

For the last six years Brian Swain has been working on the translation of lean principles and lean thinking into a form that is relevant to the construction industry at the enterprise level. He is now working with clients on whole cloth projects designed to make that a reality. Here, for the first time, he outlines his ideas.

Lean Construction Delivery System

The challenge for construction today is to do right things right, consistently, confidently and coherently. High performers will tell you this is not easy – but it is doable and the benefits are huge. In 1998 the Egan Report *Rethinking Construction* suggested the industry learn from lean implementation in motor manufacturing and logistics.

The *Lean Construction Delivery System* (LCDS) is an evolving approach to construction management (Fig. 1). Covering business strategy deployed in commercial and operational activities to lean project delivery, LCDS systematically applies Lean throughout the enterprise and adapts Lean tools for use in construction¹.

Collaboration between everyone in the construction process – client, designer, contractor, suppliers and sub-contractors – is essential for high performance. A whole system – *client to end-user* – view of construction (Fig. 2) challenges the prevailing fragmentation in the industry and recognises that working with the client, producing information, procurement and the build are inter-dependent activities.

How it works

Strategy: Becoming a high performing Lean enterprise requires a clear vision, long-term business strategy and consistent and committed leadership supported by sound commercial knowledge.

Multi-year strategic development plans begin with a detailed annual plan linked to specific goals, objectives and measures for all areas of the enterprise. This is accomplished when long-term relationships are the norm and where everyone joins in creating the plan.

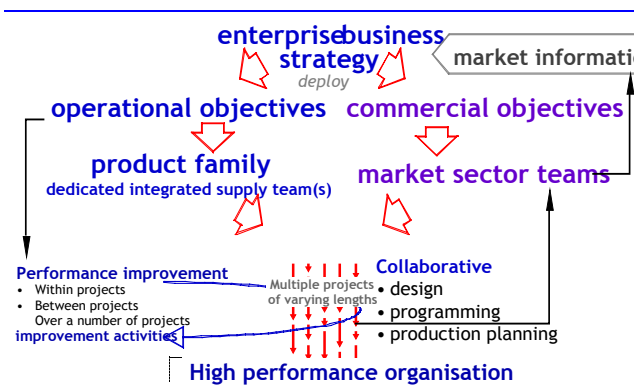


Figure 1: Lean Construction Delivery System (LCDS)

Operations: Lean creates value for customers that translates into supplier earnings. In construction the *Value Stream* is in the project, running from client brief to building hand-over. The

Delivery Safety and Environment (QCDSE) performance and develop Standard operating procedures (SOP)—the best safe practice. When people work together regularly they can innovate and improve their SOPs.

Commercial: Commercial objectives are deployed in a particular geography by market specific groups like health, education or retail. These groups are made up of customer facing design, logistics and pricing individuals who develop the brief and timeframe with the client. They involve the appropriate product family assembly teams (say concrete frame and retail fit-out) early in the discussions.

The aim is to create long-term, mutually beneficial and commercially transparent relationships focused on what is best value for the *whole* team including the client and for the whole project. Based on measures of QCDSE this approach is tough, professional, rigorous and fair – but not soft.

Tools, Techniques, Methods: Lean development uses a wide range of tools for improving performance. Fig. 2 shows tools linked to an integrated view of construction. →p.3

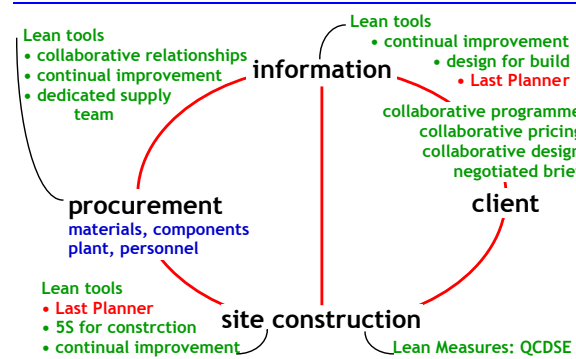


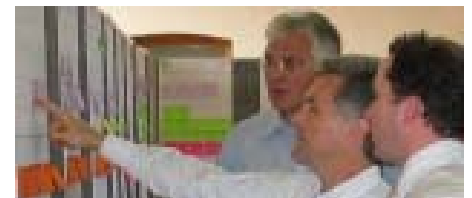
Figure 2: integrated view of construction

more efficient and effective the supply team the more everyone benefits.

Efficiency and effectiveness improve where there are opportunities to learn. This is more likely within product families – groups of products produced by the same people using similar processes.

Successful enterprises restrict their offering to specific shell and fit-out product families. Commercial teams (see below) seek opportunities to use them. For example retail and call centre teams might both want *big sheds*; housing and hotel might both specify *timber frame* structures.

