

ANNEX 10 TECHNICAL SPECIFICATIONS OF THE SOLUTION

The system will be developed following European Commission's technical standards and guidelines so that it can be then deployed into European Commission's technical environment.

All the products that are quoted hereinafter are intended to be in the version that has been approved by DG DIGIT (that doesn't mean the last available version on the market). The detailed list of products and their versions (and the subsequent updates that will occur during the development of the project) will be provided to the successful tenderer.

1. Programming languages and frameworks for web application:
 - JAVA EE – WebLogic server
 - Springboot framework
 - Maven dependency management

2. Technologies for the Machine Learning components:
 - Python language
 - All the framework and libraries used for Machine Learning shall be Open Source, no proprietary technologies shall be included in the solution
 - The Machine Learning components shall expose all their functionalities to any external component via REST services.

3. RDBMS
 - Oracle

4. General architectural guidelines:
 - The architectural choice for the communications is Representational State Transfer (REST).
 - The contractor has freedom on the number of services to be developed as well as the input and output data required by each service, however at least, one service must exist for each and every task specified in point 3.2
 - The format of choice to exchange data between the server side and the client software is JSON.
 - REST shall be used also for the (possible) communication among Java webservices and Machine Learning services

5. Client-side technologies
 - Angular (version subsequent to version 6). The Front End Layer is based on Angular, thus all UI elements shall be developed as angular components so that they can be embedded in applications that have the same architecture.
 - Other frameworks: Bootstrap, KendoUI
 - DG FISMA will provide the stylesheets and UI graphics elements

6. Authentication and security

- Any client software should only be able to consume the web services after the call has been successfully validated using an EU Login proxy ticket. DG FISMA will provide a mock service to the successful tenderer for development purposes
- For authorization, it will be role based. DG FISMA will provide a mock service to the successful tenderer for development purposes