

# CASE STUDY

MINISTRY OF JUSTICE

INTERSERVE

## LEAN PROJECT MANAGEMENT PREDICTABLE OUTCOME, CONFIDENT CLIENT, EFFICIENT DELIVERY



Interserve was handed the challenge by the Ministry of Justice (MoJ) of implementing Lean Project Management on the Harmondsworth Immigration Removal Centre project. Overcoming initial scepticism, the technique was applied to efficiently deliver a very successful project with a predictable outcome which provided a high level of confidence to the client.

Ian Harris comes across as a man with a wealth of experience who isn't easily swayed by the latest management fad. As project manager at Interserve's £25m Harmondsworth Immigration Removal Centre, his responsibility was to deliver to time and budget. So he wasn't too enthusiastic when the Ministry of Justice (MoJ) called him to a meeting and told him they wanted him to adopt a new approach on the project – Lean Project Management.

His reaction was typically blunt: "Oh no, not another one!" However, the client had spoken and had to be obeyed.

After a presentation on the lean project management by the MoJ team supported by specialist consultant Lean Thinking Ltd, Ian was still sceptical about the concept and carried out some research of his own. "I got confused by the term 'lean' as it means different things to different people," he said. "The best definition seemed to be the elimination of waste."

The first step of the implementation was to convert the project programme to one based around 'Flow' - the key principle of Lean. Emphasis is placed on making work flow seamlessly from one operation to another (which eliminates wasted time between tasks) rather than purely planning to keep resources busy. The programme was then protected with a buffer which was 34% of the overall programme duration (MoJ specified a minimum of 20%). The buffer is not an extension to the contract programme but is part of the contract duration. "The buffer is there because we recognise that stuff happens on projects that we cannot control and we needed protection against variability and uncertainty," Ian explains.

"This is a management system for the operations team, not just a planning and reporting exercise."

The lean, buffered programme was monitored using MOJ's specified suite of management tools. A weekly progress report was used to record whether the weekly planned tasks had been completed, and if not, how many days remained before completion. From this, a summary was generated for the client showing the percentage of activities that were planned to start that actually started, and the percentage of tasks that were planned to be completed that actually completed, together with a basic analysis of the reasons for delays.

*"I was very pleased that the introduction of Lean Project Management helped contribute to the early delivery of the building. It provided clear reporting mechanisms, and I know Ian's team worked hard to assimilate the new approach and make it work for the project"*

*- Richard Urmston, UK Border Agency*

A highly visual 'buffer chart' was also produced to show how much of the project buffer had been consumed. "The buffer is there to be used," Ian explains. "However, if you use up too much too quickly, you slip from the 'green zone' to the 'amber zone' which warns you to take corrective action." A copy of the buffer chart was also sent to the client who was monitoring a portfolio of projects. The simple layout meant the client could quickly review the buffer charts to see which projects needed direct intervention and which ones were running to programme.

To support these controls, bar charts were produced to show the percent of tasks started on time and the corresponding percentage of tasks completed on time each week. Asked about the rates achieved on the project, Ian responds, "We achieved a higher rate for tasks started on time than completed on time. I kept my eye on the rates, but as long as we were hitting the high priority items on or near the critical path I wasn't worried if we slipped a bit on the other tasks"

*"I believe that one of the key factors with the implementation and success of this project was that Ian developed the project plan, took full ownership of it and used it and lived it every day"*

*- Terry Stocks, MoJ*

Which brings us to the heart of the lean approach that Interserve adopted which could be summed up as "It's the critical path that's critical!"

Ian explains, "The approach hinges around having a detailed programme which clearly identifies a robust critical path. The lean facilitator ensured this by comprehensively scrutinising our logic and assumptions. In the first few months we struggled with the new approach. Then we took two weeks out to break our programme down into far greater detail. We went from a 2 page programme to 11 pages, and ended up with over 1,500 activities. We looked rigorously at how work was sequenced and linked, and challenged assumptions such as why every new subcontractor had to start on a Monday, rather than flowing seamlessly on once the preceding task was completed. We included our M&E contractor in this exercise as M&E was such a major element in the project."



