Real Companies - Real Cases

Improving Competitiveness using Enterprise Ireland Lean and Green Business Offers.

We hope that you enjoy reading these short cases from real companies, in Ireland, applying Lean to improve their Competitiveness, across their businesses.

The Cases span many different companies, sectors and sizes of businesses - the one thing connecting them all is that they are all engaging with their people to improve their immediate and long term Competitiveness with the support of the Enterprise Ireland Lean and Green Business Offers.

We hope that these case examples will help you on your journey, that they will challenge you and your people to continue your efforts and, hopefully, that you will contribute your story to future editions of the Case Study publication.

Lean and Green are working very closely together to deliver truly sustainable competitiveness, for the business and for the environment.

Best wishes for your continued Lean journey to real Competitiveness,

Richard

Professor Dr Richard Keegan, FIEI
Manager Competitiveness Department
Enterprise Ireland
BUILDING COMPANY COMPETITIVENESS

BENCHMARKING and LEAN & GREEN BUSINESS OFFER

Do you want to improve the company’s competitive position? Do you want to increase the company’s margins? Do you want the company to be effective and efficient across all areas of your business?

Enterprise Ireland's Benchmarking and Lean & Green Business Offers are designed to build the experience, knowledge and capability of your people to improve the company's performance and ensure a strong competitive position in global markets.

Benchmarking measures the company's performance across all business areas & provides comparisons against your competitors at local & international levels in a tangible way. It identifies strengths & weaknesses & helps to prioritise areas for improvement, post improvement activity it will measure the level of improvement achieved.

Enterprise Ireland's Lean & Green Business Offers encourage the adoption of lean & green business principles to increase competitiveness. Lean & green tools and techniques help the company by building the capability of your people to identify problems and improve operations. The offers are based on three levels of engagement.

Enterprise Ireland’s core mission is to work in partnership with its client companies to develop a sustainable competitive advantage leading to a significant increase in profitable sales, margin, exports and employment.
Ballytherm Ltd
GREEN CASE STUDY
CONSTRUCTION Sector

BALLYTHERM Ltd
MANUFACTURES AND SUPPLIES POLYISOCYANurate INSULATION PRODUCTS TO THE CONSTRUCTION INDUSTRY. BALLYTHERM INSULATIONS PRODUCTS ARE CFC/HCFC FREE AND HAVE ZERO OZONE DEPLETION POTENTIAL.

Ballytherm Ltd operates from a purpose built plant in County Cavan from where its products are distributed to the Republic of Ireland, Northern Ireland and the United Kingdom.

GREENSTART Project Objectives
- To implement a management system that will focus on monitoring our competitiveness by measuring the key matrices and generating a regular report.
- To create awareness of the resources used in the manufacture and delivery of the product.
- To specifically review compressed air use on site.

Key Challenges
- Limited availability of human resources on site.
- The system has to be simple and easily maintained.

Key Changes
- A documented system is now operational on site.
- The performance of the plant is monitored on a monthly basis, variances are investigated and corrective actions are taken.
- A register of opportunities is now maintained.

Results/Outcomes
- Savings of in excess of 10% of our electrical energy were identified.

“A review of our processes and procedures by an external consultant has highlighted areas where there is an opportunity to improve our performance”

BALLYTHERM Ltd
Annagh Industrial Park
Ballyconnell
Co Cavan
www.ballytherm.ie
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LEAD CASE STUDY
ENGINEERING Sector

BURNSIDE EUROCYL Ltd

HIGH QUALITY HYDRAULIC CYLINDER MANUFACTURER
WITH OVER 40 YEARS EXPERIENCE IN THE DESIGN AND MANUFACTURING OF HYDRAULIC CYLINDERS FOR THE OEM MARKET.

Burnside Eurocyl is a Carlow Town based company with leading European customers such as JCB and The Wirtgen Group. Burnside uses industrial processes such as machining, welding and manual assembly on all cylinders produced in-house.

“A lean production system requires not only tools but the dedication of management and the buy in of all personnel

LEAN TRANSFORM Project Objectives

- Develop the workforce to become lean minded with the ability to identify wastes and suggest improvements.
- Focus on KPI’s in order to achieve savings and increase revenue streams in the most beneficial areas.
- Develop a system of planning production across all manufacturing processes within the company in order to get the most out of our existing resources.
- Improve the layout of the factory to make material flow in an efficient and ergonomic manner.

Key Challenges

- Company going through a period of expansion reducing availability of key staff to work on lean projects.
- Wide variations in end products reducing the potential for streamlining of processes.
- High levels of stock needed to smooth out disruptive supply chain.

Key Changes

- Development of standard work practices and workstations using 5S principles.
- Accurate system for measuring the output of each cell and operator.
- Reduction in the number of tools required for assembly.
- Removal of non-value adding processes.
- Development of tailor made MRP system to optimise material stock.
- System introduced to reduce process times and increase quality of the finished product from machining and welding operations.
- Development of in-house built machinery to automate work intensive processes.

Results/Outcomes

- Reduction of setup times for machining operations.
- Reduction in the amount of stock raw material.
- Better flow of material with less work in progress.
- Increase in profitability of low volume batches.
- Productivity increase of 8%
- Reduced quality issues by 10%
GREEN START Project Objectives

- Implement an Environmental Management System within the company to control environmental impacts from their operations
- Conduct an environmental cost reduction programme
- Increase competitiveness of company through improved environmental sustainability
- Improve resource use in energy, water and waste

Work Programme

- A basic environmental management system and environmental policy was developed for the business
- Global Green Consultancy met and engaged with management and completed a site assessment to determine the key projects inclusive of environmental reduction potential
- A full technical environmental assessment and staff engagement was carried out focusing on energy, waste and water
- On completion of the programme Eliteform received a technical environmental audit report, a basic environmental management system, environmental policy, cloud based tools for continuous improvement and guidance to staff and management on how to best implement energy, waste and water savings

Results/Outcomes

- Achieved year on year savings of approximately €20k on resource use
- 60% energy savings through improved energy efficiency and purchase of new compressor
- Potential 20% savings in transport costs
- 80% water savings through installation of rainwater harvesting system
GRANT ENGINEERING IRELAND

HAS ACHIEVED AN ENVIABLE REPUTATION WITHIN THE HEATING INDUSTRY FOR ITS HIGH-EFFICIENCY APPROACH TO NEW CONCEPTS. THE COMPANY HAS BEEN RECOGNISED WITH AWARDS FOR ITS CONTRIBUTION TO THE INDUSTRY AND INNOVATIVE PRODUCTS. IT IS THE LEADING BOILER MANUFACTURER IN IRELAND AND THE UK.

With 40 years designing, manufacturing and supplying a wide range of highly efficient and reliable heating products, Grant Engineering Ireland has become a strong favourite for many householders and installers in Ireland.

LEARN CASE STUDY
ENGINEERING Sector

LEARN TRANSFORM Project Objectives

- Increase output on all our machines by monitoring the OEE.
- Conduct a Lean Transform Program across all areas of the business
- Instil a lean mentality across the organisation, focused on improving efficiency
- Create an environment that encourages employee engagement which allows employees to share their ideas to improve the OEE on machines.
- Use the data gathered to continuously improve operations and increase productivity.
- Deliver lean training and project mentoring to enable a ‘Lean approach’ culture in Grant Engineering.
- Implement a TPM strategy to prevent unwanted breakdowns and eliminate defective parts.

Key Challenges

- Capacity to meet sudden increases in market demand.
- Development of metrics that can drive continuous improvement
- Rollout of A3 problem solving
- Identification of a suitable method of data collection that will engage workers and highlight problems.
- Identification of appropriate solutions for reoccurring problems affecting OEE.
- Employee engagement – Not all staff engaged with the process initially. Some felt there was additional work incurred in documenting the downtime.
- Devising a TPM schedule that will not affect production.

Key Changes

- Daily communication with manufacturing operators on the floor.
- A competitive atmosphere has been created where workers strive to get the best OEE.
- Development of standard work practices and workstations using 5S principles.
- Moving to data-driven problem solving, rather than reactive problem solving.
- Hourly downtime sheets highlight recurring problems which enable us to devise solutions to address them.
- OEE Board displays data to managers, Team Leads and maintenance, so action can be taken.
- Increased participation of all staff in improvement activities.
- Daily / weekly / monthly TPM for machines.

Results/Outcomes

- A 20% average increase in OEE on all machines which has in turn increased production levels.
- Improved stock control using Kanban for consumable goods.
- Improved quality – daily tracking of quality in each department and near real-time issue resolution
- Greater awareness of production performance from the “hour by hour” downtime sheets.
- Decrease in recurring problems.
- Planned TPM has resulted in less breakdowns and part defects.
- Increased employee engagement – more employee inclusion in the daily management of their areas. This has led to the creation of a culture of continuous professional development and improvement.
- More than 2,400 frontline employee ideas have been implemented in the last 24 months.

GRANT ENGINEERING IRELAND
Crickle
Birr
Co Offaly
http://grantengineering.ie/
LEAN CASE STUDY
ENGINEERING Sector

JOLA ENGINEERING Ltd / PE SERVICES Ltd

SPECIALISTS IN SUPPLYING EQUIPMENT BASED SOLUTIONS TO THE PIG AND POULTRY INDUSTRIES MANUFACTURERS OF BULK FEED TANKS, WHICH CAN BE SUPPLIED AND FITTED NATIONWIDE.

JOLA Engineering Ltd, established in 1997, operates a comprehensive nationwide service and has begun to serve the UK market. Jola Engineering Ltd design and install Poultry House (broilers, breeders, free range, egg production and avairy), Pig and Cattle indoor equipment.

LEANPLUS Project Objectives

The company needs processes and systems to take export opportunities to grow the business.

Key Challenges

The knowledge of the industry is concentrated in a few key busy individuals. Sharing that knowledge to build new processes was a key challenge.

Key Changes

The company now has a quotation process with excel pricing model Configurator with different versions for the range of poultry houses. The price range is determined by the team and the sales team agree the final price within the range.

The model includes the PO for prepare to ship to ensure the equipment is in the supplier production schedule. The trigger for the actual order is the receipt of the deposit.

The model includes all items needed for the installation and stores, prepare the items from stock and coordinate the specialist orders to arrive on site for the installation.

A standard installation process has been created and will improve with time. It is possible to compare actual results with the initial quote and the actual margin with the expected margin.

Results/Outcomes

The company has embraced this new way of doing business. Key personnel now understand that the process must be followed.

The company can take on UK business with confidence and the margin on existing business has improved substantially.

JOLA Ltd/PE SERVICES
Unit 1 Crubany Industrial Estate
Crubany
Cavan
www.peservices.ie

2016 Competitiveness Department, Enterprise Ireland Case Study
LEAN CASE STUDY
ENGINEERING Sector

KELLY PRECISION Ltd
LEADING PRECISION ENGINEERING COMPANIES, IT SUPPLIES TO A WIDE RANGE OF INDUSTRIES, INCLUDING HYDRAULIC, OIL & GAS, AEROSPACE AND AUTOMOTIVE CLIENTS

Kelly Precision founded in 1995 supply to a wide range of industries including the Hydraulics, Oil & Gas, Pharmaceutical, Aerospace and Automotive and provide cost effective solutions in Precision Engineering to their customers

LEAN TRANSFORM Project Objectives
- Issuing of Paperwork to floor, identifying weaknesses in the Management Structure, Work Flow, Quality Systems
- Creation of Management Team with defined roles, Chasing of new customers with 'different' quality expectations, efficiency reporting
- Winning new contracts, being able to talk the ‘language’ of Quality, embedding Continuous Improvement, making a Technology Leap, improved Production Planning through the use of Standard Work

Key Challenges
- Diverse range of Customers with varying requirements and needs
- Fast moving nature of business with high Customer expectations
- Increasing emphasis from Customers on the use of Tools such as FMEA, PPAP and CpK
- Organization Structure not in place to deal with requirements

Key Changes
- Creation of defined roles for the Management team by using a common Lean approach to their Activities
- Organisation Structure developed to sustain Continuous Improvement
- Training to key staff on the use of Lean tools in their day-to-day activities
- Regular structured meetings to drive on-going change and sustain progress
- Development of Key Project team to help with new project introductions

Results/Outcomes
- Greatly improved interaction with our Customers
- Now able to talk a new ‘Language of Quality’
- Increased use of statistical tools in Lean such as CpK, Gauge R&R and SPC
- Increased Production output trough a number of Standard Work projects
- Improved Visual Management to enhance Communication

‘We have managed to further develop the Team and our capabilities here at Kelly Precision through our engagement with a Lean Transform Project’

Andy Kelly Managing Director

KELLY PRECISION Ltd
Tullow Industrial Estate
Bunclody Road
Tullow
Co Carlow

www.kellyprecision.ie
LEAN CASE STUDY
ENGINEERING Sector

MASTEK Ltd
HAS DEVELOPED AND
PRODUCES A FULL RANGE OF
SLURRY SPREADING
EQUIPMENT FOR THE IRISH AND
EXPORT MARKETS

Mastek Ltd was established in 2000
and is based in Cootehill, Co. Cavan.
Mastek updates their products on a
continual basis with the latest
technology and innovations. The
company’s main markets are in
Ireland, UK, Holland, New Zealand,
Australia, Norway, Finland, Latvia
and China.

