

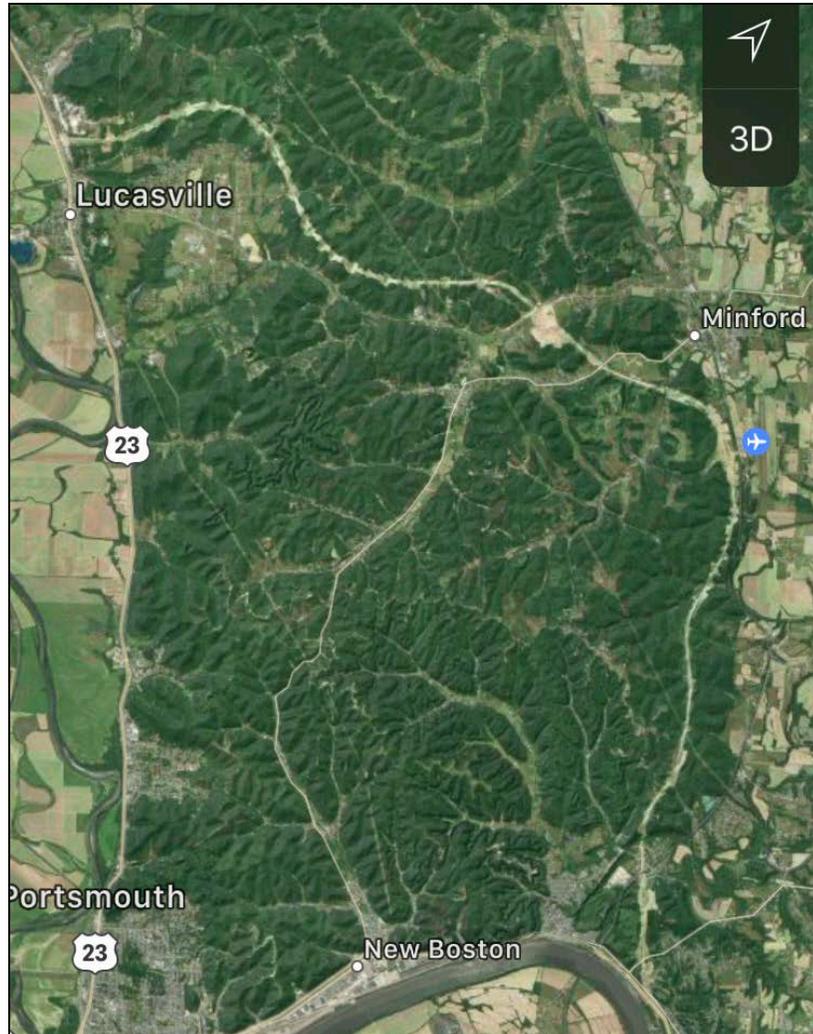
Unique Staffing Challenges Require an Out of the Box Solution

Jason A. Sander, PE

Sr. Principal, Regional Manager

Terracon Consultants

The Challenge



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Partnering to Solve the Challenge



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Getting the Job Done



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What Does Success Look Like?



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Questions?

