

DEVELOPING A DIGITAL STRATEGY FOR MAJOR PROJECTS



Highlights from the Major Projects Association event held on **17th June 2015**

Digital technologies increasingly lie at the heart of major projects, supporting decision-making in all aspects of project development and delivery. Traditionally left to specialist technicians and IT consultants, project leaders are now seeing the requirement to understand technologies as part of their own role.

'Most of the things we do are genuinely amazing, fascinating, spectacular and incomprehensible. We're beyond sci-fi.'

John Twitchen, Executive Director, Copper Consultancy

However, the employment of digital technologies on a project can involve significant investment, change management and risk. Decision-making in this area requires technical knowledge beyond the expertise of project leaders and an appreciation of the 'bigger picture' beyond the experience of technologists.

This means considerable challenges when developing digital strategies for major projects; a language which works for all stakeholders is elusive and the necessary steps to develop an approach which adequately balances risk and reward are not clear. The Major Projects Association held a one-day seminar to consider how best to navigate through this complex terrain.

'The heightened role of engineers in the future will be very much around the decision points and less about the production points.'

Chris Davis, Managing Director Transportation, Mott MacDonald

KEY TRENDS IN TECHNOLOGY

We are reaching a tipping point with technology, which we cannot ignore.

- In the 50 years since **Moore's Law** was observed computers are 33.5 million times more powerful.
- 91% of all adults have their mobile phone within arm's reach every hour of every day.
- Disruptive change means that we are not just doing things faster; we are working completely differently.
- Technology progress means that digital capabilities and requirements for systems will change through the project life cycle.
- Offices will no longer be places where people go to work. Physical meetings will only be used to build personal relationships, whilst increasingly, work will be carried out remotely through decentralised supply chains.

'Major project leaders need to be aware of how this will impact not just technology, but the nature of skills, professional relationships and the workplace.'

Andy Mitchell CBE, Chief Executive, Thames Tideway Tunnel

Can we see a world where the role of engineers is very different and our skills become redundant?

'The heroes of tomorrow are not the architects or engineers, but the data analysts. We are competing for talent with Google.'

Steve Carden, Partner, PA Consulting

IMPACT OF DIGITAL ISSUES ON MAJOR PROJECTS

Currently major projects are characterised by paper-based working with large information losses at each stage gate. An effective digital strategy will deliver both quantitative and qualitative benefits, including improved control, accountability and efficiency.

The key need is to enable a Golden Thread of information which flows from project inception to completion and touches all stakeholders and actors. Storing information once in an accessible way gives the opportunity to slice and dice information to get better insights.

A good digital strategy enables new ways of working. This includes access to global supply chains, integrated working across disciplines and lean processes. However, if these are desirable then they need to be identified first. The digital strategy will either facilitate or block these opportunities if not properly considered.

'The benefits are not really about efficiency. They're about reliability.'

James Eaton, Group Head of Digital Engineering, Laing O'Rourke

Key considerations to take into account are:

- Reality check – is there a business case?
- Clear requirements – what do we want the data to represent?
- Capability assessment – covering people, process and technology.
- Stakeholder buy-in.

Working in new, open and collaborative ways does raise additional challenges and risk. There are challenges from security, ownership, liability, warranty and data loss.

'When we have a conversation about technology, there is a major divide between the objectives held by technologists and project leaders. It is vital that a digital strategy closes this chasm.'

Steve Denton, Engineering Director, WSP Parsons Brinckerhoff

IT'S ALL ABOUT PEOPLE

It is easy to get caught up in discussions about technology platforms, hardware and software and forget the most difficult piece of the puzzle. Change management lies at the heart of implementing a good digital strategy.

Major project organisations are focused on delivery and growing teams. It is difficult to change the way people think about things so that when pressure hits they do not revert to type. No one likes something imposed on them; education is needed to encourage people to engage with new ways of working and buy in to new processes. Technology is only the enabler.

'People don't want lengthy IT programmes, they want instant return on investment and service-based models. We moving from selling solutions to services which are agile and customer focused.'

Gareth Webb, Senior Management Consultant, IBM

POINTS FOR FURTHER DISCUSSION:

- Who are the key project participants we need to talk to when producing a digital strategy? Who are we missing?
- Does the organisation have the right skills for now and the future to maximise the digital potential of every project?
- Do our digital strategies focus too much on the technical, and forget to plan for culture and people change management?
- How are we benchmarking our skills and digital technology capability? Is this effective?

'The digital element of a project is at least a mini-project, at best it is the nervous system. This is no longer just the thing that the IT director does.'

Chris Watson, Partner and Global Head of Technology, Media & Communications, CMS Cameron McKenna LLP

DEVELOPING A DIGITAL STRATEGY

The digital strategy should enable a productive digital life, improving the delivery of major projects, but also delivering a valuable digital legacy, ensuring that the digital assets handed over at the end of the project facilitate outcomes as much as the physical assets do.

The digital strategy should take account of the following factors:

- The strategy needs to be defined in complete alignment with operational strategies.
- What data is essential to underpin the project?
- What is expected and required should be clearly defined and should be explicit in the contract – and determined prior to the procurement process.
- It is important that strong leadership and key decisions are made by the client at an early stage.

'What you dream is good. But what do you want next week?'

Bruno Chiumino, Chief Information Officer, Cosea

- Agility vs fixed requirements. What aspects can be allowed to develop as project needs evolve?
- Everything needs a reason and a value case.
- The importance of remaining pragmatic and tuned to users' experience.
- Tension between minimum data to deliver a project today, and value and cost from collecting good data during operations, maintenance and decommissioning.

A good digital strategy will take account of all these tensions. It is becoming intrinsic to project processes and should be given equal merit with other key project strategies.

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BAE Systems
Babcock International Group
Balfour Beatty plc
Berkshire Consultancy Ltd
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