



EXECUTIVE SUMMARY FOR ACTION ON EMANDATES SYSTEMS FOR CROSS-BORDER INTEROPERABILITY IN THE EUROPEAN UNION

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1. EXECUTIVE SUMMARY

In order to instigate and facilitate the cross-border use of electronic Representation Powers and Mandates, the European Commission (**DIGIT, with the support of DG CNECT**), through the ISA² Programme Action 2016.12 “Semantic Interoperability for Representation Powers and Mandates”, seeks to create a **shared European data model for Representation Powers and Mandates**. Creating a **common semantic framework** will ultimately allow Powers and Mandates’ data originating from the information systems of one Member State (MS) to be processed automatically by the information systems in another MS.

During a **Phase 0** of this Action, which was **developed in a previous contract**, a number of studies assessed **MSs’ preparedness for cross-border interoperability** of electronic Representation Powers and Mandates. **A shortlist of five services** was identified as priority business cases for cross-border scenarios. Each MS’s AS-IS situation was analysed and evaluated across the Interoperability Framework’s layers. **Information requirements** were identified, and **ten feasible solutions were listed and ranked** by feasibility criteria. Finally, a **set of twelve recommendations** were issued as next steps towards cross-border and cross-sector interoperability for eMandates. All these results were published in [Joinup](#) and summarized in an Executive Summary (see document [Executive summary - Semantic interoperability for representation powers](#)) and were **taken into account as a basis** for the development of next phase in the following contract.

In **Phase 1** of the Action, 3 main tasks were entailed.

The **first task** consisted in analysing and comparing already existing electronic Mandate systems and data models in six selected pioneer MSs: **Austria, Belgium, Finland, The Netherlands, Portugal and Spain**. This desk research aimed to determine which types of Mandates were used; how the Mandates were defined, collected and used to grant access to the public service applications; what types of representations were supported; if there were commonalities and differences between MS regarding both the semantic and legal dimensions; and the needs of MS to facilitate the federation of their information sources, taking into account all the interoperability layers. A **detailed report** with the specificities of each systems was delivered (see document [RPaM-State-of-affairs of EU eMandate Systems](#)). The most relevant **commonalities** were that most MS had developed or were willing to develop a **centralised system** that would be **connected** to the **national eID scheme** and that would be available for all public service applications and that the process is always **fully digital**. The most relevant **difference** was that the MSs differed on the **information sources where the eMandates were stored** and could be retrieved from. Some MS set up a generic eMandate register, while other MS use the existing base registries for citizens and companies, and others use the eMandate system managers’ or the public service applications’ local databases. In any case, those Mandate sources are defined by law. Regarding to **cross-border scenarios**, **practically none** of the MS had **tackled the cross-border usage** of eMandates, because of the inherent complexities (except pilot projects between Finland and Estonia, and the Netherlands and Belgium); **no common/harmonised cross-border vocabulary** or data model is currently used **between MS**, except UMM&DS; and very **few common/harmonised vocabularies** exist at the **national level**, for one sector or cross-sector interoperability scenarios (Spain, Finland).

The insights and findings of this research led to the development of a **second task** where a **solution to the main cross-border interoperability challenges was defined** (see document [RPaM-Use cases and architecture](#)). The need of the definition of a **EU Powers taxonomy** was identified and solved. Six different **Use Cases** were also depicted to draw the situations where a system could be accessed cross-borderly. Still, only two Use Cases were entailing the real exchange of information between systems in different Member States: **Use Case 0 - Cross-border user eAuthorisation**, where a natural person wants to use on his/her behalf a service that is in another EU MS and **Use Case 1 – Cross-border Mandatee eAuthorisation**, where a natural person in MS-A, acting on behalf of another natural or legal person, wants to access a service that is in MS-B. Various existing **architecture solutions** (e.g. STORK 2, TOOP, eIDAS) were analysed and compared, coming up to the final recommendation of **reusing and extending the eIDAS infrastructure**. In addition, an agreement is required to define whether the recognition of the eMandate (i.e. authorisation criteria and evaluation of eMandate validity) should happen in the Service Provider (aka **data-oriented recognition**) or it should rely on the cross-border eMandate system on the basis of commonly agreed criteria (aka **trust-oriented recognition**). As a result of all analysis performed and discussions, a **proposal of hybrid federation**, i.e. a combination of a trust-oriented plus data-oriented architectural approach, has been put forward. Lastly, a draft proposal of a **common vocabulary and data model for cross-border Representation Powers and Mandates** was built, based on **the reuse of existing vocabularies** for the modelling of a flexible and expressive European Core eMandate Vocabulary. Based on the recommendations made, the report concludes with the identification of **challenges in each one of the interoperability layer** (legal, organisational, semantic, technical and governance).

The **third task** of Phase 1 was the **detailed description** of the **cross-border scenarios** that were identified as part of Use Cases 0 and 1 (see document [RPaM Description of cross-border scenarios for eMandates](#)). The report helps to visualize with drawings and examples the different situations where cross-border interoperability takes place, such as *“You are a French citizen, on holidays in Italy. You are sick and have been admitted at the hospital. You mandate your friend who is an Italian citizen, using the Italian eMandate System, so that he can act in your name as you think he would take better decisions regarding your health.”*

Finally, a **fourth and last task** of Phase 1 of the Action aimed to **share all findings** gathered so far with participants from Member States in order to come up with a final common data model and architectural approach. For this, **discussions** were held with a **Working Group** through four webinars from January until April 2019 and **feedback** and **improvement** proposals were **taken into account** as data model refinements.

The final outcome of this project (analysis, specifications, development artefacts, Working Group meetings products and references) are publicly available in <https://github.com/everis-rpam/RPaM-Ontology>.

During the next **Phase 2** of the Action, a Proof of Concept will be run in order to validate the semantic interoperability of the data model used from different Member States, to refine it in case changes are needed and to produce final functional and technical specifications and installation instructions for the model to be used cross-borderly by any European entity.