

Project X retrospective: Delivering better government projects

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Because when projects
succeed, society benefits

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For more information on Project X, please visit bettergovprojects.com

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Project X in numbers (Evidence base)¹

60+ academic publications – multiple lens on project performance

40+ journal articles
and book chapters
(34 articles
published in Q1
journals)



UK, European and
global audiences



20+ academic
conference papers



Research using
multiple lenses on
project performance
published in project
management
journals and broader
management journals



Operations
management and
supply chain



Leadership,
governance, and
decision-making



Knowledge
management



Risk and control

20+ government, industry, and professional association reports –
multiple practice-focused project performance topics



Capabilities



Project
governance
and leadership



Health, safety
and wellbeing



Project benefits
and benefit
realisation

¹ Based on data from Researchfish Award Download for ES/S009841/1, Improving Project Delivery (Project X) [accessed on 4 January 2024] and the Project X website, bettergovprojects.org [accessed on 12 December 2023].

Executive summary

In 2018, funded by the Economic and Social Research Council (ESRC) and supported by the Infrastructure and Projects Authority (IPA), Project X's three-year mission was, through rigorous co-produced research, to create an environment enabling the Project X co-production community to inform, guide, and inspire excellence in project and programme delivery. The IPA has recently been replaced by the National Infrastructure and Service Transformation Authority (NISTA). However, for continuity, in this report we have continued to refer to IPA.

The Project X co-production community (see Appendix B) included:

- i. project professionals in the IPA and wider government (such as the Cabinet Office, National Highways, and HM Revenue & Customs)
- ii. members from industry and professional associations
- iii. researchers directly funded by the ESRC grant or receiving indirect (non-financial) support, such as training, mentorship, and access to dissemination networks.

The community environment enabled academic leaders in project management from different institutions to combine their expertise, and for government project professionals to be involved with researchers in identifying and co-designing research topics with the potential to transform the performance of major project delivery in the UK.

Using multiple research lenses (including governance, and operation and knowledge management) to generate new knowledge on ways to improve the performance and delivery of major government projects, the co-production community generated high-quality evidence and insights for policymakers and practitioners. This covered capabilities (operational, organisational, and project), governance (including project governance), project management and delivery (including transitions and interorganisational relationships), and benefits management and realisation. More than 80 academic, industry, Association for Project Management (APM), Project Management Institute (PMI), and Institution of Civil Engineers (ICE) publications have disseminated the findings of the co-produced research to project delivery researchers and professionals nationally and internationally (see Appendix C).

Beyond publications, the Project X co-production community has communicated research findings and accumulated project-related knowledge via more than 120 engagement activities. These have reached diverse audiences from government and industry (including more than 30 UK-based and global collaboration partners from the public and private sector), academia, parliament and political parties, and professional association networks. Engagement activities included a one-day Project X Conference in 2021, the use of broadcast, published and social media (including the Project X website), keynote speeches, presentations, and participation in expert panels and working groups. Acting as drivers for the development of the project delivery profession, these wide-ranging, often face-to-face, engagement activities with audiences beyond the UK resulted in:

- i. audiences reporting changes in opinions and behaviour
- ii. requests for further information
- iii. opportunities for further involvement in related future activities
- iv. the implementation, by project delivery professionals in government, of new knowledge to resolve existing policy problems and inform decisions on project set up, management, and transitions
- v. participation in expert panels, working groups, and parliamentary committees, which influenced the thinking and decision-making of policymakers and practitioners.

A key aim of Project X was to grow a new generation of researchers to work with government and industry in the UK and beyond to transform the delivery of major projects. The wide range of dissemination and engagement activities helped early career researchers (ECRs) and doctoral researchers within the Project X co-production community to:

- i. identify routes to publishing their research in high-ranking journals, media outlets and professional association reports
- ii. source funding and support for research projects and training
- iii. build their profile and make new links and relationships through their involvement in conferences, seminars, and networking opportunities.

The diligence and commitment of the ECRs and doctoral researchers was acknowledged by high-profile awards and prizes. This recognition illustrated how the Project X grant enabled the development of an interdisciplinary community of next-generation major projects and programmes researchers in academia and industry.

By the end of the project, the integrated research design and impact strategy implemented by the Project X co-production community provided a pathway to improve the way research informs project delivery in practice. This pathway has the potential to deliver future improvements in project delivery performance in the UK and beyond. Full details of the impacts of “Improving Project Delivery (Project X)” can be found on the Project X website (bettergovprojects.com) and UK Research and Innovation website (gtr.ukri.org).

In his oral evidence to the House of Commons Public Administration and Constitutional Affairs Committee inquiry on the government’s management of major projects (9 July 2019), Dr Richard Kirkham explained how “the main objective of Project X is to improve the evidence base by which the projects delivery profession operates and hopefully bridge the gap that is frequently cited between policy, project delivery, and operations.”

At the completion of the research project, the Project X co-production community felt it would be an opportune moment to share their reflections on, and the benefits and outcomes of, co-produced, problem-focused, interdisciplinary research on the evidence base and policy and practitioner communities.

Introduction



Reflections from the Director of Project X, Theresa Harrington on “Improving Project Delivery (Project X)”

I joined the Infrastructure and Projects Authority (IPA) in 2015, having recently graduated from the Major Projects Leadership Academy (MPLA), run by Oxford Said Business School and commissioned by the IPA. It was attending the MPLA that opened my eyes to the application of research to project delivery practice, as the course uses published academic research to explore how to best understand and improve project delivery outcomes.

My role in the IPA was Head of Portfolio Insight and I had a small and talented team responsible for collecting, collating, and analysing the data from the largest and most important projects in government. These formed the Government Major Project Portfolio (GMPP) of (at the time) c£500bn investment. This analysis fed reports to senior leaders and the IPA’s annual report, primarily comprising trend analysis and the identification of any obvious anomalies in the progress of the projects. It was evident to me, however, that the database of information collated from the quarterly returns of GMPP projects could provide a lot more valuable insight into how to improve project delivery outcomes.

My small team did not have experience of project delivery and so were not best placed to develop the analysis to yield the insight I believed could be gleaned from the data. I therefore approached Said Business School and Cranfield University (who ran the Projects Leadership Programme for IPA) and asked if they would be interested in collaborating with me to use the data to develop research with a practical application for project leaders within or outside of government. Both organisations were very keen to work with me to develop a framework through which the data could be safely shared with regards to its sensitivity, and to establish what types of analysis and findings would most help project professionals to improve their approach to delivery.

Data was the starting point but access to the large number of project professionals working in government to better understand their successes and challenges was equally important. Exploring how best to collaborate with government departments to gain access to the appropriate individuals was therefore also key.

It was always intended that the collaboration would extend beyond Oxford and Cranfield and, early in discussions, many academics from other universities expressed their interest in working with us to create a governance framework to enable effective engagement and support rigorous academic research. These included the universities of Manchester, Sussex, Brighton, and Bath, and University College London (UCL). In addition, the project professional bodies, including the Association of Project Management (APM), Project Management Institute (PMI), and Major Projects Association (MPA), were keen to support us. Finally, several of the supplier organisations that worked with the government on project delivery also offered to support the endeavour.

Representatives from interested parties came together in a workshop and it was agreed that we would form a collaboration between government, academia, professional bodies, and business to sponsor and support practical insight-based research. The working title of this collaboration was Project X, and this name stuck as we set up the governance and framework which established how we could all work together to achieve our aim of improving the outcomes of project delivery within and outside government.

We were fortunate to receive funding and/or resources from several organisations, including the universities that were involved. Notably, the Economic and Social Research Council (ESRC) granted us £1.1m to encourage and support early years researchers to use our network of collaborators to gain access to senior project professionals, data, and information. PMI funded three stages of research into effective benefits management within and outside the UK, and IPA funded research on effective transformation delivery.

This was an extremely effective way of supporting our young researchers in undertaking interesting and relevant research. The outputs from this work, and that undertaken by other Project X collaborators, has been presented in numerous fora and conferences, has formed the basis of very interesting and informative workshops and conferences organised by Project X, and has also produced a large body of written literature, including books and published articles.

I am privileged to have remained the Director of Project X throughout its lifetime and am immensely proud of the impact we have made on the outcomes of projects across the UK, as well as on developing our young researchers during their career journeys. It has been an extremely important endeavour that I am grateful to have been part of.

Reflections on Project X's contribution to knowledge

Reflection One



Reflections from Professor Juliano Denicol on Project X's "Causes and cures of poor megaproject performance" research

It is well known that most megaprojects fail to achieve their objectives, but we know surprisingly little about why they fail and what can be done to rectify it. Our research consolidates the megaproject management literature in the world's largest systematic review of the field to date. The review analyses 6,007 titles and abstracts, and 86 full papers, identifying a total of 18 causes and 54 cures to address and improve poor megaproject performance. We clustered the scientific literature into six themes: decision-making behaviour; strategy, governance and procurement; risk and uncertainty; leadership and capable teams; stakeholder engagement and management; and supply-chain integration and coordination.

We found significant knowledge fragmentation and that no single concept or framework – no matter how far we stretch it – can account for the multiple and varied causes and cures for poor performance. We conclude that what is missing in current research is an understanding of megaprojects as a complete production system – from planning, through design and construction, to integration and handover to operations. We advocate the need for future theoretical research to adopt a systems lens to address the multiple dimensions and interacting components that impact on performance and outcomes.

Our research paper, Denicol et al. (2020), with more than 42,000 downloads, is one of the most downloaded in the history of the *Project Management Journal*, and is on track to be one of the most read and cited in the field. It has the highest Altmetric score (318) of all papers in project management journals, as well as of all journals of the adjacent fields of construction and infrastructure management.

The paper was immediately and extensively covered by policy outlets, which often takes several years. It featured in publications by the European Commission, Resolution Foundation, and Stockholm Environment Institute. It also attracted attention of the OECD and The Global Infrastructure Hub, a G20 initiative.

The research was used by the IPA to develop two of the core modules for the UK government's new "Project Routemap: Setting up projects for success". Our theoretical contribution informed the UK's Institution of Civil Engineers' (ICE) major new initiative, called the Systems Approach to Infrastructure Delivery. The paper's recommendations provided guidance for improving the performance of other leading bodies in the UK, such as the Ministry of Housing, Communities and Local Government, High Speed Two, and the Green Party's Climate Emergency Policy Working Group.

We developed several initiatives with international organisations; for example, Accenture built on our findings to inform its global report on the value of major projects. We have also engaged with organisations in Canada, USA, and Brazil, which currently has one of the world's most ambitious infrastructure pipelines. The findings were disseminated to the Brazilian Space Agency, the Brazilian Infrastructure Law Commission, and its State Agency for the Regulation of Public Services.

