

25TH ANNUAL



25TH LCI CONGRESS
OCTOBER 24-27, 2023

FROM DIVIDE & CONQUER TO **COMBINE & COLLABORATE**

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25 YEARS OF LEARNING: SUPERCHARGE YOUR LEAN JOURNEY IN THE MOTOR CITY

INTRODUCTIONS



“A-a-ron”

**AARON
ZELIGMAN**

Sr. Project Executive
Banner Health



“Big Jake”

**CHRIS
JACOBSON**

Vice President
McCarthy Building Company



“The Diplomat”

**CRAIG
PASSEY**

Vice President
SmithGroup



“J-Light”

**JASON
LIGHT**

Project Executive
Okland Construction

AGENDA

1

PROJECT BACKGROUND

Who, What, Why

2

CHALLENGE STATEMENT

Complacency & Waste are 4 Letter Words

3

THE APPROACH

Success Isn't Final, Failure Isn't Fatal

4

TAKE-AWAYS

Good, Bad, & Better

PROJECT BACKGROUND



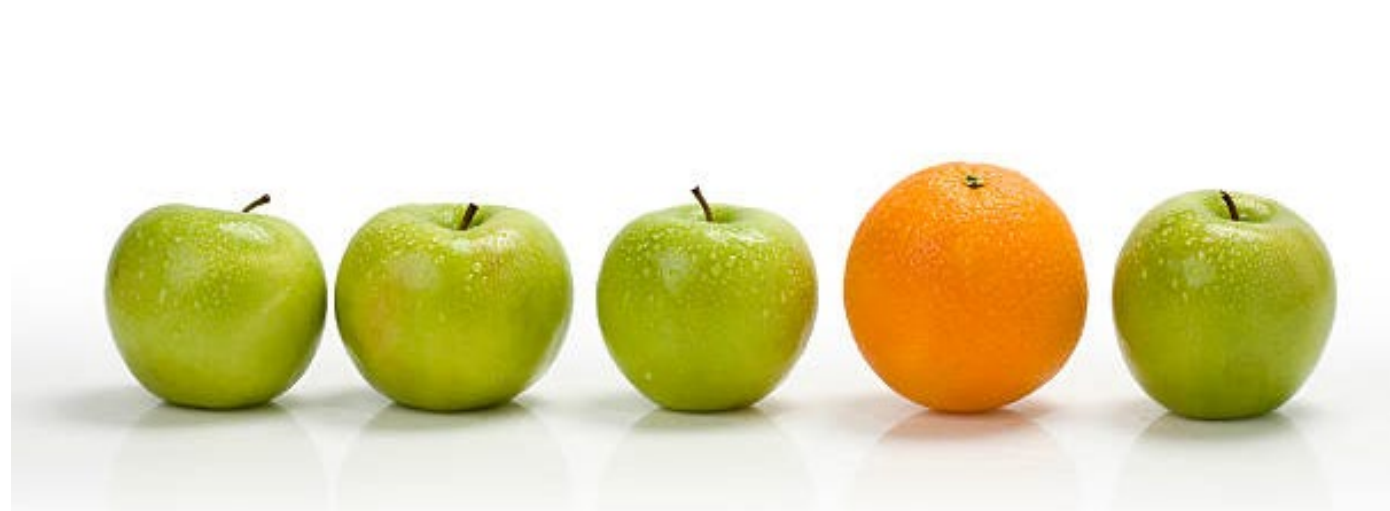
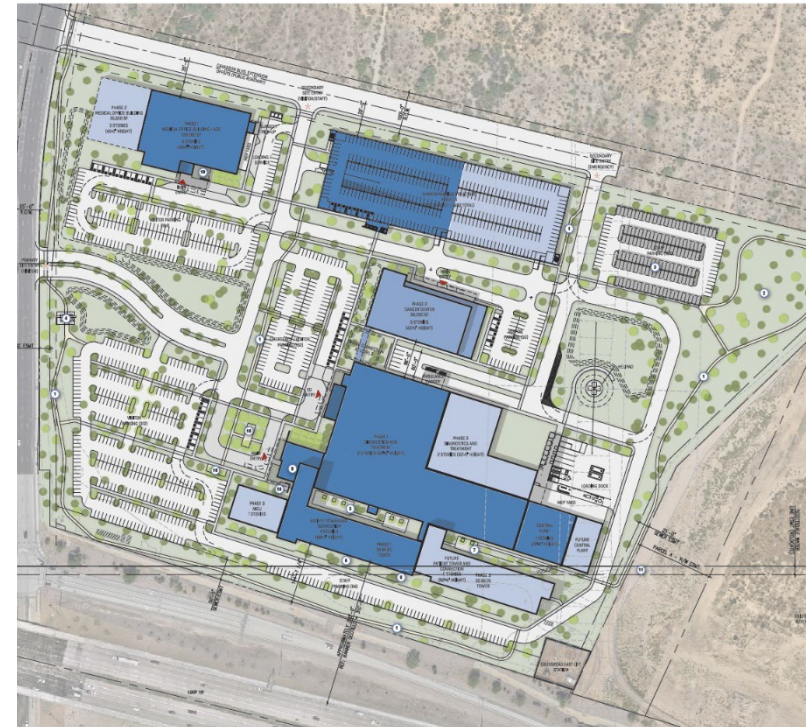
2 NEW ACUTE CARE HOSPITALS

DIFFERENT BUT THE SAME (MAYBE?)

