

Enhancing quality and efficiency through participatory processes - aiming for the ESS Vision 2020

*Mr. Dag Roll-Hansen, senior adviser, Division for Corporate governance, Statistics Norway, Oslo, Norway,
roh@ssb.no*

*Ms. Ingvild Maanum Møller, senior adviser, Division for Human Resources, Statistics Norway, Oslo, Norway,
imm@ssb.no*

*Ms. Grete Olsen, senior adviser, Division for Corporate governance, Statistics Norway, Oslo, Norway,
gol@ssb.no*

Abstract

Statistics Norway is continuously working to improve performance: Streamlining work processes, having a strong user perspective, aiming to get more out of limited resources and enhance other aspects of quality. “This is nothing new” critical voices say. Statistics Norway has a long tradition of Total Quality Management, the concept of Total Survey Error and extensive use of Quality Assessments to improve our statistics. Now we are striving to achieve the ESS Vision 2020. This work is grounded on a basic belief that through reflecting and asking questions, there are always ways to improve the way we work. This is something we are proud of. Nevertheless introducing lean methodology in Statistics Norway has changed something; the emphasis of involvement is higher - staff are given

Keywords: Lean, involvement, user needs, continuous improvement, management.

1. Statistics in Norway, not cars in Japan

Statistics Norway is using lean methodology to enhance quality, fulfil user needs and efficiency through participatory processes. The core of this is to systematically assess and improve work processes and operational control. The overall aim is to strengthen a culture where employees are encouraged to be curious about mistakes and eager to learn from them.

Further, suggestions for improvements are appreciated, assessed and implemented. Sharing successes is also a key aspect of the emerging culture.

Statistics Norway is not using lean to lay people off. We are using it to work more efficient and to get more out of limited resources. Also we anticipate that budget cuts will become severe in the years to come. So far, our goal is to use the gains of the effort for more analytical work, and hence improving our products.

The lean paradigm is very much associated with manufacturing industries in general and Toyota in particular. There are two challenges associated with this:

First you got to transfer what is useful to fit our needs and at the same time adjust lean to fit into our culture. One challenge is to make lean support the Nordic Model. This means that you re-create lean in a context of relative harmony at the workplace and strong participatory processes.

Second you need to convince people that the concepts and methodology you bring is not only relevant for the manufacturing industry.

Statistics Norway is not building Lean in a Toyota way. We are aiming to fit it into the Nordic Model as it is implemented in work life. It is based on tripartism; involving employers, employees and the government in creating a stable, consensus-oriented environment.

In Vienna 2014 we also told you about continuous improvement and lean in Statistics Norway. Since then we have increased training and implementation on the subjects we then could see needed more attention. All managers have started training in lean management, and we have educated more internal lean consultants. In all divisions we have carried out a review of at least one work process, aiming to improve it. Furthermore we have reviewed several processes with more than one responsible department, and established standardized procedures for improving cross cutting processes. A system for balancing criteria's when choosing projects, and a system for follow up on implementing new processes and routines are established. All these efforts contribute to building a culture for continuous improvement in Statistics Norway.

2. Interaction between- top down and bottom-up

The lean paradigm stipulates that projects are defined by the management, then to leave it to staff doing the work hands-on to find a way to improve the process. This approach gives a system of checks and balances, involving the most relevant stakeholders in defining a new work process. This is however no guarantee that different stakeholders do not have different interests and goals. While lean teaches that the quest is to define the best process, our experience is that a good solution that can be accepted by all is often preferable. The root cause of disagreements can be different interests between managers, departments and specialists. As a consequence, skills in negotiating solutions are an important part of our lean toolkit.

3. Involvement works

Even though we work in the same organisation, aiming for the same goals, it keeps amazing us how little people communicate across organisational boundaries. If a task is assigned to a specific unit, this unit often solves it without interacting with others working in related or similar areas. Needless to say, people are social beings, and they do interact with others as a result of being located in the same building, also across units. The focus of this interaction, however, is more of a social character: family, holidays and the weather. It seems there is not sufficiently encouragement to discuss work with colleagues from other units.

