CSPA Maturity and Readiness

## Background and objectives

CSPA is based on Service Oriented Architecture (SOA) and standards which support sharing. With the release of version 1.1, the CSPA (Common Statistical Production Architecture) now supports practical application, and CSPA compliant services are actively being developed, shared and catalogued. However, the community will only obtain value from this investment when statistical organisations adopt and integrate CSPA compliant services.

The cost-benefit of adopting and integrating CSPA compliant services is likely to be maximised when agencies apply these individual standards and practices. Agencies which have adopted these practices and standards will be able to adopt CSPA compliant services quickly and cheaply. In contrast, an agency poorly placed to implement and integrate SOA based solutions is likely to find it more difficult and expensive to harness them within their broader IT environment.

At its face to face meeting in April 2015 the Modernisation Committee on Production and Methods (MC P&M) concluded it is appropriate to review in more detail how ready agencies are to adopt, and realise practical benefits from, services being developed and shared via the CSPA initiative.

A study was initiated by this MC P&C to ensure that an appropriate balance was being struck between investing in producing individual CSPA compliant services, and facilitating adoption and integration of those services. While this initial study on readiness/maturity is small and exploratory, a number of findings are documented in this report together with suggestions for possible next steps.

## Method

MC P&M chose to base the assessment of readiness for adopting CSPA compliant services on the widely recognised and applied [Open Group Service Integration Maturing Model](http://www.opengroup.org/soa/source-book/osimmv2/intro.htm) (OSIMM). Annex 1 of the detailed report contains the one page questionnaire used to gather readiness assessments for individual agencies, together with the instructions for completion and definitions provided to respondents.

The questionnaire was sent to 11 distinct agencies, with the full response from each of the 5 agencies is [available via the Working Pages in the MC P&M wiki](http://www1.unece.org/stat/platform/display/MCOPM/MMM+Request). Due to the small number of sample in this study caution must be applied in extrapolating results. In particular:

* Responses from agencies directly involved in the MC P&M are likely to be more strategically aligned to the CSPA directions.
* Some agencies noted a heterogeneous level of maturity, so their responses may not represent all of their agency’s readiness.
* The rating scale relied on interpretations which may have varied between agencies.

Nevertheless, the study identifies a number of interesting insights.

## Summary of Results: Maturity Levels

The summary tables from the responses are provided in Table 1: Reported Current Maturity and Table 2: Reported Target Maturity. Key points from the tables are:

* It is noticeable that all agencies are aspiring to a high Target Maturity levels. This is due to a direct relationship with application architecture - including maturity in service orientation (SOA) and CSPA.
* There is a significant gap between the current and the target maturity level for all agencies.
* Design Practices was at the lowest level on average in regard to Current Maturity. Pursuing modernisation enabled though CSPA can be expected to require a significantly greater emphasis on Design Practices than previous, more localised, stand alone, development within agencies.
* Infrastructure and Management is the strongest reported dimension with a mean Current Maturity level of 3.0. Infrastructure and Management is one of the highest rated dimensions in all but one agency.

**Table 1: Reported Current Maturity**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Dimension | Ireland | Netherlands | New Zealand | Norway | Australia | Mean |
| Business Activity View | 1.5 | 2 | 2.5 | 3.5 | 1 | 2.1 |
| Business Capability View | 1 | 3.5 | 2.1 | 1 | 2.5 | 2.0 |
| Statistical Methodology | 1 | 3 | 3.5 | 1 | 4 | 2.5 |
| Information | 1.5 | 3.5 | 2.1 | 1 | 2.2 | 2.1 |
| Application | 1 | 4 | 1.5 | 2 | 2.5 | 2.2 |
| Infrastructure & Management | 1.5 | 6 | 1.5 | 3 | 3 | 3.0 |
| Governance & Organisation | 2 | 3 | 3.1 | 1 | 2 | 2.2 |
| Design Practices | 1 | 2.5 | 2.5 | 2 | 1 | 1.8 |
| Mean | 1.3 | 3.4 | 2.4 | 1.8 | 2.3 | 2.2 |

**Table 2: Reported Target Maturity**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Dimension | Ireland | Netherlands | New Zealand | Norway | Australia | Mean |
| Business Activity View |  | 3 | 5.5 | 5 | 5 | 4.6 |
| Business Capability View |  | 4 | 5.5 | 5 | 5 | 4.9 |
| Statistical Methodology |  | 4 | 5 | 5 | 5 | 4.8 |
| Information |  | 4 | 5 | 5 | 5 | 4.8 |
| Application |  | 5 | 5.1 | 5 | 5 | 5.0 |
| Infrastructure & Management |  | 7 | 4.5 | 5 | 5 | 5.4 |
| Governance & Organisation |  | 4 | 6 | 5 | 5 | 5.0 |
| Design Practices |  | 4 | 6 | 5 | 5 | 5.0 |
| Mean |  | 4.4 | 5.3 | 5.0 | 5.0 | 4.9 |

A detailed report analysing these results was presented to the MC P&M in its August meeting. (link) The key messages identified by the committee were:

1. Considerable work is required to mature to maximise the potential offered by CSPA, even for the agencies which are the most progressed.
2. Participants in the study found the exercise useful to identify areas for improvement within their agency and to develop strategies to respond to them.
3. While the maturity model was developed for assessing readiness within an agency, the framework could be adapted to guide the future work of the MC P&M.
4. The low response rate indicated that further work on communicating the value of modernisation within the modernisation community was required.

## Next Steps

The MC P&M recommends a series of actions to leverage this study in order to progress either the modernisation agenda or to help individual agencies to modernise.

Recommended actions:

1. Endorse the Modernisation Maturity questionnaire as an effective mechanism for statistical organisations to improve their readiness for modernisation
2. Encourage and promote the use of the Modernisation Maturity questionnaire to other statistical organisations and release the tool and supporting material on the UN ECE Wiki for other statistical organisations to utilise
3. The future work programs of the MC P&M leverages the maturity framework and the maturity of the community.
4. Increase the level of communication about modernisation to statistical organisations, utilising the maturity framework to provide targeted messages to stakeholders within organisations.