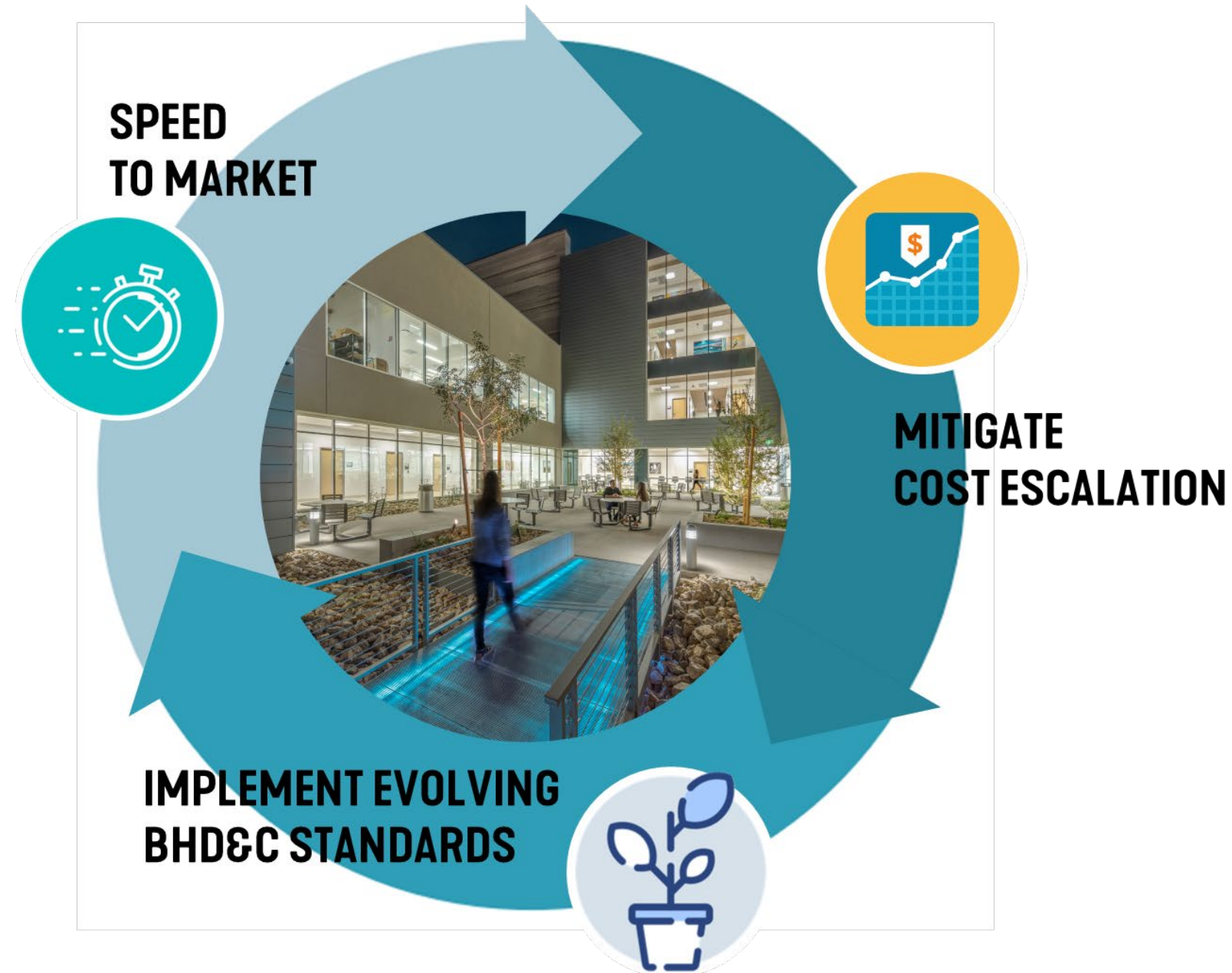


PROJECT AWARD → OPPORTUNITY FOR COLLABORATION

- 2 programs that weren't that different
 - 2 different teams; similar goals & timelines
- Added square footage was cheaper & faster than 2 separate designs...



DRIVERS FOR SUCCESS



OFF-SETTING CONSTRUCTION MARKET VOLATILITY

- Early procurement of long-lead items
- Warehousing of materials
- Trade Partner commitment/ contracting
- Pre-fabrication
 - Envelope
 - MP&E Systems
 - Interior Architecture Components



CHALLENGE STATEMENT



ELIMINATE WASTE & ADD VALUE

- **Discuss which waste we are eliminating**
- Collaboration on key trade partner selection between Okland / McCarthy
- **Shift from IPD-light to full IPD to drive successful outcomes**
- Choosing the same systems for design detailing (example is exterior skin and prefabrication)
- **Using both projects to generate the best ideas and share**
- Using the same major equipment vendors and equipment selection
- Identifying the prefabrication elements and having alignment
- **Eliminating duplication of meetings for Banner and Design team holding joint Okland / McCarthy meetings**



GLOSSARY OF TERMS

IFOA **noun**

i•f•o•a

- 1 : a common type of relational contract used in Integrated Project Delivery.
- 2 : a type of contract sometimes known as a multi/ tri-party agreement.

Delegated Design **noun**

del•e•gate•d de•sign

- 1 : a form of collaboration between a design professional and contractor (or subcontractor) where the contractor assumes responsibility for an element or portion of the design.

