

A successful small project - executed Lean

Andreas Wallner - Genentech / Roche Tony Carlson - Andersen Construction Paul Neilson - Southland Industries Ty Lee - Andersen Construction

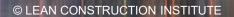
SURFING THE WAVE OF LEAN DESIGN AND CONSTRUCTION

October 24, 2024









Introduction



Who We Are

Andreas Wallner

- Architect focused on Science & Lab Buildings
- Project Manager for the Pharmaceutical Industry
- Thriving in & promoting highly collaborative Lean Project settings
- Genentech / Roche 9 years



Tony Carlson

- Specializes in Healthcare, Life Sciences, and Pharmaceutical construction projects
- Prioritizes team engagement, safety practices, and adherence to high-quality standards
- Recently appointed as a Lean 101: Intro to Lean Trainer for the company
- Has 23 years of experience with Andersen Construction



Who We Are

Paul Neilson

- Started in 1994 as a sheetmetal worker
- Project Executive, Southland Industries based in Portland, Oregon
- Primary focus is project acquisition through to completion
- His mission is to promote, mentor, and contribute to IPD projects
- He leads projects in healthcare, biopharmaceuticals, Higher Education, and Data Centers
- Member of the Cascadia-Portland Community of Practice

Ty Lee

- Emphasized mentorship by reviewing pre-task plans, conducting daily huddles, and providing safety training
- Experienced in diverse construction projects, including hospital expansions, high-rise residential buildings, and pharmaceutical facilities
- Joined Andersen Construction in 2004 after graduating from Oregon State University
- Transitioned from being a skeptic to a passionate supporter of the Last Planner System





The Owner: Genentech / Roche



Roche is a leading international pharmaceutical Company

Transformative Biotech Medicines for serious illnesses

Fill & Finish operations Hillsboro, OR since 2006

Lean Project Execution was applied at larger Genentech Projects (CSC SSF and OSUT OCN)

...but never in Hillsboro & never on "small" projects

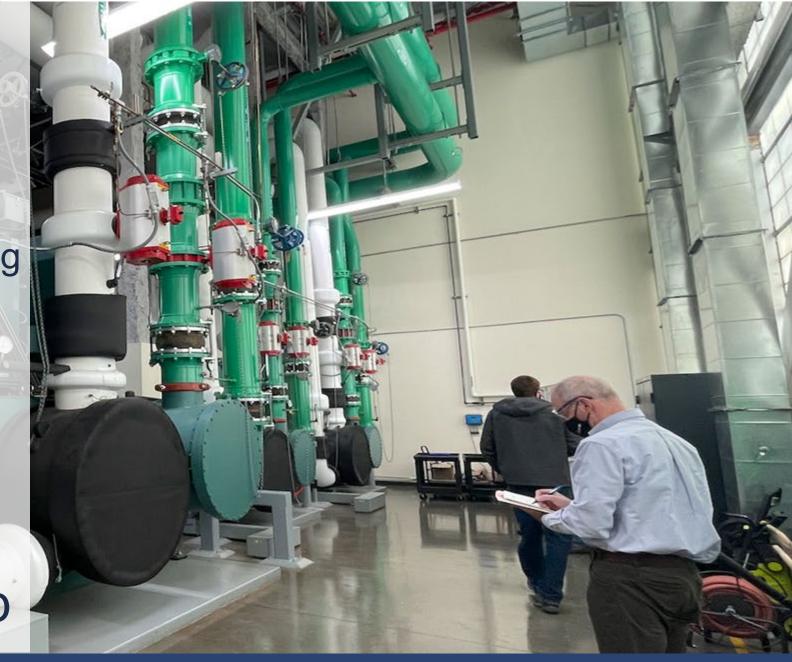
The Project

Roche is an Industry Leader in Sustainability - Drastic reduction of Carbon Footprint

Replacement of 3 HVAC Chillers with conventional Refrigerant (Global Warming Potential factor 1,430) with Chillers & Refrigerant with GWP factor of 1

Expectation & key challenge: Keep plant operational at all times!

