Infrastructure
and Projects
Authority

Annual Report on Major Projects 2019-20

Reporting to HM Treasury
and Cabinet Office

Contents

Foreword

Minister of State at the Cabinet Office and Her Majesty's Treasury, Lord Agnew and Financial Secretary to the Treasury, RT Hon Jesse Norman MP

The UK is unique in the world in having a cross-governmental understanding of the size, scope and viability of a well-established portfolio of major projects.

We have a good track record of delivering against government priorities. However, we still face challenges of delays and cost increases which need to be addressed and we cannot ignore the unprecedented and unexpected challenges posed to both government and industry by COVID-19.

As the pandemic underlines, the wellbeing and prosperity of everyone in the UK depend critically on how we build our economy and transform our infrastructure and public services for the future. Delivering major projects successfully and consistently has never been so important.

In the past year, 17 of the UK's biggest and most complex projects have been successfully delivered. All of them are critical to helping citizens and improving essential public services. Notably, they include the Department of Health and Social Care's One Hundred Thousand Genomes Project, which created the largest database of its kind, linking genomic and health data to accelerate research. This pioneering project also offers patients with cancer and rare diseases the chance of improved diagnosis and care.

The pandemic has also highlighted the importance of technology and the UK's reliance upon it. Developing and embracing cutting-edge technology continue to be a key theme of the portfolio. Projects such as the Local Full Fibre Networks programme, which ultimately aims to deliver faster and more reliable connectivity, will help to bring the nation closer together at a time when it is most needed.

"The wellbeing and prosperity of everyone in the UK depend critically on how we build our economy and transform our infrastructure and public services for the future."

Innovation in technology is central to future ways of working, for example in the construction of the £1.5bn A14 Cambridge to Huntingdon improvement scheme which opened in May. A transformational approach meant the project was delivered both early and on budget, contrary to some of the myths about UK infrastructure.

As the UK emerges from its initial response to COVID-19, it becomes even more important that we transform how we deliver these major projects, embedding and extending best practice. We must continue to focus on levelling up and unifying the country, taking bold action to ensure we make the best use of investment for the good of the people of the United Kingdom.

Lord Agnew
Minister of State at the Cabinet Office and Her Majesty's Treasury

Rt Hon Jesse Norman MP
Financial Secretary to the Treasury

Introduction

Nick Smallwood, Chief Executive,
Infrastructure and Projects Authority

"Nothing short of world-class project delivery will do."

This government has an ambition to bring about a revolutionary step-change in how it delivers major projects. Everyone in the public sector and industry has a part to play in making this happen, and the IPA has a key role in enabling the transformation.

The IPA is committed to continuing to improve project delivery across government. At the heart of our work lie the three 'P's:

- **People:** ensuring our people have the tools, competence, skills and behaviours they need to deliver.
- **Principles**: being clear about the principles of delivery and getting the basics right.
- **Performance**: driving a step-change in performance, together with industry, so we can meet future challenges.

Delivering major projects is always a challenge and even more so during these unprecedented times. The commitment of our people across government has been unswerving, bringing professional project delivery skills to where they are needed most – whether supporting the enormous national response to COVID-19 or keeping other critical national programmes moving ahead.

As we respond to the challenges facing us, often at rapid pace, the project disciplines of expert planning and delivery, assurance and commercial management have never been more important, and we need more of them. So we are putting renewed energy into equipping our people through training and other support, including through our plans to build accredited skills and expertise through a new government projects academy.

At the same time, we also need a sustained focus on the basic principles of project delivery, particularly in such uncertain times. That is why today we are publishing our new principles for project success: a quick guide for practitioners on things to get right for any project to succeed.

These principles, alongside the government functional standard for project delivery, and other IPA tools and guidance, are part of our wider endeavour to create a consistent culture of world class project performance: one where projects are set up for success and deliver real benefits for people and communities across the UK, consistently.

We have much more to do. Nothing short of world-class project delivery will do. But we have much to build on, including the enormous dedication of the people who work on projects for the benefit of the people of the United Kingdom. And we are on the case.

Nick Smallwood
Chief Executive, Infrastructure and Projects Authority

The Infrastructure and Projects Authority

The Infrastructure and Projects Authority (IPA) is the government's centre of expertise for infrastructure and major projects. It sits at the heart of government, reporting to the Cabinet Office and HM Treasury. The IPA works across government to support the successful delivery of all types of major projects, ranging from railways, roads, schools, hospitals and housing to defence, IT and major transformation programmes.

Our purpose is to continuously improve the way government delivers projects and programmes and to provide confidence that they will achieve their aims, improve public services and people's lives. As part of this, the IPA drives the development of the project delivery profession, and of the world-class skills and expertise needed to meet our ambition: to build the best project delivery system in the world.

New NHS Nightingale Hospital at Manchester Central
Image: Joel Goodman

The past year has seen unprecedented challenges to the delivery of infrastructure and services; first as a result of the UK exiting from the European Union, and secondly the sudden onset of COVID-19. As we take measures to meet these challenges, sometimes at a very rapid pace, the project disciplines of expert planning and delivery, assurance, sound governance and commercial management have never been so important.

'The project disciplines of expert planning and delivery, assurance, sound governance and commercial management have never been so important.'

The IPA recognises that delivering major projects is difficult and delivery teams face many challenges and obstacles in delivering projects successfully. Consequently, the IPA promotes best practice by setting standards, providing assurance and deep expertise, and building capability, as this report describes. We use our unique position at the centre of government to collect and analyse project data to provide portfolio-level insight to identify systemic issues and lessons for the future. We share knowledge and insights actively with departments, as well as beyond to promote market confidence.

The Government Major Projects Portfolio (GMPP) ensures robust oversight of government's most complex and strategically significant projects and programmes. The IPA supports the successful delivery of these projects through direct support, independent assurance reviews and by leading the network of over 14,000 project delivery professionals. Alongside the GMPP there are many other projects and programmes managed by departments that are important, challenging and involve complex delivery mechanisms. Some of these may be at an early stage of development and will eventually join the GMPP. Others may not join the GMPP but will continue to require and receive expert project delivery advice and assurance from the IPA on an ongoing basis.

The Government Major Projects Portfolio

The GMPP is composed of the largest, most innovative and highest risk projects and programmes delivered by government. GMPP projects are typically those where approval is required from HM Treasury, either because the budget exceeds a department's delegated authority level and/or because the project is novel, complex, contentious, repercussive, or requires primary legislation. While the GMPP spans many of the government's most high-profile projects, it represents a subset of the projects delivered across government.

Projects on the GMPP receive independent scrutiny and assurance from the IPA. 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 also required to provide quarterly data returns on delivery progress. This data is used to monitor progress across the portfolio and risks and insights are shared with departments and the centre of government.

This year's GMPP snapshot comprises 125 projects with a total Whole Life Cost (WLC) of £448bn, delivered by 16 departments and their arm's-length bodies.[1]

GMPP projects fall into one of four categories, determined by the purpose and nature of their delivery.

- **Infrastructure and Construction** projects include improving and maintaining the UK's energy, transport, telecommunication, sewage and water systems and constructing new public buildings. These high-investment projects are essential to the nation's economic growth, development and prosperity. An example is the work modernising existing infrastructure on the Great Western mainline which will create faster, more reliable services, better stations and increased freight capacity.

- **Transformation and Service Delivery** projects change ways of working to improve the relationship between Government and the people of the UK, and harness new technology to improve public services and/or make Government more efficient. This category encompasses a wide field of projects including the NHS UK programme, which is transforming the NHS website, and designing a digital service that better connects patients to the information and services that they need.

- **Military Capability** projects are vital to the effective operation of the Armed Forces. Many Military projects ensure the Armed Forces have the correct resource and personnel, such as the Armed Forces Recruitment Project, as well as projects to improve the equipment and systems used by our military.

- **Information and Communication Technology (ICT)** projects enable the transition from old legacy systems to new ICT provisions to equip government departments for the future. ICT projects are very important for achieving cost savings and efficiency and ensure our public services benefit from advances in innovation and technology. One example of this is the Home Office's National Law Enforcement Data Programme which will replace the current Police National Computer and Police National Database systems with one modernised solution.

Figure 1: Summary of the 2019-20 GMPP

	Government Major Projects Portfolio	**125** projects	**£448bn** Whole Life Cost

This comprises:

	Infrastructure and Construction	**34** projects	**£214bn** Whole Life Cost
	Government Transformation and Service Delivery	**34** projects	**£64bn** Whole Life Cost
	Military Capability	**30** projects	**£162bn** Whole Life Cost
	Information and Communications Technology (ICT)	**27** projects	**£8bn** Whole Life Cost

1   The Government's GMPP Data Transparency Policy covers Whole Life Cost, Delivery Confidence Assessment, and project end dates. It does not include project benefits. See Annex for further information.

The Government Major Projects Portfolio continued

The GMPP is an evolving portfolio that shifts in size and shape as projects join and leave. Figure 2 illustrates that over the last four years the GMPP has remained relatively stable in size. Since the 2019 Annual Report, 17 projects have joined and 25 projects have left the GMPP. The fall in number of projects since the 2015 Annual Report can be attributed in part to a consolidation of projects into programmes.

Figure 2: **The GMPP over time**
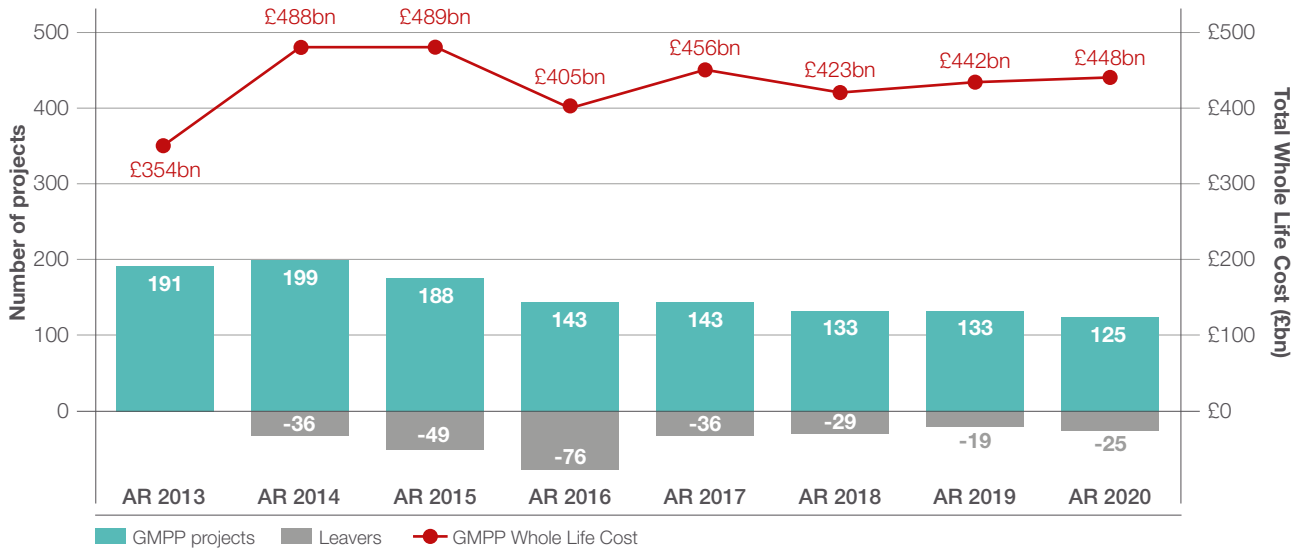
The current GMPP snapshot

Projects by category
The cost and duration of GMPP projects varies across the four project categories.

