

Leadership: Responding to complexity

A SYSTEMIC FRAMEWORK FOR RESPONDING TO COMPLEXITY IN
GOVERNMENT TRANSFORMATION AND SERVICE DELIVERY PROJECTS

Abridged version



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1. Introduction

Major government projects represent some of the most complex and diverse projects delivered by organisations in the UK and internationally. Transformation and service delivery projects represent almost a third of the government's major projects portfolio in terms of the number of projects¹.

These projects provide the opportunity to deliver significant benefits to the public as they are concerned with improving public services and making the government more efficient. Yet, as the National Audit Office has highlighted, delivering these projects can be very challenging². The efforts undertaken so far to develop leaders of major projects through initiatives such as the Major Projects Leadership Academy (MPLA) have provided a solid foundation for developing individual competencies. However, insights generated by the academic leadership literature suggest that leading organisations through change requires systemic leadership capabilities.

This research seeks to generate insights from project delivery professionals with significant experience in the delivery of the government's transformation and service delivery portfolios, programmes and projects. The research aims to provide a systemic leadership framework for responding to complexity that can be practical and useful for practitioners, organisations and policy makers. This research is part of a broader research agenda within Project X that aims to generate insights into leadership in the government's major project portfolio.

The qualitative case study views leadership as an activity

The qualitative case study views leadership as an activity. Activity views of leadership focus on what is being accomplished and how it is accomplished over time, rather than who the leaders are and what they do. This view accommodates the contributions of the individuals appointed to formal leadership positions in portfolios, programmes and projects. However, it also recognises the alternative sources of leadership that may or may not be situated within the boundaries of the portfolios, programmes and projects. Viewing leadership as an activity also provides sensitivity to how material objects and social and cultural conditions can act as enablers or constraints. Therefore, activity views of leadership are well suited for confronting broader sources of complexity and developing systemic responses.

The leadership framework developed for responding to complexity should not be treated as a universal solution for transformation and service delivery projects. The framework, which offers a model for understanding and responding to the key themes of complexity, should be adapted to local contexts. It is also important to note that some situations of complexity identified by the study have also been shown to be relevant to various industries and projects by the academic project management literature. Therefore, the leadership framework produced by this study also has the potential to provide useful insights for the wider project delivery community.



¹ The 2018 Annual Report on the Government Major Projects Portfolio (GMPP) from the Infrastructure and Projects Authority (IPA).

² NAO (2015) Lessons for Major Service Transformation, London: NAO.

2. Methodology and participants

This qualitative case study follows what the academic literature refers to as projects-as-practice approaches and the theoretical lens of routines. This approach enables the examination of leadership activities as a unit of analysis rather than focusing on the behaviours of the formally appointed leaders. This approach also makes it possible to examine both the formal leadership activities and the improvisations taking place in response to complexity.

The case study was conducted in two UK central government departments, with 15 semi-structured interviews conducted with a cross-section of project delivery professionals. The participants work across six transformation and service delivery projects and programmes within the Government Major Project Portfolio (GMPP). The GMPP consists of the most complex and strategically significant projects and programmes in the government. Participants included Senior Responsible Owners (SRO), portfolio directors, programme directors, PMO directors, project directors and project team members. The interviews lasted between 45 and 60 minutes, and were recorded.

In addition to these formal interviews, three informal interviews were conducted with representatives from the Infrastructure and Projects Authority (IPA) and the Major Projects Leadership Academy (MPLA). Documentary data was also gathered. This included documentary reports and information relevant for project delivery published between 2012-2018 by various UK central government bodies (eg. IPA, HM Treasury, Cabinet Office, Civil Service and the National Audit Office).

Audio recordings of the interviews were transcribed. To facilitate the analysis, data gathered was entered into an NVivo database for coding. The analytical process was iterative and focused on identifying themes and developing a conceptual framework. This conceptual framework was checked for validity using multiple data sources, and constitutes themes of complexity and systemic approaches to responding in transformation and service delivery projects.

3. Findings – framework

The study identified 11 activities that project delivery professionals associate with leadership. Figure 1 shows these activities by grouping them into their core area of focus.

