

Work Smart with Lean and Agile Principles: Lean and Agile adapt culture evolution

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Abstract

As a key player in statistical services, Statistics Netherlands strives to respond continuously to the developments in the society and its customer's needs.

This requires a culture of continuous improvement and agility in the organization; not by working harder, but by working more smart, especially in our day-to-day work. To be able to achieve this ambition, Statistics Netherlands introduced the Lean and Agile principles.

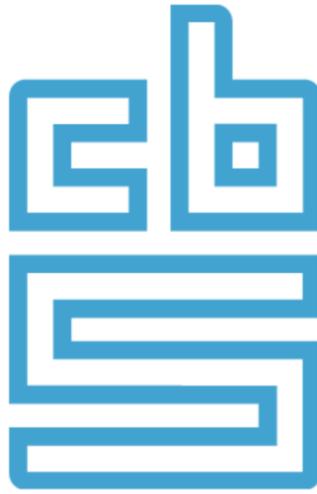
To share our experiences and lessons learned with other NSO's, we want to make you part of our culture evolution journey. Not only in the implementation of the Lean and Agile principles, but especially in the connection between both principles.

How do you make sure these principles are complementary and even reinforce one another and ensure they are no competitors with their own interests? How do hierarchical organized teams develop to more self-organized teams that work more independently, are able to organize their own work and add the most value to the customers?

Curious? We would be honoured to share our experiences during a presentation in the topic "(iv) Implementing culture change".

Keywords

Lean; Agile; Culture Evolution; HRMT





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Lean and Agile adapt culture evolution

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What is Lean and Agile about?

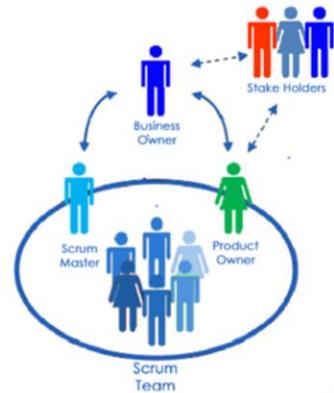
Six Sigma Projects



Lean Operational Management Teams



Agile (IT) Scrum Teams



What is Lean, Six Sigma, Lean Operational Management and Agile?

Lean:

Lean focuses on the elimination of waste in order to create more flow, based on customers' demand.

Six Sigma:

Six Sigma is a structured approach to implement improvements in existing processes in value streams*.

Characteristics Six Sigma:

- Data driven: based on facts and avoids assumptions
- Structured problem solving method (DMAIC)
- Customer comes first
- The goal is to reduce variation (predictability of your process)
- Discover and implement the solutions together with employees

Lean Operational Management:

Lean Operational Management is a way of working, aimed to:

1. Work **Together** as a team: think together, be proactively, measure, be transparent, discuss openly and continuously improve the team performances.

2. **Attitude and Behavior:** create a safe environment, have respect for each other, provide feedback and enjoy your work.
3. Increase **Customer Value** and decrease **Waste**
4. Get **control** on your process and adjust in time

Start with Lean Operational Management in 5 steps:

- | | |
|---|---|
| 1. Process and customer
(Output, Customer) | (SIPOC, Supplier, Input, Process, Output, Customer) |
| 2. How do you know when you are in control ?
(Key Performance Indicators) | (requirements to the process-> KPI) |
| 3. How do you keep track ? | (visualization) |
| 4. Adjust: frequently and short | (daily standup) |
| 5. Trends and improve | (weekly standup) |

Agile Teams:

Agile teams support a value stream. An Agile team in a value stream is responsible for the development and (technical and functional) management of the IT-products and services of the value stream. Each IT-team exists out of 2 components:

- An **operations team**:
responsible for **how** products and services are realized and managed. They are the owner of the product or service during the entire life cycle of the product or service
- A **scrum master**:
responsible for the best possible **cooperation**

A **product owner** is responsible for **what** is being realized. Agile teams comply with a way of working that ensure focus, stability, rest, regularity and effective and efficient communication.

