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RINA Market Consultation Annex 1

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1 Background

Electronic Exchange of Social Security Information (EESSI) is a messaging system between European institutions within the Social Security field. The communication is organized according to predefined Business Use Cases according to EC regulation 883/2004 that also stipulates that message exchange should be digital.

The system entered production in 2019 with currently 32 Member States and around 3 000 institutions participating in the digital exchange of messages. To date some 16 million messages have been exchanged over the S-TESTA network.

The system consists of:

- A central node, containing common data model and institution definitions, hosted and maintained by the European Commission (EC)
- Distributed Access Points developed and maintained by the EC, but hosted by each Member State.
- National Applications that implement functionality for clerks that are managing the defined business processes within the different institutions. The EC has developed and maintained a clerk handling system (RINA). It is installed and operated by Member States and their Institutions. This system is widely used by the Member States.

From 2022, the EC will no longer develop, maintain or support the clerk handling system (RINA). Member States have the option to take over the existing product or develop their own national application.

2 Intro

Since EC announced its decision to cease the delivery of services around the RINA solution, some "RINA using" institutions of different EU member states (MS) decided to group themselves, by means of a Joint Procurement Agreement (JPA) with a Central Purchasing Body (CPB) with the goal to establish a partnership with a new Software & Support Delivery Partner (SSDP) that

- ⇒ in the short term: can take over the current service offering from EC;
- ⇒ in the longer term: is capable to extend and improve the service offering, according to
 - future compatibility requirements from the EESSI community
 - future requirements of the CPB
 - the technical evolution of the market
 - expertise of the partner.

The idea behind this initiative is that, even though each MS is considered responsible for the creation and maintenance of its own national applications (NA's) to interact with the EESSI system, it is judged economically not viable for each of the MSs to develop and maintain their individual solutions, given that, especially for smaller institutions within the MSs, the required functionality, is essentially the same.

The goal of this market consultation is to broaden the CPB's vision on current possibilities available in the market in order to help the CPB jointly agree upon the best model for such a partnership that will permit to find the best value for money balance.

Missions for the new vendor (Software & Support Delivery Partner, SSDP)

The first mission of the new vendor would be, in order to guarantee business continuity, that the current service delivery would be taken over “as such” by the new SSDP.

The most urgent requirements, coming from the EESSI community, would need to be added on, or adapted in this current solution. Therefore, detailed below, we give a short description of the current service scope.

The second mission of the new vendor would be to let the product and service offering gradually evolve, taking into account the needs of the different participating institutions, in such a way, that better value for money can be obtained, while not neglecting non-functional aspects, such as security, data protection, usability etc.

Service delivery approaches

Given the high-level mission and current situation we invite candidate SSDPs to provide some insights on possible approaches for such a partnership.

3 Current service delivery of EC

3.1 Short product description:

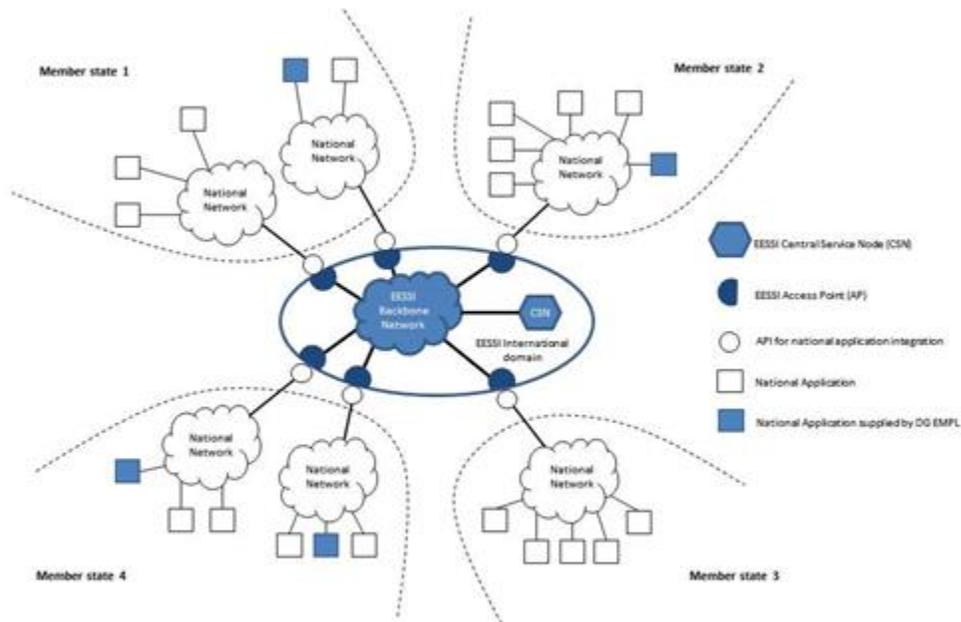
3.1.1 Business user & system interfaces:

The software includes following main interfaces, that can be used by business users or other IT-systems to interact with the system.