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The new project management system gave Ian the ability to manage the work much more effectively and he used his Friday lunchtime progress meeting as the main programme review point. At the meeting attended by key subcontractors, every planned task was reviewed to check and record progress.

"The M&E sub contractor's input to the weekly report was essential," Ian stresses. "Their project manager had a greater understanding of the progress of his works than any manager I have ever worked with. The 4-week look ahead gave him a structure to plan up-coming work, and integrating the M&E work with the other trades was much easier."

Once the project review meeting was complete, the progress information was sent to specialist company Lean Thinking Ltd who updated the programmes over the weekend.

"The critical path is not static - it changes as the work progresses," says Ian. "Weather, new information and resource availability all have an impact. With this system I was able to track the movement of the critical path. Every Monday morning I knew if it had changed and made decisions based on this knowledge. If I was short of resources and had three tasks to do, I made sure that I put them onto the highest priority tasks rather than the non-critical items."

The Lean Project Management philosophy emphasises that a day lost on the

critical path is a day lost on the project. This mantra is repeated on many of the progress charts that are displayed on the 'lean wall' in the project office.

*"We involved Lean Thinking Ltd to help us with the implementation, and we believe we had value for money as well as a return on our investment"*

*- Ian Harris, Interserve*

As the interview concludes, I ask Ian how the approach varies from what he used to do. Is it different? Isn't what he is doing just good project management? Ian pulls out an old project programme from the drawer. "Our normal practice has been to produce a plan to deliver 6 weeks early, and then monitor progress by dropping a line down the chart to show progress. However that doesn't tell you what is happening on the critical path, and doesn't force you to look ahead in the same way the lean system does. Focusing on achieving the tasks on the critical path made us think as a team. It forced the truth out into the open as you can't hide problems. In this system, no problem should remain undetected for more than 4 days."

Ian is convinced that weekly monitoring of the project buffer provides a good way of managing a project. Unforeseen events do occur but they don't have to disrupt the project. By re-scheduling weekly, he was constantly aware of where he was relative to the pro-

ject end date which of course remained fixed by the client's requirements.

Would he use the technique again? "Absolutely. It's a much more scientific way to run a project, much less subjective." With this system Ian knew the impact of each task on the end date, so was managing the project rather than the traditional method of managing tasks and trying to push on all fronts.

Ian pulled out two more sets of information for the extra work the client had requested on top of the original contract. "We treated these as two additional projects and have used the same approach," he says. The only thing I would do differently in future is to ensure that *everyone* involved in a critical path activity was invited to the Friday progress review meeting. The meetings encouraged communication between the trades and made everyone responsible for delivery."

### Project description:

Construction of secure accommodation and new reception discharge building at Harmondsworth Immigration Removal Centre (IRC).

Client: UK Border Agency

Contract: PPC2000 Standard Form of contract

Main contractor: Interserve Strategic Projects (turnover world-wide £1.9bn)

Interserve Project Manager: Ian Harris

Environmental standard: BREEAM Very Good

Client:

**UK Border Agency**

Delivery Agent: Ministry of Justice



**Ministry of JUSTICE**

Main contractor: Interserve



Lean Project Management consultant: Lean Thinking Ltd

## Lean Thinking Ltd

### Project facts:

The original Harmondsworth IRC project programme was 73 weeks.

The £25m project would have been available 6 weeks early, but the client used this period to commission £4m of additional works which were completed within the original contract period.

This saved 6 weeks prelims (approximately £90,000), benefitting both the client and contractor.

### Further information:

Ian Pearce  
Ministry of Justice  
ian.pearce@noms.gsi.gov.uk  
+44 (0)207 035 3534

Ali Mafi:  
Lean Thinking Ltd  
mafia@lean-thinking.co.uk  
+44 (0)7974 138283

### Case study compiled by:

Martin Print  
Amazia Ltd - KPI and benchmarking consultant  
Martin.print@amazia.co.uk  
+44 (0)7802 810014