Jason A. Sander, PE

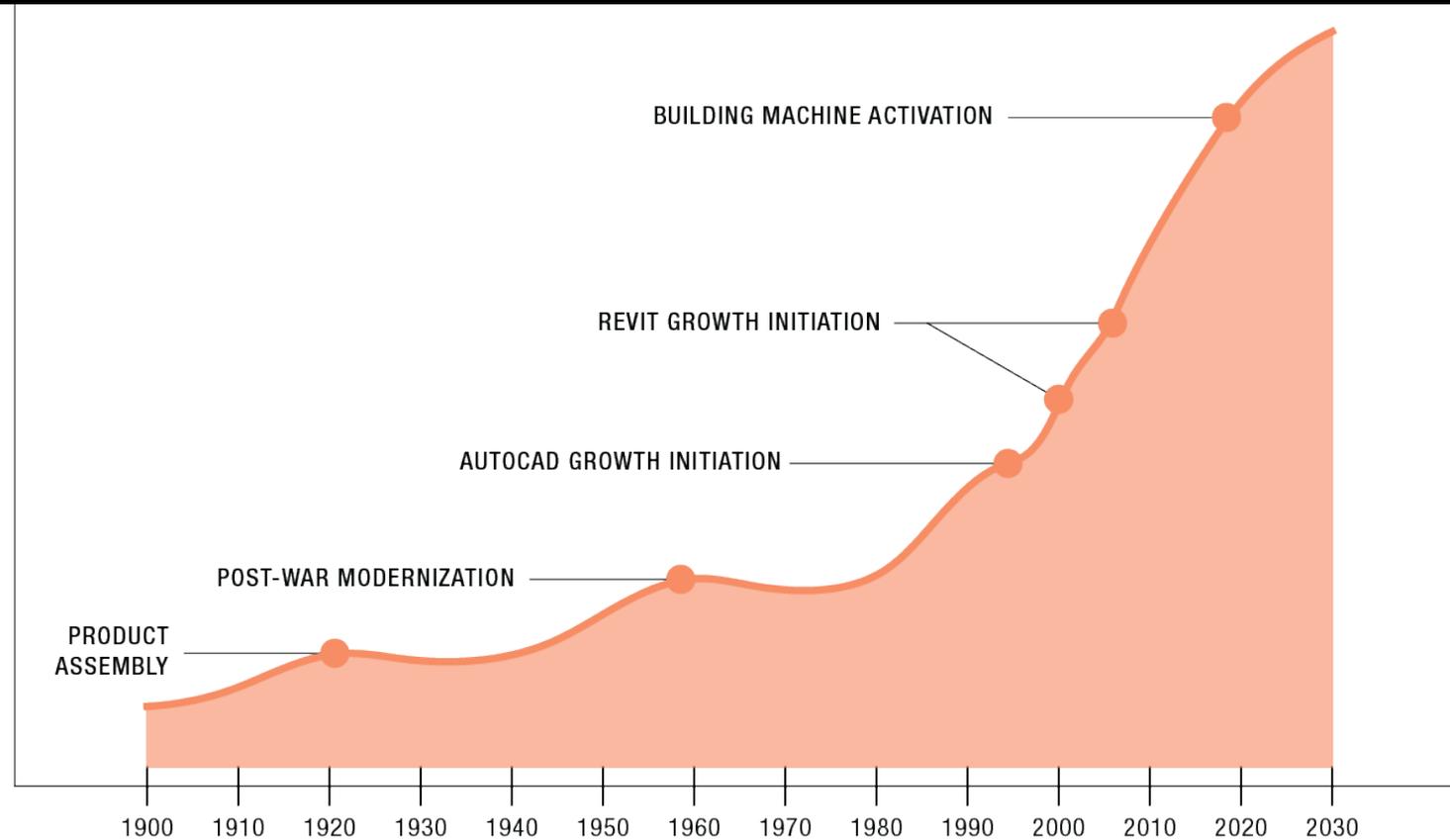
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Smart Technologies Integration

Michael Schuster, FAIA LEED AP
Principal/Owner at MSA Architects

PERCEIVED RATE OF GROWTH IN ARCHITECTURAL / BUILDING TECHNOLOGY



WE BUILD CARS WITH GREAT TECHNOLOGY.
WE BUILD BUILDINGS IN THE MUD.



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COMPONENT FABRICATION

- Built off-site
- Rapid construction



DESIGN PROCESS

a) Revit Model b) 3D Illustration c) 3D Printing



ADVANCED CONSTRUCTION METHODS

- Robotics
- 3D Building Printers
- New Fabrication Technology



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Questions?

Michael Schuster, FAIA LEED AP
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Design-Assist: The Hidden Advantages

WHAT HAVE YOU GOT TO LOSE?