Change agency	Linking to the organisation	Team leadership
<ul style="list-style-type: none"> ■ Shaping the intended change: Developing the vision for the intended change and translating it into realistic and measurable goals. ■ Getting buy-in: Getting the key stakeholders to commit to the intended change. ■ Shaping the roadmap: Charting the path and pace of the intended change. ■ Defining the method and resourcing: Selecting the delivery method and securing resources. ■ Shaping the new service delivery processes ■ Relating to the recipients of change: Gaining and maintaining the support of the recipients of change for the intended change and its implementation. 	<ul style="list-style-type: none"> ■ Presenting: Making progress, risk and issues visible to individuals and groups governing the change. ■ Sharing delivery leadership: Integrating the distributed leaders that share delivery responsibility such as the leaders of delivery groups and supplier organisations. ■ Relating to the SRO: Collaborating with the SRO. 	<ul style="list-style-type: none"> ■ Integrating the delivery collective: Integrating knowledge with the delivery partners and the suppliers. ■ Relating to the core team: Developing individual and collective capabilities.

The study identified four themes of complexity that cut across these activities:

■ Boundary complexities

Complexities associated with integrating knowledge across different functions or organisations.

■ Different authority positions

Threats and opportunities associated with the specific authority positions portfolio managers, programme managers or project managers take in their relationships with others.

■ Different evaluations

Threats and opportunities associated with the different evaluations of desirability, properness and appropriateness of the intended change and how it is delivered.

■ Shifts in the ground

Episodic or continuous shifts in the context that impact formal agreements or commitments produced at the front-end phase of projects or programmes, or change ways of working in portfolios, programmes and projects.

The study identified that a complexity response system is developed in response to each theme of complexity: bridging, positioning, legitimising and adapting. These complexity response systems constitute multiple leaders and various structural elements, spanning across multiple levels and able to dynamically adapt to emergence. Together, these complexity response systems form a leadership framework for responding to complexity. The next sections describe each of these complexity response systems in detail.

4. Findings – bridging

Bridging is concerned with responding to boundary complexities. Boundary complexities refer to the complexities associated with integrating knowledge across different functions or organisations. The study identified the following boundaries as sources of complexity:

■ Boundaries with the functions shaping the intended change

For policy-based change, feasibility issues may emerge in the implementation of the policies. For business-sponsored change, there may be an inclination to jump to solutions in situations. This can be problematic when the problem faced is a 'wicked problem'³, one that cannot be solved individually through linear thinking, but requires collective responses to systemic issues.

■ Boundaries with the functions or organisations receiving the intended change

For example, the feasibility of the new processes in diverse contexts can be uncertain.

■ Boundaries within the programme or project delivery collective

For example, the transience of specialist resources and their commitments, and the dispersion of individuals across multiple locations can produce constraints for establishing trust and creating synergies.

Bridging focuses on developing a 'trading zone'⁴ for each boundary that acts as a source of complexity. A trading zone constitutes various elements implemented at portfolio, programme and project levels that facilitate cross-boundary knowledge integration. These elements include:

■ Brokers

Individuals having worked in both groups act as translators.

■ Bridging rules and procedures

Norms and procedures regulating the exchanges.

■ Boundary objects

Documents co-produced by members of both functions.

■ Bridging functions

A group that collectively has expertise of both functions acting as the organiser of exchanges.

■ Bridging language

Developing common terms that can facilitate exchanges.

Table 1 is based on the examples from various portfolios, programmes and projects, and shows the potential elements of a multi-level trading zone for bridging with the policy/strategy function.

Level	Examples of trading zone elements
Portfolio	<p>Bridging functions: A portfolio established a specialised function that evaluates the pipeline of new policies.</p> <p>Bridging language: A portfolio adopted the term 'deal breakers' to refer to aspects of the change that are viewed as critical by the policy/strategy functions and their policy stakeholders.</p> <p>Boundary objects: A portfolio agreed terms and conditions for accepting a new policy into the portfolio.</p>
Programme	<p>Brokers: A programme getting a resource from the policy/strategy function into the programme to act as a translator.</p>
Project	<p>Bridging procedures: Project team holding a workshop with all stakeholders to collectively design the new processes.</p>

Table 1: Example of a multi-level trading zone with the policy/strategy function.



