

Some ideas on standardisation by layers in official statistics

The short draft text and diagrams below are based on a number of recent conversations, and are posted as an input to brainstorming on this topic. Please feel free to edit, add, or completely disagree. I am particularly conscious that the terminology used might not be optimal. I was trying to strike a balance between precision and accessibility to people not involved in these discussions.

Steve

Standardisation by Layers

We can think of the production of official statistics in terms of a series of conceptual levels (Figure 1).

The top layer is the management and development of the global statistical system.

The next layer concerns the enterprise architecture of statistical organisations; the model by which the organisation operates and is structured, in order to meet its objectives. Currently this tends to be unique to an organisation, but in the future it might be harmonised to some extent. It is influenced by the requirements of the global statistical system.

The third layer concerns the business architecture and process model. This layer provides the bridge between the enterprise architecture layer and the operational level. It is where business processes are defined, described and integrated. It includes resource planning, and ensuring all of the "factors of production" are assembled to produce the outputs required.

The fourth layer can be referred to as the information layer. This layer includes statistical processing and associated methodologies, as well as information modelling. It mainly concerns data and metadata treatment and flows between different parts of the statistical production process.

The fifth layer is the technology layer. This includes the IT systems, tools and standards that support the statistical production process. This layer provides the technical solutions to implement the requirements from the fourth (or "information") layer.

One purpose of this approach is to encourage the view that although each layer is constrained by requirements from higher layers, this should only be a one-way process. For example the requirements at the information layer should be independent of technical standards and solutions, and the requirements of the global statistical system should not be driven by the enterprise architecture of any specific organisation.

However, there can be interaction and mutual dependencies between activities within the same layer, for example between statistical methodology and information architecture.

Figure 2 adds in a number of international groups working in the area of statistical architectures, and attempts to place them within the layer model. Figure 3 expands this idea further by adding in some of the key statistical standards, whilst figure 4 adds the main functions within statistical organisations, mapping their areas of responsibility to the layer model.

