1 Programme Management in Context

1.1 Introduction

This second edition of the Code of Practice for Programme Management in the Built Environment is a natural development from the first edition and builds on the recently published sixth edition of the highly successful Code of Practice for Project Management for the Built Environment.

The first edition of this Code of Practice defined a programme as:

> a collective of related projects coordinated to achieve desired benefits more effectively than when managing them as a group of individual projects.

In this second edition, we retain this definition. In some organisations, programmes are created with a single business case aligned to a set of benefits. While for others, business cases and benefits are defined at project and not programme level. However, in both cases, the projects are delivered as a programme in order to achieve an organisation's strategic objectives more effectively.

We have retained 'for the built environment' because we continue to see many projects that are not solely construction or development-related. For example, if we consider some of the client sectors involved in creating new facilities and/or infrastructure, such as highways, rail, airports, shipping, nuclear, etc., all of these are likely to incorporate projects that are not related to construction. These may include disciplines such as information technology, human resources management (HRM), capacity building, marketing, etc. Indeed, even mainstream construction developments may include similar disciplines as self-contained projects within a programme.

The sixth edition of Project Management continues to provide the relevant guidance and procedural requirements for the successful management of individual projects. This second edition of Programme Management further develops the elements of functionality and procedures specific to the management and successful delivery of a number of related projects within the built environment, focusing at the programme level on the coordinated creation of value, which presents itself as a trade-off in the relationship between (see Figure 1.1):

(i) Benefits and outcomes (via outputs);

(ii) Risks and opportunities;

(iii) Requirements and objectives (incl. cost and time).

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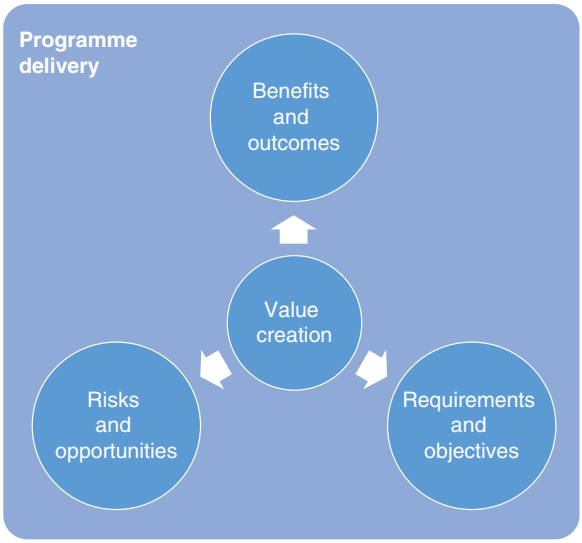

Figure 1.1 Programme Delivery Triangle.

1.1.1 Need for programme management in the built environment

When an organisation manages multiple related projects independently, issues such as a lack of willingness to share resources and knowledge or the use of different tools and techniques can limit the ability to monitor and measure performance across the related projects. This gives rise to problems of coordination and control, which will likely lead to outputs, outcomes and benefits becoming misaligned with an organisation's strategic objectives, resulting in the loss of value.

The need for programme management arises when benefits obtained in a coordinated manner are greater than the sum of individual project benefits obtained in isolation. Whereas traditionally a project is measured by the criteria of time, cost and quality, programmes are determined and measured by the strategic objectives and the benefits to the client organisation, which might otherwise not have been realisable had the projects been managed independently. Furthermore, programmes offer the ability to manage resources, risks and opportunities more efficiently across multiple projects. In this sense, programme management is a systematic approach to project grouping for the purpose of achieving benefits without leaving the process to chance.

The need for programme management in the built environment has continued to grow due to a number of factors, including:

(i) Programmes are being seen as an opportunity to better manage the availability of resources and skills in the industry;

(ii) There is a growing need for clients and suppliers to integrate government policy into the design and execution of their projects;

(iii) Programmes are being seen as a way to help transform the industry as a whole, which has continued to struggle with productivity, collaboration and innovation;

(iv) Programmes are being seen as an opportunity to bring about wider beneficial societal change beyond solely the strategic objectives of the client organisation.

In this context, the construction sector is shifting its focus from products to services, where programmes and their associated projects do not just deliver buildings; they deliver outputs, outcomes and benefits that create the additional

value their stakeholders are seeking. This in turn gives firms in the sector a greater opportunity for survival in what is becoming an ever more competitive environment.

The 2012 London Olympics represents a good example of a programme where individual venues, infrastructure, legacy, etc., each represented separate sets of related projects all under the umbrella of the Olympic Delivery Authority (ODA). The ODA was tasked to act as the programme client, with a programme delivery partner, to achieve the desired benefits (including a long-term legacy) that would not have been achieved had they been managed individually. Another example is the UK's High Speed 2 rail infrastructure programme, where, for example, training academies are created to support the development of skills in the sector.

Clients are now seeing a programme of related projects as posing less risk and greater opportunity to achieve strategic objectives than a number of individual projects can when considered alone. Given the scope for variations in terminology and approaches that are possible within the practices of programme management, this Code of Practice establishes a clear and consistent understanding of the processes involved in managing programmes in the built environment, regardless of their size, nature or complexity.