The **Business Owner** is the sponsor of the Agile Team and the most important stakeholder of the Product Owner. The business owner:

- Represents the customers' interests from process and (business) products perspective (stakeholder management)
- Creates a vision on the business process and products
- Responsible to maximise the outcome of the business processes and products
- Communication of the vision
- Manage and prioritize the Improvement Backlog
- Manage the interdependencies between the several value streams

***Value stream:**

The value stream for a business process is the series of steps that occur to provide the product, service and/or experience the customer desires. Thus steps that do not add value, that represent waste or that a customer does not want and would not pay for are not part of the value stream, meaning they should be removed.

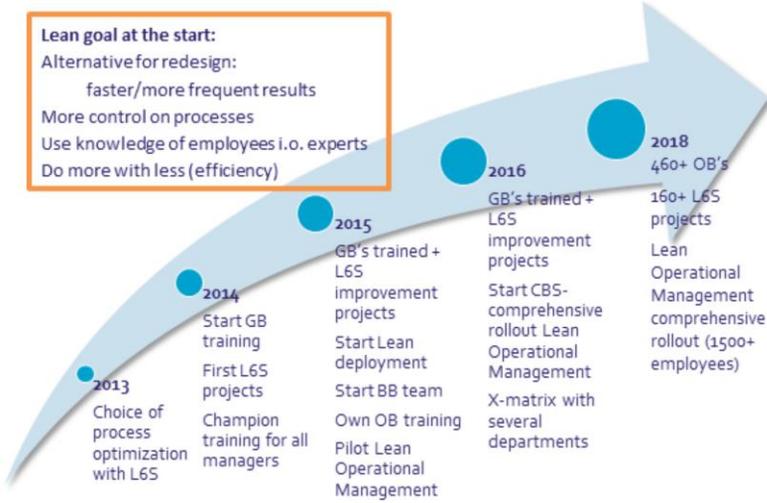
Statistics offices are also faced with “Business Non Value Add”, such as security of data and statistical security. From customers’ point of view this does not add value, but Statistics offices are obliged to ensure data and statistical security according government regulations.

Why Lean and Agile at Statistics Netherlands?



Lean journey of Statistics Netherlands ... till 2018

Lean goal at the start:
 Alternative for redesign:
 faster/more frequent results
 More control on processes
 Use knowledge of employees i.o. experts
 Do more with less (efficiency)



2013

Choice of process optimization with L65

2014

Start GB training
 First L65 projects
 Champion training for all managers

2015

GB's trained + L65 improvement projects
 Start Lean deployment
 Start BB team
 Own OB training
 Pilot Lean Operational Management

2016

GB's trained + L65 improvement projects
 Start CBS-comprehensive rollout Lean Operational Management
 X-matrix with several departments

2018

460+ OB's
 160+ L65 projects
 Lean Operational Management comprehensive rollout (1500+ employees)



Results:
 Improvements initiated: better performances, shorter lead times, higher quality
 Each invested euro has been paid back
 More cohesion within the teams

 Projects supply less quickly than expected
 Training sessions have insufficient impact
 Focus on "rollout" and deployment

The Lean transition (1)

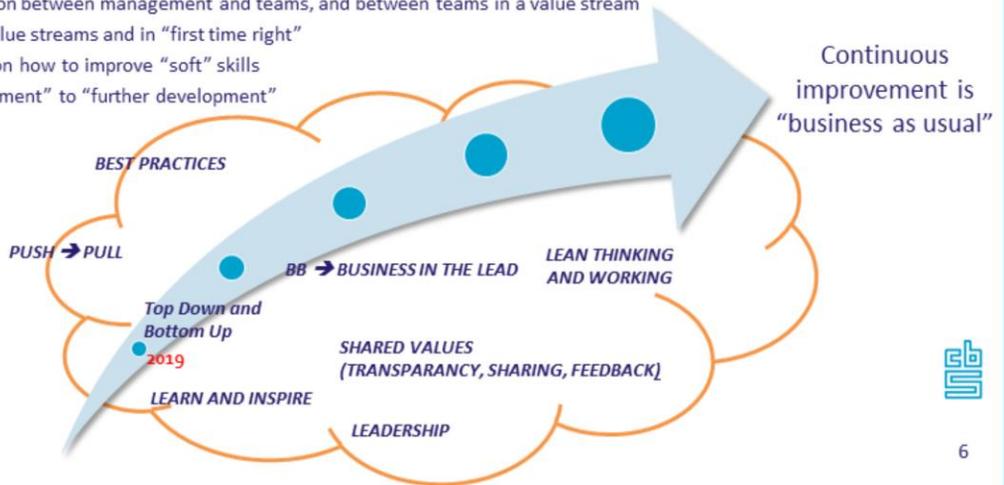
The Lean transition started in 2014 with the training of belts and the implementation of improvement projects focused on efficiency, quality and timeliness. Subsequently Lean Operational Management has been implemented all over Statistics Netherlands as from 2016; a team-oriented way of working that connects performances, improvement and behaviour.

