CBI

Programmes with purpose

Delivering success in government's major projects

Turner & Townsend

About the partner

Turner & Townsend is a global professional services company specialising in programme management, project management, cost and commercial management and advisory across the real estate, infrastructure and natural resources sectors.

With 112 offices in 46 countries, we draw on our extensive global and industry experience to manage risk while maximising value and performance during the construction and operation of our clients' assets.

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Foreword Turner & Townsend

Kick starting economic growth following the pandemic, whilst addressing the UK's regional inequalities and decarbonising our economy to meet our net zero targets, are not aspirations; they are imperatives. The social, environmental and economic overhaul that is already underway across the country is on a scale that has never been attempted or required with such urgency.

From the set-up of major departmental technology projects, the transition to a net zero UK, the delivery of the UK's freeports agenda, and the execution of rail and road transformation, these are huge projects that provide once in a generation opportunities but carry huge responsibility. What's at stake means failure is not an option.

The rich fabric of major investment projects planned by the Government to meet the country's needs, spanning sectors from transport, defence, social infrastructure through to technology and manufacturing, has a finite window for success.

Our delivery needs to be world class, but we are not yet performing at this level either frequently or consistently enough. One of the biggest obstacles to this is the spread of capability across various sectors. Connecting skills and sharing learnings is a significant challenge because there is no such thing as a major projects industry.

Turner & Townsend operates across multiple sectors and industries. We are one of the largest advisors on major projects and programmes in the UK and globally. This provides us with a fantastic opportunity to contribute to their success, but it also gives us insight, and we are continually learning and identifying pockets of innovation. We can see a lack of consistency across major project formation and delivery and we are determined to help drive change.

In the UK, if we have the mindset and capability to form programmes around societal benefits it will provide a platform for increased innovation, but also more predictable outcomes. We need to become obsessed with delivering brilliantly every time, learning with every action we take and major project we deliver. A greener, more inclusive and more productive UK is absolutely achievable if we take a programmatic approach and that is why we have partnered with the CBI on this report.

Programmes with Purpose is about recognising the need to see the bigger picture. The need for our major projects to be formed programmatically around the UK's major themes, whilst creating a connected world class delivery capability that can operate across sectors and industries. If the UK can attract and retain leading talent and through this, build capability to accomplish the task ahead, we will develop truly world leading, exportable expertise. To reach that point we need a framework on which knowledge, learning and data can be openly shared.

Coming together as an industry is the only way to exchange understanding and affect necessary change. We are proud to have worked collaboratively with the IPA on its **Project Routemap**, the Construction Innovation Hub on its **Value Toolkit**, central government on the **Construction Playbook**, the Infrastructure Client Group on **Project 13** and the Construction Leadership Council on **CO2nstructZero**. These are rich sources of guidance but they require consolidation and industrialisation. They have to be structured and become cornerstones of a new way of operating in the UK.

Ultimately, I hope this report provides an opportunity for everyone with a responsibility for leading major projects and programmes across the UK, to reflect and think about the bigger picture, and how delivery excellence can be realised. I also hope it provides a call to action for Government and its arm's length bodies, to take a leadership role in coordinating a UK wide approach to structuring major projects and underpinning them with connected capability.

If we get the next five years right, we will create an industry that will deliver the UK's sustainable legacy whilst also creating an exportable, world leading capability.

David Whysall
Managing Director – UK Infrastructure
Turner & Townsend

Executive Summary

Whether building the UK's infrastructure, redefining the armed forces' capabilities, installing cutting-edge ICT systems, or delivering world-leading public services, the 184 projects on the **Government Major Projects Portfolio** (GMPP) comprise some of the largest, most expensive, and most complex programmes of work ever undertaken across the UK.[1] Yet they also provide a significant opportunity to tackle the strategic challenges facing government as a force for good, from levelling up and decarbonisation, to global trade and UK economic prosperity.

Major projects demand significant investments of public resources to achieve these ambitions. However, they can remain challenging for the public and private sector partners to deliver. A delivery confidence analysis by the Infrastructure and Projects Authority (IPA) – the government organisation responsible for the GMPP – shows that for 2020-21, only 41 of the 184 projects (22%) were given a Green or Amber/Green rating signifying a high likelihood of delivering objectives to time and cost.[2] The impact of COVID-19 on the public finances is likely to persist for the immediate future. It is therefore important that major projects are set up for success from the outset, tackle the strategic outcomes of the country, and are delivered more efficiently and effectively than ever before.

Designed by the CBI in partnership with Turner & Townsend, Programmes with Purpose is an outcomes-led approach to government's major projects from the perspective of the projects themselves. It is based on delivering sustainable, efficient, innovative, and outcomes-orientated programmes, that put people, communities, value-for-money, and our climate at the foundations of everything done by the various parties involved in major projects.

This is not about creating more policies or initiatives. Instead, it looks at how to more effectively embed the proven techniques and initiatives already out there, by clarifying the existing documents and guidance. With industry and government focused on creating new policies and embedding existing initiatives, there has never been more pressure on major projects to react, perform, and deliver.

Designed to complement the extensive repository of efforts to improve the end-to-end lifecycle of major projects, the Programmes with Purpose Reference Guide provides a practical means of understanding where to begin across the crowded landscape of regulation, policy, guidance, and best practice. It signposts where expertise and support can be found, links to tangible case studies across seven key themes, and establishes what must, should, and can be done by stakeholders on major projects.

Figure 1 Programmes with Purpose key themes
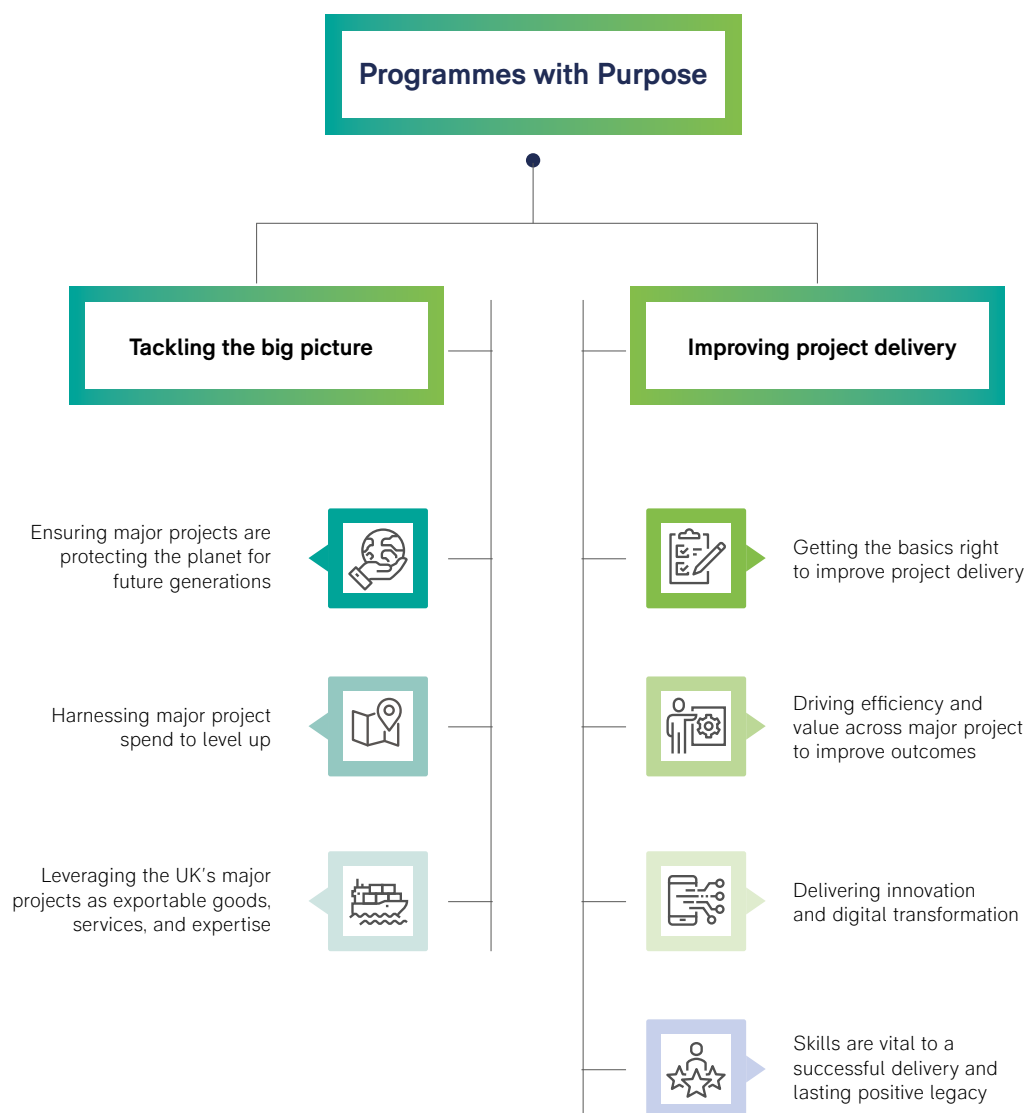
The rest of Programmes with Purpose explores the key themes in more depth and helps readers understand what success looks like by drawing on practical examples from across the GMPP. The insights and recommendations are the results of interviews with over a hundred business leaders, frontline practitioners, civil servants, academics, and policy makers from across the UK and a wide range of industries, all underpinned by Turner & Townsend's 75 years of experience in major programme set-up, delivery knowledge and expertise.

Taken together, these encapsulate what Programmes with Purpose means for the UK and how we can ensure the UK's public spending on major projects delivers a nation that is dynamic, globally competitive, fair, and future-focused.

Recommendations

Programmes with Purpose recommendations within major projects lifecycle stages

Policy ▶	Assess feasibility ▶	Appraise and select ▶	Define →
Creating a Major Projects Playbook. To bring together competing approaches to major projects and provide a regularly updated source of best practice insights, the IPA and Cabinet Office should create a Major Projects Playbook of existing legislation, best practice, and policies which should be considered for government's major projects.	**Using progressively narrowing ranges.** To continue driving ambitious targets whilst also recognising the complexities of major project delivery, HM Treasury and the IPA should encourage the uptake of progressively narrowing ranges to replace fixed time schedules and costs, particularly during the early stages of a major project.	**Strategically Important Major Projects category.** To help improve the profile and accessibility of the GMPP, and to ensure that major projects are clearly linked to key strategic priorities such as levelling up and environmental sustainability, the IPA should introduce a category of Strategically Important Major Projects for the GMPP. This category would clearly establish how major projects support or address key strategic outcomes across their lifespan and legacy.	**Using Development Agreements.** To embed clear communication and governance structures and increase efficiency and collaboration, all public sector clients and prime suppliers should sign a "Development Agreement" at the outset of a Major Project, clearly laying out the roles, responsibilities, and purpose-led outcomes of the involved parties. The Development Agreement should include the roles and co-operation mechanisms, the delivery of the core programme, the funding model, governance structures, costings, change mechanisms, security conditions (e.g. confidentiality, Freedom of Information, Data Protection), and other general conditions.
Building capacity within the IPA. To create additional capacity within the IPA for the support of major project delivery, responsibility for the UK Guarantees Scheme and oversight of the National Infrastructure Pipeline should be transfered to the UK Infrastructure Bank. This would enable the IPA to focus more deliberately on supporting major project delivery and to provide a greater emphasis on embedding and sharing learning on a rolling basis.	**Explicitly evaluating exportability potential.** To boost the UK's strong trading basis and ensure key innovations and practices are afforded the full support possible, from the outset of a major project, the sponsor should identify with suppliers what the exportability of the project's techniques, products, or industrial capabilities will be, and to support promoting this exportability to a broader range of stakeholders, including DIT and Trade Envoys.	**Updating the Balanced Scorecard for Growth.** To ensure social value considerations are placed at the heart of major projects and the maximum benefits from investment in these projects are delivered for communities across the UK, the Cabinet Office should update the Balanced Scorecard for Growth to reflect both the social value priorities outlined in PPN 06/20 but to also enable public bodies to consider the broader company wide and inherent social value of firms	**Adopting Early Engagement Forums.** To improve the collaboration, co-design, and co-ownership of major projects, all public sector clients and suppliers should adopt the use of Early Engagement Forums to ensure a dialogue during the design phase of a project and the creation of strong partnerships which can deliver the intended outcomes.
			Creating a Digital and Data Transformation Charter. The IPA should create a standard Digital and Data Transformation Charter which can be amended and then signed by major project stakeholders at the outset of a project, to ensure systems, data and integration tools are of a consistently high quality, shared effectively, used efficiently, commercialised where possible and appropriate, and given the necessary securities to keep it safe.

Deliver ▶ **Operate, embed, and close** ▶ **Operations**

Key

Measuring carbon emissions consistently.

Building upon the direction of travel set out in Procurement Policy Note 06/21, the IPA should seek to encourage the use of a standardised carbon calculator across the GMPP to enable consistent tracking of carbon emissions and the creation of a baseline for different types of major projects, including through the publication of a net zero KPI for each major project.

Creating a Project Review Team and Plan for Progression.

The IPA should establish a project review team to assess the lessons learnt and longer-term impact of major projects, to carry out a review one and three years after project delivery has completed, and to produce a project-specific Plan for Progression which shows how any learnings will be included in existing and new IPA publications, but also to ensure that the legacies of projects are being thoroughly evaluated.

Reducing leadership turnover.

To help provide end-to-end consistency and clarity of direction throughout a major project, the IPA and Cabinet Office, with insights from leading private sector partners, should explore what incentives and other changes could help reduce churn amongst senior leaders in major projects. This could include greater opportunity for in-role promotions and progression based on performance against pre-defined criteria, or suggest minimum term appointments for both public and private sector leaders.

Establishing a Project Support and Delivery Unit.

To protect outcome realisation, the IPA should establish a Project Support and Delivery Unit to provide on-the-shoulder support to clients and suppliers during the delivery of major projects.

Sustainability

Levelling up

Exportability

The basics

Value and efficiency

Digital transformation

Skills and legacy

Introduction

The GMPP represents the best and biggest of the UK's public and private sectors working together in close collaboration to tackle the most important environmental, social, and economic challenges facing the country.[3] They provide a focal point and a high-profile example of what can be achieved regardless of obstacles that come with world-leading initiatives, as even the past 12 months has shown.

Figure 2 Headline Government Major Projects 2020-21

The Vaccines Taskforce oversees the "biggest inoculation programme the country has ever launched" within a remarkably short timeframe.

Headline Major Projects 2020-21

The delivery of the Queen Elizabeth aircraft carriers has enabled the UK to project strategic political power across the globe and improve the security of the country.

Flagship highspeed rail programme HS2 completes its preparatory works in London and move onto delivering the 140 miles of dedicated track and four new stations needed to massively increase the capacity of the UK's rail network, and provide low carbon, high speed connectivity between major economic hubs.

The benefits that come from investment and successful delivery of major projects are significant. Analysis by the IPA suggests that across the 184 projects on the GMPP, £524bn in whole life costs will deliver monetised benefits worth some £826bn.[4] In specific sectors, the real economic value of investment can be even higher: analysis by Oxford Economics shows that every £1 spent on UK construction generates £2.92 of value to the whole economy.[5] Similar studies of defence, technology, and aerospace companies reveals returns of around £2.40 for every £1 of investment.[6]

The value that major projects deliver is evident in many ways. Extensive supply chains including SMEs are driving industrial growth across the country, creating jobs and businesses, and supporting new skills for the future. World-leading green technologies created during major programmes are enabling the UK to decarbonise, reduce waste, and ensure biodiversity across the natural environment.

Projects are also supporting levelling up across the regions by building vital infrastructure where it is most needed, stimulating economic growth, and connecting communities. Others are ensuring that citizens can access the highest quality public services possible, from health and social care to education and benefits.

This report draws on a wide range of practical case studies from across the UK, including major projects either underway or already completed, mostly from the GMPP but with some private sector examples as well.

