

Applying Lean and Reducing Waste Over Production

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This article is the sixth in a series of seven, with the aim of helping to answer the question:

“How do we deliver the most effective service for the very best cost to the taxpayer?”

The full set of seven wastes are:

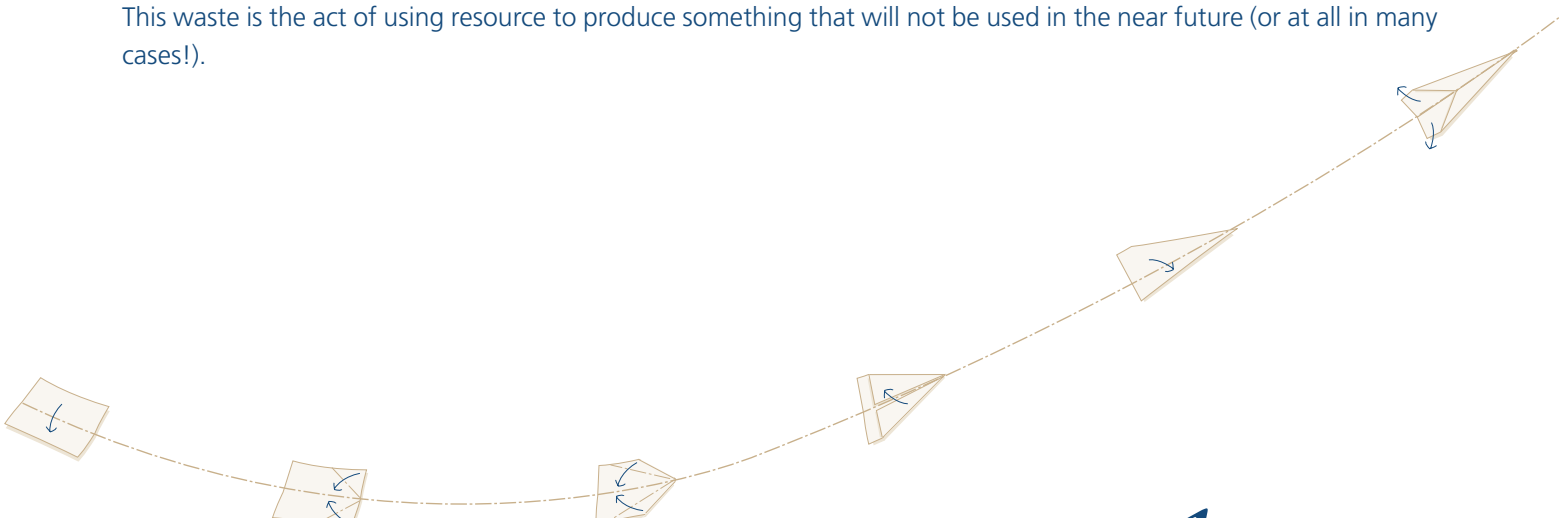
- Waiting
- Inventory
- Transport
- Movement – people, materials and paperwork moving
- Excess Processing
- Over Production
- Rework.

WHAT IS OVER PRODUCTION?

People generally go to work everyday to do their best and convention states that the harder you work the better you must be performing. Whilst it is not easy to argue if teams are working hard, the waste of Over Production can still exist and a process certainly won't be as efficient as it could be.

Sometimes Lean philosophies are counter-intuitive. Without an understanding of Lean, people will assume if the work is there to be assigned – surely it makes sense to give it all out so you know it's going to get done? This assumes that the next person in the line, the next customer in the chain, (and that might be an internal customer) is able to handle this work once it's completed. If not then actually processing that work is a waste, 'inventory' will build up in between process steps and now we have Over Production.

This waste is the act of using resource to produce something that will not be used in the near future (or at all in many cases!).



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It can generally be divided into two categories:

- Processing more than is required – this could be evident if there is a build up of inventory in between process steps
- Doing things faster, or sooner, than is required – a number of different issues could arise by completing things sooner than required. Waiting will be built into that particular piece of work. Also circumstances may change that require the piece of work, be it a case or file, to be changed or reworked, thus leading to more waste.

We now describe a client situation in the Criminal Justice Sector where we found examples of both types of waste. The process involved Probation officers providing papers to Courts to enable sentencers to make a decision. Examining the process (which was failing to meet key Government time-related targets) enabled us to work with the client to jointly identify the waste:

1. Processing more than required:

The papers collated on offenders could contain anywhere between 3 and 13 pieces of “evidence” and there was no rationale for when additional paperwork was gathered. It was very much down to individual members of staff and local office custom and practice.