The research attracted significant media attention from countries as diverse as the USA, Pakistan, and Colombia, including mainstream outlets (*The Financial Times*, *The Daily Mail* and *The Tribune*) and the trade press (*New Civil Engineer*, *Engineering News Record*, and *Management Today*). The article featured as the leading story in the Government Project Delivery Newsletter on 15 May 2020.

Reflection Two



Reflections from Professor Paul Nightingale and Dr Rebecca Vine on the “Delivering impact in an expertise economy” blogs

In 2022, we wrote two blogs for our funder, ESRC, to showcase *how* the Project X model of co-produced research had benefited the government, industry, and project management professionals. The key arguments appeared in the very popular LSE Impact Blog (Nightingale and Vine, 2022; Vine and Nightingale, 2022). The first LSE blog post had an audience of 30,000 in its first week, becoming the eighth most popular read of 2022.² We also spoke at ESRC events and a Welsh Parliament workshop.

The first article argues that the frameworks we use to think about *how* research delivers an impact are outdated. They were developed for a 1950s manufacturing economy where impact came from applying scientific discoveries. This science-push model does not work in a modern service economy. Today's innovation is too complex to be solved with off-the-shelf solutions, and it is unlikely that the problems that industry and government need to solve are the ones being researched in academia. Instead, researchers need to have expertise and high-trust external relationships, so that they can co-produce research further downstream, working alongside expert practitioners to constantly match problems with innovative, research-informed solutions.

The second article explains how Project X used £1m from the ESRC to do this. Productivity-enhancing innovation in a modern service economy increasingly comes from projects that upgrade processes, systems, and infrastructure. Specific capabilities (Kortantamer et al., 2021) are needed to manage their unpredictability, sociotechnical complexity, and messy politics. Project X developed these capabilities by organising resources into priority areas with shared oversight from theme leaders from government, industry, and academia. Academics and project professionals focused on the problems that were

causing performance bottlenecks. Project X brought together a diverse team of experts to research those problems and co-ordinated activities to generate benefits for research partners and the government (Cabinet Office, 2019). Impact was then extended internationally through our partnerships with the project management professional associations.

Project X drew heavily from research on high-performance research teams. We aimed to be 10 times more productive than a typical project of our size. In three years, Project X produced more than 80 academic and professional publications, trained a new generation of engaged scholars to co-produce research, and undertook over 120 engagement events, generating more than 30 new strategic collaborations. Building and sustaining these capabilities required careful orchestration and a sophisticated governance structure with adaptive performance management frameworks (Vine et al., 2024). A shared focus on improving outcomes generated a high-trust research environment, and partnering with industry and professional organisations allowed us to amplify the impact of the collective learning that was generated between researchers and practitioners.

Despite Project X's productivity and impact, this type of research collaboration remains an outlier. The scale needed to be effective, flexible networked staffing, funding for relationship development to build high-trust practices, and the experience required to oversee it are all difficult to replicate through traditional responsive mode funding. As the conclusion of the original 2022 article noted: “If funders are committed to impactful research that improves social welfare and economic prosperity then it is *critical* to invest in this type of field research and researcher expertise.”

² blogs.lse.ac.uk/impactofsocialsciences/2023/01/02/2022-in-review-the-top-blogposts-of-2022/

Reflection Three



Reflections from Professor Mike Lewis on “Project and programme research centres: Lessons for scholarship, policy and practice” report

One key contribution was through the publication of the APM-supported study (Msulwa et al., 2020) of project and programme research centres, raising awareness and promoting a better understanding of these institutions to project communities. We were able to reflect on their institutional role in shaping and supporting the wider knowledge ecosystems that are essential for advancing project management. The study looked at key practices across various institutions, including the John Grill Institute of Project Leadership in Sydney and Stanford Global Projects Center, highlighting, above all, the importance of collaboration across the golden triangle of business, government, and academia. Such collaborations enhance the breadth and impact of research, helping to address complex, real-world problems more effectively.

The study underlined the role of diverse funding sources, including government grants and industry partnerships, thereby ensuring continuity, facilitating robust medium- and long-term research outputs, and the ability to evaluate and influence innovative practices. Institutes like the Concept research programme in Norway and the Complex Product Systems (CoPS) Innovation Centre at the Science Policy Research Unit (SPRU) also demonstrated the value of crossing scholarly boundaries. Engaging multiple disciplines not only broadens the scope of research, encouraging more innovative thinking, but also helps to make academic work more relevant to practice. The institutes clearly offered an invaluable mechanism for balancing short-term results with long-term research goals to maintain relevance and adaptability within the dynamic field of project management.

One final critical finding – exemplified in this work by the efforts of Project X ECRs like Rehema Msulwa, Katherine Bloomfield, and Phoebe Young – was the importance of the research centres as sites for fostering future leadership. This not only enriches any research but also prepares ECRs to lead future initiatives.

Reflection Four



Reflections from Professor Terry Williams on benefits realisation management and the public sector

The work on benefits realisation management was one of the first major pieces of work to be initiated under Project X. We recognised that traditional views of “project success” (cost/time/quality) are increasingly recognised as inadequate, with many governments transitioning to a benefits-led culture. But the theoretical discourse on the benefits of major projects and programmes is relatively underdeveloped, as are the implications for a deeper understanding of benefits for the practitioner community. In 2016, the PMI funded a study of project benefits by academics from Hull, Cranfield, Edinburgh, and Manchester universities.

Year 1 looked at official benefits realisation management methods from eight countries or supranational organisations, with a systematic literature review. Year 2 looked at the effectiveness of those frameworks, concentrating on four countries, enabling comparisons of practices and effectiveness, reasons for not using the framework, and specific detailed aspects.

Year 3 looked into the “actuality” of the practice through three (UK) case studies. This was more thoroughly theoretically grounded, which enabled us to consider the nature of a “benefit”, its fluidity, its changing nature and meanings, and the difficulty of establishing a single, common, stable value for a benefit. We looked at the terms used, the design of tools, communication with stakeholders, and the use of narratives. We had to consider the relationship with the permanent organisation delivering benefits by “business as usual”, and the various reasons for benefits changing throughout the projects.

An extensive report, a brief white paper for practitioners, and a journal paper described the results of years 2 and 3, and roundtables and webinars were held. Interestingly, a parallel study in Canada produced a PMI white paper towards the end of the study with similar conclusions. We made some definitive recommendations for practice, and it would be interesting to find out how many changes have been made in response, in particular regarding the refreshing of the assurance review processes.

Reflection Five



Photo credit: Will Amlot

Reflections from Professor Mike Bourne on project leadership research and development

Cranfield University School of Management, supported by its two business partners, PA Consulting and The Project Academy, won the contract to deliver the government's Project Leadership Programme (PLP) in 2015 and Cohort 1 started on 30 June that year. PLP is a short but intense leadership programme that engages participants over a 12-month journey. It involves eight days of face-to-face sessions, synchronous and asynchronous online learning, entry and exit evaluations, assignments, and individual coaching.

Although the initial work analysed the patterns and trends in the data from the government's Major Projects database (Bourne et al., 2020) and the benefits research (Williams et al., 2020 and 2023) informed the material supporting the PLP, the major contribution from Project X came as a result of the two APM sponsored reports, "Project leadership: Skills, behaviour, knowledge and values" (Coleman and Bourne, 2018) and "Developing the practice of governance" (Bourne and Parr, 2019).

The "Project leadership" report was based on 38 interviews conducted with experienced project professionals in the private sector, but the research developed into eight project leadership survival skills, which are taught on the programme.

The "Developing the practice of governance" report was synthesised by combining literature with systems thinking and undertaking a series of development workshops with civil servants who had a project delivery background. One of the key outcomes of this report was the prescription that "fixed-goal" and "moving-goal" projects need to be governed differently. Fixed-goal projects are simpler projects, where the desired outcome and approach are known from the outset and do not change over the life of the project. Moving-goal projects are far more common in the public sector and cover situations when either the outcome and/or how it is to be achieved is not understood at the outset of the project and evolves over time.

The report highlighted the shortcomings associated with treating moving goal-projects as fixed goal-projects. It also created a series of questions that needed to be asked at the three most important phases of a project lifecycle. The report was included in background reading for the PLP, but the programme's e-learning on project governance was fundamentally based on the material from the research.

We know from the assignments on PLP submitted by participants that a number of government projects have had their governance reevaluated and redesigned as a direct result of this e-learning.

Project X in numbers (Collaboration)

30+ national and international collaborations/partners

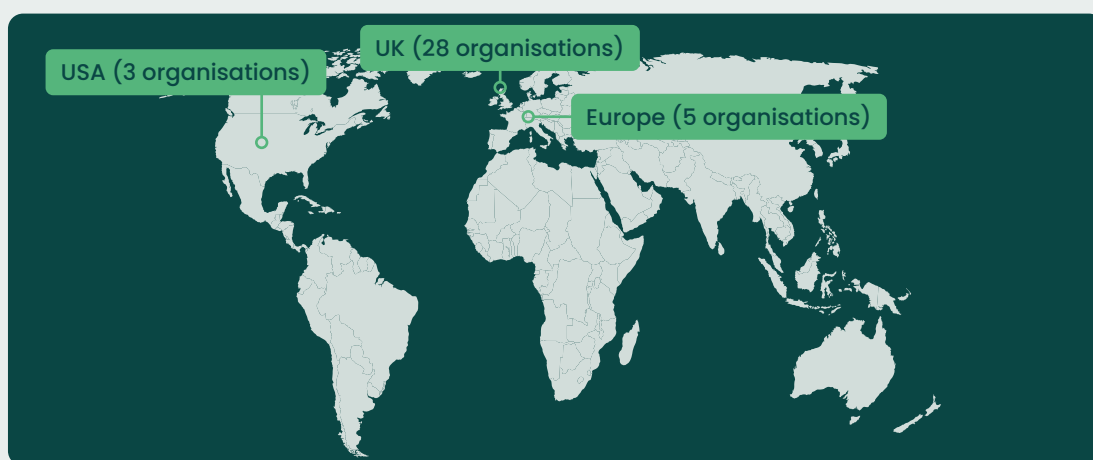
2 energy operators
(community owned & private)

10 infrastructure and management consultancy
(private)

4 professional associations
(private)

1 utilities operator
(private)

3 research institutes (public)



4 governance
(government)

6 finance
(central government)

1 health (central government)

1 safety (central government)

4 transport
(central and local government)

International reach – awards, conferences, and collaborations/partners

Publications (articles published in international journals, papers published at international conferences, and reports published by international collaborators)

Engagement (media sources and invitations to presentations, panels and events, reaching global audiences)



International perspectives



Reflections from Professor Giorgio Locatelli and Professor Vedran Zerjav on Concept and Project X

The Norwegian Ministry of Finance funds the Concept research programme at the Norwegian University of Science and Technology (NTNU) in Norway to develop knowledge and expertise on projects' front-end phase. The main activity is conducting trailing research on the country's largest public investment projects, which undergo the governance system referred to as the State Project Model or the quality assurance (QA) scheme³.

