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TECHNICAL ASSISTANCE REPORT – PUBLIC INVESTMENT MANAGEMENT ASSESSMENT

This Technical Assistance Paper on the United Kingdom was prepared by a staff team of the International Monetary Fund. It is based on the information available at the time it was completed in April 2022.

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F I S C A L   A F F A I R S   D E P A R T M E N T

United Kingdom
Public Investment Management Assessment

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Technical Report

August 2022

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ABBREVIATIONS AND ACRONYNMS

ALB	Arm's Length Bodies
CA	Contracting Authority
CBG	Consolidated Budget Guidance
CDEL	Capital Departmental Expenditure Limits
CfD	Contracts for Difference
COFOG	Classification of Functions of Government
C-PIMA	Climate-PIMA
BEIS	Department for Business, Energy and Industrial Strategy
DfT	Department for Transport
DLUHC	Department for Levelling Up, Housing and Communities
EIB	European Investment Bank
EU	European Union
Eurostat	Statistical Agency of the European Union
FAD	Fiscal Affairs Department
FReM	Financial Reporting Manual
GMPP	Government Major Projects Portfolio
HMT	Her Majesty's Treasury
IPA	Infrastructure and Projects Authority
MMC	Modern Methods of Construction
MPM	Managing Public Money
MTFF	Medium Term Fiscal Framework
NAO	National Audit Office
NIA	National Infrastructure Assessment
NIC	National Infrastructure Commission
NIS	National Infrastructure Strategy
OBR	Office for Budget Responsibility
OECD	Organization for Economic Cooperation and Development
OSCAR	Online System for Central Accounting and Reporting
PC	Public Corporations
PESA	Public Expenditure Statistical Analyses
PFI	Private Finance Initiative
PF2	Successor Framework to the Private Finance Initiative
PIMA	Public Investment Management Assessment
PPP	Public-Private Partnerships
RAB	Regulated Asset Base
SR	Spending Review
SRO	Senior Responsible Owner
TAP	Treasury Approvals Process
UK	United Kingdom
UKIB	UK Infrastructure Bank
UKGI	UK Government Investments
WGA	Whole of Government Accounts

PREFACE

At the request of the Chancellor of the Exchequer, a team from the IMF's Fiscal Affairs Department (FAD) undertook a Public Investment Management Assessment during April 4 to 19, 2022. The mission team was led by Ms. Carolina Renteria and included Ms. Michelle Stone and Mr. Tjeerd Tim (FAD), Mr. Carlos Mulas Granados (European Department) and Mr. Ed Hearne (FAD short term expert). This report builds upon the analysis in the September 2021 Climate Public Investment Management Assessment and draws on information gathered in that exercise.

The team met representatives from HM Treasury including Ms. Cat Little (Director General Public Spending), Mr. Phillip Duffy (Director General Growth and Productivity), Mr. Conrad Smewing (Director Public Spending), Mr. Marcus Mason (Deputy Director General Expenditure Policy (Capital), Ms. Johanna Harston (Deputy Director General Expenditure Policy); Mr. Tom Josephs (Director Fiscal), Ms. Ruth Curtice (Deputy Director Fiscal Statistics and Policy); Ms. Joanna Key (Director Infrastructure and Growth), Mr. Jonny Medland (Deputy Director Infrastructure, Digital and Culture) and Mr. Joe Taylor (Deputy Director Climate Policy). The team also met with staff from the Balance Sheet Analysis; Climate Change Policy; Devolution; Efficiency and Cabinet Office; Exchequer Funds and Accounts; Environment, Energy and Agriculture; Fiscal Statistics and Policy; Fiscal Strategy; General Expenditure Policy; Government Financial Reporting; Growth and Productivity; Health and Social Care; Infrastructure, Digital and Culture; Housing, Planning and Cities; Local Government and Reform; Public Value Unit; Home and Legal; Project Speed and Transport teams.

From other Departments and Agencies, the team met with the Infrastructure and Projects Authority (Ms. Helen Campbell, Director Strategy Performance and Assurance, Ms. Fiona Spencer, Director Capacity and Capability, Mr. David Clinton, Deputy Director Strategy); the Department for Levelling Up, Housing and Communities (Mr. Chris Gray, Deputy Director Levelling Up Taskforce and Zainab Agha, Deputy Director Devolution Strategy and staff); Government Commercial Function (Mr. Matthew Browne, Deputy Director Construction Major Projects and staff); the Department for Transport staff; the Ministry of Justice (Mr. Robin Seaton, Deputy Director and SRO Prisons Programme, Mr. Matt Shelley, Deputy Director Finance Strategy and Planning and staff); UK Government Investments (Ms. Lucie Lambert and Mr. Jamie Carter); and the Office for Government Property (Ms. Angela Harrowing and team).

The team also met with the Welsh Government, Mr. Andrew Jeffreys, Director, Mr. Steve Davies, Deputy Director Infrastructure Strategy & Assurance and staff; the South Yorkshire Mayoral Combined Authority, Mr. David Smith, Chief Executive and Directors; and representatives from the infrastructure sector including from: Confederation of British Industry, Global Infrastructure Investor Association, Mace and The Infrastructure Group. The team also met with the Institute for Fiscal Studies (Mr. Carl Emmerson and Mr. Ben Zaranko), the National Audit Office (Mr. James Osborne, Mr. Matthew Rees and Ms. Emma Wilson); and the UK Office for Budget Responsibility (Mr. Richard Hughes and staff).

The team would like to thank the UK government for their cooperation and their participation in constructive discussions. The mission would especially like to thank Ms. Handan Wieshmann, Ms. Halema Begum and Mr. Rory Allan for their excellent support in organizing the mission.

EXECUTIVE SUMMARY

The United Kingdom (UK) has ambitious plans to increase infrastructure investment, boost economic growth, reduce regional disparities, and help achieve the climate transition. The National Infrastructure Strategy, Plan for Growth, Net Zero Strategy and Levelling Up White Paper set out the Government's ambitions—including closing existing gaps in transportation networks, transforming digital connectivity, boosting education, skills, and R&D, accelerating the climate transition and investing in infrastructure at the local level. These goals are supported by allocations of over £600 billion in gross public sector investment over the five-year period to 2026/27. The planned ramp-up in public investment is expected to bring the UK's annual infrastructure investment to OECD average levels of 3 percent by 2024/25, reversing a process of public capital stock decline that goes back to the 1970s and 1980s.

The UK is well positioned to implement this ramp-up of public investment given it has robust institutions throughout the public investment cycle. Overall, the UK manages its public infrastructure well across the three phases of planning, allocation, and implementation. The results of the PIMA are strong, both in absolute terms and compared to other countries that have undertaken a PIMA. Nine out of fifteen institutions rank "high" in terms of institutional design, with the remaining six ranking "medium". The overall scores for effectiveness are similar, albeit with a different distribution across institutions (Table 1 and Figure 1).

Notwithstanding the UK system's strength against the Public Investment Management Assessment (PIMA) framework, there is scope for improvement. The report suggests areas for reform that could increase efficiency and unlock greater value from the planned ramp-up of public investment (Table 2).

Planning for public investment has been strengthened in recent years and the UK's Green Book and Five Case Model are recognized worldwide as standard setters. The creation of the National Infrastructure Commission in 2015 reinforced strategic planning on economic infrastructure; with coordination of capital spending plans with local authorities mainly occurring at departmental level. Following the appraisal process, major projects are required to be subject to rigorous technical, economic and financial analysis. Regulation supports competition in economic infrastructure and there is a framework to manage the involvement of the private sector in public infrastructure provision.

Additional reforms would provide more support to implement and maximize the impact of the UK's ambitious investment plans. It will be important for government to ensure consistency between economic infrastructure and social infrastructure. Joined-up planning will assist in embedding spatial considerations in resource allocation in line with the Levelling Up White Paper. Within the constraints of the UK system of government, enhancing coordination between the UK Government, devolved administrations, and local authorities—and providing more medium-term funding certainty and flexibility—could better enable local communities to develop integrated multi-annual capital investment plans. Government could also look to use tools at its disposal to support an increase in industry capacity to deliver the National Construction Pipeline, including expanding and enhancing the skilled workforce and accelerating the adoption of modern methods of construction and other productivity-enhancing techniques. The transparency, independence and implementation of project appraisal and assurance could be strengthened through greater independent scrutiny of businesses cases and publication of business case summaries to improve the robustness of the appraisal process.

Investment allocation decisions are framed within the UK's Spending Review (SR) process. Capital allocations are typically made for the period of the SR, with multi-year SRs setting budgets for three to five years. In the most recent SR, steps were taken to improve certainty about future capital allocations beyond the SR period, mostly through discretionary decisions for several large projects and programs. The budget process is comprehensive, covering both capital and recurrent spending; outlays are appropriated annually and departmental reallocations from capital to current spending require HMT and Parliament approval.

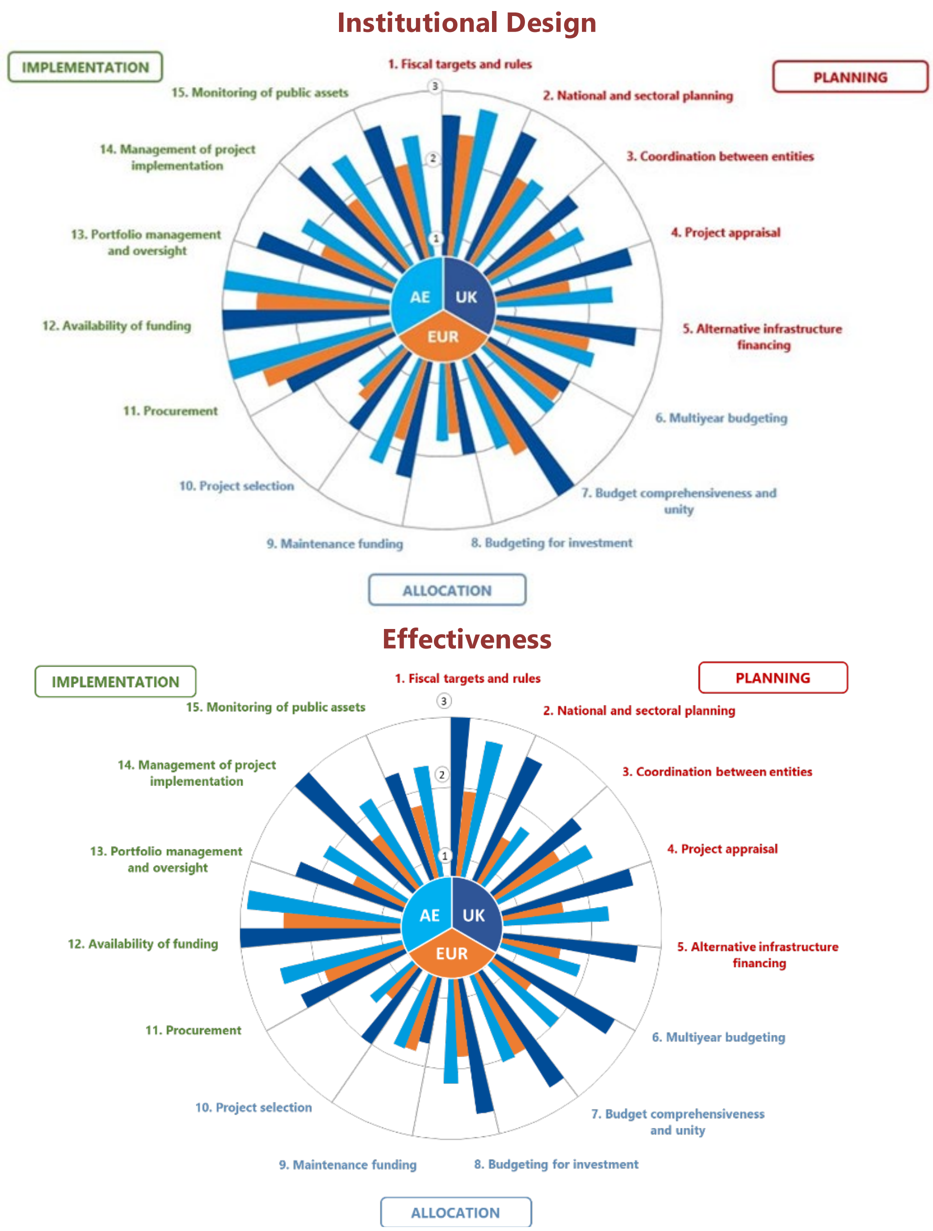
More effective public investment requires longer-term funding guidance. A potential solution would be to provide departments with funding guidance by publishing five-year capital budgets on a rolling basis. There is also scope for more granular information on departments' multi-annual capital spending plans and for improving incentives for departments and agencies to adequately maintain public assets – including by disclosing maintenance spending in budget reports. SRs usefully require the prioritization and assessment of investment projects. However, including all projects in that process regardless of maturity, risks some projects may be somewhat 'locked in' to plans prematurely. Establishing a minimum level of project maturity to receive a SR allocation, while providing other opportunities for proposals to be approved within a SR period, could help.

There are highly developed procedures for managing project implementation. Open, competitive procurement is the default. The Government Major Projects Portfolio (GMPP) provides a strong platform for the oversight of the largest projects, and there is a suite of guidance for portfolio management of smaller projects across departments. The Infrastructure and Projects Authority enables the successful delivery of the GMPP through direct support and independent assurance reviews and provides effective leadership of the project delivery profession. The National Audit Office (NAO) frequently reviews major investment projects and there is a high rate of implementation of recent NAO recommendations.

Some additional measures could further strengthen the execution of investments. Expanding the coverage of monitoring reports on procurement and implementing planned procurement reforms will provide more transparency. Policies on ex-post evaluation are long established but there is scope to improve compliance with these requirements—and to distil and apply lessons learned more systematically. Practices for asset management and maintenance are stronger in some sectors than others and central guidance on asset management could be strengthened.

This report complements the IMF's UK Climate-PIMA report. In September 2021 the IMF undertook a Climate-PIMA for the UK, which found that overall, the UK has a relatively well-designed system to manage climate relevant public investment. The report also included recommendations to better incorporate climate aspects in public investment management.

Figure 1. PIMA Results for the UK on Design/Effectiveness Compared with Peers



Source: IMF Staff

Note: The chart shows the average scores of PIMAs that have been conducted to date in advanced countries (ADV) and Europe (EUR), the latter of which includes countries across the EU, East, Central and Southeast Europe.

Table 1. United Kingdom: Summary Assessment

Phase/Institution		Institutional Strength	Effectiveness
A. Planning	1 Fiscal targets and rules	HIGH The Charter for Budget Responsibility's fiscal mandate ensures the sustainability of public finances; existing fiscal rules sets specific fiscal targets.	HIGH Fiscal rules operationalized through specific debt, current balance, investment and welfare caps, provide an anchor to the budget process
	2 National and sectoral planning	HIGH The National Infrastructure Strategy (NIS) is the overarching plan for economic infrastructure and is consistent with the capital budget set out in the Spending Review. Social infrastructure plans are set out in discrete sectoral strategies.	HIGH There is a close connection between the NIS and subsequent budgets and project costs. Output and outcome targets set in sectoral policy could be better linked to infrastructure plans and projects.
	3 Coordination between entities	MEDIUM. Investment plans of central and local governments are coordinated through national strategic priorities. In line with plans across Government, they remain mostly limited to the Spending Review period, funding is scattered across instruments.	MEDIUM. Some formal coordination mechanisms for the governments' strategic priorities. No overarching framework for sharing capital spending plan information between different levels of government.
	4 Project appraisal	HIGH. Rigorous appraisal following extensive methodology is required but not routinely published and has limited independence. Risk identification and mitigation is required.	HIGH. Approval processes reinforce sound analysis in project business cases and improve projects. Improvements to appraisal processes are pursued including for cost estimation.
	5 Alternative infrastructure financing	HIGH. Competition and regulatory oversight is established in key sectors, and policies are in place for PPPs and existing contracts. Public corporations' project plans are not consolidated.	HIGH. Competition is effective and government is pursuing delivery with private sector investors through a range of mechanisms.
B. Allocation	6 Multi-year budgeting	MEDIUM. Capital spending and ceilings are usually published over a 3-year period, at the government's discretion and are not annually rolled over. The distribution of project and programme specific costs over time is not published in budget documents.	HIGH. Projections for capital spending are consistent with budget allocation, and approved budgets are in line with the ceiling. Changes in the (planning of the) costs of projects are not adequately explained in the budget document.
	7 Budget comprehensi-veness and unity	HIGH. Capital spending is undertaken through the budget process, and capital and recurrent budgets are presented together in the budget.	HIGH. The government assesses capital and current costs of capital projects. However, information in budget documents is often high level, rather than project and programme specific.
	8 Budgeting for investment	MEDIUM. Outlays are appropriated annually, but budget documents do not disclose total project costs. Virement from capital to current must be approved by Treasury & Parliament Projects' funding is not explicitly protected.	HIGH. The total costs of projects are disclosed for major projects, but not information about the multi-year commitments of the project. Major projects receive the assessed funding needs.
	9 Maintenance funding	MEDIUM. Standard methodologies for routine and capital maintenance exist. Maintenance spending is not widely reported in the budget.	MEDIUM. It is not possible to assess the adequacy of maintenance funding using public information.
	10 Project selection	MEDIUM. Most budget allocations are made at Spending Reviews with information available at the time. Procedures govern final approvals on projects.	MEDIUM. Central review is robust within the constraints of the Spending Review. Some projects are announced before business cases are developed.
C. Implementation	11 Procurement	MEDIUM Procurement is open and competitive, and aspects of the system reported as part of Open Government policy. Complaints handled through administrative procedures and legal system.	MEDIUM There is a requirement to publish tender outcomes, and analytical reports are published on aspects of the procurement system. Legal remedies can involve delays.
	12 Availability of funding	HIGH. Cash management systems are designed to allow cash to be available when required, based on forecasts made at the departmental level.	HIGH. Departments know their commitment ceilings for the year and cash is available reliably to meet commitments as they fall due.
	13 Portfolio management and oversight	HIGH Major projects are subject to comprehensive portfolio reporting, funds can be re-allocated and there is some guidance on ex-post review of major projects	MEDIUM Portfolio monitoring informs project progression, but reallocation of funding can be difficult due to ring-fences. Ex-post reviews have led to changes in policy procedures but could be undertaken more frequently.
	14 Project implementation	HIGH Detailed rules and procedures exist and there are standard criteria for project adjustments. There are no fixed arrangements for ex-post external audit of major projects.	HIGH Project approval processes ensure close adherence to procedures. Audit recommendations have been implemented in many cases.
	15 Monitoring of public assets	HIGH. Asset management is delegated to departments, but comprehensive non-financial asset values feed into the whole-of-government accounts.	MEDIUM. Work is underway to make asset information more accessible and to improve the timeliness and quality of non-financial asset valuations.

Table 2. United Kingdom: Summary Recommendations

Recommendations	Responsibility	Inst
PLANNING		
Broaden the scope of the next NIS to incorporate social infrastructure (Q4 2022)	HMT	2, 7
Review coordination on future construction capacity and develop a strategy to boost capacity and skills in the sector. (Q3 2022)	BEIS with others	2, 13, 14
Increase certainty for investment planning at the local level through longer term funding guidance and streamlining funding instruments (Q4 2022 and Q4 2023)	HMT with DLUHC	3, 6
Increase independent scrutiny and project challenge, and validate cost and schedule forecasts, for major capital investment projects	HMT/IPA	4, 13, 14
Commence publication of business case summaries in line with Government's existing commitment to do so and publish business case summaries retrospectively for already approved major projects (immediately and Q3 2022)	HMT and departments	4
Streamline project approvals and assurance, making it easier and faster for agencies to navigate HMT, IPA and Cabinet Office approvals (Immediately)	HMT	4, 10, 14
Establish protocols for risk appetite and governance of contingencies in major projects (Q4 2022)	HMT	4, 7, 13, 14
ALLOCATION		
Provide more certainty for capital planning to departments by providing five-year departmental capital budgets, that are updated annually on a rolling basis (next SR)	HMT	6
Develop comprehensive departmental multi-annual capital spending plans and provide guidance on recording multi-annual commitments (upcoming SR and Q2 2022)	HMT and departments	6
Include maintenance in budget reports and include performance indicators in future Outcome Delivery Plans (Q3 2023)	HMT and departments	9
Set a minimum stage of project maturity to receive a Spending Review allocation, consider need to increase the reserve for unallocated capital, and provide another opportunity for proposals to be approved within a SR period (next SR)	HMT	4, 6, 10
IMPLEMENTATION		
Regularly publish monitoring reports on execution of project procurement processes (Q3 2022)	Cabinet Office	11
In line with procurement regulations, ensure the publication of contracts for major public investment projects, with minimal redaction and report on the rate of publication (Q2 2022)	Cabinet Office	11
Ensure there is sufficient flexibility to reallocate funds within and across departmental budgets to expedite delivery of projects that are ready to proceed (Q3 2022)	HMT	13
Undertake and publish ex-post project evaluations; document lessons learned and update project guidance on a periodic basis (Q2 2022)	All depts	14
Strengthen guidance on management of assets by departments (Q3 2023)	HMT	15
CROSS CUTTING ISSUES		
Continue to build capacity across government sectors and regions to develop project proposals and build a diverse pipeline of quality projects (Q3 2022)	HMT, DLUHC, UKIB, IPA	3, 4, Capacity
Explore opportunities for improved data sharing between information systems for public investment management.	HMT, IPA, implementing agencies	IT

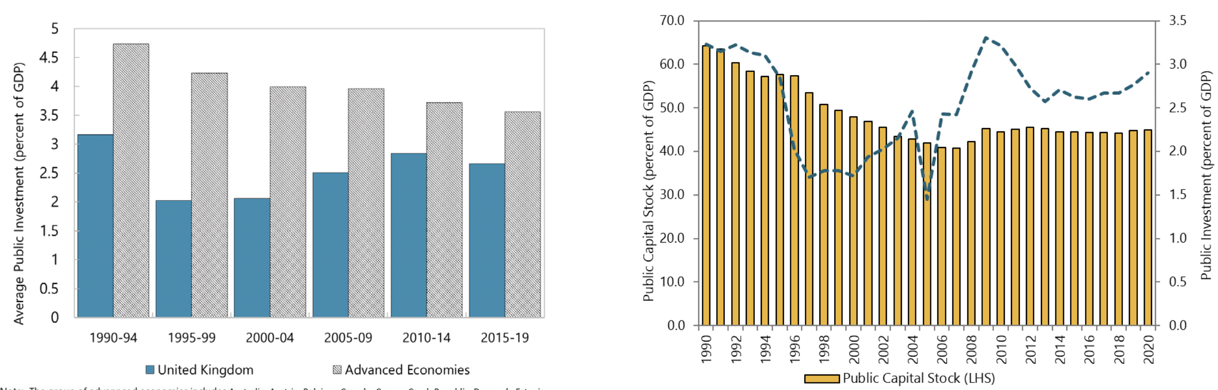
I. TRENDS IN PUBLIC INVESTMENT

A. Public Investment and Stock of Capital

1. The UK has an ambitious investment plan to expand economic growth, reduce regional disparities and help achieve the climate transition. To support these objectives, the Spending Review 2021 envisages that public sector investment will grow by 42 percent between 2019/20 and 2024/25. This increase in public investment is underpinned by three major interrelated initiatives: the Plan for Growth (which includes additional resources for infrastructure, skills, and innovation), the Net Zero Strategy (to accelerate the green transition) and the Levelling Up agenda (with additional funds for transportation and research and development).

2. This budgetary effort, if fully executed, will reverse a long period of lagging public investment. During thirty years, average public investment in the UK has remained significantly below the average of other advanced economies, albeit the gap has shrunk (Figure 1.1).[1] As a result, the UK's capital stock is estimated to be low relative to its peers. With an estimated value of 44.7 percent of GDP in 2019 the public capital stock was still 25 percent below the average of advanced economies. Since 2013, public investment-to-GDP ratios have grown steadily, and if the investment plans in the 2021 Spending Review are fully executed,[2] they should reach the OECD average of 3 percent of GDP by 2024/25.

