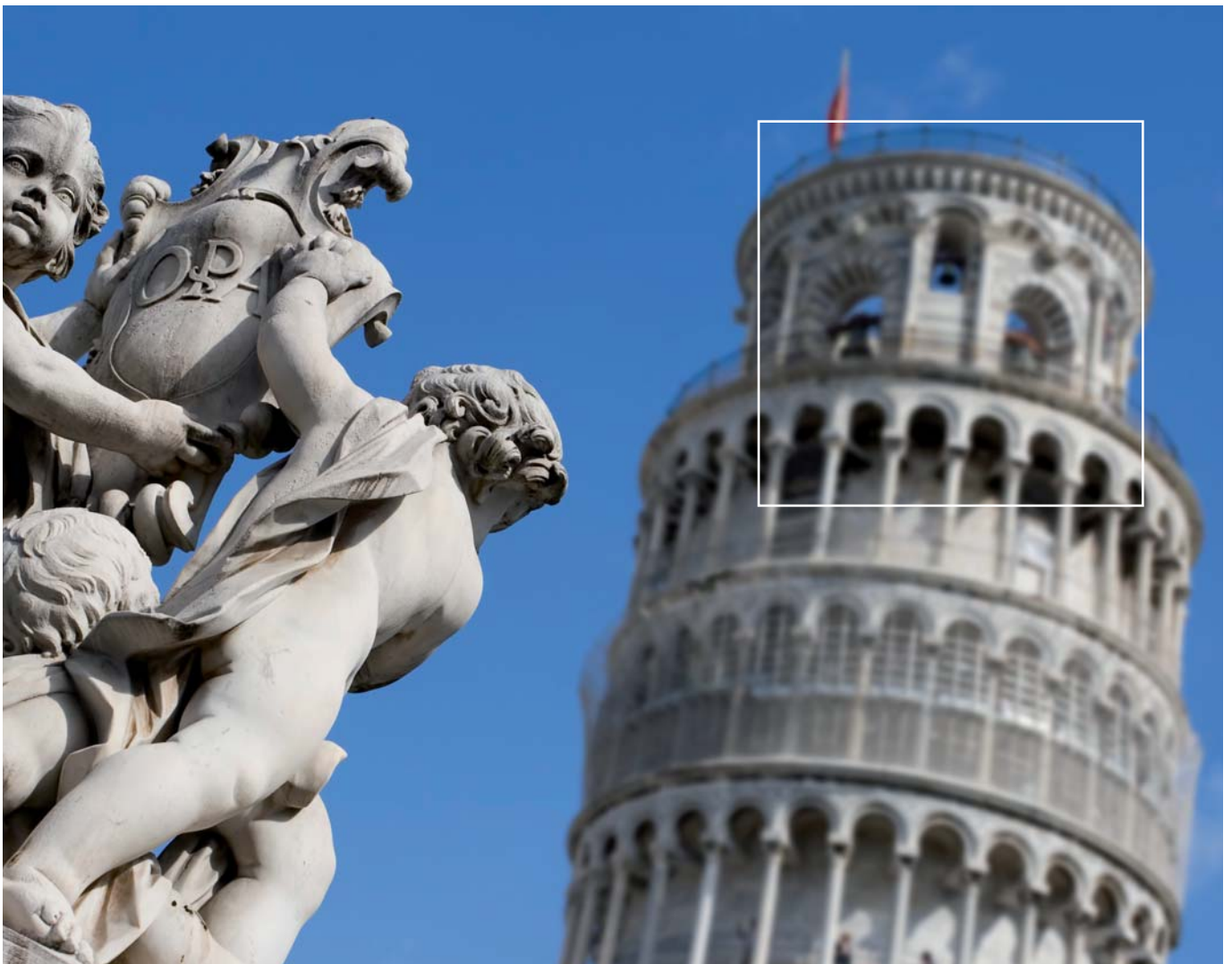


Lean

Straightened Out



Executive Summary

A proven approach – but where are the results?