Researchers from Concept have collaborated with Project X researchers over many years (not only during the period when Project X was active, but the examples below are from this period).

Joint publications include:

- "A systematic literature review: The front-end of projects", by Terry Williams, Hang Vo, Andrew Edkins and Knut Samset, funded by the Project Management Institute, 2019
- *The Front-end of Large Public Projects Paradoxes and Ways Ahead*, a monograph edited by Terry Williams, Knut Samset and Gro Holst Volden, with contributions from researchers from five countries, Routledge, 2022.

Project X researchers and civil servants from the UK have attended the Concept International Symposium on Project Governance, which is held biennially. For example, at the 2018 conference, we had speakers from the IPA, the Cabinet Office, the National Audit Office, the University of Hull, Cranfield University, and Sheffield University Management School, as well as participants from several other UK organisations.

The Norwegian Ministry of Finance has shown great interest in the UK governance system as well as Project X, after learning about it through Concept studies and conferences.

Professor Terry Williams is a key person from Project X who has mediated contact with other researchers and civil servants from the UK. Terry has attended the Concept International Symposium and has been on the symposium programme committee several times. He has welcomed visiting researchers on sabbatical from NTNU to the UK, and he was on the PhD evaluation committee for Concept's current director, Gro Holst Volden, in 2019.

More recently, Vedran Zerjav joined NTNU and the Concept team, which has further reinforced the British/Norwegian research collaboration on public project governance. In 2024, the team initiated an international study comparing governance systems in several countries. The study involves several key people from Project X.

³ ntnu.edu/concept/qa-scheme

Practitioner perspectives



Reflections from Dr Fiona Spencer ChPP on the benefits of co-production

As a senior government project delivery practitioner, I have worked collaboratively with academic and industry researchers for over a decade. Initially, I worked with the Oxford Said Business School through the MPLA, which encourages collaborative learning across government, industry and academia to improve the delivery of major government projects. Then I worked with researchers through the cross-sector Project X initiative, which provided an important opportunity for the co-design and co-production of research to inform future policy making, project delivery, and the development of the government project delivery profession.

Observing the project over the last decade has pointed to multiple benefits of co-designed and co-produced working in the field of project delivery. The most significant are below.

(i) Producing relevant research with the potential for real-world impact

Tekic et al. (2022) note the dominance, over the last two decades, of theoretical perspectives on projects and project-based organising, with studies centring within the boundaries of academic research disciplines rather than on areas of focus for practitioners. Unsurprisingly, many practitioners have seen such studies as somewhat divorced from, and indeed irrelevant to, real-world project delivery (Meredith, 2021).

Co-design has provided an important opportunity to rebalance the picture, bringing theoretical perspectives together with key policy-relevant questions and topics of interest for practitioners, enabling the design and production of research that can be used to generate real-world impacts. Through collaborative governance, conferences, and workshops engaging a cross-section of academics, practitioners, and industry partners, Project X has been a forum for identifying essential areas of focus for the theory and practice of project delivery, with its six themes forming a guiding framework for new research. This provides multiple relevant perspectives and insights that are now being used to develop practice and support professional development in the field.

(ii) Access for researchers to high-quality data and feedback on analysis

Establishing an agreed regime for the co-design and co-production of research, while ensuring that government information and data are managed securely and in line with international standards, has enabled much greater access both to high-quality data and to the contextual information needed to support analysis. A standardised approach and documentation made it significantly easier to secure formal approval for data access and reduced unnecessary work for the researchers and organisations involved. It also built trust and confidence that sensitive research would be managed appropriately. Further down the line, co-production has enabled high-quality feedback on analysis from research subjects, expert practitioners, and researchers alike within the framework of Project X, ensuring that findings were actively tested and enriched by further insights.

(iii) Developing complementary skills and expertise

Working within an established collaboration framework has yielded many benefits by developing skills and expertise, providing researchers with insights into the practical realities of project delivery, offering new perspectives for practitioners, and enabling the development of complementary cross-sector skills in the design and delivery of collaborative research. Project X has provided a wealth of such opportunities, including participation in cross-sector conferences, workshops, research seminars and study courses, individual collaborations for research design, data gathering, and the development of research papers, visits to organisations and sites, and job-shadowing. As well as deepening the skills and expertise of current researchers and practitioners, Project X has put a particular focus on providing experience and complementary skills development for research students, both theoretical and practical. This has given them a better understanding of project delivery practice in a real-world context and helped them build the skills they need to conduct successful research in such environments. There has been a notable success in furthering the professional development of some outstanding research students.

(iv) Creating wider audiences for academic research findings

One of the important benefits of collaborative research is that the engagement of a range of practitioners and researchers builds wider relationships across individuals and organisations, generating a wider field of interest in the research and its findings. Involving experienced practitioners also helps to frame research findings in ways that make them accessible and meaningful for broader and more diverse audiences.

In the Project X context, access to a broader set of organisational channels and professional networks has extended the potential reach of research findings well beyond academic journals (where practice-based research can in any case compete for publication with theoretical papers). Findings have been shared in ways that go beyond traditional research papers; for example, as presentations for practitioners and participating organisations, and as case studies shared online and through professional networks. They have also fed into wider work, such as the preparation of standards and guidance, and professional training and development for practitioners.

(v) Furthering development of project delivery as a professional discipline

Project delivery has, in the past, struggled to gain legitimacy as a professional discipline in comparison with longer-established professions. While much progress has been made in recent years (for example, by developing internationally recognised practice standards and professional accreditation), academic research has also an important part to play in continuing to further the development of the profession.

Bringing together theoretical and practice-based perspectives is key, and collaborative research presents a critical opportunity for doing so. Project X played a significant role in supporting the development of project delivery as a professional discipline in government by valuing and leveraging the complementary expertise and experience of academic researchers and seasoned practitioners, who work collaboratively to produce high-quality, relevant, and impactful research that helps improve the delivery of public projects and their social value.

Project X in numbers (Engagement)

120+ engagement activities (and impacts on the audiences)



Policymakers and politicians



Professional practitioners & industry



General public and others



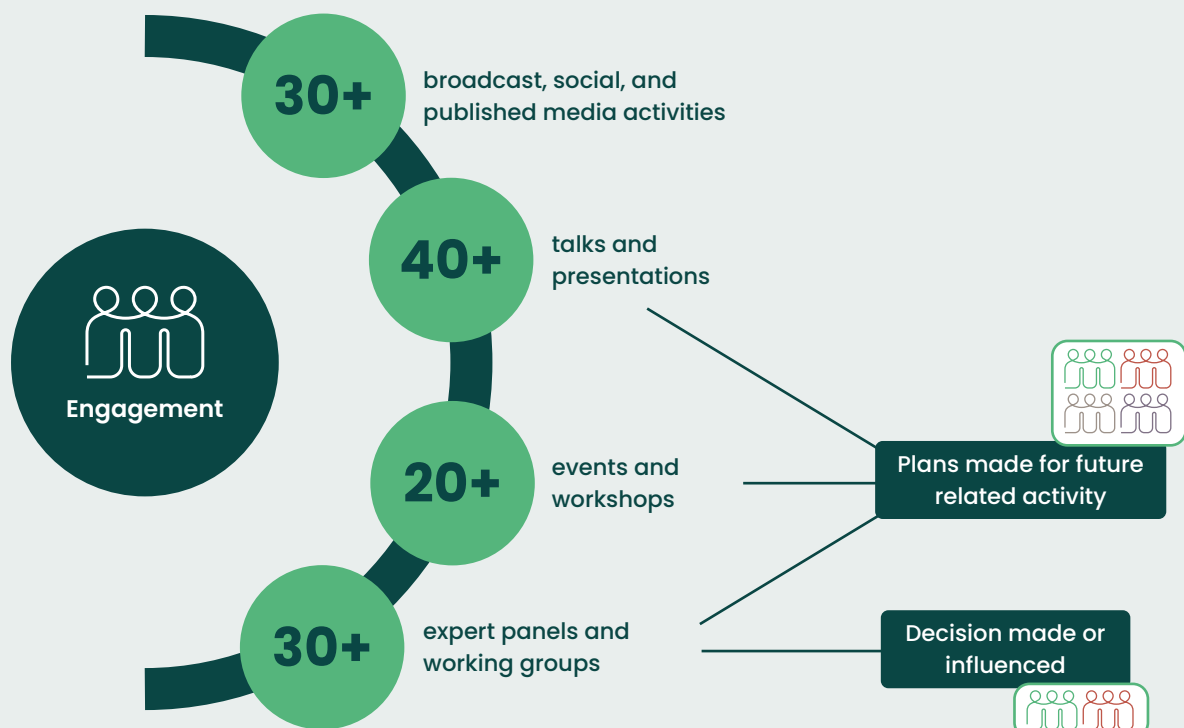
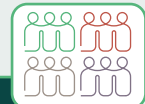
Academia

Impact (all)

Audience and colleagues reported a change in views, opinions or behaviours

Requests for further information

Requests about (further) participation or involvement



Key engagement activities with significant impact potential



ABC News invited Project X associate fellow Dr Jas Kalra to present his expert opinion on supply chain disruptions (2021).



On the publication of a policy research report by Project X researcher Dr Phillippa Groome (2021), a Department for Transport (DfT) minister, Andrew Stephenson, Minister of State, tweeted about the publication to his 20,000 followers.



Dr Jas Kalra and Professor Jens Roehrich wrote an article called "Three things that could help save Christmas 2021 from shortages" for *The Conversation*.



Representatives from the civil service, top universities, private sector partners, and professional bodies attended the one-day Project X Conference (2021). Presenters included Chair of the Public Accounts Committee, and representatives of NAO, HMRC, IPA, IOC, and Turner and Townsend.



Extensive national and international media coverage of UCL and University of Sussex "Causes and cures of poor megaproject performance" research.



House of Commons: Public Administration and Constitutional Affairs Committee. The government's management of major projects, HC 1631

Oral evidence (2019), written evidence (2019) and updated written evidence (2020) from Professor Michael Bourne, Dr Richard Kirkham, Professor Michael Lewis, and Professor Terry Williams.

Sir Bernard Jenkin (Chair):
"You have given us the benefit of a very wide range of experience and insight that has been very helpful. Thank you very much indeed."

Case studies: The value of research in project delivery

Case Study One (HMRC)



Dr Nicola Young ChPP

I really enjoyed my time working with colleagues across Project X. I may have had only limited input on occasion, but my views and perspectives were always welcomed.