Figure 1.1. Public Investment and Capital Stock in the UK



Note: The group of advannced economies includes Australia, Austria, Belgium, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Latvia, Luxembourg, Macao, Netherlands, New Zealand, Norway, Portugal, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Taiwan, United Kingdom, United States.

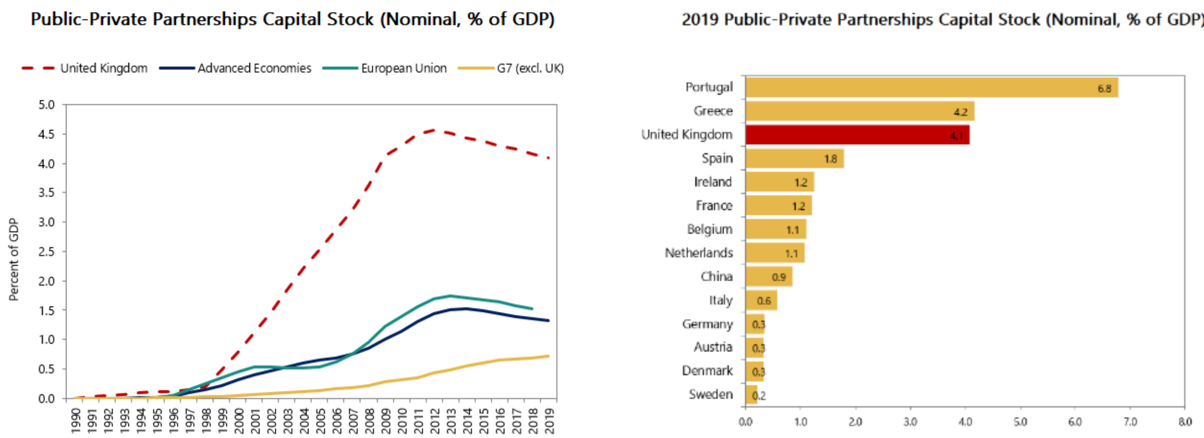
Source: IMF staff

[1] While UK authorities prefer measures of investment that include the whole public sector (see OBR's Economic and Fiscal Outlook from March 2020), for the remainder of this section, and to facilitate international comparisons, public investment will be defined as General Government's Gross Fixed Capital Formation (GFGF). GFCF does not include capital grants to other sectors such as R&D grants to universities, government grants to individuals and the private sector.

[2] The OBR (2020) estimates that historically only 80 percent of additional public investment budgets are fully executed.

3. **The existing gap in estimated capital stock partly reflects past privatizations and a greater role of Public Private Partnerships (PPPs) in the provision of public investment and capital.** Nearly four decades ago, the UK started to privatize its major national industries and largest public corporations. Assets were sold and markets opened to competition, from the first experiments with British Aerospace, British Telecom, water, and electricity, to more recent ones such as the Royal Mail. These privatizations transformed the ownership structure of the country's capital stock and shifted part of the provision of public investment to the private sector. The country led the way globally on Public-Private Partnerships (PPP) through the Private Finance Initiative (PFI), to build, for example, public hospitals (also see Section 3.5). As a result, the proportion of public investment and capital deployed through PPPs is about four times higher in the UK than in other advanced economies (Figure 1.2).

Figure 1.2. Public Capital and Public Private Partnerships



Source: IMF staff

B. Provision and Composition of Public Investment

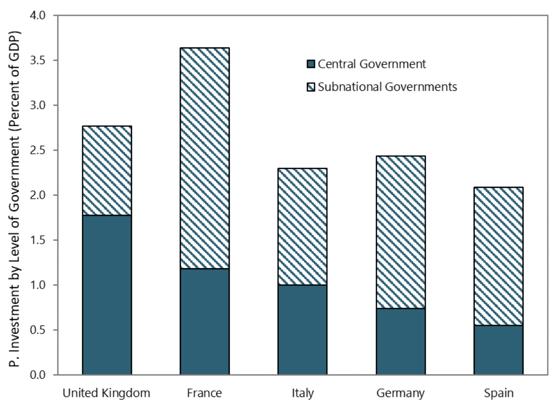
4. **Most public investment is provided by the UK Government who intend to boost local infrastructure initiatives to help reduce regional disparities.**[3] According to latest data (Eurostat, 2021), about two-thirds of public investment spending occurs at the central government level (Figure 1.3). This differentiates the UK from many other major European economies, where between 50 and 75 percent of public investment is executed by subnational governments. Public investment is heavily concentrated in the London area, especially in transport infrastructure. Capital investment per person in the London area was estimated by the Institute of Fiscal Studies to average £1,461 a year between 2014 and 2019, significantly more than the average of £851 in the rest of the UK, and £658 in the East Midlands (Figure 1.3).[4] With

[3] The analysis doesn't include investment by public corporations.

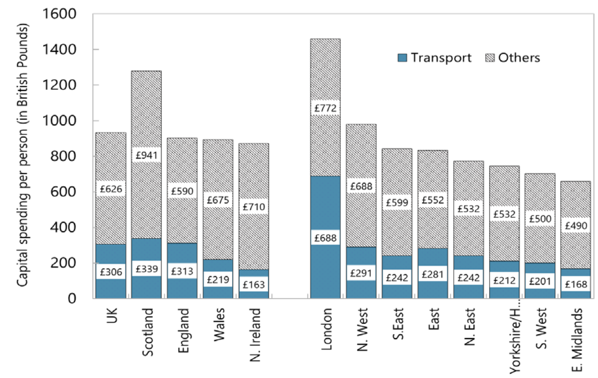
[4] See Davenport and Zaranko (2020) "IFS Green Budget 2020", Institute for Fiscal Studies: https://ifs.org.uk/uploads/CH7-IFS-Green-Budget-2020-Levelling-up.pdf#page=33

the intention to reduce these regional disparities, the UK Government launched the Levelling Up Agenda in 2021, funding commitments include £4.8 billion for local infrastructure projects through the Levelling Up Fund and the £3.6 billion Towns Fund.

Figure 1.3. Public Investment at the Regional Level



Source IMF Staff. Data from, 2019

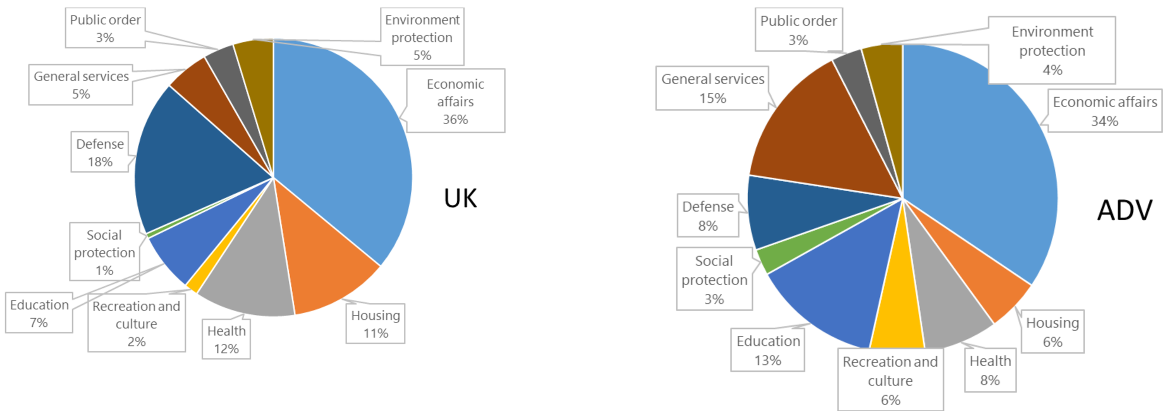


Source: Institute for Fiscal Studies (2020)

5. Over 30 percent of public investment is on economic infrastructure, while investment on intangible assets is gaining momentum. The recovery of UK's public investment over the past decade has been driven by economic infrastructure,[5] with defense, health, and housing following closely (Figure 1.4). Other advanced economies on average devoted a greater share of their investment to government services, education, culture, and social protection. Going forward, the recent Spending Review (2021) shows a growing role for the acquisition of intangible knowledge-related assets. Accordingly, forthcoming investment will focus on closing existing gaps in roads and transportation networks, boosting education, skills, and R&D, and helping the UK accelerate the climate transition. These areas will attract nearly 80 percent of the new investment plans until 2024/25 (Spending Review 2021).

[5] See House of Commons "Infrastructure policies and investment", 2021, https://researchbriefings.files.parliament.uk/documents/SN06594/SN06594.pdf. Economic infrastructure includes energy, transport, water, wastewater, waste, flood risk management and digital communications (based on NIC, OECD).

Figure 1.4, Composition of Public Investment (2019)

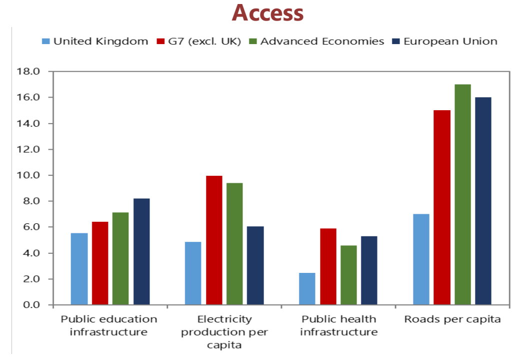


Source: IMF Staff. Data by function of government from OECD (2019) - OECD Glossary of Statistical Terms - Gross fixed capital formation - ESA Definition.

II. EFFICIENCY OF PUBLIC INVESTMENT IN THE UNITED KINGDOM

6. The UK falls behind peers on some global measures of physical infrastructure. Based on an IMF dataset built with a limited set of quantitative indicators that allow global comparisons, the UK performs weakly compared to advanced economies, the G7 and the European Union (Figure 2.1). Gaps are especially large in electricity generation, and roads per capita, but they are also significant in public education and health infrastructure.

Figure 2.1. Global Measures of Public Infrastructure Access

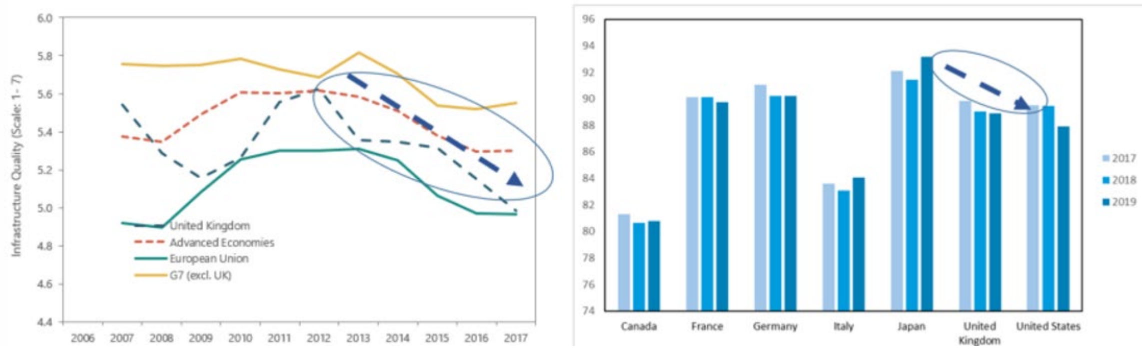


Source: IMF Staff. Data from OECD, IEA and World Bank. Indicators used: thousands of secondary teachers per 1,000 people; thousands of Kilowatts/hour per person; number of hospital beds per 1000 people; and Kilometers of road per 1,000 people.

7. The perception of quality of infrastructure in the UK is high but has declined during the last decade. According to the World Economic Forum, the UK ranked 11th out of 141 countries in terms of the overall perceived quality of its infrastructure in 2020. This places the UK above the European Union (EU), but below the G7 average. A possible factor underlying the declining perception of quality (shown in Figure 2.2), is underinvestment in maintenance of aging infrastructure.[6]

[6] See Resolution Foundation, *Euston we have a problem: Is Britain Ready for an Infrastructure Revolution?,* 2020

Figure 2.2. Global Measures of Perceived Quality of Infrastructure



Source: IMF Staff using data from WEF (2019: page 579)

Note: source of data for the UK: https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

8. The UK performs comparatively better in connectivity and digital economy indicators. Comparing with a more comprehensive set of indicators for infrastructure quality shows that the overall transportation network is perceived to be of similar quality and efficiency as those in other advanced economies (Figure 2.3). In areas such as roads and airport connectivity, the UK is clearly ahead of peers. The UK also performs well in most digital economy indicators, ranking 8 out of 28 European countries.[7] Still, the UK has room to improve in some areas, such as very high-capacity networks (Figure 2.3).

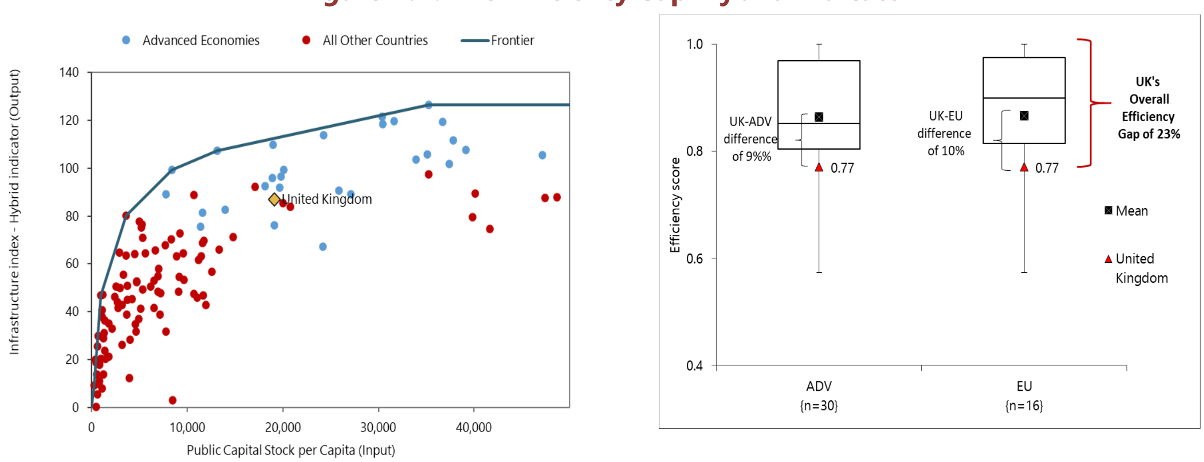
Figure 2.3. Relative Perceived Quality of Transport and Communication Infrastructure

Source: IMF Staff, using WEF (2020) and DESI (2021) data

[7] See Https://digital-strategy.ec.europa.eu/en/policies/desi-uk

9. There is scope to increase the efficiency of public investment in the UK. Based on the IMF methodology,[8] which uses four standard global quantitative and qualitative indicators available for the widest possible sample of countries in the world, the estimated efficiency gap between United Kingdom and the frontier is 23 percent (Figure 2.4). The distance between the UK's efficiency gap and the average gaps of other advanced economies or the EU is roughly 10 percent. One study that uses a wider set of 12 indicators, which are only applicable to a narrower sample of OECD economies, also estimates the UK's efficiency gap to be between 10 and 13 percent relative to the best performers.[9]

Figure 2.4. The Efficiency Gap-Hybrid Indicator[1]



Source: IMF staff
1/ The efficiency frontier is built using Data Envelopment Analysis (DEA) by identifying the best performers in a sample of about 130 countries. Performance of individual countries is measured against the frontier, which includes peer countries with similar characteristics. The efficiency frontier indicates the best outcomes in terms of hybrid measure of infrastructure (output) that are possible for a given technology and for given levels of the public capital stock and GDP per capita (inputs).

III. PUBLIC INVESTMENT MANAGEMENT INSTITUTIONS

A. The PIMA Framework

10. The IMF has developed the Public Investment Management Assessment (PIMA) framework to assess the quality of the public investment management of a country. It

[8] Efficiency of public investment is defined as the relationship between the value of the public capital stock and a "hybrid index" of measures of the coverage and quality and quantity of infrastructure assets. The methodology is detailed in the 2015 IMF policy paper "Making Public Investment More Efficient". A "frontier" is estimated, consisting of the countries achieving the highest "output" (i.e., quality and access of infrastructure) per unit of "input" (capital stock for similar income level). Using a consistent set of data, the performance of a total of 128 countries is compared against the frontier.

[9] See Resolution Foundation, *Euston we have a problem: Is Britain Ready for an Infrastructure Revolution?*, 2020.

identifies the strengths and weaknesses of institutions and is accompanied by practical recommendations to strengthen them and increase the efficiency of public investment.

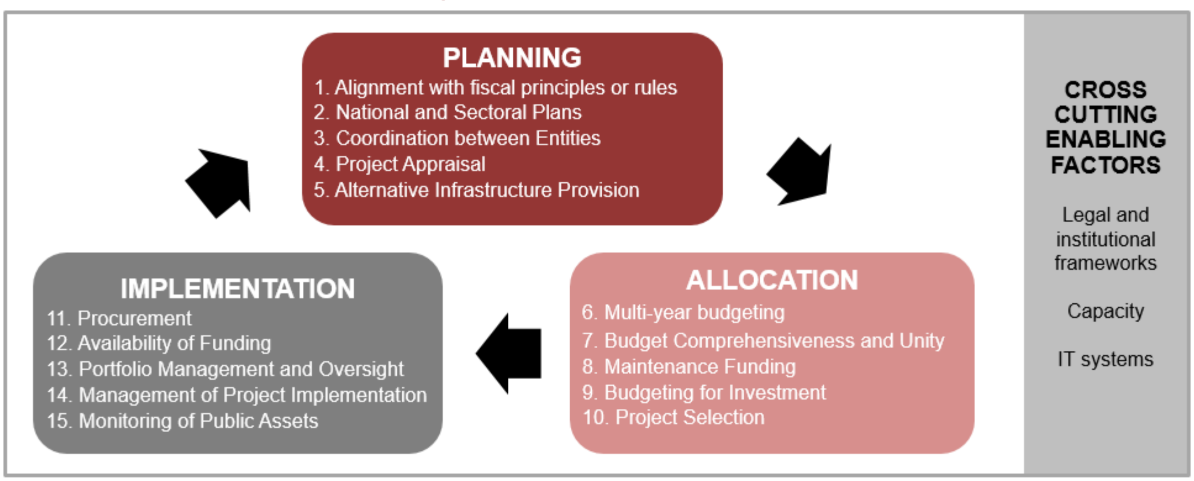
11. The tool evaluates 15 "institutions" involved in the three major stages of the public investment cycle (Figure 3.1). These are: (i) planning of investment levels for all public-sector entities to ensure sustainable levels of public investment; (ii) allocation of investments to appropriate sectors and projects; and (iii) delivering productive and durable public assets.

12. For each of these 15 institutions, three indicators are analyzed and scored, according to a scale that determines whether the criterion is met in full, in part, or not met (see Appendix II for the PIMA Questionnaire). Each dimension is scored on two aspects: institutional design and effectiveness.

- Institutional design refers to the objective facts indicating that appropriate organizations, policies, rules and procedures are in place. The average score of the institutional design of three dimensions provides the score for the institution, which may be high, medium, or low.
- Effectiveness refers to the degree to which the intended purpose is being achieved or there is a clear useful impact. The average score of the effectiveness of the three dimensions provides the effectiveness score for the institution, which may be high, medium, or low.

The following sections provide the detailed assessment for the UK according to this methodology.

Figure 3.1. PIMA Framework

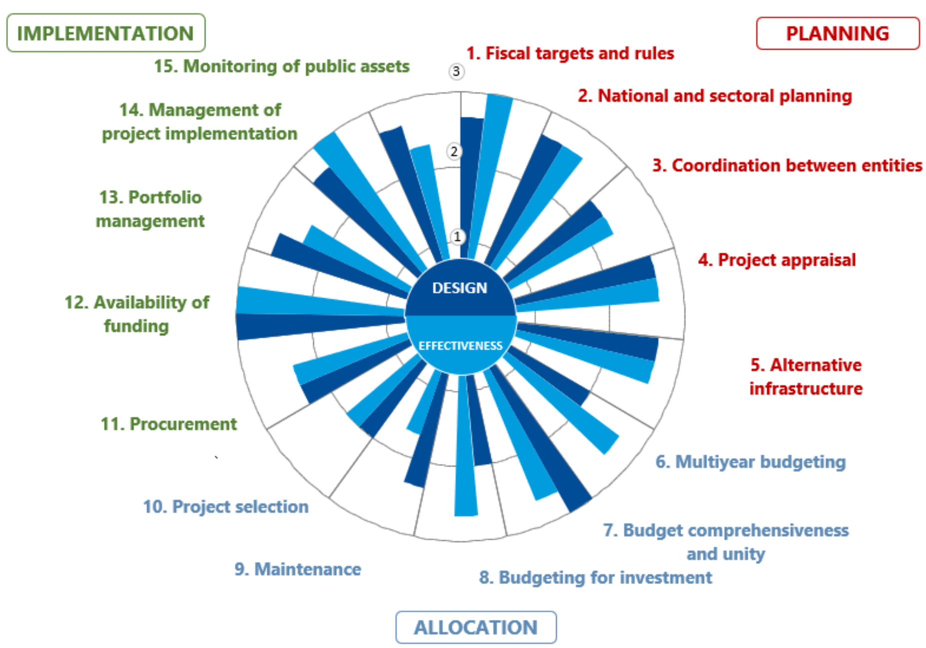


13. This PIMA for the UK draws on the Climate-PIMA undertaken in September 2021. The Climate PIMA showed that the UK has a relatively well-designed system to manage climate relevant public investment, but there is room to strengthen its institutional design and there are important gaps in its effectiveness.

B. Overall Assessment

14. Overall, the UK scores well across each of the three phases of the public investment cycle. Nine out of fifteen institutions rank high in terms of institutional design, with the remaining six ranking medium (Figure 3.2). The overall scores for effectiveness are similar, albeit with a different distribution across institutions. Across both aspects, the UK's scores are weaker in the allocation stage, including for maintenance and project selection. There are areas where design exceeds effectiveness (e.g., maintenance, procurement, portfolio oversight). There are also several institutions where the effectiveness of the UK's institutions exceeds the score for institutional design (which is generally less common), for example, multi-year budgeting and project implementation. It is important to note that in several dimensions, institutional design is assessed against long-standing practices and guidelines that are complied with by convention, rather than under direct force of law (see Section 3.F for a further discussion on this point).

Figure 3.2. PIMA Scores for the United Kingdom



Source: IMF staff

15. Notwithstanding the strengths of the UK's PIM practices, there is scope for improvement in several areas. This includes in some that score highly and reflects the relatively strong capacity of officials in the sector. The report therefore suggests opportunities for reform, in institutional design and effectiveness that will allow the UK to go further, could increase efficiency and unlock greater value from the planned ramp up in of public investment.

16. The following sections provide a detailed assessment of UK's PIM institutions. The following three sections of this chapter present supporting evidence for these ratings in the areas of planning, allocation and implementation. A section on cross-cutting issues follows.