³ Rittel H and Webber M (1973), Dilemmas in a General Theory of Planning: *Policy Sciences* 4 (2) pp155–169.

⁴ Galison P (2010), *Trading With The Enemy*. In: Gorman, ME (ed) *Trading Zones and Interactional Expertise*. Cambridge: The MIT Press.

5. Findings – positioning

Positioning is concerned with responding to threats and opportunities associated with the different authority positions that portfolio managers, programme managers and project managers take in their relationships with others. The focus is on structuring leadership roles and relationships in response to three different authority positions: lacking authority, having limited authority and having full authority.

Lacking authority – positioning for reciprocal influence

As the owners of the change agenda, business and political leaders have hierarchical authority over the strategic direction of the intended change. For portfolio managers and programme managers, their relative lack of authority over shaping the strategic direction of the business or political agendas can become a source of complexity for ensuring the continuity of strategic alignment with these agendas.

In response, formal and informal reciprocal influence mechanisms are developed, such as informal connections to the private office of the ministers and links between the senior management team of programmes and the business governance boards.

For policy-based projects and programmes, positioning for reciprocal influence in situations where it is not possible to meet the demands of political sponsors is often based on professional expertise. Positive examples from practice include a project manager drawing on professional expertise to explain why the ministerial timeline demands cannot be met and proposing an alternative solution.

This execution-phase activity focuses on organising team structures, developing teamwork and providing support and guidance to the team members.

Having limited authority – positioning for collective action

Leadership authority is often distributed in portfolios and programmes. Leaders of the delivery partners and supplier organisations have authority over specialist resources and their activities, and the leaders of the business functions also have authority over granting access to the context for landing the change. Integrating this leadership collective for mobilising collective action is not straightforward, as disagreements or tensions may emerge. In response, positioning for collective action involves a combination of the following strategies:

■ Developing a collective identity

Getting the leadership collective to commit to shared goals, values and norms. For example, co-creating a portfolio board charter and regularly reviewing those commitments in board meetings, or informally 'handshaking' on new projects with the board members.

■ Developing one-to-one partnerships

Developing a sense of sharing the change journey through regular interactions.

Having full authority – positioning for efficiency and effectiveness

Reliance on a single individual that has full authority can limit leadership capacities and capabilities. For example, there may be bottlenecks, and in situations where difficult and highly consequential decisions need to be made, leaders can feel exposed and defensive behaviours may emerge. Positioning for efficiency and effectiveness strategies vary for different relationships:

■ The SRO-portfolio/programme manager relationship

Either a shared leadership strategy based on developing a joint unit of leadership or a cascaded leadership strategy based on full delegation of authority is adopted.

■ Hierarchical leader relationships within portfolios

Typically, cascaded leadership strategies are adopted. These strategies empower lower positions by establishing portfolio norms and providing support.

6. Findings – legitimising

Legitimising is concerned with the different evaluations of desirability, properness and appropriateness of the intended change and how it is delivered. These different evaluations can produce negative reactions, such as overt or covert resistance to change, or credibility issues for portfolios, programmes or projects. The study identified the evaluations of two key audiences acting as sources of complexity:

■ The recipients of change

This audience is typically the operations function. Gaining and maintaining positive opinion may not be straightforward due to the large size of this audience and their fragmented goals and world views. For projects and programmes delivering change into local government organisations, significant leadership capacity may be required for mobilising positive opinion, since these organisations are politically, geographically and operationally diverse, and there isn't a body speaking for all of them.

■ The formal leaders governing the delivery

This audience constitutes political and civil service leaders that govern the delivery. The diversity of views and the volatility of opinions within this audience, together with the limitations of the standard assurance processes for presenting, means that maintaining positive opinion is often not straightforward.

Legitimising focuses on developing an 'opinion formation system'⁵ for each of these audiences. Opinion formation systems constitute a cluster of opinion leaders:

■ Senior leadership networks

Formal or informal networks of senior leaders who can contribute their expertise, credibility and authority.