Business-user portal	<p>a web-based portal that permits end-users to create and preserve "EESSI cases" and to exchange their constituting electronic documents (SED) with other participants in the EESSI network.</p> <p>Multiple institutions can be configured on one RINA system, while their data is logically isolated.</p>
Administrator portal	<p>a web-based portal that permits administrators to configure the RINA system with the necessary institutions, end-users, and authorizations.</p> <p>one administrator role is responsible for the configuration of all institutions and related users and authorizations.</p>
CPI interface	<p>Case Processing Interface: is an API that permits system to system automation between the RINA system and other systems inside the institutions.</p>
NIE interface	<p>Notification Interface: permits the solution to trigger business defined actions upon arrival of certain types of messages.</p>

3.1.2 Integration with the EESSI network:

The solution integrates with the EESSI network.



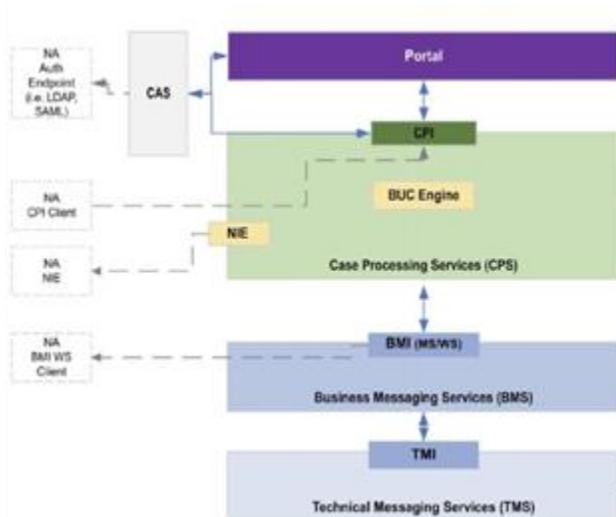
- **Physically:**
through a secured connection within the S-TESTA network, using the AS4 protocol via an Access Point (AP) of which the institution belongs.
- **Logically:** by
 1. compatibility with the centrally maintained Common Data Model (CDM).
 2. periodic synchronization of a centrally maintained Institution Repository (IR).
 3. business triggered, ad-hoc, exchange of Structured Electronic Documents (SED's) to other institutions participating in the EESSI network.

3.1.3 The ICT stack:

The software solution, delivered by the EC, is developed in Java and is built on top of some open-source packages like holodeck, elasticSearch DB, PostGreSQL DB and Tomcat. The system is developed and supported on Windows and Linux (Ubuntu) platforms.

The infrastructure on which the software solution is deployed is provided and maintained by the institutions, or their local partners, and must be compatible with pre-requisites as defined by EC.

An overview of the architecture is described below



- **Technical Messaging Layer (TMS)**
Managing communication with Access Point using ebMS/AS4 messaging according to messaging rules in the EESSI architecture. The core technology is Holodeck B2B
- **Business Messaging Layer (BMS)**
Manages business messaging and transactions towards the TMS layer according to messaging rules in the EESSI architecture. The core technology is Java, XML/XSD, REST and AS4
- **Case Processing Services (CPS)**
Manages the business logic of the EESSI Business processes using a custom developed Business Process Management engine. Responsible for CPI and NIE APIs
The core technology is Java, REST, Hazelcast, postgres, logstash, elasticsearch
- **Central Authentication Service (CAS)**
Identity and Access Management module for user management and SAML based single sign on. The core technology is Apaero CAS, Java, SAML, LDAP
- **Portal**
The web interface for clerks and administrators, integrates with CAS and CPS. The core technology is Angular/PrimeNG, eUI framework

3.2 *Product delivery:*

Up until now there has been an annual release of the software solution. The delivery of a release includes following deliverables.

