THE EVOLUTION OF PROJECT MANAGEMENT PRACTICE

FROM PROGRAMMES AND CONTRACTS TO BENEFITS AND CHANGE

EDITED BY
DARREN DALCHER

THE EVOLUTION OF PROJECT MANAGEMENT PRACTICE

Project practice has undergone significant changes requiring new ways of thinking about and managing projects. The single focus on the staged delivery of artefacts is gradually being replaced by a wider interest in stakeholders, value, benefits, and complexity. As a result there is a growing interest in the development of practitioner capabilities, grounded in the recognition that dealing with permeable boundaries and unstructured situations transcends normative processes. Modern practitioners increasingly utilise deliberative and reflective approaches, often challenging received wisdom and traditional interpretations.

This volume provides a sampling of some of the best writing in the project domain, enabling readers to access a wider group of authors, ideas, and perspectives. Key topics covered include agility and programme management, planning, people, business cases, contracts, teams, sponsorship, collaboration, strategy, patterns, context, change, and benefits.

The main aims of the collection are to reflect on the state of practice within the discipline; to propose new extensions and additions to good practice; to offer new insights and perspectives; to distil new knowledge; and, to provide a way of sampling a range of the most promising ideas, perspectives, and styles of writing from some of the leading thinkers and practitioners in the discipline.

Darren Dalcher is Professor of Project Management at the University of Hertfordshire. He has written over 200 papers and book chapters and published over 30 books. He is Editor-in-Chief of the *Journal of Software: Evolution and Process* and of two established book series published by Routledge.

Advances in Project Management

Edited by Darren Dalcher

Project management has become a key competence for most organisations in the public and private sectors. Driven by recent business trends such as fewer management layers, greater flexibility, increasing geographical distribution, and more project-based work, project management has grown beyond its roots in the construction, engineering, and aerospace industries to transform the service, financial, computer, and general management sectors. In fact, a *Fortune* article rated project management as the number one career choice at the beginning of the twenty-first century. Yet many organisations have struggled in applying the traditional models of project management to their new projects in the global environment.

Project management offers a framework to help organisations to transform their mainstream operations and service performance. It is viewed as a way of organising for the future. Moreover, in an increasingly busy, stressful, and uncertain world it has become necessary to manage several projects successfully at the same time. According to some estimates the world annually spends well over $10 trillion (US) on projects. In the UK alone, more than £250 billion is spent on projects every year. Up to half of these projects fail! A major ingredient in the build-up leading to failure is often cited as the lack of adequate project management knowledge and experience. Some organisations have responded to this situation by trying to improve the understanding and capability of their managers and employees who are introduced to projects, as well as their experienced project managers in an attempt to enhance their competence and capability in this area.

Advances in Project Management provides short, state of play, guides to the main aspects of the new emerging applications including: maturity models, agile projects, extreme projects, six sigma and projects, human factors and leadership in projects, project governance, value management, virtual teams, project benefits.

For a complete list of titles in this series, please visit www.routledge.com/business/series/APM

Further Advances in Project Management
Guided Exploration in/of Unfamiliar Landscapes
Edited by Darren Dalcher

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Martin Hopkinson

Performance Coaching for Complex Projects
Influencing Behaviour and Enabling Change
Tony Llewellyn

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Following industrial and consultancy experience in managing technology projects, Darren Dalcher gained his PhD from King's College, University of London. In 1992, he founded an international IEEE taskforce focused on learning from project failures. He is active in numerous international committees, standards bodies, steering groups, and editorial boards. He is heavily involved in organising international conferences, and has delivered many international keynote addresses and tutorials. He has written over 200 refereed papers and book chapters. He is Editor-in-Chief of the *Journal of Software: Evolution and Process* and edits two book series focused on advances in project and change management and organisational systems.

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He received international recognition in 2010 with appointment as a member of the PMForum International Academic Advisory Council. In October 2011 he was awarded a prestigious Honorary Fellowship from the Association for Project Management for outstanding contribution to project management.

He has delivered lectures and courses in many international institutions across Europe and North America. His research interests include project success and fail-ure; project requirements; change management; maturity and capability; ethics; agile project management; systems and software engineering; process improvement; project benchmarking; risk management; decision making; chaos and complexity; project leadership; change management; knowledge management; gamification; and evidence-based and reflective practice.

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Andrew Hudson has 30 years' experience working with organisations to improve their management of strategy, operations, and change. He helps senior executives and teams to better plan and execute strategy by introducing and applying leading management and governance practices and tools: performance objectives – working with leaders to define and cascade performance objectives; measurement – helping teams to apply better measures to drive performance improvement; process – ensuring operations are slick, with effective controls and governance; risk – minimising the likelihood and consequences of operational and project risk; benefits – helping beneficiaries to maximise the value of change investment; initiatives – keeping initiatives aligned with the strategy and maximising ROI; governance – ensuring that appropriate controls and reporting is in place to support better decision making. Andrew's software company, ChangeDirector, has been recognised by Gartner as a Cool Vendor. As speaker, he inspires people to adopt better practices in effective strategy execution and value realisation. He is currently developing a community of practice around measurement with people who recognise the importance of measurement to inspire performance improvement.

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PM World Journal

The *PM World Journal* (PMWJ) is an online publication produced by PM World Inc. in the United States, but created by a virtual team of advisors, correspondents, and contributing editors located worldwide. Each month, the PMWJ features dozens of new articles, papers, and stories about programmes, projects, and project management (P/PM) around the world. Objectives for the journal are to (1) support the creation of new P/PM knowledge; (2) support the transfer of that knowledge to individuals, organisations, and locations where professional P/PM may be weak, less available or sorely needed; (3) provide recognition and visibility for authors, the creators of new P/PM knowledge; (4) provide an easily accessible and useful online repository of P/PM knowledge and information as a global resource for knowledge sharing and continuous learning; and (5) promote the application of modern, professional P/PM for solving more of the world's problems – to make this world a better place.

INTRODUCTION

The evolution of project practice

Darren Dalcher

Welcome to the third volume in this mini-series focused on developing and presenting new perspectives and ideas pertinent to the successful management of projects, programmes, and change initiatives. The first two books emerged from an attempt to refine and define the boundaries of project management, often focusing on topics and areas that receive little attention in the conventional standards and professional bodies of knowledge. Once again, the writing in this volume aims to help practitioners by focusing on key areas emphasising capabilities, skills, attitudes, values, and competencies that are needed to successfully deliver projects.

There are a lot of new publications appearing in the project management arena. Many propose new ways and perspectives for approaching projects and dealing with benefits, stakeholders, and change. This volume provides a sampling of some of the best writing in the project domain, enabling readers to access a wider group of authors, ideas, and perspectives.

The chapters in this volume bring together leading authorities on topics that are relevant to leading and managing programmes and change initiatives. Topics include agility and programme management, planning, people, business cases, contracts, teams, sponsorship, collaboration, strategy, context, change, and benefits.

The main aims of the collection are to reflect on the state of practice within the discipline, particularly in the context of programmes; to propose new extensions and additions to good practice; to offer new insights and perspectives; to distil new knowledge; and, to provide a way of sampling a range of the most promising ideas, perspectives, and styles of writing from some of the leading thinkers and practitioners in the discipline.

The content is divided into 12 specific areas. Each area is explored from two distinct perspectives: First, an introductory narrative sets the context and explains the background, whilst addressing an important question, introducing a seminal work, often from a different discipline or perspective, or reviewing progress to date.

Second, the main guest chapter focuses on a particular aspect, approach or new way of thinking. Readers who might like to follow up the ideas are strongly encouraged to refer to the books published by the chapter authors, which offer greater detail and significantly more content on the relevant topic. The seminal works indicated in the introductory narrative are also worth pursuing.

The volume offers access to new ideas, approaches, perspectives, and authors, as well as an introduction to other domains and ways of thinking about change, people, benefits, and programmes informed by other disciplines. As the range of areas extends beyond the topics normally covered in project management books or courses, it is likely that the book will identify new perspectives that readers may not have considered, and thereby suggest additional reading to augment the interests and concerns of practitioners and researchers.

Rethinking project management

There have been many debates about the extent, role, and nature of underpinning theory in project management. Theory appears to play a key, if subtle, role in defining both knowledge and practice. Indeed, Einstein opined that 'it is the theory which decides what we can observe'.

The field and discipline of project management have been dominated and defined by explicit bodies of knowledge, with matching certification schemes formulated by a number of professional associations. The normative structure presented in these bodies of work has been utilised in many textbooks and courses devised for students and practitioners emphasising a linear interpretation of how projects ought to be performed in the real-life environment of project work.

The narrow conceptualisation that projects begin with a well-defined intention and progress sequentially through an agreed sequence of activities was challenged by the UK Government-funded Rethinking Project Management Network. Over the course of two years, the Network brought together senior practitioners and leading researchers to develop a new agenda aimed at extending and enriching project management ideas in relation to developing practice presented in the form of five directions for future research.

The Network identified the need to progress the dialogue around project management from a singular focus around product creation, emphasising the staged delivery of an asset, towards a wider focus on stakeholders, value, benefits, and complexity as befitting twenty-first century project management. The Network encouraged practitioners and organisations to review their approaches to project management training and practitioner development. A direct implication was the need to shift from a focus on adopting methods and tools that match an instrumental mindset towards the development of practitioner capabilities that address the challenges of a growing and expanding profession and discipline.

The key output of the Network was an explicit framework of five directions focused on the development of new concepts and approaches identified by participants as critical to the management of projects.

TABLE 0.1 Rethinking project management directions

The life cycle model of projects and PM	**Theories of the complexity of projects and PM**
From: the simple life cycle–based models of projects, as the dominant model of projects and project management. **From**: the (often unexamined) assumption that the life cycle model is the actual terrain.	**Towards**: the development of new models and theories that recognise and illuminate the complexity of projects and project management. **Towards**: new models and theories that are explicitly presented as only partial theories of the complex terrain.
Projects as instrumental processes	**Projects as social processes**
From: the instrumental life cycle image of projects as linear sequence of tasks to be performed on an objective entity 'out there', using codified knowledge, procedures, and techniques, and based on an image of projects as temporary apolitical production processes.	**Towards**: concepts and images which focus on social interaction among people, illuminating the flux of events and human action, and the framing of projects (and the profession) within an array of social agenda, practices, stakeholder relations, politics, and power.
Product creation as the prime focus	**Value creation as the prime focus**
From: concepts and methodologies which focus on: product creation – the temporary production, development or improvement of a physical product, system, facility etc. – and monitored and controlled against specification (quality), cost and time.	**Towards**: concepts and frameworks which focus on: *value creation* as the prime focus of projects, programmes and portfolios.
Narrow conceptualisation of projects	**Broader conceptualisation of projects**
From: concepts and methodologies that are based on: the narrow conceptualisation that projects start from a well-defined objective 'given' at the start, and are named and framed around single disciplines, e.g. IT projects, construction projects, HR projects etc.	**Towards:** concepts and approaches which facilitate: broader and on-going conceptualisation of projects as being multi-disciplinary, having multiple purposes, not always predefined, but permeable, contestable and open to renegotiation throughout.
Practitioners as trained technicians	**Practitioners as reflective practitioners**
From: training and development that produces: practitioners who can follow detailed procedures and techniques, prescribed by project management methods and tools, which embody some or all of the ideas and assumptions of the 'from' parts above.	**Towards:** learning and development that facilitates: the development of reflective practitioners who can learn, operate and adapt effectively in complex project environments, through experience, intuition and the pragmatic application of theory in practice.

'Overall, the Network has found a strong need for new thinking to inform and guide practitioners beyond the current conceptual base, and it is *this* need which the five directions seek to address' (Winter et al., 2006; p. 640).

The five directions, displayed in Table 0.1, thus represent the principal areas where new concepts and approaches are needed in order to guide practitioners in the management of projects.

Taken together, the five different directions offer an agenda to inform people already working within the field and discipline of project management and those interested in developing new research, and to challenge the dominant model, domains, and development related to current practice.

The clearest pattern to emerge from the deliberations of the practitioners in the Network was the sheer complexity of projects across all sectors and at all levels (Winter et al., 2006). Projects involve multiple groups of stakeholders, with different agendas, interests, politics, and values that interact, diverge, and conflict. The classical representation of a project life cycle concept is therefore insufficient to capture all nuances of project work and cannot be taken as an all-encompassing representation of actual practice (Cicmil et al., 2006).

The implication is that there is a need to develop new models and theories capable of acknowledging the inherent complexity of projects and offering new insights about the realities of projects perceived within a wider organisational and societal context. While the temptation may be to seek an alternative model that could replace the rational deterministic model, the real value of the insights is in encouraging a plurality of models and ways of engaging with the actuality of projects and project management.

The Network also noted that the literature in general fails to acknowledge the political and personal context of projects in practice. Indeed, the instrumental life cycle image promoted by the discipline offers little guidance on the 'softer' aspects of managing projects.

The evolving practitioner

A similar need to develop deliberative and reflective professionals capable of dealing with permeable boundaries and unstructured situations characterised by increasing levels of volatility, uncertainty, complexity, and ambiguity is becoming better recognised. Such a view requires the adoption of a more resilient mindset that eschews the centrality of instrumental rules, prescriptions, and procedures, starting instead with permeable boundaries, messier situations, less clear responsibility lines and chains of relationships, connections, and influences. Such situations also necessitate a greater subjectivity in interpreting the subject area and call for informed deliberation and sensemaking mechanisms.

Table 0.2 identifies some of the shifts required to improve professional practice within the domain of health and social care (after Fish & Coles, 1998). Note: most of the challenges identified in that domain also apply to the content of managing projects and programmes.

TABLE 0.2 The evolving practitioner

Contemporary practitioner	Future practitioner
Follows rules and prescriptions	Starts where rules fade; sees patterns and frameworks
Uses diagnosis, analysis	Uses interpretation/appreciation
Wants efficient systems	Wants creativity
Sees knowledge as graspable and permanent	Sees knowledge as temporary, dynamic and problematic
Relies on prescriptive approach to practice	Employs a pragmatic approach to practice
Emphasises the known	Embraces uncertainty
Assumes standards are fixed	Encourages trust in professionals
Relies on technical expertise	Employs professional judgement
Embraces assessment and accreditation	Emphasises reflection and deliberation
Requires technical training	Seeks professional development

Ultimately, the shift in practitioner development seems to be from relying on fixed expectations, standards, and models in a pre-understood and pre-defined contexts towards a more dynamic and reflective approach informed by the relevant context and situational needs and therefore capable of coping with the inherent complexity and uncertainty.

Fish and Coles contend that there are two fundamentally different views of professional practice. The first view accords with an instrumental technical rationality, implying an achievable competency-based perspective concentrated on the elements of practice. The classical approach thus prescribes and proscribes all the practitioner's activities. The second view acknowledges the situated and fast-changing reality, replete with uncertainty and therefore advocates a reflective and deliberative practice. This modern view acknowledges that practice is messy, unpredictable, and unexpected requiring continuous refinement and update as practitioners endeavour to understand complexities and investigate actions and theories.

The modern view encourages practitioners to challenge their theories with ideas from other perspectives and to seek to update and refine their practice, and its underlying theory, an objective that chimes with the purpose of this book.

Challenges in managing projects

The expectations surrounding the delivery of projects seem to increase continuously. The dialogue often features new additions such as benefits, stakeholders, and change, which seem to stretch practitioners, requiring new approaches and perspectives. New expectations are also formed around these areas, forcing practitioners to expand their repertoire.

The PMI's *Capturing the Value of Project Management* report indicates that only one in five organisations declares having a high level of benefit realisation maturity. Overall project outcomes and the ability to deliver business value are similarly

polarised across organisations and projects, and the track record of change management initiatives is reputed to be significantly below 50%.

The UK's Chartered Management Institute (CMI, 2016) reports that while 97% of managers have experienced change in their organisation in the last 12 months, only 27% have witnessed increases in productivity as a result. Their conclusion is that,

> senior management need to refocus on involving managers in organisational change, allowing them to influence its direction and implementation. . . . If there is little faith that the process will be managed well, it is unlikely that organisations will gain the necessary support to move ahead effectively.

The authors of the chapters in this book provide practitioners with new approaches for tackling these areas by agreeing to share their thoughts, insights, advances, ideas, and perspectives.

Advances in project management

The individual chapters build on articles that have been selected to feature in the 'Advances in Project Management' column published in the *PM World Journal*. The main purpose of this column is to make the ideas and principles of the knowledge and skills required to manage projects more accessible. *Advances in Project Management* was introduced in order to improve understanding and project capability further up the organisation; amongst strategy and senior decision makers and amongst professional project and programme managers. Our ambition has been to provide project sponsors, project management leaders, practitioners, scholars, and researchers with thought-provoking, cutting-edge information that combines conceptual insights with interdisciplinary rigour and practical relevance thus offering new insights and understanding of key areas and approaches.

In order to identify the potential authors, a wide range of books and resources have been consulted. Contributions were selected by the editor on the basis of their individual merit, usefulness, and applicability. The chapters offered here will feature many leading practitioners, researchers, and managers and highlight concepts, ideas, and tools that will be of benefit to practising project managers.

To this end, the individual chapters aim to:

1   share and embrace new ways of thinking around the challenges faced by project and programme managers;
2   identify and focus on *key* aspects of project, programme and portfolio management;
3   offer practical case examples of how new applications have been tackled in a variety of industries;
4   provide access to appropriate new models in these areas, as they emerge from either academic research or practical application.

In other words, the book aims to provide those people and organsations who are involved with the development in project management with the kind of structured information that will inform their thinking, their practice, and improve their decisions. Featured contributions have not been limited to a particular community, country or association to ensure that a wide variety of insights, angles, and perspectives are covered.

Geography and scope

Project management is practised in many different sectors and environments. Such different perspectives allow for the emergence of alternative ideas and ways of thinking. Many of the new ideas develop in different sectors and it is important to find a shared platform to present and highlight the impacts of such innovations. This publication offers such a shared environment, which will be of use to practitioners regardless of where they are based and whatever the geography of the projects that they are running.

The book offers a rich diversity of ideas, lessons, and insights that are ready to be shared and adopted. The topics emphasise key areas required to improve the delivery of projects and programmes in a wide range of environments and contexts. The experts and authors come from a variety of backgrounds and bring organisational, psychological, sociological, or other influences they can share. Others are experts in coaching, leadership development, risk, logistics, strategy development, and transformational change. The value of the publication is in integrating the multitude of insights and perspectives.

The management of projects is an exciting space for sharing, collaboration, and exploration. The ambition, scale, and scope of many of the new endeavours are breath-taking. But an injection of new insights and approaches is desperately needed. Many of our authors are able to offer exciting new approaches for getting there. Together we can continue to develop and grow by embracing new skills and perspectives and improving the state of practice. We encourage readers who would like to share their insights and ideas with the wider community to get in touch with the editor. We look forward to continuing the dialogue about success in projects and extending the boundaries of project and programme management.

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1

PROGRAMME MANAGEMENT

The temporal boundaries of projects and programmes

Darren Dalcher

Is it time to revisit our definitions of projects and programmes?

Definitions and assumptions play a key part in delimiting both knowledge and practice. Language is closely entwined with human life: Words and constructions and the way a language is used can shape what is seen and understood, defining what is acceptable and even possible.

> 'When *I* use a word', Humpty Dumpty said, in rather a scornful tone, 'it means just what I choose it to mean– neither more nor less'.
>
> *(Carroll, 1871; p. 57)*

The Humpty Dumpty theory of semantics holds sway in most societies and many organisations and cultures. Words, symbols, and concepts are endowed with additional meaning or associations, often derived from highly contextual, regional or vernacular sources, which can make a word mean precisely what the user wants it to mean.

Debates around the real nature of linguistics often focus around the ability to learn and adapt as opposed to inborn notions. Yet, given that meanings within linguistic communities change over time, there appears to be a need to re-visit linguistic associations and consider their impacts on language, understanding, and more widely on the implications for the wider practice.

American philosopher and logician, Willard Van Orman Quine invoked the metaphor of the 'myth of the museum', where exhibits are meanings, and the words are labels (1960). His main objection is to the assumption that semantics is determinate in the mind. Instead, Quine advocates for a naturalistic view of language, which implies discovery of the use of native words that comes from observation of behaviour. By this logic, only an empirically based account can address

the indeterminacy and contextuality of words and their use, and uncover Humpty Dumpty's intended interpretation.

Cognitive psychologist Steve Pinker concedes that semantics is about the relation of words to thoughts (2007). But he is quick to point out that it is also about: the relation of words to other human concerns; the relation of words to reality; the relation of words to a community; the relation of words to emotions; and, the relation of words to social relations. Semantics thus defines how thoughts are anchored to things and situations in the world, what shared understanding may be possible, how a word comes to evoke (and even define) an idea, how these ideas are transferred, and ultimately hint at what is allowed and what is considered possible. Above all, semantics can open a window into Humpty Dumpty's wider world and its impact on ours . . .

Starting with projects

The traditional definition of a project implies a temporal arrangement concerned with actualising a planned and defined objective. Indeed, project management is regarded as an execution discipline concerned with realising plans. In the UK, especially in government circles, there is currently a growing emphasis on strengthening the profession of *project delivery*, implying that project management, as practised, is an implementation-focused approach.

Projects are designed to deliver some asset; a result, capability, product or service. In other words, projects are undertaken in order to reach an end point and generate artefacts and outputs that have been planned and requested.

Programme management on the other hand, requires an open-ended approach. The sixth edition of *APM Body of Knowledge* defines programme management as 'the coordinated management of projects and change management activities [required] to achieve beneficial change' (p. 14). The definition cleverly sidesteps the continuous debate about the relationship between project and programme management, offering a more continuous interpretation inclusive of change and, potentially, benefits.

Benefits obscure the picture

The increasing interest in benefit realisation necessitates a wider focus beyond project delivery. Benefit realisation management was first encountered in IT project portfolio discourse. Alternative methods and approaches were devised to ensure that IT projects deliver defined, and agreed, benefits according to a plan. Over the last 20 years, the benefits discourse has penetrated additional areas, featuring in programme management and most recently in project management dialogue engendering some confusion and lack of clarity.

The *APM Body of Knowledge* asserts that 'a project is a unique, transient endeavour, undertaken to achieve planned objectives, which could be defined in terms of outputs, outcomes, or benefits' (p. 12).

It further elaborates that 'a project is usually deemed to be a success if it achieves the objectives' (ibid.).

This is confusing as outcomes occur beyond delivery and handover. More critically, benefits accrue over an extended time period as the new or improved asset or system goes into use.

If the success of a project is to be determined by the achievement of the planned objectives, which may encompass outcomes and benefits, it cannot be ascertained until the passage of a significant amount of time beyond project handover, when the benefits from use can be realised and the resulting value is accrued.

The conflation of different timeframes and timescales associated with projects and benefits is far from helpful. Making sense of an increasingly confused picture may require the creation of a distinction between project delivery and post-project benefits realisation and value that imply that the project outputs are actually in use following project completion.

Learning to think strategically

Viewing projects through a delivery lens decreases the wider impacts and potential influences of projects, not least by omitting the shared understanding, the focus on human concerns, and the relation to emotions and social relations. Delivery reduces project management to a lower common denominator focused on systematic implementation of pre-defined results. Crucially, it ignores the potential influence of project managers and leaders in shaping, advocating, negotiating, motivating, and enhancing potential solutions. It is also worth pointing out that an execution-centric perspective excludes an interest in the long-term horizon, thereby discounting the need to consider benefits, and longer-term change impacts.

Moreover, the adoption of the delivery lens creates a strategic vacuum between organisational strategy and the execution of projects.

If projects are to become focused delivery mechanisms there would be a need for something else to adopt a more strategic approach. Meanwhile, if the interest in benefits realisation requires a more strategic and longer-term approach, there is a need for a further discipline to address the wider concerns and the linkage to strategic aspects that extend beyond 'mere' delivery.

The chapter by Dr Michel Thiry entitled 'New Developments in Programme Management', bridges this gap by considering the new and expanding role of programme management. Programme management is increasingly called upon to address an uncertainty- and complexity-laden context. It is also focused not on the delivery of products and artefacts, but instead on the longer-term realisation and sustainability of benefits.

The chapter represents a reflection on the new developments and changes within the discipline of programme management, primarily over the last five years and draws upon the revised and updated second edition of *Program Management* (Thiry, 2015). It offers fresh thinking about the connection between programme management and agile management and the alignment of the programme management

standards; but, more importantly, it provides new ways of thinking about the essential differences between projects and programmes and revisiting our definitions of what might be expected of each.

Michel's work offers a direct and well-thought-out link between strategy and project execution, proposing programme management as a vehicle for organisational change. It encourages managers and executives to consider the integration of programme management in the business, the crucial role that it can play in delivering benefits and driving change and improvement. The discussion is further extended to consider the integration with portfolio management and delivery of change.

Dr Thiry has made significant contributions to programme management thinking. His approach integrates, synthesises, and strengthens the body of knowledge and empirical understanding of programmes and their wider role within organisations. It also provides detailed insights into the processes and activities of decision management, stakeholder engagement, governance, change management, and benefits management. His approach reflects updated thinking around programmes and their wider integration to business addressing life cycles, change, programme management maturity measures, organisational issues, and the development of programme management into a key organisational capability.

Rethinking our definitions

A key value of the work is in rethinking our definitions, contexts, and relationships. The chapter offers a useful mechanism for advancing the discourse on projects and programmes. While it does not offer a direct definition of either, it provides a useful set of measures based on five factors. In doing so, it clarifies the context through a multi-dimensional exploration of the different aspects of the undertaking. It is particularly encouraging to see the kind of thinking and maturity that result from the reflection on the development, improvements, and changes within the discipline.

Similar efforts are required to derive an improved understanding of the context of projects, project management, and project delivery. The words as currently used are laden with meaning and expectations. To escape from the static museum and advance the disciplinary discourse, we need to derive a more contextual understanding of the empirical uses of each and their implications. The relation of words to reality remains key.

As thoughts are anchored to particular meanings and interpretations, it is important to uncover some of the underlying assumptions and interpretations that they entail. Improving our shared understanding will depend on the ability to identify how ideas are evoked, transferred, shared, and executed, and where the limits may lie.

American novelist Jonathan Safran Foer noted that 'definitions have never done anything but to constrain'. Further advances may well depend on our ability to make clear the definitions that underpin particular views, resulting in the repetition of certain patterns and approaches. As masters of dealing with constraints, it is

incumbent upon us to uncover the ones defining our achievements. Learning to deal with Humpty Dumpty may well entail understanding what he means through a naturalistic interpretation of his actions and behaviours.

Many of the different flavours and expectations come from the baggage that words and phrases such as 'projects' and 'project management' evoke. Addressing strategic needs and affecting improvement would ultimately depend on the ability to clarify the contexts and implications of different terms and nuanced interpretations.

Semantics, as the study of meaning has a lot to offer the unfolding dialogue. American theologian, Tryon Edwards (1809–1894) asserted that 'most controversies would soon be ended, if those engaged in them would first accurately define their terms, and then adhere to their definitions'.

Meanings are incomplete without some elements of context. American Anthropologist Clifford Geertz observed that 'meaning is socially, historically and rhetorically constructed'. Until we begin to understand the geographies and the situational boundaries of the terms invoked in our conversations around projects we may continue to talk at cross-purposes. Our definitions and dialogue will become richer when we learn to share some of the context and use it to underpin current understanding, explore the emerging boundaries and limits, and continue to drive future development and improvement by re-visiting and challenging both understanding and boundaries.

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New developments in programme management

Michel Thiry

Since the first edition of my book *Program Management* was published in 2010, programme management has evolved both as a distinct discipline and as an organisational capability. As a discipline it has reached a point where, today, the main programme management standards and writers agree that it is meant to deal with complex and turbulent situations and to deliver benefits, not products. It is also becoming more of an organisational capability and practice focuses more and more on its integration within the business, from strategy formulation to sustainability of benefits.

All these developments could be encapsulated in the maturing of the programme culture. In this chapter, I will examine five aspects of this cultural evolution:

1   The rise of agility and its effect on programme management.
2   The alignment of the main programme management standards.
3   The integration of programme management in the organisation.
4   The distinction between projects and programmes.
5   The management of change as a key aspect of programme management.

Agility and programme management

Complex and turbulent situations require a cyclic and flexible approach that today is labelled 'Agile'. The concepts on which agile is based have existed for a long time, but the popularity of agile management has helped managers understand and accept the culture shifts necessary to manage programmes. I will aim to explain how agile methods and programme management share the same cultural paradigms.

Programme management has evolved from the complexity created by a number of interrelated projects and the number of stakeholders involved; from the need to span from strategy to operations and from the ambiguity involved in constantly

emergent decision-making. Agile methods were developed to deal with projects that could not be dealt with using traditional project management methodology. Projects that are complex, involving many unknowns in terms of design, and the effect that results have on expected benefits cannot be managed using traditional project management methods.

In 2001 a group of thinkers of what was then called 'lightweight methods' issued the 'Agile Manifesto' to tackle complex, fast-moving IT programming projects. This Manifesto states four basic ideas:

- Responding to change over following a plan.
- Working software (measurable results) over comprehensive documentation.
- Individuals and interactions over processes and tools.
- Customer collaboration over contract negotiation.

These principles are shared by programme management.

- Agile management and programme management are based on the concept of a series of mutually reinforcing decisions that form a coherent whole aimed at achieving expected benefits.
- Both programme and agile management evolve in an iterative way and are constantly realigned, based on measured results, to ensure they deliver stakeholder value.
- Both put the emphasis on simple governance systems that require minimal bureaucracy and rely on regular decision meetings where all key stakeholders are present.
- Both put a great focus on stakeholder engagement and team empowerment rather than formal top-down relationships.

In today's context, there is a need to manage ambiguity and high uncertainty. Whereas the ambiguity of programmes and the inability to precisely predict results was a major hurdle in its acceptance by top management, this has started to change with the rising popularity of agile principles and culture. It has convinced many managers that you can be both adaptive and predictive in a relatively organised way.

Alignment of PgM standards

Since programme management started detaching itself from project management in the mid-1990s, different authors and professional associations have debated as to what programme management really is. For many years, the three most widely recognised program(me) management 'standards': The 'MSP-Managing Successful Programmes' in the UK, 'The Standard for Program Management' published by the Project Management Institute (PMI) and 'P2M-Project & Program Management for Enterprise Innovation' promoted by the Project Management Association of Japan (PMAJ) were taking widely different views of what programme management was.

The latest edition of each of these standards (OCG, 2011; PMI, 2013; P2M, 2015) covers a slightly different area of the whole range of endeavours covered by programme management, but agree on the main principles that underlie it.

The PMAJ sees programme management as an extension of the strategy where: 'After the program mission is gained from the business strategy as a concept, a program is created to carry out the program strategy' (PMAJ, 2015; p. 32). For P2M, programmes are an intrinsic part of organisation that have to deal with a globally competitive environment and need to deliver year to year in pursuit of innovation. They divide programmes into two main categories:

- Creative or transformation-type programmes that are ambiguous and destined to create something entirely new and/or dramatically transform the current state; and
- Operation-type programmes that have agreed objectives and create values such as increased profit, new knowledge, etc.

The authors of MSP claim that the standard can deal with all these types of programmes but is better suited for business transformation (OGC, 2011). It may be used in a 'scaled down' form for technical or low unpredictability projects/programmes and may become 'less appropriate' for high unpredictability societal programs (OGC, 2011). This insight is particularly valuable because it recognises that there is a range of programmes and that each of them needs to be managed in slightly different ways.

Finally, the PMI has taken a drastically different approach for the development of its third edition. Following criticism that claimed the second edition did not truly represent programme management practice, but was more an extension of project management practice, they used a group of expert practitioners to develop and review the third edition of the PMI Standard.

This third edition defines programmes as: 'a means of executing corporate strategies and achieving business or organizational goals and objectives' (PMI, 2013; p. 4). To support this view, the Standard defines five interrelated performance domains: Strategy Alignment, Benefits Management, Stakeholder Engagement, Governance, and Life Cycle Management. Its Life Cycle is now truly representative of programme management, in particular in the concept of adaptive change, which promotes the idea that a programme's strategy and plan can and will change in order to deliver its intended benefits.

In summary, MSP provides methodologies aimed at delivering business benefits, covering issues like governance, leadership and stakeholder engagement, benefits realisation, transformational change, and capability improvement. The PMI provides a strong framework for the management of programmes in a real-life context and emphasises the relationship between programme management and change management. P2M focuses on integration and relationships, thus representing the Japanese 'ba' culture where enterprises are communities aimed

at creating value through innovation. As such, it fosters creativity and close teamwork.

It is really the first time since the mid-1990s that all the standards agree that programmes are more complex than projects, require a cyclic life cycle and are a means to execute the organisation's strategic objectives. This is really a breakthrough in the acceptance of programme management as a discipline distinct from project management.

Integration in the business

For the first time in more than 20 years, programme management is generally seen as fitting in the larger context of the organisation, and particularly the sustainment of operational benefits. In this context it is important to appreciate how it interacts with the other components of a project organisation as well as how they relate to each other to form an effective organisational system that delivers the organisation's strategy.

In a project-based environment, the corporate strategy defines the high level vision and mission of the organisation and identifies corporate goals; the integration of business activities with the corporate strategy is supported by portfolio management. The business strategy defines the business benefits and the adjustments required to achieve the corporate goals; delivery of the business strategy is ensured by programme management. At a or the functional level the strategy clarifies capability requirements and describes tangible deliverables; it is supported by project management. Finally, at the operations and/or sales level the strategy consolidates the offer by surveying and assessing product or service implementation and integration issues; this is operations management.

An organisation that has not integrated the program approach will reveal a focus on single discrete projects and a multi-project management approach that focuses on resource allocation and data gathering where project managers would be expected to play a predominantly product-delivery role and 'programme managers' a coordination and monitoring role. They focus on resource allocation and basic project data gathering, reinforcing the focus of project management on product delivery.

An organisation that has mature programme integration processes will display strong interrelationships between projects and both its business and corporate strategies; in such an organisation, managers are expected to view programme management as an integrative process to deliver value to the business. This level of maturity displays integrated, mutually reinforcing business processes that form a coherent end-to-end process from the expression of a business strategy to value realisation. This approach is considered a strategic decision management process, which includes the decision-making, the decision-execution and the realisation of the objectives.

In the last ten years, programme management has steadily moved from discrete activity to integrated organisational capability as expressed by the more mature view.

How to distinguish projects from programmes?

Although the community generally agrees to definitions of programme and project, there is still an issue as to how to practically distinguish programmes from projects. Over the years, I have used a number of qualitative approaches to answer that question and, based on testing and experience with a number of organisations, I have come to develop a more formal method to distinguish programmes from projects.

The method is based on the now generally agreed distinction scales of predictability of outcomes and convergence of objectives. To this two-dimensional view, I have added three additional factors that typically distinguish programmes from projects: Organisational span, level of change required, and expected results.

For each of those five factors, I have developed a scale of three attributes. They can be explained as:

A   Convergence of objectives that measures the degree of ambiguity of the initiative:

1   *Agreed*: Alignment of stakeholders: typically, few stakeholders and predictable interactions.
2   *Negotiated*: Likelihood or alignment: multiple internal stakeholders but generally predictable interactions.
3   *Emergent*: Challenged objectives: multiple internal and external stakeholders and unpredictable interactions.

B   Predictability of outcomes that measures the degree of uncertainty of the initiative:

1   *Likely*: Data/knowledge available enables to establish direct cause–effect relationship.
2   *Unlikely*: Data/knowledge not readily available, only indirect cause–effect relationship.
3   *Unknowable*: Unavailability of data does not enable establishment of cause–effect relationship.

C   Focus is the level at which the initiative is aimed. A wider focus increases the number of stakeholders and interdependencies between components, two factors that help distinguish a programme from a project.

1   *Operational*: Typically focused on production within a business unit and does not require resources outside the technical area.
2   *Strategic*: Typically affects multiple business units and requires change in work processes. Requires resources coming from more than one sector.
3   *Contextual*: Spans the whole organisation involving multiple business units. Typically related to competitiveness and of strategic importance to the business.

D   Outcomes of programmes generally affect broader areas of the business in more depth than projects:

    1   *Technical*: Technical or operational deliverables.

    2   *Structural*: Involves restructuring and new operational state resulting from the application of products or services.

    3   *Cultural*: Operationalisation of new capabilities will affect the way people work together and require behavioural changes.

E   Level of change is a crucial factor that distinguish programmes from projects as a higher level of change management is required so that programme outcomes actually deliver value for the business.

    1   *Handover*: Simple handover of product to user or client. Some training may be required.

    2   *Transfer*: Requires operational transfer activities such as piloting or testing of systems.

    3   *Transition*: Full transition process over a period of weeks or months until benefits are achieved.

Typically, each undertaking is scored from 1 to 3 on each of these 5 factors and the resulting score gives a good indication if you should consider your venture a project (5–9) or a programme (10–15). Complex projects and agile projects will always sit on the boundary between traditional projects and programmes and will draw their approach and processes from both project and programme management.

As organisations start understanding and agreeing on a clear distinction between projects and programmes, both will be better managed and deliver results appropriate to their objectives.