Figure 1: Layers

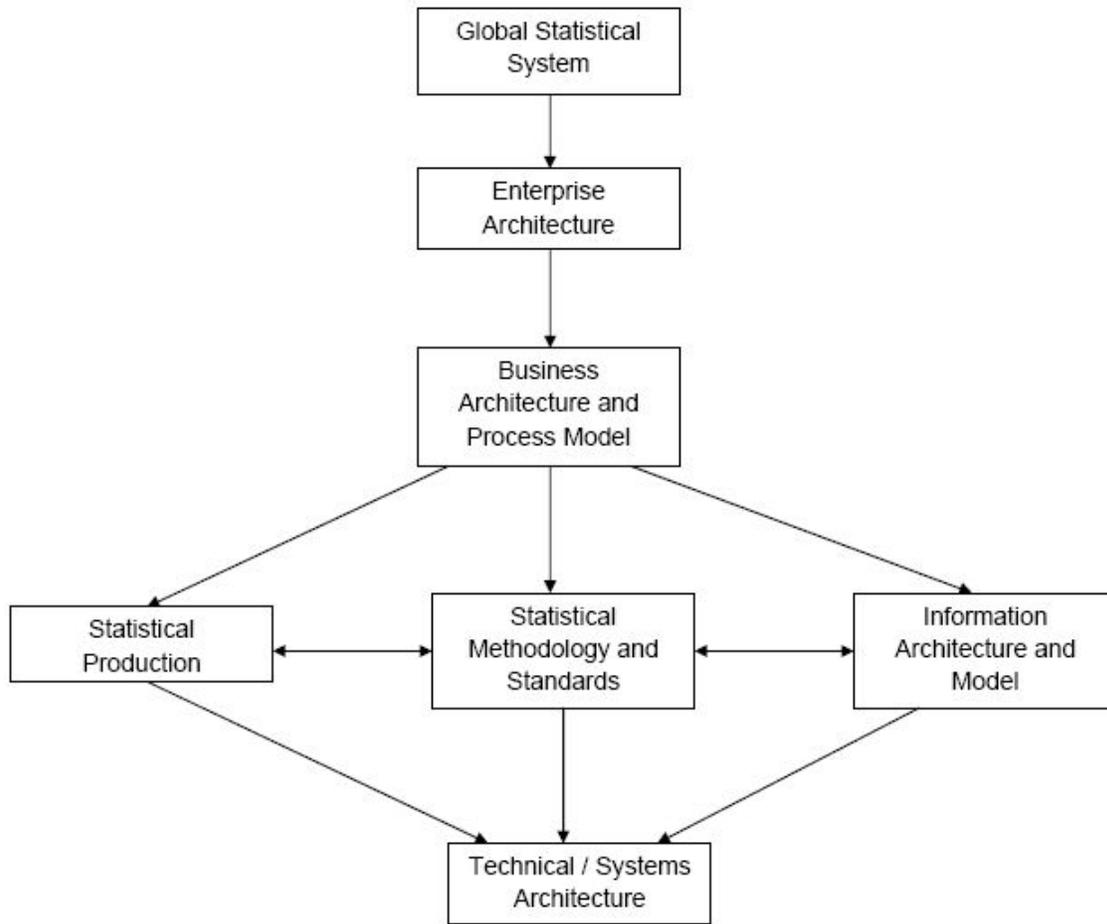


Figure 2: Layers and groups

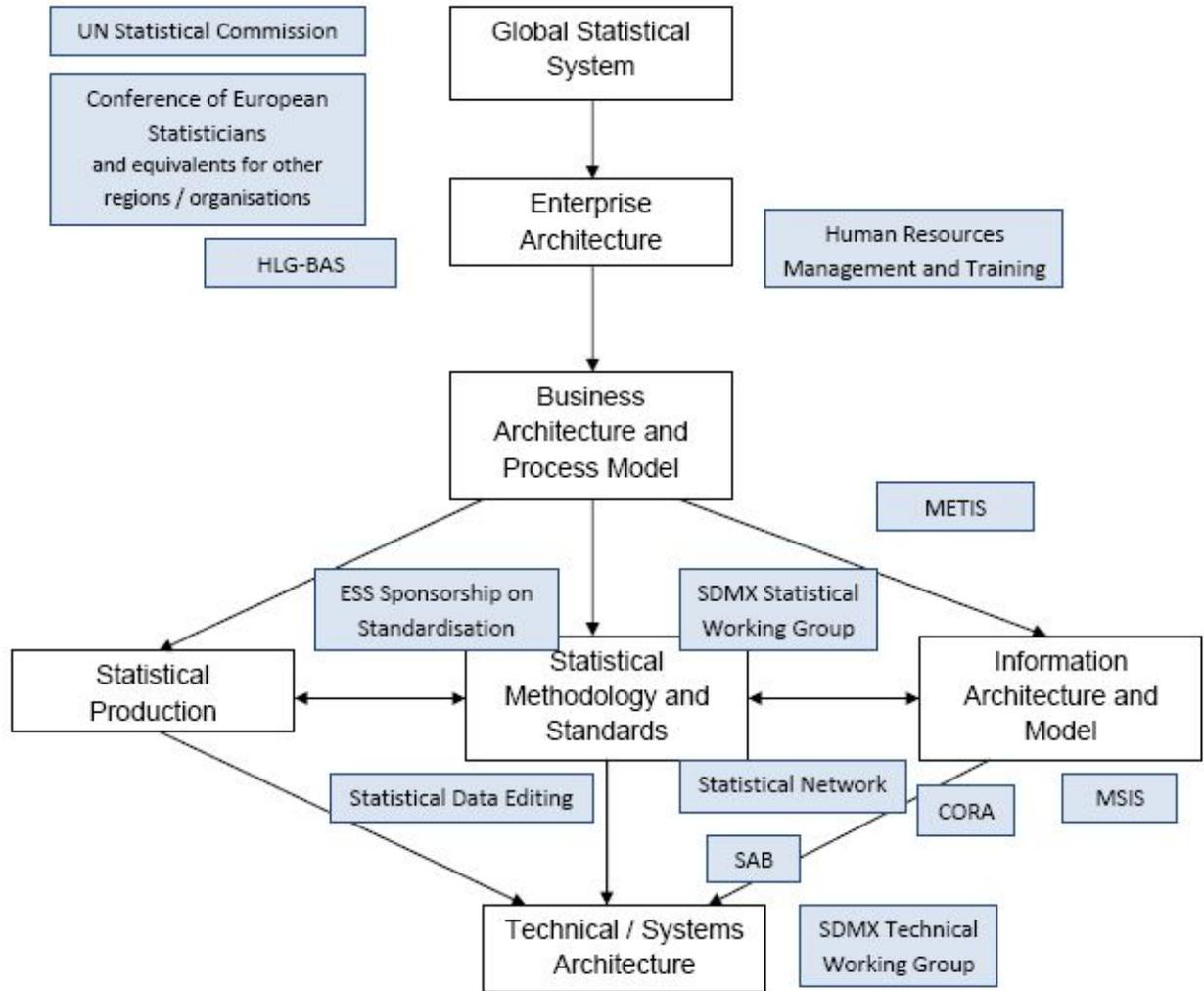