1.1.2 Future programme management in the built environment

As we prepare and publish this second edition society is still emerging from the pandemic, experiencing a bifurcation of global supply chains, high inflation and facing a war on the borders of Europe. These are global issues that are influencing disruptions in energy supply and contributing to a period of economic uncertainty. This is in addition to the environmental challenge, continued developments in the digitalisation of society, and the ongoing emphasis on social value and sustainability through corporate social responsibility (CSR) practices and environment, social and governance (ESG) metrics.

All of these factors are having an influence on the transformation of our industry, from government policy to firm strategies, in ways that point to a current and future state that is more uncertain and in greater flux than we have experienced in recent history. When we look at recent studies in industry transformation,[1] what we see is that top-down approaches, such as government policy and firm strategies, are not enough to achieve the transformation that is needed for a more sustainable future. What is emerging is a greater acknowledgement that the practices and routines that practitioners engage in when delivering projects and programmes can have a significant positive and/or negative influence on industry transformation from within the programme or project itself.

In light of this, we see the practice of programme management in the built environment becoming ever more dynamic in nature. This dynamism needs actively organising and managing through the application of this Code of Practice. More specifically, the organisational routines engaged in by the multiple organisations involved in developing and delivering programmes need to be purposefully reproduced every time. This is because we now understand these routines as being the key mechanisms through which an organisation becomes capable of delivering its objectives. As programmes are temporary organisational arrangements (albeit often of a long duration), these routines can only be reproduced once the programme is underway and must continue to be reproduced as the programme moves through its life cycle.

[1] Glass, J., Bygballe, L.E., and Hall, D., 2022. Transforming construction: the multi-scale challenges of changing and innovating in construction. *Construction Management and Economics*, *40*(11–12), pp. 855–864.

Programme management therefore is no longer simply about adapting a client organisation's capabilities from steady state A to steady state B, but one in which both current state A and future state B are uncertain and in flux. In this sense, programmes cannot be delivered solely through the mindless application of static models of practice, as these models in themselves cannot determine the programme outcomes.[2] Programme managers must move away from the assumption that once a particular programme arrangement has been established, it is already, once and for all, capable of delivering the client objectives. While this may seem self-evident, the stagnation of productivity in construction, the lack of investment in firm capabilities and rising concerns about worker welfare suggest otherwise.

This means that programme managers must continuously re-create capable programme organisations by adapting the guidance presented here to the specific situation and timing of both the individual programmes and their projects, as well as the context of the firms (clients, contractors, consultants, etc.) from which the programmes/projects are created.

This draws greater attention to how programme management practices operate at three specific interfaces:

(1) between the client organisation and the programme;

(2) between the supply chain firms and the programme;

(3) between the programme and the projects (see Figure 1.2).

Each of the organisations involved will come to the programme with their own routines and capabilities. For programme managers, then, this becomes a matter of being able to organise for and manage the reproduction of a nexus of routines at these interfaces, as without doing so there is a risk of disorder that may lead to a misalignment with the client objectives. In the context we have described above, this is a challenge, yet it also offers an opportunity for programme management to act as an ideal organisational arrangement to deal with a multiplicity of competing factors and to transition society, the economy and firms to a more sustainable, value-driven future.

Figure 1.2 Organisational interfaces in the programme context. Adapted from Winch, G.M., Maytorena-Sanchez, E. and Sergeeva, N., 2022. Strategic project organizing. Oxford University Press.

[2] Addyman, S., and Smyth, H., 2023. *Construction Project Organising*. John Wiley & Sons, Ltd.

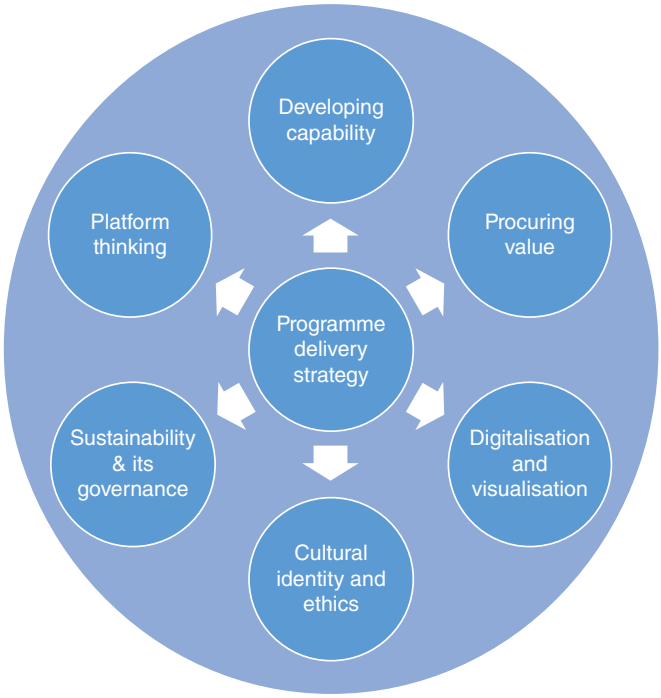

Figure 1.3 Six themes for programme management in the built environment.

In summary, then, programme management can act as an 'organisational bridge' between the longer-term strategic objectives of the firms (clients and suppliers), the capabilities they need to survive and prosper, and a more sustainable future for society more generally. In the following section, we look at six core themes that we have identified as being important for future programme management.