Context

I was involved in multiple workshops to develop the APM Paper “Developing the practice of governance”. The paper was published on APM’s website for project delivery professionals to access. I also provided practitioner input to research projects by supporting the delivery of discussions arranged by Dr Richard Kirkham with programme senior leads on the challenges of transformational change. Discussions were pitched around both theory and my practitioner experiences of working on government projects and programmes for over 25 years. I’d hope any input I provided to paper development and discussions added value by being able to provide that dual perspective (of theory and practice).

Co-production insights

Good academic papers and theory should be supported by the reality of practitioner experience and knowledge. Developing, collating, and testing theories is absolutely worthwhile, otherwise we would never move on. However, testing with practitioners is key to successful paper production. Project X was successful across the two themes with which I was involved, entirely due to the willingness to collaborate in this way.

Co-production opportunities (professional development)

I was lucky to be exposed to a broad range of experts from across their respective fields, both academic and cross-government. I was able to listen to aspects of work across all the themes and could take that back to my workplace to share with colleagues both within and outside my department. The networks and contacts I developed have allowed me to continue to maintain my wider perspective as the work of Project X came to a close. I am now an Honorary Visiting Research Fellow at the UoM Thomas Ashton Institute and I’m involved in the mobilisation of the United Kingdom Research and Innovation (UKRI)–funded SALIENT Programme. If it wasn’t for Project X, I would have never had such opportunities to maintain and continue to develop my academic links.

Case Study Two (IPA)



Dr Fiona Spencer ChPP

Project X has been a very positive experience. Working collaboratively with leading academic experts and experienced practitioners has been hugely beneficial. I hope that relationships and collaborative practices forged through Project X continue.

Context

The Ministry of Justice (MoJ) programme of strategic prison building allowed for in-depth study of a project-to-operations transition case, and the ability to contextualise this within wider MoJ and government project delivery practice. Working with Dr Richard Kirkham, I completed a MPhil (co-producing a research paper, under review). The co-production project found that successful completion of transition is challenging and critical in public projects and programmes, where multiple organisations and delivery partners deliver complex changes designed to deliver ambitious longer-term transformational outcomes. The work fed into lessons learned for MoJ projects and development for business change practitioners.

Co-production insights

Co-production built trust across academic and government project delivery communities, enabling research access to sensitive and critical areas of operation. Collaborative research provided valuable insights on important aspects of project delivery practice for practitioners (identifying transitions, managing strategies and exemplary practice in planning, management, leadership, and team behaviours) and contributing practice-based insights to the wider research literature.

Co-production opportunities (professional development)

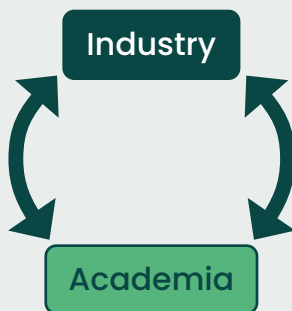
The co-production project enabled me to develop academic research skills in a highly supportive environment, learn from experienced academics, and attend qualitative research training, tailored for the demands of project delivery. These proved invaluable in designing and conducting the MoJ case study. Participation helped me understand how best to leverage my knowledge and experience as a practitioner for conducting academic research. My understanding of the field of project delivery theory and practice has grown immensely, supporting my work in developing new guidance, tools and professional training for government project delivery practitioners.

Project X in numbers (New generation of researchers)

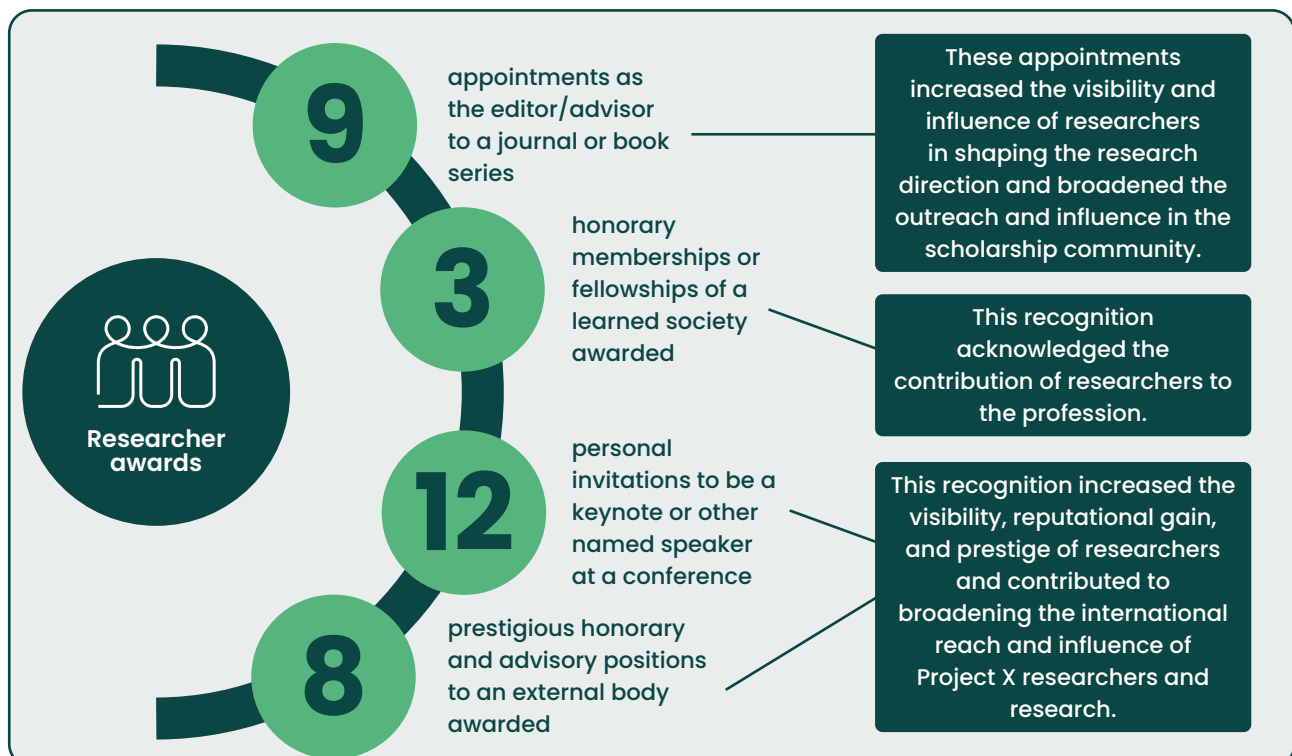
ECR and doctoral students located across the UK

ECR development – reaching a new generation of researchers in UK and beyond. Increasing the skills capacity/numbers of researchers working with government and industry to transform the delivery of major projects.

New generation of researchers bridging industry and academia



30+ awards and recognition



Awards and prizes (ECRs and doctoral students)

**Dr Jas Kalra:**

2021 Outstanding Reviewer Award by the International Journal of Operations and Production Management (IJOPM) and Best Reviewer Award by the Operations and Supply Chain Management division of the Academy of Management.

**Dr Phillippa Groome:**

SeNSS Business Engagement Conference 2017/18: Research Poster Prize.

**Professor Vedran Zerjav:**

2020 Ray Levitt Young Scholar Award, awarded at the Engineering Project Organisation Conference (EPOC) and the Emerald Best Paper Award, awarded at the European Academy of Management (EURAM) conference.

**Dr Katherine Bloomfield:**

2020 APM Project Management PhD/Doctoral of the Year Award and Herbert Walton Award for her PhD research at the University of Hull.

**Dr Dicle Kortantamer:**

2018 Best Conference Paper award by an early career research lead author at the International Research Network on Organizing by Projects (IRNOP) XIV conference.

**Professor Juliano Denicol:**

2019 International Project Management Association (IPMA) Young Researcher Award and 2021 Most Cited Paper of the Year Award *Project Management Journal/Project Management Institute (PMJ/PMI)*.

Project X: Career development of ECRs and doctoral students

Early career researcher's reflections



Reflections from Dr Dicle Kortantamer

Project X supported a cohort of ECRs as part of a drive to generate a step change improvement in social science research in major project and programme delivery. As one of the ECRs in this cohort, I received training on advanced research skills and mentoring on how to communicate with non-academics, as well as undertaking interdisciplinary research. As part of a cohort and network of academics spread across the UK, I also had far better access to the project management community in the UK than would have been possible from my own institution. This community not only provided influential networks

that enabled me to connect with practitioners and industry bodies but also provided a support network that helped me to transition my career to its next stage as a lecturer in project management at the University of Leeds. Moreover, the trust relationships formed with senior civil servants during this project enabled me to co-create new research questions and co-develop preliminary insights and share them with practitioner and academic communities. Together, these invaluable experiences and connections have provided me with a solid foundation for developing and delivering impactful research.

The benefits to ECRs of involvement in Project X

A key aim of Project X was to grow a new generation of researchers who can work with government and industry to build the UK's and global capacity to deliver major projects effectively. In the following section, our ECRs and doctoral students discuss the benefits of being involved in co-produced, problem-focused, interdisciplinary research.⁴

"Project X is a great arena where we as researchers can share insights into the major projects, complex projects, and programmes. This is a win-win-win relationship that we have between academia, the industry, and the government, because we support each other and we can benefit from each other."
(Dr Francesca Vinci, UCL).

⁴ Project X filmed interviews with ECRs, recorded in 2021.

Delivering quality research

Delivering quality research through training opportunities:

- “And it was also an opportunity for me to grow my research skills, because... receiving advanced training, especially on qualitative research methods, by senior academics... was a great opportunity.” (Dr Francesca Vinci, UCL).
- “I have also got some training around advanced qualitative methods and I am a qualitative researcher, but since I have had that training, my research designing and the quality of my data analysis has gone up a level.” (Dr Jas Kalra, Newcastle University/University of Manchester).
- “Being part of Project X has enabled me to develop a number of transferable skills for the research I am currently doing and the publications I am producing for industry and academia. An example of how I was able to do this was for a course Project X organised. This course was quite comprehensive and helped me to shape my research design, which was really important in capturing various lessons that are important for project delivery.” (Baker Rickaby, UCL).

Delivering quality research through access to high-quality data and feedback:

- “The most important aspects of Project X to me have been the opportunity to get closer, particularly to one major infrastructure client, that helped me develop my research.” (Dr Francesca Vinci, UCL).
- “Thanks to Project X, I had an opportunity to study some of the most significant projects of the UK government, which was a very interesting, valuable, and unique experience for me.” (Dr Hang Vo, University of Hull).
- “By incorporating policymakers and practitioners into my research project, it gives me a lot of access to data. It means that they are interested in the work I am doing and they start questioning the assumptions they have about how things are done and we start engaging in that conversation and, from that, the research that I produce gets reviewed by them, so I get more feedback than I would [by] taking a more traditional route.” (Dr Phillippa Groome, University of Sussex).

