

The Standards Life Cycle and a Methodology and Infrastructure for Standards Development and Implementation

AK COOPER

CSIR Built Environment, PO Box 395, Pretoria 0001

Email: acooper@csir.co.za

ABSTRACT

The CSIR is assisting Statistics South Africa (Stats SA) develop an infrastructure that supports the business of a statistical organisation, including data stores and tools for streamlining the process of statistical production. Standards are the building blocks that would allow for integration within this infrastructure. To address this, we have proposed a good practice methodology and infrastructure for selecting, developing, implementing and refining standards across the whole of Stats SA. We also described the life cycle for standards in an organisation, which provides the grounding for the methodology. Priority standards for Stats SA have been identified, and are being taken through the proposed methodology.

The methodology and infrastructure are for all types of standards in Stats SA, including specifications, classifications, definitions, policies, procedures, guidelines and other methodologies. We propose that there should be a permanent infrastructure for standards in Stats SA, comprising:

- Chief Standards Officer (CSO) – with overall responsibility for standards support and standards policing;
- Standards Steering Committee – to provide oversight, provide feedback from their constituencies, and promote the use of standards in their environments;
- Standards Secretariat – to support the CSO and the standards development processes; and
- Standards Experts – to facilitate standards development by providing expertise on standards and standards development.

This permanent infrastructure will be complemented by a temporary infrastructure, created as and when needed to implement the various stages of the standards life cycle, which have been encapsulated in the good practice methodology. These stages include proposal assessment, developing and publishing draft standards, getting buy-in from stakeholders, testing or piloting the standard, training and maintenance of all documentation. The temporary infrastructure includes panels, teams and committees, with individuals designated as 'standard's project leader and editor', and as 'chair of the editing committee', for example.

This poster presents an overview of the standards life cycle, and the proposed methodology and infrastructure for standards development and implementation in Stats SA.

INTRODUCTION

Stats SA is the statutory organ of state in South Africa responsible for producing official statistics itself, and for co-ordinating the production of official statistics by other bodies. Such statistics provide the primary framework for evidence-based decision-making by government, the private sector and others in South Africa. The Statistics Act (No. 6 of 1999) governs Stats SA and makes explicit reference to standards in several sections, and there are many standards being used across the organisation.

Very few organisations have an integrated approach to developing, identifying, reviewing and implementing the standards they use, and Stats SA is a pioneer in this regard. In terms of a Memorandum of Understanding between Stats SA and the CSIR, the CSIR has been supporting Stats SA with this since August 2004. The work forms part of Stats SA's project to develop an infrastructure that supports the business of a statistical organisation, including data stores and technologies for streamlining the process of statistical production.

The CSIR developed a proposed infrastructure and good practice methodology for standards development and implementation in Stats SA; drew up lists of the standards used and needed in Stats SA; identified the priority standards for Stats SA; and identified candidate standards for Stats SA. Currently, the CSIR is establishing the infrastructure; implementing the good practice methodology; and developing, identifying, reviewing and implementing the priority standards. The infrastructure will include creating posts within Stats SA for standards experts, under the leadership of a Chief Standards Officer, and establishing the relevant committees to provide oversight and to facilitate the efficient and effective development and implementation of standards.