Figure 3: **GMPP categories – Number of projects, Average Project Length and Average Whole Life Cost**
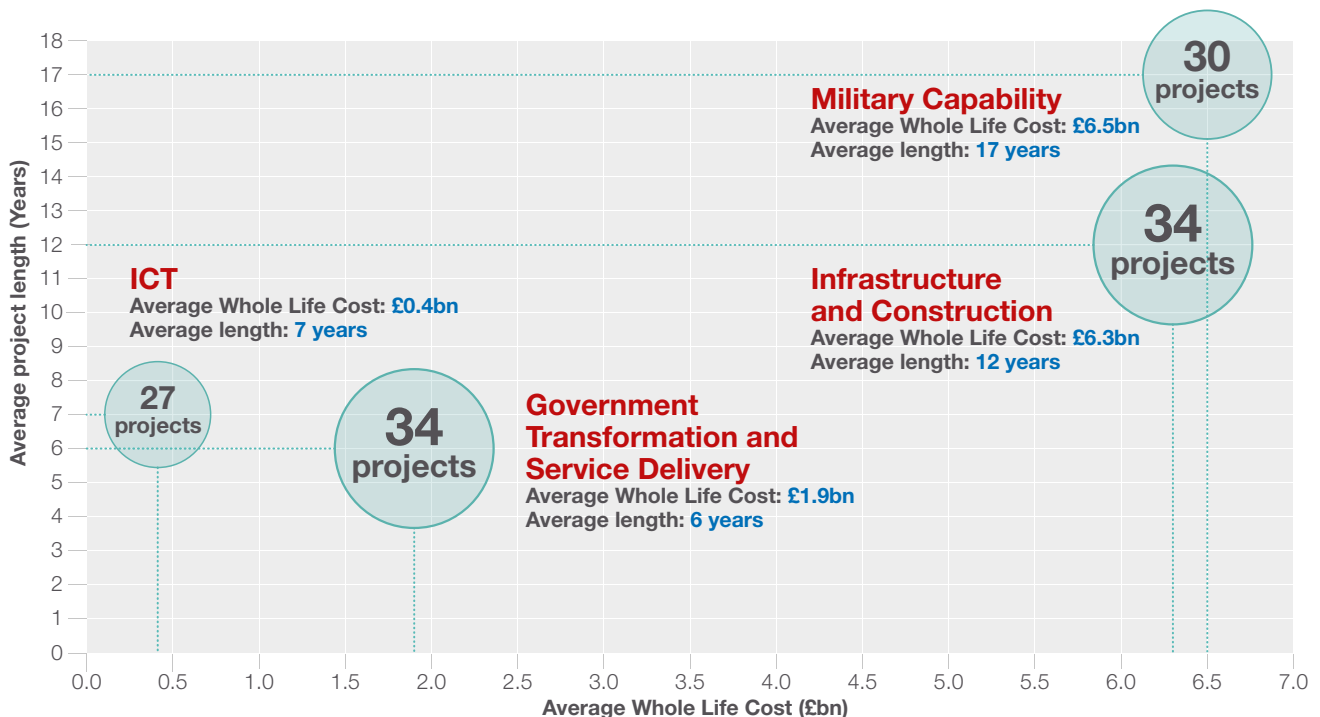
Infrastructure and Construction is the largest GMPP category in terms of Whole Life Cost. Currently there are 43 Infrastructure and Construction projects on the portfolio, up from 32 last year, with a total Whole Life Cost of £214bn. As with Military Capability, these projects are typically lengthier than projects in other categories (with an average duration of 11 years).

CASE STUDY:
5G Testbeds and Trials

The Department for Digital, Culture, Media & Sport (DCMS) 5G Testbeds and Trials Programme is the Government's nationally coordinated programme of investment in exploring the benefits and challenges of deploying 5G technologies.

In 2016, the Government allocated £200m to support 5G Testbeds and Trials. The programme will help to create the conditions to secure the development and stimulate the deployment of 5G in the UK. The pilots and trial activities are looking at use cases across different sectors to stimulate demand for new services which use 5G capabilities. The programme is two and a half years into delivery and the initial series of testbeds and trials projects have already demonstrated some of the huge benefits that 5G could bring. This includes the university-led 5G UK Test Network and a range of projects across different industry sectors and in urban and rural areas.

Across the programme, projects have been looking at a range of potential applications of 5G in areas such as manufacturing, health and social care, tourism, applications in remote areas, and supporting the development of connected and autonomous vehicles. Several of these projects looked at how the faster download rates and reduced time lag of 5G networks could open up new business opportunities. Further projects are looking at the flexibility that 5G technologies can provide, how 5G can be used in additional industrial settings and to lead the development of urban and rural connected communities.
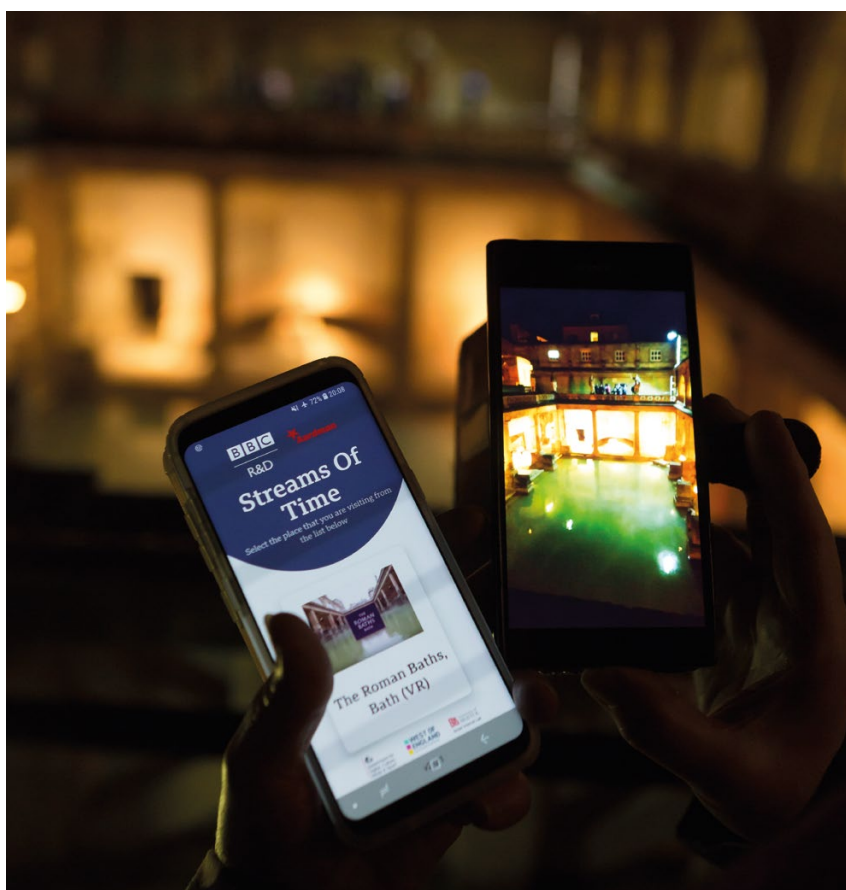
5G Smart Tourism augmented reality application at the Roman Baths, Bath, DCMS

The Government Major Projects Portfolio continued

Transformation and Service Delivery is the joint largest category by project number, totalling 34 projects this year. This is a reduction on last year when there were 43 projects on the GMPP in this category, with many leaving after their successful delivery (see page 18). Projects in this category tend to have a lower average Whole Life Cost (£1.9bn) and as a result it is only the third largest category in terms of total Whole Life Cost (at £64bn). Projects also tend to be shorter (eight years) compared to Military and Infrastructure and Construction Projects.

CASE STUDY:
Building our Future Locations

HM Revenue and Customs (HMRC) Locations Programme is central to the department's wider transformation to become one of the most digitally advanced tax authorities in the world. It is leading the delivery of phase one of the government hubs programme to provide great places to work, new ways of working and is an integral component of the department's plans to provide better services to the taxpayer at a lower cost, saving £90m per annum in estate running costs from 2028.

The programme aspires to provide offices which are supportive to the broadest range of people, while working with contractors to create some of the most digitally advanced buildings in government. The signing of the Digital Charter, last year, means that all organisations involved in constructing and maintaining HMRC buildings will focus on maximising the use of data and implementing the latest digital technology. The delivery of these hubs will change people's working environments, helping to change the way in which the Civil Service works. By better utilising technology and working differently, HMRC will become a more highly-skilled and collaborative organisation that is maximising revenue, increasing compliance, while reducing the tax gap.

HMRC's estate transformation programme will create 13 regional centres, involving the development of more than 429,000 square metres of new office space, and since starting in 2015 the programme has made significant progress in transforming HMRC's estate. HMRC is working with private sector partners to deliver the programme and is sharing lessons with the Government Property Agency, while ensuring its locations strategy keeps up to speed with emerging challenges. In the past year, hubs have opened in Bristol and Belfast, and the Croydon Regional Centre has marked its second year in operation.

HMRC Belfast, Erskine House
Image: Copyright Hufton + Crow

Military Capability projects are some of the most complex and strategically important that the Government delivers. Military Capability is the second largest category in terms of total Whole Life Cost (at £162bn) and in line with their scale these projects tend to be lengthier than other categories, with an average forecast duration of 15 years. All Military Capability projects are delivered by the Ministry of Defence.

CASE STUDY:
Type 31 Programme

The Ministry of Defence (MOD) Type 31 Programme will deliver five affordable warships for the Royal Navy, to replace existing warships that will be decommissioned throughout this decade. These warships will be at the heart of the Royal Navy's surface fleet, deterring aggression and maintaining the security of the UK's interests. They will work alongside our Allies to deliver UK warship presence across the globe.

The Government's commitment to growing the Royal Navy Fleet is enshrined in the National Shipbuilding Strategy. It has established the Type 31 as the pathfinder project to transform UK warship building to raise productivity, innovation and reintroduce competition back into the sector by establishing a second UK frigate production line and investment in skills.