Now it is important to develop to an organization where continuous improvement is business as usual. Focus on "rollout" is no longer sufficient enough: lean thinking and working ("how to recognize waste"), education, learn from each other, leadership, entrepreneurship, focus on effectiveness and cooperation in the process are an important breeding ground to make progress. In this regard it is essential that continuous improvement supports a more pleasant and smart way of working, and gives a positive and stimulating boost to the teams. So in the future we will transform from "rollout" to "rollin" where the Lean transformation will be experienced and felt by the teams themselves.

Lean journey of Statistics Netherlands ... the next step

The next step:

- Improve liaison between management and teams, and between teams in a value stream
- Mindset in value streams and in “first time right”
- More attention how to improve “soft” skills
- From “deployment” to “further development”



The Lean transition (2)

Sofar the lean transition at Statistics Netherlands has had a top down deployment with quantified annual targets, determined by the Executive Board and monitored by the central black belt team. (Push)

Parallel to that there has also been a bottom up approach, where managers and teams, that are willing to implement Lean Operational Management within their teams, will be supported by belts, taking account of their specific needs. (Pull)

To achieve the long term objective “continuous improvement is business as usual”, it has been necessary to transform from a push oriented deployment approach to a pull oriented approach. This has had consequences for the steering: ownership and its development should be part of the organization itself.

Leading Coalition Lean:

As we have been starting to work Pull, when teams require support from Lean, Statistics Netherlands has decided to establish the Leading Coalition Lean. The idea behind the Leading Coalition Development is that representatives of the **existing organization** give form and direction to continued development of Lean within Statistics Netherlands, with the ultimate goal: “continuous improvement is business as usual”.

Agile journey of Statistics Netherlands since 2017



Attention! Situation changed

Our IT is to slow

Business

IT

No equal cooperation

Usefulness Necessity

Our IT is to expensive

It is not always fun

With the aim of:

- Simpler architecture and product portfolio
- Guaranteed and consistent quality level
- Better cooperation and less tension
- Development of the profession, personal growth and professional work
- Innovation and re-use
- Healthy workload

Agile journey of Statistics Netherlands since 2017

Why Agile?

- IT demand much higher than IT capacity
- Lack of ownership of applications
- Developers feel restrained by bureaucracy, IT siloes and technical limitations
- Large number of outdated applications
- Application changes take too long
- Statistical divisions resort to “do it yourself” or hiring their own development teams

Goals for IT to become:

1. Better (more business value & closer to the business)
2. Faster (in enabling changing business)
3. More Efficient (less waste)
4. More Fun (more work pleasure for the people involved)

Leading Coalition Agile:

In 2018 the focus of the agile transition was to introduce the agile principles and to implement the appropriate structure and working method. The organization has been coached with the first steps to cooperate according the agile principles.

In 2019 the focus has been shifted to increase the professionalism by further developing the competences and skills of individual employees, teams and parts of the organization to a basic level. Subsequently the second focus of the transition in 2019 is, logically, to consolidate the change.

Consolidation requires a sustainable and learning organization, which by itself, is capable to develop continuously, to learn and to tackle issues. In order to achieve this objective, the focus of the assistance by the (external) coach shifts gradually from “doing it for the organization” to “learn the organization to do it themselves” by developing the therefor required capabilities. The necessary support decreases as soon as the competences and skills increase.

