

The Business of Pathology

PaLMS Lean 6 Sigma projects
2 years on

Ken Worth

In the Beginning...

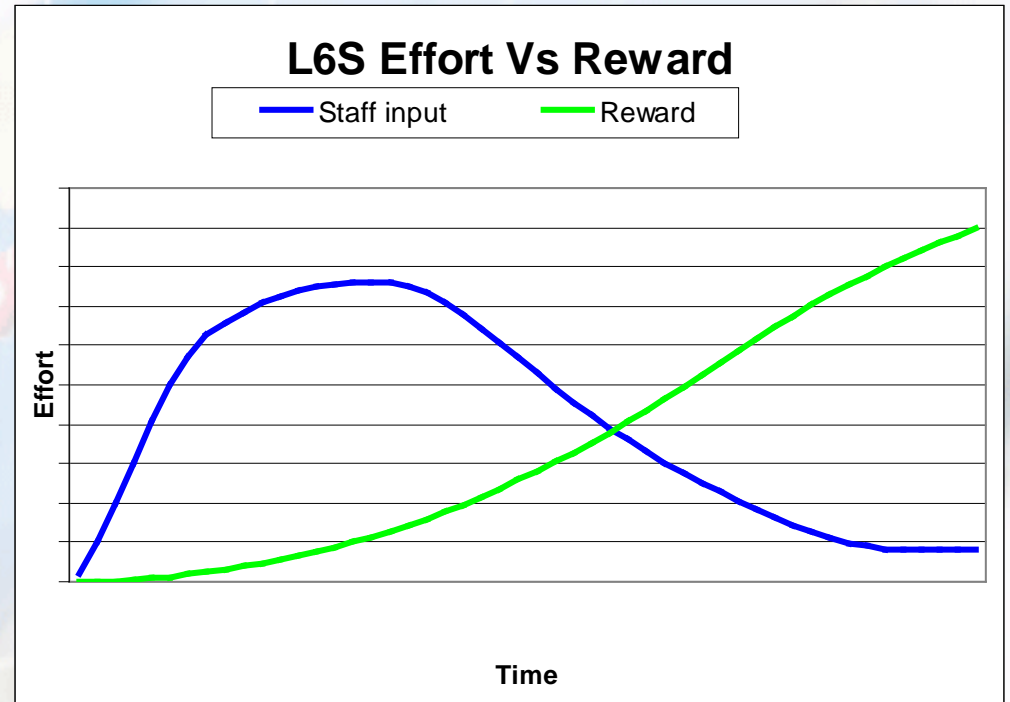
- PaLMS was doing TQM projects
- Achieving reasonable results
- Open timeframes
- No secure project boundaries
- Projects morphed and changed and took a long time to “complete”
- But still lots of good results

A More Focussed Direction

- Superhighway Project created
- Looked at:
 - Instrumentation
 - Middleware
 - PPid
 - L6S – because it had defined timeframes and a tight project structure, newer more powerful tools than the TQM set

Important to Start L6S Early

- Takes time and effort to get L6S off the ground
- We need to lock in efficiencies and free up staff for future projects
- Will soon require staff resources to implement new instruments, Middleware, and LIS.
- Don't have budget for more staff



2 Years ago

Palms implemented a L6S project at a pilot site to:

- Show how L6S could improve a workflow
- Raise QI awareness amongst scientists, technicians, managers, and executive
- To develop QI skills amongst the staff
- To expand L6S to all labs in the network
- Develop a sustainable QI culture
- Free up staff for future organisational objectives