Figure 3 Programmes with Purpose Case Studies across the UK

UNITED KINGDOM
IRELAND

SCOTLAND

NORTHERN
IRELAND

ENGLAND

WALES

Type 31 Frigate
Rosyth

HMRC Future Locations
Edinburgh, Glasgow,
Newcastle, Liverpool,
Manchester, Leeds,
Nottingham, Birmingham

Vaccines Taskforce
Keele, Oxford, Barnard
Castle, Wrexham,
Livingston

**Anglian Water
alliance model**
East of England

A14 Upgrade
Cambridgeshire

Tempest
Lancashire, Yorkshire,
Edinburgh, Luton,
Stevenage, Bristol

**Sizewell C Nuclear
Power Station**
Suffolk

**Heathrow
Expansion**
National

PDP with DE&S
Bristol

HS2
National

A303/A358
Somerset

Skynet 5
Colerne, Oakhanger

Sustainability

Levelling up

Exportability

**Value and
efficiency**

**Digital
transformation**

**Skills and
legacy**

The government has confirmed that there will be a continued investment in major projects, particularly around infrastructure and defence, for the foreseeable future.[7] This has included pledging some £650 billion in spend over the next three years to major infrastructure projects, in recognition of the vital role these programmes play in tackling the UK's strategic challenges.[8]

It is therefore vital we realise the full benefits of this investment to ensure the best outcomes for the UK as a whole. However, achieving this presents some significant challenges. Outcomes required by major programmes are increasing in complexity and can be contradictory in nature. Programmes and stakeholders are striving to achieve ever-more ambitious environmental objectives against a backdrop of a UK economy and society impacted by COVID-19 and large-scale supply chain challenges, as well as a need to modernise and drive better performance and productivity through digital transformation. All of this only adds to the general expectations of delivering significantly complex projects on time and on budget, instead of focusing on the outcomes they deliver.

Programmes with Purpose takes a programme-based perspective on the legislation, policies and guidance that projects are asked to consider. It maps these initiatives against the key themes identified by industry and government and seeks to shine a light on best practice through highlighting case studies from the GMPP and elsewhere.

Based on the hundreds of stakeholders consulted, the report identifies where there is space to accelerate the adoption of these lessons, and enable clients and suppliers to get major projects right more often.

Clarifying the changing practice around major projects: the Programmes with Purpose Reference Guide

The constantly changing landscape around major projects is awash with compelling and helpful guidance, best practice, policies, recommendations, and handbooks, written by industry, academia, and government. Updated on a regular basis by the new additions from thought leaders or based on reviews of ongoing projects, much of this practice argues for the same key principles and makes tangible improvements to the UK's major projects.

Utilising industry insights and experience, and often based on hard evidence or data, many of these initiatives are invaluable tools for major projects' stakeholders. They cover a diverse range of themes and stem from genuine desires to improve the outcomes associated with complex programmes from a variety of standpoints. CBI research shows at least 170 different publications or documents launched in the UK in the past decade which should be considered by those involved with delivering major projects.[9]

Central guidance from the IPA and others, including the **Project Routemap** and the **Cabinet Office Playbooks**, have already begun consolidating and coalescing this literature to make it more accessible and coherent.[10] Yet the reality is that this depth of information also leads to uncertainty for clients and suppliers about what is most applicable, most useful, and most important for specific projects. Interviewees reported that certain initiatives or efforts can gain traction for only a few years before losing momentum to whatever is newest and hottest before being intrinsically embedded into working practices.

To start to tackle these challenges, the CBI and Turner & Townsend have created the **Programmes with Purpose Reference Guide** which is a device to help stakeholders understand what resources and expertise are available to support them on major projects across the key themes identified by this research. It is based on the vast library of literature and changing practice used in the UK, and across the seven key themes shows four main categories of practice: legislation/ regulation; policies; guidance; and best practice.

"It feels like few industry initiatives hang around long enough to become standard practice before they are replaced by something similar with a different name […] We all need to develop more patience and longer memories if we want to see meaningful change".

*Senior Leader,
Major Construction Firm*

Figure 4 Programmes with Purpose Reference Guide, including key

Programmes with Purpose Reference Guide

Tackling the big picture

Ensuring major projects are protecting the planet for future generations	Harnessing major project spend to level up	Leveraging the UK's major projects as exportable goods, services, and expertise
Climate Change Act (HM Government, 2019)	Public Services (Social Value) Act (HM Government, 2012)	Agreement on Government Procurement (WTO, 2021)
Net Zero Strategy: Build Back Greener (HM Government, 2021)	Build Back Better: our plan for growth (HMT, 2021)	Export Strategy 2018 (DIT, 2018)
Green Book Supplementary Guidance: Climate Change and Environment (HMT, 2020)	Strategic Case Supplementary Guidance: Rebalancing Toolkit (DIT, 2017)	UK Export Finance: Leading with finance – all products (UK Export Finance, 2021)
Achieving net zero (NAO, 2020)	Maximising Social Value from Infrastructure Projects (ICE, 2020)	Department for International Trade and UK Export Finance: Support for exports (NAO, 2020)

Legislation or regulation
Legal or regulatory obligations which are at the foundation of major projects

Policies
Public sector policies which stakeholders will have to follow and will shape major project delivery

Guidance
Mandatory or non-mandatory guidance which stakeholders may be expected to use

Best practice
Recommended best practice from the public or private sectors which can have useful insights into improving practices

Programmes wwith purpose reference guide

Improving project delivery

Getting the basics right to improve project delivery

- The Green Book, Aqua Book, Magenta Book, Orange Book (HMT, 2015–2020)
- IPA Routemap (IPA, 2021)
- The Commercial Playbooks (CO, 2021)
- Project 13 (ICG, 2021)

Driving efficiency and value across major projects to improve outcomes

- The Green Book (HMT, 2021)
- GovS008: Commercial – Government Functional Standard (HM Government, 2021)
- Green Book supplementary guidance: Project/ Programme Outcome Profile (IPA, 2021)
- Value Toolkit (Construction Innovation Hub, 2021)

Delivering innovation and digital transformation

- National Data Strategy (DCMS, 2020)
- A new era of digital leadership (NHS Providers, 2020)
- Digital, Data, and Tech Playbook (CO, 2021)
- Digital Transformation Task Force (ICG, 2021)

Skills are vital to a successful delivery and lasting positive legacy

- Skills and post-16 Education Bill (DfE, 2021)
- Government Functional Standard GovS002: Project Delivery (IPA, CO, 2021)
- Major Projects Leadership Academy (MPLA) Handbook (IPA, CO, 2015)
- Diversity and Inclusion Strategy, 2020-2023 (NIC, 2020)

Legal or regulatory obligations which are at the foundation of major projects	**Legislation or regulation**
Public sector policies which stakeholders will have to follow and will shape major project delivery	**Policies**
Mandatory or non-mandatory guidance which stakeholders may be expected to use	**Guidance**
Recommended best practice from the public or private sectors which can have useful insights into improving practices	**Best practice**

Each category of changing practice links to a more detailed reference list to be found within the relevant chapter and provides a clear repository of information for users.[11] As part of the **Programmes with Purpose Reference Guide**, the CBI and Turner & Townsend have also identified one key text for each section which is either the most pertinent or the most important core practice. These are indicated at the start of each section in the Programmes with Purpose Reference Guide.

Throughout the rest of this report, sections will have colour-coordinated components which link back to this table and the core literature. This makes it easy to understand at a glance what is most relevant and how these various practices apply across key themes. Whilst not comprehensive, the aim of the Programmes with Purpose Reference Guide is to quickly signpost readers to what is most relevant for a specific theme and where they can get more information, support, and expertise.

Accessing expertise across industry, academia, and the public sector

This signposting also applies to the different organisations and groups available to provide support across the UK. A variety of different organisations play a part in the initiatives surrounding major projects and an understanding of the resources available can help provide more detail and understanding for stakeholders.

"It's a challenge to understand what "best" looks like […]. I use everyone else's ideas to help me learn what is "best" in a less painful way".

Senior Commercial Director, Infrastructure Delivery Body

Figure 5 Non-exhaustive list of expert stakeholders available regarding major project success

Professional Associations	Cross-Cutting Public Sector Authorities	Independent Groups	Industry & Government Collaborative Forums	Membership Organisations	Training Bodies
Association for Project Management (APM)	Infrastructure and Projects Authority (IPA)	Climate Change Committee (CCC)	Construction Leadership Council (CLC)	Aerospace, Defence, Security & Space Group (ADS)	Alliance Manchester Business School
Chartered Institute of Procurement and Supply (CIPS)	Cabinet Office (CO)		Defence Suppliers Forum (DSF)	BuildUK	Government Projects Academy
Institute of Chartered Accountants in England and Wales (ICAEW)	Department for Business, Energy, and Industrial Strategy (BEIS)	UK2070 Commission		Confederation of British Industry (CBI)	
	Department for Levelling Up, Housing and Communities (DLUHC)		Infrastructure Client Group (ICG)	Constructing Excellence	Major Projects Leadership Academy (MPLA) at Saïd Business School
Institution of Civil Engineers (ICE)	HM Treasury (HMT)			Federation of Small Businesses (FSB)	
Royal Institution of Chartered Surveyors (RICS)	National Cyber Security Centre (NCSC)	National Audit Office (NAO)	Strategic Suppliers initiative	Major Projects Association (MPA)	National Commissioning Academy
				TechUK	

Ensuring major projects are protecting the planet for future generations

Major projects are tackling head-on some of the biggest environmental challenges facing the UK. From nuclear energy to low-carbon transport, the GMPP contains some of the boldest projects necessary for a green, more productive future for the country. With all stakeholders focused on limiting global warming to below 1.5 degrees Celsius as agreed in the **Paris Agreement** - as well as protecting the environment through biodiversity, waste reduction, and natural capital stewardship – major projects can be expected to clearly demonstrate how environmental sustainability is at the heart of their objectives.[12]

Figure 6 Programmes with Purpose Reference Guide – Ensuring major projects are protecting the planet for future generations
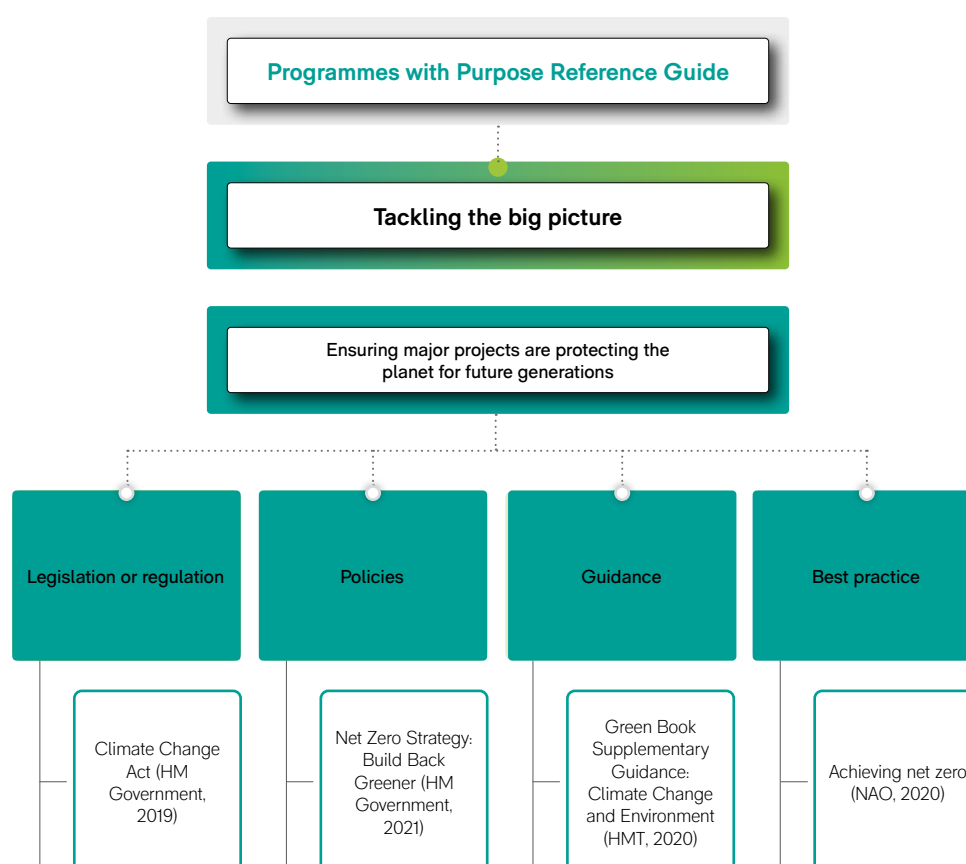
Major projects need to become part of the solution, rather than part of the problem

Given their scale, infrastructure and manufacturing major projects can run the risk of being unsustainable and carbon intensive if done with outdated tools, materials, and approaches. From pouring concrete to large-scale energy consumption, major projects can be either part of the problem or part of the solution, and it is imperative that suppliers and clients work together to make the transition to a sustainable future. Only 24 projects on the GMPP currently use a standardised carbon calculator to track their emissions and all of those are in the infrastructure and construction sectors.[13] However, the built environment contributes around 40% of the UK's total carbon footprint making a clear understanding of the scale of the issue across the GMPP an important next step.

Many government policies and guidance, including the **National Infrastructure Strategy** and **Integrated Review**, ask partners on major projects to consider the environmental impacts of the work being done. These asks differ between sectors and the extent to which environmental sustainability is a core factor in the design of major projects is inconsistent. This is exacerbated by a gap between the public sector "considering" versus "prioritising" environmental issues. Green Book supplementary guidance, for instance, only asks the public sector to consider the climate risks of policies, programmes and projects and to adapt projects accordingly.[14]

Interviewees were clear that we instead need to design projects from the outset to tackle climate change, and not add it on as an afterthought, and that project outcomes should be aligned with strategic objectives.

The IPA's Transforming Infrastructure Performance Roadmap to 2030 has called not only for embedding outcomes for net zero, sustainability, and environmental enhancements, but also recognises the importance of doing so early on.[15] The **Major Projects Association** (MPA) has created a resource guide specifically to assist practitioners with embedding sustainability throughout the lifecycle of major projects, from design to legacy.[16]

Properly taking the value of sustainability into account

Recent years have seen an increasing focus on sustainability in major projects. According to interviews, many suppliers and contracting authorities already have in place their own sustainability strategies, including internal decarbonisation targets, a recognition of natural capital, and significant investments in R&D for environmentally sustainable products and services. Defence and Aerospace company Leonardo, for instance, has been participating in the **Carbon Disclosure Project** since 2008 and has been given an A rating for the fourth year in a row.[17]

"In some areas we've had to match the demand from our clients to pay more attention to our [carbon] emissions, but in other areas of ESG we've been leading the way for over a decade, such as only buying renewable energy or greening our offices and worksites".

Senior Management, Professional Services Company

Only recently though has policy begun to catch-up with practice. For instance, **Procurement Policy Note (PPN) 06/21** introduced a requirement for public sector suppliers to track their Scope 1, 2, and a subset of Scope 3 emission, and have in place Carbon Reduction Plans in order to bid for government contracts. As the first in an ongoing ambition for leveraging public sector spending to drive sustainability, an indicative poll of CBI members revealed that 90% of businesses have either published or are intending to publish a Carbon Reduction Plan in 2021.[18]

Clear alignment about the strategic importance of sustainability can ensure it is thoroughly embedded in both the working practices of stakeholders, but also in individual projects. Clients and suppliers should establish a clear internal benchmarking exercise to understand where they stand in relation to both industry- and sector-wide standards, and put in place efforts to improve in all areas.[19]

For individual projects and broader partnerships, both clients and suppliers should engage from an early stage around the issue. All partners should make sustainability a priority when assessing the feasibility and benefits that can be created from a programme of work. This upfront valuation of issues like decarbonisation, waste reduction, efficient energy usage, and the deployment of sustainable materials will ensure that all subsequent design elements and delivery strategies are predicated on a sustainable basis. Supply chains should also be brought into the conversation early on and made aware of the overarching strategy and value around environmental sustainability objectives.

