

KNOWLEDGE MANAGEMENT AND INNOVATION IN MAJOR PROJECTS: DATA, INSIGHTS, PEOPLE



Highlights from the Major Projects Association event held on **18 May 2016**

'Technology is changing our world at a speed we are not used to. Our ability to react to that speed is fundamental.'

Steve Fox CBE, Chief Executive, Bam Nuttall Ltd

The digital era has given us unprecedented access to data and new technologies around major projects. In this half day seminar we explored how to harness knowledge and support innovation to deliver successful projects through the lenses of data, insight and people.

DATA: Is there too much data or do we just need to ask the right questions of it?

Philippe Van Impe told how the **Brussels Data Science Community** turned a virtual community into a real one and how that group came together to 'crunch' data supplied by Proctor & Gamble, to share and learn from one another and ultimately to help solve problems.

Lauren Sager Weinstein outlined the way in which Transport for London (TfL) have analysed Oyster card data to create more accurate pictures of travel patterns. These have enabled them, in turn, to anticipate and thus avoid potential problems caused by tube closures or bridge repairs.

In the cases of both TfL and Brussels Data Science Community the key was not the size of the data set but rather the need to understand the broader objectives and answer the right questions.

'You need to ask the right question. Getting answers to the wrong question doesn't solve problems; it creates more problems.'

Dr Norman Lewis, Director, Crowdsourced innovation service, PwC

Whilst the output can often be clever or interesting, it only has real value when it drives change, benefiting both the end user and those sharing their knowledge.

TfL is asking the right questions of their data to re-design whole areas of London to better reflect how people actually use those areas. Proctor & Gamble gained insights into their business by having access to a group of data scientists, who were outside of their typical network.

INSIGHTS: How do you create knowledge out of data and information?

'No one should underestimate people power. All of the data has no value unless you have someone to interpret it.'

Emma Frost, Chair of Directors, Echo

A common theme across the speakers was the need for people to use their unique human perspective to interpret data and information. And that this was most successful when people interacted with one another on a level playing field; whether taking part in a crowd-sourcing campaign across PwC, on Echo a peer-to-peer sharing platform, in a community event at the Brussels Data Science Community or in TfL partnering with start-ups and universities.

The presence of a diverse set of skills being applied to data in a practical manner drives insights that at their best create an 'of course' moment.

'You have to meet in person. If you keep it virtual, it won't work.'

Philippe Van Impe, Founding Partner, Brussels Data Science Community

Both Echo and the Brussels Data Science Community emphasised the importance of face-to-face interactions, or 'friendly friction' as Emma Frost from Echo put it. Typically based around a local area, face-to-face meetings were something of a relationship accelerator.

Today we have technologies that allow us to bring people together at an unprecedented speed. We can share knowledge regardless of time and location, but do we?

KEY ELEMENTS WHICH PROMOTE THE SHARING OF KNOWLEDGE

- Trusted relationships
- A common cause – which needs to be relevant to all
- Clarity as to what drives people
- Enhanced power – whether through money, recognition, status or reputation

PEOPLE: Do we use this technology to share our knowledge freely?

'Knowledge belongs to us personally, and whether we share it is up to us personally.'

Dr Norman Lewis, Director, Crowdsourced innovation service, PwC

Knowledge only has value when it is shared between people and it brings about change. Norman Lewis from PwC considered that knowledge management systems often fail, as there is a core assumption that people want to share their knowledge. This is not the case; we only share when there is some benefit to ourselves.

There was a common theme that a key motivator to sharing knowledge was having a united, broader objective; a knowledge that something would come of the sharing, even if it was simply having your ideas exposed to expert advice.

PwC used this understanding to recognise and reward contributors to their crowdsourcing.

INNOVATION OR REINVENTION – THE IMPORTANCE OF CONTINUOUS LEARNING

Karen Elson presented the business case for learning legacies to support the flow of knowledge from one major project to the next.

'One person's innovation is another's best practice. The construction industry needs to become more effective at sharing lessons learned, innovation and good practice.'

Karen Elson, Learning Legacy Consultant, Karen Elson Consulting

Crossrail was inundated with requests to share their knowledge. The creation of a learning legacy has been a successful means for capturing this in a controlled way, and has identified experts who are willing to share their knowledge as learning legacy ambassadors.

'Whilst incremental innovation is frustrating; incremental knowledge sharing is much more powerful.'

Steve Fox CBE, Chief Executive, Bam Nuttall Ltd

Karen Elson called for this to be done at an even earlier stage in the project life cycle.

There is a need to learn continuously from each other. Steve Fox referred to the phenomenal rate of change occurring in the world and how solving problems based on our own past experience is no longer viable.

POINTS FOR FURTHER DISCUSSION

- To what extent do we need to disrupt our current governance, commercial and political models to allow major projects to take real advantage of the new technologies available?
- How can we change the culture of major projects to discuss and learn from project failures in the same way that we share safety failures?
- Should **Construction 2025** have a seventh driver for change: effective knowledge sharing and learning from experience?

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