1.1.3 Core themes that must be integrated

In our review of current trends in the organisation and management of built environment programmes and projects, we have identified six themes that, in one form or another, need to be integrated into the life cycle strategy of the programme. We interpret these themes with due consideration of our definition of programme management presented above.

In addition to the guidance that we have taken from our working group for this second edition, we have drawn inspiration for these themes from work that has gone on over the last five years between government and firms to transform the industry. This includes, but is not limited to, outputs from the Transforming Construction Network+ research programme, The Construction Innovation Hub, The Construction Leadership Council, the Infrastructure and Project Authority Project Initiation Routemap and the industry professional bodies through updates in their bodies of knowledge and codes of practice, including the sixth edition of the CIOB Code of Practice for Project Management.

These six themes are interdependent with each other and are presented in Figure 1.3. While practitioners may take and explore any one theme on its own and in more detail than another, they must all be considered and integrated into the programme life cycle strategy.

Our aim here in this Code of Practice is not to provide a comprehensive review of these themes, but to provide an introduction to each of them and to point programme managers towards key industry and academic texts that can help

practitioners develop their programme delivery strategies. Programme sponsors and programme managers must consider how and to what extent these themes are incorporated into programmes in the early inception, initiation and definition stages of the programme.

1.1.4 Developing capability

Achieving a client's strategic objectives via programme management is not just about delivering new client capabilities, but about how the programme organisation itself becomes capable of delivering these new client capabilities. This is because any form of programme organisation needs to 'become' capable and adapt those capabilities through the life of the programme if they are to turn inputs into outputs in order to deliver client objectives.

Capabilities do not 'just appear' because we have designed an organisation, written a set of management plans and procured necessary resources from different firms. Programmes, as a form of organising, need time and effort to reproduce programme-specific routines that are the building blocks of organisational capabilities. This is difficult when different firms and people move in and out of the programme and projects at different times in the life cycle. More importantly, the time needed for reproducing routines and building capabilities is often curtailed through price and time-driven procurement models.

The industry's focus on developing collaborative working practices is the way forward. These practices need to be developed in the early stages of the programme with a specific focus on the interface between the firms and the programme management team, identified as an area that lacks attention by the industry.[3] Through their procurement and delivery strategies, programme managers need to address the challenge of integrating together the hard transactional arrangements between the different organisations and developing the relational aspects of multiple participants working together, often for the first time and which change through the life of the programme. Programmes are often of a longer duration than projects, and this provides an opportunity for people-centred strategies of capability development to be put in place. This should focus on individual competency, skills and career development as well as building a collaborative team culture. As we say, these should not be independent of the commercial transactions between organisations and thus these issues need to be considered as a part of the procurement strategies developed for the programme.

1.1.5 Procuring value

Building on the foundational work of the Latham and Egan reports in the 1990s, there has been an increasing focus on collaboration and considerable effort put into understanding how we define, measure and procure value in its widest sense.[4,5,6] Such a shift in focus from the traditional price and time-driven approach to procurement rightly focuses programme management, in its early stages, on moving away from simply considering the outputs of the programme towards a more comprehensive view of the outcomes and benefits that the programme will deliver. This is not just for the client but for society more generally, and more specifically, the societies within which the programmes are being delivered.

[3] Addyman, S., and Smyth, H., 2023. *Construction Project Organising*. John Wiley & Sons, Ltd.
[4] https://www.gov.uk/government/publications/the-construction-playbook.
[5] https://constructioninnovationhub.org.uk/value-toolkit/.
[6] https://www.constructionleadershipcouncil.co.uk/news/procuring-for-value/.

The ability of the client organisation to understand their problem, define their requirements and develop the scope for any project or programme has been demonstrated as a necessary capability for the success of any project or programme.[7] A move to understand how clients procure the value to be derived from these front-end activities has developed in parallel with our understanding of the need for more collaborative approaches to the development and delivery of projects and programmes.

While traditional and design and build procurement models continue to dominate the industry,[8,9] what we are seeing is a need for client organisations to engage collaboratively with potential suppliers at the earliest stages of a project or programme so that the supply chain is able to become fully integrated in helping understand the need, scope and requirements.[10,11] This, in turn, drives the programme team to look at different ways in which they not just manage but also engage with and integrate programme stakeholders into this process.[12] This is also important for maximising the opportunity to create routines in the early stages of the programme, which in turn helps produce the necessary programme capabilities we talk about above. Furthermore, where programmes involve the application for statutory planning consent, integrating stakeholders and supply chains in the early stages helps mitigate future problems of being successfully granted that consent in a timely manner and for the planning conditions being integrated into supply chain contracts before full mobilisation for detailed design and construction commences. This is an area that is often neglected and delivered outside of the programme delivery organisation.

Such an approach is not without its challenges, as early commercial lock-in may lead to misalignment of behaviours. However, the rewards of taking such an approach, if managed carefully, have been shown to outweigh some of the negative aspects.

1.1.6 Digitalisation, visualisation and data

The digital revolution in society and construction more specifically continues at a pace.[13] In our first edition, we rightly drew attention to the rise of BIM as a digital approach that can help underpin collaborative working. In this second edition, we point programme managers towards a greater appreciation of how this digital revolution needs to be considered in two ways: digitisation (being the ongoing advancement of digital technologies in our industry) and digitalisation (being the capability of the programme organisation to become capable of adopting and applying these technologies).