Upgrades on the A303/A358 corridor

Stonehenge is one of the UK's most iconic historical landmarks, yet what many visitors notice most is the increasingly busy road which runs alongside it.

The A303/A358 corridor is a vital artery for England's South West economy, but according to businesses along the route, congestion has become a "major barrier to economic growth in the region" (PAC, 2019). National Highways has begun a number of improvement schemes designed to tackle congestion and traffic bottlenecks along 35 miles of single carriageway, of which the £2bn three kilometre long "Stonehenge Tunnel" is just one key part.

Working in close collaboration, National Highways and contractors are planning to reduce the environmental impact of the project and protect the natural capital and biodiversity of the historically important site, whilst simultaneously making it easier to travel across the south of England from the M3 to the M5 and beyond.

Local councils and businesses support the A303/A358 upgrades and recognise the potential for growth through better connectivity, and additional homes and jobs, all vital to help the under-performing south west economy.

Moreover, the planned project would also help the UK meet its net zero targets by completing a vital infrastructure project in a highly sustainable way. From low-carbon materials, to greener methods of construction, the proposed Stonehenge Tunnel is a clear indicator the public and private sectors are committed to building a better Britain whilst preserving the unique heritage.

This fundamental approach to design, minimising disruption to the environment and communities whilst also recognising the need and benefits from vital infrastructure investment, should be at the heart of all major project thinking.

Key lesson: Balancing the need for vital infrastructure with concerns about protecting and preserving the UK's natural and historical beauty means making clear decisions about crucial outcomes at the outset.

Effective valuation also involves economic considerations. Many suppliers reported that the most environmentally-forward projects have a clear recognition of the business case for sustainable components. For instance, the **Procuring for Growth Balanced Scorecard** employed in public procurements clearly notes that the public sector should be aware of the financial elements of sustainability requirements as well as the role they can play more broadly in supporting innovating and improved performance in tackling climate change.[20]

Interviewees identified one of the largest barriers to truly environmentally sustainable major projects being the perceived cost involved of "greening" a project. Many projects are pushing to show what sustainability can look like, but whilst budgets and approvals remain predicated on driving down costs, the justification for additional expense remains difficult for clients to make.

Yet this does not have to be the case. Anglian Water has shown that reducing carbon can reduce cost, primarily by reducing the scope of projects and focusing more on utilising existing resources, both natural and man-made.[21] It is essential that all projects identify and understand how they will address climate change from the outset, including how to implement transformational improvements of existing resources, as well as creating new. Questions in the design phase should be made about when to build and when not to build. For instance, over 80% of the buildings that will exist in 2050 already exist.[22] Linked with the role of digital transformation, there is a fundamental emphasis to be placed on improving the efficiency of existing buildings and updating infrastructure instead of simply building more.

New projects should have a cost-benefit analysis based not only on financial cost, but environmental cost, which **HMT's Green Book Review** has shown is needed.[23] By valuing net zero when appraising policy and investment decisions, strategic programmes and individual projects can be given greater support due to their environmental benefits.

*"We want to invest in projects which don't just have a
sustainable angle, but are sustainable through and through […]
This is an exciting time to work with the UK to help it recover
and to build for the future".*

Director, Private Equity Firm

CBI members reported that there is significant liquidity in the private capital market for sustainable major projects, particularly around infrastructure, but the public sector is failing to fully tap into it. There is uncertainty about public sector funding mechanisms, particularly following the withdrawal of Private Finance Initiatives (PFIs), and some frustrations around how the public sector seeks funding.[24]

To make the UK a more attractive and active place for private investment, a clear and consistent pipeline and approach to tackling climate change through major projects is required. The recently published **Net Zero Strategy** and **Treasury Review of Net Zero** will both help provide a larger framework through which major projects can be designed to contribute to the larger strategic objectives.[25]

As previous CBI work has highlighted, the new **UK Infrastructure Bank** should enable the finance required to reach net zero and decarbonise the economy, whilst also supporting levelling up ambitions for the UK.[26] This would involve much greater dialogue with private capital providers to understand what the blockers to investment are.

Sizewell C Nuclear Power Station

Major projects should be 100% focussed on delivering a sustainable future for the UK by reducing carbon emissions, increasing social value and protecting the environment – that includes looking after waste and increasing biodiversity.

Sizewell C nuclear power station is an example of a major project which is putting sustainability at the heart of its purpose and practice, from design and procurement through to operation and decommissioning.

Sizewell C will provide low-carbon electricity for 6 million homes using much less land than some other low-carbon technologies. In addition, the project's vision is to be part of a Clean Energy Hub where heat and electricity from the power station can support emerging technologies such as hydrogen and direct air capture.

Major suppliers to the nuclear industry – including Atkins, Balfour Beatty, Laing O'Rourke and Mace - have joined the Sizewell C Consortium and are working with the project to develop a comprehensive approach to sustainability. Together they are aiming to set an example for future major projects to follow.

The UK will not meet its net zero target for greenhouse gas emissions by 2050 without significant and ambitious carbon reductions in electricity, heat, transport and industrial processes. If big infrastructure projects put sustainability at their core, then the UK will stand a better chance of achieving its carbon reduction ambitions.

While not all major projects will be able to deliver low carbon benefits on the scale of Sizewell C, they can still drive forward sustainability in the UK. Making the sustainability targets clear will focus minds, gain support and make outcomes clearly achievable

Key lesson: The public and private sector need to work closely together to identify which major projects will deliver the environmentally sustainable future needed, and invest in and support those projects from end to end.

Delivering on promises ensures the best outcomes and value

Measuring the sustainability successes of major projects is the final piece of the puzzle to be addressed. Many suppliers noted that efforts made to be more environmentally friendly often go systemically untracked. The continued focus on lowest cost and fastest delivery, as well as short term delivery goals, means long-term efforts to reduce carbon emissions can come into contradiction with core priorities, and result in the undervaluing of sustainability measures.[27]

"I worry that too much attention is being paid to what people say they are going to do, rather than what they actually do when it comes to the environment".

Senior Management, Public Sector Delivery Body

More recognition and reward for major projects that incentivise and deliver on sustainability targets is needed. Suppliers and clients should work together to establish a mechanism for assessing the performance against pre-agreed sustainability KPIs, with the added incentive of publication to help promote transparent understandings of general performance against the GMPP.

The Cabinet Office, for instance, currently requires the publication of standard KPIs for the 500 high-value Gold contracts, with a 2021 KPI return rate of 96%.[28] Whilst it would be difficult to create a standardised sustainability KPI that would apply across projects, an effort to use the KPI mechanism as a contractual tool to drive delivery would be welcomed. This provides not only transparency and accountability but also allows greater scrutiny of the progress being made on a broader scale.

The IPA has already championed a consistent approach to greenhouse gas emissions for infrastructure and construction projects, as outlined in the **Construction Playbook** and **IPA Benchmarking Guidance 2021**.[29] However, there is still little consistency about how projects in the defence, ICT, and transformation categories measure their emissions. Pushing for greater consistency whilst recognising the challenges of this standardisation would deliver significant benefits for understanding the scope of emissions across the GMPP. The introduction of a standardised reporting requirement for carbon emissions on GMPP projects would also help ensure that along with a sustainable approach to design, the projects are being delivered with sustainable operations.

> **Recommendation**
>
> Building upon the direction of travel set out in Procurement Policy Note 06/21, the IPA should seek to encourage the use of a standardised carbon calculator across the GMPP to enable consistent tracking of carbon emissions and the creation of a baseline for different types of major projects, including through the publication of a net zero KPI for each major project.

A consistent approach to gathering and using new and existing data on sustainable performance, including across supply chains, would also provide clients and suppliers with a holistic view of progress towards net zero. Some sectors such as construction and service provision have already put in place systems for effectively tracking carbon emissions, and the Transport Decarbonisation Plan recognises that data is a key enabler for progress.[30]

A more focused use of digital technology and existing performance and project data would ensure that projects are truly supporting sustainable objectives. Industry should learn from the best practices seen across existing projects such as the A14 upgrade to understand how greater data use during the life of the project can integrate the insights into the core processes of that project and future work.[31] The Project 13 Digital Transformation pillar has already pulled out some good examples of how data and digital technology can work to deliver for sustainability.[32]

Programmes with Purpose Reference Guide – Environmental sustainability

Legislation or regulation

Climate Change Act (HMG, 2019) – **Link**

National Procurement Policy Statement (CO, 2021) – **Link**

Procurement Policy Note 06/21: Taking account of Carbon Reduction Plans in the procurement of major government contracts (CO, 2021) – **Link**

Policies

Energy white paper: Powering our net zero future (BEIS, 2020) – **Link**

Heat and buildings strategy (BEIS, 2021) – **Link**

UK hydrogen strategy (BEIS, 2021) – **Link**

Industrial Decarbonisation Strategy (BEIS, 2021) – **Link**

A Green Future: Our 25 Year Plan to Improve the Environment (DEFRA, 2019) – **Link**

Transport Decarbonisation Plan (DfT, 2021) – **Link**

Net Zero Strategy: Build Back Greener (HMG, 2021)– **Link**

Net Zero Review: Analysis exploring the key issues (HMT, 2021) – **Link**

Race to Zero (UN, 2021) – **Link**

Guidance

Green Book Supplementary Guidance: Climate Change and Environment (HMT, 2020) – **Link**

Carbon valuation (BEIS, 2021) – **Link**

Natural capital and environmental net gain (NIC, 2020) – **Link**

Best practice

Financing the transition to a sustainable future: Business recommendations to policymakers to promote a sustainable economy, sustainable markets, and sustainable communities in the UK and globally (CBI, 2021) – **Link**

CO2nstructZero (CLC, 2020) – **Link**

Skills for a green recovery (IPPR, 2021) – **Link**

Making Sustainability Work: Best Practices in Managing and Measuring Corporate Social, Environmental and Economic Impacts (Marc J. Epstein, Adriana Rejc Buhovac, 2014) – **Link**

Achieving net zero (NAO, 2020) – **Link**

Sustainability and Circular Economy Resource Guide (MPA, 2021) – **Link**

Harnessing major project spend to level up

Government's major projects create benefit for regions and communities across the country, both in terms of the projects' outcomes but also during the delivery of the project itself. As part of the national push to level up the country, greater attention needs to be paid to ensuring that major projects are geared towards catalysing social and economic improvements from inception to legacy. Projects need to be designed with levelling up in mind and they need to deploy the available delivery tools effectively – such as social value – to help maximise benefits to local communities. the British and regional economies.

Figure 7 Programmes with Purpose Reference Guide – Harnessing major project spend to level up
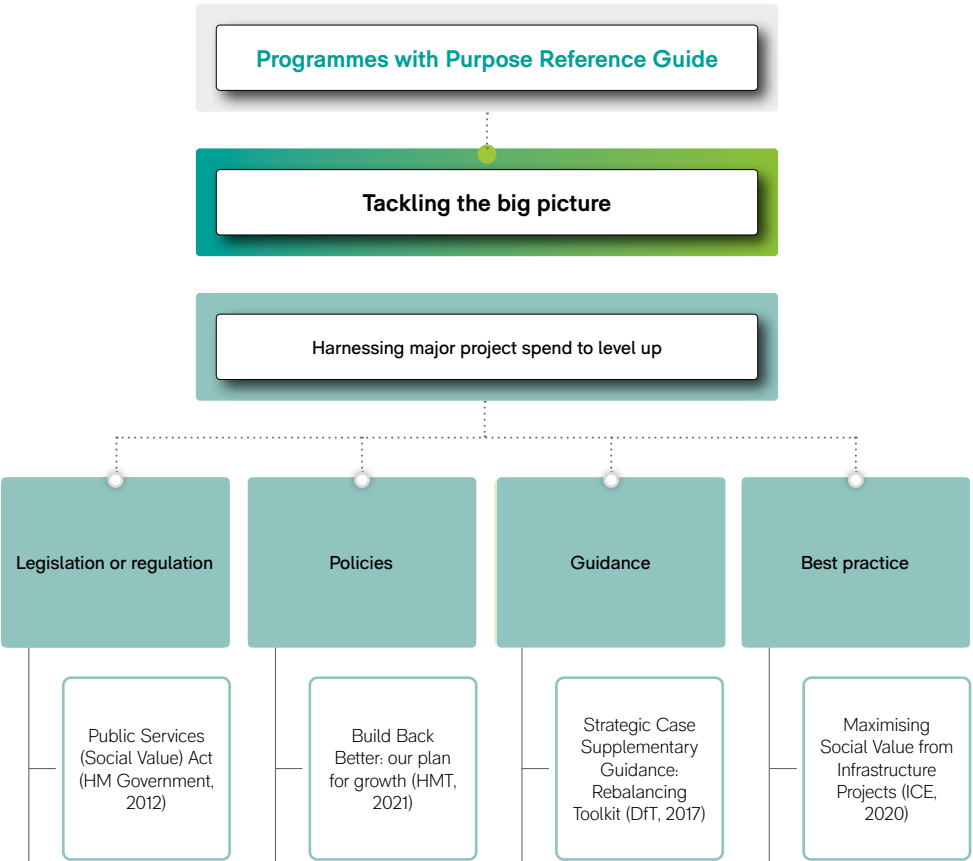
Recognising and responding to local needs

Not every part of the UK has the same requirements when it comes to levelling up and public sector clients need to recognise how a specific project can contribute most efficiently to the needs of local communities or regions. This may mean the addressing income, employment, education, health, crime, housing, or the living environment, as well as broader regional economies.[33]

Whilst a white paper setting out the UK's national levelling up strategy is expected to be launched by the government in late 2021, a tried and proven approach for major projects is strong engagement with local authorities such as Metro Mayors, councils, Local Economic Partnerships, and community-stakeholder groups.[34] The UK2070 Commission has already highlighted the benefits that come from greater collaboration for local areas, but more can be done.[35]

Co-creation and co-ownership of projects between suppliers and clients is recognised as being essential to success. Yet the most effective programmes have also involved local communities in that process from the initial phases all the way through to completion. For instance, through their community engagement strategy Respecting People, Respecting Places, HS2 invited local authorities, residents, and businesses to be involved with the project. This ensured from the outset the priorities of communities were reflected in the approach taken by the programme of work.[36] The scale of the engagement resulted in over 143,00 helpdesk enquiries, 84,000 attendees at 6,930 engagement activities along the whole line of the new railway, and over £10.4 million in funding awarded to Community & Environment Fund and Business & Local Economy Fund projects.[37]

HS2

As one of this generation's defining infrastructure projects, HS2 is seizing the opportunity to leverage the significant investments to deliver levelling up ambitions across the UK.

With around £14.5 billion worth of main works contracts for phase one covering a huge range of goods and services, the award of these contracts will work to deliver against HS2's key values and principles: optimising value for money, respecting communities, championing teamwork and collaboration, and creating a positive legacy for Britain.

Of the contracts already awarded to over 2,200 businesses, about 97% are UK based. Furthermore, about 60% of suppliers will be SMEs, helping that money get into local economies even quicker and promoting a diverse and resilient supply chain. HS2 is already supporting around 20,000 jobs, including 1,100 formerly unemployed individuals who have now secured sustainable employment on HS2.

HS2 Ltd and its delivery partners – which include Skanska, Costain, Siemens, Balfour Beatty, and VINCI – made clear from the outset that they would take a "one team" approach to everything they did, including maximising the positive impact of every pound spent. This clear focus on outcomes has helped distribute investment across the UK and in the communities which need it most.

Turner & Townsend, working as part of an integrated team, developed the HS2 Rail Systems Alliance delivery model. Built upon Project 13 principles, the model has been designed to harness the power of collaboration to deliver more efficiently and protect project outcomes. Major projects should not be afraid to set high ambitions and to identify early on how they can support key strategic objectives such as levelling up. By engaging with and respecting communities, particularly through clearly defined community engagement strategies and a strong focus on social value, major projects can deliver benefits that far outweigh their cost.

