LEAN THINKING WITHIN PUBLIC SECTOR PURCHASING DEPARTMENT: 
THE CASE OF THE U.K PUBLIC SERVICE 
Jason Waterman and Clifford McCue*

ABSTRACT. Can Lean work in public procurement, or is the field too complex and varied for a lean approach to succeed? In May 2010 the UK government announced a reform of public procurement; a key proposal was to use lean procurement to shorten timescales and reduce costs. This paper describes the Cabinet Office’s work to develop a lean sourcing process and examines its practical implementation. Early implementation experience is discussed alongside lean principles and theory and we consider the effect on procurement success in the public sector environment where strategic outcomes are paramount. We also seek to identify whether there are key enablers or preconditions which must exist in order for public procurement bodies to use a lean sourcing approach.

INTRODUCTION

Political leaders, high ranking public officials, and national and sub-national managers currently confront a growing number of global austerity measures that have attempted to reduce government operating costs. One area that could possibly be a viable way to reduce operating costs (eliminate waste) is public procurement. In fact, the magnitude of the potential reduction in expenditures that

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can be achieved by public procurement can be rather significant. For example, if we accept that government procurement typically represents 15% of GDP (Center for International Trade, Harvard University, 2011), and if we apply this estimate to the estimate of the world’s GDP of approximately $65 trillion (“In Search of Growth,” 2011) it could be inferred that governments across the globe spent around $10 trillion in 2011. Imagine, if we could reduce the cost of procuring government goods and services by 10% as a result of adopting some rather simple strategies, what this could mean in terms of addressing the global economic crisis.

One area that has witnessed growing attention by scholars and practitioners as a way to reduce the costs associated with government procurement is lean thinking and the tools and techniques associated with lean principles. Generally lean thinking is not necessarily a new way of looking at increasing efficiencies in purchasing processes by eliminating waste and improving the flow of goods and services through the entire supply-chain. Over the years a number of similar approaches have been applied in practice (such as TQM, JIT, vendor stocking programs, and the like) that can claim similar successes, as well as similar failures. What makes lean thinking different as it relates to procurement is that it is generally considered a different way to view the management process, which was first introduced as the Toyota Production System (TPS). According to Schelie and McCue (2011) lean thinking is not simply the adoption of lean tools, but a philosophy that becomes ingrained in the system that constantly looks at ways to reduce waste and increase customer satisfaction (notice how we have moved from tactical components of various analytical tools to a strategic orientation). For instance, as a result of lean thinking the TPS refocused their production process from looking specifically at how best to increase efficiency to looking to eliminate waste as goods and services moved along the entire production process (Womack, 2002).

By adopting lean thinking Toyota readjusted its entire production process by reducing or eliminating steps (waste) that did not enhance the value-chain within its manufacturing processes. Their lean philosophy was simple, look at ways to change how both human and machine processes could be redesigned from focusing on production (demand) rather than on input (supply). For Toyota, this was accomplished by aligning operational processes that accurately
captured the production process sequence, identifying opportunities
to link each process step with the previous step, and looking for ways
to always improve quality (Womack, 2002). These lean techniques
resulted in the reduction of production time, lower costs, better
quality, and flexibility in production process of the TPS.

What makes lean thinking different from other approaches is that
it is both a management philosophy and a set of tools and techniques
that attempt to reduce waste and increase quality; where waste is
defined in terms of non-value adding activities. When considering
those entities who have successfully adopted lean thinking, as well as
those who have successfully applied several of the techniques of
lean, one thing becomes readily apparent: the key principle behind
the lean doctrine is the identification and elimination of waste. Under
the tenants of lean, waste is defined through the seven forms of
muda which is best summarized as “any human activity which
absorbs resources but creates no value” (Womack & Jones, Lean
Thinking, 2003, p.6). Also critical to this thinking is that value can be
specified only by the ultimate customer for the process or activity
concerned, and therefore any activity within the production process
that does not create value for the customer is considered wasteful.

If lean thinking (as a management philosophy) and lean tools and
techniques (the methods to achieve value) result in increased value,
then why haven’t all organizations embraced both the concept and
the practice of the TPS? In this paper we examine the central
question of whether public procurement has the potential to be
improved through the use of lean processes and tools, and we extend
this to the use of lean thinking. By this we mean taking a lean
approach and following the principles of lean thinking to help make
government more efficient, and thus less costly.

