

20<sup>TH</sup> ANNIVERSARY

# Sutter Health and Lean IPD – Our Journey to Reliable Project Delivery

Digby Christian & James Pease, Sutter Health

REFLECTING ON OUR PAST, ENVISIONING OUR FUTURE

October 17<sup>th</sup>, 2018

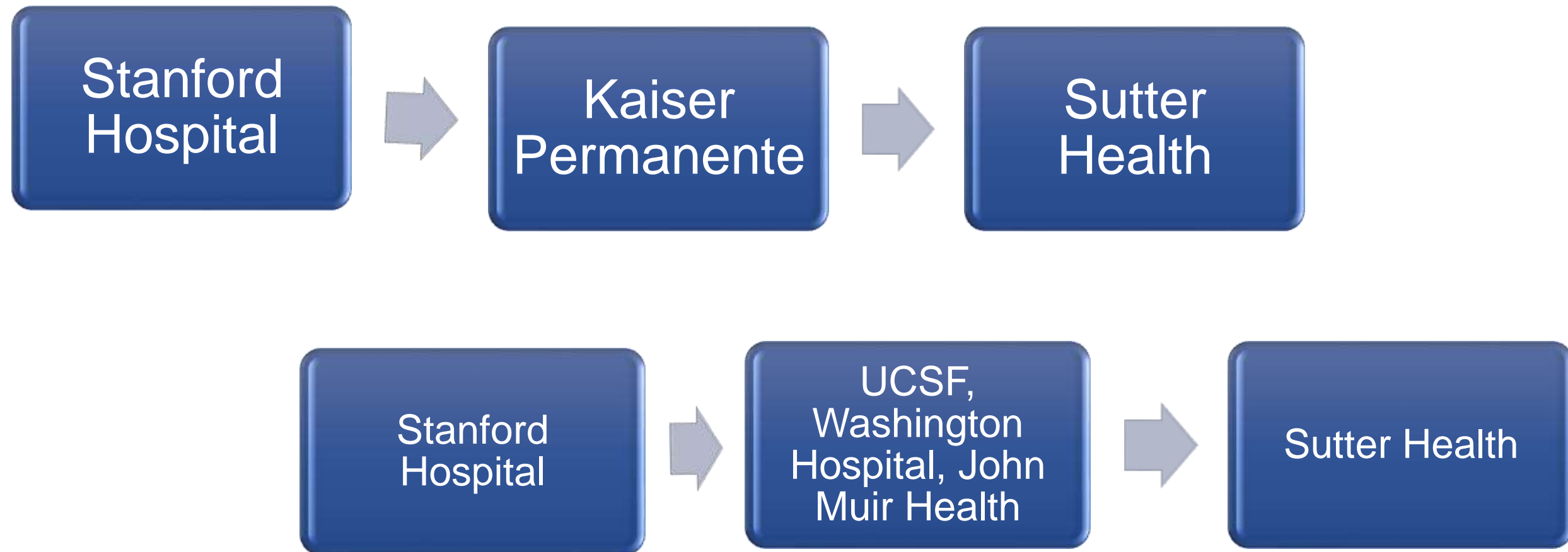


# Introducing your speakers





Our Backgrounds and History in some format here



# Agenda

Sutter and our “Why”



How: Great Facilities: On Time & On Budget



What: Change Everything



Results



A Great Discussion with You

# Sutter Overview







- Not-for-profit
- 50,000 employees
- 5,000 doctors
- 30 hospitals
- 5,000 beds
- 30,000 births per year
- 50 ER / Urgent care centers
- 60 testing labs
- 60 cancer / surgery centers
- \$500MM per year on new assets and renovations



### **Broad Reach**

Largest contiguous not-for-profit health system in the US



### **Diverse Patients**

100+ languages

Serving some of the richest and poorest areas in the nation



### **National Health Impact**

1 in 100 Americans receives care at Sutter



### **Economic Contributor**

Among the largest US employers



### **Community impact**

\$3M of charity care provided every week



# (Start with) WHY





# WHY: Serve Patients, Communities

## Sutter Health Mission and Vision

### Mission

We enhance the well-being of people in the communities we serve through a not-for-profit commitment to compassion and excellence in health care services

### Vision

Sutter Health leads the transformation of health care to achieve the highest levels of quality, access and affordability



# Sutter Facilities & Property Services

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## WHY: Empower Healing Environments





# HOW: Provide Great Facilities, On Time, On Budget





# But this ... Sylmar, OSHPD and Northridge



## Sutter Health

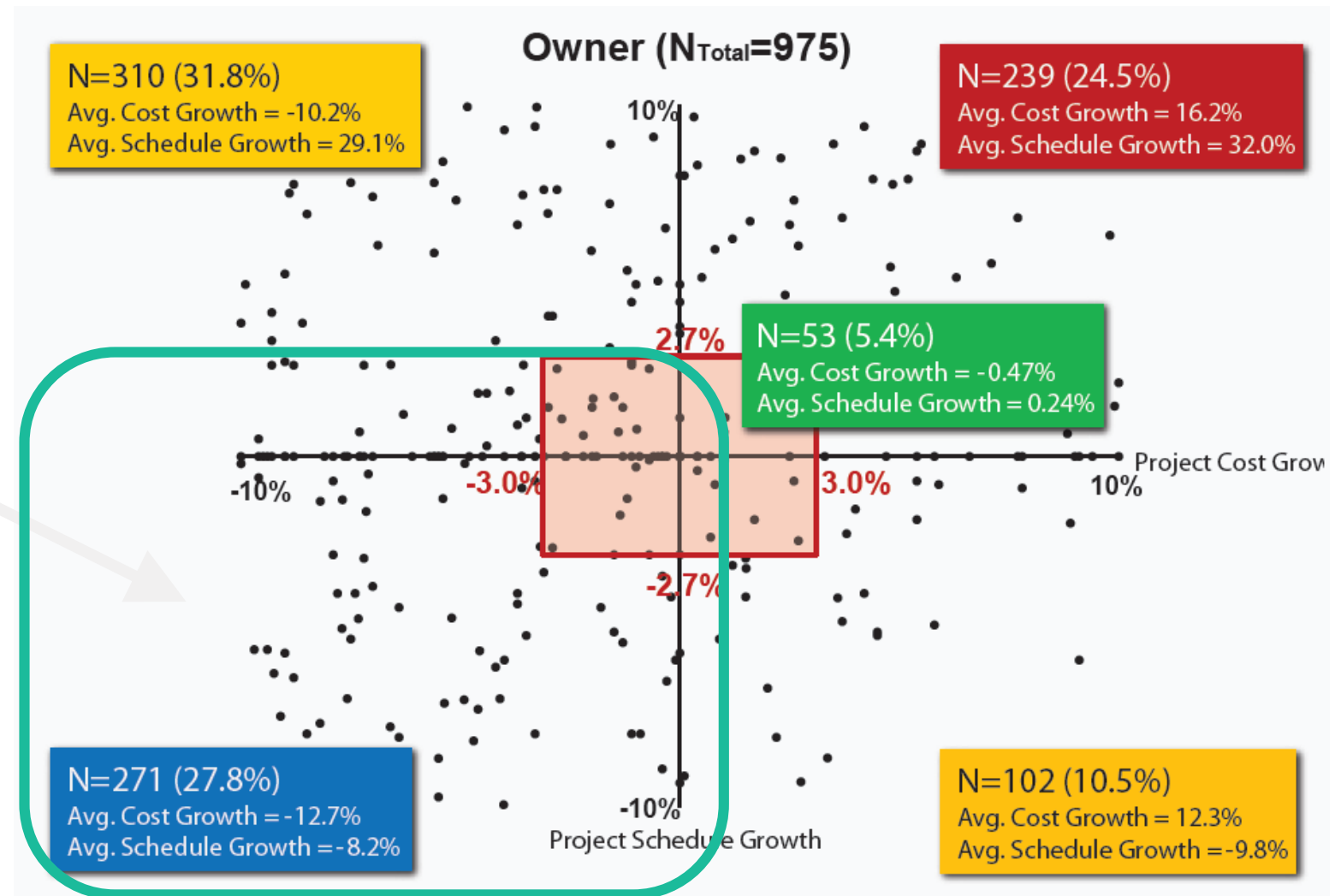
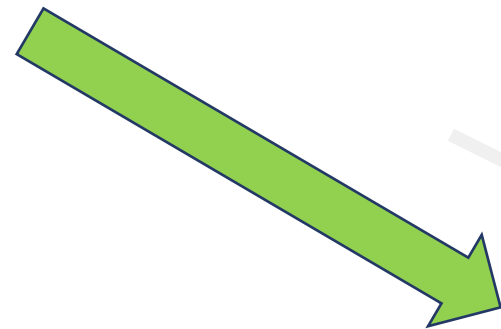
- At least 8 hospitals
- \$5B-\$7Billion estimated
- 2008, 2013, 2030...