Players in virtually every industry recognize the lean approach as a powerful way to boost performance by improving cost, quality and customer service simultaneously.

Central to the lean approach is its ability to mobilize people to eliminate waste, variability and inflexibility.

So why have so many companies failed to achieve bottom-line results when they embarked on the lean journey?

Because getting the best out of lean requires much more than mastering certain tools and techniques.

It demands focused commitment to lean philosophy and practices from board members, executives and shopfloor technicians alike. It calls for clear linkages between company strategy and lean initiatives. And it depends on changes in attitudes, culture and leadership as well as the adoption and refinement of particular tools and methods.

Everybody in the organization must be committed, engaged and persistent – it is a long-term voyage to excellence!

Lean history in brief

The concept, and term, Lean was created in the 1980's at MIT in a research study entitled "The International Motor Vehicle Program" (IMVP). This programme resulted in the book "The Machine That Changed The World" which is a comparison between Toyota and Western automobile manufacturers. The term Lean was chosen to best represent the revolutionary manufacturing, supply and product development processes adopted by Toyota. These processes claimed to need much less of everything; half the human efforts in the factories; half the manufacturing space; half the investments in tools; half the engineering hours for developing a new car. The Lean cars required half the inventory to be built and had a fraction of the number of defects. The underlying principles of Lean date back to the 1930s when Toyota invented the Toyota Production System (TPS) a stark contrast to Ford's original concept which accommodated only mass production techniques. The TPS allowed for both mass production and product variety which allowed Toyota to successfully meet the world's increasing demand for variety at low cost.

Key Differences

“Going lean” is essentially about how you transform your organization in line with a new management paradigm – the lean philosophy and approach. The transformation should take place in the whole value chain, from suppliers to distribution, in order to capture the full potential.

Lean is not about cutting the business to the bone. It’s about making it ‘fit to fight’ at every level – building the energy and engagement of employees from the shop floor and the office pool upward, focusing people on constant problem solving and keeping them open to change and flexibility.

Lean is famously an action approach, rather than an analytical approach. But the action needs to take place on five axes, in order for this powerful approach to deliver the required benefits.

A successful lean transformation relies on getting all these elements right at the same time: culture, leadership and people mobilization, as well as processes and tools.

At Arthur D. Little, we have developed rapid diagnostic and assessment tools to evaluate these elements in your company. These make it possible to then work out with you how to ensure steady progress in the required direction towards agreed goals along all five axes, at the same time, appropriately at every level in the company.

We work at every level of a client’s company to help establish the vision, install the skills, encourage the discipline, and transfer the knowledge and experience needed to make lean work.

“We work at every level of a client’s company to help establish the vision, install the skills, encourage the discipline, and transfer the knowledge and experience needed to make lean work.”

A structured, vertical approach

Our structured programme typically includes:

Workshops with top management to explore the potential of a lean thinking business model, and develop a shared vision for moving forward.

Value Stream Mapping to diagnose current process performance and identify change initiatives.

Support for application of lean tools in a pilot project or roll-out plan: e.g. ¹5S, SMED, TPM, JIT, KANBAN, Kaizen.

Establishing a clear understanding of the feasibility, drivers and barriers to change within the organization.

Definition of a change management strategy to deal with resistance to change.

Assessment of impact on the organization, culture and leadership needed to support lean thinking implementation.

Class training, on-the-job coaching, and post-project debriefing.

Setting up a company-wide operating management system to ensure sustainability of the approach, the culture and the results.

¹ 5S = Standardise, Sort, Sweep, Straighten, Self-Discipline, SMED = Single-Minute-Exchange of Die, TPM = Total Productive Maintenance, JIT = Just-In-Time, Kanban = pull-system, Make-to-Order, Kaizen = continuous improvement

Starting Out

If you've never tried a lean approach before, why not consider a pilot project focused on an explicit and measurable issue (e.g. lead time reduction, productivity, maintenance) which allows cross-functional collaboration. The focus can be manufacturing, logistics, R&D or sales & distribution.