Tadhg O’Crowley, PE

Design-Build Manager, Brewer-Garrett

Member of COGENCE Alliance

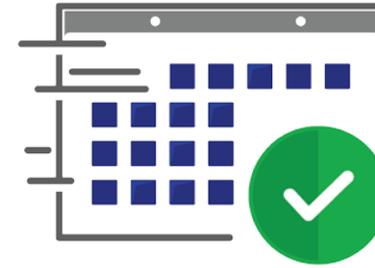
Major Design-Assist Advantages:



Reducing the owner's risk

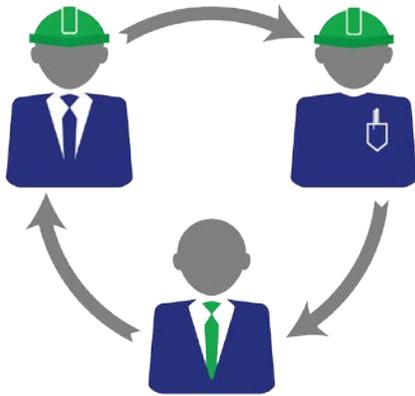


Protecting the budget



Enhancing the schedule

Hidden Design-Assist Advantages:



Promoting Teamwork

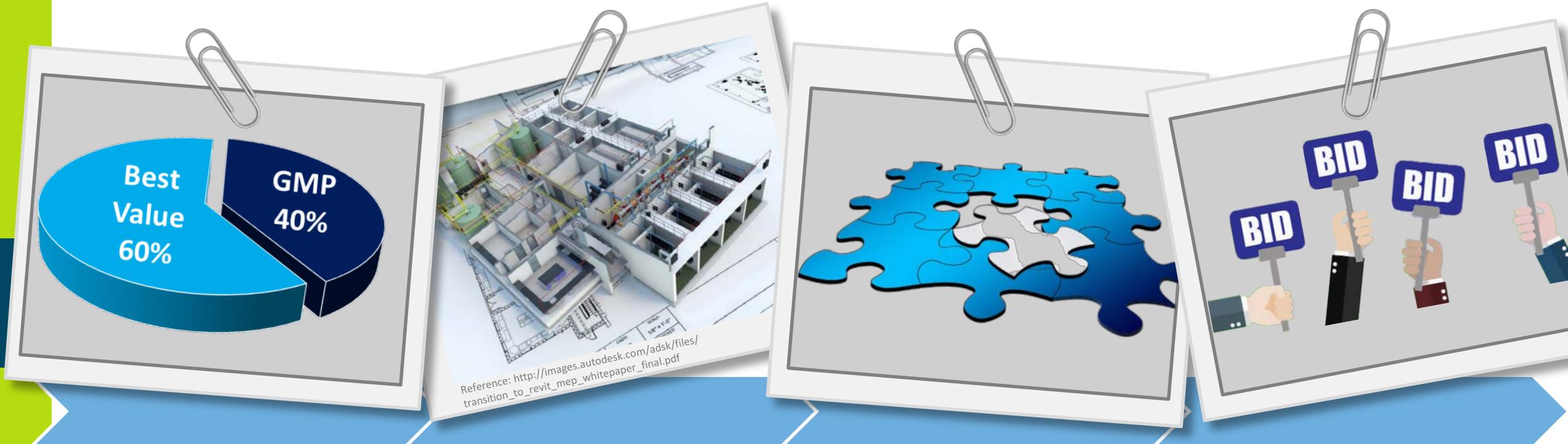


Educational



Fun

Utilizing Design-Assist through ORC 153



D-A Partner selected through best value selection process under the CMR or D-B

D-A Consultants can begin services at any time during design or construction

If target price is achieved, D-A partner can be awarded subcontract without bidding to other contractors

If target price is not achieved, CMR/D-B may request bids from other firms

Playhouse
Square Ohio
Theater
Lobby



COGENCE Alliance Design-Assist Survey Results

“What are the hidden advantages of design-assist?”

