TICKING THE RIGHT BOXES

Analysing assessment tools to ensure successful lean journeys

Organisations featured in this edition include: Panalpina, Renault-Nissan Consulting, Productivity Alberta, BAE Systems, St. Boniface Hospital, Association for Manufacturing Excellence, Edinburgh Napier University

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Lean assessments; the rally-point of the journey: Joseph Paris explains how the correct assessment procedures before and during a lean journey can ensure everyone involved arrives at their intended lean destination.

A new approach to assessments: LMJ revisits supply chain solutions organisation Panalpina to see what assessment tool it is implementing to truly make lean part of its DNA.

Lean goes back to school: Stephen Yorkstone, Senior Consultant at Edinburgh Napier University, deconstructs the university world to show how implementing lean in universities can ensure students are properly prepared for life during and after schooling.

Typhoon’s two-week drum beat: Can the final production phase of a €90 million jet fighter happen in only two weeks? Matt Heritage from BAE Systems Military Air & Information explains how the incredible manufacturing time frame of the Eurofighter Typhoon takes place.
Dear reader,

If you want to discover if you have an embedded culture of continuous improvement into your organisation, leave and return after six months, visit the gemba, and I am sure you’ll have your answer.

This is the slightly tongue-in-cheek advice I once gave to a senior lean practitioner who asked me how he would truly know if lean was embedded into his organisation. The person in question was obviously concerned about the progress of his lean journey. This is an issue any lean enthusiast or implementer should seriously consider while making a transition. This issue of Lean Management Journal focuses on benchmarking and assessment, and the differing approaches to understanding the current state of an organisation or individual.

The starting point of a lean assessment as suggested by Ian Robinson of Renault-Nissan Consulting on page 10, is to apply lean principles to assessment activity from the outset. By stepping back and asking yourself what you would value from the activity, you can remove any non-value adding waste from the process of assessment.

The success of any lean assessment programme requires the application of standard work, not only its delivery, but also the selection and management of any examiners. Having been involved in several lean assessment programmes myself, I can say that focus must be given to ensure a standard work approach, from the questions asked through to the deployment of feedback. This made me think about my role again this year as the Chair of the World Class Manufacturing judging team for The Manufacturer magazine. From my previous experience, I knew it was critical our standard work was improved, and that this was a vital element in ensuring the event reached its high quality and standard we set out to achieve.

Over the past decade there has been a plethora of lean certification providers from the USA and Europe providing assessment and accreditation. Many of these are well respected institutions and organisations all promoting off-the-shelf assessment models. Unfortunately, the alliances and collaborations of several of these organisations to create a unified standard to lean certification appear to have failed. While this may be the case, this issue of LMJ explores some of those tools which are available, as well how they were developed and how to correctly implement these to ensure lean targets are reached.

However, it is just not enough to implement an assessment tool, let it run its course and accept it has achieved what you wanted it to achieve. The frequency of assessment must be considered to achieve any real benefits from the assessment programme. The Shingo prize for operational excellence, which I managed in the UK for several years, exemplifies the issue. While following up on Shingo award winners, organisers discovered few past winners actually sustained the lean excellence that was fundamental to their original success. Assessment programmes require continuous re-assessment to deliver the benefits they were intended to provide.

On a final note, it is a case of out with the old and in with the new here at LMJ as we wish bon voyage to Roberto Priolo as he moves on from his role as Commissioning Editor. Everyone at Sayone Media wishes him well on his journey after delivering two years of excellent service to the LMJ. In turn we welcome Callum Bentley to the role. Callum will continue to develop and expand the LMJ in terms of quality and coverage. Please contact him at c.bentley@sayonemedia.com with your thoughts, articles and best practice.

Please enjoy the issue, and in the spirit of the first lean principle, please let us know what we can improve on in the LMJ and where we can further add value.

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EIJII TOYODA DIES, AGED 100

The lean world has lost one of its greatest minds and architects after the death of Eiji Toyoda last month. Toyota Motor Corporation issued a statement saying that Mr Toyoda had died due to heart failure on September 17. He was 100 years old. Eiji Toyoda was a member of the motor company's founding family. Arguably, his biggest legacy, will be the production system he designed, which has since been used as a model to increase productivity and minimise waste in manufacturing and production plants the world over. Despite Mr Toyoda's age, he remained an honorary advisor to the company up until his recent death. Mr Toyoda's passion for the motoring industry was recognised in 1994 when he was inducted into the Automotive Hall of Fame. In a statement at the time, he said: “Ever since Toyota’s establishment in 1937, I have been involved in this wonderful business, and as long as my engine keeps running, I intend to give back as much as I can for the industry’s further development.” He is survived by three sons, Kanshiro, Tetsuro and Shuhei.

PHILIPPINE SCHOOLS CHOSEN FOR CONTINUOUS IMPROVEMENT PROJECT

A GROUP of Philippine schools will become models for continuous improvement as part of a new programme designed to equip teachers with valuable lean skills. A total of 34 model schools in five Philippine regions were chosen for the project, called Continuous Improvement Towards Leaner Excellence (CITLE). The programme’s aim is to equip teachers with competencies such as customer orientation, process mapping, problem solving, project management, change management, group management, systems thinking, monitoring and evaluation as applied to continuous improvement.

FLOWVISION ACQUIRES NEW PATENT

FlowVision, LLC, a full service provider of lean business and supply chain consulting services, recently announced the U.S. Patent and Trademark Office had issued a new patent to the company for its approach to supply chain management, called “Inventory Management System”. FlowVision partner and co-inventor Mike Henderson said the inventory management system allowed customers to optimise inventory by balancing fill rates, customer service and asset utilisation. The electronic solution ties seamlessly to the user’s ERP systems, allowing integration with existing general ledgers and accounting systems. The system has been deployed throughout North America, Europe and Asia.

MANUFACTURING COMPANY SHINES ON BUSINESS JOURNAL LIST

CALIFORNIA-BASED precision manufacturing company, Quality Controlled Manufacturing Inc (QCMI) has been ranked in the top 20 of the San Diego Business Journal's Largest Manufacturers List for 2013. The proudly lean company made the cut based on its number of local employees (97) as of February, 2013. In a recent San Diego Business Journal executive profile, QCMI chief executive officer Bob Grande was asked about his philosophy of doing business. “I learned early on to do whatever it takes to satisfy the customer, and to this day we still do what it takes,” he said. “With the addition of six sigma and lean manufacturing tools, QCMI has been able to maintain margins on current work and offer competitive prices on new work.” QCMI has specialised in the precision machining of all metals including exotic alloys since it was founded in October 1978.

ESSENTIA IN BED WITH NEW LEAN PRACTICES

NORTH American natural memory foam mattress producer, Essentia has adopted a new lean philosophy to operate within its factory and production framework. Company directors will employ the just-in-time strategy to help reduce stagnant inventory and associated costs. “Lean manufacturing provides proven principles on which to build on,” Essentia production manager Morena Gelfusa said. “It should deliver some impressive results in the months and years to come for our employees, suppliers and most of all, the Essentia customer.” The brand operates 11 stores across North America.
Our experienced editorial board members contribute to the journal providing comment against articles and guiding the coverage of subject matter.
Let us answer the question right away - yes, they are. If you do not know where you are, how do you know where you’re going? Assessments are vital for many things in life; they provide diagnosis for illness at the hospital, troubleshooting for defects at the auto repair shop, and knowledge about your maturity in continuous improvement (CI). Some kind of assessment is critical for any successful change programme. But, assessments can backfire badly if you do not use them wisely. After more than 6 years experience with lean assessments in the global Volvo Group, we have seen both advantages and disadvantages. Here are a few tips for the road.

**WHAT GETS MEASURED, GETS DONE**

Peter Drucker’s famous saying “what gets measured, gets done” is popular because it is true. An assessment is not merely an audit of the current status. It also suggests the wanted position. It creates a strong “expected-to-improve” environment, and it indicates were to go next. Thus, an assessment provides focus for the improvement, fosters attention from management, and creates a desire for good scores throughout the organisation.

Because assessments motivate actions, one should not go easy with them. If not designed carefully they drive the wrong behaviours. One should take great care in developing assessments that are helpful for the organisation. Blindly copying other firms’ assessments is a dangerous route. What gets measured, gets done, so be sure to measure what you want to be done.

**WHAT LEVEL OF ASSESSMENTS DO YOU NEED?**

Assessments can go on forever. At what level of detail to stop and how to organise the audit are critical questions to ask. Companies need to decide what works for them. They can use formal, group-wide audit schemes or simple self-assessments carried out by the units themselves. Assessments can be qualitative, quantitative or both. Whatever design is chosen, we think the most important thing is to engage the people who are actually working in the unit that is being assessed. In fact, the learning that happens in the process is much more helpful than the result itself.

Multinational companies with many sites may even want to differentiate the approach for plants at different levels of CI maturity. In The Volvo Group, we have found that differentiation is needed. For plants that have barely started the CI journey, the assessments can be too harsh and even de-motivating when results are unexpectedly poor. Assessments are needed at this level, but they need not be so comprehensive. For the mid-mature plants, the assessment has been most helpful. For the best plants, the assessment frequently only offers limited benefits. These plants are already very good and they need to seek improvement outside generic assessments of CI maturity.

**NEVER FORGET THE PURPOSE OF THE ASSESSMENT**

What is the purpose of the assessment? Sometimes when people start doing assessments, they fall in love with the process itself and forget about why they do so in the first place. The big point is, of course, to provide the units with a roadmap to improve. Too many times the organisation being assessed becomes defensive and wants to justify a score, turning it into unhealthy competition. Therefore, be careful with celebrating good scores and linking assessment scores with bonuses and fringe benefits. Instead, celebrate the real improvements in operational performance that follow from succeeding with the CI journey. The result of the assessment means nothing if the unit being assessed does not move forward later. Assessments can be powerful, if deployed wisely.

Good luck with your assessments, but most importantly, your improvement.
The Panalpina Group is a provider of supply chain solutions, combining air and ocean freight with logistics services and supply chain services. Mike Wilson, Global Head of Logistics, Andrew Lahy, Global Head of Continuous Improvement in Logistics, and Paul Metzger, Head of Warehousing in the USA, discuss the company’s approach to assessing performance in each of its facilities around the world.

A new approach to assessments

and move away from offering just freight services, and aimed to provide customers with a complete supply chain solution. To do this meant developing and strengthening its warehouse operations and creating a new logistics product.