Delivering quality research through access to expert researchers, policymakers and practitioners:

- “I have had the privilege of working with very senior policymakers and practitioners and being in meetings with them and contributing alongside them... Project X has provided me with a platform, a really strong marketing platform. So, [for] the work that I produce, I have the exact contacts I need to streamline getting that research into practitioners’ hands.” (Dr Phillippa Groome, University of Sussex).
- “Project X has given me the opportunity to meet, to learn, and cooperate with many leading experts and colleagues, not only from the academia, the government, but also industry, who share the same ambition and desire to improve project management practice in general and the performance of major public projects in particular.” (Dr Hang Vo, University of Hull).
- “As Project X is a collaboration between academia, industry and government, it has given me access to key actors in the projects I am working on, as well as insight into other projects in different areas to my fields of study.” (Phoebe Young, The University of Manchester).

Building UK and global capacity

Building individual capabilities through Project X:

- “I have learnt a lot through my engagement with Project X. Primarily, as a researcher, I was able to develop my skill set in terms of different methodological approaches, undertaking new techniques, but also focusing on different areas of interest within the projects field.” (Dr Katherine Bloomfield, University of Hull).
- “Project X has really benefited me as an interdisciplinary researcher in an engineering school as it has allowed me to partake in training courses related to other elements of project management which I wouldn’t normally have access to.” (Phoebe Young, The University of Manchester).
- “Project X has been immense. So, I have got access to these methodological training. I have always wanted to do behavioural experiments; I just never knew how to. Last year, I got some training on how to do behavioural experiments with Project X and it has been great.” (Dr Jas Kalra, Newcastle University/University of Manchester).

Creating networking opportunities through Project X:

- “[I] had the opportunity to collaborate with early career researchers from other universities. I have had the opportunity to visit other institutions and meet PhD students at other universities such as UCL and Bath... One of the main projects I have worked on through Project X looked at project studies research centres worldwide and this project gave me the opportunity to meet researchers from around the world.” (Phoebe Young, The University of Manchester).
- “I have also got access to this brilliant network of collaborators across academia and industry. And I have been involved with some really interesting research projects and I have been called on to do some really interesting advisory work with some organisations in the area.” (Dr Jas Kalra, Newcastle University/University of Manchester).
- “I would really like to maintain the relationships that I have gained through Project X. So, not only is that with policymakers and practitioners but also the other early career researchers. This was my first opportunity to really feel at home with the research community and I have met people that are so friendly, very helpful – if I get stuck I can reach out to them and they will make time for me.” (Dr Phillippa Groome, University of Sussex).

Career progression supported through Project X:

- “I have recently joined Newcastle University Business School as an Assistant Professor in Supply-chain Management, where I am leading a module on project management for our MScs – and my involvement with Project X, I believe, had some part to play in that.” (Dr Jas Kalra, Newcastle University/University of Manchester).
- “Project X has given me the contacts to design my own post-doctoral proposal. To be able to design a proposal where I am working with government stakeholders, very senior ones, and to show I have their support really strengthens that application and makes the research itself a really exciting project to work on.” (Dr Phillippa Groome, University of Sussex).
- “In terms of my career progression, I have moved from being a researcher at a PhD level through to exploring a larger variety of techniques at post-doctorate level. So, my development from those two levels has grown and since then it has enabled me to move from the academic world and apply those skills in the consultancy world.” (Dr Katherine Bloomfield, University of Hull).

“In terms of networks with senior policymakers and practitioners, I have met more female role models, very senior women, than I could have on my own. And to be able to see them working, doing what they do best, really helps me to aspire and be more ambitious for my own career development.” (Dr Phillippa Groome, University of Sussex).

Project X: Recently completed PhD research projects

PhD One



Photo credit: Ursula Kelly
studiosoftware.co.uk

Overview of PhD research by Dr Sarah Coleman

I was a doctoral researcher at The University of Manchester. I am also a published author in project leadership and project assurance, and an IPA Associate and GMPP Reviewer. My long career in project, programme, and portfolio management across the public and private sectors has established my interest in project organising.

Using the lens of UK government major projects, my doctoral research seeks to understand how organisations undertake benefits evaluation after project outputs have been delivered into operational steady state, in order to gauge the impact and value created. This evidence is crucial for providing the feedback loop between the target and actual impact on policy and strategy, and on investment decisions.

The research is unique in providing a systems lens across socio-behavioural, process, and technical, temporary project and permanent organisation ecosystems, project benefits longevity, and the frequency and cadence with which benefits are measured and monitored by UK government organisations. It contributes to the body of research into project back-end activities and considerations, which is markedly more fragmented and less mature than that of early-stage and project front-end activities.

This research establishes that, to be effective in evidencing change and movement, ex-post project benefits realisation must be outside the project itself, be aligned with organisational performance and impact evaluation functions, and be proportionate to the context. Further, it informs guidance and practice for UK government organisations, project and benefits management practitioners, project commissioning and delivery organisations, and project professional bodies. Finally, this research contributes to knowledge across the domains of operations management, performance evaluation, and project management.

PhD Two



Overview of PhD research by Dr Hang Vo

Led by Professor Terry Williams and funded by the PMI, our research under Project X has yielded significant scholarly outputs in internationally established journals. Our work includes three main studies:

- **Benefits management:** A multi-university, three-phase examination of benefits management in government projects across multiple nations, aiming to holistically define project success based on the realisation of actual project benefits. This study led to two influential publications: Williams et al. (2020) and Williams et al. (2023).
- **Project front-end:** Addressing the traditionally vague definitions at the initial stages of project development, this research revisits and refines project front-end processes, resulting in significant contributions to the field (Williams et al., 2019).
- **Project governance:** Exploring project oversight and control, this study utilised access to the UK government's major projects database to examine the impact of assurance review recommendations, representing pioneering research into governance-as-practice in public projects (Vo et al., 2021).

These projects, featured in the Research Excellence Framework (REF) 2021 Impact Case Study, underscore the complex challenges of defining and achieving objectives in public projects.

The insights gained from these studies informed my PhD research, which was initiated in 2019 with funding from Project X. My thesis bridges public policy implementation and project management research, revealing a complex web of paradoxes in policy implementation processes and introducing "survival success" – a novel concept emphasising adaptability and resilience for project success. Project X has enabled me to engage in complex and sensitive projects within the UK civil service, thereby enhancing both the academic and practical understanding of project management.

PhD Three



Overview of PhD research by Dr Phillippa Groome

My PhD research aims to improve equality, diversity, and inclusion (EDI) policy when delivering major infrastructure projects, in accordance with the UK Equality Act 2010. Existing EDI policy, such as mandatory unconscious bias training, has been largely ineffective in practice, and even counter-productive (Dobbin and Kalev, 2021; Kalev et al., 2006). Recent technological developments and skills deficits have opened up employment opportunities for more diverse talent (DfT, 2016), as policymakers seek to deliver the GMPP, worth over £800bn (IPA, 2023). However, poor working conditions and discrimination continue to dampen their career prospects (Navarro-Astor et al., 2017; Wang and Degol, 2017). Construction presents a particularly challenging context for gender equality, given the industry's historical reliance on manual labour and limited application of human resources (HR) management practices amongst its large body of subcontracted SMEs (Loosemore et al., 2003). Action research methodologies were used to co-develop this study with key government and industry stakeholders, leading to the publication of a well-received policy brief on a secondment with the Department for Transport [see DfT (2021)]. Findings suggest that client organisations and their Tier 1 suppliers hold the potential to mechanise positive social change by introducing new practices that disrupt institutional rules and challenge the myth of meritocracy. Here, divergent yet complimentary literatures were brought together in a novel theoretical framework to help explain how policymakers must make a trade-off between the grand ambitions prominent in much critical sociology [see, for example, Spade (2013)] and the pragmatism found within much applied behavioural psychology [see, for example, Bohnet (2016)].

PhD Four



Overview of PhD research by Dr Joseph Harrison

I was a doctoral researcher at the School of Management, University of Bath, conducting a multi-year longitudinal case study with National Highways (formerly known as Highways England) to explore questions relating to the scale and scaling of projects in the project front-end. My research interests lie at the interface of operations and project management, and centre around finding ways to improve front-end project performance. Over the course of Project X, I have delivered two research publications (both co-authored with Michael Lewis and Jens Roehrich).

My first publication, published in the *Handbook on Innovation and Project Management* (Lewis et al., 2023), considered how the front-end has long been understood as a critical phase in both the project studies and innovation/new product development (NPD) literature. Project studies researchers have repeatedly highlighted the importance of the front-end in ensuring the eventual strategic success of projects and innovation. NPD scholars have detailed how the (fuzzy) front-end significantly influences the likelihood of innovation success. Despite these obvious parallels, there have been limited attempts to compare, contrast, or synthesise findings. In this chapter, we reviewed both subfields to showcase state-of-the-art front-end research and collated insights under the headings of process, people and networks. We then attempted some synthesis and highlighted ongoing pragmatic and conceptual front-end challenges using the themes of formalisation, uncertainty and equivocality, and contingency. We concluded the chapter by detailing three future research opportunities.

My second publication, published in the *Cambridge Handbook of Project Behaviour* (Harrison et al., 2023), evaluated the topic of misbehaviours in the project front-end. Drawing upon literature on contractual and relational governance mechanisms, we argued that traditional forms of project governance do not have strong applicability to help address some of the biggest challenges facing the front-end of projects. This chapter commenced by considering how misbehaviours can manifest and be present at different levels of analysis (macro, meso, micro). We then briefly reviewed extant governance studies before considering how misbehaviours can be tackled through such contractual and relational governance mechanisms. We concluded our chapter and presented a future research agenda to help further address the important and under-researched topic of project front-end misbehaviours.