Managing change as a key aspect of programme management

Change can be expected or unexpected, the purpose of change management activities in the programme process is to reduce the amount and impact of unexpected change.

Increasingly, project and programme management are associated with change. But, whereas projects are linked to a linear sequence of prescribed stages; programmes are ever more associated with a goal-based change management process, which involves a recurrent sequence of goal-setting stages to adapt means to reach the end state.

As such, the management of change is progressively becoming a joint responsibility of the programme manager and the business integrator (Business Change Manager – BCM) so that the ultimate objectives always remain at the forefront of the process.

As a consequence, the pace of the programme is directly related to a good understanding of the programme within the greater context of the impact the change has on the organisation and its people. Programme cycles are defined according to the stakeholders' and the organisation's readiness for change and the urgency of the change. The higher the readiness for change, the bigger the scope of each cycle can be, the longer the cycles and the shorter the periods of integration are. If the readiness is low, cycles should be shorter with longer periods of integration and a smaller scope for each cycle. This approach should also be balanced with the urgency of the change to ensure maximum success.

Conclusions

Over the last 20 years, programme management has slowly taken its place as an essential organisational capability, especially when executing strategies or implementing organisational change. In the last five years, pieces have started falling in place to generate widespread consensus over what a programme is and what its purpose is.

Programme management has also matured by acknowledging the necessary input of other disciplines like agile management and change management and, finally, as programmes become more integrated into the business, executive management is starting to see programme management as an essential practice to deliver value.

In the future, from an organisational point of view, this acceptance has to grow so that managers would not even think of executing a strategy without programme management; from a conceptual point of view, programme management researchers and experts must develop new processes and methods to tackle high ambiguity and uncertainty initiatives, which are increasingly becoming the norm and are still largely unmanageable.

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2
PLANNING

Why planning is more important than plans

Darren Dalcher

Project management is intimately associated with the production of detailed plans, charts, and schedules, constantly re-affirming Antoine de Saint-Exupery's belief that 'a goal without a plan is just a wish'.

Planning is generally considered to be a higher-level process concerned with 'how to initiate and execute the set of objectives'. Plans provide simulated maps of the unfolding future that act as baselines against which reality is assessed and expectations and achievements are monitored. Plans thus provide mechanisms for reasoning about actions independently of implementation.

Projects rely on static plans to overcome the inherent uncertainty and novelty associated with completing a task, with the underlying assumption that if planning can be done 'properly', the rest of the project will be easier to manage. Plans are therefore used to anticipate and predict circumstances allowing an organised deployment of resources.

The sixth edition of the *APM Body of Knowledge* positions planning as a key area under integrative management, explaining that 'planning determines what is to be delivered, how much it will cost, when it will be delivered, how it will be delivered and who will carry it out' (p. 110).

The *APM Body of Knowledge* clarifies that following approval from senior management, the detailed documentation, referred to as the project plan, is prepared during the definition phase. This detailed documentation provides comprehensive answers to the following questions related to the delivery of the project: Why? What? How? Who? When? How much? Where?

The agreed management plan incorporating answers to the full set of questions provides the baseline, thereby forming the basis for gate reviews designed to assess the continuing validity of the work.

So, what is wrong with detailed plans?

The *Oxford English Dictionary* defines a plan as (devising) a method of proceeding thought out in advance.

The underlying assumptions in conventional plans are that: circumstances are frozen, change is limited, preferences cannot and do not alter, and expectations remain at the same level.

Brian Loasby (1967) notes that the term *plan* is overloaded and used in many confusing ways. He further asserts that the justification of planning as a way of improving communication is the reverse of the truth.

Given that planning implies gazing into the future, Loasby identifies three reasons that justify such an effort.

The first reason for looking into the future is to understand the future implications of present decisions. Loasby encourages scrutiny on a project-by-project basis to determine: what must be prepared in order to gain advantage from what is decided now; what will be the effect of current choices on the future; and, what problems may be created subsequently, by the current choices.

The second reason is to examine the present implications of future events. Specifically, the concern is with what needs to be decided now, (and presumably subsequently), in order to be prepared for what is expected to happen. This consideration addresses the long-term commitment to change and the future.

The third reason is to provide the motivation and a mechanism to continue to ask the questions and re-visit the change agenda. Comparison of actual performance with plan may reveal problems and opportunities. A plan can also be used to secure commitment, albeit to short-term objectives.

However, Scanlan, Smith and Lawrence (2007) identify a *planning paradox*, whereby:

- Knowledge in the form of planning data, schedules, and dependencies is generated by the management domain.
- The engineering domain frequently has an aversion to planning.
- Consequently, there is limited input from technical specialists leading to limited product knowledge.
- The resulting plans are too abstract, unrealistic, and more likely to lead to failure.
- The poor track record in meeting previous plans further reduces the interest in and confidence in the plans or the planning activities.

The above is not helped by the application of dated project planning and scheduling methods and their reliance on classical dependency networks. Scanlan et al. note that dependency networks do not allow for feedback loops or iterations, and tend to enforce an overreliance on binary logic assuming full completion of a task before subsequent activities can commence.

Moreover, such classical approaches fail to acknowledge the complex, uncertain, and dynamic nature of projects.

The role of planning

The irony of project management, especially in complex projects, is that forecasting and planning in new contexts is absolutely necessary, if completely impossible. If projects imply new undertakings in unstructured and unknown contexts, there is little hope of devising perfect plans.

> Here's the paradox: there needs to be a plan, and the plan has to acknowledge that it will be departed from.
>
> *(Moss Kanter, 1988; p. 305)*

Other domains seem to concur. Dwight D. Eisenhower noted: 'in preparing for battle I have always found that plans are useless, but planning is indispensable'. Winston Churchill similarly observed: 'plans are of little importance, but planning is essential'.

Battles, like projects, involve multiple human participants, expectations, uncertainty, politics, and other human foibles. Helmuth Karl Bernhard Graf von Moltke, the chief of staff of the Prussian Army for 30 years, reasoned that 'no [battle] plan survives contact with the enemy'. Each engagement changes the situation and leads to new reactions and responses so that no plan of operations can extend with any certainty beyond that first contact.

Given Nils Bohr's assertion that 'prediction is difficult, especially if it is about the future', the detail needed to construct perfect plans may continue to allude, but the need to plan ahead and strategise remains crucial to success as planning allows participants to both probe the future and question the present.

Is detailed planning dangerous?

Loasby (1967) bemoanes the fact that plans reduce flexibility, inhibit innovation, reduce response times, and also divert attention away from flexibility. Planning needs to illuminate rather than obscure the existence and implications of uncertainty. Accordingly, Loasby calls for a shift of emphasis away from detailed action planning so that attention can be directed at planning the system and the decision process to better deal with the wider organisation and information.

In 'Warning: Activity Planning Is Hazardous to Your Project's Health' Professor Erling Andersen agitates against the common practice of detailed activity planning. Many textbooks, place the task of activity planning at the start of the project. That in turn obliges planners to foreknow all required activities and their dependencies in order to determine the critical path and derive the schedule and other project artefacts.

However, given that projects are unique and unprecedented undertakings dealing with unexplored domains, it would be impossible to identify the full range of activities during the initial planning stage. In common with army generals, it is doubtful that project planners can foresee all potential encounters and all the steps that may be needed. More crucially, the results of earlier activities, or skirmishes, may require adjustments and potential improvements that are unforeseeable.

The problem with the classical approach is that focusing on activity planning draws attention away from the main results and objectives. Andersen offers an alternative focus on milestone planning, where milestones are defined in terms of results to be achieved (not completed activities). Milestones can define a particular condition or state, independently of the methods that may be utilised in order to achieve them. Milestones can be reached by different methods, and the key emphasis is on reaching a particular state. This approach encourages result-oriented thinking, allowing planners to gaze forward and negotiate major milestones and results.

In 'Plans Are Nothing, Changing Plans Is Everything: The Impact of Changes on Project Success' Professors Dov Dvir and Thomas Lechler (2004) demonstrate that the positive total effect of the original quality of planning is almost completely overridden by the negative effect of goal changes. While plans may be important, the changing of plans is essential to the success of projects. Their empirical research confirms that the combined effect of essential goal changes, and the required adjustments to the plan (to accommodate new circumstances and conditions, including delays, strikes, weather conditions etc.), makes a much bigger difference to overall success than the original plan.

Planning for the future?

British Naval historian and author of the best-selling *Parkinson's Law*, C. Northcote Parkinson noted that 'perfection of planning is a symptom of decay'.

Parkinson (1958) observed that attempts to perfect planning characterised institutions in decline and asserted that this paradox was well supported by a wealth of archaeological and historical research proving that the luxury of perfect planning can only occur during periods of decay.

> During a period of exciting discovery or progress there is no time to plan the perfect headquarter. The time for that comes later, when all the important work has been done. Perfection, we know, is finality; and finality is death.
>
> *(Parkinson, 1958; p. 57)*

Planning will never be perfect; and the required investment is hard to justify. American writer and journalist Allen Saunders observed that 'life is what happens to you while you're busy making other plans'. Change is an inevitable part of life, and undertakings involving other parties require a certain degree of mutual adjustment and re-adjustment as we proceed.

Most organisations do not have the attention and time to perfect planning, and nor do they have the gift of perfect foresight. The chapter by Dr Mike Lauder reflects on the role of foresight in the context of projects. The chapter draws on Mike's book *In Pursuit of Foresight: Disaster Incubation Theory Re-imagined*, published by Gower. The chapter reminds us that our situated contexts are replete with change and complexity. It also encourages managers to consider their involvement

in the planning and development process. More importantly, it provides us with a new set of questions and issues of interest to consider when looking into the future and trying to understand our present.

The book makes an important contribution to safety and disaster research as well as to organisational theory. Many formal inquiries blame executives for failures of foresight, offering limited, if any, guidance. Mike's book offers the first steps to developing foresight capability. His perspective combines relevant insights from multiple disciplines and approaches. The findings distil lessons from many enquiries into a manageable and actionable set that can be used to challenge any perspective. Yet, perhaps the greatest value is in charting his learning journey and the development of his questioning attitude through a relentless effort to make sense of his context.

Delivering through planning

Projects force us to deal with the future, often requiring forays into great uncertainty. They involve guesses, approximations and adjustments as we endeavour to make sense of what may be.

> What is a good . . . plan? There is none. But there is a good planning process. . . . Flexibility is the necessary watchword. Sound thinking and debate about the future, marked by the asking of novel questions, foster flexibility of thought and action.
>
> *(Peters, 1987; p. 94)*

Perfect plans are not required in order to engage with a future. Initial efforts at planning represent an understanding of projected milestones that can be reached or established in the journey towards improvement. Plans that do not survive engagement with change, reality, the enemy, or projects, are simply first approximations and sketches of intention.

> Too much planning can lead to paralysis, indecision and collapse. Organisations that are locked in a rigid change 'schedule' of planned goals and events may find themselves following something that no longer meets their evolving needs, much less those of the world around them. Indeed pre-programmed models may be unrealistic; instead companies could remain true to the goals of the change, but be flexible about the means.
>
> *(Moss Kanter et al., 1992; p. 390)*

The value derived from planning is not found in the artefact, the complete plan, but emerges from the act of planning itself. Planning is not simply about selecting one future; keeping an open mind entails comprehension of more than one possibility. The physical production of a detailed plan is, therefore, incidental in a fast-changing

environment. The act of planning, however, reveals insights, establishes effective feedback mechanisms that are used for subsequent adjustments, and obtains a familiarity with the situation that entrenches it into a reflective, responsive mode.

> Indeed, John C. Maxwell notes that 'failed plans should not be interpreted as a failed vision. Visions don't change, they are only refined. Plans rarely stay the same, and are scrapped or adjusted as needed. Be stubborn about the vision, but flexible with your plan'.
>
> *John C. Maxwell*

Insistence on perfect plans prior to engagement is futile. In delivering projects, designing, making decisions and planning go hand in hand. Innovation implies discovery and new insights, which in turn may suggest new detours, diversions, and discoveries.

Moreover, Karl Weick (1979) proposed that plans were important as symbols, advertisements, games, and excuses for interaction, rather than for any of the traditional reasons.

Planning for the journey (as opposed to planning the perfect journey) would require a new capability for foresight, and a willingness to engage with, adapt and respond to change and emerging opportunities whilst maintaining the pursuit of a dream or vision. With the benefit of foresight, informed planning can enable progressive elaboration through stages, places, and milestones towards the delivery of a honed and refined vision in a fast-changing reality.

As we embrace new ways of bringing forward our vision of reality, so must we also continue to reflect on the traditions that have brought us thus far, whilst acknowledging the fundamental difference between the plan as an intermediary artefact and the continuous act of planning.

The final word on the topic goes to Peachum, Brecht's beggar king in 'Song on the Inadequacy of Human Enterprise':

> *Go make yourself a plan*
> *And be a shining light.*
> *Then make yourself another plan,*
> *For neither will come right.*

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Foresight saga: pursuing insight through chaos and disaster

Mike Lauder

My background is one of project planning. My training as an engineer, project manager and army officer made me conversant with the skills and practices associated with the science of planning. I liked nothing more than producing a detailed Gantt chart that took account of all the vagaries and uncertainties that might disrupt progress towards the successful completion of whatever task occupied my time. I knew about the ideas of robustness, resilience, and agility but questioned their place within the pantheon of planning tools because I knew that, if the plan was good enough, these 'add-ons' would not be required. How wrong I was!

For me the key turning point came when I tried to reconcile multiple texts of risk management. The texts, all written by serious academics and practitioners, seemed to contradict each other. How could this be? How had no-one else noticed this anomaly? I gave myself the task of understanding how the differences in these texts might be resolved. After several false starts I realised that these contradictions were caused by a difference in the assumptions underlying the way the world worked. It was these differences that caused the contradictions to arise. In due course, I identified that there were three parallel sets of assumptions (paradigms).

I have set out these paradigms in Table 2.1. The paradigms existed around the three main drivers of risk management, these being: project management, process management, and accident investigation. The project management paradigm seemed to be driven by the linear temporal nature of projects. The process management paradigm seemed to be driven by the circular nature of a repetitive process and the accident investigation paradigm seemed to be driven by an event at a point in time. After much debate, I labelled these paradigms as 'Lines', 'Circles' and 'Dots'. Again I now see that these initial labels were not quite right. Circle is only a circle if you look at a process head-on. If, however you take into account that processes happen over time (that is, look at it from the side), then a circle becomes a helix. This all goes to show how important it is to understand how (the way) you

TABLE 2.1 Main paradigms of risk management

	Forward or Backward Looking	*Desired or Unwanted Outcome*	*Chosen or Imposed Outcome*	*Variance or Invariance of Process*	*Unique or Recurring*
Line Project/Linear	Forward	Desired	Chosen	Variance	Unique
Circle Process/Repetition	Forward	Desired	Chosen	Invariance	Recurring
Dot Scenario/One-off	Backward	Unwanted	Imposed	Variance	Unique

see some things affects their shape. For me, two important lessons arose from this experience. The first was to recognise how blinkered I had been in my view of the world; other views exist. The second is that these paradigms exist concurrently. In my previous writings I have explained this using the example of air operations from a naval carrier force. I showed how different people in different roles viewed the same events in terms of either the line, circle or dot paradigm. What was important about this is that each paradigm brings different, incompatible solutions to the same problem. This experience made me wonder what else was I wrong about.

My main area of interest is organisational failure (in its many forms) and how we might learn from these experiences. In particular, I am interested in 'failure of foresight'. You will see this phrase bandied about by many authors of inquiry reports. They suggest that, with just a little more effort and a little more foresight, whatever problem that had occurred, could and should have been avoided. In my work I look at whether such exhortations are worthwhile or even valid. I have considered whether such a simple thing as the way we look at a problem means that we come up with incompatible solutions that might make foresight more problematic than it would first appear.

In my latest book I describe a thought experiment where I took a recognised accident model and re-engineered it to be a tool for foresight. I used Barry Turner's Disaster Incubation Theory as my starting point. I like Turner's model because it really helps me think about the issues being addressed rather than offering pre-packed solutions. This is consistent with my own approach. Turner produced a six-stage model. He defined these stages as:

- **Stage I – Notionally Normal Starting Point:**

  Allows the context to be set, enables beliefs about potential hazards to be articulated and the precautions that are considered normal to be articulated.

- **Stage II – Incubation Period:**

  Explains the accumulation of an unnoticed set of events that are at odds with the accepted beliefs about hazards and the norms of their avoidance.

- **Stage III – Precipitating Event:**

  The event 'forces itself to the attention and transforms general perceptions of stage 2'. Such an event arouses attention because of its immediate characteristics for example: the train crashes, the building catches fire, or share prices begin to drop.

- **Stage IV – Onset:**

  The precipitating event is followed immediately by the **onset – Stage IV**. The onset starts when 'the immediate consequence of the collapse of cultural precautions becom[es] apparent'.

- **Stage V – Rescue and Salvage:**

  First stage adjustment: the immediate post-collapse situation is recognised in ad hoc adjustments that permit the work of rescue and salvage to be started.

- **Stage VI – Full Cultural Readjustment:**

  An inquiry or assessment is carried out, and beliefs and precautionary norms are adjusted to fit the newly gained understanding of the world.

These stages can be represented in a neat linear model such as the one depicted in Figure 2.1 below.

However, this does not depict reality: life is messier. After some consideration I reconfigured the model to look somewhat different (see Figure 2.2 opposite).

In this chapter, rather than explaining how I justified such a reconfiguration, I will highlight a number of key points that emerged from this work.

The first key topic concerns the point of entry into the model. Conventionally it might be assumed that you would start at Stage One. This is not the case. During my early studies, one of my professors pointed out how you always 'join a conversation in the middle'. In a project management context this phenomenon can be recognised in that others will have initiated the project before you became engaged and the users will remain engaged with the project long after you have moved on to other things. Therefore, in terms of the revised model, the point of entry is somewhere within the incubation period. Here the crisis is probably somewhere over the horizon (in that you are unable to see it as yet), but some crisis, large or small, containable or fatal is incubating and is 'inevitable' unless appropriate action is taken. The implication of this is that context becomes all important. Those

Stage I –	Stage II –	Stage III –	Stage IV –	Stage V –	Stage VI –
'Notionally normal starting point'	Incubation period	Precipitating event	Onset	Rescue and salvage	Full cultural readjustment

FIGURE 2.1   Turner's six-stage incubation theory model as a sequence

Stage 1: Notionally normal starting point

Hazards

Precautionary Norms

Layers

Active Learning from previous incidents

Issues of Interest

Force Field Axis

Stage 2: Incubation period

Stage 3: Precipitating event

Stage 4: Onset

Stage 5: Rescue and salvage

Passive Learning

Active Learning

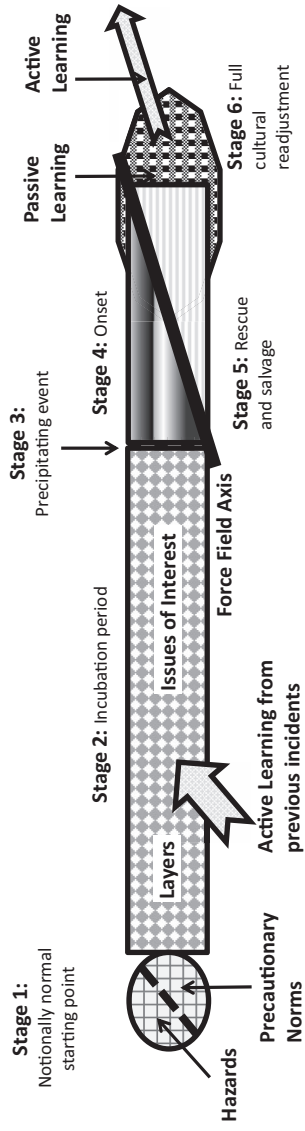**Stage 6:** Full cultural readjustment

FIGURE 2.2 Reconfigured depiction of Turner's stages

joining the project need to understand not only what has happened before in terms of setting the desired outcome but also the potential hazards the project may face and the steps taken to mitigate them. This later step is encapsulated in the model Stage One review. This work establishes a baseline for the project. When looking backwards we also need to determine what we can learn from the past. I will cover this in more detail in a moment.

The incubation period represents your normal working mode. Having established the baseline, we then work towards success using the pantheon of project management tools while avoiding 'that which is unwanted' (risks) labelled 'risk management'. One of the weaker features of current basic risk management techniques is our failure to see drift within our system. Drift means that work done in the past to mitigate risks becomes obsolete and therefore ineffective thereby allowing new risks to emerge. This work emphasises that we must not only be looking forward to what needs to be done but we also need to review what we have done to ensure that the measures in place are still working in the way we thought they would.

A second key topic is the idea of 'stable steady state'. Many of our current management tools focus on achieving 'steady state operations'. I consider this to be illusory; here, when viewed through the lens of complexity theory, chaos should be seen to be the normal state. For those who see the world as being stable but occasionally disrupted, I can only go back to the Monty Python quote 'What have the Romans ever done for us?' The characters then list all the things the Romans had done for them finishing with 'but besides those, what have the Romans ever done for us?' We can only consider our working world to be stable if we ignore all the changes that face us and our work each day. These changes range from changing requirements, changing technology, changing methods, changing clients, and even the effects of changing weather, to mention but a few. Another example is
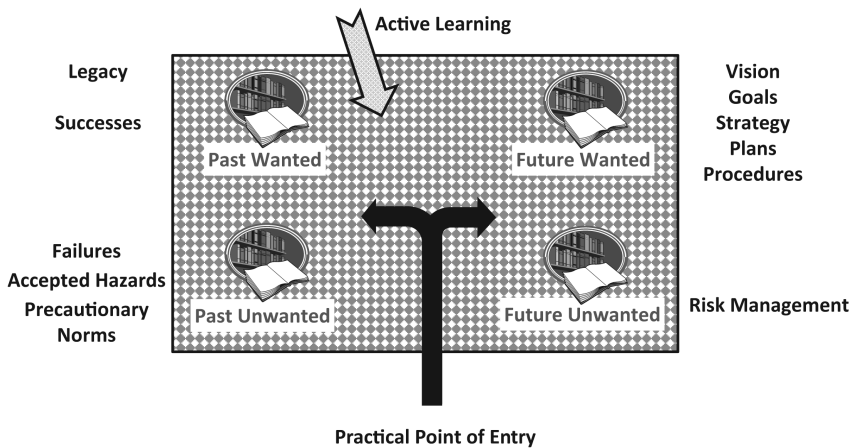

FIGURE 2.3 Point of entry within the incubation period

the ever-changing team composition. Even if personnel do not change, then the people do; they may gain confidence and experience, which changes what they want to do and are capable of doing. Conversely they may become tired and less motivated with the same implications. Change is constant and therefore the question is whether we recognise this, see chaos as normal and learn to cope, or do we pretend it is not happening in order to maintain a neat plan?

In studying the model, I start to explore how we might cope if we accept chaos as being normal. I offer three suggestions. The first suggestion is that we must try to change the way we look at the world. For my example I will take the risk management mantra that 'risk comes with opportunities as well as threat'. To me, this is an example of quite static, binary thinking and seems to make little sense. One of the basic risk mitigation strategies taught is to 'stop' an activity in order to remove the risk. Therefore, if the risk does not offer an opportunity, why take the risk? The writer Erik Hollnagel describes it better when he says that risk and reward are two sides of the same coin. That is, every action comes with jeopardy as well as benefits. The question then becomes whether the opportunity offered by an action is big enough to warrant the risk taken. This consideration therefore becomes a constant balancing act. This now leads one to think in terms of perpetual motion rather than trying to establish some kind of false binary state of either stability or instability.

The second suggestion is to recognise the complex nature of everyday activity. While it may be necessary and expedient to simplify an issue in order to manage it, it is important not to forget in what way you have simplified it. It is often these simplifications that lead to provoking unintended consequences. I suggest the simple mind tool of dividing each problem into layers in order to understand their true complexity. This layering should not be seen as a reductionist exercise, that is reducing the problem to its basic part, but more as an exercise to understand the multiple factors that are interacting and in a constant state of flux. This model, using the simple labels of micro, mezzo, and macro-layers act as a starting point for understanding the true complexity being confronted. Any simplification after this exercise is done with a conscious understanding rather than ignorance of the actual complexity being addressed.

The final suggestion is to provide, what I have labelled 'Issues of Interest'. Multiple texts implore managers to be constantly vigilant or mindful of the issues that may cause them difficulties. Few of these texts offer coherent suggestions as to 'of what' they should be mindful. My text does. Turner offered his suggestions and others have also tried. As part of previous work I conducted a review of accident and related literature. From these texts I identified over 250 causes of failure. After an exercise in winnowing and abstraction, I reduced these down to 20 questions. However, experience has shown that this is still too many to be of daily practical use to managers. After further work I reduced these down to seven overarching issues (see Table 2.2). It is of these that managers need to be aware if they are to spot emerging risks.

The pursuit of foresight during the incubation period is no simple problem and when the crisis arises it can come quickly. The transition from normal to abnormal

TABLE 2.2 Issues of interest

Label	Issue/Question
Who Cares	What are the differences in views on potential unwanted occurrences?
Erroneous Assumptions	Are we checking the validity of critical beliefs and assumptions?
Failure to Launch	Are our teams prepared, co-ordinated and aligned?
Structural Secrecy	Are the organisational structures and processes preventing the delivery of critical pieces of data?
Dysfunctional Momentum	Are we seeing and appreciating critical data and making necessary changes, which may be against the momentum of the organisation?
Practical Drift	Where are the risks to plan delivery, caused by an unconscious drift over time from accepted practices?
Plowman Effect	Are we keeping constantly aware for adverse unintended consequences emerging from routine and change activity?

chaos, Stage 3 (the Precipitating Event) when your life goes from being routine to being hellish, often lasts as little as 30 minutes. In my book I list 13 occasions where it is possible to identify this timescale from publicly available reports. These include the Bradford Stadium fire in 1985, the Hillsborough disaster, the crash of AirFrance flight 447 in 2009 and the Fukushima Nuclear accident in 2012. From this we can see that whereas the incubation period (Stage 2) may last for decades, the Precipitating Event (Stage 3) is often upon us in minutes. This extended incubation period helps explain the problem of induction that leads us to perceive our truly chaotic world as being stable.

My true interest is not in crisis management and therefore I spend much less time in my book exploring the issues around Onset (Stage 4) and Recovery (Stage 5). However, examination of these two stages did reveal another key topic. In the Turner model these two stages are depicted as being consecutive. After many discussions with my colleagues who specialise in crisis management, we would contradict this assertion. We feel that it would be more accurate to depict this period as a contest between two opposing forces: onset factors that look to perpetuate the crisis and the other factors aimed at resolving it. It is in this period that we can start to appreciate the true value of being robust, resilient, and agile.

Finally, we come to Stage 6, which concerns learning from such events. In my first book (*It Should Never Happen Again*) I examined the value provided by public inquiries following major organisational failures. In examining over 30 public inquires and commissions from around the world I found no new lessons to be learned. At best the inquiry accurately identified a known cause within their specific context. At worst these inquiries produced reports that, to the informed (those specialising in these matters), were breeding ground for the unintended consequences that had already started the incubation of the next crisis. This can be seen in the fact that inquiry reports often contradict the finding of previous

investigations. There is great hubris and narcissism in thinking that our failures have been caused by something unique and unforeseeable. In practice our experience is unlikely to have much new to teach others. Our failures are more likely to have arisen from us failing to learn from the past. Therefore, the key point here is that rather than the main learning coming at the end of the process, it should come during Stage 2 (the Incubation Period) where we should be spending more of our time trying to learn from the past. So why do we not learn? I would say that this is because few of us have the luxury of having the time to explore all the potential causes of failure and applying them to our everyday work. We could, however, for a place to start, try and apply the seven 'issues of interest' identified above.

Please do not interpret these ideas as an attack on planners and planning. It is not. There is a clear and important role for planning, however; as has been said many times before, it is planning not the plan that is important. Elsewhere plans that do not satisfy their end have been described as 'fantasy documents'. In a world where chaos is normal, achieving foresight into how we might fail and planning for the future, is complicated and time consuming. However, some foresight is possible and planning remains a vital task. The question is whether the cost of doing so produces sufficient rewards; at what point does planning suffer from the law of diminishing returns? How might we adapt our linear perspective to help cope more effectively with the world as it actually is. Answering this question is my next quest.

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3

PEOPLE

Rethinking the social element of projects

Darren Dalcher

The previous chapter identified a certain preference within classical management thinking towards organising and control. This reflects a fascination with execution and control, rather than recognition of uncertainty, potential, and human capability to deal with and benefit from the unexpected. In reality, perfect plans do not exist, and instead the act of planning provides the focus and flexibility needed to prepare and adjust for the future. Yet the notion of a perfect organisation offers an attractive and alluring proposition to wishful managers.

The social psychology of organisations

In 1966, Daniel Katz and Robert Kahn published a book that would become the foundation for organisational behaviour and organisational psychology thinking. *The Social Psychology of Organizations*, offered deep analysis and reflection on the essential problems of human organisations. The original book, and the second edition published in 1978, offered a wealth of new perspectives on organisations, their relationship to their environment and the effect of organisations on the health and well-being of individual members. In addition, it also explored the demands and opportunities fostered by organisations, and the experimental development of alternative structures to conventional bureaucracy.

Katz and Kahn made a powerful case for viewing the organisation as a living entity. The book encouraged researchers to consider the phenomena of organised groups. Economists tend to view the world in terms of units of production or assets, missing out on the people and their role within organisations. The book attempted to create a bridge between the micro approach of the psychologist, and the macro account of the sociologist and economist. By applying open systems theory and thinking models, Katz and Kahn were able to reconceive human work patterns, suggesting that the problems associated with organisations could be viewed as a

function of the type of structuring. The way functions are designed can thus influence working relationships, politics and the outcomes of the interaction between labour and management. The use of systems thinking lens also allowed for consideration of inputs and processes that lead to outcomes and products.

Katz and Kahn (1978) observed a wishful tendency for controlling the environment within which organisations are placed. In reality, organisations are not self-contained or closed systems and must instead acknowledge their role within the wider environment and recognise the boundaries and interactions that delimit their actions, and insights.

The book was important in offering an alternative way of thinking to the prevailing scientific management of Taylor (1923) and classic bureaucracy of Weber (1947). Classical thinking did not question existing structures, and was therefore unable to deal with restructuring or social change and re-organisation. Openness to new inputs and the role of individuals offered transformational contributions to the discipline of organisational behaviour, the appreciation of change and its impacts, and the consideration of relations and positions of individuals and groups. While not strictly a project management text, the book has paved the way for many important discussions related to projects and the organisations and structures within which they occur.

Classical project management reflects its early roots in working with traditional management concepts and ways of thinking, emphasising the tendencies to control, structure, command, and divide work in a centralised fashion. It echoes a reductionist, mechanistic approach to thinking about work rather than a more socially-aware stance that acknowledges the implications and strengths of new structures and relationships embedded within organisational arrangements.

The new social dimension

The demand for a greater emphasis on stakeholder engagement, expectation management, relationship management, change management, and benefit realisation points at the need to consider new methods of organising for project work.

New technologies, including social media; an increased focus on sharing assets, platforms and even work tasks; and agile and lean work practices offer new possibilities. Such possibilities encompass new opportunities to re-conceive the work space, and re-create relationships, temporary structures, collaboration mechanisms, and sharing capabilities for the benefit of all.

The innovations that can transform product delivery and customer experience into a more cohesive development effort can also have profound impacts on the discipline of project management itself. With greater emphasis on distributed project environments, virtual teams, and the connectivity offered by social media, project teams can adopt new non-traditional work practices that allow projects to prosper in new contexts.

The chapter entitled 'The Social Project Manager: Balancing Collaboration With Centralised Control in a Project Driven World', authored by Peter Taylor

encourages such new thinking around projects. The chapter makes the case for considering the social context of projects whilst utilising new thinking and social media. The new perspective relies on sharing, marketing and selling, and the development of a wider collective purpose. It relies on thinking about the social component in new ways and addressing communication and interaction on three different levels.

The contribution draws on Taylor's book with the same title, published by Gower. The book makes a good case for rethinking project management at the enterprise level and harnessing the power of a collaborative community. It thus offers new thoughts on organising projects, managing project performance and guiding progress, whilst encouraging team collaboration and engagement through the leveraging of new technologies.

Embedded project work in organisations with ambient awareness

The work of Katz and Kahn provided a great impetus for the development of organisational theory and recognition of the interaction between the formal and informal structures in organisations. Social media offers the potential to transform all facets of life through greater connectivity and interaction.

If Katz and Kahn were important in identifying the wider open links to the environment, a transformative shift enabled by new technologies and capabilities delivers an opportunity for a transformational rethink of what can be shared, achieved, and advanced by a connected and linked community.

Online communities have combined to show what can be delivered through networks of engaged participants working on shared goals. Technology offers an infrastructure for delivering new ways of working. But is also offers new ways of organising for change, and for creating new types of organisational and project team entities.

The term *ambient awareness* describes the social awareness existing between connected participants who share events, activities, photos, and comments in relation to many facets of life. Individuals engage in networks that contain a constant pulse of information about each other or a common cause. Extending such relationships to surround specific projects or engagements can create greater intimacy and participation in projects.

Such arrangements can still involve project managers, but they are also capable of delivering better informed and more deeply connected teams able to engage with projects in new ways. Participants can follow the conversation, become more intimately connected, contribute, share, and enhance the ambient awareness, leading to improved knowledge, learning, development, and decisions.

While we await the significant changes that can come from a real rethink encompassing the power of projects and the use of social media, we can also begin to revise our models of how projects can be approached and what social project managers may be able to achieve. The new ultimate tome on the *social psychology of*

organisations in the age of social connectivity is yet to be written, but many of the new insights are already out there, ready to be shared – offering a serious potential to rethink and improve the way projects are being run. Project managers and teams can now start to engage with the new and emergent social fabric of project work.

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The social project manager: balancing collaboration with centralised control in a project-driven world

Peter Taylor

> We human beings are social beings.
> We come into the world as the result of others' actions. We survive here in dependence on others.
> Whether we like it or not, there is hardly a moment of our lives when we do not benefit from others' activities.
> For this reason, it is hardly surprising that most of our happiness arises in the context of our relationships with others.
>
> – Dalai Lama

Social project management is a non-traditional way of organising projects and managing project performance and progress aimed at delivering, at the enterprise level, a common goal for the business but harnessing the performance advantages of a collaborative community.

There is a paradigm shift ongoing in many organisations that is all about finding a practical balance between the challenges to traditional project management made by what is known as Project Management 2.0 – which encouraged a move away from centralised control of projects and instead promoted the value of team collaboration – and the practical recognition that large-scale projects do require a stronger form of centralised control and governance.

It is this balance, if correctly made, that will take the best of both worlds and move project management into the highest levels of performance and achievement, into the world of the social project and therefore the world of the Social Project Manager.

Naturally the starting point for conversation around social project management is with the project management role itself; what does this specifically mean for any project manager, what should they think about, and should they adjust their

behaviour? But let us expand this thought process to the project team as a whole and consider how such social tools impact the team performance.

> Thought: I believe that all project team members, including the project manager, welcome any approach that reduces the amount of time invested (and for the greater part wasted) in meetings.
>
> Add to that the ever-present challenge to project managers of getting true commitment to the project goals from contributors then an approach that achieves this will also be welcomed.

Consider the world of the project team, of which the project is part of course but also a separate entity in itself – and one that can be constantly in flux throughout the project life cycle with team members coming and going, joining the team with their skills and time and then leaving to return to their 'business as usual' roles and responsibilities.

> Thought: If you have ever managed a project for any significant length of time I am sure you will recognise, as I do, that the project becomes a 'being' in itself and takes on a 'life' within the organisation and project community.
>
> As such the concept of communicating 'to the project' is one that I personally find logical, it becomes in many ways 'one of the team members'.

I feel we can think of the communication as at three levels, all interacting with each other and crossing boundaries – social means fewer boundaries after all so perhaps we should say 'without boundaries' – but to understand the types or themes of project conversations then Figure 3.1 might help.

Social
Around the project

Social
About the project

Social
Within the project
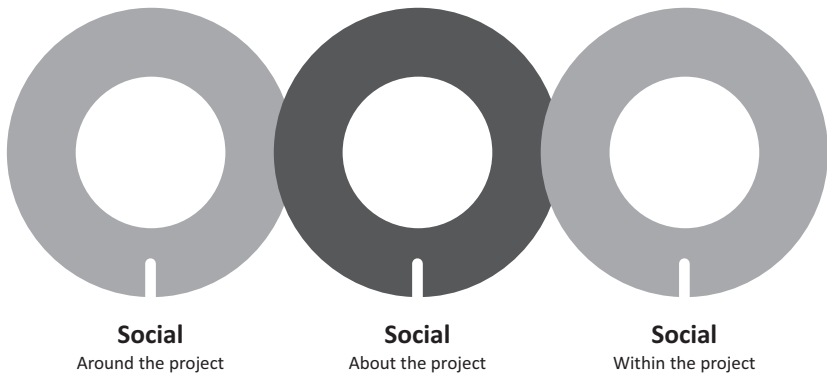
The layers of social project interaction

FIGURE 3.1   Levels of communication

I describe these as the three elements of 'social' project communication – and it is critical to empower all three and provide a seamless flow of engagement, interaction, conversation and idea generation, decision making, and team-building through all channels.

