

FRONT-END TRACK

WHAT HAVE WE LEARNED ON RECENT PROJECTS? HOW ARE WE PLANNING OUR PROJECTS? WHAT IS WORKING AND WHAT DO WE NEED TO CHANGE?

Speakers:

- Kelly Adams Adams – Vice President of Operations, Phoenix Industrial Management
- Gord N. Crawford N. Crawford – Engineering Manager, Rally Engineering
- Rick Gallant Gallant – Manager Operations Technical Surface Engineering, Imperial Oil Resources

Moderator:

- Lloyd Rankin – President, Ascension Systems Inc.

Questions to Panel:

1. What are we learning about how detailed planning on our projects should be and what activities are required to support the level of planning?
 - Gord N. Crawford – The outcome of the battle is determined before you hit the field. When do we get all players involved – different & competing. We need to integrate teams at outset of project to come up with a plan. There needs to be an early decision about using WFP needs to be made at the beginning of the project, then alignment of organization is next. Material arrival can affect success of a project and the agendas of each player have to be in line with the larger plan.
 - Kelly Adams – As the role for WFP is broadened, role of WFP has grown & changed. Now a methodology. We need a holistic approach for execution in the field. Also, we need to make sure that everyone is in place with a role that is effective in the workforce planning role.
 - Rick Gallant – Planning depends on the complexity of the work. The more complete the planning, the better the safety performance, the better the cost & schedule performance. Detail of planning is a function of the complexity of project. There is a choice to spend time up front doing the detailed planning or spend the same time

on change management in the field waiting for work activities to begin. A good approach is to assemble who teams early with a clear understanding of objectives, agreement on P of C & work sequencing. It is really important to have a disciplined change management process that is rigorous with collaborative effort.

2. What are we learning about how to create collaboration & manage the alignment necessary to execute the plan?
 - Rick Gallant - We need to gauge contractors early – construction & engineering – through the design & construction process. Depending on the type of contract, it is important that involvement is early. Sometime we may need to pay for the consultation before putting contract out to bid. If you are able to work with ongoing contractual relationships in many projects – alliances can be valuable. Over time, alignment on expectations and planning process works more smoothly. When constructors participate in constructability reviews, there is a better product to take to the field.
 - Kelly Adams – Change Management from an internal perspective means making sure contractors know what the system looks like before going into the field. A culture shift within organizations to understand the priorities and why systems function a certain way is critical. There can be impact by changes in project priorities and systems need to adapt through understanding of the principles behind systems.
 - Gord N. Crawford – The Cradle to Grave concept for team approach means leadership management should be there to continue with the project, even if there is a change in players. Constructability reviews utilized at pre-DBM stage at higher level with larger blocks of work has produced positive outcomes in planning. Real, productive, paid work.

3. What are we learning about how the project should be managed?
 - Kelly Adams – More constructor/contractor involvement is beneficial to the life cycle of the asset and how it should be constructed. Shorter turnaround times need to deliver critical information to the field.
 - Rick Gallant – There has been a recent trend of owner involvement; although, nothing constant yet. Owner presence is critical. Owner involvement on the Project Management team is

imperative. All of the key positions are staffed by owner staff & hand picked by owners to maintain total care & custody for the project. Project Management is a core job and we need people skilled in doing that kind of work. The provincial experience level has declined and we need to draw on knowledge & experience where we can get it, but the responsibility must rest with owners.

- Gord N. Crawford – composition of the team with owner involvement is clear; however, it is created (embedded in home or 3rd party team). PMT can be in house staff positions or 3rd party EPC integration. Both are successful; however, 3rd party is still at arm's length (us & them concept) until final turnover that owner takes full ownership & accountability. Internal PMT shortfall is akin to working with family – commitment level is fluid and you are left turning over a project to yourself. Project priorities are not always clear.

4. How do you capture the Lessons Learned – in the contract, what other ways? How do we learn and put the lessons into practice?

