Understanding virtual team interaction in large, complex resource projects

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Disclaimer

• The following contains extensive use of Qualitative data.
• Guidance is recommended for those relying only on quantitative data.
• No statistics were harmed in the preparation of this presentation
Background

• Francis Norman AFIEAust CEngA, IEng MInstMC, MAIPM, MAICD
• MSc in Project Management completed 2010
• 31 year career in EPC/EPCM, greenfield and brownfield projects, 22 in technical roles, 9 as engineering manager
• International experience working for extended periods in India, Brazil, South Korea, Germany and Norway
• 2015 Engineers Australia WA Division President
Research background

- PhD research commenced in 2011 (planned completion 2016)
- Investigating interpersonal communications within virtual project teams delivering engineering projects into the WA resources sector.
- Qualitative approach, interviewed project team members both in Perth and other offices in each organisation participating in the research.
- 35 interviews conducted between early 2012 and mid 2013
Demographics

- **Perth**
  - Project 1: Tier 1 EPCM (4 pax)
  - Project 2: Tier 1 Supplier (4 pax)
  - Project 3: Tier 1 Engineer/Supplier (2 pax)
  - Project 5: Tier 1 Consultancy (2 pax)
  - **Completed Sub total 12**

- **External Cohort (6 pax)**

- **Outside of Perth**
  - Adelaide (5 pax)
  - Sydney (4 pax)
  - Singapore (3 pax)
  - Dubai & Sydney (D = 3, S = 2)
  - **Completed Sub total 17**

**Note:**
- D = 3
- S = 2
Findings

Results from analysis of data so far
People

“Projects are about people, if you get the people element right, the project will generally get delivered, but if you get it wrong, then your project’s in serious trouble”

Project Director
Task Complexity
Organisational Structure
Organisational Structure
Organisational Structure
Contractual Inter-office Relationship
Task Allocation
Schedule and Budget for Virtualisation
Time and temporality
Language

Språk       linguagem       언어       لغة

ভাষা       言語       bahasa       زبان

Язык       言語       bahasa       زبان

भाषा       γλώσσα       wika       语言

Ulimi       ꜜรง       linguagem
Trust
Putting it together
Systems and Processes

Encompassing
- Organisational structure to support the work
- Levels of Authority
- Division of labour
- Reward mechanisms
- Procedures
- IT networks and tools
Technical Skills

Encompassing

- Skills of personnel engaged in the work
- Costs and availability of personnel
- Level of relevant task experience
Systems and processes

Technical Skills

Affect

Encompassing

• Emotional commitment to the project
• Trust
• Belief in virtual teams approach
• Relationships with virtual colleagues
• Ability to deal with higher levels of ambiguity
• Willingness to communicate
Systems & Processes plus Technical Skills

• Strong operating system supporting the virtual team work and skilled technical personnel.
• Potentially the personnel may not be committed to the project.
• It appears that this is the most prevalent combination.
Systems & Processes plus Affect

- Structured operating systems that support virtual team work
- Committed personnel
- Potentially suboptimal technical skills within the team
Technical Skills plus Affect

- Skilled and proficient personnel committed to the outcome of the project.
- Potentially suboptimal systems and processes in place to support the endeavour.
The best outcomes appear to come from projects with a more even balance:

- Where the processes support the structure
- Where personnel have appropriate skills for their assigned work
- Where personnel have an emotional commitment to the project and their colleagues
Observations

- Many organisations have good systems, but these systems are often built for single location execution. In many cases these do not adapt well to multi-centre work.
- IT systems are no substitute for personal contact, face to face meetings.
- Rewarding management based on the P&L of individual centres may well inhibit genuine open collaboration.
- Meeting face to face builds trust and personal relationships which in turn lead to improved affect.
Observations

• Hiring on technical skills alone is not enough… The best technical person may not be the “best fit” communicator.
• High turn over has as large, or even larger impact on multi centre work as it does in a single centre project.
• Not every PM is suited to multi centre work, it demands additional characteristics such as high tolerance for ambiguity, not a typical PM characteristic
• Richer communications is not always better,
  • Those running the projects tended to prefer to use video
  • But those delivering technical scope were happy with email, telephone and shared documents.
The challenge is

“trying to get people to do what you want or, getting people to want to do what you want them to do”

Project Engineer
Thank you

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