Mike was hired in 2011 to do this, and recognised that while Panalpina was in a unique position (it had a global network of warehouses already in place and a strong customer portfolio from their freight business), it didn’t have the right skills and expertise to make the best of its existing logistics operations and it didn’t have a clear strategy to transform them into world-class facilities that added value to Panalpina and its customers.

He set out to recruit a new team and made a conscious decision to recruit not just from the logistics industry, but also from the manufacturing industry. He looked for people with experience of running and setting up lean operations. He had run Celestica (a multinational electronics manufacturing service provider) in Europe for many years, and therefore knew the power of lean and how it can transform a business. He decided to recruit a team who understood what lean was all about from day one - and he knew that to get true lean experts he would have to look in the manufacturing industry, where there is currently more expertise than in logistics.

In March’s edition of the LMJ, we provided an overview of the global lean approach being rolled out at Panalpina. In this article, we share more details on the LogEx pyramid, one of the tools the team has developed to assist with achieving one of its key strategic objectives: Making continuous improvement part of Panalpina’s DNA.

THE BUSINESS NEED FOR THE ASSESSMENT

Panalpina has operated logistics operations around the world for many years. Traditionally, these logistics operations were not part of the company’s core business and were there to support its air and ocean freight business.

In 2011, this changed completely. The company decided to refocus its strategy different industries and backgrounds. Each one brought new ideas and experiences of the right and wrong ways to set up a lean assessment.

As Andrew explains, “We wanted to avoid the common pitfalls and, like with many things in Panalpina, we wanted to do things differently”

DESIGNING THE LOGEX PYRAMID

The initial focus was on putting the foundations in place to create a lean business. These foundations are the “bronze level” in the LogEx pyramid.

Most companies would look for their best site and assess this first to set the standard. We decided to use an alternative approach. We identified a number of sites across the world that were not running well and sent a team there, mostly to help them improve, but also to identify why they were failing. As part of the improvement process, we asked the team to identify what was missing at these facilities that was causing the failures.

Once the operations were running well again, we re-grouped as a team and drew up a list of the things that had been missing at each of the sites when we had first arrived. We saw that more often than not, one or more “fundamental” elements were missing at the site that was causing the operational failures. For example, roles and responsibilities were not clear, KPIs were not measuring the right things or processes were not clear or being followed.

We decided that this “list of fundamental elements” would be the basis for our initial LogEx assessment. We grouped the list under a number of headings and displayed the headings on a pyramid, with a traffic light that turned green when all the elements were in place. We
decided that once all of the traffic lights were green on the bottom two levels of the pyramid, we would award the site with a bronze certification.

With many sites now at bronze, we have started to develop the assessment for silver.

Now that everyone knows about bronze and the standard we are looking for, we have started to turn our attention to “what is silver”. If bronze is about getting the fundamentals in place, silver is about the softer sides of lean; a focus on employee engagement, customer value and the development of a culture of continuous improvement. This is not something you can check with a yes/no checklist as we do for the bronze assessment. The only way to see if the

When LogEx was introduced in 2011, it was just a pyramid with building blocks of tasks to be completed to achieve a green dot... another box to tick on a checklist of tools! However, upon implementation of each of the blocks, new meaning and roles of the warehouse became much clearer. And when “yes” was answered to each of the questions with true objective evidence, not only was the green button highlighted but a true visual transformation began to take place in the logistics facilities, and a new spirit of continuous improvement was born in each of the operators.

The biggest visual evidence was when 5S was fully implemented in each of the facilities. In the cleaning out phase of 5S, dumpsters were ordered to haul out the trash and unused items. Floors, walls, windows were cleaned for the first time in years. Painted or taped lines on the floor shows where traffic areas are, where pedestrians can safely walk, and where things belong. Signage indicates where things are to be stored. Desks are clean and tools can be quickly located on a shadow board. All of these efforts have brought organised structure and discipline to each of our facilities and has made each warehouse a place of pride and ownership by the operators.

Other blocks on the pyramid encourage us to develop meaningful KPIs and assure the customer requirements are being met and communicated. We have also been cleaning up our finances; and not only managing our costs better but also creating greater transparency on revenue and cost for each account and product in the warehouse. All operators are encouraged to be involved in the process and the ones that choose to stand on the sidelines and “watch” are soon swept into the continuous improvement spirit.

The biggest change we have seen though is in our operators. They have always done a good job and over the past two years we have asked them to go from doing a good job to doing a GREAT job with our slogan “good to GREAT”.

With LogEx as a guideline we can now measure our successes and also give the team a common understanding of what GREAT is. This is no longer just a programme, it’s a common challenge. It is who we are. It is also exciting to see what we are becoming: a united logistics team ready to deploy its vision: “Global logistics solutions tailored and delivered with excellence - every shipment, every time.”
AVOIDING THE COMMON PITFALLS WHEN CREATING A LEAN ASSESSMENT

We started by reviewing the assessments we had used before, both inside and outside the logistics industry, to try to understand why many lean assessments often end up failing to add value to the business. There were many reasons for failure, but our top five pitfalls when creating an assessment method were:

1. There is no clear business objective for doing the assessment. If the reason for the assessment is not linked to achieving a clear corporate goal and the assessment is not supported by senior management, it will not be successful;

2. Assessments are dreamt up by someone in a head office function or copied from an external company or consultant. This usually ends up with a tick list of fancy tools and techniques, rather than an assessment of the real things the business needs. The assessment should be designed by the people running the business and operations;

3. The assessment quickly morphs from a continuous improvement tool into an auditory tool. The result is that operations teams start to see the assessment not as a tool to help them improve the operation, but as a burden and another audit that they need to prepare for each year;

4. The assessment focuses only on identifying gaps and weaknesses, and doesn’t reward success. Identifying gaps and areas for improvement is important of course, but equally important is that the team is rewarded for tackling the gaps and making the improvements to the business;

5. Improving the average score in the assessment becomes more important than improving the business. Assessments usually result in a rating- or percentage-based score for each site. The consequence is that people look for the easy items that they can tackle quickly to boost their score, rather than focusing on improving in the area where the business has actual needs. In extreme cases, people become more focused on increasing their percentage score in the assessment than they do on running the business.
Renault-Nissan Consulting is the internal business improvement arm of the Renault-Nissan Alliance. In addition to helping enable the operational excellence goals of its parent, it supports several non-automotive organisations with their lean journeys. RNC’s Director Ian Robinson shares some thoughts on the importance of focusing on what you want to achieve when developing lean assessment tools.

We have looked at many lean assessment tools over the past 10 years or more — some for our parent and some for external clients. Many of these were “off the shelf” and available within the wider marketplace, some more tailored to specific areas like manufacturing, supply chain, logistics and even customer-facing roles like sales and marketing.

The one thing that struck us most was that although they covered most or all of the areas we wanted to assess, they often covered lots of other areas as well. This meant we were either buying something over-specified for our needs, or worse, that we would be tempted to assess areas that didn’t need assessing because the tool gave us the capability to do so.

This might seem a small detail, but it helped us to identify a larger problem — unless you apply lean principles to your lean assessment activity, you can end up doing lots of non-value adding activity. This seemed a little counter-productive and led us to step back and think about what we really wanted our assessment tool to do.

A significant recurring criteria that emerged was “flexible to meet the needs of various stakeholders and applications”, which proved rather interesting. We help our parent, their supply chain and lots of non-automotive organisations with their lean journeys. Each of these parties is looking for different things, both across different organisations and within the different area/divisions that make up each individual one. For example, we have one user of our lean assessment tool who wants to improve the lean maturity of their customer support operations. They have only recently started on this journey, and therefore want to know what level of maturity their operations are at. In this instance, a one to five scale works best, as not everything needs to be at four or five to...
achieve their mid-term goals. Conversely, in their manufacturing operations that started on its lean journey many years ago, rather than a scaled approach, they apply “yes/no” criteria to the assessment.

You might argue that for “yes/no”, everything just needs to be a five or one on the scaled version. But when you are analysing the outcomes on a radar chart, you would see two sets of “threes” side by side that meant totally different things.

In the end, we decided to develop our own assessment tool. Ironically, we have actually developed two versions of it - one with a “yes/no” response and one with a one to five maturity rating. We have also subdivided it into the different modules/question sets that suit manufacturing, service and support environments (although the lean principles are the same, the terminology and tasks being assessed often vary significantly, and if you want valuable data on which to make robust decisions we have found there isn’t one specific approach that works).

A key element of all these modules, however, is the alignment with the lean strategy and goals of the organisation/area being assessed. You have to tailor the assessment criteria to the current and desired levels of lean maturity. This can then be evolved as the maturity of the area/organisation being assessed improves (after all, today’s current state is tomorrow’s baseline for measuring how much you’ve improved).

Once we had the tool’s requirements nailed, we started to look at the application of it. This is where the value delivered by a lean assessment tool often lives or dies.

It is important to remember that these assessment tools are applied by people, and the ratings they give for each area being assessed will depend not only on the assessment criteria but on the ability of the person to accurately rate it.

The tool therefore needs to be applied by people who know what they’re doing in a consistent way (if two people assess differently you will get two different outcomes, so we applied some “Gauge R&R” logic to this problem). What we found is that we had to make the assessment mistake-proofed (poka-yoke) otherwise the assessments conducted, either of two areas at the same time or the same area some months later, would be meaningless. One of the classic lean fundamentals came to the rescue here - standard work. By standardising the way the tool is used, coupled with error-proofed assessment questions and a skills matrix for the assessors, we found the consistency of assessment greatly increased. It is still not perfect, but it is a lot closer to genuine “like for like” than if we left the scores to a subjective view.

Which brings me to my last point – your assessment tool must align with your strategic goals. In reality, you are assessing your organisation’s capability to deliver those goals through your lean assessment activity. The outcomes should tell you where to focus effort to deliver value more efficiently and effectively. You can then deploy your valuable, and most-times limited, improvement resources on the areas that will accelerate the achievement of your goals.

So to summarise, your lean assessment tool needs to assess the right elements of your business, do this in a consistent and high-quality way and enable you to focus improvement on increasing the delivery of value, aligned to your strategic intent.

That does not reduce the number of tools that are available, but it does significantly tighten the range of them that are tailored to meet your organisation’s needs.

And that, in turn, reduces the non-value adding activity that is needed to turn your assessment findings into meaningful action plans. Which, after all, is why you’re doing it.
As all great explorers have proven throughout the ages, all journeys must start with proper preparation. Joseph Paris from the Operational Excellence Society emphasises the importance of self-assessment prior to and during any lean journey to ensure your organisation arrives at its intended destination.