Best fit: Lean, highly collaborative Project set up

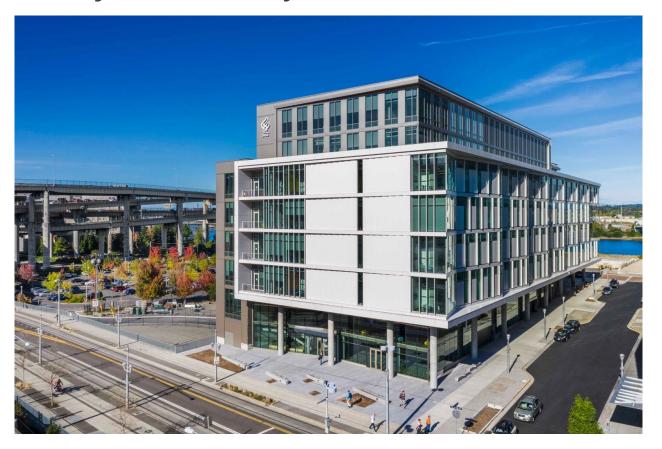


How the Seed Was Planted

LCI COP Lean Coffee @4th & Montgomery (Vanport Building)

Andersen and Southland Previous Lean Project Delivery





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What stuck out:

- + variety of measures
- + practical applications
- + great team energy was tangible

When the time came - we picked up the phone...

All starts with assembling a Team

If you want a team to go lean with you - say it!

In a paragraph of the RFP

To onboard early, only ask for basic cost figures - no fixed price

- Precon Cost
- Overhead & Profit and General Conditions as percentage



Building Trust & a collaborative Team Culture early is essential

Setting Up the Project



Building a Team - Fostering Project Culture

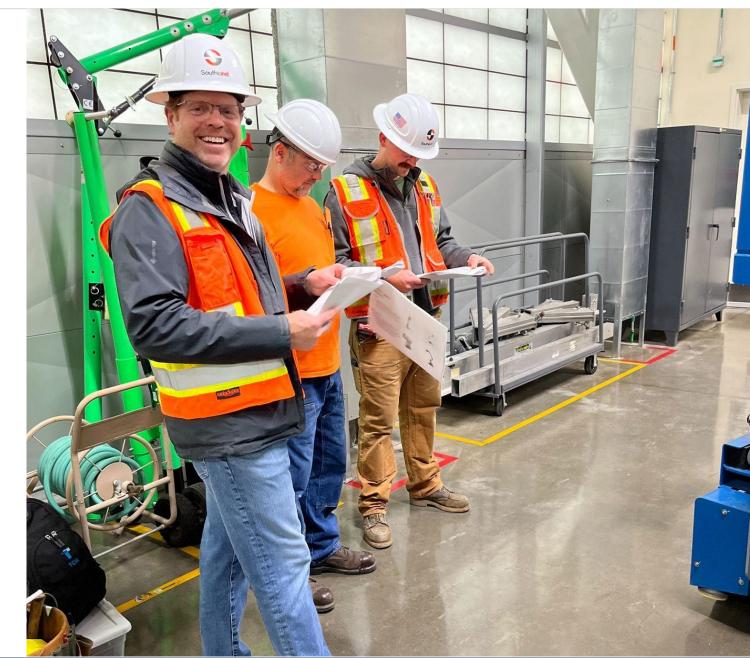
Early trade partner selection with Owner and Planner Involvement

Lean RFP Process

"5 questions- 5 pages"

RFP

- 1. Team Members
- 2. TVD
- 3. Collaboration
- 4. Big Ideas
- 5. Diversity



Building Trust

One Team Approach:

