

“Last Planner® can be understood as a mechanism for transforming what SHOULD be done into what CAN be done, thus forming an inventory of ready work, from which Weekly Work Plans can be formed, including assignments on Weekly Work Plans as a commitment by the Last Planners (foremen, squad bosses) to what they actually WILL do.” – Glenn Ballard

Why use Last Planner®?

- Proven [benefits of Last Planner®](#) include shorter schedules, increased productivity, greater process transparency and improved site organization, better collaboration, communication and understanding, more stable workflow and matching of crew resources, speedier RFI replies and submittal approvals. [Last Planner® System is the gateway to Lean behaviors.](#)
- Last Planner® addresses key components not working in Critical Path Method scheduling including:
 - Little trade foreman input and buy-in,
 - Lack of a visually understandable plan because information is buried in hard-to-read bar charts or Excel spreadsheets, and
 - Lack of clear tracking of the plan on a day-to-day and week-to-week basis because the work is disconnected from the CPM schedule.

What is the Last Planner® System?

- A system used for production planning control (scheduling) that was first used by the developers Glenn Ballard and Greg Howell in 1992 for use on projects to improve workflow, plan reliability and the predictability of work. The basic premise is those who do the work plan the work and make commitments to complete work (reliable promises) to other members of the team.

Last Planner® focuses on five key principles:

- ① More detailed planning occurs and reliable commitments are made as the tasks get closer (1 – 2 weeks)
- ② Those who touch the work last and who do the work (Last Planners® - trade foremen, designers, suppliers etc.) plan the work – often using combined experience of 300+ years.
- ③ Constraints of the planned task(s) need to be identified and removed in advance of the work.
- ④ Reliable promises are made and kept by those who make them (Last Planners).
- ⑤ Reasons for missed commitments are used to develop organizational learning capability and create a culture of continuous improvement.

There are five elements of the Last Planner®:

[A short YouTube video demonstrates Last Planner®](#)

- ① **Master Scheduling** is about setting milestones and strategy; identification of long lead items (**should**);
- ② **Phase “Pull” planning** specifies the handoffs; identifies operational conflicts and uses Post-It® tags similar to the image on the right (**can**);
- ③ **Make Work Ready Planning** uses look-ahead planning to assure that work is made ready for installation; re-planning as necessary (**will**);
- ④ **Weekly Work Planning (WWP)** commitments are made to perform work in a certain manner and a certain sequence(**do**); and
- ⑤ **Learning** by measuring percent of promises complete (PPC), diving deep into reasons for failure, and developing/implementing lessons learned.

Resp. Party		Preparer Init.	
PE	3 WORKERS	CD	
Activity INSTALL REBAR @ 1ST FLOOR, ZONE B			
Constraint 1		Tag #	
PROCESS RFI		44	
Constraint 2		Tag #	
FIELD DIMENSIONS			
Tag UID	Duration	CPM ACT. ID	
45	1 of 2		

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Other key components of the Last Planner®:

- The Last Planners® attend “Daily huddles” at a set time every day for 5 – 10 minutes. The superintendent will lead the short huddles and look at the previous day’s tags to see the percent of promises complete (PPC), reschedule any works (if necessary) and secure promises from the Last Planners for the current working day.
- First Run Studies (FRS) are basically mock-up trials of how certain aspects of work will be performed in advance of the work actually taking place. This can help refine the sequence of work and how it should flow from one specialist (trade) to the other.



Where can Last Planner® be used?

- Anywhere we need to plan aspects of work such as design and construction including buildings, civil engineering, infrastructure, ship building, oil/gas and mining projects, and plant start-ups/shut-downs.

Key Factors for Last Planner® Success:

- Be on time for daily huddles and meetings. Be respectful. Start and finish meetings on time!
- Have all the relevant and necessary people at planning sessions present (e.g. those who know the sequence of works/familiar with the job, can allocate resources, and make reliable commitments).
- Use the system in full (five elements) – do not pick and choose elements.
- Keep the schedule real and adjust it daily to reflect what is most likely to happen in the field.
- The superintendent will perform a “forward pass” when the WWP is complete (image above) to walk through the work as planned to be done. This helps the team understand the bigger picture and can identify missing tasks or faults with the sequencing and seek better ways at working.
- Use PPC to measure team performance, not individual crews. Perform weekly variance analysis for activities not complete as planned and ask “five-why” not “who” and document the root causes.
- Use a competent facilitator to keep meetings lively and focus the team’s attention when needed.
- Use competent external Last Planner® coaches to train teams/facilitators if teams are new to Last Planner®. To sustain Last Planner® performance have periodic check-ins with your Last Planner® coaches.

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