What we have learned is that the rate of change in digital technologies and their application means that this is going to be dynamic and evolving throughout the life of a programme and is an important aspect of developing capabilities that we set above. Programme managers therefore need to not just build these technologies into their delivery strategies but also identify and implement the ways in which the

7 cf. NAO: Lessons from Major rail infrastructure programmes. https://www.nao.org.uk/reports/lessons-from-major-rail-infrastructure-programmes/.

8 Oyegoke, A.S., Dickinson, M., Khalfan, M.M., McDermott, P., and Rowlinson, S., 2009. Construction project procurement routes: an in-depth critique. *International Journal of Managing Projects in Business*, 2(3), pp. 338–354.

9 RIBA Construction Contracts and Law Report 2022. https://www.architecture.com/knowledge-and-resources/knowledge-landing-page/riba-construction-contracts-and-law-report-2022.

10 https://www.gov.uk/government/publications/the-construction-playbook.

11 Mosey, D., 2019. *Collaborative construction procurement and improved value*. Hoboken, NJ, USA: Wiley-Blackwell.

12 Di Maddaloni, F., and Sabini, L., 2022. Very important, yet very neglected: Where do local communities stand when examining social sustainability in major construction projects? *International Journal of Project Management*, *40*(7), pp. 778–797.

13 https://www.ciob.org/industry/policy-research/resources/digital-construction?gclid=Cj0KCQjwsIejBhDOARIsANYqkD1ijb4lWlFPbhyDOy_td7GUNBzXc3nt9NCFz36nuMzn1duVT8tagtYaAgVWEALw_wcB.

programme organisation will continue to evaluate and adapt its digital capabilities (both technology and personnel) during the whole life of the project. This requires some analysis and practical foresight for what might be at present and what might come in the future, as well as an appreciation of the different digital capabilities that exist in the wide range of supply chain partners that vary considerably between large organisations and small and medium enterprises (SMEs).

Furthermore, these digital technologies produce a lot of data, and programme managers need to be creative and innovative in the ways that organisational routines are reproduced in ways that enable teams to share this data and to 'visualise' and communicate on the performance of the organisation, both internally and externally.

1.1.7 Cultural identity and ethics

Programmes encompass a wide range of organisations and individuals that vary in their day-to-day practices and management styles. But all need to have ethical standards of trust and behaviour that are mutually acceptable, even if they contain variations, if their relationships within the programme are to be successful and sustainable. We know relationships are important, and relationships need managing. In this sense, programme managers need to reproduce practices and routines that facilitate ways for participants to be able to relate to each other in their professional roles.

For all the work that has been done on improving health and safety in construction and all the talk of being more collaborative, as an industry, we still have what has been termed a toxic culture[14] and lag behind other industries in terms of the wellbeing of the workforce.[15] Most notably, skilled construction and building trades rank first in the ONS (Office for National Statistics) statistics for in-work male suicide.[16] A situation that must change if we are to transform the industry.

The remedies for such problems are not easy to come by or implement, but as we have already pointed out in this Code of Practice, such problems cannot be approached solely from the top-down through the prescriptive applications of standards or rules at the institutional or firm level. Programme managers may use ideas that we have presented in the above themes for developing programme capabilities, collaborative procurement and a focus on social value as ways to approach such systemic industry problems. We see programmes and programme managers as a force for positive change in this area, as they arguably have the time and scope to positively influence the change that the industry needs in this area.

This will become ever more important as the digitalisation of the industry increases and we move towards more modern methods of construction. We will see changes in the way that workers from all professions and skill levels engage with the industry, and to ignore worker wellbeing in this move will perpetuate some of those negative practices that are seen to induce the current problems we have.

1.1.8 Sustainability and its governance

Environmental performance and impact, together with the other sustainability elements of 'economic' and 'social', are becoming increasingly important to both

[14] Clegg, S., Loosemore, M., Walker, D., van Marrewijk, A., and Sankaran, S., 2023. Construction Cultures: Sources, Signs, and Solutions of Toxicity, Ch. 1, pp. 3–16. In: Addyman and Smyth (Eds), *Construction Project Organising*.

[15] Xu, J., and Wu, Y., 2023. Organising Occupational Health, Safety, and Well-Being in Construction: Working to Rule or Working Towards Well-Being? Ch. 2, pp. 17–30. In: Addyman and Smyth (Eds), *Construction Project Organising*.

[16] ONS (September 2021). *Suicide by Occupation, England: 2011 to 2021*. UK: Office for National Statistics: https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/adhocs/13674suicidebyoccupationenglandandwales2011to2020registrations.

clients and firms in the built environment. Programme aims need to consider both 'sustainability by the programme' (i.e. managing in a socially, economically, ethically and/or environmentally viable fashion) and 'sustainability of the project' (i.e. the ability of benefits to endure beyond the end of the programme/project).[17] This includes requirements on carbon emissions and energy consumption. In addition, it may also prescribe requirements for the environmental impact on local topographies or areas adjacent to related projects. It may determine outcomes in terms of associated communities, such as providing employment and training opportunities or the use of supply chains.