Background information:

Why an agile organization? Fit for purpose!

Demand for reliable data for substantiation, *evidence based*, and accountability in decision-making, and scientific research.

The world is changing rapidly and we need to anticipate technological and digital innovations.

Budgets and resources are scarce and need to be deployed as effective and efficient as possible.

Urgency: IT problems delay our development.

IT does not deliver products and services quickly enough

Too big change projects.

Lead to long lead times and complex IT-solutions with a lot of customization and limited re-use.

Feedback shows slow take-up and the business knows only at a late stage if the outcome meets its requirements.

Expensive change and management processes.

Delaying bureaucracy.

Supporting processes are slow, vague, take a lot of time and lead to frustrations.

The organizational structure in silo's results especially in many handovers, responsibility “until the counter’ and low commitment for the common objective.

Our IT is too expensive

Waste due to too many chains and handovers:

This costs a lot of time and results in loss of information which affects the quality.

Insufficient focus on business value.

Way of working leads to unnecessary functionality. Therefore less time for subjects that really matter.

This results in a “Beauty-contest” dilemma. Big and expensive is supposed to be equal to important.

Too little direct feedback.

“All of nothing” replacement of systems. Few little modular adjustments in systems. Only feedback upon completion, when it is too late for adjustments.

Lack of budget responsibility.

Structure and working method do not promote a high awareness of the costs. Although there is awareness of the costs, there is a lack of insight in the revenues. The “pain” of budget overrun and high management costs are felt by IT.

An inflexible and too planned approach.

The execution according plan has more priority than adapting to new insights. New projects are expected to be well considered. Business does not have the opportunity to change its opinion.

Too complex

Complex solutions, a lot of customization, limited re-use.

No equal cooperation

Limited ownership.

Due to development and management cooperate very limited, no one feels the responsibility and ownership for preventive maintenance. Big changes are charged to the management budget.

Sub-optimal solutions with poor quality.

We have to choose between central IT-development with central IT development tools or decentral IT-development with decentral IT development tools. This results in sub-optimal solutions and own quality standards. Every one has its own method, with limited overview and no guaranteed quality and consistency.

Rarely together.

IT and business do not cooperate to a common goal.

Negotiations associate with conflicts, resulting in tension and even sick leave.

It has to be more fun

Too high workload and individual subordinate to organization objectives.

IT professionals experience like they are “errands”, who are being moved by resource management from task to task to get the temporary job done under stress.

Limited time for development of the profession and personal growth, and not the opportunity to work professionally.

No boost to think about innovation or re-use.

Infrastructure and tools are outdated

Both the infrastructure and the tools for IT professionals are outdated, cumbersome and not hip. This hampers them to carry out their work, but also frustrates them not to achieve their personal ambitions.

What makes that Lean and Agile can go hand in hand together very well?



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What have Lean and Agile in common?

Lean Operational Management:

1. Work **Together** as a team: think together, be proactively, measure, be transparent, discuss openly and improve continuously the team performances.
2. **Attitude and Behavior**: create a safe environment, have respect for each other, provide feedback and enjoy your work.
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Agile:

Goals are for IT to become:

1. Better (more business value & closer to the business)
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What are the differences between Lean and Agile?

Lean



Agile



What are the differences between Lean and Agile?

Although Lean and Agile have a lot in common, they are applied in different situations.

Statistics Netherlands applies Lean to improve processes (in the value streams) and has a smart goal (DMAIC), whereas Agile/scrum teams are responsible for the implementation and (technical and functional) management of the IT-products and services of the value stream and do not have, necessarily, smart goals.

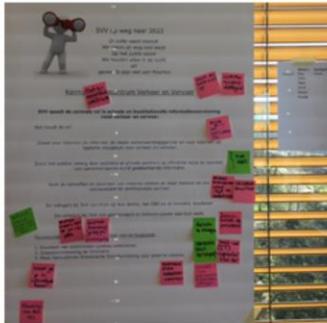
How does a department embed Lean and Agile within their organization?