Conditions of Satisfaction (CoS) **noun**

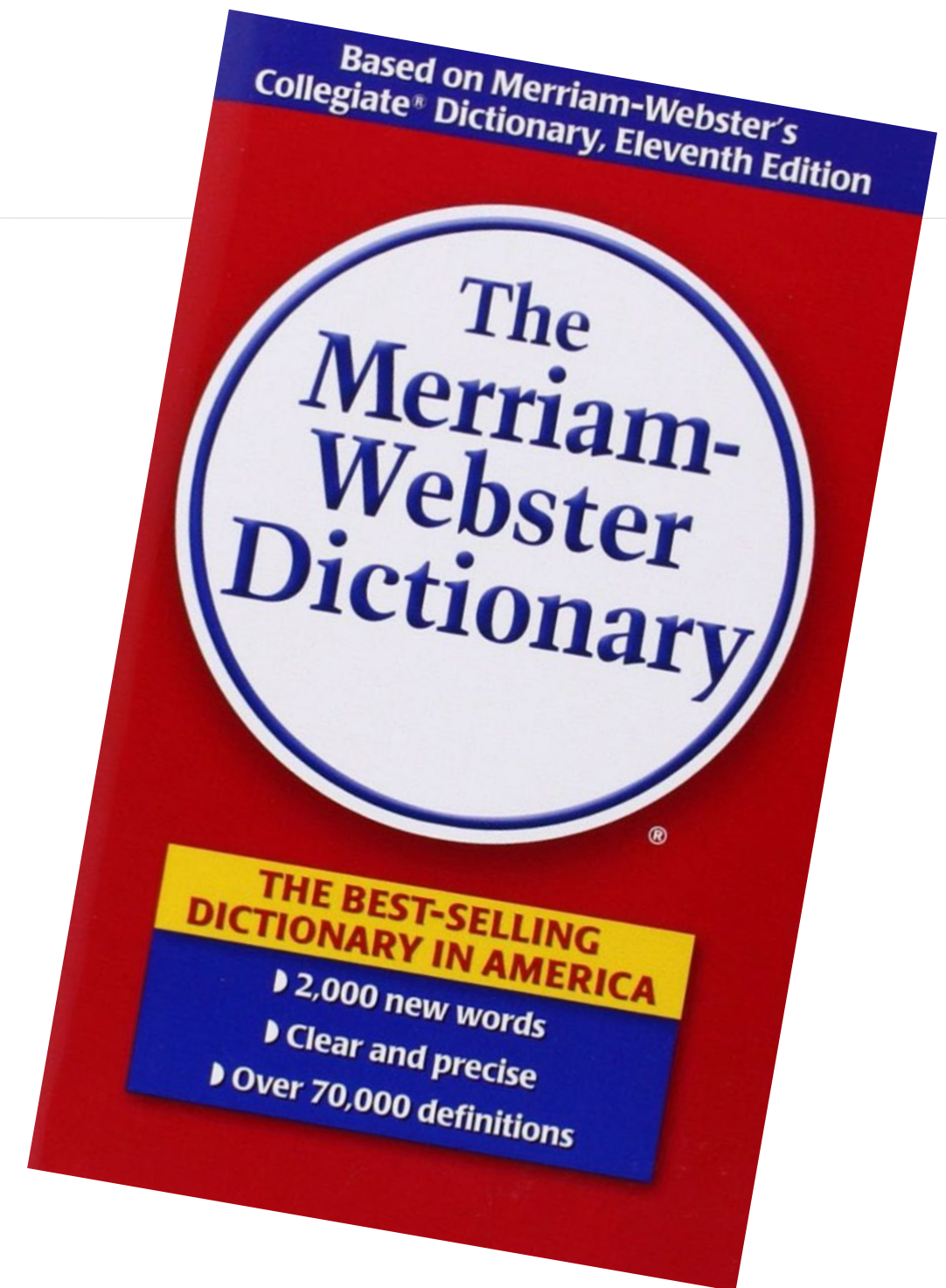
con•di•tions of sa•tis•fac•tion

- 1 : requirements that must be satisfied by the project Team for the Owner to feel that they received exactly what was wanted

Pitfall **noun**

pit•fall

- 1 : a hidden or unsuspected danger or difficulty
- 2 : Popular Atari 2600 video game, originally released in 1982, featuring Pitfall Harry.



THE APPROACH



CROSS-PROJECT COLLABORATION PRECEDENCE (BIG 3)



BANNER GATEWAY
340,000 GSF/ \$157 MM



BANNER THUNDERBIRD
289,000 GSF/ \$185 MM



BANNER DESERT
212,000 GSF/ \$98 MM

SMITHGROUP



Cunningham



Pre-fabricated headwalls
Pre-fabricated building envelope

Finishes
Pre-fab interior framing

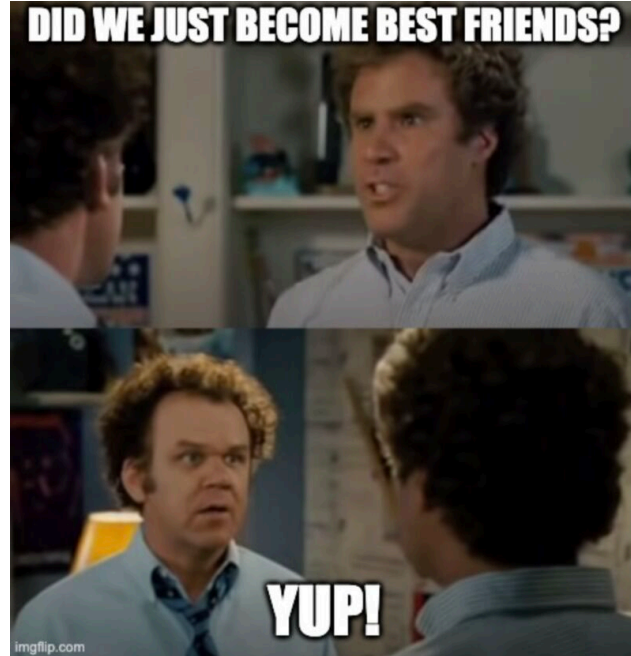
Pre-fabricated bathroom pods

HOW IS THIS GOING TO WORK?

MOTIVATIONS

- IFOA for both projects → Enhanced Fee incentivized collaboration
- Final product will be the new templates

Designating team leads per design cluster was essential.



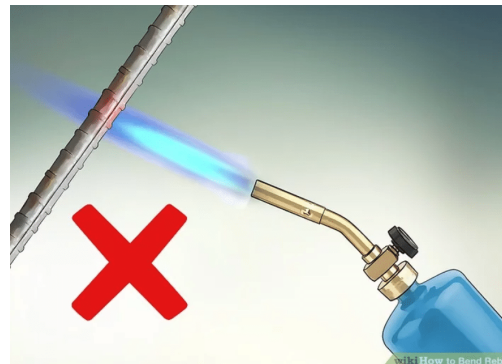
STANDARDIZED FLEXIBILITY

Why?

- Allowing the teams to own their project while keeping design intent
- Means and methods are different between contractors

How do we obtain feedback?