With a pilot project, driven from the top, Arthur D. Little helps organizations to start applying and transferring lean methodologies and problem solving techniques across a large number of people in different departments, to achieve rapid results. These help to create a compelling argument for spreading the lean culture and methods more widely and effectively across the business.

“With a pilot project, driven from the top, Arthur D. Little helps organizations to start applying and transferring lean methodologies and problem solving techniques across a large number of people in different departments, to achieve rapid results.”

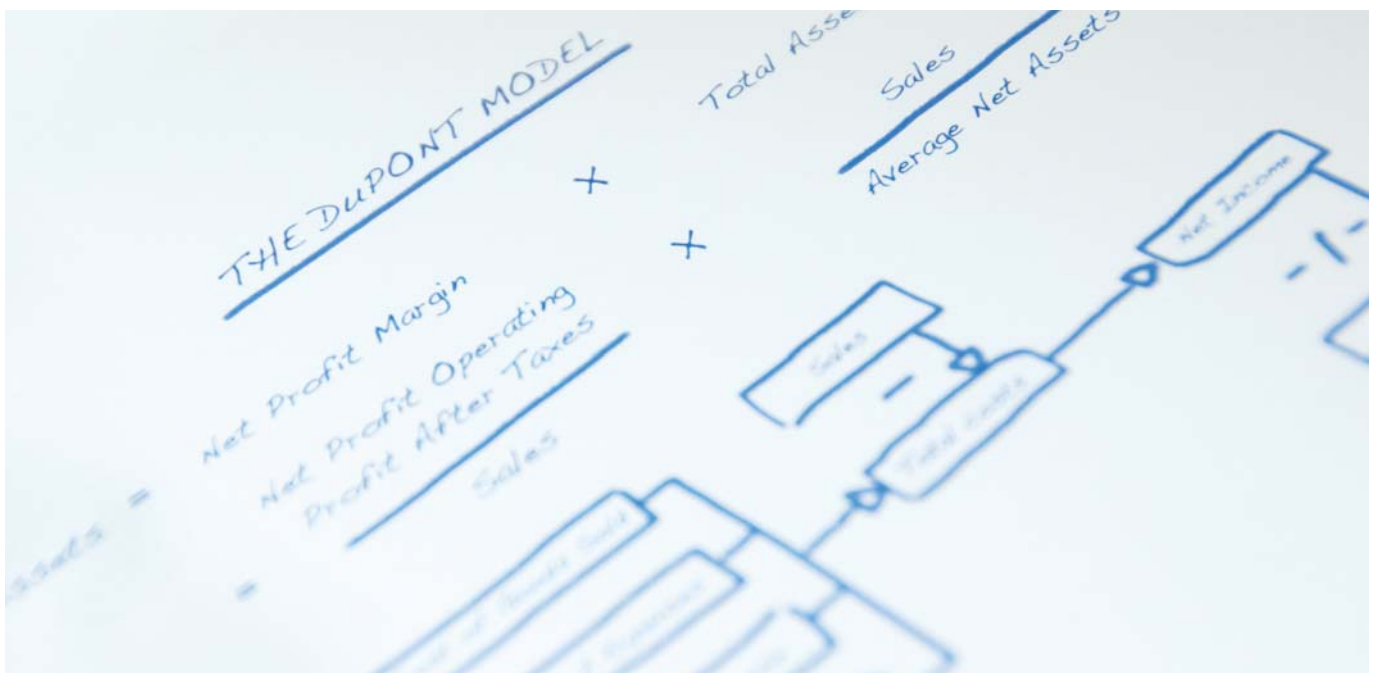
Doing it better

Where previously a lean approach has disappointed, we focus on achieving the vertical connection within the client organization – linking purpose, processes and people, and converting top-down leadership into bottom-up initiative.

The results include extensive employee participation, process streamlining and waste elimination. So clients achieve bottom-line results that are in line with corporate strategy and that can continue to be built on over time.