METHODOLOGY

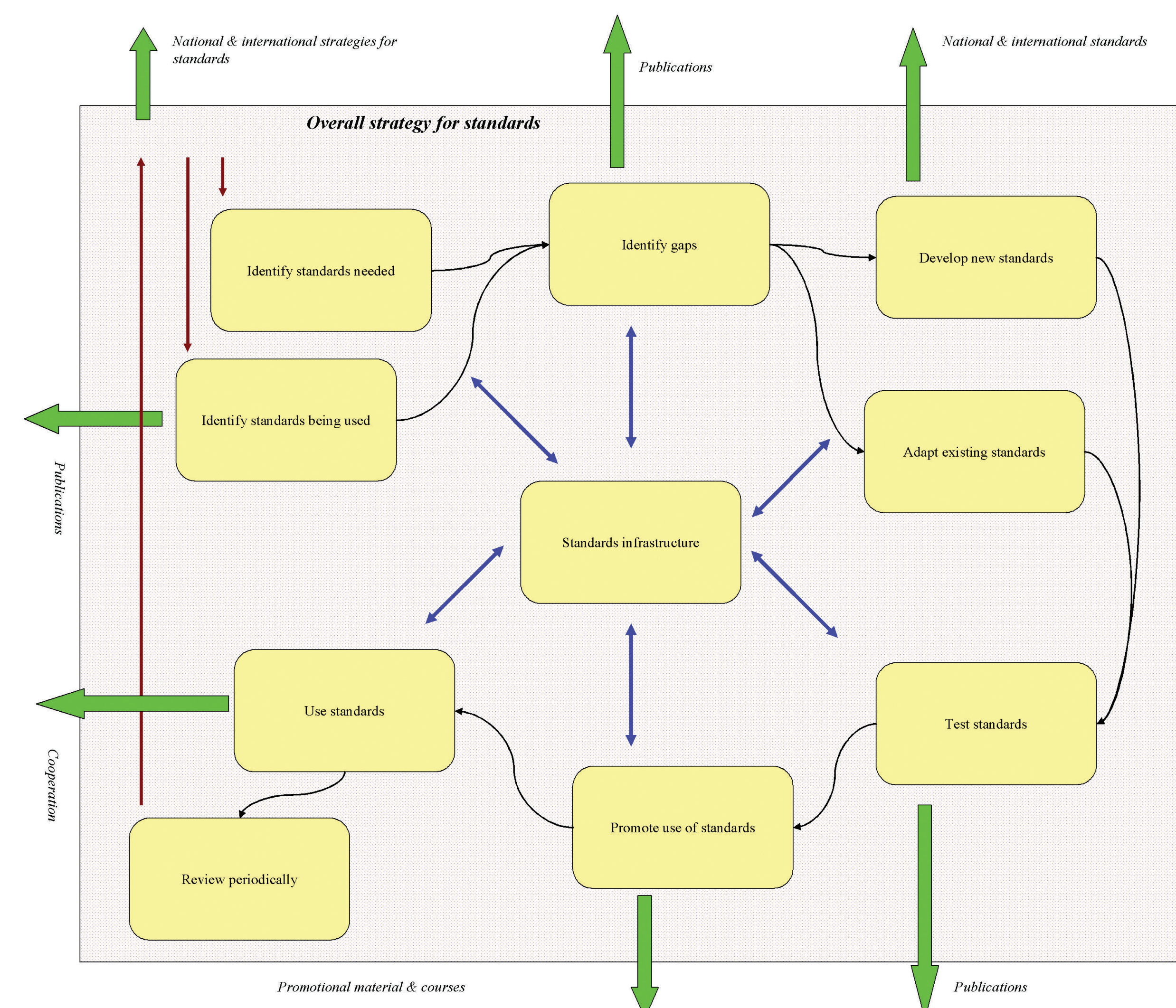


Figure 1.

Figure 1 presents an overview of the standards life cycle, which emphasises that standards are in a continuum, from their initial proposal through development and implementation to review. Throughout, in all their phases, they need a standards infrastructure, and there are many outputs from the standards life cycle, some of which could be of value outside the organisation. The standards life cycle needs to occur within an overall strategy for standards, which provides direction, ensures that standards move through their life cycle, and which considers the external environment.

