

The challenge of change when implementing lean

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Abstract: The Central Statistics Office, Ireland embarked on a programme of business process improvement using the methodology of Lean Six Sigma in 2011 which proved very successful in a number of areas. Despite the initial success a full programme of continuous improvement was not implemented successfully throughout the Office. This paper examines the reasons behind why the lean programme did not become embedded in our organisation and the difficulties encountered in managing this change process. The paper will also highlight a number of alternative approaches currently being undertaken to introduce process improvement initiatives in the Office on a more sustainable basis.

Lean implementation in the CSO

In response to increased demand for outputs from our customers and reduced budgets following the economic downturn which impacted Ireland from 2007 onwards, the Central Statistics Office began examining a number of business process improvement methods to support and manage the change we were experiencing as an organisation. After researching and analysing a number of process improvement techniques and methodologies and having consulted with similar organisations in both the public and private sectors, the CSO decided that Lean Six Sigma (LSS) would be the best fit for us and began developing a Lean programme to drive the change process.

The implementation of LSS methodology in the CSO commenced in 2011 with the introduction of a proof of concept in the shape of three different projects. These projects were carefully selected by the quality manager and a senior management team from a number of survey areas where improvement was required to ensure that the methodology could be a success if applied correctly.

A selection of staff members across the three areas received 5 days introductory training in LSS and the DMAIC¹ framework which was delivered by an external consultant. The breakdown of the training consisted on 3 initial days on the Define, Measure and Analyses phases of the framework which were followed by the commencement of the LSS projects. Significant time was spent at the beginning of the project on getting the project charter correct where a problem statement was drafted which set out in detail why the project was being undertaken. This ensured that there was clarity for all in the team on the overall purpose of the project and which problem was being addressed. By focusing on the root cause of the problem it ensured that the team did not jump to conclusions and solutions but instead focused on first 3 phases of the DMAIC framework. The other 2 training days were built into the lifespan of the project to monitor progress against project schedule and focus on the Improve and Control phases once the analysis was carried out.

The projects took approximately 12 to 14 weeks to complete and the CSO Quality Manager provided hands on coaching and mentoring when needed. Each project went through the DMAIC structure in a systematic manner with no rushing to judgement and a strong emphasis on the data underpinning the analysis of the problem together with solution identification and prioritisation. One essential element communicated to the project team was that LSS is not about blame but improvement and that LSS is about the process and not the person.

The proof on concept proved very successful with each of the projects driving organisation efficiencies from the point of view of process improvement, shorter production times,

¹ DMAIC stands for Define, Measure Analyse, Improve, Control

improved product quality and substantial cost savings (Foley, 2011). This success provided the CSO's senior management team with the confidence to invest further in LSS and a lean programme was implemented in the CSO from 2012. In the following 24 month period to the end of 2014 14 lean projects were implemented to varying degrees of success with over 80 staff receiving lean training.

Success followed by unease

While the Lean programme was regarded by the senior management team as a success, the programme was struggling to be accepted by the general body of staff in the Office. It was noted that lean worked better in some CSO Divisions than in others. When reviewing the lean implementation programme it was found that follow through on project recommendations was uneven across sections and divisions and was highly dependent on the support from senior management to carry out the necessary changes. In some cases where process improvement was introduced in a business area, they reverted to old practices and behaviours over time. It was also the case that issues emerged with project selection as some business areas struggling to identify projects which would be suitable for the lean programme or identifying process risks that the lean methodologies could address. Where projects were being nominated for inclusion in the programme it was often from the same business divisions who had bought into the benefits of lean and had already implemented a successful programme. The lean programme as is was unsustainable and action was required to re-invigorate it.

In order to get a better understanding of why the lean programme was struggling to get traction and engagement from survey owners or business divisions, staff and management were consulted for their views. A number of common themes emerged as part of this consultation including:

- There was a lack of clarity by staff as to the purpose of the lean programme with the common perception that the programme being regarded as cost cutting more than value adding.
- Staff saw the LSS methodology as overly technical in nature. They did not understand the language used when implementing lean and at times saw it as “consultant speak”.

- The LSS programme was another change initiative that was taking place at a time of major organisational change where staff numbers were being reduced through retirements and transfers and where the demand for statistical outputs was increasing
- While the LSS programme was linked to the corporate strategy, it was competing with a number of other strategic change initiatives
- There was a lack of a support team to assist with LSS projects or practices with only one staff resource supporting the programme
- As a public sector body the Office is not only non-profit focused but also has a monopolistic nature and that customer focus is diluted when compared with private organisations, therefore the sense of urgency towards change is somewhat minimised.