The Competitive Design Phase, completed in late 2019, has delivered a value-for-money solution which provides the required capability and for its price, a market-leading warship that is attractive in the export market. Throughout the Competitive Design Phase, the programme team worked to deliver an outcome that achieved the targets of cost and a baseline schedule to deliver acceptance of all five ships by the end of 2028. The team have also achieved the Design & Build contract award, through a significantly compressed timescale compared to previous ship procurements. This required significant cross-department working, and ensured the necessary approvals were achieved to meet deadlines.

Type 31 General Purpose Frigate (Render), MOD
Image: Copyright Babcock International Group

The Government Major Projects Portfolio continued

Information and Communications Technology (ICT) is the smallest category by number and Whole Life Cost with 27 projects at a cost of £8bn. Despite ICT being a significantly smaller part of the portfolio by cost it is still an important part of the portfolio with many projects in other categories having significant digital components.

CASE STUDY:
Making Tax Digital

The Making Tax Digital (MTD) programme is part of HMRC's vision to be a trusted, modern tax and customs department. HMRC are transforming our systems to be smart, transparent and flexible enough to handle a vast and widening range of different customer needs and circumstances.

A key element of the programme is for businesses to use digital record-keeping tools and submit tax return data directly from those records using MTD-compatible software. This will make it easier for businesses to get their tax right, saving time which can be devoted to maximising business opportunities, and helping to foster good financial planning. There has been a gradual but real shift of customers towards HMRC's digital services.

Over 1 million businesses were required to start using the MTD for VAT service in 2019, with most required to join the service and make their first VAT return through it for VAT periods starting on or after 1 April 2019. As of May 2020, more than 1.4 million businesses have signed up for MTD and more than 5 million VAT returns have been successfully submitted through the service. This includes more than 280,000 smaller VAT businesses that have joined voluntarily.

Making Tax Digital (MTD) Programme
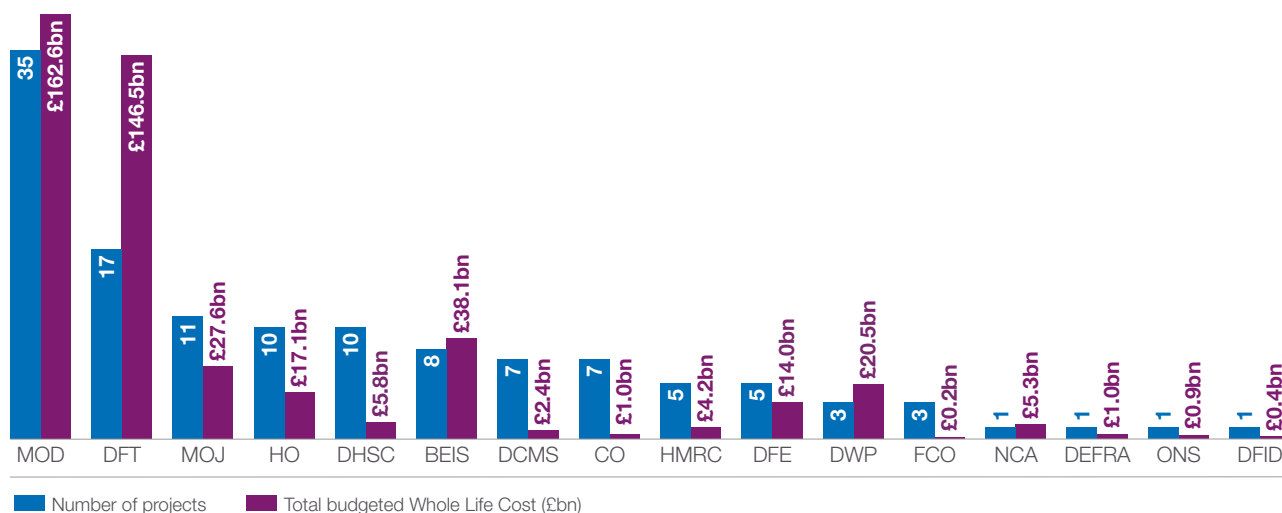
Projects by Department

Figure 4: **GMPP Summary by Department – project number and Whole Life Cost**

The GMPP consists of projects from 16 departments with varying portfolio sizes. Ministry of Defence (MOD) and Department for Transport (DfT) continue to make up the majority of the GMPP, with 41% of projects by number and 69% by Whole Life Cost.

This year, there are 35 MOD projects on the GMPP, which account for over a quarter of the portfolio by number. MOD delivers all 30 Military Capability projects, as well as four ICT projects and one Transformation and Service Delivery project.

DfT has the second largest portfolio and the second highest Whole Life Cost by department. Of the 17 projects that are led by DfT in this Annual Report, 16 are Infrastructure and Construction projects, with the Rail Franchising Programme the only DfT Transformation and Service Delivery project on the GMPP.

The Department for Business Energy and Industrial Strategy (BEIS) is a significant contributor to the Whole Life Cost of the GMPP, accounting for a larger amount of cost than the Ministry of Justice (MoJ), the Department for Health and Social Care (DHSC) and the Home Office (HO) despite having fewer projects. The Department for Work and Pensions (DWP) only has three projects on the GMPP, but these have a total cost of over £20bn.

There are several departments with multiple GMPP projects that are actively managed as part of wider portfolios. This is in line with the Government Project Delivery Functional Standard which identifies that 'a portfolio comprises part or all of an organisation's investment required to achieve its objectives… such as other portfolios, programmes, projects, other work and

work packages'.[2] The standard sets the expectation that all departments will adopt a portfolio management framework to manage their major projects and programmes.

The maturity of portfolio management varies across departments. For example, HMRC have a well-developed central portfolio approach to govern their major project investments, to actively manage resources and to adjust delivery priorities in response to changes in context. Other departments take a similar approach, with arrangements tailored to suit the nature of the portfolios and to dock with existing governance, accountabilities and responsibilities. As part of the Department for Transport and IPA's 'Lessons from transport for the sponsorship of major projects' (see page 21), DfT is implementing a more robust central portfolio approach to managing its major projects. Other departments also manage clearly identifiable sub-portfolios. For example, the Department for Culture Media and Sport (DCMS) has a number of projects that collectively are part of the Building Digital UK programme for delivering broadband networks to the nation.

In the above examples, a portfolio approach allows the departments to ensure that their particular mix of projects and programmes is helping to deliver their strategic objectives. The IPA is committed to supporting the development of increasingly mature and effective approaches to portfolio management in departments. Through a combination of tailored advice and support and the introduction of portfolio-level assurance tools, the IPA aims to help departments to manage the totality of their major change, as well as delivering the individual projects successfully.

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2   Lessons from Transport for the Sponsorship of Major Projects, DfT/ IPA (2019)
    https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/746400/Project_Delivery_Standard_1.2.pdf

The Government Major Projects Portfolio continued

CASE STUDY:
Building Digital UK: Local Full Fibre Networks, Rural Gigabit Connectivity Programme and 700MHz Clearance Programme

The Building Digital UK (BDUK) portfolio includes several GMPP projects that are collectively aiming to deliver broadband networks to the nation. To support the delivery of fixed broadband infrastructure, the Local Full Fibre Networks programme continues to stimulate greater commercial investment in full fibre networks across the UK to deliver faster and more reliable connectivity. Alongside this, the Rural Gigabit Connectivity programme is piloting and testing innovative approaches to deploying full fibre in the most difficult to reach areas where the market alone is unlikely to deliver.

Helicopter lifting new 700MHz antenna into position at top of Mendip TV mast in Somerset; DCMS.
Image: Arqiva

The demand for mobile data has grown substantially in recent years with huge growth in the number of smartphones and tablets being used, as well in the monthly usage of data by smartphone users. Mobile operators will either need access to more spectrum or will need to be able to increase the density of the network infrastructure. The 700MHz Spectrum Clearance programme in the BDUK portfolio is nearing completion of the activities to clear the airwaves in the 700MHz spectrum band so they can be used for mobile broadband services in the future. The programme is an example of how the Government, Ofcom and Multiplex Operators, work closely to deliver shared goals. The Shared Rural Networks programme has recently been added to the Portfolio, which aims to invest in a network of new and existing phone masts that will guarantee coverage to 280,000 premises and 16,000km of road.

Along with elements such as BDUK's Superfast Broadband programme and the Digital Infrastructure Investment Fund, this portfolio has comprised a large-scale government investment in broadband infrastructure in the UK. The BDUK portfolio has contributed to the stimulation of a competitive marketplace for broadband infrastructure deployment, and has helped provide valuable lessons for the Government's planned investment of £5 billion into the deployment of gigabit-capable broadband in the hardest to reach 20% of the UK.

GMPP delivery confidence

The IPA assesses the likelihood of each project delivering its objectives to time and cost with a Delivery Confidence Assessments (DCAs). Ratings are categorised into five groups, which span a range from Red to Green, with each providing an indication of likelihood of successful delivery and level of associated risks. Detailed definitions of each rating can be found in Annex A. DCAs are not a comprehensive reflection of project performance but reflect a project's likelihood of success at a specific snapshot in time, if issues and risks are left unaddressed. They are reviewed quarterly by the IPA and change depending on the challenges projects are facing, the results of focused independent assurance reviews and actions taken by projects. By taking the right steps following reviews and managing delivery challenges effectively, DCAs are often improved over time.

At this year's snapshot (end of September 2019), 21 projects were rated Green or Amber/Green (17% of the GMPP) and 43 projects were assigned Red or Amber/Red (34%) while 59 projects (47%) were Amber. It should be noted that the snapshot date for data collection was prior to the COVID-19 pandemic. As a result, the data does not reflect the impact COVID-19 has had on the delivery of major projects, and the true impact of COVID-19 on projects' DCAs will largely be presented and discussed in next year's Annual Report. See page 31 for further information on the challenges major projects face responding to COVID-19.

As illustrated in Figure 5, in the 2019-20 snapshot there was around £93.9bn of Whole Life Costs associated with projects rated Red compared to £19.8bn in Green or Amber/Green projects. These aggregate figures are of course influenced by individual 'mega projects'. For example, HS2[3] accounts for over half of the total Whole Life Cost associated with Red-rated projects. Amber-rated projects make up around half of the portfolio by project number and are responsible for around 56% of total Whole Life Cost.

In this year's report there are 11 projects rated as Red, the highest level over the last eight years. Several projects have moved to the highest severity of delivery confidence over the last year including the East West Rail Programme (Western Section) and the Health Transformation Programme. A small number of projects have also had major risks or issues apparent in key areas for a significant number of years, including the High Speed Rail Programme (HS2) and HM Courts & Tribunal Service Reform Programme.

In looking at this pattern of delivery confidence, it is important to acknowledge that GMPP projects are the government's most difficult and challenging projects to deliver. They are, by definition, large, complex or innovative, with many 'breaking new ground'. Focusing on supporting these difficult projects is at the core of the GMPP's purpose. This helps ensure IPA resources are deployed to priority areas and is also aligned with the IPA's commitment to increasing focus on the most difficult projects and ensure they set up for success.