Hidden Design-Assist Advantage:

Fun

77%

“Gain industry insight to new trends / ideas / pitfalls”

“Hearing opinions of other disciplines / trades”

“Design solution with multiple perspectives”

“Solutions in-line with budget early in design - avoid VE at end”

“Learn from each other”

“More innovative / collaborative solutions” **ARCHITECTS**

“Better alignment of budget/scope”

“Capitalizes on individual strengths” **ENGINEERS**

“Open communication lines, building relationships & trust”

“Collaborative relationships reduces conflict”

“Less coordination issues in the field”

“Buy-in to good of project mindset”

“Plays on strengths from each D-A”

“Better value / earlier recognition of cost & schedule”

“Risk management and navigation”

“Creates psychological safety”

“Keep owner focused and grounded” **OWNERS** “Helps with long lead-time processes”

CONSTRUCTION MANAGERS

“Avoid additional costs later”

“Early trust developed”

“Expert advice on a topic the owner may not be familiar with”

“Creates strong team”

“Transparency”

“Shared buy-in of successful outcome”

“Early budget / cost”

“Timely coordination and constructability review = no change orders”

“Project delivered below GMP reduces project cost”

TRADE CONTRACTORS

“Early risk identification with realistic or variable resolutions”

“Fluidity amongst project tradesman consistently makes a successful schedule”

“Sets common goals and expectations”

Potential Design-Assist Challenges & Solutions

1

Eliminates
Competitive
Selection (Bidding)

Asking for a GMP with D-A selection ensures the process is competitive. The D-A contractor is incentivized to meet or exceed the GMP by being awarded the project without further bidding. The owner/CM has the option to go out to bid at any stage during the process.

2

Inexperienced D-A
Partner

Contractor selected based on Best Value Selection Process. This process provides the owner/CM with the control to select qualified partners.

3

Early Cost to
Engage D-A
Partners

Although there are D-A fees added to the design phase, these are minimal compared to the potential construction savings. Early coordination and constructability review results in fewer change orders and a faster project delivery.

4

Increased
Coordination Required
by the Design Team

This increased coordination will significantly reduce time required during construction and minimize value engineering.

Quotes from COGENCE Alliance Design-Assist Survey



“Increased participation by trade contractors in managing risk earlier in the project, leads to higher level of buy-in and engagement in managing risk throughout the project.”

-Pen Wolf, Director of Construction, Cleveland Clinic

Questions?