C. Investment Planning

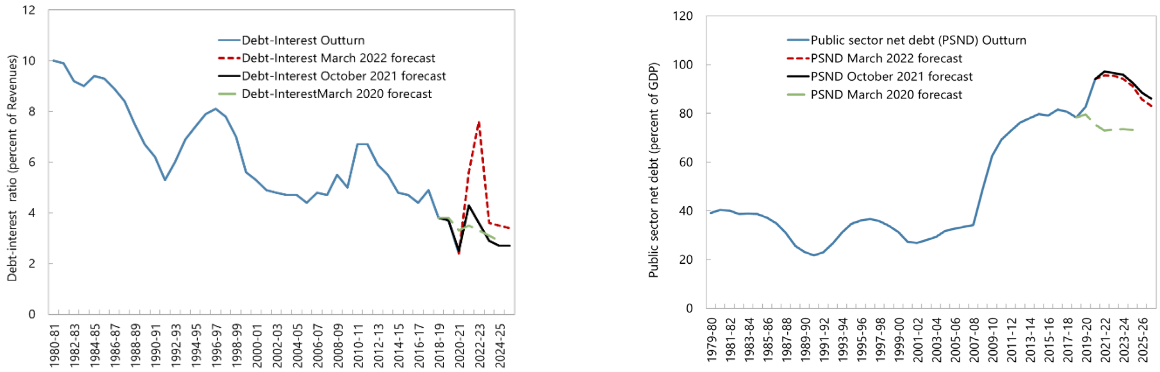
1. Fiscal Principles or Rules (Strength— High; Effectiveness— High)

17. The UK has a fiscal framework to support debt sustainability and affordability. The revised Charter for Budget Responsibility (2022) sets out how UK's management of public finances operate.[10] The stated objective of fiscal policy is to "ensure sustainable public finances, economic growth (…) and intergenerational fairness." Instead of setting numerical debt targets or limits, the Charter includes a fiscal mandate to have public sector net debt (excluding the Bank of England) as a percentage of GDP falling by the third year of the rolling forecast period. The Charter also makes a reference to the need to monitor debt affordability given current high debt levels and the growing sensitivity of debt to changes in interest rates and inflation. Given that the Charter for Budget Responsibility and the associated fiscal rules have been in place less than a year, the effect of the pandemic and subsequent fiscal policy reactions, and the frequency with which rules have been changed in the recent past (see below), the high score in institutional design and effectiveness is the result of considering a longer-term perspective of two decades.

18. The Office of Budget Responsibility (OBR) provides authoritative independent fiscal forecasts and assesses the long-term sustainability of public finances. Since its creation in 2010, the OBR produces detailed five-year forecasts for the economy and public finances twice a year, which the government uses to produce its Autumn and Spring Budget documents. These forecasts also incorporate the impact of any tax and spending measures announced by the Chancellor and are the basis for OBR's assessment of the government's performance against its own targets and fiscal rules. In its most recent analysis of the 2021 Spending Review and the Spring Budget, published in March 2022, the OBR concluded that the public sector net debt (which has increased as a result of shocks such as the global financial crisis and the pandemic) and the debt-interest ratio are expected to decline by the end 2024/25 and therefore the fiscal mandate in terms of sustainability and affordability will be met (Figure 3.3). A unique feature of the OBR is that it also looks beyond the 5-year horizon and publishes fiscal risks and sustainability reports which assess the long-term trajectories of major fiscal aggregates and the public sector's balance sheet providing a view on the overall sustainability of public finances. The independence and quality of OBR's analyses confirm that the institution plays a central role in the UK's fiscal framework.

[10] See: https://obr.uk/about-the-obr/legislation-and-related-material/#charter

Figure 3.3. Debt Sustainability and Affordability



Source: Office of Budget Responsibility (2022)

19. The fiscal anchor is supported by operational fiscal rules with rolling targets. To support the declining debt mandate, which serves as the anchor for fiscal policy, the main operational fiscal rule states that the current budget should be balanced by the end of that same rolling period. Additionally, there is a target to ensure that expenditure on welfare is contained within a predetermined cap and margin set by the Treasury, and another target to ensure that public sector net investment does not exceed 3 percent of GDP on average over the rolling forecast period.[11] Both the debt and current budget rules have rolling targets to be achieved in the third year of the forecast. There is also an escape clause, but no definition of what constitutes a significant economic shock. According to the OBR, while these features reduce the possibility of missing the rules or abandoning them during economic crises, it is possible to push forward the actual date for meeting the rolling target indefinitely, which could result in public finances progressively deteriorating.[12] To secure that the institutional design and effectiveness of the fiscal framework remains high, the IMF has recommended to the UK authorities (see Art. IV 2021) that every time the design of fiscal rules is altered, the OBR provides the Parliament with a structured commentary as to whether the new calibration aligns with higher-order fiscal objectives of debt sustainability, before the members of Parliament vote on the new rules.

20. The introduction of an investment cap may create PIM challenges. While HMT considers the introduction of an investment cap consistent with future debt sustainability, the economic rationale to fix it at 3 percent of GDP is not evident. In fact, giving that reaching the average level of public investment in the OECD (also 3 percent of GDP) is a declared policy objective for the UK, both the target and the cap could coincide making the latter binding. In such circumstances, the investment cap may in fact limit the capacity to invest further in support, for example, of the Net Zero Strategy and the Levelling Up Agenda or require amendments in

[11] Different from other countries, the UK's fiscal framework and fiscal rules goes beyond the general government and also include public corporations.

[12] See OBR (2021), Economic and fiscal outlook, paras 4.29–4.32.

capital plans. In this context, it would be advisable to develop guidelines on the phasing or reprioritization of investment spending if it appears the cap is likely to become binding.

21. The UK Government is required to have fiscal rules, but the rules themselves are not legally binding and can change frequently. Contrary to some other countries, fiscal rules in the UK do not have a binding legal status and rules contained in the Charter can be changed via a vote in Parliament. Every time the Chancellor wishes to modify the Charter, a revised version is presented to Parliament, and it comes into force as soon as is approved by simple majority in the House of Commons. In the last twenty-five years, there have been many different sets of fiscal rules (see Table 3.1). While the core themes of the fiscal rules persist, governments have tended to change the metrics or time horizon of the rules when the outlook shifted, instead of adjusting policy to meet the pre-established fiscal rule. In this context, OBR warns that "relative to a world in which fiscal rules acted as a greater constraint, the path of debt can be expected to be higher."[13]

22. A medium-term fiscal framework (MTFF) aligns budget preparation and public investment plans with fiscal policy. The Charter of Budget Responsibility stipulates how the MTFF works and the interaction between the Treasury and the OBR during the budget process. The MTFF is developed prior to budget preparation. At the start of the process, the OBR issues economic forecasts that the Treasury uses for its multiyear budgeting exercise. The Treasury then works with departments to prepare a budget proposal that differentiates between multiyear current and capital spending. HMT provides the OBR with costings for all DEL expenditure, including capital. The OBR plays a role in costing AE (Annually mandated Expenditure) which is more volatile than investment expenditures.

[13] OBR (2019). Fiscal risks report, paras 8.3–8.16.

Table 3.1. Major Changes to UK's Fiscal Rules, 1998–2021

Years	Rules
1998-2008	• The current budget to be balanced on average over an economic cycle; and • The national debt to be less than 40 percent of national income.
2008-2010	• Fiscal rules were suspended during the financial crisis and replaced with a target to reduce the cyclically-adjusted current budget deficit "once the economy emerges from the downturn," ultimately returning to balance.
2010	• Government borrowing as a percentage of GDP to fall in each year 2010/11 to 2015/16. • Government borrowing to halve between 2009/10 and 2013/14. • The national debt to fall as a percentage of GDP in 2015/16.
2010-2014*	• The cyclically-adjusted current budget to be in balance or surplus at the end of a rolling, five-year forecast horizon. • The national debt as a percentage of GDP to be falling in 2015/16.
2014-2015*	• The cyclically-adjusted current budget to be in balance by the end of the third year of the rolling five-year forecast period and the national debt to fall each year in 2016. • Introduction of a welfare cap, limiting the amount that government can spend on certain social security benefits and tax credits set. The level of the cap is set by HMT at the start of each parliament and the Office of Budget Responsibility would report on whether the cap has been met.
2015-2016*	• The national debt as a percentage of GDP to be falling in every year. • The budget (public sector net borrowing) to be in balance by 2019/20. • Welfare cap: expenditure on welfare will be contained within a predetermined cap and margin set by HMT.
2016-2020*	• Reduce cyclically-adjusted deficit to less than 2 percent of GDP by 2020/21. • The national debt as a percentage of GDP to be falling in 2020/21. • Welfare cap: expenditure on welfare will be contained within a predetermined cap and margin set by HMT.
2020-2021+	• The current budget to be in balance by no later than the third year of the forecast period. • Public sector investment to average no more than 3 percent of GDP on average over the forecast. • If debt interest payments consistently exceed 6 percent of revenue, the Government will reassess its fiscal plans. • Welfare cap: expenditure on welfare will be contained within a predetermined cap and margin set by HMT.
2021	• The public sector net debt (excluding the Bank of England) as a percentage of GDP should be falling by the third year of the rolling forecast period. • The current budget should be balanced by the third year of the rolling forecast period. • The public sector net investment should not exceed 3 percent of GDP on average over the rolling forecast period. • Welfare cap: expenditure on welfare will be contained within a predetermined cap and margin set by HMT.

Source: Staff analysis. *Represents an update to the Charter for Budget Responsibility.
These rules were announced in the 2019 Conservative Party manifesto and adopted at the Spring Budget 2020. However, they were never formally adopted in the Charter for Budget Responsibility as the fiscal framework was reviewed.

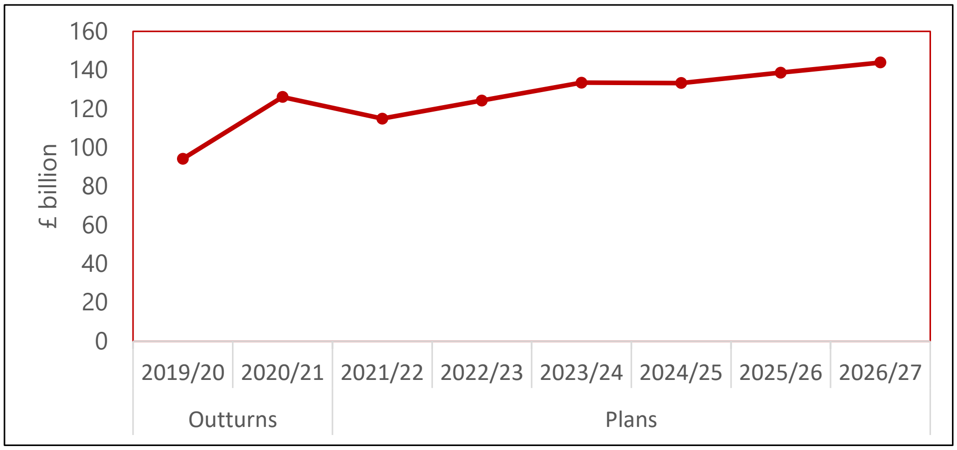
2. National and Sectoral Planning (Strength— High; Effectiveness—High)

23. The National Infrastructure Strategy (NIS) and social infrastructure sectoral plans identify major investment projects. The NIS is the overarching plan for economic infrastructure and encompasses investment across transport, energy, water and wastewater, waste, flood risk management, and digital communications.[14] The Strategy has three broad objectives: to boost

[14] HM Treasury. The National Infrastructure Strategy.

growth and productivity across the whole of the UK, levelling-up and strengthening the Union; to put the UK on the path to meeting its net zero emissions target[15] by 2050; and to support private investment in infrastructure. In addition to funding commitments across economic infrastructure sectors, the NIS also commits to a range of reform initiatives to enhance delivery. The NIS sets an ambitious plan to return UK public sector net investment to the highest sustained levels since the 1970s. Investment plans for social infrastructure, for example schools and healthcare, are set out in discrete sectoral strategies. Total Spending Review 2021 investment (including economic and social infrastructure), shown in Figure 3.4, is consistent with the NIS.

Figure 3.4. Trends in Public Sector Gross Investment



Source: HMT Autumn Budget and Spending Review 2021

24. The NIS is the product of a strong policy architecture for economic infrastructure planning (see Box 3.1). The National Infrastructure Commission (NIC) is currently working on an updated National Infrastructure Assessment (expected in 2023) which will inform the next NIS.

25. Sectoral investment strategies complement the NIS. Sectoral strategies cover investment in areas such as digital infrastructure, rail transport and flood defense as well as social infrastructure such as healthcare and housing. The mission's analysis revealed there is scope to streamline sectoral investment strategies and embed stronger links between sectoral plans and the overall national strategy. There is a large number of sectoral investment targets and this risks fragmentation of policy coherence.

[15] The IMF's recent PIMA-Climate Change module assessed the public investment management institutions and effectiveness from the perspective of meeting climate action commitments.

Box 3.1. The National Infrastructure Commission and National Infrastructure Strategy

The NIC was established in 2015. As an Executive Agency of HMT, it operates at arm's length from the Government and provides independent, expert advice and recommendations to Government on the development of economic infrastructure.[1]

The NIC provides advice and makes recommendations through three core channels:

- It publishes a National Infrastructure Assessment (NIA) once in every Parliament, documenting its assessment of long-term infrastructure needs.
- It undertakes specific studies on pressing infrastructure issues and challenges which have been set by the government.
- It publishes an annual monitoring report, and assesses the Government's progress in areas where it has committed to taking forward the recommendations of the NIC.

The NIC's objectives, set out by Government in its mandate, are to support sustainable economic growth across all regions of the UK; to improve competitiveness; to improve quality of life; and, since 2021, to support climate resilience and the transition to net zero carbon emissions by 2050. The NIC discharges these functions within a 'fiscal remit' – it must be able to demonstrate that its recommendations can be implemented within a constraint of gross public investment in economic infrastructure of between 1.1% and 1.3% of GDP in each year between 2025 and 2055.

As part of this process, the Government commits to responding to recommendations within six months (where practicable and never more than one year), stating whether it accepts or rejects the recommendations. The 2020 NIS was informed by NIC recommendations and represents the Government's response to the 2018 NIA.

Sources: HM Government, Charter for the National Infrastructure Commission, October 2016
HM Treasury, , Remit Letter for the National Infrastructure Commission October 2021
[1] These are energy, transport, water, and wastewater (drainage and sewerage), waste, flood risk management and digital communications

Box 3.2. Levelling Up

Levelling Up is the UK Government's strategy to address regional imbalances in economic and social prosperity across the country. The strategy consists of 12 "missions" designed to spread economic opportunities, enhance public service provision, improve housing and devolve more power to local leaders.

The Levelling Up White paper undertakes to "hardwire" spatial considerations in government decision-making. Public investment will have an important role to play in achieving these objectives, aligned to the NIS. Relevant projects include investment in Innovation Accelerators, the Integrated Rail Plan, City Region Sustainable Transport Settlements, Project Gigabit and school improvement through Education Investment Areas.

Source: HM Government, Levelling Up the United Kingdom February 2022

Box 3.3. Scope of Infrastructure Plans

The scope of infrastructure investment strategy varies across countries. In addition to economic infrastructure such as transport, energy and digital networks, a number of countries also include social infrastructure in public investment planning.

In **Australia**, Infrastructure Victoria's research output has encompassed studies in social and affordable housing, health infrastructure and justice and the objectives underpinning its latest Infrastructure Strategy included fostering healthy, safe and inclusive communities.[1] *The Infrastructure Strategy for New South Wales* [2] covers investment in health, education, justice, culture, tourism and sport.

Canada's 12-year infrastructure plan Invest in Canada is comprised of five investment streams including adequate and affordable housing and childcare as well as cultural and recreational facilities.

In **Ireland**, the National Development Plan 3 incorporates capital investment in healthcare, housing, schools, third level education, culture, community regeneration and justice and is firmly linked to an overall national spatial strategy.[4]

In developing the evidence base for **New Zealand's** National Infrastructure Commission, *Te Waihanga*, assessed baseline condition of infrastructure in healthcare and education, along with economic infrastructure.[5]

In addition to economic infrastructure, **Scotland's** Infrastructure Investment Plan 2021/22 – 2024/25 includes built environment of housing, education, health, justice and cultural facilities.[6]

Sources

[1] Infrastructure Victoria. *Victoria's Infrastructure Strategy 2021-2051*

[2] Infrastructure New South Wales. *State Infrastructure Strategy 2018.*

[3] Government of Ireland, *National Development Plan 2021-2030*

[4] Government of Ireland *Project Ireland 2040 – The National Planning Framework*

[5] New Zealand Infrastructure Commission, *Te Waihanga* - - *Annual Report 2020/21*

[6] Scottish Government, *Infrastructure Investment Plan for Scotland 2021-22 to 2025-26*

26. Broadening the scope of the NIS could ensure alignment with social infrastructure delivery and assist in achieving the Levelling-Up agenda. Widening the policy architecture to incorporate social investment spending into the NIS[16] will increase comprehensiveness of overall policy plans, enabling better planning and sequencing of public investment across sectors and levels of government. A unified economic and social infrastructure strategy, consistent with a vision of regional development, would support the commitment to "hardwire" spatial considerations in investment planning as set out in the Levelling Up White Paper (see Box 3.2). National Investment Strategies for Wales and Scotland are good examples of incorporating social infrastructure plans and economic infrastructure. Internationally, a number of jurisdictions plan social infrastructure and economic infrastructure in tandem (see Box 3.3).

27. Projects are costed in advance of inclusion in investment strategies. The Spending Review provides the funding framework for the NIS and social infrastructure. Departmental level settlements contained in the Spending Review are based on bottom-up costing of all capital spending projects. HMT and the IPA review business cases for investment proposals prior to

[16] Potentially also National Infrastructure Assessments and NIC recommendations. The NIS already includes recommendations to reform project planning and delivery which also apply to social infrastructure.

inclusion in the budgetary plans. This includes an assessment of delivery capability. SR21 provides budgets for a three-year period, however the investment strategy takes account of early-stage total project costs and is consistent with longer-term assumptions on available fiscal space. In certain cases, HMT provides longer term indicative budgets beyond the Spending Review period for projects, which are still within scope at future SRs. Departmental settlements provide approval for medium-term project budgets. Examples include major transport and energy projects and Project Gigabit, the Government's long-term plan for digital connectivity.

28. Sectoral strategies do not uniformly include measurable output and outcome targets for investment plans, however a number of reporting channels aim to track investment outcomes. In particular the Public Value Framework requires departments to produce Outcome Delivery Plans to demonstrate spending impact. While not limited to capital spending, the indicators generated can be used to monitor progress against key policy targets set out in the NIS and related policy initiatives such as Net Zero and Levelling Up.

3. Coordination Between Entities (Strength-Medium; Effectiveness-Medium)

29. The level of fiscal decentralization in the UK is limited, as fiscal policy is controlled by the UK government. As stated in the Statement of Funding Policy 2021,[17] the responsibility for UK fiscal policy, macroeconomic policy and funding allocation across the UK remains with HMT. In the UK there are four nations (England, Northern Ireland, Scotland, and Wales) and three devolved national administrations (in Northern Ireland, Scotland, and Wales).[18]

30. Devolved administrations do not fully control their budgets, as grants from the UK Government significantly sustain them. Table 3.2 provides a summary overview of the devolved spending powers in Northern Ireland, Scotland, and Wales.[19] The devolved administrations also have revenue-raising powers, notably elements of income tax in Scotland and Wales. The devolved governments fund their activities from their own Consolidated Funds. These funds are the vehicles into which the funding from the UK government, called the "block grant," and other allocations from the UK Government are paid, together with the funding raised by the devolved administrations themselves. During every Spending Review, Fiscal Event, and

[17] HM Treasury, *Statement of funding policy: Funding the Scottish Government, Welsh Government and Northern Ireland Executive*,, October 2021.

[18] England is divided in 55 unitary councils and 10 combined authorities, Scotland has 32 unitary councils, Wales has 22 single-tier councils and Northern Ireland has 11 local councils.

[19] Devolution varies between varied devolved administration and sectors, for example, energy is a devolved power for Norther Ireland while rails in transport is reserved for Wales.

Parliamentary Estimate, the existing block grant is updated using the rules-based "Barnett formula." [20, 21]

Table 3.2. Devolved Powers in Northern Ireland, Scotland, and Wales

Health and social services	Economic development	Tourism, sport, culture and heritage
Education, training, and skills	Agriculture, forestry, and fisheries	Fire and rescue services
Local government	Environment and planning	Water and flood defense
Housing	Transport	

Source: Civil Service: Introduction to Devolution

31. Local authorities receive funding through various funding channels such as capital grants, formula funding, competitive bidding, and taxes. As can be seen in Table 3.3, the OBR estimates that public investments are expected to grow by around 16 percent between 2022-23 and 2026-27, from £124.3 billion to £143.9 billion, while public investment by local governments is expected to grow between 2022–23 and 2026–27 by around 17 percent, from £26.3 billion to £30.7 billion. Local governments in England show the strongest growth in investments (18 percent), as compared to Scotland (8 percent) and Wales (13 percent).

Table 3.3. United Kingdom: Local Government Capital Expenditure[1]

	2022/23	2023/24	2024/25	2025/26	2026/27	Growth 2022-26
Total UK public investment (PSGI), bn £	124.3	133.5	133.3	138.7	143.9	16%
Total public investment by LGs, bn £	26.3	29	28.7	29.8	30.7	17%
LG public investment in ENG, % of total investment by LGs	80%	80%	80%	81%	81%	18%
LG public investment in SCT, % of total investment by LGs	14%	14%	14%	14%	13%	8%
LG public investment in WAL, % of total investment by LGs	6%	6%	6%	6%	6%	13%

Source: Office of Budget Responsibility, Economic and Fiscal Outlook, March 2022.
1/ This analysis does not include Northern Ireland as services there are provided by their devolved government, the Northern Ireland Executive, and not by local governments.

32. Coordination of local authority capital spending plans with the central government takes place in the context of the central government's capital spending priorities. Currently, there is no single, overarching framework in place through which the central

[20] The Barnett formula determines the yearly change of the block grant based on population, changes in spending by UK departments, and the extent to which the UK department's services are devolved. The formula doesn't determine the total size of the block grant just the yearly change.

[21] The Spending Review process, fiscal events and budget composition are explained in Section 6.

government and local governments share information about their multi-annual capital spending plans, and shape investment priorities and capital spending plans in a collaborative manner. Coordination of capital spending plans mainly takes place in the context of department's investment priorities. For example, in the context of climate change, coordination takes place through sectoral networks such as the Local Adaptation Advisory Panel,[22] the Department for Business, Energy & Industrial Strategy (BEIS) provided £587 million in 2021 to local authority investments in heat decarbonization and energy efficiency as part of the UK Public Sector Decarbonisation Scheme.[23]

33. UK Government capital grants to local governments are spread over different funding instruments, with different criteria, procedures, and funding horizons per instrument. Local governments can bid for capital grants from various central governments funds such as the "The Pothole Action Fund", "New Stations Fund," "Ideas Fund" and "Levelling Up Fund." These funds transparently set out their funding criteria and processes and allow local governments to finalize their bids well before the start of a new financial year. The departments responsible for administering the different funds have delegated flexibility to determine issues like selection criteria, applicable procedures, and fund-specific funding horizons, with HMT scrutinizing these via the Treasury Approvals Process.

34. The system is complex. The bureaucracy and variety of bidding procedures, selection criteria, and funding flexibility could potentially constrain the capability of local governments to develop integrated multiannual capital spending plans; a fact that is acknowledged in the Levelling Up White Paper.[24] This issue of complex coordination was also recognized in the Spending Review 2021 as it stated that policy problems at the local level often fall under the responsibility of multiple departments, and emphasized the need for joint programmes, cross-cutting investment priorities and jointly funded programmes. In response, the Spending Review 2021 announced the establishment of a multi-department Levelling Up Fund,[25] aimed at removing funding siloes to better match local needs.

35. In general, the funding horizon of these funding arrangements is constrained by the Spending Review horizon. This limits the capability of local governments to develop multi-annual capital spending plans. Central government may set out longer horizons for certain funds

[22] A network to facilitate dialogue between the UK Government and local authorities in England on how best to support local action on climate change adaptation.

[23] See: BEIS, [Public Sector Decarbonisation Scheme Phase 1 Summary Report](), January 2022.

[24] See p.206, https://assets.publishing.service.gov.uk/government/uploads/systeAm/uploads/attachment_data/file/10527061/Levelling_UP_WP_HRES.pdf, p.206.

