

CAPITALISING ON LEAN METHODOLOGY AS A MANAGEMENT TOOL IN THE SCOTTISH POLICE SERVICE

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WHAT IS LEAN METHODOLOGY?

As well as being a philosophy (Bhasin & Burcher, 2006), 'Lean' methodology is a management technique developed from a model created by an American statistician, Professor William Deming, for the Japanese car industry in the 1980s (Neave, 1990). Since then 'Lean' has been recognised around the world as an effective way to improve efficiency and effectiveness whilst maintaining an unrelenting focus on service delivery to the customer. It is about improving flow, the elimination of waste and the provision of a quality service through continuous improvement. Deming states, *'If the capacity of the system is the work plus waste then capacity can be increased by eliminating the waste'* (Neave, 1990). To us this quote has explanatory power in an organisational police setting because it challenges the traditional dynamics of change by engaging the whole organisation. Its origins can be found at Toyota which it helped to evolve into one of the largest and most reliable motor vehicle brands. The concept transferred easily to the service sector where it was adopted by household names such as Tesco. Of significance is the fact that more recently it has been used effectively in the public sector, particularly the health service and local authorities. Clearly some elements originally used in manufacturing are not applicable to the police but the basic principles and many of the core tools certainly are. These form the basis of this briefing. It is helpful to consider some theory at this point.

The main texts in relation to 'Lean' methodology are Neave (1990), Hines & Taylor (2000), Jones & Womack (2002) and Womack and Jones (1996). Womack and Jones (1996) and Jones & Womack (2002) highlight five core principles to define Lean thinking as a means for understanding value:-

- Specify the value desired by the customer
- Identify the value stream for each product or service providing that value and challenge all of the wasted steps
- Make the product or service flow continuously
- Introduce pull between all steps where continuous flow is impossible
- Manage toward perfection so that the number of steps and the amount of time and information needed to serve the customer continually falls.

Following 'Lean' methodology allows one to identify and map process. This is known as "*Value Stream Mapping*" (Rother & Shook, 1998; Jones & Womack, 2002). For a fuller explanation of 'Lean' methodology see Bicheno (2008), "*The Lean Toolbox*" and for more detail on its history see Emiliani, (1998). The work of Bicheno is of particular relevance to the police service.

Lean is currently the subject of debate in policing circles as the sector seeks to service growing demand with static or reducing resources. Consequentially, this paper seeks to explore its relevance to policing in Scotland. In order to do that it will be helpful to first outline the basic principles as they relate to customers and processes.

THE CUSTOMER PERSPECTIVE

The primary focus of Lean is the service delivered to the customer. In its rawest form Lean states that if a process, or an element of a process, doesn't benefit the customer then don't do it. A more pragmatic approach is to ask 'would the customer be prepared to pay for this?' Policing has numerous customers, all of whom have an interest in its processes. For example, the customers in an initiative to reduce drug dealing on the street may be the offenders arrested, the detectives who want to use the intelligence gathered, the community in which the operation took place, or the outreach workers engaged in rehabilitation etc. Examining a process from all the various perspectives would be near impossible so Lean requires that customers are segmented according to their needs. Key segments can then be chosen and the process examined from their perspective. Scottish policing has customers just like any other organisation, public or private. Customer segmentation is also important in helping to deliver enhanced public confidence. The first step in the process is to form a 'Lean Team'.

Unlike most traditional inspection methodologies, Lean methodology utilises a review team from within the area under review, consisting of managers, supervisors and service delivery staff, where necessary supported by a Lean expert. The benefits of using an internal team is that they understand the process, are often already aware of opportunities for improvement; can act as ambassadors for change during the change implementation phase and will build the skills necessary to deliver continuous improvement. The challenge for Scottish policing is the lack of continuity caused by the constant churn of police officers and some police staff as they follow their career paths or respond to operational need, and the resource implications of abstracting staff from their day to day work. Perhaps the more realistic option might be a small dedicated central team supported by representatives from the area under review as appropriate.