- Gord N. Crawford – The key factor is WHO owns the plant! Internal PMT then ownership of the plant is that company. EPC work means EPC owns the plant and must be involved at an early stage with a clearly defined plan.
- Kelly Adams – Instruments involved in contracts revolve around default/failure. We need to set out general expectations at a contract level so alignment of all parties & expectations will put instruments in to protect from failure and guarantee success. Set up-front standards for everyone to adhere to, all working to the contract.
- Rick Gallant – Longer term contractual relationships help but up-front expectations are paramount so there are no later surprises to derail the projects.
 - i. Safety Standards – performance & how it is managed
 - ii. Project Planning Methods – focusing on expected results
 - iii. Execution Plan
 - iv. Project Measurement
 - v. Home Office visits to test that functions are in place
 - vi. Stewardship in contracts related to contractors & subcontractors
 - vii. Procurement Staff to oversee procurement activities.

Audience Questions:

1. Are Lessons Learned cycled into Standards & Procedures & filtered through organizations?
 - Gord N. Crawford – Some have become Best Practices and may be implemented on future projects- mostly what worked well. People turnover lessons are harder to implement.
 - Kelly Adams – We need post mortem discussions after construction that are seriously listened to and focused back into new projects.
 - Rick Gallant – We need to discipline the Lessons Learned process to capture across all organizations a continuous improvements process on our management development system to apply Lessons Learned. It is critical that lessons are learned the first time and not repeated.

2. Over \$300 Million dollars, more problems experienced? How is this managed differently?
 - Gord N. Crawford - A management system is scaled with gate/checkpoint review with a certain amount of detail at each stage. Complexity or size means more review. There must be rigour in review of detail design and the construction process. Some organizations have scaleable PEP & some do not – so this can be an area of concern depending on the type of project. The key element of PEP, large or small, is the due diligence steps. Distill a large project down to smaller scale to exercise plan, then religiously follow it.
 - Kelly Adams – More progress auditing, safety audits, quality audits should be bigger and start almost immediately. No big bang effect, continual auditing.

3. How to manage scaffolding with regard to WFP, as part of CWP, FIWP, separately?
 - Kelly Adams – There must be breakdown of CWP in support of a work package. Include a scaffolding diagram related to scope of work for placing, timing, criteria, etc. , then roll into an overall scaffolding schedule.
 - Lloyd – Should we be looking at engineering scaffold prior to going to the field?

- Kelly Adams – Scaffold can become an operational part of plant after construction. Possibly platforms can replace scaffolds. Going through a platform design cycle and early discussion would reduce the permanent/temporary scaffold problem.
 - Gord N. Crawford – The missing link is involving operations & maintenance in early design. Platforms are easy to cut out of budget but save a lot of money later.
 - Rick Gallant – Always have an operations representative in planning team. Conduct a scaleable, detailed human factor review of design to pick out access points that can be problematic.
4. Is there experience where a contract consultant does not end up being the contractor hired?
- Rick Gallant – We've consulted with a contractor that built a previous plant and used their experience for planning of the second project but there has been not actual bidding yet.
5. Given turnover that can often happen in beginning of project how do you maintain the training & education process? Various stages of front-end has had a lot of change. Is there an ongoing training procedure to keep everyone in line?
- Gord N. Crawford – This is dependent on project leadership with a clear mandate that is communicated clearly. Clear objectives & project culture should be communicated when a new person comes on and this is spelled out at the outset. If there isn't compliance, it is necessary to decide to keep or lose participant.
 - Kelly Adams – Change management is a program that starts early, before project charter. The team needs to know start, plan and end. Systems need to be established early on with structure, expectation & roles/responsibilities.
 - Rick Gallant – Project Management System with Exxon Mobil brings people in with overview of system & expectations for on-boarding process. Change Management Process deals with design & project personnel to cover issues of familiarity, project goals, etc.

6. When trying to get onto site, safety training is inconsistent. How do we make it possible for WFP to become a standard from project to project with consistent key element? Should we aspire to this?
- Rick Gallant – We have an efficiency opportunity to reach critical mass of the number of people who adopt WFP to make a standard. Qualification standard is necessary. Currently SAIT has a training process, but it currently is not a standard and we should aspire to that.
 - Kelly Adams – Reduce adaptability from project to project. Standardization of interaction will be a benefit for alignment and critical handoffs. The variety of systems & software applications create a need for standards in exchanging information and using it.
 - Gord N. Crawford – Understanding!! Of what Workface Planning entails is the big challenge for the upcoming year. We need a better, widespread understanding in the industry.