# BUT: Also This

2012: CII's Performance Assessment Study of 957 projects. Average size \$65MM

Only 30% of projects  
meet/exceed their cost  
and schedule goals



**BUT: And Also This Too Aswell**

# **The Stagnation Equation**

Performance is terrible

+

Owner's aren't paying attention

+

Everyone else is making money

=

**Nothing changes**



# WHAT: Change Everything!





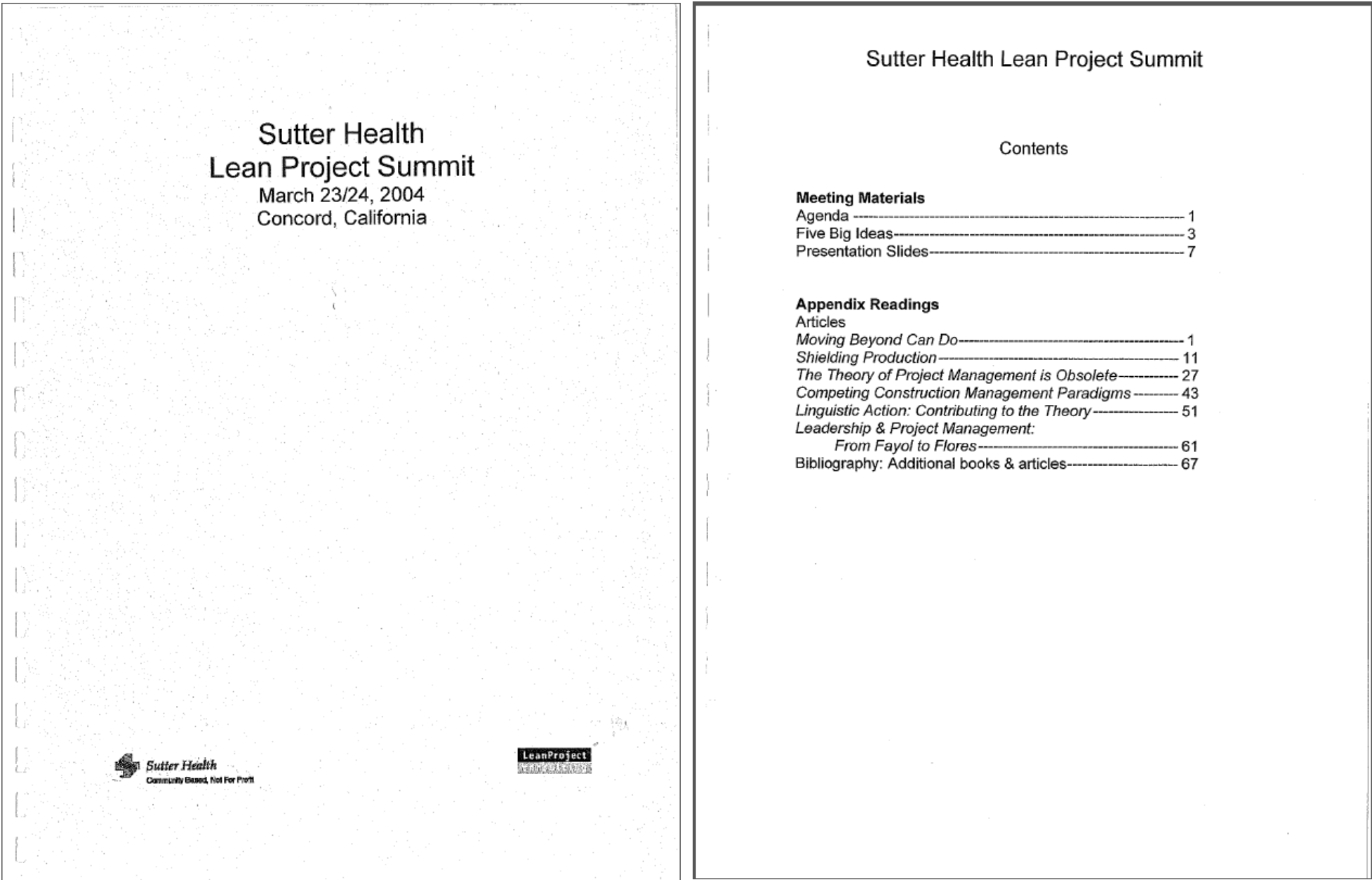
2000 – 2004

# CHANGING EVERYTHING Part 1: Collaborate, Really Collaborate





# WHAT: Part 1 - Lean Intent



# WHAT: Part 1 - Lean Intent

**5. Tightly couple action with learning.**  
Continuous improvement of costs, schedule, and overall project value is possible when project performers learn in action. Work can be performed in a way that the performer gets immediate feedback on how well it matched the intended conditions of satisfaction. Doing work as *single-piece flow* avoids producing batches that in some way don't meet customer expectations. The current separation of planning, execution, and control contributes to poor project performance and to declining expectations of what is possible.

We are setting out to change healthcare project design and delivery. Please join us.

**Signatories**

*Campbell*  
*Bauer*  
*ASSOCIATES*

*Both*  
*Padovanovich*  
*HMC Architects*

*DAN H. DER*  
*ELLERBE BECKET*

*Ken Howard*

*DOUG REITZ* HARRIS CONSTRUCTION

*David Chambers*, Sutter Health

*Dave Pixley*, Sutter Health

*Kyle Roquet*, Skanska USA

*Rick Lincicome*, Ellerbe Becket

*David R. Flux* RTI&F

*Frank DaiZovi*, Turner Construction Company

*David Martino*, The Smith Group

*Lowell Shields*, Capital Engineering

*LESLIE AUSPACH*, POUND COMPANY

*Harbison Mahony Higgins Builders*

*CLINT STROEBAKER* CEO

*BANK M. BOOTH* DESIGN BUILD CO

*ALISON UCHIYARA*, ORIGIN SOLUTIONS

*WES PALMQUIST*, ALTA BATES SUMMIT MEDICAL CENTER

*Prepared for the Sutter Health Lean Project Summit, March 23 & 24, 2004, Concord, CA in collaboration with Lean Project Consulting, Inc.*