MORE THAN 1 WAY TO BEND STEEL



THERE'S A BETTER WAY- COMBINE & COLLABORATE

SMITHGROUP



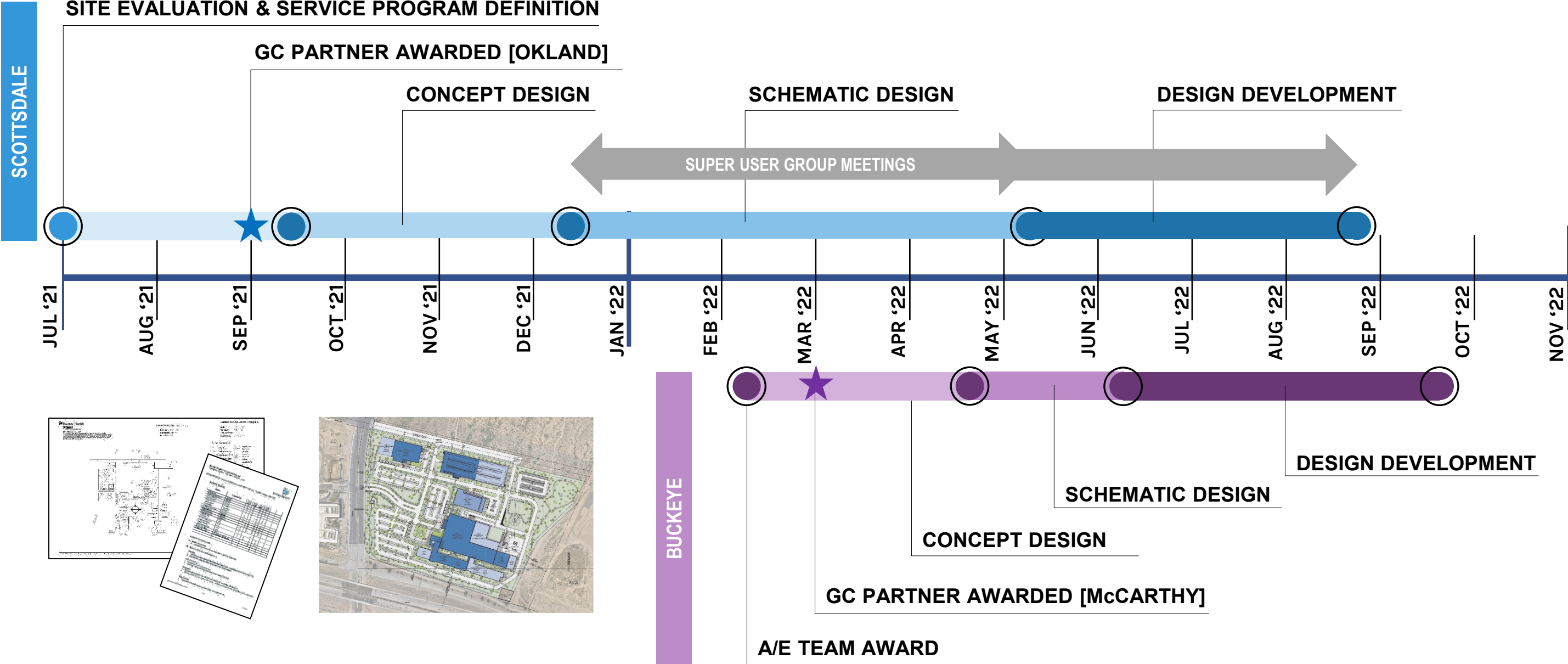
BANNER BUCKEYE
350,000 GSF/ \$294.5 MM



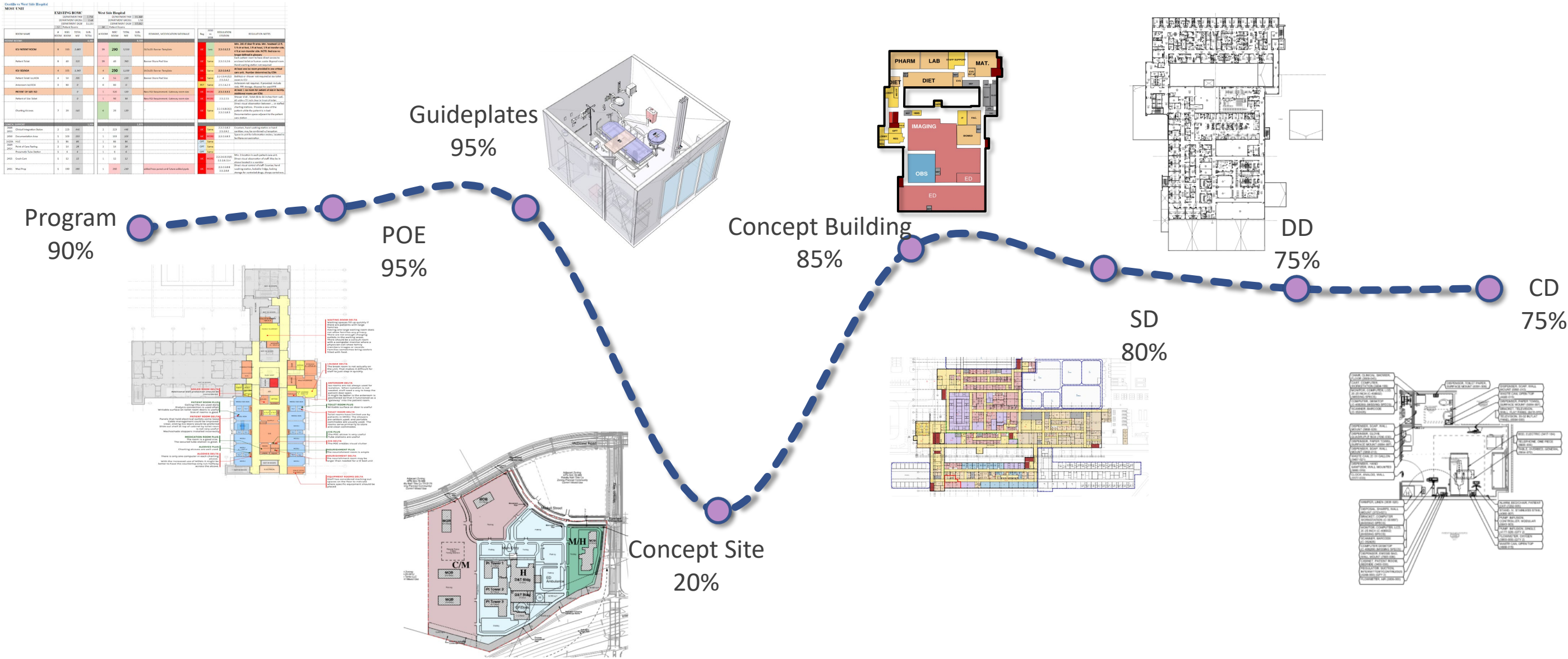
BANNER SCOTTSDALE
350,000 GSF/ \$295 MM



PROJECT(S) TIMING CONTEXT

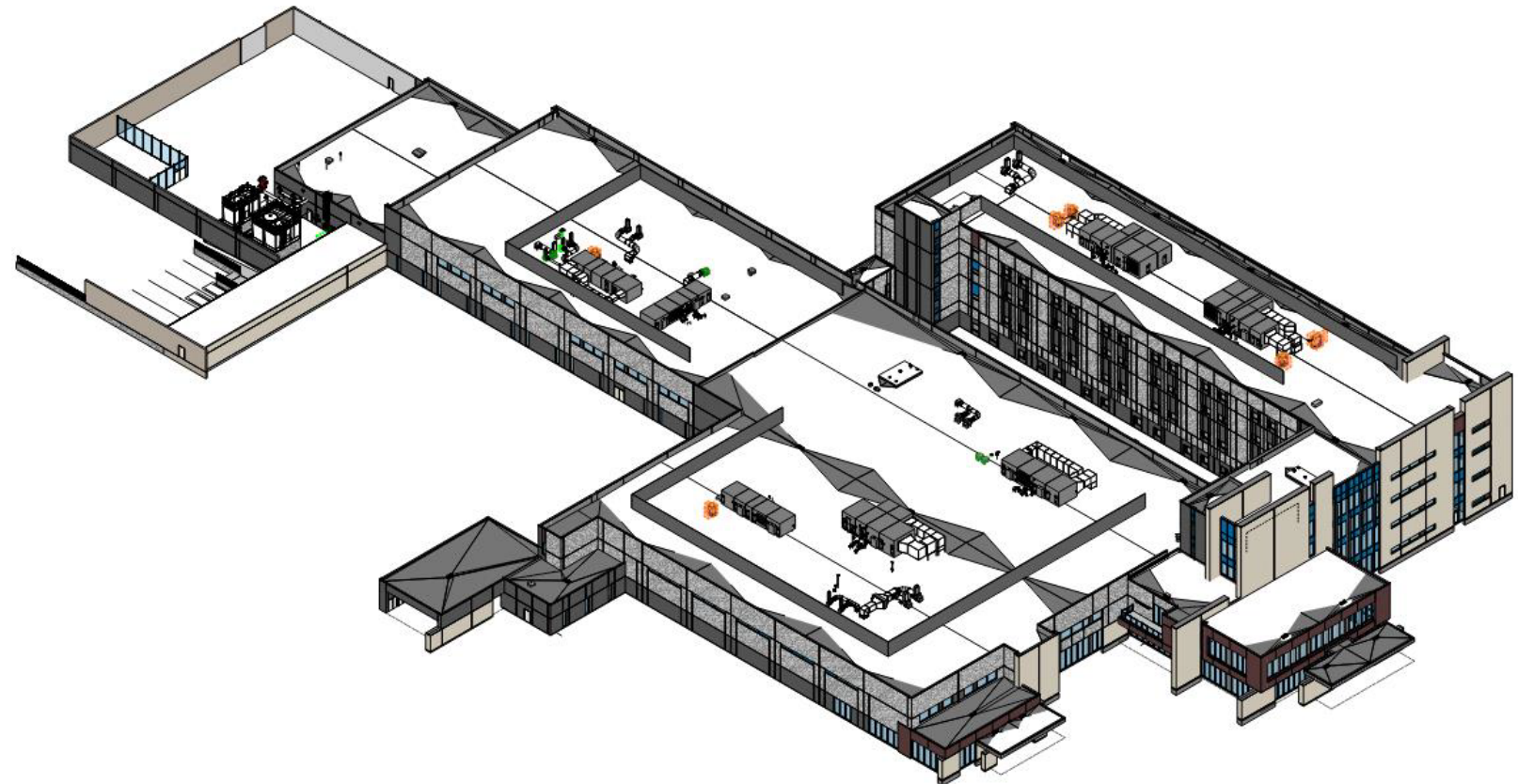


LEANING THE PROCESS



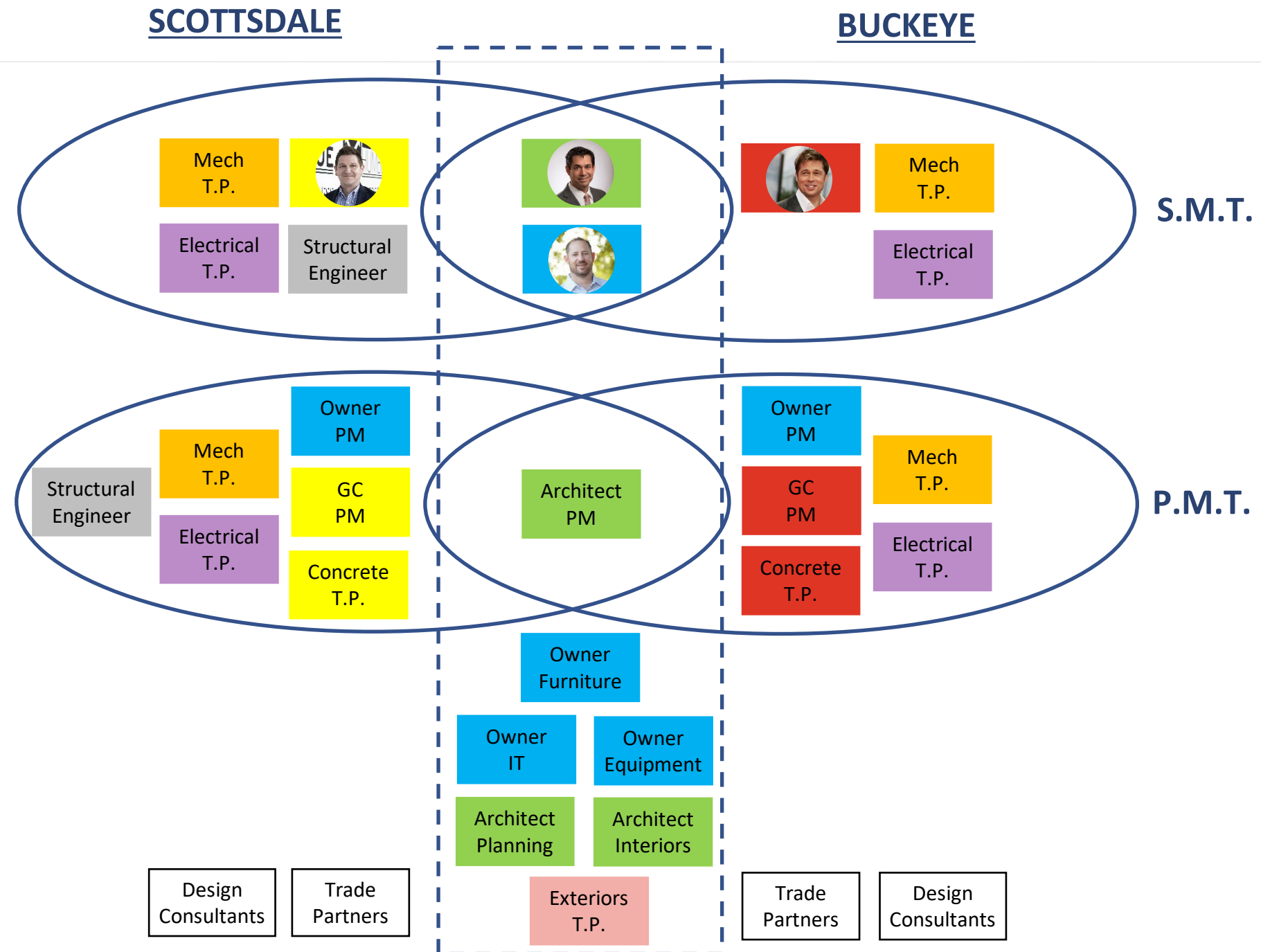
LEANING THE PROCESS/ ELIMINATING WASTE

- Establish a Super User group serving as a resources for both projects.
 - Promote consistent direction and decision-making
 - Eliminate redundant staffing and meetings
- Develop/ maintain a shared Revit model thru DD's.
 - Promote consistency of product.
 - Supported Improved Quality Control
 - Collapse project staffing and accelerate schedule`



STAFFING

- Need Consistency
- Who has to be on both?
- Who should be dedicated?



