



Lean Improvement Apprenticeships



Our People, Your People, Your Business...

Established in 2004, Complete Lean Solutions is a lean training and Specialist support organisation providing services to clients across the globe. With offices in England and Australia and clients globally, CLS provides a standardised, well-proven model that enables our customers to significantly improve their operations.

Our team of 35 lean experts, all with first-hand experience working at the home of lean, Toyota, develop tailored lean engagement programs to ensure maximum tangible benefits for our clients.



- ✓ **CLS only employs coaches who have “been there and done it.”**
- ✓ **Our coaches have extensive experience in implementing the Lean Tool Kit with people at all organisational levels, using a combination of simple examples, analogies, simulations and hands-on deployment, all done side-by-side with the process owner/operators.**
- ✓ **More importantly, our coaches understand how to communicate and reinforce the lean mindset – the key to successful, sustainable improvement.**
- ✓ **Lean Manufacturing has been derived from the Toyota Production System.**

We take the time up front to understand your business

Before starting any training programme, we need to understand what is important to your business –

- Your biggest challenges
- Your current understanding of business improvement / lean
- What good practice is already in place
- What lean tools are most applicable to yourselves
- What project areas we can focus on as part of the apprenticeship
- What the teams will look like

It is important that we build on the good work you already have in place and keep a consistent message –

- ✓ We use the program to re-enforce important company information
- ✓ We plan the delivery method and support around your company needs
- ✓ We can dual brand the training material with your company logo
- ✓ We contextualise the delivery to be relevant to your type of work
- ✓ We incorporate your material and wording wherever possible

You can choose if you want to work on a specific project or just take an area and create a lean showcase utilising the programme



The aims of the Lean Training Programme?

- ✓ To deliver structured Business Improvement Training
- ✓ To develop the people within your business
- ✓ To complete practical projects that support the business needs and goals

- **Project Lead** - The projects may be generally implementing some lean foundation tools across the business, such as – Visual Factory, 5s , Standardised work OR they may go on to include specific challenges such as delivery on time, quality improvements or increased productivity
- **Practical** - This Programme is a hands on *learn-by-doing* approach that minimises the time in the classroom and maximises the time carrying out the improvements at the workplace
- **Team Based** – The projects are typically delivered by teams of learners to ensure collaboration, teamwork and sharing of best knowledge.

Which qualification?

Where possible, everyone should undertake the Level 2 qualification first to ensure that there is a common language and understanding across the business. Then some people may want to progress to the level 3 qualification.

For mixed groups (who are undertaking Level 2 and Level 3 – we would tailor the training delivery to accommodate the current understanding of Lean Improvement).

For learners that do not have a manufacturing related role then they would undertake the Level 3 Programme.

Level 2 – Lean Operative	Level 2 Diploma - Lean Manufacturing Operative - Apprenticeship	Manufacturing Operators / Inspectors / Logistics (12-14 months)	To give as many shop floor people as possible a common understanding of lean tools and techniques - and the ability to demonstrate these through the improvement projects carried out during the program - working in teams of 5 or 6 learners
Level 3 – Improvement Technician	Level 3 Diploma - Improvement Technician - Apprenticeship (Level 3 specific)	Any job role - from office, through to manufacturing, IT etc. At any level (12-14 months)	To build on the knowledge gained from the level 2 Programme by leading a team or owning an improvement project - using detailed Problem solving and analysis. If the learner has not completed a level 2 with CLS there may be a need to import elements of the level 2 program into the level 3 to ensure that they have the same understanding as those learners undertaking a level 2

