CYNTHIA C.Y. TSAO, Ph.D.

Based in Greater Boston
cynthia@navilean.com **(510) 593-4884**

Cynthia customizes the strategy and approach for production system design and continuous improvement on capital projects. A proponent of Lean project delivery since 1997, she uses her expertise in product-process integration to improve project outcomes by leveraging team member capabilities as well as transforming complex design problems into ones that are easier to procure and construct.

EMPLOYMENT

2018 – present **Building AEC Learning, Inc. (BAECL)** *Founder*

BAECL is a 501(c)(3) non-profit organization devoted to capturing, curating, and sharing knowledge about the best methods for Project Team Alignment, Management of the Design and Delivery Processes, Decision Making, and Knowledge Management.

2013 – present **Navi*lean,* LLC** *Owner*

Supporting enterprises, companies, and project teams in continuous learning and improvement while maintaining respect for people.

2012 – 2021 **Wentworth Inst. of Technology** *Senior Affiliate Faculty*

- Taught Modern Construction Delivery Methods to graduate students
- Organized joint Lean learning opportunities for industry practitioners and WIT students

2015 – 2018 **Consigli Construction Co., Inc.** *Director of Lean Strategy*

- Coached project teams on how to connect Milestone Planning, Phase Planning, Make Ready Planning, Weekly Commitment Planning, and Daily Learning on 10-20 projects per year
- Spearheaded Make Ready Planning and Daily Learning initiatives for 40-60 projects per year and worked accordingly with the Field, PM, IT, HR/Training, and Marketing departments to develop company-wide awareness, education, training, and framework for project implementation
- Developed an internal Lean Team with 20 representatives from the Field, PM, Quality, Scheduling, Preconstruction, Safety, VDC, and Sustainability departments

ALIGNMENT WITH CLIENT + DESIGN PARTNERS

- 2015: Worked with various departments to develop a Roadblocks Log process to prioritize project challenges. (Impact = Streamlined communication within project teams)
- 2016: Worked with project teams to manage a Risk Register for identifying, mitigating, and removing major project risks. (Impact = Better alignment with Owners + Design Partners on key project risks)
- 2017: Introduced Choosing By Advantages (CBA) for Trade Partner selection. The Purchasing Department used CBA to buy-out at least $100 million of work in the first year of CBA testing. (Impact = Selected Trade Partners based more on qualifications and price instead of just price)
- 2018: Started an Owner-Architect-Engineer-Contractor Peer Learning Lab (OAEC-PLL) that has now evolved into Building AEC Learning, Inc. (BAECL) (Impact = Developed a local Community of Practice to learn about and share our best approaches for managing project teams)

ALIGNMENT WITH TRADE PARTNERS

- 2015: Worked with the Field, HR/Training, and Marketing Departments to roll-out a company-wide policy of Daily Stand-Up (DSU) meetings with Trade Partners. 2017: Rolled-out a company-wide policy of using DSU boards. 2018: Rolled-out a company-wide DSU meeting assessment program.
  (Impact = Improved coordination on projects that introduced and sustained Daily Stand-Up meetings)
- 2015: Provided Last Planner™ System coaching on select projects. 2018: Worked with the Field and PM Departments to develop approaches for takt planning with Design and Trade Partners.
  (Impact = More efficient installation on projects due to collaborative planning with partners)
  2016: Worked with the Purchasing Department to update language in contracts to establish clear expectations for Trade Partner participation in collaborative planning meetings.
  (Impact = Better participation by Trade Partners in collaborative planning meetings)
- 2016: Worked with the Field, Scheduling, MEP, and Marketing Departments to develop Flow Boards and Floor Plan Boards to clearly plan and track Weekly Commitment Planning.
  (Impact = Better visualization of the work plan for project teams to implement and track progress)