Figure 5: Summary by DCA – project number and Whole Life Cost

	Number of projects	Total Whole Life Cost (£bn) including non-government costs
Green	3	£2.8bn
Amber/Green	18	£17.2bn
Amber	59	£253.0bn
Amber/Red	32	£60.2bn
Red	11	£93.9bn
Exempt	2	£20.9bn

Legend: Green   Amber/Green   Amber   Amber/Red   Red   Exempt

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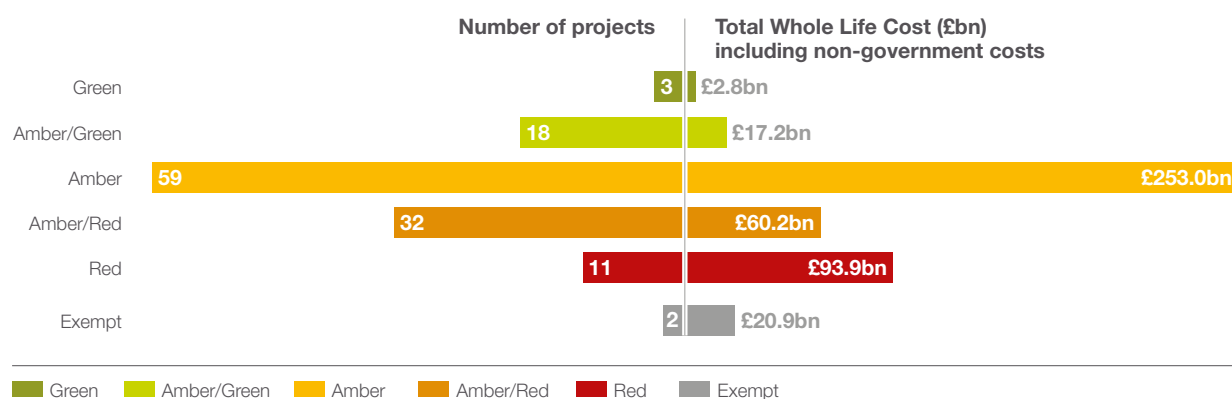
3   HS2 was reset by the Prime Minister and Government in February 2020 with an amended cost and schedule for the Birmingham to London section, development of an Integrated Delivery Plan for the Midlands and North, and strengthened governance and control including increased ministerial oversight. More information is provided in the Full Business Case for HS2 Phase One: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/879445/full-business-case-hs2-phase-one.pdf

The Government Major Projects Portfolio continued

GMPP delivery confidence by category

Projects with a Red Delivery Confidence Assessment sit mainly in the Infrastructure and Construction and Military categories with five and four Red-rated projects respectively, however ICT and Transformation and Service Delivery have more Amber/Red projects. Over half of the 26 ICT projects are Red or Amber/Red which is an increase of four projects on last year. Government Transformation and Service Delivery contains the most projects with confidence in delivering successfully

(Amber/Green and Green) with a total of 10 out of 34 projects (29%). ICT has the lowest proportion of projects in this category with two out of 26 projects (8%).

There are several strands of work under way across government to support and improve the future delivery of Infrastructure and Construction. This includes Project Routemap (see page 22) and Transforming Infrastructure Performance (TIP) (see page 24).

Figure 6: DCA Analysis 2013-2020

Year	Red	Amber/Red	Amber	Amber/Green	Green	Exempt	Reset	No DCA	Total
AR 2013	8	23	58	49	32	21			191
AR 2014	4	37	63	54	17	15	1	8	199
AR 2015	8	40	64	44	28	4			188
AR 2016	6	38	55	29	10	5			143
AR 2017	4	34	71	23	5	5	1		143
AR 2018	8	38	59	22	2	4			133
AR 2019	4	38	66	18	4	3			133
AR 2020	11	32	59	18	3	2			125

Legend: ■ Red ■ Amber/Red ■ Amber ■ Amber/Green ■ Green ■ Exempt ■ Reset ■ No DCA
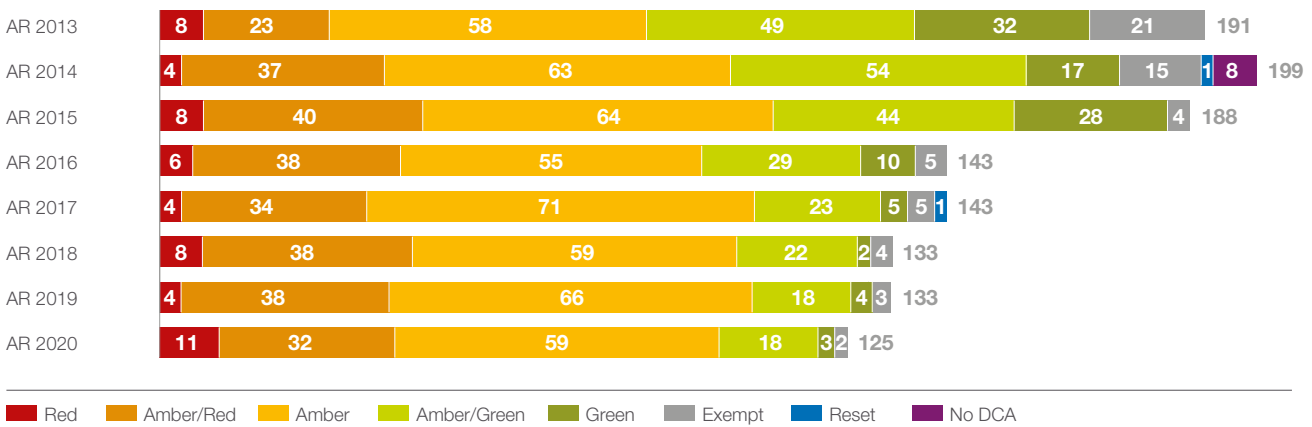
Figure 7: DCAs by Project Category

Category	Red	Amber/Red	Amber	Amber/Green	Green	Exempt	Total
Infrastructure and Construction	5	4	19	5	1		34
Government Transformation and Service Delivery	1	12	11	9	1		34
Military Capability	3	4	19	2	1	1	30
ICT	2	12	10	2	1		27

Legend: ■ Red ■ Amber/Red ■ Amber ■ Amber/Green ■ Green ■ Exempt
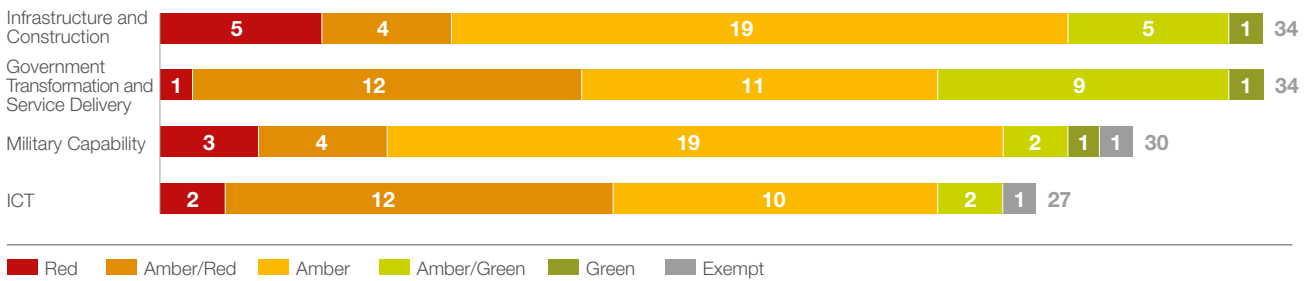
GMPP delivery confidence change

Despite these challenges and complexities, analysis of a cohort of GMPP projects over time shows a broadly positive pattern of delivery confidence. Of the 105 current projects which have been on the GMPP for at least a year, over a quarter of projects (28) have improved their DCA since the last Annual Report, while (23) have moved to a worse DCA than in 2019. Of those that improved DCA, three projects improved by two or more DCA ratings, including the Making Tax Digital for Business project which moved from Amber/Red to Green at the 2019/20 Q2 snapshot.

These ratings demonstrate the significant challenges inherent in delivering such complex projects and programmes. Building project delivery capability across government continues to be a priority for the IPA, as well as providing departments with expert support and advice from the centre (see page 27).

GMPP leavers 2019-20

Since last year's Report, 25 projects have left the GMPP. In most cases projects leave the GMPP when it has been successfully delivered or no longer demands regular IPA support; for instance where a project reaches a business as usual stage of delivery. Readiness to leave is judged by the IPA alongside departments. Of the 25 projects that left the GMPP this year, 17 were on track to deliver against their objectives and expected benefits (see case studies on following pages).

Figure 8: DCA changes between AR 2019 and AR 2020

AR 2020					
AR 2019	Red	Amber/Red	Amber	Amber/Green	Green
Red	2	1	0	0	0
Amber/Red	4	16	11	2	0
Amber	2	10	33	11	1
Amber/Green	1	1	5	3	2
Green	0	0	0	0	0

Improved	28	27%
Stayed the Same	54	51%
Worsened	23	22%

There were 105 projects that were on the GMPP in AR 2018-19 and AR 2019-20.

The Government Major Projects Portfolio continued

CASE STUDY:
One Hundred Thousand Genomes Project

The 100,000 Genomes Project was announced in 2012 as part of UK ambitions to develop a world-leading genomics medicine service. Delivered by Genomics England, working closely with NHS England and utilising the nation's life sciences and medical talent, the project created the largest database of its kind, linking genomic and health data to accelerate research and offer patients with cancer and rare diseases the chance of improved diagnosis and care.

Initial evidence shows at least 25% of rare disease patients participating in the project have received diagnoses for the first time and around 50% of participants with cancer have been given actionable findings to improve treatment or recruited into appropriate clinical trials. Data on 2,000 genome sequences also enabled a ground-breaking Cancer Research UK study into bowel cancer published in February 2020.

The project left the GMPP in mid-2019, following IPA assurance at key stages, advice on governance and deep dive support to improve cancer patient recruitment. Its success led Health Secretary Matt Hancock to announce a new target in 2018, to sequence 5 million whole genomes in the UK over the following five years. During 2020, Genomics England has been closely involved in the COVID-19 response to understand the virus and patients' genomic data.

"With the commitment and expertise of everyone involved, and the support of participating patients and their families, the 100,000 Genomes Project has transformed the field of genomic medicine, positioning the UK as a world leader."

Dr Louise Wood, *SRO for the 100,000 Genomes Project & Director of Science, Research and Evidence at the Department of Health and Social Care*

Image: © Sergey Nivens, provided by Genomics England

CASE STUDY:
A14

The £1.5bn A14 Cambridge to Huntingdon improvement scheme is the largest Highways England scheme in construction. Having opened in May, the project has overturned the widely held belief that UK infrastructure is always overdue and over budget. It is both early and on budget. The multi award-winning scheme puts its success down to several key themes, from its commercial model to its use of data.