It is the responsibility of each product family (big shed, timber frame, &c) to constantly improve their Quality Cost



Brian reviewing a programme with clients

Highlights on other pages

Olympus UK pioneers Lean Service	2
Preparing for retirement	2
Healing business relationships	3
Too busy to improve?	3
Mediation at work	3
Continental Rubiconians	4

¹ For more on lean see *Crosscurrents* Autumn 2002 or Womak & Jones 2003 *Lean Thinking*

Retirement: Enjoying the afternoon of life

Belinda Heys¹ enjoys helping individuals manage career transitions. She has specialised in career development since 1990. With **George Perry** she is offering a week's workshop on *Enjoying the Afternoon of Life: surfing transitions and discovering the new*. She writes:



Whether we enjoy our work or not, it has a strong formative effect on many aspects of our lives. Work brings us into contact with colleagues and clients, introducing us to a varied social circle, which includes people that otherwise we would never have met. It brings structure to our days, weeks and years and shapes how we see ourselves, giving us feelings of competence and the experience of engaging with the world. Without work, many of us feel dislocated and experience a loss of identity.

Because of this, retirement is often one of the most challenging of life's transitions. In our minds, retirement is often associated with *stepping back*, with the loss of our position in the world and with the thought that *it's all downhill from here*.

The good news is that the landscape beyond 65 holds a myriad of possibilities, joys and surprises. We can define, plan and manage it as creatively as we can our journey up to retirement. For example, many people these days are choosing *phased* retirement where work – part-time, project-based, starting a new business, mentoring, voluntary, consulting – still forms an important part of their life.

How we each plan and shape our retirement years is very individual. The following questions can help manage the transition into retirement:

- *What do I want to do while I still can?*
- *What is most essential to include in my life for the future?*
- *How shall I live the rest of my life?*

Essential elements to consider are: the social side of life (family, friends and beyond), how I wish to engage with the world, what are the new challenges or new skills and knowledge that I would like to take up or learn?

According to Jung *we cannot live the afternoon of life according to the programme of life's morning*. In the later years of our lives we are challenged to find new truths, new ideals, to engage with the world, and to transform aspects of ourselves.

Enjoying the afternoon of life: 10 - 16 July 2005, Emerson College, Forest Row, East Sussex. Further information from Ian Lawton on 01342 822238.

¹ Belinda was married in the summer so you may know her as Belinda Hammond.

Action Learning in the East

In association with our good friend and colleague Otmar Donnenberg, **Steve Briault** has begun a fascinating project with **Raiffeisen International**, a banking group with its Head Office in Vienna and subsidiary banks in fifteen Central and Eastern European countries. The programme brings together senior executives from Austria, Kosovo, Croatia, Hungary and Romania for a nine-month *Action Learning* process facilitated by Steve. If this pilot is successful, more such groups may be started to support managers operating in these rapidly-developing and challenging markets.

Olympus UK pioneers Lean Service

Steve Briault has been working with the UK subsidiary of Olympus, introducing the Lean approach to the end-to-end process of supplying scientific equipment. Besides its well-known range of high-quality cameras, binoculars and voice recording products, Olympus also produces and sells scientific and medical technology.

Steve led a pilot project in their Microscopes Division and demonstrated the ability of the Lean approach to identify substantial improvements – from reducing the need for customers to chase orders to reducing internal hand-offs and process complexity. The approach is now attracting interest from the wider Olympus organisation. Steve recently completed a full set of materials for use in the further implementation of Lean Service – an introductory booklet, an improvement project manual and toolkit, and presentation and training materials for project teams.

R

Steve is also leading process improvement in a UK insurance company and working on the **Lean Service Delivery System** version of LCDS (page 1).

Lean steel, lean housing

Brian Swain has been asked to build on his success with **Corus Packaging Plus** in The Netherlands and take the lean message to Redcar Steelworks in Teeside.

R

Brian is also helping develop lean house building with colleagues **Rachel Vincent** and **Charlie Wigzell** in West Yorkshire.

Last Planner

Since the article on *Last Planner* in the last *Crosscurrents* the number of companies using Last Planner in construction, one-off manufacturing and similar applications continues to grow.

In construction we have helped **Warings, Pearce**, companies in the **Kier Group, Crown House Technologies** (now part of Laing O'Rourke) and others implement Last Planner. Several existing clients have joined with us to get the message to others in construction at **Construction Productivity Network** events.

More information from **Alan Mossman** 01453 765611.

Customer service game plan

Several thousand managers in at least five countries have experienced, enjoyed and learned from Rubicon's *paper funnels* manufacturing process simulation. This dramatically illustrates the benefits of key lean concepts such as **pull** and **single-piece flow**, and allows participants to see **line balancing**, **visual management**, **integrated quality assurance** and **cell design** in a simple, quick process laboratory.