MATERIALS STAGING & EQUIPMENT MANAGEMENT

- 2015: Coordinated with the Safety Department to enforce "Nothing hits the ground", "Everything on wheels", and dunnage / trash removal policies. (Impact = Cleaner job sites)
- 2016: Worked with project teams to establish and enforce:
  - Designated materials and gang box storage spaces for Trade Partners
  - Materials staging strategy to support installation within 3 days of delivery to the job site
- 2018: Coached the Supply Chain Department in using 5S to better organize the warehouse
  (Impact = More organized warehouse after removal of obsolete materials and broken equipment)

2012 – 2014 **Lean Project Consulting** *Senior Associate*

- Facilitated Lean training workshops and coached Last Planner implementation on projects
- Facilitated process improvement sessions using swim-lane diagrams or pull planning

2008 – 2011 **Lean Construction Institute** *Assistant Executive Director*

- Developed an operational structure for the Lean Construction Institute (LCI)
- Coordinated and oversaw the growth of LCI Communities of Practice from 3 to 17

2004 – 2008 **University of Cincinnati** *Assistant Professor (Civil & Env. Eng.)*

- Logistics Manager for Sutter Health Lean Summit involving key design & construction partners
- Helped Construction Users Roundtable committee develop Lean Construction workshops

1997 – 2004 **UC Berkeley** *Student Researcher (NSF #9811052)*

- Research focus on the interfaces between design, fabrication, and installation
- Developed Lean work structuring case study - used in national LCI and AGC Lean training

EDUCATION

2005 Ph.D. **UC Berkeley** - Civil & Environmental Engineering (Engineering & PM)
1998 M.S. **Stanford University** - Civil & Env. Engineering (Construction Eng. & Mgmt)
1996 B.S. **UC Berkeley** - Civil & Environmental Engineering (Construction Eng. & Mgmt)

navilean LLC

2013	$15B+	125+	50+
Year Established	Projects supported	Production management + planning partner of PMs and Superintendents	Trade events supported

Helping organizations develop and navigate their Lean journeys

Organizational Coaching
to help organizations become successful learning organizations. We provide coaching in developing long-term vs. short-term strategic goals and establishing + improving internal standard processes.

Project-Based Coaching
to develop high-performing teams. We provide virtual and on-site Lean/IPD coaching in Validation, Project Conditions of Satisfaction development, Target Value Delivery, Design for Release™, A3 Thinking + Choosing by Advantages (CBA), Big Room Facilitation, Prefabrication / Modularity / Kitting, At-the-Right-Time Logistics Management (aka JIT), Last Planner® System, and Takt Planning.

Our Philosophy
We strive to establish a steady interaction cadence with our project teams – yes, that means we are takt planning our coaching! This is a great approach for building a learning culture.

We prefer to develop "Train the Trainer" as well as Peer-to-Peer learning programs to help organizations and project teams sustain their Lean journeys sooner rather than later!

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SELECT PROJECTS

HEALTHCARE

2022-2024

$370M – **Cleveland Innovation District Project** in OH

Project Conditions of Satisfaction, A3 Study, Choosing By Advantages, and Big Room training of Owner, Design, and Construction Team. LPS + takt training and implementation of construction workflows. (Client: *Cleveland Clinic*)

2014

$280M – **Brigham Building for the Future** R&D, Clinical, and Medical Office Building in Boston, MA

LPS training of CM/GC + Trade Partners and LPS implementation focused on foundation workflows. (Client: *Suffolk Construction*)

2013-2014

$230M – **Nemours/Alfred I. duPont Hospital for Children expansion project** in Wilmington, DE

LPS training CM/GC + Trade Partners and LPS implementation focused on prefab bathroom pod installation and atrium build-out workflows. This case study was presented at ASHE PDC 2015. (Client: *Skanska*)

BIOPHARMA

2021-2024

$$$M – **Merck B63A Multi-product Syringe Filling line** in PA

Lean / High Performing Team Coaching focused on LPS, Target Value Delivery, and Teaming. This project team presented at the 2023 LCI Congress and was awarded the 2024 LCI Engineering Design Award. (Client: *IPS-Integrated Project Services, LLC*)