[25] In the first funding round, the Levelling Up Fund supported £1.7 billion of projects in over 100 local areas in the UK, delivering £170 million of funding to Scotland, £120 million in Wales, £49 million in Northern Ireland.

on a case-by-case basis, for example based on deliverability considerations, which may be determined in conjunction with local government.

36. Contingent liabilities from all public sector entities are disclosed in financial reports and published in the Whole of Government Accounts (WGA). Information about contingent liabilities in financial reports are to be published in accordance with the International Financial Reporting Standards. The WGA provides a comprehensive, financial accounts-based picture of the financial position of the UK public sector, for which it needs to consolidate the audited accounts of over 9,000+ public sector organizations. Whilst information about contingent liabilities related to capital projects of specific organizations can be found in the financial reports, these contingent liabilities are only explicitly mentioned in the WGA if they are material in terms of the overall account, such as the contingent liability of £3.5 billion reported in 2018-19 related to the Department for Transport.

4. Project Appraisal (Strength- High; Effectiveness-High)

37. Major projects are systematically subject to rigorous technical, economic and financial analysis, but greater independent review and transparency could improve effectiveness further.

- The documented *Treasury Approvals Process*[26] (TAP) and the Consolidated Budget Guidance (CBG) set out the need for project appraisal as part of project development. The Better Business Case Guidelines[27] outline the requirements to undertake project appraisal through a series of business cases that are developed as the project progresses in maturity (Figure 3.5). All projects joining the Government Major Project Portfolio (GMPP) require an *Integrated Assurance and Approval Plan*[28] validated by HMT that sets out the assurance requirements that must be followed, including the sequencing of reviews and approvals from HMT, Cabinet Office and Infrastructure and Projects Authority (IPA) (Box 3.4). HMT guidance also requires departments and Arm's Length Bodies (ALBs) to scrutinize the business cases of projects in their portfolios before they go to HMT for approval.

[26] HM Treasury, *Treasury approvals process for programmes and projects*,, March 2022.

[27] HM Treasury and Welsh Government, *Guide to Developing the Project Business Case - Better Business Cases: For Better Outcomes*,, 2018.

[28] The Treasury Approvals process document requires the production of plans required under: Infrastructure and Projects Authority, *Guidance for Departments: Integrated Assurance Strategies and Integrated Assurance and Approval Plans: A guide to implementing integrated assurance v2*, UK Government, 2017.

Figure 3.5 Business Case Development Framework

Determining the strategic context and undertaking the Strategic Assessment	Stage 1 – Scoping the scheme and preparing the Strategic Outline Case (SOC)	Stage 2 – Planning the scheme and preparing the Outline Business Case (OBC)	Stage 3 – Procuring the solution and preparing the Full Business Case (FBC)	Implementation and monitoring	Evaluation and feedback
Step 1: determining the strategic context **Gateway 0: strategic assessment**	Step 2: making the case for change Step 3: exploring the preferred way forward **Gateway 1: business justification**	Step 4: determining potential Value for Money (VfM) Step 5: preparing for the potential Deal Step 6: ascertaining affordability and funding requirement Step 7: planning for successful delivery **Gateway 2: delivery strategy**	Step 8: procuring the VfM solution Step 9: contracting for the Deal Step 10: ensuring successful delivery **Gateway 3: investment decision**	**Gateway 4: readiness for service**	**Gateway 5: operations review and benefits realization**

Source: HM Treasury and Welsh Government, Guide to Developing the Project Business Case: Better Business Cases for Better Outcomes, 2018.

Box 3.4. The Government Major Projects Portfolio

The GMPP comprises the largest, most novel and highest risk projects and programmes. GMPP projects are typically those where approval is required from HMT, either because the budget exceeds a department's delegated authority limit and/or because the project is novel, complex, contentious, or requires primary legislation. The GMPP covers many of the government's most high-profile projects.

The IPA provides scrutiny and assurance of priority projects on the GMPP as part of business case development. Expert teams in the IPA also give specialist project delivery, commercial and financial advice, provide practical tools and make specific recommendations to help improve the chance of successful delivery.

Projects on the GMPP are required to report quarterly on delivery progress and costs. This data is used to monitor progress across the portfolio and identify risks and delivery insights.

The latest 2020–21 GMPP annual report comprised 184 projects with a total Whole Life Cost of £542 billion delivered by 18 departments and their arm's length bodies. HMT advised that the GMPP had expanded to include around 250 projects and programmes.

Source: UK Infrastructure Projects Authority, Annual Report on Major Projects 2020-21, July 2021, and HM Treasury.

- These processes together deliver strong analysis and compliance with business case requirements, but truly independent review is limited. While the IPA is not an independent body,[29] reporting formally into both HMT and Cabinet Office, it does however provide expert and independent assurance of GMPP projects. The Major Projects Review Group panel that reviews the business cases of projects that are above £1 billion, or that are highly novel and/or contentious, includes two independent individuals selected from a pool of senior public and private sector experts.
- Public information on appraisals is currently limited. In its response to the Green Book Review in November 2020,[30] the Government committed that from April 2021 it would commence publishing summary business cases for infrastructure projects on the GMPP

[29] The IPA formally reports to HMT and Cabinet Office. It plays an active role in providing assurance of GMPP projects. It has no formal independence and acts largely as in-house adviser to HMT and project proponents (in addition to fulfilling other roles).

[30] HM Treasury, *Green Book Review 2020: Findings and response*, November 2020.

within four months of projects having reached final approval. However, the IPA confirmed that no business cases have been published yet due to timing, and security and commercial sensitivities. To date, publication of business cases has occurred only in limited circumstances, often in response to requests from Parliament. Stronger transparency would promote: the sharing of best practices; sharing of information relevant to other projects and the community; transparency and greater accountability for (and quality of) appraisals.

38. A clear, robust methodology for project appraisal is in place-and supported actively by HMT to drive continuous improvement in culture and practice.

- The Green Book and related Supplementary Guidance establishes the detailed standard methodology to be followed in undertaking economic appraisal throughout the development of project business cases.[31] Business cases are prepared following the five-case model (strategic, economic, commercial, financial and management). Whole of government methodologies, templates, tools and examples are publicly available, including March 2022 guidance on Value for Money assessment. Targeted guidance is provided for some sectors, including Health, with the Department for Transport having the most comprehensive guidance in the form of the Transport Analysis Guidance.[32] The conduct of assurance by HMT tests that these methodologies are applied in practice.
- The UK Government has been perceived as a standard setter for project appraisal methodology, with the earliest versions of the Green Book dating back to the 1970s. The Green Book has informed similar frameworks in other countries and is an example of leading practice internationally. HMT also has a commendable commitment to improving the effectiveness of appraisals which is already high against the PIMA framework. A public Green Book Review was undertaken in 2020, in part to address concerns that the appraisal framework had biased development towards South-East England. That review, and a 2021 survey of government agencies' experience in applying the Green Book have informed the HMT Green Book and the strategy of the Major Projects Unit (a team within the Public Spending Group in HMT) to improve the culture and practice of project appraisal.[33] Regular training to those involved in business case preparation is provided by private providers based on a HMT syllabus, and HMT provides training to those involved in performing assurance functions in HMT and Cabinet Office. A network of business case practitioners has also been established and receive updates from the Unit.

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[31] See https://www.gov.uk/government/collections/the-green-book-and-accompanying-guidance-and-documents for a guide to publicly available documents.

[32] https://www.gov.uk/guidance/transport-analysis-guidance-tag

[33] The strategy comprises 35 actions including arranging joint meetings bringing together different approval bodies to speed up approvals, improved signposting of how to navigate the range of guidance and support available, establishing procedures for how IPA should rapidly respond to off-track projects and improving ALB oversight.

39. Risk assessment and mitigation is a core part of project development and appraisals, and efforts are underway to improve the rigor of cost estimation.

- The Orange Book, which forms part of the Green Book Supplementary Guidance, deals specifically with risk in project appraisal and development.[34] Detailed methodologies cover specific risks, including optimism bias and climate risks. For GMPP projects, a Risk Potential Assessment[35] is completed and shared by the lead department with HMT, IPA and Cabinet Office to inform decisions on the assurance process to be followed and promotes early risk identification. Risk identification and mitigation plans are updated and reviewed as the business case progresses in maturity. HMT, the IPA and the Cabinet Office, oversee compliance with these requirements as part of project assurance. Large delivery departments also have sophisticated risk management practices to manage risks at the project and portfolio level.
- Notwithstanding these tools, the quality of cost estimation remains a major challenge in project implementation (also see Institution 13 on Project Implementation). The Department for Transport and HMT currently are reviewing the approach to management of transport project contingencies. In addition, agencies are increasingly moving to estimation of cost by ranges in line with the IPA's Cost Estimation Guidance.

5. Alternative Infrastructure Financing (Strength- High; Effectiveness-High)

40. There is an extensive regulatory framework supporting effective competition in all key markets for economic infrastructure, and independent regulators are well established. All key markets for economic infrastructure have been privatized, except for railway infrastructure in the UK and railway services in Northern Ireland. Many infrastructure companies are subsidiaries of multinational companies. Independent regulators (Ofgem, Ofcom, Ofwat, and the Office of Rail and Road) are long-established and enshrined in legislation. The Principles for Economic Regulation released in 2011 have guided the design and evolution of the regulatory frameworks in energy, water and digital infrastructure over the past decade, incorporating: periodic price reviews; statutory obligations for regulators, strategic policy statements from government; competition; and expert bodies to hear appeals. Government has committed to consult in 2022 on a package of measures to strengthen this framework, with a focus on ensuring the framework will deliver the investment needed, increase innovation, promote growth and deliver better outcomes for consumers and investors.

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[34] See HM Treasury, *Orange Book: Management of Risk - Principles and Concepts*, October 2004 and related tools and guidance available at https://www.gov.uk/government/publications/green-book-supplementary-guidance-risk

[35] https://www.gov.uk/government/publications/risk-potential-assessment-form .

41. The UK Government prefers alternative approaches to private sector finance in infrastructure delivery after ending the PFI scheme-although PFI type arrangements are still implemented by devolved administrations and local government.

- The UK was a pioneer in the use of PPP, through the Private Finance Initiative (PFI) introduced in 1992 and the successor PF2 from 2012. PF1 and PF2 have been governed by extensive regulatory and management arrangements, including comprehensive guidance materials (Green Book Annex A.4 deals specifically with designing and assessing PPPs), training and central support to departments and sub-national governments. In 2018, the UK Government decided to suspend new approvals under the PFI scheme noting the model was "inflexible and overly complex" and that the OBR had "also identified private finance initiatives as a source of significant fiscal risk to government."[36] Strong policies are in place for the management of existing PFI contracts-which, given their number and value, is a very important issue for the UK (Box 3.5).
- PPPs are still used by devolved governments, which have established their own modalities for such contracts, and local governments. In Northern Ireland, PPPs may be entered into subject to specific rules and Northern Ireland Department of Finance approval. The Welsh Mutual Investment Model is similar to PFI/PF2 but includes a requirement that the project delivers community benefits. Scotland implements managed investment model contracts and non-profit distributing PPP models, with these arrangements overseen by the Scottish Futures Trust.[37] There is collaboration between jurisdictions on the design and operation of PPP schemes, including with support from IPA. Local governments may also implement PPPs, as done by Transport for London.
- The UK Government's position to facilitating private sector involvement in infrastructure delivery was reviewed through the 2019 Infrastructure Finance Review.[38] The Government's response was included in the 2020 National Infrastructure Strategy, where the Government concluded that forming the UK Infrastructure Bank (UKIB), improving independent economic regulation and continuing to develop innovative tools to support investment were the preferred approach to accessing private sector finance (see Box 3.6). It noted that the Government is open to considering other PPP structures, such as joint ventures and concessions, where the benefits outweigh the costs. Discussions with private sector participants highlighted other issues relevant to private sector finance in infrastructure (Box 3.7).

[36] UK Government, *Budget 2018*, October 2018.

[37] https://gov.wales/mutual-investment-model-infrastructure-investment; https://www.scottishfuturestrust.org.uk/ page/non-profit-distributing; https://gov.wales/mutual-investment-model-infrastructure-investment; https://www.finance-ni.gov.uk/articles/public-private-partnerships-ppp-projects-and-procurement-issues.

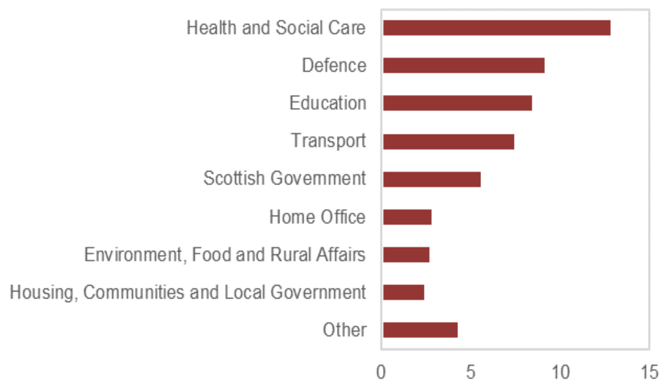
[38] https://www.gov.uk/government/consultations/infrastructure-finance-review

Box 3.5. Management of Existing PPP (PFI) Contracts in the UK

At the time the Government announced the ending of the PFI Scheme, more than 700 projects had been executed with a capital value of £57 billion (2.7 percent of GDP), which were to run to the end of the contract period. These PFI contracts provided a range of public services, including schools, hospitals, social care services, waste services, roads, housing, prisons, and military capability. As of mid-2021, there were over 550 PFI contracts operational in England, representing assets with an initial capital expenditure of £46 billion. In 2020, there were around 120 Scottish PPP projects across the education, health, office, and prison sectors.

Most PFI contracts result in the asset being returned to government once the contract ends. In 2020, the NAO estimated that assets to be transferred back to the central government in the period to 2026 were valued at £3.9 billion.

Chart: PFI Contracts by Capital Value (£billion, 2018)



In its report, NAO highlighted the need for strong management of these assets to ensure their quality is being maintained. There are also heightened risks and challenges for government at the point of the hand back of assets including continuity of service and potential financial costs that can be managed through active contract management.

IPA's PFI Centre of Excellence supports management of legacy contracts at the UK Government level. In February 2022, the IPA released new guidance on PFI contract expiry, which incorporated lessons learned from contracting authorities with experience in the expiry process and from the IPA's process of expiry health checks. It includes guidance on the impact of climate targets as recommended in the Climate-PIMA. It followed similar guidance from the Scottish Futures Trust.

Sources: *Infrastructure and Projects Authority, Preparing for Contract Expiry, February 2022; Scottish Futures Trust, PPP projects nearing the end of contract, April 2020; and National Audit Office, Managing PFI assets and services as contracts end, June 2020.*

Box 3.6. Types of Private Involvement in Infrastructure in the UK

Public-Private Partnerships (PFI/PF2)—More than 700 projects were delivered by the Private Finance Initiative (PFI) launched in 1992 and the successor PF2 (2012) framework under which the public sector procurer awards a contract through competitive tender for the design, build, financing and operation of certain public infrastructure.[a] The contractor is typically established as a special purpose vehicle comprising the successful bidder (or, more commonly, a consortium of bidders) for the project. In October 2018, the UK Government announced PFI contracts would no longer be used in England, and this position was reaffirmed in the 2020 National Infrastructure Strategy.

Regulated private ownership of key assets—Regulated Asset Base (RAB) models establish a regulatory framework for a long-term licensed private operator of a network or utility infrastructure asset. It is used for monopoly or monopolistic businesses providing essential services. The model allows the licensed operator to recover a regulated price calculated based on agreed expenditures to operate and maintain the asset, as overseen by an independent regulator. The RAB model is typically used in the UK, to finance large scale infrastructure assets such as water, gas, and electricity networks. The model was used to deliver greenfield projects such as the 2016 GDP 4.2 billion Thames Tideway Tunnel sewage project. Following consultation, government plans to use the RAB for new nuclear plants in the UK such as Sizewell C, and it could have future application to carbon capture usage and storage.[b] In 2018, the total RAB value across the UK electricity, gas, water, and airport sectors was approximately £160 billion (7.5 percent of GDP).[c]

Concession-based and other user-pay models—Concessions typically use project-financed structures similar to PF2 projects but, instead of the contractor's revenue coming from payments made by the procuring authority, revenue comes from user charges. This structure has been used in the UK for toll roads and river crossings.

Contracts for Difference—The UK Government provides incentives for low carbon electricity generation through the Contracts for Difference (CfD) scheme. The scheme reduces the risks for renewable energy generators by providing confidence about future wholesale prices over a 15-year period when making large, long-term investments. Bids from renewable energy generators are sought and approved in auction rounds, with offshore wind schemes having found success. CfD also supports the most recently built nuclear plant, Hinkley Point C. The fourth allocation round opened in December 2021.

Loans, equity injections and credit enhancements—In the 2020 National Infrastructure Strategy, the Government committed to the creation of the UK Infrastructure Bank. The Bank aims to provide £22 billion of infrastructure finance to tackle climate change and support regional and local economic growth across the UK. Support can be provided through loans, credit enhancement and equity investments. The first deals were done in 2021.

Grants and incentives—The UK Government incentivizes delivery of infrastructure for use by the public through the provision of grants to private providers of infrastructure in new sectors, or to address disadvantaged regions. Examples include the provision of grants to private providers of electric vehicle charging stations that are available for public use[d] and the £1 billion mobile connectivity programme[e]

(a) HM Treasury and Infrastructure and Projects Authority, Private Finance Initiative and Private Finance 2 projects: 2018 summary data, May 2019.
(b) The Energy White Paper includes a desire to bring a least one large-scale nuclear power project to final investment decision by the end of the current parliament. Following an industry consultation initiated in 2019, Government concluded that RAB remains a credible basis for financing large scale nuclear projects. The NAO recommended government consider a RAB model after assessing the experience of Hinkley Point C.
(c) Department of Business, Energy and Industrial Strategy, Contracts for Difference Policy Paper, Updated March 2020.
(d) Office for Zero Emission Vehicles, Grant schemes for electric vehicle charging infrastructure updated January 2021.
(e) The Rt Hon Oliver Dowden CBE MP, Mobile connectivity revolution to boost the Union, June 2021.

Box 3.7. Securing Private Investment and Private Funding in Infrastructure Provision

Since privatization, BEIS estimates that over £450 billion of private sector investment has been directed to the energy, water, and digital infrastructure sectors. Maximizing certainty and stability in policy settings will be important for continuing to attract long-term investment into infrastructure investment. Private sector groups stressed the importance of articulating government's intentions for achieving net zero and climate resilience to provide more confidence for future private sector infrastructure investment. Clarity about Government's future plans for renewing infrastructure currently provided through PFI contracts would also be helpful.

Across all stakeholders there was broad support and acknowledgement of the important work done by the IPA in supporting infrastructure delivery. Private sector representatives also suggested that greater staff capacity to structure and manage commercial arrangements across the wider public sector would also support future projects. They noted that even where strong commercial capacity exists, it can be stymied by others inside government who are less comfortable with innovative approaches.

The Government could also continue to explore ways to seek appropriate contributions from those who derive significant private benefits from the provision of new infrastructure. The 2020 HMT Balance Sheet Review rightly identified the opportunity for value capture to be used to contribute towards costs of infrastructure, however it does not seem that policies are in place to actively pursue this possibility. Similarly, there is little use of user charging in road provision relative to other comparable economies (beyond bridges and crossings). Both topics could more systematically be considered as part of project development, including for their ability to contribute to a funding source for the upkeep of the new assets created.

Source: Department for Business, Energy and Industrial Strategy, Economic Regulation Policy Paper, January 2022; HM Treasury, Improving Balance Sheet Management, 2020; private sector consultations; and IMF mission team.

42. Oversight of public corporations is undertaken by UK Government Investments (UKGI) and departments, with centralized financial reporting and oversight of large projects. Given the extent of privatization, public corporations (PCs) play less of a role in UK infrastructure delivery than in most other countries. UKGI is the ownership authority for some public corporations, including the Nuclear Decommissioning Authority and National Highways. Major projects are subject to scrutiny through standard processes for project development and approval in accordance with HMT and IPA guidance.

- Going forward, the UKIB (which is an operationally independent ALB of the Treasury) will be expected to make a sustainable return over time, recycling capital and reinvesting returns from its initial £22 billion of financial capacity. While it is envisaged to be operationally independent[39] in its day-to-day activities (such as its investment decisions), the UKIB will operate within a strategic framework set out by government and it is expected that there will be overarching coordination to ensure conflicts between UKIB and other government activities are minimized. The government plans that UKIB will be put on a statutory footing this year.
- There is no requirement in place to publish a consolidated report of public corporations' expenditure plans but there are strong procedures for accountability and transparency of

[39] UK Infrastructure Bank and HM Treasury, *UKIB Framework Document*, undated.

individual PCs. The CBG requires that departments agree forward plans with PCs, and that they monitor capital expenditures as part of portfolio management. The Guidance also requires departments to obtain and monitor wider performance information on their PCs and report this information to HMT for the purposes of the preparation of the whole of government accounts. Individual entities also disclose capital plans and financial information through their Annual Reports.

Recommendations for Planning Institutions

Issue 1: National and Sectorial Strategies A unified economic and social infrastructure strategy, consistent with a vision of regional development, could help achieve the Leveling-Up agenda, ensure the comprehensiveness of overall policy plans and enable better planning and sequencing of public investment across sectors and levels of government.

Recommendation 1. To ensure full alignment of investment planning and maximum efficiency in investment execution, broaden the scope of the next NIS to incorporate social infrastructure. (HMT by Q4 2022).[40]

Issue 2: Management of construction sector capacity to deliver the infrastructure program. As the UK scales up its infrastructure investment agenda, the capacity of the construction sector to deliver on this agenda also needs to ramp up. Government could do more to identify potential bottlenecks and proactively develop industry's capacity to deliver by better coordinating across relevant agencies, including potentially education, skills, employment, industry, and other policy areas. The current challenges of the post-COVID recovery, heightened competition for skilled labor and global supply chain limitations make this more important.

Recommendation 2.1 Review coordination mechanisms between IPA, NIC, HMT and BEIS on managing future construction and infrastructure sector workforce and capacity (BEIS to lead in consultation with IPA, HMT, NIC by Q3 2022).

Recommendation 2.2 Develop a strategy to improve construction sector capacity and workforce to meet the national infrastructure construction pipeline (BEIS by Q3 2022).

Issue 3: Investment planning at the local level. As the UK scales up its investments in local communities, the Government could pursue to better match the horizon of its funding mechanisms with the investment planning horizons of local communities, consolidate funding mechanisms to reduce the bureaucratic burden and enable local communities to develop integrated multi-annual capital investment plans.

[40] While the next NIS is not anticipated until 2024/25, decisions on what will be in scope should be taken earlier to facilitate research, analysis and policy development.

Recommendation 3.1. Increase the funding horizon of capital grants for local governments to match their capital planning horizon (HMT in coordination with DLUHC by Q4 2022).

Recommendation 3.2. Continue the consolidation of existing funding instruments for local governments (HMT in coordination with DLUHC by Q4 2023)

Issue 4: Strengthening the transparency, independence and implementation of project appraisal and assurance. Greater independent scrutiny of businesses cases and publication of business case summaries would improve the robustness of the appraisal process. Occurrence of cost and schedule overrun on major investment projects is frequently caused by optimism bias in early-stage forecasting. Truly independent scrutiny can provide a more robust challenge function and help de-bias forecasts. Greater transparency of business cases would help to sharpen accountability and provide information for wider planning purposes. Continuing to better organize the timing of assurance process will help minimise project delays.

Recommendation 4.1. Put in place procedures to increase independent scrutiny and project challenge and validate cost and schedule forecasts for major capital investment projects (HMT/IPA by Q4 2022).