■ Mass media leaders

Leaders that have authority over large audiences.

■ Ground-level opinion leaders

Individuals that can provide personalised influence in one-to-one relationships. These opinion leaders typically adopt the following strategies:

■ Informing

Tailoring a communication approach to different audiences.

■ Parading

Promoting good news, showing and promoting confidence.

■ Probing

Testing ideas and potential responses from different audiences.

Based on the examples provided by various portfolio managers and programme managers, Table 2 shows the potential leaders and strategies included in opinion formation systems which focus on the operations functions.

Opinion leaders	Examples
Mass media leaders	Leaders of the operations functions: Informing through regular conferences that demonstrate support for the intended change and explain how the change is linked to the strategic direction.
Senior leadership networks	A coalition formed with leaders of the business areas: Parading in difficult situations by showing and promoting confidence to their networks and groups, and facilitating probing by acting as a sounding board for ideas.
Ground-level opinion leaders	Resources from operations functions seconded into projects for a limited duration: Parading by showing and promoting confidence in one-to-one interactions with their peers.

Table 2: Opinion formation systems focusing on the operations function.

⁵ Burns JM (1978), *Leadership*, New York, Harper and Row.

7. Findings – adapting

Adapting is concerned with responding to shifts in the ground that impact formal commitments produced at the front-end phase of projects or programmes, or change ways of working in portfolios, programmes and projects. The study identified four key shifts: shifts in the political ground, shifts in the ground for landing the change, shifts in the organisational ground and shifting technologies.

Shifts in the political ground: anticipating strategies

Shifts in the political ground can disrupt the agreed roadmap. For example, policy-based programmes and projects need to obtain buy-in from the new ministers after a ministerial change, the purdah rules during elections can restrict activities, and annual spending reviews may produce budget cuts. The responses typically focus on being prepared for change. The study identified two anticipation strategies:

■ Developing an absorptive capacity

This strategy focuses on the ability to quickly absorb the impact of the disruption. For example, a policy-based project had ministerial statements and briefings that explained the rationale of the intended change and the roadmap prepared for rapidly responding to ministerial changes.

■ Preparing for revisioning

This strategy is concerned with rapidly adapting to change. For example, programmes make their plan assumptions visible to show the impact of potential budget or scope changes, while some projects conduct learning and development activities during purdah periods.

Shifts in the ground for landing the change: shared leadership strategies

Concurrent project and programme delivery activities delivering change to the same business areas, and the local changes implemented by business areas, may produce shifts in the ground for landing the change. These shifts produce opportunities such as synergies in the design of the new processes, but also threats such as a reduction in the forecasted business benefits.

The shared leadership strategies that search for potential shifts and assess their impact are adapted as a response in portfolios, programmes and projects. For example, portfolio managers may invite other programme managers to their board meetings to identify shifts and generate responses.

Projects may also adopt dispersed screening mechanisms to identify potential changes. For example, project team members in their formal and informal interactions with the recipients of change identify changes and rely on self-organising team approaches to collectively interpret the identified changes and revision plans.

Shifting organisational ground: translating strategies

Changes to ways of working within the organisation can produce opportunities and challenges for portfolios, programmes and projects. For example, new professional guidelines can provide opportunities for improving efficiency and effectiveness, or periods of governance process transitions may produce ambiguities for providing assurance. The translation strategies adopted in response focus on interpreting what the change means for the local context. For example, some portfolios respond to agile by developing local norms for blending agile and waterfall approaches.

Shifting technologies: anticipating strategies

For technology-enabled change, rapid changes to technologies are a source of complexity since designs can become outdated. Anticipation strategies are adapted in response. For example, a programme manager continuously scanned for emerging technologies, reviewing them to determine if the technology underpinning the designed solution required refreshing and the potential implications for the agreed programme roadmap.

8. Conclusion

The study identified four themes of complexity across the activities project delivery professionals associate with leadership. As Figure 2 shows, a leadership framework has been developed for responding to these cross-cutting themes of complexity.

