

Case Study

Moving From Tools to Outcomes: Transforming Process Excellence to Turbo-Charge Business Performance

Looking to make a step change in performance: here is how one client used Lean Sigma techniques in innovative ways to drive strategic transformation



Business executives are waking up to the fact that processes are key to enabling business growth, improving customer satisfaction and responding quickly to market shifts. But for too long, and in too many deployments, process excellence has been focused down in the weeds, getting lost in the tools and techniques. It's time to bring process out of the backroom and into the boardroom by focusing on driving strategic business outcomes. This case study describes how one organization is achieving this.

The Background

Fujifilm Diosynth Biotechnologies (hereafter Fujifilm) is an industry-leading biologics Contract Development and Manufacturing Organisation (CDMO) with plants in the UK & USA. The business has over 25 years' combined experience in the development and manufacture of a range of bio-pharma products (proteins, vaccines & antibodies) using a variety of host cell systems.

The Business Challenges

Previously part of the Merck Corporation, the business was acquired by Fujifilm in 2011. Earlier still, it had been part of Avecia and originally ICI. Rapidly growing in a dynamic and emerging market, the business is founded on high quality R&D and flexible and responsive manufacturing.

The main focus of the Fujifilm transformation has been to shift the organization's 'mindset' to that of a service business. This has required a shift from traditional large corporate manufacturing thinking into a highly innovative, agile, customer-centric approach.

Key strategic challenges essential to drive growth & increase profitability have been addressed

- providing unique & tailored services for customers
- driving increased productivity in all business activities
- reducing lead times and increasing flexibility

Re- Energising the Transformation Programme

In 2010 Fujifilm launched a Lean Sigma based Operational Excellence programme as the foundation for their business transformation activities. Part of Merck at that time, the programme followed the corporate approach, based largely on the GE model popular at the time.

Suitable for large corporate manufacturing this approach did not easily fit the culture the business was striving to develop. Some financial benefits were delivered and solid foundations established. However this traditional approach did not have the impact on business performance being sought.

In 2011 (with the business now owned by Fujifilm) Paul Found (Lean Six Sigma Programme Leader) approached Process Insight with the objective of rejuvenating and redirecting the programme.

The Process Insight proprietary deployment 'health-check', combined with key stakeholder discussions, resulted in the following re-shaping of activities:

- "Size of the Prize" analysis was carried out to identify priority focus areas for improvement
- A new deployment vision and roadmap was developed strengthening the programme alignment with the business strategic objectives and required outcomes
- Leadership involvement and engagement with the programme was deepened
- Critically the programme scope was extended out beyond manufacturing to cover other strategically vital business activities e.g. R&D, QC, Engineering support, Sales & Operations Planning

trust
 + delighting our customers
 + gemba (go do it)
 + genki (enthusiasm)
 = **GR^WTH**



"Business transformation needs to involve the whole business! Our change programme has energised and engaged all our employees enabling everyone to make changes aligned with our values of trust, delighting our customers, gemba and genki

Success in our transformation efforts has come largely from our focus on using Lean Sigma in new ways to address our biggest challenges – using it as a tool to drive strategic change rather than just fixing problems. From training over two thirds of our employees in yellow belt to driving our business objectives processes, the whole business has embarked on an exciting journey full of growth and opportunity" (Steve Bagshaw, Managing Director)

Maintaining Focus in Core Operations has been critical for credibility

This case study concentrates on the distinct and different – the innovative use of Lean Sigma techniques to drive strategic transformation. However, the strength of the programme is that this took place alongside continued focus in the "engine room" so essential to drive rapid benefits and broad engagement:

- To date over 40 Green Belts and 330 Yellow belts have been trained, and have completed improvement projects and Kaizen events
- 5S and visual management has been rolled out across all key manufacturing and laboratory areas (including R&D)
- Lean Daily Management processes have been introduced
- Improvement activities have been undertaken tackling wide range of issues including
 - Reducing process cycle times
 - Increasing QC productivity
 - Increasing Right First Time
 - Reducing losses
 - Reducing equipment downtime

Driving a “Step-Change” in R&D Productivity

The R&D group represents over 30% of the business workforce and all of its activities are done under contract with customers. Kit Erlebach, an experienced bio-chemical engineer and Black Belt, has been leading the Lean Sigma improvement activities within this group since the programme began. Kit highlights some of the challenges he has faced: “To meet business objectives the R&D team have been challenged over the last year with the need to drive a step change in productivity. In simple terms we need to build capacity to do 30% more projects with the same R&D resources. The R&D team can see the value of the Lean Sigma approach but we need to apply it carefully to make sure we don’t kill the creativity that is at the heart of everything we do”.

Kit’s approach was to quickly build a picture of waste & “time traps” in the typical R&D activities the group carried out. The new insights developed from this analysis led to focus on 3 key areas adapting lean concepts in innovative ways to make them relevant in the R&D environment

Bringing R&D alive with Visual Management

Visual and lean daily management techniques were adapted to make them work effectively in the “scientific” culture of the R&D environment.

