governance and technical work packages) it has also been agreed to have a two-levels external validation:

- **TCS-domain level**: specific external evaluation of each TCS and the ICS-C by the Impact Assessment Groups, composed of experts proposed by each TCS and nominated by BNSR.
- **EPOS level**: a panel of external evaluators selected by the BNSR and composed of legal, scientific, financial and managerial experts will conduct an overarching evaluation of the EPOS Enterprise and its delivery framework, as decided by the BGR in June 2017.

The external evaluations coordinated by the BNSR on behalf of BGR will be responsible of the validation and the check of the fitness for purpose of the EPOS infrastructure. The validation criteria concern technical, legal, governance and financial issues.

The Validation Workshop and the Service Coordination Board meeting also resulted in actions to finalize the actual list of Service Providers (SPs) in charge of delivering the “ready for validation” DDSS elements in each TCS. The SPs are the legal entities that will ensure the data and service provision through EPOS-ERIC on behalf of the entire TCS community. The detailed list of Service Providers represents the indispensable information for undertaking the validation process. The prioritization of DDSS elements and the identification of the involved SPs performed through the internal verification is presently analysed and discussed by the Project Development Board to check the first set of EPOS services entering into the validation process. The first PDB recommendations are expected in November 2017.

EPOS is on track in its implementation roadmap concerning both the service implementation and the legal establishment of EPOS-ERIC. EPOS is working to establish an ERI capable to govern an implemented Research Infrastructure accomplishing its original vision and mission after a successful implementation phase.