

PAAD – Project Alignment and Delivery

a GO Productivity and Industry Leader's
Collaborative Initiative



GO Productivity is an enterprising non-profit corporation working alongside Canadian businesses to build their internal capacity to reduce waste and increase profits, sustaining and building Alberta and Canada's place in the world market.

A stylized illustration of three human figures. The central figure is light green and has its right arm raised, as if presenting or speaking. The two flanking figures are light blue. They are positioned behind a teal banner.

**Leading expertise in improving productivity
and competitiveness**

In This Presentation

1. Addressing an industry need
2. PAAD – Project Alignment and Delivery
 1. Vision, Strategic Intent
 2. Core elements
 3. Results
3. PAAD's Best Practice Implementation Process

Construction Industry Analysis Alberta vs. United States

Construction Cost Performance:

Average % over budget

Alberta = 24.8%

US = 1.7%

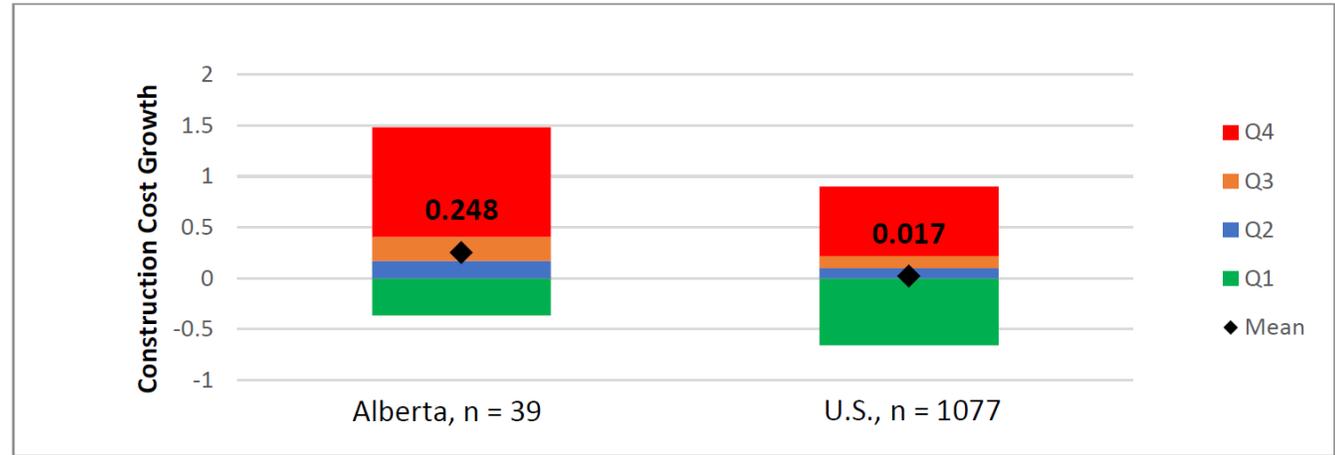


Figure 15: Construction Cost Growth – Alberta and U.S. Projects

Construction Schedule Performance:

Average % schedule delay

Alberta = 17.5%

US = 0.7%

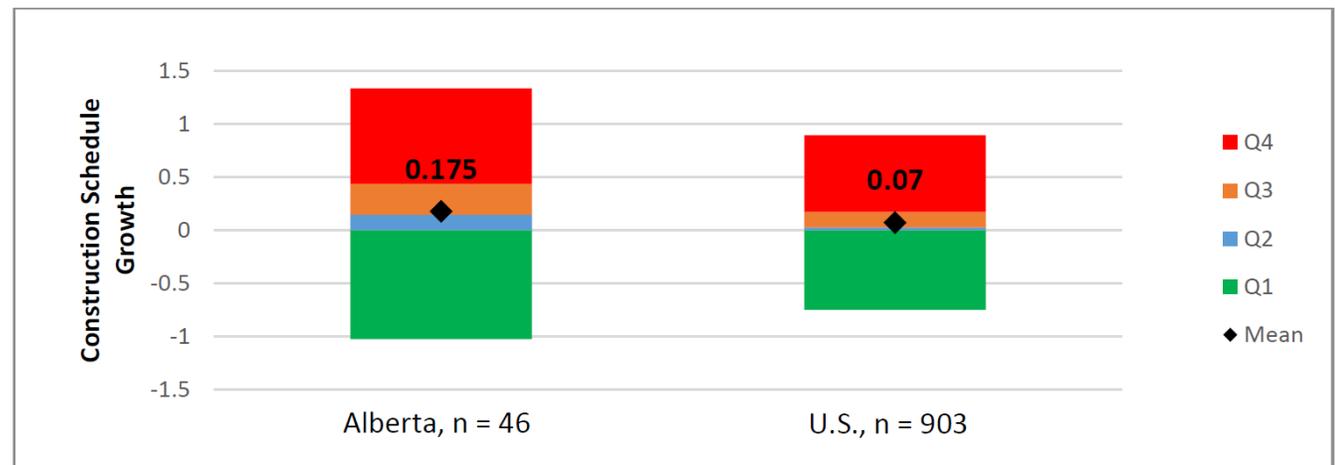


Figure 25: Construction Schedule Growth – Alberta and U.S. Projects

Source: COAA Alberta Report 2

<http://www.coaa.ab.ca/Portals/ConstructionPerformance/1%20Alberta%20Report%202022%20final%20%20202015%20Feb%2010.pdf>

Alberta can do it

We know what needs to be fixed

- Front-end Planning
 - Executive Leadership and commitment and competence
 - Clear scope, minimal changes
 - Thorough planning including for risks and room in budget for changes
 - Proven best results if *80% Engineering* done before construction execution phase.
- Improvement/Learning Cycle
 - Lessons Learned
 - Productivity Measure, and Improve
- Management
 - Labour planning
 - Communication

We have the resources

- **Best Practices**
 - COAA – Construction Owners Association of Alberta
 - CII – Construction Industry Institute out of Texas
 - Each company has their own culture and best practices
- Our people
 - Highly-skilled labour workforce
 - Highly-skilled engineering centers
 - Highly-skilled project managers
 - Talented Executive Leadership

Critical Elements for Alberta

Do the Project Basics *right*

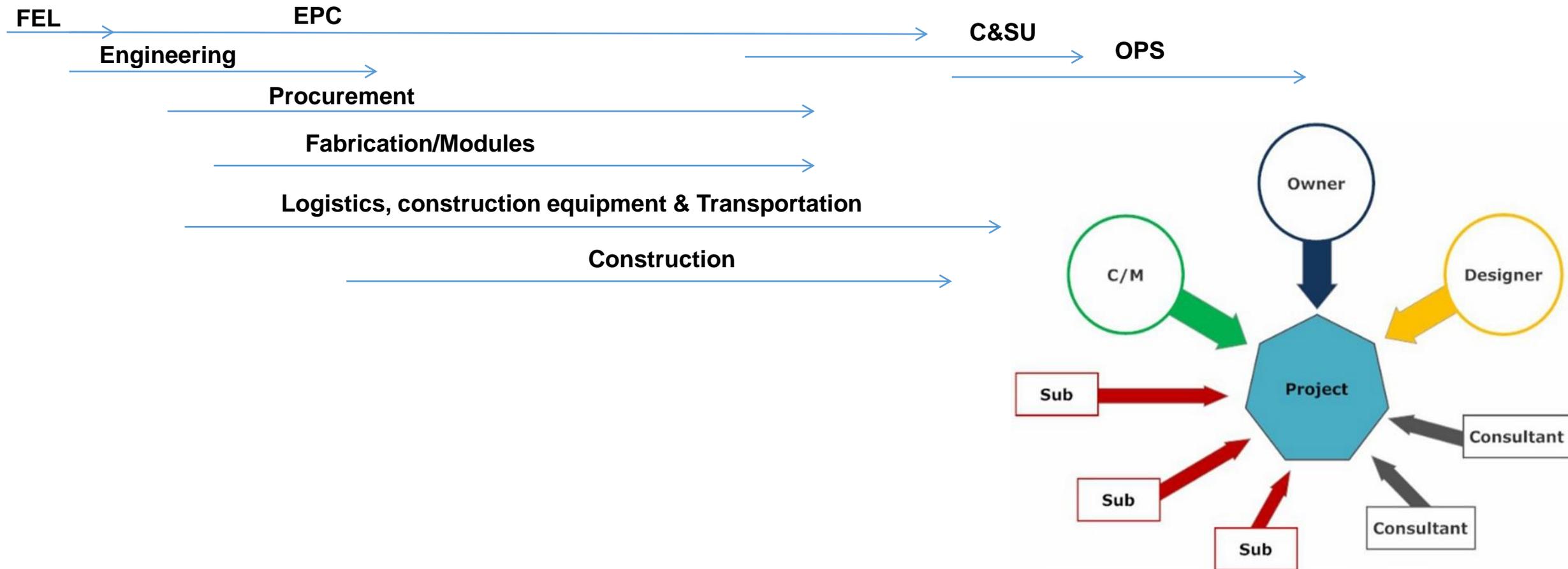
- Implement and use the companies stage gate process correctly
- Do the right level of Front End Engineering and Design before sanction
- Freeze the scope. Deal with scope changes appropriately
- Plan the project in adequate detail before sanction
- Stick to the plan