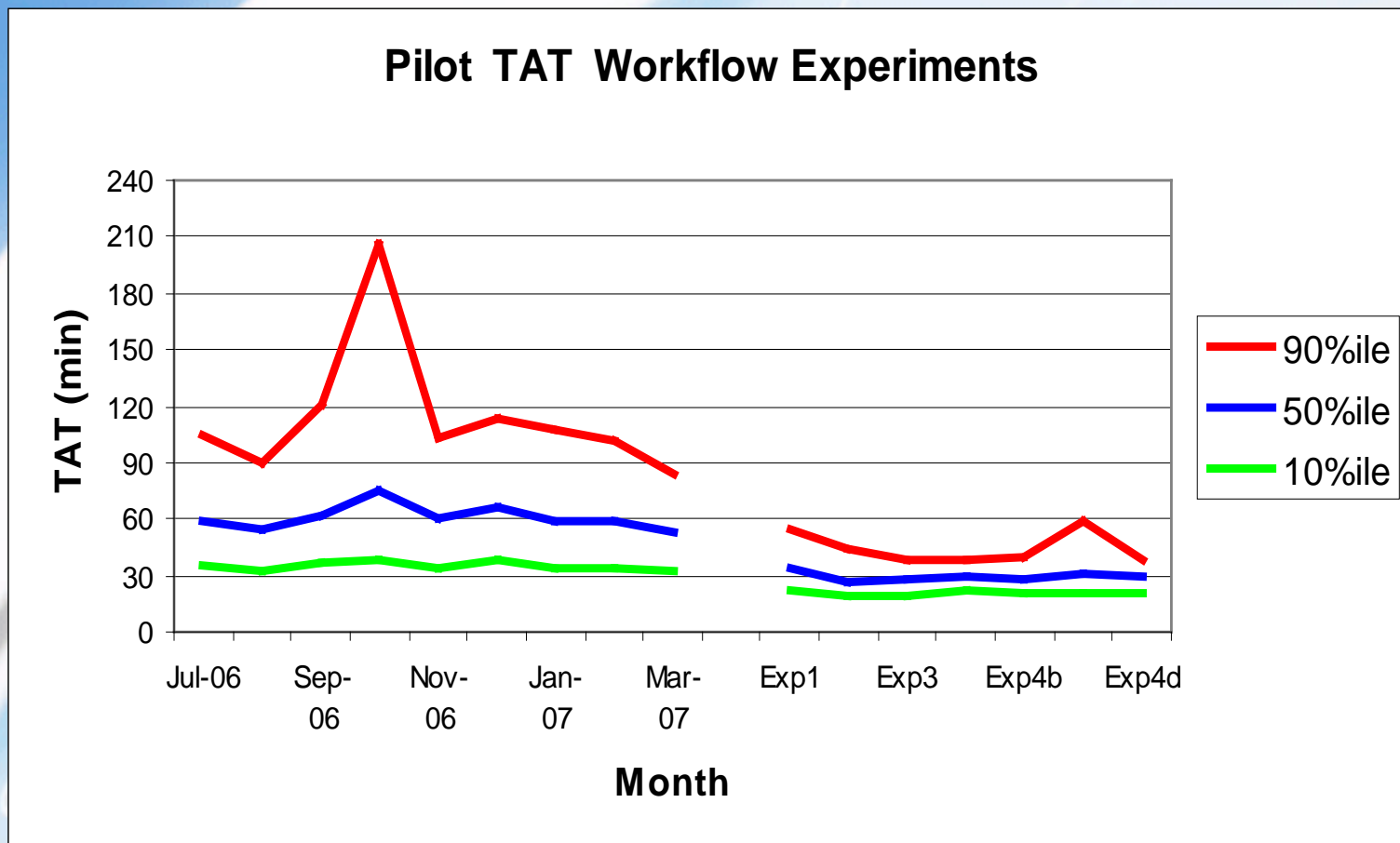
What Has Changed Since Then

- Pathology North was formed on 1st July 2009, through the amalgamation of the pathology services of:
 - Hunter Area Pathology Services (HAPS)
 - Mid-North Coast Pathology Service (MNCPS)
 - Northern Rivers Pathology Service (NRPS)
 - Pacific Laboratory Medicine Services (PaLMS)
 - Pathology New England (PNE)
- PaLMS has expanded from 7 labs to 25 labs
- Have over 1000 staff and perform 20 million tests annually
- Had budgets squeezed by Dept of Health

Recap – What Happened in the Pilot?

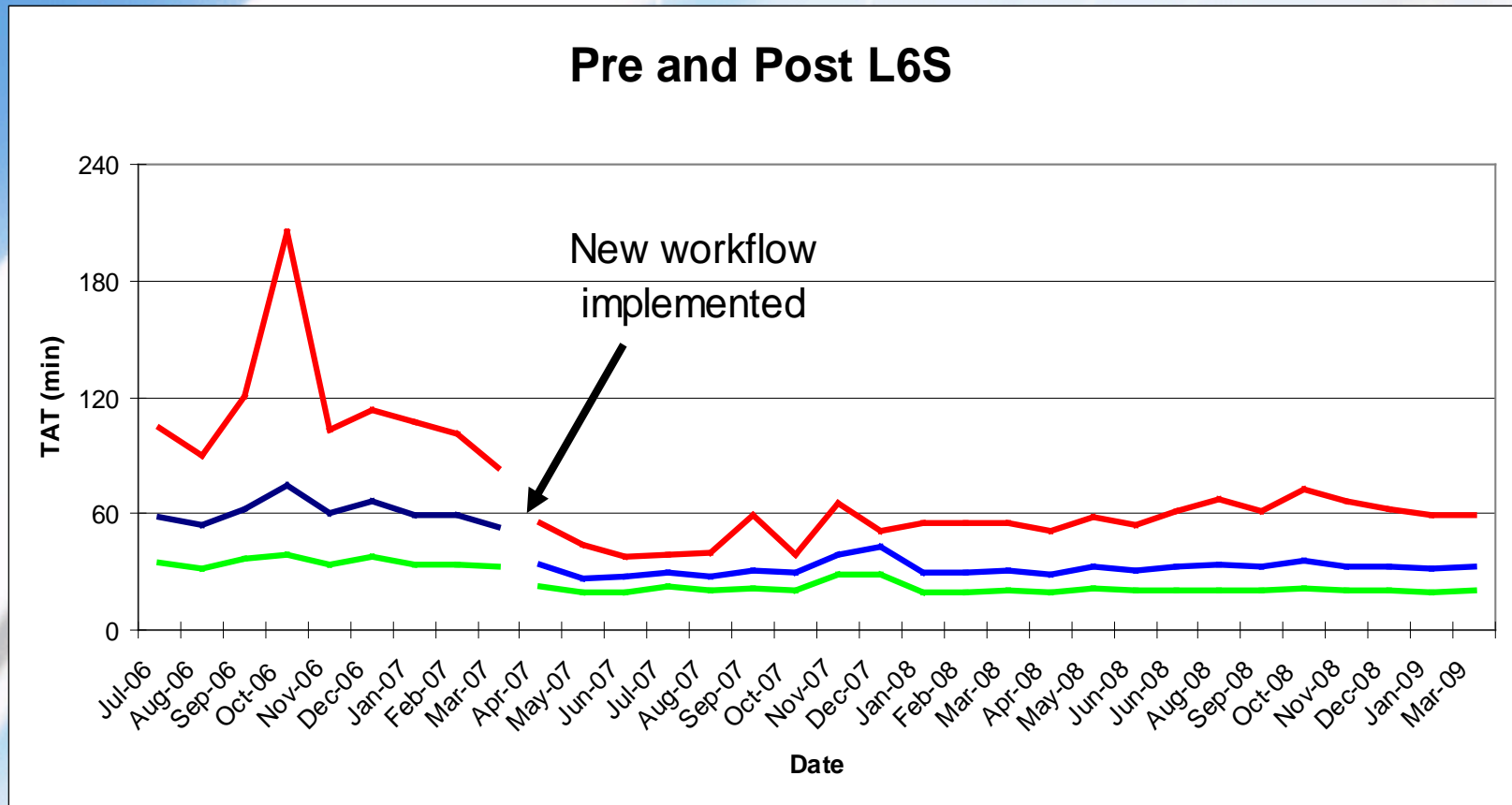
- Developed L6S training course
- Implemented 8 week DMAIC project
- Halved TATs
- Simplified workflow
- Standardised the worksteps
- Controlled variation