The impact was quickly felt with more rapid issue resolution, and clearer accountabilities. Equipment utilisation and uptime was improved and expediting and chasing around for critical resources was eliminated.

As one of the senior R&D technologists recently commented “this gives immediacy to my work and allows me to get what I need when I need it”.

Challenging Convention: defining ‘Standard Work’ in R&D

The concept of “standard work” is very well accepted in operational environments, but would seem alien in the creative world of R&D. However, challenging convention is necessary to drive transformational change. Kit and the team were quick to recognise that several critical aspects of R&D project activities could be standardised with benefits of both higher productivity and more consistent quality in the project deliverables.



“When applied in imaginative and pragmatic ways the LSS tools can really improve the R&D process by simplifying execution, improving the elegance of our design and through creating better review and learning processes.

We have demonstrated that when done in the right way It really aids creativity rather than constrains it!” (Mark Carver, Senior Vice President R&D and Innovation)

R&D best practice was defined and exploited. A menu driven approach to selecting unit operations required for each R&D project was designed to significantly streamline and simplify the development effort.

Over the last 12 months the concept has been successfully piloted across several critical R&D operations and is now being rolled out.

“Design For Lean” delivers much higher throughput

Installation of very sophisticated and expensive high throughput experimental and analytical equipment is a key element to drive higher R&D productivity and deliver better customer service. Following Lean training the team were quick to see the constraints apparent in traditional laboratory workflows and layouts. A novel design and installation methodology (adapted from the DMADV approach) was developed based on “Design For Lean” principles. Following training, the methodology has been applied in a systematic and rigorous way by each of the installation teams to optimise equipment operation and utilisation to deliver the highest quality results at the maximum capacity.



“The idea of standard work in R&D is really powerful. It allows routine aspects of my projects to be easily dealt with so that I can focus on real value added creative work” (Fujifilm R&D Technologist)

HR Transformation to enable Strategic Change

Dianne Hiscocks is Head of Organisation Development at Fujifilm. Unusually for an HR professional, she is also a certified Black Belt with a passion for driving positive change in the organisation. Newly appointed to the OD role in 2012, Dianne recognised fundamental problems: “The HR services were not fit for purpose and did not support our vision for the business. The HR focus was on “following the process” and not on delivering the right outcomes for employees and the business”.

Dianne set about gathering “the Voice of the customer”, talking with key business stakeholders and encouraging feedback from users through interviews and survey. Key findings identified the need for critical change in several key areas, notably:

- Making HR services more accessible and engaging
- Redefining recruitment and skills development
- Improving the accuracy and usefulness of HR data

A new leadership vision for the HR service was developed and a clear improvement roadmap was established setting out a 3 year strategic plan. Lean Sigma tools (e.g inter-relationship diagram) were used to understand the cause and effect relationships between different aspects of the service. Consequently the various improvement activities could be prioritised and a clear timeline established, giving visibility to the change programme and helping manage expectations.

"It feels really satisfying and productive working in the HR team now. The HR Department now has a visible and valued input into business objectives and strategy across site, which has given a clear mandate to drive change through the business, and empowered the function to be proactive and seek out strategic and operational improvements, in partnership with other departments, rather than merely reacting to a series of problems" (Peter Dybell, HR)

5 tightly scoped DMAIC improvement projects were defined and chartered as the initial phase of the plan.

1. Effective appraisal & progression management
2. Improved employee consultation
3. Improved HR Data quality
4. Accommodation Standards
5. Re-engineering the Recruitment Process

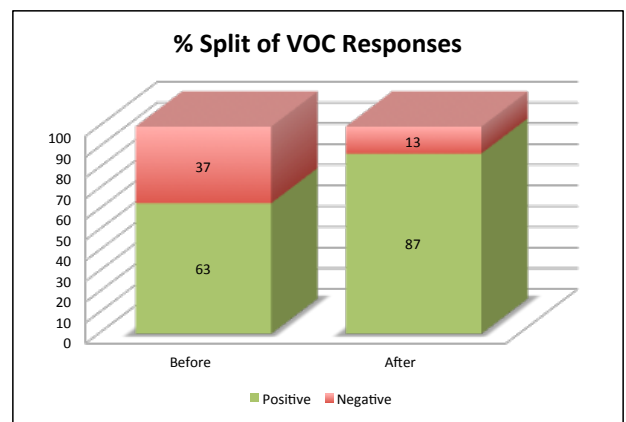
The Results

9 months later, these improvement projects have been successfully delivered and the beneficial impact on the service has been felt across the organisation.

This is reflected in the key performance metrics, VOC survey responses (the increase in proportion of positive responses shown in chart below), and also very importantly in direct feedback from the users.

“There has been a massive improvement in the interview and recruitment process”

“There is a lot more communication and real engagement - much less feeling of people taking sides (management vs. employees)”



What Next ?