Although the funnel project is well received in all business sectors, we have long intended to develop an equivalent specifically for *customer service* contexts. With the help, support and patience of several clients and colleagues, we now have a design for this new simulation. It includes both call centre and back office environments and shows how lean principles transform performance and customer satisfaction. We will be using it both in-house and in public seminars from early 2005.

As Dan Jones, co-author of *Lean Thinking* says, *People learn from projects, games and stories*. Look for stories of how it generates learning - and improvement projects - for our clients in future *Crosscurrents*.

Too busy to improve?

“We’d really like to do this project, make these changes, start this learning programme, but I don’t know how we’re going to find the time...”

Among the many challenges involved in our work of trying to help organisations change and improve, this is one of the most common and intransigent problems. So many people are constantly over-stretched and find it genuinely hard to take time out to reflect on the *what, how and why* of their activity. Reflection is always an essential first step in any change process that is to be more than merely reactive. Whether it takes the form of *current state mapping*, seeking and digesting feedback or an exploratory dialogue about strategy, creating a certain distance from immediate pressures is a pre-condition for any consciously-chosen development.

Of course, reacting to pressure can be addictive, reflection and change can be uncomfortable, and lack of time can become a convenient excuse for continuing current patterns. Nevertheless, in most cases the difficulty is an objective reality. One cause of this is the common fallacy that efficiency means having the bare minimum of people to cope with the workload. Sometimes *lean* is *mis*-interpreted as a method for achieving this. It is not. It is a way of ensuring that everyone has enough time for what they need to do - including learning, change and continual improvement.

As consultants, although we may feel frustrated by the time constraints expressed by our clients, we are of course subject to exactly the same pressures. We (Rubicon) plan regular *development days* for ourselves, to exchange experiences, study together, and develop new

For construction *Last Planner* is essential. It can be used from the outset enabling the *flow* of design and assembly to be agreed with the whole team and coordinating other tools to improve the way work is done.

Conclusion

LCDS is a structural and operational approach bringing successful Lean methods into construction.

It offers a whole enterprise/whole systems approach to create the desired high performance. Four key structural features effectively align business objectives and create concerted business

Building and healing business relationships

For fifteen years now, Rubicon consultants have built up a strong track record of successfully training, coaching and facilitating negotiators from a wide range of organisations, from public utilities to banks, manufacturers, unions and top civil servants. **Steve Briault** and **George Perry** have specialised in helping managers resolve inter- and intra-organisational issues and conflicts, using principled negotiation and mediation techniques.

These simple yet profound methods help transform stuck or tense relationships into constructive co-operation benefiting all concerned. In many cases we have worked with both sides to improve the process and optimise the outcomes.

The new **Rubicon Negotiation Clinic** offers a range of seminars, advice, coaching and master-classes for groups and individuals at our new offices (see back page) close to Gatwick airport. You can ask for advice by phone and email and we’ll publish an e-newsletter from early 2005.

Do tell us what you want from the clinic and let us know if you want to receive the negotiation e-newsletter – negotiating@rubiconassociates.com

ideas and methods: but what happens when a short-notice, high-level meeting with a prospective client clashes with these dates - or the deadline for a crucial project report or presentation approaches?

One can only admire the courage and foresight of managers who do carve out the time to reflect and to undertake genuine new initiatives. In spite of what some consultants or vendors might suggest, change (like not changing) always involves risk and outcomes can never be accurately predicted in advance. Time is a scarce resource, and the strategy for investing it has to be both prudent and creative. Investing time in improvement should not be the privilege of only a few specialists: in principle, every department, every team, every job should be designed so as to allow time, not just for “training”, but for regular participation in activities which contribute to enhancing and transforming the work. What could be more important to be busy with, than this?

R

Mediation works

Who do they think they are - do they think we’re stupid! They’ve taken us for a ride - we’ll get them back!

Whether between neighbours or nations, colleagues or companies, conflicts are generally costly – financially, emotionally and timewise.

The road to litigation often makes the conflict worse and leads to less than satisfactory results. Dealing with conflict directly and quickly can prevent it becoming positional, escalating into a stand-off and even reaching a kind of mutual destruction.



development year on year:

1. clear business strategy
2. commercial implementation of the strategy
3. strategically aligned product family delivery systems
4. continual improvement.

Companies are taking up this approach with growing success and effectiveness. More and more clients with an ongoing need for construction are demanding that their suppliers use Lean. Construction is changing – slowly now, but with a quickening pace.

brianswain@rubiconassociates.com

01892 771042

The parties to a mediation can resolve their differences themselves with the help of a third-party mediator. The process enables both sides to feel sufficiently empowered and acknowledged to reach their own solutions based on their real interests: *win-win* agreements that stick. This is particularly important for long-term relationships such as partnering projects or customer/supplier contracts.