Considering 'social within project'

Beginning with social within project then this is the communication about the project components, the tasks, the activities, the challenges, and the team members themselves, the mechanics of meetings and reports and briefings, together with the deliverables and benefits.

Everything that is to do with the project life cycle and the end goals of the project.

When is 'A' required? What will happen if 'X' happens? Can we get help from someone on 'Y'? Are we going ahead with 'B'? What did we learn from 'C'? And so on.

Here the social project management team engages with each other to share knowledge and update each other on progress, seek assurance and help, encourage and congratulate, solve problems, and celebrate achievements. It should be a self-regulating activity with the team contributing and providing knowledge and wisdom to each other; it is when the sum of the parts is definitely greater that the whole.

This 'team' will include the project itself based on the previous insight that the project becomes itself a 'member of the project', with whom other project members can communicate, and who can communicate with other project members.

Collective purpose is shared and reinforced through this social within project communication and, as we have seen, by using a social project management activity stream and project-centric communication, the feedback about what is going on with the project becomes nearly constant, which adds to the value of this type of project communication.

Considering 'social about project'

I noted in another of my books, *Project Branding* (Taylor, 2014), that 'I learned something very important a long time ago, when I first started out in project management: no matter how good a job you do, if you don't let people know, then most people just won't know!' and I went on to advise that:

> The art of project marketing is to ensure that your project is understood, expected, appreciated, welcomed, and supported within its organizational home (and, if relevant, the wider community of stakeholders). Such acceptance is crucial to long-term success, since this is where the project deliverables will eventually be implemented, once the project has been completed. Project marketing is the proactive process of educating all stakeholders about

the value of your project deliverables in order to aid successful delivery and acceptance.

Social about project is this very world of project marketing and perhaps even project branding which is the purpose and process of ensuring that your project is well known (for good reasons) and is well understood, together with the right levels of expectations set for the widest community of stakeholders.

Considering 'social around project'

Think of your own working day, today or yesterday – it does not matter. Now think about how much of the day, at the start over your first coffee, when you bumped in to so and so at the water cooler, at the start of that meeting with the team from the other building, or when you joined that conference call with the remote users . . . how much of that time was spent in talking about non-project matters? Non-work matters actually. How many minutes during each event and how many hours in the day?

This does not make you bad or lazy; it makes you human. Human-to-human interaction is social in its very nature.

Humans are in fact highly social beings. We all like to be surrounded by friends and family and co-workers and we all value being able to share our own personal experiences with others, and to hear what others wish to share with us in return. In fact the recent appearance of all of the various social tools, and their incredibly rapid adoption illustrates the fundamental desire for social belonging and interpersonal exchange.

Therefore it has to be accepted that whatever 'project' or 'business' orientated social tools that you provide will also be used (hopefully respectfully) for 'around project' social communication and this is actually a good thing.

It helps bond team members (even around remote and virtual teams) and adds an honest 'human' aspect to the communication. This in turn can only aid the project.

Therefore, looking at these three elements of 'social' project communication, I believe that the best social project managers, the ones who understand the value and potential of this new social world, will be the ones that combine these elements into one cohesive communication experience.

To a degree it is a leap of faith and perhaps very different from how project managers have gone about the job in the past.

Thought: One of the significant issues that I uncover which project managers who have only just started on the project management journey is the bad practice of channeling as much communication as possible through themselves, thereby creating a bottleneck for decision making and an unnecessary burden to the time of the project manager.

It is a time of change and, as discussed, there is a paradigm shift ongoing with a move away from centralised control of projects and a rise in the value of team collaboration for many organisations and therefore project managers.

It is about taking the best of both the traditional project world and the opportunity of the new social project world, the world of the Social Project Manager.

Reference

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4

BUSINESS CASE

Business cases, benefits, and potential value

Darren Dalcher

Earlier chapters focused on the preference for planning over plans, the wider need to consider the inevitable role of uncertainty in change programmes, the social element of projects, and the increasing necessity for flexibility, resilience, and agility, in preference to strict organisation and control. They also addressed a need to rethink how projects are initiated and managed.

In general, projects now encompass extended life cycles and time horizons, which require managers and stakeholders to engage with and address wider time horizons, realised benefits, decommissioning, long-term environmental impacts, societal considerations, accrued value, and changing and evolving uses. The shift implies that projects are mutating from temporal operational undertakings into more influential strategic endeavours.

Such a shift places an even greater importance on the writing of comprehensive and well-reasoned business cases that can be used to underpin proposed undertakings.

Business cases

The sixth edition of the *APM Body of Knowledge* positions the business case within integrative management, clarifying that 'all projects and programmes must have a business case that demonstrates the value of the work'.

The *APM Body of Knowledge* explains that business cases provide justification for undertaking projects or programmes. A business case evaluates the benefit, cost, and risk of alternative options and provides a rationale for the preferred solution.

During the concept phase of the life cycle an outline document is prepared and utilised by senior management in order to determine whether to give the go-ahead for the definition phase. The document is developed iteratively through a process of progressive elaboration adding and refining details as information becomes available

and the required level of accuracy is achieved. During the definition phase the detailed business case is completed. Such a document typically encompasses:

* A strategic case, including the context, background, and rationale.
* Options appraisal, indicating which options have been considered, and why.
* Expected benefits, ideally including unavoidable disbenefits.
* Commercial aspects, including costs, investment appraisal, and preferred funding arrangements.
* Risk, identifying the key risks, opportunities, and issues and their impact on the proposal and business case.
* Timescales for key outputs, and for the realisation of benefits, and delivery of value.

Business cases are used to translate ideas into tangible documents, identify and compare alternative schemes, justify investment, inform decision-making, secure funding, underpin governance structures, create baselines for managing the undertaking and realising the benefits, mobilise support, establish a platform for measuring progress, and defining business success and impact expectations that extend beyond the traditional measures of delivery.

Sponsors support projects and programmes in order to ensure that the benefits are realised and the promised value is delivered (i.e. in order to satisfy some business goals, strategic objectives, and intentions). Business cases may be prepared by project or programme managers, although in many organisations, they may be undertaken by other domain specialists, such as business analysts, systems analysts, enterprise specialists, or solution architects.

Crucially, business cases are not static documents. Once approved, cases should be kept up to date, reflecting approved changes and agreed modifications, thereby facilitating their use as a primary document during gateway reviews, governance audits, and in establishing the residual success (including in terms of benefit realisation and value delivery) of the programme or project, at the relevant timeframes.

Well-developed business cases are used to communicate a compelling argument to key stakeholders whose active support is needed to define an opportunity and deliver the required change. A convincing argument will identify and compare multiple alternative options, making a solid case for the selection of the preferred alternative whilst indicating the pathway needed to turn that choice into action.

Fallacy, bias, or misrepresentation?

Given that business cases are used to drive the development efforts through projects and programmes, the projections and assumptions embedded within the cases are fundamental to assessing the success and achievement levels of such efforts.

Daniel Kahneman and Amos Tversky first identified the phenomena of *planning fallacy* in 1979. The planning fallacy implies that plans tend to embody the best-case scenario: Planners subsequently assume that the outcome will follow the plan, when both experience and common sense suggest that they should know better.

It is often pointed out that a plan is a mere scenario, and Kahneman and Tversky (1979) observed a tendency to document overly optimistic scenarios leading to serious underestimation of the risk of failure. Kahneman's subsequent work suggests that the existence of a plan tends to induce overconfidence, as people exaggerate their confidence in the plan. Lovallo and Kahneman (2003) put forward an expanded definition suggesting a tendency to underestimate time, costs, and risks, whilst overestimating the potential benefits.

A similar phenomenon is encapsulated through the idea of *optimism bias*. Optimism bias is a recognised cognitive bias, often acknowledged in the risk management literature that causes people to underestimate the risks of experiencing negative effects and impacts. In recent times it has been adopted by the project management community to refer to overly optimistic trends in estimates related to projects.

Public sector guidance in the UK now makes a direct reference to optimism bias, suggesting that 'there is a demonstrated, systematic, tendency for project appraisers to be overly optimistic' (Supplementary Green Book Guidance; p. 1).

The advice given is to take such bias into account: 'To redress this tendency appraisers should make explicit, empirically based adjustments to the estimates of a project's costs, benefits, and duration' (ibid.; p. 1).

Ultimately, the suggestion is that estimates for capital and operating costs, benefits values, and time profiles require informed adjustments to account for optimism bias and offer more realistic projections.

US journalist and Pulitzer Prize winning author Thomas L. Friedman suggests that pessimists are usually right and optimists are usually wrong; yet, all the great changes have been accomplished by optimists. The ambition to achieve and deliver may play a part in colouring perceptions and encouraging hope and confidence in new undertakings, which may imply a misjudged belief in the ability of individuals or teams, or in the presumed luck needed for achievement. Winston Churchill noted 'for myself I am an optimist – it does not seem to be much use to be anything else'. Indeed, optimism may provide the faith and belief that fire up the passion to achieve and deliver innovation.

'Optimism is a strategy for making a better future. Because unless you believe that the future can be better, you are unlikely to step up and take responsibility for making it so' (Noam Chomsky).

Yet, while allowing people to initiate new projects, it must be acknowledged that projections, especially regarding innovation, take place as opportunities emerge prior to the discovery of formed facts. Intended or otherwise, the tendency to underestimate the costs of prospects, and overestimate the potential benefits, has fuelled discovery and innovation over many centuries, emboldening

pioneers to conquer new lands, search for precious resources and engage in new endeavours.

The values used in business cases are crucial to making decisions about the feasibility of projects and programmes. In some sectors, projects may be initiated on the basis of unrealistic expectations and over-optimism, occasionally referred to as a 'conspiracy of optimism'. When different parties collude in initiating risky projects on the understanding that the estimates will be adjusted or corrected during the life of the project, it is likely to lead to cost and time overruns, underutilisation of promised benefits, and inability to meet value projections. The terms *Strategic misrepresentation* and *manipulation of information* are used to refer to planned and systematic distortion or misstatement of facts in budgeting and planning systems. Ultimately, investments and business decisions are as good as the data that underpins them, and the cases that provide the overarching rationale for proceeding.

Delivering better business cases

Balancing costs and benefits is essential to making decisions about project viability. Yet, business cases rely on data derived from projections, forecasts, and future plans. Alas, many completed projects show a discrepancy between initial projected estimates of costs, time, risks, and benefits, and the actual results accrued in practice.

The direct implication is that business cases can make poor predictors for the viability of projects, and the likely return on investment, expected value, and potential benefits. Organisations are therefore increasingly looking for reliable and well-informed business cases that can underpin project development and management. This chapter by Martin Hopkinson offers a new contribution and a robust method for making informed decisions about project selection and approval.

The chapter draws on Martin's book, *Net Present Value and Risk Modelling for Projects*, published by Gower/Routledge in the Advances in Project Management Series. The book re-positions Net Present Value as an integrating set of tools, facilitating strategic decision making about projects and programmes. NPV models are ideal for addressing uncertainty during the concept phase of the life cycle, thereby enabling managers to query available options, assess their viability, determine the feasibility of the proposed projects, and evaluate and establish progress.

Martin's work makes an important contribution to the thinking around business cases by integrating project financial forecasting and sound risk management principles to build a robust approach to answering key project questions. The book utilises NPV models to forecast the financial value of the project's benefits comparing them with the costs to determine the financial viability of the business case. Risk and its discussion form an important part of the business case: The use of NPV risk modelling offers a sophisticated way of allowing inputs to fluctuate in order to represent the effects of risks on both costs and benefits, showing the potential variation in project NPV. It also enables both development and management to be informed by risk considerations allowing managers to develop risk-robust project

solutions. The result is a considered and well–informed governance approach devel–oped alongside (and in support of) the business case.

The business case as a source for determining value

Executives making big strategic choices rely on their team's ability to create reliable business cases. The business case is a key live document that underpins the project by making a direct connection between funding and promised achievement. It is particularly important because it is not focused on the project delivery itself, but on the accrued benefits and value that can be derived through the project. In other words, the interest is in the promised business value that can be realised beyond the project handover and delivery phase.

While project managers may be involved in refining and building the business case, the key audience for the document is the project sponsor who has an interest in the overall purpose of the system and in realising the projected benefits. The business case allows the sponsor to reason about the benefits, compare different options, address the risk implications, make strategic decisions, and monitor the achievements against an agreed baseline.

It is unlikely the document will be owned or signed off by the project manager, as the document is required to address the considerations of the project sponsor. In some settings, project managers are unlikely to be involved in the early set-up and planning phases. Moreover, some of the decisions and questions addressed through the options analysis may invoke issues at the portfolio level and the impact on other projects and initiatives may need to be assessed at the enterprise level. Nonetheless, failure to meet the expectations and values expressed in the business case may lead to the entire project being considered a failure, and hence involvement and partici–pation in defining the parameters, identifying the boundaries, and establishing the expectations and assumptions is of great importance.

Value attainment is neglected from classical project delivery life cycles, partly because it happens post delivery and is not controlled by the project manager. Agile project management methods prosper partly because they re-emphasise the link between projects and the cumulative delivered value, offered as a continuous stream.

In a similar vein, business interest does not cease when a project is delivered. Fol–lowing delivery and handover, when systems go into use, real benefits can start to accrue, allowing the projected business success to materialise. The business case uti–lised as blueprint for value delivery remains a key document that is monitored and consulted in order to ensure that the streams of benefits come on line as expected and that the promised business case materialises.

The greater insight afforded by well–developed business cases is essential. While we continue to engage with opportunities, we must recognise that the delivery of value begins and ends with the business case; and ultimately, so will the business success, or failure, of our endeavours.

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Kahneman, D. and Tversky, A. (1979). Intuitive prediction: Biases and corrective procedures. *TIMS Studies in Management Science*, *12*, 313–327.

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The case for project net present value (NPV) and NPV risk models

Martin Hopkinson

A project may be worth doing provided that its costs are more than justified by its benefits. This principle lies at the heart of any project business case. If we can forecast the financial value of a project's benefits, we can compare it to the project's cost to test how attractive the business case is. NPV modelling is a way of performing this test. Its approach to discounting cash whereby future cash can be compared to today's value is considered to make it a robust method for making financially-based project selection and approval decisions.

The NPV method

Today's value of an amount of cash is its present value. If we know the cost of tying up cash or delaying its receipt, we can calculate the present value of cash at different points in the future. The rate of cost can be expressed as a discount rate. For example, if the discount rate (D) is 10%, the annual cost of tying up £100 cash is £10. On this basis, we would need £100(1+D) = £100(1+0.1) = £110 one year in the future to compensate for having £100 today. This is equivalent to calculating that the present value of £110 one year in the future would be £110/(1+D) = £100. Thus, if an amount of value of cash in one year in the future is written as C_1 and its present value written as P_1, then $P_1 = C_1/(1+D)$. In general, since the associated costs accumulate at a compound rate, for a point in time that is n years in the future the present value P_n of an actual amount of cash C_n is calculated by the formula:

$$P_n = C_n/(1+D)^n.$$

The Net Present Value (NPV) method for project financial modelling is usually applied by calculating the present value of the cash flow for each annual period of

the extended project life cycle. Costs produce a negative cash flow, whist benefits contribute positively. The cash flow for each period can thus be calculated by deducting the cost forecast for that period from the cash value of the forecast benefits. Having calculated the present value for the net cash flow during each period the project NPV is calculated by summation. The formula for project NPV is thus:

$$\text{NPV} = \sum_{t=0}^{n} C_t / (1 + D)^n \text{ using year-end discount factors, or}$$

$$\text{NPV} = \sum_{t=0}^{n} C_t / (1 + D)^{n-0.5} \text{ using mid-year discount factors}$$

where:

C_t = the net cash flow over a period of time (typically 1 year),

t = the period of time during which that cash flow takes place,

D = the discount rate (rate of loss in the value of cash expressed as a percentage – typically per annum) and

n = the number of periods of time periods (typically years) over which NPV is calculated.

The discount factor is the value by which a year's cash flow is multiplied to obtain its present value. In practice, many projects are modelled using year-end discount factors. However, on projects in which costs and benefits materialise continuously throughout each year, the use of mid-year discount factors is usually more appropriate.

A simple example

Figure 4.1 is a simple example that illustrates how NPV can be modelled. It is based on a project that is forecast to cost £2.5m over a two-year period and achieve

Base estimates	Value (£k)	Costs and benefits broken down by year (£k)					Total
		Year 1	Year 2	Year 3	Year 4	Year 5	
Delivery cost	2,500	1,250	1,250	0	0	0	2,500
Net benefits	3,500	0	500	1,000	1,000	1,000	3,500
NPV calculation		Year 1	Year 2	Year 3	Year 4	Year 5	Total
Cash flow: Benefits – Cost (£k)		−1,250	−750	1,000	1,000	1,000	1,000
Discount Rate	4%						
Mid-year discount factor		0.9806	0.9429	0.9066	0.8717	0.8382	
Cash flow Present Value (£k)		−1,226	−707	907	872	838	**684**
Cumulative NPV (£k)		−1,226	−1,933	−1,026	−155	**684**	

FIGURE 4.1   Illustration of the calculation of project net present value (NPV)

benefits of £3.5m over a period commencing 18 months into the project and ending at the end of Year 5. An undiscounted forecast of the project's net value would thus be £3.5m − £2.5m = £1m. Figure 4.1 shows how applying a discount rate of D = 4% affects this calculation. Note that the 4% rate used in the example above is comparatively low and reflects the use of constant cost forecasts for costs and benefits i.e. without the effects of inflation.

Figure 4.1 shows that the project's NPV is £684k. The reduction in value from the undiscounted calculation of £1m illustrates the effect of discounting. Discounting cash flows also usually increases the project payback period. Thus, for example, whereas, in an undiscounted model the project would become cash positive as from the end of Year 4, Figure 4.1 shows that cumulative NPV would not reach this point until almost a quarter of the way through the fifth year.

Advantages of using the NPV approach in projects

NPV supports a rigorous approach to modelling the value of projects. Discount rates vary significantly from one organisation to another, the cost of capital being driven by the relevant markets' perception of risk. The NPV method thus allows the financial strength of a project business case to be assessed in the organisation's own financial context. It is also sensitive to the timing of cash flows, favouring projects with costs that materialise later or deliver benefits earlier than others.

A key property of present value calculations is that they align all forecasts to a scale based on today's value of cash. This enables a fair comparison between investments and/or projects regardless of their duration or phasing of cash flows, making it a useful portfolio management tool. It also provides a basis on which groups of independent projects can be aggregated. Thus, if we have two independent projects A and B:

NPV (Project A + Project B) = NPV (Project A) + NPV (Project B)

The same property also allows different options for the same project to be compared. Such options are often mutually exclusive since you would only choose one combination of options for any particular project. A key point is that such choices often concern the scope of a project and how it should be delivered and are made in its earliest project phases prior to full implementation. NPV models can thus be a valuable tool for developing a project solution that optimises the trade-off between costs and benefits as a project solution is being developed.

A final point in favour of NPV modelling is that it requires a project to take into account costs and benefits beyond just the period during which a project manager will be accountable for its delivery. This can help counter a danger with a traditional project management approach in which project managers may treat the phases for which they are accountable with greater importance than subsequent phases. For example, they might choose to control project implementation phase costs at the expense of the value that the project adds to operations. The NPV approach requires all relevant impacts of a project to be taken into account.

NPV risk models

NPV risk modelling is an extension to the NPV method that can provide an improved way of representing the implications of project–specific risk. Risk can be defined as being 'the effect of uncertainty on objectives' (ISO 31000, 2009). The use of NPV modelling is consistent with the premise that a project's objective is to optimise value for money. Therefore, if value for money is a key objective and we are able to extend the NPV technique to model the effect of uncertainty, we can produce an NPV risk model.

In common with a number of sources, this chapter takes the word 'uncertainty' to mean 'lack of certainty'. We can thus contrast risk models with deterministic NPV models that use single point input estimates with the single points implying an assumption of certainty. As a result of recognising that both costs and benefits are uncertain, an NPV risk model will calculate the degree to which the overall project outcome may vary as a consequence.

Modern approaches to project risk analysis account for the potential implications of both negative and positive effects. However, it remains the case that the typical outcome of project cost risk analysis is the identification of a need for more funding than calculated from the use of base estimates. A similar issue affects the estimation of benefits. The realisation of benefits is also exposed to risk. But here, experience has demonstrated a tendency for benefits to be overestimated rather than underestimated. Downside risk is usually thus larger than upside risk.

Simple example of a net present value risk model

The following example is designed to illustrate how an NPV risk model is structured and how its results can be displayed. The project is the same as the previous example shown in Figure 4.1.

This example uses Monte Carlo simulation to operate the model. The model requires the use of a suitable tool (such as @RISK for Excel or ModelRisk) that operates as an add–on to a conventional spreadsheet tool. For the purposes of simplicity, it has been assumed that risk can be simulated appropriately by substituting the single values of overall project cost and benefits used in the previous example with triangular probability density functions. Table 4.1 summarises the input estimates that have been used and Figure 4.2 shows the associated probability density functions. From these we can see that it has been estimated that risk associated with the project cost implies that it could vary from as littles as £2m (the optimistic extreme estimate)

TABLE 4.1 Inputs to the simple net present value risk model example

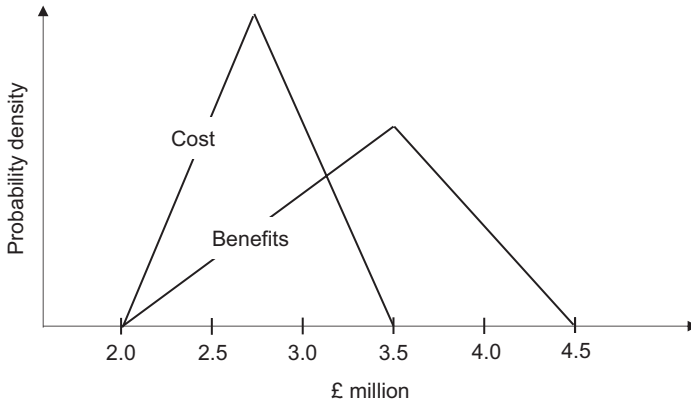|	*Min*	*Mode*	*Max*	*Apportionment of cost and benefits*
Project cost (£k)	2,000	2,700	3,500	Even spread over Years 1 and 2
Project benefits value (£k)	2,000	3,500	4,500	Even spread from middle of Year 2 to end of Year 5

FIGURE 4.2   Illustration of the probability density functions used by the example NPV risk model

to as much as £3.5m (the pessimistic extreme estimate). The most likely cost relative to other possibilities (mode) has been estimated as being £2.7m. This compares to the previous cost estimate of £2.5m, the additional £0.2m being attributable to an assessment that the effect of cost risk is more likely to be adverse than not.

When the model is run, the Monte Carlo process simulates a large number of iterations. Five thousand iterations is a sufficient number for many models, although the speed of modern tools usually makes the use of more practicable. During each iteration, a random value selected from the cost probability function is used to represent project cost and an independent random value similarly selected for benefits. The corresponding project NPV is then calculated using this pair of values in the same manner as that used for the earlier NPV model example. The risk model thus uses the same NPV calculation structure as that shown in Figure 4.1. It also uses the same discount rate D = 4%.

Although the probability density functions in Figure 4.2 will allow you to see that, for most iterations, net benefits will exceed costs, it should also allow you to realise that there will be some iterations in the Monte Carlo simulation for which the reverse is the case and that the calculated value of NPV will be negative. For example cost = £3,143k and benefits = £2,482k is a plausible combination for an iteration, even if the reverse combination is more likely. The results produced by the risk model are shown by the histogram and cumulative distribution graphs in Figure 4.3. They show that, although the project is more likely to have a positive NPV than not, negative NPV is a significant possibility.

Risk modelling tools provide a variety of statistical results. In the case of this example, the results include:

- Mean NPV = £310K
- Median (P50) NPV = £330K
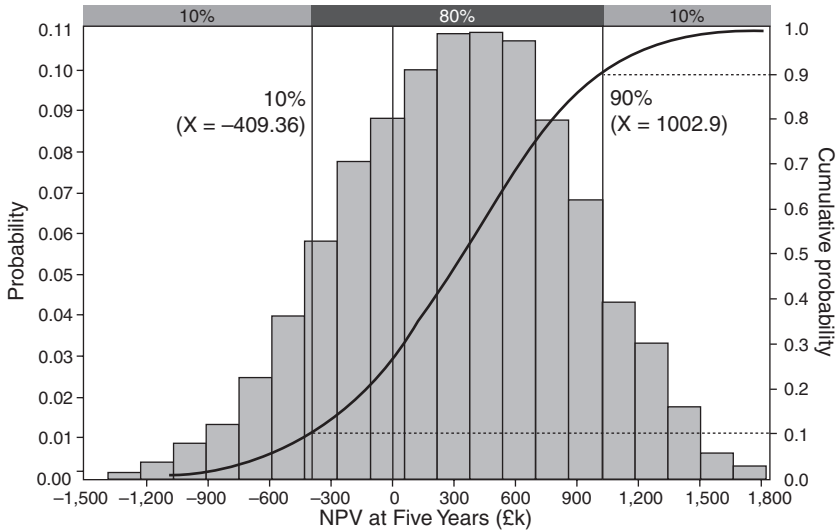- NPV Standard deviation = £540K
- Skewness = -0.11

FIGURE 4.3   Results of the simple NPV risk model produced by ModelRisk

The mean NPV forecast of £310k can be compared to the £684k forecast by the earlier deterministic NPV model 2. The lower value produced by the risk model is due to the fact that the mean values of both input probability density functions are less optimistic than the values used for the NPV model.

Figure 4.3 illustrates three different methods for representing project risk using the results from NPV risk modelling. One method is to use a histogram. A second method is to use a cumulative probability curve. These curves are frequently referred to as s-curves owing to their characteristic shape. Both methods are capable of illustrating the full range of the results but have different advantages. The advantage of using histograms is that they illustrate asymmetry in the results more readily. An advantage of using cumulative probability curves are that, where several results are available for comparison purposes, it is easier to illustrate their implications by overlaying s-curves. Another advantage of cumulative probability curves are that they can be illustrated as being directly linked to percentile points, which are in themselves a third method for representing results.

The method of using modelling results percentile points is illustrated in Figure 4.3 by the 10th (P10) and 90th (P90) percentiles. The model forecasts an 80% probability that the project would achieve an NPV of a value within these boundaries. Percentile point data represents risk in two ways. First, the interval between percentiles indicates the risk associated with variance in outcome. Second, percentile points can be associated with specific objectives. For example, if the project objective was to deliver an NPV of zero or greater, we could deduce from Figure 4.3 that there would be a probability of project failure of approximately 28%, i.e. the point on the cumulative probability scale that intersects the s-curve as it crosses the zero point on the x-axis.

Advantages of NPV risk modelling

One benefit of NPV risk modelling is the increased richness in the results that it produces. For example, Figure 4.3 illustrates the limitations of single value forecast produced by a deterministic model such as that shown in Figure 4.1. Including the effects of project-specific risk directly in NPV models also allows an organisation to differentiate between projects that are high risk and others that are not. This can be contrasted with the approach of organisations that make an allowance for the effects of project risk by applying a standard increase to the discount rate.

The application of a sound risk estimating process can also help to address sources of bias that may affect single point estimates of the type used in deterministic models. Moreover, an early use of risk estimates may be useful in countering the phenomenon of optimism bias in first-pass project forecasts based on immature data, thereby avoiding later problems caused by management expectations of costs and benefits having been set at an unrealistic level.

Finally, NPV risk modelling can be used to support the management of risk during the earliest phases of a project; the time during which uncertainty is greatest. Since the value of opportunities should exceed costs and tends to be realised during a later period, the risk to benefits often exceeds that of the risk to cost. Given that opportunities to manage risk to benefits are often best exploited as a project is being planned, NPV risk models can be used to develop a risk-robust project solution, thus integrating the project risk management and business case development processes. When I have used this approach in practice, the consequences have been beneficial to both business case development and the effectiveness of the risk management process itself.

Notes

1 The examples illustrated in this chapter are taken from the book *Net Present Value and Risk Modelling for Projects* (Gower/Routledge, 2016).
2 The two models have been made as simple as possible for the purposes of explaining the basic calculation process. Excel versions of these models, and other more complex models, can be downloaded from www.projectnpv.com.
3 Care needs to be taken to align the discount rate with the treatment of inflation in the model. Some discount rates are calculated at nominal rates i.e. including inflation, whereas others are calculated in real terms. This and other NPV modelling-related issues are described in more detail in the above book and website.

Reference

ISO 31000 (2009). *Risk Management*. Geneva, Switzerland: International Organization for Standardization.

5
CONTRACTS

Thinking in contracts: the role of intelligent procurement

Darren Dalcher

Contracts, the legal documents capturing the formal agreements between people, parties or groups are often of little interest to project managers. Devised by lawyers, they tend to emphasise the enforcement of promise-based obligations to perform a particular duty, supply certain goods, provide a given service or commit a specific act. Contracts are typically phrased in a legal language that endeavours to identify all contingencies and deliver a legally binding and enforceable agreement.

The sixth edition of the *APM Body of Knowledge* focuses on contracts under the Resource Management section, which is concerned with the acquisition and deployment of internal and external resources required for delivering the project or programme. The *APM Body of Knowledge* defines contracts as the 'agreement made between two or more parties that creates legally binding obligations between them . . . and sets out those obligations and the actions that can be taken if they are not met' (p. 202).

Contracts are covered by contract law, governed and determined by local jurisdiction. The *APM Body of Knowledge* therefore recommends that specialist advice should be sought to interpret and understand the legal ramifications of the contract. Given that contracts are invoked when actions, goods or services are required from outside the host organisation, local legal experts need to be involved in drafting the contracts and interpreting their implications.

The fifth edition of the *PMI Guide to the Project Management Body of Knowledge* includes a wider knowledge area focused on project procurement management, which is defined as the 'processes necessary to purchase or acquire the products, services or results needed from outside the project team' (p. 355). Accordingly, procurement management is therefore concerned with establishing, maintaining, and closing relationships with suppliers of goods and services for the project.

Sustaining interest

One view within the project contract community is that contracts should be completely comprehensive, encompassing all potential contingencies. When uncertain events occur, disputes can easily translate into legal teams quarrelling about interpretation, agreement, and expectations. In large and complex undertakings, that can often use up valuable time and resources. An alternative approach is to develop sustainable long-term relationships, supported by more flexible definitions that allow both parties to continue to operate and negotiate workable solutions. A lot depends on the context and cultural expectations of participants and the cultural and sectoral preferences enacted by an industry or an organisation in order to address the partnerships required to deliver projects.

In delivering a new vision for IT project development, the Agile Manifesto (2001) offers an interesting distinction, suggesting that experience indicates that a better way of developing software is through coming to value customer collaboration over contract negotiation. If collaboration is viewed as a long-term strategy, it can trump adherence to contracts and encourage a more flexible interpretation of objectives and duties based on the need to sustain the relationship and deliver meaningful and useful increments of value.

The key importance of the distinction offered by the Agile Manifesto is in ensuring that project managers remain part of the conversation and play a part in the discussion around contracts, expectations, vision, uses, acceptability, stakeholder engagement, and relationship management. Such an approach also results in greater understanding and engagement between the different parties resulting in a greater likelihood of addressing the essential issues, delivering useful systems, and ensuring success.

Repositioning contracts for success

Occasionally we consider using different metaphors or viewpoints to change our perspective or way of thinking. I have often wondered what would happen if we stopped viewing contracts as mere legal documents that can only be drafted by legally qualified experts and instead considered them as instruments for allocating risk between the two parties (still under the guidance of experts but in a better informed and more considered stance)?

Extending that thought, what would happen if we viewed contracts as a way of identifying opportunities and proposing a sharing of the spoils? Could that be done in an incremental and dynamic fashion as our projects unfold?

Would we then learn to use these instruments more creatively? Would both parties aim to think creatively and endeavour to truly deliver more with less? Would our relationships become more engaging and encourage longer-term sustained collaborations?

Most importantly, would our success rate in doing project work improve? And would the number of litigations and court cases involving projects, a clear indication

that current procedures are not ideal, be reduced? Indeed, could we banish litigious court cases and out-of-court settlements as a measure of project failure?

Towards active contract management

The good news is that there is a lot of useful thinking around encouraging a more intelligent use of contracts to make project procurement more effective. The chapter by Louise Hart fosters a more active approach to planning for contract management. The chapter draws attention to the three constituent parts of the contract suggesting that the incentives, specifications, and provisions can be planned and used more effectively. Indeed, the time for planning the contract and identifying the impacts and actions is well before it is formally issued. Incentives drive behaviours, and in order to satisfy certain sets of expectations the potential impacts need to be recognised early on.

The chapter draws on Louise Hart's 2015 book *Procuring Successful Mega-Projects: How to Establish Major Government Contracts Without Ending up in Court*, published by Routledge. The book explains how to develop contracts that contain the necessary provisions for successful project management whilst excluding undeliverable obligations or perverse incentives. The value of the work is in re-thinking the role and value of contracts in the procurement process. It is also important in supporting the knowledge required for successful project delivery to ensure that projects do not end up in court and reminding us that planning for the management phase of the contract is part of the procurement process.

Encouraging more agile procurement

If agile development is concerned with active and sustainable relationships, agile contracts would aim to encourage long-term collaboration through planned and intelligent sharing of benefits and value over an extended period. When unexpected or uncertain events occur, both parties have an incentive to continue to co-operate, rise to the challenge, and maximise the potential to deliver through shared incentives. Indeed, in such a setting the imperative to do more with less can be used as the motivation for adopting a more creative and innovative stance.

Contract in haste, repent at leisure is often used as a maxim to encourage deeper consideration of contracts. It can also be used to suggest taking time out to plan the management of the contract.

If both parties adopt a responsive tactic combined with careful planning, contract management can become a dynamic and flexible approach that is capable of leveraging incentives, opportunities, and long-term relationships and improving the delivery and success track records of projects. To reduce the number of projects that grace the annals of failure, we may well need to become more responsive and forward planning throughout our endeavours. Above all, it might imply involving project managers and contract managers in the conversations around projects,

expectations, and achievements, before they are called upon to rescue the same undertakings when they encounter the first signs of the unexpected, unwanted, uncertain or undesired.

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Planning for contract management

Louise Hart

The delivery method for many projects is to engage a contractor to deliver the project. This is common even for – perhaps especially for – the huge government infrastructure projects that cost billions and take years to deliver.

Governments and other organisations generally outsource delivery because they do not have the capacity to do it themselves. They enter into contracts to pass the delivery risk to a contractor who does have the capacity. While this aligns with the principle that a risk should be allocated to the party best able to manage it, there is a critical distinction between allocation of risk and elimination of risk. Too often, contract management is ignored or downgraded because of a misguided belief that a risk which has been allocated to the contractor ceases to exist.

It is often possible to eliminate certain risks, and it can be a very good thing to do. Every risk eliminated is one less to worry about, and there is generally quite enough to worry about as it is. But risk allocation is just that – allocation. No matter where the risk is allocated, it still exists. Allocation of a risk to the contractor does *not* eliminate it, as evidenced by the many contracted projects that run over time and over budget, sometimes spectacularly so.

Delivery risk continues to exist. If you choose to pass it to a contractor, that just means you will now have to manage the risk by managing the contract, instead of managing it directly.

The time to recognise this is *before* you enter the contract, while there is still time to do something about it. Once a contract has been entered into, it can be very difficult to amend it. Many infrastructure projects are structured as Public Private Partnerships (PPPs), which means the 'contract' is really a suite of contracts covering design, construction, finance, and operations and involving a number of different parties, consortia, and syndicates: amending these complex arrangements is deliberately designed to be very difficult indeed. But even a simple design and build

contract cannot be amended without the co-operation of the other party, who is unlikely to be receptive to changes that are not in their favour.

If you want a contract that helps rather than hinders contract management, you need to plan for the management phase as part of contract procurement. The contract is one of the most powerful tools you have for managing risk and you sign it only once. Some risk management controls can be introduced or eliminated at any time, but controls in the contract are either there on day one or not there at all. You need a contract with the right provisions, and you need a contract manager who will use those provisions to manage the contract effectively.

The contract

There are three key factors in designing a contract that will facilitate successful contract management:

1   The structural incentives;
2   The specification; and
3   Specific contract management provisions.

Contract incentives

Contractors are in business to make money. The contract is the means by which they make it. The implication for contract management is simple. If there is anything you need the contractor to do, make sure they get paid for doing it. If there is anything you want the contractor *not* to do, make sure they do not make money by doing it.

Some incentives are inherent in the contract structure you choose for the procurement. This should influence your choice of structure. It is almost inconceivable, for instance, that you would choose to deliver a mega-project through a 'cost-plus' contract. The contractor, paid more if the costs incurred are higher, is encouraged to push costs as high as possible. Mega-project costs will already be sufficiently stratospheric without creating an incentive to increase them.