SRO Chris Taylor, who has led throughout says:

"What we have learned on A14 has been being shared across our other major schemes, into Highways England's new Regional Delivery Partnerships, and our Smart Motorways Alliance. Whether it has been our digital or our commercial approach, A14 is the beginning, not the end of our journey."

He and his team put their success down to a one-team delivery approach, and a realigned commercial model in which risk and reward were shared, a culture of genuine care and a sharp focus on cost, lean delivery and exploiting the opportunities.

With a thin client model, continuity and quality of leadership has been key alongside a strong investment in behaviours to help meet challenges as a single team, not as individual organisations.

Innovation in construction and technology, shared and open data to drive performance and powerful decision-making have also been a thread throughout the project which have helped weave their success.

A14 Cambridge to Huntingdon improvement scheme, DfT
Image: courtesy of Highways England

The Government Major Projects Portfolio continued

Other reasons for leaving the GMPP include where a project is merged/replaced by other similar projects, or no longer meets the GMPP criteria. For example, the Ministry of Justice Prison Estate Transformation Programme (PETP) was closed early and replaced with two new projects: Glen Parva New Build Prison and Wellingborough New Build Prison.

Projects usually join the GMPP at an early stage and consequently with an uncertain delivery confidence level. This is illustrated in the initial published DCAs for this year's leavers cohort: of the 25 projects that left the GMPP in the last year, eight started with a Red or Amber/Red DCA while no projects started with a Green or Amber/Green DCA. Over the course of their time on the GMPP, 10 projects left the GMPP with a Green or Amber/Green delivery confidence. Considering the complexity of these projects and the challenging delivery environment this is a positive performance and shows improvements over time.[4]

The majority of projects leaving with a Red or Amber/Red DCA in the last year were stopped early or closed. The IPA has overseen an increase in this type of closure in the last 12 months for strategic, operational reasons or to support departmental prioritisation. This year five projects have been closed early including four Transformation and Service Delivery projects and one ICT project. While the IPA supports successful project delivery, it must also help government and departments to prioritise the correct projects.

Leaving the GMPP rarely marks the end of a project's delivery, and for some of the most complex projects the IPA maintains a continued involvement in the project, as required. In line with recent National Audit Office recommendations, the IPA is committed to ensuring that all projects leaving the GMPP have had an exit (or equivalent) review which includes consideration of the ongoing tracking of project benefits.

Figure 9: Reasons for leaving the GMPP 2019-20
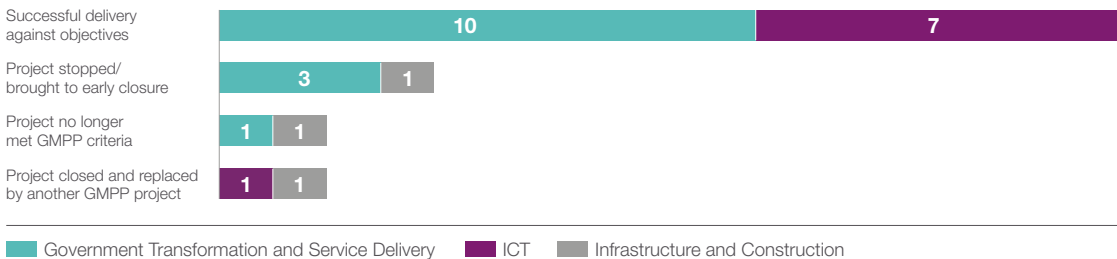
Government Transformation and Service Delivery ICT Infrastructure and Construction
2020 Leavers: last GMPP return Q2 2018-19 to Q1 2019-20

Figure 10: Delivery confidence of 2019-20 leavers – first Annual Report publication vs last Annual Report publication
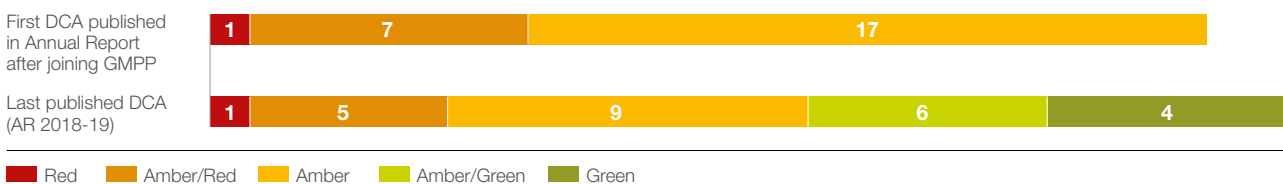
Red Amber/Red Amber Amber/Green Green
2020 Leavers: last GMPP return Q2 2018-19 to Q1 2019-20

4 N.B: The 'last published DCA' in the 2019 Annual Report is not necessarily a project's actual leaving DCA (where it left the GMPP after Q2 2018-19).

CASE STUDY:
Francis Crick Institute

Francis Crick Institute

The Francis Crick Institute is a joint venture between the UK's largest biomedical research, academic and charitable institutions. A previous GMPP project, the Institute is now home to over 1,500 scientists and staff working on the biology of health and disease.

The Francis Crick Institute benefited from regular IPA assurance throughout its initiation and build period, as well as a recent benefits realisation review. In its three and a half years since the state-of-the-art building was opened in autumn 2016, the 'Crick' has successfully migrated people and research projects, attracted high-quality new staff and implemented its strategy for "discovery without boundaries".

The independent IPA Gateway 5 review confirmed that recommendations from earlier assurance reviews and an Establishment Review had been followed up. The review confirmed that work was well under way to prepare for the Institute's quinquennial review (QQR) in 2021/22 – led by the Medical Research Council on behalf of all Founders – to evaluate the scientific projects and cross-cutting themes such as training and knowledge transfer and assess the case for renewed investment for a further five years.

"We appreciate the very positive comments on our achievements to date and our operational effectiveness. We can also relate to the recommendations made and will discuss these with our Board members."

Sam Barrell, *COO of the Francis Crick Institute and Joint SRO*

Improving the delivery of major projects

Delivering major projects of this nature and scale is difficult, and the IPA uses its expertise to advise, support and assure individual projects, as well as to create a strong government project delivery system that enables projects to flourish. This includes setting clear standards and providing the right tools and support for project delivery, learning key lessons to drive continuous improvement, and helping projects to get the earliest stages of planning right so we consistently set projects up for success.

Our partners in industry have a part in delivering nearly all of our major projects, and IPA uses its role to actively improve the productivity and efficiency of the sector more widely.

Principles for project success

The IPA has, in consultation with expert practitioners across government and others, undertaken analysis of common challenges across the project delivery system, considering previous evidence and lessons from recent and historic major project delivery performance, to identify the key factors associated with project success, e.g. the A14 (see case study on page 17). This analysis has shown that, while there are many factors involved in major project success or failure, there are certain basic principles which are particularly key if projects are to be delivered successfully, brought together as the principles for project success, summarised at headline level below:

These principles, alongside the government functional standard for project delivery and other IPA tools and guidance[5], are part of the IPA's wider endeavour to create a consistent culture of world-class project performance: one where projects are set up for success and deliver real benefits for people and communities across the UK, consistently.

IPA will work with project practitioners across government to put these principles into action and to address the systemic challenges which impact on major project delivery confidence. This includes supporting projects to develop more accurate estimates of cost and schedule; greater engagement with market supply chains; improving cross-sector coordination and knowledge sharing (link to ARP); and building strong, competent teams with the right skills, culture and behaviours.

1 Focus on outcomes

2 Plan realistically

3 Prioritise people

4 Tell it like it is

5 Control scope

6 Manage complexity and risk

7 Be an intelligent client

8 Learn from experience

Key components of **success**

Setting up for success — Execution — Entry into service

Focus on outcomes | Plan realistically | Control scope | Manage complexity & risk | Project Lifecycle

Prioritise people | Tell it like it is | Be an intelligent client

Project Lifecycle | Project Lifecycle

Learn from experience

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5   Project Delivery Functional Standard Guidance, IPA (2019)
     www.gov.uk/government/publications/project-delivery-functional-standard

Lessons from transport for the sponsorship of major projects

This government intends to deliver a revolution in the quality of UK infrastructure. Government's ambitions and the public benefits which come with it can only be realised if we also revolutionise the way major infrastructure projects are delivered. In order to improve future delivery, we need to make sure we are identifying the right lessons from projects that have gone before and we are applying them to projects that come next.

The Department for Transport (DfT) and the IPA jointly published in April 2019 the 'Lessons from transport for the sponsorship of major projects'[6]. The report identified 24 practical lessons, which will help to raise the bar on how we deliver projects in government. These lessons cover five themes: accountability must be unambiguous; behaviours matter more than process; control schedule and benefits as well as cost; deal with systems integration risk; and enter service cautiously.

Over the past year, the IPA has been working jointly with DfT to address the strategic issues highlighted by the report in DfT and across Government. These cover five areas:

1 **Improving project delivery practice:** Ensuring lessons from previous issues with project delivery are embedded in current and future project delivery practice.

2 **Reducing portfolio risk:** Working to reduce aggregate risk and improve management of the portfolio.

3 **Roles and responsibilities:** Agreeing on clearer, more effective models for engagement with delivery bodies, and a roadmap to achieve the target state.

4 **Behaviours and culture:** Launching interventions to address behaviours which obstruct effective delivery, and implementing a plan to create a positive culture.

5 **Capacity and capabilities:** Identifying capacity and capability shortfalls that prevent effective delivery and agreeing a plan to address these through development, talent management, recruitment and managed deployment.

One of the first projects to apply the 'Lessons from transport for the sponsorship of major projects' was HS2 which has begun construction of the new rail line from London to Birmingham. The full range of lessons were considered jointly by the executive teams from the Department for Transport and HS2 Ltd at a diagnostic workshop. The revised cost and schedule targets, governance and reporting arrangements for Phase 1 have actively reflected the lessons and the teams continue to review Phase 2a and 2b against the report.

The IPA will continue to embed these lessons in its work with departments and will ensure that it works with projects at the earliest stages so that they can deliver on their full potential.

6 Lessons from transport for the sponsorship of major projects, DfT/ IPA (2019)
   www.gov.uk/government/publications/lessons-from-transport-for-the-sponsorship-of-major-projects

Improving the delivery of major projects continued

Better project initiation

The IPA is aiming to strengthen its support for projects much earlier in their development to help set them up for success. This is already part of the IPA support offering, as projects may form part of the Early Development Pool (EDP). These initiatives are those which will have the potential to join the GMPP later in their development, when judged by the IPA and the department that they are at a stage to do so. Other initiatives the IPA works with at this early stage include projects and programmes which are being set up to deliver the UK's transition from the EU at the end of 2020 and to establish programmes for delivering the future of the UK.

Projects and initiatives that have been supported by the EDP and subsequently joined the GMPP include the Ministry of Housing, Communities and Local Government's Unsafe ACM Remediation project which ensures the remediation of unsafe ACM cladding from high-rise residential buildings so that residents are safe in their own homes in the long term.