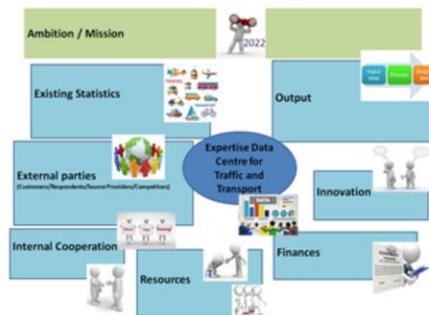
Workshop “Data Expertise Centre Traffic and Transport Statistics 2022”

What Hurts and Helps?

Create a Vision and Refine



Downsize to specific and achievable activities (2019)



Department Traffic and Transport Statistics

The “Department Traffic and Transport Statistics” invited mid-2018 a Lean Six Sigma Black Belt to support one of their teams to work, as a team, towards their goal to achieve a new way of publishing and making output for multimodal transport in the future.

It was interesting to see the team developing gradually from hesitation to believe in the opportunity to achieve their goals, to take ownership and to execute actions in small steps, and to have, finally, a working database with data about multiple transport modes. They achieved their goal in time!

Set goals

Early 2019 the “Department Traffic and Transport Statistics” also set a long term goal. They wish the expertise centre to grow into a recognised authority on data for Traffic and Transport in 2022, both internal and external Statistics Netherlands.

Simultaneously they also initiated to establish a scrum team (Agile) in order to be able to take up the (IT) challenges they face to achieve their defined goals.

Workshop “Data Expertise Centre Traffic and Transport Statistics 2022”:

The Lean Six Sigma Black Belt and the Scrum master conducted together a workshop, where the director explained her vision for the “Department Traffic and Transport Statistics” to become the Expertise Data Centre for Traffic and Transport in 2022.

During the workshop the team members brainstormed which challenges they faced to grow towards this objective and what they needed to overcome these obstacles.

It was a very creative workshop where all the team representatives were closely involved. As result at the end of the workshop we converged to a first set of activities that need to be executed in **2019**, to become the recognised authority on data for Traffic and Transport in 2022.

In the period after the workshop ownership was allocated to each prioritized activity. Together with content expert(s) they are responsible for the implementation of that specific activity.

One Department, Teams, Lean, Agile. How to cooperate?

Workshop “Continuous Improvement”



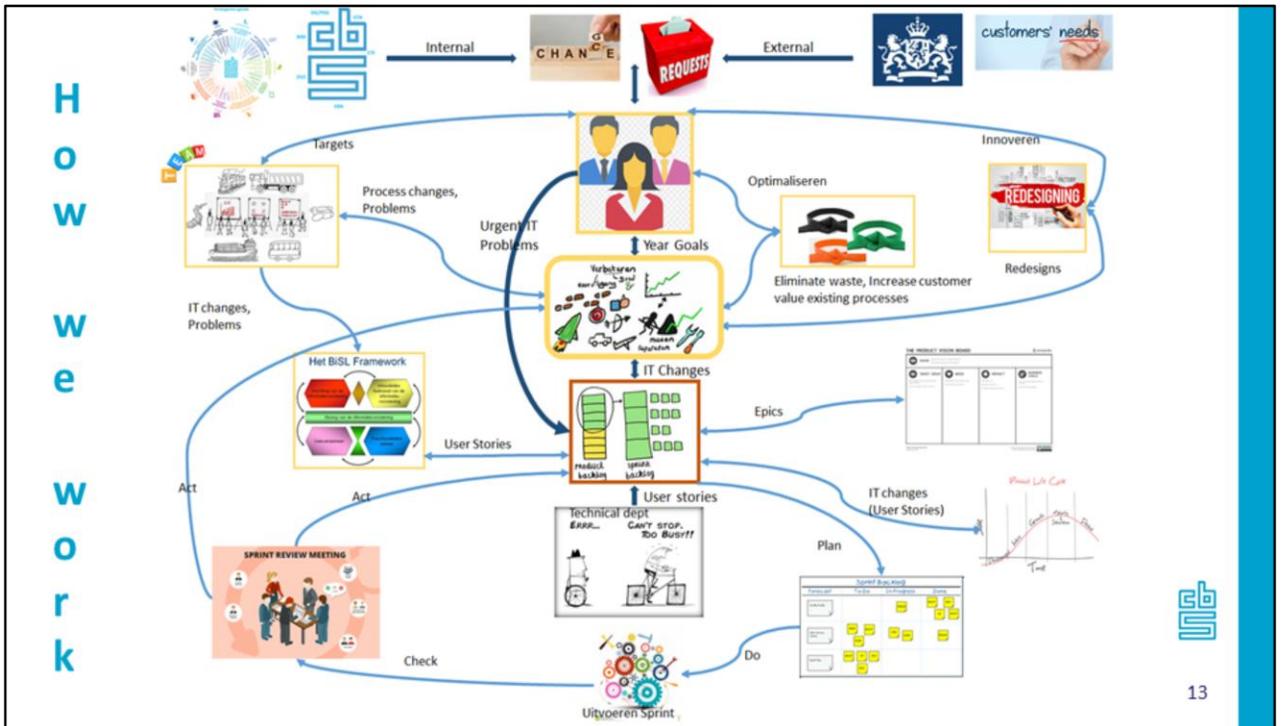
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Department Traffic and Transport Statistics