So, you are thinking about embarking upon a lean journey at your company. Or, more than likely, you are going to be RE-embarking upon a lean journey at your company.

But where do you start? At the beginning, of course.

But is it enough to take that first single step? Is it not as important, if not more important, to know where you are going? How are you going to get there? What provisions and skills might you need on the journey? Do you think that Edmund Hillary woke up one morning, decided he was going to be the first to scale Mount Everest, and by the end of the afternoon he was on top of the world?
No Sir. As with Hillary and Everest, your lean journey needs preparation – and lots of it.

The first step is to define your destination. Where are you going? This needs to be defined up front so that you can measure progress against the plan.

What plan? This is the second step. You need to know how you are going to get to your destination.

This is obviously going to be a long journey and not a day trip. What are you going to need? Hillary had Tenzing Norgay as his Sherpa – the guide who knew the mountain and carried the provisions. Who do you have as your Sherpa and what are they carrying? Is it enough to reach the top?

Most critically, where are you NOW? There are two points in any journey - where you are starting and where you are going. These two points define the journey – you cannot end your journey unless you have determined your destination – and you cannot begin your journey unless you know where you are and what you will need.

Assuming a defined strategy (or future state) in the lean journey exists, the process of planning starts with the assessment. In its most simple form, an assessment is an evaluation of the present state of something. In school, students are assessed as to their position and the progress of their education by a series of tests which evaluate their knowledge of a subject and their readiness to proceed with the material. In a lean assessment, this evaluation determines where an organisation is in respect to its intended destination and the state of readiness in which to progress forward.

Internal Self-Assessment: This is an evaluation performed by an organisation using its own resources. Sometimes the organisation will obtain and leverage external assessment tools that are available on the internet.

Example: An example of a successful self-assessment programme can be found at United Technologies Corporation (UTC) and its Achieving Competitive Excellence (ACE) Program, which is billed as UTC’s “Operating System”. A core belief of ACE is that every employee, from the highest position to the lowest position, is involved in the efforts to improve the company with the shared goals of eliminating waste and “delighting” customers. As such, UTC is in a continual cycle of assessing, planning, acting, and evaluating.

Pros: A benefit of an internal assessment is that it is highly customisable and specific to the company creating the assessment. The company that is doing the self-assessment can identify a desired outcome from the effort, target specific areas to assess, and determine the assessment criterion.

Cons: The integrity of self-assessment can be compromised and the results skewed by politics and self-interest – “If I don’t like the results, I can just make the numbers work.” In addition, a company that does a self-assessment does not have the opportunity to benefit from the fresh eyes of an outsider.

External Assessment: This is an evaluation performed by resources which are external to that of the organisation. Almost always, the company that hires out an assessment is one that is facing considerable challenges and has lost its faith in its internal capabilities based on past performance.

Example: Private equity and “turn-around” firms which take an ownership interest in distressed companies will believe (rightfully or wrongly) that the company is in distress because of an inability of the present resources to perform. Because of this lack of confidence, they will almost always seek external resources to perform an assessment.

Pros: In challenging times, internal people become increasingly anxious about their future and might not be willing participants in an improvement initiative because they fear it might mean losing their jobs by redundancy or performance. Introducing trusted outsiders with fresh eyes, and whose allegiance is aligned with ownership, might accelerate the achievement of necessary improvements for the company to overcome its challenges – and, in the case of distressed companies, even to the point of becoming viable.

Cons: The minimal leveraging of existing knowledge of the business, or the past “lessons learned” from those who have worked there, might return results that are less than what might have been achieved if existing knowledge were more actively sought or engaged.
Hybrid Assessment: This is an evaluation performed by the organisation which utilises internal resources in conjunction with external resources. This approach is found to be the approach most companies take, especially when they are new to the disciplines of lean and they are not in a “turn-around” or distressed situation.

Example: Most companies that do not have a mature and successful lean program seek to accelerate their journey by engaging an outside consulting firm that specialises in lean program development. There are many such firms that exist, but it is important for companies to realise that sustainable success depends upon building internal capacity and capability, and they should not hire consulting firms merely for engaging projects (where the knowledge will leave – along with the consultants – after the engagement is complete).

Pros: The company gets the benefit of using fresh eyes and at the same time leverage the knowledge and capacity of the people who worked the processes (usually, for a considerable amount of time).

Cons: There is a potential for friction between the internal resources and the external resources which needs to be guarded against.

Many firms will seek recognition for their efforts. They would then be able to leverage this recognition to gain respect among peers, and also demonstrate to customers (and vendors) that they take their improvement programmes seriously. But the winning of a “prize” should not be the goal, and is not a guarantee that the company can be considered a viable long-term partner.

In addition to partnering with consulting firms and leveraging government programmes, many universities also have programmes for conducting lean assessments. One such University (which is also an MEP) is Purdue University in Indiana, USA. In addition to offering degrees in industrial engineering (including the disciplines of both lean and six sigma), Purdue’s manufacturing assistance offerings are very robust. Of course, there are other universities with similar programmes, and a quick internet search will probably return a result that is suitable for almost any company, almost anywhere.

However, there are other factors to consider. On certifications for individuals, the advice is “Caveat Emptor”, Latin for “Let the buyer beware.” There are a lot of “certification mills” out there which will offer a certification for little cash and little effort. Do not be duped into engaging one. The question to ask yourself is, “If someone were to query me as to where I obtained my certification, would I be embarrassed to tell them?” If the answer to that question is yes, then don’t engage.

There are numerous legitimate organisations where an individual might become lean certified, including from the Institute of Industrial Engineers (IIE), Villanova University (USA) and the University of Michigan (USA). Of special note and worthy of inquiry is a new joint programme offered by an alliance of the American Society for Quality (ASQ), the Society for Manufacturing Excellence (SME), the Association for Manufacturing Excellence (AME), and the Shingo Prize.

In the end, it is important to remember that a lean assessment is only the starting point. To be successful, a company needs to know where it is going (strategy), how it is going to get there (tactics), and what it needs for the journey (logistics). And, of course, a lean assessment is not worth doing at all unless you are dedicated to embarking upon the journey.

“Dans la légion, vous marche ou crève” - In the Legion, you march or you die.
In the current business world, where long-listed CVs mean a step in the right direction towards employment, Simon Elias, former Director of Cardiff University’s Lean Enterprise Research Centre, gives four reasons why lean certification can put managers and employees ahead of their peers.

“Staff being trained increasingly demands that a programme of learning should result in the award of a formal qualification. Indeed, it is now often a condition of funding by many public bodies.”

“Academies” were emerging to galvanise organisational learning, became commonplace. With all this knowledge and a plethora of coinciding courses, a need emerged for some form of framework around which lean training and education could be organised while also recognising attendees’ newly acquired knowledge.

A precedent for workplace-based certification had already been set in the improvement and quality arena with the belts of six sigma. This seemed to offer a standard for individuals and...
organisations, so it was a logical step when lean-oriented certification systems emerged, mainly from vocational qualification bodies, professional associations and some universities, both in the UK and the US.

For companies that fund and deliver training, such systems provided a coherent framework around which they could build lean training programmes. This framework also allowed them to deliver to a consistent standard and definition of lean while providing a recruitment benchmark. This helped them in their key task of raising the overall lean capability of the workforce. To a certain extent, systems also helped legitimise the new lean academies and meant they could offer employees a clear and tangible benefit in the shape of a lean qualification with high perceived value.

Indeed, it is now often a condition of funding by many public bodies. Attending a five-day session in a four-star hotel and coming away with nothing more than a certificate of attendance is no longer acceptable.

Third, qualifications provide important recognition for individuals who can now pursue a career focused on lean or continuous improvement. Having evidence that you have a specific level of lean expertise boosts your credibility and authority among managers, peers, subordinates, suppliers or customers. This appears to be particularly important as lean managers are, invariably, facilitators of change, where there is a particular requirement to be seen as authoritative and credible.

Fourth, certification systems give employees a clear framework on which they can develop their lean knowledge and plan future learning. One of lean’s inherent problems is the lack of an accepted standard definition of what it exactly is, and at least a certification system can offer an integrated framework showing how the various themes, subjects and schools of lean thinking relate and interconnect.

For employees, certification has been attractive on a number of levels. First, a lean qualification is seen as a career boosting prospect. Employees are only too aware that there is a shortage of people with good lean credentials in the job market, so formal recognition of lean knowledge is seen as particularly useful. Furthermore, in today’s world of portfolio careers and job mobility, careful nurturing of your CV is considered critical and the more skills and experience that enhance your marketability, the better.

Second, staff being trained - as well as other stakeholders, such as funders and employers - increasingly demands that a programme of learning should result in the award of a formal qualification.

However, certification systems are not without their critics. The lean philosophy famously emphasises learning by doing, with constant visits to the gemba, as this, it is claimed, is where the real learning takes place - not through PowerPoint-laden lectures. Indeed, several lean commentators appear actively against classroom-based learning and formal lean courses. There is, no doubt, some validity in this viewpoint, which probably applies to almost every practical endeavour, whether in medicine, engineering or simply driving a car. This has not been ignored by the creators of certification systems, many of which place a high emphasis on the inclusion of evidence of the practical application of lean principles and tools as part of the assessment criteria. This complements the knowledge aspect, which alone is no indicator of the real level of expertise.

A further criticism of certification systems is that they lead to training “for its own sake”, where legions of staff are put through programmes without being able to actually apply the knowledge in their jobs. This is generally the case when the training is not integrated into work activities or staff is not empowered sufficiently. This is training overproduction at its worst. Ideally, continuous improvement activity needs to be integrated into all roles to make such training truly productive.

One of lean’s inherent problems is the lack of an accepted standard definition of what it exactly is, and at least a certification system can offer an integrated framework showing how the various themes, subjects and schools of lean thinking relate and interconnect.

Lean certifications are still relatively new, though several organisations (along with their staff) look to be embracing the concept with enthusiasm and a range of benefits are accruing for all parties.

The acid test of the success and ultimate longevity of certification systems will partly be based on their ability to deliver high perceived value for individuals, and partly on whether they can demonstrate they play a positive and cost-effective role in helping organisations reach what many consider to be the ultimate lean goal: a sustainable continuous improvement culture. The limited evidence so far suggests that the signs are positive and, as lean is increasingly accepted as a mainstream business discipline, it is likely that the demand for relevant and adaptable lean certification schemes and qualification systems will continue to grow.
Principles & Purpose

There is a plethora of productive assessment tools readily available to companies and organisations, but how exactly are these tools developed, and furthermore, how effective are they? Lori Schmidt, CEO of Productivity Alberta, a Canadian not-for-profit corporation which helps small- and medium-sized enterprises reach their productivity goals, sheds some light on how her company developed its productive assessment tool and its different uses.