Increasingly, clients are setting out these requirements in contracts, which in turn pose a challenge for firms operating in the built environment due to the temporary and geographically dispersed nature of the projects that they deliver. What we have seen here is firms engaging with third-sector organisations (i.e. non-governmental, charitable) that can provide a bridge between firm strategies, client requirements and the local communities within which they work.[18] Clients and programme managers need to work together to develop and deliver requirements that can reasonably achieve these objectives within the bounds of individual programmes.

1.1.9 Platform thinking and modern methods of construction

Since the first edition of this Code of Practice, we have seen a growth in interest towards modern methods of construction (MMC)[19] and product platforms,[20] developed into what has been termed platform thinking. A recent study on platforms in construction[21] extended the understanding to four types of platforms: (i) platform organisations; (ii) product platforms; (iii) platform ecosystems; and (iv) market intermediary platforms. Due to the nature and scale of programmes in the built environment, platform thinking offers a new opportunity to bring about transformative change in the industry and offers new ways for thinking about how strategic objectives can be delivered both effectively and efficiently.

Central to this way of thinking is the digital revolution that continues to influence the industry, and while approaches to the application of platforms in construction are new, strategies for their implementation and application are growing. The transforming construction network + report presents two approaches to designing platforms:

(1) Top-down – conceived and designed from scratch;

(2) Bottom-up – existing structures analysed for common features.

As with any new approach, programme managers need to be cognisant of the existing capabilities of the organisations involved in a programme before seeking to push through a new initiative that may, if not duly considered, become more of a constraint than an enabler to better performance. We recommend the place to start here is the product platform rulebook developed by the Construction Innovation Hub.

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17 Huemann, M., and Silvius, G., 2017. Projects to create the future: Managing projects meets sustainable development. *International Journal of Project Management*, 35(6), pp. 1066–1077.

18 Loosemore, M., Alkilani, S.Z., and Murphy, R., 2021. The institutional drivers of social procurement implementation in Australian construction projects. *International journal of project management*, *39*(7), pp. 750–761.

19 Farmer, M., 2016. Modernise or die: Time to decide the industry's future. Construction Leadership Council. London, UK. https://www.constructionleadershipcouncil.co.uk/wp-content/uploads/2016/10/Farmer-Review.pdf.

20 The Construction Innovation Hub: The Value of Platforms in Construction. https://constructioninnovationhub.org.uk/media/rzwdinep/the-value-of-platforms-final-upload-april-2023.pdf.

21 Mosca, L., Jones, K., Davies, A., Whyte, J., and Glass, J., 2020. Platform Thinking for Construction, Transforming Construction Network Plus, Digest Series, No.2.

1.2 Applying programme management in practice

1.2.1 Introduction to programme management

Unlike projects and portfolios, programmes are created for the horizontal coordination of multiple projects, which may run sequentially or in parallel. From a business and customer perspective, a programme is designed to operate, learn and adapt in a dynamic environment of interrelated projects, people and organisations. Programmes do not necessarily have the strictly finite nature of a project.

An undertaking is considered and executed as a programme when some or all of the following are considered relevant:

- the delivery criteria may or may not be fully known, defined or approved;
- the undertaking requires a high level of regulated governance;
- risk and opportunity across related projects are best managed through a central function;
- achievement of the overall outcome required necessitates a number of related projects, each demanding different specialist skills, expertise or organisational approaches;
- the size, complexity and uncertainty of the undertaking are such that delivery is best approached by creating a number of projects;
- the delivery skills required are beyond the organisational and contractual arrangements for one team;
- the geographic spread of the undertaking makes it uneconomic or infeasible to have one project;
- time or cost constraints mean that it is uneconomic or infeasible to have one project;
- there is a requirement to manage interdependencies between projects;
- there is a requirement to manage conflicting priorities and resources across projects.

In the context of construction, CIOB defines a programme in the following way (see Figure 1.4):

> A programme is a collective of related projects coordinated to achieve desired benefits more effectively than managing them as a group of individual projects.

A programme therefore comprises a collective of related projects that are limited in time and designed to individually deliver agreed-upon objectives and that produce and deliver a product, service or outcome. Projects may be internally delivered or outsourced to specialist suppliers and/or contractors, or a mix of both. The coordinated manner in which they are managed delivers programme benefits that are greater than the sum of individual project benefits if they were not coordinated at the programme level.

1.2.2 Types of programmes

The task of programme management is to create and coordinate this collective of related projects in order to deliver programme benefits, which would not be as

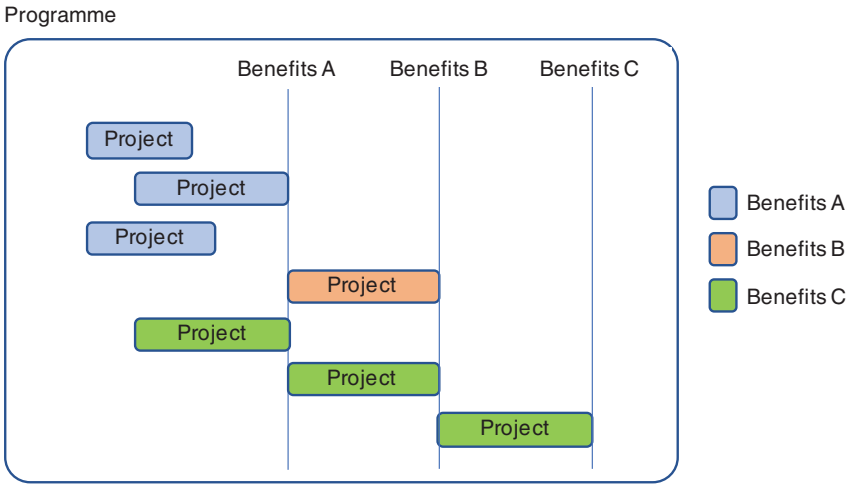

Figure 1.4 Programme, projects and benefits.