Project Results – Massive Improvement in a Short Space of Time



Continuity







Workflow and TATs still stable



The Good and the Bad

- ✓ Reinforced the workflow and new behaviours by using graphs
- ✗ Some staff disgruntled because they were not involved in the planning of the changes
- ✓ Involved the staff to control their workflow
- ✓ Had regular review meetings to address latent issues and prevent backsliding
- ✗ Did not continue on with other projects on this site
- ✓ Other sites wanted the “secret ingredient” to workflow improvement
- ✗ Many sites wanted someone to run a project at their site – but were not prepared to run it themselves, and did not want to commit staff to a project

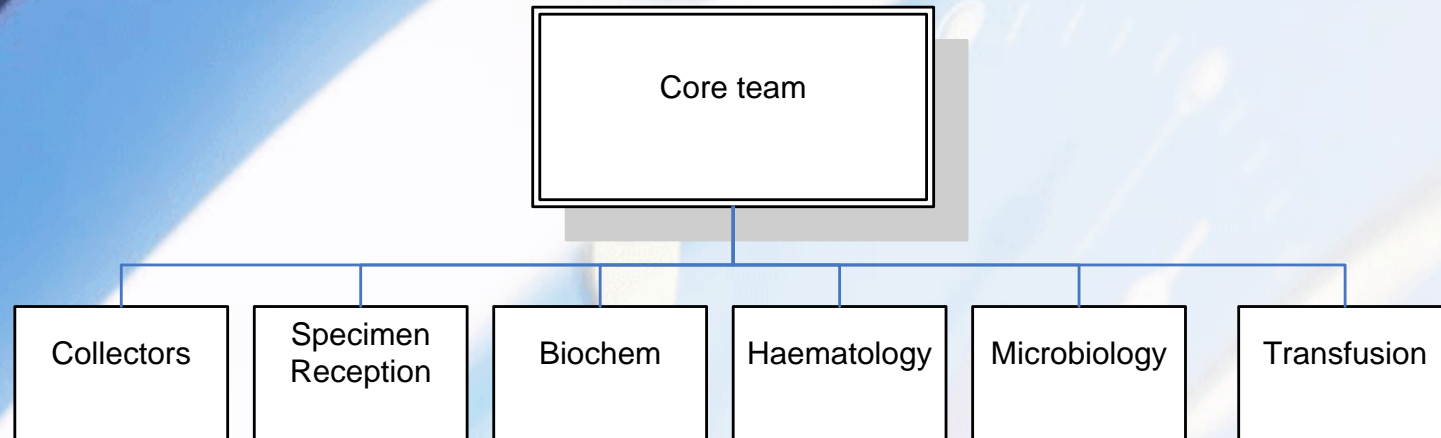
Did We Meet the Pilot Project Aims?

- Has L6s improved the workflow 
- Is there more QI awareness amongst staff 
- Have we developed QI skills amongst the staff 
- Did we expand L6S to all labs in the network 
- Have we developed a sustainable QI culture 
- Have we freed up staff to participate in other activities 

Next Project

- More ambitious
- Larger site – Category G lab with multiple, differentiated departments, approx 80 staff, different computer system
- Wanted to involve **all** staff
- Still a tight timeframe – 24 days
- Ran a “tiered” project consisting of several separate groups coordinated to be at the same stage of the project at the same time

Tiered Multi-Project



The leader from each lab team was on the Core team.