One achievement of lean in Statistics Norway's is that it brings people together. Project owners and workshop participants have reported that participating in lean projects make them communicate better, and interaction runs better. Tensions disappear and the level of conflict is reduced. One example is a project on cooperation on editing and using a base on companies from the tax authorities (NO-database). Depending on how you count, the base is used by around 10 different divisions. Before the project started, there were no common standard for editing data. We had several examples that data from large companies were edited by one division just before another published data based on the same sample.

Another example: IT-staff wanted to improve the way their day to day tasks were solved. A project group consisting of group leaders and ordinary staff members outlined a suggestion for

new ways of working. There was concern that colleagues not involved in the process might resist the suggested changes. In order to bring everyone to the same page, the project group held meetings with all staff to discuss the suggestions made. This was not only valuable to spread information on the discussions behind the suggestions made. It also gave the project valuable input and new ideas on how to progress. At the end of the day, the suggestions from the project were accepted by all staff. The participatory process had contributed to ownership of the new process among all staff. It also made it clear that there were no hidden agenda behind the work.

Motivating people for a project may be difficult. People have different wishes for what should come out of a project, and sometimes they would prefer to continue as before. When we assess the outcome of projects, we find that projects run by the same facilitator using the same methodology often have varying degree of success. The main explanation we have found is in the goals and interests of the project participants and involved managers. If they do not have a wish to change something, preferably by pulling in the same direction, creating change is a challenge.

Less resources are spent when the interaction is improved, especially interaction between different units in the organisation. It is however a challenge to quantify the gain. It is also a challenge to maintain this interaction over a longer period of time. The attention the new process received fade away, and colleagues may move on to other jobs.

4. Sustainability: Maintaining the effect

It is always a challenge to implement whatever has come out of a project into the daily routines of the workplace. Sometimes new routines have to be adjusted a bit to fit the reality on the ground. The benefits of new procedures may not be apparent to everyone. This is particularly challenging when multiple units are involved. Then defining ownership to a process is often difficult and the responsibility for developing it further is generally unclear.

Positive effects may easily fade away when a project is defined as over. Our methodology stipulates to establish a forum for continuous improvement; for discussing how to further improve the process that has been looked into.

Colleagues involved with processes that are being looked into will meet regularly to identify further challenges and to improvements to the process. Other relevant stakeholders may also be gathered to discuss how improvements can be made. The forum is handled by a process administrator, having the responsibility for collecting information on how the process runs, calling meetings and following them up. Identifying errors that happen, including everything that does not go as well as hoped for is a key task for the process administrator.

Generally one of our directors is defined as project owner, and has the authority to decide on changes in the process, also when it involves multiple departments. So far, four of our projects have established such fora. Recent experiences show that crating a working forum for continuous improvements is easier related to some processes than others. The work is however in its infancy, and we still have many lessons to be learned.

5. Why get engaged?

Goals for areas to address are set by the management. All staff are participating in developing and continuously improving work processes. This gives them possibility to develop their own positions and influence how to fill them. This is important for the motivation and productivity of staff members, as employees increase their output as a result of more involvement, commitment and affection, resulting from a high degree of autonomy and control over work processes. Many people that have not been involved are sceptical, whereas those who have are more positive. This is shown in an assessment made in 2014. It showed that colleagues that have participated in lean workshops twice as often report that lean substantially contributes to identify possibilities for improvements (79% for participants vs. 36% among non-participants). We think this is because they see the benefits lean methodology can give them. They have more say over how they perform their work. Working with lean also allows you to set aside time to work on improvements; time that would otherwise have been spent solving everyday tasks often the same problem over and over again.