**Lean Thinking in the Public Sector**

Since public resources have become scarce, the efficiency of the
procurement process should be a primary consideration of every
national and sub-national government. Open, transparent and non-
discriminatory procurement is generally considered to be the best tool
to achieve “value for money” as it optimizes competition among
suppliers. At the same time, there exist a number of tools and
techniques that can potentially make public procurement more
efficient; but for the purpose of this study, we look specifically at lean
techniques. What is the essence of lean thinking? What are the underlying conditions and principles of lean thinking? Is lean thinking a philosophy or a set of tools and techniques that can be simply adopted in the public sector? What themes can lean thinking target within the public sector purchasing department? These are significant questions regarding lean thinking and its application in the public sector, and specifically in public procurement. Answers to these questions will help us better understand the potential outcomes of implementing lean thinking in public procurement, and how public procurement can become more efficient.

When talking about naming the general lean system his team developed that was similar to the Toyota Production System, Womack (2002) listed key performance advantages of the system in product development and production: less effort, less space, few errors, less production time, lower volume requirement, and less capital investment for a given level of output, among other elements. This principle of less of everything to design and manufacture products “at lower volumes with fewer errors” (Womack, 2002, p. 4) can be summarized as “achieving substantial cost saving and quality improvement” (Radnor & Walley, 2008, p. 13).

According to Womack & Jones (1996), any human activity that absorbs resources without creating any value is referred to as waste. Lean thinking is a powerful antidote to waste. It embraces some principles providing approaches to doing more with less while satisfying the exact needs of customers to a greater extent. The core principles of lean thinking include (a) specifying the value defined by the ultimate customers; (b) identifying the value stream which comprise all actions required to bring a specific product or service; (c) having the product or service flow continuously; (d) introducing pull between the steps where continuous flow is not available; and (e) managing towards perfection as there is no end to the process of reducing effort, time, space, cost, and mistakes while offering customers the products or services they really want (Womack & Jones, 1996; Womack, 2002).

Lean thinking is a philosophy that functions as a guide to saving costs and improving quality while meeting customers’ exact needs. When lean principles are implemented in practice, a variety of tools and techniques are created to serve various purposes in particular circumstances. Womack & Jones (1996) discussed some lean tools
and techniques that have been applied in the manufacturing industry, such as 5S approach, value-stream mapping, multi-machine working, single-minute exchange of dies, single-piece flow, turn-back analysis, and visual control. Actually, both the content of lean thinking as a philosophy and the methods it has adopted are not totally new (Radnor & Boaden, 2008). Lean thinking has drawn on other established tools and techniques. The concept of lean thinking includes some elements from some other management concepts, such as just-in-time (JIT), systems thinking, total quality management (TQM), and business process engineering.

In practice, not all of the tools and techniques used in the manufacturing industry are appropriate for achieving cost saving and quality improvement in the public sector. It is argued that tools and techniques used in the manufacturing industry should be adapted according to specific conditions in the public sector before they are adopted (Radnor & Boaden, 2008; Radnor & Walley, 2008). Some typical and frequently applied lean tools and techniques adapted and adopted in the public sector include rapid improvement event (see McNichols et al., 1999; Radnor & Walley, 2008), value-stream mapping (see Hines & Rich, 1997; Weber, 2006), and Six Sigma (see Proudlove et al., 2008).

Scorsone (2008) warned that when transferring lean tools and techniques from the private sector to the public sector, public managers must pay careful attention to the legal system that drives procurement and management-labor relations in order to achieve an expected efficiency of government operation and cost improvement. This is because law indicates that there are different values and requirements for lean thinking in the public sector. In addition, management-labor relations in government agencies are based on principles different from those in the private sector, and thus more complex than the latter.

In the public sector, the lean approach has been successfully applied in a host of areas, ranging from applications in hospital management to accounts payable processes in the U.S. Coast Guard. Case studies conducted by Radnor and Walley (2008) in public organizations show that lean thinking is closely related with some themes public organizations have identified in their organization operations. For example, the need to move toward process-based thinking is embraced in the conception of lean thinking. Focus on
value to the customer is an important principle of operation in the public sector. Addressing customers' issues and meeting their needs is also emphasized in the lean philosophy. To achieve cost saving, improvement of service quality and efficiency, government agencies must make efforts to eliminate waste. Elimination of waste is the focus of lean thinking. A lot of lean tools and techniques are intended to eliminate waste. And last, application of lean thinking requires participation of all employees who are involved in lean programs and tasks (Womack & Jones, 1996). Actually, participation of front-line staff in lean programs and tasks is what government agencies need in their operation.

The above themes identified in the case studies of some public organizations (Radnor & Walley) are also addressed in the public sector purchasing departments. Public purchasing departments have many operation targets and missions, such as saving cost, improving service quality, efficiency, and effectiveness. Lean thinking can be appropriately applied to address these operation targets and missions. Government purchasing is a complex process that is composed of various stages and techniques (Thai, 2007).