Ultimately however, all those impediments seem to derive from an unwillingness to change either the culture of the Office and existing work practices rather than the difficulty of LSS project implementation.

At the end of 2014 it was decided to pause the Lean programme so that we could consider the feedback from staff and decide on the next steps that should be taken. At this time the CSO also began the implementation of a major organisational review of priorities. While lean was included in a list of strategic priorities for the Office (CSO Statements of Strategy, 2015 & 2016) it was again competing with (while also complementing) a number of other prioritised strategic change initiatives which were focused on improving process and output quality, methodology, and customer service projects. As we were conscious of the impact and burden all of these change initiative would have on the day to day business as usual of statistical production it was agreed to take an alternative, practical approach to implementing change and continuous improvement.

Approach now taken

Learning from the challenges faced along the way in trying to implement changes into work practices based on LSS methodologies in CSO, a new approach was taken commencing in January 2016 when a dedicated quality team was set up to cater for business process

improvement and the quality needs of the office (S. Portillo & K. Moore, 2016). The focus of this team was to drive improvement and change in both statistical process and outputs by providing support, guidance and expertise to the business areas so that improvements could be identified and driven by the quality team thereby allowing the business areas to concentrate on business as usual. The team comprised of a mixture of lean practitioners, experienced statisticians and technical experts with IT/Methodology backgrounds.

The initial steps taken by the team were to establish and integrate the Generic Statistical Business Process Model (GSBPM) as the standard model for statistical production and, based on this model, determine the “as is” status of statistics processing in CSO in the shape of process maps. The GSBPM model was also used in the generation of standard documentation and re-organisation of data and files inside servers. While these exercises required the involvement of CSO staff of all grades from all statistical areas in the Office, the initial set up burden that is generally placed on staff when carrying out LSS projects was minimised. This was due to the Quality team taking ownership of all the facilitation and documentation tasks thus allowing the statistical units to concentrate on business as usual. Any lack of standardisation and small improvements across the office that were easily corrected were highlighted at this stage and steps were taken to correct them. When process mapping each statistical output, potential improvement actions were highlighted and discussed with the business owner and an implementation plan was developed and put in place. These process improvement actions were implemented through the collaboration of the business areas, the Quality team and other support areas when required (e.g. Methodology, HR, Training and IT). In addition process metrics and indicators, based on the UNECE Quality Indicators for the GSBPM, were identified and added to the process maps to assist survey owners on managing and monitoring survey performance.

With a baseline view now completed, new maintenance policies are being rolled out in order to keep these standards in place and turn them into the new “normal”. Training on the use of the systems supported by additional procedures and policies has begun to be delivered. In addition the Quality team in conjunction with an assurance review team will use regular self-assessment questionnaires to identify and address potential risks at an early stage, and determine whether more formal, extensive LSS projects are required.

One of the key challenges we continue to try to address relates to communications with staff and how much communication is enough. While the Quality team have engaged with senior managers, heads of business units and all staff through a variety of communications channels on a continuous basis (Training, workshops, information notes, information sessions, newsletters, a new Quality website etc.) it appears that the message of change and improvement is not always well received. This key element remains an obstacle to change.

The same approach is also being adopted to plan for future change (Design for Lean Six Sigma) an example of which is a current project in a Labour Market statistics area where new methodologies are being introduced and the quality team in collaboration with the business owners are attempting to lean the to-be process.

Key elements for making sustainable change

The Quality team have learned many lessons in our attempts to embed both lean but to a larger extent change into the culture and practices of the CSO in our efforts to make change sustainable. These lessons are reflective of Kotter's 8 stages of change (Kotter, 2012) and include:

- **Management buy-in and support:** This is the most important aspect of introducing and sustaining change. It is not enough that management endorse the change initiative, there needs to be direct, visible support and involvement from senior management to ensure success. By getting senior management sponsorship and involvement, they become more closely aligned to and invested in the change initiatives which in turn impacts on how staff engage in the change. By providing strong leadership and support, senior managers set the tone for the change in organisational culture and pave the way for the implementation of change.
- **Governance is essential:** Any change initiative needs to be supported by an appropriate governance framework for it to be embedded as the new norm. The governance needs to reinforce that what should be happening as a result of the change is actually happening and provide some form of follow-up or assurance to the organisation. While CSO has established a new organisational governance structure to

support prioritised change projects, we are still developing the appropriate roles, procedures, responsibilities and checks to support the embedding of change.