Key lesson: Engaging with local communities and stakeholders, and defining outcomes which matter to those communities, is the best way for major projects to support levelling up.

Unlocking social value in major projects to deliver more benefits

Major projects have three types of programme value: economic, environmental, and social.[38] Historically, economic value has taken precedent and priority over other forms, particularly in the shape of upfront cost considerations. This is due largely to budgetary constraints and short-term funding cycles making initial spend far more important than either longer-term value or non-economic considerations of value.[39]

However, recent years have seen an increasing focus on value as opposed to cost, and both social and environmental value and ways of achieving them. A number of public sector practice documents ask for clients to assess the whole life costs of projects and ascertain the value, in lieu of only considering the initial outlay.[40] This should apply also to the private or public sector investment applied to a project. The **Value Toolkit** created by the Construction Innovation Hub has shown exactly what best practice in this space can look like, and its take up outside of the construction sector should be widely promoted.[41]

"We need to move away from simply 'funding' projects, to actively "financing" them, to being involved in ensuring a positive outcome and sharing both the challenges and successes".

Senior business leader, Finance Sector

Suppliers, clients, and communities all recognise that social value is a vital tool for achieving levelling up, with a proven track record of delivering meaningful change. Major projects are also beginning to embed social value at the heart of their design, and placing a renewed emphasis on gearing their operations towards maximising the social value generated.

Defined in the **Public Services (Social Value) Act 2012** as the additional social, environmental, and economic benefits generated through procurements and public-private partnerships,[42] Cabinet Office has sought to make social value an inherent part of how central government and public bodies procure in recent years. This has included the introduction of a mandatory minimum 10% weighting for social value in bids, and the creation of both a **Social Value Model** and a **National Procurement Policy Statement** to facilitate the use of social value more broadly.[43] Many firms are already delivering significant amounts of social value through public contracts, and partnerships with public bodies have begun to place an emphasis on designing social value requirements to deliver the best outcomes.[44]

Yet a step change is still needed in how clients award contracts for social value across more projects, and identifying how social value can be used to support the national levelling up agenda. A 2019 CBI poll revealed that only 3% of businesses stated social outcomes were currently the determining factor for public contract awards, compared to almost two-thirds who believed it was lowest initial bid cost.[45] Interviewees argued that two significant changes are needed to truly maximise the impact of public spending for local communities, and that major projects which have incorporated these changes will increase their contributions to levelling up.

First, that social value and considerations of social value within a project or programme should be considered in the same way as key commercial factors. This involves not only using clear KPIs, but also embedding clear accountability and reporting processes, and ensuring social value is placed at the heart of any commercial arrangements alongside criteria like performance and price. Using financial proxies for social value, such as the National TOMs by Social Value Portal or the Social Value Engine, can help put a figure to the benefits being generated and therefore make the task easier. But it is also crucial that this financialization is balanced against the local needs and strengths of projects.[46]

Second, too much emphasis is placed on the social value within a contract rather than looking more broadly at the benefits of longer-term partnerships. SMEs, diverse-owned firms, and corporations with social purpose all have an inherent social value, and large suppliers similarly make contributions to communities across the UK which can often go unrecognised when social value is considered on a contract-by-contract basis. The result is that there is the risk of disruption to ongoing social value projects to the detriment of those communities and individuals who benefit most on such efforts. **Taking a more holistic view of social value within a partnership allows for longer-term deliver of benefits and a great interlocking of collaborative efforts across a region.[47]**

Recommendation

To ensure social value considerations are placed at the heart of major projects and the maximum benefits from investment in these projects are delivered for communities across the UK, the Cabinet Office should update the Balanced Scorecard for Growth to reflect both the social value priorities outlined in PPN 06/20 but to also enable public bodies to consider the broader company wide and inherent social value of firms.

An update to the Balanced Scorecard for Growth, used on contracts worth over £10m, would go a significant way to encouraging partnership and enabling a more realistic evaluation of the social impact possible during a major project, whilst also aligning social value objectives in procurement strategies over and below the £10m threshold.

Understanding the big picture should be balanced with delivering excellence

Major projects are often generation defining and nationally significant. Whilst sometimes delivered locally, the supply chains can encompass hundreds of businesses across multiple regions, and the intended outcomes may affect multiple communities and hundreds of thousands of individual users. The **UK Government's National Infrastructure Strategy** has made the recovery and rebuilding of the UK economy, alongside levelling up, a core priority because of the significant impact and broad reach that major projects can have.[48]

Consequently, it is essential that this big picture is balanced against a focus on the local. The public sector and individual clients need a holistic view of how a project will work with other projects, but also what its contribution towards nationally strategic objectives will be. Considering major projects as a smaller part of a bigger picture through a systems-thinking approach can unlock significant benefits, particularly when the information and data attached to a project is considered as interconnected with other programmes of work.[49]

We emphasise to all our teams that what they're doing isn't just filling a contract for a client. We make clear that they understand they're part of a team of hundreds of people from the midlands and north-west and everywhere and really contributing to the UK's growth".

Senior Manager, International Technology Company

Greater buy-in by central government, local authorities, and industry – not only to individual projects but to ongoing, longer-term partnerships – is essential for ensuring visibility of the big picture. As the scope and scale of the GMPP is likely to continue increasing given the promised investment in infrastructure, ensuring this spend is delivering against national needs as well as local should be a fundamental consideration of public sector clients and suppliers. Government expects to spend up to £31 billion on economic and social infrastructure projects in the 2021/22, and £200 billion before 2025.[50]

Enabling information flows across these traditionally siloed systems is one ongoing effort, particularly within infrastructure. **Project 13**, for instance, has produced guidance discussing how levelling up can be supported by cross-industry collaboration between and around individual projects, particularly through greater sharing of project data.[51] The benefits are sizable, with a report for the NIC estimating that greater data sharing could release an additional £7 billion across the UK infrastructure sector.[52]

There are a number of specific tools available to help suppliers and clients place their specific contributions in a larger context. **The Value Toolkit**, developed by the Construction Innovation Hub, helps clients to understand the outcomes and benefits and give businesses the practical tools to deliver social impact.[53] The **IPA Routemap** has established that carrying out an analysis of the outcomes and whole life benefit should be an inherent stage in any major project process.[54]

Yet the breadth of the GMPP undermines the unique circumstances and requirements of locally important major projects compared to major projects of national strategic importance. Whilst all projects should contribute to the UK's national prosperity through levelling up and working towards large national objectives like decarbonisation, only a few are intrinsic to the UK as a whole. Projects in all four GMPP categories could be identified as of national strategic, technical, economic, environmental, social, or political importance and afforded a clear recognition of their role in building a better Britain. This would ensure that resources are allocated most effectively and that particular scrutiny is afforded to these projects.

Recommendation

To help improve the profile and accessibility of the GMPP, and to ensure that major projects are clearly linked to key strategic priorities such as levelling up and environmental sustainability, the IPA should introduce a category of Strategically Important Major Projects for the GMPP. This category would clearly establish how major projects support or address key strategic outcomes across their lifespan and legacy.

**Major projects can help tackle some of the UK's most pressing
social challenges**

Successful major projects are defined by a clear understanding of the intended outcomes. This applies not only to the operational outcomes, but also the broader social, environmental, and economic benefits.

The COVID-19 pandemic has shone a sharp light on some of the most pressing social challenges facing this country, from income inequality to strong differences in the quality of local infrastructure (e.g. broadband) and public services (e.g. mental health services).The significant changes to the UK's labour market wrought by the pandemic have made clear that major projects can play a role in tackling these challenges, by not only delivering the new infrastructure and services needed, but enabling a workforce prepared for future challenges.

As these priorities can change multiple times during the lifespan of a project, there is a risk that partnerships focus only on what is currently popular without delivering meaningful change. **Having clearly defined levelling-up and social impact outcomes can reduce the risk of uncertainty and leverage supplier expertise in the most effective way from the outset.**

The IPA recently published a **Project/Programme Outcome Profile** (POP) method and tool to help the public sector establish a "golden thread" between a specific project and government's strategic priorities.[55] The POP provides an essential tool alongside departmental **Outcome Delivery Plans** for clearly establishing how projects will support government's key outcomes, and also facilitates the use of consistent metrics to track a project's contribution to those priority outcomes.

Some major projects have already begun to design their delivery with a deliberate attention to supporting levelling up objectives and sharing the benefits of a locally-delivered project across the country. Heathrow Airport, for instance, recognised that using offsite construction and regional Innovation Partner hubs could demonstrate a new way of delivering a location specific major project with a national reach.

Yet promises are not enough. Suppliers and clients should also be held to account when projects fail to deliver. Interviewees were clear that outcomes and outputs around larger strategic objectives like levelling up should be defined, managed, and treated the same as any other commercial KPIs within a project, subject to the same scrutiny and rigour. Measuring the success of the outputs and outcomes around levelling up is the only way to ensure that major projects are working as intended, and to enable stakeholders to understand where changes are happening. Social value is an incredibly effective tool for doing so and a continued emphasis on measuring and collecting social value data as a key element of a major project's design will help provide more detail as to the impact major projects are having.

Heathrow Expansion Regional Hubs

The planned expansion to Heathrow Airport was to be one of the largest aviation infrastructure projects undertaken in the UK in recent years.

Whilst based in the already relatively prosperous south-east of the UK, the team behind the Heathrow Expansion programme were quick to realise that the impact of their spending could have a larger impact elsewhere across the country.

Heathrow embraced the idea of large-scale logistics hubs to facilitate offsite construction of their £16bn expansion programme. Beginning with a long-list of 65 different locations in 2017, Heathrow finally shortlisted some 18 potential sites which could host factories and yards to build components for the third runway. These shortlisted Innovation Partners were located not only across England but in Scotland, Wales, and Northern Ireland as well.

The Innovation Partners model was planned to utilise a centralised logistics technology which would track and monitor the millions of component parts, as well as updating the central teams and delivery partners as to progress. This whole process would not only reduce the impact on the already-busy west London area around Heathrow but share the benefits of investment across the country.

More major projects should seek to use the increases in efficiency and value-for-money that come with offsite construction, as well as the additional benefits for local communities in different parts of the UK. Whilst postponed by the impact of Covid-19, the lessons learnt in the approach could play a significant role in future major projects

Key lesson: The best major projects are not afraid to embrace fresh thinking and innovation to address the challenges of today over the longer, by maximising benefits from inception through to delivery.

Programmes with Purpose Reference Guide – Levelling up

Legislation or regulation

Public Services (Social Value) Act 2012 (HMG, 2012) – **Link**

National Procurement Policy Statement (CO, 2021) – **Link**

Social Value Model (CO, 2020) – **Link**

Policies

Build Back Better: Our Plan for Health and Social Care (CO, 2021) – **Link**

Global Britain in a Competitive Age: the Integrated Review of Security, Defence, Development and Foreign Policy (CO, 2021) – **Link**

Great British Railways: The Williams-Shapps Plan for Rail (DfT, 2021) – **Link**

Export Strategy 2018 (DIT, 2018) – **Link**

Build Back Better: our plan for growth (HMT, 2021) – **Link**

IPA Routemap (IPA, 2021) – **Link**

Transforming Infrastructure Performance Roadmap (IPA, 2021) – **Link**

Project Delivery Diversity and Inclusion Strategy 2020-2023 (IPA, 2021) – **Link**

Guidance

Procuring Growth: Balanced Scorecard (CO, 2016) – **Link**

Strategic Case Supplementary Guidance: Rebalancing Toolkit (DfT, 2017) – **Link**

Infrastructure, Towns and Regeneration (NIC, 2021) – **Link**

Behaviour change and infrastructure beyond Covid-19 (NIC, 2021) – **Link**

Measuring social value in infrastructure projects: insights from the public sector (RICS, 2020) – **Link**

Best practice

New Foundations: A fresh start for procurement to help construction – and the UK – build back better (CBI, 2021) – **Link**

Valued Partnerships: Embedding social value in public contracts (CBI, 2020) – **Link**

Infrastructure investment opportunity to get Northern Powerhouse back on track (Alliance Manchester Business School, 2019) – **Link**

Levelling up the UK's regional economies: Increasing the UK's rate of economic growth (Centre for Cities, 2021) – **Link**

Maximising Social Value from Infrastructure Projects (ICE, 2020) – **Link**

National recovery, digitally driven: The Infrastructure Client Group Digital Benchmarking Report 2020 (ICG, 2020) – **Link**

Annual Report on Major Projects 2020 to 21 (IPA, 2021) – **Link**

How infrastructure programmes can meet the challenges of the Farmer Review (T&T, 2017) – **Link**

Go Big. Go Local. The UK2070 Report on a new deal for levelling the United Kingdom (UK2070 Commission, 2020) – **Link**

Leveraging the UK's major projects as exportable goods, services, and expertise

The successes of the UK's major projects should be recognised and promoted internationally. There is a significant value in exporting the practices, ideas, products, and expertise generated through the experiences of the GMPP to a global market, both to public sector clients but also the suppliers. Success stories include the Contactless Payment System used by Transport for London which is now being replicated in major cities around the world. This shows that the UK has significant partnerships and insights to share with governments and businesses elsewhere.

Too often these benefits are not given enough importance or recognition at a sufficiently early stage to become a core component of a major project. Many suppliers have emphasised the significant value that could come from sharing and selling their goods, services, and ideas to other countries, yet lament the historic lack of engagement around the issue from their public sector partners.

Figure 8 Programmes with Purpose Reference Guide – Leveraging the UK's major projects as exportable goods, services, and expertise
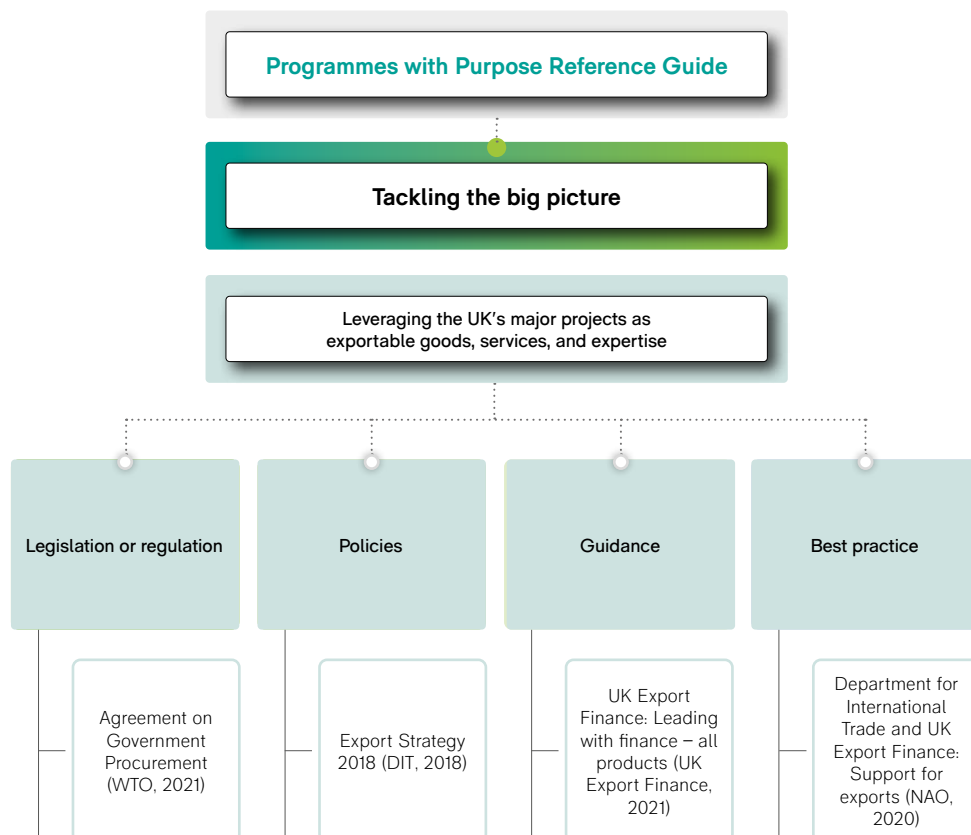
Designing for a global market

Whenever possible, government should work with suppliers of major projects to assess to what extent the product, good, service, or related expertise is exportable and consider what steps need to be taken for exports to be successful. **The Construction Leadership Council** (CLC), for instance, established an Exports & Trade Industry Initiative with the sole purpose of supporting an increase in exports across the UK construction industry. It promoted a joined up approach between industry and government bodies tasked with promoting exports to increase brand awareness internationally and harness innovative concepts.