How the programme is delivered

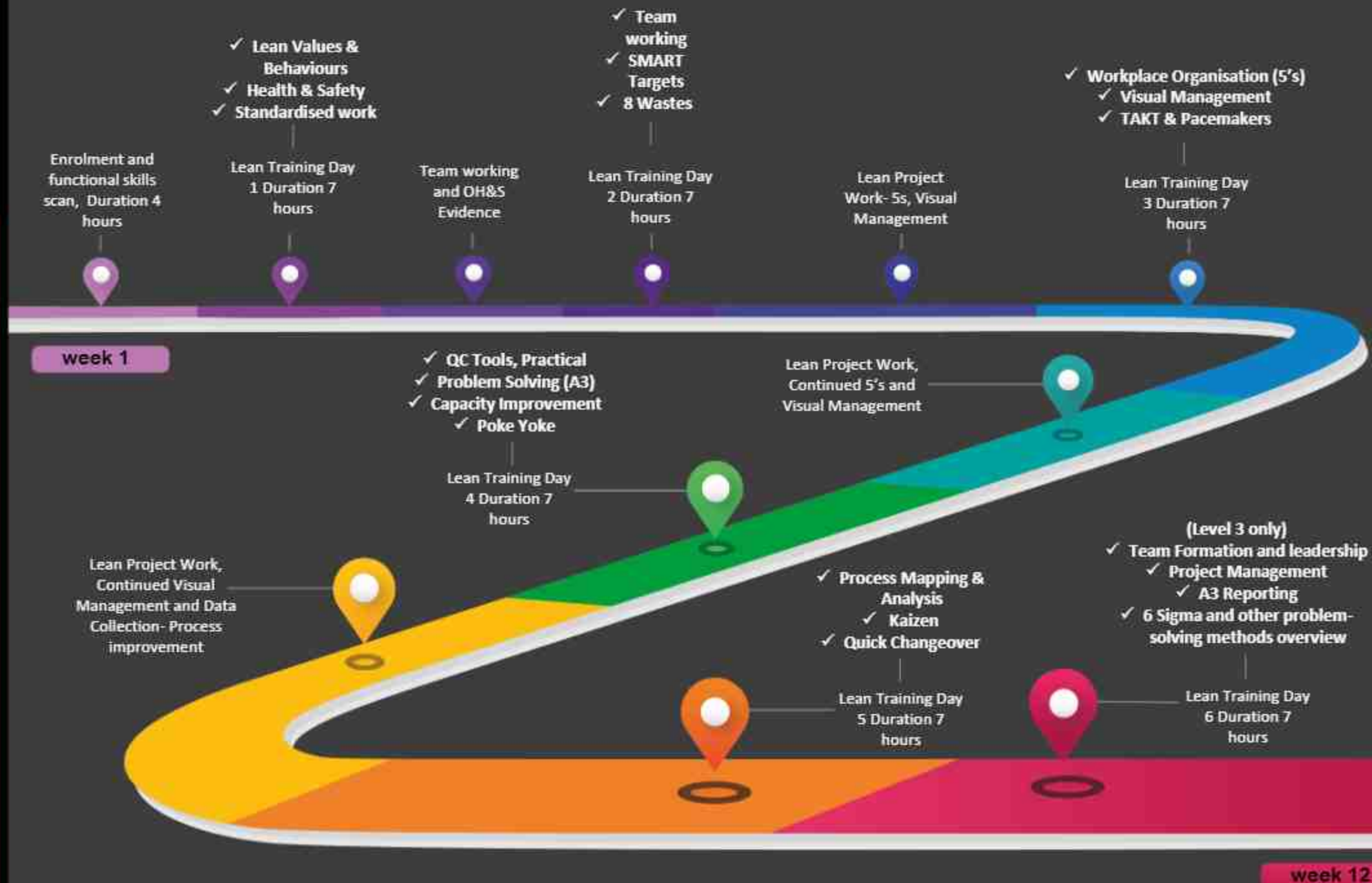
(Typically the first 12 weeks)

→ **Three Month Underpinning Knowledge Training** - providing you with the knowledge and skills to be able to carry out improvements within the workplace or lead a lean project

→ Training room and workplace based at your facility

→ Each Lean Training Day is classroom based, and made up of interactive exercises, practical examples and an end day assessment to ensure underpinning knowledge has been understood

→ **The Lean Project Work is the bedrock of the whole apprenticeship** - This is where learners demonstrate their knowledge and our specialists support the project teams through coaching and observational visits