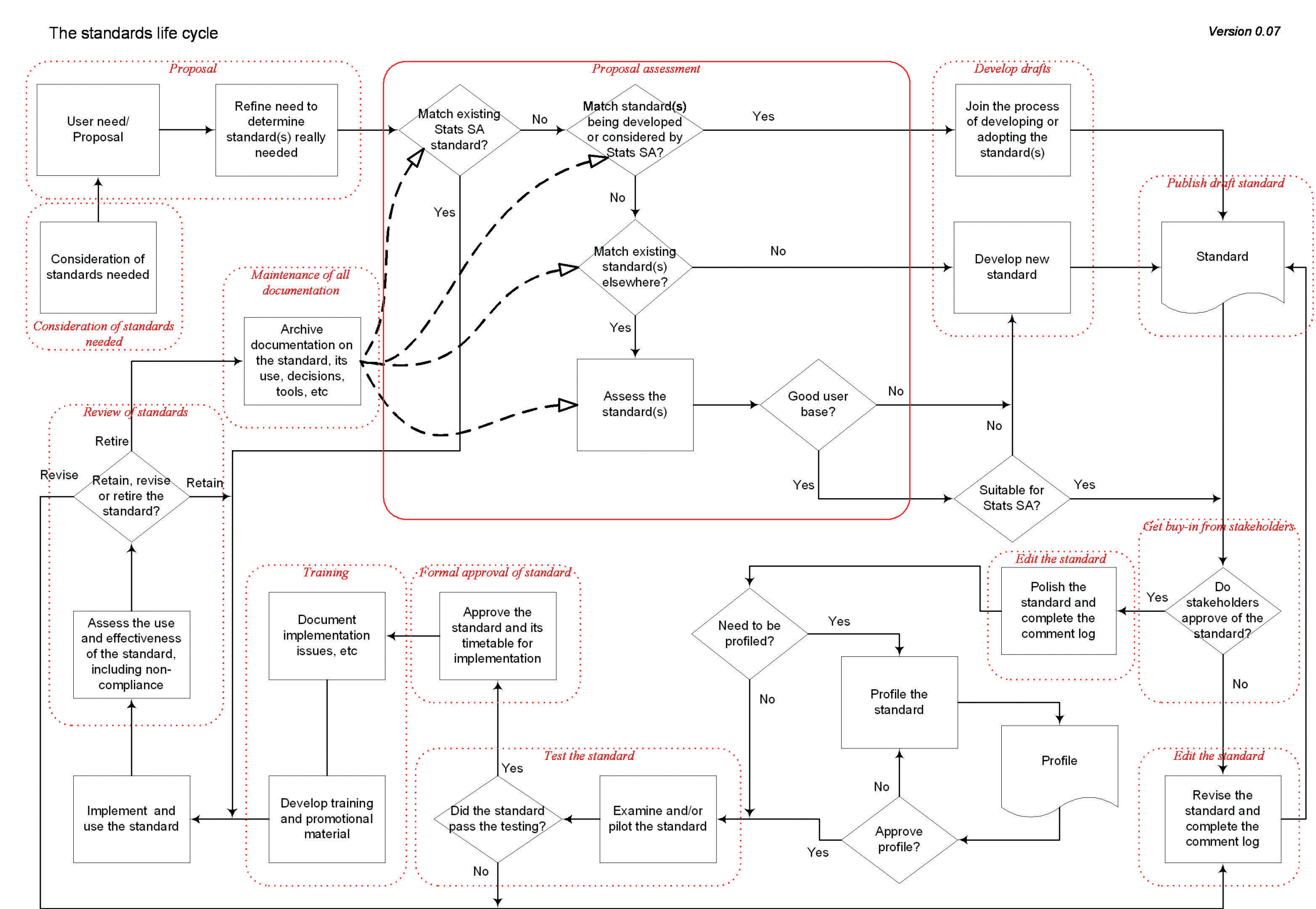


Figure 2.

Figure 2 provides a much more detailed view of the standards life cycle, and is being used in Stats SA for planning the development of the priority standards and for monitoring their progress.

The methodology for standards development has two broad components. The generic methodology aims at ensuring that appropriate processes are followed to ensure that standards meet users' needs and enjoy their "buy-in", and that the standards are harmonised. It covers the 14 parts of the life cycle for selecting, developing, implementing and refining standards. The specific methodology provides guidelines for project teams (consisting of domain experts) developing standards to assure the technical merits of their standards. Each standard addresses an identified need and hence should be developed as quickly as possible, ensuring the experts on project focus on the standard. A project team could consist of only one expert and a standard could be developed in less than one day!