*John Berna* MARIN COMMUNITY HEALTH

*James R. Ambrose*, PAMF

*John Schumann* - SH-PPD

*John Leppas*

*David Long* SH-PPD

*CONNIE WALKER*, HCA

*Rick White-Turner*

*Jim Raloff*, RALOFF

*Mark O. Kerner* HERZOG CONTRACTORS INC

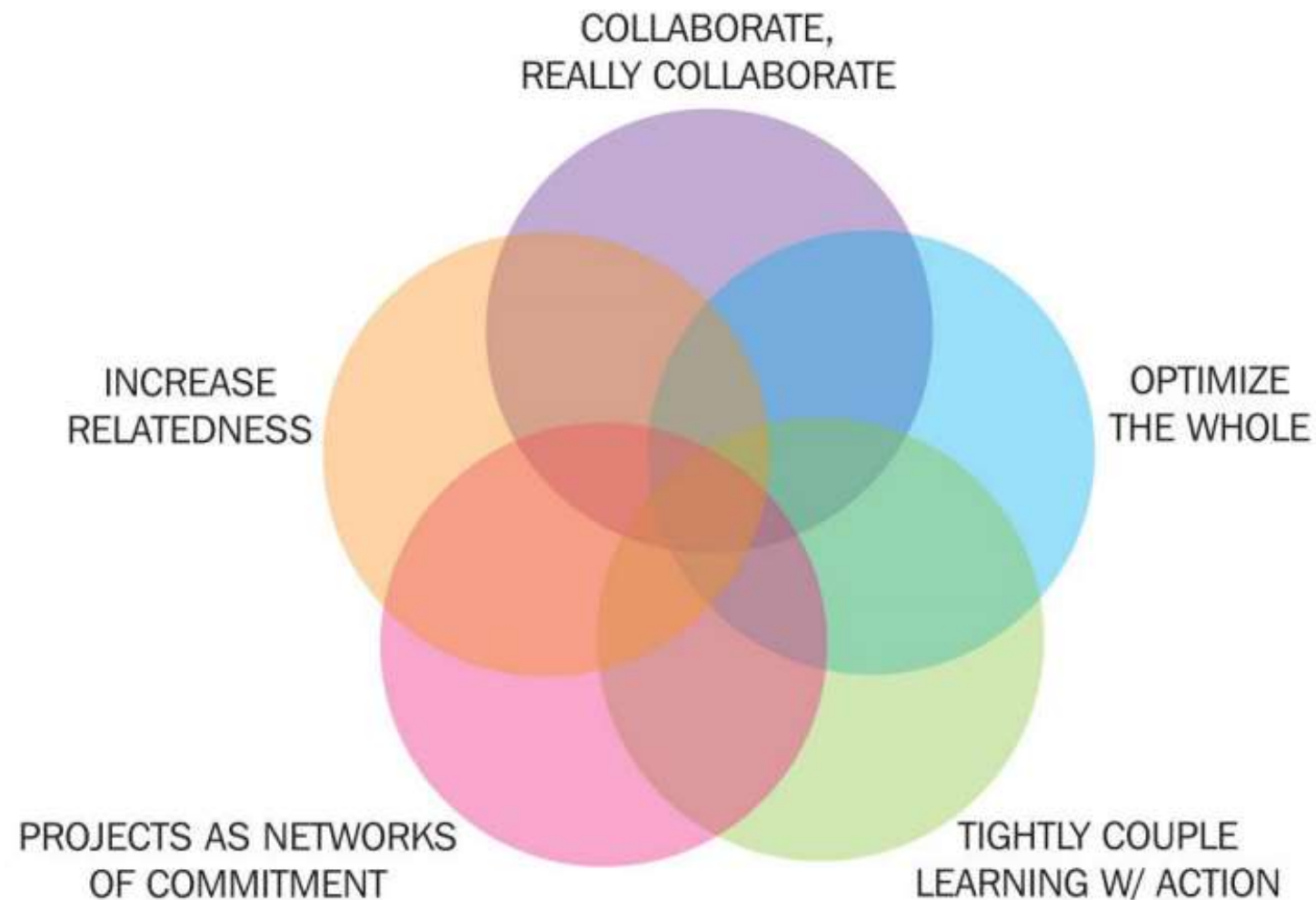
*Chris Thompson Higgins*

*John McCrackin* F.M. BOOTH DBCO

*OVER*  
*L*

# WHAT: Part 1 - Lean Intent – “The 5 Big Ideas”

**Work and learn and as a single team in the interests of overall project success**





# BUT: Early Results



2005