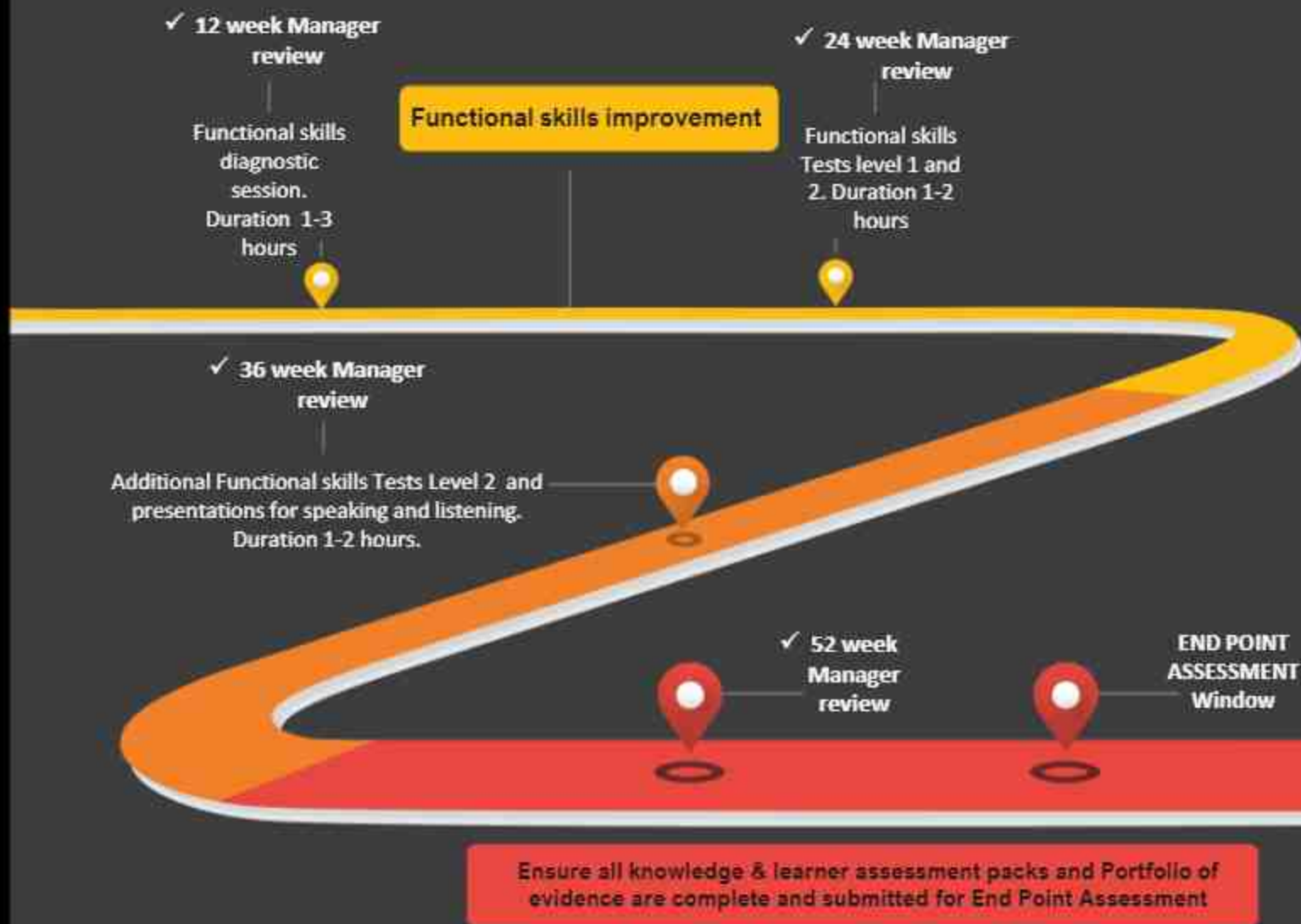
week 12

The Practical Implementation - levels 2 & 3

- You will work in teams on the projects that give the most benefit to you and the business.
- The CLS coach will be on site to support and guide you throughout your projects.
- Where required you will complete Functional Skills in Maths and English. Initial and month 3 assessments determine support and tailor learning. Final exams at week 26. Some exemptions with GCSE certificates

Potential projects	Support days
Ss / Quality Improvement / Standardised Work Introduction / Productivity Improvement / Delivery Improvement	Support days will be made up of practical observations, project support, on the job training and question and answer sessions etc. Support days will be delivered to the project teams at the work site and support can also be given via Microsoft Teams or Zoom etc. where appropriate.
Can be on a cross-functional basis or own job area specific. Projects such as improved quality outcomes, lead time reduction, or costing improvements are just some examples of what an Improvement Technician will carry out. The A3 PPS document that the project builds will be demonstrated at the End Point Assessment stage.	

The next 9 months -



Completing the Qualification and passing the apprenticeship - week 52

Assessment Gateway - Preparing for the End Point Assessment – All work Completed by week 52

At around week 52 the Learner / Trainer and Manager will confirm that the Apprentice is ready to undertake the end point assessment. This is to confirm that the learner has understood and completed the tasks to achieve the Level 2 Diploma in Manufacturing and their portfolio is complete. Or the Level 3 Learner had completed their A3 project report and have gained the knowledge required to go forward to the end point assessment. Level 2 Learners without Level 1 (or equivalent) in English and maths must have passed Level 1 (unless they have a suitable prior qualification) prior to taking the end-point assessment. Level 3 learners must have passed the level 2 qualification in English and Maths

The End Point Assessment – (Must be completed within 12 weeks of the apprentice meeting all the requirements of the assessment gateway)

Once the Learner , Trainer and Manager are confident that the End point assessment can go ahead then a date will be arranged for the End point Assessment organisation to come to the workplace to carry out the assessment. The End Point Assessment Company will be assigned during the program. CLS can support the facilitation of this or the EPA can be assigned by the client. The EPA will have knowledge of the Programme that has been delivered and will ask general questions to confirm that the learner has completed all of the evidence required and has gained the knowledge and skills to continue to deliver improvements after the course has completed.