If the contract is 'design and build', where the contractor receives a fixed price for delivering the asset, the inherent incentive is to build the asset as cheaply as possible. There is also at least some time incentive, because delays increase costs. There is no inherent quality incentive, which is a problem. When you procure a major asset, you want value for money on a whole of life cost basis, not just on construction. A cheap structure may require more maintenance or more frequent replacement, so that overall it may cost more.

An alliance contract is often used where there is significant uncertainty on costs. Initial work is done to establish a reasonable target cost, with overs and unders then shared with the contractor. In alliance contracts, the contractor's agreed profit is made when costs come in exactly on the target cost. To make a greater profit, the contractor must bring the job in *below* the target cost: since the client takes a share

of the savings, the more profit made by the contractor, the lower the cost to the client. This usually makes for a good, easy-to-manage relationship – unless the target cost is too wide of the mark, in which case it is not easy at all.

The PPP is a common model for very large projects. In a PPP, the contractor is remunerated with 'availability payments' or 'access payments'. They build the bridge or the hospital or whatever at their own expense, then when the asset is built receive payments for allowing people to use it: the payments are sufficient over the life of the asset to pay off the loans raised to finance construction. The payments are fixed, which clearly provides an incentive to reduce costs. Less obviously, there is a very strong time incentive. Since the contractor provides the construction finance for an asset costing a billion or two, and access payments only kick in when the asset is delivered and the money has been spent, the financing costs associated with delay are huge.

There is also an inherent quality incentive in a PPP, but it is much less robust. In theory, the contractor makes money by keeping down the whole of life costs. It is not in their interests to deliver a poor quality asset, because they will lose all the money saved on construction through increased repair and maintenance costs and lost access payments when the asset is out of service for maintenance. In practice, if things start to go wrong, contractors come under so much financial pressure from the time incentive they are likely to cut corners on construction anyway, regardless of the impact in future years. They will then struggle financially for the whole period of the contract, which always increases the likelihood of claims and disputes, and may even go bust, leaving behind a poorly constructed asset.

The imperatives for each project will be different. The incentives inherent in the contract structure you have adopted may not be sufficient, so consider including additional focused incentives where you need to change the balance.

Additional incentives may be particularly useful where subsidiary obligations are important to you but are not on the contractor's critical path for the main deliverable. If a contractor needs a temporary worksite on land you are waiting to use for something else, a one-off payment on release of the site will encourage the contractor to hand it over sooner rather than later.

Care is needed in structuring incentives, particularly in relation to the delivery of services in the operational phase of a PPP. Too little thought and you will saddle the contract with *perverse* incentives, that is, incentives that have a negative rather than positive impact on contractor behaviour.

For instance, incentive payments can be made for reducing the number of people on a hospital waiting list for service. If the service is provided more quickly, which is the behaviour you want to encourage, the number of people on the waiting list will fall. Unfortunately, the number of people on the waiting list will also fall if the contractor instead makes it difficult for people to be put on the waiting list in the first place. This is usually much cheaper for the contractor than improving the service, so which do you think is more likely to happen?

Do not be optimistic about a contractor's ability to resist the temptation to make money. Design the incentives to be resistant to gaming.

Contract specification

The overwhelming majority of disputes that arise on contracts relate to the specification. Probably everyone recognises the importance of specifying what the contractor must do correctly. Variations made necessary by an inadequate or ambiguous specification always end up costing a lot more to deliver than if the right words had been in the contract to start with, and managing variations is a real headache.

What is sometimes overlooked is the importance of also correctly specifying what the *client* is obliged to do – and making sure, before you enter the contract, that the organisation is genuinely capable of doing it.

Do not take on obligations to the contractor that the organisation is not capable of delivering.

Do not take on *any* obligation to the contractor unless you can identify an individual who will accept responsibility for delivering it. Make sure that person has understood the nature and extent of the obligation and put their signature at the bottom of a document that says so.

If the organisation needs to review design documents, for instance, your engineer might tell you the standard turnaround time is five working days. Do not take this as a green light to accept an obligation to review design documents in five working days. That 'standard' may well be optimistic at the best of times and it will reflect the current throughput of design documents. Resourcing may be wholly inadequate to deal with the volume generated by the project. Get a realistic commitment from the engineer. In writing.

Bear in mind that making life easy for your engineers does not necessarily reduce cost or risk to the organisation. The cost of putting in place special arrangements to enable fast document turnaround may well be dramatically less than the cost of requiring the contractor to plan their project around lengthy review processes. And while you are at it, check whether the engineers should be reviewing the documents at all. What value is being added? Are they importing risk instead of reducing it? If the engineers do not have to be on the contractor's critical path, get them off it.

Contract management provisions

Everyone wants to have contractors who are easy to manage. It is possible to put behavioural aspirations into the contract: they are most commonly seen in alliance contracts, which often talk about the parties having a responsibility to model the sort of collaborative behaviours that make alliance projects successful. You do not have to limit this to alliance contracts, since collaborative behaviours are also useful in other project structures – uncollaborative behaviours such as lying, bullying, and shooting messengers have adverse impacts in pretty much any context.

However, writing such words into the contract will not overcome the structural incentives. The behaviours most likely to emerge from the contractor are those

driven by the money. If there are behaviours you do not want to see from the contractor, do not give them a financial incentive to indulge in them.

Other types of contract management provision can be more useful. Managing a contract requires knowledge. Since the contractor is the one doing the work, you will not know what is happening unless the contractor tells you. What do you want to know? What do you *need* to know? How are you going to find out?

Do not overlook the value of including specific provisions in the contract. It may seem superfluous to include an obligation on the contractor to attend regular meetings – you will be talking to them every day, why clutter the schedule with unnecessary meetings? In fact, it is often useful, because it provides a minimum level of interaction.

It is not a matter of being able to enforce the interaction (although you can: the obligation to attend meetings is just as much a legal obligation as any other in the contract). The point is that the first thing many contractors do when things start to go wrong is hide from the customer. If the meetings do not happen, or the contractor starts dodging some of the agenda items, you know there is trouble. The sooner you know, the sooner you can do something about it.

Similarly, requirements for regular reporting give you a base level of information and audit rights can come in very handy when you suspect the contractor is hiding stuff from you. On one project I was involved in, the contractor kept insisting the project was on track. Eventually, many months in, we had an independent schedule audit done and discovered that completion was further away than it had been when we signed the contract.

It is not unusual to put very intrusive audit rights into the contract and then either get in the contractor's way by exercising the rights without due thought or, more commonly, fail to exercise them at all. Your contract management plan should include an audit programme that provides assurance without interference.

You don't have a contract management plan? Write one. Now. Trouble is heading your way.

Contract manager

Contract management is not a one way street. The contractor also sees the contract as something that has to be managed – and perhaps not in the way that you were expecting.

The team that won the bid is not the team that delivers the contract. This may be literally true: key personnel restrictions in the contract can give only limited comfort about team stability and quality. But it is also true in another sense: even if the individuals do not change, the management of them does.

Behaviours driven by a desire to win the contract may not survive contract award, as the contractor's project manager becomes subject to relentless pressure to meet the monthly budget. A specification that was originally examined to see how the tenderer could deliver something attractive to the customer is now examined to see how it can be delivered more cheaply.

Efficiency is desirable. Cutting corners indiscriminately is not. If your organisation is to receive the deliverables it is paying for, the contractor needs to know from the start that you are paying attention and will hold them to the contract.

Yes, you need a contract management plan to be in place. But even more important than the contract management plan is the contract manager who will implement it. Documents do not manage risks. People manage risks. There is no form of contract that does not require active management for success to be assured. If there is no existing capability within the organisation to manage the contract, building that capability should be top of the list of things to be done *before* signing the contract.

Skilful contract management during the delivery phase may not be enough to save a project if it was badly structured on day one, but poor contract management can bring down any project. If you wait until there is a contract before hiring a contract manager, the project is in trouble.

The transition from the tender process to the delivery phase, from contract set-up to contract management, is critical: once the contract is signed, will the project team hit the ground running or just hit the ground?

On day one, the project has no momentum behind it, and three months lost from the schedule now is three months lost. Contingency was put into the schedule to deal with the things that will go wrong later, not to give everyone a chance to put their feet up at the start. This is one of the highest risk periods in the whole project: delays and misunderstandings quickly become unrecoverable and irreconcilable. A first class contract manager ready and running during the procurement phase is the best risk mitigation you can have.

It also makes for a better contract. Developing the contract is all about making trade-offs: cost against risk, time against cost, the needs of one stakeholder against the needs of another, present cost against future cost. Having the person who will be responsible for managing the contract involved in the set-up makes an enormous difference to the dynamics of the debate.

Would Britain's wildly unsuccessful poll tax have gone ahead if the civil servant who reportedly said 'Try collecting that in Brixton' had had responsibility for its design?

You are far less likely to end up with an unmanageable contract if the person who will have to manage it is in there helping to write it.

In summary

If a project is being delivered by a contractor, successful project management means successful contract management.

You only sign a contract once. If the incentives are perverse, the specifications inaccurate or the management provisions inadequate, you are stuck with them. Get it right before you sign.

If the contract manager arrives before the contract does, you have a much better chance of success.

6
TEAMS

Thinking teams, performing teams, and sustaining teams

Darren Dalcher

When can we talk about teams?

Given that teams are central to effective project management and, indeed, to project work, do we spend enough time considering the role and impacts of teams? Do we take them for granted, or do they really offer us the best way of organising for project delivery?

It is about 30 years since the publication of *Peopleware – Productive Projects and Teams* by Tom DeMarco and Tim Lister. The book has had a profound influence on the management of software projects, as the neologism, the newly coined term, peopleware (also employed by Peter Neumann), gradually gained acceptance as the third core aspect of computer technology, alongside, the better established and more recognised aspects of hardware and software.

Peopleware has been utilised as a label referring to the role of people in development IT systems and grown to encompass teamwork, group dynamics, project management, organisational factors, the psychology of programming, and the interface with people and users. The importance of the book was in drawing attention to the significance of managing project teams; reminding readers that the major problems encountered in projects were not technical, but sociological or political issues that needed to be considered, understood, practiced, and taught within the canon of software development.

DeMarco and Lister (1987; 2016) assert that software managers are prone to a tendency to manage people as if they were components. It may not be surprising as technicians and developers who are used to organising resources into modular pieces, such as software routines or circuits, get promoted to managerial positions. The black-box approach that works for hardware and software systems, allowing developers to ignore internal idiosyncrasies, and the tendency to work with a standard interface, does not apply to teams of developers and project workers. Managers of software teams thus need to learn to overcome a new set of

challenges related to the performance and characteristics of individual members and the wider project team.

Project teams

Given that projects, by the very nature, require the use of teams, one would expect to find a plethora of ideas and insights about organising teams within the standard literature.

Yet, at first glance through the tables of contents, the various bodies of knowledge do not address the team concept as a main area of interest. This is a little surprising, as it would seem to impact the operational side of project organisation.

A more detailed search of the fifth edition of the *PMI Guide to the Body of Knowledge* (PMBoK) identifies teams within the Project Human Resource Management knowledge area. The chapter makes it abundantly clear that the project manager is responsible for the team. Subsequent guidance addresses the development of team competencies, facilitation of team interaction, and the creation of a team environment that is likely to enhance project performance. Team formation is discussed under the standard steps of forming, storming, norming, performing, and adjourning, indicating that the responsibility for guiding the team lies with the project manager. In the earlier part of the *Guide*, under organisational influences, the project team is described as being made up of the project manager and other project workers.

The sixth edition of the *APM Body of Knowledge* (*APM BOK*) does a little better and covers teams under the interpersonal skill of 'teamwork', included in the people section (there are three sections overall focused on context, people, and delivery). Teamwork is defined as 'a group of people working in collaboration or by cooperation towards a common goal'.

The general guidance elaborates that teams consist of groups of people committed to a common goal that no one individual can achieve alone. The resulting focus of teams and teamwork is on mutual accountability and performance.

What makes teams special?

The essential question is: 'When does a group of people become an effective team?' The concept of teamwork described by the *APM BOK*, or the team structure offered in the *Guide to the PMI BoK* do not offer sufficient authoritative guidance on the makeup, dynamics or effectiveness of teams.

McKinsey partners, Jon Katzenbach and Douglas Smith (1993a), maintain that the essence of a team is the shared commitment. The best teams invest effort in shaping a common purpose in which individuals can believe, which allows them to emphasise communal performance rather than a collection of individual achievements.

The book *A Discipline of Teams* by Katzenbach and Smith (1993b) has become the bestseller on teams at work, having sold over 500,000 copies. In contrasts with work groups that have a strong, clearly focused leader, teams display shared

leadership roles. They amalgamate individual and mutual accountability towards collective work products and emphasise collectiveness and togetherness in terms of discussing, deciding, and doing things. Katzenbach and Smith recognise that the most successful teams shape their purposes in response to a demand or opportunity placed in their path, thereby broadly framing the performance expectation.

The contrast between a (project) manager running the team and the dynamic nature of the engagement and re-alignment displayed by effective teams, reflects the observations of DeMarco and Lister in *Peopleware*. The major problems and failures in projects are still not technical, but more often relate to sociological, political, organisational, and individual, motivational aspects.

Project teams are often managed rather than led. The result is that the managed projects may reflect the fact that they are being built and delivered by groups rather than teams. Advocates of agile working will recognise the focus and autonomy given to teams in an effort to improve their performance and ensure that opportunities are acknowledged and embraced during development. Working in teams can truly enhance flexibility and resilience, and also offer a reduced risk of underachievement, if the principles for building high-performing teams are applied.

High-performance teams

High-performance teams (HPT) were first described by the UK's Tavistock Institute in the 1950s. The concept originates in organisational development to refer to highly focused groups that continuously achieve high-performance results. HPT was popularised by organisations such as Boeing, General Electric, Digital Equipment Corporation and other defence and governmental organisations in the USA. The initial implementation led to many successful teams delivering effective and influential results and products as HPT became a major way of organising successful manufacturing and production projects.

Later attempts to implement similar structures often ignored the dynamics of teams and the social and political realities of the organisations leading to patchy results. The concept of high-performance teams is becoming increasingly popular once again, but effective utilisation would require a strategic understanding of the context and purpose and operational recognition of the underlying dynamics and emergent benefits.

Emergence teams

Situational awareness and recognition of context remain crucial. Coupled with a growing level of uncertainty and turbulence in political, economic, national, and business systems they introduce a need to engage with the teams of developers and creators in order to leverage greater value from assets, projects, products, services, and other undertakings.

This chapter by Tom Cockburn and Peter Smith offers guidance for project teams operating in an uncertain world. The authors recognise that the business

landscape within which most organisations operate requires greater variety and diversity to benefit from new emerging opportunities. Different situations can be characterised as simple, complicated, complex, or chaotic requiring matching diversity and capability in order to perform and operate.

To successfully address the emerging opportunities, organisations need to develop and foster emergence teams: High-trust teams capable of exceptional affinity for knowledge sharing, sense making, and consensus building needed to accurately define the business environment and recommend appropriate action. The chapter was developed from the authors' 2016 book *Developing and Leading Emergence Teams: A New Approach for Identifying and Resolving Complex Business Problems* published by Routledge. The book offers a theoretically grounded, yet practical guide for thriving in a world of uncertainty and complexity and benefitting from emergent opportunities through thoughtful organisation.

Emergence teams provide a basis for responding to emerging challenges and opportunities by abandoning old structures and embracing the uncertainty and complexity of new configurations and trials faced by organisations. Such teams can deliver open and collaborative ways of engaging with challenging new types of problems. They offer new ways of responding to and thriving in the face of uncertainty and complexity. The authors do a wonderful job in re-focusing attention to what can be achieved through dedicated and focused teams, intimating enhanced approaches for dealing with reality by embracing the powers, skills, and capability of team members liberated from more conventional thinking and loyalty structures and responsive to the contextual details and identifying features that apply in a given situation.

In teams we trust

Teams offer ways of embracing and benefitting from the collective power of a focused group emphasising fun, teamwork and a shared purpose. In this way, the emergence within the team itself can account for more than the sum of individuals. Yet, many organisations overlook the power of teams to innovate, improve, and sustain achievements.

Indeed, the team architecture can be used to embrace the potential to develop great work in a collective setting. Moreover, the team concept provides the context and essence for dedicated and purposeful project work. Teams offer the promise for greater achievement, but only when their potential is recognised and realised, and when the individuals are valued and involved, thus benefitting from the shared higher purpose.

Focusing on the organisation, architecture and value of the collected wisdom and capability can begin to enhance the power of team. As we endeavour to complete more distributed projects; bring in trans-disciplinary collaborators with different interests, priorities, and values; and summon the power of crowdsourcing, we need to grasp and embrace the potential of teams as an organising structure, architecture, organisation, and framework for higher achievement and sustained performance.

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VUCA and the power of emergence teams

Tom Cockburn and Peter A. C. Smith

In their 2014 report, Deloitte asserted that the global business landscape has fundamentally changed and that business-as-usual and the previous ideas of what is *Normal* are a thing of the past. They imply that everyone is now working in the world of VUCA – an acronym for the volatility, uncertainty, complexity, and ambiguity of general business conditions and market situations; witness 'Brexit' and the Trump phenomenon as current illustrations of VUCA. Nevertheless, according to McKinsey & Company (2014) this new emergent VUCA environment is 'rich in possibilities for those who are prepared', as well as pitfalls for the unprepared.

VUCA contexts mean more than complication of systemic or detailed workings. Complexity is imbued with the forces and outcomes of emergence across all business dimensions and levels, from strategic to operational. *Emergence*, according to Wikipedia (2015) is the process whereby a large system, entity, pattern, or regularity with singular properties evolves through interactions among smaller, simpler entities (that themselves do not exhibit such properties). The core features of emergence are: (1) surprise or radical novelty (features not previously observed in systems); (2) integration and coherence or correlation (integrated wholes that maintain themselves over some period of time); (3) a holistic global or macro level (exhibiting some property of 'wholeness'); (4) it is the product of a dynamical process (it evolves); and (5) it is 'ostensive' (it can be perceived).

In order to achieve a meaningful theoretical–practical balance for thriving in and benefitting from a VUCA world, we first focused on operationalising Snowden's (2007) Cynefin Framework for teams operating under emergence situations. The Cynefin framework is cited in the literature (Snowden & Boone, 2007) as a tool for *a leader* to use in their decision-making. Given that the Cynefin framework is a 'sense-making framework that is socially constructed from peoples' experience of their past and also their anticipated futures' and 'the Cynefin framework is a sense-making one and is normally created as an emergent property of social interaction'.

One of the reasons for this is the need to root any sense-making model in peoples' own understanding of their past and possible futures'. (Snowden, 2010; p. 5). However, in our opinion its use solely by leaders seriously short-changes the framework's power, and we recommend its use in team settings where conclusions drawn regarding environments and responses are emergent, enriched, and reach project consensus based on team consensus or team input to the leader.

Cynefin is a Welsh word, which may be translated into English as 'place', although the term was chosen by Snowden (2014) to describe his understanding of the evolutionary nature of complex systems, and their inherent uncertainty – the name Cynefin is his reminder that all human interactions are emergent and determined by experiences, both through the direct influence of personal experience, and through collective experience; for example through storytelling.

The four Cynefin environments and associated recommended responses are:

1   Known environment: Sense–categorise–respond.
2   Knowable environment: Sense–analyse–respond.
3   Unknowable environment, complex: probe–sense–respond.
4   Unknowable environment, chaotic: act–sense–respond.

Many organisations categorise the environments they face without any detailed examination as *known environments*, assuming, without further study, that the environments in question have been previously categorised. These organisations then respond by applying *best practices;* that is with solutions that have worked in the past. However in our VUCA business world, where complex conditions exist in virtually all business situations, *normal* typically no longer applies and employing *best practices* without careful consideration does not take account of VUCA's surprise factors and often produces catastrophic results. In this regard, it is noteworthy that the average longevity of S&P 500 organisations declined from 67 years in the 1920s to just 15 years today (Gittleson, 2014).

Organisations typically try to apply simplified solutions to even the most urgent problems because they lack 'situational (contextual) awareness'. All too often they are trying to solve the wrong problem as they confuse symptoms and causes. It really should be no surprise to decision makers when previously successful problem-solving approaches fail in new situations – the simple reason is that most organisations try to solve problems facing backwards! They confidently assert that what worked in the past will work in the future – try driving your car down a busy street that way. You will end up in the same situation as do such organisations – with a catastrophe! As Snowden and Boone (2007; p. 68) assert: different contexts call for different kinds of responses. Before addressing a situation, leaders need to recognise which context governs it and tailor afresh their actions.

Application of Cynefin response #2 may seem to offer a safer more general situational approach although 'analysis' too has many pitfalls (Ackoff, 1977) and this environment would be better approached using systems theory (Ackoff, 1981); for example analysis would not resolve the following question: why do two seemingly

identical cars have the steering wheel on the left in one case and on the right in the other? A systems approach could tell us that one is built for the UK market and the other for the North American market.

The experimental approach of 'probe, sense, and respond' may be seen as overly demanding by many practitioners although it is one that has served countless organisations well for many decades e.g. in complex plant optimisation using statistical design and analysis and also in organisational development where it is called 'Action Learning' (McGill and Beaty, 1995). The key is to make sure that the 'probe' will not produce disastrous results but rather results from which careful further probing may be planned after in-depth reflection and learning (sensing, adapting). Although slow, this approach has no serious drawbacks, even when Cynefin environments #1 or #2 are actually being faced. Action learning typically takes place among trusted colleagues in a group of about six people where the group ('Set') members encourage and help the group-member(s) owning the problem to reflect on problem causes and possible courses of action before the Set member(s) with responsibility for the problem take(s) action. The action-learning approach practised in organisations today has become highly structured and consultant/set-adviser driven.

It is important to remember that events in complex contexts do not necessarily result in the proportionality of responses of the Newtonian-type, i.e. equal and opposite reactions. They can, in fact, be very disproportionate. Small events can trigger big changes and vice versa. These amplifications encompass the affective domain too. Groups must maintain a minimum of cohesion to avoid the centripetal forces of discontent overwhelming the centrifugal forces of group bonds (Arrow et al., 2000; p. 231). Centrifugal forces include the differential effect of events on individual members at different times. There are a number of vitally important conversations that often get missed, misheard or mis-communicated, resulting in project failure.

Emergence team conversations

Many initiating and evaluation conversations between key parties about projects tend to focus on scheduling and risks of cost overruns but perceptions of what constitutes a 'successful' project may also vary between the business clients and the project team or may include unvoiced assumptions. Similarly the mutual perceptions of 'ideal' composition of the team itself may differ. These may then impact the manifest or tacit project management risks and what are the key choices to be made by each party at a variety of stages, such as who has the major say, what are the key features, advantages, and benefits to each party and, thus, when is the project actually successfully completed.

Emergence teams are designed to address complex '3D' strategic problems i.e. those that impact in depth as well as vertically and horizontally tackling major issues in VUCA contexts. In such complex business and leadership contexts developing shared narratives and conversations about meaning-making processes are both vital but also extremely fragile or fragmented in frequently far-from-equilibrium periods these teams inhabit.

There are a number of critical conversations that must take place, which we briefly summarise here.

- Team sponsor and team leader conversations clarifying and communicating project purposes, aims, objectives, and goals;
- How to reach consensus inside fluid boundaries;
- Participative problem-solving processes – not just inward-looking or relying solely on their own data or resources; may include crowdsourcing;
- Impacts of fragmented work and dissolving hierarchies;
- Team members' reward;
- Timing, gradients of change, resourcing;
- Structures and strategies;
- Identification of team members;
- Formal and informal team rules, values, expectations, and responsibilities.

The key to a collaborative work environment is that many individuals at *all levels* are responsible for achieving success. Collaborative interactions may operate under a set of predetermined norms or 'rules' or shift into a new paradigm and level and enact new rules and processes. As we have stated in other places (Smith and Cockburn, 2013; 2014; 2016). We would agree that every leader's key role is to influence or change local rules of interaction in order to promote knock-on changes and encourage a qualitative change. We also recognise the interaction between hierarchy and hierarchic ties, suggesting this systemic feature in organisations can be a control mechanism for avoiding uncontrolled complexity overwhelming teams (Hazy et al., 2007; p. 30). In most teams, there are individual performers, each of whom has a contribution to the collective whole but some of whom can be more easily replaced than others.

Application of the Cynefin framework raises a number of other practical questions underpinning team conversations: What is the best way to categorise the environment facing an organisation? Once categorised, what is the best way to decide on a response or a series of responses? In regard to how a business organises to apply the framework, the 'principle of requisite variety' (Ashby, 1981) becomes very important. This principle suggests that the internal diversity of any internal system must match the variety and complexity of its environment if it is to be successful in dealing with the challenges posed by the environment. Adhering to this principle indicates that to successfully categorise the environments facing an organisation and to define an appropriate response or series of responses, the organisation must access a pool of individuals with experience in facing the challenge(s) of the environment in question.

Team requisite variety and crowdsourcing

This principle of requisite variety suggests that the internal diversity of any internal organisational system must match the variety and complexity of its environment

in order to be successful in dealing with the challenges posed by the environment. Adhering to this principle indicates that to successfully categorise the environments facing an organisation and to define an appropriate response or series of responses, the organisation must access a pool of individuals with experience in facing the challenge(s) of the environment in question. The organisation may also choose to include in this pool individuals having expert knowledge of disciplines relevant to challenges of the environment in question.

We recommend that to access and activate the pool of individuals, the organisation develops one or more teams, similar to self-directed teams that meet together as long-term communities. A self-directed team is made up of employees who are fully responsible for turning out a well-defined segment of finished work or service. Since every member of the self-directed team is responsible for the finished segment, such teams are the opposite of assembly-line teams where each team member is responsible for only a narrow segment of the finished product or service (Orsburn et al., 1990).

In the context described above, such teams might also be characterised as 'matrix' teams, 'cross-functional' teams, or 'transdisciplinary' teams or even some hybrid combinations of these terms e.g. cross-functional matrix team. A matrix team is composed of people from different areas of an organisation who are brought together to solve a common problem or achieve a goal through collaboration. Team members could also be drawn from outside the organisation e.g. customers, suppliers, or consultants. A cross-functional team is a team of people with different functional expertise working toward a common goal; for example it might include people from planning, IT and human resource departments. A transdisciplinary team is one in which members come together to jointly communicate, exchange ideas and work together whilst emphasising freedom to cross the lines of their professional disciplines as they do so.

An exception to the above approach may well be necessary under chaotic conditions when response time is often of the utmost importance. In such cases a sole decision-maker may be necessary, for example the emergence team leader, although this decision-maker should try to obtain the recommendations of as many informed sources as feasible, given the time constraints.

As noted above, emergence teams have something in common with matrix teams, cross-functional teams, and self-directed teams. However, the makeup of emergence teams is quite unique and particularly challenging. Each emergence team member represents a centre of excellence, combining in-depth experience and knowledge of their own organisational domain (as in matrix teams) with deep knowledge of the problem with which the team is confronted. Each emergence team member must also abandon their chain of command allegiances (unlike matrix teams) and their organisational unit allegiances (unlike cross-functional teams) becoming part of a new 'organisation', which is the emergence team.

The sense that emergence teams are self-directed teams may also be inappropriate since although they have responsibility for a well-defined segment of finished work or service they may hand over their conclusions regarding further work to

other teams that then have responsibility for work completion. In other words not only are emergence teams unique but for team members they demand particularly unique kinds of individuals who are capable of assuming novel roles.

For this team approach to yield the necessary knowledge sharing and consensus the organisation must also have developed and promoted an open organisational culture that supports strong social capital (Smith and Cockburn, 2013, pp. 272–278). Social capital consists of the stock of active connections among people – the networks of trust, mutual understanding, and shared values and behaviours that bind together members of teams and make knowledge sharing and co-operative action possible (Cohen and Prusak, 2001). This may incorporate crowdsourcing and sociodigital technologies to maximise coverage of stakeholders' interests inside and outside the organisation in various ways.

In complex environments there may be times when emergence teams may incorporate matrix structures or members, cross-functional and/or transdisciplinary team members. The challenge then is exaggerated because of the organisational reporting lines involved and the overall diverse nature of the teams. These are all topics that are discussed in this book.

High-performing teams do not happen by chance. The managers selected to develop the plan cannot simply be co-opted from various departments where their skills are not currently in high demand. Team motivation cannot simply be assumed but must be enabled and facilitated in various ways.

It is critically important to establish a clear role for the team leader

It is critical that the team's sponsor, and other members of senior management, understand that the emergence team may uncover unpalatable facts about the organisation's operations in relation to the problem with which the team is tasked, and that such conclusions must not be rejected unless they are seriously flawed. All too often, senior management of an organisation will not countenance any suggestion that mistakes have been made, and indeed will suppress any such research-based conclusions. Both authors of this book have carried out research reviews of unsuccessful business initiatives; these studies were based on in-depth interviews and stories from intimately involved personnel, and in both cases the resulting reports were not used in any organisational-learning fashion but in fact were confiscated and destroyed! It will be important for the emergence team to ensure that its Environment (see Cynefin Framework) research findings do not carry a 'blaming' tone but rather set out the team's reasons for categorising the problem Environment as a Known environment; a Knowable environment an Unknowable environment – complex; or an Unknowable environment – chaotic. However, unless the evidence for one particular environment is overwhelming, it is very likely that the team's categorisation will not be fully supported by all team members or all senior executives.

Emergence teams are only formed to tackle serious organisational problems, and since launching an emergence team is a significant undertaking, it should not be

TABLE 6.1 Emergence team sponsor–team leader–team members questionnaire

The following questions relate to the work to be carried out by the emergence team and are being sent to you as sponsor initially, and also to the team leader, and later to each member of the team. Please fill out the questionnaire and retain your responses providing one copy to the sponsor or team leader or team members as appropriate; these will be used as the basis for later dialogue between the sponsor and the team leader, and potentially with team members.

1 Why are we doing this?

- What imperatives influenced the decision to form this emergence team?
- Please describe concisely the problem(s) with which the team will be tasked.
- How does the team's work relate to the organisation's present and future strategies and objectives?

2 What will be achieved?

- What will be the specific outcomes/results of the team's work?
- How will the team know when it is successful?
- In what manner will the team report its progress and results?

3 Definition of the team leader's role

- How will the team leader contribute to achieving question #2 above?
- What role is the team leader expected to play in advocating plans, tasks, and activities related to the outcomes to be achieved?
- How must the team leader participate in leading implementation of the plans, and in sustaining commitment and ensuring cohesiveness?
- How is the team leader expected to support team development?

4 Who else has a stake in the team's activities?

- Who are the other key internal and external stakeholders (including other teams)?
- What should be the team's relationship to these stakeholders?

5 How will the team's sponsor support the team?

- What is the sponsor's role?
- How will the sponsor and the team relate?

6 How will the team members be rewarded?

- What achievements should the team or its members be rewarded for?
- How should achievements be recognised:
  - At intervals throughout the project? Or
  - At the end of the project?
- Should rewards be granted to:
  - Individual team members?
  - The team as a whole?

7 What could hold the team back?

- Are there any critical constraints or barriers?
- Are there security concerns?
- How will all these constraints be addressed?

commenced without the understanding and support of the most senior levels of the organisation. The CEO or a senior member of the executive team should drive the formation of the emergence team as well as assume the role of the emergence team's sponsor. This individual must clearly understand not only the problem but also what results are expected of the emergence team, its interaction with and impact on other stakeholders, and how successful resolution of the problem will be defined. This information establishes the core of the team's charter including the team leader's role, and forms the basis for Table 6.1.

Emergence team decision making

In normal circumstances, reaching decisions in emergence teams is not a matter of the exercise of authority, represented by *power over* or *technical/functional relevance*, but rather involves reaching consensus among the team members and with the team leader in a process where traditional boundaries are non-existent or are blurred. However, in an emergence team, *final* decisions are still the responsibility of the team leader. This responsibility must not be taken lightly, and is normally based on a 'consensus' with the team members. Exceptions to this proviso are expected when the situation demands immediate emergency action, and the team leader, in formulating a decision, must rely on his/her/own experience or on the best (team?) information available at the time.

   We define 'consensus' as a multi-participant decision-making process that involves dialogue and reflection among all the team members, the team leader, and sometimes the team sponsor, until the particular 'final' decision has typically the support of all the participants, or of a predefined majority. It has been emphasised previously that the CEO or a senior member of the executive team should drive the formation of the emergence team as well as assume the role of the emergence team's sponsor. It was further pointed out that this individual must clearly under-stand the problem but also the consensus process, plus what results are expected of the emergence team; its interaction and impact on other stakeholders and how suc-cessful resolution of the problem will be defined. This information is fundamental to the team's charter, including the team leader's role, and will form the basis for Table 6.2 below. All the parties must have an equal opportunity to air their views and an independent facilitator is sometimes used to ensure this equality.

TABLE 6.2 Consensus-oriented decision-making model 6-steps (Boundless, 2014)

1 Framing the Topic
2 Having an Open Discussion
3 Identifying the Underlying Concerns
4 Building a Collaborative Proposal
5 Choosing a Direction
6 Synthesising a Final Proposal

Source: adapted from http://en.wikipedia.org/wiki/Consensus_decision-making – cite_note-35

'Consensus may be defined as an acceptable resolution; one that can be supported, even if it is not the "favorite" of each individual' (Boundless, 2014). In other words 'consensus' does not imply total 'agreement' and helps avoid the potential for extreme escalation of team commitment leading to 'groupthink' and related problems including project failure seen in research on other kinds of teams (Cockburn, 2010). A number of approaches and processes relating to consensus building are described in Boundless (2014) including a Consensus-Oriented Decision-Making model that offers the step-wise consensus process set out in Table 6.2.

The level of agreement necessary to finalise a decision is known as a 'Decision Rule'. Possible decision rules for consensus vary and include the following range (based on: Boundless (2014)):

- Unanimous agreement (agreement is based on this proposal being a person's first choice).
- Unanimous consent (consent given because this proposal is one that the person can live with).
- Unanimous agreement minus one vote or two votes.
- Unanimous consent minus one vote or two votes.
- Majority thresholds without regard for 'agreement' or 'consent' (90%, 80%, 75%, two-thirds, and 60% are common).
- Simple majority without regard for 'agreement' or 'consent' (51%).
- Team leader decides.

Concluding remarks

In hierarchical organisations, any equal-voice process is unsettling for team participants in the early stages of emergence team formation. However, consensus is greatly facilitated when the foundational principles of action learning are adopted. Team performance management and team development are based on the co-operative development values that are held in common between team members. In other words, fundamentally it is based on how quickly the team matures and how well they bond together.

Critically, sharing a set of core values and principles always entails shared interests, whereas the sharing of interests does not always entail shared values and principles for work processes. On the other hand, sharing information does not necessarily entail shared interests, but once again parties who have a 'worldview' in common are more likely to share information (Takeishi and Numagami, 2010). For example, action learning emphasises and helps ensure that the issue is clearly stated and understood by all; that individuals offering statements and opinions are helped by other participants to reflect on those opinions and the reasons why they hold such views. In action learning all the participants learn from and with each other through the sharing of their knowledge and stories as well as the questions such sharing raises.

As we noted above, even in normal organisational team settings where emergence teams are not involved, all too often the organisational benefits that the team sponsor envisaged are not delivered. Preventing or resolving these kinds of problems begins with clarification and understanding by the team leader of the team sponsor's vision of team activity and expected results (initially presented in general at a meeting of potentially concerned individuals), and the shaping of these intentions given the practical experience of the team leader. This process must be honest about risks, frankly discuss unpalatable matters and surfacing the 'undiscussables' in order to produce authentic consensus between the team's sponsor and the team leader regarding the team leader's role and the team's working context.

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7

SPONSORSHIP

The unspoken role of sponsors, champions, shapers, and influencers

Darren Dalcher

Many of the surveys focused on the success criteria of projects, organisational change efforts, or process improvement initiatives that home in on the need for senior executive support. The advice is often couched in terms of securing the support and backing of a senior figure within the organisation in order to guarantee successful delivery. Within the software process improvement community this is typically recognised as the dominant factor that is required in order to guarantee success.

Defining sponsorship

The sixth edition of the Association for Project Management, *APM Body of Knowledge* positions sponsorship in the initial section of the book, under the heading of governance, and alongside key areas such as project management, infrastructure, life cycle, success factors, and maturity. It begins by confirming that sponsorship is an important senior management role; asserting that 'the sponsor is accountable for ensuring that the work is governed effectively and delivers the objectives that meet identified needs'.

Sponsors are required to play an active role in promoting, advocating, and shaping projects. They may be known as project champions, senior responsible owners (SRO), funders, or senior clients, and may even be part of the project steering group.

The *APM Body of Knowledge* points out that sponsors own the Business Case. Their role starts before the appointment of a project manager, and continues beyond project closure and the departure of the project manager. As owners of the business case, they are responsible for overseeing the realisation of benefits, thus spanning a longer project life cycle, extending beyond project delivery and handover.

In many situations the sponsor and project manager may belong to different organisations, with the sponsor representing the client organisation and the project manager hailing from the contracting organisation. Note: In larger and more

complex project setups, this disparity in role and position often requires a senior contractor representative on the project board to work with the sponsor and address the different sets of business priorities and commercial objectives.