# CHANGING EVERYTHING Part 2: Change the Contract (a bit)





# WHAT: Part 2 – New Contract (Alpha Release) Modified GMP Contracting





REFLECTING ON OUR PAST, ENVISIONING OUR FUTURE

# BUT ...





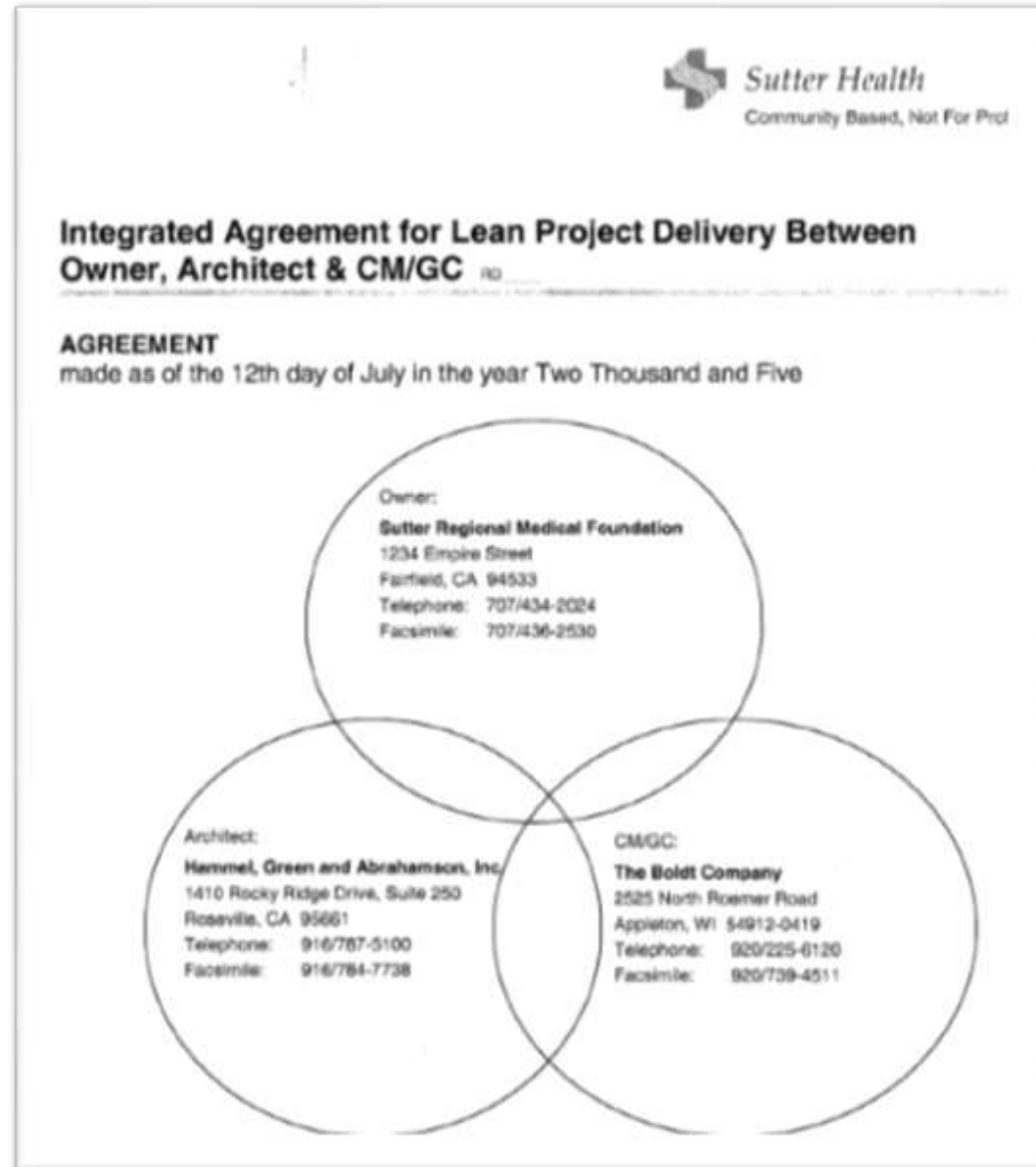
2006

# CHANGING EVERYTHING Part 3: Change the Contract (a bit more)



# WHAT: Part 3 – New Contract (Beta Release)

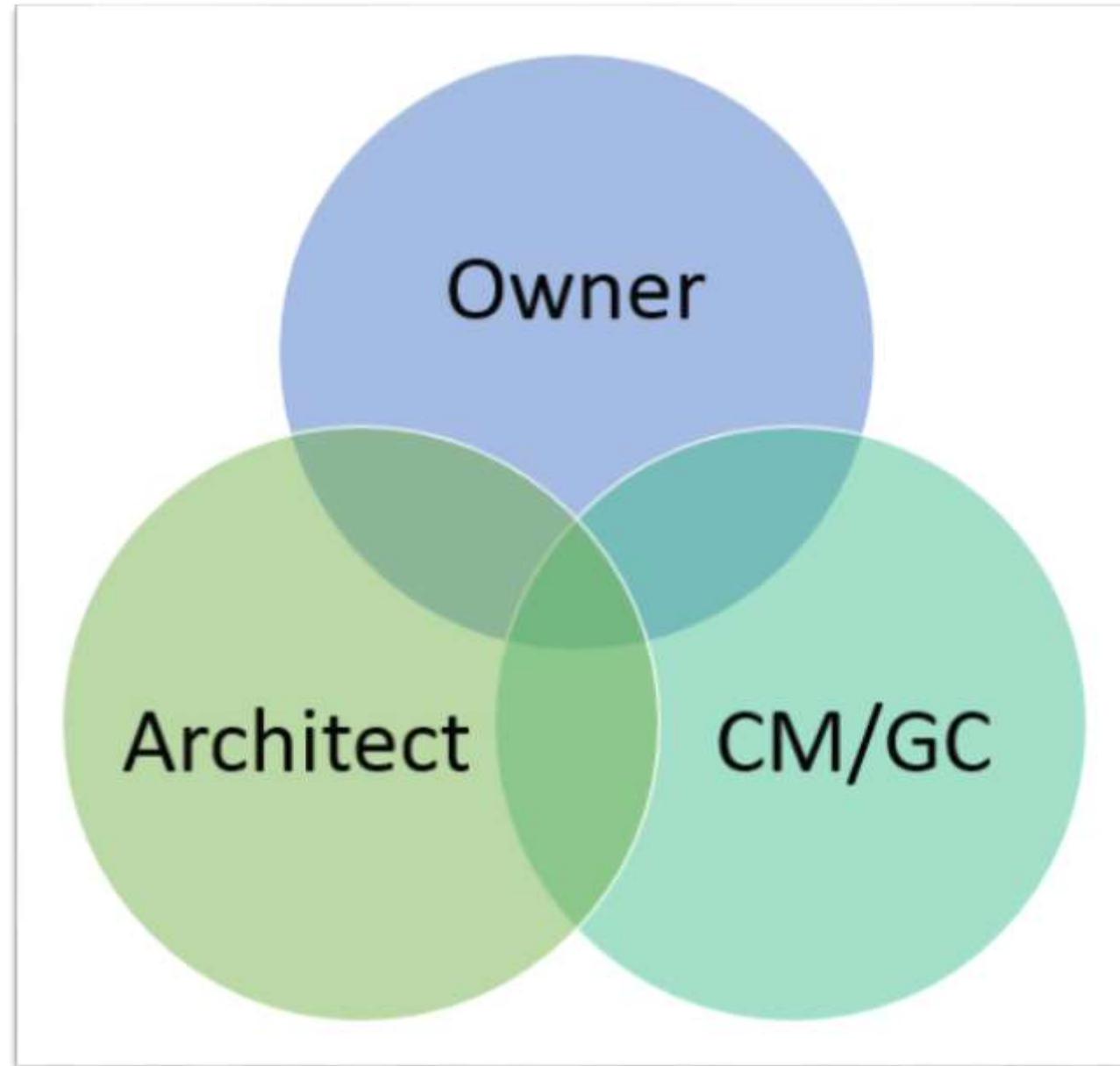
## IPD Tri-Party Contracting – No Shared Reward