Utilize Best Practices (BPs) effectively

- Substantial number of BPs available
- COAA developed excellent BPs
- Construction Industry Institute in Houston Texas developed a large number of excellent best practices
- IPA encourage the use of Value Improvement Practices during the development and execution of projects

Project Alignment

Individual teams and companies may want to improve, but the entire project delivery chain needs to work together to be more aligned and more competitive.



PAAD Vision and Strategic Intent

The Alberta Energy Industry will be **Twice as Safe, Twice as Productive** and *Internationally Competitive* by 2020

PAAD will facilitate industry improvement in Alberta on project delivery with a lead-by-example approach; **demonstrating and implementing best practices** using a large network with representation from all levels of the project delivery value chain.

What is PAAD?

PAAD was founded in 2014 by a group of industry professionals and their companies in order to start taking action on improving themselves and their energy industry partners. Over the course of a year they developed their mission and goals and how to start improving projects.

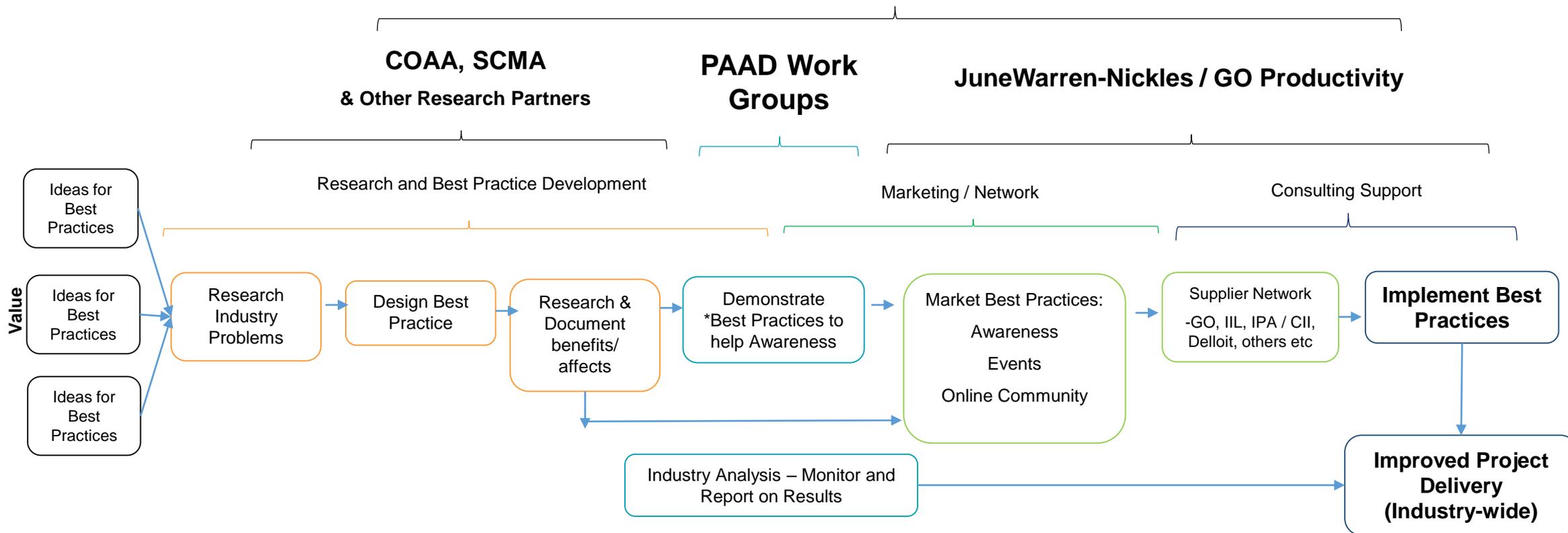
The core elements of PAAD are:

- **Industry Coalition** – Founder and Associate Members representing all parts of the industry to support Alberta Energy-related Projects; focused on Industrial Construction.
- **Demonstration Projects** – Trying a new best practice for the first time in a protected environment. These projects are often an existing project being worked on by a Founder member and applying a best practice.
- **Implementation Projects** – Taking the best practice and lessons learned during the demonstration project and implementing with consideration for work process and company culture.
- **Collaboration/Network** – Work together with similar initiatives to make sure our combined efforts are improving the industry. This includes finding and engaging marketing expertise and best practice development expertise.

Aligning Multiple Industry Initiatives

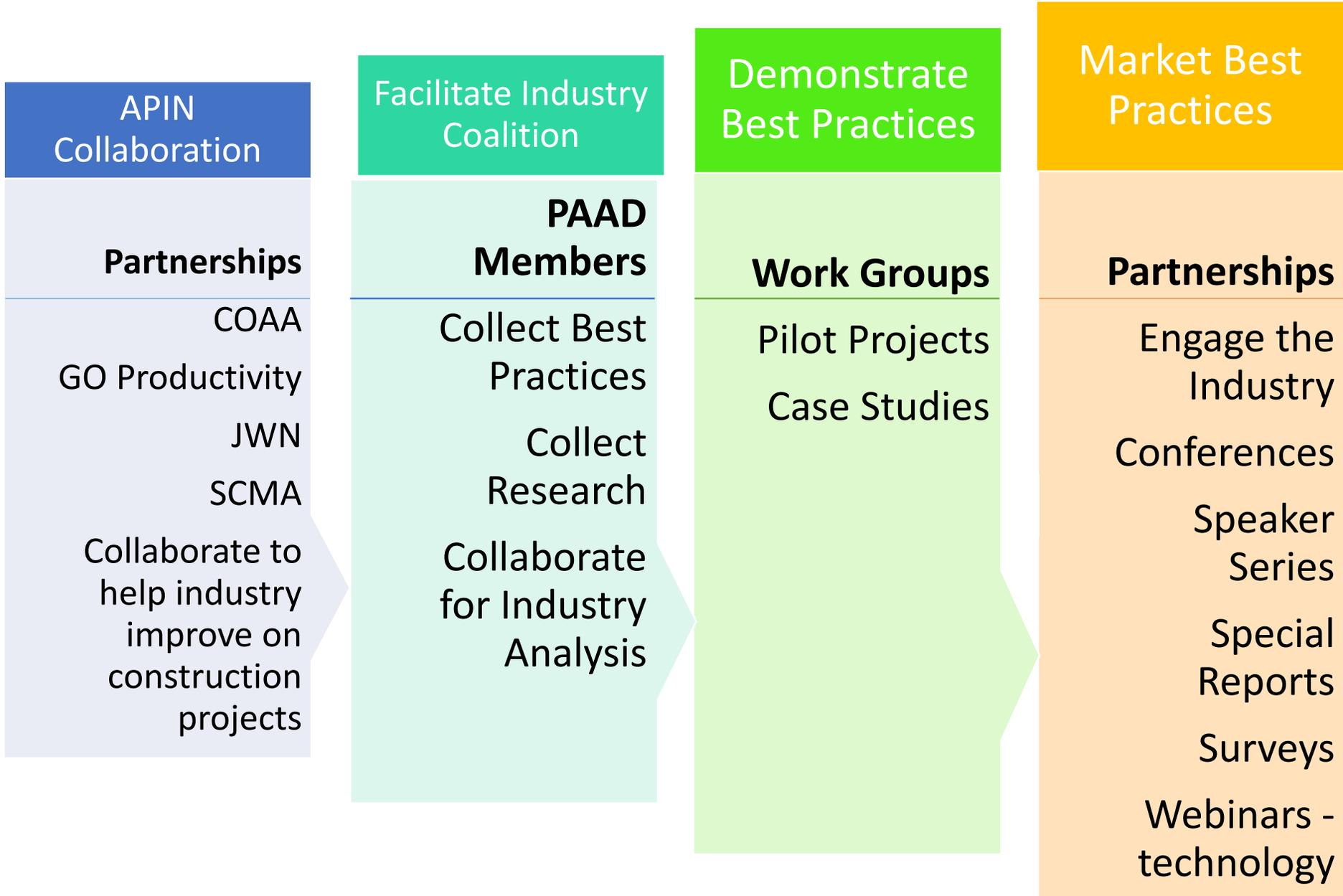
Alberta Projects Improvement Network (APIN)

