



Rethinking project management
– new directions, new practice
Main findings of a UK Government funded research network

Seminar 128 held at the Institution of Engineering and Technology, London
18th October 2006

Summary

Introduction

Funded by the UK Government, 'Rethinking Project Management' was initiated in 2004 to research the areas in which mainstream project management theory needs to develop to support practitioners working on 21st century projects. Following a two-year research programme involving a network of many leading academics and senior practitioners, the seminar reviewed the programme's main findings for developing new thinking in the management of projects.

Following an overview of the programme's main findings, the seminar focused on three key areas in which the field needs to develop: value creation through projects and programmes, social complexity in project environments, and the shift from conventional training to learning and development. Key insights and messages were presented, followed by discussion about the implications for practice and future research.

Summary of the Network's principal research findings

The Network identified three key areas in which new concepts and approaches are needed to support practitioners working on 21st century projects.

1. Value creation – new concepts and frameworks
2. Social complexity – new concepts and images
3. Practitioner learning and development

Mainstream project management knowledge in the 20th century has focused strongly on 'product creation' – the creation or improvement of some physical asset, system or facility to specification cost and time – and hence has developed around the project life cycle idea, leading to training and development in associated methods, techniques and tools.

Project management in the 21st century is not just about the creation of a physical product, but increasingly the creation of value and benefit for different stakeholder groups. The focus on stakeholder value, rather than shareholder value, increases the complexity of projects and programmes and requires new knowledge and skills.

The most important message of the Network research programme is the need for organisations to review their approaches to project management training and development. In contrast to mainstream approaches, which focus on training in 'methods and tools', new approaches need to focus more on the development of 'practitioner capabilities' linked to the realities of 21st century projects.

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The table below highlights some of the characteristics, traits and practices relevant to 21st century practitioners.

20th century practitioner	21st century practitioner
Follows rules and prescriptions Sees knowledge as graspable and permanent Prescriptive approach to practice Embraces the known Technical expertise is all Emphasises assessment and accreditation Technical training	Informed by principles and frameworks Sees knowledge as temporary and dynamic Pragmatic approach to practice Embraces uncertainty Professional judgement counts Emphasises reflection and deliberation Professional development

Adapted from Fish and Coles (1998)

Case for research

One of the messages that came from the Network is to support research as a process of enquiry and debate and not as a solution for solving gaps in knowledge.

The objectives of the MPA were outlined, and the question asked as to who organises and distils the knowledge. This presents a challenge to professional organisations and universities who all aim to:

- Provide forums and platforms for project teams openly to share experience, knowledge and lessons learned
- Disseminate good practice guidance and advice based on real experience
- Work to remove obstacles, both internal and external, to adoption of improved practice in major projects

The Network believes there is a danger in just relying on practitioner-based knowledge without scientifically-based research knowledge. There needs to be a better dialogue between practitioners and researchers in which practice informs theory and vice versa. Its purpose is not to provide definitive answers but to shape the discourse in such a way that the evolving project management body of knowledge is comprehensive, coherent and integrated.

Presentations

1: Value creation

The enormous increase in information access and its transfer via the internet has resulted in value creation factors becoming more numerous, more complex and more transparent. There will be increased relationships/partnerships between clients and companies and organisations as well as higher client expectations in terms of performance and corporate responsibility. Risk taking will have to be better informed and opportunities must be seized for value creation as the project or programme evolves.

An example of a merger between two large organisations in the food industry was presented to delegates. This demonstrated a much wider view of the value or benefit requirements of the programme than the mere delivery of tangible assets. Though the task consisted of the replanning and refurbishment of a large number of retail stores over a three-year period – a challenge in itself – the programme needed strategic initiatives and action plans to integrate IT systems, logistics and human resources in a wide wholesale and retail market.