# WHAT: Part 3 – New Contract (Beta Release)

## IPD Tri-Party Contracting – No Shared Reward



2007

# CHANGING EVERYTHING Part 4: Change the Contract (completely!)



# WHAT: Part 4 – IPD IFOA Rev 1 Multi-Party Shared Risk/Reward

Single Goal: Meet the Owner's Conditions of Satisfaction

Cost of Work  
Guaranteed

Fixed  
Overhead  
Guaranteed

X% Share  
of Savings

**Architect &  
Designers**



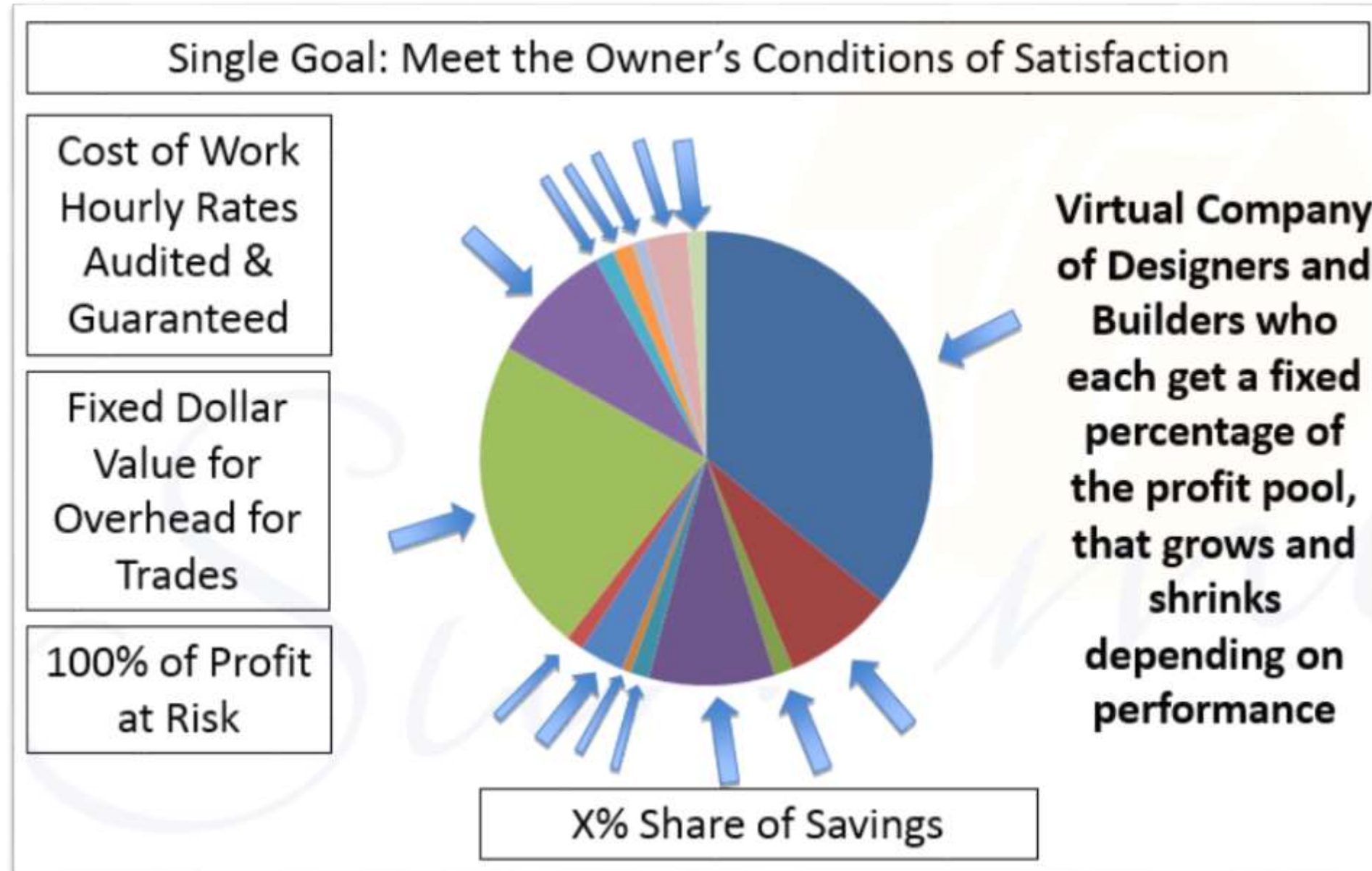
100% of  
Profit at Risk

**GC & Trades**



# WHAT: Part 4 – IPD IFOA Rev 1

## Multi-Party Shared Risk/Reward



2007 - 2018

# CHANGING EVERYTHING Part 5: Change Everything Else



# The “Everything Else” List (partial)

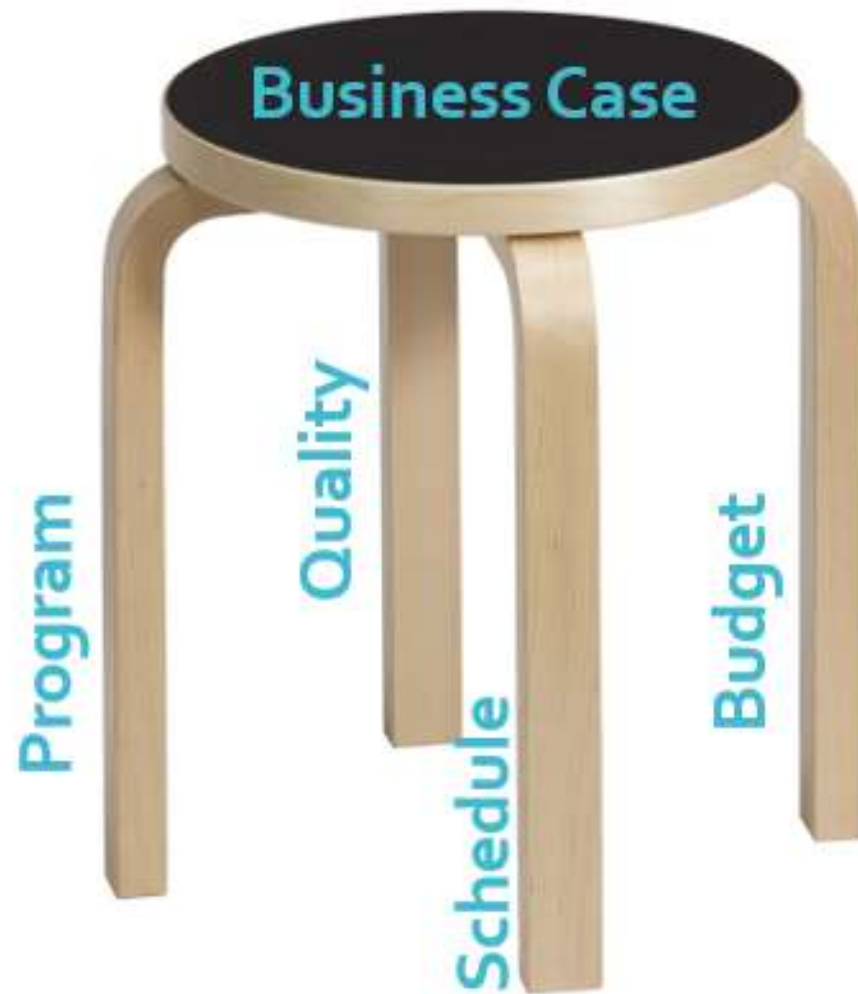
- Co-Location
- Target Value Design
- Last Planner ® System
- BIM for Risk Management
- Design for Fabrication
- Risk and Opportunity Tracking
- Cost to Complete Forecasting
- Takt Time / Location Based Scheduling
- Dashboarding / Visual Management
- Active Learning from Failures



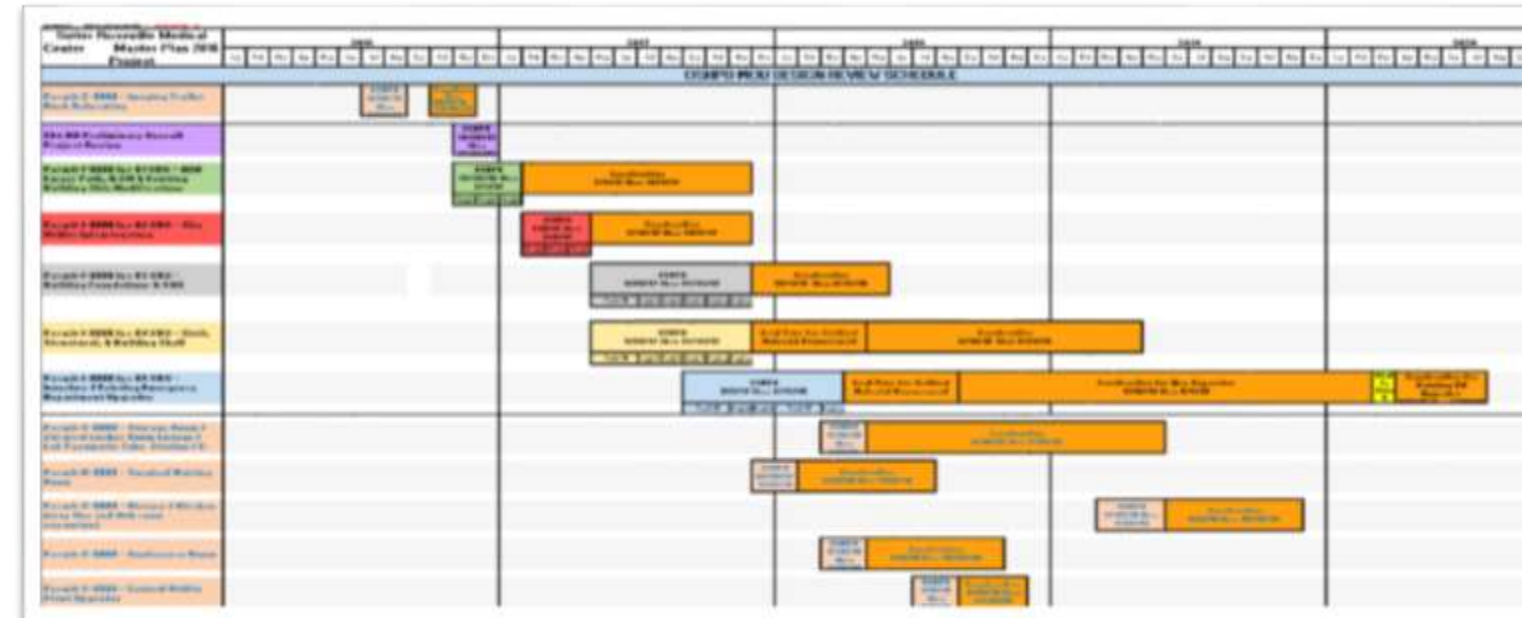
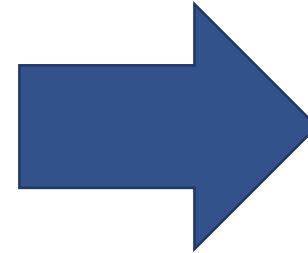


# Intentional Validation

Can We Deliver the **Proposed Program** and **Quality** within the **Schedule** and **Budget** Supported by the **Project's Business Case**?

