OSSIM Maturity Model - CSPA - SMMM

| **Levels**  **Dimensions** |  | **Initial** | **Pre-implementation** | **Early implementation** | **Corporate implementation** | **Mature implementation** |
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|  | **OSIMM** | 1 | 2,3 | 4,5 | 6 | 7 |
| Business | 1,2 | Each area designs and develops its own solutions. Budget and staff is located at each area. There aren’t stablished SLAs  Each area has its own skilled people and they only follow local management orders. | Although each area continues designing its own solution they try to make them modular and to share its code. The ITC budget and staff still being located at each area but there is a central coordination putting some general guidelines.  People tends to concentrate on specialized area belonging to a directorate (or Unit) and coordination committees start to be organized. | There is analysis of the business processes. GAMSO and GSBPM are applied as a basis to classify each statistical service and business function. Several levels of granularity to define services are still and issue. The ITC budget is concentrated and a general development program prioritizes and address each unit needs. Specialized ITC areas conforms a council and runs on a coordinated way following agreements and stablishing differentiated SLAs for each service/unit.  Some of the roles defined by CSPA start to being recognized and informally adopted by the ITC areas. | A unique services environment running on a common ITC platform to attend all organizational needs are part of the organization’s long term plans. All services are defined following an agreed granularity level. ITC resources (people, budget, skills, etc.) are mainly oriented to build and maintain the common platform.  Exceptions are analyzed and authorized by the ITC council only if they have a solid use case not covered by the common platform. SLAs are homogenized in the whole organization following standardized criteria to differentiate and prioritize each service.  CSPA roles and responsibilities are clearly defined and mapped to areas in the organization. | Statisticians are able to make specific orchestrations of services to cover its projects and new user’s requests. A specialized ITC cross-organization group is in charge of the maintenance and expansion of the services platform. There is a planned evolution of the ITC services based in long term institutional goals, historic performance indicators and external changes. SLAs are improved based on an institutional cost-benefit basis drive by society needs. |
| Methods | 3 | Methods are not standardized | There are some attempts to use some common methodologies, mainly related to codification standards and APIs definition but under the interpretation of each area. | CSPA and other standards starts to be implemented as a concern of the whole organization, but the implementation is partial obeying to internal needs. Internal and interinstitutional team collaboration are part of programmed working plans.  First attempts to develop SOA/CSPA based services. | CSPA has been implemented, and all ITC staff in the organization follows it.  Reuse and sharing of services developed by other NSOs is a common practice.  Inter-institutional teams follows an agreed program for the development of new shared services. Service virtualization is a “must” characteristic in order to make easier the instantiation of the services in different environments. | All ITC staff follows internationally agreed standards and models. There is a basic set of kills which is shared by all NSOs making easier to have trained people able to attend institutional needs and participate on interinstitutional collaboration efforts. |
| Information | 6 | Information is duplicated and each application uses its own structures | Some databases start to appear as separated information structures belonging to specific systems. Some applications share the information of the databases but in the form of views or other similar mechanisms. Database schema is modified each time that is required by the programmers of the application.  Separation of development and production databases starts to being made. | There are an integrated databases covering several domains. Services works using these shared information sources. Production and dissemination databases are clearly separated. There are separated instances of the databases for development, testing and production. Each one following specific rules. Early attempts to apply GSIM and CSPA LIM are carried out. | The common services platform access an integrated information environment. The information environment follows the CSPA LIM so shared services can be configured by each organization to cover its own needs. Some early attempts to make use of cloud facilities are made. | Information databases can incorporate new sources of information without affecting the services environment applying an internationally agreed set of models and standards. Information is independent of the environment, so internal, public and hybrid cloud facilities can be used in a transparent way. |
| Applications | 4,5 | Applications runs as separated instances. It’s very difficult to make them interoperable, manual work is required to do that. | Applications still being separated instances. Some common component libraries start to appear, but the components are difficult to integrate so the programmer ends developing its own components.  In some cases, commercial components start to be integrated. | Some applications starts to be converted to services using some common protocols (like WSDL), technologies (like SCA) and patterns (like “wrapping”). Some early service oriented systems making use of services attending certain common activities starts to appear. Services orchestration is still an issue that is mainly carried out for each system. | All applications are developed as an orchestration of services following the CSPA guidelines. Services are developed to be independent of specific ITC configurations. The organization has its own CSPA services compliant catalog. An international catalog is used as a reference to complement the internal one. | Some (or all) services runs in a cloud environment so they are shared by several statistical organizations. There is a shared catalog that is used by the institutions as a first level place to find existent services. Local catalogs are still being used only for very specific services. |
| Technology | 7 | Standards are not applied. There is an ITC heterogeneity (language, architectures, protocols, etc.) | There is a definition of a basic ITC platform which states supported and monitored OS, programming languages, protocols, commercial applications, and other tools; but not all the teams follows it. | The ITC platform is clearly defined and all applications are built following it. A dedicated services infrastructure is stablished and the CSPA’s communication platform starts to be implemented. SLAs are supported by hardware, software and communications facilities. | ITC platform plenty supports the SLAs of the services platform, and includes all the needed components to virtualize the services. Early adoption of cloud facilities as part of the platform are being made. | The ITC on premise platform on each institution is minimized and combined with the facilities provided by on cloud services, some of them shared by several subscribed organizations sharing, costs responsibilities and management supporting commonly agreed SLAs. |