LeanPLUS Project Objectives

- Develop the capability of the organisation to profitably grow the
  business
- Carry out an organisation review, agree the structure, responsibility and
  authority levels within the business
- Leverage Lean to bring a continuous improvement culture into the
  business

Key Challenges

- The company is young and the systems and structures had not kept up
  with the company’s growth. It operates in two distinct business sectors.

Key Changes

- Strategy and profitable growth opportunities
- Organisation structure and roles and responsibilities
- Setting up of Lean teams

Results/Outcomes

- The program has delivered €150k in hard savings and increased capacity
  by 25% in mast production. However the customer has increased orders
  by a further 30% which has resulted in shift work and a new backlog.
  There are new jigs in place to aid production, a cleaner work space after
  a 5’S program. All masts now have drawings and parts numbers.
- A new warehouse has a lean design input, will be used for assembly only
  with a bespoke showroom for the full range of slurry spreading machinery.
- An expanded range of machinery has no gaps and the company is a one
  stop shop for slurry spreading equipment with major export potential. The
  need for a customer database with serial numbers, customer details has
  been addressed and the supplier has started work.
- The flow of innovation between the shop floor and the design team is
  feeding practical innovation and better equipment. A R&D plan has been
  agreed, submitted to Enterprise Ireland and been approved with support
to further the company’s exciting growth plans.

Raleigh & Associates Ltd delivered excellent value. Setting the strategic
direction, dealing with HR issues, and leveraging the benefits of Lean.

Mastek Ltd
Business Park Cornacarrow
Cootehill
Co Cavan

www.mastek.ie

2016 Competitiveness Department, Enterprise Ireland Case Study
LENSART Project Objectives

- Create the required structures (System and Reporting) to achieve monthly P&L accounts
- Introduce accurate and efficient Project Cost tracking for Estimated (Quoted) Cost versus Actual – Labour & Materials
- Introduce best practice for Inventory Management

Key Challenges

- Lack of required departments established for accounting purposes and delays in securing information
- Poor Inventory accuracy
- Lack of reporting and analysis of stock
- Excessive purchasing frequency based on visual stock management
- Inability to track project costs accurately and timely and to carry out consistent project reviews.

Key Changes

- Required departments for P&L reporting established
- Key inventory reports established and training delivered on analysis
- Training delivered in Lean Project selection and delivery
- Improved template created for future project cost tracking and analysis – Labour and material cost.

Results/Outcomes

The Company with the help of the external Lean Support Consultant identified a number of key improvement areas such as

- Project Cost Tracking
- Inventory Levels
- Levels of slow moving and obsolete stock
- Frequency and overall number of purchase orders generated.

These will have a direct impact on cost saving; waste reduction; improved efficiency; increased sales and profitability.

The Lean program had a direct impact in assisting key staff to manage the business in a more effective manner.

To this end the effective use of reporting from the MIS system Opera, careful analysis and trending as well as the creation of project teams for continuous improvement will have a very positive impact on the Company.

Mooney Boats, Killybegs Co Donegal based company, are the largest ship building and restoration company in North West Ireland. The engineering side of the business provides a range of services to the Marine and Oil & Gas sectors.

“We are delighted with the progress made over a short few days. It has given us the confidence and desire to move to build on the success to date and also bring improvements to other areas of the business.”

Mooney (Boats) Ltd
St Catherines Road
Killybegs
Co Donegal

www.mooneyboats.ie

2016 Competitiveness Department, Enterprise Ireland Case Study
LEAN CASE STUDY
ENGINEERING Sector

MULTI-TECH DESIGN Ltd

FABRICATES TANKS, AND ENGAGES IN GENERAL ENGINEERING WORK. IT ALSO DESIGNS AND Installs WATER TREATMENT PLANTS IN IRELAND AND THE UK.

Multi-Tech Design Ltd is a fourth generation family company with a long tradition of engineering excellence.

"Raleigh & Associates delivered excellent value. They helped set the strategic direction, deal with HR issues, and leverage the benefits of Lean with hard savings, increased productivity and a design team in place to capture more export business."

LEANPLUS Project Objectives
- Develop the capability of the organisation to profitably grow the business
- Carry out an organisation review, agree the structure, responsibility and authority levels within the business
- Leverage Lean to bring a continuous improvement culture into the business

Key Challenges
The company is built on an engineering tradition over four generations of the Brady family. Highly skilled the team can fabricate without drawings. To grab the opportunities available the company has to have drawings for all fabrication work and achieve the CE mark.

Key Changes
- Strategy and profitable growth opportunities
- Organisation structure and roles and responsibilities
- Setting up of lean teams

Results/Outcomes
The skill levels within the company facilitated fabrication of major water treatment plant without detailed drawings. Standard work and detailed drawings for all fabrication jobs were introduced. The company is now ready for the CE mark audit.

The time taken to fabricate has been reduced by 50% by introducing the drawing discipline. In addition there is a free flow of ideas and improvements from the engineers and the fabricators.

The company designs its own control panels and is now making them in house. It has just won another two major water treatment plant design and fabrication orders in the UK.

The company designs and fabricates the various parts needed for a water treatment plant and builds the panel to control the installation. It also designs and fabricates a range of tanks for clients.

Conservatively the savings are €200k with the potential to grow the business by 30-50%.
LEAN CASE STUDY
ENGINEERING Sector

PQE TECHNOLOGY LIMITED
SPECIALISTS IN THE MANUFACTURE AND SUPPLY OF INNOVATIVE ENGINEERING SOLUTIONS OF MACHINED AND FABRICATED PRECISION COMPONENTS ACROSS A RANGE OF INDUSTRY SECTORS.

PQE Technologies Limited, delivers engineering solutions to a broad range of client companies across a variety of industry sectors: Materials handling, Power Distribution, Agriculture Machinery, Quarrying, Construction Equipment, Transport, Utilities and Renewable Energy.

LEANSTART Project Objectives

To increase the On Time in Full (OTIF) Delivery KPI of finished products
Reduce costs by improving wasteful planning and production processes

Key Challenges

OTIF Delivery was estimated to be running between 40% and 50%. In addition the practice of injecting rush/urgent orders into the manufacturing process caused other products to be rescheduled, disruption to process flow, increased set-ups, unnecessary overtime, poor quality and dissatisfied customers. Additional courier/transport costs were being incurred

Key Changes

- Restructuring planning and communications processes. Elimination of wasteful and unnecessary activities
- Changes to planning and production roles and responsibilities
- Agreement with customers on lead times and communication processes
- Improved process for introduction of orders to factory floor
- Improved team working between customer services, planning and production personnel
- Introduction of daily planning meetings
- Improved capacity planning on machining and lathes
- Improved coordination between welding and machine shop
- Increased level of customer awareness and ownership of committed delivery dates
- Clarification and introduction of key milestones in customer service, planning and manufacturing processes
- Introduction of OTIF delivery Performance KPI overall and for key customers

Results/Outcomes

- Saving of €55,440 per annum in direct and indirect labour cost
- Saving of €5,000 per annum in transport costs
- Major increase in OTIF delivery KPI that continues to rise
- Improved customer satisfaction through improved delivery performance and increased communication

Successful Lean pilot project with measurable bottom line and customer satisfaction results. Set basis for further development of continuous improvement culture at PQE. Excellent facilitation and mentoring provided

PQE Technology Limited
IDA Industrial Estate
Cavan Road
Cootehill
Co Cavan
www.pqe.ie

PQE Technology Limited
2016 Competitiveness Department, Enterprise Ireland Case Study
LEAN PLUS Project Objectives

Introduce a lean culture and techniques to allow a company wide focus on quality, on time delivery, and waste reduction resulting in improved efficiency of the internal process, competitiveness and ability to grow the business with existing and new customers.

Key Challenges

- Managing the introduction of new products for the automotive and aerospace industries.
- Development of a lean culture with an emphasis on improvement.

Key Changes

- Introduction of a lean culture.
- Removal of waste (non-value add activities) throughout the business process.
- Improved new product introduction process.
- Reduction in scrap and rework activities.
- Development of a problem solving skills.

Results/Outcomes

- 20% Increase in turnover per employee.
- 40% reduction in scrap.
- Improved outgoing quality.
- 15% production efficiency due to change over and cycle time improvements.
- Reduced lead-time as a result of improved New Product Introduction process.
- Ability to secure and win new long term contracts with existing and new customers.

Shannon Precision Engineering Ltd
based in Shannon Industrial Estate, Co. Clare, established in 1978 supplies product to various Multi-National Companies. SPE has created a niche in pulley production which has lead to design and development input of products with key customers.

The Lean Plus program has been very beneficial for SPE and a major contributing factor to growth over the last 2 years. As all our customers are on similar journeys, and a key aspect for them is reduction of large orders quantities and shorter lead times. Machining companies will live and die by our response, that we can align production with our customers' demands and feedback accurate information.

Through the Lean Plus program SPE have been able to implement a new company structure, new planning techniques, measuring systems, problem solving tools that all flow towards the same goal. 100% Quality and OTD. Without these introductions and a company wide focus, SPE would not have progressed like we have in the last 2 years. The Lean journey is an ongoing one that will push continuous improvement, being driven from all departments within the company.
GREEN CASE STUDY
ENGINEERING Sector

JOHN SISK AND SON (HOLDINGS) LTD.
AN INTERNATIONAL CONSTRUCTION COMPANY WHO PLACE A STRONG EMPHASIS ON PERFORMANCE, QUALITY, TEAMWORK AND A "HANDS-ON" MANAGEMENT APPROACH TO ENSURE CLIENT SATISFACTION

John Sisk & Son - Building and Civil Engineering Design and Construction services headquartered in Ireland, and have domestic operations in England, Ireland, Northern Ireland, Wales and Scotland and international operations in Europe and the United Arab Emirates

GREENSTART Project Objectives

- Our intention is to become certified to the ISO 50001 management system and be the first contractor / builder in Ireland & UK to do so.
- The SISK Energy Forum, (October 2014) led by Building Services Manager Padraic O’Connor, aimed to take advantage of the extensive skills base that exists within the company. Comprises representatives from all 8 of its Irish and UK operational business units, with help and input from support functions such as Procurement, ICT / HR / Fleet and HSEQS working collaboratively to achieve the objective of ISO50001 certification.
- The Energy Forum identified the Significant Energy Users SEU’s as diesel for transport, diesel for site vehicles/equipment, electricity and gas.