"The best major projects have a role in delivering a lasting contribution to the UK's GDP, rather than just increasing economic activity during the delivery".

Director, Major Consultancy

Exportability can also enable continuation of value beyond the life of the domestic project, as well as ensuring that the supplier and wider supply chain continue to be supported by an extended pipeline of work.

The Type 31 Frigate Programme provides one such example. As the pathfinder project for the National Shipbuilding Strategy (NSbS), the Type 31 seeks to supply five ships to the Royal Navy and exploit the identified global market of around 40 ships in the next decade.

More projects, particularly those involving manufacturing or defence capabilities, should seek to embed exportability considerations at their heart. Many major projects are still assessed and evaluated only on the basis of their upfront cost and intended outcomes. A more nuanced analysis of their broader economic benefits, including exportability or longer-term additional advantages, could help the UK to leverage investment even further.[56]

Type 31 Frigate

In the National Ship building Strategy, the Type 31 Frigate was originally classified as T31e, with the e standing for export, ensuring a strong focus on exportability from inception which was then a major factor in all bidders' designs.

The new class of Type 31 frigates are being built for the Royal Navy by Babcock at its Rosyth Facility and the programme will see all five ships delivered by 2028 at a total project cost of £1.5bn. The programme is a positive example of a major project which is designed for export success from the outset.

The Type 31 frigates procured by the Royal Navy are highly adaptable and capable general purpose frigates based on a proven hull form. This makes the platform very appealing to export markets as, in addition to its market leading price point, the platform is proven and can be modified to meet differing requirements.

The export variant of the Type 31 has already been successfully marketed to international buyers before the first of class has been built in the UK. This is a clear acknowledgement of the quality of British shipbuilding.

The MOD's procurement strategy, combined with strong government support to help market the ship abroad, has made the Type 31 programme a prominent example of a well thought-out and holistic approach to maximising major project benefits.

Key lesson: If exportability is an intrinsic consideration of a major project during the design phase, the benefits during and beyond the delivery phase can be significant.

Listening to suppliers

Interviewees from all sectors noted that international trade opportunities around major projects are not solely the prerogative of the public sector.

"There was a lot of talk in parliament and elsewhere about exporting Britain's expertise but the whole time I was working on [the project], I didn't once have a conversation with DIT or anyone else about what we could do in this space".

Project Lead, Construction Firm

The businesses involved in public private partnerships are often fully aware of global market demand to an extent that the public sector cannot match. Greater engagement and support between the client, supplier, and sources of expertise such as the Infrastructure Exports: UK group at DIT, as well as DIT itself would deliver significant benefits for the UK as it looks to build back better from COVID.[57]

Similarly, it is only through a combination of both client and supplier that an exportable product can be effectively understood and created. During the design phase of a major project, the opportunity for economic and trade benefits can disappear unless there is a clear component of the evaluation and design which involves the supplier's expertise. Recent government efforts including the Export Strategy and DSIS have identified the role of exports in boosting the UK's economic and social growth. Yet there remains a gap between what is happening in policy and in practice. A greater emphasis on designing major projects with the exportable benefits in mind would help the UK to level up.

Recommendation

To boost the UK's strong trading basis and ensure key innovations and practices are afforded the full support possible, from the outset of a major project, the sponsor should identify with suppliers what the exportability of the project's techniques, products, or industrial capabilities will be, and to support promoting this exportability to a broader range of stakeholders, including DIT and Trade Envoys.

Programmes with Purpose Reference Guide – Exportability

Agreement on Government Procurement (WTO, 2021) – Link

Global Britain in a Competitive Age: the Integrated Review of Security, Defence, Development and Foreign Policy (CO, 2021) – **Link**

Export Strategy 2018 (DIT, 2018) – **Link**

National Infrastructure Strategy (HMT, 2020) – **Link**

UK Export Finance: Leading with finance – all products (UK Export Finance, 2021) – **Link**

How to get better private finance deals for infrastructure (IfG, 2021) – **Link**

Department for International Trade and UK Export Finance: Support for exports (NAO, 2020) – **Link**

Getting the basics right to improve project delivery

Whilst major projects are complex due to the number of different elements involved, a solid foundation built upon a clear definition of intended outcomes and objectives makes it far more likely that a project will be successful. This involves making sure people understand their roles and that the most important and broadest themes are embedded at the heart of programmes from the outset, but also an awareness of the different responsibilities.

Figure 9 Programmes with Purpose Reference Guide – Getting the basics right to improve project delivery

Programmes with Purpose Reference Guide

Improving project delivery

Getting the basics right to improve project delivery

Legislation or regulation	Policies	Guidance	Best practice
The Green Book, Aqua Book, Magenta Book, Orange Book (HMT, 2015–2020)	IPA Routemap (IPA, 2021)	The Commercial Playbooks: Sourcing; Construction; Consultancy; Digital, Data, and Tech (CO, 2021)	Project 13 (ICG, 2021)
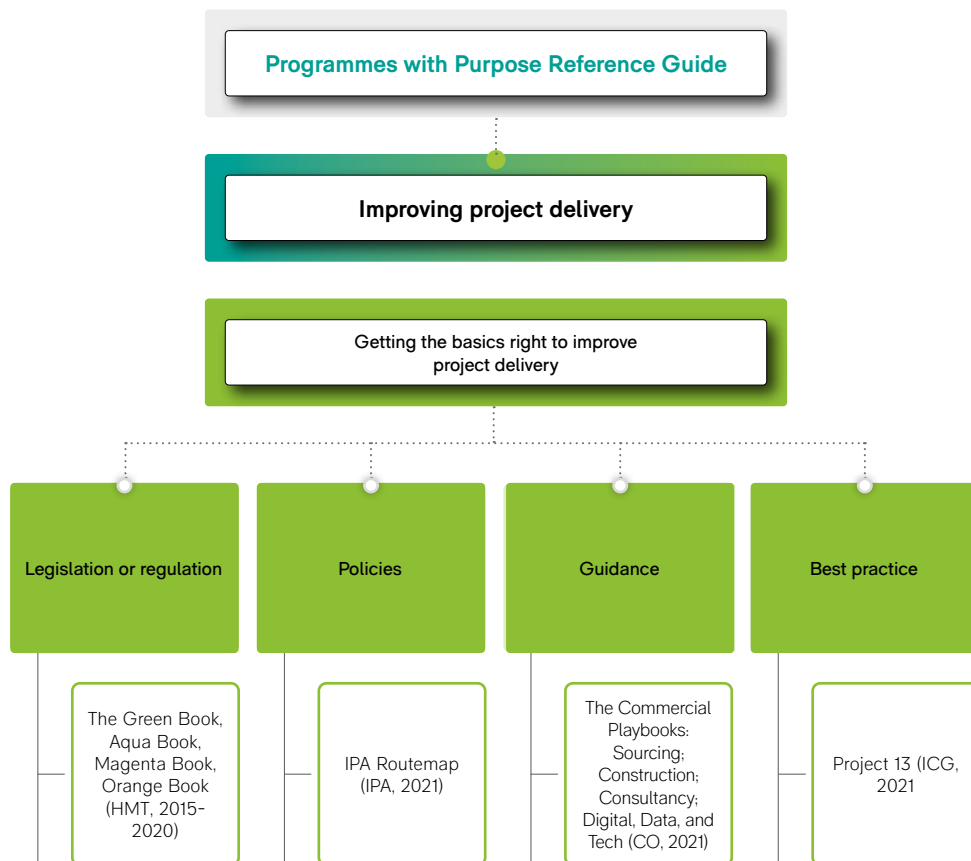
Whether assessing feasibility, designing clear outcomes, identifying risk, managing stakeholders, establishing effective governance, delivering effective procurements, or demonstrating good project management, there are dozens of different elements that need to work seamlessly within the architecture of an effective delivery model to ensure a successful major project.[58]

The most effective projects depend on all stakeholders having the capabilities and resources necessary to deliver against a clear framework of success aligned to the intended outcomes and objectives.[59] Individuals and teams need to be skilled, competent, and supported to deliver, even in challenging situations. They must have a clear picture of what they are seeking to achieve and how they will work towards those outcomes, as well as their role within the broader programme of work.[60] They must also be well-informed as to strategic objectives – such as sustainability or levelling up – in order to ensure they can target those outcomes within the bigger picture.

In practice, this means that individuals and teams are asked to be experts on a variety of different topics, even within a single role. A procurement professional may be asked to make contract award decisions based on commercial, social, economic, environmental, and logistical factors, whilst also having to abide by imposed deadlines or other project-specific criteria such as supply chain ecosystem management.[61] An integration of these factors may deliver the best outcome in principle, yet a number of interviewees noted that in practice it may prove challenging for even a seasoned professional to maintain a complete understanding at all times of the expectations on them, whilst also delivering at the highest level.

"I have a full-time day job but I'm also expected to keep up with all the latest stuff the Treasury and MoD are publishing which is nigh on impossible".
Project Management professional

Interviewees from industry, academia, and the public sector revealed that whilst the general level of competence and skills is high across the various sectors involved in major projects, there is concern both about their ability to keep up with the changing landscape and how the transition from the current workforce to the new generation will retain knowledge.

In a 2019 survey, the **Association for Project Management** (APM) found that 39% of businesses were already concerned about having access to enough people with the right project management skills and capabilities in the UK.[62] Data from the 2011 Census similarly shows that over 30% of the construction workforce are aged 50 and over, meaning that many will be nearing retirement in the coming years.[63]

Whilst the question of skills is addressed later in Programmes with Purpose, and initiatives have begun to address this question from the perspective of specific sectors (such as **Project 13** for infrastructure) or lifecycle stages (like the **IPA Project Routemap** for setting up programmes), there is still a need for a single document setting out what the fundamentals for a successful major project are and how they can be applied.

As with other Playbooks produced by government, major projects comprise a discreet category of public–private partnerships which are notoriously challenging to deliver, yet have a significantly positive outcome if they work. A **Major Projects Playbook**, matched to the principles of the existing Playbooks, would provide a valuable reference for all stakeholders.

> ### Recommendation
> To bring together competing approaches to major projects and provide a regularly updated source of best practice insights, the IPA and Cabinet Office should create a Major Projects Playbook of existing legislation, best practice, and policies which should be considered for government's major projects.

Programmes with Purpose Reference Guide – The basics

Legislation or regulation

Green Book Review 2020 (HMT, 2020) – **Link**

Policies

Transport Infrastructure Efficiency Strategy (DfT, 2019) – **Link**

Guidance

Lean sourcing: guidance for public sector buyers (CO, 2015) – **Link**

Contract management professional standards (CO, 2019) – **Link**

New Models of Construction Procurement (CO, 2014) – **Link**

Model services contract (CO, 2020) – **Link**

Best practice in benchmarking (IPA, 2021) – **Link**

Green Book supplementary guidance: Project/Programme Outcome Profile (IPA, 2021) – **Link**

Cost Estimating Guidance (IPA, 2021) – **Link**

Design Principles for National Infrastructure (NIC, 2020) – **Link**

The value of design in infrastructure delivery (NIC, Expedition Engineering, Marko&Placemakers, 2020) – **Link**

Best practice

Measures for successful outcomes: the five capitals approach (ACE, 2020) – **Link**

Making the Total Value Case for Investment in Infrastructure and the Built Environment (ARUP, 2018) – **Link**

Investing in infrastructure: Securing the finance to build back better (CBI, 2020) – **Link**

Fine margins: delivering financial sustainability in UK construction (CBI, 2020) – **Link**

Human Learning Systems: Public Service for the Real World (Centre for Public Impact, 2021) – **Link**

Realising benefits from UK government ICT projects (Cha, 2017) – **Link**

The End of the Beginning: Achieving Value for Money from Government Digital Transformation Projects (Cha, Dzandu, Winch, 2021) – **Link**

Value Toolkit (Construction Innovation Hub, 2021) – **Link**

Procuring for value: Outcome based, transparent, and efficient (CLC, 2018) – **Link**

Building flexibility: New delivery models for public infrastructure projects (Deloitte, 2008) – **Link**

Voices on Infrastructure: Major projects: Improving the odds of success (Global Infrastructure Initiative, 2018) – **Link**

Reducing the gap between cost estimates and outturns for major infrastructure projects and programmes (ICE, 2019) – **Link**

Project 13 (ICG, 2021)

Using targets to improve public services (IfG, 2021) – **Link**

Commercial and contract management: insights and emerging best practice (NAO, 2016) – **Link**

Efficiency in government (NAO, 2021) – **Link**

Major transport infrastructure projects (Transport Committee, 2021) – **Link**

How to: build a more flexible culture to enable major project success (T&T, 2021) – **Link**

Driving efficiency and value across major projects to improve outcomes

Major projects are profoundly complex, involving multiple core components which must all be delivered for success. Whilst improvements in individual elements can deliver significant results, the best projects have shown that efficiency and value come from an effective approach to end-to-end project delivery.

Figure 10 Programmes with Purpose Reference Guide – Driving efficiency and value across major projects to improve outcomes

Programmes with Purpose Reference Guide

Tackling the big picture

Driving efficiency and value across major projects to improve outcomes

Legislation or regulation	Policies	Guidance	Best practice
The Green Book (HMT, 2021)	GovS008: Commercial – Government Functional Standard (HM Government, 2021)	Green Book supplementary guidance: Project/ Programme Outcome Profile (IPA, 2021)	Value Toolkit (Construction Innovation Hub, 2021)

Effective integration to deliver efficient outcomes

From data and skills to regulation and audit, major projects need a mix of smart systems, smart people, and clear guidance to deliver what is needed. This "hyper-integration" means bringing together complementary resources within a well-defined and transparent objective framework.

With so much emphasis being paid to individual components, it is sometimes challenging to take a holistic view and understand how each element works together, often interdependently. One meta-analysis of megaprojects by three academics from UCL and the University of Sussex identified a failure to understand "megaprojects as a complete production system – from planning, through design, manufacturing, and construction, to integration and handover to operations" as a key barrier to success.[64]

"It's no good having a world-class procurement team if you are procuring for the wrong outcomes designed six months ago".
Senior Project Management, Major Consultancy

Being able to look at the broad picture and understand how different priorities can come together to deliver a coherent outcome is therefore essential. As different organisations focus on specific components or industries, and there are few organisations which design initiatives from a purely programme perspective, raising awareness of these different initiatives and their often significant overlap can avoid major project stakeholders from reinventing the wheel.

Collaboration therefore needs to happen upfront between clients, contractors, and the supply chain, as well as the broader community and end service users. **The Sourcing Playbook, IPA Routemap**, and other documents all highlight the importance of the public sector establishing and maintaining strong relationships with suppliers over the long -term, and some excellent examples of cross-sector collaboration have tangibly demonstrated the benefits of doing so.[65]

Team Tempest

The constantly changing defence landscape and the long delivery times for complex military projects provides a challenging set of asks for any major project, particularly one involving cutting-edge technologies and security demands.

As outlined in the Defence and Security Industrial Strategy and the Integrated Review, industry innovation and thinking plays a vital role in enabling the capabilities to meet these demands, particularly in areas such as the Future of Combat Air.

Team Tempest – a consortium including core industry partners BAE Systems, Leonardo UK, MBDA UK and Rolls-Roybe, alongside collaborative partners such as GEUK, QinetiQ, Thales UK, and Spirit– is demonstrating how close industry collaboration with the public sector during the early design phase can provide significant benefits to the project and more broadly to larger social or economic objectives.