Lean thinking provides principles as well as tools and techniques to deal with this process so that the purchasing department can buy more with less. Within the procurement function, seven types of waste are typically found in the supply chain: transportation delays; product defects; inappropriate processing; unnecessary waiting (queuing) times; unnecessary motion; unnecessary inventory; and overproduction. Remember, however, that the elimination of waste is not the ultimate goal of lean thinking; lean thinking is all about how to create value for the customer. Eliminating waste is just one way to increase the value to the customer relationship.

The aforementioned literature, by no means exhaustive, contributes to improving our general understanding of lean thinking to both direct and indirect public procurement activities. Although there is no agreed upon common denominator amongst the studies conducted previously, one thing that becomes relatively apparent is that the application of lean thinking in public procurement is suitable to all types and sizes of transactions regardless of complexity levels, difficulty in comprehension, and degree of ‘wicked’ presence. The impact of lean thinking in public procurement and its relationship to public value, civic engagement, stakeholder desires and taxpayers
resonates across the board. As a result the incorporation of lean thinking in public procurement across all organizations has just begun.

METHODS

Case studies have been used by a number of scholars examining a host of situations, including social, political, and economic phenomenon (see for example, Schiele & McCue, 2011 for a discussion of case studies in lean thinking). Such studies have also been used to examine lean principles and techniques in the public sector. Although there are limitations associated with case analysis (Yin, 2009), for research attempting to explore from a grounded theoretical framework a more robust understanding of why certain phenomena exist, what factors lead to those phenomena, and how other governments can benefit from previous attempts at adopting lean thinking, case analysis provides the breadth to capture unanticipated phenomena.

As an “enquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple source of evidence is used” (Yin, 1984, p. 23) the case study methodology is most appropriate. Schiele and McCue (2006) further elaborated on the use of case studies in the public sector as an effective means to gain a better understanding of lean thinking in public procurement. They used this approach to address the factors impacting meaningful involvement of public sector procurement professionals in acquiring professional services. Further, Gerring (2004) expressed his generally regard for case study as “an intensive study of a single unit for the purpose of understanding a larger class of (similar) units.”(p. 342). We have concluded, based on the growth of case studies in supply chain management, that the case study methodology is an appropriate technique to generate knowledge and understanding of the adoption of lean thinking in public procurement.

Employing a case study methodology in the public sector is essential to provide insights into the factors that either inhibit or promote the adoption of lean thinking. The UK Cabinet Office case was selected from among other possible cases because it is a high profile and current example of government using lean thinking to help bring about significant reform in its procurement processes. We
believe that it is one of the best examples from current practice that could perhaps provide at least partial answers to some of the questions as regards whether public procurement can truly be lean.

Lean Thinking in the UK Public Sector

Background and the Lean Study Report 2010

This study will highlight the UK public sector, where public procurement is divided between a central government which reports to cabinet ministers, and local government which comprises some 375 Councils in England and Wales, reporting to around 21,000 elected councilors. The case outlined in this paper applies to central government. In the UK the size and diversity of public procurement is considerable; no other single business organization faces a similar challenge. For example in 2009 the Public Sector Procurement Expenditure Survey in the UK showed that there was £220bn of spend carried out across 44,000 different organizations. Public procurement also tends to be highly regulated, for example through national legislation. In Europe the European Commission sets public procurement law which applies to all member states of the European Union. The Government Procurement Agreement proclaimed by the World Trade Organization (WTO) applies to public authorities across the world. Public procurers also tend to be required to satisfy a broad range of stakeholders, often with conflicting interests, and are subject to more public scrutiny and accountability.

We have observed that public procurement is subject to considerable scrutiny and in the UK this has certainly been the case for many years. Besides the numerous commentaries from practitioners and academics alike, there is also oversight and often criticism from the National Audit Office, and the Parliamentary Accounts Committee. Against this background, there was a change of government in the UK in May 2010. Such changes almost inevitably have an effect throughout the public administration and of course on public procurement. In the UK at the time there had been statements from politicians about a perceived need to reform public procurement. These stemmed at least in part from the impact of an economic recession that was rapidly taking hold across Europe, bringing with it a need to control and reduce public expenditure, and to cut the cost of operations across the public sector. Against a background of almost constant scrutiny, and frequent criticism, it was
now possible more than ever to add political pressure to the list of procurement reform drivers. By May 2010 there was a strong desire in the new government to pursue a program of procurement reform, especially in central government where ministers have the greatest degree of control.