The first phase of improvements is now complete and the focus has shifted to the next stages of the HR transformation roadmap. The priority is now placed on driving improved performance management processes necessary to enable sustained company success.

Importantly, the HR improvement plan is now tightly linked in with the Annual Business Cycle and Strategy Planning. In this way the HR service improvement needs can be directly aligned to critical business objectives.

As Dianne observes “Using Lean Sigma we have totally changed the role of HR – moved it from what was historically purely an admin function to something that is core to driving successful business outcomes”.

“The HR function has been dramatically transformed. It is now a real partner to the operations functions, providing a valuable consultancy service to drive us forward rather than just a payroll function”
(Nick Martin, Head of Engineering)

“We all have a tendency to jump to solutions especially when starting with a blank piece of paper – you know you need something – but what?! The DMADV approach enabled us to stand back, fully understand the business drivers and then design the organisation structure and system to meet the business needs” (Paul Found)

Re-engineering The Organisation For Increased Flexibility & Productivity

Paul Found has been leading the Lean Sigma programme in Fujifilm since 2010. Commenting on his role Paul reflects: “ An essential part of my job is to ensure the full range of lean sigma methods are effectively harnessed to tackle the big hairy strategic issues”

In 2011 the business was faced with the need for a major re-structuring of the manufacturing organisation in order to respond to growing cost pressures and changing market demands. There were many challenges associated with the organisation design and re-structuring, and the risks were very high. A clearly defined methodology was essential to enable

- Key stakeholders to be properly engaged
- Business requirements and constraints to be clearly defined up front
- Clear and measurable goals to be established
- Alternative organisation design solutions to be developed and pros and cons reviewed against clear criteria
- A clear plan with well defined milestones and deliverables
- Effective governance & timely decision making

Recognising these needs ,Paul led the manufacturing transformation project through a method adapted from the Lean Sigma DMADV process providing:

- A clear framework for organisation design decisions based on clearly established business objectives and performance metrics
- Practical tools adapted to support the organisation design process (e.g. House of Quality , FMEA)
- Lean thinking built into the organisation design to reduce cycle time, minimise hand-offs and exploit visual management

The Results: a summary

- A new manufacturing structure and shift pattern implemented on time and on budget
- Annualised hard benefit of > £1.8 million
- Significant increase in productivity with 20% reduction in headcount



- Record number of new product introductions into manufacturing with 60% reduction in new product introduction cycle time

Summary

This case study illustrates how Lean Sigma can move beyond “tools & projects” to successfully drive strategic level change.

3 very different “big hairy issues” in Fujifilm have been tackled – in each case customer focus & lean thinking have been at the heart of solutions. Conventional thinking has been challenged and the tools and approach have been adapted and customised to deliver successful outcomes

Equally important , the techniques have been applied in ways that engage with the people at the “coal face” who need to make the transformation. It needs experience and skill to go “off piste” with confidence. However by “taking the plunge” you can properly explore what it truly means to shift the focus from tools and methods towards business outcomes with real impact.

“There are lots of courses and experts out there that will tell you what to do – what they don’t tell you is how. Our experience is that if you apply LSS by rote you will get some benefit but not the full potential. Process Insight helped us with the how – how best to analyse where our big wins were, how best to apply the tools to tackle them – how not to get hung up on the purity of the toolbox!! It is a leap of faith to turn away from traditional wisdom – but having help to navigate a new path was invaluable to us! “ (Steve Bagshaw, MD)

About Process Insight

Process Insight Consulting delivers bespoke solutions that demystify process improvement so you too can become an agile, responsive organisation.

We help clients across Europe to deliver their goals through improved processes -allowing them to respond quickly to changing market situations whilst minimising costs and maximising profit.

Whether it is a solution to specific problem or the design and delivery of a full improvement programme we can guide and help you in pragmatic ways to deliver sustained improvements. These typically include revenue growth and customer experience; quality or productivity improvement and cost reduction.

Contact Us

Chat with our professionals about your requirements

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Or request more information via info@process-insight.co.uk and we will be in touch

We look forward to being able to help



Andrew Ruddick,
Director



Andy Liddle
Director

Our Approach

Successful process improvement cannot come from “vanilla” or standard solutions. Our customised solutions take full account of your company’ s needs, culture, and ambitions.

We draw on a wide range of methods, tools and techniques (such as lean, six sigma, big data mining, customer experience and change management) plus deep personal experience.

Our team has broad sector experience across a wide range of industries including Manufacturing, Chemicals, Pharmaceuticals, Speciality Materials, Financial Services, Engineering, Packaging

So whether you just need some advice, a solution to a specific problem, a process review or a full implementation programme, we will guide you every step of the way with a very practical approach

Some of Our Clients

Our clients from a wide range of sectors include:

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TMD Friction	Smith and Nephew	Standard Life
Verallia	Macfarlan Smith	Lombard
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