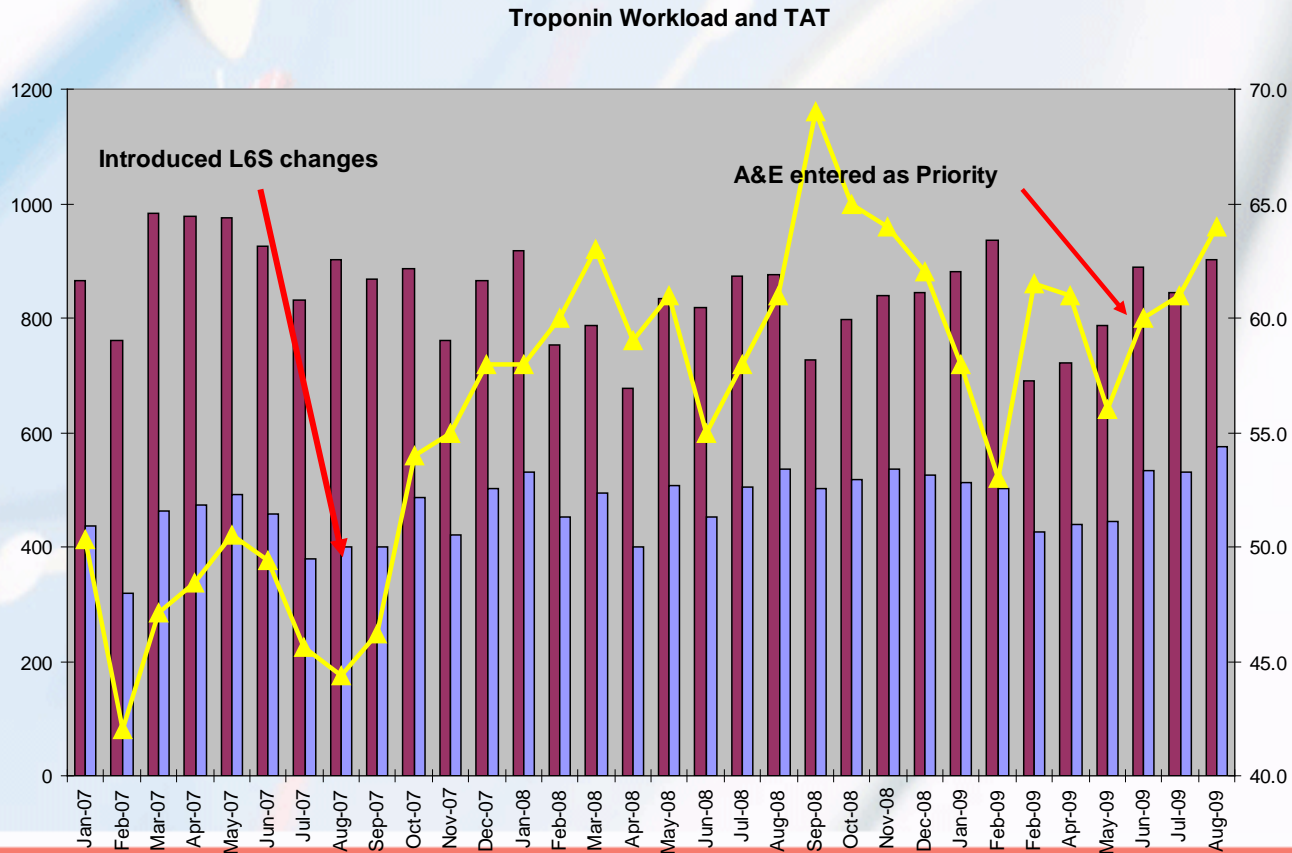
Each lab section was at the same stage of the DMAIC at the same time.

The leaders could see the similarities and differences in the way each team used the QI tools to move their projects forward

They had confidence in the other teams because they could see the activity

Achieved Good Results

- Departments start working cooperatively together.
- Had 2IC from each dept as coordinator of project in their area
- Many small improvements add to give large final improvement
- Still had to fight a cultural feeling of mistrust – (poor cousin syndrome)









Had Some Backsliding

- ✘ Many of the key people in the project went on leave directly after the project so some of the gains were not “concreted in”
- ✘ Didn't have follow up meetings to discuss improvements and work out issues
- ✘ Only some of the new practices still survive

- ✔ Some managers are still data focussed and are using the tools to start new projects in their area
- ✔ New projects are moving slowly and the QI culture is beginning to take hold in isolated pockets

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Where Are The Problems?

- Political agendas
- Everyone wants something for nothing
- Too much fear of change – older managers would rather argue with rhetoric than use data – because they still feel in control
- Not enough investment from management and executive – staff, money, and public support
- Lab managers fear losing staff if they become more efficient
- Bench staff lack QI confidence and think it is too hard for them to get a project running

L6S Goes Underground

- Lean Champion started in a new lab
- Did not mention L6S nor the tools to the staff – but still followed the format of :