Another key part of the IPA's toolkit for early stage infrastructure is the Project Routemap[7], which has strong links to industry and continues to be supported by experts from leading public and private sector clients and industry partners.

The methodology is underpinned by a series of best practice guidance modules, which are applied through a collaborative process with the project team to develop a 'Routemap' for successful project development. It is particularly useful for organisations that are delivering larger or more complex projects than they have previously delivered, or where capability gaps may exist.

Over 40 projects, in both the public and private sectors, have benefited from applying the Routemap methodology since its development in 2012; examples include the Digital Railway programme, which supports the delivery of digital technologies on our railways and the Geological Disposal Facility programme.
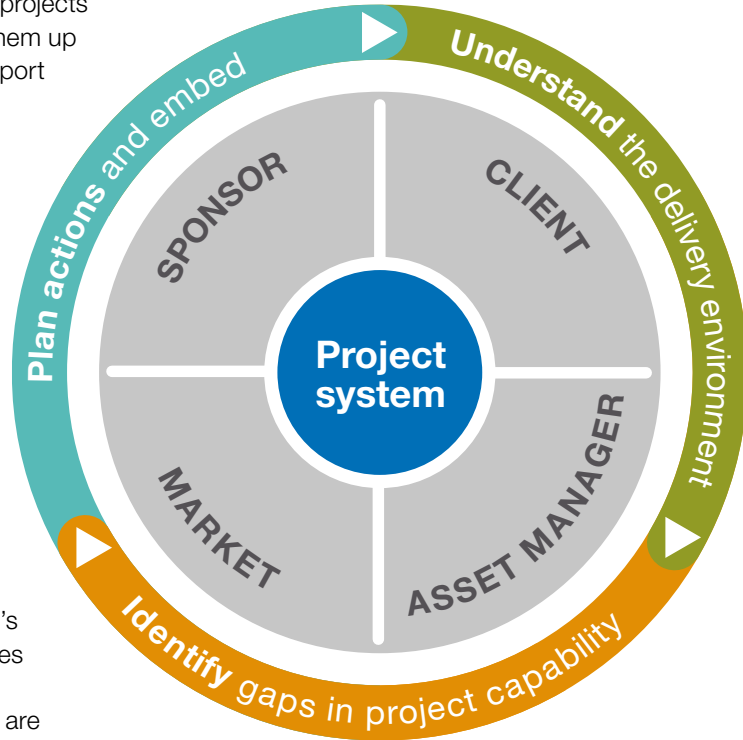
On the international stage, the Project Routemap has been recognised as global best practice for project preparation, under the Prosperity Fund's Global Infrastructure Programme. It is being adapted to incorporate the needs of middle income countries through a 10-step process, which includes considerations for the UN Sustainable Development Goals. Training will shortly be rolled out across several partner countries. The Routemap has been successfully piloted on a nationally important road project in Indonesia, and a strategic freight rail corridor project in Colombia. Engagement is also under way with Peru, Brazil and Mexico.

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7   www.gov.uk/government/publications/improving-infrastructure-delivery-project-initiation-routemap

ROUTEMAP CASE STUDY:
Geological Disposal Facility programme

Geological disposal involves isolating radioactive waste deep underground to ensure that no harmful quantities of radioactivity ever reach the surface. Radioactive Waste Management (RWM) Ltd, an arm's-length body of the Nuclear Decommissioning Authority, is responsible for the programme to deliver the UK's first Geological Disposal Facility (GDF), a highly engineered structure consisting of multiple barriers that will provide protection over hundreds of thousands of years.

RWM Ltd first applied the Routemap methodology in 2016 to help them assess its readiness as an organisation to embark on the GDF programme. The GDF programme team then applied the Routemap methodology for a second time in 2019. This time the aim was to understand and plan for the new capabilities that would be required to successfully transition from the policy development phase to the community engagement phase of the programme. This new phase required a much greater focus on clearly communicating the benefits of the GDF to stakeholders including potential host communities.

The Routemap exercise also supported the programme team in making sure the governance arrangements – involving the Department for Business, Energy and Industrial Strategy, the Nuclear Decommissioning Authority and RWM Ltd – were fit for purpose for the new phase.

Proposed UK Geological Disposal Facility Concept for higher strength rock, BEIS

"We have used the Routemap twice now and the structured approach to aligning capabilities with programme complexity has generated real enhancements to our plans. It has also been a really valuable way of engaging others and gaining their support and a sense of joint ownership."

Bruce McKirdy, *Managing Director, Radioactive Waste Management Ltd*

Improving the delivery of major projects continued

Improving cost and schedule estimates

The Government and Treasury need to have confidence in the estimated costs, schedule and benefits of major projects when they consider the investment decisions and agree to fund some projects rather than others or make concrete plans on when services will become available. Recent high profile issues with completing Crossrail to schedule and the need to reset HS2's budget ahead of authorising Phase 1 have increased focus on the challenge of making evidenced estimates on cost and schedule. In response to recent delivery challenges the IPA instigated reviews with key stakeholders to identify and address systemic issues. These have reinforced our view that a consistent focus on the fundamentals of project delivery, and on getting the basics right, is key to improving project delivery and successful outcomes for the public.

We are working across government to ensure that we are more consistent at estimating costs, timescales and developing our benchmarking capability. This will create a step-change in programme estimation and build a better understanding of risk across government. We want to ensure that we use ranges when projects present costs rather than unrealistic point estimates.

Work has begun with a review of the government's approach to cost and risk estimation this year. The review will draw together and baseline current ways of working across government, and propose measures that will drive greater consistency and discipline across departments, implementing the basics of proper cost estimation while also supporting Green Book principles. The IPA Benchmarking Capability tool[8] was published in June this year, which builds on the IPA Benchmarking methodology[9] published in February 2019.

The IPA is working with government departments, delivery bodies and industry to develop a centralised benchmarking hub and data platform to aggregate and leverage past government project data to underpin, challenge and assure future project decisions in terms of cost, schedule and output.

Transforming Infrastructure Performance

In addition to supporting major projects of all types across government, the IPA plays a central role in coordinating government's ambition to improve performance and productivity in the delivery and operation of infrastructure and construction projects.
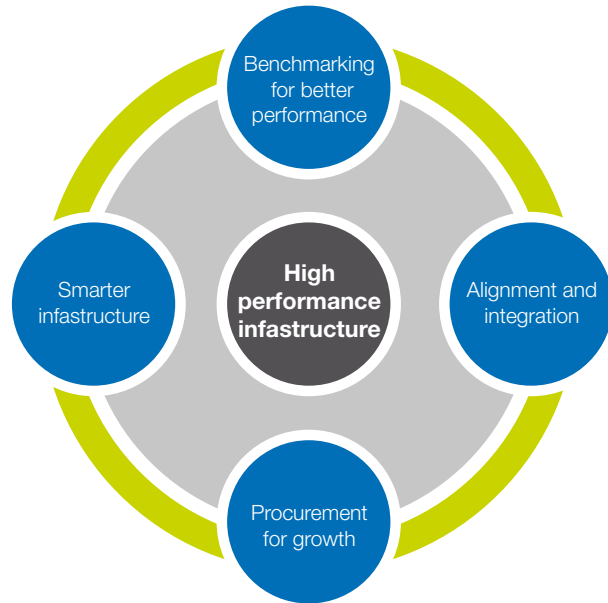
Transforming Infrastructure Performance (TIP) is the government's 10 year plan to increase the effectiveness of investment in infrastructure by improving productivity in the way we design, build and operate assets.[10]

TIP's four themes – Benchmarking for better performance; Alignment and integration; Procurement for growth; Smarter infrastructure – aim to prioritise investment in the right projects, improve productivity in delivery and maximise the overall benefits of infrastructure.

This last year has seen the IPA make progress across the four themes. The team strengthened its Modern Methods of Construction capability and continued to coordinate and support the Government Construction Board. The IPA has been providing support and advice to stakeholders regarding delivery of the government's ambitions for the Oxford-Cambridge Arc, and views it as a potential test case for future integrated infrastructure delivery. The IPA is also providing procurement support, alongside Crown Commercial Services, to government departments through the Collaborative Procurement Working Group, as well as within industry by supporting the CLC's Procuring for Value workstream.

TIP remains the government's vehicle for supporting future infrastructure ambitions, by improving the government's approach to delivery and facilitating the widespread use of data and technology. The IPA will work in partnership across central and local government, to embed TIP principles in new projects and programmes and ensure they are delivered in a cohesive and integrated way. The IPA plans to respond to the call for evidence on the Platform approach to Design for Manufacture and Assembly (P-DFMA) during 2020, and to publish a roadmap for TIP and government construction.

8   www.gov.uk/government/publications/benchmarking-capability-tool

9   www.gov.uk/government/publications/best-practice-in-benchmarking

10   Transforming Infrastructure Performance Guidance, IPA (2017)
      https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/664920/transforming_infrastructure_performance_web.pdf

Assuring and supporting project delivery

The IPA provides a range of different independent assurance reviews, from formal Gateway Reviews to more bespoke critical friend reviews. In line with last year, the IPA arranged and managed around 250 independent assurance reviews this year, with additional forms of project support such as expert technical, finance and project delivery advice also provided by the IPA.

This assurance activity helps support the scrutiny of major projects and programmes across government. IPA assurance processes work together with HM Treasury approvals throughout the lifecycle of major projects to confirm whether a project is on track and aligned to strategic objectives. IPA assurance also helps inform discussions and decisions on approvals, which can include Treasury Approval Panels and Major Projects Review Group assessments of spending proposals.

A large amount of assurance activity coordinated by the IPA was conducted outside of the GMPP over the past year, including on projects in their formative stages and bespoke reviews on EU Exit projects and programmes. Projects in the last year have received support from across the IPA, can be offered from multiple areas such as the international advice and assurance provided to the Lima 2019 Pan-American Games.

The IPA is currently strengthening this assurance system through the Assurance Refresh Project. The IPA's work will deepen the impact of its assurance, ensure that processes are followed with rigour, and build in lessons learnt and good practice from across IPA and across government to maintain and further boost quality. To achieve this, the IPA is:

- focusing on refining its processes to make more use of the project data we hold to inform our reviewers;

- further improving our offer to reviewers to ensure we attract and deploy the most expert assurance teams from inside and outside government; and

- working with HM Treasury to make sure that reviews happen at points where they are most able to inform investment and delivery decisions.

This refresh of our systems and processes will continue to build on existing best practice and ensure a consistent and continued high quality of independent assurance reviews. Through this, the IPA will continue to support projects to help them deliver successfully.