Given that the sponsor owns the business case, there is a need for a close relationship with the project manager to ensure that the business case remains viable and that the benefits are both relevant and realisable.

The *APM Body of Knowledge* therefore acknowledges (p. 36) that the sponsor needs to be:

- A business leader and decision maker with the credibility to work across corporate and functional boundaries;
- An enthusiastic advocate of the work and the change it brings about;
- Prepared to commit time and support to the role;
- Sufficiently experienced (in project and programme management) to judge if the work is being managed effectively and to challenge project managers where appropriate.

Additional guidance on sponsorship

According to received wisdom sponsorship is concerned with influencing the performance of project management. The Association of Project Management's publication, *Directing Change* (2005) notes that sponsorship is the effective link between the organisation's senior executive body and the management of the project. The sponsoring role has decision making, directing, and representational accountabilities, providing a route through which project managers directly report to owning organisations and from which project managers obtain their formal authority, remit, and approval of decisions that require agreement.

Englund and Bucero (2006) make the point that the success or failure of any project often hinges on how well the sponsor relates to the project, the project manager and other stakeholders. In reality, maintaining the relationships is difficult and multi-faceted, and sponsors often do not understand their role and impact. Englund and Bucero note that the sponsor fulfils the roles of: seller, coach, and mentor, filter, business judge, motivator, negotiator, protector, and upper management link during the different phases of the project.

The APM's publication *Sponsoring Change* (2009) concurs that every project needs a sponsor (p. 1), and identifies four core purposes for sponsorship:

- **Separation of decision-making responsibilities**, particularly in relation to the purpose of the project, the objectives, the top-level contingency provisions, appointment of the project manager, feasibility, and deployment of external resources;
- **Accountability for the realisation of benefits**, that typically extend beyond the role of the project manager;

- **Oversight of the project management function**, by applying consistent oversight, expertise, and sound judgement;
- **Stakeholder management**, particularly at senior levels and in relation to other significant parts of the organisation.

The critical success attributes that project–owning organisations should consider developing and enhancing include (APM, 2009):

- **Support**: appropriate organisational support in terms of clear authority, access to decision makers, and adequate resources;
- **Continuity**: Ensuring continuity of sponsorship throughout the life of the project;
- **Alignment**: Acting in the long-term interests of the organisation and providing professional and ethical leadership consistent with its culture and values.

Perhaps the key importance of the role relates to its core position, and associated responsibility, as mediator and translator between the board, the project manager, and the project (and its pledged benefits). The position thus allows sponsors to communicate and translate requirements downwards to ensure real needs are being addressed, whilst communicating resource requirements, progress visibility, and identified constraints upwards to ensure that pace and momentum can be maintained.

Rethinking the position of sponsorship

Sponsorship is increasingly addressed as part of the discourse around project governance, but its impact on projects and programmes remains underexplored. Moreover, only limited guidance and advice are available for executives and senior managers seeking to undertake sponsorship roles, with the majority of available content representing the project side of the conversation.

French-American microbiologist René Jules Dubos (1968) noted that 'man shapes himself through decisions that shape his environment'. In general, we create conditions that can enhance or limit. Early decisions, in projects and other creative endeavours, introduce constraints, limit options, and direct future development. In contrast, early consideration also opens up opportunities and new perspectives ripe for both exploration and exploitation.

Considering sponsorship from a project perspective focuses on deliverables and the project structure, whilst also recognising that sponsorship needs to extend beyond the minimal life of the project and account for factors such as benefits, the business case, and the organisational value of introducing change. However, this perspective fails to account for the extended life cycle of the project, the reasons for carrying out the work in the first place, and, most crucially, it ignores the early identification and definition effort that occurs before a project is formally and officially launched.

In many projects and change initiatives, sponsors may predate project managers' involvement. Considering the role of sponsorship therefore necessitates taking account of the wider activity of sponsorship within its full scope. An opening into such a crucial perspective is offered by Dr Mark Mullaly's chapter, which considers the wider environment of project initiation and the impact of sponsors, or shapers, as key players during early deliberations. The chapter is derived from Mark's 2015 book, *Exercising Agency: Decision Making and Project Initiation*, published by Routledge.

Mark's work addresses the important area of decision making, particularly around the initiation of projects. Drawing on extensive and original research, it highlights the importance of *shaping*, or sponsoring organisational undertakings and the balance between process, politics, and agency in the initial shaping of new undertakings. Yet, the critical importance of the work is not in emphasising the role of sponsorship, but in drawing specific attention to the upfront *shaping* activities that influence and determine the success of projects. Initiation of projects is an area that has been recognised by practitioners as being of crucial importance to starting projects right, but it somehow also has managed to defy extended scrutiny by researchers.

Mullaly's research addresses many of the concerns and entanglements inherent in project initiation. Mark identifies the tension between established organisational processes, politics, and the need to shape the environment and make informed choices and good decisions. The role of shapers in starting a project right is crucial to improving the track record of project delivery. Mark's research offers fresh ways of considering decisions and choices and bringing the shaping part into the discussion about effective sponsorship, improved project initiation, and informed decision making.

Shaping for future progress

While sponsorship has been considered from a governance position, or even from the perspective of managing the business case (APM, 2009; West, 2010; APM, 2012), it is useful to employ a wider lens to re-conceive the issues surrounding project initiation in order to engender a deeper appreciation of success in the context of implementing change projects. Extending the distinction put forward by René Jules Dubos indicates that organisations could shape themselves through decisions that in turn shape our change projects, and inevitably alter the ways we organise for them.

Work that draws attention to the upward connection of projects to strategy can therefore play a key part in reframing our understanding of projects, and change in organisations.

In 1938 Chester Irving Barnard, an American business executive, published his landmark book, *The Functions of the Executive*. The book, which sets out to explain how organisations actually behave, was voted the second most influential book of the twentieth century in a poll of Fellows of the Academy of Management.

The book introduced a number of important concepts: It imported the idea of decision making from public administration into the business world, thereby introducing a preference for action, through the implied end to deliberation and the initiation of action. Moreover, Barnard put forward his view of organisations as systems of co-operation of human activity. He asserted that organisations are short lived because they fail to follow the two criteria necessary for survival: effectiveness and efficiency. Note however that Barnard's definition of organisational efficiency is the degree to which an organisation is able to satisfy the motives of the individuals. In his view, if an organisation can satisfy the motives of its members, while attaining its own explicit goals, it can sustain itself and develop through co-operation.

Accordingly, the co-operative functions of the executive were defined as:

• Establishing and maintaining a systems of communication;
• Securing essential services from other members;
• Formulating organisational purposes and objectives;
• Managing people, and ensuring they do their job.

The four functions of successful executives offer a good match with the roles of sponsors highlighted above. If shapers endeavour to execute the functions of the executives, whilst maintaining an interest in Barnard's version of organisational efficiency through the satisfaction of the needs of members of the project team, they can begin to leverage a new perspective on the initial definition and development of projects.

Decision-making and trade-offs are absolutely essential. Indeed, balancing Barnard's (1938) organisational efficiency of internal members with the effectiveness of achieving corporate goals can provide a more intimate synthesis of interests and co-operation that can be used as a basis for shaping, sponsoring and leading teams.

Barnard observed that firms, systems and even societies do not typically last a whole century due to the mismatch and tensions between organisational efficiency of participants and wider corporate effectiveness. As we embrace long-term thinking in our societal undertakings, it is useful to consider the need to balance the wider organisation with its internal people, and the possibility of invoking longer-term success through such amalgamation. The ideas put forward by Barnard's seminal work may yet offer a direction for channelling our interest in shaping new organisations (including temporary endeavours) that can offer lasting co-operation and meaningful translation and juxtaposition of corporate and personal concerns leading to enhanced, sustained, and combined achievements.

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Exercising agency: making a difference in how projects are initiated

Mark Mullaly

Defining agency

The words we use to describe concepts are incredibly important. Our word choices shape not just the meaning we intend to convey, but also the manner in which that meaning is interpreted by the recipient. Using a term like 'agency' represents a very specific and nuanced concept about how people interact within their organisations. The word has a number of potential meanings, however, so being clear about the intent underlying how it is being used becomes fairly essential.

For the most part, when we hear the term 'agency' we think of someone who does something for somebody else. The most common use in our everyday lives is a firm that provides services to other organisations or individuals, for example an 'advertising agency', a 'placement agency' or a 'real estate agency'. In legal contexts, agents act for us, as our representative, and are expected to negotiate the best agreement possible for us in representing our interests. In a legal context, we are the 'principal' and they are the 'agent'. The principal–agent relationship extends the power of the principal to the agent, where commitments made by the agent are binding on the principal. This idea of principal and agent is also the essence of 'agency theory', which has been the basis of a lot of research in organisational development and operations. Agency theory explores what is referred to as the 'principal–agent problem', in which the principal and agent, while in a relationship with each other, also have their own interests that they are also pursuing. All of these are represent different variations and nuances of how agency emerges in different contexts.

The meaning of 'agency' employed within *Exercising Agency*, however, is slightly different yet again. The term comes from philosophy and sociology, and expresses some important concepts about freedom, will, and self-determination. In this context, the focus on agency is less on doing something for someone else (although this

can be a factor) so much as understanding the degree to which individuals have the capacity to act independently and make their own free choices. Someone who can be said to act with agency is someone whose actions are self-motivated and directed, rather than being subject to constraint. These constraints could be imposed by others, or by the processes and structures of the organisation they work within.

The project shaper role

In the context of the book, *Exercising Agency: Decision Making and Project Initiation* the agency being exercised is that of the project shaper, the person charged with championing the initiation of a project. This is a role that was originally hypothesised by Mark Winter and Charles Smith, and one that was expanded on in the research represented in the book. In all of the organisations studied, the idea of project shaper was one that was universally present, at least informally. How this role was performed, however, varied considerably, and this is the focus of the book.

For some organisations, the role of project shaper was almost entirely constrained by the processes that existed within the organisation. In these instances the actions and requirements of the process determined which projects got initiated, and how this occurred. In other organisations, political forces within the organisation strongly shaped the project initiation process. In these instances, the actions – and the agency – of the project shaper were largely constrained by the political influence and actions (or neglect) of others.

In a few organisations, however, the most significant influence on decision-making effectiveness was the degree to which the person performing the project shaper role acted autonomously, making their own choices and taking their own actions. In other words, effectiveness was a product of the agency of the individual. It was a product of their being willing (and able) to freely act, to set their course and make their own choices about how to guide the project from idea to initiation. The ability to do so was less about the structure of the organisation, and more about their abilities and capacity as an individual.

It is this idea of agency that proved the most important and essential concept in the research that led to the book. It was a key determinant in how project initiation decisions were made in a significant number of organisations, but varied in how it was applied. For some participants, agency was the sole influence in decision making effectiveness. For others, the exercising of agency was able to compensate for inadequacies and political constraints and challenges within their organisations. And in the rare instances where there actually was effective process in place, agency was constrained as participants voluntarily gave up their capacity to act independently in favour of a consistent, uniform, and valued approach.

The role of process

Many organisations indicated that some degree of process governed how project initiation decisions were made. The challenge is that, for most, this process was not

terribly effective. In fact, only a very few research participants described an initiation process that genuinely worked well. In these instances, the process was not just formal and consistent, but it was also valued. This had an interesting impact on politics and agency, though. In these organisations, politics were perceived as counterproductive to the effective functioning of the process. What is more, individual respondents indicated that better results were obtained by working through the process, rather than around it. In other words, in the face of good process, politics, and agency were suppressed or constrained.

The challenge is what to do when faced with ineffective process. In a process-based environment, where there are formalised processes in place, the expectation is typically that they will be adhered to. When these processes are not helpful or relevant, however, ineffective decisions result. The right projects do not get initiated, the wrong ones do get started, and the journey from idea to actual agreement that we should do something is long, convoluted, and often painful.

The first requirement in getting better decision outcomes in such circumstances is to assess what is going on in the organisation. Where there are less effective – or downright ineffective – processes in place, we need to understand the dynamics around how decisions do actually get made. A key area of consideration is the level of formality and the degree of consistency by which the process operates. Formality and consistency are related, but they do not mean the same thing. A process can be informal, and yet consistently and regularly adhered to. At the same time, a formal process can almost never be used, resulting in a process that is chaotic and inconsistent.

We also need to understand how clear the decision-making process is, and the criteria that exist in determining how a project should proceed. In the absence of decision-making clarity, each opportunity tends to get evaluated on its own merits, in response to varying and inconsistent drivers, without clear indication of who will actually make the decision. Decisions might be made by a single decision maker, or in a committee environment; they might be made in the room, or develop or emerge by osmosis after the proposal for a project has been reviewed.

More importantly, we need to understand what to do when processes have a lack of formality and consistency. Where the process is inconsistently applied and insufficiently formal, this can be compensated for by the individual shaping the project. This effort needs focus on not just negotiating how a particular project will be initiated, but also demonstrating the value and importance of the project under consideration. Particularly useful in establishing credibility in this context is reinforcing the ability, track record, knowledge, and expertise of the project shaper supporting the project. The project shaper needs to demonstrate that the due diligence has been performed, relevant criteria have been considered and that there is a track record of performance that demonstrates likely success.

Harder to navigate is a complete absence of process where there is still a stated expectation of decision-making formality, or there is over-emphasis on process that does not lead to the creation of value. Both of these situations are challenging, although they exist for different reasons. The absence of process clarity means that

project shapers are shooting in the dark, trying to hit a target they cannot see. These situations are characterised by a lack of clarity around how the decisions are actually made, and an absence of criteria for the decision itself. What is important to realise is that over-emphasis on process that does not deliver value is often the result of an attempt to avoid decisions, or at least to maintain the freedom to be arbitrary under the guise of process. Both situations are far harder to navigate for the project shaper, and need to be approached with care.

For the project shaper to be successful in navigating an arbitrary or uncertain process environment, they will need to exercise their own influence or agency. This requires careful judgement and consideration of whether they can be successful in doing so. Up-front negotiation can be helpful, but in an arbitrary environment there is a risk that these expectations may still change. Agency can be exercised, working within the process where necessary and outside of it when appropriate, but there needs to be confidence on the part of the project shaper that they can successfully act independently without the fear of undesirable consequences. There will be times when this investment of energy and personal effort will be merited, and there will be circumstances when the potential risks outweigh any likely gains.

The presence of process should lead to a better and more effective approach to project initiation. Better process has been demonstrated to lead to better decisions. Compromised or ineffective process, however, can create significant – and sometimes insurmountable – hurdles. The project shaper needs to approach their role with eyes wide open, serving the needs of the project and organisation while still maintaining their own credibility, reputation and ability.

The role of politics

The influence of politics was far greater in a much larger number of organisations. Some research participants described a co-operative and collaborative environment, where project initiation decisions were a product of consultation and consensus amongst managers and executives. By contrast, other participants described the political environment of their organisations as toxic or dysfunctional. As can be expected, a lack of constructive politics resulted in extremely ineffective project initiation decisions. At the same time, even functional political environments had only a moderate impact on decision-making effectiveness. Political compromise can conspire to sub-optimise good decisions in favour of consensus and group acceptance.

Looking at project initiation decisions, there is often political influence at play. People have an interest in projects for the capabilities that they enable. Advocating for a project involves gaining support for a specific change in the organisation, one that requires buy-in and support. Approval of one project often comes at the expense of another project, one that someone else viewed as being equally (if not more) important. Where there is not formal and clear process in place, the way that these decisions are made is inherently through the use of politics.

The challenge here is that even where politics was viewed as functional and positive, it only produced moderately successful decision-making outcomes. Consistently

effective decision-making outcomes required not only a supportive political environment, but also the positive exercise of agency by someone in the project shaper role. Given that most organisations are inherently political in their project initiation processes, it is important to understand how politics plays a role.

A significant influence on project initiation decisions in environments where politics holds sway is the degree to which political behaviours are positive and functional. In such an environment, extensive consultation and collaboration is the norm. Ideas are socialised, views and perspectives are sought, support is weighed, and the degree to which favourable opinion exists is carefully calculated. Political decision-making environments that are functional work through consensus and mutual support; for a project to move forward, it has to be collectively viewed as valued and worthwhile.

The role of the project shaper is an extremely important one in a political environment. There needs to be a clear champion of the potential project. This is someone whose role is to actually introduce and socialise the idea, who engages in consultation and advocates for the value and relevance of the opportunity that the project makes possible. Where decision-making effectiveness is higher in project initiation decisions, this is a formal one, where it is fully expected that someone should be shaping the project.

Finally, the personal influences of the individual performing the project shaper role also make a difference. Unlike in process-based environments, where reputation, credibility, and a track record of performance were valued, here what needs to be emphasised are – perhaps unsurprisingly – political factors. The project shaper must be someone who engages in proactive communication, possesses political savvy, and leverages relationships in order to secure support for the project.

Caution needs to be exercised in political environments where the nature of the politics is dysfunctional or obstructive. In dysfunctional environments, constructive political behaviours are not present. Instead, people are seeking their own advantage and furthering their own agenda, at the expense of others or the organisation itself. In this situation, it is difficult – and at times quite dangerous – to be advocating for project initiation decisions. Where the project is not seen to further, or is counter to, the desired agenda of powerful political players, the project – and by extension the champion of the project – could well be challenged.

As well, where the project shaper role is informally recognised, it is more difficult to hold sway and gain effective decisions in political environments. The risk is that the project shaper becomes viewed as another political player, furthering the agenda of advocating their project at the expense of some other project or person. Caution needs to be exercised in determining whether to engage with the organisation and act independently in such situations. Individuals need to carefully assess their likelihood of success, and the consequences of potential failure.

Politics is the dominant means by which projects are initiated in the majority of organisations. In a functional political organisation, the project shaper is often a valued role where a person is seen as advocating for and guiding the discussion around an individual project opportunity. In dysfunctional environments, however,

the project shaper runs the risk of being just another political opponent. Proceed with caution in such circumstances.

The influence of agency

Politics and process play a role in organisations, and they manifested different degrees of influence in how project initiation decisions were made. What was most significant, however, was that of agency. The willingness, ability, and freedom of those in the project shaper role to act in support of their project could, on its own, result in effective decisions. More importantly, the agency of those in the project shaper role was also able to compensate for political environments that were only moderately effective, helping these organisations to still make effective decisions. Even in dysfunctional environments, agency could make some difference, although care and caution was required in determining when and how agency was exercised.

In endeavouring to create an environment that produces consistently effective project-initiation decisions, the influences of process, politics, and agency are not mutually exclusive. There is an interaction between each of these dimensions that helps determine how well decisions do in fact get made:

- Where process works, the very consistency and rigour that makes process effective also constrains the relevance of agency. Actors who theoretically should have a great deal of organisational influence and autonomy willingly give up their freedom where process is seen to produce better results.
- Politics can be partly effective on its own, but is most consistently successful in supporting project initiation decisions when augmented by the influence of agency by the project shaper. Agency is able to compensate for political challenges and overcome inadequacies and organisational dysfunctions in securing better decisions.
- Agency can have influence on its own, but requires a strong and capable project shaper who is willing to act alone in order to further the interests of the organisation, particularly where neither politics nor process are seen to be effective.

Effective project initiation decisions are influenced by process, politics, and agency. While these forces can act in isolation, they more typically interact with each other. The influence of one force can augment, compromise or constrain the actions of the others. What is important in all of this is the insight that this research has provided in helping those who support the initiation process to help make better decisions. Doing so requires an accurate assessment of the organisational environment, a sense of our own individual capabilities, and a willingness and determination to act at all times in the best interests of the project and the organisation.

In performing the project shaper role, it can be argued that a person is acting on behalf of another, and working to further the interests of the organisation. In the research, this was unquestionably the case. What was particularly important in

how participants exercised agency was that they did so not to benefit themselves, but to ensure that a good decision was made on behalf of the organisation. It is not the power of the individual, or the idea of a principal-and-agent relationship, that is key here. Agency is the degree to which project shapers are able and willing to independently act to get a project approved, working within, around or despite the structure and politics of their organisation. What makes agency such a powerful concept is the idea that we as individuals can and do make a meaningful difference. Outside of – and often despite – power, politics, and process, it is our own sense of self and our willingness to make choices that ultimately makes the most significant difference in how projects get started.

8
COLLABORATION

The essence of collaboration

Darren Dalcher

It is sometimes said that competition makes us faster, but collaboration makes us better.

The *Oxford English Dictionary* defines collaboration as 'the action of working with someone to produce something'.

While collaboration enables two or more parties to work together on a shared purpose in order to attain a particular benefit, implying a good fit with project practice, the various project management bodies of knowledge and IPMA's newly released Individual Competence Baseline say little about what it is and how it may apply to projects.

Major initiatives and projects often require collaboration across a team, or between different teams and organisations in order to enhance competitiveness or performance. Collaborating teams are often large, virtual, diverse, specialised, and distributed. Collaboration can therefore take place in one of two forms:

- Synchronous, where the team interacts in real time (often as a co-located team housed to facilitate physical collaborative and joint working in close proximity, or electronically, via online meetings, instant messaging, Skype or other joint working platform);
- Asynchronous, where interactions are time-shifted, geographically dispersed, or are simply designed to allow a group to collaborate at times that suit individual participants. Shared documents, workspaces, and Wiki pages allow such teams to work together. More recent examples include crowdsourcing efforts, combining the best of crowd participation and outsourcing to tackle complex, detailed and demanding assignments by groups of interested participants who are able to divide the work and focus on achieving the wider purpose through this division of labour and expertise.

Standardising collaboration

The British Standards Institute has an established standard on Collaborative Business Relationships. BS 11000, which forms the basis of the international ISO 44001:2017 standard, notes that in business, as in other walks of life, teamwork can pay real dividends, and companies that work together can often achieve much more than they can achieve alone.

The standard advises that collaborative business relationships can take many forms, including: (private or public) strategic business partnerships, supplier relationships, consortia and alliance partnering, shared services, collaborative procurement, divisional relationships, and client or customer relationships. In short, many of the arrangements utilised in complex or large projects would qualify as collaboration initiatives.

BS 11000 provides the strategic framework required to establish a successful collaboration and enables organisations to focus their effort through an eight-stage approach covering the following steps:

1   Awareness: Identifying a clearly defined rationale for proceeding in accordance with the organisational business objectives.
2   Knowledge: Establishing a platform of knowledge as the basis for building the relationships.
3   Internal assessment: Understanding own capabilities and recognising strengths and weaknesses, before looking to define what is expected of others.
4   Partner selection: Identifying and selecting suitable partners by assessing the performance of each partner organisation as well as the potential match and the ways in which the partners could work together. This phase can also be used to identify internal groups that could work more closely together.
5   Working together: Establishing the protocols and formal foundation for working together to mutual benefit, including contractual frameworks, agreements, roles, and responsibilities.
6   Value creation: maximising the value derived from the partnership by creating an environment that encourages the consideration of new ideas and alternative approaches.
7   Staying together: Implementing mutually agreed measures to help maximise the effectiveness of the partnership. Maintaining the partnership should be cultivated through fostering continuous improvement and the development of dispute resolution processes.
8   Exit strategy: Defining an exit strategy at the outset of the collaborative relationship. While this is useful in reinforcing the roles during the collaboration, it also ensures that the ultimate disengagement at the end of the collaboration is mutually respectful.

The first three stages focus on strategic aspects of the relationship, while the next two address the phases of engagement, and the remaining three are concerned with the management of the relationship.

Collaborative working

The Institute for Collaborative Working, established in 1990 as a not-for-profit joint initiative by UK government and industry, aims to have collaborative working recognised as a fundamental business discipline. The Institute's role is to help organisations of all sizes, in all sectors, to build and develop effective competitive business relationships based upon a collaborative approach. It aims to promote the use of the BSI standard as a consistent framework, which can be scaled and adapted to meet particular business needs through the use of a structured methodology to underpin successful business relationships.

The advantages of formalising the standard process enable better engagement, stronger processes, improved risk management, while offering a platform for skills enhancement, and sustainable relationships and a neutral starting point that underpins effectiveness and value. The framework can thus be used as a collaborative benchmark, a basis for structuring relationships, a pan-industry perspective and indeed, as a public and private sector foundation for collaborative process and systems.

Collaboration in practice

In practice, there are many challenges to effective collaboration. For example, as the number of participants increases, the tendency to collaborate and share diminishes leading to poor communication and loss of interest and focus. Larger projects also bring multiple participants with different cultures, different groups of stakeholders, conflicting expectations and shifting priorities. However, some projects are delivered under far more extreme and demanding conditions.

The chapter by Alejandro Arroyo and Thomas Grisham focuses attention on some of the projects conducted in more exacting settings. As if collaboration between organisations were not difficult enough, the authors remind us that some undertakings are far more perilous, volatile, and uncertain, thereby requiring an enormous concentration on the mechanisms and structures required in order to make collaboration happen.

The chapter draws on the authors' book, *Leading Extreme Projects: Strategy, Risk and Resilience in Practice* published by Routledge. The work explores the challenges, obstacles, and techniques associated with delivering large projects in some of the most challenging environments and economies in the world. The authors draw on 19 case examples of projects conducted under extremely demanding conditions, highlighting the strategic challenges they faced, including cultural, social, political, and security risks, fraud, corruption, extreme climates, fragile supply chains, and fears of terrorism and insurgency. The cases also highlight the need to strengthen partnerships and collaborations under such conditions, and the requirement to engage with indigenous concerns and communities, and develop partnerships that can withstand the raft of challenges.

Leading collaborations

Arroyo and Grisham's (2017) key contribution is in mapping out the importance of clear leadership under such extreme conditions. Their chapter develops the concept of a Collaborative Project Enterprise (CPE), whose leader is responsible to the customer, or the public, for the successful planning, delivery, and operation of the required assets. Such leaders may have limited control over all participating partners, and hence the importance of the partnership and collaboration agreements, and the structures and intentions that can be tested to the extreme in demanding settings. Leaders are normally considered essential for successful collaborations, and indeed for most successful enterprises. When collaborations entail specially demanding and challenging conditions, the role of leaders in securing and delivering sustainable and acceptable solutions becomes even more critical.

Equally important is the publication of the cases that underpin the discussion in the book. Opportunities for engagement with cases of actual project practice are rare and the authors have enabled project practitioners, students, researchers, and educators a glimpse into some of the challenges and difficulties encountered during such undertakings.

Alexander Dumas asserted that 'he who has a partner has a master'. Recent experiences in crowdsourcing initiatives and major research partnerships suggest that many of the great discoveries and achievements require working in collaboration with others, without having a master as participants can self-govern and co-lead. Completing projects under challenging conditions requires even greater levels of engagement, trust, and support between partners. Maintaining relationships under challenging conditions is not so much a question of how you see your partners, but whether you can see your partners and understand their concerns. Developing effective structures and governance for collaborations, recognising the value of relationships as opposed to identification of masters, recognising the shared needs and purpose, and developing leaders that can guide and support, consult, and direct will remain essential to delivering meaningful projects under both normal, and extreme conditions. These measures are also required to ensure the legacy and benefits of projects that can be delivered through co-operation with the relevant communities of users, stakeholders, and participants, to ensure sustainable and meaningful transformations. Ultimately, by recognising the necessity to collaborate and the pertinent needs and expectations of all participants, we can begin to build stronger and better collaborative partnerships, thereby extending our reach into more demanding terrains, environments, and contexts.

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Leading extreme projects: strategy, risk, and resilience in practice

Alejandro Arroyo and Thomas Grisham

Imagine a project manager leading a consortium for an integrated gas field programme in the Peruvian rainforest. A programme that includes construction of an energy site in the Americas that involves Peruvians, Argentines, Swedes, and Americans. It is a huge programme in the Peruvian rainforest requiring a complex logistic operation carried out by three different consortia on a tight schedule, and in demanding topography. It includes new infrastructure, ocean shipping, port operations, ground transportation, aerial operations, and river barging. It also includes indigenous communities, politics, drug trafficking exposure, and 'shining path' events (Shining Path is a brutal Maoist political group in Peru).

All of these elements are components of Corporate Social Responsibility (CSR), and they play an important role in all projects, especially global ones. People have discussed and debated ethics for thousands of years, and the relationship between capitalism and socialism. Needless to say, the debate continues and there are as many visions of CSR as there are people. For example, the USA passed the Foreign Corrupt Practices Act, which forbids bribing a foreign official. If an organisation is found guilty, the CEO goes to jail, in theory. But, a criminal offence in the USA is an accounting issue in Germany, where bribes were, at one time, a tax deduction. Thus the rules and the application of the rules vary widely, and the rules in the Peruvian rainforest are far more flexible than in the Western world. Can you imagine leading such an endeavour?

In a new work, the authors use case studies to demonstrate what was actually done on a number of extreme projects such as the one described above, to illustrate the challenges, and to recommend steps that can be taken to help diminish the impact upon future projects. We have explained and developed the structure of each case study in detail but the names of the actual participants have been changed. By extreme projects we mean those conducted in demanding physical, political, multi-cultural, multi-country, multi-organisational global environments, and where

often the operational windows turn out to be as tight as they are unpredictable. Or as Cockburn and Smith write in their chapter, VUCA projects that are volatile, uncertain, complex, and ambiguous. The case studies encompass the Americas, Africa, and Asia, and cover the extractive industries portion of the author's experience as well as transportation infrastructure-related projects. Examples of issues, which the authors have encountered, often, in all sectors of our global economy include:

- JV or alliance partners with different goals and objectives.
- Suppliers and vendors with questionable ethics and hidden agendas.
- The importance of effective logistics.
- The need for political fluency and competence.
- The need for cultural fluency and competence.
- The need for strong leadership.
- The need for multidisciplinary teams, and interdisciplinary leadership.
- The importance of principled leadership.
- A strong understanding of local communities and societies.
- A lack of infrastructure.
- A lack of operational monitoring and financial control.
- Poor communications.
- A lack of concern for the environment.

We consider it critically important to lead projects from conceptualisation, through design and construction, and into operations, utilising what we call Collaborative Project Enterprises (CPEs). A CPE is naturally constructed of diverse interdisciplinary teams with a variety of organisational goals. Figure 8.1 shows a normal sort of CPE for a global infrastructure project. The CPE leader, what is shown as the Public Private Partnership (PPP) Manager, represents the organisation that is ultimately responsible to the customer, or in this case the public, for the successful planning, design, construction, commissioning, and operation for the asset.

It is easy to imagine that the goals of the Equipment vendor from Brazil would have a short-term transactional goal of making a profit on the work, and any long-term interests would only occur if they saw the possibility of long-term repeat sales. The PPP Manager on the other hand would have a long-term goal of ensuring customer satisfaction not only for this project, but also for similar projects for other customers. Our experience is that reputation, or brand value, is a spectacularly important asset for global organisations such as this one. Similar considerations exist for the financial group. The Dubai Bank may have a short-term need for profitability, where the government of South Africa would likely be concerned about the long-term sustainability for the endeavour.

The CPE leader in such cases has little contractual authority over most, if not all, of the organisations shown. In fact, often we see written agreements specifically preclude communications between organisations. Thus the challenge is to inspire the desire for people to follow because of the characteristics, and behaviour of the
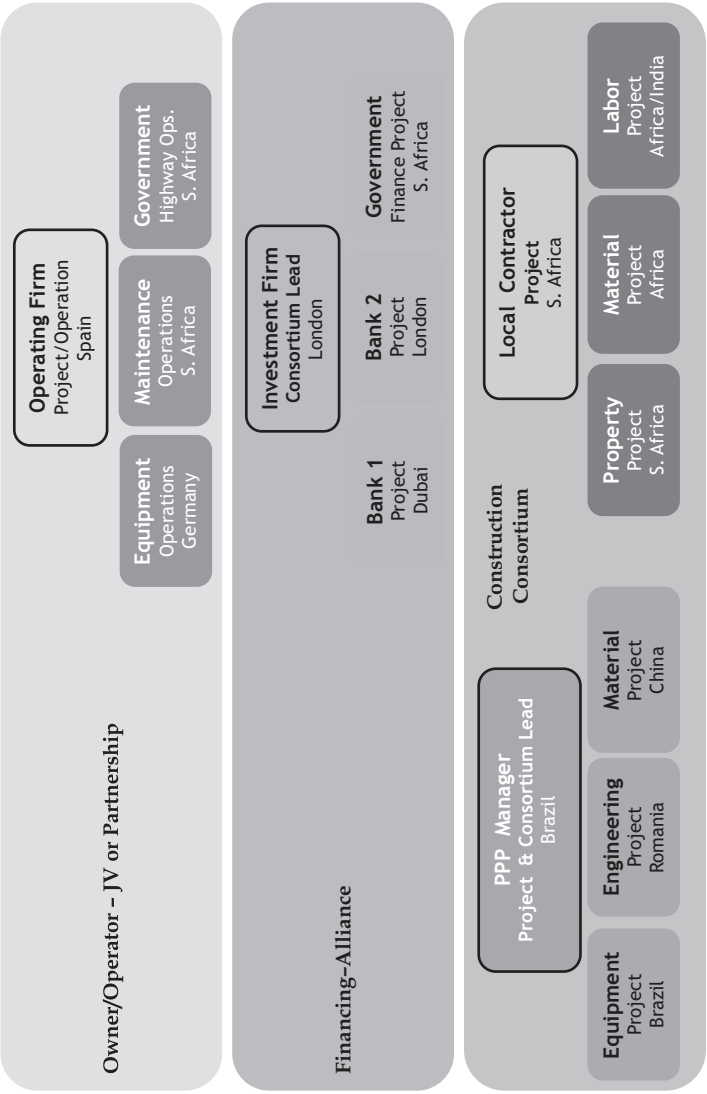
FIGURE 8.1 CPE for a global infrastructure project

leader. This is not hypothetical, we have seen people pull together such diverse teams and lead them toward a common goal as if they were members of the same organisation, the enterprise portion of CPE. Lead as if it were a temporary project organisation.

Many have written about the importance of considering the 'business case' when initiating a project, and of transferring the project to operations when the asset is completed. But, from experience, this is problematic as seldom is knowledge passed from business, to PM, to operations effectively, if at all. In fact, we spend much of our time in corporate education trying to help people bridge this gap. And, all three components must be integrated on extreme global projects. If this is not done, the risks are magnified, rather than mitigated, in environments that are fluid in the best of circumstances.

These case studies describe projects in extractive industries, where many of the risks are different from the medical, finance, and IT sectors, while many of the issues are common. One easy example is the failure to adequately consider the long-term implications of the product life cycle throughout the project. Many, perhaps most, of the extreme projects show the damage that short-term thinking and planning can have on global projects. If short-term quarterly financial metrics drive behaviour on projects that may have a product life cycle of decades to develop, plan, execute, and operate, bad decisions proliferate. The authors have seen this in all sectors, not just extractive industries. We continue to describe, graphically for our customers, how important operational thinking is during the planning and construction of physical facilities.

Finding a leader for a CPE is not easy. Extreme projects are a mixture of interdisciplinary skills, politics, cross-cultural conflicts, language barriers, social issues, and often safety. Projects in Colombia while the FARC were still operating required that walls had to be built around the project site, protected by para-military 24/7. People coming to work were carried in by helicopter, for it was too dangerous to use ground transport. So safety is often a significant issue, as is understanding of the conditions in the country. Or think about logistics in Africa where local 'toll gates' are frequent and potentially hostile for trucking. Imagine the skill sets that are needed for a leader. Technical competence is a good thing to have, but is easily overshadowed by the environment in which the project is being undertaken.

Experience identifies ways to offset the existing gaps between technical skills and the hostility of a remote spot. This may be based on cultural compatibility between the expats and the locals, even if planning and training are seriously considered well in advance. A cultural match is as relevant as the type of technology to make a project work despite the fact that too often it is regarded as a secondary aspect. Many executives worldwide tend to erroneously underestimate its importance, as its symptoms never come up at an early stage. Examples on this sort of gap leading projects to face inefficiencies and deal with corruption practices turn out to be very vivid in a silver mining project case study in northern Argentina, a bi-oceanic logistic corridor case study between Europe and South America, and an operations audit case study in the Peruvian rainforest on the oil & gas sector.

Cultural matching is a great motivator and works beautifully in terms of teamwork as in a Canadian Arctic coastal and inland navigation-focused project, as well as an iron ore mining project in Cameroon. These two project settings offer significant contrasts in physical restrictions, tight operational windows, and cultural differences. It is amazing to see, in the twenty-first century, that well-reputed and knowledgeable global corporations keep on making the very same operational mistakes over and over without realising that the secret, in the authors' experience, lies more in an early identification of the subtle details that are often hidden in a project consultation process. Like a gold mine project in Costa Rica, or a preliminary social task aimed at achieving a social licence to operate on a gold mining project in Bolivia. Even more so than what is supposed to be a finance-based solid corporate strategy.

A number of projects in Brazil that we participated in clearly demonstrate some sort of divorce between those making decisions at the top of the organisation, and the ones in charge of executing the strategies on the field. The operational challenges are too often so formidable that projects run aground, and their executives fade away without even having the chance to learn something they might make good use of in the future. Conversely, a gold mine project in Guyana provides a good example of the way operational barriers may be overcome by trial and error. Far from ideal, it may work in extreme settings if the field personnel learn to adapt, and the top management to learn from their initial limited vision.