Recommendation 4.2. Commence publication of business case summaries in line with Government's existing commitment to do so (HMT in consultation with departments, Immediately).

Recommendation 4.3. Publish business case summaries retrospectively for already approved major projects (HMT in consultation with departments by Q3 2022).

Recommendation 4.4 Implement HMT's existing plans to streamline project approvals and assurance, making it easier for agencies to navigate HMT, IPA and Cabinet Office approvals (HMT, Q2, 2022).

Issue 4.1: Cost overruns on major projects can have significant budgetary consequences. IPA guidance requires the use of the P-50 or median forecast as the project's Anticipated Final Cost.[41] However, cost overruns on the most complex projects can have significant budgetary consequences and understanding the potential impact of overruns at the outset should be key information in decision making.

Recommendation 4.5. Establish protocols for risk appetite and governance of contingencies in major projects (HMT by Q4 2022).

[41] IPA, Cost Estimating Guidance

D. Investment Allocation

6. Multi-year Budgeting (Strength—Medium; Effectiveness—High)

43. HMT carries out Spending Reviews to determine government plans for public spending, which include, multi-year departmental budget allocations for public investment. Spending Reviews set budgets over multiple years, typically on a three-yearly basis,[42] with the overall spending envelope set in line with fiscal rules. Spending Reviews sets out the Government's spending and investment plans and the maximum amount each government department can spend in a year on capital and recurrent spending by setting Departmental Expenditure Limits. More information about the budgeting framework in the UK can be found in Box 3.8.

44. Capital allocations are typically made for only the period of the Spending Review, though in recent years some steps have been taken to improve certainty for departments about future allocations.

- Generally, multi-year Spending Reviews set budgets for three to five years, providing capital allocations to departments for the same period. For example, Spending Review 2021 set budgets to 2024−25. However, by design, the length of the period of each department's planning certainty shrinks with the passing of every year. This is because capital budgets are not rolled over for an additional year in each subsequent budget but are only extended at each Spending Review.
- On a case-by-case basis, the government makes longer-term spending decisions to provide more planning certainty to specific projects or programs of certain departments. For example, the 2020 Spending Review (which had a 1-year horizon given COVID-related uncertainty) provided multi-year capital settlements for 21 capital programs[43] in the sectors of Transport, Climate Change, Housing, Public Services and Defense, Security and Science. Longer term allocations have also been made for specific projects e.g., the allocation for Project Gigabit in the 2020 Spending Review. As can be seen in Table 3.4, 42 percent of CDEL was part of the multi-annual settlements in the Spending Review-period 2021−22.

[42] Government changes and COVID-19 meant that spending reviews were done in three successive years, 2019, 2020 and 2021. The 2019 and 2020 reviews covered only one year.

[43] See SR2021, p. 111, table C.6: Multi-year capital programme settlements. However, the 2020 Spending Review did not detail the criteria underlying decisions to provide these particular programmes with more funding certainty for medium term allocation.

- Therefore, whether departments have a medium-term planning horizon for capital projects depends on discretionary decisions made by the Chancellor about the timing and coverage of Spending Reviews and varies across different Spending Reviews. This reduces the certainty and increases the volatility of capital budgets for departments (and also devolved administrations) who must plan capital across longer horizons given the often-long lead and delivery times of capital projects notwithstanding the shorter period of funding certainty.

Box 3.8. Spending Reviews and Budget Process

Spending review. The UK government has set out a forward look at likely expenditure since the Plowden Report on the control of public expenditure published in 1961. However, Spending Reviews, in their current form which seeks to set fixed multi-year ceilings for departmental spending and hold departments to those ceilings, were introduced in 1998. For capital investment, Spending Reviews make allocations for (i) continuing projects and programmes, (ii) new projects that are selected in the SR-process, and (iii) broader capital allocations not tied to specific projects or programmes (for example, on-going maintenance investment).

Although multi-year SRs set budgets for three to five years, in recent years, due to Government changes and COVID-19, the Government presented Spending Reviews for three successive years, 2019, 2020 and 2021. The 2019 and 2020 reviews set total departmental budgets for one year.[1] However, through the 2020 Spending Review, the UK government sought to provide more multiannual funding certainty for key capital programmes beyond this one-year period (to 2024-25).[2]

Spending Review allocations are determined by the Chancellor of the Exchequer, in consultation with the Prime Minister and other Cabinet Ministers and set out in documents presented to Parliament.

Key stages of the budget process. Within the overall spending framework multi-year Spending Reviews set fixed departmental budgets over multiple years, with Parliament then voting on and approving spending for each specific year via Supply Estimates processes each year. This process is implemented in the following way:

- Spending review: Sets fixed department budgets for the Spending Review-period.
- Parliament votes on and approves spending for each specific year via the annual Supply Estimates process. Mains Estimates presents budgets to Parliament for the upcoming financial year, with Supplementary Estimates setting out any further adjustments to budgets ahead of the end of the financial year.
- Additional spending announced outside of a Spending Review may be accounted for at Annual Budgets, which usually take place in the autumn.
- Annual reports and accounts are presented to Parliament by Departments and report spending outturn against provisions in the estimates. These are audited by the NAO.

Box 3.8. Spending Reviews and Budget Process (Concluded)

Spending Review 2021. Spending Review 2021 set departmental budgets from 2022/23 to 2024/25. The departmental budgets are binding for the SR-period. The ten departments with the largest budgets for capital spending Capital Departmental Expenditure Limits (CDEL) are shown below, with the biggest investment budgets being for the two major economic infrastructure sectors (Energy and Transport).

£ billion	**2022/23**	**2023/24**	**2024/25**
Total Managed Expenditure	1045.4	1081.4	1107.6
Total Departmental Capital Budgets (CDEL)	106.8	115.5	111.9
Business, Energy, and Industrial Strategy	*17*	*20.8*	*21.2*
Transport	*19.5*	*19.9*	*20.5*
Defense	*15.6*	*15.8*	*16.2*
Health and Social Care	*10.6*	*10.4*	*11.2*
DLUHC Levelling up, Housing and Communities	*8.9*	*6.9*	*6.8*
Education	*6.3*	*7*	*6.1*
Foreign, Commonwealth and Development Office	*2.6*	*3.5*	*4*
Environment, Commonwealth and Development Office	*2.2*	*2.9*	*2.7*
Levelling Up Fund	*0.9*	*1.4*	*1.4*
Justice	*1.7*	*2.2*	*1.4*
Other	*21.5*	*24.7*	*20.4*

Source: Table SR2021, p.42, Table 1.18: Departmental Capital Budgets.
1/ With the exception of the Ministry of Defence, for which Spending Review 2020 set budgets to 2024-25.
2/These included health, transport, further education, nuclear security, justice, defence, housing, R&D and digital infrastructure. See:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/938052/SR20_Web_Accessible.pdf

Table 3.4. CDEL and Multi-year Programme Settlements

	SR period	Forecast period		
	2021/22	**2022/23**	**2023/24**	**2024/25**
CDEL, £billion	100.4	107.3	109.1	112.8
Multi-year settlements, £billion	41.8	47.1	49.2	37
Multi-year settlements, % CDEL	42%	44%	45%	33%

Source: SR2021, p. 111, Table C.6: Multi-year capital programme settlements.

45. Departments have some flexibility to carry forward expected CDEL underspends related to significant investment programs. Managing large projects can pose significant challenges to departments that have to manage spending within annual budgets, which may have been set several years before the start of the project. Consolidate Budgeting Guidance (CBG) sets the conditions under which departments can request approval from HMT to qualify for carrying forward CDEL underspends. Conditions include: the program must be bigger than £50 million in the year in question; the carry forward may not exceed 20 percent of the program's CDEL in the year from which it is being carried forward; and if approved, the carry forward may be spread across multiple years. An 'allowance for shortfall' is calculated by OBR based on historical capital underspends and an expected forecast. It reflects the impact expected future capital underspends are expected to have on fiscal aggregates and targets.[44]

46. The total costs for major projects are estimated and published, but there is no multi annual capital spending plan with information about how costs are spread over each project's horizon. As laid out in the Green Book, and the CBG, the valuing of a new investment project should cover the lifetime period of the assets and therefore be based on a whole-life costing approach. The total costs of major projects are published in the GMPP Data documents, but the Spending Review and annual budget documents do not publish information about the distribution of the yearly costs of projects over an, e.g., five-year horizon. Without such information, it is difficult to compare total project costs vis-a-vis available resources over the medium term, how projects are prioritized over a multi-year horizon and how they are accommodated within the long-term fiscal constraints.

47. The government does not transparently explain changes in the estimated costs of investment projects in the budget documents. Total costs of major investments are published in GMPP data document, and as stated by HMT, changes in costs of projects are discussed with departments in the context of changes to spending approval as agreed when approving the business case. However, budget documents do not comprehensively and systematically publish in-depth information that explains all these changes. If budget documents do not explain when and why cost estimates are changed and do not provide a reconciliation of such changes over time, the relevance of cost estimation and publication is reduced.

7. Budget Comprehensiveness and Unity (Strength-High; Effectiveness-High)

48. Capital spending is undertaken through the budget. The CBG sets out the budgeting framework for expenditure control for public bodies. Budgets are prepared comprehensively, with budget estimates (including capital estimates) covering UK government departments. Departments are required to present estimates covering their ALBs, PPPs, non-departmental public bodies, Local Authorities and PCs.

49. All capital spending of the entire public sector is published in fiscal reports. Disclosure about the total amount of capital spending in the UK public sector is full and comprehensive. The Main Estimates presented in April each year contain information by department on the capital spending in the budget year under each of the government's main policy areas[45] and the same line is included for the Department's ALBs. HMT publishes the annual

[44] The OBR explains historical capital underspends and its estimation approach in Box 3.2 of the March 2020 Economic and fiscal Outlook, available at https://obr.uk/docs/EFO_March-2020_Accessible-1.pdf.

[45] Central Government Supply Estimates 2021-22 Main Supply Estimates May 2021 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/986125/CCS001_CCS0321282944-001_HMT_Main_Estimates_2021-22_Bookmarked.pdf

Public Expenditure Statistical Analyses (PESA) report, which brings together recent outturn (capital and recurrent) budgetary data, estimates for the latest year, and spending plans for the rest of the current SR period for the entire public sector (Table 3.5).

Table 3.5. Summary of Information Available in PESA Reports

Sections	Chapters
Budgets	Departmental budgets Economic analysis of budgets Changes in departmental budgets
Public sector spending	Trends in public sector expenditure Public sector expenditure by Classification of the functions of government (COFOG) subfunctions, and economic category
Sectoral analyses	Central government own expenditure Local government financing and expenditure Public corporations
Country and regional analysis	Public sector expenditure by country, region and COFOG subfunction Public sector expenditure by country, and COFOG subfunction.
	Public sector expenditure by country, and COFOG subfunction.

Source: PESA 2021

50. Capital and recurrent budgets are prepared in an integrated process and spending for both is presented together in the same budget documentation. As required by the MPM and the Green Book, the department responsible for capital projects reviews the whole life costs of an investment project, which includes the current cost estimations of a capital project. Subsequently, investments projects are approved based on the estimated capital and recurrent spending. Ideally business cases from one department incorporate the consequential impacts on other spending departments of decisions to proceed with infrastructure projects so that a complete cost picture is presented.

51. Capital and recurrent costs are presented by department against standard program classifications. The capital and recurrent costs are reported in budget documents, when they require approval through the budget process and PESA presents information on capital and recurrent costs based on the COFOG-framework. However, budget documents do not provide detailed breakdown of capital and recurrent costs per capital project over the project's horizon.

8. Budgeting for Investment (Strength—Medium; Effectiveness—High)

52. The UK Parliament appropriates budgets annually but is not systematically provided with information on total project costs and project specific multi-year commitments. UK Parliament approves the annual budget for each department for the budget year ahead. Projections of multi-annual spending published in budget documents are grouped by department, not project, and they are subject to confirmation or revision in the future annual budget decisions. For some very large projects, such as High Speed 2, the legislation provides planning consent for the project and the Government reports to Parliament on a six-monthly basis with information on project progress and contracts awarded under the allocated budget. [46]

53. Departments can switch expenditure from capital budgets to current budgets only with approval by HMT. As stated in CBG, HMT should retain control over the level of current spending via the resource budgets.[47] Exceptions on this rule are laid down in the CBG and require approval of HMT. Approval by the UK Parliament would normally take place as part of the net adjustments made through the Supplementary Estimates process, through which reallocation of funds between capital and current spending is presented to Parliament. HMT oversight is effective at ensuring capital spending is protected, and HMT indicated that departments do not frequently request approval for such transfers. A more common adjustment involves HMT allowing capital expenditure that is not spent due to delays in project execution to be rolled forward into the following year in line with Budget Exchange rules set out in CBG.

54. There is a mechanism in place to protect funding of ongoing projects in the annual budget. HMT provides a delegated responsibility to departments to implement all ongoing projects for which they have been allocated funds for the Spending Review period and have delegated authority over their budget.[48] Subsequently, departments cannot use the allocated funds for ongoing projects for alternative purposes without approval of HMT. Ongoing major projects receive the required funding.

9. Maintenance (Strength— Medium; Effectiveness—Medium)

55. There are standard methodologies in place for both routine and capital maintenance, and capital maintenance is addressed in sectoral plans. Maintenance is a delegated responsibility and accounting officers of Government departments are responsible for managing their assets. MPM[49] stipulates that "each organization needs to have a clear grasp of the content of its current asset base, the assets it needs to deliver efficient, cost-effective public services; [and] what this means for asset acquisition, use, maintenance, renewal, upgrade and disposal." For example, the Department for Transport provides strategic direction and funding to Network Rail, which is the Non-Departmental Public Body with delegated responsibility for managing and maintaining approximately 20,000 miles of rail track, 6,000 level crossings, 30,000 bridges and 2,500 stations. However, there is also evidence of certain maintenance backlogs, for example, SR21 provided £8 billion for local roads maintenance and upgrades.

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[46] High Speed 2 is a high-speed railway currently under construction in the UK. Through the High Speed Rail Act 2013, Parliament allowed expenditure on preparatory work, including construction design. The High Speed Rail Act 2017 authorized phase one of the construction. An example HS2 6-montly report to Parliament can be found at https://www.gov.uk/government/speeches/hs2-6-monthly-report-to-parliament-march-2022.

[47] CBG paragraphs 1.58 to 1.62.

[48] CBG 2022-23, 2.74 to 2.81.

[49] See MPM, A4.15 1&2, May 2021.

56. Costs for routine and capital maintenance of capital projects are estimated during project design and added to departmental budgets through the budget process. When preparing a project, the Green Book requires that costs of investment projects should be calculated over the lifetime of the capital project and that maintenance and renewal costs associated with the servicing of the asset should be included when estimating the total cost of a capital project. Costs for maintenance need to be based on organization-specific maintenance policies. To support government departments with management and maintenance of government property, the Office for Government Property, part of the Cabinet Office, develops standards and tools for planning, managing, and costing maintenance over the whole life cycle of government estate.[50] Accounting Officers can request additional funding for maintenance through budget allocation processes (e.g., at Spending Reviews).

57. Routine and capital maintenance spending information is not systematically disclosed in budget documents. Routine and capital maintenance spending is published mostly through agency-specific financial reports. There is no comprehensive centralized reporting on routine and capital maintenance in departmental budgets. Budget documents mention maintenance spending on a case-by-case basis. For example, the Spending Review 2021 announced expenditure of £22 million over the Spending Review period for maintenance of flood defenses, which was a Manifesto Commitment. Because information on maintenance spending is minimal, budget documents do not provide the legislature with the information to develop a view on the adequacy of short, medium, and long-term allocation for routine and capital maintenance of all public organizations.

58. The framework does not sufficiently ensure that maintenance of public assets is prioritized over new construction. As recognized in the Balance Sheet Review, under-investment in maintenance negatively impacts the useful life and value of public sector assets. Deferring maintenance creates backlogs and can multiply costs, while asset maintenance can support operational improvements to public services.[51] Key budgetary framework documents such as MPM, Green Book and TAP provide little guidance to public sector organizations on how to structurally strengthen their asset maintenance in the context of the findings as, for example, are published in the Balance Sheet Review or maintenance reports of public organizations. HMT indicated that it introduced tools and processes to identify value for money maintenance investment at the two most recent Spending Reviews (2020 and 2021). However, the incentives and institutions are still to be fully developed. Box 3.9 highlights country examples on incentivizing maintenance.

[50] For example, the OGP published the Government Functional Standard GovS 004: Property (September 2021) and Whole Life Asst Management Tools.

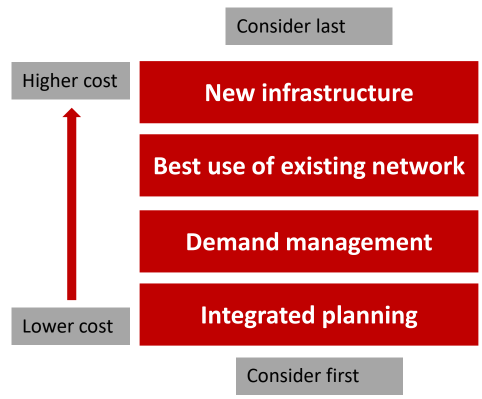
[51] Balance Sheet Review, November 2020, p.24.

Box 3.9. Incentivizing Maintenance of Public Assets

The **New Zealand Transport Agency** introduced an intervention approach that requires that alternative and option selection should start with lowest cost alternative and option, including making the best use of existing transport capacity, before considering higher cost alternatives and options.

- Integrated planning: Align development with existing transport infrastructure and services, and plan for urban form which reduces travel demand.
- Demand management: Address demand through supply-side measures: active modes, public transport and school or workplace travel plans.
- Best use of existing network: Through optimized levels of service on roads and public transport services.
- New infrastructure. Where affordable, to meet desired outcomes.

NZ Intervention Hierarchy



The **Netherlands** uses public scrutiny to incentivize maintenance and renewal of major infrastructure sectors, such as flood prevention management, by publishing information on maintenance and renewal spending in its budget documents, and also information about maintenance-performance targets.

Sources: PBC-intervention-hierarchy.pdf (nzta.govt.nz), https://www.gov.scot/publications/analysis-responses-consultation-draft-infrastructure-investment-plan-2021-22-2025-26/pages/5/ and (Dutch) 7 Deltafonds - Deltaprogramma 2021

10. Project Selection (Strength-Medium; Effectiveness-Medium)

59. Spending Reviews are the primary means of determining budget allocations for major public investment projects. As explained in institution 6, multi-year Spending Reviews set capital and recurrent budgets for three to five years. For capital investment, Spending Reviews make allocations for (i) continuing projects and programmes, (ii) new projects that are selected in the SR-process, and (iii) broader capital allocations not tied to specific projects or programmes (for example, on-going maintenance investment). Spending Review allocations are determined by the Chancellor of the Exchequer, in consultation with the Prime Minister and other Cabinet Ministers and set out in documents presented to Parliament.

60. Projects can be considered for funding in the Spending Review process regardless of the stage of the project and the maturity of the business case (i.e., the stage in Figure 3.5). As discussed at Institution 4, business cases are subject to robust review and assurance as part of the business case development process. This is not synchronized with the process for allocation in the Spending Reviews. This means the competition for allocations in the Spending Review is between all potential projects, not just appraised and mature projects, which is more typically considered best practice.

61. **Within the constraint of the Spending Review, HMT attempts to ensure robust central review of projects.** At each spending review since the 2015 Spending Review, HMT has undertaken a simultaneous assessment of all potential projects regardless of the level of project maturity—the capital appraisal process. At Spending Review 2021, this process stipulated that investment proposals, whatever their stage, be supported by a business case, with key details captured in a Business Case Summary Sheet. This includes all proposals that have a budget impact managed by departments, including projects delivered with the private sector. Business case summaries are prepared by departments before review by HMT, and depending on the proposal, the IPA and Cabinet Office, before Spending Review allocations are made. The nature of the Spending Review process, which considers all proposals at the same time places a high burden on all involved in this process (from HMT officials to Ministers) to assess the large amount of complex information in a narrow window. Where projects have already been reviewed by HMT, IPA and Cabinet Office, this information is also drawn on to inform Spending Review allocations. As described in Institution 4, true independent scrutiny is encouraged but often limited in project business cases.

62. **The Business Case Summary Sheet template prepared by HMT for the 2021 Spending Review summarizes the five cases and other data to inform decisions on budget allocations.** Summary information requested is organized around the five-case model (strategic, economic, commercial, financial, and management). Information on the impacts of the project on the achievement of Net Zero; alternative options considered, and geographic impacts are also captured. The IPA advised on project deliverability and risk of major projects as an input to the project selection process. There are no additional specific selection criteria for projects to receive budget funding in place.

63. **Formal approvals to proceed with funded projects are governed through a separate process to the Spending Review budget allocations process.** The well-articulated Treasury Approvals Process sets out the approvals that must be sought through a project's development and prior to contracting of funding. This process is de linked from the budget process (Box 3.10).

64. **Pipelines of future projects are maintained at a sector level they cover appraised and unappraised projects and are generally shared with HMT.** To some extent, these are consolidated by HMT for the periodic Spending Review process, but they are not otherwise formally maintained consistently across sectors. Some sector teams in HMT are involved in regular reviews with relevant departments. Government can include projects that have not been appraised in Spending Review allocations and some projects have been announced and/or committed to prior to appraisal, or subject to business case requirements being met. A consolidated pipeline of appraised projects ready for consideration for budget funding is not maintained. Some examples of countries who do this are at Box 3.11. Different approaches to handling proposals identified by the private sector and submitted to government for consideration is set out at Box 3.12.

Box 3.10. The Treasury Approvals Process

The Treasury Approvals Process applies to projects and programmes that that are above an agency's delegated authority limit, or proposals that are "novel, contentious or significantly repercussive for public finances in future." The process is captured in an evolving document that was last updated in March 2022. Approvals are required for projects at the Strategic Business Case, Outline Business Case and Full Business Case (contract award) stages.

The Treasury Approvals Process establishes:

- requirements to follow Green Book and Supplementary Guidance
- the ability for HMT to determine that some projects or programmes should join the GMPP, in which case Risk Potential Assessments apply
- requirements for Integrated Assurance Approval Plans designed to ensure that appropriate assurance activities are effectively planned, scheduled, coordinated. IAAPs were made a mandatory requirement for all central government major projects in January 2011
- detailed processes for assurance of major projects as they progress through stage gates; and heightened rapid engagement by IPA for projects that receive a status of "red"
- principles including early stakeholder engagement; transparency; departmental oversight of projects within their department and ALBs
- the requirement for business cases submitted by departments for approval to be signed off by Senior Responsible Officers, Accounting Officers and the relevant finance division
- approval arrangements for different types of projects ahead of final HMT and/or Cabinet Office Ministerial approval, including review by
    - Treasury Approval Process Panel (for projects below £1 billion)
    - Major Projects Review Group (Chaired by the HMT Director General of Spending and the Cabinet Office Permanent Secretary, including some external expertise) for projects above £1 billion and that are highly novel or contentious.

Source: HM Treasury, *Treasury approvals process for programmes and projects*, March 2022.

Box 3.11. National Infrastructure Pipelines

Infrastructure Australia maintains a priority list of credible, unfunded projects which are potentially "nationally significant." Proposals typically emanate from subnational governments and industry. Infrastructure Australia, a statutorily independent body, then evaluates the merit of these proposals against a standard set of criteria. A detailed prioritization framework considers proposals in terms of; strategic fit; economic, social and environmental value; and deliverability. Detailed submission guidelines are published along with further information on requirements of project proponents throughout each stage of the process.

In the **Netherlands**, the Multi-Year Programme for Infrastructure, Spatial Planning and Transport provides an integrated framework to address project feasibility from early concept through to final approvals. The process of project development is transparent and highly collaborative.