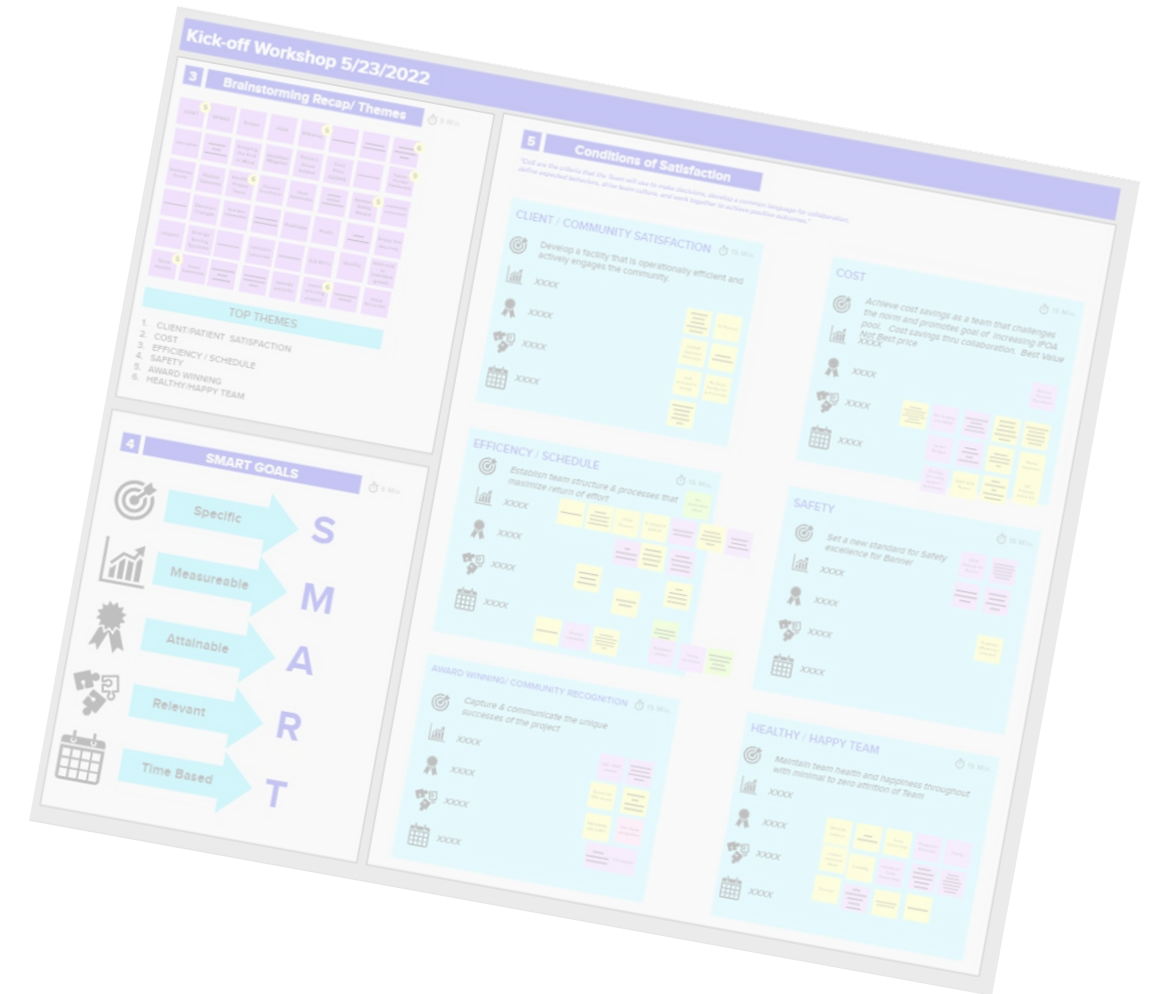
APPROACH TO ESTABLISHING CONDITIONS OF SATISFACTION

Scottsdale – Team Culture & Collaboration to Achieve Outcomes

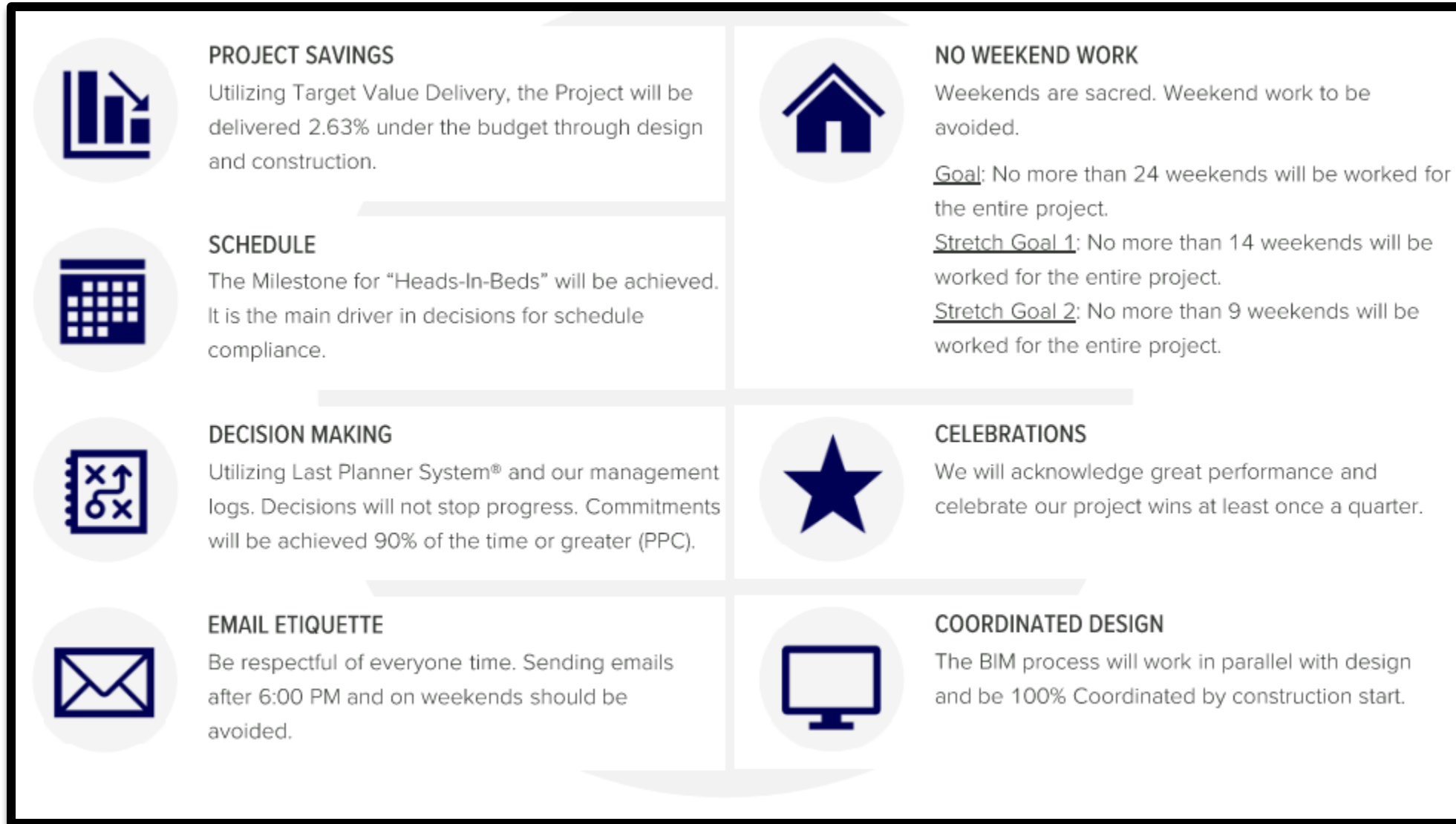
- Determine Guiding Principals
- Review What we Don't Like
- Mural Board with team to determine importance
- Refinement by Project Management Team ('PMT')