Key Challenges

- The most significant challenge encountered was the analysis and comparison of KPI’s for energy usage across all of the construction sites, as many variables such as type of project, duration, method of construction, site working times, site accommodation arrangements, commissioning duration etc. made it difficult to produce comparative data.
- SISK’s focus in the shorter term is to control the inputs to energy use by way of the introduction and planning of energy efficient designs to their temporary electrical installations, combined with procedures and guidelines in the use and selection of plant and equipment to help in the reduction of their energy usage.
- “Zero Energy Waste” is now the SISK energy policy in accordance with the company’s zero philosophy. Challenges:
  - Temporary site for each project (all work is project based)
  - Fleet / transport identified as largest energy user
  - Dispersed nature of sites leading to high fleet mileage
  - Access to grid electricity & gas leading to high generator use
  - Imperative to meet completion deadlines of pay penalties

Key Changes

- Structured approach to energy management now applied on-sites (50001)
- Single provider for electricity and gas procured, supporting ISO50001 and BRE SmartWaste target attainment
- Staff engaged at all levels via Toolbox talks and classroom training from Authentic Energy Management Services (AEMS)
- Companywide targets for reduced energy use in kWh/€m of turnover

Results/Outcomes

- Measured 13% fuel savings in L/100km before vs after from eco-driving training (target was 5%)
- 89,180 kWh x £0.15 = £13,377 per year potential savings from ICT Desktop Power Management (reported result, companywide roll-out to complete 2016)
- Savings from using grid electricity identified and promoted to ensure grid supply used as first choice for new sites.
- Site accommodation tested and business case established for Eco cabin specification delivering 36% energy saving vs 20% uplift in cabin cost – justifying eco-cabin choice for many sites where they would not have been considered.

“Savings and opportunities identified to date, have changed how we do business and are helping Sisk to; reduce cost, price future work more accurately and deliver measurable reductions in our environmental impacts.”

“AEMS’ Conor Molloy helped us overcome the challenges of including road fleet and plant diesel in our 50001 project, leading to key savings results”

Padraic O’Connor, Building Services Department Manager, John Sisk & Son Ltd.

JOHN SISK & SONS (HOLDINGS) Ltd
Wilton Works
Naas Road
Clondalkin
Dublin 22
www.johnsiskandson.com

2016 Competitiveness Department, Enterprise Ireland Case Study
GREEN CASE STUDY
ENGINEERING Sector

TEG
BASED IN MULLINGAR, CO WESTMEATH, DESIGN, MACHINE AND SHIP PRECISION ENGINEERED PARTS ALL OVER THE WORLD IN THE PHARMACEUTICAL AND TRANSPORT SECTORS

Electricity is used for production and natural gas for central heating and water. The main energy loads are CNC/milling machines, compressed air, lighting and air conditioning which account for about 80% of the site energy usage.

GREENSTART Project Objectives

- Become more competitive by implementing energy cost reductions
- Develop an Energy Management System (EnMS) and a cloud based tool
- Provide training for relevant staff
- Comply with current legislation and regulations
- Perform an energy audit of the manufacturing facility
- Prioritise future spending in energy efficiency

Key Challenges

Increased costs of energy

Key Changes

- An EnMS was developed and implemented
- A cloud based tool was set up to manage the management system and to update the register of opportunities to maintain energy management best practice
- Training needs where identified, provided and records are maintained
- Legal requirements are reviewed every 3 months
- An energy audit was carried out and potential energy savings identified:
  - Upgrade MIC to remove excess capacity charges
  - Install power factor correction bank to eliminate excess wattless charges
  - Participate in the Winter Demand Reduction Incentive
  - Change gas supplier for better rates
  - Change factory lighting to more energy efficient lighting
  - Replace fluorescent lights in the offices, meeting rooms, toilets and hallway with LED lighting and controls
  - Change exterior lighting and Install 65KW photovoltaic cells

Results/Outcomes

Estimated annual energy cost savings of €20,744 (23%) with a ROI of < 1.5 years for most projects. (Note: Est. ROI for photovoltaic cells is 7-8 years.)

TEG
Forest Park
Mullingar
Co Westmeath
www.teg.com
LEAN CASE STUDY
ENGINEERING Sector

T & T PRECISION Limited
LEADING GLOBAL PROVIDER OF HIGH PRECISION TOOLING AND GAUGING TO THE MEDICAL DEVICE AND AEROSPACE MARKET. WE DELIVER CUSTOMISED SOLUTIONS TO OUR CLIENTS INCLUDING SERVICES SUCH AS DESIGN AND/OR MANUFACTURE TO ENSURE A BENCHMARK QUALITY SERVICE, SEAMLESSLY ALIGNED TO CLIENTS MANUFACTURING TEAM.

T & T Precision Limited was established in 1996 and has a long association and proven track record within the Aerospace, Medical Device, Food & Drug, and Plastic industries, providing innovative and complex precision engineering solutions.

LEANSTART Project Objectives

- To support the development of the Leadership team to deploy and sustain Lean into the organisation.
- To educate and mentor employees on Lean concepts, applications and sustaining the benefits.
- To identify and increase the capacity of the bottleneck in the value stream.
- To implement 5s and visual factory into eight areas of the business.
- To implement Lean tools into the business where they can deliver value.

Key Changes

T&T Precision Ltd operates in an environment where quality is critical, but at a competitive cost. As a result, the key challenges for the organisation include:

- Demands from the tendering process to reduce cost of product and service provided, while maintaining quality standard.
- Increasing costs of managing a business.
- Investment requirements to improve the efficiency of the workplace due to a relocation of facility, at a time of cost competitive pressures.

Identification of the bottleneck using data analysis.

As a result of a SMED exercise at the bottleneck process, the following key changes were implemented:

- All tooling required for a specific machine is now at point of use.
- Training sheets were implemented for effective operation of each machine.
- Improved communication of knowledge between personnel, through the introduction of critical to quality information on the drawing/programme.

5s was implemented across eight areas in the plant, with all personnel involved in the change. Changes included ensuring all items required for work were at point of use, implemented signage and labelling, supply of benches and many changes to improve safety of the workplace.

Process to implement autonomous maintenance in a systematic way was developed.

Learning and development of team members, with all team members presenting their projects to the entire organisation on completion of projects.

Results/Outcomes

The key results from the Lean Start Program include:

- Release of €152k Additional Capacity for the business.
- Implementation of 5s in 8 areas of the business, resulting in the reduction of search times by 6 hours per week.
- Six team members were certified as Lean Yellow Belts on completion of the project presentations.
- Management of the business demonstrated strong lean leadership behaviours throughout and beyond the Lean Start Program.
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<tr>
<th>FOOD</th>
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<tr>
<td>Ashbourne Meats</td>
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<tr>
<td>Carbery Food Ingredients</td>
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<tr>
<td>Callan Foods</td>
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<td>Foods of Athenry</td>
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<td>Glenpatrick Springs</td>
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<td>Grove Turkeys Ltd</td>
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<td>Irish Country Meats</td>
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<td>Shalvey Poultry Ltd</td>
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<td>Sillis Green Veg</td>
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<td>Silver Pail Dairy</td>
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<td>Silver Pail Dairy</td>
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# LEAN CASE STUDY

## FOOD Sector

### ASHBURNE MEAT PROCESSORS
ONE OF IRELAND’S LEADING BEEF PROCESSORS, EXPORTING PREMIUM CHILLED IRISH BEEF ALL OVER EUROPE

The company was established in 1985. They supply premium chilled and frozen beef products to leading retailers, manufacturers and distributors throughout Europe, Russia, Asia, Africa and the Middle East.

<table>
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<tr>
<th>LEANSTART Project Objectives</th>
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<tr>
<td>• Increasing throughput of the processing line</td>
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<tr>
<td>• Increasing value adding activities and eliminating waste</td>
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<tr>
<td>• Provide Lean training for the management team and select process areas to apply principles</td>
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<tr>
<td>• Improve overall competitiveness</td>
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### Work Programme

- LEAN Start

### Projective Outcomes

- Increased line productivity by 16%, going from 43 cattle per hour to 50 cattle per hour
- Team introduced to Lean Six Sigma and Theory of Constraints principles through formal training and on the job mentoring
- OEE introduced and improved by 10%
- Bottleneck operation identified as Hide Puller, process variation on this key step reduced by 35%

*Lean tools and techniques are helping companies to address competitiveness issues within their businesses by building the capability of their people to identify problems and improve operations.*

---

ASHBOURNE MEATS Roscrea
Castleholding
Roscrea
Co Tipperary

Website: [http://ashmeats.ie](http://ashmeats.ie)
GREEN CASE STUDY
FOOD Sector

CARBERY FOOD INGREDIENTS

MANUFACTURES A BROAD RANGE OF MILK BASED PRODUCTS AND MANUFACTURES FROM EIGHT FACILITIES WORLDWIDE, INCLUDING IRELAND, UK, USA, BRAZIL AND THAILAND.

Carbery Food Ingredients based in Enniskeen, Co. Cork was founded in 1965 and is recognised as a leading international manufacturer of speciality food ingredients, flavouring systems and an award-winning cheese producer.

GREENPLUS Project Objectives

- To build internal capability in energy management and implement a certified energy management system to ISO 50001 standard
- To structure energy management in the plant to ensure continuous improvement and competitiveness in electrical and thermal energy use
- Examine efficiencies in process as a result of implementation
- To provide training to staff on energy management

Programme

- Phase 1: Site profiling including base line calculation, compilation of logic diagrams
- Phase 2: Scope system including setting boundaries, determining systems and sub systems. Reviewing policy
- Phase 3: Tailor Model - establish relationships develop cell structure and technical writing
- Phase 4: Inform and empower including training programme
- Phase 5: Apply Model – Complete energy matrix, determine legislative and corporate demands, set targets and instigate plan
- Phase 6: Monitor & Report

Results/Outcomes

- Potential savings of €400k identified (€120k by project end)
- 7% energy saving identified
- Carbery Milk Products achieved certification to ISO 50001
- Competitiveness now measured and reported at business unit level
- Installation of a Cold Chemical Sterilisation system in Camolin resulted in thermal energy savings of 65% and a 35% reduction in water usage
- Procurement procedures amended to include lifecycle costing
- Continuous improvement embedded through focussed process audits
CALLAN BACON

LEADING PORK AND BACON PROCESSING COMPANY BASED IN CALLAN Co. KILKENNY

Callan Bacon is a family run business with a global profile which commenced operation in 1924. For generations, Callan Bacon has been providing retailers in Ireland and the UK with quality products. The company operates a full HACCP system and is accredited by Bord Bia PQAS and by BRC at higher level.

LEAN PLUS Project Objectives

- Provide LEAN training to relevant employees
- Involve as many people as practical in the lean programme
- Achieve productivity improvements
- Set up and coach teams to establish a continuous improvement culture

Work Programme

- LeanPlus project

Project Outcomes

- Productivity increased by 20%
- Lean Leadership training provided to Management
- Lean Green belt training given to 12 middle Management
- Lean problem solving given to 10 Lead hands
- 12 teams trained and taken through a complete cycle of DMAIC projects

Lean tools and techniques are helping companies to address competitiveness issues within their businesses by building the capability of their people to identify problems and improve operations.

CALLAN BACON Co Ltd
Westcourt
Callan
Co Wexford

www.callanbacon.com

2016 Competitiveness Department, Enterprise Ireland Case Study
GREEN CASE STUDY
FOOD Sector

THE FOODS OF ATHENRY

PRIMARY MANUFACTURERS OF PREMIUM ‘FREE-FROM’ BAKED PRODUCTS. TWO BAKERIES ON THE FARM, BAKING CERTIFIED GLUTEN FREE IN A DEDICATED FACILITY, WHILE ALSO BAKING WHEAT & SPELT IN A SECOND BAKERY.

The Foods of Athenry is a family-owned and run bakery, based on the family farm in the West of Ireland. Operating as a bakery since 1998, it became a limited company in 2004. All products across the production contain no additives, preservatives or hydrogenated fats.

GREENSTART Project Objectives
- Develop Environmental Policy & Key Aspects
- Comply with legislation & Regulations
- Improve Environmental awareness
- Reduce Packaging
- Reduce logistics costs

Key Challenges
- Resources
- Packaging’s costs
- Logistics

Key Changes
- Mini Environmental System developed & Implemented
- Packaging design reviewed and implemented
- Outer case formats consolidated
- Transport optimised and implemented
- Increase in max cases per pallet
- Changed electricity supplier for better rates

Results/Outcomes
- Estimated annual savings of €5000 with return on investment less than 1 year.

"Greenstart made us look at our business from a holistic viewpoint. Decisions taken as a result not only are having an on-going beneficial environmental impact but are also showing a positive result on our bottom line P&L."