Source: https://www.infrastructureaustralia.gov.au/infrastructure-priority-list and https://cdn.gihub.org/umbraco/media/2343/gih_procurement-report_case-study_netherlands_final_web.pdf

Box 3.12. Market-led Proposals

Marked-led or unsolicited infrastructure proposals are those that come forward from the private sector at their own initiative, rather than responding to a specific request or project proposal or problem identified by government. Subjecting such bids to an appropriate level of scrutiny is important to ensure that the project is in line with government priorities, makes best use of scarce resources, and is subject to competition from other potential providers. In some countries unsolicited bids are prohibited, often reflecting the risks of such proposals or the desire to focus on identified priorities. Unsolicited bids are not accepted in Scotland.

HMT advised that these such proposals would generally be considered within a framework of law and policy as set out in MPM, the relevant grant standard on competition[(a)] and the public procurement regulations. Any prospective direct awards would also be considered novel, contentious and repercussive and would therefore require HMT consent as set out in MPM.

There are benefits in having clearer policies to guide both project proponents and decision makers. The UK Department of Transport has provided such guidance for market-led proposals in the rail sector,[(b)] and other governments have broadly applicable frameworks.[(c)]

(a) UK Cabinet Office, *Guidance for General Grants Minimum Requirement Five: Competition for Funding*, 2021.
(b) UK Department for Transport, *Rail market-led proposals Guidance*, March 2018.
(c) E.g. Government of New South Wales, *Unsolicited Proposals: Guide for Submission and Assessment*, August 2017, and Philippines PPP Governing Board, *Guidelines on Managing Unsolicited Proposals*, 2018.

Recommendations for Allocation Institutions

Issue 5. Multi-year budgeting: providing more certainty for capital planning. Effective capital planning requires longer-term funding certainty. In general, the Spending Review horizon only provides certainty for 3–5 years, and the funding horizon shrinks with the passing of every year. The timing and duration of Spending Reviews is set at the governments' discretion, providing further uncertainty.

Recommendation 5.1. HMT to provide and publish five-year departmental capital budgets and add an additional year on a rolling annual basis (HMT, upcoming Spending Review).

Issue 5.1. Multi-year budgeting & budgeting for Investment: developing comprehensive multi-annual spending plans. Effective capital planning requires integrated decision-making about allocation of funds across the planning horizon. Departments currently do not publish integrated multi-annual capital spending plans, nor information on distribution of costs of investment projects over the project's horizon.

Recommendation 5.2. HMT to instruct departments to publish a multi-annual overview of major capital programs and projects—including the cost distribution for each project, identifying and explaining significant changes (HMT and departments, Q4, 2023).

Recommendation 5.3. Departments to record multi-annual commitments and report to HMT, as requested (HMT, Q2 2023).

Issue 6 Incentivizing maintenance. The importance of adequate capital and routine maintenance of public assets is not sufficiently acknowledged in the PIM-framework, and more complete information relating to capital and routine maintenance funding in budget reports should be made available.

Recommendation 6.1. Publish information about maintenance spending in budget reports. (HMT by Q3 2023).

Recommendation 6.2. Integrate maintenance-performance indicators in the Outcome Delivery Plans. (HMT by Q3 2023).

Issue 7. Spending Reviews may allocate budget funding before project proposals are ready for an investment decision. Under current practice, Spending Reviews may make allocations to projects before business cases are fully developed and assessed and this happens in some cases. Agreeing budget allocations for projects and announcing them at an early stage may make it harder for government to change course if the proposals have weak business cases. Setting a minimum project maturity for consideration in the Spending Review would help ensure projects are 'locked in' to the budget only after they have been adequately developed and considered. Companion reforms could be considered, including increasing the amount of unallocated capital expenditure and establishing a periodic and prioritized process to consider budget funding for maturing proposals.

Recommendation 7.1. Set a minimum level of project maturity to receive a Spending Review allocation (HMT by Q2 2023).

Recommendation 7.2. Consider companion reforms including increasing the reserve for unallocated capital expenditure and allow maturing bids to come forward for consideration in an interim round at least once within each Spending Review period (HMT by next Spending Review).

E. Investment Implementation

11. Procurement (Strength— Medium; Effectiveness—Medium)

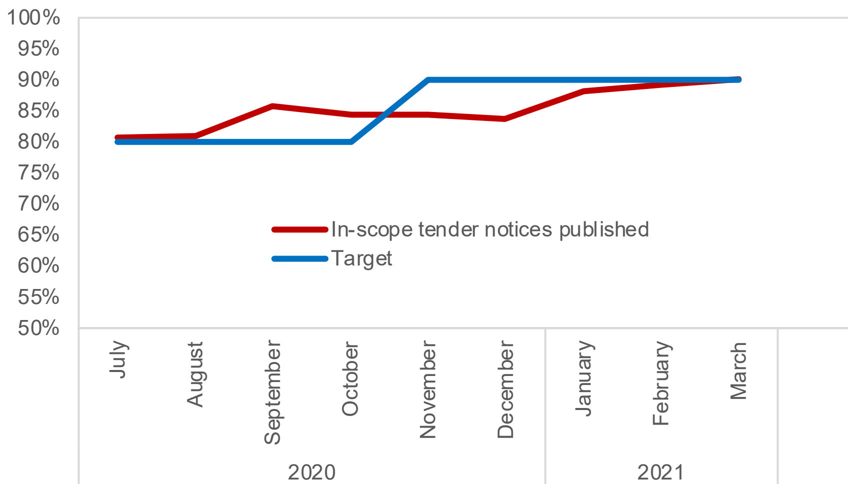
65. Procurement of major projects is open and competitive with requirements to advertise tenders for public works contracts, concessions, and utilities. UK Government Authorities are required to publish details of all procurements in excess of £10,000 (£25,000 for sub-central Authorities).[52] The majority of procurement is undertaken through e-procurement systems: Contracts Finder for procurements in excess of £10,000[53] and Find a Tender for

[52] The requirement to publish on Contracts Finder continues to apply if opportunities are advertised on local e-sourcing platforms.

[53] Cabinet Office, [Procurement Policy Note – update to legal and policy requirements to publish procurement information on Contracts Finder]

contracts valued over £118,000.[54] Results of contracting processes are published online. The Open Government National Action Plan, 2019–21 set targets to achieve up to 90 percent of publication of in-scope tender notices by April 2021. This target was achieved in March 2021 (Figure 3.6).

Figure 3.6. Rate of Publication of In-Scope Tender Notices



Source: Staff analysis of Cabinet Office data [1]

1/ Progress Against the Open Contracting Commitments in the Open Government National Action Plan 2019-21.

66. Transparency requirements mandate the publication of contracts upon tender award, with certain arrangements for redaction where necessary.[55] Once a contract has been awarded, the Contracting Authority is required to publish, at a minimum, the full company name of the winning contractor, the date on which the contract was entered into, the total value of the contract and an indication of whether the contractor is an SME or a Voluntary, Community or Social Enterprise. Government departments are also required by policy to publish contract documents in addition to the award notices. Internal monitoring data has shown that the extent of document publication varies substantially across Departments. In the period from January 2020 to April 2021, while six departments were found to have published more than 80 percent of awards with full documentation attached, a further six departments were found to have published less than 40 percent of awards with documents attached. Planned procurement reforms, including the recent Procurement Bill aim to enhance transparency.[56]

67. Through the Construction Projects Pipeline (see Box 3.13), the IPA provides information on forthcoming market opportunities arising from major investment projects. Government bodies are required to provide advance notice on planned procurements in the

[54] Cabinet Office, Procurement Policy Note – Introduction of Find a Tender

[55] Cabinet Office, Guidance on the Transparency Requirements for Publishing on Contracts Finder

[56] The Procurement Bill: Summary Guide to the Provisions.

coming 18-month period. This provides transparency and is a valuable tool to help prime the supply chain. The most recently published pipeline detailed more than 400 contract opportunities commencing procurement in the 2021/2022 financial year. The Pipeline also includes estimates of the likely construction workforce required to deliver the planned contracts.[57] To further assist the supply chain in preparing for opportunities, the IPA could consider publishing greater detail on expected opportunities including additional information on project maturity, risk and link to overall national and sectoral investment strategies. The publication of project business cases would also assist the construction industry in understanding the strategic context for major projects and support enhanced benefits realization.

68. High-level analytical reports for monitoring elements of the procurement system are published as part of the Open Government National Action Plan. Progress against targets for contract publication is published with remedial action taken where necessary. While there are requirements to publish data on individual contract awards,[58] there is not a timely, comprehensive overview of the operation of the system including information on the number of bids received, details of winning contractors and aggregate data to identify trends across the procurement system. Introducing a new periodic reporting process would support greater transparency, allow for timely identification of potential barriers to effective procurement and enable prompt detection of emerging market trends.

69. Planned procurement reforms and actions under the Open Government initiative aim to strengthen transparency in public procurement.[59, 60] A new central digital platform will be established and will hold comprehensive data on procurement notices and awards and wide-ranging KPIs. Transparency requirements will include mandatory reporting of contract performance throughout the project lifecycle, not just at tender publication and award stage.

[57] Infrastructure and Projects Authority. Analysis of the National Infrastructure and Construction Pipeline 2021

[58] Such as the name of successful tenderer and whether it is an SME.

[59] Cabinet Office, Transforming Public Procurement, Our Transparency Ambition

[60] Central Digital and Data Office, UK National Action Plan for Open Government 2021-2023

Box 3.13. Infrastructure and Construction Pipeline and Modern Methods of Construction

The IPA publishes the Infrastructure and Construction Projects Pipeline on an annual basis. The Pipeline presents future planned procurements and levels of investment consistent with the NIS. A core focus of the pipeline is to provide construction industry participants with advance notice of forthcoming procurement opportunities to assist in preparing for contracting opportunities. To assist in supporting enhanced construction sector productivity, procurement is supporting greater deployment of modern methods of construction (MMC). The Pipeline includes advanced notice of contract to include MMC components. [1]

Estimated forecast of pipeline to include Modern Methods of Construction (£m)

Sector	2021/22	2022/23	2023/24	2024/25	Total
Transport	12,037	11,723	11,663	12,262	47,685
Utilities	5,500	5,526	5,299	4,433	20,758
Social infrastructure	3,124	1,809	1,754	1,747	8,434
Digital Infrastructure	239	400	375	464	1,478
Flood and coastal erosion	1.2	1.2	1.1	1	4.6
Science and research	86	123	95	89	393
Total	20,988	19,582	19,186	18,996	78,751

Source: IPA, Analysis of the National Infrastructure and Construction Pipeline 2021 August 2021.
1/ Modern methods of construction includes a range of techniques designed to improve productivity, output and delivery timeframes in the construction industry. This includes off-site production and deployment of manufacturing approaches in place of traditional on-site building.

70. The Devolved Administrations publish reports on aspects of the procurement system. For example, the Scottish Procurement Reform (2014) act places a requirement on public bodies with procurement spend in excess of £5 million per annum to prepare an annual report on activities. At the aggregate level, the Scottish Government publishes an annual report presenting a range of information included limited data on transparency.

71. The Construction playbook presents a new approach to foster more efficient procurement of major projects and is mandatory for all public works projects and programs (see Box 3.14). The playbook is mandated for central government departments and ALBs on a 'comply or explain' basis. A common suite of contracts is used for the procurement of major projects. These include international standard forms of contract.[61] In the event that Contracting Authorities choose an approach from beyond the standard suite, they must seek explicit approval as part of the Treasury Approvals Process (see Institution 10).

[61] These are NEC 3 or NEC 4, as published by the Institution of Civil Engineers; JCT 2016, as published by the Joint Contracts Tribunal and PPC2000/TAC-1 and FAC-1 as published by the Association of Consultant Architects.

Box 3.14. The Construction Sector Playbook

Co-developed by the Construction Leadership Council and public authorities, the Construction Playbook sets out the new guidance for sourcing and contracting public works projects. The Playbook recognizes the critical role of the construction industry in delivering national investment policy and aims to foster collaboration to improve performance, profitability, and sustainability of the sector.

The Playbook sets out fourteen policy approaches across the themes of:

- Project preparation and planning (clearly defining objectives, assessing the market, early contractor involvement and setting the sourcing strategy)
- Procurement publication and advertising the contract opportunity
- Selection (featuring early contractor involvement and taking an outcome-based approach)
- Evaluation and award
- Contract implementation (monitoring, dealing with modifications, close out and review)

The Playbook specifically aims to embed digital technologies in contracting major projects by standardizing the approach to generating and classifying data and adopting the Information Management Framework. Greater cost certainty is promoted through the use of "Should Cost" modelling. Market engagement is used to better inform risk apportionment through contracting strategies.

Consultation with industry representatives points to the need to ensure full adherence to the Playbook across all contracting authorities. In addition, while the standard forms of contract are adequate, industry representatives report that contractual risk allocation practices are not always best suited to enable efficient delivery. This should be closely monitored by the Cabinet Office and IPA.

Source: IPA, Construction Sector Playbook, 2020.

72. Following the UK's exit from the EU, a program of procurement reform is underway.[62] At present, the main provisions of procurement regulations enacted in line with EU Procurement Directives are still in place. A White Paper published in 2020 outlines a range of potential reforms designed to speed up and simplify procurement processes and provide more opportunities for small businesses. In particular reforms will aim to rationalize the parallel regulations in place for procurement of public contracts, utilities, concession and defense and security and replace with a single, uniform set of rules for all contract awards.

73. Legal challenges to procurement processes are handled through the courts and so there are no fixed time limits on the resolution of cases.[63] At present the standard remedies and processes which derived from the EU Procurement Directives are still in place. These include the standstill period of at least ten days between the conclusion of the tendering process and the award of the contract, during which unsuccessful bidders can challenge the decision. The planned procurement reforms seek to streamline arrangements for legal challenge of

[62] Cabinet Office. Transforming public procurement, Green Paper.

[63] While specific data on precise timelines are not available, the Green Paper on Transforming Public Procurement cites research that reported the UK as having significantly longer timelines than European comparators (European Commission, Economic efficiency and legal effectiveness of review and remedies procedures for public contracts, Final Study Report, MARKT/2013/072/C, April 2015).

procurement outcomes and broaden access to what can be a timely process. This includes rationalizing the trial process for challenges considering characteristics such as urgency of contract award, value of the contract and the degree to which the facts of the case are not in dispute.

74. In addition to legal remedies, a Public Procurement Review Service (PPRS) is run from the Cabinet Office. PPRS is free of charge and allows suppliers and potential suppliers to raise issues of concern about public sector procurement practices. The service can also be used to highlight potential issues with the sub-contracting practices of prime contractors on Government contracts. The process and timing from initial acknowledgement to case conclusion varies depending on complexity and case load. However, issues relating to live procurement are handled more promptly—including potentially recommending remedial action to the Contracting Authority. Individual cases are anonymized and reported. Monthly updates document key issues in each case, the nature of the complaint and the outcome of the review including whether the procurement decision was overturned. At an aggregate level, the Cabinet Office publishes an annual report providing details on the number of cases recorded, the key issues raised and the progress in disseminating lessons learned across the system.[64]

12. Availability of Funding (Strength- High; Effectiveness-High)

75. Procedures for cash management and the related banking arrangements are well aligned with advanced international standards. Accounting officers, generally the highest-ranking civil servant in each department, are responsible for managing their cash requirements efficiently and actively under MPM guidance issued by HMT. It is long-standing practice that departments adhere to this administrative guidance, which under common law has an equivalent effect to more formal obligations.

76. Strong management of within year commitments is in place, along with established practices for cash flow forecasting and management covering both capital and recurrent expenditure. Each public sector organization is expected to plan its cash requirements as they need it, down to the daily level, while remaining within their voted provisions in Estimates for the fiscal year that are approved in Supply and Appropriation Acts. Guidelines on the preparation of cash forecasts are provided in Box A5.6A of MPM. Generally, departments will include ALBs' flows in their own projections and departments can update cash flow projection information at any time. Departments and entities surveyed indicated cash flow forecasts for capital spending are generally prepared by project teams and aggregated to the entity level monthly. The cash flow forecast information entered by departments is also visible to the Exchequer Funds Accounts team in real time. The Exchequer Funds Accounts team use this information for managing the government's daily cash requirements who undertake a full review of the forecast data at least monthly.

[64] Cabinet Office Public Procurement Review Service Progress Report 2020/21

77. Cash is released for payments in a timely fashion in line with annual appropriations. Appropriations may be amended during the year and approved in Supplementary Estimates. Agencies are required to pay invoices within 30 days to first tier suppliers/prime contractors and report on compliance with this requirement over the previous 12 months as part of their Annual Reports. This also provides evidence of timely availability of cash for infrastructure projects. No evidence of delays in cash availability to departments or other governments was found.

78. Together these arrangements give departments confidence to make commitments in line with annual appropriations, but there is more uncertainty about availability of funding for future years. Departments are permitted to enter longer-term contracts for infrastructure projects despite the absence of appropriations covering total project costs. Departments may use funding settlements made as part of Spending Reviews (at the department, project or program level) to guide these commitments; however, they are not constrained from taking longer term, or larger, contracts than their Spending Review allocations. HMT considers that departments take the risk if they enter into contracts that extend beyond Spending Review allocations-in that they may need to constrain other activities in the future to ensure the contract can be fulfilled. In practice, HMT set Delegated Authority Limits with an eye to giving departments a level of discretion that makes it less likely they will 'overcommit' against likely future budgets.

79. Until Brexit is fully complete, some external official funds from the European Union are used to fund infrastructure spending through the 2014–20 Multiannual Fiscal Framework. The Treasury banking policy requires departments to minimize balances outside of the main banking structure. Agencies are required to have a policy to manage bank accounts and report to Treasury on balances under rules set out in MPM. These rules provide oversight of accounts created for infrastructure delivered in collaboration with the private sector. Maintaining close scrutiny of both on and off-balance sheet liabilities related to infrastructure provision, and the potential transactions related to them, is also important for the UK.

13. Portfolio Management and Oversight (Strength- High; Effectiveness-Medium)

80. Major projects are monitored through the Government's Major Project Portfolio (GMPP). The Portfolio covers projects which are subject to HMT approval for reasons of financial cost and/or because the project is novel, complex, contentious, or requires primary legislation. The GMPP brings together information on the implementation status of all major projects in one place. GMPP projects are classified in four categories-infrastructure and construction, transformation and service delivery, military, and information technology. The 2020–21 GMPP annual report included 66 construction and infrastructure projects with whole life costs of £236 billion. Projects in this category had an average cost of £3.8 billion and schedule of 11 years.[65]

[65] Infrastructure and Projects Authority Annual Report on Major Projects 2020-21

81. **Central monitoring of the GMPP is overseen by the IPA and includes systematic data on performance against budget and schedule.** A report on overall trends across the portfolio is published annually and departments submit detailed quarterly reports to the IPA covering data on costs, schedule, benefits and a range of internal management information (see Box 3.15). As part of the annual reporting process, departments are required to explain changes in cost from the previous year and individual departments' returns are published at the project level. Each project is assigned a Delivery Confidence Assessment.[66] In the future, the IPA's assessment will be refocused on the readiness of a project or program to pass through a stage-gate. This will inform HMT approval decisions.

Box 3.15. GMPP Quarterly Reporting

For all projects on the GMPP, project reports contain overview data such as project description and history; cost, schedule and benefits data and NPV estimate; physical completion rating; and project resources overview. IPA connects over 2,000 discrete pieces of project data each Quarter.

Each project return includes an update on 'Vital Signs' across three categories:

1. People – including size of project team, rate of churn, number of vacancies, share of Senior Responsible Owners (SROs) time spent on the project and summary capability and capacity assessment.
2. Performance – including risks ratings, milestones and variance and current forecast outturn against approved cost, schedule and benefits.
3. Principles and fundamentals – including performance against milestones and assurance and drawdown of contingency.

Source: IPA

82. **Monitoring information is used to inform resource allocation and improve project performance.** GMPP data was an important input into Spending Review 2021. Each project's Delivery Capability Assessment (DCA) was a key consideration in funding allocation. The IPA's Annual Report on Major Projects provides a consolidated view of performance across the portfolio. The most recent report suggests that a project's inclusion on the portfolio is associated with an improvement in delivery confidence over time: focusing on those projects that had been on the GMPP for over a year, the DCA improved for 32 projects, remained the same for 42 projects and deteriorated for 12 projects.

83. **Quarterly assessment of projects on the GMPP involves detailed scrutiny of project cost and schedule performance.** Projects that fall outside of a tolerance of +/- 10 percent on cost or schedule are subject to further challenge. Recent data shows that forecasts for the large majority of GMPP projects fall within these limits.

84. **The GMPP covers the largest and most complex programs and projects.** Portfolio management for the remainder is managed by departments and ALBs, within their overall capital

[66] The likelihood of a project delivering its objectives to time and cost.

allocations. The Government's Project Delivery Functional Standard details requirements for portfolio management (Box 3.16).[67]

Box 3.16. Government Functional Standard for Project Delivery

The Government Functional Standard for Project Delivery establishes requirements for the management of portfolios, programs and projects ensuring value for money and successful and timely delivery. The Standard sets out clear definitions of portfolios, projects, programs and work packages. Clear governance requirements are articulated relating to assurance, decision-making, and accountabilities and roles.

The Standard describes the role of the portfolio director and manager:

- The portfolio director provides leadership and direction and owns the portfolio's vision and strategy. The portfolio director is accountable for the direction and governance of the portfolio and for delivering benefits at an acceptable level of risk.
- The portfolio manager is accountable to the portfolio director for managing the portfolio and ensuring it is set up to deliver on objectives, including monitoring spend against budget and benefits realization.

Source: IPA

85. Maturity of portfolio management capacity varies across departments. Departments with substantial programs of technology and business transformation have longer-established portfolio management practices. IPA is working to develop capacity across other bodies and, as part of the Government Project Delivery Framework, will shortly publish new guidance on portfolio management.

86. The NAO has reviewed portfolio management across government and made recommendations to improve the assessment of portfolio performance.[68] The review found that successful portfolios have clear objectives and purpose; are established with clarity on resourcing, governance and funding; and are managed in a way that is responsive to changes in the project context. The report recommends a framework for reviewing portfolios, made up of six elements: purpose, information, planning, governance, alignment and risk.

87. Departments have autonomy to portfolio manage allocations within agreed limits, however HMT approval is required to reallocate from ring-fenced project budgets. Ringfences are designed to isolate the effect of major investment projects and programs on the remainder of a department's budget. While the objective is to incentivize efficient estimates of project budgets at spending review and during delivery, ringfences may limit the capacity of departments to portfolio-manage their allocations. There is some flexibility to carry-over unspent allocations from one year to the next, which can aid portfolio management. The importance of

[67] The Cabinet Office has put in place a suite of Functional Standards across a range of areas of government activity which provide procedures and documentation to guide government officials. The IPA is responsible for the Project Delivery Standard.

[68] National Audit Office. Framework to Review Portfolios

ensuring adequate latitude for managing the portfolio is underscored by the high rate of capital investment underspends experienced in recent years. By putting in place arrangements to allow re-allocation, spending bodies will be better enabled and incentivized to exploit opportunities to expedite more advanced projects that can absorb underspends from less advanced projects. In 2020, Project Speed was established to review each stage of the infrastructure project lifecycle and identify where improvements could be made in order to deliver infrastructure projects better, faster and greener. As part of this process, HMT Authorities should ensure that departments have sufficient flexibility to portfolio-manage their allocations and exploit opportunities to expedite individual projects.

88. Guidance requires undertaking ex-post reviews upon project completion, however compliance is mixed. The Government's Project Functional Standard includes outcome review as the final stage in the project lifecycle and best practice guidance for evaluation is contained in the Green Book and Magenta Book on evaluation.[69] Gate 5 reviews are undertaken on projects exiting the GMPP, however these do not constitute comprehensive ex-post evaluations. Periodic ex-post reviews have been undertaken for projects and programs in certain sectors. An example is in highways where Project Outcome Performance Evaluations are undertaken as a matter of course. In 2019 the Department for Transport and IPA jointly undertook a study[70] to learn lessons from major transport investments and the findings have been incorporated into project management guidance. Stronger adherence to the requirements for ex-post reviews, and periodically reflecting lessons learned in project appraisal and management guidance, would improve project delivery performance.