References

- Bohnet, I., 2016. *What Works: Gender Equality by Design*. Belknap Press.
- Bourne, M., Anker, D., Chambers, G. and Torjai, L., 2020. How to measure and manage the UK government's major project portfolio. *Measuring Business Excellence*, 24(4), pp. 461–474. doi.org/10.1108/mbe-02-2020-0035
- Bourne, M. and Parr, M., 2019. Developing the practice of governance. Association of Project Management.
- Cabinet Office, 2019. Cabinet Office Areas of Research Interest. Cabinet Office, HM Government, UK.
- Coleman, S. and Bourne, M., 2018. Project leadership: Skills, behaviours, knowledge and values. Association of Project Management.
- Denicol, J., Davies, A. and Krystallis, I., 2020. What are the causes and cures of poor megaproject performance? A systematic literature review and research agenda. *Project Management Journal*, 51(3), pp. 328–345.
- DfT, 2016. Transport infrastructure skills strategy: Building sustainable skills. Department for Transport, HM Government, UK. assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/495900/transport-infrastructure-strategy-building-sustainable-skills.pdf
- DfT, 2021. Enhancing equality, diversity and inclusion for transport infrastructure skills. Department for Transport, HM Government, UK. gov.uk/government/publications/transport-infrastructure-skills-improving-equality-diversity-and-inclusion
- Dobbin, F. and Kalev, A., 2021. The civil rights revolution at work: What went wrong. *Annual Review of Sociology*, 47, pp. 281–303. doi.org/10.1146/annurev-soc-090820-023615
- Harrison, J., Roehrich, J. and Lewis, M., 2023. Governance mechanisms to manage misbehaviours in the project front-end. In L. Ika, J. Pinto and P. Love (eds.), *Cambridge Handbook of Project Behaviour*. Cambridge University Press.
- IPA, 2023. Infrastructure and Projects Authority annual report 2022–23. Infrastructure and Projects Authority, UK Government. gov.uk/government/publications/infrastructure-and-projects-authority-annual-report-2022-23.
- Kalev, A., Dobbin, F. and Kelly, E., 2006. Best practices or best guesses? Assessing the efficacy of corporate affirmative action and diversity policies. *American Sociological Review*, 71(4), pp. 589–617. doi.org/10.1177/000312240607100404
- Kortantamer, D., Vine, R. and Kalra, J., 2021. Rethinking project capabilities: Lessons for policy, scholarship and practice. Association of Project Management.
- Lewis, M., Harrison, J. and Roehrich, J., 2023. It's all a bit fuzzy. The front-end in project and innovation management. In A. Davies; S. Lenfle; C. Loch and C. Midler (eds.), *Handbook on Innovation and Project Management*. Edward Elgar Publishing.
- Loosemore, M., Dainty, A. and Lingard, H., 2003. *Human Resource Management in Construction Projects: Strategic and Operational Approaches*. Routledge. doi.org/10.4324/9780203417881
- Meredith, J.R., 2021. HOLEY MOLEY, the poppycock syndrome, and academic drift. *International Journal of Project Management*, 40, pp. 15–18.
- Msulwa, R., Bloomfield, K., Lewis, M. and Young, P., 2020. Project and programme research centres: Lessons for scholarship, policy and practice. Association of Project Management.
- Navarro-Astor, E., Roman-Onsalo, M. and Infante-Perea, M., 2017. Women's career development in the construction industry across 15 years: Main barriers. *Journal of Engineering Design and Technology*, 15(2), pp.199–221. doi.org/10.1108/JEDT-07-2016-0046
- Nightingale, P. and Vine, R., 2022. By focusing on outputs, rather than people, we misunderstand the real impact of research. LSE Impact Blog. blogs.lse.ac.uk/impactofsocialsciences/2022/02/07/by-focusing-on-outputs-rather-than-people-we-misunderstand-the-real-impact-of-research
- Spade, D., 2013. Intersectional resistance and law reform. *Signs*, 38(4), pp. 1031–1055. doi.org/10.1086/669574
- Tekic, A., Zerjav, V. and Tekic, Z., 2022. Evolution of project studies through the lens of engaged scholarship: A longitudinal bibliographic analysis. *International Journal of Project Management*, 40, pp.531–546.

Vine R., Kortantamer D. and Davies A., 2024. Voyages of Discovery – Balancing leadership, control and capabilities in megaproject delivery. In L. Ika, P. Love and J. Pinto (eds.), *Cambridge Handbook of Project Behavior*. Cambridge University Press.

Vine, R. and Nightingale, P., 2022. We live in an age of projects – Research impact should reflect this. LSE Impact Blog. blogs.lse.ac.uk/impactofsocialsciences/2022/03/14/we-live-in-an-age-of-projects-research-impact-should-reflect-this

Vo, H., Kirkham, R.J., Williams, T.M., Howells, A., Forster, R. and Cooke-Davies, T., 2021. An empirical study of assurance in the UK government major projects portfolio: From data to recommendations, to action or inaction. *International Journal of Managing Projects in Business*, 14(4), pp. 865–897.

Wang, M.-T. and Degol, J. L., 2017. Gender gap in science, technology, engineering, and mathematics (STEM): Current knowledge, implications for practice, policy, and future directions. *Educational Psychology Review*, 29(1), pp. 119–140. doi.org/10.1007/s10648-015-9355-x

Williams T., Samset, K. and Volden, G.H., 2022. *The Front-end of Large Public Projects Paradoxes and Ways Ahead*. Routledge.

Williams, T., Vo, H., Bourne, M., Bourne, P., Cooke-Davies, T., Kirkham, R., Masterton, G., Quattrone, P. and Valette, J., 2020. A cross-national comparison of public project benefits management practices – the effectiveness of benefits management frameworks in application. *Production Planning & Control*, 31(8), pp. 644–659. doi.org/10.1080/09537287.2019.1668980

Williams, T., Vo, H., Bourne, M., Bourne, P., Kirkham, R., Masterton, G., Quattrone, P. and Toczycka, C., 2023. Benefits realisation: Case studies in public major project delivery with recommendations for practice. *Production Planning & Control*, 36(1), pp. 1–21. doi.org/10.1080/09537287.2023.2256287

Williams, T., Vo, H., Samset, K. and Edkins, A., 2019. The front-end of projects: A systematic literature review and structuring. *Production Planning & Control*, 30(14), pp.1137–1169. doi.org/10.1080/09537287.2019.1594429

Appendix A: Glossary of terms, acronyms and abbreviations used

APM	Association for Project Management
CoPS	complex product systems
DfT	Department for Transport
ECR	early career researcher
EDI	equality, diversity, and inclusion
EPOC	Engineering Project Organisation Conference
ESRC	Economic and Social Research Council
EURAM	European Academy of Management
GMPP	Government Major Projects Portfolio
HMRC	HM Revenue and Customs (His Majesty's Revenue and Customs)
HR	human resources
ICE	Institution of Civil Engineers
IJOPM	<i>International Journal of Operations and Production Management</i>
IPA	Infrastructure and Projects Authority
IPMA	International Project Management Association
IRNOP	International Research Network on Organizing by Projects
LSE	London School of Economics
MPA	Major Projects Association
MPhil	Master of Philosophy
MPLA	Major Projects Leadership Academy
MoJ	Ministry of Justice
NISTA	National Infrastructure and Service Transformation Authority
NPD	new product development
NTNU	Norwegian University of Science and Technology
OECD	Organisation for Economic Co-operation and Development
PhD	Doctor of Philosophy
PLP	Project Leadership Programme
PMI	Project Management Institute
PMJ	<i>Project Management Journal</i>
QA	quality assurance
SPRU	Science Policy Research Unit
UCL	University College London
UKRI	United Kingdom Research and Innovation

Appendix B: Co-production community

Our civil servant community

Department	Community member
Cabinet Office	James Kemp
Crown Commercial	Jo Bradshaw
National Highways	Terri Harrington [Project X Sponsorship Director]
HM Revenue & Customs	Gill Evans [Project X Cabinet Office Lead (Theme E ¹)]
HM Revenue & Customs	Doctor Nicola Young
Infrastructure and Projects Authority	Natalie O'Connell [Project X Cabinet Office Lead (Theme C)]
Infrastructure and Projects Authority	Fiona Spencer [Project X Deputy Director, Project X Cabinet Office Lead (Theme B)]
Transport for London	Ben Ganney [Project X Cabinet Office Lead (Theme A)]

Our industry community

Organisation	Community member
Aravun	Karlene Agard [Project X Research Fellow (Theme A)]
(Prev) Association of Project Management	David Thomson
(Prev) Association of Project Management	Daniel Nicholls
(Prev) Association of Project Management	Steve Wake
Crewe Consulting	David Crewe
Major Projects Association	Jonathan Norman
Project Management Institute	Stephen Townsend
Turner & Townsend	Peter Hargraves

¹ Themes are explained/available on the Project X website: bettergovprojects.org/about

Our academic community

Institution	Community member
Cranfield University	Professor Michael Bourne [Project X Academic Lead (Theme D)]
Cranfield University	Doctor Rick Forster
Newcastle University/ University of Manchester	Doctor Jas Kalra [Project X Research Associate (Theme E)]
University College London	Professor Andrew Edkins [Project X Academic Lead (Theme B)]
University College London/Norwegian University of Science and Technology	Professor Vedran Zerjav [Project X ESRC Grant Co-Investigator (Theme B)]
University College London	Professor Juliano Denicol [Project X ESRC Grant Co-Investigator (Theme E)]
University College London	Doctor Francesca Vinci [Project X Research Associate (Theme E)]
University College London	Baker Rickaby [Project X Research Associate (Theme E)]
University of Bath	Professor Michael Lewis [Project X Academic Lead (Theme B)]
University of Bath/ University of Sydney	Doctor Joseph Harrison [Project X Research Associate (Theme B)]
University of Bath	Professor Jens K Roehrich
University of Brighton	Doctor Nick Marshall [Project X Academic Lead (Theme E)]
University of Brighton/ University of Bristol	Doctor Akinyo Ola [Project X Research Associate (Theme E)]
University of Brighton/ University of Leeds	Doctor Dicle Kortantamer [Project X Research Fellow (Theme E)]
University of Cambridge	Doctor Rehema Msulwa
University of Edinburgh	Carolina Toczycka [Project X Research Associate (Theme C)]
University of Hull	Doctor Katherine Bloomfield [Project X Research Fellow (Theme B)]
University of Hull	Doctor Hang Vo [Project X Research Fellow (Theme C)]
University of Hull	Professor Terry Williams
University of Hull	Professor Yasmin Merali
University of Leeds/ Politecnico Di Milano	Professor Giorgio Locatelli [Project X Academic Lead (Theme A)]
University of Liverpool/ Technological University Dublin	Doctor Clare Eriksson [Project X Academic Lead (Theme F)]
University of Manchester	Professor Paolo Quattrone [Project X Academic Lead (Theme C)]
University of Manchester	Doctor Richard Kirkham [Project X Academic Lead (Theme D&F)]
University of Manchester	Phoebe Young [Project X Research Associate (Theme F)]
University of Manchester	Doctor Maria Papadaki
University of Manchester	Doctor Sarah Coleman [Project X Research Associate (Theme F)]
University of Manchester/ University of Westminster	Doctor Jonghyuk Cha
University of Oxford	Professor Alexander Budzier [Project X Academic Lead (Theme A)]
University of Sussex	Professor Andrew Davies [Project X ESRC Grant Principal Investigator, Project X Academic Lead (Theme E)]
University of Sussex	Doctor Rebecca Vine [Project X ESRC Grant Co-Investigator (Theme E)]
University of Sussex	Doctor Phillippa Groome [Project X Research Associate (Theme E)]
University of Sussex	Professor Paul Nightingale [Project X Academic Lead (Theme F)]
University of Warwick/ University of Leeds	Professor Naomi Brookes [Project X Academic Lead (Theme C)]

Appendix C: List of publications

Books

Davies, A., Lenfle, S., Loch, C.H. and Midler, C., 2023. Introduction: Building bridges between innovation and project management research. In A. Davies, S. Lenfle, C.H. Loch and C. Midler (eds.), *Handbook of Innovation and Project Management*. Edward Elgar Publishing (pp. 1–34).

