

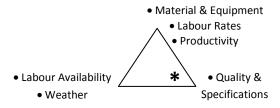
Alberta Megaproject Productivity – Challenges and Opportunities Industry Leaders Roundtable #3

Breakout Group 2 – discussion & flip chart summary

Key Messages from Owners & Industry

re: Twice as Safe, Twice as Productive by 2020

- Multinational corporate investments are very sensitive to schedule and cost risks Alberta must be
 perceived as reliable / predictable for these investments to continue
- Productivity is about shifting to excellent execution from concept to startup involves all employees
- In next ten years, many mega-projects and hundreds of in situ projects are anticipated adopt province-wide standard details, e.g. standard dimensions and structural members for pipe racks – a "manufacturing mindset"
- Encourage innovation within EPC firms (risks and rewards within same organization), or insist on collaboration between engineering and construction silos
- Alberta competitive position
 - o Already below average in several other industries
 - Not as obvious in O&G buoyed up by high resource prices, now eroding due to lower-cost completion from shale oil and gas
- What elements of risk associated with projects can we control? What elements are beyond our control, simply have to manage as they arise? Are we (all steps of the project) aiming too much to the lower right corner of the triangle"?



- Owners can control execution strategies set early in the process, then hold them
- An anecdote from the Roundtable discussions: In 2012, Fleur and other EPC's were assigning
 engineers several hundred of them from offices around the world to work on projects in western
 Australia. In 2014, there are reportedly 4,000 unemployed engineers in Perth. The lesson: in our
 global economy, the investment tap can turn off quickly and dramatically. There is no room for
 complacency!