Embed the cooperation of supporting functions, such as (value stream) business analyst, Lean Six Sigma Black Belt, Scrum Master with management and the teams:

While the owners and the content experts investigate how to execute and implement the prioritized activities of the workshop “Data Expertise Centre Traffic and Transport 2022”, and the functions in the Agile team gradually get recruited, the next step was to determine how all these different roles are supposed to work together in a more efficient way.

To figure this out we held the workshop “Continuous Improvement”.



Department Traffic and Transport Statistics

Workshop “Continuous Improvement”

The business owner, the scrum master and the black belt creating together a road map for the workshop “Continuous Improvement”. First of all they developed a “discussion picture” where all the different roles were represented with a first proposal for the review design of the process flow.

Refining the “discussion picture”



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Department Traffic and Transport Statistics

Workshop “Continuous Improvement”

The business owner presented the proposal of the “discussion picture” and the participants added their comments. Some items still require some further investigation.

What is needed to perform optimally?



Department Traffic and Transport Statistics

Workshop “Continuous Improvement”

After the process flow each role mapped from his/her point of view which products/services (output) they provide to whom (customer) and what input they require from whom (supplier)*.

In sequence of the animation in the “discussion picture” we discussed each role separately. In this way we noticed that the flow of the outputs and inputs in conjunction with the roles were mostly clear, but in some cases also the blind spots of the (input/output) expectations between the roles became visible.

Some items still require further investigation.

*SIPOC: Supplier, Input, Process (in this case we used the role), Output, Customer

What have they accomplished?

- A better understanding of each others work
- A common understanding of a possible cooperation between the business and agile teams
- How:
 - to deal with change/continuous improvement
 - the transition is managed
 - choices are made



How has the department been transformed?



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What transformation has the department made?

- The management determined a vision to become the “Data Expertise Centre Traffic and Transport” in 2022
- Management involved the teams to think **together** how to set up their organization and how to cooperate. They developed from a WE (Department Traffic and Transport Statistics)/THEM (IT) mentality to an US mentality.
- Downsize the vision to year objectives and to concrete activities, including ownership.
- Into conversation and address issues that extend their span of control during the daily stand-up or weekstarts.
- From hesitation gradually to willingness. Basic trust has been recovered.

What makes the cooperation successful?



Management



Confidence

A team is not a group of people who work together. A team is a group of people who trust each other. -



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Guidelines for success

1. Work towards achievable goals in small steps
2. Commitment from Management for transformation
3. Management indicates the results for the workshops, relies on the skills of the facilitators to organize it, supports and gives feedback and approval on the content.
4. Supporting parties assess with management their needs and how they can help
5. Supporting parties allocated to a department (Agile, Lean, Business Analyse) prevail the departments interests above their own programm interests (avoid political issues)
6. Confidence between cooperating parties and express it to each other





Facts that matter