Buckeye - Traditional Project Outcomes

- Review Team Ideas for Themes
- Create Challenge Statement
- Mural Board with team to determine importance
- Refinement with all Stakeholders



CONDITIONS OF SATISFACTION - SCOTTSDALE



CONDITIONS OF SATISFACTION - BUCKEYE

- **Effectively manage Banner Health's expectations for Cost, Schedule, and Scope in order to support a growing need for healthcare services in the west valley.**
- **Deliver a cost competitive hospital/ campus development that meets Banner Health's Service Program requirements.**
- **Capture content and position the project to promote its unique challenges to the local and national communities.**
- **Establish a team environment that fosters collaboration, eliminates waste, and yields positive results.**
- **Implement a Safety program that eliminates accidents and creates a culture of safety consciousness.**
- **Foster a team culture that celebrates the individual and collective team members' successes and promotes team health.**

CONDITIONS OF SATISFACTION		
THEME	CHALLENGE STATEMENT	GOALS / METRICS FOR SUCCESS
CLIENT / PATIENT SATISFACTION	Effectively manage Banner Health's expectations for Cost, Schedule, and Scope in order to support a growing need for healthcare services in the west valley.	Monitor customer satisfaction with Buckeye residents quarterly with an 80% satisfaction rate via polls and Town Halls
		Conduct quarterly surveys with Banner Steering Committee and achieve 85% satisfaction rate, once Steering Committee meetings are established.
COST	Deliver a cost competitive hospital/ campus development that meets Banner Health's Service Program requirements.	Beat Banner Health's Project Target Value amount.
		Mitigate XX% of project contingencies through collaborative design / buyout / delivery.
		Maintain a Decision log in order to challenge Banner Standards to achieve and deliver a target value project.
KNOWLEDGE SHARING	Capture content and position the project to promote its unique challenges to the local and national communities.	Document and Track process and progress throughout via lessons learned log, photos, screenshots. set as weekly big room report out - LEAN LEARNING!
		Track knowledge sharing and promotional opportunities (Conferences, Publications etc.), on local and national level. Report out on Monthly Basis
		Leadership Team to promote, share and like all social media content prepared by social media champion
EFFICIENCY / SCHEDULE	Establish a team environment that fosters collaboration, eliminates waste, and yields positive results.	Project Start, Substantial Completion & Heads in Beds Milestones. Schedule Success as a Team
		Submittal Success Metrics – XX% first time approval
		Document reduction in administrative hours spent through LEAN processes
SAFETY	Implement a Safety program that eliminates accidents and creates a culture of safety consciousness.	Total project incident rate < XX %
		Achieve an Ashton Tiffany Safety Audit rating of "Excellent" for 85% of the surveys.
		Establish a dedicated safety cluster where the entire team can add value and provide input
HAPPY / HEALTHY TEAM	Foster a team culture that celebrates the individual and collective team members' successes and promotes team health	Conduct quarterly retrospective informed by a 3 minute (max.) survey that has a 75% response rate.
		Recognize and celebrate successes. Maintain an agenda item during which the team identifies success and opportunity for improvement during the big room meeting.
		Optimizing peoples time and attention to specific problems by establishing a meeting leader and publishing an agenda prior to meetings

TRADE PARTNER SELECTION

- Identify & Coordinate Pool of Qualified Trade Partners with Availability
- Coordinate Design Assist scope to Procure Trades with Alignment between Projects
- Avoid Risk by Hiring the Same High-Risk Trades
- Coordinate Timing of DA Trade Partner Procurement for Best Responses
- Be open to Comparing Project Details to Reduce Waste