We suggest in a global economy that a CPE leader must be curious, open-minded, compassionate, adaptable, and able to inspire the desire of the CPE stakeholders to follow her or him. It is simply not possible to write, or enforce, contracts that construct the collaborations that must occur for a project to be successful. In fact, simply defining a common definition of success will challenge the weak of heart. Eighty to ninety percent of the skills needed are interpersonal in nature, not technical, and not process. Process is important, for if properly done it will create enough time to permit the CPE leader to focus on the other issues. Such a person also needs to be accomplished at negotiations, and at dealing with conflict. On all projects, not just extreme ones, there will be conflicts and changes. A CPE leader can build trust and collaboration by showing how to deal with the problems, fairly and humanely. Most importantly, a long-term view is essential. People like Jeff Immelt have turned away from the distraction of quarterly metrics, for good reason in our view. Through our new work and the case studies, we, hopefully, add another voice to this chorus.

9
STRATEGY

Thinking in patterns: problems, solutions, and strategies

Darren Dalcher

Humans have long been fascinated with patterns in nature and in socially constructed work and cultural environments. Consequently, the abilities to identify patterns and make sense of reality have been highly prized.

British philosopher, social and political theorist, Sir Isaiah Berlin highlighted the central role of patterns:

> The pattern, and it alone, brings into being and causes to pass away and confers purpose, that is to say, value and meaning, on all there is. **To understand is to perceive patterns**. . . . To make intelligible is to reveal the basic pattern.
> *(1997; p. 129)*

Patterns are regular and intelligible forms or sequences that are discernible in the way that events unfold, or that something happens or is done. Patterns can thus be described as perceptible regularities in nature or in man-made (artificial) designs.

The pattern movement

Christopher Alexander, an influential, albeit controversial, architect and design theorist advanced the study of patterns over a series of books documenting his observations on the relationship between form and function and the art of design.

In *Notes on the Synthesis of the Form*, Alexander defines the process of design as 'the process of inventing things which display new physical order, organisation, form, in response to function'. Alexander explains that form is adapted to the context of human needs and demands that has called it into being. However, the search

is for creating a kind of harmony between a form, which is yet to be designed, and a context, which cannot be properly described. The adaptive process proceeds in a gradual, piecemeal fashion allowing an organic design. The form is moulded not by designers, but by the slow patterns of changes, which avoid the traps of premature preconception of ideas. This allows designers to create new concepts out of the structure of the problem, resulting in a form that is: well adapted to its context, non-arbitrary, and correct. The book has proved influential in multiple disciplines including architectural design, civil engineering, and software development: *Industrial Design* magazine described it as 'one of the most important contemporary books about the art of design, what it is, and how to go about it'.

Thirteen years later, Alexander, together with his team, released a book focused on architecture, urban design, and community liveability, emphasising the role of patterns (Alexander et al., 1977). The book remains a perennial best seller in architecture and has spawned research and new developments (including the WIKI architecture) in many other disciplines. *A Pattern Language* revolutionised the way problems are conceived and considered. The basic rationale asserts that users are more sensitive to their own personal context and needs than professional architects. Delivering a pattern language, encompassing timeless constructs in the form of 253 patterns, enables participants to develop a community and work with their neighbours to improve their context, or neighbourhood, design a house, or a wider community, and collaborate on bigger projects.

Combining different established patterns forms a kind of language, with each pattern offering a word, or thought, in the wider context needed to address a need and deliver a new solution. Sequences of individual patterns, akin to sentences, can deliver complete buildings and environments that work together. The pattern language can empower individuals to design relevant solutions that address their own concerns, reflecting the preferences of the relevant community.

The principles of employing a pattern language were documented in an earlier book, *The Oregon Experiment*, which records the experience of an environmentally active community engaged in shaping and constructing its own environment in a departure from a more centralised form of planning and control. The experiment carried out at a university in Oregon encouraged users to prioritise and develop their own community. Alexander and his colleagues identified the *organic order* needed to balance the needs of the part with the needs of the whole, so that both the importance of the part and the coherence of the environment as a whole are maintained. Growth and development, they reasoned, are often hampered by the inability to manage the subtle balance needed for maintaining this organic order.

> This is a fundamental view of the world. It says that when you build a thing you cannot merely build that thing in isolation, but must repair the world around it, and within it, so that the larger world at that one place becomes more coherent, and more whole; and the thing which you make takes its place in the web of nature, as you make it.
>
> *(Alexander et al., 1975; p. xiii)*

Designing with patterns

The basis for developing the pattern language concept flows from the appreciation that many medieval cities appear to have been constructed in attractive and harmonious fashion. Alexander et al. explain that the equilibrium is maintained by acknowledging an important duality and the balance of building to existing standards and local regulations, whilst allowing architects sufficient space and autonomy to adapt to a particular situation and the local preferences and priorities of the users.

For added trust, patterns are tested in the real world and are reviewed by multiple practitioners for both aesthetic beauty and practicality. They include a provision for future modifications and adjustments, recognising that needs and preferences change over time requiring adaptation in strategy and approaches. Communities revolving around pattern languages have emerged and organised in other domains including software development, which has witnessed a centrally structured definition and cataloguing efforts of proposed new patterns by an active community.

Patterns can be combined and repeated to create sequences that support and enhance other patterns, thereby enabling larger architectures that underpin communities and their needs, and deliver long-term satisfaction as part of a balanced and well-considered approach.

Strategy development and patterns

One area that has not been particularly well addressed through patterns revolves around the development and delivery of organisational strategy.

The majority of strategies fail to be implemented and deliver the benefits envisaged at the outset. Put plainly, most strategies are not fit for purpose. Using Alexander's terminology, strategy development is failing to find the harmony between a form, which is yet to be planned and delivered, and a context, which has not yet been defined, and is bound to change before the form is even delivered. Moreover, strategies cannot be devised in isolation from the world surrounding them. Indeed, observing the same tensions, French general and statesman, Charles de Gaulle, noted that you have to be fast on your feet and adaptive, or else your strategy becomes useless.

Christopher Alexander was concerned about the duality embedded in refining the balance needed for the organic order, encompassing the importance of the part, in the context of the wider environment.

> But in practice master plans fail – because they create totalitarian order, not organic order. They are too rigid; they cannot easily adapt to the natural and unpredictable changes that inevitably arise in the life of a community.
>
> *(Alexander et al., 1975; p. 18)*

Attempts to rethink strategy tend to focus on the development of new methods for conceiving and refining strategy, often ignoring the essential aspects of strategy development. Such attempts also disregard the key criticisms expressed by Alexander

and his colleagues. This chapter endeavours to reverse this residual neglect by introducing a new framework and approach for thinking about strategy. Patrick Hoverstadt and Lucy Loh strive to bridge the gap between strategy development and strategy execution by challenging and rethinking many of the aspects taken for granted and agitating for a new and improved paradigm. The chapter developed from their book, *Patterns of Strategy*, published by Routledge (Hoverstadt and Loh, 2017), offers a unified approach to viewing the dynamic nature of strategy through the application of patterns as a revolutionary strategy. They encourage a view of organisations as dynamic and active, in direct competition with other players in the environment.

Hoverstadt and Loh position strategy development as an emergent process that influences and is influenced by the business ecosystem. The book offers descriptions of 80 common patterns of strategy enabling the development of strategy as a series of manoeuvres within an overall aim to improve the strategic outcomes. The patterns enable the organisation to devise different approaches for collaborating and competing within the wider organisational landscape.

Towards rethinking the role of strategy

Powerful strategies are but the beginning. Michael Porter observed that a strategy delineates a territory in which a company seeks to be unique. Yet, companies typically realise only a meagre proportion of their strategy's potential value.

Hoverstadt and Loh offer a new perspective to re-consider the fluid and complex dynamics of strategy formulation and the longer-term aspects of alignment and delivery through effective and meaningful execution. Their focus on manoeuvres further introduces three core dimensions of *fit*, *time* and *power* enabling organisations to sustain, alter, or improve their strategic position in order to create, sustain or enhance their advantage.

Projects link to, emerge from, and pertain to organisational strategies and plans. The main contribution of Hoverstadt and Loh's work is in challenging the ways we think about and relate to organisational strategies. Bringing patterns into the conversation could offer a potential game changer for understanding organisations, strategy, and change.

Developing a deeper and more meaningful understanding of the dynamics of strategy and change is likely to impact directly on the space for projects and programmes in the strategic context. Patterns of strategy could offer the vocabulary and perspective needed to engender a new and more meaningful conversation about delivering promised benefits and identifying strategic progress. Coupled with Alexander's themes of organic order, form, users (stakeholders), context, and additional ecological concerns about the dynamics of co-operation and competition, the work might encourage new ways of addressing and making sense of the areas of strategy, execution, and the dynamics of change.

Ultimately, invoking the idea of patterns offers a new richness in addressing the dynamics of natural processes. Intriguingly, patterns often point to a contrast

between two intertwined features, as partially acknowledged by Alexander. Rules and laws often reflect the wish to transition into an orderly state through legislating for change and delivering a detailed plan that focuses on the delivery of change at the individual level. In contrast, the environmental influences and dynamics of the whole often provide a lively context that responds, reacts, adapts, and otherwise complicates any intervention plan. Delivering and executing requires an identification of the organic order between the two aspects by defining the long lost harmony between form and context. The secret simply lies in attaining and sustaining that harmonious balance.

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Bridging the gap: effective transition from strategy development to strategy execution

Lucy Loh and Patrick Hoverstadt

Overview

There is fairly consistent survey evidence that current approaches to strategy devel‐
opment fail to deliver the planned strategic change in the majority of cases and we
argue this shows they are intrinsically broken. There is a trend in the strategy litera‐
ture and amongst strategists to blame this failure not on strategy itself, which could
feel rather close to home, but instead to blame the failure on 'execution'. From
this viewpoint, the strategy itself is clear and adequate and it was just the projects
to implement change that failed and, by implication, so did their project managers.

In this chapter we take a different viewpoint. We argue that what destabilises strat‐
egy execution projects is often the flawed strategy that feeds into them. Specifically,
the strategy can be flawed in that it fails to take into account changes in the strategic
environment that renders the strategy defunct. Conventional strategy also fails to take
into account the direction and momentum the organisation is already locked into.
We highlight some of the reasons for that and then go on to present a radically new
model for developing strategy, and for managing its execution: a key challenge for the
project and programme managers who are charged with this. The *Patterns of Strategy*
approach is different from existing approaches at both conceptual and practical levels.
It gives a much richer way to explore strategic options at the strategy development
stage, and it generates a very precise implementation plan to inform the execution
stage, as well as metrics that can be used to measure the effectiveness of the deployed
strategy. So the use of a very different paradigm of what strategy is, and how it is
defined, drives, and enables a different paradigm for managing its execution.

How *Patterns of Strategy* is different

Most conventional strategy approaches fail to recognise other organisations as actors.
When they are described in strategies – and that is not often – they are positioned

as static and passive. They are seen as static in that that their current position is a given, rather than simply being a point in time, and passive in that there is little or no consideration given to their potential to act, and to act with implications for us. In game theoretic terms, these approaches fail to recognise that other organisations have independent will, which they can and do exercise, and that in reality the interactions between organisations are complex and dynamic, unfolding like a drama or dance. Since these approaches do not recognise the agency of other organisations, they define strategy as what we want our organisation to become, based on the assumptions that we can define what we want, and that we can get there without let or hindrance from others. This second assumption is wrong. Other organisations are actors; they have options in what they do and how they do it, and their choice and execution of option defines the strategic space in which we operate and affects what we can accomplish. Once it is written down in this way, it is of course apparent that it is critical to model and understand the possible decisions and actions of others in our environment, but conventional strategy approaches do not do this. The interventions and actions of those other actors can impact or totally derail the strategy execution itself. In these circumstances, strategy execution can get the blame for inadequate strategy definition, a real problem for programme or project managers. A range of studies and surveys suggest that, conservatively, more than 90% of strategic plans generated by conventional strategy approaches are not implemented. While there is considerable variation in the assumptions about what constitutes a strategy and what constitutes implementation failure, even the most sanguine indicate failure levels around 70%, and that makes the levels of failure very significant indeed.

Patterns of Strategy is a new approach to strategy development developed by Patrick Hoverstadt and Lucy Loh. In this approach, it is fundamental to treat actors as having independent will. In game theory, an actor is an individual or organisation with decision-making capability, including the ability to create and execute a range of different options in any particular context or situation. Game theory examines what happens when my option A interacts with your option B, or my option A triggers a response from you of option C. It's the interaction between my actions and your actions which creates the game, a constant dynamic as each actor seeks advantage for themselves. *Patterns of Strategy* models how we interact with key actors around us, explores what options each actor has, and how the situation plays out, depending on which options are chosen by each actor. So instead of just analysing some factors (strengths, threats, resource, market position, etc.), it looks at the relationships between the organisations acting in the relevant strategic arena. It is the interaction between organisations that is the underpinning driver of strategy, as significant changes on the part of one actor will have an impact on the others. It looks at strategy as the orchestration of a dance: I move, you move, I move. And once the mechanism by which these interactions drive each actor are understood, then they can be managed in a purposeful way, and this is at the heart of this way of thinking.

Many traditional strategy approaches treat strategy as a mental construct, a document or some model or a plan, as a set of thoughts and decisions, and Mintzberg described: 'Strategy is a pattern in a stream of decisions'. This is necessary but insufficient – strategy is what is realised, what actually happens with real people and real organisations: which actors take which decisions and act in which ways and with what impact. It is about the drama that actually unfolds. This is much closer to Mintzberg's revised definition: 'Strategy is a pattern in a stream of actions' – and this is much closer to the clarity and specificity which is needed by the programme manager who is drawing together threads of strategy execution. This approach treats strategy as a sequence of manoeuvres that each actor executes, where a manoeuvre is about deployment of actual resource to different points of focus at different time points and speeds, not just a line in the plan but in reality. It has three core dimensions: fit, time and power, and strategic manoeuvres alter each of these dimensions to create and sustain advantage. The manoeuvres chain together in a sequence to make a pattern – a pattern of strategy.

There is another important aspect of the approach. Your overall strategy is likely to affect multiple actors because you have multiple strategic relationships, with customers, partners, competitors, regulators, markets, and so on. All organisations depend on co-operation and collaboration in some part of their activity. No organisation is purely competing, no organisation is purely collaborating. So it is vital to have a strategy approach that can deal effectively and equivalently with the challenges and opportunities of both collaboration and competition. In many strategic situations, the actors have to collaborate in some way and you need ways to think about these situations in strategic terms. The approach looks at strategy through a frame of strategic relationships, which can be competitive, collaborative or a combination of the two, and is equally applicable to all of these.

Patterns of Strategy: informing strategy execution

Once we see strategy as being a set of manoeuvres being played out between real actors with real resources, then identifying what is required in the implementation plan becomes very concrete and straightforward. So too does monitoring strategy execution and measuring its performance, because you define metrics against each of the manoeuvres: have you changed yourself as you intended, has that had an impact on the other actor or actors, and has that in turn brought you the advantage you wanted? We define strategy as changing your fit with the environment to your advantage by differential use of power and time. The critical focus of strategy is to improve your fit, either by changing yourselves to better fit our environment or by changing your environment to be a better fit for you. You assess the interactions between you and the other actors, and also the interactions between other actors that do not involve you, and in this way get rapid and direct feedback through the defined metrics on whether the strategy is working as intended and improving your degree of fit.

Patterns of Strategy has three dimensions of fit, power, and time.

Fit

The nature and attractiveness of our couplings with other actors in our environment

Power

Differentials in our resource and capability, and their deployment, relative to others

Time

Differentials in our speed and rate of change relative to others

These dimensions break down into six elements, which we use to define manoeuvres.

To change your fit, you develop a sequence of strategic manoeuvres, and each strategic manoeuvre requires a change in capability to deliver it. Defining these manoeuvres makes it clear on what exactly in your organisation you need to change and by how much. The approach is systemic, and assesses the differentials between the actors against six different elements, within the core dimensions of fit, time, and power. As it uses differentials between the actors, it requires you to define exactly what needs to change, to change your fit with the environment to your advantage. So the development of manoeuvres comes with a high degree of precision: not just a vague 'be more agile' type of statement, but instead: 'be this fast, in that business operation' and have 'x amount of resource deployed to Operation A which could also deliver Operation B and be moved there with y days' notice'. In addition, the manoeuvres have an inherent sequence, which informs the strategy execution plan.

If you need a faster cycle time, for example, the precision of what change and in what cycle, and by how much and by when, is detailed enough to define the key features of an implementation plan. If we see organisations as a set of capabilities, then the strategic plan is to develop and improve the performance of one or more capabilities. Some manoeuvres can simply be executed without any organisational change, but many will need some sort of change in the organisation – a redirection of existing capabilities, increasing or decreasing some existing capabilities or the building of new capabilities, and here we are in the heart of programme or project management, defining a strategic implementation plan to bring these capability shifts about.

The articulation of strategy is two-fold, both in its definition and also the order in which things are chained together. The strategy directly and easily generates the strategy execution plan as a sequence of changes in capability, with clear metrics on which capabilities need to change, by how much, and when. This gives early validation of the strategic option that has been chosen, testing whether we are capable of delivering the strategy, given the degree and rate of change it requires.

Patterns of Strategy: defining how strategy performance will be assessed

It is important to be able to monitor progress of the capability shifts. So, are you now 'this fast, in that business operation'? Are you now able to shift 'x amount of resource deployed to Operation A which could also deliver Operation B with y days' notice'? These are the output indicators, of course, and are directly in the control of your organisation. But our definition of strategy is changing your fit with the environment to your advantage by differential use of power and time, these output indicators give you some leading measures but do not provide a full measurement picture. To understand if you have been successful in changing your fit, you also need outcome indicators, which assess the external impact of your internal capability shifts, the impact on your fit and your advantage.

As well as defining output metrics, the approach also generates outcome metrics, indicators about you and the other actor. In our experience, this focus on the other actor as well as you is unusual but, given all we have said about the dynamic interactions between you and the other actor, it is critical. We generally look at two types of outcome indicator about other actors. One is monitoring for evidence of the other actor being forced into reacting to delivery of your strategy. The other recognises that even as you are planning and changing, so are they. So the other type of outcome indicator is to look for early signs that they are changing their manoeuvres in any way that could have an impact on you.

When fit is built and sustained, there is a multi-way value exchange, with each actor giving and receiving value from the strategic relationships they have. The manoeuvres change your fit, and so alter the amounts and types of value that you give and receive. Usually, the types of value exchanged are rich and varied, in both directions. The value received and the value given could include a wide range of resources, reputation, learning, access, reliability, resilience, and intangibles as well. In this approach, you make explicit what value you want to get, which types of value and how much of each, and what value you are willing to give in order to get what you want. Assessing shifts in the value exchanged, both outputs and outcomes, is part of assessing the performance of the strategy.

Overall, then, you measure outputs for you, and outcomes for both you and other actors – has your strategy made a difference? – and using both quantitative and qualitative metrics. This focus on metrics supports another area of the programme or project manager's role, that of monitoring and control.

Here is an example from one of our clients. We've redacted it a bit and made it rather more high level (it is their strategy, after all), but you can clearly see the four steps.

Our strategy is:

1   To secure our relationship as a preferred first-tier supplier to ANO Automotive, so that we can maintain and grow revenue in the long term
2   and we're going to do this by:

  • synchronising our operations with theirs (so they get what they need when they need it), and
  • being more innovative than we have been – at least matching the innovation rate of our peers and what ANO are expecting from us.

3   To do those two things we're going to have to restructure <these operations> to improve their innovation and agility so we can respond to changes in demand more easily. And to do all that, we're going to invest in people and change, including <these new techniques and skills> and structural change.
4   And we'll know this has worked if we get the new contract confirming us a preferred supplier, ANO's trust in us increases, and they start chasing other suppliers to bring them up to speed. And while we're doing all that, we will need to keep our other customers on board.

Patterns of Strategy: communicating the strategy to the organisation

A real constraint on strategy execution is the quality by which the strategy is actually defined and then communicated to the organisation at large and, in particular, to the programme or project manager who will oversee its execution. After the strategy discussion, it is important to be able to describe it to others, in an easily communicable form. The organisation can only execute strategy when they understand it, and understand it in detail and with precision. If we go back to a previous example, then 'being more agile' does not help. But being 'this fast, in that business operation' sets a clear expectation to both programme manager and staff.

The elements of *Patterns of Strategy* themselves make this very straightforward.

There are five main steps to the strategy statement:

1   Define the desired state of each strategic relationship(s), as it/they will be after the manoeuvres have been completed.

2   Define the changes in the *Patterns of Strategy* elements.
3   Define the capability shifts required to alter the *Patterns of Strategy* dimensions.
4   Define the metrics you will use, for both Black and White.
5   And finally we turn it into 'plain English'.

Using the patterns

The book includes a catalogue of more than 80 strategies that we have seen used repeatedly by organisations, either consciously or unconsciously. Each strategy is documented with a description, typical use, and an example. Importantly, we also include the sequenced set of manoeuvres that are needed to execute the strategy, and the indicators for monitoring its progress. The strategy patterns are grouped to make it easy to narrow your search. Some are clustered by purpose (defence, growth, collaboration, competition, managing the herd), one for size (small organisations), one by its defining characteristic (cunning plans), and some by what the principal actor is coupled to (supplier or market).

This is a totally different way to work, and although it is unlikely that your strategic situation will exactly match one of the examples, it is likely to be strongly similar to one of the examples, or a hybrid of two of the examples. An alternative way to use the catalogue is to define your strategic context carefully and then work through all the strategies and ask yourself: how could this apply here? It is possible to do this in about an hour and generate a couple of dozen viable potential options to broaden the thinking and repertoire; many organisations unconsciously reuse a pattern they are familiar with, without re-considering if it is the most suitable for the current context and situation.

Using the documented strategies provides an accelerant to your strategy development work, which is already quick and easy. And the description of the strategies helps you to diagnose the patterns at play in your sector, and which strategies your competitors or partners might be using, and what that could mean for you.

The approach is fast, and you can readily take the generic components of a pattern and translate and apply it to the realities of your context and strategic situation. This speed matters; the best strategy comes from exploring multiple options and ideas and testing them for their impact – and their doability. The discussion moves between what you might do strategically, and whether and how fast you could do it, and this is the interaction between strategy and organisation. Typically, you are considering what organisation and capabilities you might need for a particular strategy, and simultaneously considering what strategy options are possible or easy, given the organisation and capabilities you currently have, and iterating between these two perspectives. The approach provides rich information to the strategy end of that interplay, and a good model of your organisation is invaluable at the organisation end. Iterating in this way ensures that the programme or project manager can feel confident that the defined strategy is realistically deliverable by the organisation. In terms of planning implementation, this fast iteration is important, because so often conventional strategy is conceived in complete isolation from the harsh realities of

Keiretsu

Create formally inter-coupled set of companies for power and defence

Who? This is a strategy for big players competing with other big players who need occasional access to more power than they can muster on their own

When? Whenever the competitive situation leaves single companies exposed and vulnerable

What do you win? *'All for one and one for all'* – the power of the group made available to each member for attack, growth, or defence

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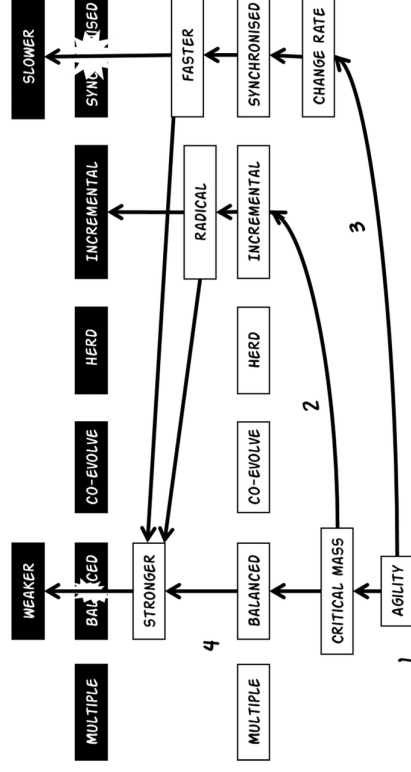
FIGURE 9.1   Example of manoeuvres in a *Pattern*. Keiretsu is a collaborative strategy

the organisation (quite literally because strategy teams go off to a remote location to do it), so the divorce between strategy conception and strategy execution is built into the conventional process.

There is a toolkit for using *Patterns of Strategy*, and leaders and strategists can use it interactively to explore their strategic relationships, whether competitive or collaborative, internal to the organisation or external, or all of these. It includes boards to map out potential scenarios, and the manoeuvre set that each actor could deploy in those scenarios, as well as a set of cards to explore the actual and potential value exchanges between the actors. In addition, each of the 80 strategies is described, along with the manoeuvres required to bring it about. Using the toolkit helps you get the terminology and – more importantly – its systemic thinking style into your organisation, and provides a frame and a focus for strategy development work. Using the toolkit, leaders can iterate through scenarios and options really quickly, and reducing the cycle time for each iteration of the strategy makes it possible to repeat, review, and refine it at a higher cadence or when there is – or may be – a substantive change in the environment.

Bridging the execution gap

Overall, using this approach prompts a number of key questions around the execution gap, including:

- How will you have to change your organisation, to effect a manoeuvre?
- What new capabilities will you need to carry out that manoeuvre?
- What enablers will you need to build that capability?
- What will you measure, both outcome and output?
- What can you observe of the other actor's strategy?
- If you carry out a manoeuvre, what effect will that have on them?
- How might they react?

Or, starting more from the 'organisation' end:

- Which strategies are you capable of?
- Which strategies could you execute without needing to change the organisation?
- How fast can we change?

Having chosen a strategy from the different options you have explored, you are then able to chart its path as it unfolds. You can assess whether the planned capability shifts are taking place to the degree and at the speed required. You can evaluate which actors and which organisations are actually affecting the situation and how effective each is being. Perhaps most critically, this approach provides early evidence of the effect of the strategy; it isn't necessary to wait until the end to be able to see the results, thus providing better control and the ability to change the strategy to meet changes in the unfolding situation.

Because conventional strategy fails to take into account what other actors might do that could destabilise us, it rarely works as planned, but the blame for that failure is laid at the door of execution. What we are arguing here is that the responsibility for dealing with that uncertainty in the strategic environment lies with strategy not execution, but none of the conventional strategic approaches have been designed to deal with it. *Patterns of Strategy* does.

10
CONTEXT

Why situational awareness remains essential

Darren Dalcher

Context plays a principal part in the processes required for solving problems, managing, and making decisions.

Starting with context

Influential architect and design theorist, Christopher Alexander, featured in the introduction to the previous chapter, considered design as an activity made of two symmetrical parts, the form and the context (Alexander, 1964). The form refers to the solution to the problem that is being constructed by the designer, while the context is the domain – the setting that defines the problem. The 'search for fitness' between the two parts is the essential balancing process.

> Fitness is a relation of mutual acceptability between these two. In a problem of design we want to satisfy the mutual demands which the two make on one another. We want to put the context and the form into effortless contact or frictionless coexistence. . . . Adaptation is a mutual phenomenon referring to the context's adaptation to the form as much as the form's adaptation to its context.
>
> *(ibid.: p. 19)*

Finding a good fit can be achieved through the neutralisation of misfits, the incongruities, irritants and forces that cause clashes that stand out and violate fitness. The design problem can thus be described as an effort to achieve fitness between the form and its context.

> In the case of a real design problem, even our conviction that there is a fit to be achieved is curiously flimsy and insubstantial. We are searching for some

kind of harmony between two intangibles: a form which we have not yet designed, and a context which we cannot properly describe.

(ibid.: p. 26)

The only reason we have for thinking that there must be some kind of fit to be achieved between them is that we can detect incongruities, or nega-tive instances of it. The incongruities in an ensemble are the primary data of experience. If we agree to treat fit as the absence of misfits, and to use a list of those potential misfits which are most likely to occur as our criterion for fit, our theory will at least have the same nature as our intuitive conviction that there is a problem to be solved.

(ibid.: pp. 26–7)

Context can therefore be said to be essential to the framing and problem solving practised within the realms of architecture and design.

Other domains also tend to look beyond the objective and question additional aspects related to a problem and the given situation.

The person and the situation

One of the most recognised landmark studies in psychology, the Stanford Prison Experiment, was devised to evaluate the impact of perceived power and position. The experiment, conducted at Stanford University in 1971, investigated the psy-chology of imprisonment. Volunteer participants were arrested in their homes by the local police department and 'charged' with armed robbery. Prisoners were booked by the police, strip-searched and issued with a new identity before being transported from the police station to mock prison cells in the university basement.

The mock prison was operated by other volunteers acting as guards. 12 of the 24 participants were assigned the role of guards, while the other 12 were assigned the role of prisoners. Guards were provided with suitable accessories including batons and sunglasses. The intention was to conduct a two-week prison simulation. But the environment, and context, in which the experiment was conducted, had an enormous impact on participants, beyond the expectations of the experiment designers.

Within days the 'guards' began enforcing authoritarian measures, subjecting prisoners to psychological torture. The study had to be terminated before the first week was out when the 'guards' became increasingly sadistic and the prisoners 'pathological'.

Stanford psychologist, Professor Philip Zimbardo, who designed and conducted the experiment, summarised it as follows:

The primary simple lesson the Stanford Prison Experiment teaches is that situations matter. Social situations can have more profound effects on the behaviour and mental functioning of individuals, groups and national leaders

than we might believe possible. Some situations can exert such powerful influence over us that we can be led to behave in ways we would not, could not, predict was possible in advance.

(Zimbardo, 2007; p. 211)

While the Stanford Prison Experiment remains controversial it highlights the complex interactions between the personal and the situational determinants of behaviour. The discipline of social psychology continues to study the impact and relationship between the person and the situation.

Researchers in other disciplines, including human computer interaction (HCI), knowledge management, and communications also endeavour to take account of the situated nature of human social behaviour and account for the context. Action and change efforts thus require a deeper engagement with both context, and situated understanding.

Finding context in projects?

Do project management approaches and indeed the wider profession take any account of project context?

The sixth edition of the *APM Body of Knowledge* is divided into four sections: context, people, delivery, and interfaces. The section on context, asserts that 'the context of a project, programme or portfolio is made up of two areas: governance and setting' (p. 7). Governance deals with procedural and cultural aspects encompassing aspects such as sponsors, success factors, and maturity, while the setting is concerned with the organisational environment and strategic management. Given the primacy of the position offered to context, one would expect to see an extended dialogue regarding its impact on and application to project practice; yet, there is very little that is said about context within the guidance, the methodologies or even in the existing bodies of knowledge.

Yet, if every project is unique with its own special context, and if every project is likely to involve people who will need to interact with the social situation, one would expect to find a variety of models and approaches that can take account of such diversity. In reality, it is difficult to find relevant explicit guidance that can be tailored to a specific context.

Taking into account considerations related to context and specific situations requires a new way of conceiving and viewing projects and their management. It also requires fresh ways of thinking about project practice. This chapter encourages project managers to seriously re-consider their approach to project work by introducing a typology of projects and project situations. The chapter authored by Oliver Lehmann is developed from his 2016 book, *Situational Project Management: The Dynamics of Success and Failure* published by CRC Press. The typology invokes multiple dimensions, each representing different situations and project contexts. The direct implication is that each dimension would require different considerations. A project situation may therefore involve a balance of different factors and

positions from across the various dimensions, necessitating intelligent consideration regarding the approaches and responses that would match that particular situation.

Lehmann's concept of situational project management makes a crucial contribution to the discipline by encouraging managers to engage with their context and identify the required dimensions of their project situation. Thinking about the different situations enables the identification of the essential characteristics of the project. It can thus be used to inform the management style and approach and select tools that emphasise that particular perspective.

The importance of situational awareness

Situational awareness implies an appreciation of the wider context of a given situation including the environmental influences. US educator and businessman Stephen R. Covey (1989) described his fifth habit of highly effective people as 'seek first to understand, then to be understood'. Covey is advocating for a general understanding of a person and their position. A similar case can be made for appreciating a situation in a finer, or deeper, level of detail. Indeed, as often asserted in problem solving and communication theory, without relevant context it is impossible to receive a message, address a situation, understand a problem or resolve a dilemma.

Lehmann's work thus offers a more intimate perspective on the unique features of projects. Yet, equally critically, it challenges the hegemony of adopting a single 'best' approach to project work.

Believers in one-size fits all may be disappointed at the lack of a magic recipe. Engaging with context requires adding a twist of common sense to accommodate the specific details and peculiarities of each particular scenario. The wisdom of relying on the habit of 'best practice' is similarly tested by virtue of the distinguished characteristics that typify each scenario giving it a distinct flavour.

Many disciplines run an extended affair with what is labelled as 'best practices'. In reality, there is little competition and comparison before a practice is selected as best in class on the basis of performance in a particular task or environment. Even when one practice is recognised as best in class, it is only to the extent that it has proved useful in some limited, constrained or a somewhat controlled environment.

Physician, psychologist and thinking guru Edward de Bono (1993) was acutely aware of the role of determining facts and habits, noting that 'Science only works because in any experiment it is assumed that the context is held constant while one factor (the experimental variable) is altered'. Yet life is never that simple.

Confucius observed that real knowledge implies knowing the extent of one's ignorance. Understanding the context and the situational parameters of a problem provides the added background required to inform and make effective decisions. In Philosopher Karl Popper's words: 'True ignorance is not the absence of knowledge but the refusal to acquire it'.

It is often said that the greatest obstacle to knowledge is not ignorance but the illusion of knowledge, which can often masquerade as ignoring the specific and assuming that the general applies. Professionals cannot afford the luxury of

simplifying or ignoring such contextual essence. In assuming that the context is held constant, they might be removing the truly critical aspects that provide leverage and offer insight.

Methodology and process aficionados need to likewise learn to acknowledge the unique aspects of each situation and assess their importance and implications. When we truly accept that projects are unique; understanding the context and specific details of each situation would result in a greater recognition of risks, opportunities and the ultimate potential for success, and failure, that are situated alongside and inside that project.

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An introduction to a typology of projects

Oliver F. Lehmann

Could it be that, in its current self-conception, project management is much more similar to ancient alchemy than to a modern science or an art?

Alchemists were driven by the desire to find the philosopher's stone that could turn lead and other cheap metals into gold. They searched for panaceas, cures for all diseases and, while they developed various laboratory methods, some of them still in use today, their activities were mostly performed against a background of mysticism and magic.

There were several steps that took practitioners and scientists from old alchemists' approaches to those of modern chemists. A central one was the publication of the periodic table (Mendelejew, 1869), which allowed chemists to classify and typify chemical elements and improve the understanding of chemistry through the identification of an inner order in the diversity of elements. A similar step was achieved in biology with the development of the Linnaean taxonomy, which allowed scientists to classify species and understand their relationships but also their differences (Linnaeus, 1758).

Typologies and with them classifications allow us to better manage diversity. Another example is provided by burns. Burns happen on a continuum between a minor injury and the most dreadful damage to tissue that can happen to humans. Each burn is different, but a typology in the form of a system of degrees helps respond appropriately to them. Burns of a first degree are mostly treated by applying outpatient care and superficial methods. Burns of the third or fourth degree (depending on the system) will be treated in intensive care within a hospital. Despite the uniqueness of burns, the typology helps to better select the most suitable response.

One should note that the classification systems in chemistry and biology are open classifications, that can be expanded, when new knowledge has been explored

and new elements or species, genera and so on should be added to the existing ones. This is different to the closed classification of burns; this classification is generally considered to be complete.

'Best Practices' or uniqueness?

In project management, the common belief in the existence of a 'best practice' approach is a concept comparable to alchemy, and it is widely held. Many project managers believe that there must be a practice that is applicable to all projects that generally ensures success in all of them.

Interested in the question of how popular this concept is, the author asked project managers between April and August 2015 whether they believed in universal best practices. He received 189 responses, and the majority confirmed that they believed in best practices within the discipline. Figure 10.1 shows the results of the survey.

In scientific papers and articles, any differences between project types are also commonly ignored. Searching in websites that provide links to published work on project management gives many results of research in project management generally, but the vast majority is not linked to specific types of projects. The questions that they raise would be similar to scientific papers and articles in chemistry asking 'What is the boiling point of an element' or in zoology 'How do animals survive?', ignoring the fact that boiling points are different from element to element and also

There are proven 'best practices' in project management. Applying them ensures repeatable success in any given project and project situation.

There are no 'best practices' in project management. The same practice that has been successful in one project or project situation may fail in another one, and vice versa.

61.7%

22.9%

Based on my experience and observations, I cannot support either of the claims.

7.4%

8.0%

Other

FIGURE 10.1   Universal best practice survey

depend on environmental conditions; and the same is true for the survival strategies of animals.

There are also 'proven best practice methodologies'[1] promoted, that can be 'applied to all types of projects',[2] which would be comparable to a description of the best treatment practice of all burns, ignoring their degree.

This last point is very common in project management in organisations. When one talks with managers from the project governance functions, statements like 'we are moving all projects to agile methods' (or any other methods that are considered cooking recipes for project management) is possibly good news for some of their projects, but may be bad news for others.