Bourne, M. and Bourne, P., 2023. Introduction to performance management. In *Concise Introduction to Performance Management*. Edward Elgar Publishing.

Gil, N., Pinto, J. and Msulwa, R., 2019. Building institutions or capital investment? Organisational duality in the pursuit of socio-economic development. In N. Gil, A. Stafford and I. Musonda (eds.), *Duality by Design: The Global Race to Build Africa's Infrastructure*. Cambridge University Press.

Hughes, W., Champion, R., Coleman, S., Chu, Y., Hare, B. and Hay, A., 2022. *ICE Companion to Engineering Management*. ICE Publishing.

Institution of Civil Engineers, 2021. *Civil Engineering Procedure* (8th edition). ICE Publishing.

Lewis, M.A., Harrison, J.W. and Roehrich, J.K., 2023. It's all a bit fuzzy? The front-end in project and innovation management. In A. Davies, S. Lenfle, C.H. Loch and C. Midler (eds.), *Handbook of Innovation and Project Management*. Edward Elgar Publishing (pp. 101–124).

MacAulay, S.C., Davies, A. and Dodgson, M., 2023. "Lonely projects" to orchestrating project innovation ecosystems. In A. Davies, S. Lenfle, C.H. Loch and C. Midler (eds.), *Handbook of Innovation and Project Management*. Edward Elgar Publishing (pp. 294–307).

Vine, R., Kortantamer, D. and Davies, A., 2023. Voyages of discovery: Balancing capabilities, control and leadership in megaproject delivery. In L.A. Ika, J.K. Pinto and P.E.D. Love (eds.), *Handbook of Project Behaviour*. Cambridge University Press.

Journal papers

- Addyman, S., Pryke, S. and Davies, A., 2020. Re-creating organizational routines to transition through the project life cycle: A case study of the reconstruction of London's Bank underground station. *Project Management Journal*, 51(5), pp. 522–537. doi.org/10.1177/8756972820943436
- Alimadadi, S., Davies, A. and Tell, F., 2022. A palace fit for the future: Desirability in temporal work. *Strategic Organization*, 20(1), pp. 20–50. doi.org/10.1177/14761270211012021
- Alimadadi, S., 2022. A pragmatist perspective on front-end project organizing: The case of refurbishment of the Palace of Westminster. *International Journal of Project Management*, 40(7), pp. 763–777. doi.org/10.1016/j.ijproman.2022.08.008
- Avanzi, P. and Zerjav, V., 2020. Caught in a crossfire: Front-end decision-making in airport expansion programmes. *Transportation Research Interdisciplinary Perspectives*, 8, p.100222. doi.org/10.1016/j.trip.2020.100222
- Bloomfield, K., Williams, T., Bovis, C. and Merali, Y., 2019. Systemic risk in major public contracts. *International Journal of Forecasting*, 35(2), pp. 667–676. doi.org/10.1016/j.ijforecast.2018.10.005
- Bloomfield, K., 2019. Risk assessment in public contracts. *European Procurement & Public Private Partnership Law Review*, 14(1), pp. 7–15. doi.org/10.21552/epppl/2019/1/4
- Bourne, M., Anker, D., Chambers, G. and Torjai, L., 2020. How to measure and manage the UK government's major project portfolio. *Measuring Business Excellence*, 24(4), pp. 461–474. doi.org/10.1108/mbe-02-2020-0035
- Cha, J., Newman, M. and Winch, G., 2018. Revisiting the project management knowledge framework: Rebalancing the framework to include transformation projects. *International Journal of Managing Projects in Business*, 11(4), pp. 1026–1043. doi.org/10.1108/ijmpb-11-2017-0147
- Davies, A., 2024. From project management to the 'management of projects'. *Engineering Project Organization Journal*, 11(1), p. 16. doi.org/10.25219/epoj.2022.00106
- Davies, A. and MacAulay, S.C., 2023. Valuing theory and practice: Using a portfolio lens to publish research on projects. *Project Management Journal*, 54(3), pp. 211–218. doi.org/10.1177/87569728231173647
- Davies, A., MacAulay, S.C. and Brady, T., 2019. Delivery model innovation: Insights from infrastructure projects. *Project Management Journal*, 50(2), pp. 119–127. doi.org/10.1177/8756972819831145
- Denicol, J., Davies, A. and Krystallis, I., 2020. What are the causes and cures of poor megaproject performance? A systematic literature review and research agenda. *Project Management Journal*, 51(3), pp. 328–345. doi.org/10.1177/8756972819896113
- Denicol, J., Davies, A. and Pryke, S., 2021. The organisational architecture of megaprojects. *International Journal of Project Management*, 39(4), pp. 339–350. doi.org/10.1016/j.ijproman.2021.02.002
- Denicol, J. and Davies, A., 2022. The megaproject-based firm: Building programme management capability to deliver megaprojects. *International Journal of Project Management*, 40(5), pp. 505–516. doi.org/10.1016/j.ijproman.2022.06.002
- Denicol, J., 2022. Why clear managerial recommendations matter in major projects research: Searching for relevance in practice. *International Journal of Project Management*, 40(2), pp. 98–100. doi.org/10.1016/j.ijproman.2022.01.004
- Eltigani, A., Gardiner, P., Kirkham, R., Williams, T., Ou, L. and Calabrese, A., 2020. Learning in and from projects: The learning modes and a learning capability model. *Production Planning & Control*, 31(10), pp. 786–798. doi.org/10.1080/09537287.2019.1690175
- Harrison, J., Lewis, M., Roehrich, J. and Davies, A., 2024. Scale in project management: A review and research agenda. *Project Management Journal*, 55(6), pp. 708–722
- Howard, M., Roehrich, J.K., Lewis, M.A. and Squire, B., 2019. Converging and diverging governance mechanisms: The role of (dys)function in long-term inter-organizational relationships. *British Journal of Management*, 30(3), pp. 624–644. doi.org/10.1111/1467-8551.12254
- Johnson, M., Roehrich, J.K., Chakkol, M. and Davies, A., 2021. Reconciling and reconceptualising servitization research: Drawing on modularity, platforms, ecosystems, risk and governance to develop mid-range theory. *International Journal of Operations & Production Management*, 41(5), pp. 465–493. doi.org/10.1108/ijopm-08-2020-0536

- Jones, K., Mosca, L., Whyte, J., Davies, A. and Glass, J., 2022. Addressing specialization and fragmentation: Product platform development in construction consultancy firms. *Construction Management and Economics*, 40(11–12), pp. 918–933. doi.org/10.1080/01446193.2021.1983187
- Kalra, J., Lewis, M. and Roehrich, J.K., 2021. The manifestation of coordination failures in service triads. *Supply Chain Management: An International Journal*, 26(3), pp. 341–358. doi.org/10.1108/scm-03-2019-0115
- Kalra, T. and Cousins, P., 2021. The microfoundations of relational governance capability: A social capital perspective. *Academy of Management Proceedings*, 2021(1), p. 16141.
- Kortantamer, D., 2019. Governing major transformation portfolios in practice: Illustrations from the UK central government. *International Journal of Managing Projects in Business*, 12(3), pp. 755–784. doi.org/10.1108/ijmpb-09-2018-0174
- Kortantamer, D., 2023. Distributed leadership in projects: The contributions of stakeholders. *Project Management Journal*, 54(2), pp. 179–193. doi.org/10.1177/87569728221143049
- Kortantamer, D., 2023. Rethinking leadership in projects for a resilient and just future. *IEEE Transactions on Engineering Management*, 71, pp. 12921–12931. doi.org/10.1109/tem.2023.3268242
- Kortantamer, D., 2024. A balancing act of leadership: The practice of shaping the direction of a project portfolio. *Project Management Journal*, 55(6), pp. 626–649. doi.org/10.1177/87569728241232336
- Locatelli, G., Greco, M., Invernizzi, D.C., Grimaldi, M. and Malizia, S., 2021. What about the people? Micro-foundations of open innovation in megaprojects. *International Journal of Project Management*, 39(2), pp. 115–127. doi.org/10.1016/j.ijproman.2020.06.009
- Locatelli, G., Zerjav, V. and Klein, G., 2020. Project transitions – Navigating across strategy, delivery, use, and decommissioning. *Project Management Journal*, 51(5), pp. 467–473. doi.org/10.1177/8756972820953976
- Makridakis, S., Kirkham, R., Wakefield, A., Papadaki, M., Kirkham, J. and Long, L., 2019. Forecasting, uncertainty and risk: Perspectives on clinical decision-making in preventive and curative medicine. *International Journal of Forecasting*, 35(2), pp. 659–666. doi.org/10.1016/j.ijforecast.2017.11.003
- Prakash, S.B., Kirkham, R., Nanda, A. and Coleman, S., 2023. Exploring the complexity of highways infrastructure programmes in the United Kingdom through systems thinking. *Project Leadership and Society*, 4, p.100081. doi.org/10.1016/j.plas.2023.100081
- Roehrich, J.K., Davies, A., Frederiksen, L. and Sergeeva, N., 2019. Management innovation in complex products and systems: The case of integrated project teams. *Industrial Marketing Management*, 79, pp. 84–93. doi.org/10.1016/j.indmarman.2018.10.006
- Roehrich, J.K., Davies, A., Tyler, B.B., Mishra, A. and Bendoly, E., 2023. Large interorganizational projects (LIPs): Toward an integrative perspective and research agenda on interorganizational governance. *Journal of Operations Management*, 70 (1), pp. 4–21. doi.org/10.1002/joom.1280
- Roehrich, J.K., Kalra, J., Squire, B. and Davies, A., 2023. Network orchestration in a large inter-organizational project. *Journal of Operations Management*, 69(7), pp. 1078–1099. doi.org/10.1002/joom.1237
- Sainati, T., Locatelli, G., Smith, N., Brookes, N. and Olver, G., 2020. Types and functions of special purpose vehicles in infrastructure megaprojects. *International Journal of Project Management*, 38(5), pp. 243–255. doi.org/10.1016/j.ijproman.2020.05.002
- Sergeeva, N. and Kortantamer, D., 2021. Enriching the concept of authentic leadership in project-based organisations through the lens of life-stories and self-identities. *International Journal of Project Management*, 39(7), pp. 815–825. doi.org/10.1016/j.ijproman.2021.09.001
- Stefano, G., Denicol, J., Broyd, T. and Davies, A., 2023. What are the strategies to manage megaproject supply chains? A systematic literature review and research agenda. *International Journal of Project Management*, 41(3), p.102457. doi.org/10.1016/j.ijproman.2023.102457
- Vine, R., 2021. Riskwork in the construction of Heathrow Terminal 2. *SSRN Electronic Journal*, 2020–20. doi.org/10.2139/ssrn.3768464
- Vo, H., Kirkham, R.J., Williams, T.M., Howells, A., Forster, R. and Cooke-Davies, T., 2021. An empirical study of assurance in the UK government major projects portfolio: From data to recommendations, to action or inaction. *International Journal of Managing Projects in Business*, 14(4), pp. 865–897. doi.org/10.1108/ijmpb-10-2019-0242

Vukomanović, M., Cerić, A., Brunet, M., Locatelli, G. and Davies, A., 2021. Trust and governance in megaprojects. *International Journal of Project Management*, 39(4), pp. 321–324. doi.org/10.1016/j.ijproman.2021.04.004

Whyte, J. and Davies, A., 2021. Reframing systems integration: A process perspective on projects. *Project Management Journal*, 52(3), pp. 237–249. doi.org/10.1177/8756972821992246

Whyte, J. and Davies, A., 2023. Systems integration in construction: An open-ended challenge for project organising. *Construction Project Organising*, pp. 33–49.