Employees are engaged and equipped to focus on creating and delivering value in the eyes of the customer. Decisions are confident and quick, planning is deliberate and clear, debates are constructive and conclusive. Errors and rework are minimized; delays and abandoned efforts are no longer 'business as usual'.

“Employees are engaged and equipped to focus on creating and delivering value in the eyes of the customer.”



Client Benefits

Case Study #1

For a major tire manufacturer, Arthur D. Little took part in a lean initiative at a production facility which eliminated downtime and increased equipment efficiency by 35%. Radically enhanced motivation in the workforce, coupled with rapid low-cost solutions, waste reduction awareness and a new culture of continuous improvement, all contributed to increased capacity at the facility, enabling our client to sustain ambitious market expansion.

“Radically enhanced motivation in the workforce, coupled with rapid low-cost solutions, waste reduction awareness and a new culture of continuous improvement, all contributed to increased capacity at the facility, enabling our client to sustain ambitious market expansion.”

Case Study #2

When we were asked to help one of the leading private healthcare companies in Europe to increase operational efficiency drastically, our approach to lean included top level workshops, Value Stream Mapping, and implementation support. We focused on helping the client to identify ways of reducing waste in processes, adapting their services to their customers’ perceptions of value, and fostering leadership and continuous improvement. The ten primary care units that implemented the program have increased their productivity by between 15% and 40%.

“We focused on helping the client to identify ways of reducing waste in processes, adapting their services to their customers’ perceptions of value, and fostering leadership and continuous improvement.”

Case Study #3

A world-leading provider of telecom equipment and related services with a handful of plants worldwide asked us to improve operational excellence and delivery performance. First we established awareness among board directors of the benefits of a corporate-wide lean improvement program. Then we worked alongside plant manufacturing staff to diagnose areas of waste, variability, and inflexibility and re-design manufacturing systems. Typical improvements included workstation layouts, balancing, bottleneck control, workplace organization, flexible workforce and team structures, and continuous flow manufacturing. Employee mindsets and behaviors also changed to support continuous improvement. As a result, the client is enjoying significant improvements in quality, cost savings – through reduced labor, inventory and waste – and customer delivery performance. The total productivity improved by on average 130%.

“First we established awareness among board directors of the benefits of a corporate-wide lean improvement program. Then we worked alongside plant manufacturing staff to diagnose areas of waste, variability, and inflexibility and re-design manufacturing systems.”



The Leaning Tower of Pisa

The Tower of Pisa is the bell tower of the Cathedral. Its construction began in 1173 and continued for two hundred years. The Tower was designed to be "vertical" and started to incline during its construction. During its construction efforts were made to halt the incipient inclination through the use of special construction devices; later columns and other damaged parts were substituted in more than one occasion; today, interventions are being carried out within the sub-soil in order to reduce the inclination and to make sure that the Tower will have a long life. In this story it is possible to find a meaningful constant, the "genetic code" of the Tower: its continual interaction with the soil on which it was built. Today's work for the safeguard and the conservation of the Tower with very advanced methodologies are designed to fully respect this constant.

To find out more

If you would like to explore a lean approach for the first time, or increase the benefits that lean brings to your organization, please contact your local Arthur D. Little office.

Arthur D. Little

Arthur D. Little, founded in 1886, is a global leader in management consultancy, linking strategy, innovation and technology with deep industry knowledge. We offer our clients sustainable solutions to their most complex business problems. Arthur D. Little has a collaborative client engagement style, exceptional people and a firm-wide commitment to quality and integrity. The firm has over 30 offices worldwide. With its partner Altran Technologies, Arthur D. Little has access to a network of over 16,000 professionals. Arthur D. Little is proud to serve many of the Fortune 100 companies globally, in addition to many other leading firms and public sector organisations. For further information please visit www.adl.com

Copyright © Arthur D. Little 2008. All rights reserved.