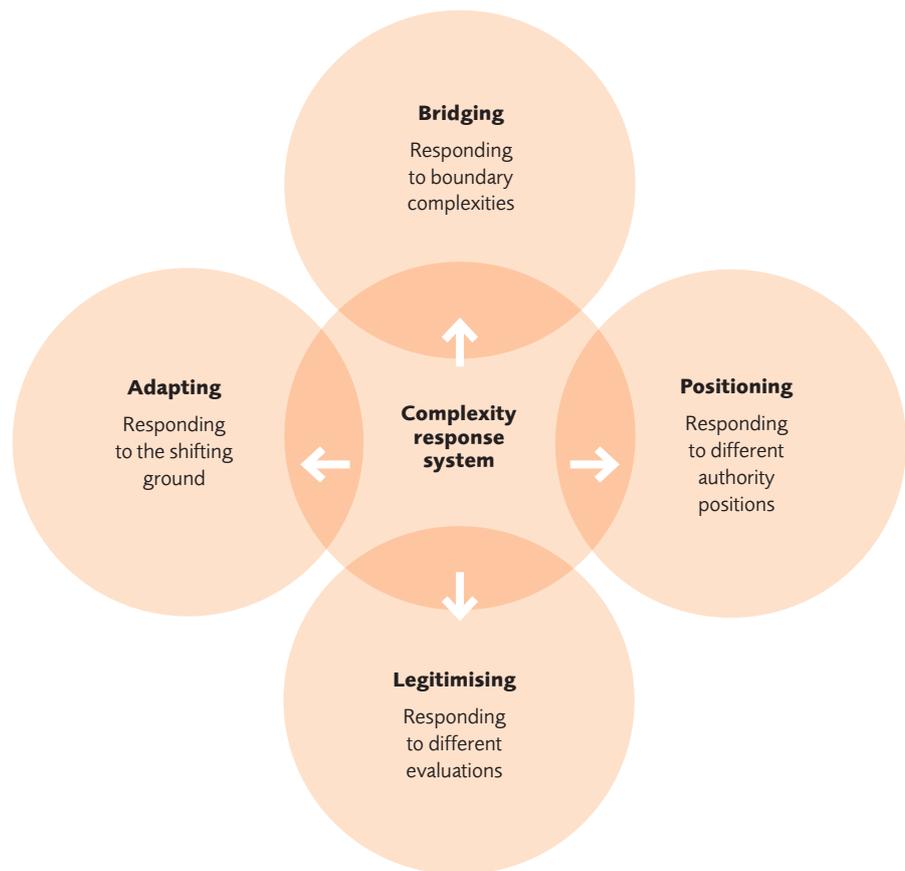


Figure 2: Complexity response system framework.

The framework consists of four complexity response systems. For each complexity response system, a repertoire of common structural elements and strategies are provided. However, it is important to note that complexity response systems require tailoring for the complexities relevant to the specific context of the portfolios, programmes and projects. Therefore, the local implementations of this framework are expected to look different.

It is recommended that portfolios regularly assess local complexities through collective inquiry and continuously develop their complexity response systems accordingly. Collective inquiry can be particularly beneficial since individuals may have different views of complexity and their appropriate responses. This is because of the potential differences in past experiences, competencies, organisational positions and goals. In situations where the framework is found to offer limited guidance, this collective inquiry can seek to learn from the experience of other portfolios, programmes and projects.

Some of the situations of complexity identified by this study have also been shown by the academic literature to be relevant to various industries and projects. For example, projects, programmes or portfolios operating in a matrix organisational structure can benefit from bridging and positioning. Therefore, project delivery professionals in different industries and organisations can also benefit from reviewing this framework in relation to the local conditions and adapt the aspects of these complexity response systems that are relevant for them.

9. Recommendations

This framework can be viewed as a guide for designing and developing complexity response systems in the local contexts of portfolios, programmes and projects. Drawing on the insights from the academic literature, this section offers strategies for further strengthening the framework and its application.