achievable if they were managed as a group of individual projects. Success of a programme is thus dependent on a programme team's ability to deliver those benefits. Programme management brings reality and method to strategic planning and to the delivery of strategic change with the right strategic objectives phased and delivered on cost, on time, on quality and on benefits.

In the context of the built environment, programmes may be categorised into three key types, depending on the driver for change. These are:

(a) Type 1: **Vision-led programmes** that are necessarily top-driven and set out to meet a particular strategic vision or need;

(b) Type 2: **Emergent programmes**, where the organisation recognises that a group of existing projects would be better managed together (a bottom-up approach); and

(c) Type 3: **Compliance programmes** that are created in response to internal or external stimuli, often generated outside the control of the organisation.

All programmes, regardless of the driver and type, introduce change: internal or external or even both internal and external.

Example 1: Vision-Led Programmes

Reducing the carbon footprint of existing and new hospitals is a vision that requires a number of diverse retrofit and new-built projects according to commonly accepted standards, staff training, logistics and other projects. Mobilisation of vast resources across geographical regions calls for coordination far beyond the needs of a single project.

Example 2: Emergent Programmes

An organisation facing similar problems in several existing projects recognises that they need to be addressed across all projects. For example, some common factors that lead to delays and other types of losses need to be addressed holistically, and solutions developed and implemented in all projects. A programme could then be formed by pulling together existing projects to develop and implement solutions across all projects in the programme.

Example 3: Compliance Programmes

A change in facilities-related legislation could force an organisation with a large number of facilities to form a programme to implement the necessary changes across all facilities. Large organisations where compliance-related changes normally lead to the formation of programmes designed to implement the necessary changes normally need to maintain in-house programme management capacity and capability.

1.2.3 Programme management process and stages

Programmes can be of different sizes and complexity. Some will include a large number of projects over many years with major milestones. Other programmes will be fairly small, with only a few projects. Regardless of their size and complexity, programmes in the built environment are best served by following the traditional linear delivery life cycle model for projects, which offers a robust model for programme planning and delivery.

For the application of this model to be effective, programme teams will need to adapt their organisation and management approach to anticipate and integrate changes within their financial, contractual and physical constraints, as the programme moves through its life cycle. More specifically, programme teams will need to plan for and manage the transitions from one life cycle to the next, setting out changes to organisation and governance arrangements.

Within a programme, different project management approaches, such as waterfall or agile, may be applied to individual projects where appropriate. Innovation and creativity through clarity of strategic intent and creative design coupled with adapted controls (risk, opportunity and change management) are critical to successful scope delivery (on time, to budget and quality) and benefit realisation. The programme and organisational structure (including resource levels) will be gate-controlled and evolve through each stage of the programme.

The following stages determine a framework for through-life management of programmes:

- Stage A: Programme inception
- Stage B: Programme initiation
- Stage C: Programme definition
- Stage D: Programme implementation
- Stage E: Programme benefits realisation and transition
- Stage F: Programme closure

The purpose of each stage, the key activities of each stage, and the key roles and responsibilities of each stage are set out in detail in Chapters 5–10 and represented here graphically in Figure 1.5.

Appendix A provides an overview of the key artefacts that are produced for each of the stages and how the entire process relates to the RIBA[22] plan of work 2020.

1.3 Programme organisation

As described above, programmes may be vision-led, emergent or compliance-based (driven by external pressure). That means some programmes will be internal, others will be developed on behalf of an external client, and some will be a mix of

[22] https://www.architecture.com/knowledge-and-resources/resources-landing-page/riba-plan-of-work.