3.2.1 Technically:

- The developed software itself;
- Installation guidelines, pre-requisites or installation scripts for all underpinning components;
- Installation guides and scripts to “plug” the software on these underpinning components when performing a fresh installation;
- Upgrade scripts and guidelines to migrate an existing RINA system to a next version of the software, while business data is preserved on the system;
- Integration guidelines explaining how the RINA system must be integrated with the EESSI network (through the Access Point);
- Operational instructions that permit administrators to perform daily maintenance of the system, to keep it in a healthy state;
- Troubleshooting information, explaining how to deal with common issues;
- Architectural documents;
- Training Material for administrators.

3.2.2 Functionally

- Business User guide for the end-user
- Training Material for administrators and business user.

3.3 *Support Levels*

The different support levels are described below

3.3.1 Support levels within Member States

The following support levels are falling under the responsibility of the participating country/MS:

- **Institution Service Desk Level 1 (L1):** ideally implemented at institution level. It should provide support services (business and technical) to the end-users/clerks consisting from:
 - Technical user assistance
 - Business user assistance
 - Message delivery status and further troubleshooting performed in cooperation with L2.

- **National Service Desk Level 2 (L2)** providing:

-
- **Advanced Technical support** services to the Institutions hosting Access Points; it should be implemented in each participating country at a National or Access Point level. Level 2 team also provides support towards L1 teams which serve institutions hosting RINA or National Applications.
 - **Business support** services to the Institutions. It should be implemented at a National level.
 - **Technical coordination with the L2 support from other countries:** especially regarding message deliveries through access points and linkage to the institutions responsible regarding message deliveries
 - **Advanced Business support** services: especially needed in relation to other countries. It should be implemented at National level to offer support with business issues when problems appear between one country and another during case resolution.

3.3.2 Support levels provided by Vendor

The following support levels fell previously under the responsibility of the EC and will in the future be the responsibility of the Procured Vendor.

- **Central Service Desk Level 3 (L3):** ensured by the **Procured Vendor**. It provides support services to the National Service Desks (L2).

This includes incident management and troubleshooting, technical support.

Development and support Level 4 (L4): ensured by the **Procured Vendor**. It provides evolutive and corrective maintenance of the RINA Software and also support regarding specific issues escalated from L3.

This includes adaption to new releases of EESSI central data model, analyse new business needs and confirm feasibility in the tool. Release management of major and minor releases, testing, training as well as supplying tools and infrastructure needed. It may also include studies on future evolvement of the system and its architecture.

3.4 Product development and maintenance

In order to build a qualitative product in an efficient manner the EC uses an adequate development environment, an appropriate methodology and toolset that suits their needs.

Normally there is a yearly major release of EESSI, where changes in the central data model needs to be adapted in the RINA system. This is governed by a centralized Release Deployment Plan.

Overview of activities:

- Business & functional analysis
- Solution architecture & technical design
- Software development (JAVA developer, database developer, database administrator)
- Testing & Quality Assurance
- Change management
- Integration testing with central systems

After the construction and system testing phase, the system is delivered to the Institutions of the Member States for local installation and integration testing and verification of the product before upgrade in production environment.

3.5 Product Support

The EC also assures that Member States are properly trained to install, operate and maintain their RINA systems, as well as to train their own business end-users on the functional aspects of the application.

This objective is partly reached by some of the delivery of some of the guidelines mentioned above. However, on occasion, other and extra support is necessary, for example:

3.5.1 Documentation support

- ⇒ Technical administrators and business support employees of the member states can consult the documentation and on a confluence site, where also other information about the EESSI project is published.

3.5.2 Ticket based Support:

- ⇒ Technical administrators and business support employees of the Member States, can enter "request for support" tickets in a Jira ticketing system, where all tickets are consultable and amendable by all participants.
- ⇒ The EC service desk provides answers via the ticketing system, based on their current knowledge and experience.

3.5.3 Troubleshooting Support

- ⇒ On reporting of "unusual system behavior" EC service desk uses its own "test and troubleshooting" environment to simulate and investigate the behavior, and to find either solutions and workarounds to be applied by the administrators or to prepare "bug fix request" for the development team.

3.5.4 Hands - on support

- ⇒ On occasion EC service desk employees investigate "irreproducible unusual system behavior", together with the administrators, on the systems of the institutions.

3.5.5 Security and compliance

- ⇒ Security incident investigation and management

3.5.6 Training or workshops

- ⇒ On occasion, when a common need for support is identified, special trainings or workshops are organized to get all administrators and/or business support informed "on the same level". Usually the train-the-trainer principal is applied here.

3.5.7 Bug fixing

- ⇒ When bugs are identified, usually they are included in the next release of the software delivery.
- ⇒ In cases of blocking issues, these may be dealt with in the context of hotfixes being released prior to the next release date.