Tadhg O’Crowley, PE

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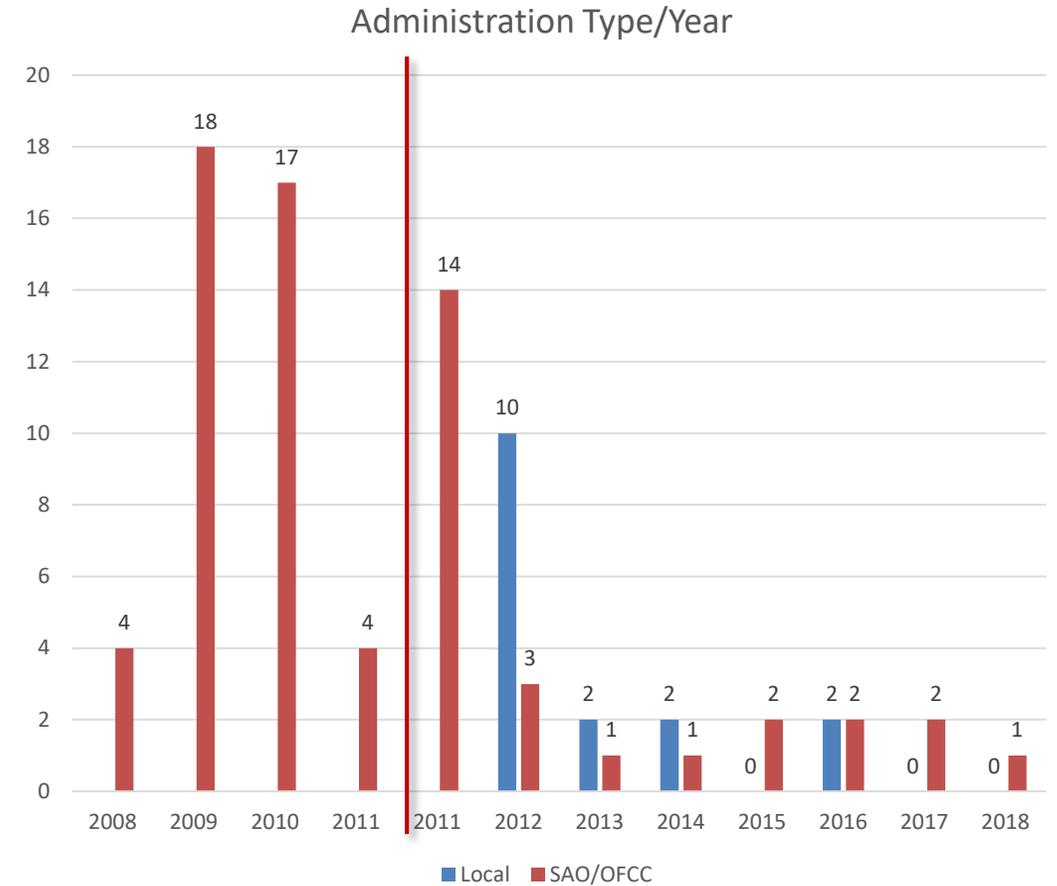
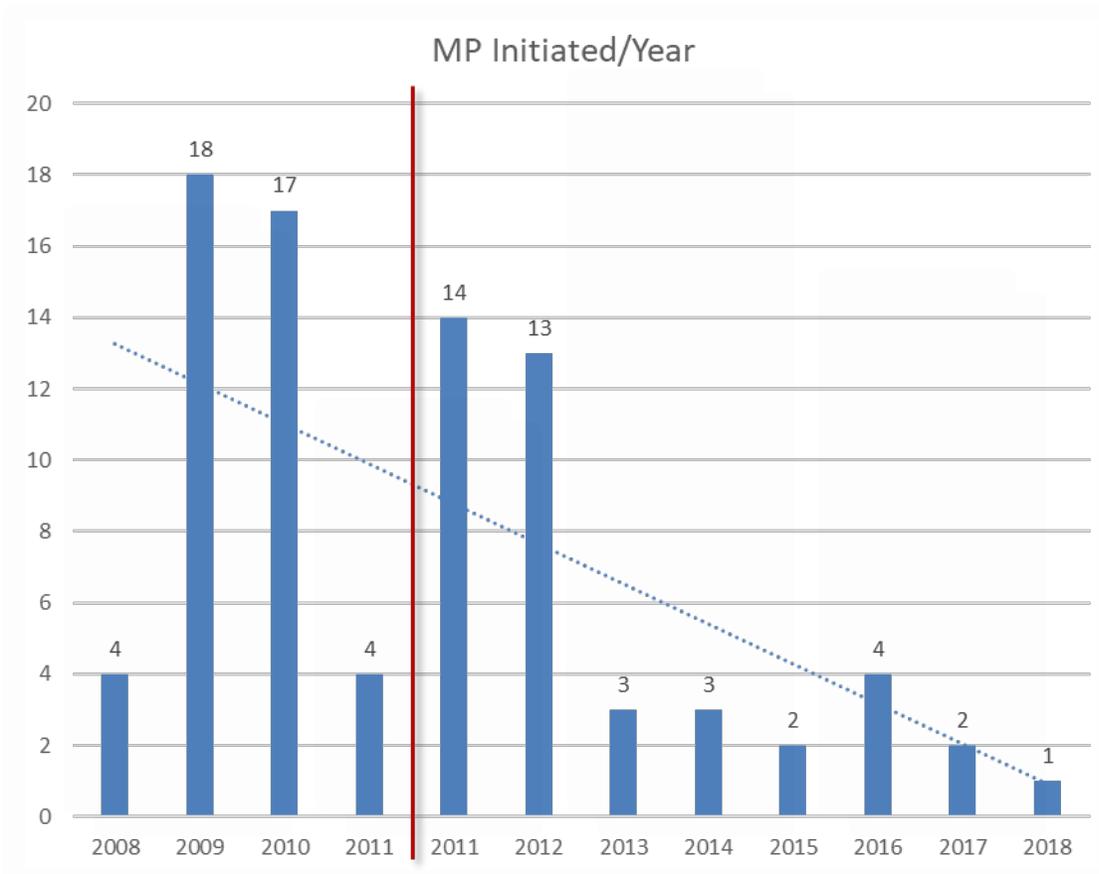
WHAT HAVE YOU GOT TO LOSE?