Among the initiatives being discussed at the time was the potential for the use of lean thinking and processes to bring greater efficiency to public procurement. The Minister for the Cabinet Office was the chief instigator behind the desire for procurement reform and he commissioned in November 2010 a short “Lean Review” with the aim of uncovering wasteful practices and unnecessary complexity in the procurement process. The review was led by the Cabinet Office and was conducted in partnership with Unipart Expert Practices and Her Majesty’s Revenue & Customs (HMRC) where a lean team had already been set up successfully in one of its operational units. The review examined the competitive dialogue procurement process (as defined in the Public Procurement Regulations 2006) and normally used for complex procurement. The findings of this review were that turnaround times could be reduced by up to 70%, with savings of £3.5m to suppliers across a typical procurement, and a reduction in processing costs of around £400,000 per procurement. A report, *Accelerating Government Procurement, Management Summary of the Findings of a Lean Study to Investigate Waste and Inefficiencies in the Government’s Procurement Process*, was published in February 2011. The report set out five key themes as shown in Table 1.

| TABLE 1  
Lean Study Report Findings |
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<td>Process Design &amp; Management</td>
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<tr>
<td>Bureaucracy</td>
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TABLE 1 (Continued)

<table>
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<tr>
<th>Capability</th>
<th>There is insufficient capable senior resource with experience of complex projects, and a lack of in house legal advice leading to over reliance on external advisors.</th>
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<tr>
<td>Pre OJEU Readiness</td>
<td>The formal procurement process (through issue of a notice in the Official Journal of the European Union (OJEU) is commenced too quickly with insufficient preparation and planning beforehand.</td>
</tr>
<tr>
<td>Misuse</td>
<td>There is evidence of poor selection of procurement routes leading to elongated procurements and additional costs for government and suppliers.</td>
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Developing a Standard Solution

As a result of the findings a small team in the Efficiency and Reform Group of the Cabinet Office undertook a project to develop more fully a lean sourcing process for government procurement covering all types of procurement within the regulatory framework, i.e. subject to EU Directives on Public procurement. Lean expertise from the private sector was again provided by Unipart Expert Practices and by May 2011 the team had developed a lean “Standard Solution” covering the three major procurement processes used in central government in the UK. In each case lean thinking was used to identify the flow of value through the processes, and to eliminate waste. The Standard Solution is based around a Value Stream Map and Standard Operating Procedures.

Between May and December 2011 the Cabinet Office team refined the lean sourcing process, in particular adding richer detail to the Standard Operating Procedures, following a period of consultation and testing with procurement practitioners, in some cases testing parts of the new process on live procurements. Testing of the standard solution has of necessity been limited. There are many reasons for this; chief amongst these is that the typical procurement lifecycle has in the past been in excess of 200 working days. Therefore it would not be feasible to test the entire process without injecting considerable delay into the government’s procurement reform program. Furthermore, one of the key features of the new process is the much earlier engagement of the supply market and a more efficient approach to the pre procurement phases of activity. This meant that for a full test the team would have had to identify
several potential procurements which were still at the early stages of requirements definition. Taking these problems into account, the examiners identified “pathfinder projects”, live procurements can be used to test parts of the process. Four procurements in the Cabinet Office’s Government Procurement Service (GPS) were monitored, and one more complex project in the Home Office. A Department of Health project was also being followed through its early pre-procurement stages.

Making meaningful comparisons in the data on turnaround times for these projects is difficult. One method attempted was to compare the pre-existing plans with the actual outcomes. Another method, easier and in many ways more representative was to compare actual turnaround times with the averages achieved over the past 6 months. Attempts to compare against each project’s existing plans were frustrated by the lack of existing baseline plans, and in one case by an existing plan which was potentially over optimistic but was also based on using an untested approach, albeit slightly at variance with the Cabinet Office’s lean process. In practice therefore the team found it more expedient to use data extracted from Tenders Electronic Daily. The focus during all this time was very much on the turnaround times for procurement (from advertisement to award of contract). The team was also interested in the regulated procedure followed, and whether or not a Prior Indicative Notice (PIN) specific to each procurement had been issued. The type of procedure is relevant because the standard solution contains detailed operating procedures for each of the three types normally used in the UK. The PIN is relevant because the lean process recommends its use in order to improve market engagement and reduce timescales. The data extracted is set out in Table 2.