THE LEAN PROCESS EXPLAINED

The Lean process is relatively simple and to a large extent follows many previous police inspection methodologies - the significant difference being the use of a cost benefit model and value stream mapping. The following FARIC methodology (Smart, 2008) has been adapted for the UK police services and consists of the following steps:-

- **Feasibility** – Is it feasible to apply Lean to the process under consideration? In most cases the answer is yes but consideration must be given to the likelihood of analysis and redesign exceeding the value of the efficiencies likely to be achieved. Benefits may not always be financial or easily quantifiable. For example Lean was used to accelerate the flow of domestic violence risk assessment information to partner agencies from two weeks to one day. Victims benefitted from earlier support but outcomes were difficult to quantify.
- **Analysis** – The Lean team is used to gather and analyse data. This includes populating an initial cost benefit model for the process under review and creating a value stream map. This is a basic process map with swim lanes accommodating the various participants in the process. Data is added to the map to give context. The team then identifies those parts of the process that add value, those that don't add value but have to be done, such as statutory requirements, and those that are waste. Their findings are validated by their peers.
- **Redesign** – The Lean team redesigns the process eliminating all waste and as much of the process that does not add value as possible. Often they will create the perfect process map and adjust it to make implementation achievable. They then explore the change required and identify the enablers needed to allow it to happen, for example workspace redesign, alternative equipment, training etc.
- **Implementation** – The key point here is that the Lean team will have been in regular contact with their peers throughout the process so the obstacles to change should have been identified and addressed. A senior member of the Lean team will usually take responsibility for leading the implementation, which utilises standard project management principles. Team members in the workplace promote change and feed back any inhibitors.
- **Continuous improvement** – This is the most important part of the process. The Lean team back in the work place should now have the skills to work with their peers to continuously identify opportunities for improvement and deliver change. This engages the whole department or organisation and develops the continuous improvement ethos.

The process isn't complex but does require strong leadership and organisational commitment to ensure it is fulfilled. Middle managers can be very resistant to releasing staff to participate because their focus tends to be on achieving short term targets. This may not be as problematic for Scotland as in some other areas given that the Scottish approach to performance management has been less intense than elsewhere so managers still feel they have some discretion.

ASSESSING ITS APPLICABILITY IN RELATION TO THE SCOTTISH POLICE SERVICE

From research conducted by the authors, it is apparent that 'Lean Methodology' can be and is being utilised in the police service in settings such as the control room; Intelligence Management; Domestic Violence Risk Assessment; and the Quest Programme.

- **Control room** – A high performing control room in a provincial police force used Lean to deliver a 10% saving on its running costs, identified high levels of idle time due to resource not matching demand and redeployed its back end quality control team to a front end quality assurance role, enhancing the quality of service to the public.
- **Intelligence management** – A metropolitan force used Lean to reduce its criminal intelligence processing time from up to 28 days to 2 days, fulfilling the requirement of investigators for current intelligence.
- **Domestic violence risk assessment** – A provincial police force used Lean to reduce the time taken to share risk assessment information with partner agencies from 2 weeks to 1 day, enabling the delivery of earlier support to the victim.
- **Quest** – This programme currently being applied in some English police forces is a derivative of Lean and has delivered some significant savings and performance improvement but it is expensive and practitioners are beginning to question its sustainability.

The benefit of using 'Lean' is that it is a tried and tested Management technique and in the current professionalisation and reorganisation of the Scottish Police Service, as it seeks to move towards a more efficient and business like model of policing, it has much to offer. For example, the Scottish Police Service currently faces repeated censure from HMICS in relation to their inability to articulate the cost of basic police practices (MHICS, 2000, 2004, 2009). A 'Lean Methodological Approach' would help forces audit their practices and process at the same time as addressing issues of costs. The Scottish Police are extremely efficient at the business of policing but not so in relation to the issue of business processes. This is a fact appreciated by ACPOS and the Leadership Division of the Scottish Police College, which recently reviewed its core areas of concern and have grouped learning needs around the three central core areas of Leadership, Business Processes and Operational Practices. However, 'lean methodologies' are not without their challenges and problems because not all policing activities can be pared down or delivered at a reduced cost. Therefore a risk analysis is often necessary. There are also significant leadership issues at play, such as commitment, buy in and resource implications. Therefore, this paper should be read in conjunction with SIPR briefing paper No 5 'Adopting Agile leadership in the police service' (Smith, 2009).