Lean Training

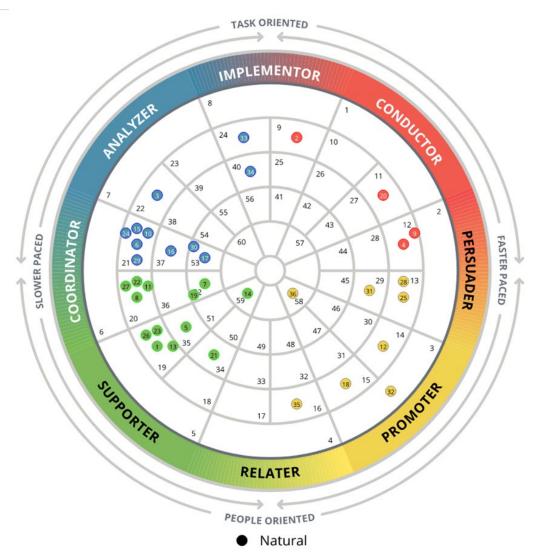


Team Alignment Sessions



Conditions of Satisfaction





Team Members
DISC Assessment

Contract Amendment - Productivity Profit Pool

- Commitment to act as one team
 - Focus on Solutions Optimize the whole
 - Focus on Project shared CoS
 - Most qualified Team to execute the task
 - Open speak-up commitment
 - Complete financial transparency
- Communication Tool
- Team Buy-in Incentive
- 1 Page Contract Amendment
- Plus / Delta Solely Based on Trust



Integrated Form of Agreement Genentech K6 HTO Chiller Replacement **Productivity Profit Pool Saving Plan**

Fundamental to the success of Project delivery is the willingness and ability of all Project Team members to make decisions as a team, secure reliable promises, collaborate, and strive for mutual success.

By forming an Integrated Project Team, the parties intend to gain the benefit of an open and creative learning environment where team members are encouraged to share ideas freely in an atmosphere of mutual respect and trust. Project members shall work together and individually to achieve transparent and cooperative exchange of information in all matters relating to the Project and to share ideas for improving Project delivery as contemplated in the Construction Documents. Team members shall actively promote healthy conflict, collaboration and cooperation among all entities

In order to achieve Owner's objectives, the Project must proceed with informed, accurate information concerning program, quality, cost, and schedule While each Project Team member will bring different expertise to each of these issues, all these issues, and the full weight of the entire teams' expertise will need to be integrated throughout the pre-construction and construction process if project success is to be attained. None of the parties can proceed in isolation from the others; there must be deep collaboration and ongoing flow of information. When a question or issue is uncovered, it is very important that all sides be able to state their point of view before a solution is made. "No" should never be the first response to a question.

The integrated Project Team agrees to the following list of values and specific behaviors that will be monitored, tracked, measured, tausht, and reinforced throughout the life of the project: 1. Focus on solutions, 2. Focus on the project, 3. The most qualified individual will perform tasks, 4. Every person can speak their mind in the effort to find solutions, and 5. Complete financial transparency.

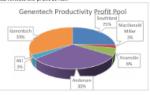
The parties agree to share, between all profit pool members, with the utmost accuracy the following information, updated monthly – Total Project Budget Total Construction Budget, 5-week look-shead schedule, overall project schedule, budget variance by functional team, potential cost impact events Percentage of Promises Completed (PPC) (weekly and project total), and other identified metrics which promote communication and clarity regarding the

judgment and to collaborate and cooperate with each other project participants in actively pursuing an integrated project and furthering the interests of the Project. The parties recognize that each of their opportunities to succeed on the Project is directly tied to the performance of other Project participants The parties shall therefore work together in the spirit of cooperation, collaboration, and mutual respect for the benefit of the project, and within the limits of their professional expertise and abilities

PROFIT POOL - SHARED SAVINGS

The shared savings pool will be made up of the project savings of the following (3) trade partners: Southland, MacDonald Miller, and Rosendin. This pool also contains Andersen Construction as the general contractor, AEI as the designer, and Genentech as the owner. The profit pool will be divided as shown in the table below based on the initial contribution amount which also reflects the profit at risk

Num	Partner	Potential Contribution Amount	Profit Pool %
1	Southland	\$67,533	25%
2	MacDonald Miller	\$7,100	3%
3	Rosendin	\$15,465	6%
4	Andersen	\$80,000	30%
5	AEI	\$25,000	3%
6	Genentech	\$88,000	33%
TOTAL			100.000



Here are basic points of the shared savings profit pool:

- . All (3) of the trade partners bill the project monthly on a percent complete fashion as if the contract was a lump sum contract.
- All (3) trade partners and Andersen Construction agree to meet regularly to keep each other updated on the status of the project and the financial health of each contract. All trade partners should provide rough projections to the other partners.
- At the start-up of the 3rd chiller, the team should meet and calculate the final profit pool distribution percentage
- Each trade partner can only contribute to the profit pool. If a trade partner's costs are over the lump sum contract, the profit pool cannot be used to recuperate project overruns unless agreed by all parties. The trade partner with the overruns will get their profit pool percentage.
- Andersen Construction will contribute any GMP savings to the profit pool based on overall project savings excluding Andersen mark-ups (invoiced a 100%), allowances, general conditions, and general requirements