As well as delivering a sovereign Combat Air capability, independent analysis shows Tempest is expected to deliver more than £26bn to GDP between 2021 and 2050, as well as supporting 21,000 jobs per year in the industry between the start of the development programme into operational service (2026-50).

Considering the big picture and allowing suppliers to work in collaboration from the outset can ensure that not only does the client receive the best possible outcome from a major project, there is a lasting contribution to the UK beyond the benefits of the actual programme.

Key lesson: By working closely and considering the bigger picture, major projects can make a lasting contribution to the UK beyond the project itself.

This also means recognising a major project as a partnership and not a transaction, and dropping the adversarial commercial policies which erode trust and remove open and honest interactions.[66] The commercial model, contracting strategy, and procurement approach all need to be interlinked and designed to translate the intended outcomes and objectives into contractual arrangements which incentivise performance across the supply chain aligned to these outcomes.

"Everyone needs to recognise that we are going into business together, not a trading relationship".

Senior Consultant, Major Consultancy

However, whilst an improvement on previous efforts, supplier days or market engagement events still fail to provide a forum for open and honest discussion between clients and suppliers at an early stage of the process. Concerns about undue influence or potential challenges often lead public sector teams to avoid any dialogue until after the design has already been completed.

This approach may work for common goods and services procurements, but it is entirely inappropriate for major projects which may cost billions of pounds, cover decade-long lifespans, and be dependent entirely upon all stakeholders working together to deliver the desired outcomes.

Partnership delivers stronger projects than transactions, and interviewees stated that when clients and suppliers work together from design through to delivery, the chances of a successful project increase significantly. Co-design also opens up space for innovative solutions and the best outcomes to be built in from the outset. The role of early market engagement and involvement of suppliers in design has been encouraged by the **Commercial Playbooks** published by the Cabinet Office and other guidance by the ICE and IPA.

Recommendation

To improve the collaboration, co-design, and co-ownership of major projects, all public sector clients and suppliers should adopt the use of Early Engagement Forums to ensure a dialogue during the design phase of a project and the creation of strong partnerships which can deliver the intended outcomes.

Systems thinking to break siloes and share improvements

Business cases are too often done backwards on major projects, with the solution being thought of before the outcomes.

Interviewees were clear that clients need to identify the intended experiences and outcomes, before even beginning to design the project or its outputs, and that the project design is most effectively done through an iterative process involving both client and suppliers.

This approach to major projects can help afford clarity and transparency to the decision-making processes involved, including providing all stakeholders with a firm understanding of what is being delivered, for whom, and why. A single clearly defined goal can help act as a framework for the more detailed commercial and contracting relationships.[67]

Many suppliers, clients and academics referred to the success of a systems thinking approach to deliver truly meaningful and well-designed projects, with reduced complexity.[68] **Project 13**, for instance, highlights the importance of systems, not only within a project but looking outward as well and the **IPA Routemap** also contains an element on systems integration.[69]

Too often, clients define the requirement and then task contractors with delivering. Projects like the A14 show that when contractors are treated as equal partners in a project and provided with co-ownership, the investment and potential outcomes in a project increase significantly, as well as generating a more realistic attitude to risk management.[70]

A14 Upgrade

The A14 Upgrade remains the only £1bn+ project in Europe to be delivered on budget and ahead of schedule and this success has been attributed to the cultural and digital initiatives put in place by the partners involved. Involving over 14,000 people and a five-year timeframe, Highways England and partners Costain, Skanska, Balfour Beatty, Atkins and Jacobs together set a new standard for major project delivery during the widening of a 21-mile stretch of the A14 in Cambridgeshire.

From the outset, a "one team" approach was taken to support collaboration and interoperability, ranging from the use of the same IT systems for all site offices, to a top-down competency framework for behaviours and leadership. The suppliers and Highways England established a cloud-based platform to hold project data and provide a single, accurate, and transparent source of progress and performance data, and a specific schedule for timely updates. The result of this integration and collaboration was that informed and timely decisions could be made on the go, driving efficiency across the project and bringing all partners into the conversation in an effective forum.

Already widely praised, the A14's approach to collaboration and data has set a new benchmark for major projects and its approach and tools should be adopted across the GMPP more broadly. Combining cultural methodology, digital expertise, and effective data leverage – for a minimal investment cost – can deliver significant improvements across the value and efficiency of major projects.

Key lesson: When cultural and digital initiatives are used to develop an integrated way of working between suppliers and clients, major projects can be delivered more efficiently and effectively, and lessons learnt for the future.

Clear responsibilities and roles as the framework for success

Major projects succeed when everybody involved knows precisely where responsibility lies, and how all stakeholders work together. This applies from the top down through effective governance and leadership in the shape of a capable owner, but also from the bottom up through a well-informed and capable workforce.[71]

When the UK was faced with the challenge of delivering COVID-19 vaccines to its whole population, including design, manufacturing, and distribution, in a short space of time, it was the role of a genuinely collaborative public-private partnership that delivered results.

The Vaccines Taskforce

The international impact on lives and livelihoods caused by the COVID-19 pandemic will not quickly be forgotten, but thanks to the unprecedented demand for vaccines, we can learn from a model for a truly collaborative approach to delivering time-critical crisis projects.

Launched in May 2020 under the remit of the Department for Business, Energy, and Industrial Strategy (BEIS), the UK's Vaccine Taskforce has since proven to be one of the single most effective major projects in the UK's history, seeing a widespread international vaccination programme made possible only by effective cross-sector working.

As a model for future engagement between industry and government, the Taskforce brought together multiple stakeholders in the end-to-end process with a clear central mission and a high level of transparency and information flows.

The result has been the development, production, and roll-out of a vaccine on previously unprecedented scales and timeframes, made possible only by the partnership approach and the speed with which issues could therefore be identified and resolved.

Whilst the specifics of the Vaccine Taskforce's working model cannot be replicated for every major project, there are some lessons which should be closely studied, and the step change seen in government-industry engagement should form the basis of future public-private partnerships.

Key lesson: When government and industry work in genuinely collaborative partnership from end-to-end in a major project with very clear objectives and outcomes, the chances of success and the best outcomes increase.

Clear communication strategies between individual stakeholders should underpin any understanding of responsibilities, including fundamental delineation of who is responsible for communicating what and to whom. These reporting structures up and down the project hierarchies permit open and timely awareness and dialogue around project-critical issues, including the raising of red flags, at a point when they are not jeopardising the project as a whole.

A **Development Agreement**, as used on HS2, provides a useful mechanism for consolidating and clarifying all of these principles.[72] A clear and effective Development Agreement not only clearly delineates the responsibilities and roles between multiple parties involved in delivering a major project, but also provides a governing mechanism for the relationship as it progresses.

Recommendation

To embed clear communication and governance structures and increase efficiency and collaboration, all public sector clients and prime suppliers should sign a "Development Agreement" at the outset of a Major Project, clearly laying out the roles, responsibilities, and purpose-led outcomes of the involved parties. The Development Agreement should include the roles and co-operation mechanisms, the delivery of the core programme, the funding model, governance structures, costings, change mechanisms, security conditions (e.g. confidentiality, Freedom of Information, Data Protection), and other general conditions.

Embracing budget realism increases the chances of project success

Interviewees noted that one of the most damaging and persistent issues facing major projects is the lack of upfront realism about the budget required and the understanding of the risks involved with a project. This leads to untenable situations where either significant budget increases are required to continue delivering a project, or cost-cutting exercises undermine the delivery of the intended outcomes.[73]

Being realistic and open about the budget upfront can however lead to further challenges, particularly if a specific figure is provided during the early phases of a project, which would then be used as the comparison against which all revisions are based. It is challenging if not impossible to fully cost a project to a specific figure before delivery begins.

Several successful projects have implemented the use of progressively narrowing ranges for both budget and delivery date which helped overcome many of these issues, and this approach has since been encouraged by the *Public Accounts Committee* and adopted in IPA guidance.[74]

This involves beginning with a larger but still ambitious range of potential costs at the start of a project, and continuously revising these figures as a greater level of detail, data, and information becomes available through the progression of the project. The result is that by the start of the delivery phase, for instance, an accurate figure has been ascertained that reflects changes that may have occurred both in the design but also in broader extenuating factors that could influence delivery. Whilst already encouraged by the IPA in their **Cost Estimating Guidance**, a similar approach for timeframes and expected completion dates would be welcomed by stakeholders

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Recommendation

To continue driving ambitious targets whilst also recognising the complexities of major project delivery, HM Treasury and the IPA should encourage the uptake of progressively narrowing ranges to replace fixed time schedules and costs, particularly during the early stages of a major project.

Racing to the best, not the bottom

Many suppliers feel there is a persistent belief within the public sector that accepting the lowest cost compliant bid reduces the risk shouldered by the client, and that clients are sometimes still faced with a difficult challenge of procuring for quality whilst facing tight budgetary constraints.[75] This race to the bottom on price undermines the stated objectives of major projects to deliver social, economic, and environmental value. It further puts the supplier ecosystem under pressure to deliver at sometimes unrealistic margins, with little scope for flexibility or innovation, or limited ability to invest in skills or R&D.

Clients and suppliers should work more closely together to ensure that the value of a project becomes the deciding factor in procurements, rather than lowest upfront cost.[76]

Part of this issue could be solved by recognising the value of digital assets and pushing onto balance sheets to maximise the value of major projects.

The upcoming **Procurement Bill** should make clear that contracting authorities are encouraged to award contracts and use their commercial partnerships to deliver social value, rather than just the lowest possible expenditure. A change from Most Economically Advantageous Tender to the Most Advantageous Tender would provide clarity on this point and reduce the risk-aversion that often accompanies the procurements for major projects.

External support is vital to driving up commercial and delivery capabilities

Improvements in efficiency and value across major projects cannot only be delivered by those intrinsically involved in delivery. The whole landscape of major project stakeholders must also be involved in encouraging and facilitating the adoption of best practice. These include professional bodies, membership organisations, and public authorities, as well as the clients and suppliers themselves.

Interviewees reflected that whilst the IPA plays an essential role in assessing, inspecting, and ensuring lessons are learnt from the performance of major projects, both through individual project scrutiny and the publication of guidance, there remains a need for a practical central team to provide on-the-shoulder support throughout the lifecycle of a project.

"Nobody identifies the necessary lessons as well as the IPA and sometimes the NAO [...] but it would be useful to have some of those lessons given back to us whilst we're doing the project and not afterwards"
Senior Project Leader, Infrastructure Client

Many valuable lessons and a significant amount of institutional knowledge about the GMPP is already collated within the IPA. Disseminating these insights typically takes the form of policies, guidance, and workshops, such as the **IPA Routemap**. Yet there is usually a delay between the relevant lessons being identified and analysed, and their adoption by practitioners. A Project Support and Delivery Unit would act as a focal point for the IPA's expertise and knowledge, and provide an integration tool for programmes to access and embed learnings. It could draw upon support and resources from private sector colleagues to ensure an integrated and cohesive programme approach.

Recommendation

To protect outcome realisation, the IPA should establish a Project Support and Delivery Unit to provide on-the-shoulder support to clients and suppliers during the delivery of major projects.

Programmes with Purpose Reference Guide – Efficiency and value

The Green Book (HMT, 2021) – Link

Policies

Transport Infrastructure Efficiency Strategy (DfT, 2019) – **Link**

Guidance

Green Book supplementary guidance: Project/Programme Outcome Profile (IPA, 2021) – **Link**

Lean sourcing: guidance for public sector buyers (CO, 2015) – **Link**

Contract management professional standards (CO, 2019) – **Link**

New Models of Construction Procurement (CO, 2014) – **Link**

Model services contract (CO, 2020) – **Link**

Best practice in benchmarking (IPA, 2021) – **Link**

Cost Estimating Guidance (IPA, 2021) – **Link**

Design Principles for National Infrastructure (NIC, 2020) – **Link**

The value of design in infrastructure delivery (NIC, Expedition Engineering, Marko&Placemakers, 2020) – **Link**

Best practice

Value Toolkit (Construction Innovation Hub, 2021) – **Link**

Measures for successful outcomes: the five capitals approach (ACE, 2020) – **Link**

Making the Total Value Case for Investment in Infrastructure and the Built Environment (ARUP, 2018) – **Link**

Investing in infrastructure: Securing the finance to build back better (CBI, 2020) – **Link**

Fine margins: delivering financial sustainability in UK construction (CBI, 2020) – **Link**

Human Learning Systems: Public Service for the Real World (Centre for Public Impact, 2021) – **Link**

Realising benefits from UK government ICT projects (Cha, 2017) – **Link**

The End of the Beginning: Achieving Value for Money from Government Digital Transformation Projects (Cha, Dzandu, Winch, 2021) – **Link**

Procuring for value: Outcome based, transparent, and efficient (CLC, 2018) – **Link**

Building flexibility: New delivery models for public infrastructure projects (Deloitte, 2008) – **Link**

Voices on Infrastructure: Major projects: Improving the odds of success (Global Infrastructure Initiative, 2018) – **Link**

Reducing the gap between cost estimates and outturns for major infrastructure projects and programmes (ICE, 2019) – **Link**

Using targets to improve public services (IfG, 2021) – **Link**

Commercial and contract management: insights and emerging best practice (NAO, 2016) – **Link**

Efficiency in government (NAO, 2021) – **Link**

Major transport infrastructure projects (Transport Committee, 2021) – **Link**

How to: build a more flexible culture to enable major project success (T&T, 2021) – **Link**

Delivering innovation and digital transformation

The scale, complexity, and duration of major projects in the next decade requires intelligent systems and tools to manage the various systems, applications, data flows, handovers, testing regimes, and risks involved. Designing and setting up a 'digital by default' programme delivery system, that is both resiliant and strong, is vital to managing this complexity. Equally important is ensuring that innovative technologies, solutions, and approaches are delivered to the front line of project delivery as effectively as possible.

Figure 11 Programmes with Purpose Reference Guide – Delivering innovation and digital transformation
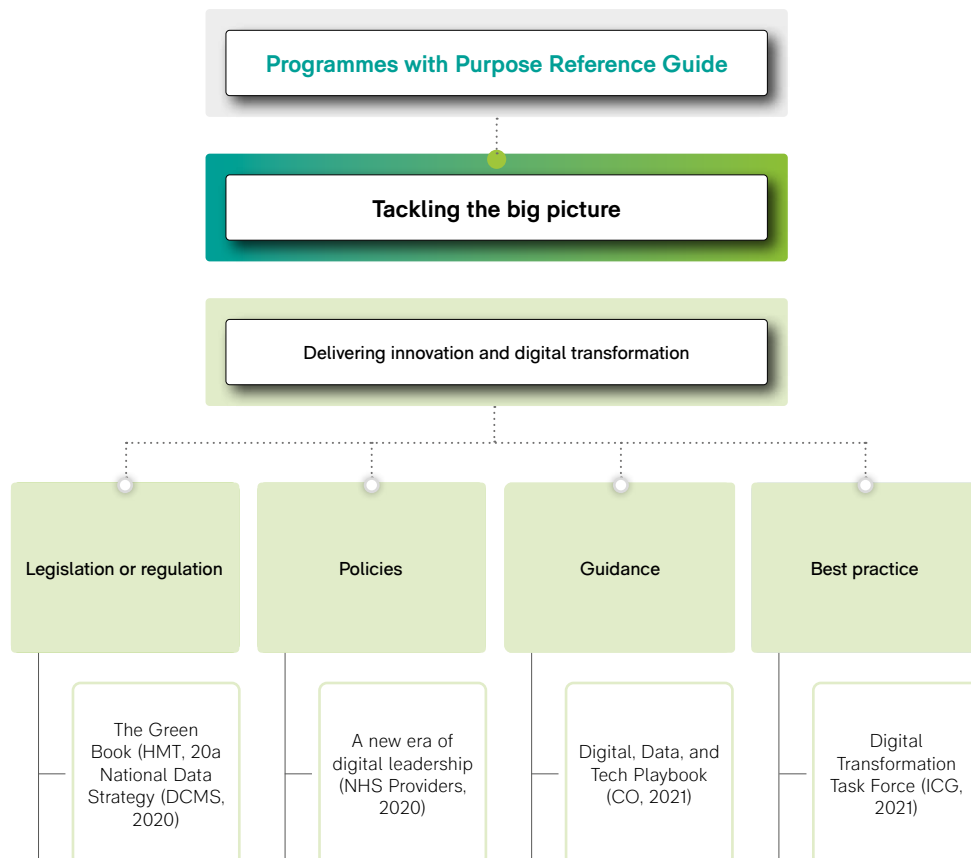
From cutting-edge military hardware to the transformation of legacy ICT systems within the public sector, the GMPP contains a number of examples of where government is seeking to utilise innovation and new technology. For both suppliers and clients, this desire provides challenges of its own including on how to balance the space for innovation with the risk that can come with adopting new approaches.