This report is printed on process chlorine free paper made from 100% recycled post consumer waste.

www.adl.com/lean

Strategy & Organization

Austria

Stefan Hoeffinger
T: +43 1 515 4132
E: hoeffinger.stefan@adlitttle.com

Belgium

Herman Vantrappen
T: +32 2 7617 208
vantrappen.herman@adlitttle.com

CEE

Stefan Matthaei
T: +49 89 38088 781
E: matthaei.stefan@adlitttle.com

China

Thomas Schiller
T: +86 21 644 788 66
E: schiller.thomas@adlitttle.com

France

Francois Deneux
+33 1 55 74 29 17
E: deneux.francois@adlitttle.com

Germany

Wilhelm Lerner
T: +49 611 714 8112
E: lerner.wilhelm@adlitttle.com

Iberia

Alberto Aragones
T: +34 91 702 7400
E: aragones.alberto@adlitttle.com

Italy

Mario Turner
T: +39 02 67376 240
E: turner.mario@adlitttle.com

Japan

Makoto Terai
T: +81 3 3436 8941
E: terai.makoto@adlitttle.com

Korea

Bonjay Koo
T: +82 2 720 2040
koo.bonjay@adlitttle.com

Malaysia, Singapore

Jeffrey Lai
T: +60 3 2164 6063
E: lai.jeff@adlitttle.com

Middle East

Thomas Kuruville
T: +65 6297 2300
E: kuruville.thomas@adlitttle.com

Sweden

Petter Kilefors
T: +46 8 5030 6542
E: kilefors.petter@adlitttle.com

Switzerland

Thiemo Rehlaender
T: +41 44 722 8925
E: rehlaender.thiemo@adlitttle.com

The Netherlands

Martijn Eikelenboom
T: +31 10 2018 815
eikelenboom.martijn@adlitttle.com

United Kingdom

Mark Mulcahey
T: +44 870 336 6616
E: mulcahey.mark@adlitttle.com

USA

Markus Lahrkamp
T: +1 212 661 2500
E: lahrkamp.markus@adlitttle.com

Operations Information Management

Austria

Stefan Hoeffinger
T: +43 1 515 4132
E: hoeffinger.stefan@adlitttle.com

Belgium

Franck Herbaux
T: +33 68785 1279
E: herbaux.franck@adlitttle.com

CEE

Carsten Vollrath
T: +41 44 722 8919
E: vollrath.carsten@adlitttle.com

China

Kurt Baes
T: +86 21 6447 8866
E: baes.kurt@adlitttle.com

France

Raymond Amour
T: +33 1 5574 2935
E: amour.raymond@adlitttle.com

Germany

Roswitha Terteia
T: +49 211 86090
E: tertea.roswitha@adlitttle.com

Iberia

Juan Vera
T: +34 91 702 7400
E: vera.juan@adlitttle.com

Italy

Mario Turner
T: +39 02 67376 240
E: turner.mario@adlitttle.com

Japan

Hiroshi Shimizu
T: +81 3 3436 8918
E: shimizu.hiroshi@adlitttle.com

Korea

Allen Song
T: +82 2 720 2040
E: song.allen@adlitttle.com

Malaysia, Singapore

Jeffrey Lai
T: +60 3 2164 6063
E: lai.jeff@adlitttle.com

Middle East

Thomas Kuruville
T: +65 6297 2300
E: kuruville.thomas@adlitttle.com

Sweden

Hauke Bossen
T: +46 8 5030 6548
E: bossen.hauke@adlitttle.com

Switzerland

Carsten Vollrath
T: +41 44 722 8919
E: vollrath.carsten@adlitttle.com

The Netherlands

Jeroen DeKort
T: +31 10 2018 817
E: dekort.jeroen@adlitttle.com

United Kingdom

Tony Court
T: +44 870 336 6674
E: court.tony@adlitttle.com

USA

Lee Laviolette
T: +1 281 404 9900
E: laviolette.lee@adlitttle.com