2023

$2B – **Fujifilm Diosynth Biotechnologies** in Holly Springs, NC

LPS implementation technology training for meeting facilitators. (Client: *Jacobs*)

2023

$1B – **Confidential Pharmaceutical Fabrication Facility** in NJ

Design for Release™ training for Owner and Design Team. (Client: *IPS-Integrated Project Services, LLC*)

2019

$450M – **Merck Formulation, Laboratory and Experimentation (FLEx) Center** in Rahway, NJ

Lean / High Performing Team Assessment, project vision workshop facilitation, including development of Conditions of Satisfaction and identification of Project Risks & Opportunities. (Client: *Spear Group*)

SPORTS

2024

$475M – **Private University Sports Arena** in Boston, MA

Milestone Pull Planning facilitation to capture the permitting process, decision making strategy, and design + construction workflows. Training in Risks/Opportunities management. (Client: *Private University*)

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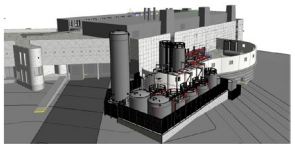
Helping organizations develop and navigate their Lean journeys

SELECT PROJECTS

MANUFACTURING

2022-2024



$110M – **40 Moore Drive Renovation Project** in Durham, NC

Project Conditions of Satisfaction, Profit Distribution Milestone meetings, Big Room, and Lessons Learned training of Owner, Design, and Construction Team. (Client: *Wolfspeed*)

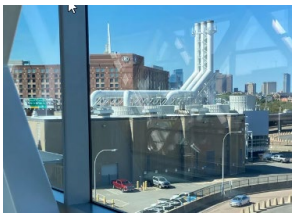
2022-2023

$2B – **Silicon Carbide Factory Project** in Siler City, NC

Project Conditions of Satisfaction, Big Room, and Team Health survey training of Owner, Design, and Construction Team. This project team presented at IGLC 2023 and the 2023 LCI Congress. (Client: *Wolfspeed*)

TRANSPORTATION

2023-2025



$$$M – **Logan Airport Central Heating Plant Net Zero Project** in Boston, MA

Project Conditions of Satisfaction, A3 Study, and Choosing By Advantages training of Owner + Design Team. LPS training of Design Team, and LPS implementation focused on decision-making and design workflows. *(Client: RMF Engineering)*

2013

$170M – **Logan Airport Terminal B Renovation** in Boston, MA

LPS training of CM/GC and Trade Partners, and LPS implementation focused on MEP fit-out workflows. *(Client: Suffolk Construction)*

HIGH-END RESIDENTIAL

2021-2024

$325M – **Caesars Hotel Expansion and Casino Renovation** in New Orleans, LA

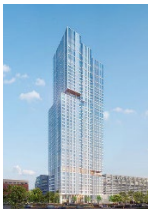
LPS training of CM/GC + Trade Partners, and LPS implementation focused on foundation, structure, rough interior, and finish interior workflows. Coordination of workflows that support Final Certificate of Occupancy. (Client: *AECOM Tishman*)

2018-2021

$450M – **Four Seasons Hotel and Private Residences** in New Orleans, LA

LPS training CM/GC + Trade Partners, and LPS implementation focused on hotel, private residences, amenities, and MEP fit-out workflows. This project was awarded ENR's Best of the Best Renovation / Restoration Projects in 2022. Taylor Swift stayed here during the New Orleans concerts for her Eras Tour in October 2024. (Client: *AECOM Tishman*)

2018-2019



$250M – **Residential Tower at Bulfinch Crossing** in Boston, MA

LPS training of CM/GC and Trade Partners, and LPS implementation focused on MEP fit-out workflows. *(Client: AECOM Tishman)*