### TABLE 2
TED Data 2011

<table>
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<tr>
<th>Source: Tenders Electronic Daily (Central Government) Jan 11 to Aug 11</th>
<th>No. Of contracts awarded</th>
<th>No. Of PINs published relating to those contracts</th>
<th>Average No. of Working Days from Contract Notice Publication to Contract Award Date</th>
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<tbody>
<tr>
<td>Competitive Dialogue</td>
<td>10</td>
<td>4 (40%)</td>
<td>439</td>
</tr>
<tr>
<td>Restricted</td>
<td>89</td>
<td>10 (11%)</td>
<td>202</td>
</tr>
<tr>
<td>Open</td>
<td>10</td>
<td>2 (20%)</td>
<td>111</td>
</tr>
</tbody>
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 Developments in Government Policy

Before looking at the early indications from the pathfinder projects, it is necessary to understand the manner in which the political agenda has been moving in parallel with the Cabinet Office's work on developing the new sourcing process. Under the current administrative arrangements the Minister for the Cabinet Office (MCO) is the government minister responsible for public procurement in the UK. The team developing the lean sourcing process reports, via several layers of management, to the MCO. We noted earlier that the use of lean thinking to reform the procurement process was part of a wider government efficiency and reform agenda. The initial message was that procurement could be faster and more effective for a lower overall cost. This was followed in February 2011 with a strong focus on opening up government procurement to small business (typically referred to in the UK as Small and Medium Sized Enterprises (SMEs)). Insuring that the procurement procedure was fair to and accessible by SMEs was another strand of work the Cabinet office factored into the design of the lean standard solution. The focus then returned to turnaround times, and to choice of procurement procedure, in November 2011. Announcements were made in the Chancellor’s autumn statement, reinforced at a conference “The Crown and Suppliers: A New Way of Working” on 21 November 2011 of some key government policy. These were as follows:

1. That the turnaround time for all but the most complex procurements should be no more than 120 working days (measured from advertisement to award of contract);
2. That there was now a presumption against the use of the Competitive Dialogue procurement procedure; and
3. That greater flexibility would be sought in future discussions with the European Union on the forthcoming revised Directives.

This was followed in January 2012 with internal presentations to procurement staff in which it was made clear that there was an expectation that much greater use would be made of the Open Procedure. These new political imperatives affected immediately the work of the "lean team" within the Cabinet Office. Team members were directly supportive in that they stated that the use of the new lean sourcing process would be the enabler which would allow procurers to achieve the new target turnaround time. They also gave
a heightened importance to the measurement of the data referred to in Table 2. The early indications from the pathfinder projects have been encouraging. The projects completed so far in the Government Procurement Service have shown 120 to 130 working days as turnaround times for a non-complex Restricted Procedure procurement. Experience so far also suggests that these figures will reduce with practice in using the lean process. Indications are that the Competitive Dialogue procurement in the Home Office is on track to complete within around 180 working days, well below previously achieved turn-around-time.

The policy move to influence heavily the choice of the regulated procurement route is interesting. It can certainly be argued that with enough pre procurement market engagements, buyers should in the majority of cases be able to specify their requirements in sufficient detail to be able to use the Open or Restricted Procedures. The use of the Open Procedure is seen as the best choice for maximizing effective leverage of a diverse supply market. These new policy directions are almost certainly born from a frustration that public procurers in the UK have not always made best use of the procedures available; for example there is far greater use in other EU member states of the Open Procedure, and correspondingly, shorter procurement turnaround times have been achieved.

However, in practice, the use of competitive dialogue could continue to be necessary where it is not possible, or desirable from a value for money perspective, to conclude the makeup of the commercial deal without discussion or negotiation with bidders. At present, officials in the UK are working on the detailed proposals for implementation of the policy presumption against the competitive dialogue procedure and there will naturally be some tensions to resolve. Ultimately those responsible for major complex projects will be faced with a risk-based decision on whether it is feasible to define and package up both the technical and commercial deal such that it can be taken to the market through an Open or Restricted procedure. It also remains to be seen whether the supply market will adapt to this approach; it may require a longer and more detailed engagement in advance of any guarantee of a procurement being undertaken. Although the Open Procedure is evidently a faster and more streamlined process, is not necessarily always the best procurement route for businesses. This is especially so if the buying authority
simply adds a stringent set of qualification criteria (as with the Restricted Procedure) to the tendering process as a first pass evaluation; this would potentially still exclude small firms but require of them the added expense of preparing a full tender.