THE FOODS of ATHENRY
Oldcastle
Kilconieron
Athenry
Co Galway
www.foodsofathenry.ie

2016 Competitiveness Department, Enterprise Ireland Case Study
LEAN CASE STUDY
FOOD Sector

GLENPATRICK SPRING WATER CO LTD
MARKET LEADING, INNOVATIVE DRINKS PRODUCER SPECIALISING IN RETAILER HOUSE BRANDS AND BRAND CO MANUFACTURING

Water sources are drawn from limestone rocks found beneath the southern slopes of the beautiful and conserved natural heritage area of the Slievenamon Mountain in Co Tipperary. With in-line bottle blowing facilities, sports capping and Reel-Fed label technology Glenpatrick has the solution to your beverage needs.

Lean Transform - Project Objectives

Deliver competitive advantage to Glenpatrick Spring by operating the new Krones line to best in class OEE level. Take learning’s from the improvement in the Krones line and implement across other parts of the business. Deliver these objectives through the implementation of the below projects:

- Lean Awareness Project – Rolled out to all employees
- New Filling Line KPI’s
- Preventative Maintenance New Filling Line
- Management Development Training – Including Behaviour Assessment and coaching
- Lean Production Planning Wheel
- Warehouse Capacity Management

Key Challenges

The success of the project was to increase the OEE of the new Krones line to the rated running OEE of 85% that would sustain over a three shift cycle. In order to achieve this objective, a number of initiatives needed to be put in place:

- Workplace Organisation – Rollout of A frame Change Parts
- Standard Work – Implementation of Front Line Asset Care by operators
- Standard Work – Identification of best practice for each of 17 changeover equipment points on the line and rollout of point of use training material to operators across 3 shifts
- Implementation of Preventative Maintenance for the Krones line with software package to manage the PM annual program
- Rollout of A3 problem solving

Rollout Behaviour Assessment to Operation Manager and Production Managers and rollout of Core Behaviour Matrix to all employees to ensure right behaviours are aligned to job needs to drive the required performance.

Improvements delivered on the Krones line were rolled out across the glass line and in support departments across the business.

Project Outcomes

Through the successful implementation of the lean transform program, the company has gained a competitive advantage over its competitors by operating the site through lean as the way it now operates the business. Standard work is in place to ensure people do the job in the approved way they have been trained.

A3 problem solving is used to correctly define a problem and put in place corrective action counter measure. Cockpits are used effectively daily to run the business, ensuring performance is tracked, good communication exists and everyone is held to account in doing their jobs.

Core behaviours have been rolled out as part of a performance management process to ensure people’s mindsets are aligned with the job requirement to drive high performance across all areas of the business.

OEE line performance on the Krones PET line has been increased from 60% to 76% and yield loss has been reduced from 2.5% to 1.4%. This has resulted in an annualised cost saving of €750,000. Lean tools and practices are now embedded in the daily execution of the process to enable the team to continue the improvement journey to achieve 85% OEE.

The lean training of tools and practices has been extended to the glass line with positive impact on metrics.
GROVE TURKEYS Ltd

One of the largest producers and suppliers of Turkey and poultry added value products to the retail and foodservice markets in Ireland and the United Kingdom.

Grove Turkeys Ltd based in Smithborough, Co Monaghan was founded in 1972. The product range serves the retail and foodservice markets is varied and extensive and many products are tailored to meet specific customer specifications.

GREENPLUS Project Objectives

To achieve ISO14001:2015 certification by end of June 2016. In doing so, to reduce water, energy and waste generation and overall operating costs.

Key Challenges

- Environmental training of employees.
- EMS training of operators and internal auditors of system.
- High water use throughout site.
- Monitoring and measurement of KPIs not in place initially.

Key Changes

- Improve environmental performance of site.
- Achieve cost savings.
- Environmental training of operators and internal auditors.
- High water use throughout site: water use minimisation procedures identified.
- Monitoring of resource use now in place.
- KPIs now monitored.
- Targets set for reduction in water, fuel and waste generation per finished product by end of 2016.
- High waste areas identified.
- Full compliance with relevant legislation including IPPC Licence.

Results/Outcomes

Achieved external ISO14001:2015 certification and reduction targets for all KPIs by end of June 2016.
GREEN CASE STUDY
FOOD Sector

IRISH COUNTRY MEATS

SPECIALIST SHEEP MEAT PROCESSING DIVISION OF SLANEY FOODS, A SUBSIDIARY OF THE LINDEN FOOD GROUP - A COMBINED BUSINESS WHICH REPRESENTS SIGNIFICANT SCALE IN BEEF AND LAMB PROCESSING ON THE ISLAND OF IRELAND.

Irish Country Meats, based in Camolin, Co. Wexford and Navan, Co. Meath, wished to gain ISO 14001 certification through the implementation of an Environmental Management System (EMS).

GREENPLUS Project Objectives

- Implementation of a certified environmental management system to achieve water, waste and energy savings
- Examine efficiencies in process as a result of implementation
- Assure compliance with environmental legislation
- Increase Irish Country Meats international competitiveness
- Basis for Irish Country Meats application for Bord Bia Origin Green registration
- Increased Corporate Social Responsibility identity

Work Programme

- The GreenPlus Programme was the stimulus for Irish Country Meats seeking ISO 14001 accreditation
- The Programme is designed for SMEs and Large companies
- The Programme assisted Irish Country Meats achieve significant resource efficiency savings
- GreenPlus provided the financial support to assist in the hiring of an external trainer, to build environmental management capability and achieve ISO 14001 certification.

Results/Outcomes

- Irish Country Meats achieved certification to ISO 14001:2004
- Waste volumes reduced by 12.5%
- 20% energy saving in waste water treatment due to drum screen installation
- Compressed air system upgrade in Camolin plant resulted in 50% energy savings
- Installation of a Cold Chemical Sterilisation system in Camolin resulted in thermal energy savings of 65% and a 35% reduction in water usage
- Innovative packaging initiatives resulted in 46% volume reduction
- Irish Country Meats has been involved in a joint venture project with The Carbon Trust and Bord Bia to establish a carbon footprint for lamb production
- Irish Country Meats has won a contract to supply a supermarket chain, based on ISO 14001 certification, achievement of green corporate goals and membership of Origin Green programme

IRISH COUNTRY MEATS
Bayland
Camolin
Co Wexford
www.irishcountrymeats.com
GREEN PLUS Project Objectives
The objective of the project was to build the knowledge and structure to manage our Energy and Environmental responsibilities. The company policy is maintain sustainability and place it at the forefront of the business. The training involved embedding the principles of ISO 50001, understanding how to develop an Environmental Management System and Carbon Management Principles based on ISO 14064-1.

Key Challenges
The key challenges involved building a team around the energy and sustainability plans. Keelings is a big company and we needed to build an effective team around the Green Champion. This was successfully achieved when some adjustments were made to the meetings format.

The initiatives identified cover:
1. Waste
2. Energy & Carbon Emissions
3. Transport Energy & Emissions
4. Packaging
5. Health & Nutrition
6. Community Partnership
7. Develop Sustainability Initiatives
8. Biodiversity
9. Wellbeing Days

Key Changes
We have a more structured approach to Sustainability which is becoming embedded in the daily operation of the company.

Results/Outcomes
We identified €151,094 in savings as a result of this project in year 1.
LEAN CASE STUDY
FOOD Sector

KEPAK GROUP
AN IRISH BASED COMPANY, IS ONE OF EUROPE’S LEADING FOOD INNOVATORS, ENGAGED IN PROCESSING AND MARKETING A FULL RANGE OF MEAT PROTEINS IN VARIED FORMATS AND PRESENTATIONS. THE GROUP COMPRISSES OF 3 STRATEGIC BUSINESS UNITS, KEPAK MEAT DIVISION (KMD), KEPAK FROZEN DIVISION (KFD) AND AGRAKEPAK INTERNATIONAL

KMD business is focused on supplying partner retail and food service customers across Europe. The bedrock of KMD is built on a very strong supply base from producers who are acutely responsive to customer needs.

Kepak Meat Division (KMD) is the primary processing business unit of the Kepak Group. KMD has an array of very well invested processing facilities strategically located across Ireland processing in approximately 250,000 cattle, 800,000 sheep and 300,000 pigs a year.

LEARN TRANSFORM  Project Objectives
- To conduct a Lean Transform Program across all functions/areas of the business.
- To deliver Lean training and project mentoring to enable a ‘Lean approach’ culture in Kepak.
- To introduce a blend of Lean and project management methodologies to deliver targeted cost savings from Continuous Improvement.

Key Challenges
- The industry has in recent years seen an unprecedented fall in activity due to changing demographics in the farming industry.
- External factors such as exchange rates and energy cost inflation were working against us.
- Our Customers were asking for change and we were listening.

Key Changes
- A Lean Transformation Program was introduced, broken into separate work streams
  - 5S to deliver a simpler, safer and better working environment for our team.
  - Standard work to give Operations the tools to meet targets in quality, yield and efficiency
  - Visual management to improve communication and improve the speed of change.
  - Management routines including Gemba walks to bring the frontline and office staff closer together.
- A central Project Management Office (PMO) was established to coordinate Lean implementation, training & mentoring of staff and CI delivery to target.

Results/Outcomes
- We have simplified and standardised our processes so that our sites are now managed and our products produced in a Lean manner.
- We have built a more educated, involved team at all levels through the Lean Transform Program, training in Lean principles & project methodologies, and partaking in CI projects.
- We have improved our cost base helping us to remain competitive and grow along with both sides of our supply chain.
ROSIE & JIM GOURMET FOODS

IRISH CHICKEN PRODUCTION COMPANY WHO SUPPLY DISTRIBUTORS TO THE RETAIL, FOOD SERVICE AND CATERING TRADES

Rosie and Jim Gourmet Foods have been producing, premium quality chicken products in Dublin since 1997.

Lean tools and techniques are helping companies to address competitiveness issues within their businesses by building the capability of their people to identify problems and improve operations.

LEAN START Project Objectives

- Reduce raw material costs
- Establishing cash contribution per hour on top 4 products after raw materials, wastage, packaging and direct labour
- Reengineer products to make them more commercially attractive for the UK market
- Green – completed the green questionnaire and got an Ecomap.
- Identify any production processes that could be more efficient
- Identify any potential new sales prospects through existing sales channels

Work Programme

- Examined all the main raw materials and spoke with different suppliers for each of the products
- Carried out 4 detailed costings including Time and Motion study on the top 4 products
- Reengineered both tortilla wraps and pies to make them more cost competitive for the U.K. market
- Met with the Electrician and the refrigeration engineers and completed the Green questionnaire. They also completed an initial Ecomap
- Examine OEE of existing production processes
- Identify any areas in the factory where production efficiencies could be introduced through redesigning equipment
- Identify any potential new sales opportunities through existing sales channels

Projective Outcomes

1. Achieved raw material savings of €58k
2. Completed detailed costings on 4 products, which showed the company how what its cash contribution is for its top 4 selling products
3. Reengineered wraps and pies that make the products commercially more attractive for the U.K.
4. Completed Green questionnaire and got draft 1 of an Ecomap
5. Identified two projects that will lead to better production efficiencies
   - Designing a new railway belt for the existing breading line will reduce the need to have three staff in the one area down to two operators and possibly one operator
   - Automating the filling for the tortilla wraps and the pies – Buying a Handtmann machine and manufacturing a custom build filling head
GREEN PLUS Project Objectives

Reach the level required to maintain the ISO 14001 environmental standard.

Key Challenges

Recycle packaging, reduce water and energy usage.

Key Changes

- Isolation valves now in the refrigeration system and heat exchangers.
- Lagging all pipework and clearing out all maintenance rooms. Painted the rooms.
- Reorganising spare parts, nuts, washers, bolts and
- Painted the workshop.

Results/Outcomes

Excellent feedback from the BRC audit.

Ready for ISO 14001 audit.
SILLIS GREEN VEG Ltd
SUPPLIES READY PREPARED VEGETABLES AND FRUIT TO THE HOTEL AND CATERING INDUSTRY NATIONWIDE.

Sillis Green Veg Ltd based in Glaslough, Co. Monaghan was established in 1997 and have since built a reputation for delivering a high quality customer service and wide variety of top quality produce.

The lean programme improve the factory’s efficiencies without having to spend on capital. We felt it brought the management team and our production staff closer together and communication between the two sides improved thus improving our overall efficiency.

LEANPLUS Project Objectives

- Develop scheduling system based on lean principles.
- Implement metrics in each production area.
- Develop system to support reduction of in process waste.
- Develop new quality returns system to support continuous improvement in product quality.