	End Point Assessment activity	Evidence Required to show the end point assessor
Level 2 – Lean Operative	<p>Total Maximum of 2hrs 40mins</p> <ul style="list-style-type: none"> → 2 hours of observing the operator in their role following written job instructions. → 40 minutes professional discussion around the portfolio of evidence that has been collected during the programme 	<ul style="list-style-type: none"> ✓ Functional skills certificates in Level 1 English and Level 1 Maths (or equivalent) ✓ Portfolio of evidence collected during the project work
Level 3 – Improvement Technician	<p>Total Maximum time of 2hrs 25 mins</p> <ul style="list-style-type: none"> → Multiple choice examination – to assess knowledge elements of the standard 40 minutes → Project report, presentation & questioning – to holistically assess knowledge, skills and behaviours (KSBs) in the standard 75 minutes → Professional discussion underpinned by log – to holistically assess KSBs across the standard 40 Minutes 	<ul style="list-style-type: none"> ✓ Functional skills certificates in Level 2 English and Level 2 Maths (or equivalent) ✓ A3 Project report ✓ Project Presentation

What does the programme cost?

What is the commitment required from you?

Level 2 – Lean Operative

Fully-funded through the Levy pot, and for any shortfall in the Levy pot, the company would pay a maximum of 5% (£300) per learner.

If end point assessment results are required, then the company would be liable for these - however before the end point assessment takes place management and the trainer would confirm the learner is ready to undertake the end point assessment.

Level 3 – Improvement Technician

Fully-funded through the Levy pot, and for any shortfall in the Levy pot, the company would pay a maximum of 5% (£200) per learner.

If end point assessment results are required, then the company would be liable for these - however before the end point assessment takes place management and the trainer would confirm the learner is ready to undertake the end point assessment.

Throughout the programme the learners need to have time to be able to work on the improvement projects that have been selected, attend training days and use the new tools and techniques that they are learning as part of the apprenticeship.

The government guidelines stipulate that this should include 6 hours / week of their time spent at work while on the programme. The way the programme is delivered by experienced manufacturing professionals recognises the need to maintain production and business activity while still improving the processes and people.

Therefore, all of our program is focused around improving not only the individuals understanding, but also improving the key business metrics that have been selected.

The key commitment from yourselves is to allow people the time, and give support, to help implement change. Our coaches will spend time with you discussing progress of the projects and individuals throughout the duration of the programme. We are flexible in our approach to support your business demands and individual circumstances and will plan our support and training days accordingly.

Example of improvements made during one of our Improvement Programmes

These cost savings were made by an engineering company of around 100 employees

Project	Area	Detail	Savings (one off)	Savings (ongoing)
5S	Soft Machining	Excess Benches & Tooling	£1,478.00	
		Tooling replacement reduction		£2,000.00
		5% setting reduction		£4,400.00
	Flute Grinding	Tooling and materials returned to store	£192.00	
		Time saving from using new Setting Trolleys on the Bramac & ITM		£5,500.00
		Time saving from organising projections from a pile to a filing cabinet		£3,940.00
		Shortened setups due to not having to look for setting tools		£583.00
Blank Finishing	Thread Grinding	Obsolete inventory sold as scrap metal		£900.00
Standardised Work	Soft Machining	5% reduction in Set Ups		£4,400.00
	Blank Finishing	11 min reduction time in set-up time		£1,283.00
7 Wastes	Soft Machining	Staggered lunch breaks		£17,600.00
		Spare set of Swarf bins - downtime reduction		£5,700.00
		M35 C8 Steel Rationalisation	£16,779.00	
	Flute Grinding	Transport of tools to store - trolley put in place & end of transport		£6,500.00
		pre-rough of grinding wheel off machine - reduce set-up time		£13,800.00
	Blank Finishing	5S WIP(reduction) & visual factory highlighting excess labour - redistributed		£69,160.00
		Grinding Wheel rationalisation & control - 17 reduction	£1,170.00	£350.00
	Heat Treatment	Inventory (WIP) reduced through implementation of a managed buffer	£45,448.00	£4,545.00
Parts were being scrapped due to degreasing too early - rusting			£1,200.00	
Thread Grinding	Time saved by eliminating need for operators to calculate from imperial to metric - downtime reduction		£22,500.00	
Visual Factory	Heat Treatment	5s, target setting & managed buffer - 20% increase in throughput		£36,800.00