The original problem as perceived in early 2010 was framed in the context of complex procurement, and the Competitive Dialogue procedure in particular. The Lean Study was aimed solely at Competitive Dialogue procurement. The development of the standard solution was extended to cover the Restricted and Open Procedures because it became obvious during development that the process would need to cover all procedures in common use in order to be effective in its adoption across government. However, in lean thinking terms the majority of the waste identified in current practice related to the Competitive Dialogue procedure, and in particular to the highly iterative dialogue phase. It is therefore in the application of the lean sourcing process to Competitive Dialogue procurement that the greatest savings are likely to result. By setting a strong presumption against the use of the Competitive Dialogue procedure as a matter of policy, the government has introduced a new dynamic. Is the effect a different solution achieved by reducing dramatically the use of the procedure, rather than by resolving the underlying issues? Or can this approach work with the lean thinking initiative? In practice, the government continues at the same time to support strongly the implementation of the lean sourcing process, thus both aims should be achieved. In those cases where, perhaps inevitably, there will be a continuing need to use the Competitive Dialogue procedure a lean process will be available with all the benefits that this brings in terms of both time and cost.

**The Scope of Application for the Lean Sourcing Process**

One of the points of almost continual debate during the development of the lean sourcing process in the cabinet office has been the extent to which the detailed process, i.e. the Standard Operating Procedures (SOPs), can be applied to all types of government procurement, or whether there are cases where these SOPs can be varied or in some cases omitted. We will return to this point when considering in more detail the question of whether lean thinking and techniques can be applied across the spectrum of procurement, or whether as complexity increases this becomes
impossible. In designing a lean process for UK central government the Cabinet Office team found that there was, as expected, a broad range of scale and complexity, with the potential for variation in detailed process on account of a number of factors; for example:

- The nature of the department’s core business: for example where overseas operations, national security, or regulatory restrictions affect the process;

- The nature of the goods or services to be procured: for example, ICT solutions have very different characteristics to Facilities Management services, or large construction projects;

- The makeup of the supply market; for example some markets are very restricted due to monopoly suppliers, regulatory requirements, whereas others can be very open with potentially large numbers of bidders for a procurement; and

- The commercial arrangements for the structure and funding of the solution; for example the increasing trend in the UK towards the use of Joint Ventures, Consortia and Mutual's, and the widespread use of private finance.

During the course of consultation with practitioners across government and with suppliers to government, this view was confirmed. The team formed the view that it would be likely to be problematic should the government decide to mandate the detailed process across all its procurements. The view developed increasingly that should there be a desire to mandate the new approach, as is indeed the case from a political standpoint, then it would be preferable for a set of key principles to be mandated, with the lean sourcing process set out in the detail of the SOPs and an expectation that departments would seek to apply the SOPs wherever possible or appropriate. This approach has been adopted by the Cabinet Office and at present the MCO has established the lean sourcing principles in internal communications to the procurement community in central government, and it is expected that the principles, together with the lean sourcing process, will be launched more publicly through a new online Government Procurement portal in April 2012.

The principles were derived directly from generic lean thinking principles, the outcome of the 2010 study, and the work carried out by the Cabinet office team. The principles are set out in Table 3.
As shown in Table 3, the lean sourcing principles alongside the generic principles of lean thinking and the findings of the 2010 Lean Study in the Cabinet Office. This set of principles was agreed on by key procurement leaders in the major central government departments through a Procurement Executive Board, convened and chaired by the Cabinet Office Efficiency and Reform Group. Two specific points worth mentioning are that Principle 7 is somewhat self-referential in that it calls for challenge to any deviation from the more detailed process as set out in the standard operating procedures. In Principle 6 the concept of the “boot camp” can be

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<th>TABLE 3</th>
<th>Lean Sourcing Principles</th>
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<td><strong>Generic Lean Principles</strong></td>
<td><strong>Lean Sourcing Principles</strong></td>
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<tr>
<td>1. Specify Value – in terms of the customer</td>
<td>1. Establish a sound understanding of required business outcomes Focus on the voice of the customer</td>
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<tr>
<td>2. Identify the value stream – the specific path the product or service needs to take</td>
<td>2. Establish a strong planning and management discipline using the lean standard solution as a guide; use visual management tools to drive progress</td>
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<td>3. Flow – products flow through the process without interruption</td>
<td>3. Carry out extensive pre-procurement market engagement with industry before the formal procurement process begins; use and advertise structured and time boxed industry days to test and refine thinking.</td>
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<td>4. Pull – product is pulled through the value stream to eliminate waiting time</td>
<td>4. Ensure proper readiness to go to market by publishing a full bidders pack (outcome/output based specification, draft T&amp;Cs and project plan) at the point of going to market (e.g. OJEU)</td>
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<tr>
<td>5. Standardise Process – with inbuilt quality</td>
<td>6. Streamline engagement with suppliers by using a ‘boot camp’ approach to make best use of limited time and resources</td>
</tr>
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<td>6. Visual Control – to expose problems</td>
<td>7. Drive continuous improvement by application of the lean sourcing standard operating procedures and by monitoring and measuring performance; Challenge deviation from the standard solution to assure efficiency of the process</td>
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<tr>
<td>7. Continuous Improvement – strive for perfection, always</td>
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**Themes from 2010 Diagnostic Study**