The claim of 'best practices' contrasts with the definitions of the term 'project' used in the various international standards. Here are some examples:

- 'A project is a temporary endeavor undertaken to create a unique product, service or [other kind of] result'. (PMI, 2013)
- 'Project: [A] unique process, consisting of a set of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirements including constraints of cost, time and resources'. (BSI, 2000, S. 10)
- 'Projekt: [Ein] Vorhaben, das im Wesentlichen durch Einmaligkeit der Bedingungen in ihrer Gesamtheit gekennzeichnet ist'.[3] (DIN, 2009, S. 11)

The International ISO standard 21500 (ISO, 2013) also emphasises uniqueness as a main characteristic of projects and explains how differences between seemingly similar projects can arise due to the specific processes applied or may be affected by the unalike environments in which the projects are performed.

In reality, the same practice that has led to success in past projects may lead to failure in others, and vice versa. The principle may not only be relevant to entire projects and their life cycles, but to situations during these times. Approaches that have led to success in certain situations may cause troubles in other situations still in the same project. Situational Project Management (SitPM) is then the application of those practices that are favourable in given project situations while avoiding other practices that are considered detrimental. Situational project managers are not just confident with the practices that they master but go through a lifelong learning process, adding new tools, techniques, behaviours etc. to their existing capabilities as much as a craftsman or craftswoman adds new equipment and tools to their job shops to help them meet varying demands and requirements.

What happens if a project manager, believing in the comforting certainty of a best practice, avoids this continuous learning process? If a person only has a hammer to make a living, the person must convince the world that it is made of nails. Another person may only have a screw driver, and this person must tell the world that it is screwed.

An example of how a practice that has been successful in one place may lead another project into trouble is offered through the two central station projects in

Germany – Berlin and Stuttgart. They can highlight the insufficiency of 'One size fits all' approaches, that come with the postulation of universal best practices:

- **Berlin Hauptbahnhof:**

  Berlin Central station was a new construction, opened in 2006. In its overall appearance, it is mostly considered a successful project, a piece of modern traffic infrastructure, which meets functional purposes and is aesthetically impressive.

- **Stuttgart 21:**

  Stuttgart Central station is a reconstruction of an existing station, turning the tracks by 90 degrees to convert a 16-track dead-end station to an eight-track through station. The project began in 2010 and planned to have the new station operational by 2016. Still in the first year, it was confronting massive resistance from local citizens, who took their rejection of the project to the streets and demanded a complete termination of the project. Their protests delayed the project and led to the resignation of the project manager in May 2011.

It is interesting to compare the two projects (see Figure 10.2) as, on the first glance, they are almost identical.

To make the difference even harder to understand, both projects were performed by the same project manager, in the Stuttgart 21 project until May 2011, using the same approach, which was obviously beneficial for the Berlin project but detrimental in Stuttgart.

On the surface, it is hard to understand why the project in Berlin was successful while the project in Stuttgart was not. The typology should help in making sense of the differences and lead to adaptation of approaches by project managers and other supervisors.

	Success	Crisis
	Berlin Hauptbahnhof	**Stuttgart 21**
Industry	Railway	Railway
Application area	Construction	Construction
Deliverable	Main station	Main station
Organisation	Deutsche Bahn, local and national government	Deutsche Bahn, local and national government

FIGURE 10.2   Comparison of the two main station projects

The crisis in Stuttgart 21 refers to the years 2010 and 2011; the project has since been led mostly back on a success path.

A research project

To better understand how projects have commonalities and differences that can influence the dynamics of success and failure, the author performed a research project with the intention to tap knowledge from experts.

He brought together a group of 17 project management experts, who have been practitioners in the past, but used their experience in the field in their new roles as instructors, authors of articles, books and blogs, in project governance or in volunteering in professional associations. The experts had between 7 and 36 years of experience, which accumulated to 393 years of project management experience as practitioners and in the later roles. Twelve of the experts held the PMP[4] certification from the Project Management Institute (PMI), one of them also held a Level B[5] certification from the International Project Management Association (IPMA).

In interviews, the experts were asked to answer two questions:

- **Dysfunctional question:**

  'During your time as a practitioner or as an expert, do you remember a moment when a practice, a method, a behaviour or a tool for project management, that had led to success before, led to failure?'

- **Functional question:**

  'During your time as a practitioner or as an expert, do you remember a moment when a practice, a method, a behaviour or a tool for project management, that had led to failure before, led to success?'

All experts had examples that answered the dysfunctional question, sometimes more than one; but not all had an example that answered the functional question.

During these interviews, the examples that the experts remembered were recorded and in a next step further investigated by applying the 'five whys' technique, a root cause analysis method used to dig deep into the underlying origins of problems in management and production (Adams, 2008). A further technique applied was 'Affinity diagramming', which allowed to consolidate the thus far anecdotal stories and to identify underlying principles that finally resulted in the definition of project types that are relevant for the selection of project practices.

The project types

The project typology is considered open, which means that the following dimensions are not considered a complete description and that further exploration could identify many more. The dimensions that are described below were just those that turned up during the research. Figure 10.3 gives an overview of these dimensions. The column 'occurrences' describes how often the dimension turned up among the answers. The column 'mode' was introduced based on a discovery by one of the

Types of projects and project situations identified			
Typological dimension		Occurrences	Mode
1 Mark 1 project	Mark n project	|||||||	B/W
2 Greenfield project	Brownfield project	|||	B/W
3 Siloed project	Solid project	|||	Greyshades
4 Blurred project	Focused project	||	Greyshades
5 High impact project	Low impact project	||	Greyshades
6 Customer project	Internal project			B/W
7 Stand-alone project	Satellite project			B/W
8 Predictable project	Exploratory project			Greyshades
9 Composed project	Decomposed project			B/W

FIGURE 10.3   Identified typological dimensions

experts, that some dimensions describe dichotomies ('B/W' for black and white), while others describe continua ('Greyshades').

1. Mark 1 vs. Mark n projects

The terms are borrowed from British engineering, sports cars, and Japanese cameras.

A Mark 1 project is the first of its kind, at least for the people involved in it. As a breakthrough project, it has a high degree of novelty and cannot rely on existing processes and solutions; they must be developed during the course of the project. Mark n projects in contrast are similar to former projects, and the teams involved have a lot of experience with this kind of projects, they often have processes and readily developed solutions, on which they can rely.

This dimension has been identified and described before by Shenhar and Dvir (2007), who stated that a Mark 1 project has higher risk than a Mark n project, which seems generally plausible. However, the result of the author's research gave a different picture: In two out of seven cases where the dimension was influencing success and failure, it was the novelty of the project that caused the problems. In five out of seven cases, troubles came from the Mark n character of projects, from complacency and from the lack of attention to seemingly small issues that grew and became major crises later in the project.

Seven cases for an analysis may be too small a sample size to make a final statement on the risk exposure of Mark 1 projects versus Mark n projects, and the topic would be an interesting one for further in-depth research. The example shows how a typology can open doors for future exploration and discovery, that is more focused and more tightly connected to the realities in the projects of this world.

2. Greenfield vs. brownfield projects

The terms are quite popular in construction and infrastructure projects. A greenfield project is built on virgin ground, literally or metaphorically. The project managers do not have to take too much care of legacies, and the number of stakeholders involved is mostly small, allowing project managers to focus on the project. In a brownfield project, there may be a lot of legacies that impact the project, often massively, and expectations, hopes, and fears raise high. Organisational and interpersonal issues add to that.

Berlin Central station is an example of a greenfield project in a literal sense. The station was built on a green strip, which had been left from the former 'death strip' between East and West Berlin. The wall was dismantled, the barbwire and spring guns were removed, and crossing the city from its north to the south, a strip was left, wide enough to make space for a new and modern traffic infrastructure. The project team did not have to give much consideration to nearby residents; instead they focused on keeping too much political influence at a distance to the project.

Stuttgart 21 is a brownfield project. Due to the hilly surroundings, it consists of vast tunnel-drilling activities, and these need to be undertaken inside difficult geological layers (anhydrite) that can swell in contact with water, which can lead to massive damage to the houses atop. The owners of these houses asked the project manager to meet them and talk about their concerns, something he rejected. Repelled stakeholders often come back, bringing with them friends, lawyers, and the press. The approach of isolating the project from its stakeholder environment, which was successful in the greenfield project in Berlin, drove the seemingly similar project in Stuttgart into crisis. Meanwhile the project managers in Stuttgart have learned their lesson the hard way and implemented a system to improve stakeholder involvement and engagement called the Bürgerforum 21 (Landeshauptstadt Stuttgart, 2011), where concerns and worries of citizens are discussed in a transparent and open fashion.

3. Siloed vs. solid projects

Projects can be siloed in various ways. There may be different organisations that work together as partners or distributed over complex and often highly dynamic supply networks, each of these organisations with their own business interests and different ways of how they want to perform the project. Teams may be distributed over various countries, cultures, legal systems, etc. 'Siloing' may relate to age groups, genders and many more aspects. Siloing may also be a result of phase models, when a subteam has the responsibility for a project phase and, when this has been finished, figuratively throws the result 'over the fence' to another team that will be responsible for the next phase. Siloing can make project management difficult, but it is often unavoidable.

Solid projects instead are like 'bands of brothers'[6] and sisters that act tightly together, understanding that then the result will be more than just the sum of its

parts. Solidifying projects can include measures like collocation and concurrent engineering, overlapping of phases with the intention to improve communications. There are limitations for the application of these measures, so project managers should be able to manage siloed projects as well as solid ones.

4. Blurred vs. focused projects

Following a major part of literature, each project has a clear start date and a clear end date, desired deliverables have also been specified and agreed upon, and the team is assigned to the project, so that people know if they belong to the project or not.

This organisational and interpersonal separation of the project from the performing organisation(s) is often not more than wishful thinking. The internal requestor or paying customer has no clear understanding of the deliverables that would allow for specification and, if they have, this understanding is often open to change. The performing organisation too often has not the resources at hand that it can dedicate to the project, so there is a continuous coming and leaving of human and other resources. And as much as the project has slowly grown from some kind of limbo into existence, there is also no clear point definable when it can be said that the project is over and closed. While focusing is desirable, project managers must also be able to manage the ambiguities and uncertainties of blurred projects.

5. High-impact vs. low-impact projects

High-impact projects have commonly more management attention than low-impact projects. The impact comes with opportunities, but also threats, and the higher these are, the more management attention that can be expected.

Management attention is often the scarcest, but most valuable resource in a project. While its presence does not guarantee the availability of other resources like funding, people or equipment, its absence is a sure reason that these other resources will also not be available for the project.

6. Customer projects vs. internal projects

The most obvious typological dimension in SitPM.

An internal project, performed for an internal requestor, often called 'internal customer', is a cost centre. There may be future expectations that the deliverables of the project will give the organisation monetary benefits, but the project as such costs money and does not earn it. Projects can be performed for a variety of future goals, including new income, cost savings, strategic benefits. Some are made to build a monument to an influential person or just for fun. Internal projects may have complex business cases or are initiated in an ad hoc decision.

Customer projects are mostly profit centres. The organisations involved perform these projects for paying customers, and it is the job of the project managers to

bring money home. Initiating these projects is far more complicated, as it involves a business development process jointly performed by a buyer and a seller, who will later become the customer and the contractor.

The author wondered what percentage of project managers are responsible for each type and performed a survey among project managers. He received 246 responses, and Figure 10.4 describes the distribution of the answers.

One can say that the project managers are roughly divided 50–50% among the two types. Figure 10.5 describes the differences between the two types of projects.

What type of project are you currently managing?

An internal project: the organisation (company, agency, association etc.) that pays me performs the project for its own purposes.
44.3%

A customer project: the company that pays me performs the project for another organisation (company, agency, association etc.) and gets paid for it.
51.1%

The setup of my project is different.
4.5%

FIGURE 10.4   Responses regarding project type

	COMMON DIFFERENCES	
	Internal projects	**Customer projects**
Are . . . for the performing organisation	Cost centres	Profit centres
Project selection is mostly made as . . .	Internal decision	Bid/no-bid decision
Project work for the requester is based on . . .	Internal agreements	Legally binding contracts
Team's familiarity with the target environment at project start is . . .	High	Low
Project managers are mostly . . .	Rather weak	Rather powerful
Obtaining resources is mostly . . .	Rather difficult	Rather easy
Management attention for the project is mostly . . .	Rather low	Rather high
Project managers must consider . . .	The interests of their own organisation	The interests of both the customer and the contractor
Staffing and procurement mostly managed by . . .	Functional units	Project management team
Reputation inside the organisation is mostly . . .	Rather low	Rather high

FIGURE 10.5   Differences facing project managers

While the distinction along this typological dimension is very obvious and easy to observe in practice, it is surprising that it has not been better elaborated in the literature and research. This is another example of how a typology can help gain fascinating new insights.

7. Stand-alone projects vs. satellite projects

Many projects do not stand alone, as is normally assumed in literature. Their project managers and teams perform projects 'in the wake' of other projects (that the experts called 'principal projects'), and the success of the satellite projects relies on the work of the project's own team, but also on that of the principal project. A crisis in the principal project may swiftly translate into a crisis in the satellite project. The dynamics of success and failure can become very complex, especially, when there are more than two projects involved.

8. Predictable projects vs. exploratory projects

The most significant discussion in project management during the last couple of years explores 'agile methods' versus 'waterfall methods'. Agile was a hype in recent years, but looking at presentations in congresses and also observing publications, it seems that a renaissance of the predictive approaches is occurring at the moment.

The author also made a survey on this topic in the past, asking project managers how static and predictable requirements in their projects are. The responses from 140 respondents were distributed as shown in Figure 10.6.

What is your experience regarding original stakeholder requirements (functions and features, deadlines, budget, quality, disruption of operations, etc.) over the lifecycle of a project?

They remain mostly the same.	7.1%
They get frequently changed.	57.9%
Identifying them is part of my project.	31.4%
I do not have much experience on that.	2.1%
I do not know.	1.4%
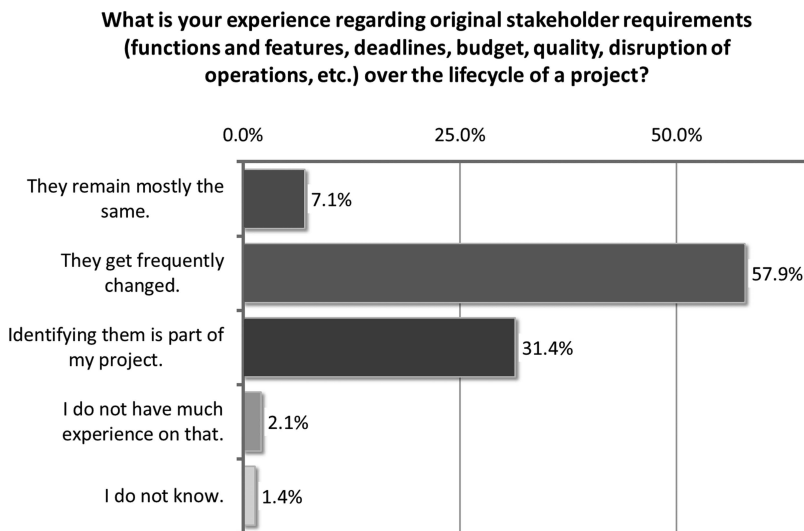
FIGURE 10.6   Predictability and dynamics of project requirements

The first group of 7.1% is the group of projects that require predictive approaches with long-term forecasts and planning. The third group are projects, in which 'the way is made by walking',[7] projects, for which agile methods have been developed.

Between these two groups that are best managed using waterfall or agile methods is another grouping, where requirements have been defined, but these are open to frequent change, and for which the teams should apply an approach, that is variously called 'Progressive elaboration', 'Iterative incremental', or 'Rolling wave'. A decision to perform all projects in a portfolio using highly predictive methods, or performing them all applying agile methods, is probably a decision that will benefit a minority of projects but will be detrimental to others.

9. Composed projects vs. decomposed projects

A traditional approach to project management responds to probably the oldest definition of a project, written by Daniel Defoe in the late seventeenth century, who stated that 'The true definition of a project, according to modern acceptation, is a vast undertaking, too big to be managed, and therefore likely enough to come to nothing'.[8] In order to manage this undertaking, it is commonly decomposed into smaller, better manageable items along a tree structure called the Work Breakdown Structure (WBS), hoping that the re-integration of these items will lead to the complete set of results that the project is required to deliver. The last pieces of wood at this tree are commonly called work packages, and these work packages can then be performed either by the project's own team, by other business units as internal providers inside the performing organisation, or by external vendors.

Some projects are developed using the opposite approach. Friends come together, or organisations that have a more or less vested interest in the project, or a customer organisation requires contractors to work together. These organisations then come together, each offering a contribution to the project, and the WBS is then not developed by decomposing the project but by composing it from individual contributions. If the contributions are able to bring about a complete set of deliverables, and if the parties involved adhere with their commitments, such projects can become very powerful. They are also vulnerable to changes in the business situations of the contributors, and project managers must rather have great moderating skills than be traditional managers.

Further types of projects

In his book (Lehmann, 2016), the author adds further types of projects that he met in his practice or that he observed, but that did not turn up in the research project. The typology is not a closed one, postulating 'the 18 types of projects, structured along the nine typological dimensions', but instead assumes that there are many more criteria that can be used and that will lead to identification of further types.

Conclusion

Project management is a highly heterogeneous field, and most projects undergo massive change during their performance. At a given time, a project may be highly exploratory and unpredictable. This may be due to basic research that needs to be made at the onset, and whose outcomes are not predictable – if they were, the research would not be necessary. Or the project begins with a creative phase, something, for which one can allow time but that is hard to plan. Later in the project, it may be necessary to book resources to ensure they are available when they are needed, or to request timely deliveries from the supplier. In other projects, predictive phases may be rather too early in the project to allow for subsequent exploration and creativity. It may also be that a project has several work streams performed in parallel, and while some of them require predictive approaches, agile approaches may be beneficial for others. While the typology above speaks of project types, projects can move between these types, when requirements on project managers and their teams are highly dynamic.

Understanding the dynamics of success and failure in project management comes with new requirements to both practitioners and researchers. Simple cooking recipes may not be sufficient to guide project managers, when these have been developed with a certain type of project in mind, but the current project or project situation is different. SitPM poses some difficult musts on project managers. They must develop situational intelligence, which means that they have to understand the specific situation, identify the approaches that are most favorable for it, then adapt their approaches to this situation and finally implement this responsive behaviour in a way so that they do not appear erratic or unreliable to stakeholders. At any given time, they should be able and prepared to explain, why they have chosen a certain approach in response to a given situation, and why they applied alternative approaches to respond to other situations.

Situational Project Management is not a new method designed to replace waterfall type methods, or agile approaches, or other kinds of achieving styles and management behaviours. It is rather a meta-approach that gives each method, behaviour, and approach its place in a continuously growing toolbox of practices that a project manager should acquire over time and confidently use when the dynamics of success and failure require them.

Notes

1 For example in the advertisement of a British government-supported method Prince2 within the Axelos portfolio (n.d.).
2 The claim 'PRINCE2 is designed to be applied generally to all types of projects' can be found in various places, among them at ILX Group plc (2016).
3 An undertaking that is chiefly characterised by the uniqueness of the conditions in their entirety. Translation by the author.
4 Project Management Professional.
5 Certified Senior Project Manager.

6 Shakespeare (1599).
7 A description that the author took from the Spanish poet Machado (2012).
8 Abridged by the author (Defoe, 1697).

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11
CHANGE

Living with the inherent paradox of change

Darren Dalcher

Humans have a fascinating, albeit paradoxical, relationship with change.

Many of us desire improvement, growth, and development. Queue the stream of New Year's resolutions, which infer dissatisfaction with the *status quo* and a commitment and promise to self-improve, change, alter some aspect of life, or develop a quality, attribute or capability, ultimately translating into better jobs, relationships, health, education, income, benefits, or simply a richer or better life. The resolutions imply recognition of inadequacies, or perceived underachievement, and a dedicated commitment to overcome or improve such shortcomings, at a convenient landmark, such as the upcoming New Year. Such resolutions are entertaining to make, following reflection on past performance, but often prove hard to keep and maintain beyond the initial burst of enthusiasm. The attitude is aptly embodied by Oprah Winfrey's acknowledgement: 'cheers to a new year and another chance for us to get it right'.

But there is also the other side of change: When a potential change is about to be imposed, the afflicted change consumers appear to resist any attempt to alter existing conditions, often fighting, blocking, and undermining the imposition of new circumstances, regardless of the potential value or improvement on offer. Indeed, English novelist and essayist Mary Shelley (1797–1851) noted that 'Nothing is so painful to the human mind as a great and sudden change', whilst US president, Woodrow Wilson, quipped that 'if you want to make enemies, try to change something'.

It would thus appear that change has the potential to invoke promises informed by clear illustration of benefits emerging from a great desire to improve. However, change can also engender strong feelings, resistance, and protests against the intention to implement new measures.

Reconciling change

Psychologists and psychiatrists have also been fascinated with the concept of facilitating and introducing change. A long-standing debate tries to determine if individuals remain relatively constant over their lifetime, displaying a tendency for stability. The alternative view implies a degree of malleability and psychological plasticity allowing for change through adjustments. In this view culture, events, experiences, and conscious decisions can play a part in effecting a change in people.

One of the fascinating perspectives comes from the tradition of Gestalt Therapy and has resulted in the development of the *paradoxical theory of change*. The basic concept is associated with the thinking of psychiatrist Fredrick Perls, implemented throughout the life and work of his disciple, Arnold Beisser.

Beisser was an extremely talented tennis player (ranked 17th in the world) and qualified MD when he was struck down by polio at the age of 25, just a few months before the polio vaccine became widely available. Suddenly, the active young man found himself plugged into a negative pressure ventilator (iron lung) enabling him to breathe after losing normal muscle control. The change was particularly hard as he found himself, in his own words, 'transformed from doctor into patient and from champion into cripple'.

Despite his paralysis, Beisser was able to re-build his life and become a leading psychotherapist who influenced the lives of a multitude of patients including many athletes and sports personalities. Beisser (1970) developed an influential theory of psychological, mental, and emotional change by analysing his own journey to function despite his sudden and life-changing disability, allowing him to practice and formulate the principles of the *paradoxical theory of change*.

> Briefly stated, it is this: that change occurs when one becomes what he is, not when he tries to become what he is not. Change does not take place through a coercive attempt by the individual or by another person to change him, but it does take place if one takes the time and effort to be what he is – to be fully invested in his current positions.
>
> *(Beisser, 1970; p. 1)*

Stated simply, change begins when one ceases trying to be what they are not, and begins instead to be what they are.

Beisser himself took time to accept the change in his circumstances. Entering the rest of his life in a wheelchair first meant recognising that things were different. The great insight is that the purpose of the therapy, intervention, or reflection is to allow the subject to be.

With that in mind, sessions can be dedicated to becoming comfortable with being. When the subject is comfortable with their state of being, there are obvious changes and adjustments that can take place, as the surrounding environment around them continues to change. In order to remain true to themselves, they can continue to change in response to external changes to the world and other people

and systems around them, thereby reflecting the dynamic transaction between the self and the environment.

Psychiatrists have since expanded their scope of interest beyond the individual self to encompass social change, and the wider need to reflect the interaction with shifting society, moving and transforming at an even faster pace.

Paradoxically, the implication to practice is that while changing may be the motivation for an inquiry into current conditions, one does not change by trying to change. Instead one changes (gradually) by *being*; as change only follows not changing.

So how do we manage change?

Arnold Beisser noted that 'By rejecting the role of change agent, we make meaningful and orderly change possible'.

In his view, the therapist's role is not to act as a change agent as his strategy is simply to encourage the patient to *be*. Change does not happen following trying, coercion or persuasion. Even insight, interpretation, and other analysis-based approaches are not needed. The therapist eschews the role of 'changer' to support the patient in being where and what he is. The purpose of therapy is therefore to become comfortable enough with being, so that you can respond to changes with change of your own. By not pursuing a change agenda, it becomes possible to change in a natural and adaptive way.

Change is clearly a complex, and traumatic, process. The insights from psychoanalysis imply a lesser focus on the imperative for change. They also suggest avoiding a coercive perspective that leads to enforcing change and managing its implementation.

Out of recognition that most change efforts fail (see, for example, [Kotter, 1996]), behavioural scientists increasingly emphasise the leadership angle through supporting behaviours and designing environments that foster such behaviours. New ideas in systems thinking and complexity theory enable the understanding of emergent relationships and interactions and facilitate the analysis of holistic impacts of actions. Contemporary thinking is thus shifting from a focus on managing towards a softer recognition of the need to lead, or even to facilitate change actions. This implies a significant change in the perspective and the approaches applied while dealing with change.

Rethinking business performance

The sustainability and growth of organisations depends on their ability to embrace change, adapt, and continue to thrive. Indeed, English philosopher and physicist John Locke (1632–1704) observed that 'things of this world are in so constant a flux, that nothing remains long in the same state'.

Management guru, Peter Drucker (1985; p. 11), considered it a clear opportunity to thrive by exploiting change: 'The entrepreneur always searches for change, responds to it, and exploits it as an opportunity'.

Yet, the challenge of how to organise and build for sustained engagement with change remains. Greek author, Nikos Kazantzak, noted that 'since we cannot change reality, let us change the eyes which see reality'. As practitioners we often need to find the pair of eyes that we can adopt to begin to be, or even to see afresh.

Such a fresh perspective is offered by Sankaran Ramani's chapter, which is focused on the role of change management in transformation efforts. The chapter was developed from his book *Improving Business Performance: A Project Portfolio Management Approach*, published by CRC Press. Ramani acknowledges the crucial role of people and culture. His work notes that successful change initiatives rely on the development of integrated eco-systems of organisational portfolios, programmes, and projects, so that the change initiatives become the delivery mechanisms for implementing the strategy of the organisation.

Rather than focus on a single level, or on projects in isolation, Ramani's work is concerned with the integration of the different change efforts to facilitate alignment to strategy and accommodate on-going change. While it places portfolio management at the apex of change initiative management, it also considers the integration of programmes and projects to facilitate the wider interactions across diverse change initiatives, thereby offering the essential infrastructure for adaptive and responsive change, supportive of benefit realisation.

Is it time to rethink change?

Many organisations are ill prepared for change. US Management guru Tom Peters observed that 'excellent firms don't believe in excellence – only in constant improvement and constant change'. The challenge for many organisations remains to embrace such change and thrive and prosper under such dynamic and volatile conditions.

So, do we get to manage change?

Well, not really. We engage with change constantly, and adapt and respond in its wake. We can try and work with those impacted by change and create organisational structures, such as the mechanisms proposed by Ramani to address some of the influences. Other means are also available: Introducing agile infrastructure, for example, could allow us the flexibility and luxury of adjusting, responding, and adapting.

Kurt Lewin observed that in order to truly understand something; you need to try to change it. Recognising that individuals cannot be coerced into change initiatives may require new methods of conceiving our own roles, our state of being, and the ultimate relationships to change. It will also impact the ways we approach stakeholder engagement, relationships, expectations, and communication, and should also be reflected in how we think about and measure benefits, and in how we consider the usage of planned new assets (potentially leading to the ultimate attainment of benefits and through them of overall value).

US businessman, film producer, and financier, Ryan Kavanuagh commented that 'the key is to embrace disruption and change early. Don't react to it decades later. You can't fight innovation'.

Timely adjustment and co-existence are essential. In adopting new ways of facilitating and guiding change, we may need to consider developing a keen understanding of individual beings, of organisational and communal intentions, and regrasp the role of opportunity. Arnold Beisser provides a significant role model who was able to reposition his life and transform his aspirations from sportsman, to psychoanalyst, and later in his career, when his health and energy failed him, from active teacher to author. Throughout his work, Beisser (1970; 1989) maintained the power to influence and transform, even from the confines of his wheelchair. His theories and practice re-invigorated psychoanalysis, especially as he was able to draw on his own personal transformation. Whilst there were difficult periods and unexpected decisions, Beisser remains an inspiration to the power of humans to change for the better, even against unimaginable adversity.

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Enterprise-wide transformation programmes do not succeed without change management!

Sankaran Ramani

Practitioners and consultants have been advocating better processes and tools to implement large-scale programmes (and portfolios) in large organisations. Many of them are well informed and their intentions and commitment are indisputable as well. Yet, in spite of the well-laid-out plans and the drive from top management, a significant percentage of change initiatives fizzle out or do not produce the intended results.

A key reason for this failure is the impact on the people perspective. Top-down-driven initiatives breed scepticism and pushback from the operational stakeholders – where the 'rubber meets the road'. It is often said that 'people want change but won't change'. This is especially true when the impacted stakeholders perceive the outcomes from the transformation programmes to be negatively impacting them.

Based on our experience and analysis, we could categorise stakeholders into three groups – Top Management (typically the C level executives), Middle Management (usually Divisional or location managers/Heads of business units and their deputies) and the Operational Stakeholders. The likely success of large-scale change initiatives under various combinations of stakeholder commitment and propensity to change could be summarised as in Table 11.1.

Enterprise-wide transformations

For any enterprise-wide transformation, we consider the dimensions highlighted in Figure 11.1, impacting the success of change initiatives.

For the initiatives to succeed, the people and culture perspectives are of paramount importance, as compared to resetting processes or deploying enterprise-wide tools (including ERP or similar IT systems). Whereas we are not discrediting the process and tool perspectives, we have noted from our experience that mere implementation of new processes and tools do not alone facilitate effective or sustained change.

TABLE 11.1 Change impact matrix

Stakeholder commitment

Top Management	*Middle Management*	*Operational Stakeholders*	*Likely success of the change initiative/status*
Low	Low	Low	Nil. Status quo–resigned state.
Low	Low	High	Nil. Enthusiastic bottom-up ideas – sabotaged by the middle and senior management. Frustrated work force. High de-motivation and attrition.
Low	High	Low	Unlikely situation. In this combination – middle management can spearhead the change – but will require considerable push to implement them.
Low	High	High	Medium. Fertile situation for change to happen and a change in top management can trigger off the transformation.
High	Low	Low	Negligible. Unless the rank and file changes – top management will find it extremely tough to push change. Typical situation seen in many corporates. Long lead time for implementing changes.
High	High	Low	Success more likely. The operational stakeholders can be incentivised to absorb change and, with a lag, the momentum for change can catch on.
High	Low	High	Low–medium. Unless the blocking middle management is convinced or 'cajoled' – change can fizzle down.
High	High	High	Utopia! Change initiatives will be debated and accepted swiftly.
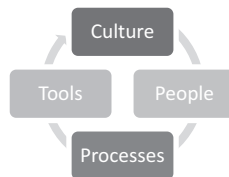
FIGURE 11.1   Dimensions impacting success of change initiatives

The soul of the organisation lies in its culture and its people. Herein lies the problem as these perspectives are more 'resistant' to change. These four perspectives are interconnected (though the linkage from Tools to Culture is more of second-ary nature). Any enterprise-wide transformation that predominantly addresses the process and tool perspectives would find the organisation reverting back to the old equilibrium at the 'first possible' instance and change will not be sustained.

The maturity of the organisation and the triggers for change also play a critical role in sustaining change. In a stable environment, change can be planned and driven. When the change is triggered due to external factors (like change in political environment, mergers or acquisitions etc.) – we have noted that the change process itself is chaotic and 'emergent'. In such a situation, the transformation programme itself gets subjected to frequent ups and downs, causing frustration and disenchantment to management. It has also been noted many times that the top management is 'attuned' for change in their mindset – but the operational management is not – causing friction and expectation mismatches.

Amongst the various organisational change models propagated, John Kotter's Eight step model is quite popular. The 'standard' eight steps are noted in Figure 11.2.

For most of the 'top-driven' changes, the disconnect typically happens between steps 4 and 5, as the top management typically is unable (or unwilling) to put in the required efforts to empower people or remove obstacles due to obsolete processes or structures (and culture). Also, if the change is radical or far-sweeping, the time-lag between steps 7 and 8 can be protracted.

Step 2 above is vital. Many organisations undertake pilot implementations and gauge the organisational readiness for change. The champions of these pilot implementations can become 'early adopters', propagating the change to the rest of the organisation.

Apart from creating and communicating the vision, the top management also needs to develop detailed outcomes expected from the implementation of the change initiative – including the impact on customers, employees, suppliers, and other key stakeholders.

FIGURE 11.2 Kotter's model of change

Step 6 – creating short-term wins would be focusing on 'low hanging fruits' – with the redesign of a new functional model of the pilot organisation, product and support functions, outsourcing/alliances etc.

A knowledge transfer mechanism needs to be in place to achieve step 7. How quickly an organisation absorbs change is also dependent on the maturity of the organisation and its change readiness. This step will also call for creating new job profiles, capacity and capability planning for the entire organisation, mapping current skills to the roles, high level training, and assessment of out-sourcing needs etc. New business scenarios will be created and 'walked through' to familiarise the functional and middle management with the new roles and responsibilities.

Governance mechanisms get significantly influenced by the culture. As the companies institute the 'new culture' – it is imperative that the redesigned processes and structures need to be fully embedded in the organisation.

Transition management is important in step 6 and more during step 7. While managing change, it is imperative for the organisations not to lose focus on their core operations and their commitments to their clients. Usually there are three sub-steps in transition management, covering pre-transition, transition, and post-transition with detailed activities to address the change. Most of the change involves communication to the functional stakeholders – as these are the people who get typically impacted the most. An early communication of what is in store for them is more important than last moment 'surprises', which tend to breed more resistance and non-acceptance.

A separate change director (or transformation director) is deployed in large-scale engagements to address the soft-skills aspects concerning change, to ensure these initiatives produce desired outcomes and benefits.

Change at the portfolio level

Change at the organisational level and the portfolio level are inter-related to a considerable extent. The portfolio manager designs the portfolio in conjunction with the portfolio steering group (or a similar body). The portfolio consists of the programmes and stand-alone projects within its ambit.

At the portfolio level, the challenges are more coming from non-acceptance of change from senior management. Especially if the portfolio management may include projects and programmes from diverse departments and some of these decisions can become contentious (like 'why was the programme from my department not included in the portfolio while the programme from another department was included' and so forth).

Senior management usually resolves this by having a common meeting wherein the issues are debated and resolved. Such decision-conferencing systems are held where the top management states the vision of the portfolio and the middle managers agree on why change is initiated and what benefits it brings to the organisation. Again pilot studies or feasibility reports enable a quicker buy-in.

Programme management – change perspective

Transition management is a key consideration during programme-level changes. Once the project outputs combine to create a capability, transition management occurs to concerned operational departments.

The functional managers (also called business change managers) are responsible for accepting the outputs from projects and transitioning them into operations. They need to prepare their concerned business areas for change – by relating to what is going to change and what is not going to change. This is especially useful for functional users who may get anxious on the extent of changes that may impact them. During the actual process of transition, extensive handholding may be needed to guide through the change, including creation of temporary facilities for transition and helpdesks etc.

Once the transition gets stabilised, the concerned project managers can be de-engaged and the programme can move onto creation of capabilities for the next transition.

Post-transition, the business change managers need to focus on realising the benefits. This is the step where outcomes get stabilised and benefits start forthcoming. The functional (business change) managers need to ensure that the operational departments are not relapsing back into old ways of working. In some cases, parallel systems are commissioned to ensure there is no disruption to the service levels provided to the customers. Benefit realisation plans are activated to measure the benefits as and when they accrue.

Projects and change management

Typically projects operate under the 'constraints' of the triple triangle – comprising schedule, cost, scope, and also quality. Delivering fit-for-purpose outputs is a purpose of project management. In this context, the project management is more concerned about technical delivery rather than typical change management as noted in the programme and portfolio management.

Most of the change requests that come relate to changes from the baselines. The assessment done in this context relate to the impact on the scope, schedule, and costs and how best they can be addressed. It is however likely that the impacts on the project can 'hit' other dependent projects on the programme and may ultimately affect the programme change readiness. In such cases, the programme manager assesses the impact of the change request from the programme perspective and takes corrective and preventive actions.

Summing up

All change initiatives (whether projects, programmes, or portfolios) are enablers for change. Whereas the technical capability enables the change initiatives to succeed, without organisational change management, large-scale changes usually falter. We have been seeing increasing awareness from organisations of the necessity for large-scale change management, which is a welcome change by itself!

12

BENEFITS

So where do benefits come from?

Darren Dalcher

Benefits are increasingly discussed in the context of project delivery. The sixth edition of the *APM Body of Knowledge* lists benefits management as one of the core areas addressed under the heading of scope management, thus reflecting the assertion that the planned objectives of projects can 'be defined in terms of outputs, outcomes or benefits' (p. 12).

The *APM Body of Knowledge* asserts that delivering benefits is the primary reason for organisations to undertake change. Benefits management is therefore defined as 'the identification, definition, planning, tracking, and realisation of business benefits' (p. 124). The benefits may be expressed as tangible quantities, often measured in monetary terms, or as intangible qualities (for example, corporate reputation, or capability for rapid change).

However, if project delivery is focused on the handover of outputs, there is a need to identify the interface with the realisation of benefits required to make the change meaningful and attain the business benefits identified at the outset.

The information paradox and the emergence of benefits

The very concept of benefits has emerged from the information systems domain in an effort to quantify the impact and scale of proposed investment in information technology (IT) projects. IT spending is often the largest capital investment for many enterprises. In the 1980s, there was a rush to increase IT spending; however, the ability to justify such investments in terms of real value was seriously lacking.