Define, Measure, Analyse, Improve, Control

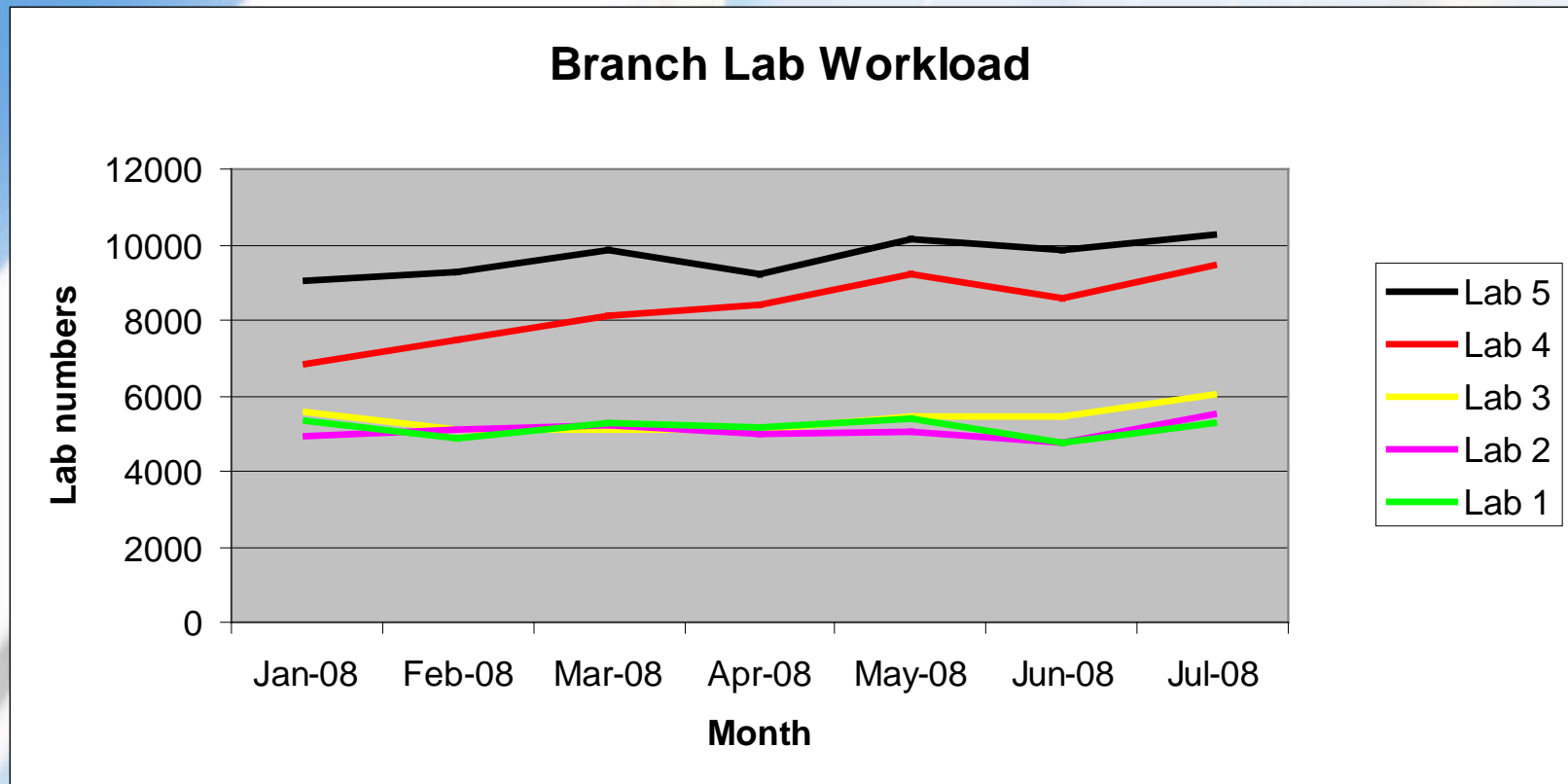
- Kept the staff in the loop about things that I thought could use a bit of change, asked for their ideas and help
- We did what was “common sense” and “logical”

The Lab Was Busy

- Staff had been complaining for years that the lab was too busy – but got no sympathy from management because it was busy everywhere.
- SO...we wrote a few database commands to get information from the LIS (Measure)
- Now we know test numbers and times – we can plan the roster and assign staff better (Analyse, Improve)
- Compared test numbers and staffing levels to other comparable labs

Lab 5 Was Working Hard

We sent the graphs and request for staff to the executive
Data was more effective than complaints – now they listened



Staff had Some Complaints

- They all felt that as individuals, they were working harder than their peers
- Not everyone was doing the same job to the same level
- Some staff kept forgetting to do things
- There was limited cooperation
- We keep running out of stock
- “So and so” doesn’t do analyser maintenance
- We have to take machines off-line in the middle of the busy periods
- I never get to go to training courses
- “This should be someone else’s job”
- Its not fair!

Made the Workload More Fair

- Got the staff to list all of the tasks that should happen when you work on a particular workstation.
- Did this for all workstations
- Created checklists for each workstation (standard work)

Controlled shift change-over

- Each checklist broken into shifts so that everyone was responsible
- Introduced the “Gemba”
- Kept the focus on the main things that staff needed to know to take over from one another.
- Asked about analysers, Maintenance, QC, customers, and any problems?