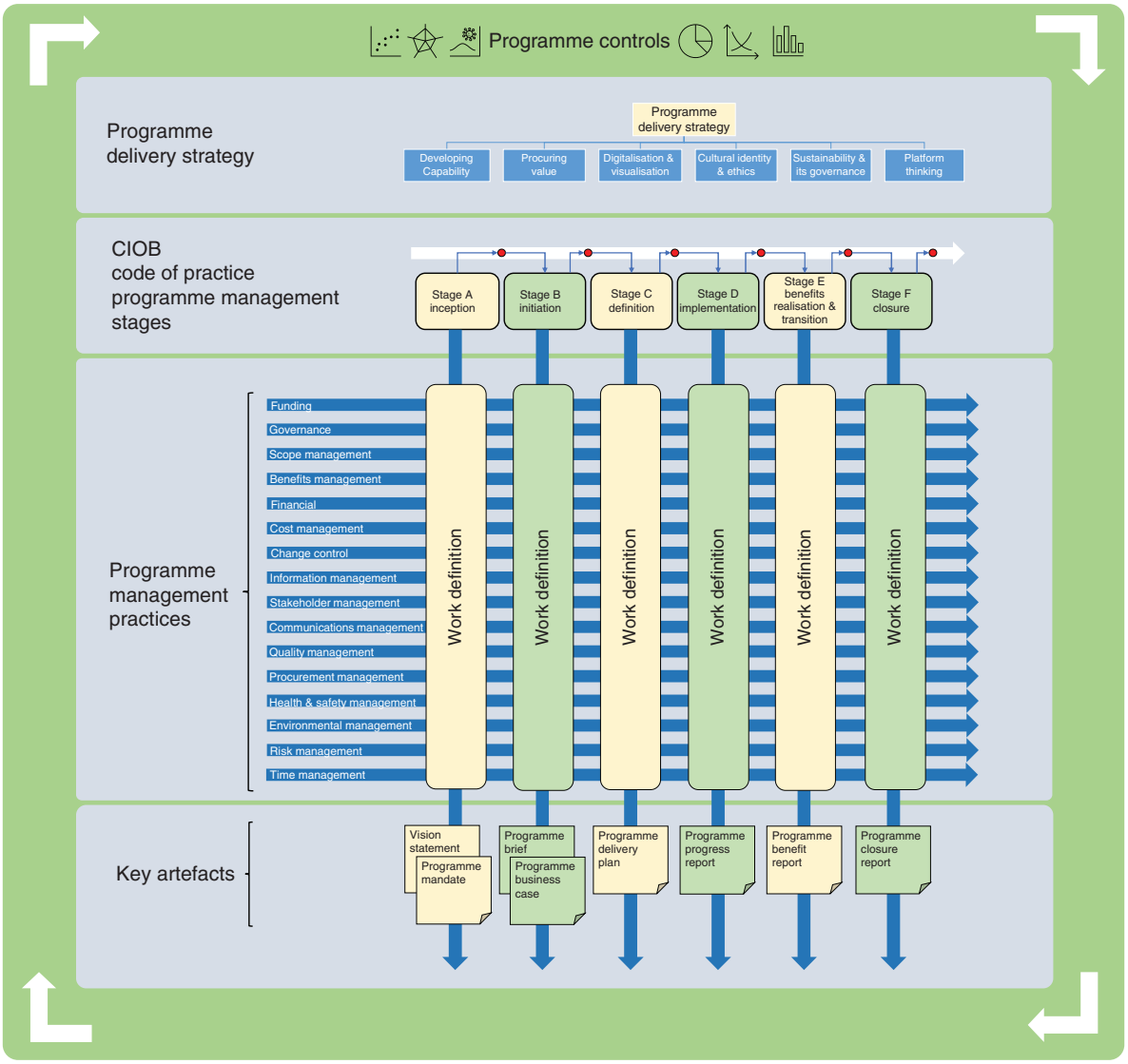

Figure 1.5 CIOB Programme management structure.

both. Regardless of the case, a programme is always developed to deliver benefits to a client (internal or external). Although the nature of their businesses and their approaches and structures in the private and public sectors are diverse, it is common that interim or final outcomes and deliverables will need to be reported to a board of directors.

1.3.1 Types of clients who may initiate programmes

In this Code of Practice, a client is an organisation that procures the services of professionals (either internally or externally) to initiate, develop and deliver a programme of projects. In the built environment, client organisations broadly range from:

(1) clients that undertake construction as a one-off event to extend or enhance their business activity;

(2) those that undertake programmes and projects as their core business activity;

(3) those that do programmes and projects alongside their core business activity; and

Typical public sector clients	Typical private sector clients
• Central Government • Local Government • Government departments • Health • Transport • Energy	• Banking and finance • Retail • Hospitality and leisure • Manufacturing • Food and beverage outlets • Developers

Figure 1.6 Typical organisations.

(4) those that are established for the single purpose of delivering a programme of projects.

The organisational and management arrangements for developing and delivering projects vary hugely across this array of clients, from large, dedicated departments to a single appointed responsible person.

Client organisations undertaking programme management in the built environment typically come from the private and public sectors, although they may also come from the third sector (i.e. charitable or nongovernmental organisations). Figure 1.6 lists typical public or private sector clients.

The client organisation will usually 'own' the programme and the projects and is likely to have obtained their own funding. The client organisation will appoint the programme sponsor as the person who represents the client.

All programmes differ in structure, but they will have similar characteristics. The following sections describe the attributes of the key programme management roles.

1.3.2 Key programme management roles

Whether controlling single or multiple programmes, clients will allocate a number of roles overseeing the delivery of the programme. Depending on the type of client, these roles may be sourced internally from the client organisation, or the client may procure this expertise from an external organisation. The two primary roles that must be appointed are programme sponsor and programme manager, both supported by management boards and a programme management office, as follows:

1.3.3 Programme sponsor

A programme sponsor outlines programme vision, objectives and benefits. Directly responsible for developing the vision statement into the programme mandate, a programme sponsor's key responsibilities include:

- strategic direction and fit with the overall business strategy;
- releasing the required resources;
- ensuring programme stability in terms of time, budget and scope;
- championing the programme at the most senior level;
- providing high-level feedback on programme progress.