1. Wasteful process design and management
2. High levels of bureaucracy – guidance, serial processing
3. Pre OJEU readiness
4. Mis-use of procurement procedure
5. Inadequate resource capability
applied most effectively where there is strong engagement with suppliers, for example in a competitive dialogue procedure; it is used elsewhere in the process, but less extensively.

In summary the position reached at the time of writing this paper is that the Cabinet Office has developed and partially tested a lean sourcing process covering most types of procurement undertaken in UK’s central government. It has agreed across the procurement community on a set of key principles which have been mandated by the MCO. A training program to underpin and support the change is in operation, and the cabinet office team is embedding the principles and the process through a series of open workshops or ‘familiarization’ sessions.

Lessons Learned from the Cabinet Office UK Case

From the UK public sector case discussed above, what can be learned about the practical implementation of lean thinking, and can the Cabinet Office experience offer answers to any of the key questions about the application of lean thinking to public procurement? What are the key enablers for lean in public procurement? In addressing the central question as to whether public procurement can be lean, we could observe that the “Lean Sourcing Process” in UK central government will be fully launched and in use by April 2012. But does this mean that procurement can now be defined as lean?

The lean thinking was applied to the procurement processes in the UK through the use of value stream analysis, identification of waste, with reference to *muda* and the seven classic wastes. The management philosophy of lean has been used to herald a new way of approaching procurement and to ensure the quality of the tools and processes developed. The toolkit available to purchasers includes the use of visual management and there will be a continuous improvement process in place to support the products. However, as observed in the case above, it has not proved possible to implement, or indeed to mandate, a single fully standardized process covering all government procurement. The Cabinet Office’s standard solution remains optional in the extent of its application, and experience to date with the pathfinder projects has shown that not all of the SOPs can be always be implemented in full. This is sometimes due to local processes, and sometimes on account of the increasingly
severe resource constraints in the public sector. Nevertheless, the evidence thus far has shown that the availability of the standard solution and its strong promotion by the Cabinet Office can bring significant benefits; the goal of making procurement 40% faster for example appears to be realistically achievable using the lean processes.

Experience from the Cabinet Office case was also that most practitioners were in broad agreement with the proposed lean sourcing process. During the early stages of implementation the Cabinet Office team has undertaken an extensive "familiarization" program, presenting the standard solution to practitioners in government departments. The team has presented to 600 commercial staff across the seventeen major government departments in the UK. The overwhelming view from these sessions is that the principles are sound and accepted, and that the process is likely to be effective in most cases. Typically, procurers draw attention to the specialized limited circumstances in which exceptions might be required. In around half of the major departments, practitioners have pointed to aspects of their procurement operations where they believe that they have unique requirements, for example around security or technical issues, which would require them to tailor the standard solution to fit their individual needs. Of these, perhaps the most interesting is the case of complex procurement. Can lean thinking be applied to all procurement, or does it only work really well for relatively simple procurement processes?

Experience from the Cabinet Office case suggests that as procurements increase in their complexity, so the application of a standard solution becomes more difficult. For example, although the Cabinet Office team did develop a standard process for the use of the competitive dialogue procedure (typically the legal procedure used for complex procurement in the UK), feedback from practitioners were that the standard process would need some tailoring where the procurement involved certain types of complexity. In practice the team has narrowed this down to just a few major areas of potential divergence:

- Where there is complex and iterative design work required; this will often require more than the simple outline proposal process specified in the lean standard solution;
- Where planning permission needs to be sought and approved before contracts can be awarded; and

- Where projects are using private finance and financial swap rates need to be agreed upon before contracts can be awarded.

Notwithstanding these issues, the majority of the standard solution designed using lean thinking may be applied to even the most complex projects. Indeed the early indications from "pathfinder” projects are that the use of visual management and time boxed "boot camp” approaches to dialogue or negotiation with suppliers can be particularly effective in complex procurement. There is also an argument that it is only in the more complex cases that a public authority can justify the allocation of sufficient resources to operate the lean process to its best and full extent. From a purist point of view, the user has to intervene to tailor the process; but the lean thinking, and the benefits associated with it remain applicable.