Lessons Learned: Multiple Prime

Ned Thiell

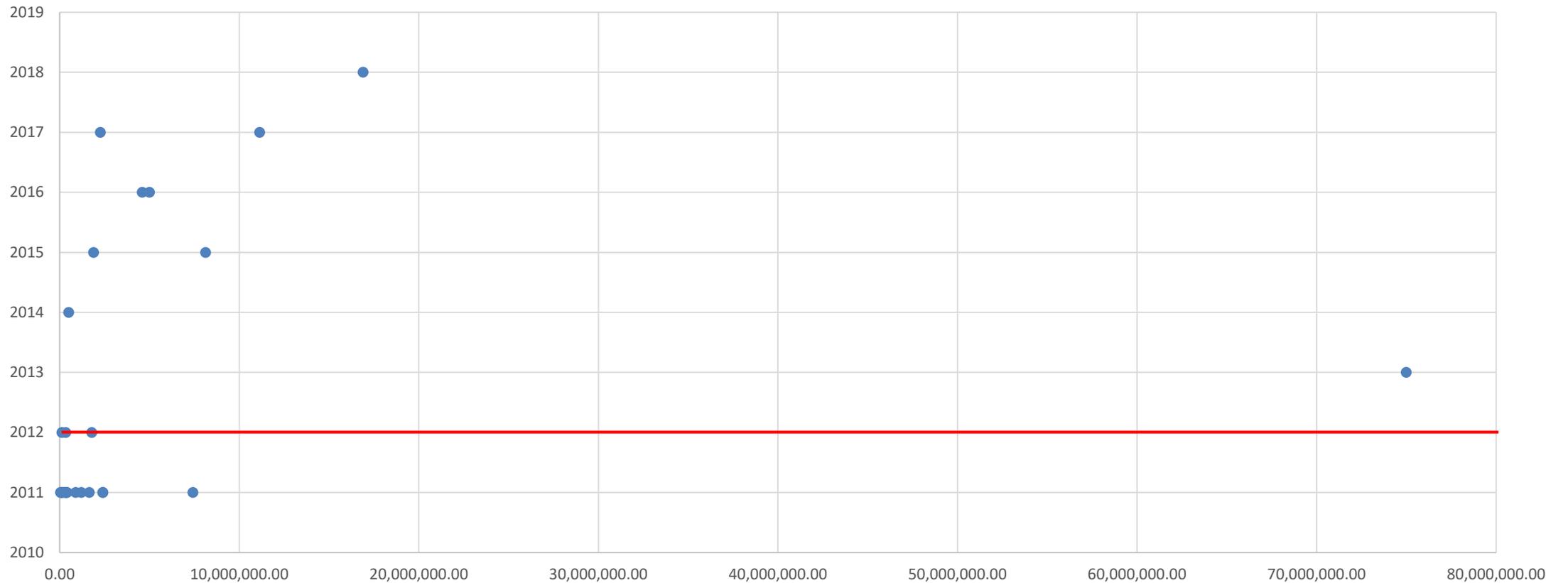
Program Manager, Agency | Higher Education

Multi-Prime Over the Last Decade



Project Costs

OFCC Project Cost/Year



When is Multi-Prime a Good Fit?

- Contracting Authority/Owner has a strong Project Manager
- Project scale is small
- Project design is NOT complex
- Number of Trades are limited
- Owner team is supported with additional resources
 - Independent estimating services
 - Scheduling consultant during construction

Why?

- + Better Management Control with appropriate “resources”
 - + 3rd party Scheduling expertise
 - + Faster response and resolution
-
- More contracts to financially administer
 - + Supplement Schedule Services as a consultant

“Resources” Needed for Success

- Contracting Authority Project Manager
- Scheduling Consultant
- the Contract
- Attitude
- Communication
- Aiming for success

Management Set-Up | “Stack the Deck for Success”

- Scheduling Consultant
- Project Manager
- “Partnering”

Contract Information

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