George Perry provides our mediation service. He is a qualified mediator and offers a balance between the legal and relational aspects of dispute resolution. He has experience of resolving disputes in a wide range of issues: commercial contracts and industrial relations; personnel; schools and special education; medical practices; homelessness and housing; separation and family law.

For an informal discussion about alternative dispute resolution contact George on 01452 813262 or via the office.

R

Lean Construction Delivery System – from page 1:

Rubicon offers:

Specialist consultancy:

Lean transformations
Value Stream Development
Organisation, Team and Job Design
Coaching
Negotiation
Mediation
New Product Development
Personal, Vocational and Career
Counselling
360° Feedback
Lean Service
*including lean applied to health,
financial services, government.*
Lean Manufacturing
Lean Construction

Integrated learning:

Lean Construction Delivery
Last Planner
Supply Chain development
Negotiation Clinics
Career transition
Management Development
Value Stream Leadership

*These may be programmes, seminars
or workshops*

Rubicon is:

Steve Briault (Director)
stevebriault@rubiconassociates.com
Brian Swain (Director)
brianswain@rubiconassociates.com
George Perry
georgeperry@rubiconassociates.com
Belinda Heys
belindaheys@rubiconassociates.com
Jan Swann
janswann@rubiconassociates.com
Andrew Scott
andrewscott@rubiconassociates.com
Alan Mossman
alanmossman@rubiconassociates.com
Andree de Miranda (NL)
andreedemiranda@rubiconassociates.com
Ton Hodes (NL)
tonhodes@rubiconassociates.com
Christian Lucke (DE)
christianlucke@rubiconassociates.com
Joan Simons (Administrator)
joansimons@rubiconassociates.com

Rubicon Associates

Hodore Farm
Parrock Lane
Upper Hartfield
East Sussex
TN7 4AR
01892 771042
fax: 01892 771039
info@rubiconassociates.com
<http://www.rubiconassociates.com>

Continental Rubiconians

We have long collaborated with a range of overseas colleagues. This year three consultants, two in The Netherlands and one in Germany, have joined us. We are delighted to welcome Christian, Andree and Ton to Rubicon and look forward to working with them.

Andree de Miranda

For the last three years Andree has advised clients in Germany and The Netherlands on Lean in sectors as diverse as automotive parts suppliers, hospitals, courts of justice and municipal social security departments.



He sees employees as the real experts on work improvement. Coming from the workers themselves it is more likely to be sustained in the long run. He facilitates this with action learning programs aimed at direct improvement of work processes, where learning Lean principles and optimising the ways a team handles ideas for improvement go hand in hand.

Based in Zeist in The Netherlands, Andree is one of the founders and a member of the board of the Netherlands Lean Initiative (NLI). He studied political science at university and then worked as an organisation and IT consultant in a large Dutch bank.

Ton Hodes

Ton has worked on Lean transformations in industrial, service and municipal organisations since 1994. In 2000 Philips asked him to help compress the one-off unpredictable new product development process. Applying Lean principles led to an 80% reduction in lead times at Philips and an innovation award for Ton. He is now keen to apply Lean and Last Planner to other complex project management situations.



Ton is member of a development group for concepts and ideas in Lean Project Management and, like Andree, a founder and board member of NLI.

Christian Lucke

Christian is an economist and works as an organisation development consultant. He has been advising and accompanying his clients in complex change processes during the last 14 years. He integrates the development and optimisation of working processes with company structures and the development of the skills and abilities of managers and co-workers.



After living in The Netherlands from 1993 to 2000 he is now back in Germany and working in both countries. He is an active member of the NLI and of the Association for Social Development.

New Rubicon Office



Earlier this year we moved our main office in Sussex all of thirty-five metres, within the Hodore Farm estate. We are now proudly ensconced in a historic oast house that gives us space for meetings and seminars. The lovely rural setting continues to offer us welcome relief from the motorways, airports etc. where many of our working days start and end. If you haven't already done so, do visit soon. All our contact information is the same.

The new Office above where *Negotiation Clinics* happen (p.3): below a Rubicon quarterly development meeting in progress.



↳: George, Andree, Ton, Christian, Brian, Belinda all but hidden by Steve and Jan (Alan took the photo)

letting value flow

You may have noticed we have a new *strapline* - that short statement that appears below our logo on the front page. *letting value flow* talks about *how* we approach *development at work*. We know from experience that when our clients unleash value for their customers and enable it to flow more easily the process is developmental for all involved.