Developed Relations With the Customers

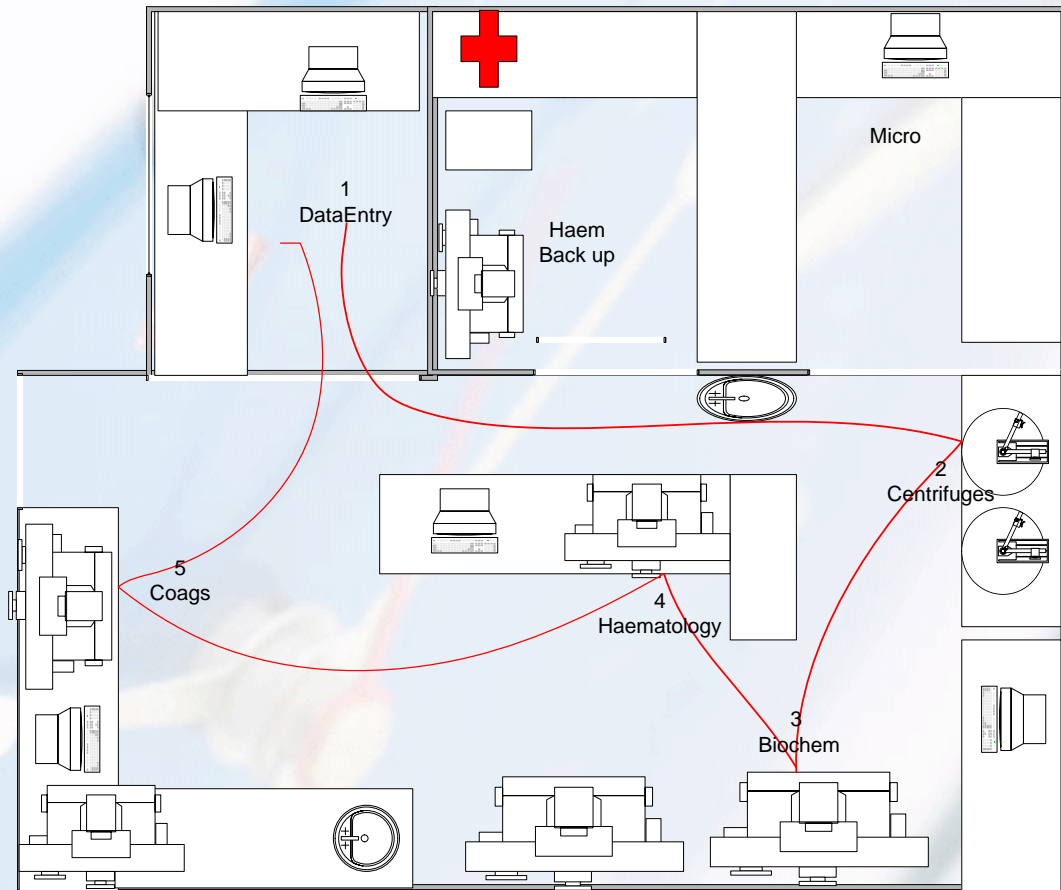
- Attended all the hospital meetings: Head of Dept, NUMs, Safety, JMO training
- Delivered reports personally – just to meet the people in the wards
- Constantly talking to A&E, HDU, clinics
- Made friends with all of the porters and stores/delivery staff and couriers (secured upstream supply lines)

Kept the Workflow Fluid

- Didn't allow staff to inhabit a space in front of an analyser – removed most chairs from the lab
- Encouraged a cycle of activity:
pick up specimens from data entry, load/unload centrifuge, load each analyser, validate results as you go, start cycle over again
- Only process small batches – 5 or 6 specimens at a time is enough

Simple Activity Cycle

- One operator can run all analysers at once.
- Specimens are not set down to wait before any step
- No change-over points
- The centrifuge dictates the cycle time



Stabilised Ordering System

- 5S on storeroom, fridge, and lab benches
- Sneaked “unnecessary” stuff out of the lab
- Found out what we used, how much we used, and where we got it from.
- Measured the actual usage, timed how long it takes to receive orders
- Labelled shelves, determined reorder quantities
- Minimum stock volumes – reorder points

Created Visual Controls

Reorder point marked on wall or shelf

Reagents labelled “ready for use” or “to be calibrated”

Shelves labelled with product, order code, minimum quantity.