Figure 11: Assurance reviews and project/programme stages
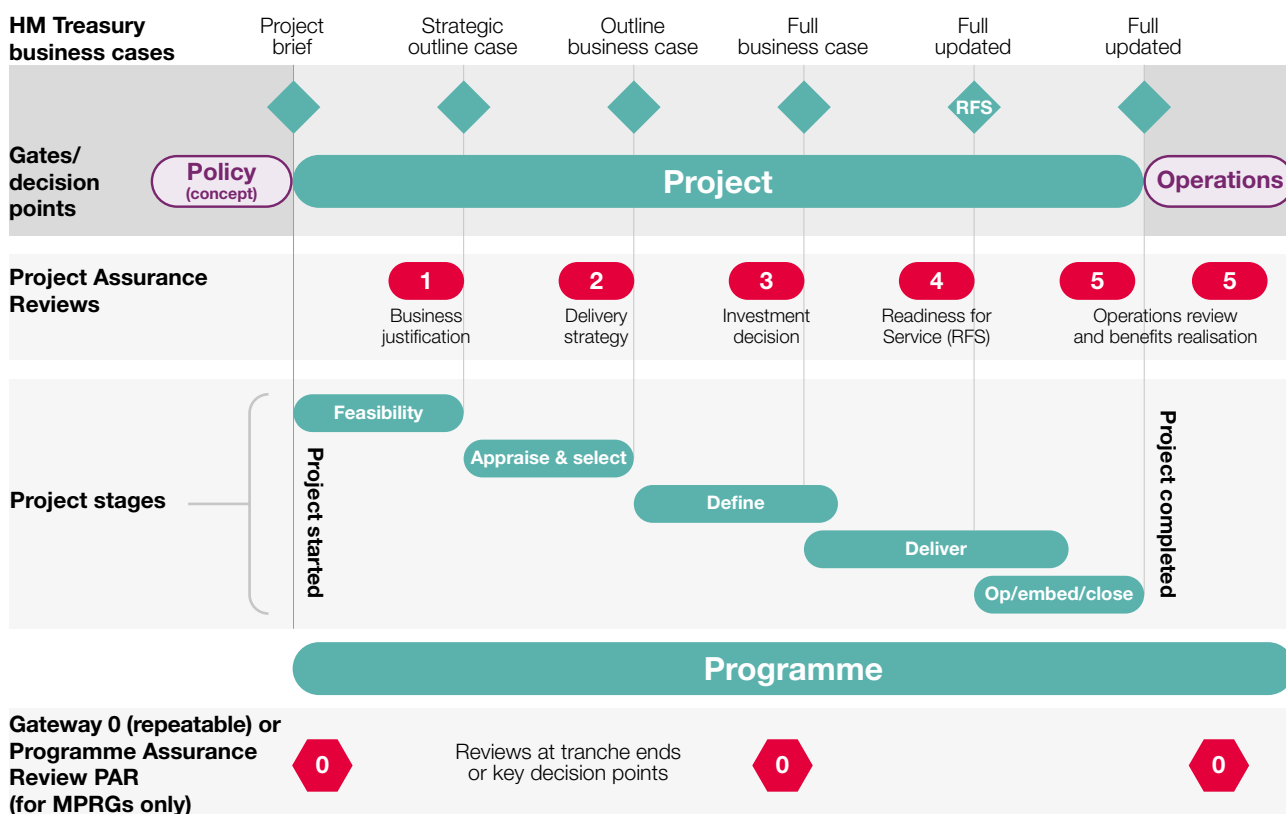
Improving the delivery of major projects continued

GMPP CASE STUDY:
Lima 2019

In April 2017 the UK and Peru signed a government-to-government (G2G) agreement making the UK the key partner in supporting the Lima 2019 Pan-American Games, the world's third biggest sporting event, and the Parapan American Games. It involved the provision of expert UK supplier advice to the Peruvian government on procurement processes and contract management to ensure the Games and supporting infrastructure were completed on time.

The Department for International Trade (DIT) led programme was novel as the first G2G agreement outside the defence sector. The UK team offered an advisory function to the Peruvian government and the Games' organising committee. The IPA worked closely with DIT to set up the programme governance and provided regular independent assurance, including subject matter expert reviewers involved in the London 2012 Olympics, to help DIT critically assure progress. The IPA was also able to broker expert advice on building an appropriate benefits realisation plan for the programme.

Pan American and Parapan American Games (Lima 2019), DIT

At no financial cost to the UK, the four major benefits delivered were: a successful Games which provided skills transfer to Peru; export sales from the UK of £100m, sustaining hundreds of jobs; increased influence and access in Peru for UK business; and a reusable valuable G2G partnering model.

"The IPA provided very helpful formal governance and review to the Lima 2019 Pan American Games G2G project. In addition, one of their senior team sat on the Board providing helpful challenge and support including framing our thinking around risk management and mitigation and benefits realisation. As Senior Responsible Officer for the project I really appreciated the IPA engagement – the team were responsive and offered ways of working which helped to ensure the project was a huge success."

Michael Charlton, *Senior Responsible Owner, Lima Games 2019, Department for International Trade*

Building project delivery capability

Projects are delivered by people, and building professional capability is a high priority for the IPA. We need to build high-performing, professional, flexible and diverse teams to deliver world class projects now and in the future.

Strengthening project leadership

We know that having leaders with the right tools, skills, experience and behaviours is a key factor in successful project outcomes. While capability and retention has improved, there are still not enough experienced senior project leaders across government. Too many Senior Responsible Owners (SROs) are still spread too thinly, overseeing several programmes at once. So, building a broader pool, and a stronger pipeline, of skilled and experienced project leaders across government, is a key priority.

We have continued to run our flagship leadership programmes across government to strengthen project delivery leadership capability. Since 2012 over 700 leaders have attended the Major Projects Leadership Academy (MPLA), and over 50 Director-Generals have attended the Orchestrating Major Projects programme in Oxford. Around 1,300 individuals have also enrolled on the Project Leadership Programme at Cranfield.

Our core leadership development offer has been extended to support leaders of EU Exit programmes, with a new tailored programme developed with the Oxford Saïd Business School, attended by 133 senior leaders. New modular training for Ministers has been developed with Oxford, for introduction during 2020-21. An annual programme of training for HM Treasury officials has been developed. The IPA has also worked with departments to broaden access to departmentally-led development programmes for more junior project practitioners, under the federated academies initiative.

Over the past year the IPA has also invested in building expertise in portfolio management within the IPA and more broadly across government, helping departments improve management of their portfolios of major projects and programmes. A new cross-government community of practice has also been established to provide peer support and sharing of best practice in portfolio management, aligned to the government functional standard for project delivery.

LEADERSHIP CASE STUDY:
Universal Credit Programme

The Department for Work and Pensions (DWP) Universal Credit Programme began in 2010 with the aim to simplify the Social Security system; taking six individual legacy benefits and replacing them with one single new benefit. The simplified system allows claimants to receive a single monthly payment covering their entire claim, with a digital system and transformed Job Centre network supporting claimants and ensuring that the programme can meet its objectives of helping more people get into work, reducing the cost of the benefit system and reducing fraud and error.

The programme had a difficult start and needed to be reset during its early years – a time during which it also had several SROs. Since 2014, the continuity in the roles of Senior Responsible Owner and Programme Director have brought a level of stability to the programme in otherwise challenging circumstances. This leadership has ensured that the challenges of the early years have not been repeated.

Neil Couling and Ian Wright, SRO and PD respectively, have led the programme for five years, and in doing so have been able to marshall a large-scale government transformation programme. Universal Credit has now been rolled out nationwide. In December 2018, a significant milestone was met when full service of Universal Credit became available in every area and Jobcentre in Great Britain. Over 2.5 million claimants now receive Universal Credit and the digital system and Job Centre processes that underpin the new benefit system are significantly improved.

The delivery of Universal Credit over the last five years has been enabled by talented, MPLA-trained and experienced leaders who have stuck with the Programme – a model we would like to see shared by other GMPP programmes.

Building project delivery capability continued

Developing talent

We have strengthened our functional senior talent management by improving talent identification, development and succession planning, to build a strong, diverse pipeline of talent. This is also helping us deploy skills and experience to where they are needed most – for example in responding to urgent project leadership requirements in response to COVID-19.

A sustainable project delivery profession also relies on a strong pipeline of skilled and capable people entering the profession, who have access to excellent career opportunities, in terms of location, challenge and development. The IPA has continued to recruit to the Project Delivery Fast Stream in the last year, and to use the Level 4 Associate Project Manager apprenticeship to upskill existing members of staff.

The Project Delivery Fast Stream began in 2016 and by spring 2020 it had recruited 270 Fast Streamers to roles across Government. Another cohort of Fast Stream candidates is due to join the Civil Service in Autumn 2020.

Improving skills

The Project Delivery Capability Framework (PDCF) remains core to building the capability of the profession by providing a common set of job roles and competencies required to deliver successful projects. Over 12,000 professionals are now using the PDCF, with 7,000 of them assessing themselves against the standards using the government Online Skills Tool, to identify their strengths, areas for development and support their career development. This is allowing departments and the IPA to get a clearer picture of the overall capability across government, and to identify and start to address gaps, for example in planning and portfolio management skills.

To build a truly world-class project delivery system, we need to take a more systematic approach to skills development and professional accreditation, building on the PDCF, with clear expectations and a tailored development offer at all levels, from foundation level through to mastery. The IPA's aim is to put this in place progressively through our plans for a new Government Projects Academy, set out further below.

Figure 12: Project delivery competencies and grades

| | | Civil Service Grades | | | | | | | |
| | | B1 | B2 | | A | | SCS | | |
		EO	HEO	SEO	G7	G6	SCS 1	SCS 2	SCS 3
Leadership	Head of Profession						●	●	●
	SRO / Sponsor				●	●	●	●	●
	Portfolio Manager / Director				●	●	●	●	
	Programme Manager / Director			●	●	●	●	●	●
	Project Manager / Director		●	●	●	●	●	●	●
	PMO Manager / Director				●	●	●		
Project Delivery Specialists	Portfolio Analyst		●	●					
	Project Planner	●	●	●	●	●			
	Resource Manager		●	●	●	●			
	Business Case Manager	●	●	●	●	●			
	Assurance Manager	●	●	●	●	●			
	Configuration Manager	●	●						
	Project Support Officer	●	●	●					
	Governance & Reporting Manager	●	●	●	●	●			
	Risks & Issues Manager	●	●	●	●				
	Advisor						●	●	
Business Analysis & Change Specialist	Stakeholder Manager	●	●	●	●	●			
	Benefits Manager	●	●	●	●	●			
	Business Change Manager	●	●	●	●	●			
	Business Analyst	●	●	●	●				

Increasing diversity and inclusion

The project delivery profession must be representative of the society we serve; this will enable us to deliver projects reflecting the needs of our diverse society. We have focused on attracting, developing and retaining project delivery professionals from all backgrounds. This is reflected in the strong representation of women we now have across the profession, and the encouraging diversity of our early talent programmes.

Whilst we have more women leaders at senior grades than elsewhere in the private sector, we still have more to do to increase female representation at senior grades, and we also need to increase ethnic minority and disabled people's representation across the profession, again particularly at senior levels.

