Last Planner

Collaborative design programming

Collaborative project programming

Relationship between predictability (measured as PPC) and profit

Making tasks ready

Securing reliable promises is critical

✔ Last Planner is used to manage design and construction production. It is also used for new product development, one-off manufacturing, including shipbuilding, and software development.

Lean Construction Institute UK
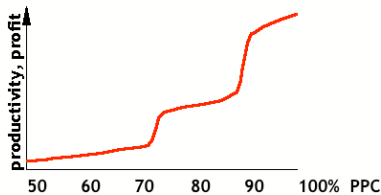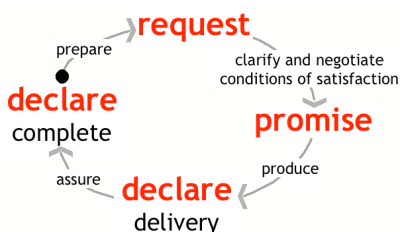building knowledge in design and construction

Making projects more predictable

The Last Planner™ System (LPS) manages the network of production relationships and commitments that are required to deliver quality projects on-time. Developed by staff of the *Lean Construction Institute*[1] in the US to make programmes and production plans more predictable, LPS builds trust and uses peer pressure as a critical motivator.

In Last Planner, it is the *last planners* [trade foremen on site, design team leaders] and project managers who produce the overall project programme collaboratively so that they understand the total process before they start; who work together to plan production week by week and ensure that work is ready to be done when required; who continually improve both planning and production.

Based around a small number of easy to complete forms, LPS is simple to administer using Post-it® notes, paper, pencil and a photocopier. On larger projects MS Excel® or a similar spreadsheet can help. Last Planner works alongside current project management software.

Benefits

When teams use LPS reliability of **production plans** improves. Profit and productivity grow with plan predictability (measured in terms of "PPC" — the percentage of work promised for a given day delivered on-time and to quality). Where LPS is not used, PPC is generally well below 50%. Scores of 70%+ show projects making good money. With integration and collaboration of a high order, top performing companies have learned to achieve 95%+.

LPS production planning processes encourage supervisors to plan and prepare their work and ensure that they know what subsequent trades expect of them. Critical issues between trades are worked out in weekly production planning meetings before problems arise on site or in the drawing office.

By ensuring information, pre-requisite activities and resources required to perform a task are ready in time, the **MakeReady** process ensures that production that is planned can be done. This in turn contributes to **safer working** and waste reduction.

[1]   http://www.leanconstruction.org

Collaborative Programming prepares the whole team to work together; they get their heads around the detail of the phase or project and agree how they will assemble the building or create the design, anticipate problems and identify unresolved details, see opportunities to reduce cost and or improve the quality; consider risks and develop countermeasures where they can. **Programme Compression** can reduce the length of a programme — one contractor took 6 weeks from a 19-week programme.

Generally LPS is linked to improved safety (50% fewer accidents in one study), reduced sickness absence, improved quality and delivery and a smoother running site.

We do it already

Most project managers do some or all of these things sometimes.

Last Planner is a formal and disciplined execution of a system of related elements. Major benefits come when the whole project team use all the elements rigorously over time. Greatest benefit comes when an integrated team use the elements consistently over a number of projects.

Signals that you are not *yet* doing it include:
- work being *pushed* into production by the programme
- continual fire-fighting
- sub-contractors with no sense of ownership of the programme
- work being done out of sequence
- operatives with little or no sense of what they will be doing the day after tomorrow.

BAA's Gerry Chick talks of the value of getting everyone round a table. He welcomes the recognition LPS gives to bad news. *Bad news*, he says, *provides good information. Bad news* early *is even better*. Last Planner enables bad news to surface before it becomes a major issue and can also provide signals of immanent crisis that may enable the team to head it off.

BAA, along with Waitrose, require the use of Last Planner on their contracts.

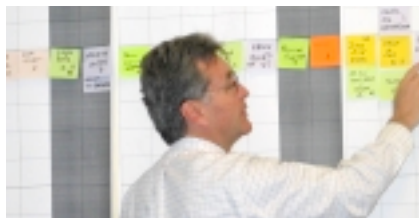Alan Mossman 01453 765611
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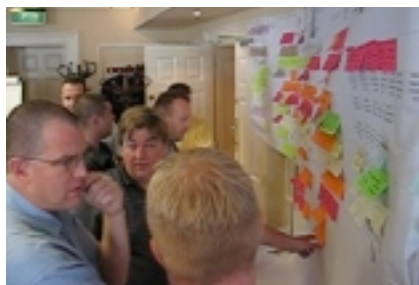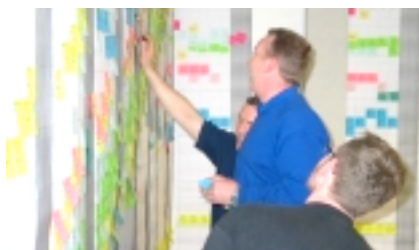

Programme compression

Collaborative programme on site

Production planning

First-run study to determine sequence and times

Collaborative re-programming to get a project back on track

What others say about the Last Planner System:

"This is an excellent production tool that **engages the supply chain in the project delivery process and ensures we harness their collective knowledge and experience**. I have seen it bring significant benefits. **Warings will apply Last Planner to all its future projects**."

Andrew Moore,
Process Development Manager,
Warings Construction Group

"Results have shown a **30% improvement in the rebuilding times for runways** since Last Planner was introduced, and predictability is greatly improved."

Gerry Chick, Supply Chain
Developement Manager, BAA plc

"The Last Planner System provides a management tool for our site supervisors to be able to **plan their workload on a weekly basis** and assess their team's performance on a daily basis. **This plan is based on facts, not a site manager's wish list**. And LPS gives our site supervisors a better understanding of the planning that goes into a job from the home office. This has created a closer working relationship between directors, managers, and on-site supervisors/foremen. Once the supervisors have understood the working of Last Planner it can reduce the frequency of senior management visits to site. Foremen are capable of handling situations as their decisions are based on facts that are documented weekly."

Nick Wain, MD, Image Decorations

"LPS is **an effective set of tools for leveraging the shared knowledge of all members of the project team**. Without LPS a project manager is guessing at what can be accomplished versus knowing how the job will get done."

Tom Richert, Linbeck Construction

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In the UK Rubicon Associates offer a **Last Planner Project Masterclass** for a single project team in addition to in-company training workshops and implementation support under licence from the Lean Construction Institute
mailto:lci@rubiconassociates.com

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Lean Construction Institute UK

LCI-uk Ltd aims to be the primary UK body for the documentation, development and dissemination of global good practice in lean thinking applied to construction and construction related activities and to make it available to the widest possible audience in the UK.

LCI-uk will offer:

- A biennial lean construction summit showcasing the latest applications from around the world
- Fora for practitioners to exchange ideas and learning
- Special interest groups/Communities of Practice to enable practitioners and academics to develop and learn together
- Academic/practitioner meetings
- Study tours to visit companies and projects with advanced applications of lean and last planner around the world
- Lean construction and Last Planner training workshops
- Collaborative identification of research topics and joint commissioning of research programmes
- In the longer term we want to be in a position to commission research on behalf of the industry or groups of industry stakeholders.

Founded on the same principles of collaboration and openness as our sister institutes in the US and Denmark, **LCI-uk Ltd** is onstituted as a not-for-profit, pan industry think tank.

LCI-uk is a membership organisation open to individuals and organisations; it aims to attract the widest possible membership from across the industry — clients, designers, contractors, sub-contractors, specialists and suppliers — and to represent the special interests of none.

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