

TOOLS AND TECHNIQUES VS CRITICAL THINKING

Highlights from the Major Projects Association event held on 24th January 2019

This Major Projects Association evening debate considered the following proposition:

We believe there is an over-reliance on tools, techniques and current 'best practice', rather than teaching critical thinking to project professionals to enable them to make judgements appropriate to the project conditions.

The world is changing as technology disrupts every aspect of the way we live and run our businesses. Whether in industry, the financial sector, retail or medicine, the power of technology is already making sweeping changes to the way decisions are made.

Delegates discussed how project management professionals have responded to these changes and the opportunities that they have brought. In particular, the discussion focused on whether modern project managers place too much emphasis and reliance on the new and continuously emerging processes, tools and techniques, rather than teaching critical thinking to underpin judgement and decision-making.

The consensus throughout the debate was that, as an industry, we are over-reliant on process and tools as the basis for decision-making. Despite an ever-evolving and increasingly sophisticated array of tools and processes available to project managers, we are not getting any better at delivery.

'We are an industry that has the potential to be a pack of dinosaurs if we are not careful. Around us every single industry has been transformed dramatically – I am not sure that our industry is ready for it.'

Sir David Higgins, Chairman, Gatwick Airport Ltd

A number of key themes emerged:

- Every sector of industry is changing and being disrupted by technology – major projects must embrace this change and adopt the latest tools and processes.
- While these evolving processes and frameworks are vitally important parts of the project management toolkit, they must be seen simply as tools, rather than an output in themselves.
- Critical thinking, leadership and the ability to challenge decisions are vital for project managers to deliver the best outputs.
- Industry needs to help the next generation make mistakes and find the space to develop its critical thinking.

EMBRACING CHANGE REQUIRES ADOPTION OF THE LATEST TOOLS AND PROCESSES

In infrastructure and major projects, the opportunities from technology are vast. Artificial intelligence will almost certainly replace any activity that can be modelled, recorded and enhanced; remote condition monitoring will drive whole-life costing; sensors and evidence-based decision-making will replace codes; off-site manufacturing is going to overtake manufacturing in situ; blockchain will transform financial transactions and record-keeping.

Modern project managers must embrace this new world of tools and technology – adopting an open mind to what is likely to emerge as the critical disruptive technologies of the future.

Typically, there are two key types of project manager. The first sees processes and practices as a set of rules, and their job as following those rules. Similarly, the organisations that they work for demand that those rules are followed.

However, the second type of project manager, while embracing processes and tools as a fundamental part of their role, relies on them to take care of the basics – thus freeing up time to focus on and think critically about the more important or difficult issues that cannot be handled by process.

Typically, a strong project manager will have:

- A strong technical background.
- A firm grasp and understanding of process and data management.
- An ability to carry forward their experience and use critical thinking to learn from that experience.

'Strong project managers don't think too much about the process but thrive on critical thinking. Strong project managers rely on the process to take care of the basics, freeing them up to actually lead.'

Allison Aschman, Director, Capital Solutions, IPA Global

TOOLS ARE JUST TOOLS – NOT AN OUTPUT IN THEMSELVES

Project management should be both an art and a science: the art is all about the people – the complex part of projects that does not fit the rule book. Our focus on tools as the solution means we over-emphasise the science and forget about the art.

The key thing to consider is how to use and adapt the tools at our disposal. The processes we rely on are a distillation of corporate memory – ‘the scars and champagne moments that have gone before’ – and have to flex, evolve and develop as new experiences are met. They are not the solution in themselves, but simply the means to help project managers find the solution. We must therefore give people licence to challenge when processes are not applicable – to take a pragmatic approach to project controls and decide if they are appropriate, to avoid being process-rich but outcome-poor.

‘Despite decades of work to improve our project management processes, our project success rate hasn’t really improved. We must be getting something wrong.’

Bill McElroy, Head of Industry Strategy, Turner and Townsend

CRITICAL THINKING, LEADERSHIP AND THE ABILITY TO CHALLENGE DECISIONS IS VITAL

Every project management professional must understand the technical basics that underpin major projects. However, the basics taught at university are just the start. Work experience teaches the vital critical thinking which enables project leaders to challenge assumptions and make the right decisions.

In general, the more complex a project becomes, the more that soft skills are needed. Whilst smaller projects can rely on the use of processes to help people do their jobs effectively, complex projects require project managers to step beyond the process and lead.

It is estimated that on successful projects, only around 25% of project management activity relies on hard technical or process-driven skills. The remaining 75% is tied up with the softer leadership skills associated with creating the right environment, culture and teams for success. The question is, are we spending enough time and resource developing those vital skills for future leaders?

‘Frameworks and processes provide a great structure – a baseline to follow that should allow robust thinking. Process is essential but the key is to not over-rely on it.’

Trevor Birch, Partner, PA Consulting

MAKING MISTAKES IS CRUCIAL FOR THE NEXT GENERATION TO DEVELOP ITS CRITICAL THINKING

The next generation of project managers is facing new challenges driven by the escalating need to manage issues such as costs, value, safety, performance and sustainability. Critical thinking is vital to challenge the current rules and processes that are too often considered the norm.

‘The next generation is being given different challenges to meet. They must constantly challenge whether or not the current rules and processes are still appropriate responses to the needs of today and tomorrow.’

Dr Michèle Dix CBE, Managing Director, Crossrail 2, Transport for London

There is a reluctance to step away from the accepted best practice for fear of making a mistake. If something goes wrong, people like documentation to ‘cover their back’ and demonstrate that the accepted best practice – whatever that might be – was adhered to.

Without learning through mistakes, there is a fear that critical thinking skills are being bred out of the industry. Over-reliance on process is taking away the need for responsibility and an acceptance that project leaders are accountable – not to the process but to the actual result that is delivered.

‘I think that we are doing a disservice to those coming behind us. Have we created so much process that it is now impossible for those behind us to succeed?’

Bill McElroy, Head of Industry Strategy, Turner and Townsend

POINTS FOR FURTHER DISCUSSION

- How can career development balance the desire to lead with the need for experience?
- Can critical thinking be taught?
- How can mentors help to instil critical thinking into young professionals?
- Do we allow project managers to act as project leaders?

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Chair:

Sir David Higgins, Chairman, Gatwick Airport Ltd

Contributors:

Allison Aschman, Director, Capital Solutions, IPA Global
Trevor Birch, Partner, PA Consulting

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Arup
BAE Systems
BP Exploration Operating Company Ltd
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Dr Michèle Dix CBE, Managing Director, Crossrail 2, Transport for London
Bill McElroy, Head of Industry Strategy, Turner & Townsend

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Transport for London
Turner & Townsend
UK Power Networks

For further information contact: Professor Denise Bower, Executive Director, Major Projects Association
t: 01865 818030 denise.bower@majorprojects.org www.majorprojects.org