



**Statistics Iceland**

# QM Implementation

---

*Based on CoP, PDCA, and GSBPM*

**Statistics Iceland**

Reynir Kristjánsson

Quality Manager

May 2014

## Quality Policy and Improvement System

Statistics Iceland is the center for official statistics in Iceland and collects, processes and disseminates data on the economy and society. In 2013 it had around 100 full time employees and some 80 part time. The organization is divided into four departments: Economic Statistics, Business Statistics, Social Statistics, and Recourses and Services. The chief executive officer of Statistics Iceland is the Director-General.

Although quality has always been an important issue, it was not until 2012 a quality manager was hired in a full time position, and a systematic quality management implementation was launched. Among the first tasks was to create a road map for the implementation, develop a quality policy, and prepare quality training for employees.

The quality policy, which is based on PDCA<sup>1</sup> and the European Statistics Code of Practice (CoP), was published in the beginning of 2013 and can be found at <http://www.statice.is/pages/2952>.

The PDCA-part of the policy is:

*Statistics Iceland operates within well-designed processes and according to plan. Quality indicators and other important factors regarding the operation and its outputs are well defined and results are checked accordingly. If quality indicators are not met changes will be carried out and improvements made on processes and procedures.*

After the policy was approved by upper management, a road map was created to plan for the coming years. Most of the components in the road map can be seen in figure 1, showing the improvement system being implemented at SI.

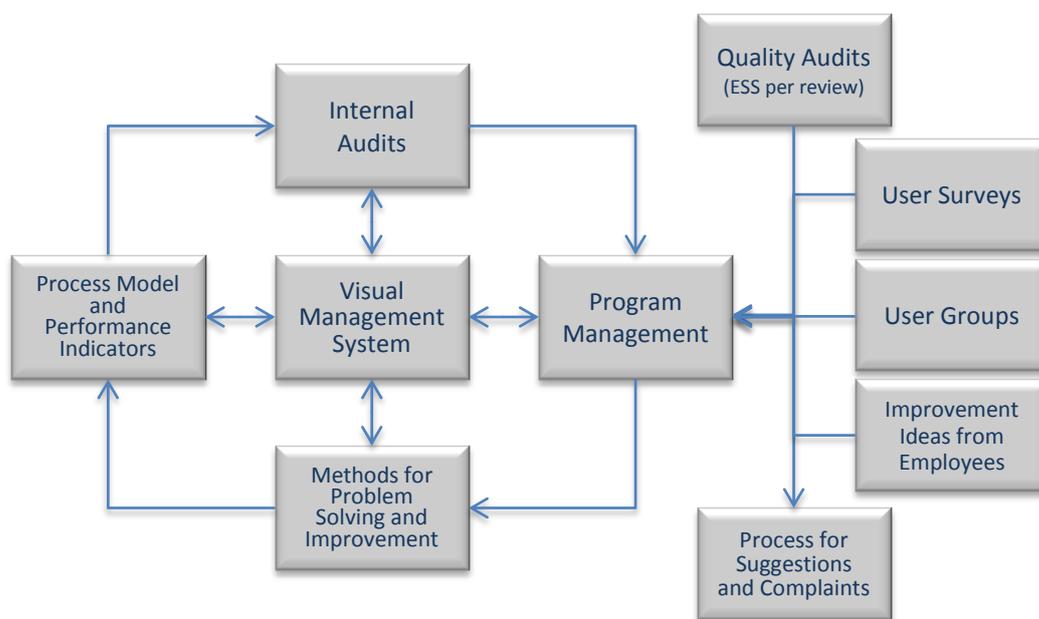


Figure 1: System for continuous improvement at Statistics Iceland.

<sup>1</sup> PDCA is a process for continuous improvement, where P stands for plan, D is do, C stands for check, and A is act.

In January 2013 the Director-General established a quality council to support the implementation effort. There are six managers on the council: All the directors, including the Director-General, and the quality manager who also serves as the secretary of the council. The quality council meets once or twice every month. It is responsible for the implementation of the quality policy and all major decisions regarding the implementation are made by the council.

This paper is about one part of the improvement system, i.e. how SI has designed its process model and how GSBPM has been used to map processes. A more comprehensive paper, addressing the different parts of the improvements system, can be accessed from the author.

## Process Model

The quality policy states that “Statistics Iceland operates within well-designed processes and according to plan.” To be able to ensure quality, it is necessary that employees work according to plan and use predesigned processes to produce statistics according to specifications. These processes should be easily accessible for all employees and managers as part of standard operating procedures (SOPs) and work descriptions (WDs). SOPs show macro processes and essentially answer the question: “What is done and by whom?” and sometimes “When?” or “How often?”, whereas WDs show micro processes and answer the question: “How is it done?” In most cases a WD is made, not only with process maps, but also with explanations on how to do the work. This might also require screen shots of different user interfaces of software used to perform the work. Usually a WD shows only a part of the macro process but sometimes it is more appropriate to show the whole macro process in the WD, for example when the macro process involves only few steps. Good process maps and documentation is not only necessary for quality assurance but also for process improvement. The process model is therefore an important part of the improvement system.