GOAL: Twice as Safe, Twice as Productive by 2020



Our Collaborative Network will allow each partner to specialize in what they have the greatest capacity to deliver but still allow flexibility and collaboration where needed. Transparent communications and regular collaboration will be critical to maintain this partnership.

PAAD Organization



The Founders and Associates

Founders:

- Leaders of the Industry, implement change and set new standards
- Sets PAAD priorities
- Provide advice to PAAD operations
- Be the main influencers that will lead the change
- Membership is for 3 years and must include a cross representation of the supply network and associate organizations
- Provides representatives for industry forums
- Participates in pilot projects

Associates:

- Leaders and Champions for change
- Access to key outputs including research, reports, and metrics.
- Participation in Working Groups and Innovation and Demonstration Projects

Founders

AECON



JACOBS

Teck

MAMMOET

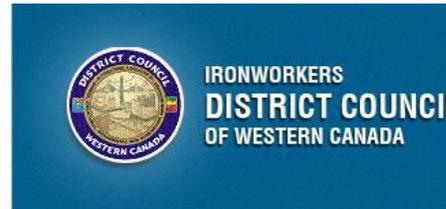


Waiward

Associates



CLAC
better together



PAAD Results

- Research
 - Lean Construction Book – 3 volumes
 - 1 White paper on performance challenges for mega projects
 - 1 best practices handbook
 - 1 productivity body of knowledge
- Demonstration Projects Completed
 - Competency Tracking
 - Share Risk Register
 - Front-end Planning
 - Collaboration / Team Alignment

Go Productivity/PAAD Publications

<p>3 Volume Book A guide to Collaborative and Aligned Construction Projects</p>	<p>Robert Porter Lynch and GO Team</p> <p>Aligned Construction Enterprise 2014-2015</p>	<p>1 Handbook On all relevant best practices available</p>	<p>GO Team</p> <p>Best Practices Handbook 2016-2017</p>
<p>1 White Paper A guide to Collaborative and Aligned Construction Projects</p>	<p>Dr. Jergeas, Robert Porter Lynch and GO Team</p> <p>Future Path for Industrial Mega-Project Delivery 2014</p>	<p>1 Body of Knowledge Construction Productivity</p>	<p>GO & BuildForce Canada</p> <p>Where we are and Where we need to go 2016-2017</p>

Go Productivity/PAAD Publications Cont'd

<p>3 Work Group Final Reports Posted on PAAD.ca</p>	<p>PAAD Work Groups</p> <hr/> <p>Final Reports 2016-2017</p>	<p>1 Industry Survey 150+ responses Resulting final report</p>	<p>JWN Energy & GO Productivity</p> <hr/> <p>Implementation of AWP and Stage Gate Oct 2016</p>
<p>1 Magazine Report Introduction to APIN and industry issues</p>	<p>JWN Energy & GO Productivity</p> <hr/> <p>A New Project Era Oct 2016</p>	<p>6 Magazine Articles & 2 online articles</p>	<p>JWN</p> <hr/> <p>Oilweek, Alberta Construction Magazine and Oilsands Review 2017</p>

Best Practices Demonstrated

<p>\$6.8M High Risks Diverted \$32M total risks identified</p>	<p>Suncor & Aecon/Canonbie</p>
	<p>Shared Risk Register Aug 2015 – Jan 2017</p>

Simple Concept!

