

a new angle on your complex projects

Project Complexity – why should PMI & its members be interested?







October 2018 Karen <u>Cherrill, Director</u>

Introducing ourselves

- Karen Cherrill
- BEng Chemical Engineering, CEng
- Director of Kingsfield Consulting
- 30 years' experience in international engineering and construction projects
- Areas of particular interest complexity, risk, working in joint ventures, collaboration



Our aims for this presentation

- Show what can happen to costs and schedule on complex projects
- What causes this seemingly uncontrollable growth?
- How can we use this understanding to improve management of complex projects?





Why we should be interested in complexity – because cost & schedule can get out of control





So what happened?

- This was a relatively straightforward housing construction project in the Middle East
- Planned 11m man-hours grew to in excess of 40m; the project was over a year late; and the costs more than doubled
- One of the key causes of growth was that the project became COMPLEX rather than just COMPLICATED



What's the difference between complicated and complex?

Complicated	Complex
Predictable	Unpredictable
Linear	Non-linear
Clear beginning – middle – end	Emergent behaviour
Repetitiveness involved	Recycle loops
Can be modelled	Unclear cause & effect
success depends on execution of the plan	success emerges, and depends on ability to adapt



Causal mapping shows how the hours spiral out of control



Need to act differently in complex projects

Just a few ideas on needing to act differently in a complex project environment...

- What type of people will thrive on complex projects those who are comfortable with continually adapting or those who need to follow a linear plan?
- Research shows that opportunities need to be created for 'big picture' thinking and planning
- Probe-sense-respond emergent behaviour is key characteristic of complex systems so try something out, see what happens and adjust
- Ensure diversity of thought for challenging problems (break down silos)
- Initiate different ways of communicating that address the interconnectedness
- Identify leading (rather than lagging) indicators as early warning flags for intervention
- Use scenario planning for major risks e.g. what if....? so that the team re-gains a level of control through trying to anticipate what might emerge



Are you prepared to act differently to avoid your project outcomes looking like this?



INSANITY "doing the same thing over and over again and expecting different results" Albert Einstein



Complexity in Project Management course

- International Centre for Complex Project Management – lots of great research and resources
- Kingsfield partners with ICCPM for delivery of their PM course
- If you are interested, please come and talk...





Kingsfield Consulting West Byfleet Surrey KT14 6LB United Kingdom

+44 (0) 1932 340 140 kci@kingsfieldconsulting.com

kingsfieldconsulting.com