The case study has shown that what was designed was a standardized process inspired by and drawing on lean thinking, embodied at a high level in a set of universal principles. This of course falls short of a single standardized lean process for the whole of public procurement; but it does prove that lean thinking can be applied, even to more complex procurement across the public sector. The benefits in terms of time and cost saving are beginning to be seen as the process starts to be implemented. As regards complexity, the case shows that a standard solution can be used as the basis of a common approach, even if it does require tailoring or deviation in some limited cases. Furthermore, there is potential for the size of the gains or benefits to be greater when the lean standard solution is applied to more complex and higher risk procurement projects.

It is still too early to pronounce further on the success or otherwise of the Cabinet Office’s lean standard solution. We can examine what might be the key enablers that will either ensure success, or where they are lacking, contribute to failure. Experience in working with stakeholders, both customer and supplier suggests the following:

- Openness to Change: Practitioners need to be willing to open themselves up to a new way of working. This requires not simply a process change, but a shift in behaviour. This is notoriously difficult to achieve, especially in large organisations which tend
to have their own deep seated culture. Senior level people across the business will need to show their belief in the new ways of working, and must demand a lean approach in the future.

- **Investment in Resources**: budget holders will be required to make an investment in the resources needed to run a lean process; this includes the correct level of resources for each procurement, in addition to lean expertise in order to get the new processes up and running quickly. In some cases, for example where boot camps are to be used for engagement with suppliers, investment will be required in accommodation and systems to facilitate this.

- **Top Level Support**: In order to embed genuine behavioral change in an arena as large and diverse as the public sector, strong support from the very top of government is essential. The UK case illustrates a promising beginning in this respect, with direct and powerful influence from the most senior procurement figures in government. Top level support can take the form of mandating the use of lean solutions, or perhaps more powerfully can be given through leading by example, adopting the new practices and behaviors and demonstrating their success.

In considering any successful implementation of lean thinking in public procurement, it will be necessary for the public authorities to understand the way in which they define such success. For example, successful procurement is not necessarily the same thing as lean procurement; there can be many other criteria for success, these often being established by the public administration at the time. These criteria are likely to contain similar elements to those illustrated in the Cabinet Office case, especially the need to improve efficiency and drive down costs. The achievement of demonstrable financial savings through reduction in costs and shortening of timescales will inevitably be balanced with the need for a public perception of improvement. Thus success will often be set in a wider context, driven by a mix of operational and political aims. This is all the more so because public procurement is so often criticized, and can be seized upon relatively easily by media and opposition politicians seeking public acceptance of their own views and policies. Perhaps a public perception of success is the most important outcome for those attempting to improve or reform public
procurement, with lean thinking becoming an increasingly convincing and important enabler for these wider objectives.

CONCLUSION

Ultimately, we return to the question: Can public procurement be lean? Evidence from the case study indicates that, with the right set of pre-requisites in place, there is every potential for lean thinking to be applied to public procurement. It is, for example, perfectly possible to analyze current processes for value, and to identify where there is waste or *muda* evident in the process. The case also suggests that it is possible to develop from this analysis a set of tools and documentation to support a “standard solution”, in other words, a standardized process based on lean thinking. Whilst this does fall short of a perhaps utopian vision of a single standard process for all public procurement, it does provide the potential for significant benefits to be realized both by public procurement authorities, and by their suppliers.

It could also be argued that the answer is “not entirely”; the diversity of its structure, governance and operations means that public procurement as a whole cannot ever truly be lean. We have seen from the case study that it is difficult to provide a standardized process which can be applied to the whole of the public sector’s procurement operations, and that only a relative high level set of principles could be said to have been applied across UK central government. Furthermore, the very diverse nature of the goods and services bought across a public procurement operation seem to militate against the application of a single standardized process solution; again the case study found that organizations tended in practice to make their own variations to the offered “standard solution”. These variations tend to stem from the inherent complexity and diversity of public procurement, and in addition are exacerbated by the complex and multi layered governance and approval structures and processes that tend to pertain in most public authorities.

But ultimately is it the precise implementation of a lean process which makes the difference to public procurement, achieves the objectives set by public administrations? Lean thinking can, as we have seen, offer both a management philosophy and a set of tools and processes. We have also seen that even a limited application of lean- inspired tools and procedures can bring substantial benefits to
public procurement. The lean principles that resulted from the Cabinet Office work in the UK effectively span the detail of the process and the underlying philosophical approach. Perhaps the most valuable conclusion from this is that even with a varying approach to the use and take up of the lean tools, these tools and processes do effectively embody an underlying management philosophy; with increased take up of the tools and processes, the philosophy that leads to all important and often elusive behavior change will surely follow?

REFERENCES