- **Measure, Measure, Measure:** In order to ensure that change is firstly successfully implemented and secondly sustained you have to have appropriate process metrics. Examples from a statistical processing perspective are response rates, confidence levels, timeliness, rate of error failures, cost etc. The process metrics and change indicators allow survey owners to assess performance, provide evidence of delivery levels and improve control over the risks that matter. The metrics must become part of the day to day work in the process and should be regarded by staff as a support more than a monitoring task.
- **Promote the benefit to the business.** If you want to get the business areas to fully engage with the change process, they need to understand from the very start what is in it for them. You have to promote and communicate the benefits that the change will bring and where possible ensure that the effort that is required to be put in is outweighed by the benefit.
- **Provide support to the business:** In CSO a dedicated Quality team was established in 2016 to support and drive the improvement and change process. As per Kotter this team should be committed, reliable, able to influence and should lead by example. It is important that the team has the right people in place with the right emotional drive and commitment, and the right mix of skills. The team should be empowered to make the difficult decisions and have the ability to remove any obstacles they encounter.
- **Communications is key:** You can never have enough communications with stakeholders who should be consulted with or informed at every step of the change process. It is critical that you engage and collaborate with as many people as possible including those who are resistant and reluctant to change. We make every effort to communicate our vision and implementation plan in a clear, simple language so that our message is clearly understood by all. By explaining and communicating the burning platform for change (the WHY) and setting out the plan (the HOW) people can better understand the vision and future state and are more likely to become engaged.
- **Get quick wins and celebrate success:** When you are setting your goals and deliverables it is important that you do not attempt to tackle the greatest problem first but looks for opportunities where success is a strong possibility. This was a lesson learned

hard by the Quality team. If possible you should set goals that achievable and you should only embark on a manageable numbers of change initiatives at any one time. It is important to complete open projects before commencing new initiatives as unfinished business may impact on your credibility and reputation. This in turn could have an effect on future engagement. When a project ends you should reward and acknowledge progress and achievements to promote participation and involvement. This also helps in keeping the momentum going while also motivating and energising the team who are driving the change.

- **Take a risk based approach:** By adopting a risk based approach when identifying change initiative projects going forward you can tackle the issues which have the most impact on the organisation. Examples of this approach dealt with issues of improving consistency in the processes of dissemination, revisions, editing and scanning. One project currently being undertaking relates to the potential risks that the upcoming GDPR regulation may have on how we manage our data assets in CSO and we have undertaken a number of data management change initiatives to address these risks.
- **Better coordination:** If any business process improvement initiative is to be successful we recognised that we needed to coordinate better with the rest of our colleagues also introducing change to work practices. Strong internal communications and strong support from other management teams are paramount to achieving this. This would translate into better buy in and less resistance from the implementing areas into carrying out the change.
- **Deal with resistance early:** There is extensive literature indicating how to deal with resistance to change in an organisation, and the recurring techniques widely used refer to the following:
 - Communication - Teaching, talking, listening to person who is resisting
 - Involvement - Working together with the person, listening to their ideas
 - Support – Helping other person to change, giving time and space
 - Negotiation - Buying co-operation of other person, Incentives
 - Co-option - Selective use of information, giving individual a role
 - Coercion - Forcing the cooperation of other person –
- **Reinforce change through training and engagement:** While training increased staffs awareness and understanding of the change it also reinforces the message that

this change is not a short-term initiative but is something the organisation is committed to.

Finally one of the most important qualities required for change and which is essential to the success of any project is having a sense of humour while being positive, supportive, engaged and adaptable to the many unforeseen and unexpected obstacles faced along the change journey.

Conclusion

Implementing change in an organisation is a difficult task that requires energy and commitment from staff at all levels. By communicating the long term vision and linking this to the strategic direction of the Office, staff will have a better understanding of the rationale behind the drive to change and will be more likely to engage and participate. Embracing change is not something that comes as a given. However, in the fast paced environment in which we work nowadays change is a constant and needs to be considered and built into all planning stages. If we want to drive improvement and change then the culture of an organisation itself needs to adapt, in small incremental steps, until it develops and embraces a change. This continues to be an ongoing challenge for the Quality team.

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