Making the grade

There are numerous productivity assessment tools in use across North America, however there is no generally accepted standard and each tool tends to be biased by its developer towards a particular use or desired outcome. Consequently, there is no consistency in what is measured by the various tools used by industry in Alberta, and there are many gaps between each tool’s coverage.

Many assessments commonly used by North American industry are focused on one aspect of productivity, typically operational performance and usually with a slant towards lean, six sigma, combined lean six sigma, or a variation thereof. What differentiates our assessment tool is that it is practice- and method-agnostic – it is not just about the hard numbers, rather it is about assessing the behaviours of the people within the company and its systems.

In 2009, we undertook the development of an assessment tool that addressed the integrated impact on firm-level productivity of innovation, leadership and management, and operational productivity. The productivity assessment tool (PAT) was designed to provide small- and medium-sized enterprises (SMEs) with a means to self-evaluate and provide a deeper understanding of key issues and problem areas within their company so they can then link to potential solutions.

The Productivity Assessment Tool

The PAT was developed based on the results of a gap analysis study, interviews with representatives from various industry sectors within Alberta, and research on tools in use in North America and Europe by academics, institutions, private consulting groups, and industry associations.

Several models of tools are in use around the world, and selected components of these were integrated into ours. A concept version, which focused on three key elements (leadership and management, innovation and

READ ABOUT:
- Developing a productive assessment tool
- Different uses and implementations of PATs
- How industry professionals react to PATs
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The results of the gap analysis and industry interviews indicated an alarming number of SMEs had limited or no knowledge of productivity issues and opportunities. This lack of awareness has manifested itself in a very poor growth rate in productivity in recent years in Alberta, and highlighted the real need to provide SMEs with a self-assessment tool focused on productivity.

**Productivity in Three Dimensions**

The PAT, as noted above, was established as a three-dimensional model. The leadership and management component is founded conceptually in Target Training International’s Personal Talent Skills Inventory that translates scores into capacities related to the business environment. Innovation analysis is based on research work conducted by Robert Porter Lynch and The Warren Company over the past 15 years, supplemented with numerous other research initiatives from academic institutions and consulting groups. Establishing the model for operations was a result of selecting and synthesising work and examples from operations), was then vetted through industry focus groups. The tool design consists of a series of behavioural questions in each of the elements that are further broken down into a number of key categories for measuring and reporting purposes. To expedite the use of the tool, it is available to the user in both a short version and a long version, which typically take up to 45 minutes and two hours respectively to complete.

**The Fundamentals**

The fundamental principle behind this tool, and other similar tools, is based on the work of Dr. Robert S. Hartman in the science of axiology. Axiology is a mathematically accurate science that objectively identifies how one’s mind analyses and interprets experiences. It identifies how people are most likely to react in any given situation and helps us understand the patterns people use to make judgements. These patterns allow for the translation of the results into quantitative measurements and scores that, in turn, can be applied to the daily business. Based on this principle, a series of behavioural traits were selected as the method of measuring impact on productivity as influenced by leadership actions, application of innovation, and actual operational processes and actions.
a large number of sources including academia, industry associations and consulting groups in North America and Europe.

The scoring system for our tool is a 10-point scale that provides a greater range of selectivity for the user. A common survey scoring system is the 5-point scale, but it was important to distinguish the tool from a survey by providing a greater range of performance selection so the 10-point system was adopted. Scoring each of the questions is subjective, particularly when used most commonly as a self-assessment tool. However, this is compensated for with the total number of questions in the tool. Each of the questions in each of the elements is linked to a recognized category for which all answers are scored and averaged, in turn providing a score for that particular category of behaviour. The effect of this approach is to provide a measurement of relative strengths and weaknesses in specific areas within each of the three key elements of leadership, innovation and operational productivity. The absolute numerical score is not what is critical, rather it is the relative strength or weakness of the score in relation to all other categories within each element that is important.

**INDUSTRY FOCUS**

Two industry focus group sessions were held in Edmonton and Calgary to examine the concept of the tool and the approaches being considered for its design and use. The focus groups’ feedback was that leadership and management was the most important issue in determining organisational productive capability, but all three elements were critical to measuring productivity.

Participants agreed that organisations that were driven to continuously improve their productivity would use the tool to help their management teams identify areas of strength and weakness so that they could focus on the most beneficial areas of improvement. They also saw it as a management skills development tool.

Leaders at the focus group sessions said that they would be willing to invest one to four hours in the tool to help them focus their continuous improvement efforts and help with the productivity strategic planning process used by their management team. It was even suggested that the tool would be used to “survey” all staff to gain a better perspective on how staff view the organisation’s operations and overall productivity.

**USE OF THE PRODUCTIVITY ASSESSMENT TOOL**

This tool has been designed for use not only as an organisation’s self-assessment tool, but also as a tool that businesses can use to aid in their strategic management and work plans. It can be used by individuals, teams, or as an in-depth survey instrument of selected groups. It can be used in its short or long
version. It can also be used on a regular basis to monitor a company’s progress on its continuous improvement journey. While actual scoring numbers will vary based on each individual’s opinion and perception from their position within the organisation, the impact of the tool and exercise rests in the identification of relative strengths and weaknesses.

The PAT can be used to measure departmental and divisional value streams and overall corporate performance. If used regularly, improvements, stagnation, and regression within the company or sub-group become obvious. The long version has been used, on an annual basis, by the senior management or divisional management teams of organisations to focus discussion, identify direction for strategic improvements, and stimulate discussions around practical opportunities of strengths and weakness within the organisation and amongst its leadership. One organisation has implemented a quarterly review of its continuous improvement journey by having its branch, division, and operational leadership complete the short version and compare the results with prior reviews. Once a year they conduct a similar review using the long version of the tool as an aid to their corporate strategic planning process.

Other organisations have had their management team complete the short version of the tool on an individual basis. They then review each individual’s perceptions to determine why they rated various aspects/elements of the productivity set in the manner that they did, taking the average of the management team’s scoring to look for consensus on the most critical areas for improvement. This is used to determine the teams’ and the company’s continuous improvement action plans for the next three to six months.

We have found our tool can also be used to effectively define an enterprise’s strengths and weaknesses. Once defined, a business can then develop strategic plans to maintain its strengths and address its weaknesses. There is also the benefit of being able to identify easily where members of the company’s management team disagree on how well the organisation performs. These differences need to be explored and resolved as the company’s productivity journey continues.

**Connection to Lean**

The PAT is a wide-ranging, comprehensive analysis of an organisation’s productivity behaviours and, as such, is not a replacement for an on-site walkthrough and assessment. Rather, the tool can start a company down the path of looking at the behaviour and thinking of its people that directly and indirectly impact operational productivity performance.

Lean can be seen as a deeper dive into the organisation’s processes and systems that the PAT simply cannot provide. But the tool often serves as a catalyst for the company to see the potential for improvement and help lean practitioners identify issues beyond the shop floor or front office that will affect the performance and results of process improvements. By opening the mind of the company and its management, the tool is a way to accelerate the productivity conversation and prepare the company to discuss and prepare to make changes to its business.

An internal culture shift is required to introduce, implement, and sustain lean and six sigma improvements in an organisation successfully. The PAT can provide the lean practitioner with deep insight into the culture, thinking, and priorities for the company as it implements change.

**Accessibility and Reach**

From its inception, our tool has been offered free of charge to Alberta-based SMEs. It is also available for limited-time trials to organisations located outside the province. In the nearly four years that the tool has been available, nearly 1000 individual users have registered and taken advantage of the service, with additional users choosing to complete a hard copy off-line version.

Interest in the tool has been growing in Alberta and beyond, with service providers in the provinces of British Columbia and Nova Scotia obtaining term licenses for the use and customisation of the tool to suit the needs of their SME communities. Additional opportunities exist for the continued roll out of the tool to new geographic markets and industrial sectors, with similar usage and results anticipated.

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**Further Reading:**

- For information on the Productivity Assessment Tool, visit: [www.productivityalberta.ca](http://www.productivityalberta.ca)
Put the people back

Denis Becker, World-wide Operations Excellence Manager at Gemalto and lecturer on MSc Lean Enterprise at the University of Buckingham explores lean assessment tools and how effective they can be when people are properly involved.

Your lean assessment reflects your lean thinking. It describes what is important to you, the destination you want to reach and the major stops along the journey. Your key stakeholders understand your lean strategy by looking at the assessment. The things you put in or leave out directly impact the reality of your lean transformation.

In recent years, the lean movement has reinvented itself by questioning tool-driven approaches and emphasising the people and scientific problem-solving dimensions of continuous improvement. Spear’s “Rabbits”, Rother’s “Kata”, various books on A3 coaching and the rediscovery in the west of long-forgotten Training within Industry (TWI) methods are all central to this new awareness of what lean is, or should be, all about.

As a result, most serious lean practitioners will probably agree that lean is all about the people - not the tools. But how does this awareness translate into action? And, given that lean assessments reflect not only our lean thinking, but hopefully lean doing, what does your lean assessment have to say about the target condition for your people and your journey to get there? What are the gaps? Has your lean assessment made the journey, or are you stuck in the old tools paradigm?

Read About:
- Using assessment tools to grow improvement capacity quickly
- Properly involving people to get results
- The shift from tool-based methods to people-based methods

Why Does it Matter?
In the October 2012 issue of LMJ, I outlined a new assessment paradigm to improve the pace of lean deployment and deliver better business results faster. After all, this is what lean is all about - improving faster (and making more
The problem, she argues, is that in traditionally managed organisations or those in the early stages of conversion, the employees do not know how to participate (other than by performing their work) whilst managers do not know how to transition to a participation-based way of operating.

This is where we, as lean change agents, come in. Or at least where we should come in. To unlock the inertia resulting from this gap in know-how, operators, supervisors, managers and lean experts need to acquire new skills, develop new ways of organising their work and adopt new habits (routines). It is our role to help our organisation start this journey with a clear destination in mind. This is what I call our people target condition.

This target condition must be clear in your lean assessment and, by using the maturity levels carefully, we can shape the path of the transition.

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A few weeks ago I asked our students at the MSc in Lean Enterprise to define lean from the perspective of “people.”
There was a variety of good answers, including the all-time favourites of “we make people before we make cars” and “respect for people”. But what exactly do we mean by “making people”? How do we convert “respect for people” into practical activities that shape our lean journey? And, how can we assess progress in this important lean dimension?