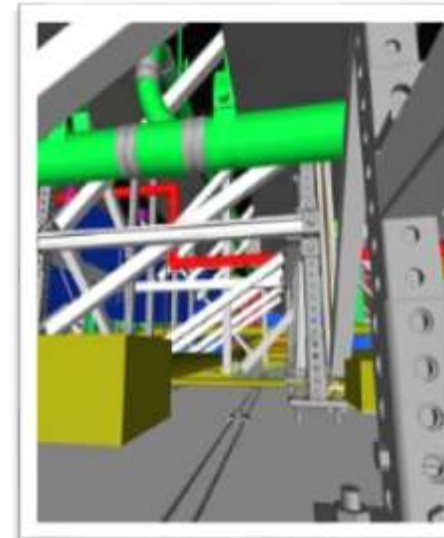
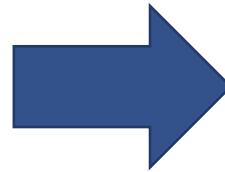
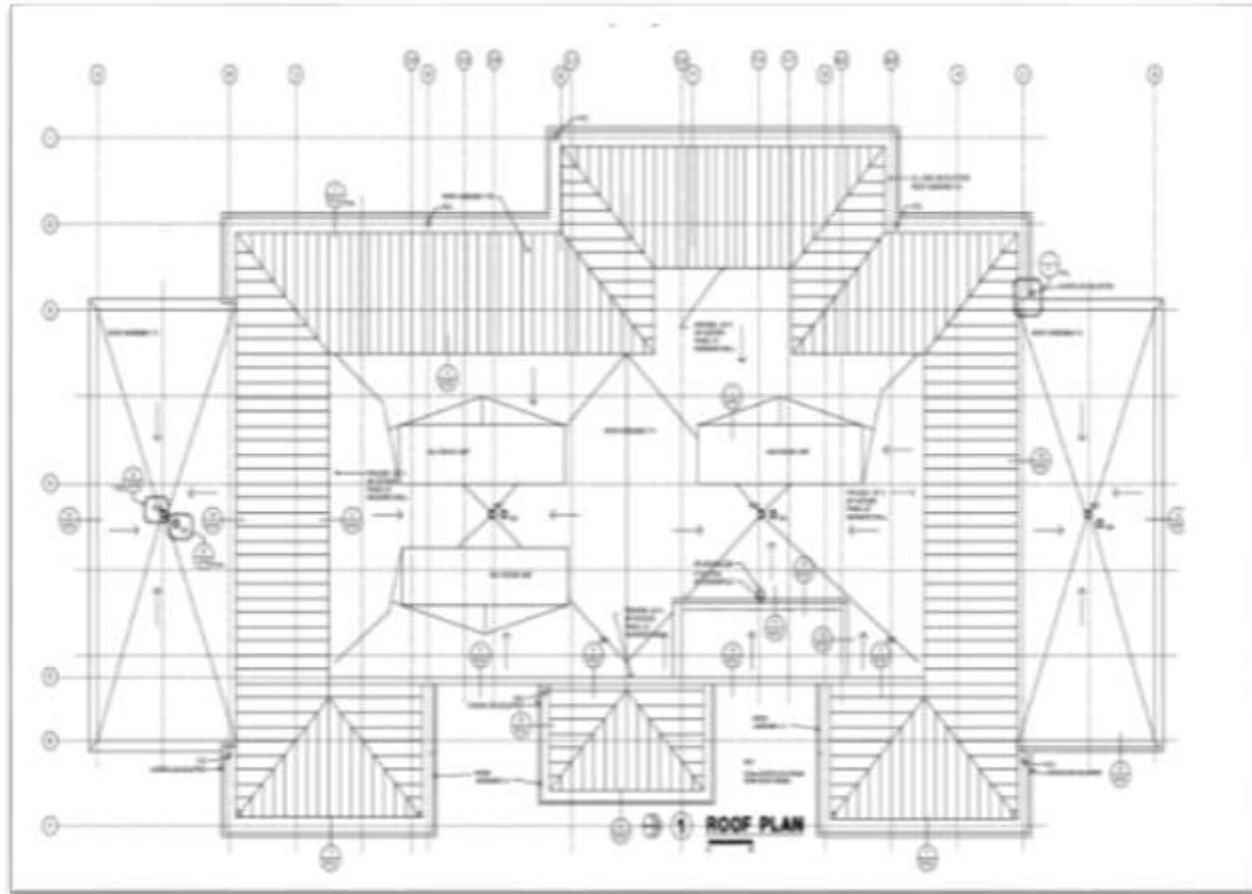