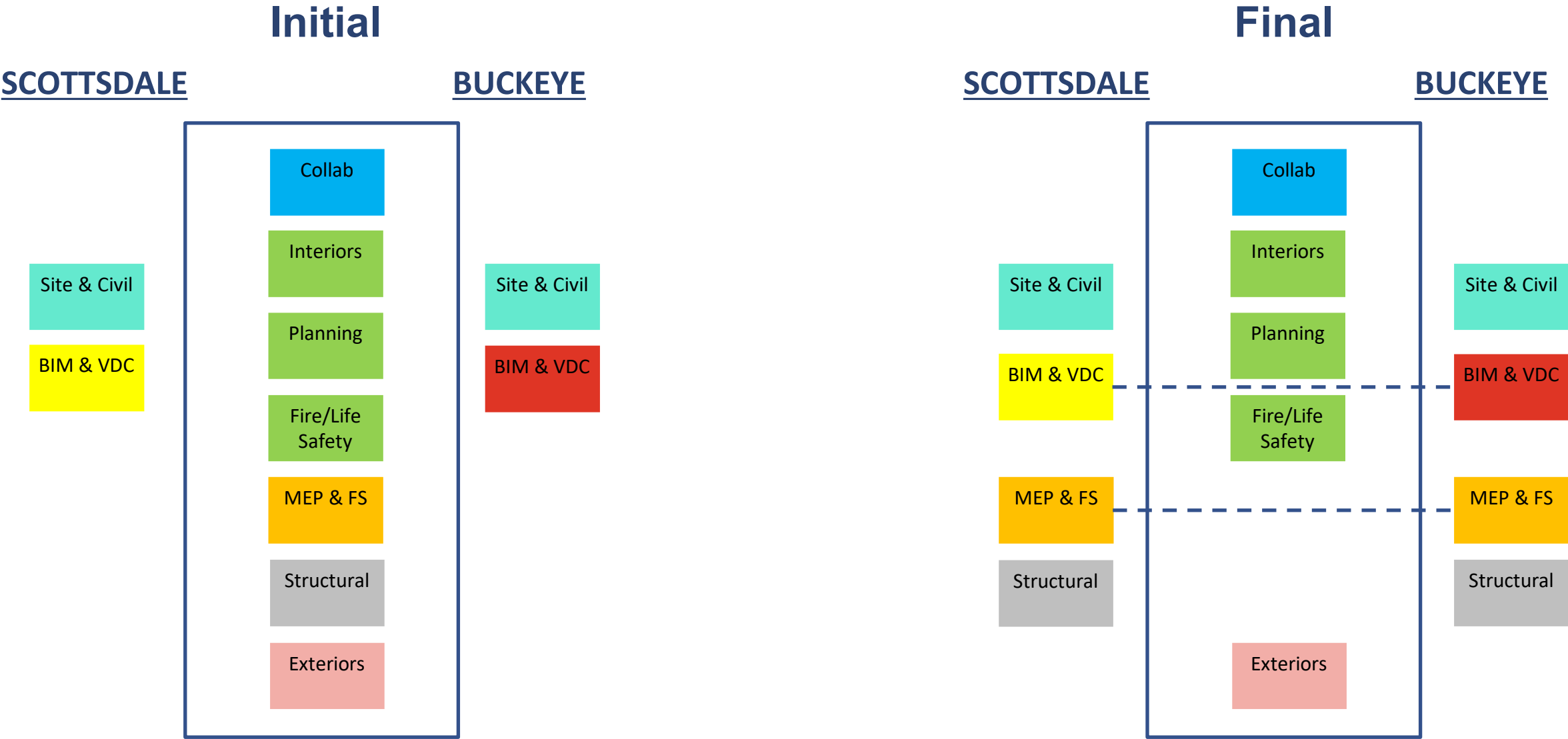


Sharing – Delegated Design

- Realized that MEP modeling was going to be different for each project based on their own means and methods as well as controlling of cost components. Building Envelope was our largest opportunity for delegated design sharing
- 1 prefabricated skin detailer and manufacturer
 - All the same design material selections were the same
 - Joint building enclosure consultant and cluster meetings
 - Glass and glazing shop drawings shared and standardized
- Roofing analysis and costing options run parallel and collectively both teams used Choosing by Advantages ('CBA') for best option
- Joint Cost Benefit analysis



Design Cluster Organization



TAKEAWAYS



WHAT WORKED?

- Reduced design costs by roughly 20% (~ \$2.5M in savings)
 - 1 Architectural team through SD → eliminate staffing redundancy
 - Lower meeting count & lower design hours
 - Maintained/Increased fee potential
 - Allowed for a “super-user” group
- Reduced Owner staff requirements by 40% in design (~ \$2.5M in savings)
- Consistency of product
- Enabled procurement of 80% cost of work early in design → budget certainty
- Joint drawing reviews



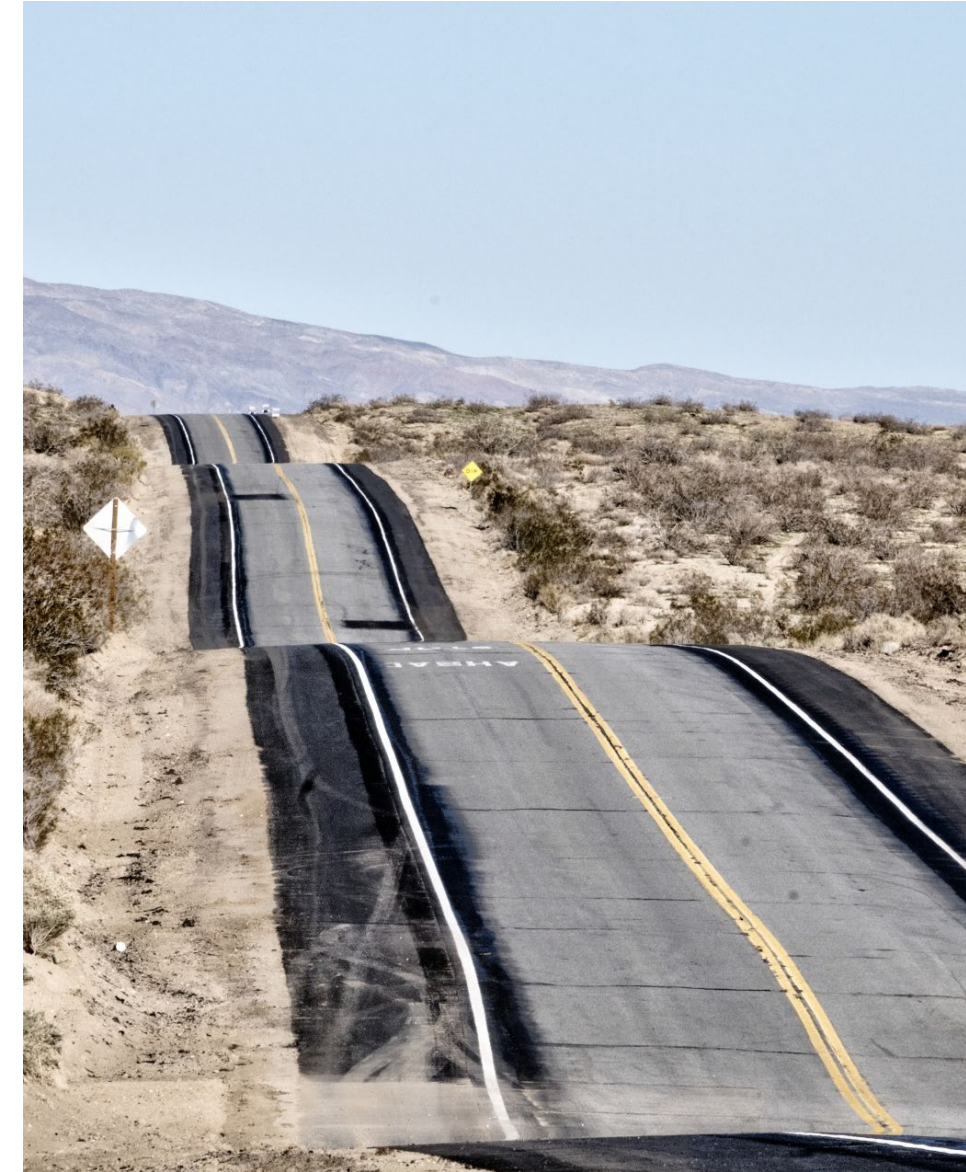
WHAT WORKED?

- Scottsdale & Buckeye perspectives
 - Sourcing and pricing for major equipment as a team
 - Building enclosure strategy and detailing
 - The power of two teams solving challenges for both projects at the same time
 - Cost comparisons within pre-construction teams
 - Casting a wider net on trade partner community
 - Teams worked together for the good of both projects and not own interests!
 - I have a new friend 😊



WHERE WERE THE BUMPS IN THE ROAD?

- First time IFOA for most of the team
- Delegated design was not utilized the same between projects
 - Decision was made based on capacity & capabilities at the start; should have been the same
- Trade Partner Intellectual Property
- Different processes and communication of information between construction partners
- Mechanical engineering/ trade varying approach between Teams



WHERE WE PIVOTED

- Team reflection weekly & 2 team reflect bi-weekly
- Collapsed clusters that then separated
- Timing of engaging delegated trade partners on Buckeye
- Shared model cloud location
- Shared model break at DD's in lieu of SD's.



CAN YOU DO THIS?

- Yes, but...
 - Need similar projects & team capabilities
 - Projects of size
 - Team chemistry: transparency & communication
 - Discuss pitfalls before you fall into them
 - Accept that you will have to adapt
 - Incentivize the teams!
- Outcomes can lead to template & standards updates



“PITFALL”





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Thank you... Questions?

CONTACT US

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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.