At the top level our people target condition might sound something like this; “Our operator teams own and autonomously improve their cell processes, delivering double-digit performance improvement every year in all performance dimensions.”

Easy to say, but hard to pull off. We could try to go the Toyota Kata way of experienced sensei leading their protégée on a one-to-one basis. But even Toyota struggled to free up enough sensei during its international expansion. What chance do we have to accelerate from zero to 100 in seconds without the required horse power? So this is really the core challenge; how can we accelerate the journey of our staff to become expert problem solvers that routinely achieve double-digit improvement?

**PULLING THIS OFF**

Tackling this challenge starts by adding three ingredients to our lean assessment:

1. **simple kata to catch problems, solve problems, stabilise the process, and lead change that all frontline staff can quickly learn, and that our supervisors are able to coach**
2. **a support structure (including supervisor-coaches) that provides guidance, removes obstacles, and maintains the integrity of the kata**
3. **a policy that rings fences regular time to improve the process and practice the kata**

I deliberately use the word kata rather than training here because too often lean training programmes do not deliver skills, but rather a power-point presentation with loads of lean concepts to build understanding, but not skills. If lean is about simplifying complexity, then the same approach must be applied to the way we develop the improvement skills of our people. We need to deselect content and break with tradition. Practical, hands-on skills with concrete business results are the only acceptable training outcome - awareness is an excuse for wasted time and resources. Fast, real-life impact can only be achieved by focusing on core skills, rather than trying to get everyone to understand the intricacies of heijunka, value stream mapping and line design, for example. In practise this means teaching and coaching a few simple kata directly on the shop-floor that allow us to build extraordinary skills in ordinary people. The more they practice the kata, the better they get at problem solving.

The good news is that if you do not already have the capability for delivering and cascading these core skills in your organisation, there is a quick fix available on the market. The kata we need for this journey have been around and tested for more than 60 years. The TWI programmes are part of the foundation of the Toyota Production System (Ohno himself was a TWI trainer). Developed in the 1940s to give front-line supervisors the skills needed to become ‘expert improvers’, at Gemalto we now use them not only for the supervisors or team leaders, but also to develop the team skills. Each of the kata job methods (improve/ solve problems), job instruction (stabilise), job relations (lead) can be learned in 10 hours through a standard training model designed for rapid cascading to hundreds of workers. Perfect for our purpose of growing our improvement capacity quickly. After the training, all you need is to make regular time to practice, and receive qualified support. Utter simplicity, off the shelf, ready to use.

What about A3 problem solving? I am a great supporter of the A3 as a story board, a communication and coaching tool. At Gemalto and Buckingham University we use it extensively. The problem with A3 problem solving is that it does not really solve the problem. Yes, if used well it promotes scientific thinking and tells a good story. But the improvement ideas need to come from somewhere else. TWI job methods is reliable to generate these ideas and even features a proposal worksheet that looks rather like an A3 in structure and content which was developed in the 1940s.

**BACK TO THE LEAN ASSESSMENT**

In other words, lean transformation is not about process engineering and tools, it is about the people. How we use and build their knowledge and skills and manage their personal transitions (and our own) as we learn to turn ever faster and more frequent cycles of improvement is of strategic importance. The lean assessment is our master plan for the lean transformation. Unless kata, support structure and improvement time policy are clearly defined and followed up, our program will probably end up more painful and slower, and any improvement will be much harder to sustain.
In 2006, applying lean in UK universities began in earnest. At the time, the global economy and funding for education were in a very different place. That is when we began to feel that things might be too good to be true, and that something was about to change. I was working as one of the first lean practitioners in UK universities, as we set off on an adventure to release waste and create value in our industry.

At that time there was little understanding of lean thinking in higher education (HE), certainly in the UK. There was many a blank look as we worked to relate this foreign thinking to colleagues inside HE. At industry events, as experts from other sectors reflected on the difficulties of managing change in universities, I often ended up facing looks of incredulity.

A good few years and a good number of universities later, I can see that the UK higher education sector is getting to grips with what lean might mean, but there are still some looks of surprise, and perhaps with good cause. Now seems the right time to reflect on the journey here so far, and think about where universities might go next.

**The Stereotypical University**

It is worth putting some context around what we mean by universities, and by doing so the HE sector. Universities, of course, primarily deliver teaching and research.

The typical university takes in a big batch of students each autumn, and a few years later releases a bunch of graduates into the job market.

Research in universities is harder to classify. Each research project is aiming at doing something new and unique, to add something novel to the sum of human knowledge. The common thread is that research is typically run on a project basis, identifying funding at the outset to meet agreed outcomes.

Research projects range from the huge-budget multi-national to the highly intimate and esoteric. Teaching
ranges from traditional chalk-and-talk through to technologically-advanced e-learning.

**HE INSTITUTION MODELS**

As independent bodies, universities are established in many different ways. There are a number of models that take account of these varying types of university. A common one classifies them on two axes, one of scale and subject balance (i.e. from small/specialist to large/multidisciplinary), and one around the approach of the university, say from applied/vocational to research-intensive.

This accepts that some institutions will focus on a narrowly-defined target market and others will be more broad brush. That some universities will deliver to individual students, and close-to-market research, and that other universities will seek to influence societies and cultures and deliver research at an abstract, theoretical level.

All this could look an awful lot like waste, unnecessary variation between organisations established to do basically the same thing. However, a key quality of universities is that they are creative organisations and we know that creativity requires divergent thinking, freedom of thought, and perhaps that freedom of thought needs some messiness.

The other key quality that defines the sector is academic freedom. For example, the right (even the necessity) of the academic to pursue the interests of the field without prejudice, regardless of whatever the line management and perhaps even the strategy of the organisation might say or be.

**IDENTIFYING THE CUSTOMER**

There is a debate that has raged within the higher education sector, and it is one that sheds some revealing light on how the cultures within universities support lean innovations. The debate may seem rather foolish to outsiders. It is around who the “customer” of higher education is.

If universities are in the business of teaching and undertaking research, it would seem like a simple matter to identify their customers - those who pay for the services received, i.e. students and research funders.

Research funders tend to be councils disbursing public monies, charitable organisations, private companies, or a mixture of these. Although it is the students at undergraduate and postgraduate level that institutions teach, funding is often provided through family, loans, government or employer support.

For some, using the word “customer” in relation to people who interact with universities is seen as offensive and even damaging. Some of those people are students themselves. There is a belief that universities interact very differently with their stakeholders than through a transactional customer relationship.

Even if we choose to accept that universities have customers, whether those customers are indeed students or research funders, is not always a given, I’m afraid.

Some argue that it is not the students themselves that are the customers. We have identified that they are not always self-funding. It could be said that perhaps the employers of those students after graduation are the real customers. Indeed, some would go further to argue that the customer of a university is society at large and that it is the role of HE to hold a mirror to social realities through the arts, humanities and sciences.

I don’t want to make light of this genuine discussion, but the truth as I see it is that different universities engage with all these stakeholders as customers in different ways. There is no one simple customer for the sector and the relationships between funders and students are far from simple transactions.

**LEARNING FROM THE CUSTOMER DEBATE**

In the debate around who the customers of universities are, we can observe something crucial to the culture of higher education: the pervasive analysis and deconstruction of ideas.

As with many experts in their field, one of the stereotypical problems when engaging with academics is getting them to take off their analytical hat and engage with taking action. This would not be at all surprising, as academics employment is essentially for the purpose of analysis.

This is a real skills waste, i.e. when the intellectual effort of deconstruction is applied inappropriately, effectively getting stuck in the define, measure, analyse stages of the DMAIC process, without ever moving forward to improve and control.

Another important aspect in universities is, of course, the creativity required
to innovate in research alongside the freedom to do so. With this, we find ourselves back at the importance of academic freedom. This is clearly vital when it comes to the creative process of teaching and research. The challenge here is to bring enough standardisation to ensure that the customers of processes in HE get the value they deserve.

IMPLEMENTATIONS IN HIGHER EDUCATION

So, what do lean implementations look like in such a context? What practitioners are doing in HE is to pragmatically identify who each process is for, and work to these peoples’ interests. This has resulted in benefits being delivered for both process user and those stakeholders, demonstrating the power of lean thinking and leveraging further change.

Data around this is not conclusive, but as an example at institutional level, between 2006 and 2012, the University of St Andrews published time savings in excess of 7,500 annual recurring staff days (equivalent to around 2% of the university’s total staff time).

One specific project from Edinburgh Napier University is around moving student financial aid to an online process. This has offered opportunities to make things more efficient and accessible.

Facilitated process design enabled the new financial aid process to better meet student needs. Direct cost savings were small, estimated at around £500 on paper materials to support the old process. Staff time released from the new process was significant, totalling about 22.3 working days per calendar year, which were repurposed to provide a better quality of support to applicants for financial support with face-to-face meetings. Upon implementation the process time was decreased by around 3.5 calendar days, an important gain for the approximately 2,000 students accessing financial support annually.

As with many improvements in this particular project, staff involved found it beneficial to work together with other departments, improving the process for the student customer while making better use of time.

Alongside this bottom-up approach of bringing about change, there is also a growing number of senior leaders in higher education who are starting to challenge the way that things are done.
to deliver improvements from the top down. We are starting to see leaders setting the vision for radical change in how universities do business.

Lean implementations in universities would be broadly familiar to practitioners from any sector. Lots of academic institutions are applying lean principles to their back office administrative processes. One of the next challenges for lean in universities lies in engaging with how learning happens and how research is generated, moving beyond lean service in universities to a truly lean education.

Where lean implementations have worked well in university contexts they have embraced a dilemma: tailoring their approaches to the HE sector while remaining true to the principles behind lean.

What does this mean? Well, there are number of different “methods” an organisation can adopt, but the nature of the sector means that there is an inescapable debate and many institutions find it hard to accept and integrate these fully-formed approaches wholesale. Not to say that that can’t happen, but there is the danger that the things that make higher education function well, creativity and innovation, means debate is to be expected and could even be embraced.

Respect for people is where the real challenge lies. Often universities are a high-pressure and competitive environment, in a sector where being a nationally-recognised thought leader is a minimum level of achievement for academic staff. When under pressure, respect for people is often the first thing to go, even though we know it is the foundation for continuous improvement.