Key Challenges

- Develop scheduling systems that could cope with the unpredictability and variation in daily demand that exists in the prep veg sector.
- Get staff used to the accountability that comes with having production metrics in place.

Key Changes

Existing scheduling system was based on a manual interpretation of historical sales data. The new system based on lean principles provided a more accurate daily schedule. Re. metrics, target were developed for each area based on scheduled daily demand.

Results/Outcomes

- Time required for production planning reduced from 1 hr to 15 mins per day.
- Number of people capable of developing daily production plan increased from 1 to 3 people.
- New system for tracking, identify and reducing quality issues implemented.
- Dispatch waste reduced by 50%. PIT system implemented
GREEN CASE STUDY
FOOD Sector

FOXWAY COMPANY
 t/a SILVER PAIL DAIRY

MANUFACTURERS OF QUALITY
ICE CREAM AND FROZEN
DESSERTS FOR FOODSERVICE
AND RETAIL CUSTOMERS.

Foxway Company t/a Silver Pail Dairy is located in Fermoy, Co. Cork and founded in 1978 producing ice cream, frozen yoghurts and cream liqueur for the retail and foodservice for Ireland and International markets.

GREENSTART Project Objectives
- Refrigeration was identified as a key energy user in the facility with a significant potential for improvement.
- A focus on resource efficiency with a target to improve refrigeration efficiency by 2% and LPHW by 1% within 12 week timeframe was agreed.

Work Programme
Identification of the resources to be addressed included Energy, Water, Waste and Emissions.
A review of the plant took place which identified opportunities for improvement.
A sustainability team was set up which incorporated representatives throughout the site
- Sustainability metrics were developed for energy, refrigeration, waste, recycled material and water discharge from the site along with project improvement plans.
- Implementation of refrigeration controls improvements, additional monitoring equipment, development of metrics and hosting of sustainability team meetings ensued.

Results/Outcomes
- €10K savings from the modification of controls to the refrigeration plant with a 10% improvement potential over the coming three years.
- Regular sustainability meetings have given greater understanding of sustainability issues across the site and a management structure is now in place to monitor and manage energy and environmental issues throughout the site.

“"The GreenStart Project was instrumental in formalising the sustainability programme and assisted in identifying concrete improvement projects”

"The GreenStart Project was instrumental in formalising the sustainability programme and assisted in identifying concrete improvement projects”

FOXWAY
 t/a SILVER PAIL DAIRY
Dublin Road
Fermoy
Co Cork
www.silverpail.com

2016 Competitiveness Department, Enterprise Ireland Case Study
LEAN CASE STUDY
FOOD Sector

FOXWAY CO t/a SILVER PAIL DAIRY
MANUFACTURES QUALITY ICE CREAM AND FROZEN DESSERTS FOR FOODSERVICE AND RETAIL CUSTOMERS.

Foxway Company t/a Silver Pail Dairy is located in Fermoy, Co.Cork and founded in 1978. Specialists in the manufacture of ice cream, frozen yogurts and ice cream dessert.

The lean start program has been a great success as the management team got behind the program. Similar buy in is already in place for the Lean Plus program which will help in delivering further business benefits for SilverPail.

The lean start program has been a great success as the management team got behind the program. Similar buy in is already in place for the Lean Plus program which will help in delivering further business benefits for SilverPail.

LEANSTART Project Objectives

OEE Project

Visual Management
Set morning stand up meetings on the shop floor. Agree standard agenda template. Review performance and follow up on major downtime issues. Agree escalation process to get outstanding issues resolved and report to monthly management meeting.

Workplace Organisation
Review and set workplace organisation standard for the packing area. Identify appropriate storage locations for pallets and materials and clearly mark area to authorise these storage locations. Put workplace audit in place to verify that this workplace standard is being adhered to.

Repack Project
Formalise Repack area. Put formal measurements in place.

Work Programme
Project scope detailing milestone plan completed for each project. Project reviewed by milestone plan each day on site. Good engagement with people involved in the projects from the beginning by meeting each team one on one to introduce the principles of lean and the scope of the four projects. Ownership and accountability clearly established in the delivery of each project. All projects delivered on time and met or exceeded project objectives.

Results/Outcomes
The target savings across the four projects under the lean start program were €20k. The actual delivered annualised savings across the four projects are €26K. These savings are attributed to two of the four projects:

- OEE Project €14,490
- Repack Project €11,436

The other two projects were strategic in nature so did not have a hard financial target deliverable but the impact on the shop floor through work place organisation and visual management have had a positive impact on both the shop floor operation and on employee engagement.

- Visual Management
- Workplace Organisation

FOXWAY t/a SILVER PAIL DAIRY
Dublin Road
Fermoy
Co Cork
www.silverpail.com

2016 Competitiveness Department, Enterprise Ireland Case Study
LEAN CASE STUDY
HEALTHCARE Sector

WHATCLINIC.COM HELPS PATIENTS FIND, COMPARE AND BOOK THE CLINIC THAT MEETS THEIR NEEDS. DETAILED LISTINGS FOR OVER 120,000 CLINICS ARE PROVIDED ON THE WEBSITE. WhatClinic.com was founded in 2006 and will be a global leader in patient experience for the elective healthcare sector, connecting the right customers with appropriate clinics and providing all the necessary tools and information patients need to make an informed choice.

LEANSTARTProject Objectives

To develop a better way of identifying clinics that are interested in using WhatClinic.com to grow their business through new patient acquisition.

Key Challenges

We have customers in over 40 countries, the key challenges in this project was to identify a process that would allow us to identify and grade potential new customers that can be then fed to our sales team. This allows us to get the most efficient use and best return from our current sales process.

Key Changes

We now have defined pre-sales process that we use on a daily basis to generate new quality for our sales and a way of evaluating the results and performance on an on-going basis.

Results/Outcomes

We have increased new business sales by approximately 15% and increased our renewal rate to 85%+.

The Lean Start program has helped us to implement a formal pre-sales process, which allows us to identify stronger sales prospects and helped us to expand our customer base and increase the pace of growth within WhatClinic.com.

Conor Leech, Sales Manager,
WhatClinic.com

WHATCLINIC.COM
12 Duke Lane Upper
Dublin 2

www. Whatclinic.com

WhatClinic.com
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TOPFORM Ltd
IRELAND’S PREMIER SUPPLIER OF CREATIVE WORKTOP SOLUTIONS. WITH ALMOST 40 YEARS OF EXPERIENCE SUPPLYING TO THE CONSTRUCTION INDUSTRY, TOPFORM ARE AT THE CUTTING EDGE OF INNOVATION IN LAMINATING.

Topform based in Gort, Co. Galway, have thrived through innovation and premium quality.

“The Lean Start program really opened our eyes to the potential change a Lean Journey could make to our business. Although it only seemed to scratch the surface, it made an immediate improvement in the small area we worked on. Now our eyes are opened, it is now impossible to ignore the Lean road ahead!”

LEANSTART Project Objectives
- Raise Lean Awareness throughout the company
- Establish 5S practices in production
- Improve Productivity in the countertop production line
- Establish environmental policy

Key Challenges
- Project was being carried out at a time when demand was high meaning there were challenges around working with the production team and getting their availability
- Other changes were also underway at the time of the project – New production equipment was being installed and also a new ERP project was underway

Key Changes
- 5S project was established throughout the product area and is now in the phase of being audited on a regular basis.
- Daily Metrics gathering of plan and actual was established for the production line. Value Stream Map was done for production line.
- Process change method was identified – For certain board types we were processing 2 boards together through the press operation as this was more effective in terms of press cycle. However analysis indicated that this created waste in the process steps both sides of the press. There was resistance to the change as it was perceived to be counter intuitive, this has now taken place.
- The benefits have been to remove burden on the step prior to the press (laying – up) and we estimate an average increase in throughput has been achieved.
- But also key to this is that it has helped us establish that the next step in the process, Post-Forming, is actually the key constraint to the overall production line productivity. Future projects will now focus on improving this process step.

Results/Outcomes
- Notwithstanding some challenges the overall outcome of the project has been positive.
- 5S has been introduced and is beginning to be established in production – This is having a positive impact in terms of the visual layout of production and also issues can be seen more easily.
- While the challenge of very variable demand means it is difficult to say the definitive improvement in production we do estimate that production line throughput is up by around 20% on average.
- The project has also highlighted a number of future actions in terms of maintenance and technical issues that need to be resolved – These will lead to further improvement in productivity.
- The analysis has also given insights into the focus of the next phase of improvement action with respect to the production line which will be around our post-form process step.
- Establishing daily plan versus actual metrics is assisting in ensuring we are focussed on delivery and also helps to sustain improvement into the future.

2016 Competitiveness Department, Enterprise Ireland Case Study
LEAN PLUS Project Objectives

Eliminate waste (including duplication) and streamline processes from the design to the installation of panels manufactured in Balbriggan.

Key Challenges

The company is a major success, profitable with numerous awards in its sector.

The team in the company achieved that success using in house expertise.

Getting the team to open up to new ideas, using lean as the continuous improvement method will facilitate the company reaching world class manufacturing standard.

Key Changes

Increased communications within departments and between departments.

We created an island of excellence in steel with a Five S program, streamlined purchasing, new job descriptions, management development, and better interaction with drawing office and production with KPI displayed for the key outputs (which will be replicated throughout the plant).

Brought the “customer” into the Yard with a 3 lift policy (1 into the yard, 1 onto the truck and 1 onto the building). This has massively reduced double handling and damage to panels.

Results/Outcomes

Productivity has increased, communications between design and manufacture has improved. The steel shed is now ahead of schedule producing cages today for use tomorrow.
KLASMANN-DEILMANN IRELAND

HARVESTS PEAT MOSS AND MANUFACTURES HORTICULTURAL SUBSTRATES FOR PROFESSIONAL GROWERS.

Klasmann-Deilmann Ireland [KDI] was founded in 1982. The company’s products are now distributed throughout the world with 96% of its revenue being generated from exports. KDI is the first SME in Ireland to partake in all stages of Enterprise Ireland’s Lean Programme.

LEAN TRANSFORM Project Objectives

- Maximise the peat harvest by reducing collection times from 3 ½ days to 2 days.
- Embed a ‘problem-solving’ culture in the company.
- Eliminate non-value add activities in the office, factory and peat production areas through process standardisation.
- Increase factory output by implementing quick changeovers.
- Increase employee engagement through A3 improvement projects and weekly improvement meetings.

Key Challenges

- Labour intensive industry.
- Competitors with lower labour costs.
- High transport costs and increased lead-time due to export nature of the business.
- Highly weather dependant industry.
- Some employees feel ‘too busy’ for Lean activities.
- Not all staff engaged with the process initially.

Key Changes

- Increased communication through weekly improvement meetings.
- Gradual shift from reactive to proactive thinking.
- Increased participation of all staff in improvement activities.
- Greater sustainability through weekly waste walks.
- Front-line employees now lead projects affecting their area of work.
- Successful Yellow and White Belt Certification for 20 employees leading to a greater understanding of Lean concepts.

Results/Outcomes

- 10% reduction in processing time for sales orders.
- Reduction of 35% in time taken to screen peat materials, leading to an annual saving in excess of €60,000.
- Increase in milled peat production by 66%, leading to cost savings of €34,000 and increased sales revenue of €200,000 per annum.
- Implementation of 300+ improvements through weekly idea meetings since 2013.
- Greater awareness of production performance through key metric tracking on ‘hour by hour’ boards.

“The single greatest benefit of our Lean journey has been the engagement of all our people in the process. Now everyone at every level in the organisation feels empowered to initiate improvement actions.”

John Neenan, MD

KLASMANN-DEILMANN IRELAND Ltd
Killinagh
Rathowen
Co Westmeath

www.klasmann-deilmann.com
Kiernan Structural Steel Ltd provides a wide range of services to the steel construction industry, including projects where clients request value engineering for their structural steelwork.

Kiernan Structural Steel Ltd is a family business that was established in 1989. A Longford based company who manufacture & install structural steel buildings and bridges in Ireland & the UK.

LEAN START Project Objectives

- Implement 5S
- Reduce waste
- Improve performance.