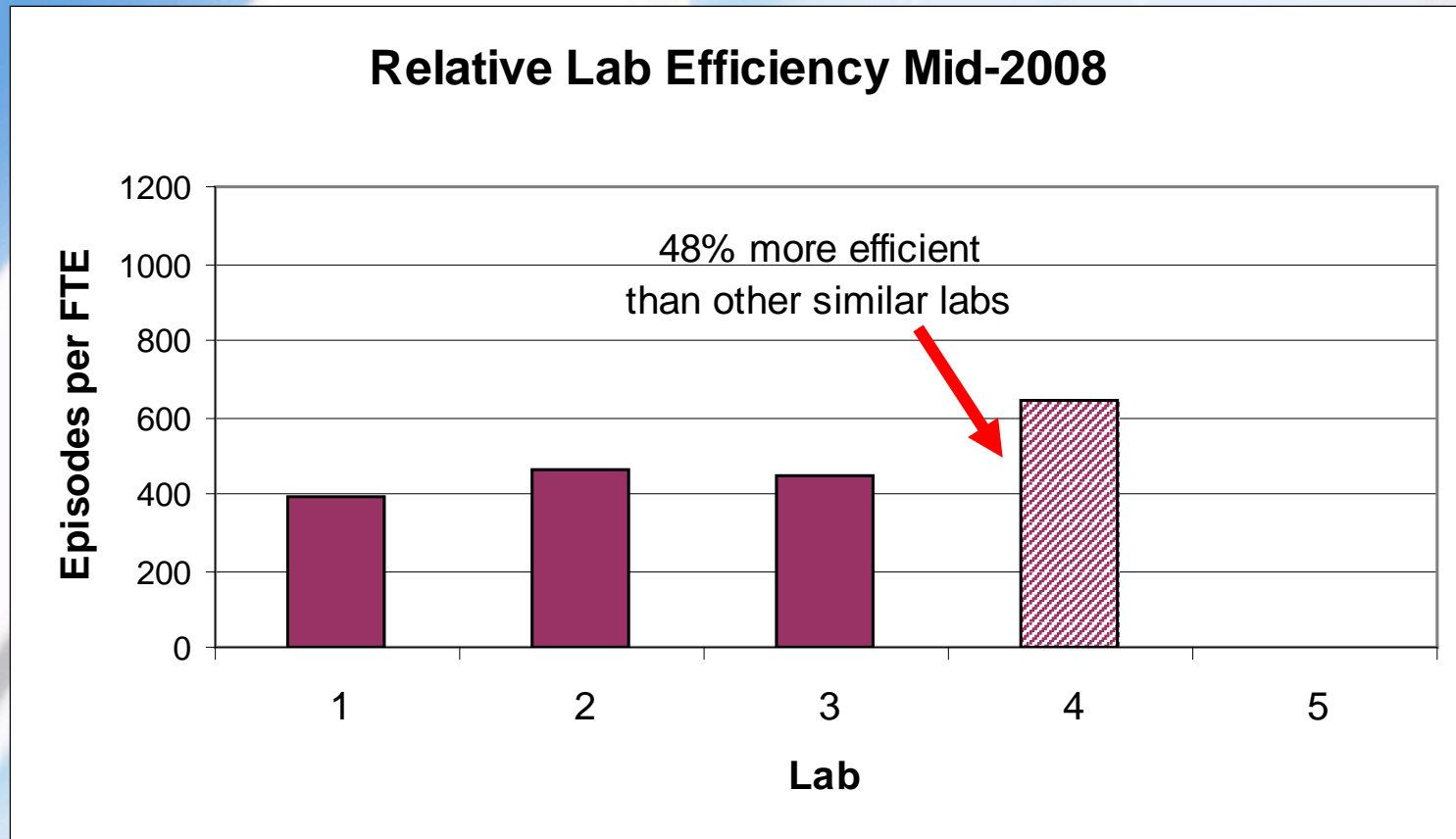


Put the Staff in Control

- Encouraged each staff member to be the key operator for an instrument
- Actively trained them about the role
- They overview the QC, reagents, and maintenance for their area
- They control the roster, shift changeovers, points on the worklists
- They come up with ideas for improvement
- We talk a lot but try to base our decisions on data

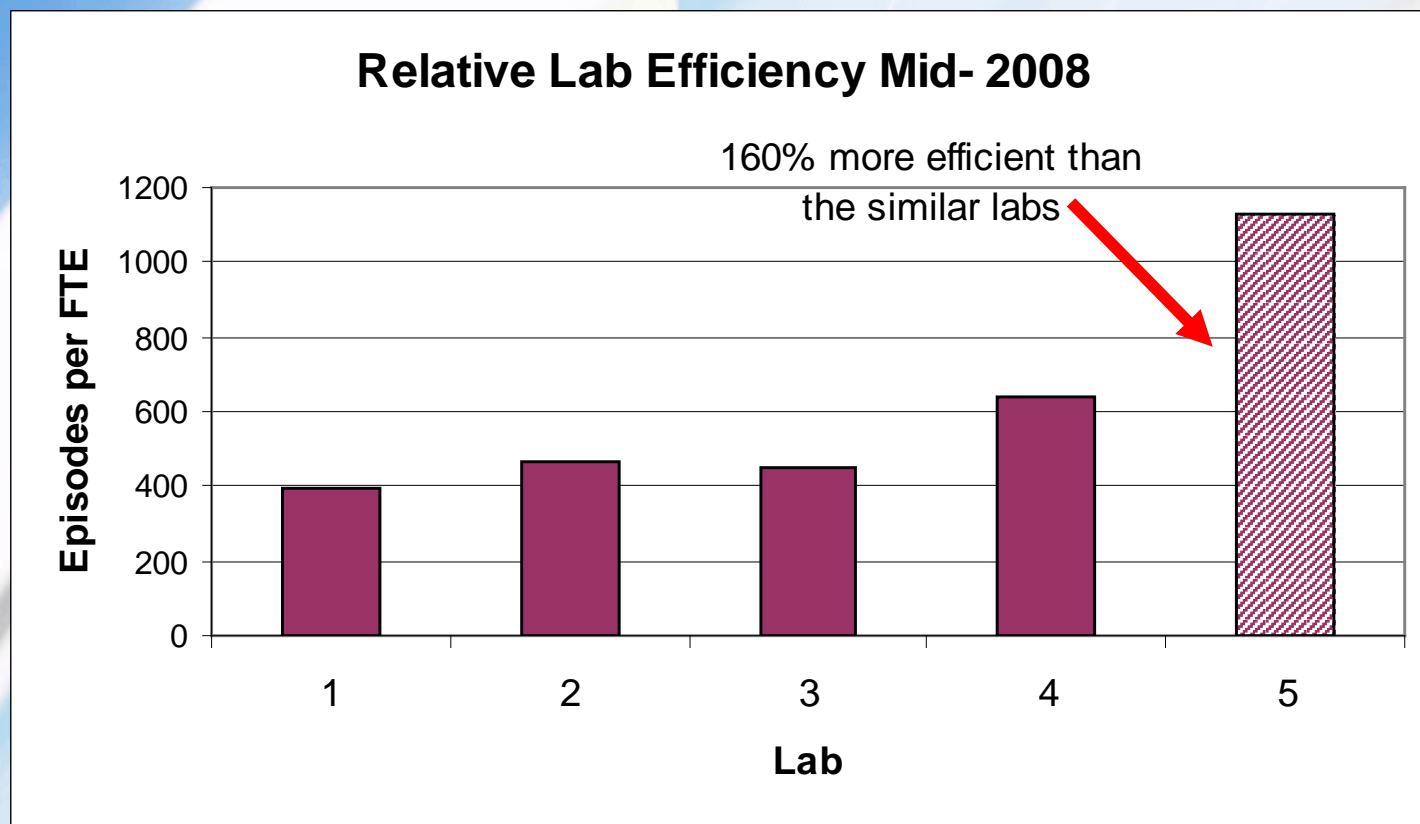
Does L6S Affect Lab Efficiency?