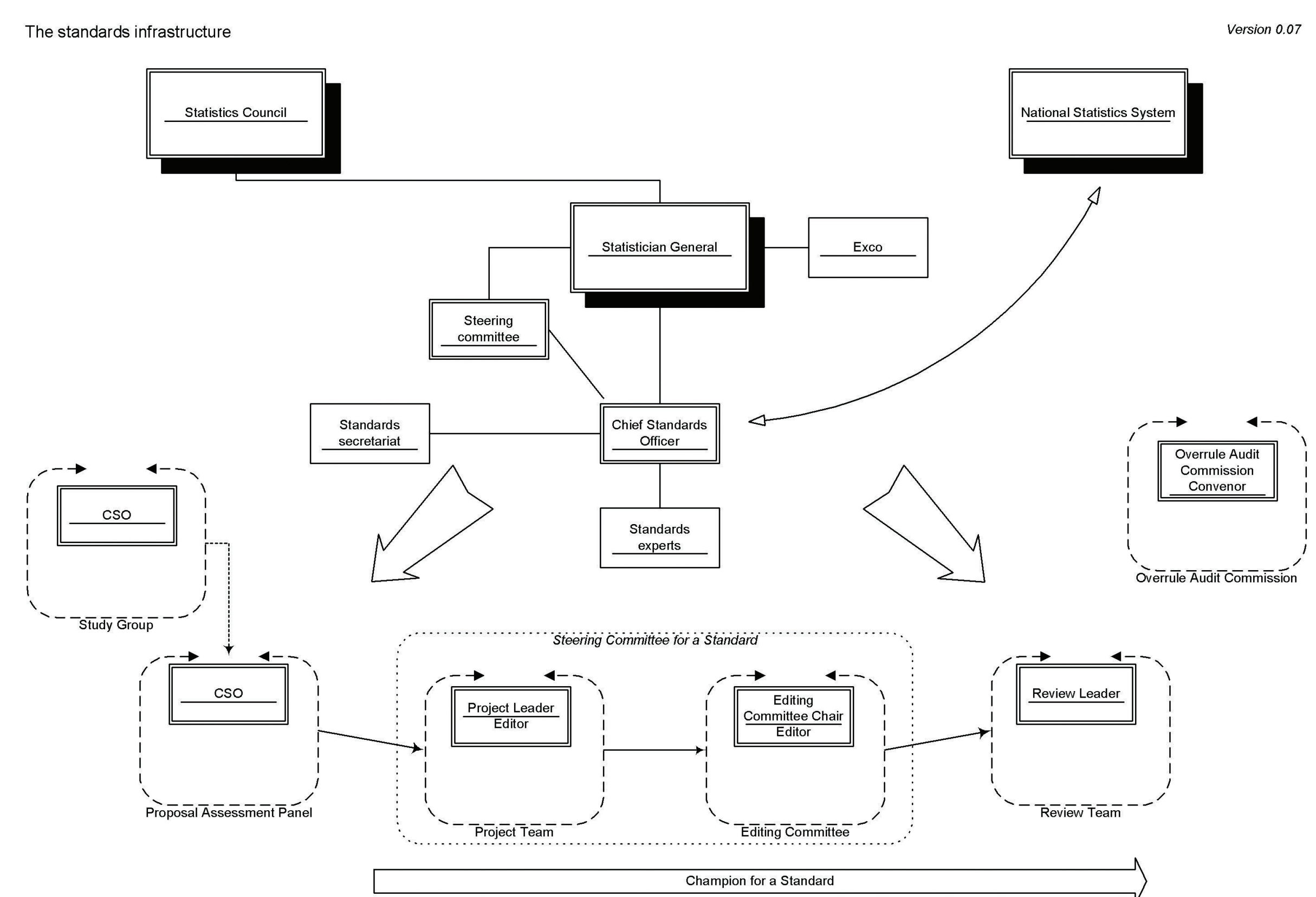


Figure 3.

Figure 3 illustrates the proposed standards infrastructure for Stats SA. Central to it is the new position of Chief Standards Officer (CSO), who is responsible for standards support and standards policing. The CSO will be supported by a secretariat and by standards experts. Together with the Steering Committee, they form the permanent component of the standards infrastructure. The temporary component is formed as and when needed for each standard, with each committee having a finite life to ensure they focus on the task of taking the standard through its life cycle, and to minimise the disruption to the organisation of taking them away from their usual jobs. Throughout, the permanent infrastructure will support the temporary infrastructure, providing them with guidance and ensuring that they meet their deadlines.

ACKNOWLEDGEMENTS

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