Key Challenges

- Initial resistance by staff.
- Lack of full commitment by some top management.

Key Changes

- Introduction of daily white board meeting.
- Introduction of each staff member cleaning up their own work area twice daily.

Results/Outcomes

- More interaction with floor staff. They feel like they have their say & are being listened to on how things run in the company.
- Factory is much cleaner & as a result the work flow of the factory is smoother. Factory looks very presentable to clients who have commented on the same.
- Reduction in waste & lost time.
- Improvements in health & safety.
- Improved methods of work.

LEAN requires full commitment by all staff. If this can be achieved savings can be easily made & production increased.

Kiernan Structural Steel Ltd
Carrigglas
Longford
N39VN23

www.kssl.ie
www.kiernansteel.co.uk

2016 Competitiveness Department, Enterprise Ireland Case Study
DENNISON TRAILERS LTD

A MARKET LEADING MANUFACTURER OF SEMI-TRAILERS, WITH CUSTOMERS THROUGHOUT IRELAND AND BRITAIN AND A HEALTHY EXPORT MARKET

Dennison Trailers Ltd has been building high quality trailers for over 50 years. In 1983, the company opened its current manufacturing plant in Naas and six years later, to serve the UK market, Dennison opened a manufacturing plant in Lancaster, UK. Throughout its history, Dennison has been an innovative company, with continuous research and development being at the core of the business.

LEANPLUS Project Objectives

- Productivity improvement – target 10% Improvement in Hours per unit
- Implement Daily PIT meetings
- Improve Production Scheduling
- Identify and implement other cost savings that benefit from productivity improvement projects

Key Challenges

- Systems in place have not kept up with growth in business
- Traditional push system in place in manufacturing
- Individual schedules for different manufacturing areas
- Poor work flow in certain areas

Key Changes

- More transparent scheduling process
- Work flow studies implemented
- Lean training for key personnel
- Daily PIT meetings implemented

Results/Outcomes

- +12% Productivity improvement achieved
- Lean awareness/PIT meeting training was provided to key individuals in the organisation
- Training on Heijunka – Level Loading schedule to customer demand
- Significant cost reductions (> €250K) were achieved from the 2 Productivity improvement projects

“This program has shown the potential improvement possible when lean is embraced by the organisation. We will definitely continue with the Lean journey and implement a Lean transform program.”

Aidan Kinsella – CEO.

DENNISON TRAILERS Ltd
Maudlin’s Cross
Naas
Co Kildare

www.butlerms.com
LEAN CASE STUDY
MANUFACTURING Sector

BUTLER MANUFACTURING SERVICES

SPECIALIST DESIGNER AND MANUFACTURER OF WASTEWATER TREATMENT PRODUCTS. THE COMPANY IS LOCATED IN LONGFORD.

Butler Manufacturing Services Ltd. (BMS) was established in 1986. BMS has implemented a World Class Manufacturing (WCM) programme since 2002. BMS products are now in over 37 countries world-wide.

The LeanStart initiative focused on:
- Establishing a cost of sales model covering materials and labour for main products
- Developing a P&L for 2011
- Identified and Quantified improvement programmes to bring company costs back into line
- Objective was to identify improvements that would bring company into breakeven situation

Key Programme

LeanStart

Results/Outcomes

The key improvement measure used was Operating Expenses as a % of turnover. This was tracked back on various P&L’s to 2008. Based on the status quo, Operating Expenses will account for 64% of sales. As a result of implementing agreed initiatives this Operating Expenses will reduce to 41% of sales. The initiatives include:

- 20% reduction in overheads
- 10% reduction in material costs
- 25% increase in productivity
- 30% increase in sales
- 5% increase on selling price

Meeting these objectives in 2011 would result in the company achieving a 10% net profit.
ANORD CONTROL SYSTEMS LTD

A GLOBAL PROVIDER OF CRITICAL POWER EQUIPMENT TO THE DATA CENTRE, NUCLEAR POWER AND RENEWABLE ENERGY SECTORS

Anord provide turnkey power and automation solutions incorporating LV switchgear, busbar trunking, PDU’s, energy management systems and UPS systems to blue chip clients on a worldwide scale.

"We are beginning to improve our data collection which in turn allows us to proactively take actions to improve our processes."

LEAN TRANSFORM Project Objectives

- To implement lean methodologies throughout all functions of the business
- Increased employee engagement in continuous improvement.

Key Challenges

- Difficult to find similar “Engineered to Order” companies to benchmark that have already employed lean methodologies.
- As each “product” is unique and can have customer changes at any time, this means basic lean tools and methodologies such as, takt time, one piece flow and value stream mapping are ineffective as the process can change at any time.
- To develop metrics that can drive continuous improvement

Key Changes

- Moving to data driven problem solving rather than reactive
- Lean Champions identified and given resources to complete projects
- Operators now have facility to offer improvement ideas
- 5S program in operation in all functions of the business

Results/Outcomes

- Improved stock control using Kanban for consumable goods.
- Removal of double handling of material to secondary storage unit.
- Kaizen suggestion scheme for process improvement, safety and facility ideas.
LEANTSTART Project Objectives

- To devise and implement effective communication / information systems from concept submission, client specification approval, right through to service / product delivery
- To devise and implement Lean manufacturing processes incorporating VSMs, Theory of Constraints, Resource Planning and Performance Management
- To implement the skills necessary for initiating a Lean continuous improvement environment

Key Challenges

- Lack of effective communications across the entire enterprise
- Lack of effective and timely reporting causing difficulties in performance and resource management
- An environment of “never enough time” always in a rush

Key Changes

- Implementation of formal communication processes where customer designs / specifications are agreed and appropriate labour and equipment resources allocated
- Management and key employees have been introduced to and engaged in the application of VSMs, Theory of Constraints, Resource Planning and Performance Management
- The introduction of a formal Environmental Management Programme has defined individual responsibilities and ensured that appropriate resources are made available to ensure compliance and optimum savings
- Management and employees are committed to achieving a continuous improvement environment

Results/Outcomes

- Customer designs / specifications are communicated plant wide in a timely and easily understood manner
- Initial processes put in place for timely data collection and effective performance management
- Based on the work done to date under the LeanStart Programme opportunities have been identified for savings in our direct manufacturing costs

Alan Devine Design & Display Ireland Ltd based in Dublin, manufactures a comprehensive set of display products, including counter-top displays, spinners, free-standing floor displays using materials such as metal, plastic and wood.

LeanStart has been an excellent programme in motivating our workforce to fully participate in achieving a Lean continuous improvement environment”
AGRIGEAR

A TYRE AND WHEEL SPECIALIST COMPANY. IT FABRICATES WHEEL ASSEMBLIES AND SELLS AND FITS MAINLY AGRICULTURAL TYRES

Agrigear was established in 1980 and is based in Bailieborough, Co. Cavan. It has manufacturing and reconditioning facilities, and can manufacture or modify wheels to suit any machine, as well as restore used or old wheels.

LEANPLUS Project Objectives

- Develop the capability of the organisation to profitably grow the business
- Carry out an organisation review, agree the structure, responsibility and authority levels within the business
- Leverage Lean to bring a continuous improvement culture into the business

Key Challenges

Agrigear has built a very substantial business and the growth has created HR challenges. The investment in a new plasma cutter, shot blaster, paint line and size of the business meant that people have to be developed to take responsibility and given authority to act.

Key Changes

Lean consultants, Raleigh and Associates, worked on strategy and profitable growth opportunities & the organisation structure and roles and responsibilities. They set up the lean teams and worked with them to improve their processes.

Results/Outcomes

- The business is growing at 20% per annum. The lean program saved €145k and facilitated the growth with small headcount increase. Purchase order system in place allowing a five day month end close. Logistics team have definite runs and flexible runs on a schedule. The Sales team now get a separate schedule which is a day before the logistics run to allow customers to fill the load. The yard now get a schedule in advance which allows them to pick accurately in a shorter timeframe.
- The specialised wheel manufacture has standard processes for manufacture, shot blasting, painting and assembly. The number of rejects has fallen. A standard quotation system with more accurate measurement and customer responsibility has been implemented. A data base of various types of row crop wheels and tractor wheels has been started and is making the information easier to access. Visual aids have been created to ensure accurate measurement is taken to reduce rejects.
- The company has invested in a plasma cutter, new shot blaster and paint line to improve its customer service. The new measurement processes in place allow the company to use drawings with confidence to grow its market share.
LEAN PLUS Project Objectives

- Develop the capability of the organisation to profitably grow the business.
- Carry out an organisation review, agree the structure, responsibility and authority levels within the business.
- Leverage Lean to bring a continuous improvement culture into the business.

Key Challenges

- The company revenues have grown substantially with the same management team. The key challenges was to focus the team on profitable growth, and their individual roles and responsibilities.
- The business operates in two distinct business sectors rubber hose manufacture (including rubber lined products) and abrasive products manufacture.

Key Changes

Key personnel were assigned to work on

- strategy and profitable growth opportunities
- organisation structure and roles and responsibilities
- setting up the lean teams and work with them to improve their processes

Results/Outcomes

- The program has delivered €200k in hard savings and increased capacity by 15% in hose production, 50% in rubber lined products, 25% in abrasive manufacturing. The organisation has a clear strategy and is focused on profitable growth.
- Teams were set up in hose production, rubber lining, abrasive manufacturing, finance, purchasing, sales, and quotations.
- The Lean teams identified and reduced wastage. The level of innovation has been fantastic in the manufacturing processes without major investment. The teams want to continue to keep the improvement cycle going.
GREEN CASE STUDY
MANUFACTURING Sector

INLAND & COASTAL MARINA SYSTEMS

DESIGN, MANUFACTURE AND INSTALLATION OF MARINA SYSTEMS AND INSTALLATION OF PRE-CAST CONCRETE STRUCTURES.

Inland and Coastal Marina Systems are based in Banagher, Co Offaly and specialise in the design, manufacture and installation of marinas. Their clients include local and regional Government, Port and Fishery Authorities, Marina Operators, Sports and Recreational Clubs, Development Consortiums, Consulting Engineers, Architects and Main Contractors.

GREENSTART Project Objectives
- Reduction of non-hazardous waste and reduction in energy usage
- Aspects and Impacts Evaluation and Legal Compliance Evaluation and implementation of control measures to improve performance in these areas
- Implementation of formal structures and systems for the management of environmental performance to achieve the above goals

Key Challenges
- Key challenges where the implementation of a formal waste management system. The main waste issue that created a problem was the by-products of the GRC production where no ‘appropriate’ waste disposal methodology was being used
- Implementing a more ‘green’ culture within the organisation to reduce waste and improve lean business practices

Key Changes
- Better waste management procedures
- More green culture within organisation and higher awareness of environmental issues
- Monitoring of environmental performance

Results/Outcomes
- Improvements in environmental legal compliance within the organisation
- Aims for a reduction in non-hazardous waste going to landfill and energy usage
- Improved environmental performance /credentials will strengthen our position in tendering for contracts (nationally and internationally).

The Enterprise Ireland Environmental Business Improvement Grant has been a steep learning curve for ICMS taking us from a position of limited environmental awareness within our organisation to a much more ‘green’ position. We are just at the start of this process whereby we intend to continually improve our environmental performance, thereby reducing waste, making us more competitive and providing reassurance to our customers in relation to our environmental business practices.

Inland and Coastal Marina Systems
Queen Sreet
Banagher
Kylebeg
Co Offaly
www.inlandandcoastal.com

2016 Competitiveness Department, Enterprise Ireland Case Study
GREEN START Project Objectives

- Carry out an energy review of the facility
- Monitor energy usage for breakdown of significant energy users
- Become more competitive by reducing energy consumption
- Comply with Environmental Legislation & Regulations
- Environmental & Energy Awareness

Key Challenges

- Increase in energy costs

Key Changes

- Mini Environmental Management System Implemented
- Significant energy users identified
- Machines turned off when not in operation
- Environmental awareness
- Change electricity supplier for more competitive rates

Results/Outcomes

- Estimated annual savings of 92,960 kWh or 49,547 kgCO2/kWh or 8.6% per annum.
SteriPack has a strong global presence with manufacturing facilities located in Ireland, Poland, Malaysia and the USA.