14. Management of Implementation (Strength- High; Effectiveness-High)

89. Implementation is managed in line with robust project delivery requirements set out in the Green Book, Five Cases Model[71] and supplementary guidance. The Five Cases Model requires the systematic identification of the Senior Responsible Owner and the preparation of the project delivery plan prior to approval. Specifically, the Management Case requires detailed information on project governance (including roles and responsibilities), arrangements for use of specialist advisers, change and contract management arrangements, benefits realization arrangements, risk management arrangements, post-implementation and evaluation arrangements, contingency arrangements and plans.

90. A suite of guidance documents and procedures for project management are set by HMT and IPA. The Project Delivery Functional Standard is the approved reference for all government departments and ALBs. The Standard sets out clear definitions of portfolio, projects, programs and work packages. Governance requirements are articulated relating to assurance,

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[69] HMT, The Magenta Book, Central Government Guidance on Evaluation.

[70] Department for Transport and IPA. Lessons from transport for the sponsorship of major projects, 2019.

[71] HMT, Guide to Developing the Project Business Case

decision-making, and accountabilities and roles. Within this framework, further detailed guidance describes the role of the SROs.[72]

91. The Project Delivery Functional Standard is widely understood and found to be useful. Survey data shows that 75 percent of respondents in the project delivery function stated that the Standard is improving work practices across the function.[73] Project Delivery is one of the designated civil service professions and is made up of over 14,000 professionals in government who are involved with the delivery of projects, programs and portfolios (see Box 3.17). Monitoring data shows a high level of vacancies across projects and stretched resources for SROs. This is a risk to successful delivery.

Box 3.17. The Government Project Delivery Profession

The Government Project Delivery Profession is a community of over 14,000 professionals working in project implementation across UK Government. To support the development of the profession, the Project Delivery Capability Framework has been established, consisting of three core strands:

- Career pathways detailing the range of job roles within the profession;
- The technical and behavioral competencies required for such roles; and
- Development pathways guiding members of the profession to development and training opportunities available.

A number of advanced leadership programs form part of the development pathways including the Major Projects Leadership Academy developed and provided by the University of Oxford; the Project Leadership Program delivered by Cranfield University School of Management; and the Orchestrating Major Programs course for the most senior leaders, also delivered by the University of Oxford.

92. For major projects, there are standard criteria for classifying delivery confidence, which are systematically applied across the portfolio and used to inform project adjustment where necessary. The IPA undertakes a quarterly review of major projects. Projects are assigned a Red/Amber/Green status, which correspond to conditionality on project progression (See Box 3.18). As part of IPA's Quarterly Assessment of the portfolio, projects with schedule and/or cost profiles beyond tolerances of +/- 10 percent are typically subject to further scrutiny.

93. A set of follow-up reviews and escalation procedures—including potential escalation to the relevant minister—is in place. IPA annual reports show evidence of project redesign and/or early project closure in some cases. Smaller scale and less complex projects that are not on the GMPP are managed by departments in line with the Government Project Delivery Standard that establishes procedures for change management.

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[72] IPA, Project delivery: guidance The role of the senior responsible owner

[73] Cabinet Office. Functional Quality Survey, unpublished.

Box 3.18. Red/Amber/Green Status and Project Adjustment

Green: Successful delivery to time, cost and quality appears highly likely and there are no major outstanding issues that at this stage appear to threaten delivery. Recommendation: The project is ready to proceed to the next stage.

Amber: Successful delivery to time, cost and quality appears feasible but there are significant issues requiring management attention. These appear resolvable and, if addressed promptly, should not present a cost/schedule overrun. Recommendation: This project can proceed to the next stage with conditions, but the project must report back to the IPA and HMT on the satisfaction of each time bound condition within an agreed timeframe.

Red: Successful delivery of the project to time, cost and quality appears to be unachievable. There are major issues which, at this stage, do not appear to be manageable or resolvable. The project may need re-baselining and/or its overall viability re-assessed. Recommendation: This project should not proceed to the next phase until these major issues are managed to an acceptable level of risk and the viability of the project has been confirmed.

Source: IPA

94. Despite strong institutional arrangements, cost overruns, schedule delays and benefits shortfalls occur from time-to-time on high profile projects. In a UK context, the NAO has pointed to contributing factors such as shortcomings in forecasting, issues with scope, system interdependencies and governance. Internationally, a growing body of literature focuses on biases in cost and schedule forecasting as root causes of problems during delivery.[74] While such issues may present as challenges in implementation, their roots can usually be traced to decisions taken during planning, appraisal and selection. Different countries have put in place governance steps to tackle cost and schedule overrun including strengthening Gate Approval processes, debiasing forecasts and introducing more independent scrutiny of business cases (see Box 3.19).

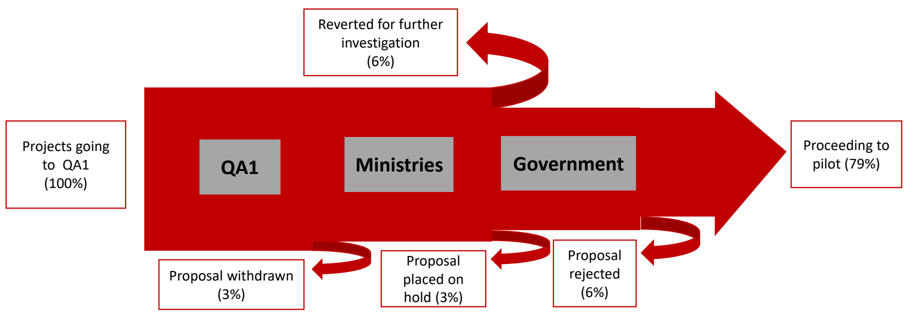
[74] For example Flyvbjerg, Bent (2104) What you Should Know about Megaprojects and Why: An Overview, Project Management Journal. 2014;45(2):6-19

Box 3.19. International Examples of Major Project Challenge Models

In **Australia**, all investment proposals are reviewed by Infrastructure Australia, the country's independent statutory infrastructure advisor. Assessments are undertaken against a standard framework and consider a range of questions including deliverability. At a subnational level, the statutorily independent Infrastructure New South Wales' Infrastructure Investor Assurance Framework consists of: project monitoring; regular project reporting; expert and independent Gateway Reviews supplemented by Health Checks and Deep Dives; and insights sharing and capability building for public sector professionals engaged in the delivery of infrastructure projects.

In 2000, **Norway** introduced a new quality assurance process for major public investment projects. This consists of external scrutiny of the cost forecast of major projects prior to parliamentary approval (QA2) and was extended to include scrutiny of the conceptual solution prior to section by cabinet (QA1). Independent evaluation has shown that the scheme is achieving its objectives of reducing cost overrun.[1]

Proposal progression through the QA1 stage



In 2022, **Ireland's** [Department of Public Expenditure and Reform] introduced a similar approach to project challenge on major investment projects (>€100 million). Under the External Assurance Process, Government Departments are required to commission reviewers (from a framework of service providers established by the Department of Public Expenditure & Reform) to assess key project characteristics set out in the Business Case such as the validity of cost and schedule forecasts and the degree to which estimates adequately account for risk. Prior to Government Approval of the project at two key Decision Gates, the Business Case and External Assurance Report are presented to the Major Projects Advisory Group. The Group - made up of independent experts on a range of disciplines relevant to project planning and execution – provides advice to the Minister for Public Expenditure and Reform on the deliverability of the project in advance of Government decision.

1/ Odeck et al (2015). The Impact of External Quality Assurance of Costs Estimates on Cost Overruns: Empirical Evidence from the Norwegian Road Sector. *European Journal of Transport and Infrastructure Research*, *15*(3)

95. Despite the absence of an automatic review of major projects, the NAO frequently examines major projects and results are scrutinized by Parliament. The NAO has produced comprehensive reports on lessons learned and recommendations for reform.[75] The approach consists of both department-specific focus and analysis of cross-cutting themes. The NAO may wish to consider introducing triggers or protocols for routine review of major projects, potentially based on scale or complexity.

96. The NAO monitors and reports on the implementation of its recommendations.[76] Since 2019, the NAO has published a tracker of the rate of acceptance and implementation of its

[75] For example, NAO, Lessons learned from Major Programs

[76] NAO Recommendations Tracker

recommendations. Table 3.6 shows a snapshot of the follow-through on recommendations from reports that focus on major projects or public investment more widely, it shows a high rate of implementation of recommendations.

Table 3.6. Implementation of NAO Recommendations from Public Investment-Related Reports

Report	Date of publication	Number of Recommendations	Recommendations implemented
Completing Crossrail	May 2019	3	3
HS2 Progress update	January 2020	9	9
Improving Broadband	May 2019	10	9.5[1]
Improving the A30	October 2020	5	4
Westminster renovation	April 2020	21	12

Source: Staff analysis of NAO Recommendations Tracker
1/ Nine recommendations were fully implemented, and one partially implemented.

15. Asset Management (Strength— High; Effectiveness—Medium)

97. Responsibility for asset management is delegated to departments. MPM Annex A4.15 sets out requirements for departments to manage assets and suggests that the maintenance of asset registers updated at least annually is good practice. The UK's practice of preparing comprehensive, audited financial accounts effectively requires agencies to know their asset base and means assets are recorded. Oversight of some aspects of asset management is provided by sector and asset specific bodies.

- Sector maintained asset information is not currently made available in a comprehensive or coordinated way and is not shared with HMT.[77] The ongoing development of the National Underground Assets Register and the Digital National Assets Register recognizes the importance of making information available about assets, their location and their condition to help public and private decision makers make better decisions about assets, their use and complementarities across sectors (Box 3.20).
- The Office of Government Property establishes Functional Standards for the management of land and buildings and monitors performance against these standards. Departmental asset management plans are prepared on the management of land and buildings, and brief summaries of these are published.[78]

[77] A centralized national fixed asset register incorporating 370 government bodies was last published in 2007. See HM Government, *The National Asset Register*, January 2007.

[78] https://www.gov.uk/government/publications/departmental-strategic-asset-management-plan-executive-summaries

- Network Rail's asset management plans includes rail assets owned by the government.[79] The Office of Road and Rail also monitors Network Rail's license condition on asset management, including the management of asset information, and uses independent technical experts to support its oversight.
- The IPA is responsible for maintaining a register of PFI contracts and assets, helping departments to manage PFI contracts (including overseeing asset quality while still in private hands) and helping agencies prepare for the return of PFI assets to the public sector.

Box 3.20. Improving Asset Information to Help Public and Private Sector Planning

UK's Geospatial Commission is building the **National Underground Asset Register**. A digital map of underground pipes and cables that will become progressively available from 2023. The Register will provide a consistent, interactive digital map of buried asset data, accessible to those planning and executing excavations on behalf of underground asset owners. The Register will bring together data held by over 650 asset owning organizations, who are legally required to share their data for free. It is estimated that the economic benefits of the Register will be £350 million per year, comprising of planning and other efficiencies, reduced asset strikes, and reduced delays to the public and businesses.

The Cabinet Office is leading the development of a **Digital National Asset Register**—a comprehensive database of buildings and land owned by UK public-sector entities that will support management and analysis of data on government property. It is intended that data that could be useful to public and private sectors would be released under the Open Government License.

Source: Geospatial Commission, *National Underground Asset Register An Overview*, March 2022 and https://www.digitalmarketplace.service.gov.uk/

98. The government is required to publish a full balance sheet annually that reflects the current condition of infrastructure assets—though there are some delays, and challenges in valuation, reducing effectiveness. The *Government Resources and Accounts Act 2000* establishes requirements for the production of financial statements under guidelines set by HMT that should reflect recognized accounting standards. (This is provided through the Government Financial Reporting Manual). The latest 2018–19 Whole of Government Accounts (WGA) contain over 9,000 entities including central government departments, local authorities, devolved administrations, and public corporations.[80] Property, plant and equipment comprises 60 percent of assets in the WGA, the largest component of which is infrastructure assets (largely road and rail networks). The WGA contains discussion of the valuation methodologies used for the road and rail networks and the associated uncertainties.

- The 2018-19 WGA were qualified[81] by the NAO on the basis that a material misstatement arises from differences between the financial reporting frameworks used by local

[79] Network Rail, *Assset Management Policy*, 2018 and Network Rail, *Asset Information Services Strategic Plan*, 2019.

[80] The 2019-20 WGA have been delayed due to factors including the roll out of the OSCAR 2 financial management information system https://committees.parliament.uk/publications/9250/documents/160035/default/

[81] See p. 190 of the 2018-19 Whole of Government Accounts.

government[82] and public corporations, which require infrastructure assets to be valued using historical cost, and the requirements of the Financial Reporting Manual (which determines that central government should value these assets at their depreciated replacement cost). While Treasury made certain adjustments to account for these, NAO considered asset values to be materially understated (estimated by NAO to be at least £58.8 billion, up from £47.8 billion in 2017–18). The NAO highlighted the importance of strengthening local authorities reporting of asset condition and timeliness of end of year financial accounts to improve future cost estimation.

- The Department for Transport's annual reports discloses the accounting assumptions for the road and rail network, the methodology used for estimation of valuation, the expert advice sought by the Department and the technical reviews done by the auditor as part of the audit. The audit opinion in the 2020–21 departmental accounts concluded the asset values were reasonable.[83]

99. Depreciation is recorded in operating expenditures in departmental financial statements based on asset specific assumptions and subject to audit. Guidance to departments on calculating depreciation is included in the Financial Reporting Manual, including specific advice for road assets, and is consistent with IFRS standards. The WGA report outlines that depreciation is calculated for each asset individually based on its estimated useful economic life and residual value The general timescales for each category are disclosed in the WGA and range to up to 150 years for Scottish water infrastructure.

Recommendations for Implementation Institutions:

Issue 8 Comprehensive and timely procurement reports are not routinely published. Regular and wide-ranging reporting of procurement information and publication of awarded contracts can ensure transparency and support confidence in the public procurement system.

Recommendation 8.1. Continue and expand the coverage of monitoring reports on execution of project procurement processes as part of the Open Government initiative (Cabinet Office, Q3 2022).

Recommendation 8.2. In line with procurement regulations, ensure the publication of contracts for major public investment projects, with minimal redaction. Publish timely reports on the rate of contract publication (Cabinet Office, Q2 2022).

[82] Road network assets held by local authorities are currently held at historical cost less depreciation, which is different from the valuation basis used by central government. The 208-19 WGA reports that local authorities investigated a valuation based on replacement cost less deprecation—but the body that sets the standards for local authority accounts decided that the costs of implementation outweighed the benefits and decided not to proceed.

[83] Department for Transport, Annual Report and Accounts 2020–21, p 188-189.

Issue 9 There is inflexibility in reallocating funding within and across departments. To exploit opportunities to expedite more advanced projects that can absorb underspends from less advanced projects and enable more strategic portfolio management, arrangements should be developed to allow re-allocation within and between departmental allocations.

Recommendation 9.1. Ensure there is sufficient flexibility to reallocate funds within and across departmental budgets in order to expedite delivery of projects that are ready to proceed (HMT by Q3 2022).

Issue 10 Ex post project evaluations are not routinely undertaken. Mandating post-project reviews for major projects and periodically reflecting lessons learned in project appraisal and management guidance, would improve project delivery performance.

Recommendation 10.1. Undertake and publish ex-post project evaluations for major investment projects. (All departments, Q2, 2022).

Recommendation 10.2. Document lessons learned and update project guidance on a periodic basis (All departments, Q2, 2022).

Issue 11 Strengthening management of assets. Departments are not required to maintain asset registers and share information on assets. Some initiatives are underway to improve digital registers for some assets, however, strengthening the expectations on departments would improve practices across the board.

Recommendation 11.1 Strengthen MPM guidance so that entities with material non-financial assets are required to maintain asset registers and establish minimum standards for their upkeep and transparency (HMT, Q3 2023)

F. Cross Cutting Issues

Legal Framework

100. The UK operates a common law system and does not have a written constitution. In this context, the powers used to manage public spending, including investment, consist of common law, primary and secondary legislation, parliamentary procedure, the duties of ministers, and other well-established practices.

101. Parliament has a key role within the legal framework for public investment management. Parliamentary agreement is required to set annual departmental budgets. As part of the Supply Estimates process, departmental estimates are put to Parliament annually and represent departmental budgets for the year ahead. Parliament has a central role in scrutinizing public investment. The Public Accounts Committee hold public hearings on central government accounts and frequently examine NAO reviews relevant to public investment management.

102. Under devolution, Northern Ireland, Scotland and Wales each have distinct legislatures and governments. Each devolved parliament has a separate devolution settlement and holds powers that were previously the preserve of the UK government. The specific arrangements are expanded through Acts of UK Parliament which set out the legislative competence of devolved administrations. Within this legal framework, a range of public investment functions are devolved (see Table 3.7).

Table 3.7. United Kingdom: Devolution of Competence for Economic Infrastructure

Sector	Scotland	Northern Ireland	Wales
Transport	Devolved	Devolved	Devolved, except rail
Energy	Largely devolved	Largely devolved	Partially Devolved
Water and sewerage	Devolved	Devolved	Devolved
Flood risk	Devolved	Devolved	Devolved
Waste	Devolved	Devolved	Devolved
Digital infrastructure	Not devolved	Not devolved	Not devolved

Source: IMF staff

103. Primary and secondary legislation covers certain aspects of the public investment system, however regulatory and guidance documents play a central role. The legal framework for public investment covers public procurement law and the planning process, both of which are the subject of reform initiatives at present. A number of independent institutions relevant to public investment management have been established including economic regulators, the NIC and the OBR. MPM sets the administrative framework within which public investment is executed. MPM sets explicit requirements and establishes the fiduciary duty of public servants to use public money responsibly. Further detailed rulebooks are issued by the Devolved Administrations.

Information Systems

104. Information systems for financial reporting information are comprehensive. HMT maintains an integrated financial Online System for Central Accounting and Reporting (OSCAR) to manage financial reporting, the budget estimates, and collect key datasets for government. OSCAR 2 has recently been introduced to replace OSCAR and is currently being refined. Key datasets captured in OSCAR include:

- Financial plans for the year ahead covering legal authorities to spend based on the Main Estimates and Supplementary Estimates
- Outturns, both Forecast and Outturns to track spending through the year and inform monthly reporting, and actual outturns

- The PFI database, which includes UK government departments and devolved administrations' PFI/PF2 data. Data collection takes place annually and includes key dates such as start of the contract, estimated original capital investment, and forecasted future annual payments. This was last published in 2018.
- Whole of Government Accounts data (including from devolved and local governments), and
- Country and regional analysis data for certain larger areas of spending.

105. The IPA maintains the GMPP dataset, which includes a set of information used for project implementation monitoring and reporting. A subset of this information is published in the IPA's Annual Report. A more complete internal dataset is used by the IPA.

106. Plans to link HMT data on approved spending for projects with GMPP data will improve oversight of project costs. Currently the cost data in GMPP is from a variety of sources and does not necessarily line up with allocations made for projects made in Spending Reviews. This inconsistency in data makes it more difficult for the IPA to monitor project costs.

107. The UK does not have a public portal on public investment projects that have been approved and/or are in delivery by location and value. Portals of this sort have been adopted in other countries and aid transparency and accountability for project delivery in a way that is easy for citizens to access.[84] The most comprehensive data made available is via the National Infrastructure and Construction Pipeline, which is targeted to the construction sector and available in excel format. Wales produces a similar Infrastructure Investment Pipeline.

108. Initiatives underway to improve readily available digital information on existing infrastructure assets will be useful to the public and private sectors. As outlined in Box 3.20, work underway to create a digital register of land and buildings and a National Underground Assets Register will support improved asset maintenance and planning.

Capacity Building

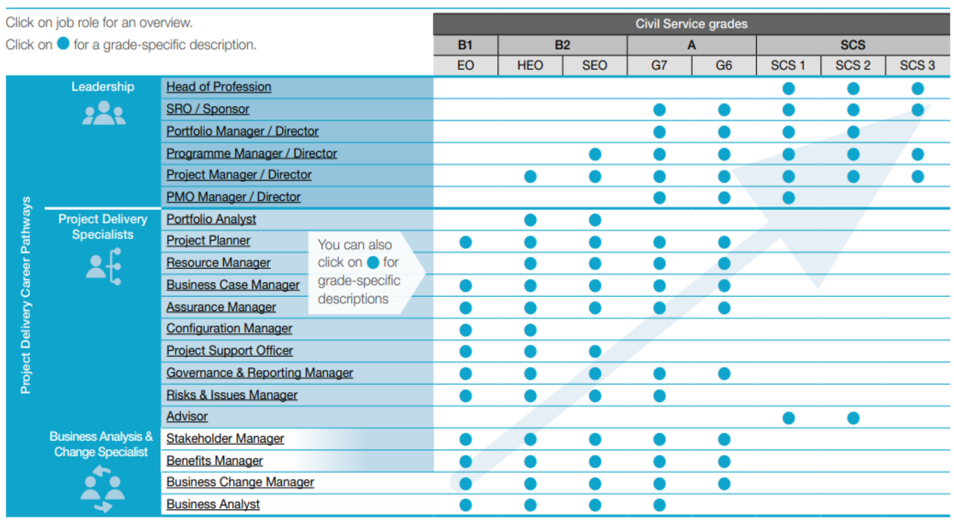
109. The UK Government is actively developing the project delivery and leadership capabilities of its investment project professionals. As the government's center of expertise for infrastructure and major projects delivery, the IPA has developed a range of instruments to increase the capability of every government project professional who works across all infrastructure sectors and at all levels of government. Ramping up the capability is needed not only because of currently planned investment projects and labor market shortages, but also because the government plans to increase public investment and to invest in new areas such as a

[84] Examples include the Governments of Manitoba (Canada) and New South Wales (Australia) https://www.gov.mb.ca/mit/mipmap/map.html and https://www.budget.nsw.gov.au/my-budget

net-zero and climate adaptive infrastructure.[85] Examples of instruments to build project delivery and leadership capabilities include:

- The IPA "Project Delivery Capability Framework". The framework describes the roles, capabilities, and learning for all government project delivery professionals across government. It contains three elements: a career pathway/common set of job roles (see Figure 3.7), a set of competencies, and a signpost for development opportunities specific to job roles. It further provides a common language to describe job roles and the knowledge, skills, and abilities needed to perform project work across all areas of the government.

Figure 3.7. UK Project Delivery Career Pathways



Source: IPA, Project Delivery Capability Framework.

- The Government Function Standard GovS 002: Project Delivery. GovS 002 sets expectations for governance, portfolio management, program and project management, planning and control practices, and solution delivery practices.
- The Major Projects Leadership Academy and the Government Projects Academy. Both institutes offer training curriculums for government officials at all levels, ranging from Senior Responsible Owners (SROs) of major government projects to project delivery specialists such as project support officers.

110. The IPA also monitors the resources needed for successful delivery of projects in the GMPP. The IPA monitors varied information about the number and composition of project professionals and investment projects across the GMPP-portfolio (e.g., the skills of the current project professional population, vacancies, and understaffed teams). This information provides insights for better allocation of project professionals across the government, informs recruitment

[85] The UK Climate-PIMA (February 2022) provided recommendations to strengthen the government's capacity in the context of net zero targets.

activities to replenish capacity shortages, and builds a workforce that is adaptive to new commercial developments and opportunities.

111. Having sufficient skills at the devolved and local government levels is also important to effective infrastructure delivery. It is often more difficult for local authorities to attract and retain needed skills, though reforms underway should contribute positively—namely the move to create local combined authorities in England, and for the UKIB to provide advisory services to local governments who wish to engage in private sector projects.