Williams, T., Vo, H., Bourne, M., Bourne, P., Cooke-Davies, T., Kirkham, R., Masterton, G., Quattrone, P. and Valette, J., 2020. A cross-national comparison of public project benefits management practices—the effectiveness of benefits management frameworks in application. *Production Planning & Control*, 31(8), pp. 644–659. doi.org/10.1080/09537287.2019.1668980

Williams, T., Vo, H., Bourne, M., Bourne, P., Kirkham, R., Masterton, G., Quattrone, P. and Toczycka, C., 2023. Benefits realisation: Case studies in public major project delivery with recommendations for practice. *Production Planning & Control*, pp. 1–21. doi.org/10.1080/09537287.2023.2256287

Williams, T., Vo, H., Samset, K. and Edkins, A., 2019. The front-end of projects: A systematic literature review and structuring. *Production Planning & Control*, 30(14), pp. 1137–1169. doi.org/10.1080/09537287.2019.1594429

Zerjav, V., Edkins, A. and Davies, A., 2018. Project capabilities for operational outcomes in inter-organisational settings: The case of London Heathrow Terminal 2. *International Journal of Project Management*, 36(3), pp. 444–459. doi.org/10.1016/j.ijproman.2018.01.004

Zerjav, V., McArthur, J. and Edkins, A., 2021. The multiplicity of value in the front-end of projects: The case of London transportation infrastructure. *International Journal of Project Management*, 39(5), pp. 507–519. doi.org/10.1016/j.ijproman.2021.03.004

Theses

Bloomfield, K., 2018. Systemic risk in public sector outsourcing contracts.

Cha, J.H., 2016. Performance of public sector information systems projects: The case of UK central government.

Coleman, S., 2025. Exploring ex-post project benefits realisation in UK government major projects.

Groome, P., 2025. Delivering gender equality through UK major infrastructure projects.

Harrison, J., 2025. Essays in project management: Scale, idea generation and misbehaviour.

Vine, R., 2018. The intelligent client: Learning to govern through numbers at Heathrow.

Vo, H., 2023. Bridging the policy implementation gap through public projects: From policy aspiration to implementation to actual policy impacts.

Conference papers

Alimadadi, S. and Tell, F., 2018. Understanding the construction of temporal structures in megaprojects. *10th International Process Symposium*, June 2018.

Alimadadi, S. and Tell, F., 2018. Rethinking temporary organizing in megaprojects setting: Theoretical development and future research directions. *Proceedings of the 34th European Group for Organizational Studies (EGOS) Colloquium*, July 2018.

Bloomfield, K. and Merali, Y., 2020. Front-end risk and its consequences for interorganisational collaboration in complex projects. *EuroMA Conference*, June 2020.

Bloomfield, K. and Zerjav, V., 2020. The role and recognition of the gestation phase in temporary organisations. *Proceedings of the 36th European Group for Organizational Studies (EGOS) Annual Colloquium*, July 2020.

Brady, T., Zerjav V., Vine R., Pantelias A. and Kiamehr M., 2018. Connecting the dots in infrastructure development and management: The Africa agenda for new innovation. *1st IDFA Conference*, 2018.

Denicol, J. and Davies, A., 2020. A typology of megaproject client models: Insights from six megaprojects in London. *Proceedings of the European Academy of Management (EURAM) 2020 Annual Conference*, December 2020.

Denicol, J. and Davies, A., 2021. Designing the inter-organisational system of megaprojects: Strategies from six infrastructure projects in London. *Proceedings of the EURAM 2021 Annual Conference*, June 2021.

Edkins, A., Zerjav, V., Lewis, M. and Spencer, F., 2018. The hinterlands of project management? Project bookends and the (neglected) role of boundary organising. *Engineering Project Organization Society (EPOC) 2018 Conference*, June 2018.

Harrison, J., Lewis M. and Roehrich J., 2021. Scale and scaling in net zero projects. *29th International European Operations Management Association Conference*, July 2021.

Kalra, J., Mills, G. and Papadonikolaki, E., 2021. Building data analytics capability to increase information processing capacity: The case of a professional service firm. *European Operations Management Association (EuroMA) Conference*, July 2021.

Kortantamer, D., 2019. Distributed leadership pattern in the project-based partnership of public organizations. *International Studying Leadership (ISLC) Conference*, December 2019.

Kortantamer, D., 2020. Distributed leadership and power. *International Leadership Association (ILA) Conference*, November 2020.

Kortantamer, D., 2020. Leading a project part of a major project portfolio aiming to transform public services. *Proceedings of the EURAM 2020 Annual Conference*, December 2020.

Kortantamer, D., 2021. Configuring the ambiguous leadership space of temporary inter-organisational partnerships. *Proceedings of the 37th European Group for Organizational Studies (EGOS) Annual Colloquium*, July 2021.

Kortantamer, D., 2021. The contribution of temporariness to temporal work in strategizing. *12th Process Organization Studies (PROS) Symposium*, September 2021.

Merali, Y., 2020. The role of risk allocation on achieving collaborative outcomes in the commissioning of major public projects. *Proceedings of the EURAM 2020 Annual Conference*, December 2020.

Toczycka, C. and Hang Vo., 2021. Benefits as scripts: Overcoming the temporal boundaries of a temporary organization. *Proceedings of the 37th European Group for Organizational Studies (EGOS) Annual Colloquium*, July 2021.

Vine R., 2020. Calculative cultures of control in temporary organisations. *British Accounting and Finance Association Conference*, April 2020.

Zerjav, V., Nussbaum, T. and Whyte, J., 2018. Transition from project to operation in infrastructure megaprojects: Coordination by mutual adjustment. *Proceedings of the 34th European Group for Organizational Studies (EGOS) Colloquium*, July 2018.

Zerjav, V., 2020. Shifting social constructions of time in the front-end of temporary organisations. *Proceedings of the 36th European Group for Organizational Studies (EGOS) Colloquium*, July 2020.

Industry reports

Balmforth, H., Beers, H., Bourne, N., Cao, R., Cheung, C., Clarke, S., Collinge, W., Cooper, G., Corbett, E., Davies, K., Hartwig, A., Johnson, S., Li, L., Ling, D., Liu, C., Kaltango, A.Y., Kirkham, R., Manu, P., Thurlbeck, S., van Tongeren, M., Weightman, A. and Yuan, P., 2021. Keeping the UK building safely: A scoping study. Thomas Ashton Institute, The University of Manchester.

Bourne, M. and Parr, M., 2019. Developing the practice of governance. Association of Project Management (APM).

Coleman, S. and Bourne, M., 2018. Project leadership: Skills, behaviours, knowledge and values. Association of Project Management (APM).

Zaayman, E., Budzier, A., Jobert, F., Parsons, M., Belkov, N., Dolya, A., Sharma, S. and Sánchez Mulas, J., 2020. Lessons from high-performing capital projects amid the pandemic. Boston Consulting Group (BCG).

Groome, P., 2021. Enhancing equality, diversity and inclusion for transport infrastructure skills. UK Government, Department for Transport.

Institution of Civil Engineers, 2020. A systems approach to infrastructure delivery. Institution of Civil Engineers (ICE).

Kirchherr, J., Reitz, F., Stern, S. and Valtueña-Ramos, G., 2021. Road work ahead: The emerging revolution in the road construction industry. McKinsey.

Kortantamer, D., 2019. Leadership: Responding to complexity. Association of Project Management (APM).

Kortantamer, D., Kalra J. and Vine R., 2021. Rethinking capabilities: Lessons for policy, scholarship and practice. Association for Project Management (APM).

McArthur, J., Smeds, E and Zerjav, V., 2021. The impact of historic shocks on infrastructure demand. UK Government, National Infrastructure Commission.

Msulwa, R., Bloomfield, K., Lewis, L. and Young, P., 2020. Project and programme research centres: Lessons for scholarship, policy and practice. Association of Project Management (APM).

Nightingale, P. and Vine, R., 2022. Delivering impact in an expertise economy (1). University of Sussex, UKRI Economics and Social Research Council blog hdl.handle.net/10779/uos.23489414.v1

Vine, R. and Nightingale, P., 2022. Delivering impact in an expertise economy (2). University of Sussex, UKRI Economics and Social Research Council blog. hdl.handle.net/10779/uos.23489417.v1

Williams, T., Bourne, M., Bourne, P., Kirkham, R., Masterton, G., Quattrone, P., Toczycka, C. and Vo, H., 2020. Identifying and realising project benefits: A cross-national comparison of benefits management practices. Phase 3: Recommendations for improvement. Project Management Institute (PMI).

Williams, T., Hang, V., Bourne, M., Bourne, P., Kirkham, R., Masterton, G., Quattrone, P. and Valette, J., 2018. Identifying and realising project benefits: A cross-national comparison of benefits management practices. Phase 2: Effectiveness of frameworks in application. Project Management Institute (PMI).

Williams, T., Hang, V., Bourne, M., Bourne, P., Kirkham, R., Masterton, G., Quattrone, P. and Toczycka, C., 2019. Benefits realization management. Project Management Institute (PMI).

Williams, T., Hang, V., Edkins, A. and Samset, K., 2019. A Systematic literature review: The front end of projects. Project Management Institute (PMI).

Williams, T. and Vo H., 2018. Project governance: From data to recommendations to action or inaction. Project Management Institute (PMI).

Zerjav, V., Edkins, A. and Davies, A., 2018. Project capabilities for operational outcomes in inter-organisational settings: The case of London Heathrow Terminal 2. Association of Project Management (APM).

Zerjav, V. and Konstantinuo E., 2021. Extending project practices for the future of the profession: Final report for the research project P3M implementation framework for grand challenges policies. Project Management Institute (PMI).



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