Viewing leadership as an activity

The findings suggest that, while the complexity response systems within an organisation may constitute a variety of elements and strategies, within a specific portfolio context they often rely on a sub-set of these. Viewing leadership as an activity can facilitate the strengthening of the complexity response systems within portfolios as this view draws attention to alternative sources of leadership and a broadening of the repertoires of responses.

Potential next steps include:

■ Project delivery profession

Promoting activity views of leadership and distributed leadership approaches by providing relevant resources and support.

■ Organisations

Developing the conditions to support viewing leadership as an activity by, for example, showing recognition of distributed leadership in projects. Developing the conditions to support acting as 'bricoleurs'⁶ by, for example, cultivating responsibility of collective inquiry into wicked problems.

■ Portfolios

Adapting the approach of a 'bricoleur' that relies on combinations of hierarchical authority, interactions between entrepreneurial individuals and collective inquiry. Developing the conditions for effective distributed leadership across all levels of the portfolio.

Continuous learning and development

Learning and development of complexity response systems are facilitated through the move of individuals holding formal leadership positions to different portfolio delivery contexts and the activities of the project delivery profession. The complexity response systems can be further strengthened by complementing these activities with more systemic approaches to learning and development that focus on bottom-up learning and the unintended consequences or limitations of adopted strategies.

Potential next steps include:

■ Project delivery profession

Facilitating, reflecting upon and responding to the unintended consequences and limitations of the strategies adopted, cultivating cross-context learning and providing guidance and support for developing dynamic capabilities of portfolios.

■ Organisations

Paying attention to bottom-up learning from projects, as that can inform the shaping of organisational strategy and portfolio direction.

■ Portfolios

Continuously reflecting on the unintended consequences and limitations of the implemented complexity response systems. Focusing on developing dynamic capabilities of portfolios through top-down leadership interventions (eg. establishing structures) and bottom-up learning (eg. capabilities developed through projects).



⁶ Strauss CL (1962), *The Savage Mind*, Chicago, University of Chicago Press.

Developing the institutional conditions for strengthening the responses

Sharing responsibility for systemic complexities in portfolio contexts and responding to them at an organisational level through the collective inquiry of all professional functions can enrich the ecological conditions for the complexity response systems.

This can be particularly useful in responding to wicked problems and the paradoxical tensions underpinning the cross-profession interactions that can constrain the achievement of synergies, such as the tensions formal leaders experience in balancing the hierarchical accountability demands and horizontal collaboration demands, as well as the tensions that the portfolio collective may experience in balancing transactional market exchanges with community logic, emphasising collective identity and shared goals with delivery partners.

Focusing on the consequences of professionalisation can also be beneficial. For example, opportunities for cross-profession learning may emerge, but also limitations may emerge such as a relative lack of individuals with cross-profession experience in the future acting as brokers in trading zones.

Potential next steps include:

■ Organisations

Developing collective responsibility for wicked problems and the continuous improvement of cross-boundary collaborations, creating cross-profession platforms that continuously reflect on and develop ways of responding to complexities associated with cross-profession collaborations and the consequences of professionalisation.

■ Project delivery profession

Developing resources and support for conducting cross-profession collective inquiry and responding to paradoxical tensions in cross-profession collaborations. Facilitating cross-profession learning and development by, for example, supporting non-project delivery professionals that do not have experience of working in a project delivery collective, and learning beneficial for enhancing bridging, such as identifying core business problems through the policy/strategy approaches for blue sky thinking.

10. Areas for further research

This report is based on an exploratory qualitative study. Further research is needed to develop and test the framework. This research could include the following:

Exploring leadership practices through longitudinal studies

It would be beneficial to explore situations of complexity and ways of responding to them in daily actions and interactions. This would enable the development of more sophisticated recommendations that would take subtle actions and interactions into account and reduce potential heuristic biases such as hindsight bias.

Testing the framework in other public sector organisations

It is recommended that the framework is tested in other public sector organisations that have different conditions for project delivery to the departments studied (eg. other departments, local government organisations). This would enable examining if such conditions produce variations in the framework.

Exploring the experiences of other professions

Exploring the complexities other professions experience and their responses in relation to project-based change would enable incorporating more diverse view points and strategies into the framework.

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