112. HMT's Green Book and Major Projects Unit is also working to improve the capacity for the public sector to undertake high quality project appraisals. The unit is ensuring training is available for staff preparing business cases and those that who are overseeing. More information is available in Section 3.C.4.

Recommendations for Cross Cutting Themes

Issue 12: More capacity is likely to be needed to identify and develop quality projects across sectors and regions. With the scaling up of the infrastructure program, and a desire to spread it more across the regions, it is likely there will be a growing need for more staff skilled in project identification and preparation across all regions. Existing skilled staff in such locations may also be attracted to higher profile projects, exacerbating the shortage.

Recommendation 12.1: Continue to build capacity across government sectors and regions to develop project proposals and build a diverse pipeline of quality projects (Q4 2022, HMT, DLUHC, UKIB, IPA)

Issue 13: Improving interfaces between information systems for public investment management would streamline management and improve efficiency. Current information systems are used for different purposes. Improved interfacing and sharing of relevant information across systems could improve the quality of management information and reduce duplication costs for all agencies in collecting similar data for different purposes.

Recommendation 13.1 Explore opportunities for improved data sharing between information systems for public investment management. (Q4 2023, HMT, IPA in consultation with implementation agencies).

Annex 1. PIMA Action Plan

#	Recommendations	2022	2023	2024+	Responsibility	Priority
	PLANNING					
	Better integrating economic and social investment planning					
1.0	Broaden the scope of the next NIS to incorporate social infrastructure		Q4		HMT/ NIC	Medium
	Boosting construction sector capacity to deliver the infrastructure program					
2.1	Review coordination mechanisms between IPA, HMT, NIC, and BEIS on managing construction and infrastructure sector capacity	Q3			BEIS to lead, with IPA, HMT, NIC, Educ	Medium
2.2	Develop a strategy to improve construction sector capacity and workforce to meet the national infrastructure construction pipeline	Q3			BEIS	High
	Increasing certainty for investment planning at the local level					
3.1	Increase certainty for investment planning at the local level through longer term funding guidance and streamlining funding instruments	Q4	Q4		HMT w DLUHC	Medium
3.2	Continue the consolidation of existing funding instruments for local governments		Q4	→	HMT w.DLUHC	Medium
	Strengthening the transparency, independence and implementation of project appraisal					
4.1	Increase independent scrutiny and project challenge, and validate cost and schedule forecasts, for major capital investment projects	Q4			HMT/IPA	High
4.2	Commence publication of business case summaries in line with Government's existing commitment to do so	Q2			HMT with public sector	Medium
4.3	Publish business case summaries retrospectively for already approved major projects	Q3			HMT with public sector	Medium
4.4	Implement plans to streamline project approvals and assurance, making it easier for agencies to navigate HMT, IPA and Cabinet Office approvals	Q2			HMT	Medium
	Limiting budget impact of cost overruns on major projects					
4.5	Establish protocols for risk appetite and governance of contingencies in major projects	Q4			HMT	High
	ALLOCATION					
	Providing more certainty for capital planning					
5.1	HMT to provide and publish five-year departmental capital budgets and add an additional year on a rolling annual basis			Next SR	HMT	Medium
	Developing comprehensive multi-annual spending plans					
5.2	HMT instructs departments to publish a multi-annual overview of capital programs and projects—including the cost distribution for each project, identifying and explaining significant changes		Q4		HMT and departments	Medium
5.3	Departments to record multi-annual commitments and report to HMT, as requested		Q2		HMT and departments	Medium

#	Recommendations	2022	2023	2024+	Responsibility	Priority
	Incentivizing maintenance					
6.1	Report about routine and capital maintenance spending in budget reports		Q3		HMT	Medium
6.2	Integrate maintenance-performance indicators in the Outcome Delivery Plans		Q3		HMT	Low
	Better aligning project maturity and budget funding decisions					
7.1	Set a minimum stage of project maturity to receive a Spending Review or budget allocation.		Q2		HMT	Medium
7.2	Consider need to: - increase the reserve for unallocated capital, and - allow maturing bids to come forward for consideration in an interim round at least once within each Spending Review period			Next SR	HMT	Medium
	IMPLEMENTATION					
	Strengthening procurement monitoring and reporting to increase transparency and confidence					
8.1	Regularly publish monitoring reports on execution of project procurement processes	Q3			Cabinet Office	High
8.2	In line with procurement regulations, ensure the publication of contracts for major public investment projects, with minimal redaction and report on the rate of publication	Q2			Cabinet Office	High
	Making it easier to speed up capital projects that are proceeding well.					
9.1	Ensure there is sufficient flexibility to reallocate funds within and across departmental budgets in order to expedite delivery of projects that are ready to proceed	Q3			HMT	Medium
	Strengthening ex-post project evaluations and learning from experience					
10.1	Undertake and publish ex-post project evaluations	Q2			All depts	Medium
10.2	Document lessons learned and update project guidance on a periodic basis	Q2			All depts	Medium
	Strengthening guidance on management of assets					
11.1	Strengthen MPM guidance so that entities with material non-financial assets are required to maintain asset registers and establish minimum standards for their upkeep and transparency.		Q3		HMT	Low
	CROSS CUTTING THEMES					
	Building capacity to scale up project identification and preparation across all sectors and regions					
12.1	Continue to build capacity across government sectors and regions to develop project proposals and build a diverse pipeline of quality projects	Q4			HMT, DLUHC, UKIB, IPA	Medium
	Improving IT systems interoperability and information sharing					
13.1	Explore opportunities for improved data sharing between information systems for public investment management.		Q4		HMT, IPA, implementation agencies	Medium

Annex 2. Detailed UK PIMA Scores

The following color coding is used in presenting the scores:

Score	1	2	3
Color	Low	Medium	High

A. Planning		
	Institutional Design	Effectiveness
1.a.	3	3
1.b.	2	3
1.c.	3	3
2.a.	3	3
2.b.	3	3
2.c.	2	2
3.a.	2	2
3.b.	2	2
3.c.	3	3
4.a.	2	3
4.b.	3	3
4.c.	3	2
5.a.	3	3
5.b.	3	3
5.c.	2	2

B. Allocation		
	Institutional Design	Effectiveness
6.a.	2	3
6.b.	2	3
6.c.	2	2
7.a.	3	3
7.b.	3	2
7.c.	3	3
8.a.	1	2
8.b.	3	3
8.c.	2	3
9.a.	3	2
9.b.	3	2
9.c.	1	1
10.a.	2	2
10.b.	2	2
10.c.	2	2

C. Implementation		
	Institutional Design	Effectiveness
11.a.	3	3
11.b.	2	2
11.c.	2	2
12.a.	3	3
12.b.	3	3
12.c.	3	3
13.a.	3	3
13.b.	3	2
13.c.	2	2
14.a.	3	3
14.b.	3	3
14.c.	2	3
15.a.	2	2
15.b.	3	2
15.c.	3	3

Annex 3. PIMA Questionnaire

Indicator		Scoring		
		1 = To no or a lesser extent	**2 = To some extent**	**3 = To a greater extent**
A.	**Planning Sustainable Levels of Public Investment**			
1.	**Fiscal targets and rules: Does the government have fiscal institutions to support fiscal sustainability and to facilitate medium-term planning for public investment?**			
1.a.	Is there a target or limit for government to ensure debt sustainability?	There is no target or limit to ensure debt sustainability.	There is at least one target or limit to ensure central government debt sustainability.	There is at least one target or limit to ensure general government debt sustainability.
1.b.	Is fiscal policy guided by one or more permanent fiscal rules?	There are no permanent fiscal rules.	There is at least one permanent fiscal rule applicable to central government.	There is at least one permanent fiscal rule applicable to central government, and at least one comparable rule applicable to a major additional component of general government, such as subnational government (SNG).
1.c.	Is there a medium-term fiscal framework (MTFF) to align budget preparation with fiscal policy?	There is no MTFF prepared prior to budget preparation.	There is an MTFF prepared prior to budget preparation but it is limited to fiscal aggregates, such as expenditure, revenue, the deficit, or total borrowing.	There is an MTFF prepared prior to budget preparation, which includes fiscal aggregates and allows distinctions between recurrent and capital spending, and ongoing and new projects.
2.	**National and Sectoral Planning: Are investment allocation decisions based on sectoral and inter-sectoral strategies?**			
2.a.	Does the government prepare national and sectoral strategies for public investment?	National or sectoral public investment strategies or plans are prepared, covering only some projects found in the budget.	National or sectoral public investment strategies or plans are published covering projects funded through the budget.	Both national and sectoral public investment strategies or plans are published and cover all projects funded through the budget regardless of financing source (e.g., donor, public corporation (PC), or PPP financing).
2.b.	Are the government's national and sectoral strategies or plans for public investment costed?	The government's investment strategies or plans include no cost information on planned public investment.	The government's investment strategies include broad estimates of aggregate and sectoral investment plans.	The government's investment strategies include costing of individual, major investment projects within an overall financial constraint.
2.c.	Do sector strategies include measurable targets for the outputs and outcomes of investment projects?	Sector strategies do not include measurable targets for outputs or outcomes.	Sector strategies include measurable targets for outputs (e.g., miles of roads constructed).	Sector strategies include measurable targets for both outputs and outcomes (e.g., reduction in traffic congestion).
3.	**Coordination between Entities: Is there effective coordination of the investment plans of central and other government entities?**			
3.a.	Is capital spending by SNGs, coordinated with the central government?	Capital spending plans of SNGs are not submitted to, nor discussed with central government.	Major SNG capital spending plans are published alongside central government investments, but there are no formal discussions, between the central government and SNGs on investment priorities.	Major SNG capital spending plans are published alongside central government investments, and there are formal discussions between central government and SNGs on investment priorities.

3.b.	Does the central government have a transparent, rule-based system for making capital transfers to SNGs, and for providing timely information on such transfers?	The central government does not have a transparent rule-based system for making capital transfers to SNGs.	The central government uses a transparent rule-based system for making capital transfers to SNGs, but SNGs are notified about expected transfers less than six months before the start of each fiscal year.	The central government uses a transparent rule-based system for making capital transfers to SNGs, and expected transfers are made known to SNGs at least six months before the start of each fiscal year.
3.c	Are contingent liabilities arising from capital projects of SNGs, PCs, and PPPs reported to the central government?	Contingent liabilities arising from major projects of SNGs, PCs, and PPPs are not reported to the central government.	Contingent liabilities arising from major projects of SNGs, PCs, and PPPs are reported to the central government, but are generally not presented in the central government's budget documents.	Contingent liabilities arising from major projects of SNGs, PCs, and PPPs are reported to the central government, and are presented in full in the central government's budget documents.
4.	**Project Appraisal: Are project proposals subject to systematic project appraisal?**			
4.a.	Are major capital projects subject to rigorous technical, economic, and financial analysis?	Major capital projects are not systematically subject to rigorous, technical, economic, and financial analysis.	Major projects are systematically subject to rigorous technical, economic, and financial analysis.	Major projects are systematically subject to rigorous technical, economic, and financial analysis, and selected results of this analysis are published or undergo independent external review.
4.b.	Is there a standard methodology and central support for the appraisal of projects?	There is no standard methodology or central support for project appraisal.	There is either a standard methodology or central support for project appraisal.	There is both a standard methodology and central support for project appraisal.
4.c.	Are risks taken into account in conducting project appraisals?	Risks are not systematically assessed as part of the project appraisal.	A risk assessment covering a range of potential risks is included in the project appraisal.	A risk assessment covering a range of potential risks is included in the project appraisal, and plans are prepared to mitigate these risks.
5.	**Alternative Infrastructure Financing: Is there a favorable climate for the private sector, PPPs, and PCs to finance in infrastructure?**			
5.a.	Does the regulatory framework support competition in contestable markets for economic infrastructure (e.g., power, water, telecoms, and transport)?	Provision of economic infrastructure is restricted to domestic monopolies, or there are few established economic regulators.	There is competition in some economic infrastructure markets, and a few economic regulators have been established.	There is competition in major economic infrastructure markets, and economic regulators are independent and well established.
5.b.	Has the government published a strategy/policy for PPPs, and a legal/regulatory framework which guides the preparation, selection, and management of PPP projects?	There is no published strategy/policy framework for PPPs, and the legal/regulatory framework is weak.	A PPP strategy/policy has been published, but the legal/regulatory framework is weak.	A PPP strategy/policy has been published, and there is a strong legal/regulatory framework that guides the preparation, selection, and management of PPP projects.
5.c.	Does the government oversee the investment plans of public corporations (PCs) and monitor their financial performance?	The government does not systematically review the investment plans of PCs.	The government reviews the investment plans of PCs but does not publish a consolidated report on these plans or the financial performance of PCs.	The government reviews and publishes a consolidated report on the investment plans and financial performance of PCs.

B.	**Ensuring Public Investment is Allocated to the Right Sectors and Projects**			
6.	**Multi-Year Budgeting: Does the government prepare medium-term projections of capital spending on a full cost basis?**			
6.a.	Is capital spending by ministry or sector forecasted over a multiyear horizon?	No projections of capital spending are published beyond the budget year.	Projections of total capital spending are published over a three to five-year horizon.	Projections of capital spending disaggregated by ministry or sector are published over a three to five-year horizon.
6.b	Are there multiyear ceilings on capital expenditure by ministry, sector, or program?	There are no multiyear ceilings on capital expenditure by ministry, sector, or program.	There are indicative multiyear ceilings on capital expenditure by ministry, sector, or program.	There are binding multiyear ceilings on capital expenditure by ministry, sector, or program.
6.c.	Are projections of the total construction cost of major capital projects published?	Projections of the total construction cost of major capital projects are not published.	Projections of the total construction cost of major capital projects are published.	Projections of the total construction cost of major capital projects are published, together with the annual breakdown of these cost over a three-five-year horizon.
7.	**Budget Comprehensiveness and Unity: To what extent is capital spending, and related recurrent spending, undertaken through the budget process?**			
7.a.	Is capital spending mostly undertaken through the budget?	Significant capital spending is undertaken by extra-budgetary entities with no legislative authorization or disclosure in the budget documentation.	Significant capital spending is undertaken by extra-budgetary entities, but with legislative authorization and disclosure in the budget documentation.	Little or no capital spending is undertaken by extra-budgetary entities.
7.b.	Are all capital projects, regardless of financing source, shown in the budget documentation?	Capital projects are not comprehensively presented in the budget documentation, including PPPs, externally financed, and PCs' projects.	Most capital projects are included in the budget documentation, but either PPPs, externally financed, or PCs' projects are not shown.	All capital projects, regardless of financing sources, are included in the budget documentation.
7.c.	Are capital and recurrent budgets prepared and presented together in the budget?	Capital and recurrent budgets are prepared by separate ministries, and/or presented in separate budget documents.	Capital and recurrent budgets are prepared by a single ministry and presented together in the budget documents, but without using a program or functional classification.	Capital and recurrent budgets are prepared by a single ministry and presented together in the budget documents, using a program or functional classification.
8.	**Budgeting for Investment: Are investment projects protected during budget implementation?**			
8.a.	Are total project outlays appropriated by the legislature at the time of a project's commencement?	Outlays are appropriated on an annual basis, but information on total project costs is not included in the budget documentation.	Outlays are appropriated on an annual basis, and information on total project costs is included in the budget documentation.	Outlays are appropriated on an annual basis and information on total project costs, and multiyear commitments is included in the budget documentation.
8.b.	Are in-year transfers of appropriations (virement) from capital to current spending prevented?	There are no limitations on virement from capital to current spending.	The finance ministry may approve virement from capital to current spending.	Virement from capital to current spending requires the approval of the legislature.
8.c	Is the completion of ongoing projects given priority over starting new projects?	There is no mechanism in place to protect funding of ongoing projects.	There is a mechanism to protect funding for ongoing projects in the annual budget.	There is a mechanism to protect funding for ongoing projects in the annual budget and over the medium term.

9.	**Maintenance Funding: Are routine maintenance and major improvements receiving adequate funding?**			
9.a.	Is there a standard methodology for estimating routine maintenance needs and budget funding?	There is no standard methodology for determining the needs for routine maintenance.	There is a standard methodology for determining the needs for routine maintenance and its cost.	There is a standard methodology for determining the needs for routine maintenance and its cost, and the appropriate amounts are generally allocated in the budget.
9.b.	Is there a standard methodology for determining major improvements (e.g., renovations, reconstructions, enlargements) to existing assets, and are they included in national and sectoral investment plans?	There is no standard methodology for determining major improvements, and they are not included in national or sectoral plans.	There is a standard methodology for determining major improvements, but they are not included in national or sectoral plans.	There is a standard methodology for determining major improvements, and they are included in national or sectoral plans.
9.c.	Can expenditures relating to routine maintenance and major improvements be identified in the budget?	Routine maintenance and major improvements are not systematically identified in the budget.	Routine maintenance and major improvements are systematically identified in the budget.	Routine maintenance and major improvements are systematically identified in the budget and are reported.
10.	**Project Selection: Are there institutions and procedures in place to guide project selection?**			
10.a.	Does the government undertake a central review of major project appraisals before decisions are taken to include projects in the budget?	Major projects (including donor- or PPP-funded) are not reviewed by a central ministry prior to inclusion in the budget.	Major projects (including donor- or PPP-funded) are reviewed by a central ministry prior to inclusion in the budget.	All major projects (including donor- or PPP-funded) are scrutinized by a central ministry, with input from an independent agency or experts prior to inclusion in the budget.
10.b.	Does the government publish and adhere to standard criteria, and stipulate a required process for project selection?	There are no published criteria or a required process for project selection.	There are published criteria for project selection, but projects can be selected without going through the required process.	There are published criteria for project selection, and generally projects are selected through the required process.
10.c.	Does the government maintain a pipeline of appraised investment projects for inclusion in the annual budget?	The government does not maintain a pipeline of appraised investment projects.	The government maintains a pipeline of appraised investment projects but other projects may be selected for financing through the annual budget.	The government maintains a comprehensive pipeline of appraised investment projects, which is used for selecting projects for inclusion in the annual budget, and over the medium term.
C.	**Delivering Productive and Durable Public Assets**			
11.	**Procurement**			
11.a.	Is the procurement process for major capital projects open and transparent?	Few major projects are tendered in a competitive process, and the public has limited access to procurement information.	Many major projects are tendered in a competitive process, but the public has only limited access to procurement information.	Most major projects are tendered in a competitive process, and the public has access to complete, reliable and timely procurement information.
11.b	Is there a system in place to ensure that procurement is monitored adequately?	There is no procurement database, or the information is incomplete or not timely for most phases of the procurement process.	There is a procurement database with reasonably complete information, but no standard analytical reports are produced from the database.	There is a procurement database with reasonably complete information, and standard analytical reports are produced to support a formal monitoring system.

11.c	Are procurement complaints review process conducted in a fair and timely manner?	Procurement complaints are not reviewed by an independent body.	Procurement complaints are reviewed by an independent body, but the recommendations of this body are not produced on a timely basis, nor published, nor rigorously enforced.	Procurement complaints are reviewed by an independent body whose recommendations are timely, published, and rigorously enforced.
12.	**Availability of Funding: Is financing for capital spending made available in a timely manner?**			
12.a .	Are ministries/agencies able to plan and commit expenditure on capital projects in advance on the basis of reliable cash-flow forecasts?	Cash-flow forecasts are not prepared or updated regularly, and ministries/agencies are not provided with commitment ceilings in a timely manner.	Cash-flow forecasts are prepared or updated quarterly, and ministries/agencies are provided with commitment ceilings at least a quarter in advance.	Cash-flow forecasts are prepared or updated monthly, and ministries/agencies are provided with commitment ceilings for the full fiscal year.
12.b	Is cash for project outlays released in a timely manner?	The financing of project outlays is frequently subject to cash rationing.	Cash for project outlays is sometimes released with delays.	Cash for project outlays is normally released in a timely manner, based on the appropriation.
12.c	Is external (donor) funding of capital projects fully integrated into the main government bank account structure?	External financing is largely held in commercial bank accounts outside the central bank.	External financing is held at the central bank, but is not part of the main government bank account structure.	External financing is fully integrated into the main government bank account structure.
13.	**Portfolio Management and Oversight: Is adequate oversight exercised over implementation of the entire public investment portfolio**			
13.a	Are major capital projects subject to monitoring during project implementation?	Most major capital projects are not monitored during project implementation.	For most major projects, annual project costs, as well as physical progress, are monitored during project implementation.	For all major projects, total project costs, as well as physical progress, are centrally monitored during project implementation.
13.b	Can funds be re-allocated between investment projects during implementation?	Funds cannot be re-allocated between projects during implementation.	Funds can be reallocated between projects during implementation, but not using systematic monitoring and transparent procedures.	Funds can be re-allocated between projects during implementation, using systematic monitoring and transparent procedures.
13.c	Does the government adjust project implementation policies and procedures by systematically conducting ex post reviews of projects that have completed their construction phase?	Ex post reviews of major projects are neither systematically required, nor frequently conducted.	Ex post reviews of major projects, focusing on project costs, deliverables and outputs, are sometimes conducted.	Ex post reviews of major projects focusing on project costs, deliverables, and outputs are conducted regularly by an independent entity or experts, and are used to adjust project implementation policies and procedures.

14.	**Management of Project Implementation: Are capital projects well managed and controlled during the execution stage?**			
14.a	Do ministries/agencies have effective project management arrangements in place?	Ministries/agencies do not systematically identify senior responsible officers for major investment projects, and implementation plans are not prepared prior to budget approval.	Ministries/agencies systematically identify senior responsible officers for major investment projects, but implementation plans are not prepared prior to budget approval.	Ministries/agencies systematically identify senior responsible officers for major investment projects, and implementation plans are prepared prior to budget approval.
14.b.	Has the government issued rules, procedures and guidelines for project adjustments that are applied systematically across all major projects?	There are no standardized rules and procedures for project adjustments.	For major projects, there are standardized rules and procedures for project adjustments, but do not include, if required, a fundamental review and reappraisal of a project's rationale, costs, and expected outputs.	For all projects, there are standardized rules and procedures for project adjustments and, if required, include a fundamental review of the project's rationale, costs, and expected outputs.
14.c.	Are ex post audits of capital projects routinely undertaken?	Major capital projects are usually not subject to ex post external audits.	Some major capital projects are subject to ex post external audit, information on which is published by the external auditor.	Most major capital projects are subject to ex post external audit information on which is regularly published and scrutinized by the legislature.
15.	**Monitoring of Public Assets: Is the value of assets properly accounted for and reported in financial statements?**			
15.a	Are asset registers updated by surveys of the stocks, values, and conditions of public assets regularly?	Asset registers are neither comprehensive nor updated regularly.	Asset registers are either comprehensive or updated regularly at reasonable intervals.	Asset registers are comprehensive and updated regularly at reasonable intervals.
15.b	Are nonfinancial asset values recorded in the government financial accounts?	Government financial accounts do not include the value of non- financial assets.	Government financial accounts include the value of some non- financial assets, which are revalued irregularly.	Government financial accounts include the value of most nonfinancial assets, which are revalued regularly.
15.c	Is the depreciation of fixed assets captured in the government's operating statements?	The depreciation of fixed assets is not recorded in operating statements.	The depreciation of fixed assets is recorded in operating statements, based on statistical estimates.	The depreciation of fixed assets is recorded in operating expenditures, based on asset-specific assumptions.
Cross-cutting issues				
A	**IT support**. Is there a comprehensive computerized information system for public investment projects to support decision making and monitoring?			
B	**Legal Framework**. Is there a legal and regulatory framework that supports institutional arrangements, mandates, coverage, procedures, standards and accountability for effective PIM?			
C	**Staff capacity.** Does staff capacity (number of staff and/or their knowledge, skills, and experience) and clarity of roles and responsibilities support effective PIM institutions?			