We are not the only national statistics office working to improve through lean methodology. In December 2015 the Statistical Journal of the IAOS published articles on the experience of using Lean Six Sigma in Netherlands (Smekens and Zeelenberg, 2015), and Ireland (McSweeney and Moore, 2015). The articles were commented by colleagues from Austria and Canada¹. Even though the methodology is not fully overlapping, the practical approach used in the Netherlands and Ireland resembles what is done in Norway. This is true both for how the offices are organising the implementation of lean, as well as the fact that all rely on internal resources to do the job after an inception phase involving external consultants.

In Ireland staff at the Central Statistics Office did not associate themselves with the lean six sigma terminology. Many had the impression that the methodology was about lean six sigma per se, not about making statistics. Our Irish colleagues refocused their work to emphasize that the work was all about making the necessary adjustments to produce quality statistics in a changing environment. Lean terminology has been used in Statistics Norway but emphasis is put on using words staff relate to, like work process and specific and measurable goals. Our experience is that keeping specific lean terminology to a minimum makes it easier for colleagues to identify with the way of work.

6. Ownership of the results

Generally colleagues that have participated in lean-related projects feel ownership to the outcome. This is how it ought to be. Lean facilitators are only assisting, helping in the process. They are not the experts; they are not the ones that are actually doing the work. As staff members are the ones that identify improvements, they rightly own the results. However, this adds to the difficulty of quantifying effects of lean projects. Even though lean methodology facilitated the process, lean did not come up with the improvements and they could have happened anyway. Hence it may be difficult to see the direct link between the contribution of lean and the results.

¹ <http://content.iospress.com/journals/statistical-journal-of-the-iaos/31/4?start=10>

The ownership to cross cutting processes is often difficult to define. The more people with different interests and perspectives involved, the more challenging this is. The final ratification of a new cross cutting projects are made in a meeting among the Directors, with little knowledge of the nitty-gritty details leading up to the proposed processes. Hence, they also sometimes have limited ownership to the projects.

7. Which parts of the organisation should we approach?

Some time back we had the impression that managers in Statistics Norway used lean for the small improvements. If you needed to fine-tune a work process or improve your management of day-to-day work, you would call in the lean-team. If however major improvements in our systems were planned, generally the IT department or an experienced project manager would be in the driver's seat. The argument is to a certain degree understandable; we focus on today's processes as a point of entry for making something better. This may make it more difficult to see the potential for making fundamental changes in the production processes.

Earlier, the lean perspective tended to be forgotten when major improvements were implemented. This has now changed. Participation from the lean-team is now discussed when major projects are planned. As an example, a representative from lean is invited into the core team of a major modernisation program in Statistics Norway from the inception phase. The program aims to close the gap between our business process model and the IT systems supporting it. As one of our tasks is to help design good work processes, we consider it important to be present when systems are defined and created. We can assist in facilitating participatory processes leading up to streamlined work processes.

8. Inviting to propose projects

The trade unions in Statistics Norway are positive to the Lean initiative. They have been invited to suggest projects to be addressed through the lean initiative, but have however not so far involved themselves very actively in the process. We are looking forward to receive suggestions for projects from the trade unions, and everyone else that see potential for improvements in different parts and layers of the organisation. We have established a channel

for suggesting projects for lean. Even though it is not all that much used yet, it sends a clear message that we want suggestion for projects. We hope that we manage to communicate the power in defining what areas to address. If people fail to raise issues, the validity of arguments like “nothing good is happening” will be reduced.

9. The role of managers

To get real impact, people have to support lean. Plans and structures are important, but without engaged colleagues we get nowhere. It is necessary to engage and empower people.

Managers have challenging positions within this paradigm. They need to give staff the autonomy necessary to achieve motivation and high-performance. And they need to balance expectations from users and available resources in their unit. Managers in Statistics Norway have often been subject matter experts, keeping a close eye on the quality of the work of their staff. Not only is there a growing recognition that a high degree of control of staff, often grounded in distrust, generally is counterproductive. Also, the message from employees is clear; when asked to describe the ideal lean leadership (Culture gap analysis) the description is a leader who:

- uses teamwork and has an inclusive leadership style
- are involving and clearly pulling in the same direction
- uses coaching and gives feedback
- creates trust in teams and the organisation
- gets each individual to do his best

Introducing lean thus places additional demands on leaders; perhaps especially in knowledge based organisations like Statistics Norway. Traditionally management has been chosen for their excellent academic skills in their area, more than general management skills. This way off managing is now under pressure.

