



**Luciana Burdi** *Massachusetts Port Authority* 



**Digby Christian**Sutter Health



William Seed

Jackson Health System



Southland Industries

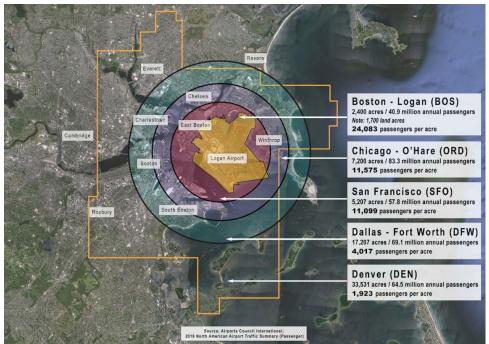


### Luciana Burdi

Director Capital Programs and Environmental Affairs, Massachusetts Port Authority

SURFING THE WAVE OF LEAN DESIGN AND CONSTRUCTION

#### Massachusetts Port Authority (MPA) Line of Business













#### **Capital Programs & Environmental Affairs**

#### VISION

**Transform** our industry through innovation; **create** value for our clients and **deliver** "best-in-class" infrastructure projects for our customers.

#### **MISSION**

Excel in delivering projects that enhance our customers' experience by programming, designing and building safe, efficient and sustainable infrastructure. We commit to doing this by being inclusive, leveraging technology and finding opportunities to continuously improve in our project management and delivery.

#### **4+1** VALUE STREAMS



#### **Aviation**

- Logan Airport
- Hanscom Field
- Worcester Airport

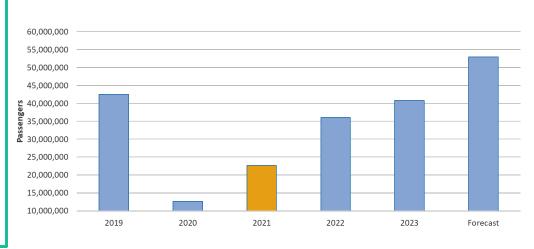
#### **Real Estate**

- South Boston
- East Boston
- Charlestown

#### Maritime

- Conley Terminal
- Flynn Cruiseport Boston
- Seafood Landlord
- Boston Autoport

#### **Logan Projections within 10-15 years**



### Lean...Looking Back



### Challenges to Implementing a Lean Organization Approach

- Lack of champion & passion at executive leadership level
- Resistance to modify past approaches
- Time to learn new approaches
- Confidence to implement new approaches
- Insufficient training

- Cost of 'learning curve' to implementing new approaches
- Lack of alignment and communication of expectations
- Change fatigue what is the most important change





### Digby Christian

Executive Director of Project Delivery, Sutter Health

SURFING THE WAVE OF LEAN DESIGN AND CONSTRUCTION



### Organization

- 3.5 million patients
- 57,000 employees; 12,000 physicians
- 24 Hospitals, 36 Surgery Centers, 41 specialty care centers
- \$800M per year in capital project investment



### Lean Program

- 17 years, \$4.5 Billion, 30 projects all on time, on budget
- Integrated Form of Agreement
- Last Planner System 2.0 / vPlanner
- Big Room
- Early engagement of design & trade partners
- High quality culture meshed with intense process rigor
- High levels of: Respect, Performance, Accountability & Transparency



## **Current Challenges**

- Growth outpacing expertise in the market
- Need to cut the cost of construction
- Need to run 5 10 major projects simultaneously with no drop in success rate





#### William Seed

Consultant, Facility Design & Construction, Jackson Health System

SURFING THE WAVE OF LEAN DESIGN AND CONSTRUCTION



#### Organization

2017 - current



- Public Safety-net health system, tax payor funded
- Significant government requirements/public participation
- 4 campus 8 hospitals: 2 new 6 renovated
- Various Lean intensity, small and large projects



+/- 100 projects
\$2MM to \$200MM
Across the country
Various lean
intensities
Significant learning

2014 - 2016



16 programs \$10MM to \$1BB Florida/California Various and unique projects

#### Lean Program: Employed Lean IPD Concepts/Tools/Strategies

- A3 Reporting
- A3 Decision Making
- Last Planner System
- Target Value Design
- Big Room
- Collaboration
- Study Action Team
- Core Clarity

High Value
Easy Implementation

- Early use of Trade Partners
- Plan Do Check Adjust
- Plus Delta / Retrospectives
- Continuous Estimating
- Onboarding
- Burn Rate Management
- Visual Management
- Work Clusters

- Team Based Budgeting
- Shared Risk / Reward Contract
- Value Based Partner Selection
- 5 Whys
- 5 S

Contracting:
CMAR cost plus a fee
Design Assist Trades, as many as 12
Shared savings
Fully auditable costs

### ILPD Challenge: Leadership-Passion-Compassion- Change

**Iterative** 

Continuous

Repetitive

Backslide

New members join

Outside Challenges

**Organization Pressure** 

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Tactical Change	Strategic Change	Transformational Change	Leadership skills
Last Planner System	Early Team Involvement	Hierarchical to network organization	Emotional intelligence
A3 Thinking	Consensus Decision Making	Individual Company Goals to Project Goals	Individual skill assessment
Choosing By Advantages	Seek and use craft, trade and multi-stakeholder input	Personal Goals to Project Goals	Team Dysfunction, dynamics/facilitation
PDCA Cycles	Continuous Estimating	Piece Work Optimization to Project wide	Multi-organizational leadership talent
Swarming	Target Value Design	Local Optimization to Value Stream	Relationship management
5 Why	PDCA on all phases of development and build	Rigidly defined roles to no stripes in the room	Integration skills: studios, designers, builders, operators
Ohno Circle	Burn Rate management	Just get it done to PDCA	Cheerleader/encourager
Daily Huddles	Consolidated Budget/cost management	Just get it done to continuous reflection	Drive collaboration not just cooperation
Conditions of Satisfaction	Conditions of Satisfaction	Big Room Rules	RESILIENCE!!!!!!



# LCI CONGRESS

**#LCICongress24** 

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