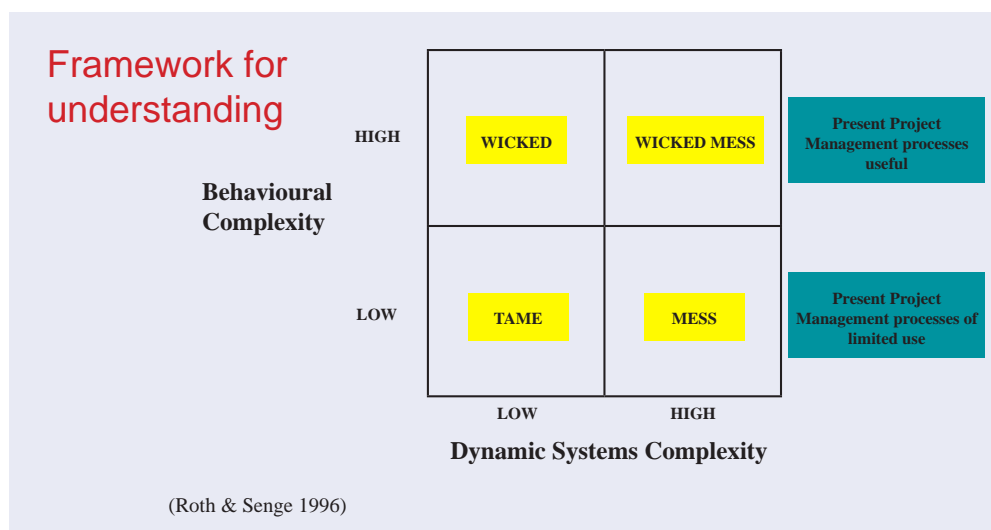
Opportunities were provided for competent staff actively to manage their local project and programme. The change programme created value, not just in terms of wealth creation for shareholders, but also for stakeholders such as the employees who helped to bring about change and to the end customers who benefited from the products in the retail outlets.

2: Social complexity

Projects and programmes in the 21st Century are becoming more complex, systemically and socially, and project managers increasingly find that technical capability alone is no longer sufficient to deliver them. There is a need to understand socio/economic and political issues which may require some knowledge of sociology, psychology and even philosophy.

The traditional wisdom for solving complex problems is to gather data, analyse it, formulate a solution and then implement the solution. When a project or programme involves low behavioural complexity or interaction on the part of the people involved traditional processes may be used to solve problems. Where human behavioural complexity is high such processes are of limited use.

Studies in the United States have shown that problems can be classified in four ways to give a 'Boston Matrix' (Roth and Senge version 1996).



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A problem in which the behavioural complexity is low is called a 'tame' problem – 'tame' does not mean 'simple', but in theory the problem can be solved using traditional processes. Increase in the dynamic nature of the system causes the problem to become 'messy', but still theoretically solvable. As behavioural complexity further increases clusters of interrelated or interdependent problems which cannot be solved in relative isolation from one another become predominant, leading to 'messes' and even to 'wicked messes'. For these, traditional management processes are of limited use.

A move to the right of the matrix indicates an increase in the interconnectivity of events in which people must agree to a 'satisfactory solution' rather than an optimum one. A move towards the top of the matrix requires an increasing reliance on social science type solutions where behaviour is dominated by belief systems, emotions and feelings.

Predicted trends in project complexity

- Interaction with the web will lead to increased societal interaction
- The increased interaction will be with 'non-experts' – so rolling out experts to talk about coefficients and safety factors will not work
- Increased political involvement because value creation factors will become more numerous and complex
- Increased relationships/partnerships between clients and companies and organisations
- Higher customer expectation
- Improved performance will be expected
- Risk taking will have to be better informed

Projects or programmes which involve complex human interactions cannot be defined in detail because, whilst the outcome is describable, the ways in which it can be reached are very variable. In such dynamic systems small changes can have large effects and are much affected by hidden human agendas.

Project evaluation is a political process in which a satisfactory solution can only be achieved with openness and honesty. It becomes an ethical imperative not to present as known that which is actually unknown, guessed or preferred. In this world the rhetoric of control is inappropriate and attempts to solve problems in the traditional way can rapidly make matters worse.