The inability to prove the value of IT investments galvanised John Thorp and a team of IT consultants and practitioners within Fujitsu to define a set of methods, tools, and techniques to improve the effectiveness of IT investment projects. The result was the publication of *The Information Paradox* in 1998 (and subsequent revision and enhancement in 2003).

TABLE 12.1 Fundamental shifts in business (after Thorp, 2003)

From:	*To:*
Project management	Programme management
Free-for-all competition for resources	Strategic portfolio management
Traditional methods of tracking project delivery	Full cycle governance required to turn concepts into realised benefits

The key finding was that new IT, by itself, delivers no discernible value. Value can only be created and sustained through the actual *use* of the new IT systems. Selection and management of IT-enabled investments in organisational change becomes critical to performance. Realising value from the investment requires action beyond the mere delivery of IT systems; it necessitates real change within the organisation to enable the new systems to be utilised. The change would often impact many other aspects including: the nature of the business itself; business processes; skills and competencies; and the organisation. Such change, which is not IT-specific, or even project related, could often account for up to 80% of the total investment.

In order to advance an approach capable of identifying and delivering clear and significant business results, Thorp identified the need for three fundamental shifts (see Table 12.1).

The shift to improve and deliver significant business results is underpinned by three necessary preconditions:

• Activist accountability that includes the concept of ownership;
• Relevant measurement linked to contribution to outcomes and lines of accountability; and, perhaps most critically,
• Proactive management of change that is visibly led by senior management

A clear implication of the work is that benefits require improved structures for governance, stakeholder engagement, full life cycle utilisation, and strategic consideration and oversight. They also depend on the all-important support from senior management, necessitating active and sustained involvement and visible leadership.

Benefits realisation in programmes

While there are a number of competing methodologies and approaches to addressing benefits in practice, there is little standard practice acknowledged as universally successful in linking benefits, strategy, programmes, and success.

The final chapter by Andrew Hudson focuses on the role of benefits in the management of programmes. Hudson emphasises the connections between strategy, operations, and change, clearly placing the management and realisation of benefits at the apex of organisational performance. He also identifies the key challenge of maintaining the initial momentum and energy established during the early

definitional phases and carrying them throughout the extended life cycle of the programme. The temptation to focus on project constraints, such as time and cost, may often lead to attempts to re-adjust the scope, thereby impacting benefits, and it is therefore essential to plan the full life cycle for utilising, realising, and harvesting the benefits. Key activities, such as strategic alignment, play a crucial part in mapping and balancing the delivery of potential benefits.

Establishing the benefits mindset

Thinking about benefits and value requires a new approach to organising programmes and a different perspective for thinking about strategy, management, leadership, and change, and the inevitable connections between them.

There are multiple lessons that can be taken from the work of John Thorp and his team. Particularly important are their observations regarding the new benefits mindset and the key premises that underpin that perspective:

- *Benefits do not just happen*. They don't just automatically appear when a new technology is delivered. A benefits stream flows and evolves over time as people learn to use the new technology.
- *Benefits rarely happen according to plan*. A forecast of benefits to support the business case for an investment is just an early estimate. It is unlikely to turn out as expected, much like corporate earnings forecasts. You have to keep checking, just as you would with a financial investment that fluctuates in value on the securities market.
- *Benefits realization is a continuous process* of envisioning results, implementing, checking intermediate results and dynamically adjusting the path leading from investments to business results. Benefits realization is a process that can and must be managed, just like any other business process.

(p. 22)

Breese (2012; p. 347) notes that targets for programmes are often set at the bid stage for an unknown future. Inevitably, some programmes encompass key elements that cannot be delivered, and occasionally agreed targets prove unattainable.

The lessons from Thorp's work therefore imply a shift from a project perspective emphasising output delivery towards an active and continuous approach to engaging with the benefits in order to deliver significant and sustained business results. They also point to the need for continuous learning, adjustment and adaptation as we continue to engage with the uncertain, unknown, and unknowable. Recognising that the benefits streams evolve, and identifying the need for dynamic adjustments, call for greater connection with other disciplines and management structures and a deeper understanding of strategy, leadership and success.

Similar ideas have been explored by Dan Remenyi and his colleagues (1993; 1997; 2000): Their body of work emphasises the integration of technology with business strategy and corporate culture; continuous evaluation of inevitable change;

an increasing focus on the shared responsibility to a group of main stakeholders; and, the delivery of real business value.

A new paradigm for benefits management?

The idea of organising through benefits realisation frameworks has been around for a number of decades. Benefits have the potential to address a wider perspective and engage with a deeper meaning of organisational success, providing added justification for the initial programme decisions. However, Thorp (1998) warned of the inevitable risk of 'silver bullet thinking', assuming that the benefits focus will provide a neatly packaged methodology and approach for managing investments and strategies.

Encompassing benefits is an important step in re-considering the relationship of projects and programmes to the wider organisation; however, it is worth noting that while the consideration of benefits is a relative novelty in some sectors including the PPM community, ways of thinking about benefits are adapting and changing in other arenas. Truax, for example, noted a shift from passive management of benefits to a more proactive and dynamic perspective (see Table 12.2).

Truax also noted a number of problems that can arise when organisations are not obtaining the benefits they expect, namely:

*   The immediate results of an investment are rarely those expected (or promised).
*   Necessary means for benefit realisation are not identified (or understood).
*   Benefits do not occur where and when they are planned.
*   The 'right' benefits are difficult to identify up front.
*   Projects are too narrowly defined for effective delivery of benefits.
*   Organisations often have limited ability (or experience, or appetite) to manage change.

The list of challenges identified by Truax matches many of the concerns encountered by project organisations engaging with benefits. Moreover, one potential

TABLE 12.2 Paradigm shift for benefits realisation (after Truax, 1997)

Traditional Benefit Realisation Principles	New Benefits Realisation Principles
Benefits are stable over time	The potential benefits from an investment change over time
The investment determines the nature and scope of benefits	The organisation and its business context determine the benefits
Financial returns represent the most valid justification for an investment	All the outcomes of an investment represent potential sources of value
It is sufficient to manage the investment to generate the benefits	The organisation must be proactive in realising benefits

manifestation in practice is the amplified tendency to search for 'additional' benefits to match the identified problems, rising costs, delayed implementation or under-delivery of strategically misrepresented aspects of the programme in order to continue to justify the business case put forward at the outset.

Advancing the dialogue and developing dynamic capabilities would require recognition of the shifting nature of benefits, the adaptive character of strategy, the dynamic and continuous process required to engage with benefits, and the richer and more varied definition of success that must surely underpin our attempts to make sense of organisational achievement. Allowing for benefits to 'flow and evolve', adapt, adjust, and grow as envisaged by Thorp and Truax would require an even higher level of learning, engagement, and maturity, and a deeper understanding of how to dynamically relate to organisational targets, opportunities, and achievements. Critically, it would also depend on our ability to develop an understanding of how programmes evolve and adapt over time, and how we might engage with the systemic and dynamic characteristics of programmes in order to deliver new levels of enduring success.

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Managing programme benefits

Andrew Hudson

> To begin with the end in mind means to start with a clear understanding of your destination. It means to know where you're going so that you better understand where you are now and so that the steps you take are always in the right direction.
>
> *– Stephen Covey*

Introduction

There is no other purpose in doing a programme than to deliver value and realise benefits. This is the true measure of a programme's success. To illustrate this, consider which of the following programmes is better? A programme that was delivered on time, on budget and created some value, or a programme that was late, over-budget, and created significant value? It is hard to argue that the latter programme is better because it delivered more value despite being late and over budget.

This chapter explains how being more effective at managing programme benefits can accelerate performance improvement and better enable organisations to achieve their strategic objectives. It explains common benefits management practices and explores reasons for programme benefit success and failure. The chapter also provides practical guidance on the most effective strategies to lead and deploy programme benefits management including guidance on how to tackle some of the barriers to successful adoption. It offers general guidance to key practices and references to leading practice resources for further reading.

Benefits management context

Benefits management, as a practice, is at the heart of an organisation's strategy. It is a central discipline that connects strategy with change and operations enabling

FIGURE 12.1   Benefits management at the core of the strategic process

strategy to be executed and performance measures and targets to be achieved. Figure 12.1 illustrates how benefits management sits at the heart of the strategic process.

The need for programme benefits management

The beneficiaries of a programme, who could be internal or external consumers or operators, need to know that the programme's outputs will enable them to realise their objectives.

Programmes start with high expectations and levels of motivation. This motivation ebbs as the programme deals with delivery issues relating to quality, cost, and time. Programmes may be de-scoped to ensure the programme delivers on time with insufficient awareness and consideration given to the value impact. This is an example of why programmes may fail to deliver the expected benefits. A study (Ward and Maylor, 2013) conducted by the International Centre for Programme Management (ICPM) found that of the 21 programmes (£10m–£100m+) researched over a two-year period, six were successful at achieving the stated objectives, nine partially successful and six failed to achieve any objectives or were abandoned.

Findings from this study and other research show that for programmes to be more successful they need to have a clear purpose, be strategically aligned with a recognised need and a strong financial case. Programme benefits management is the practice that brings this together. Whilst organisations lack people with the skills and experience to do this effectively, consultants and contractors are often appointed to facilitate programme benefit management on behalf of the organisation. There is, therefore, a major opportunity for practice leaders to emerge within organisations to lead benefits management practice and its adoption.

Executive attitude to programme investment

Programmes require a significant investment in terms of financial and human resources. Executives know that programmes are complex and challenging so they do not invest in them lightly:

- They may have their own performance objectives and remuneration tied to the success of a programme.
- They may want the programmes to become a focus for the organisation and their teams to improve performance whilst not distracting from current operational issues.
- They may have high expectations that programmes will deliver the expected outcomes and performance improvement.
- They may rely on a turnaround or transformation programme to sustain the organisation and reduce the risk of takeover or failure.

What is programme benefits management?

Programme benefits are the positive outcomes of change enabled by programme investment and capability delivery. Programme benefits management involves organising and facilitating the identification, evaluation, commitment, and realisation of benefits throughout the life cycle of the programme:

- Programme benefits are generally aligned to one or more organisational strategic themes and objectives (e.g. to transform the customer experience, to develop new products and service propositions, to improve productivity) or a major change activity (e.g. a major system upgrade or compliance project).
- Programme benefits may be identified before the programme has been initiated. For example, a strategic review or transformation blueprint may have identified performance improvement targets that are subsequently assigned to a programme.
- Programme benefits do not just happen as a result of new IT systems or process capabilities. They need business or behavioural change activities to realise the potential value.
- Programme benefits may be dependent on complex cause and effect relationships with changes and intermediate benefits that are difficult to articulate. Benefit dependency maps are a valuable and engaging technique to model these inter-relationships.
- Programme benefits must be owned and ideally managed by the operational and functional leaders and teams who derive value from the capabilities being delivered by the programme. It is incumbent on those leaders and teams to ensure that the programme delivers the right capabilities to maximise the value. Programme managers and benefits leads need to facilitate benefit adoption.

- Programme delivery should be aligned to the critical programme benefits with opportunities for quick wins deployed at the earliest opportunity. For example, the process design for an IT project may identify operational changes that can be deployed prior to the system deployment.
- Programme benefits are measurable and contribute to one or more financial or non-financial measures (e.g. revenue growth, cost reduction, defect reduction or customer satisfaction). Measures are a metric or measurement that define the achievement of an outcome or benefit. Outcomes or benefits that you can-not measure are likely to be a deliverable or activity.
- Programme changes and benefits may lead to additional risks and dis-benefits that need to be understood and their negative effects minimised. Planned changes may potentially need to be put on hold.
- Programme value (or worth) is the general term used to describe the net effect of benefits less investment and ongoing costs.
- Programme financial value is the return on investment (typically measured using discounted cash flow (DCF) techniques including net present value (NPV) and internal rate of return (IRR)).
- Programme benefits will continue to be realised after the programme has com-pleted delivery. There should not need to be a handover of benefits since the operational leaders and teams should already be handling their realisation.

What is the programme benefits life cycle

Whilst there is no global standard for benefits management, Figure 12.2 is a generic mapping reasonably aligned with leading practices. The steps involved in each stage will vary by organisation and will be aligned to internal budgeting and investment procedures and governance rules.
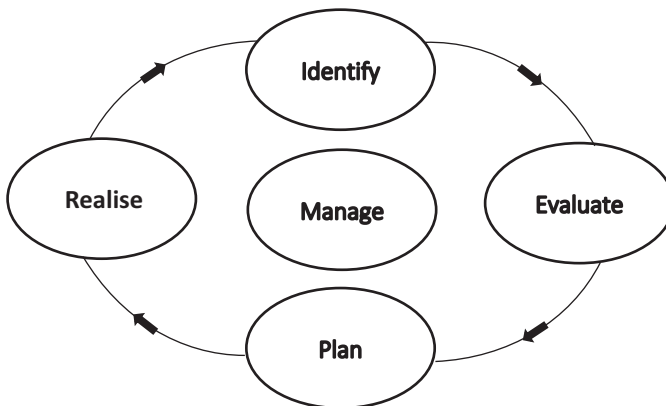
FIGURE 12.2   Benefits management process

Identify

This stage involves identifying programme benefits and outcomes from a range of perspectives:

1   The primary strategic objectives that the programme will contribute to and the programme's contribution relative to other initiatives.
2   Intermediate and end benefits that can be mapped out in a cause and effect diagram called a benefit dependency map.
3   Stakeholder and operational issues assessment to identify improvements and benefits that are relevant to end customers of the programme deliverables.
4   Understanding the impact and benefits of the key programme deliverables, capabilities and enablers.
5   Alignment and identification with strategic, operational and financial measures.

Benefit mapping workshops enable engagement, a shared understanding and strategic context for the programme for a range of stakeholder groups. If programme delivery teams are also involved, they will be more motivated if they know what the value and contribution of their efforts are to the organisation and its strategy.

Benefits need to be SMART – specific, measurable, agreed upon, realistic and time-bound. Benefit profiles (templates) are used to articulate benefits and include details such as description, ownership, measurement, risks and the dependent benefits, enablers and capabilities. Measures may also include an initial profile of expected performance.

Evaluate

This stage involves a more detailed value assessment prior to funding and budget approval. The value assessment is prepared using a business case that includes financial justifications as well as non-financial benefit forecasts. Key sections of the business case should include:

1   Financial justifications that are evaluated by subtracting the initial investment and ongoing costs from the financial benefits. Cash flow projections are discounted to determine the return on investment (ROI). Financial forecasts are reviewed with finance and the relevant beneficiaries including decisions on whether the benefits are cashable or non-cashable.
2   Non-financial benefits with measures that are specific to the programme or multiple projects and programmes. Where there are multiple project and programme contributions to a measure, the use of a high, medium or low contribution rating will be sufficient since quantified contributions are often arbitrary.
3   Evaluations of the relative contributions of programme and project deliverables to benefits and strategic objectives. This enables better discussions with the programme delivery teams on the relative priorities and contributions of each deliverable.

4   Changes and 'quick win actions' that can be performed by the beneficiary with minimal up-front effort (for instance actions that do not require a major system change).

5   Benefit risks with a financial impact can also be assessed to identify the level of risk management reserve required for the programme.

The programme or project level business case(s) will then be submitted for approval by the appropriate investment committee. This is likely to coincide with the annual budgeting and strategic planning cycle with either departmental or organisation-wide investment decisions being made. On approval, the benefits and costs are base-lined and budgeted in the overall financial plan and strategy. Approved projects may also have tolerance thresholds above which the project would be subject to review or cancellation. Agreeing when you would stop a programme or project before you start it makes it a less emotive decision to cancel and leads to more positive conversations on how the resources and funds can be better utilised.

Plan

This stage involves forecasting and re-confirming the expected benefits taking into account available resources and more detailed delivery plans. Benefits need to be translated into specific measures that the operational teams can use to drive performance improvement. Specific 'business' changes will also be planned to ensure that the value of capabilities delivered can be realised by the operational teams. Other planning activities include:

1   Re-confirmation of the financial cost benefit and cash flow analysis from more detailed programme delivery planning and scoping.

2   Plans for stakeholder engagement, communications and capability deployment identifying the changes required to ensure adoption, minimise risks and realise benefits. The work required to realise the benefits of change is often underestimated by those involved in delivering the capability.

3   Timing of benefit realisation aligned with the availability of resources to deliver the required capabilities.

4   Consolidation and prioritisation of benefits and benefit measures to ensure delivery and operational team focus.

5   Confirmation of measurement data sources, measure forecasts and, where required, the measurements that need to be set up for tracking and reporting.

Realise

Benefits realisation is the responsibility of the programme's benefit owners not the programme. Due to the lack of personnel and capability to identify, track and report on operational measures, it is often incumbent on programme benefit teams to coordinate this task in support of the benefit owners. In the case of financial

benefit measures e.g. Revenue or Cost, these may be reported centrally by Finance with value contributions assigned to each programme in consultation with measure owners.

During the programme delivery phase the programme's benefits are reviewed and re-forecast to re-confirm the programme's viability with quick-win benefits recorded. Programme deliverables (i.e. capabilities) shall also be checked for benefit contribution with additional benefits highlighted or operational issues tackled through programme changes. Dis-benefits are also tracked to minimise value leakage.

Post-programme delivery benefits realisation should have switched into standard measurement reporting by operational areas. There may also be a central performance reporting unit who would handle reporting by team.

As the programme progresses, reviews will need to validate the expected benefits are achievable and that there is a return on the remaining programme investment. Quality reviews should also establish that the benefits have been defined to the right standard and that the beneficiaries remain committed to the benefit planned. Dis-benefits will also need to be considered to ensure that any negative impacts are minimised.

Manage

This stage involves ensuring the effective management and governance of benefits on the programme. Ideally there should be a central function to oversee benefit (i.e. improvement) planning and reporting as a continuous process across all departments and programmes. If no central function or organisational standards exist, the process, templates, and reporting formats for benefits management will need to be established by the programme benefits manager.

At relevant stages in the programme benefits life cycle the overall benefits manager will need to assure that programme benefits have been identified, assigned, evaluated and confirmed by the respective benefit owners. They must also assure that the programme's deliverables have been assessed and aligned with the needs of the operational areas.

Programme benefits management challenges and mitigations

Some of the challenges involved in managing programme benefits and the opportunities to mitigate or handle these are identified in Table 12.3.

Programme benefits management roles

This section describes the common roles involved in programme benefits management, providing guidance to individuals on their responsibilities and the behaviours required.

TABLE 12.3 Challenges and their mitigation strategies

Challenge	Explanation	Mitigation
Maturity	Low organisational maturity with poor governance, frameworks, practices, and know-how.	Appoint advisers who can shape benefits management strategies and practices.
Long Lead Times	Long lead times to benefits realisation with changes in accountability, organisational strategy and external events lead to disenfranchisement of beneficiaries.	Quarterly or Bi-annual reviews of programme outcomes, alignment with strategy and financial justification. Identification of quick wins to evidence programme contribution to beneficiaries.
Complexity	Programmes are complex by nature with multiple internal and external dependencies. Programme benefits are complex to articulate and difficult to measure.	Take time to understand the complexity and use techniques such as benefit dependency maps, risk assessments and scorecards to simplify the logic.
Practice Understanding	A diverse range of stakeholders who do not understand the practice and find it too complicated.	Build education of practices into programme communications.
Poor Forecasting	Benefit measures are forecast in isolation of the actual operational measures used by the organisation with over optimistic expectations.	Aggregate common benefit measures (e.g. savings) to operational measures where operational measure owners forecast benefits across multiple programmes.
Information Quality	Inadequate and inaccurate information and insights to manage benefit performance to enable effective decision making.	Establish a benefits reporting framework and tools that is run and managed by a central programme office or strategy team.
Delivery Pressures	Programme pressures to focus on delivering to time, cost and quality even though the programme success is ultimately measured by outcomes not capability.	Programme leadership need to use benefit or outcome criticality and consequence to inform decisions on programme delivery.
Stakeholder Engagement & Support	Programmes involve diverse stakeholders many of whom are beneficiaries or blockers to successful outcome delivery.	Understand stakeholder needs, motivations and concerns related to programme outcomes and ensure these are addressed with an agreed engagement plan.
Benefit Accountability	Programmes are not accountable for the benefits, they are responsible for ensuring that the right capabilities are being delivered to achieve them.	Ensure programme beneficiaries are assigned to and reported by operational managers.

Benefit owner

Benefit owners are the senior beneficiaries (e.g. line managers, directors or executives) within an organisation accountable for committing to and realising a benefit or improvement target. Benefit owners can consider benefits as the outcomes required to deliver their team's part of the organisation's strategy or to address specific operational performance issues.

Before committing to a benefit, benefit owners need to be confident that their team can achieve the targeted performance and that there is a coherent plan in place to deliver it. Risks can be used to qualify commitment and highlight uncertainties and concerns in benefit achievement. Benefit owners need to be proactive at resolving issues and concerns. Focusing on a few critical benefits and measures also increases their chances of success.

Whilst benefits may relate to a single programme, benefits typically depend on the contributions from multiple initiatives, internal actions and change programmes. Due to the complexity of benefits analysis and assurance, benefit owners rely on analysts and consultants to facilitate, assess, and report benefits from multiple stakeholder perspectives. As well as providing the overall management responsibility for benefits realisation, benefit owners will need to report or escalate issues to the executive committee or board levels for consideration.

Benefit manager

Benefit managers are responsible for facilitating and managing benefits within a programme or across one or more organisational areas. They will be aligned with or report to one or more organisational areas but may also report to the programme manager, central strategy or change office. Benefit managers need the knowledge and skills to apply benefits management practices. Whilst experience of the sector or process is invaluable they need to be adept at interpreting operating procedures, process models, performance reports and benchmark data. Responsibilities include facilitating the development of benefit dependency maps and producing benefit profiles for review and agreement with the relevant benefit owners and stakeholders. They may be required to prepare business cases, working with the benefit owners and programme sponsors, but more commonly to focus on validating the financial benefits, ongoing costs and scope of programme deliverables. Benefit managers are responsible for ensuring that the relevant change transition activities are in place to realise the planned benefits. They are also responsible for reporting benefit measure performance with exceptions reported for review by senior management.

Benefit managers need to be expert facilitators who can translate and articulate benefits and benefit measures in a way that stakeholders understand and own. They need to be competent at interpersonal skills and understand behavioural drivers. Senior benefit managers will lead and inspire change working within operational or cross-functional teams.

The benefit manager's role may also involve the planning and coordination of business change activities or a specific 'business change manager' role may be required in its own right.

Programme sponsor

A programme sponsor is the senior manager or executive who is the primary beneficiary of the programme's outputs (i.e. their area benefits most affected from the programme's capabilities delivered).

They are accountable for the successful delivery of the programme (time, cost, and quality) and benefits realisation in their organisational area. They are also accountable for ensuring commitment from other benefits owners to the delivery of the programme specific benefits in other organisational areas.

Programme sponsors need to ensure that the aims of the planned change continue to be aligned with the organisation's strategy and overseeing and directing the transition from change delivery to business as usual.

Benefits management practice leader

The benefits management practice leader is responsible for defining, agreeing, deploying and overseeing benefits management practices and governance within a programme or across the organisation. Whilst they would be likely to have a role as a benefit manager they would be granted the remit to lead benefits management practice adoption across the organisation either as part of a central or specific, strategy, programme or project management office. In some organisations the benefits practice leader may be appointed to run a benefits (or value) management office with its own terms of reference.

This position involves supervising the team that provides benefits management support services and escalating process compliance issues relating to quality, ownership, and reporting timeliness. They may also be responsible for maintaining measures on practice adoption, quality, achievement, skills, satisfaction, and communication. Benefits management maturity may also be judged on an organisation's ability to measure the process and continuously improve it.

Programme benefits management practices

This section describes common practices and techniques required to manage programme benefits including advice and guidance on key related areas (see Figure 12.3).

Strategic alignment

Strategic alignment involves understanding the relative contributions of projects and programmes to the organisation's strategic objectives. If the organisation's
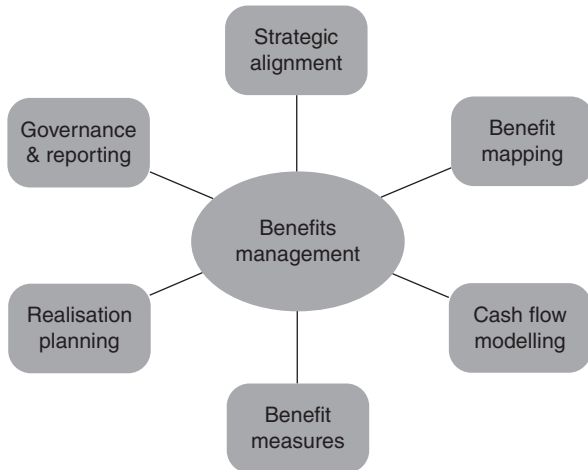
FIGURE 12.3 Common practices and techniques

strategy has not been articulated as a set of strategic objectives then the programme benefits lead may need to define strategic objectives using available reports, presentations, scorecards, and measures. During an initial qualification of projects and programmes this technique helps to evaluate whether the programme is worthwhile doing. It also highlights objectives where the contribution from programmes and projects is too light. Beyond the initial qualification, the objective contributions can be used as a starting point for benefit mapping, business case development and contribution status reporting.

As a technique the simplest way to visualise strategic alignment is through a grid or matrix. In the Figure 12.4 example, the relative contributions of projects and programmes are assessed against the strategic objectives. Contribution values of 1, 3 or 7 are used to represent a low, medium and high contribution respectively. Strategic alignment scores are calculated by summing the contributions multiplied by the objective weightings.

Benefit mapping

Benefit dependency maps (BDMs) are a visual representation of the value chain from project and programme work products to end objectives. The mapping technique is a valuable way of engaging programme teams and wider stakeholders to understand and articulate the benefits of a project or programme and the required deliverables and changes. Complex programmes that are difficult to articulate in terms of value and benefits find this technique invaluable. One of the key techniques is identifying the organisational and behavioural changes required to ensure programme and project deliverables and capabilities translate into benefits. For example, a new system provided to users may not deliver the expected benefits

	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	
Weighting	2	1	2	1	1	**Score**
Programme A	7	3		1		18
Programme B		1	3	1		8
Programme C		7		3	1	11
Programme D	7		7	1	3	32
Programme E		3		1	1	5
Programme F			3	1		7
Programme G	3				3	9
Contribution	**34**	**14**	**26**	**8**	**8**	

FIGURE 12.4   Sample strategic alignment

until users have been trained, know how to use it effectively and new behaviours have been adopted.

Benefit dependency maps have evolved into a range of formats and conventions that are broadly similar. The example in Figure 12.5 shows the programme or project enablers and capabilities, the business changes, benefits, and strategic objectives. Dis-benefits may also be shown since minimising the impact of dis-benefits may affect whether the programme is worthwhile or not. Balanced scorecard strategy maps are related in that they show the overall strategic themes and objectives mapped out in a value chain by a general scorecard perspective.

Maps are ideally formulated in workshops that are set up and run by experienced 'independent' facilitators. Facilitators need to ensure that there are contributions from all participants. Well-run workshops create a shared understanding and vision on how to achieve the objectives. One of the challenges for the facilitator is to consolidate scores of ideas and thoughts into very specific and relevant items. Any more than 30 items on a map becomes unwieldy, difficult to interpret and communicate. A simplified version of the map with key items may be required for general communications. Benefits and outcomes should be measurable and describe what the outcome has achieved (e.g. reduced expenditure leakage with a measure, baseline, and target for leakage). Enablers, Capabilities and Business changes often turn into detailed dependent tasks and actions. These need to be consolidated into specific items with detailed task plans for each item. Benefit measures and risks may also be shown on the maps or included on a benefit profile.

Cash flow modelling

Determining the value of a programme is difficult because the value of money in the future is not worth as much as earnings today and there are different ways to measure the value of future cash flows. Cash flow models are used to calculate the annual and cumulative return i.e. the financial benefits net of the investment and ongoing costs. Net present value (NPV) is a standard technique used to evaluate the
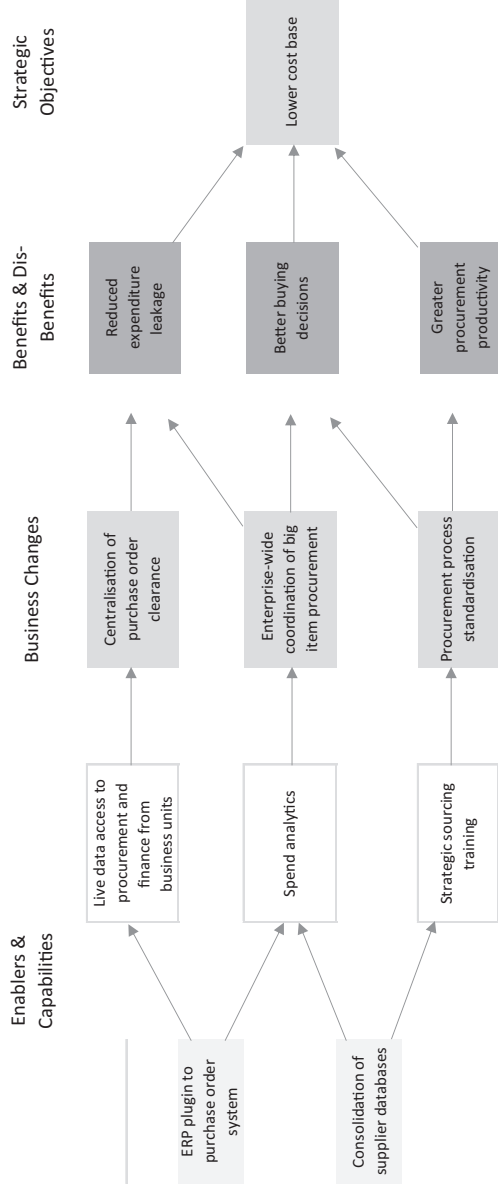
FIGURE 12.5 Sample benefit dependency map

financial returns of an initiative taking into account a discount rate for the cost of capital (i.e. the equivalent of having the money in the bank). The precise rules and discount rates vary by organisation and type of programme.

The example in Figure 12.6 shows four years of cash flow with an initial investment in Year 0.

For budgeting purposes the budget holders and finance departments need to know whether financial benefits are cashable or non-cashable and whether they are tangible or intangible (see Bradley, 2006 for more specific categorisations of benefit types). Benefit owners also need to review financial benefits and ongoing costs across all initiatives by type of financial measure (e.g. revenue or cost) to ensure that the sum of financial benefits is valid and not double-counted, as is often the case. A useful test is to review all the approved business case financial benefit forecasts and to compare those with the business plans and budgets.

Benefit measures

Measures are something you can put an amount, quantity, size, ratio or a percentage against (e.g. the number of claims). Measures are fundamental to benefits management since they tell you whether you have achieved a benefit or not. Imagine trying to do high jump without a bar. Bar height is the measure and the target is how high you set the bar. Measures by themselves can inspire better performance if they are meaningful, motivating, and rewarding. Benefit measures also tend to be the leading measures that drive performance improvement – hence why they are so valuable.

Benefits need to have at least one measure associated with them. Measures can only be assigned to one benefit because a measure on multiple benefits is too complex to manage. If a benefit cannot be measured then it is probably a capability or

		Year 0	Year 1	Year 2	Year 3	Totals
		2015	2016	2017	2018	
Financial	Procurement saving	200	800	425	425	1,900
benefits	**Gross financial benefits**	**200**	**800**	**425**	**425**	**1,900**
Investment	Procurement optimisation	650				650
costs	**Gross investment costs**	**650**	**0**	**0**	**0**	**650**
Ongoing	Procurement savings	50	80	80	80	290
costs	maintenance					
	Gross ongoing costs	**50**	**80**	**80**	**80**	**290**
Totals	**Net cash flow**	**−500**	**720**	**345**	**345**	**910**
	Cumulative cash flow	**−500**	**220**	**565**	**910**	**96.9% IRR**
	Net present value (NPV)	**−471.7**	**169.1**	**458.8**	**732**	

IRR = internal rate of return   All figures are in $000s

FIGURE 12.6   Sample cash flow calculation

activity. For example a 'standardised procurement process' is not a benefit whilst 'greater procurement productivity' is. Before assessing benefits it helps to compile a register of existing performance measures and group these by strategic objective or outcome. In some cases measures may be decomposed by function, location, process, or customer (for example). For example there could be an overall savings target which is broken down by business unit, department, and operating unit.

Measure tracking and reporting is complex with multiple types of analytics possible from simple measure data. For example, if you had procurement savings as a measure and you report monthly, you could track the actual performance for this month against last month, the actual performance financial year to date versus target (amount and percentage), the trend since last month, the forecast versus target to year end, and the level of exception, taking measure tolerance into account. Benefit measures should also relate back to operational measures to provide a line-of-sight from strategy to benefits realisation and value creation.

Realisation planning

Benefit realisation plans are defined in business cases, benefit profiles, and work plans. Business cases tend to elaborate and explain the background and justification of the programme with details of work activities, resources and costs, and the overall steps required to achieve financial and non-financial benefit outcomes. Benefit profiles are either programme or non-programme specific and detail how each benefit will be realised including: benefit measures and their associated targets profiled by year, quarter or month; the capabilities and changes required with their relative contributions to the benefit's achievement; quick wins that can be undertaken by the relevant beneficiaries without a major capability investment; related or dependent benefits that contribute to the benefit's achievement; relevant risks that qualify the likelihood of benefit achievement and their mitigating actions; specific actions to minimise related dis-benefits; stakeholder engagement plans to ensure beneficiaries or those affected by the change are engaged in the right way.

Initial iterations of realisation plans detail the capabilities and changes required, the required timelines and the priorities in terms of benefit achievement. Delivery priorities can be used to scope work plans so that the more value-adding activities are undertaken. As more detailed work plans are produced, resources allocated and delivery commitments are made so the benefit realisation plans will be updated to reflect forecast realisation.

Conclusions

Managing programme benefits is arguably the most fundamental and critical discipline in programme management. Programmes that adopt and apply benefits management practices will deliver more tangible results and successful outcomes than those that do not. Benefits management as a practice is complex and challenging and touches all parts of an organisation as well as external stakeholders (e.g.

customers and suppliers). It can be used to shape a more tangible and executable strategy, to drive performance improvement within teams and to ensure that the programme delivers capabilities that are beneficial to the organisation.

Over time it is easy to foresee a convergence of management practices where benefits or value management is at the heart of a connected set of management disciplines including strategy, risk, performance, change, project, and programme management. Benefits management may also merge or align with other disciplines such as Agile and Six Sigma.

Where an organisation does not have an approach to benefits management it may be incumbent on the programme to establish one. For the programme office or benefits team, this could lead to a more strategic role. Individuals that have experience in leading and coaching benefits management practice deployment will be in considerable demand with more fulfilling, rewarding and strategic roles. Leaders that champion and adopt benefits management practices will be more successful at executing their strategy with more motivated and engaged teams.

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CONCLUSION

Darren Dalcher

Projects continue to provide an exciting arena for discovery. The book has explored a large number of topics and areas, highlighting many of the major concerns related to the successful management and leadership of projects and programmes.

The core areas of change and benefits featured throughout many of the chapters, offering a common link that extends to the adoption of a long-term perspective around projects. Indeed, programme management offers a vehicle for driving organisational change and delivering benefits. People, sponsors, teams, and collaboration were also represented across many of the different topics providing a reminder of the core activities that take place in project work. Traditional organisations and systems often struggle with environments rich in change, as well as volatility, uncertainty, complexity and ambiguity, thus challenging traditional structures and artefacts such as perfect plans and comprehensive contracts requiring new arrangements and structures.

The initiation of projects and programmes places attention on sponsors, business cases, and the development of an effective link between strategy and execution. The specific context also plays an important part in determining the strategies and approaches that need to be adopted to gain maximum benefit and address the risks associated with the specific conditions.

The contributions indicate that project management requires a wider scope of interest that extends beyond many of the traditional aspects covered by the existing bodies of knowledge. The ways we engage with projects, measure performance and success, and develop teams and capabilities, keep adapting and changing to encompass new insights about what makes projects and programmes successful.

The book recognises the inevitable shift towards developing future practitioners ready to deal with unstructured contexts and uncertain conditions. While each project is specific, contextual and situated, the role of practitioners often requires the identification of new patterns and frameworks, where current rules, and procedures

offer limited value. Future practitioners would be expected to engage in interpretation, apply a pragmatic approach to practice, and develop reflection and deliberation in order to make sense of project situations. Instead of seeing knowledge as finite and complete, informed practitioners will seek to enhance their skills and view knowledge as temporary and dynamic. The direct implication is that the exciting side of practice begins where the rules fade and the prescriptions no longer apply.

The authors of the different chapters identify many of the concerns and challenges that apply in project practice. They provide patterns, frameworks and new and revised tools and approaches for refreshing project practice. Above all, they also aim to encourage the development of informed, reflective and questioning project practitioners who are able and motivated to continue their personal quest to discover what works and what is needed to deliver successful projects and programmes in increasingly more demanding environments.

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