Yet digital transformation has the potential to deliver significant benefits not only in outcomes, but in how projects are delivered.[77] The rewards for implementing digital change will generate much wider benefits for the UK economy, society, and the environment by making major projects more efficient, effective, and exportable.[78]

Strong partnerships are essential to enabling innovation

The nature of a free-market economy means that businesses are constantly having to horizon-scan in order to remain at the forefront of the competition. In many cases, this forward-looking approach means they are early adopters of technologies that can also benefit the public sector.[79]

Yet the risk aversion of a public sector that is ultimately accountable to the taxpayer can lead to situations where not enough emphasis is placed on learning from industry what is possible and what could be delivered. Clients specify what they want to be delivered, instead of asking what possible solutions there are to reach their target.

This approach stifles innovation and fails to fully engage the levels of the supply chain that could help solve the public sector's problems in a more cost- and resource-effective way. Many major projects face a perennial issue – stick with tried and tested but sometimes outdated solutions, or try something innovative and new which could deliver significant benefits but may come with more challenges, such as insurance or contractual barriers. From the technology around railways to the digital technology and software underpinning the public sector, this dichotomy can present a significant barrier to new technology adoption.[80]

The public sector should look to engage with suppliers earlier on in the design process and be more open to listening to examples of where businesses have already used new or innovative approaches to overcome the challenges faced. Encouraging both open dialogue and the uptake of proven examples of success can help clients and suppliers to deliver better major projects, as shown with the A14 Upgrade programme or HMRC's **Estates Digital Blueprint**.[81]

HMRC Our Future Locations Programme

Major projects go right when they are set up correctly from the outset, and digital and data are playing an increasingly important role in establishing the best foundations.

Her Majesty's Revenues and Customs (HMRC) and their private sector partners have put a "digital and data first" approach at the heart of the Future Locations programme, involving the construction of new regional HMRC hubs across the UK.

Through their Estates Digital Blueprint, HMRC and 15 firms involved in the construction and facilities management of these sites – including Aecom, Sodexo, Mace, **Turner & Townsend**, and Wates – have signed a digital charter and promised to "maximise the use of data and implementing the latest digital technology" to ensure the construction of the hubs are as effective, efficient, and informed as possible.

By establishing upfront the expectations on all sides as to the role of digital technology and data, this charter helps ensure that all involved stakeholders are able to embed a consistent and constructive approach throughout the project's lifecycle and make digital and data core components of any designs and discussions.

The intended outcome is to reap the benefits of a joined-up approach to data collection and analysis to show how these hubs can be proactively and responsively designed to meet the needs of the staff working in them from the outset.

More major projects would benefit from concerted efforts to embed a clear and consistent approach to key drivers of change – such as digital technology and data – from the initial project design, and to maximise the likelihood of these useful insights being used effectively.

Key lesson: Digital transformation is most effective when it is agreed and designed for upfront, and all stakeholders buy into the ambition from the outset

Suppliers stated that the best major projects have involved an upfront and clear engagement between stakeholders about what technology would be most appropriate to provide a solution, taking into account concerns about safety, security, and length of life. Ultimately, it is most beneficial to both client and supplier to have a clear understanding about what is possible and what is feasible, rather than what could be done.[82]

Multiple guidance and policy documents suggest that for particularly innovative services or goods, pilot schemes should be undertaken to test the validity and applicability of these models, whilst also reducing the risk involved.[83] Yet for major projects, piloting is often challenging or unfeasible given the large-scale delivery model and timeframes. Consequently, they are more likely to pursue what they deem a lower-risk option.[84]

Whilst individual circumstances will dictate the approach to innovation in major projects, it is clear from existing practice that it need not be a binary choice between proven or new. This early engagement can help identify solutions and understand their prior applications, as well as developing more complete risk profiles.[85]

Digital transformations driving improvements

A more consistent and informed use of data by suppliers, clients, and users can deliver significant benefits for major projects as a whole. Initiatives like the **UK BIM Framework** and the **National Digital Twin Programme** have already established how a coherent and standardised approach can work, and the benefits from doing so for major projects are sizeable.[86]

A recent report by the Project Praxis Group at the WMG, University of Warwick, suggests that better use of *Project Data Analytics* – i.e. "the use of past and current project data to enable effective decisions on project delivery" - has the potential to deliver up to £23bn in annual savings across UK infrastructure projects.[87] It notes that currently data is largely used to describe what is happening (descriptive analysis) rather than predicting future performance (predictive analytics).

Projects should establish clear performance checkpoints based on this data at specific intervals throughout the life of a project, such as the one, two, and three year points. These checkpoints should offer an opportunity to establish the need for a reset in either the commercial or operational components of a project, based on the data.[88]

The complexity of major projects, which involve multiple stakeholders, complicates the situation. Suppliers and clients may capture data in a way best suited to their individual needs, rather than the project as a whole.[89] Multiple interviewees argued that getting organisations to share data and models throughout their supply chains needs to become far more commonplace than it currently is.

Digital transformation can therefore also drive efficiency across the project, particularly if it is designed as an intrinsic part of a commercial deal and recognised as a valued part of the project. A consistent and approved approach to data can help with project reviews in shorter timeframes, as well as the accurate benchmarking of performance.[90] Too often different contributors to a major project use disjointed systems and approaches which then create further barriers to collaboration. Putting in place a common agreement would help coordinate and standardise the approach and encourage clients and suppliers to continue developing innovative digital solutions.

Recommendation

The IPA should create a standard Digital and Data Transformation Charter which can be amended and then signed by major project stakeholders at the outset of a project, to ensure systems, data and integration tools are of a consistently high quality, shared effectively, used efficiently, commercialised where possible and appropriate, and given the necessary securities to keep it safe.

The cost of flexibility

Projects across the GMPP are vulnerable to the changes in technology which are happening at an increasingly rapid rate. These changes make it important for clarity around the innovation and technology decisions made during the design phase to be consistent throughout the lifecycle of the project. The consequence of choosing to change the technology utilised during a contract is additional cost.[91]

In some cases, these changes during the life of a project are entirely necessary and this flexibility has to be contractually embedded between all parties. For instance, a number of military capability major projects have to respond to the latest developments from militaries around the world in order to retain their strategic effectiveness. If not properly understood and prepared for, these changes can be damaging not only to the project but to the partnerships involved.

Putting in place processes to avoid these changes in the first place – either by accelerating the procurement or building in flexibility through cost and time requirements – can result in much better outcomes than responding reactively.

Skynet 5

On some major projects, the sheer breadth of the ambition can make coordination and alignment challenging for both clients and suppliers unless a clear operating structure can be established.

The ambitious Skynet 5 programme sought to deliver military-grade communications satellite systems and ongoing support for the UK's armed forces, and was a well-structured MOD contract with clear delivery plans and accountability mechanisms.

Delivered through a Private Finance Initiative and involving a range of suppliers from those involved in constructing the satellites to supporting the ground equipment and staff, it was Airbus Defence and Space who were ultimately responsible for making it all work.

Whilst contractually a single prime supplier, in practice Airbus and other contractors including Serco, CGI, Motorola, and BAE Systems worked in conjunction at a behavioural level, with the different partners delivering together rather in competition.

The result was a true partnership approach to a turnkey project which demonstrated the value to major projects of a clear and consistent approach to accountability, whether driven by the client or the contractors themselves.

Key lesson: When the intended outcomes are cutting edge and multiple suppliers are working together to deliver, it is vital to ensure the right leadership and governance structures are in place to deliver the best chance of success.

Having this oversight and control to be flexible requires not just strong commercial and contracting processes, but also a capable owner with visibility of those changes and confidence in the teams delivering them. High-turnover of senior figures within projects, on both the client and supplier side, can lead to worse outcomes and a higher risk of project challenges.[92]

Programmes with Purpose Reference Guide – Innovation and digital transformation

Legislation or regulation

National Data Strategy (DCMS, 2020) – **Link**

Policies

Cyber Essentials (National Cyber Security Centre, 2021) – **Link**

A new era of digital leadership (NHS Providers, 2020) – **Link**

Guidance

Digital, Data, and Tech Playbook (CO, 2021) – Link

Behaviour change and infrastructure beyond Covid-19 (NIC, 2021) – **Link**

Best practice

UK BIM Framework (BSI, CDBB, UK BIM Alliance, 2021) – **Link**

National Digital Twin Programme (Centre for Digital Built Britain, 2021) – **Link**

White Paper: Accelerating Digital Transformation from Within (ClearPeople, 2020) – **Link**

Digital Transformation Task Force (ICG, 2020) – **Link**

The challenges in implementing digital change (NAO, 2021) – **Link**

Digital Services at the Border (NAO, 2020) – **Link**

Digital transformation in government (NAO, 2017) – **Link**

Decoding digital transformation in construction (McKinsey & Company, 2019) – **Link**

The Smart State: Redesigning government in the era of intelligent services (Policy Exchange, 2018) – **Link**

Skills are vital to a successful delivery and lasting positive legacy

Good policy should lead to good practice. Yet the embedding of policies are largely dependent upon having a skilled, capable, and well-resourced workforce able to understand and implement the requirements on a specific case basis. This translation of "paper to practice" is challenging, not least because of the scale and ambition of many major projects compared to ordinary government programmes, and the breadth of different industries, stakeholders, and outcomes involved.

Figure 12 Programmes with Purpose Reference Guide - Skills are vital to a successful delivery and lasting positive legacy
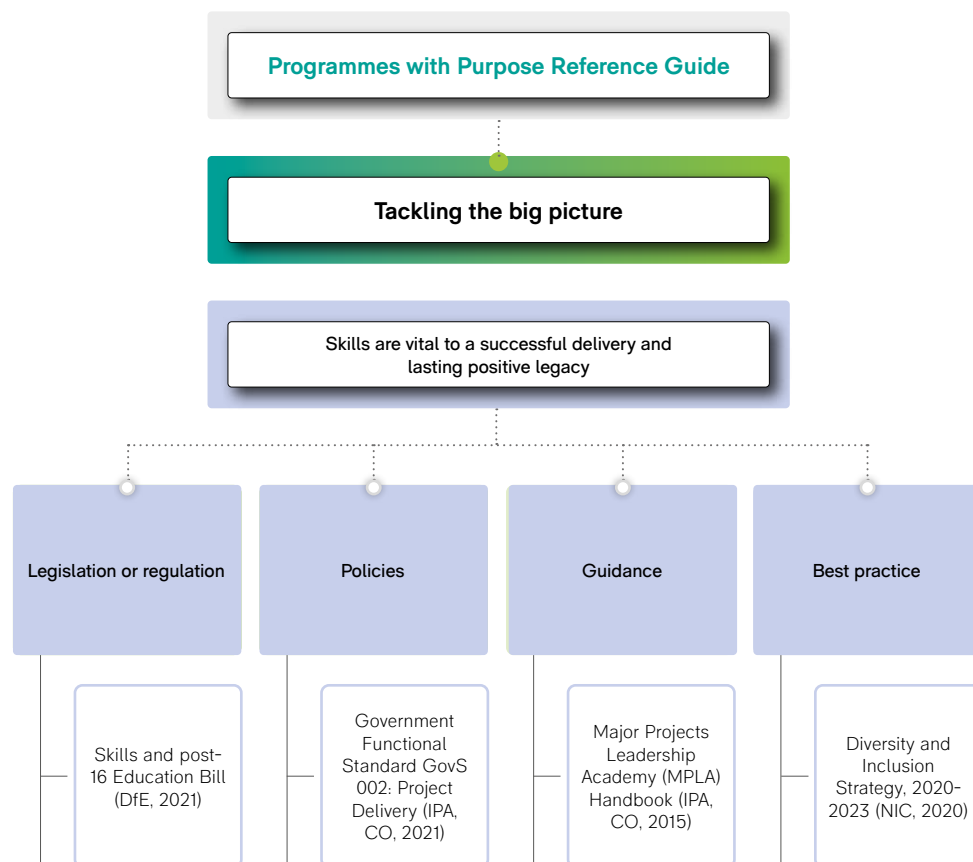
A skilled, confident, and competent public sector is essential to major project success

The public sector has historically struggled to develop and maintain a capable capacity for delivering major projects, due in no small part to the scale of these projects and the diversity of intended outcomes they encompass.[93] Given the significant variation between departments, there are a number of staff across the public sector who may be involved in only a single major project during their career, and those who may deal with multiple projects per year. Establishing a fundamental base of skills and understanding is a key theme of several IPA and industry-led initiatives, including the **Government Projects Academy** and **Government Project Delivery Framework**.[94]

The **Project 13** initiative has similarly recognised the holistic role of multiple skilled components in delivering major infrastructure projects, with lessons applicable for major projects more broadly.[95] Advocating for an enterprise model, Project 13 identifies the equally important need for a Capable Owner and an equally capable ecosystem of suppliers, advisors, and an integrative team.

Figure 13 Capable Owner enterprise matrix, **https://www.project13.info/about-project13/**
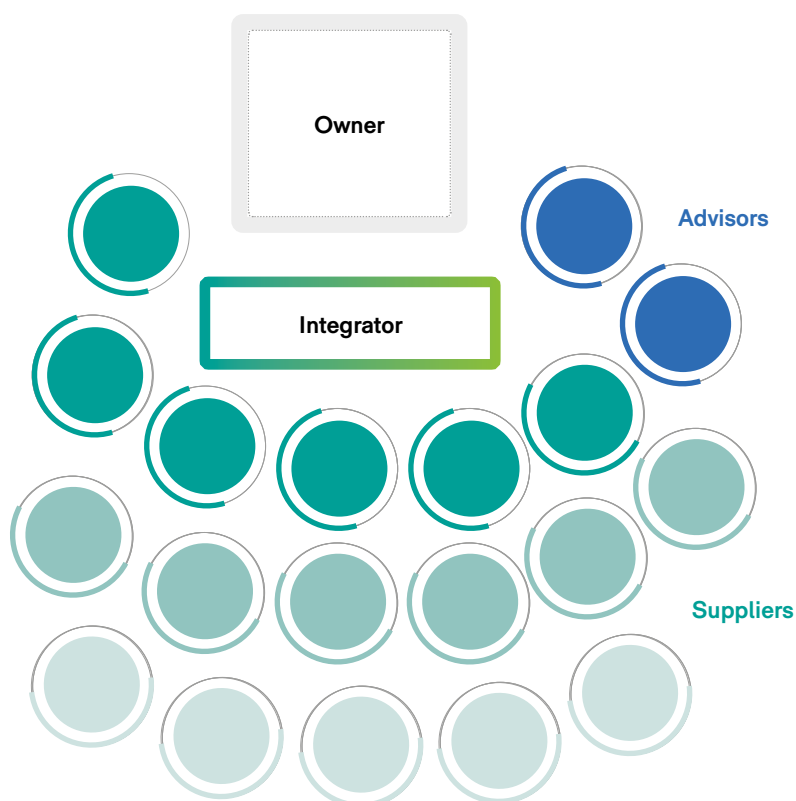
A centralised pool of knowledge, delivered in partnership with private sector support and expertise, would further drive exemplary behaviours and help share knowledge.