3: Learning and Development

People working on 21st century projects will require reflective practitioner skills to:

- Deal with ambiguity and uncertainty
- Understand the social world (politics, factions, conspiracies)
- Handle relationships
- Understand value and its creation
- Be able to use theory pragmatically
- Work with multiple perspectives

An example of a project management professional development programme which aims to develop these skills was described to delegates. Delivered by the University of Manchester with a consortium of companies, the programme provides flexible learning, can be accessed from a distance and offers a choice of eight modules. Participants can pick any number of modules, a certificate is given for successfully completing four modules, a diploma for eight modules and if participants continue for a further year and write a dissertation they are awarded an MSc from the University of Manchester.

A key feature of the course is that it combines academic input with coaching, mentoring and active learning on the job. There are also two plenaries and four networking opportunities per year for people to come together and share practical experiences. This has given rise to an informal information network and increasingly there is cross-business development. Benefits of the programme include promotions and career moves for participants and better project outcomes for their employees.

Project management as a profession

Given the increasingly global nature of business and the internationalisation of many major projects it is important to consider the professionalisation of project management. Project managers usually work extremely hard and are often not sufficiently rewarded for their efforts.

Whilst many large organisations could provide some kind of internal reward or certification, it is relevant to ask whether project or programme management can be promoted as a profession by the umbrella organisations that represent the practice. How can the skills needed be classified and who should set out the criteria?

There is a great deal of cross-border knowledge transfer all over the world and it is necessary to ask how a commodity can be made of project management knowledge, so that it can be propagated in an international environment where, at present, there are many different views as to what competent practitioners actually do. Professional project managers would be able confidently to offer project management services in other countries.

Analysis conclusions

An analysis of the seminar's proceedings revealed possible areas for research and looked at the responsibilities of umbrella organisations such as the Major Projects Association (MPA).

Possible areas of research:

- How the broader concept of value can be translated at different levels to everyone contributing to a project
- A more thorough assessment of what is meant by 'extended life cycle' of a project
- Delivering a project in a complex and rapidly changing environment
- New models and frameworks to deal with process complexity
- More learned guidance on managing multiple stakeholders in the modern world
- Improving the learning and education processes and perhaps including psychology in project management training
- Knowledge management and knowledge transference within and between organisations
- The creation of simulation models of project environments that give experience of the real world from a safe environment

Possible objectives for the MPA:

- Promoting the concept of professionalism within programme and project management
- Canvassing the views of member organisations as to sponsoring and funding research
- Holding more events which analyse and address some of the recommendations heard about today

¹ The Boston Matrix was first created by Bruce Henderson for the Boston Consulting Group in 1970 to help corporations analyse their business units or production lines and decide the allocation of resources. It is still much used in brand marketing, product management, strategic management and portfolio analysis.

Participating organisations

Advance Consultancy Ltd	Henley Management College
Association for Project Management	Human Systems International Ltd
Atkins plc	John Laing plc
BAA plc	KBR
BAE SYSTEMS, Submarines	KPMG LLP
Balfour Beatty plc	Major Projects Association
Bechtel Ltd	Metronet Rail
Bovis Lend Lease	Middlesex University
Bristol Business School	Mott MacDonald Group Ltd
British Energy	Mouchel Parkman
Centre for Research in the Management of Projects (UCL/UoM)	National Air Traffic Services Ltd
Centrim, University of Brighton	National Audit Office
Charles Smith Consulting	PA Consulting Group
Cranfield School of Management	Pell Frischmann
CSE International Ltd	Rolls-Royce Marine
Department for Transport	Rolls-Royce plc
E-Borders	Royal Liver Assurance
E-Change Training Ltd	Said Business School
EDF Energy	Scott Wilson Kirkpatrick & Co, Ltd
Greater Manchester Public Transport Authority	Siemens Business Services
Groupe ESC Lille	Taylor Woodrow Construction
Halcrow	The Nichols Group
Harris Management Services	Union Railways Ltd
	University of Glasgow
	Westfield Ltd