Annex 2: Questions for IP4 projects

Interoperability Services

1- In general, do you have any need for translation of data to/from different formats (mostly preserving the semantics of the information)?

If Yes:

Y.1- How often such transformation/conversion happens?

Y.2- How much is the volume of data needed to be transformed?

Y.3- How do you describe the type of data you are converting?
Historical, Real-time, Reference data, meta-data

Y.4- Do you have any time constraints for the execution of a single conversion/translation?
E.g., if your system needs to transform an Event message coming from some Event-source, then the conversion must be done in real-time and quickly. In other cases, for example, when retrieving a timetable, you might only need to convert the data at the end of a day/week/month?

Y.5- In general, how must such transformation/conversion be achieved?
    i. Streaming processing/conversion (e.g., processing of a stream of events).
    ii. Batch processing/conversion (when system accumulates data performs the conversion once, e.g., to compute statistics about delays).

Y.6- Could you provide the most frequent use-case scenario in your initiative which requires some sort of data/query/message/specification/artefact being converted to other types of structured data/format/specification/query representation/meta-data?

Y.7- How many different types of messages do you need to take into account?

Y.8- Is the structure of your message plain e repetitive or is it complex and deeply nested?

Y.9- How big is a single message in your scenario?

If No:

N.1- Either for internal operation, or in the case of interacting with an external organization, or for data sharing, do you need to transform a kind of "structured data" into other "structured format" (without necessarily preserving the semantics of the data)?

N.2- Do heterogeneous data modelling technics (UML modelling, Owl based Ontology, RDF) co-exist together in your echo system?

N.3- Do your organization and all the co-related organizations follow the same, stable and fixed standardizations? Do you use some custom version of established standards?

2- Is your organization dealing (e.g., interacting) with legacy systems? Do you need to interpret legacy data formats/standards?

If Yes:

Y.1- How often does such transformation/conversion happen?

Y.2- How much is the volume of data needed to-be transformed?

Y.3- How do you describe the type of data you are converting?
Historical, Real-time, Reference data, meta-data

Y.4- Could you provide some example of such interaction?

3- Consider the following example:

A person's journey requires a multi-modal trip using heterogenous mobility services; in this case, the person might need to validate his/her information (e.g., tokens) in different transportation systems/sectors, where the used standards might be different. In such cases, one might need to translate such information defined in one specific format to the other one.

Do you need to face similar situations/use cases to the described example? If so, could you explain/describe an example (not necessarily in the validation domain)?

Do you deal with cross-border journeys?

4- Do you provide some services (or are you a service provider)?

If Yes:

Y.1- Of which kind of services? Could you provide some example/explanation?

Y.2- Which technologies and formats do you use for your service description?

Y.3- Do you support some kind of machine-readable service description?

Y.4- Does your organization follow specific standards or uses particular technologies for describing services (WSDL, Swagger, etc.)?

Y.5- Does your initiative provide some means for service discovery (Hub, search engine, registry, etc.) or you are relying on external sources for that?

Y.6- Do you normally create meta-data/semantic annotations for your service description/asset/artefact? Do you create/provide such meta-data or do you expect to use some external system for this purpose?

Y.7- Do your services/APIs compel the consumer to use a single specific data format/standard?

Y.8- Does your organization impose any rate limit on the requests to your Services/APIs? If yes, it is to address the *scalability* concerns or *privacy* concerns such as the restriction on data usage per client account/organization?

5- Are you a consumer of external services?

If yes:

Y.1- How do you manage the discovery of new services?

Y.2- Does your initiative provide some means for service discovery (Hub, search engine, registry, etc.) or you are relying on external sources for that?

Y.3- How do you process/analyze the service description to pick up the best service?

Y.4- Does your organization consume services that follow specific standards or use particular technologies for describing services (WSDL, Swagger, etc.)?

Y.5- Is your organization capable of interacting with any types of services (e.g., REST, SOAP)?

6- Should the artefacts/assets in your system follow some particular lifecycle (i.e., for creation/use/update/removal), from a managerial or a technical point of view?

Security and data sovereignty

7- In the case of sharing data,

Y.1- Do you have any privacy concern on-*who* can access them?

Y.2- Is being an authenticated user/account enough to access your data? Or, you have various level of access permissions and some authorization process is also necessary?

Y.3- Which particular pattern/technology do you use for managing identification and authentication?

Y.4- Which particular pattern/technology do you use for managing such access control?

Y.5- Do you allow external registries to store and advertise information about your data?

8- In the case of service provision, do you have any privacy concern on-*who* can consume it?

Y.1- Which particular technology do you use for managing such access control?

Y.2- Do you examine the authorized user per session or per API request?

Y.3- Do you allow external registries to store and advertise information about your service?

9- Do you mandate particular usage restrictions for your data and services? E.g., to give read access to the code list without the right of making the statistical analysis on them

If yes:

      Y.1-   Do you enforce such restrictions? How (e.g., legal contract)?

10- Do you allow access to your data/service for free, or under some payment scheme?

SPRINT Objectives wrt. CFM Projects Objectives

11- Are there any integration steps that you are currently performing to add new features/services to the Interoperability Framework?

If Yes:

      Y.1-   Which integration process are you currently using?

      Y.2-   Which of such steps do you believe they might be automated?

12- Are you currently using Semantic Web technologies (RDF, SPARQL, …) to implement new converters?

13- Are you currently using Semantic Web technologies (RDF, SPARQL, …) to implement new resolvers?

14- Which components of the Interoperability Framework are you currently using?

15- How many (and which) ontologies are you currently using?

16- How are you performing the mappings between the input/output formats and the ontologies?