**Batch-and-Queue Education**

Focusing on a practical rather than theoretical vision of a lean university, a number of embedded non-lean ways of working, unsurprisingly, abound. Perhaps we have already touched on the most obvious: that universities are deeply tied to batch-and-queue in their annual cycles of teaching.

This inefficiency happens throughout the length of the degree, each year of the degree, indeed each semester. It drives huge burden and unevenness in how processes are managed.

Some universities are experimenting with breaking down the batch-and-queue processes as much as they can. However, outside the delivery of online learning, few universities are able to move to a truly one-piece flow for undergraduate teaching.

**Supporting Factors**

The prospects for lean in higher education aren’t bleak, as there are lots of factors encouraging universities to embrace lean practices.

Universities are environments that can really nurture innovation and provide the space for creative solutions. They often have expert staff in lean and similar approaches that can support activity. There is a growing support for lean approaches across the sector, albeit this is at early stages.

The higher education sector is long lived, stretching back to the middle ages, and has had to be able to cope with change in order to survive. Part of the reason behind its ability to survive is perhaps the fact that universities have long been in the business of what has more recently been termed “co-creation of value” with their stakeholders, which brings us back to the customer debate.

**Next Steps**

At the moment, there is a lot of discussion around integrated lean-type services and project management offices. The idea is to combine the redesign and implementation of new processes with the synergies that brings.

This looks like a great solution: mixing the benefits of a well-implemented lean-styled solution to ensure there is a slick process with the benefits of good project management to control
the implementation. However, implementation is often where lean-type interventions have been documented as coming unstuck in HE.

An integrated problem-solving approach looks good for the staff who manage it, and easy for those who use the services. However, when I put my systems thinking hat on, I wonder how this helps with root-cause problem solving and with embedding the behaviours required to maintain healthy staff organisation. The danger is that these elements will not be seen as the core parts of business-as-usual that they are, for all staff to innovate and improve, but as the function of a few specialists.

Of course, there is a practical problem in making this happen, as having some individuals leading change is a logical necessity. As someone charged with bringing about lean in higher education, this is an issue of which I am constantly aware. How can I make sure that the interventions I lead allow the knowledge to be passed on to the people I am working with each time?

Here is the next challenge I see for lean in higher education: how to integrate the methodology in how we work, using the experience of analysis and the creative nature of the sector as points of strength rather than limitations, while moving towards lean as an enterprise-wide activity, as opposed to the preserve of a few appointed staff.

In order to do this, a lean leader needs an unusual mindset and the desire to see the organisation improve. However, they must not be seen taking any of the credit for success, instead taking the fall for failure. Perhaps this is the paradox of leadership: power is demonstrated by giving it away rather than flaunting it, which opposes our natural survival instincts of keeping things to ourselves when under threat. Higher education faces the same leadership challenges as any industry.

Looking back, despite the quirkiness of universities, there have been many examples of lean programmes increasing value and minimising waste in higher education, leading to a growing movement across the sector. No longer are there so many blank looks when I describe the importance of always innovating and always respecting people.

How lean interacts with universities still has the potential to surprise. The sector is at an early stage in its journey, but it is already clear that there is a lot that the methodology can do to support it, perhaps without quite as much waste of resources. More importantly, without the waste of human potential.

**FURTHER READING:**
- Bob Emiliani’s *We Can Do It!* and *The Lean Professor*, The CLBM, LLC.
I mean that’s what the Gemba is all about, right? **Getting real.** And that’s exactly what AME TORONTO 2013 is doing. For the first time ever at an AME conference, four of the world’s leading lean thought leaders **Jim Womack, Dan Jones, John Shook** and **Mike Rother** will each share real value stream experiences and present these lessons on stage. **Don’t miss it!**

We pride ourselves in providing a solid learning experience at an unbelievable price. If you don’t learn at least one new idea in Toronto that you can bring back to your organization, we’ll refund your entire registration fee. We have been offering this guarantee for the last three conferences and have never had a single refund request. We think that speaks volumes about the value attendees have received.

**SAVE 5%** on all registration prices for attendees from the United Kingdom and other international destinations, visit ametoronto.org.
Jon Tudor: What is the main purpose of the Association for Manufacturing Excellence (AME)?

Dale Gehring: AME is a not-for profit organisation that supports more than 4,000 senior and middle managers who wish to improve both their organisations and their personal performance. Our purpose is to inspire a commitment to enterprise excellence through experiential learning by bringing people together to share, learn and grow.

JT: AME has been operating for more than a quarter of a century. What has been the main reasons for its longevity?

DG: One of our core values is volunteerism and over the years this has been a key to the success of AME. This is an organisation run and driven by volunteers. They have a passion for improvement and come from all areas of industry, consultancy and academia. In total we run more than 100 seminars, conferences and events across North America, and our annual international conference attracts participants from more than 30 countries. People volunteer to develop their own capability and to also develop the capability of their people. Looking outside from their organisation is one of the best ways in accelerating their professional development and own organisations. What all of our members

Dale Gehring is Chairman of the Board at the Association for Manufacturing Excellence (AME). Based out of Portland, Oregon, he is a typical AME member. His day job is a senior lean practitioner, while outside of this he spends countless hours and days volunteering for AME, supporting AME members in advancing themselves and their origination through the promotion of lean thinking and enterprise improvement methods. In this interview he speaks to Lean Management Journal’s Jon Tudor about the volunteer network and introduces some major changes happening at AME.
In our interview with Dmitriy Gorkin, President and CEO of AME, we explored their passion for excellence and how they attract volunteers, as well as the challenges they face while running their international conference.

JT: How have you been able to continually attract so many volunteers?
DG: Engaging and welcoming everyone involved with AME is a core value we all share, and this too has helped us to continually attract volunteers. For many of them, the personal interaction is core to their involvement, whether this be through the mentoring relationships that happen or the networking events. A key area is the benefits volunteers receive. Whether you are a business leader or middle manager, you are able to speak to people who have the same challenges, peer to peer, and they all have a passion for lean and excellence. People also feel good about helping others find answers to the challenges they have, and this feeds on itself.

JT: In October you have your international conference, what is the main challenges of running this event?
DG: What the annual conference does for our volunteers and members is get everyone charged up. The whole week feeds the soul for anyone who is passionate about enterprise excellence, and it works. The major challenge is actually finding ways of sustaining that energy and charge once the members return to their region.

JT: What changes have happened at AME?
DG: Like many organisations there can be a risk of, at times, being too internally focused. So 18 months ago we made extra efforts in going out to our members and looking at ways of broadening the sphere of influence and understanding of AME members. We interviewed and consulted on a large scale and as a result we enhanced our vision to create an entire system that supports enterprise excellence. One research finding in particular was a real concern held by the majority of our members. It was of the ongoing skills shortage in manufacturing, and the image of the industry in determining that manufacturing is actually a positive career choice. As a result of the research we have also created programmes such Adopt a School, in which we promote manufacturing as a desired career path at a local level across the AME regions.

JT: What are the biggest challenges faced at AME?
DG: Focus and selection of activity is the biggest challenge as we have so many ideas and opportunities we can pursue. As the majority of members are manufacturers, we are used to creating and making things, we know our combined energy and capability means that when we put our mind to it we can achieve literally anything. Therefore, the problem then comes when deciding what we do and what we don’t do. The focus on the selection of activities is probably our biggest challenge.

Our purpose is to inspire a commitment to enterprise excellence through experiential learning by bringing people together to share, learn and grow.

FURTHER INFORMATION:
- AME membership is available in the USA, Canada, UK and Australia, for more information visit www.ame.org.
- For more information on attending the AME international conference which runs from October 21-25, please visit www.ametoronto.org. Attendees outside of North America can receive a 5% booking discount.
The Porsche Lean Transformation Programme

Porsche Plant, Leipzig, Germany

This unique two-day residential course by Lean Management Journal and Porsche Consulting takes you to the heart of world class manufacturing and logistics. Delivered on site at the most advanced car production plant in the world, this will provide manufacturing executives with the opportunity to really transform their own manufacturing and logistical operations.

Designed for senior manufacturers and improvement leaders, the two-day training programme features:

• In-depth training and insight into the process, structure and approach of Porsche’s internal Continuous Improvement Programme
• Exclusive access and private tours of Porsche’s world class assembly and logistical operations
• Direct access and learning from senior managers and experts from Porsche AG and Porsche Consulting
• Hands-on simulation activity of lean production and logistics
• Insight into Porsche’s supplier development, logistics approach and implementation
• Understanding the behaviours of the operational leadership team to sustain lean manufacturing
• Porsche Race Track Experience – your chance to drive several high performance cars around purpose built race circuit used for F1 testing

"10 out of 10, the leadership training and the logistics simulation workshop were impressive, really benefited my lean thinking"

Group Trucks Operations Manager, Volvo Trucks, France

For full details visit: themanufacturer.com/porsche2013, call Benn Walsh on 020 7202 7485 or email b.walsh@sayonemia.com

Porsche Consulting
It is well known that over the last decade, traditional media companies have struggled to make their financial models as innovative as the products that they offer. Many commentators and the media companies themselves have struggled to formulate successful strategies to fight against the tide of customers expecting more for less or, in many cases, more for nothing.

At the same time however, the media industry has often neglected the need for improved efficiency and ignored a customer-focused approach to decisions. Although SayOne Media is the publisher of the Lean Management Journal, much like many media organisations, we have much to learn from the best in the business when it comes to lean. However, over the next 12 months we aim to take some strident steps towards improving our business and our customer service.

The first project we have undertaken has looked at the subscription process for this journal. Using the style learned in the OEE course, we have completed a process map of the existing subscription related activities and compared that to what we would like for an ideal process. We have uncovered a number of unnecessary steps and opportunities for mistake prevention.

One of the obvious areas for change is that at present we do not offer an online payment system for LMJ. That decision was made because of an assumption that due to the corporate profile of LMJ subscribers, most would prefer to be invoiced. This however has proven not to be the case with credit card payment requests, which are currently taken over the phone, having steadily increased over the last 12 months to now represent nearly 50% of orders raised.

Also, customers generally expect immediacy when it comes to accessing digital content for which they have paid. As a result, it has become clear that an online payment system which integrates with the membership system would not only provide this immediacy but would help reduce the workload for the accounts department. Ideally we would then also like to integrate the payment system directly with our CRM system to ensure we have a single source of information, but this will likely take place at a later stage.

In addition to this, we have also begun to create a company-wide competency/training grid which clearly demonstrates whether individuals require training, are currently undergoing training, are competent, or are capable of providing training. This has revealed a number of areas within the business where more training is required including the process for delivering digital material across our various publications.