Some of this evidence could not be found and had to be requested from other agencies which slowed the collection of data by up to two weeks and would take a minimum of 15 minutes per request. All of the evidence had to be copied a number of times for each file which would take on average 15 minutes per file. This doesn't sound a lot, but when 9000 files were produced every year, this added up to a lot of time – the equivalent of over two full time staff!

The majority of cases required only 3 pieces of paper. Only in the most complex of cases was more paperwork required. Most of the excess data was gathered early in the process “just in case”. After a Rapid Improvement Workshop, the paperwork was streamlined to three pieces of paper for all straightforward cases.

2. Completing faster or sooner than required:

Within the same process, a report would be written for the Court at the start of the process. The file then waited for between 4 to 6 weeks with nothing happening. Part of the process included asking the officer responsible for the case to write an “update” a few days before the case was heard.

This update could involve several ‘phone calls, faxes or e-mails, all of which took precious time. By producing the report once, just before the case was heard, it reduced waste in every case processed.

These were just two of the examples of waste in one single process. By working with an in-house team of staff and managers on one project, we started to transfer the philosophy and mindset required for people to think “Lean” at all times.

As mentioned at the start, over production can be difficult to spot in a service environment - hidden amongst well-intentioned and hardworking teams. It is unlike a classic manufacturing environment where, for example, you could see large stocks of part finished, or finished goods. However we worked with a client where excess stocks of materials were prevalent in a service environment resulting from a culture of over production:

One of our clients in the Healthcare sector found new patients were constantly coming on stream and off stream for a home-based service. Poor communication when treatments for individual patients changed or when patients were no longer requiring treatment meant stocks of client specific bandages and dressings could build up. This could run

into thousands of pounds worth of stock. As part of a co-ordinated Lean campaign the client was able to clear out excess and outdated stock clearing valuable space for the remaining stock and improve communications to lessen the chance of stock build up re-occurring. Essentially the client was planning for more visits than was required or over producing.

“The reasonable man adapts himself to the world: the unreasonable one persists in trying to adapt the world to himself. Therefore all progress depends upon the unreasonable man.”

George Bernard Shaw

Replace ‘unreasonable’ with ‘dissatisfied’ and you have the Lean philosophy. Developing staff and managers who are “dissatisfied” with the way their processes operate and giving them the tools to make change happen will play an essential role in delivering more effective and efficient public services... whatever the three letter acronym!

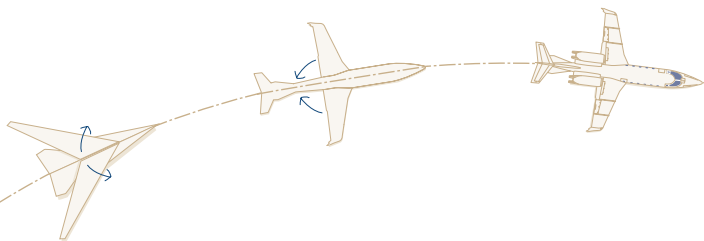
POSSIBLE SOLUTIONS

So which Lean tools and techniques could you use to tackle the problem of Over Production?

Used on their own these tools will deliver benefits but like any Lean programme it is the correct application of these whilst tackling the cultural aspects of change management that will give the maximum long term benefit:

- Moving to a “Pull” process rather than “Push”. This takes away the possibility of producing before the next stage of the process is ready, or the customer requires it. Eventually moving to a process where individuals take their work based upon the next available piece of work rather than being given a batch of work to complete
- Work Balancing to improve the flow of a process and reduce lead time. Removing “blockages where a build up of inventory may occur
- Information Centres – improved communications within and across teams. Visual measures to aid performance management and team based problem solving to address the root cause of over production
- “Managed Buffers” – Agreed amounts of work in process to ensure if errors occur that the process doesn’t come to a halt
- “Takt Time” – Produce only to the pace of customer demand. No faster, as this is a classic case of over production

If you would like to know more about the seven wastes and potential solutions to reduce waste and improve your customers experience then contact us directly or look on our website for our programme of free seminars. We’re more than happy to find out about and discuss any issues you may have.



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PHONE: +44 (0) 845 366 8528 EMAIL: seriousfun@ad-esse.com WEBSITE: www.ad-esse.com