Continued: Example of improvements made during one of our Improvement Programmes

*These cost savings
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employees*

Capacity Improvement	Thread Grinding				
			Uptime increased by 27% through implementation of a visible & audio andon		£104,320.00
Smart Changeover	Soft Machining		22% reduction in setup time on Miyano		£9,600.00
	Flute Grinding		Wheel changeover - externalisation of prep tasks & standardisation = 26min/set-up		£9,660.00
	Blank Finishing		Reduction in set-up time through externalisation of tasks and removal of need for manual crane		£1,166.00
	Thread Grinding		Set-up time reduction of 34 minutes by externalisation of tasks		£41,328.00
TPM	Soft Machining		25% Fewer breakdowns in section. Machine down for an average of 4 hours		£7,680.00
A3 Reports	Conveyance		Walkway between plant 1 & 3 - reduce motion, inventory, scrap and heating	£75,000.00	£6,600.00
	Flute Grinding		Purchase of additional grinding wheel spindles to aid smart changeover - reduced time		£7,300.00
	Thread Grinding		Purchase of spare motors for the Drakes - loss in downtime		£25,390.00
Value Stream Mapping	Drills		Lead time in Black Magic Drills reduced by 9 days - WIP saving & improved IFOT	£21,743.00	£2,174.00
	Taps		Highlighted build up of inventory at inspection - new layout will almost eliminate buffer WIP reduction (17,606 components @ average cost £8.05 per tap)	£141,728.00	£1,473.00
Training Matrix	Soft Machining		1 shift per month the Miyano doesn't run due to lack of skills coverage		£7,680.00
	Blank Finishing		Skills coverage improvement freeing up 1 shift / week		£13,125.00
PPS	Soft Machining		Band-aid identified for broken centres - scrap reduced by 0.1		£2,880.00
	Thread Grinding		Scrap reduction through implementation of new flute to square measurement method		£2,186.00
Pull System	Tips		Kanban re-ordering for Tips - Reduction in stock	£400.00	
	Grinding Wheels		Kanban re-ordering for wheels - reduction in emergency trips to Bunnings		£735.00
			Kanban re-ordering for wheels - reduction in downtime		£12,864.00
Poka Yoke	Thread Grinding		Poka Yoke implemented to prevent blowing of light on inspection kit - reduce downtime while using plant 1 kit		£1,368.00
				£303,938.00	£458,690.00

£762,628

Total cost savings



**Continued:
Example of
improvements
made during
one of our
Improvement
Programmes**

*These cost savings
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What does the company get from the programme?

- ✓ Employees that have a common understanding of how business improvement works and the steps to take to solve problems
- ✓ A clear cost benefit to the company through the projects that have been implemented
- ✓ A legacy framework to operate the business in a lean way
- ✓ Access to world class business improvement specialists – who get their hands dirty and pass their knowledge on by getting involved



What do the apprentices get from the programme?

- ✓ A nationally recognized Apprenticeship Certificate
- ✓ An opportunity to carry out improvement projects that directly affect themselves in their own workplace
- ✓ A structured platform to showcase to management their achievements
- ✓ 12- 14 months of access to world class business improvement specialists, who are real people and have “been there” and implemented lean activities in different environments all over the world

Summary



Tangible Improvements - Practical projects are carried out in teams at the workplace based around your needs and priorities.



Flexible delivery – We fit in around the demands of your business and schedule the visits and / or remote contact accordingly.



Learn by doing – Only 5.5 / 6.5 days in a classroom over the 52 weeks of the program. The rest of the training and support is carried out by our coach in the workplace supporting and assessing the implementation of the projects either in person or remotely. For a cohort of 30 people our contact is 1 day per week on average



Level 2 / 3 accredited apprenticeship – The learners receive accreditation and recognition for the effort they put in to improving the business.



Cost Effective – For Levy paying companies the maximum you will be invoiced for is £300 / apprentice. (Level 2) and £200 / apprentice (Level 3) – And this is only if your levy pot is empty for the whole duration of the Programme.

Some of our clients....



Step 2

Agree a start date

Step 3

Apprentices undertake enrolment and skills scan half day – CLS are on site to explain the course to the learners and carry out an initial assessment of vocational and functional skills to ensure the programme is appropriate for the potential learners

Step 1

Select the group of people you would like to undertake the program and pass their details to CLS (name, postcode, date of birth) – There is no maximum number. The more people involved the better!



Step 4

Typically, one week after the enrolment day, we commence the lean training Programme

Get in touch



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