**LEAN CASE STUDY**

**PACKAGING Sector**

**STERIPACK**

THE PARTNER OF CHOICE FOR CLEANROOM STERILE PACKAGING SOLUTIONS AND CONTRACT MANUFACTURING SERVICES FOR MANY OF THE WORLD’S MEDICAL DEVICE, PHARMACEUTICAL AND ALLIED HEALTHCARE INDUSTRIES OFFERING THE COMPLETE SUPPLY CHAIN SOLUTION FROM INITIAL CONCEPT TO FINISHED PRODUCT

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**LEAN TRANSFORM Project Objectives**

- To enhance a Problem Solving Culture.
- Use data to drive Continuous Improvement activity.
- Enhance teamwork.
- Create a visual work floor where abnormality at a glance was possible.
- Invest more time to coach and develop our people who are our most valuable asset.
- Create an environment that allows us to set expectation and challenge our workforce in a positive way.

**Key Challenges**

- Different approach to data collection to drive activity.
- Increased engagement of operators during Problem solving.
- Looking at Organisation structure to improve support during Continuous Improvement.
- Trending re-occurring issues affecting production using data and displaying it visually beside the machines.
- To increase operator ownership of problems through increased engagement.
- To allow Supervisor more time by allocating a Team Leader to handle day to day issues usually handled by Supervisor.

**Key Changes**

- Employed Toyota to develop key staff to coach and develop a new data driven Problem Solving Culture.
- New Line side KPI’s which drive Kaizen activity.
- Pilot Team Leader role introduced to support Pilot area and generate reports based on KPI’s.
- Regular structured Kaizen Meetings to tackle biggest issues.
- Layered Confirmation is used every day to sustain progress made.
- Organisation structure supporting Continuous Improvement.
- Time to coach, develop and challenge our workforce.

**Results/Outcomes**

- Increased availability and schedule adherence in Pilot Area.
- Increased OEE in Pilot Area.
- Decrease in re-occurring issues.
- New systems developed and successfully implemented.
- Projects based on data collected by Operators themselves.
- Increase in team based projects.
- Increase in ownership.
- Faster escalation of issues which means quicker resolution.
- Time invested into coaching our Operators.
- Team Leader dedicated to area to support production and help drive improvement.

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“Our Kaizen is driven by data collected by our operators, by doing this we tackle their biggest issues with the best possible solution to prevent re-occurrence, not only do they collect the data but they form the teams responsible for fixing the problems.” Steripack

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SteriPack
Kilbeggan
Clara
Co Offaly

http://steripackgroup.com

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2016 Competitiveness Department, Enterprise Ireland Case Study
Pharmaceuticals

Chanelle

Univet
UNIVET Ltd

MANUFACTURES A WIDE RANGE OF VETERINARY PHARMACEUTICAL PRODUCTS THAT ARE SOLD IN OVER FORTY COUNTRIES WORLDWIDE UNDER OUR OWN BRAND AND IN MANY MORE AS THE BRANDED PRODUCTS OF MAJOR MULTINATIONALS.

Univet’s veterinary pharmaceuticals are exported to an increasing number of countries world-wide. Clients include veterinarians, livestock breeders and farmers, public and private livestock development and management authorities in many countries around the globe.

The Enterprise Ireland Lean Manufacturing support infrastructure for Irish SME’s seeking to compete aggressively in world markets is unique and without peer. The benefits are very real and go straight to the

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**LEANPLUS Project Objectives**

- To release at least €1M in additional production capacity on a number of critical manufacturing lines by reducing batch changeover times.
- In all cases to standardise changeover procedures
- To achieve at least €100k p.a. savings on material and running costs by reducing waste
- Improve factory visual appearance
- Improve interdepartmental communications
- Improve GMP compliance
- Instil a continuous improvement mindset in the business

**Key Challenges**

- Freeing up very busy Team Members and Project Leaders to devote the necessary time to training and project work
- Keeping the overall project in focus and on track whilst continuing to satisfy increasing customer demand
- Implementing physical changes whilst minimising disruption

**Key Changes**

- Three major production lines revamped – liquid, powder and syringe packaging
- The Kaizen method introduced as a standard practice
- New standards applied in factory layout and appearance
- New communication protocols introduced
- Green and Yellow Belt certification introduced and targets set for Black Belt

**Results/Outcomes**

The targets set were exceeded and following were the highlight results:-

- Total new throughput capacity of €1.141M achieved
- Annual running costs reduced by €119.2k
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**LEAN CASE STUDY**

**PLASTICS Sector**

**OBRU PLASTICS Ltd t/a THORMAC ENGINEERING**

**LEADING CUSTOM PLASTICS, INJECTION MOULDING AND CONTRACT MANUFACTURER SPECIALISING IN PLASTICS DESIGN, PROTOTYPING, LARGE PART MOULDING, VALUE ADDED ASSEMBLY & MEDICAL DEVICE MANUFACTURING.**

Thormac Engineering based in Shannon since 1979 providing quality injection moulding manufacturing to medium and high technology industries.

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**LEANSTART Project Objectives**

- Raise Lean Awareness throughout the organisation.
- Focussing on 3 of the current production cells establish the current state via Value stream mapping, process activity mapping and review of current data.
- Identify immediate and longer term improvement actions within the organisation.

**Key Challenges**

- Working in a competitive marketplace with intense customer pressure to achieve quality outputs in demanding time frames with downward cost pressure.
- As a contract manufacturer Thormac have challenges of high variability in demand leading to the need to be highly adaptable and responsive to change, while being limited in terms of having a long term commitment from customers that will allow investment in engineering solutions to efficiency issues.

**Key Changes**

- An awareness of lean was established throughout the organisation leading to an increased willingness to communicate improvement ideas.
- Overall the project has also lead to communication within the company of the challenges caused by the ever increasing customer price pressure and thus has led to better understanding and acceptance of the need for continuous improvement of efficiency and effectiveness.
- Within 2 of the targets cells we have seen positive improvements that came directly from the cell members. These have resulted in improvements in efficiency as well as reducing burden. The engagement with staff has also resulted in having future actions agreed that will lead to further improvement.

**Results/Outcomes**

- Reviewed 3 cells within the company using Value Stream Mapping and activity mapping and calculation of OEE. Identified opportunities for cost reduction/improvement in efficiency in 2 of the 3 areas.
- Review of Cell 1, a manual assembly process, identified Lean wastes in terms of transport /motion and cell layout. Actions were undertaken to change the cell layout resulting in less batching of work and also reducing motion and transport within the cell. In this product area there was an identified issue with the transport of final production to the customer via ‘kan-ban’ trolleys. Further discussion is underway with the customer to provide more transport units which will significantly reduce handling internally.
- Review of Cell 2, a machine and manual process. OEE indicated during review was high and no immediate improvements identified. Further improvements are possible via review of packaging at the units but this was not completed in the lean start but should be reviewed at a later state.
- Review of Cell 3, a machine and manual process, did identify areas for improvement.
- One of 2 moulding machines has been identified as problematic and, subject to customer commitment to future work, is scheduled for replacement.
- Deficiencies in the cell layout were identified and these also will be addressed if a new machine is purchased.
- An issue with tooling for the key part being manufactured was identified and rectification of this issue is estimated to leading to an overall efficiency gain of > 10% when producing the part which is approx. 40% of all production in the cell.
- Future opportunities to level load through more effective kanban/load levelling do exist and further streamline of the process will lead to significant savings in terms of capacity management.

It was a pleasant surprise to see the buy in from the employees so quickly and the quality of the ideas that they put forward.”
THE SHABRA GROUP
IRELAND'S ONLY INTEGRATED RECYCLING, REPROCESSING, MANUFACTURING & SUPPLY COMPANY WHICH RECYCLE AND REPROCESS ON SITE ALL TYPES OF PLASTICS, INCLUDING FILM AND POST CONSUMER BOTTLES.

Shabra uses its own feedstock to manufacture recycled sacks and also exports recyclate material. Shabra reprocesses Post Consumer PET Bottles, Post Consumer HDPE Natural Bottles and Baled Industrial LDPE/LLDPE Film and exports the finished PET flake, HDPE/LDPE flake.

“*The Lean Plus process has made a significant positive impact on our business. It has given all employees greater visibility and input into our business*”

Rita Shah

LEANPLUS Project Objectives

- Educate the organisation on the concepts, applications and benefits of a Lean implementation.
- Develop an understanding of the current recycling and manufacturing value streams. Identify and implement improvements to improve overall business performance.
- Increase overall sales for recycled flake/pellets. Increase the supply of bottles for recycling.
- Develop and implement key business metrics to provide greater visibility of performance in the production and customer service areas.
- Implement 5S in the warehouses and production areas to improve housekeeping, process flows and reduce waste.
- Increase communications across site through better use of visual management.
- Support the personal development of key management staff in the understanding / implementation of the lean journey.

Key Challenges

- The economic climate in Ireland during the period of the lean implementation – 2011/2013.
- The increased cost of doing business in Ireland – rates, local charges, insurance costs.
- The increased levels of inferior imported product driving down pricing in the tender process.

Key Changes

- Several significant plant layout changes based on 5S principles have been implemented to improve plant performance and housekeeping. These include equipment layout changes, greater access to resources by operators and simplification of processes.
- A Balanced Scorecard was developed for the business to identify, monitor and act on key metrics. A weekly governance structure has been established to review operational performance.
- Greater use of Data Analysis and Closed Loop systems to control key processes.
- An Operational model of Production Capability was developed which identifies the best manufacturing option based on Customer Demand, Production & Materials Costs.
- A Stock Kanban replenishment process has been developed to eliminate stock outs due to insufficient finished goods / inventory inaccuracies.
- Increased communication has been achieved through additional departmental meetings and posting of performance metrics.

Results/Outcomes

- > €200K savings per year identified and achieved
- Increased Flake/Pellet Sales (Recycled Plastic Sales) has increased by 88% from Q1’2011 to Q3’2013.
- OTIF PET Recycled Plastic Sales - Customer Service Performance has increased from 45% (2011) to >95% (2013).
- Plastic Sales Customer OTIF has increased from <50% (2010) to >95% (2013).
- Production Schedule Adherence has increased from <50% (2010) to >95% (2013).
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LEY CASE STUDY
SERVICES Sector

DUTEC Ltd

PROVIDES A COMPREHENSIVE SUPPLY CHAIN SOLUTION AND GLOBAL LOGISTICS SERVICE. IT IS THE SUPPLY CHAIN SOLUTION PARTNER OF CHOICE TO SOME OF THE WORLD’S MOST SUCCESSFUL COMPANIES. CENTRAL TO DUTEC’S OFFERING ARE FLEXIBILITY AND CUSTOMER SERVICE.

DuTec Ltd was established in 1999 and operates from Dock Road Co Limerick providing solutions in e-fulfilment, warehousing and inventory control, after sales service. The Company provides services including logistics, print management, inventory management, packaging, assembly, sales support, financial consultancy, website design, and graphic design

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**LEANSTART Project Objectives**

- Introduce Lean thinking At Dutec
- Apply Lean principles and methodology to several of Dutecs processes. Goods receipt, delivery performance to main customers, put away and retrieval of archive products, efficiency and yield tracking in production areas

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**Key Challenges**

Develop systems to monitor KPIs that can be run efficiently and incorporated into the existing IT system

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**Key Changes**

Process performance data collected in a format that could be trended / analysed quickly to support identification of countermeasures. System also supported ongoing evaluation of countermeasures success and prompts requirement for additional correction action

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**Results/Outcomes**

- 20% reduction in supplier quality issues
- 10% reduction in time required to retrieve samples

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“By Engaging in the LEAN START programme and working closely with the external consultant, we at DuTec have identified and expanded our Key Performance Indicators, improved our data collection and measurement methods and generally improved our processes and procedures. The programme introduced the concept of “LEAN THINKING” within the organisation and we can now see the potential savings and benefits a well-run LEAN programme can bring.”

---

**DUTEC Ltd**
B5 Corcanree Business Park
Dock Road
Limerick
V94 VYX9

www.dutec.ie

2016 Competitiveness Department, Enterprise Ireland Case Study
KN NETWORK SERVICES (KNNS)

LEADING SERVICE PROVIDERS TO THE RAIL AND TELECOMS SECTOR IN THE UK AND IRELAND DELIVERING MANAGED SOLUTIONS TO INDUSTRY.