The IPA has already stepped up to begin filling this role and has made great strides forward in creating both the person-orientated repository of knowledge across their teams, as well as publishing the guidance and policies needed across the wider public sector and industry.

These efforts include at the top of major project teams. **The Major Projects Leadership Academy** (MPLA), run by the IPA and Oxford Saïd Business School, was established in 2013 precisely because an opportunity had been identified to improve the capabilities of senior civil servants in leadership positions in major projects. Utilising the **MPLA Competency Framework,** the Academy has since managed over 500 graduates and produces more each year.[96]

However, there is sometimes significant turnover within the senior governance of major projects, leading to a frequent change in direction for the project and considerable uncertainty for partners involved in the project. Providing a minimum term commitment for project leaders would provide a significant amount of consistency and clarity for the rest of the project teams, thereby improving the likelihood of positive outcomes and delivery against targets. Interviewees noted that SRO positions can sometimes act as a barrier to career progression, so it would also be necessary for the parent organisation to review the opportunity for in-role promotion.

Recommendation

To help provide end-to-end consistency and clarity of direction throughout a major project, the IPA and Cabinet Office, with insights from leading private sector partners, should explore what incentives and other changes could help reduce churn amongst senior leaders in major projects. This could include greater opportunity for in-role promotions and progression based on performance against pre-defined criteria, or suggest minimum term appointments for both public and private sector leaders.

More investment and support in the IPA, as well as a greater engagement between the IPA and project stakeholders in an end-to-end approach to major projects, will help embed the best practices across the lifecycle of projects. Cabinet Office and the IPA should seek to further expand their engagement with industry and the wider public sector to not only provide assistance on individual projects, but support in the general upskilling of departments and teams.

There are 4,000 commercial staff across central government responsible for managing and delivering procurements and contracts, part of a cross-government network called the Government Commercial Function.[97]

Ensuring this upskilling of the broader public sector should not be entirely dependent on a training programme for civil servants, although the significant improvements seen across commercial teams thanks to efforts by the **Government Commercial Function** shows how important focused programmes can be.[98]

Interviewees emphasised that government needs a cadre of skilled individuals and teams to deliver major projects on a permanent basis. An in-house approach to this – as is being undertaken at delivery bodies like Network Rail, National Highways, and DE&S – has led to marked improvements in the likelihood of successful programmes of work.[99]

PDP with DE&S

The most effective approaches to major projects involve the client putting in place at an early stage the skills, resources, and capacity needed to deliver the project successfully.

Given the rapidly changing demands that a public sector client may face, cross-sector partnerships can often help tackle any shortfall in commercial or project management capabilities, whilst also upskilling the client themselves in the long-term.

One such joint venture between **Turner & Townsend**, Jacobs, and Defence Equipment & Support (DE&S), the MoD's delivery body for complex projects, will ensure that the UK's armed forces get access to the vital equipment and services needed whilst also delivering value for money for the taxpayer.

The Equinox JV enables DE&S to draw upon specialist resources, products, and services as and when required, delivering the best outcomes from challenging projects.

As per the best practice laid out by Cabinet Office, public bodies should constantly seek to assess whether they have a clear understanding of their core skills around major projects, and take steps to address any shortcomings before seeking to deliver a major project.

Key lesson: The public sector should draw upon the expertise and experience of the private sector to help boost capacity and embed skills around major project delivery.

The public sector should also seek to complement and expand their own capacity, by drawing upon the focused resources of the private sector on a longer-term partnership basis. By bringing to bear dedicated specialist support, the private sector is able to quickly boost the resources, capacity, and expertise of government teams, not only for individual projects but more broadly to support the ongoing delivery of programmes of work.

To create a clear delineation of responsibilities across the public sector, and identify exactly where additional support is needed, the new **UK Infrastructure Bank** should absorb some of the responsibilities of the IPA. This would help clearly clarify the responsibilities and remit of both the UKIB and IPA, as well as freeing the IPA up to focus on supporting major project delivery.

Recommendation

To create additional capacity within the IPA for the support of major project delivery, responsibility for the UK Guarantees Scheme and oversight of the National Infrastructure Pipeline should be transfered to the UK Infrastructure Bank. This would enable the IPA to focus more deliberately on supporting major project delivery and to provide a greater emphasis on embedding and sharing learning on a rolling basis.

A diverse and inclusive workforce ready for the future

The private sector needs to have a workforce that can not only deliver current major projects, but also to be prepared for future demands. Although investment in training and skills is good, some sectors and individual businesses are still negatively affected by ultra-competitive relationships. Many sectors involved in delivering major projects are facing a skills and labour shortages. One estimate for the energy and utilities sector, for instance, identified 221,000 vacancies that will need to be filled over the next decade.[100]

Businesses and clients need to become more confident at sharing practices between sectors, both good and bad, through forums like the CBI and the Infrastructure Client Group. Government and industry need to work more closely to identify and put in place engagement plans for specific skill sets and careers that will be necessary to deliver the project of the future, as with the Department for Transport's **Transport Infrastructure Skills Strategy**.

A comprehensive skills pipeline from school-age children to the labour market is needed to help put in place the conditions for strong growth in coming years. Labour shortages in 2021 have already shown the significant impact that poor workforce strategies can have on the UK's prosperity. **Over 75% of businesses surveyed by the CBI in September 2021 reported access to labour as a threat to the UK's labour market competitiveness.[101]**

For major projects spanning the breadth of the UK and requiring thousands of workers, such as the New Hospitals Programme, this lack of a skilled and capable workforce can be a significant blocker to success from the outset.

New Hospitals Programme

Whilst public support from government can often open the door for major programmes to get green lit, it is the private sector who are called upon to deliver these political ambitions.

The aspirational £3.7 billion New Hospitals Programme promises to deliver 40 new hospitals across England by 2030 in one of the largest concerted NHS construction programmes in decades, requiring a workforce up to the task.

For the companies involved in designing, constructing, equipping, and maintaining these hospitals, being able to put in place a workforce capable of meeting these demands will be vital to delivering the success needed.

From the senior leadership down to the frontline workers, firms like the Wates Group are investing in their teams to not only deliver the hospitals in time, but also to utilise the latest and most innovative Modern Methods of Construction when doing so.

Given the time required to identify, recruit, and prepare workers for specific projects, the early visibility around the New Hospitals Programme has provided a sufficient run-in period for suppliers to create the right workforce and increase the likelihood of the best project outcomes.

Other major projects could also benefit from ensuring suppliers are given early visibility and ample time to create the best conditions for success.

Key lesson: Early visibility of upcoming potential work gives suppliers the time and capacity to prepare, both in terms of workforce and strategy.

Equality, diversity, and inclusion need to be at the heart of this future workforce.[102] Research has shown that diverse organisations are more productive, innovative, and collaborative, as well as more attractive places to work.[103] Industry and clients involved in major projects already recognise the importance of reflecting the diversity of the communities and regions they work with, and many are part of initiatives like the **Change the Race Ratio** which seek to embed diversity and inclusion throughout their businesses.[104]

The **NIC Diversity and Inclusion Strategy 2020-2023** shows there are great lessons to be learnt from businesses and clients already actively driving a more diverse workforce, and that supporting diversity and inclusion in all forms can achieve the best outcomes if sectors work together to collaborate and share learnings.[105]

Learning the lessons of current projects will deliver better major projects in the future

Major project stakeholders need to improve in learning the lessons from previous projects, but also embedding those lessons into practice.

In scrutiny of major project delivery, the Public Accounts Committee noted that the IPA and NIC should work more closely with the public sector to ensure that vital insights become common practice as quickly and efficiently as possible. The report highlighted the work around cost estimates as a good example of how this responsiveness should happen, and it is reassuring to see the IPA taking the initiative in translating lessons into practice.[106]

The lesson-learning responsibility falls on individual project managers and owners as they are the people most likely to have the data and insights necessary for truly constructive analysis. The IPA, NAO, and other organisations can often take a holistic view and draw out key conclusions.[107] Initiatives from industry clients and suppliers, both collectively like Project 13, and individually like the Learning Legacies carried out for the 2012 Olympics and Crossrail, provide vital forums for change even during the lifespan of a single programme of work.

Anglian Water's Alliance Model, for instance, has delivered significant benefits by not only supporting an innovative approach to a major project, but also embedding ongoing learnings into new operations.

Anglian Water Alliance Model

Since 2015, Anglian Water has taken a constructive new approach to project partnerships and set a new benchmark for collaborative working.

With over six million customers, 38,000km of water pipes and more than 1,100 water recycling centres, Anglian Water has a significant capital investment programme to maintain and improve its infrastructure.

The provider established a series of partnership arrangements covering different parts of its work programme, including the @One Alliance and the Strategic Pipeline Alliance. Each brings onboard partners such as Balfour Beatty, Skanska, Costain, Mott MacDonald and others for a long term, integrated approach to project delivery. This dispenses with traditional client/contractor relationships that can result in learning and experience being lost each time a new job is started with a new partner.

The @One Alliance, for instance, brings together consultants, contractors and Anglian Water teams who will deliver more than 1,000 projects worth about £1.4billion, between 2020-25. The structure of the Alliance ensures all partners are integrated, collaborate towards a common goal, and deploy best-for-task resources to really unlock innovation. The result is improvements in areas such as standardisation across projects, significant cost savings, and huge capital carbon reductions. This is only possible because of the establishment of common goals underpinned by an innovative financial framework.

Turner & Townsend's longstanding relationship with Anglian supports delivery of outperformance against a backdrop of increasing environmental, economic and regulatory challenges. Anglian's approach to Alliancing is now emulated widely, with the collaboration it drives delivering benefits for some of the largest infrastructure projects globally.

Key lesson: Innovative approaches to partnerships can increase value for money and deliver significant sustainability benefits across major programmes, and it is vital best practice is shared across industries.

A greater cross-sector collaboration when embedding lessons would help avoid some of the loss of impact that come from client/supplier siloes. Too often, lessons learnt about a major project are done at an operational level and not a programme level.

Taking this broader view and moving forward with the findings will help ensure that the workforce retains and further develops its skills and capabilities as it moves onto the next project. The IPA should be tasked with establishing a major project review process which will also be focused not on scrutinising what has gone wrong, but rather what went right and the Plan for Progression will clearly set out how learnings can be embedded in government going forward, as well as shared with broader stakeholders.

Recommendation

The IPA should establish a project review team to assess the lessons learnt and longer-term impact of major projects, to carry out a review one and three years after project delivery has completed, and to produce a project-specific Plan for Progression which shows how any learnings will be included in existing and new IPA publications, but also to ensure that the legacies of projects are being thoroughly evaluated.

Programmes with Purpose Reference Guide – Skills and Legacy

Legislation or regulation

Skills and post-16 Education Bill (DfE, 2021) – Link

Policies

Commercial Continuous Improvement Assessment Framework (CO, 2021) – Link

Commercial Functional Standard (CO, 2021) – Link

Skills for jobs: lifelong learning for opportunity and growth (DfE, 2021) – Link

Transport Infrastructure skills strategy: four years of progress (DfT, 2020) – Link

GovS008: Commercial – Government Functional Standard (HMG, 2021) – Link

Government Project Delivery Framework (IPA, 2021) – Link

Government Projects Academy (IPA, 2021) – Link

Government Functional Standard GovS 002: Project Delivery (IPA, CO, 2021) – Link

Guidance

Major Projects Leadership Academy (MPLA) Handbook (IPA, CO, 2015) – Link

Project 13: Insights and guidance on how to use the Project 13 enterprise model (Mott Macdonald, 2020) – Link

Best practice

APM Body of Knowledge 7th Edition (APM, 2019) – Link

Future skills report (CLC, 2019) – Link

Skills Workstream: 2018 Strategy and Action Plan (CLC, 2018) – Link

Skills for a green recovery (IPPR, 2021) – Link

Project Management: A Strategic Managerial Approach, 10th Edition (Jack R. Meredith, Scott M. Shafer, Samuel J. Mantel Jr., 2017) – Link

Procurement and Supply Chain Management (Kenneth Lyons, Brian Farrington, 2020) – Link

Supporting Diversity and Inclusion in the Infrastructure Sector (Mayor of London, 2020) – Link

Commercial and contract management: insights and emerging best practice (NAO, 2016) – Link

Lessons learned from Major Programmes (NAO, 2020) – Link

Improving the performance of major equipment contracts (NAO, 2021) – Link

Specialist skills in the civil service (NAO, 2020) – Link

Diversity and Inclusion Strategy, 2020-2023 (NIC, 2020) – Link

Oxford Global Projects Project Leadership Academy (Oxford Global Projects, 2021) – Link

Conclusion

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Given the scale of investment and resources involved, major projects are one of the strongest tools government has for tackling the most pressing social, environmental, and economic issues the country faces.

Yet they also remain some of the most complex to design and deliver. From understanding the priorities facing involved stakeholders, to actually ensuring value, efficiency, and positive outcomes, there are many competing factors which must be understood and embedded into the project from the outset if it is to deliver success.

Luckily there is a wealth of information available to support practitioners, from government guidance to industry initiatives. Some, like the **IPA Project Routemap**, are new and focused on delivering cutting edge improvements to major projects. Others are well-established and widely used, like social value in public-private partnerships.

However, this same breadth of best practice can also lead to death by a thousand cuts for the inexperienced or ambitious clients and suppliers.

Key organisations like the IPA and ICG have a vital role to play in helping share knowledge and guidance across the sector as a whole. But businesses also need to collaborate more closely with each other and their partners.

This report, and the Programmes with Purpose Reference Guide are designed to help both government and business understand the key issues which many major projects face today and have the rules, guidance and best practice readily at their disposal to tackle them.

It focuses on what is most important and what is most useful, to reflect what stakeholders say are the topics that need integrating most into a purpose-led approach to major projects.

Most importantly, Programmes with Purpose is designed to help clear the air rather than add to it. The recommendations are targeted at gaps in the existing landscape where there is a pressing need for change. The case studies are examples of best practice, not criticisms of the worst. And the themes are those which apply whether delivering a battleship, building a road, implementing new technology, or transforming a public service.

Programmes with Purpose is not the final stage in the process of delivering the best major projects the UK's public sector and partners can do, nor is it the first. But it is a step along the way to putting purpose, clarity, and collaboration at the heart of the GMPP and beyond.

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About the CBI
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Founded by Royal Charter in 1965, the CBI is a non-profit business organisation that speaks on behalf of 190,000 UK businesses of all sizes and from across all sectors, employing nearly 7 million people between them. That's about one third of the private workforce. This number is made up of both direct members and our trade association members. We do this because we are a confederation and both classes of membership are equally important to us.

The CBI's mission is to promote the conditions in which businesses of all sizes and sectors in the UK can compete and prosper for the benefit of all. With offices around the UK (including in Scotland, Wales and Northern Ireland) and representation in Brussels, Washington, Beijing and Delhi, the CBI communicates the British business voice around the world.

Our mandate comes from our members who have a direct say in what we do and how we do it

The CBI receives its formal mandate from 9 Regional Councils, 3 National Councils from Scotland, Wales and Northern Ireland plus 16 sector based Standing Committees. These bodies are made up of members in that region, nation or sector who serve a term of office. The chair of each Standing Committee and Regional and National Council sit on the CBI's Chairs' Committee which is ultimately responsible for setting and steering CBI policy positions.

Each quarter this formal engagement process across the CBI Council reaches over 1,000 senior business leaders across 700 of our members who have a direct say in what the CBI do and how they do it, from refreshing their workplan to discussing the key business issues of the day and re-calibrating its influence. Over 80% of the businesses represented on the CBI Council are outside of the FTSE350 as the CBI represents a wide range of sizes and sectors from the UK business community. This formal governance process is supported by a wide range of working groups, roundtables, member meeting and events that makes the CBI unparalleled at listening to and representing British business.

CBI Council in numbers
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1000+
Committee and Council representatives

28+
Regional and National Council and sector based Standing Committees

50%
Representatives of the CBI Council at C-Suite level

80%
Of the CBI Council from non-FTSE 350 businesses

To share your views on this topic or ask us a question, contact:

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