# Project Master Phase Planning

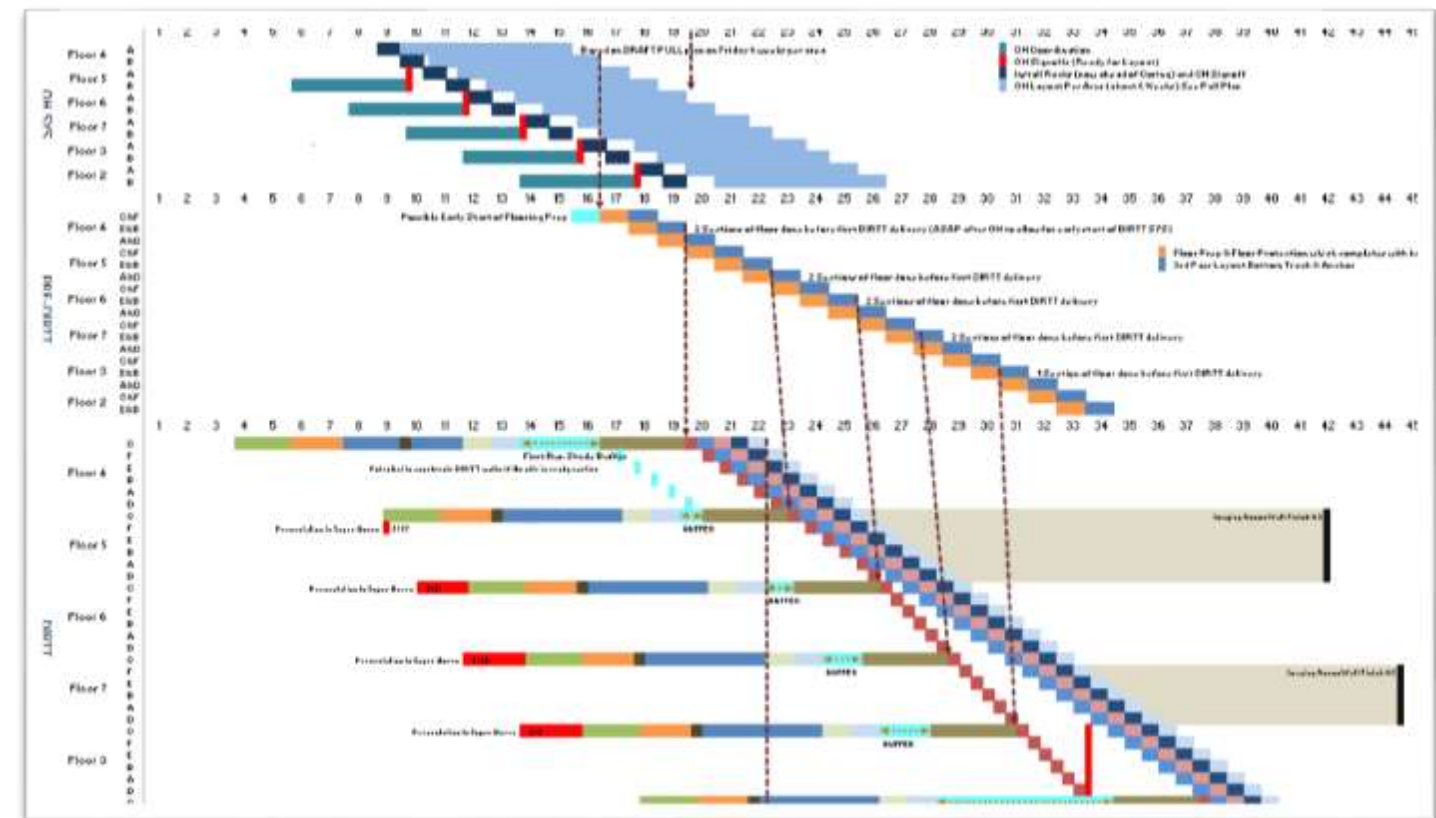




# Design for Fabrication not Design for Intent

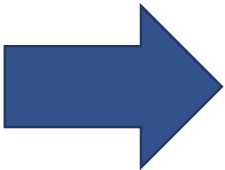


# Team-created Workflows

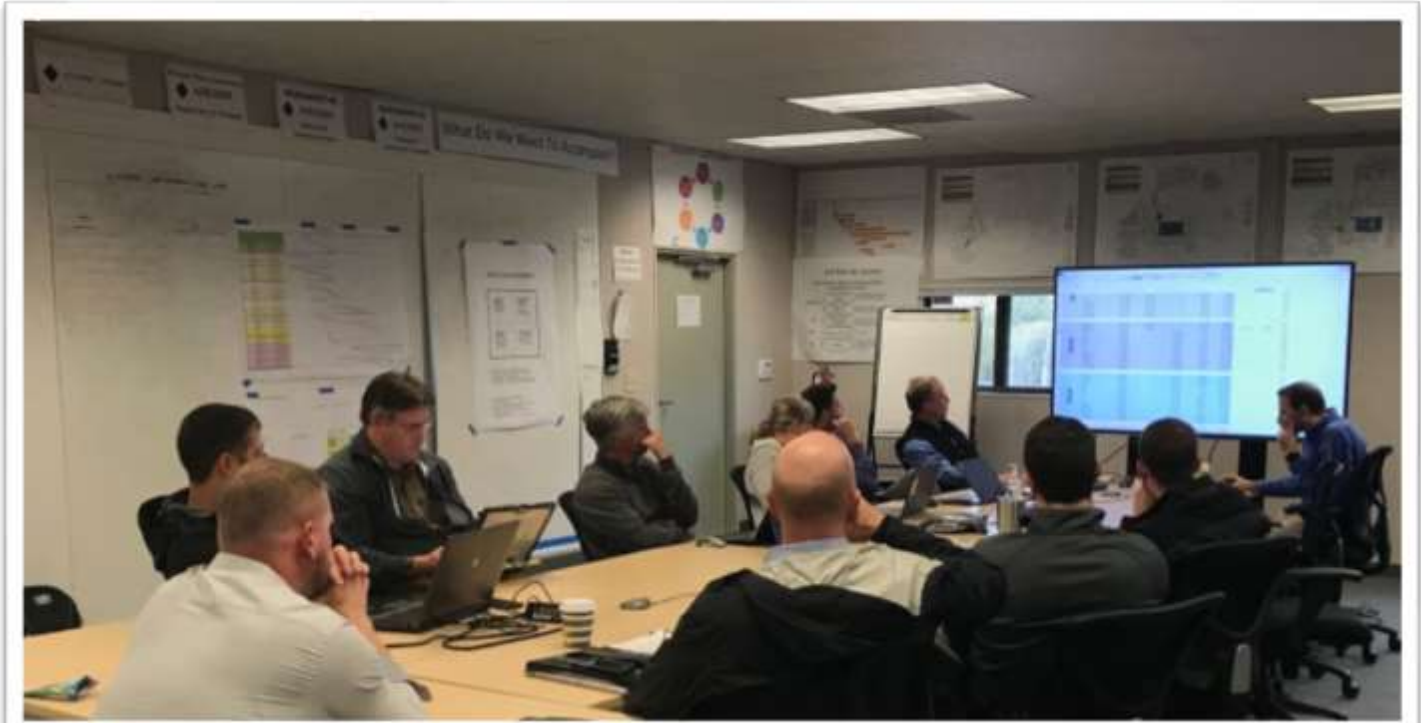




# Risk Assessment and Tracking



USK / OPPORTUNITY LOG											
Aug 27, 2017											
Date Item Added	Description	Total Order or Magnitude	Percent Utilized	Construction Costs	Design Fee	Contingency (Owner/FE)	Cost / Savings to OMP (Yes/No)	Owner Contingency (\$)	Pending Savings / Cost to OMP	Status	Comments
08/02/17	Provide porcelain pavers at courtyard in lieu of concrete pavers	\$ 24,238	100%	\$ 24,238	\$2,900	Owner	No	\$ 24,238	\$ -	Pending Change Order	8/16/17 - HGA provided A/E cost information - needs justification - scope only changes pavers to porcelain
08/09/17	Revised exterior wall finish w/ETD - HGA	\$ 184,000	100%	\$ 184,000		IFGA	No	\$ -	\$ 184,000	Closed	
08/09/17	Laminated glass in lieu of BM glass	\$ 115,790	100%	\$ 115,790		IFGA	No	\$ -	\$ 115,790	Closed	
08/09/17	Single integral blind in meeting to multiple stainless steel rails at staff stair in lieu of painted steel	\$ 193,195	100%	\$ 193,195		IFGA	No	\$ -	\$ 193,195	Closed	8/17/17 - Sutter approved process HGA finalizes condition at design team
08/14/17		\$ -	100%	\$ -		Owner	No	\$ -	\$ -	Closed	4/12/18 - Per Sutter at OAC meeting, painted rails approved
08/14/17	Enhanced floor finishes at north stair	\$ -		\$ -		Owner	No	\$ -	\$ -	Pending Owner action	HGA to present options to Sutter for review
08/16/17	Support structural steel / stairs	\$ 145,620	100%	\$ 145,620		IFGA	No	\$ -	\$ 145,620	Closed	
08/23/17	Hardware - provide "chrome-plated" stainless finish in lieu clear anodized	\$ 90,000	0%	\$ -		IFGA	No	\$ -	\$ -	Closed	Per HGA, clear anodized finish is acceptable
08/25/17	Enhanced rails at north stair	\$ 18,790	75%	\$ 18,790		IFGA	No	\$ -	\$ 18,790	Need RDM pricing	8/12/17 - Per Sutter at OAC meeting, decorative rails only at exterior stairs & landings
08/25/17	Provide fuel at additional fuel tanks reference RO #70	\$ 100,000	50%	\$ 100,000		Owner	No	\$ 100,000	\$ -	8/23/17 - Sutter WAG	8/23/17 - Sutter required if RO #70 is accepted
08/27/17	Pressure tube burst	\$ 167,577	100%	\$ 167,577		IFGA	No	\$ -	\$ 167,577	Closed	
08/28/17	Entrance canopy / time off shading	\$ 193,500	75%	\$ 193,500	\$2,900	IFGA	No	\$ -	\$ 193,500	Need RDM pricing	8/16/17 - RDM pricing pending final solution for drop-off; HGA provided RDM pricing (submitted for CTO) already in HGA
08/09/17	Additional exterior sound mitigation measures - laminated glass CM/SE liability insurance then effective date of work	\$ 51,584	100%	\$ 51,584		Owner	\$ 51,584	\$ -	\$ -	Pending Change Order	4/24/17 - Cost proposal provided, 4/18/17 - Per Sutter (OAC), change is authorized
08/28/17		\$ 17,918		\$ 17,918		Owner	No	\$ 17,918	\$ -	Revised Change Order	8/17/17 - Per Sutter (OAC)