The role of programme sponsor is a very senior position requiring visionary capabilities and competent leadership skills acquired from leading diverse senior teams.

In some organisations the programme sponsor role may be known as the senior responsible owner or the programme director.

1.3.4 Programme sponsor's board

The programme sponsor's board will have the authority to make key decisions and commit expenditures on the programme on behalf of the client organisation. It will consist of executive-level individuals who are heads of functions of either the sponsoring organisation or of the final commissioned enterprise. Membership of the programme sponsor's board needs to be ratified at the highest level, by the executive board or chief executive officer of the sponsoring organisation.

Throughout the programme, the role of the programme sponsor's board is to provide the overall strategic direction, support the programme sponsor in the implementation of the programme, ensure that adequate resources are available to the programme, monitor the programme's progress towards achieving the required outputs, outcomes and benefits, facilitate the resolution of any major issues, determine when the programme's objectives have been achieved and ratify closure of the programme.

1.3.5 Programme manager

The programme manager coherently manages programme stages, reports to the programme sponsor and is responsible for the delivery of the proposed change. Key responsibilities include:

- developing and maintaining a project-supportive programme environment;
- working with the programme sponsor to ensure the programme is delivered on time, within budget and scope;
- managing the programme management office;
- delivering programmes successfully in terms of agreed objectives and identified benefits (i.e. programme finances and benefits).

The programme manager is a senior appointment. The person in that role must have the necessary skills to implement the programme. In addition to understanding project management skills, a programme manager should have:

- sound understanding of business case development;
- good knowledge of key programme-level financial and business indicators;
- senior-level credibility to effectively support project teams;
- excellent stakeholder management skills.

1.3.6 Programme management board

The programme management board is composed of senior managers of the programme management structure and provides advice and support to the programme manager. Its key responsibilities include:

- reviewing progress;
- highlighting and resolving any issues that may be hindering progress.

1.3.7 Programme management office

The programme management office is a central support unit that supports the programme manager in overseeing day-to-day operation of a programme. It includes a senior manager and other specialist staff to carry out the functions required to:

- develop the programme delivery plan;
- develop and maintain standards;

- establish the governance controls;
- manage programme documentation;
- enhance capability to deliver the programme.

1.3.8 Wider programme management team

The programme sponsor and programme manager will be supported by a wider programme team. The roles, responsibilities and design of the programme team will vary from client to client and depend on the type of programme. In this Code of Practice, we put forward the following key roles:

- Programme business change manager;
- Programme benefits realisation manager;
- Programme financial manager;
- Head of programme management office;
- Programme risk manager;
- Programme scheduling manager;
- Programme cost manager.

In each programme stage and Appendix D, we set out these roles and responsibilities and their key competencies.

1.3.9 Stakeholders

Stakeholders include persons and organisations that have an interest in the strategy of the organisation and programme, have an impact or are impacted by a programme.

Programmes and organisations have to identify all stakeholders and assess the level of power they hold to affect the decisions and outcomes of the programme.

Stakeholders can be divided into two groups:

- Internal stakeholders: members of the organisations and those with an economic or contractual relationship with the programme;
- External stakeholders: those with interest in the organisation and programme activities or those impacted by the activities in some way, such as governments, the public, interest and pressure groups, media and news organisations, local communities and statutory authorities.

A list of common stakeholders may include the following:

- general public (people who are only indirectly affected by a programme but who may have a significant influence on its realisation);
- community (people who are directly affected by a programme through their geographic proximity to programme works);
- client employees (delivered changes and benefits will directly impact employees of the client organisation);
- shareholders (individuals or legal entities owning shares in the client organisation undergoing change that are affected by the business change);
- end users (those who will ultimately work in new facilities provided or who will be the beneficiaries of the outcomes of the programme);

- customers (customers of client organisations who will be affected by the business change);
- statutory and regulatory authorities (most programmes will be subject to a range of organisations that will impose restrictions on the way they can be implemented);
- interest groups (the members of which share common interests and control some area of activity, e.g. nonprofit organisations and voluntary organisations).

Programmes need to identify and map the stakeholder landscape to engage and communicate effectively. To assess the level of engagement required and the impact stakeholders will have in meeting the objectives of the programme, a stakeholder map should be developed. This map will define the different tiers of stakeholders according to their potential to affect the reputation or the progress of the project or organisation, with the programme at the centre.

1.3.10 Portfolio management

In the eventuality that there are a number of projects and programmes running in parallel within an organisation, the organisation will often utilise a portfolio approach to govern and administer the initiatives, projects and programmes to identify and manage priorities.

The portfolio management approach will aim to understand the current strategic intent of the organisation and will determine the optimum spectrum of programmes and projects that would provide the most effective and efficient way of achieving the strategic vision by balancing the resources, risks and benefits sought.

Typically, in any organisation, portfolio management is an ongoing activity, for unlike most programmes and all projects, it will not have a defined end date.

The administration, management and governance of portfolios follow principles similar to those of a programme; however, unlike programmes, the procedures are open-ended and subject to continual reviews at the highest level of the organisation.

Large organisations may have multiple portfolios, in which case an additional layer of management and governance will be necessary between the senior decision-makers and the portfolio management levels for reporting and administration purposes.