To begin with we wanted to map the current condition. Before looking at the micro-processes, we defined the high level processes creating what is often called a *high level process map* (see figure 2). In our case we have eight processes:

- Three *core processes* (pointing to the right) produce products and services for customers.
- Four *enabling processes* (pointing up) service the core processes (and each other)
- One management process called *Get the right things done* including *create vision and strategy, organize, make plans, review and evaluate, and improve.*

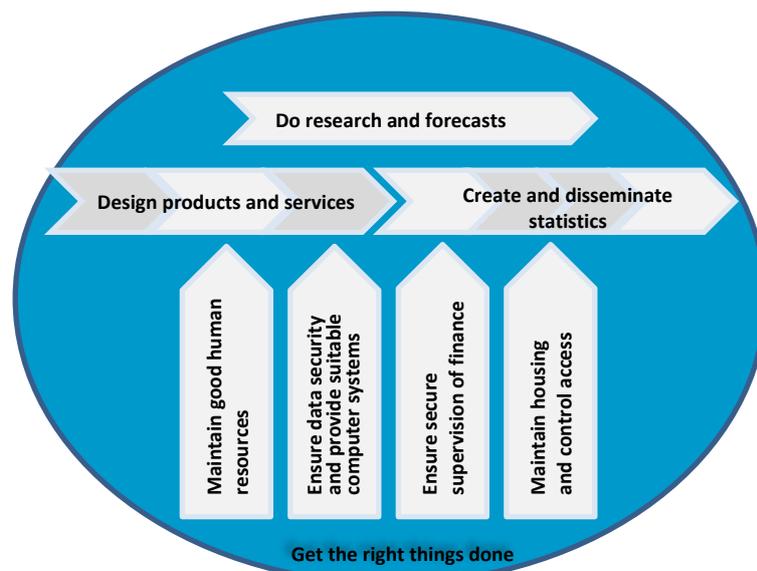


Figure 2: Statistics Iceland’s high level process map showing all of its business processes.

After the high level process map was ready, we continued by drilling down each of the high level processes or business processes. This drill-down structure of processes makes up what we call *SI's process model*. This model shows four levels of processes and includes procedures, work descriptions, and all other documents that have to do with how work is performed (see figure 3).

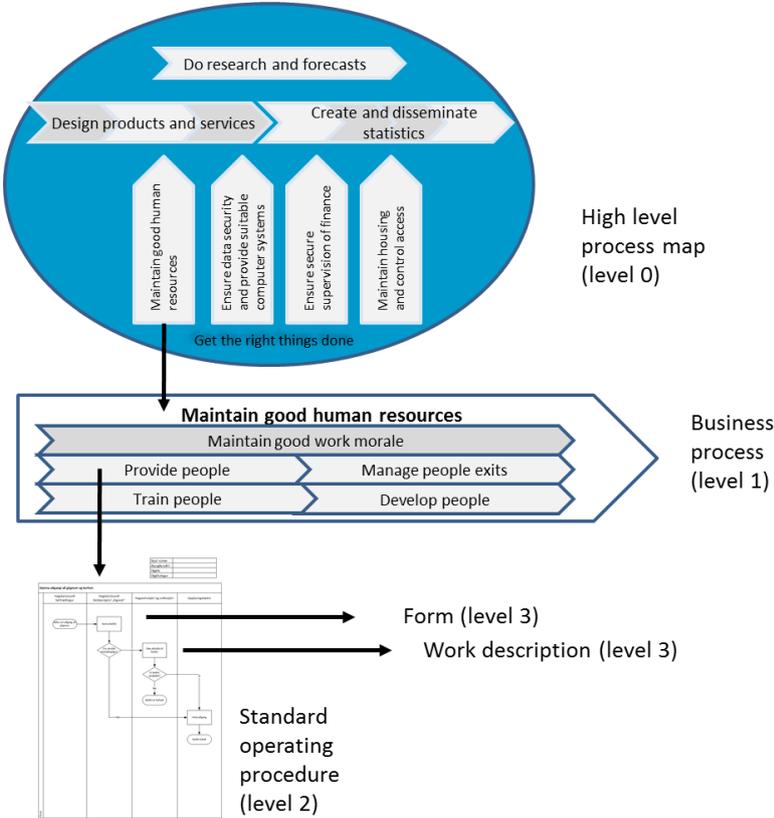


Figure 3: The process model shows processes and documentation on four levels.

While most of the business processes were mapped up on a blank piece of paper, the product development (*Design Products and Services*) and the production process (*Create and Disseminate Statistics*) were mapped using the GSBPM as a reference frame. This means that level 1 for these processes are almost identical to level 1 in GSBPM version 5.0 (the only difference is that we define *Evaluate* as part of the management process).