AGREEMENT - The Genentech K6 HTO Chiller Replacement Team Agrees and Accepts this Agreement



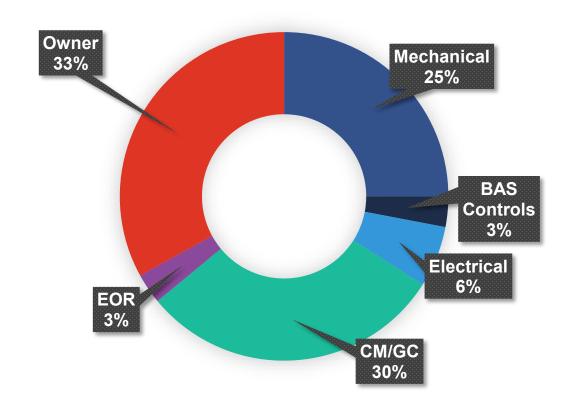




Profit Pool

- Owner's contingency contribution
- Design team participation and GMP savings
- Contribution key trade partners based on contract value
- About even contributions between the three main stakeholders
 - Owner
 - GC
 - Trade Partners

Genentech Productivity Profit Pool



GC & EoR Contract:

\$4.7M

Shared:

\$0.2M



Implementation of Lean Tools



Field Execution







- Last Planner Application / PPC
- Method of Procedure (MOP)
- Daily Huddles / Huddle Board
- Field Office
- Planning for Safety w/ Leading Indicators
 - Leadership Engagement Tracking
 - Pre-Task Plan Reviews







Key Factors to success of Field Implementation...

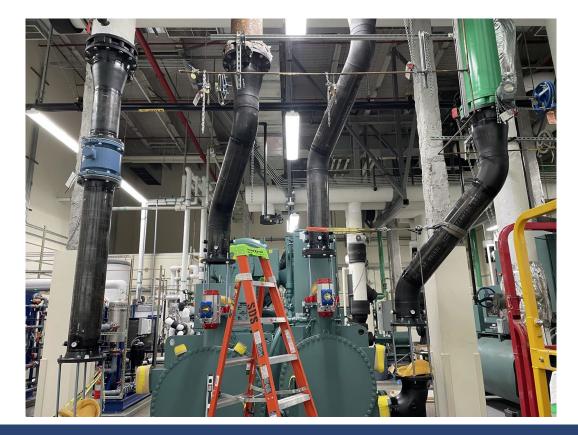
- Design with Pre-fabrication in mind
- Field Scanning

Field Scan of Existing Conditions - Before



- Factory Acceptance Test
- Team Building

New Chiller - After



... and applied PDCA

- Continuous Improvement / Phase 1 Misses
- Plus / Delta after each phase
- Lessons Learned with Team
 - 1st Chiller 644 hours
 - 2nd Chiller 420 hours
 - Last Chiller 318 hours
- Cost Underruns to Shared Savings Pool



Summary & Key Takeaways



Summary & Key Takeaways

From the Contractor's point of view:

- One Team Approach
- Budget Surety & Savings Realized
- Building Trust
- Safe Execution
- High Customer Satisfaction
- Enjoyable Team Experience Had Fun!





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Summary & Key Takeaways - what the owner thinks

If you want to go lean...

- Develop a conceptual execution plan early & align with key stakeholders
- Be clear in your RFPs about your intentions
- Assemble a team early
- Build Trust & Collaborate with an open mind Foster a Project Culture!

We have built relationships based on mutual Respect, Trust & Transparency - and this has has lead to future Opportunities

Small projects are an ideal way to dive into the lean world.

Many team members shared: Collaborative & Lean Projects are the most enjoyable work experiences!

Questions & Contacts

Questions, Comments Thoughts?

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In the spirit of continuous improvement, we would like to remind you to complete this session's survey! We look forward to receiving your feedback.





Thank you for attending this presentation. Enjoy the rest of the 26th Annual LCI Congress!