- 12 months after the single L6S project in Lab 4 gains are locked into place

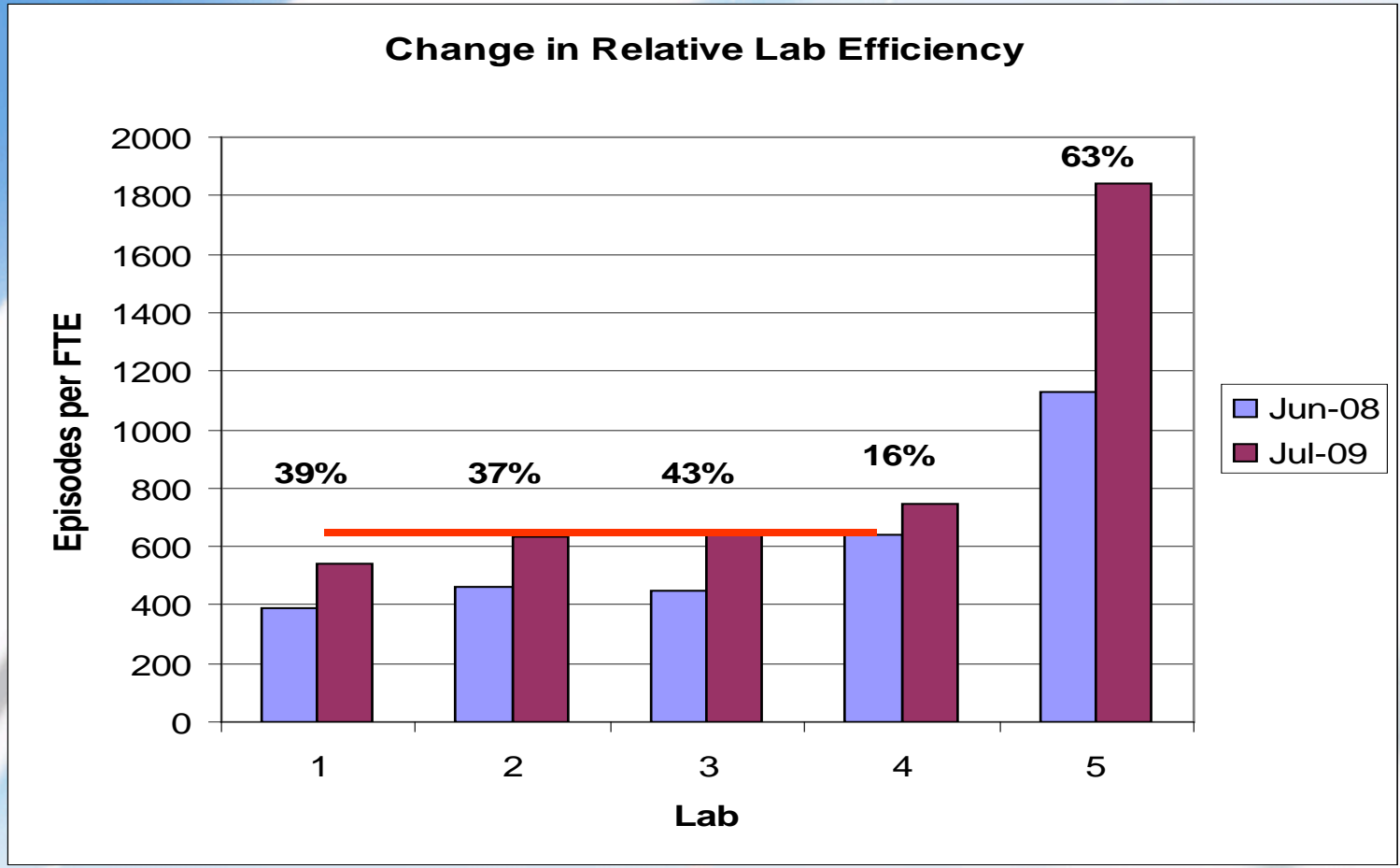


Does L6S Affect Lab Efficiency?

- Beginning continued L6S application in Lab 5
- Lots of processes being looked at – not just a single project



Continued Application Makes a Big Difference – After 1 Year



Summary

- Pilot projects successful and still working
- Other sites within network want project benefits and have implemented some of the main recommendations
- Bench staff don't feel confident to run their own projects
- Isolated secondary projects are just starting now
- Executive and senior managers still don't seem convinced about L6S benefits
- Don't want to apply resources to get the gains because of cost and resource pressures – yet they will need to free up resources for near future projects
- Can change the culture at a single site while there is a champion keeping it alive, but cant change the organisation as a whole