SayOne Media is hoping to develop processes alongside innovative products to deliver the best content and user experience possible. While we have a long way to go to meet the high standards we have set for ourselves we are well underway on our lean journey.

Following on from last month’s report on the LMJ team’s attendance of the OEE Lean Practitioner course, Tim Brown reports on how the techniques learned during the course are being applied to current continuous improvement projects at SayOne Media.
Sales & Operations Planning Seminar and Site Tour
Draeger Safety UK

Draeger Safety UK, Blyth, Northumberland
21st November, 09:30 to 16:30

The Lean Management Journal invites you to a unique one day event that combines a site visit to an award-winning world class manufacturing plant with a hands on interactive seminar on sales and operation planning.

Key benefits from the day:
- See and hear from a world class manufacturing team that has achieved the IMECE Manufacturer of the Year 2012
- Understand more about effective operations and logistical planning from the team at Draeger
- Improve your own cross functional working between commercial and sales team members with manufacturing and operations through the S&OP activity
- Gain ideas and activity that will enable alignment and synchronization across all functions of your organization
- See practical examples of how this award-winning manufacturer benefited from the S&OP simulation activity

Draeger Overview
Dräger is an international leader in the fields of medical and safety technology. Our products protect, support and save lives. Founded in 1889, in 2012 Dräger generated revenues of around EUR 2.37 billion. The Dräger Group is currently present in more than 190 countries and has about 12,500 employees worldwide. Its manufacturing site in Blyth, Northumberland produces compressed air breathing equipment (including cylinders), escape equipment and associated spares and consumables.

Sales & Operational Planning - Overview
The fundamental part of any successful S&OP process focuses on planned actions and anticipated results. Companies that have an integrated business management process use the S&OP process to monitor the execution of the company’s strategies. Done well, the S&OP Process also enables effective supply chain management.

Draeger Safety UK Ltd participated in the S&OP activity, enabling it to highlight areas in the business that need improvement and to ensure all departments are working effectively together. The Lean Management Journal is delighted to have the opportunity to bring a unique day of factory tour and business simulation of S&OP.
Sales & Operations Planning Seminar and Site Tour
Draeger Safety UK

Morning Session
The morning session focuses on manufacturing excellence at Draeger Safety UK. Based in Blyth the factory designs and manufactures Air Breathing Apparatus with almost 400 on site. During the morning you will tour around the facility learning more about its journey to manufacturing excellence. You will hear from key operational staff as they explain their approach to world class manufacturing and achieved national recognition for engineering, operational and logistical efficiency.

Afternoon Session
During the afternoon you will participate in the same S&OP Business Game that Draeger Safety UK completed to help understand whether there was complete synchronization within their supply chain. You will be split into groups and a series of cases will be presented to you. The game simulates the kinds of problems that might arise in a company and which demonstrates the benefits of the features of a good S&OP process. The main objective is to show you how important it is to gain complete cross-functional collaboration and we believe this game will demonstrate the significance of exactly that!

Delegate Fees
Early Bird List Price
List price per person: £395+VAT
Early Bird price per person: £325+ VAT

Note: Due to the sensitivity involved in site visits, the host site reserves the right to omit any delegate or delegates from the site visit. Please contact Jon Tudor, LMJ Editorial Director, if you have any queries regarding eligibility j.tudor@sayonemedia.com

*For the early bird fee you will need to book before 11th October 2013.
On blaming people vs the system

Jacob Austad from LeanTeam in Denmark reflects on Bill Bellows' article in the September issue of LMJ and reiterates the fact that a more holistic management view must be practised in order to tackle singular problems.

I admit it, I need to be challenged. I try to engage in discussions to see how “controversial statements” are reached, and I argue my case. But it all boils down to a constant strive to find new perspectives and to get new input for reflection and learning. Sometimes it starts with something said during a morning radio programme, a headline in a newspaper article or someone telling a story or simply asking “why?”, “why not?” or “what if..?”

My favourite Saturday morning radio show is a programme with three guests called The Monopoly. The panel discusses small, big, important and funny everyday dilemmas coming in from everyday people. The point of the show is to try and find a new perspective on a particular subject. The Monopoly just sits and discusses what could be done and gives advices on how to solve the dilemmas. The guests do not know the problems up front, and they only say what they are thinking, leaving it to the “dilemma owners” and the listeners to decide how to use The Monopoly’s input.

The issues are about everything happening in our lives and the premise is that everyone from time to time can do with an outside perspective. The good news is that the direct feedback, as well as follow up discussions via social media, gives high ratings due to the decent, outside-viewed advice from The Monopoly guests, who are able to see the issues from other perspectives using their own experiences and stories. Often it takes an outsider to bring us back on track, because outside viewers tend to see the system and not the individual silos.

I find it hard to disagree with Bill (and Deming and Ranney as well) when he describes the consequence of narrow objectives and the fact that problems all too often are tried...
solved with point actions apparently helping the business. All too often so called business objectives lead to sub-optimization, because each functional silo focuses on fulfilling its own targets and forgets to take a holistic perspective. My hypothesis is, it is also because of the way we tend to measure success.

I have the privilege of having a dear friend who worked for many years with Dr. Deming and she tends to remind me about a phrase from the New Economics describing the purpose for any organisation as:

The aim proposed here for any organisation is for everybody to gain – stockholders, employees, suppliers, customers, community, and the environment – over the long term

To me, this is one of the best descriptions of the power of systems thinking, and it furthermore tells us about the consequences if we try to implement simple short-term solutions.

Bill is absolutely right that we often only see the last straw as the reason, and fail to remember the actions and things leading to the last straw. Even though management literature is full of examples and good advice on how to deal with similar issues, any change tends to start with a burning platform – do something about it or be out of business. My argument is that this is a result of narrow silo-focused objectives, and more people should study and discuss causes of this problem and test theories in the hunt for real examples from across industries and environments of more end-to-end solutions.

From a customer perspective, trouble occurs when there is no flow in the process (regardless of industry). Studying and learning from Goldratt’s theory of constraint (ToC) might help - it should anyway, be worth testing:

- **Identify** where the information or product flow stops (identify the constraint)
- **Exploit** the constraint
- **Subordinate** everything else to the exploitation decision
- **Elevate** the constraint
- **Repeat** the above steps for any new constraint created

The entire system needs to be aligned in regards to speed, as any misalignment results in stoppages (lack of flow). If everybody does not gain, there is a constraint somewhere in the system and it needs to be handled, otherwise we end up with the last straw.

Working with business development and process optimisation, I find the best results emerge when there is a vision guiding and testing the ideas and proposed solutions. The aim is for everyone to gain and, therefore, we need a method to ensure we do not mess up the bigger picture solving a specific (local) issue.

I do not believe there is one right solution fitting all, and therefore we cannot just copy tools and solutions without understanding the problem first. We can, however, show interest, study the system and test hypothesis of causes. The only prerequisite for this is a natural curiosity and imagination.

Imagine an organisation where everybody gains in the long term. What would it take to make your organisation like this?

Imagine a place where it would not come to the last straw. Why should it not be possible?

Imagine what we could accomplish if we help each other to have a holistic view and test our ideas in a small scale environment (laboratory) to see the consequences before we go large.

Imagine if there is no limit for learning. Maybe it is only about asking questions?

Imagine if we could keep an open mind and ask “what if...?”

Let’s test our imagination with a simple question – Who is on the team?

Maybe it leads to a new question about boundaries...

Thanks to Bill for challenging our thinking and revealing elements of Deming’s thinking in a new perspective. I really like the way you start the debate and open our minds to see things through new glasses. Please continue.
Typhoon’s two-week drumbeat

Manufacturing is often all about the drumbeat. Takt time, how many units you must produce in an hour, a day or week to keep on schedule. Cars are measured in units per hour, jet aircraft per month.

At BAE Systems Military Air & Information in Warton, Lancashire, Matt Heritage is responsible for the biggest stage of final assembly of the Eurofighter Typhoon, the multi-partner €90 million aircraft that is Europe’s first “dual role” fighter jet, capable of operating in air-to-air or air-to-ground missions. Matt’s takt is one Typhoon every two weeks.

“I’m not building a Range Rover Evoque every 45-seconds,” says Heritage, Final Assembly Operations Manager. “But, in terms of drumbeat, I need to deliver an aircraft every two weeks and 24 is a lot in one year. We’ve never been at this rate before, we’ve got it for some years and if we get export orders we’ll have it for some time to come.”

Simplify a fighter jet production line and it sounds straightforward. The fuselage, which arrives in three pieces, is screwed together. You fit the engines, pipes, electronics and all the clever stuff, in order. Test for wiring faults and hydraulic leaks. Test the engine works. Run flight tests and deliver it.

The takt of 24 aircraft a year makes this far more challenging. Each key stage has a very defined “start”. “We need to be loading the brotje [laser line] every two weeks, paint an aircraft every two weeks and sell one every two weeks,” says Heritage.

“It’s all about hitting start rates. If you hit the starts, invariably you will hit output. If you get a problem that might stop the line, it’s about solving the problem rather than moving the starts.”

For aircraft makers, takt time is as important as for car manufacturers. As well as the team’s professional integrity and obligation to the customer, there are financial penalties, including liquidated damages, for missing trading dates. The team’s annual bonus is calculated partly on hitting milestone payments, which align with taks. Everyone here is watching the clock.

The Build Line
Fuselage sections, known as major units, arrive from one of the four partner countries - Germany, Italy, Spain and the UK. Team Zero - there are three
teams - loads into a laser brotje, a facility that uses lasers to marry up the three sections accurately. “We use this as much for repeatability as accuracy, to avoid a bottleneck,” says Heritage.

Wings are married here or in a separate area of the factory, depending on the brotje’s schedule. Once structural marry up is complete, the airframe is handed over to Team One, Matt’s team, for systems integration.

“Team One fit the pipes, the minor unit, foreplanes, the engines, missile eject launchers, the avionic trays, avionic boxes. We run a Dipma code test, running voltage through the aircraft to check there are no wiring faults, put hydraulic fluid into aircraft to check there are no leaks, check the ‘power-on’ system, ready for flight testing.” This stage takes about 12-weeks.

Teams within teams move around the aircraft, not vice versa. The team that fits avionic bay plugs and the Dipma code test, for example, will take two weeks, then move on to the next aircraft.

Team One hands over to Team Two, engine testing. Rolls-Royce, which makes the EJ200 engine as part of a consortium called Eurojet, is on-site full time. Flight testing, also at Warton, follows.

