How to Implement Last Planner® Pull Planning

The ReAlignment Group of California

If you are looking for proven methods to implement Last Planner System® pull planning, here are implementation techniques our Coaches have field-tested on over 100 projects and several hundred sessions, for dozens of companies.

PREREQUISITES

1. Get Executive buy-in to the Last Planner System®. Otherwise, it's an "experiment" and without solid, vocal executive buy-in the effort will often peter out.
2. Make sure the project Superintendent(s) are in agreement to use the Last Planner method of planning and scheduling since they are the key person(s) in a successful superintendent. It's a GO-NO GO gate. If the Superintendent says "No", it's *NO*.
3. Get a coach. You wouldn't send your kids on any playing field – regardless of the sport – without a coach who knows the process, the rules and can patiently train and "coach" the team.
4. Clarify the participants:
    a. Those who MUST participate in the training and the implementation include the Superintendents & Assistants, PMs, PEs, Scheduler, Trade Contractor Foremen, Superintendents and PMs.
    b. The LPS system works best if the active participants also include: the Designer, the Owner's Representative, and sometimes consultants (especially in Design-Build and IPD), and commissioning agent. If you can get the Inspector to participate, you're golden.

GETTING STARTED

Introducing the entire Last Planner System (and Pull Planning) in design and construction on a project (whether new or in progress) requires an initial 2-session foundation of training (that can be done in one day):

1. Create the "Aha" moment for each member of the team. We recommend a hands-on simulation like Villego® (www.villego.com). Some take a full day for this, but we recommend 3.5-4 hours. NEVER BE BORING.
2. LPS Simulation Training – a hands-on simulated training of the entire process in which people role play, and create a mock Milestone Plan, Phase Pull Plan and Weekly Work Plan on a simple project. Our team uses whatever room the group is training in, imaging as though they were standing in a BIM model and looking around at the design. We call it "Build This Room". It's quick and handy and everyone can agree on scope without delving into drawings and specs.
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LAUNCH THE PLANNING

Once the team has been trained, our recommended introduction and implementation of Last Planner® specific to the project includes the following:

1. An initial Coaching meeting with the General Contractor or Design-Builder staff (Superintendent, PM, PE, Director, etc.) to further train in the basics of **managing** the Last Planner® System and get them comfortable in their roles:
   a. Identify project Milestones (30,000' level) and Superintendent/Trade milestones (20,000' level)
   b. Plan the upcoming Phase Pulls with trades – usually pulling from major milestones like "Out of the Ground", "Dry In", "Ready for Finishes", "Substantial Completion", "Commissioning Complete".
   c. Introduce the PM/PE/Supers to **facilitating** and managing the phase, look-ahead, and weekly work plan generation (this already begins building internal capacity). If they are new to this, then at first the Coach will be the facilitator of initial meetings, but as soon as possible this role needs to pass to the staff.
2. Conduct an initial 4-5 hour session to introduce the entire trained project team and all trades and/or consultants (in this Phase) to Pull Planning and Last Planner® process and its underlying Lean construction principles.
   a. Create a collaborative environment to support Pull Planning and explain the 3 levels of Last Planner® System
   b. Understanding of Milestone Pull Planning for the project
      i. Create a Milestone Pull Schedule for the entire Project or at least the initial 12 months of the Project
   c. Review and discuss opportunities for phase planning
      i. Create the initial Phase Pull Plan for the next 10-16 weeks
   d. Create the Weekly Work Plan through the initial 6 weeks.
   e. Assure the Leaders know the proper process for Daily Huddles and Weekly Work Plan Updates including Make Work Ready Planning (removal of constraints).
3. Implement the plan! Assure 15-minute Daily Huddles every day. Update the Weekly Work Plan with progress ("X" out tasks done on time, and mark those "Missed" for review at the weekly meeting).
4. ONE TO TWO WEEKS LATER: Bring the Coach back in for a 3-hour working and coaching session to see how the team has kept true to the LPS process. Use this opportunity to flesh out the Weekly Work Planning assuring a full six weeks are now projected. In addition to posting the first six weeks' worth of activities on the pull plan wall:
   a. Train participants in their roles for working collaboratively through the look-ahead process, for making work ready and for execution in a productive and effective manner.
   b. Train participants in the improvement cycle of:
      1. calculating PPC (Percent Plan Complete or our preference "Percent of Promises Complete") and tracking Variance categories (including posting them on the wall)
      2. reviewing weekly work plan results, identifying mistakes and taking mitigation measures.

LAUNCH THE PLANNING (continued)

5. TWO WEEKS AFTER THAT: Bring the Coach back in for a 2-hour to 3-hour working and coaching session to observe the team's weekly meeting, develop the next 8-12 week look-ahead pull schedule and the update the six-week look-ahead Weekly Work Plan. In addition:
    a. Train participants in the improvement cycle of:
        1. identifying root-causes for misses (5 Why)
        2. identifying counter-measures
        3. developing a plan for enacting counter-measures
        4. assigning responsibilities for plan implementation.

    b. Coach the PM/PE/Super to assure they are able to facilitate and document the Pull Planning and Weekly Work Planning Meetings themselves in accordance with proper LPS procedures.
6. DURING THE NEXT TWO MONTHS: Schedule three 2-hour follow-up weekly coaching sessions (spaced at increasing intervals to wean the team) to implement the Look-Ahead and Weekly Work Planning Meetings during which you should:
    a. Coach the PM/PE/Super on facilitating the meetings
    b. Coach all participants on any short-comings observed in the process
    c. Refine participants' understanding of the process and Lean Principles behind it.
7. Depending on the length of the project we also highly recommend at least two additional coaching sessions to audit the team's adherence, realign the team if needed, train and coach on difficult or different meeting and project challenges, and get into additional phase pulls to ensure the process flow is maintained moving forward.