10. Method for lean management training

The important key role of our managers and the new demands on leadership has been focused on for quite some years. The topic of change management has been emphasized, and managers have been given training and arenas for developing new management skills. We know that leaders are responsible for the environment for lean to thrive. Lean leadership role is exercised in various venues – but it is in the daily behaviour and interaction between managers and workers there is real capacity for change. To achieve results, behaviours must be changed. To help leaders change their behaviour, they need to be observed in their natural settings and coached based on this. There are 10 core dimensions in lean management.



Figure 1: Core dimensions in lean management

They are all important, but it is not possible to practice all at once. By focusing on some of them, the aim is to achieve greater focus and improvement. These four were selected as a starting point in Statistics Norway.

- operations management
- coordinated management
- problem solving
- coaching leadership and feedback

One very important tool in this program is the “Lean Leadership maturity model”, developed in cooperation with top management and external consultants. This model describes 4 levels of maturity within each of the focus areas. This was used both as a tool for self-evaluation, reflection and for observation and feedback. The development process is as follows:



Figure 2: The lean leadership process

The results are quite positive:

- observable behavioral changes among leaders.
- self-evaluation scores improved by between and 17 and 37 percentage points
- Employees are more involved at meetings.
- training done as part of the leader's daily work is less extensive
- the maturity model is an excellent tool for reflection, coaching and feedback.

Self assessment (0-100 scale)	Before training	After training	Change
Operations management	30	67	37
Coordinated management	20	50	30
Problem solving	27	50	23
Coaching leadership and feedback	23	40	17

Table 1: Leader's self-evaluation scores in the areas they received training

11. Continuous improvements – the road ahead

The ESS Vision 2020 is aiming for excellence. The vision is defining high standards in key areas of the statistical production process. It establishes norms on areas to address, not the drivers of change; the emphasis on how we should go ahead to fulfil the vision is not all that elaborated. In our view, enhancing quality is a never-ending task, making small improvements every day. This way we eliminate threats to quality through the entire the production process. In lean thinking we focus on user needs, and a lean culture based on continuous improvement will be flexible and aware of changing user needs. The more colleagues eager to take part, the better it works. Without it, introducing sophisticated methods will have less value. We argue that using participatory processes for improvement combined with lean management, encourage continuous improvement of our statistics. Hence, this may help statistical offices achieve the ESS Vision 2020.

Our basic idea is that improved work processes and lean management goes hand in hand. Colleagues with knowledge of the situation on the ground are empowered to make improvements. This is encouraged by leaders through their new way of managing, supporting a culture for continuous improvements.

We are working to establish continuous improvement of work processes in Statistics Norway in multiple ways. First, we involve colleagues in improving their work processes. Then we help leaders to manage in a better way and give them tools to do so.

Finally we have established an organisational setup aiming for continuous improvement. We do however know that we need to have people with us in order to get something done. We can make plans and establish structures, but if our colleagues are not engaged, we get nowhere. We need to engage and empower our colleagues. Without ownership and enthusiasm you have nothing.

12. References

McSweeney, Keith and Moore, Ken (2015), Innovating to do more with less – the story of Lean Six Sigma in the Central Statistics, Statistical Journal of the IAOS, vol. 31, no. 4, pp. 587-592, <http://content.iospress.com/download/statistical-journal-of-the-iaos/sji929?id=statistical-journal-of-the-iaos%2Fsji929>

Smekens, Marret and Zeelenberg, Kees (2015), Lean Six Sigma at Statistics Netherlands, Statistical Journal of the IAOS, vol. 31, no. 4, pp. 583-586, <http://content.iospress.com/download/statistical-journal-of-the-iaos/sji930?id=statistical-journal-of-the-iaos%2Fsji930>