Figure 3: Layers, groups and standards

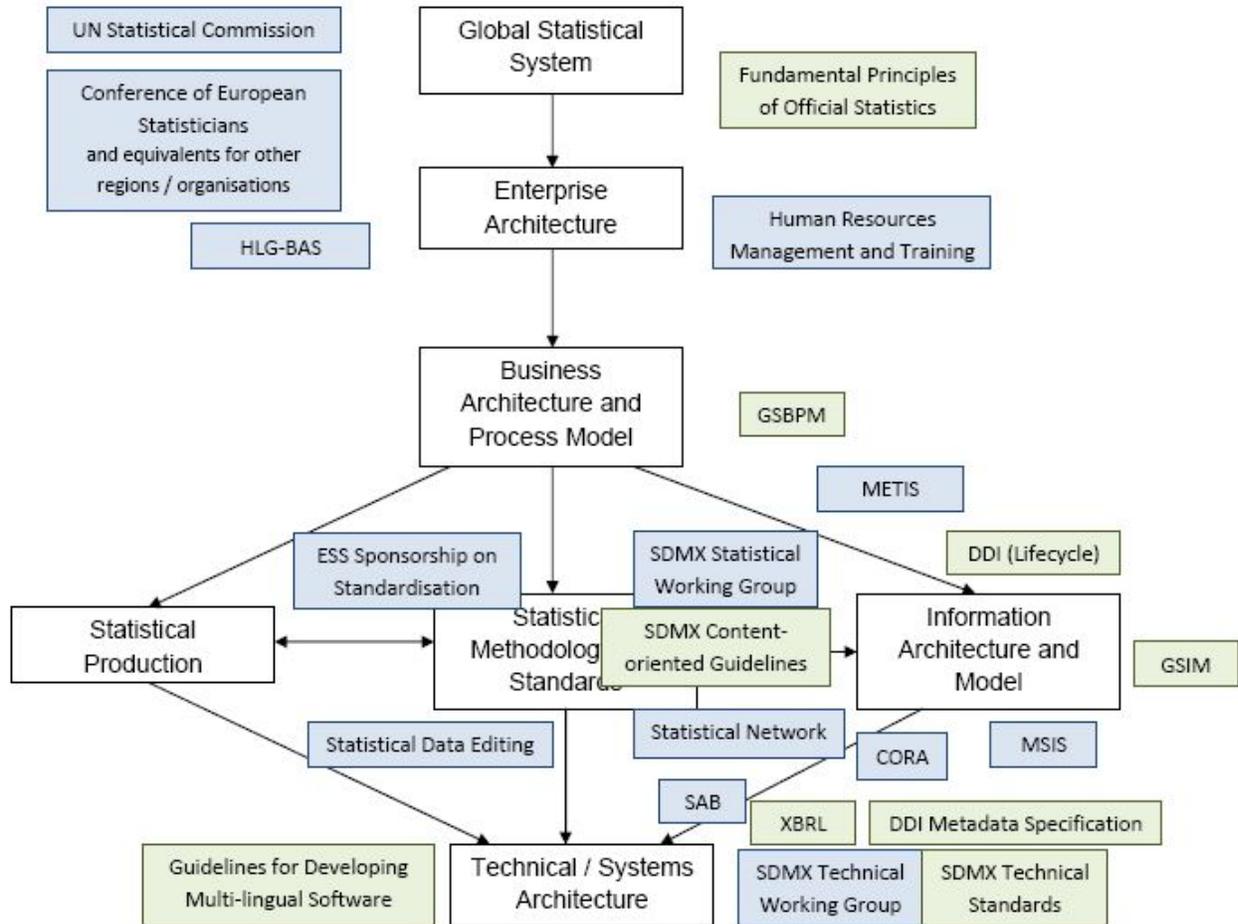


Figure 4: Layers, groups, standards and functions