# Daily Check-ins not Large Phase Rework





REFLECTING ON OUR PAST, ENVISIONING OUR FUTURE

# Culture





# RESULTS: It Works!







- **22 projects completed in the past 11 years**
- **\$3.1 Billion US**
- **On time, on budget, no scope compromises**





- **In progress \$2.3 Billion US**
- **4% under budget**
- **On schedule**



# The Realization Equation

Performance is terrible

+

The Owner is paying close attention

+

We might not make any money

=

**Everything changes\***

# \* The Asterisk Slide

- If the Owner is deeply involved
- If the Owner is a committed partner
- If the Owner is open & transparent
- If the Owner leads the change



# QUESTIONS ?



# Thank you

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# *Questions*



# What's Next? Looking towards the future



- 4 new hospitals by 2030
- Better – Faster – Cheaper
  - Standardization
  - Prefabrication
  - Modularization
  - Automated Design/Programming
- Working to set up teams faster
- Build upon previous successful teams





# How can you apply this tomorrow?

- *Provide attendees some specific examples they can take back to their workplace in this chart. A guide of “where to start.”*

# Contact Us

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**James Pease**

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[peasejd@sutterhealth.org](mailto:peasejd@sutterhealth.org)



**In the spirit of continuous improvement, we would like to remind you to complete this session's survey in the Congress app! We look forward to receiving your feedback. Highest rated presenters will be recognized.**



- It takes time – 14 years since 2004
- Invest in people
- Invest in partners
- Spend time in Validation
- Create a Change Management Process



# Title Goes Here

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- Keep it **short**
- Keep it **focused**
- Keep it **concise**
- Keep it **powerful**



Use this text format for  
callouts, quotes, stats, or  
to draw attention to  
important text.











# Blah Blah blah

## Insert Photo(s)

- Either two photos:  
From “This” to “This”
- Or one photo “To this”

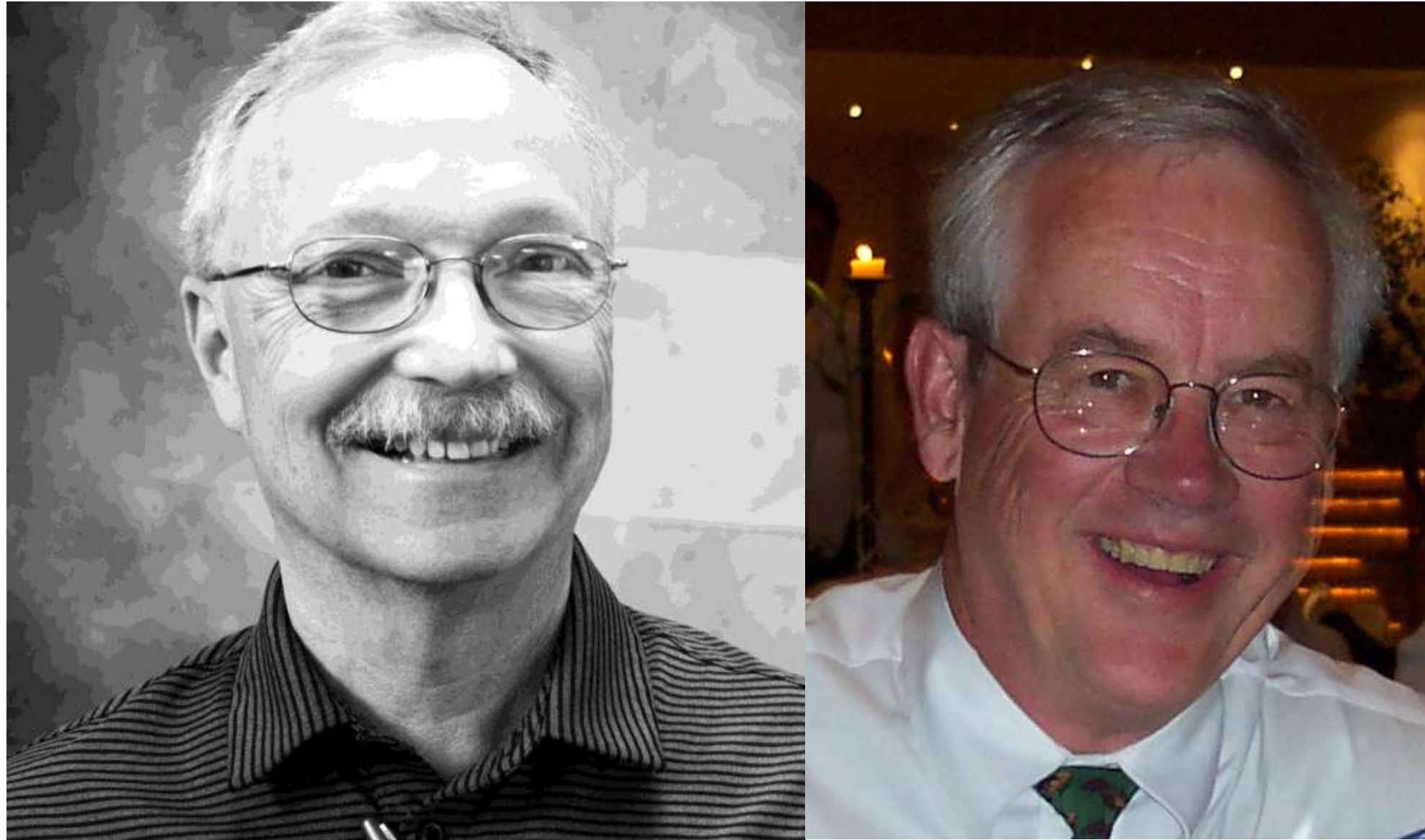




# **The Declaration of Intent**

## **2000 - 2006**

# Lean





Continued to Fail after that . . . This drove the need for a contract.

Continued to Fail after that . . . This drove the need for a contract.

# Summary

So apart from changing the way we

- Validate, Contract, Design, Budget and Schedule our projects
- It's pretty much business as usual 😊



## Presentation Summary from LCI Agenda – Delete in this Slide in Final Presentation

9:30 AM - 10:10 AM

**Level**

Fundamental

**Type**

Single Presentation

**Open to**

all registrants

**Track**

Lean Transformations

**Duration**

40 minutes

**Sutter Health and Lean IPD - Our Journey to Reliable Project Delivery**

**Location TBD**

Sutter Health has spent the last 17 years working to build healthcare projects reliably. Through the development of Lean Construction and Integrated Project Delivery practices, a capital program of roughly \$5Billion has been delivered on time and on budget. The journey has not been easy and has consisted of twists and turns. From adoption of the 5 Big Ideas in 2004, the implementation of the first pilot Integrated Form of Agreement, to the successful completion of over 20 IPD projects, Sutter representatives will share their hands on experience and stories along the journey. Discussion will also cover transformation within the department of Facility and Property Services as the culture of project delivery changed.

Learning objectives:

- What are the 5 Big Ideas?
- What is Integrated Project Delivery and why did Sutter go in that direction?
- What are some of the challenges with Integrated Project Delivery?
- What are some of the major opportunities with Integrated Project Delivery?

**Speakers:** James Pease, Digby Christian

Total Capacity: 300

\* Owner Interest

# Other thoughts

Need something about

- Celebrating successes
- Culture of learning/problem solving
- Respect, Safe Spaces



## Lean Design and Construction

A production management-based **approach** to project delivery (LCI website)

## Integrated Project Delivery

An approach that **integrates people, systems, business structures** and practices into a process that collaboratively harnesses the talents and insights of all participants to **optimize project results, increase value** to the owner, **reduce waste**, and **maximize efficiency** through all phases of design, fabrication, and construction. (AIA 2007)