The biggest problem regarding the production process is the “stovepipe” character of the different processes for different products. By “stovepipe” we mean that different processes for different products have been designed and have evolved over time in isolation from processes for other products. From quality standpoint, this does not have to be a problem, but we believe that considerable efficiency gains can be realized from a more unified way of producing different statistics. We believe that by using the GSBPM as a model when developing the production process we can better standardize different parts of the process, making a more unified process. This is sometimes called “industrialization” of production processes.

Using the GSBPM as a reference frame has made the process mapping both easier (it takes less time) and it is much easier to compare processes for different products. Without the GSBPM we

experienced too much variability in how processes were mapped. Figure 3 shows an example of a process map that is part of a standard operating procedure (level 2). Standardized phrases from the GSBPM are used in the boxes (process steps) and horizontal lines are used to divide between the sub-processes (level 2) within each phase of the GSBPM. Processes mapped this way are easier to compare between different products, and this also makes it easier to compare processes, for the same product, between two different statistical offices – given that the other office is using this method when mapping processes.

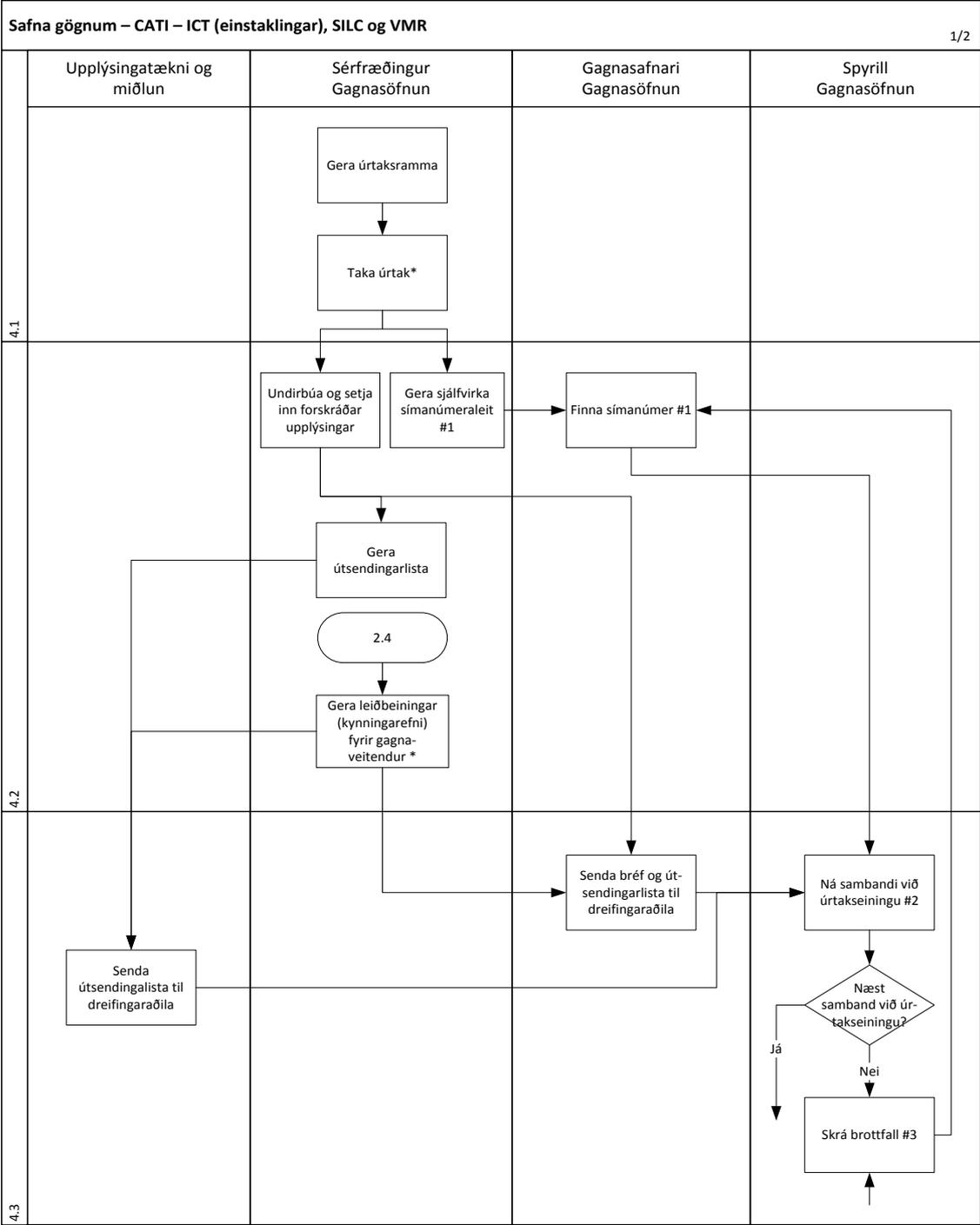


Figure 4: Process map showing part of the computer-assisted telephone interviewing (CATI) process. Note how the process is divided in to sections and on this picture we can see 4.1, 4.2 and 4.3 from the GSBPM.