- Monthly collaborative meetings
- Combined Risk Registry
- Openly share obstacles coming up
- Work together to prevent delays
- *Requires TRUST & PERSISTENCE

<p>\$500k/year alone in tracking certifications 800% reduced lost time claims</p>	<p>Waiward Steel & Ironworkers 720</p>
	<p>Competency Profile Sharing Feb 2016 – Oct 2016</p>

True Value from Collaboration

- 'Living' resume for workers
- Supervisor-witnessed Competencies
- Scores; Mastery, Competent, Needs Training
- Scores go on resume, travel with the worker
- Real Value seen when used on all union members, employers can utilize witnessed competency scores from other jobs/sites
- Work Group created a commercial product:
MODOS

Best Practices Demonstrated cont.

<p>*Historical Projects Review – Benefits of sticking to the Execution Plan:</p> <p>%12 under budget 3 months ahead of schedule</p>	<p>Shell Canada</p> <hr/> <p>Project Portfolio Management Jan 2016 – Jan 2017</p>
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<p>*Discovered opportunity to standardize</p> <p>\$1M cost savings</p> <p>More Simple, Easier to Build Well Pad Design</p>	<p>Suncor & potential contractors</p> <hr/> <p>Team Alignment Session April 2016 – June 2016</p>
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Good FEL versus Good Project Execution

- Compared two recently completed projects
- Both had good FEL scores
- One project over budget and behind schedule because of changing business pressures
- One project learned from those pressures and stuck to the plan resulting in under budget and ahead of schedule

Collaboration and Innovation

- Two day session
- Owner teams and potential contractors
- Define scope of the project together
- Highlight ways to work together better
- Build open channels of communication for further discussions on opportunities to innovate
- Resulted in discussions on how to align owner's needs with manufacturing abilities and came up with standard well pad design

PAAD's 8 Best Practice Implementation Steps

- Combined several Change Management methodologies:
 - Kotter – Harvard's 8 Step Process for Leading Change
 - PROSCI's Change Management Process and Individual Change Management Process
 - Partners in Leadership's Culture Change
 - INSEAD Switzerland's Fair Process Leadership 5E's
 - CII's Vision to Action Hot List
 - Ambrose Managing Complex Change
- Need Sense of Urgency + Change Process + Culture

1. **Generate Alignment and Sense of Urgency**

1. Define/frame the BP implementation including the justification and a proposed strategic vision and key results to achieve
2. Enroll CEO and Executives or Senior Management as appropriate
3. Executives/Management declares their support
4. Create a deadline with the target goal to build the 'sense of urgency' that can excite people to sign on and commit to implementing the BP

2. **Engage/form the BP implementation leadership team and an implementation team (coalition) to frame the process to deliver the Key Results**

3. **Implement the Strategic Vision and Initiatives that will enable the execution teams to implement the BP to achieve the Key Results**

8 Best Practice Implementation Steps

4. **Incentives:** Land on what is possible. Adjust the Strategic Vision, KEY BUSINESS RESULTS and implementation process if needed. Add to annual performance cycle of staff that should implement the change.
5. **Enable action by removing barriers** that prevents or may prevent the team of achieving the key results including Competency/Skills plan
6. **Generate short term wins** and celebrate them. Measure and report progress
7. **Never letting up** the drive towards implementing the BP to achieve the Key Results. Sustain acceleration. Maintain progress as part of annual goal setting process
8. **Seek critical revisions and lessons** to improve the process of implementing BPs

Questions?

If you have any further ideas, questions or thoughts please feel free to email or contact the PAAD team:

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