KNNS clients includes blue chip organisations and local authorities/councils. In the UK clients include BT, London Underground, Network Rail and Transport for London. KNNS aims to deliver managed service solutions which consistently meet the changing needs of industry.

LEANPLUS Project Objectives

- Establish within the Organisation, a philosophy of Lean that allows the business to achieve significant measurable gains in capability and cost competitiveness that will make the business more attractive to existing and potential customers. We seek to do this by identifying and eliminating waste and duplication.

Key Challenges

- The highly competitive landscape within which we find ourselves (i.e. the downward pricing pressure in the tender process).
- Understanding the concept of ‘Waste’ and how it might improve our business processes.
- Usable data analysis sets and models.
- Embracing of Lean by all employees.

Key Changes

- Establishment of a Process Improvement Team to drive change and plan for continuous improvement.
- Development of an in house App to manage defects in the field and reduce the amount of rework.
- A programme to upskill all field technicians to enable them to handle
  - Greater understanding of the need for data analysis and closed loop management systems to help in decision making.
  - Employee recognition that they have a part to play in process improvement.

Results/Outcomes

- Reduction in data movements of 170%
- Potential to increase in route capacity of 78%
- Increase in cross-functional co-operation
- Awareness and acceptance of Lean tools and concepts
- Springboard to many more projects

As part of our continued commitment to reduction in cost and waste, we decided to carry out this LeanPlus assignment as a starting point on our Lean journey. Lean’s approach to process and value added activities has brought a different perspective to our daily operations. This assignment has been a very worthwhile activity and would recommend to other businesses.

KN NETWORK SERVICES
Cloverhill Industrial Estate
Clondalkin
Dublin 22

http://knnetworkservices.com/
SONAS BATHROOMS
IRELAND’S LEADING PROVIDER OF QUALITY BATHROOM PRODUCTS WITH OVER THIRTY YEARS OF EXPERIENCE. THE SONAS TEAM CAREFULLY SELECTS EACH COLLECTION TO CREATE THE PERFECT BALANCE OF STYLE AND PERFORMANCE. SONAS PRODUCTS ARE FULLY SUPPORTED WITH A DEDICATED AFTER SALES AND TECHNICAL SUPPORT

Sonas Bathrooms products are fully supported with a dedicated after sales and technical support. In-house 5,000 square foot dedicated showroom is open to homeowners, installers and trade professionals who would like to view the complete and extensive product range.

"The lean approach to analysing the data on returns has enabled us to accurately capture the extent of the returns issue, and with the new approach to looking at trends versus snapshots is enabling us to control our returns rate more effectively. R Sloan"

**LEANSTART Project Objectives**

Project 1: Implement system for tracking, monitoring and evaluating customer returns as % of sales by type etc

Project 2: Implement system to optimize admin processes for coordination of inbound shipments

**Key Challenges**

Getting buy in for new analysis techniques from the customer service / purchasing team. Getting the data in a usable format from the IT system

**Key Changes**

Implement system that utilizes data and trend analysis. Development of system and training of staff in new tools and techniques

**Results/Outcomes**

Metrics available on returns rates by product, customer, sales rep trended for any period. Allows evaluation of trends and assists in determining what areas are most contributing to credits and supports efforts to reduce same.
LEl CASE STUDY
SERVICES Sector

TOPFLIGHT TRAVEL GROUP
IS ONE OF THE UK AND IRELAND’S LEADING PRIVATELY-OWNED TRAVEL COMPANIES WITH BRANDS WHICH INCLUDE TOPFLIGHT HOLIDAYS, TOPFLIGHT FOR SCHOOLS, DIRECTSKI.COM, SKI BEAT, SKI MCNEILL AND BLISS CAMPING.

Its Dublin head office is home to the company’s senior management, sales, operations, finance and software development teams. The company has offices in Brighton (UK sales) and the French Alps (resort and chalet operations). The company’s staff levels vary from 70 to 220 in line with the seasonal requirements of the business.

The Tools and techniques are important but, if they are to benefit an operation, they need to be used and implemented by people.

LEAN TRANSFORM  Project Objectives

- Instill ‘Lean Culture’ throughout the organisation, the business had become fragmented with various different mergers and the plan was to tie it all together with the Lean Philosophy.
- Apply cost savings to our key processes and eliminate waste throughout entire course.
- Develop clear communication lines so that everyone shares in and strives towards the common goals of the organisation.

Key Challenges

- Difficult to find similar service companies who employed lean methodologies, so it made the path a difficult one to navigate.
- Processes in our industry are not as visible as those in manufacturing environments. They cross geographical silos and encompass many different departments and they’re fairly complex making it more difficult to identify the waste. It required much more detailed process mapping, investigations and strong problem solving tools before true waste was discovered.

Key Changes

- Although it sounds obvious, we focus our energies at all times now on the end customer.
- Now, we eagerly challenge the status quo.
- Finally as a result of Lean, the culture in the company has shifted significantly and with various different projects undertaken has resulted in the business surviving in extremely difficult market conditions.

Results/Outcomes

- Kaizen event, where we looked at making improvements to transporting our customers from the airport to their ski resorts.
  - 32% reduction in cost per guest (£250k savings)
  - 45% improvement in transfer planning efficiency
  - Improved customer service, reduced poor responses by 36%
- Technology – the introduction of agile processes including Kanban, improved on project delivery, last year 100% of projects undertaken were completed within 2 weeks of scheduled completion.
- Yellow Belt training & certification, resulted in the following improvements
  - Pricing tool – enabled more specific manipulation of holiday prices increasing our margin year on year by an average of £30 per booking.
  - Streamlining the processes and procedures in both our sales & operations department resulted in department running at 6480pax per FTE in comparison to 3751per FTE the previous year.

"The Tools and techniques are important but, if they are to benefit an operation, they need to be used and implemented by people."
Software

Monsoon
MONSOON CONSULTING DESIGNS, BUILDS AND SUPPORTS USER CENTRED CONTENT AND E-COMMERCE WEB SOLUTIONS FOR EUROPE’S LEADING BRANDS AND BUSINESSES.

Monsoon Consulting is a Web Design Company and utilise a user-centred design approach for the delivery of all solutions (Websites, Intranets, Software Solutions, Mobile Apps) in Dublin-Ireland, UK

LEAN CASE STUDY SOFTWARE Sector

**LEANSTART Project Objectives**

- To improve the Monsoon Consulting delivery model using agile and lean principles and practices.
- To increase visibility of progress and predictability of delivery
- To reduce defects and time to market

**Key Challenges**

- Mixed appetite among employees for the introduction of new delivery approaches.
- Methods were being applied to in flight projects, commissioned using the old model, concerns that an agile approach wouldn’t be compatible.
- Concerns at how to communicate and contract new ways of working with customers.

**Key Changes**

- Piloted updated delivery model on two projects, with recurring events for planning, delivery and continuous improvement.
- Moved from one large delivery taking multiple months, to multiple small deliveries of one month or less.
- Operational support workflow updated, and reduced work in progress (increasing delivery speed as a result)

**Results/Outcomes**

- Both pilot projects demonstrated working software to the clients dramatically sooner than on previous projects (5 times faster to market), with fewer defects and positive outcomes for all stakeholders.
- Visibility of projects dramatically increased, predictability of delivery significantly improving.
- Productivity increases, with the team producing more in less time (effectively a 35% capacity increase).
- Company processes for contracting and on boarding clients updated to benefit agile and lean principles.

"The visibility and delivery improvements have been really phenomenal. What’s also been fantastic and unexpected, was the positive effect on us as people, this approach has really deepened our commitment to each other and our clients."

**MONSOON CONSULTING**
Harrington Street
Dublin 8
www.Monsoonconsulting.com
Telecommunications  Obelisk
EOBELISK

PROVIDING SOLUTIONS AND RESOURCES TO INDUSTRY ACROSS TELECOMMUNICATIONS, POWER TRANSMISSION AND DISTRIBUTION, RENEWABLE ENERGY AND TOWER INFRASTRUCTURE.

Obelisk is a privately owned company, established in 1996. Obelisk recognises their clients’ unique requirements and tailors services to meet their needs and objectives. Obelisk operates & maintains an ISO accredited integrated management system that includes ‘Quality’ ISO 9001: 2008. They are committed to protecting our environment and have achieved the ISO 14001:2004 Environmental Management System Standard

LEANSTART Project Objectives

Right First Time, Customer driven, be fairly rewarded for doing a good job.

Key Challenges

Remote delivery locations, restricted lead time on services by external customer influences.

Key Changes

More efficient system of work, implementation of new procedures and processes, resistant to change.

Results/Outcomes

Better working environment, improved turnaround time for services, staff motivation more efficient.

Service is a business of inches every inch counts.
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EIREBLOC

MANUFACTURES COMPOSITE PALLET BLOCKS FROM A MIX OF RECYCLED AND VIRGIN WOOD USING THE MOST ADVANCED PRODUCTION TECHNOLOGIES IN THE WORLD.

Eirebloc commenced life following in-depth research into new ways of cleansing and adding value to recycled wood. The company was born out of this research which was conducted in conjunction with the LIFE Programme of the European Union. Eirebloc's composite pallet blocks have achieved certification from both EPAL and FSC®.

LEANSTART Project Objectives

The project objectives were to develop a planning process and associated toolset which could support the, Sales Order Processing, Production Planning and Dispatch departments in an integrated manner.

The critical requirements were to:

1. Take a rolling 3 monthly forecast into account
2. Take live stock figures into account from existing financial system on a daily basis
3. Take actual dispatched orders into account on a daily basis
4. Process on a daily basis new sales orders
5. On a monthly basis to roll over order balances

Key Challenges

The key challenges were to develop a process and toolkit combined in a short timeframe and upskill personnel appropriately in its use

Key Changes

The key personnel were taken though a process of concept validation, process re-engineering and pilot data testing & validation before the system was fully deployed in “Live Mode”

Results/Outcomes

In November the Sales Order entry, Live Stock importing and Dispatch Processing went live and has been in use since.

IN January 2016 the Production Planning system went live and now has forecast information embedded up to June 2016.
WOODFAB TIMBER LIMITED

processes timber for fencing, decking and packaging purposes and also produce co-products: sawdust used in wood-pellets; woodchip used in the manufacture of MDF; shavings used as animal bedding and bark for garden mulsh.

Woodfab Timber Ltd based in Aughrim, Co Wicklow. The plant has been processing timber since 1974. A strict environmental policy is maintained and the preservatives used ensure that the products are non-hazardous to the environment.

GREENPLUS Project Objectives

Our intention is to become certified to the ISO 14001:2015 management system. Woodfab, led by David O’Connell aim to take advantage of the extensive skill base that exists within the company and working collaboratively to achieve the objectives of ISO 14001. With this achieved our intention would be to expand the Integrated Management System to include certification to ISO 9001:2015 and OHSAS 18002 management system.

Key Challenges

A significant challenge was that there was no structured EMS in place. Up until now the required monitoring & reports were done but without this structure it was difficult to produce comparative data and act upon it. Our initial aim was to carry out an initial environmental review of environmental performances and document the findings. This included a study of the Aspects & Impacts and required the input from all departments to achieve this.

Another significant challenge to Woodfab’s operation is the increased cost of energy. Woodfab’s focus in the shorter term is to try and control planning and production to improve our energy usage, with a greater focus on this area we expect to gain additional savings over time.

Key Changes

- An Environmental System was developed and implemented and a structured approach to environment management now applies on site (ISO 14001).
- Training needs were identified, provided and records are maintained.
- Staff engaged at all levels via Toolbox talks and training.
- A single provider for a Legal Register was procured and legal requirements are reviewed through a web based service Antaris.
- Change in our energy provider for better rates.
- Change exterior lighting and install LED lighting.
- Install motion sensors to fluorescent lights in canteen and toilets.
- Install waste compactor to recycle cardboard, plastic and paper waste.
- Retain an energy consultant to examine energy usage.

Results/Outcomes

- Measured 34% waste disposal costs savings before and after recycling.
- Measured 5% fuel savings costs for internal transport with the implementation of new eco-driving procedures.
- Measured 4% energy savings by changing energy provider.

“Very worthwhile project. Savings and opportunities identified during the project have changed how we do business.”
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