OVERCOMING THE CHALLENGES

The challenges are generic to all organizations and relate to issues of sustainability, team work and quantifying outcomes.

- **Sustainability** – perhaps the biggest challenge for 'Lean' in the police service has been sustainability. Attention is easily distracted elsewhere and the burden of the day to day workload can inhibit delivery of the intended improvements. Overt leadership and organisational commitment are vital.

- **The team** – similarly committing a team of people to the Lean project can be difficult when a department is working to capacity or the staff work shifts but nevertheless, the police traditionally have an entrepreneurial 'can do' mentality and a tradition of team work.
- **Quantifying outcomes** – Enhancing or streamlining a process does not necessarily deliver quantifiable outcomes. For example, a Lean review of child protection streamlined information flows between the police and children's services and freed up time to enhance investigation, neither of which delivered a directly quantifiable outcome.

APPLYING IT IN A SCOTTISH CONTEXT

So can it be applied in the Scottish Police Service? The answer to this question is clearly "Yes". Lean is a universal concept and as such can be tailored to local need. Policing in Scotland has to find a way to maintain or enhance the quality of service it delivers in an environment where resources are static or reducing and demand is increasing. Arguably, the cautious approach adopted by the Scottish police to the centralist performance management regime applied elsewhere was wise (Loveday, 2009), not least because it largely avoided the skewing of delivery which resulted in the widespread criminalisation of young people and the prosecution of others for easy to prove minor crime. Moreover, 'Lean' is not centrally driven and focuses more on quality than quantitative outcomes which sits more easily with the ethos of Scottish policing (Scott & Donnelly, 2005). It also sees the organisation as a team (in a wider sense) which sits easily with the overall ethos of police management in Scotland. The greatest challenge is to ensure it is strategically driven both from within the service and politically. It does deliver and it is sustainable but it takes time to fully embed. It can be usurped by a political desire to achieve short term gain.

It has been used elsewhere in the Public Service in Scotland and England. Indeed, the conclusion from Research in 2006 by the Scottish Executive (Radnor *et al.*, 2006) provides a useful summary –

"Lean is transferable to the public sector and can be used to develop more seamless processes, improve flow, reduce waste and develop an understanding of customer value. Lean is most suited to organisations with high volume, repeatable tasks that allow greater standardisation and integration, supported by a less hierarchical management structure that allows empowerment and engagement of the workforce. However, to ensure greater successes, organisations require an awareness or realisation of the need for improvement; the capacity within the organisation to deal with change; and an organisational culture which is receptive to understanding the customer and process analysis and is able to use relevant data to drive improvement. For longer-term impact and sustainability, implementation of lean should be tied to more strategic objectives. By tackling the barriers and ensuring the provision of the factors contributing to success, this research finds that Lean is a suitable methodology for improving performance and embedding a continuous improvement culture in the public sector".

Radnor, *et al* (2006) make specific mention of Lothian and Borders Police as having piloted the use of 'Lean' methodology. Fillingham (2007) reported on its use in the health Service where its implementation led to an increase in efficiency and to saving lives by streamlining business and operational processes. In a public service context 'lean' methodology can be reformulated as "*Lean Service*" (Seddon & O'Donovan, 2009).

Looking to the future, some commentators are arguing that police efficiencies over the past decade have only delivered incremental gain. This is in keeping with the view of HMICS. Going forward there will be a requirement to achieve even greater savings whilst maintaining service quality and scope. Part of this might be achieved by refining the organisational team ethos and streamlining process but ultimately it is likely to require a rethink of the way the service is delivered. Using competent alternative providers to deliver those services that do not require coercive power is clearly an option. Almost all of those providers will apply Lean to optimise delivery. Applying the principle now could help Scottish police forces understand where they need to go and how best to get there. One of the major issues in applying 'Lean' methodologies is that of sustainability. Organisational memory is often an issue in that accepted and established practices are often reverted to.

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