SCHEDULING MASTER CLASS
Matt Heritage’s job is defined by pinpoint scheduling of skilled people - 72 in his team, 150 in the facility - to hit start rates at the correct build Matturity, borrowing and lending resources when stages are behind the master schedule, without compromising build quality.

“I have capacity to discharge 2,200 hours of labour a week. I am getting 2,200 hours of achievement?” he recounts a typical daily thought. “Is it good achievement, or unscheduled growth i.e. ‘bad achievement’, which wasn’t in the plan?”

“So, I’ve scheduled 2,236 hours for Team One this week, more than normal, which means I have to hit all the planned load while next week hopefully I’ll have a lower load and I can deal with some unplanned work.”

To make this system work reliable, there is some buffer. For example, Team Two has a 12-week window in the plan, but they are configured to discharge in eight to 10 weeks providing they have a clean run of tests, when test equipment needs no calibration, etc. Team Two personnel with overcapacity could potentially help Team One with systems fitting.

Typhoon Assembly’s balancing act is that team managers have to be very parochial about their build stage, while having the altruism of working in a bigger team. “If Team Two can’t get a part to complete testing, I could take it off one of my aircraft, using my resource buffer to discharge some unplanned work for him, to keep him on programme. Dave [Team Two leader] is my customer.”

Within this variance of completion, ultMattey build Matturity between Team One and Team Two has to be at a level where Team Two can test an aircraft. “I measure myself at a product Matturity benchmark of 95%, where I can hand over a very good aircraft to test,” says Heritage. “At the moment I’m delivering at 89%-95%. I want to be near 100% by year end.”
Dr Michel Tétreault, President and Chief Executive Officer of St. Boniface Hospital in Winnipeg, Canada chronicles the hospital’s journey to becoming a leaner organisation with improved customer care. But as he describes, in order for the hospital to achieve its goals, the change had to start at the top.

In late 2007, St. Boniface Hospital’s executive team recommended a bold, yet simple lean transformation strategy to our board of directors – quality is the strategy.

Previous improvement strategies had had limited success. We were frustrated with our ability to sustain meaningful quality improvements. I was persuaded we could do much better by our patients. The Board overwhelmingly agreed this was the approach we had to take to improve care. This was not to be a project or a trial, but a way of doing business at SBH.

We started slowly. We went to see other facilities engaged in the process to learn from their experiences. We made it clear at the outset: staff, physicians, patients and families would be involved, and no employment would be lost as a result of process improvements. We explicitly stated this was all about delivering better care to patients.

Our goal was to rapidly improve results on SBH’s True North: satisfy patients, engage staff, do no harm, and manage resources. In the first years we focused on introducing lean tools to senior leadership and managers, and on learning to use them together. However, we were still challenged to sustain transformation gains despite being armed with a fully-stocked lean toolbox.

Today we recognise that in our eagerness to move forward, we were not always practising the behaviours we were preaching, and that tools are only as good as people’s ability to understand them. The answers could not be found in the boardroom. Change could only happen with the commitment and engagement of everyone at St. Boniface Hospital, especially frontline staff. We came to realise communication is about so much more than putting out messages - it is about listening. We learned to engage staff by listening to their feedback and responding to the information we heard.

One of our most successful transformations involved the surgery programme, one of the first to introduce lean problem solving to several of its units at SBH. Surgery inpatient, pre- and post-operative units and clinics were spread over six floors throughout the facility, causing multiple movements for patients, staff, and families.

After 18 months of extensive lean problem-solving activities, we brought all 19 surgery outpatient flows together on one floor, adjacent to the operating room. This eliminated 15,000 elevator trips and multiple hand-offs, thus improving patient care. The “surgery on the move” project affected where and how staff work and the work they do. This could not have been made possible without early improvement efforts to prepare staff for the bigger changes.

Seeing surgery staff influence processes, make changes, and accomplish great
things proved to be a powerful motivator for all staff.

Two years ago we started to notice a culture shift at SBH. All employees - senior executives, directors, unit managers and front line staff - began proposing initiatives to improve care and, most importantly, these initiatives were increasingly focused on improvements linked to our True North.

Individuals who recently joined the organisation have commented on our culture, and on how things are different at St. Boniface Hospital.

Since 2008, more than 1,200 employees and physicians from all departments of the hospital have been involved in transformation activities. Our leadership team has grown to appreciate the benefits of being focused and clear, the rigour involved in addressing the right problem, setting targets, developing and attending to completion plans, monitoring results, and adjusting plans as needed.

We have developed clear mechanisms to hear the voice of patients, through the creation of a Patient and Family Advisory Council, daily leadership visits with patients at the bedside, satisfaction surveys, critical incident reports, and most importantly, patient and family participation during process improvement initiatives. Their voice is essential to our success.

We have accomplished some great things, and we are a better hospital now than we were five years ago.

We focus on what matters most, our True North. We have clear three-year goals and annual targets for each. We believe that if we satisfy patients, engage our staff, and do no harm we will manage resources and move closer to our vision of care.

In 2012, 85% of patients rated the overall quality of care they received as very good or excellent (our goal is to achieve a 95% or higher rating). Staff engagement is at an all-time high (scores are 58%, up from 41% before we began our lean transformation; our goal is 65%). Most importantly, St. Boniface Hospital has reduced occurrences of unexpected harm to patients by 30%. The Canadian national average for unexpected harm to patients is one per cent. St. Boniface Hospital’s average is 0.7%. Although we did not embark on our lean transformation journey to save money, thanks to our transformation efforts in 2012 we treated four per cent more acutely-ill patients with the same resources as the previous year.

The SBH board of directors focused senior leadership on sustaining our quality goals in 2012, and spread training and knowledge more deeply throughout the organisation. Working effectively with leadership and managers is central to our success. To this end, in the past year, we developed a management system to regularly and intentionally hold “catchball” conversations between senior managers and their direct reports. These conversations are an opportunity to focus and bring attention to True North, results achieved to date, and the actions and counter-measures to achieve breakthrough results.

Our focus for breakthrough is attending to patient flow throughout the hospital. Managers have identified patient flow as the top priority to positively impact patient outcomes, manage access to beds, and decrease length of stay from admission through to 30 days post-discharge.

Extensive improvement in several units will involve patients, staff, physicians and families and provide insights on the beginning-to-end journey of patients as they flow throughout the hospital. Ultimately, improvements will spread to all clinical areas and involve all areas in the hospital. The goal is to attend to the right steps at the right time, every day, to remove risks, delays and waste, and to provide the best possible outcomes for patients.

Lean is more than just words and a set of tools – it is becoming the way we do business. This journey is not without obstacles. I like to say we make great mistakes, and each is an opportunity to learn and do better. Our members of staff are passionate about patients, and are seizing opportunities to share their ideas and solutions to improve patient care on a regular basis.

When St. Boniface Hospital was established by the Grey Nuns in 1871, they were present in every department, every day. Lean transformation is helping us return to our roots and our traditions.
There is currently an expanding pool of events available for the development of the lean community. They offer both general and sector specific opportunities to renew your enthusiasm and gain new perspectives through communicating with lean contemporaries.

**THE LEAN STARTUP CONFERENCE**

*December 9-11, San Francisco, California*

The Lean Startup Conference brings together entrepreneurs from organisations of all kinds - including startups, established corporations, non-profits and government - to learn from each other. Through talks and in-depth sessions, the event will focus on real-world advice to help you grow faster. In addition, this year’s conference includes new ways to connect with other participants relevant to you. Speakers include: Cindy Alvarez from Microsoft; Kent Beck from Facebook; Reid Hoffman from LinkedIn. For more details and to register your attendance, please visit [www.leanstartup.co](http://www.leanstartup.co).

**AME TORONTO 2013**

*October 21-25, The Sheraton Centre, Toronto, Canada*

AME is the largest lean conference in the world, and this year’s line-up of keynotes promises to deliver, yet again, a memorable event. Dan Jones, Mike Rother, Jim Womack and John Shook - among others - will take to the stage and share their knowledge and experience with the audience. AME prides itself in providing a solid learning experience at an unbelievable price. Delegates who are not able to bring back to their organisation at least one new idea will receive a refund for their entire registration fee. For more information, visit [www.ameconference.org](http://www.ameconference.org).

**THE MANUFACTURER GALA DINNER & AWARDS CEREMONY 2013**

*December 4, Birmingham, United Kingdom*

This year’s awards ceremony is set to be another sell out event. Secure your table at this year’s awards and celebrate the achievements of your company and your team.

Join over 600 people at this prestigious black-tie event, as we’ll be celebrating the success of our finalists and revealing the winners of The Manufacturer of the Year Awards 2013. Guests will enjoy a drinks reception followed by a three-course dinner, awards ceremony and entertainment to the small hours. Make sure you book early to avoid disappointment!

If you are shortlisted, make sure you join us to enjoy your moment in the spotlight. If you didn’t enter this year or you are not a finalist, come along for a spectacular evening of industry celebrations and networking.

**ERP CONNECT**

*December 4, Birmingham, United Kingdom*

The right ERP software can radically increase the efficiency of your business, but there are a myriad of options, solutions and vendors and choosing the right one is absolutely critical.

Twice a year ERP Connect brings together the most significant ERP solutions providers in one place for one day. This is your unique chance to evaluate their solutions and match the key elements with your specific business needs. DON’T MISS IT.

Key Features
- Access to high quality conference content including the latest insights from technologists, academic research and industry case studies
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- One-to-one meetings between delegates and vendors addressing individual business needs

See more at: [www.themanufacturer.com/eventsite/erp-december-2013](http://www.themanufacturer.com/eventsite/erp-december-2013)
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Company sector (Please tick ONE box)

- Manufacturing
- Engineering
- Finance
- Construction
- Healthcare
- Local government
- Professional services
- Government
- Retail
- Military
- Other _____________

Employees at Site (Please tick ONE box)

- 1-50
- 251-500
- 51-100
- 501-1000
- 101-250
- 1001-5000
- 5001+

Employees globally (Please tick ONE box)

- 1-50
- 251-500
- 51-100
- 501-1000
- 101-250
- 1001-5000
- 5001+

Turnover (Please tick ONE box)

- Under £2m
- £50m-£99m
- £2m-£4m
- £100m-£499m
- £5m-£9m
- £500m-£999m
- £10m-£49m
- £1b+

Among the following topics, which are of most interest to you?

- Leadership
- Tools
- Coaching
- Employee engagement
- Visual management
- Event reviews
- Case studies
- Research
- Academic debate
- Standards
- Assessments
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