We are therefore working with our champions and members of the profession to target action, for example around selection and development, drawing on the profession diversity data which has become available for the first time this year. We are also working with others, particularly professional bodies like the Major Projects Association and Association for Project Management, in supporting academic research on factors impacting gender balance in project delivery, and will use their findings to tackle barriers and improve career pathways.

Creating a new government projects academy

To deliver the step change needed in project performance, we need a system-wide approach to building project delivery capability across government. We have several key elements in place, including our world-class project leadership programmes, and the project delivery capability framework. But to meet the challenges ahead, we need to accelerate progress, with a sustained focus on consistent standards and expectations, a clearer curriculum, and a rigorous approach to professional assessment and accreditation.

The IPA is therefore working to develop, trial and implement, over time, a new framework for development, assessment and accreditation of project delivery professionals across government, linked to external professional qualifications, and brought together as a new government projects academy.

The new academy will cover all levels of the profession, from foundation level, through practitioner and senior practitioner, to mastery level for our most experienced and expert major project leaders. Through the new academy, we will create a clear professional pathway for entry, development, and progression for everyone working in project delivery, and a structured approach to equipping project leaders with world-class project delivery skills, and the experience and competence needed to lead the most challenging and complex projects across government.

EU Exit and Transition

The UK's transition from the EU remains a top government priority. The clarity provided through the Withdrawal Agreement has seen a significant shift this year from No Deal preparations to Transition Period delivery. Throughout this, the IPA has continued to play a central role in ensuring critical programmes are set up for success and remain deliverable over their lifecycle, both in the medium term to December 2020 and beyond, to grasp the opportunities available in the coming years.

The IPA has remained agile through the changing portfolio, to pivot independent assurance to the highest risk programmes. This year the team has undertaken nearly 40 EU Exit reviews across every impacted department, providing programmes with insight on their deliverability, and recommendations to progress or re-set their trajectory. Beyond assurance, the IPA has provided departments with 130 days of delivery support, both directly through specialised director-level resources to assist at a strategic level and through on-going advice on project delivery.

'EU Transition continues to push IPA to innovate, work at pace and test new methodologies.'

At the heart of government and with a direct relationship with departments, the IPA is in a unique position to assess overall portfolio health, and provide detailed, high-quality insight and analysis to drive the central government response. The IPA works collaboratively with the other functions to tackle challenges highlighted through this analysis, to find solutions and escalate where appropriate. This was particularly evident through the IPA role in cross-departmental assurance and operations testing; facilitating multiple departments and functions to come together and ensure an end-to-end solution spanning multiple programmes, that was fit for purpose when in operation. An example of this was the Category 1 goods solution including DfT's Kent Traffic Management programme, DHSC and Defra.

EU Transition continues to push IPA to innovate, work at pace and test new methodologies. Beyond our own organisation, the IPA's response to EU Exit has allowed departments to access quality support and assurance from a wide range of experts from across the centre of government and beyond.

Major Projects and COVID-19

At the time of writing, the true impact of COVID-19 on major projects is still being fully understood. However, it is certain that the future prosperity of the UK depends on our major projects now more than ever before. These are unprecedented times, the impact of which has been felt right across the world.

The enormous national response to COVID-19 has demonstrated that the project delivery profession is vital in times of crisis management, and the skills within the function are relied upon right across Government to support delivery at pace. The rapid and flexible deployment of people from across government to bring professional project delivery skills to where they were needed most over recent months is a testament to the profession as a whole.

IPA has been supporting COVID-19 programmes across government by providing project delivery advice, support and assurance. As an example, the DHSC response to COVID-19 has involved challenging programmes being set up and delivered at an intense pace in a novel and constantly changing environment. The IPA has supported DHSC COVID-19 delivery through Independent Peer Reviews that provide expert advice to programme leaders and support decision making, embedding project delivery specialists to work alongside the programme teams to strengthen areas of delivery and assisting in the recruitment of senior leaders into key COVID-19 posts.

The impact of COVID-19 on the construction sector has been keenly felt, both in the demand for new buildings and assets and the ability to operate safely in line with government guidance. Whilst initially a large number of construction sites closed in response to COVID-19, Government guidance has supported the sector to reopen and remain operational where it is safe to do so.

The impact on supply chains in all sectors cannot be underestimated and so in order to move forward Government and industry must and are working even more closely together. A new procurement pipeline was published on the 16 June 2020 to provide industry with visibility of planned public procurements for the 2020/21 financial year.[11]

Having a strong, effective and sustainable construction sector in the future will be essential to the economic recovery of the UK. In June 2020 the Construction Leadership Council (CLC) published an Industry Recovery Plan which the IPA welcomes. Government will work collaboratively across government and with the CLC and wider industry to develop the proposals further and to restart, repair and reset construction and infrastructure projects.

This will build on our established Transforming Infrastructure Performance programme, and continue work to ensure government's major new infrastructure and construction programmes are set up to drive improvements in outcomes and performance.

It is vital for our major projects to flourish and succeed consistently to support our economic recovery and improve people's lives across the UK. Everyone, across both Government and industry, has a part to play to make this happen.

'The enormous national response to COVID-19 has demonstrated that the project delivery profession is vital in times of crisis management, and the skills within the function are relied upon right across Government to support delivery at pace.'

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11 National Infrastructure and Construction Procurement Pipeline 2020/21, IPA (2020)
    www.gov.uk/government/publications/national-infrastructure-and-construction-procurement-pipeline-202021

Annexes

The Annual Report and transparency data on major projects

Under its 2012 mandate, the IPA is required to produce an Annual Report on the GMPP. This is the eighth Annual Report, with some previous reports having been published by the Major Projects Authority (MPA). In accordance with the Government's major projects transparency policy, the Annual Report is published at the same time as departments publish the data on their projects that are part of the GMPP. The data published this year was submitted to the IPA in September 2019. The Delivery Confidence Assessments (DCAs) within that data, and included in this report, are as assessed by the IPA at that time. The narratives from departments that accompany their published data online provide an update on progress since then.

Annex A: Explanation of DCA colour ratings

The DCA is the IPA's evaluation of a project's likelihood of achieving its aims and objectives, and doing so on time and on budget.

■ Green
Successful delivery of the project on time, budget and quality appears highly likely and there are no major outstanding issues that at this stage appear to threaten delivery significantly.

■ Amber/Green
Successful delivery appears probable; however, constant attention will be needed to ensure risks do not materialise into major issues threatening delivery.

■ Amber
Successful delivery appears feasible but significant issues already exist, requiring management attention. These appear resolvable at this stage and, if addressed promptly, should not present a cost/schedule overrun.

■ Amber/Red
Successful delivery of the project is in doubt, with major risks or issues apparent in a number of key areas. Urgent action is needed to address these problems and/or assess whether resolution is feasible.

■ Red
Successful delivery of the project appears to be unachievable. There are major issues with project definition, schedule, budget, quality and/or benefits delivery, which at this stage do not appear to be manageable or resolvable. The project may need re-scoping and/or its overall viability reassessed.

■ Reset
A significant change to a project's baseline which involves a business case refresh or change.

■ Exempt
Data can be exempt from publication under exceptional circumstances and in accordance with Freedom of Information requirements – i.e national security.

Annex B: Key for department names

BEIS	Department for Business, Energy & Industrial Strategy
CO	Cabinet Office
DCMS	Department for Digital, Culture, Media & Sport
DFE	Department for Education
DFID	Department for International Development
DFT	Department for Transport
DHSC	Department for Health & Social Care (formerly DH)
DWP	Department for Work & Pensions
FCO	Foreign & Commonwealth Office
HMRC	Her Majesty's Revenue & Customs
HO	Home Office
MOD	Ministry of Defence
MOJ	Ministry of Justice
NCA	National Crime Agency
ONS	Office for National Statistics

Annex C: Snapshot periods for Annual Report years

AR 2013	**2012-13**	Published in 2013 using data as at September 2012
AR 2014	**2013-14**	Published in 2014 using data as at September 2013
AR 2015	**2014-15**	Published in 2015 using data as at September 2014
AR 2016	**2015-16**	Published in 2016 using data as at September 2015
AR 2017	**2016-17**	Published in 2017 using data as at September 2016
AR 2018	**2017-18**	Published in 2018 using data as at September 2017
AR 2019	**2018-19**	Published in 2019 using data as at September 2018
AR 2020	**2019-20**	Published in 2020 using data as at September 2019

Annex D: List of projects with DCA history

The table below reflects DCAs of the 125 projects used in the Annual Report analysis, alongside their historic DCAs where they appeared in previous Annual Reports. **DCAs and the supplementary data reflect the project status at the end of September in the relevant financial year (see Annex C).**

Legend: ■ Green ■ Amber/Green ■ Amber ■ Amber/Red ■ Red ■ Reset ■ Exempt

2013	2014	2015	2016	2017	2018	2019	**2020**	Project Name	Dept	Description
							Amber	Futured Shared Services Programme	BEIS	Programme to replace existing platforms for HR, Finance, Procurement and Payroll services, which will go out of licence and support in 2021.
Exempt	Amber	Amber	Amber	Amber	Amber/Red	Amber	Amber	Geological Disposal Facility Programme (GDF)	BEIS	To site and construct a Geological Disposal Facility for the disposal for higher activity radioactive waste.
				Exempt	Exempt	Amber	Amber	Heat Networks Investment Project	BEIS	Helping create a self-sustaining heat network market through £320m capital investment and short-term actions to address market barriers
			Amber/Red	Amber	Amber	Amber	Amber	Local Land Charges (LLC) Programme	BEIS	Deliver a single Local Land Charges (LLC) Register Service for England to provide a national resilient service, consistency of customer experience and fees.
Exempt	Amber/Green	Amber/Green	Amber/Green	Amber	Amber	Amber	Amber	Magnox & RSRL PBO Competition	BEIS	To secure a reduction in the cost to deliver the outcomes of the Magnox Optimised Decommissioning Plan and the Optimised Research Sites Restoration Limited (RSRL) baseline by securing a new Parent Body Organisation for the Magnox and RSRL Site Licence Companies.
			Amber/Green	Amber/Green	Amber/Green	Amber	Amber	New Polar Research Vessel	BEIS	Royal Research Ship Sir David Attenborough will replace two existing polar research/supply vessels with one dual purpose ship which planned to save £102m over 30 years.
Exempt	Amber	Amber	Amber	Amber	Amber	Amber/Red	Amber	Smart Metering Implementation Programme	BEIS	To offer every home and small business a Smart Meter by 2020.
						Amber	Amber/Green	The Next Magnox Operating Model	BEIS	Changing the model for delivery of decommissioning of the Magnox Sites from the current Parent Body Organisation (PBO) model to an NDA Subsidiary Model.
						Amber/Red	Amber	Commercial Capability Expansion Programme	CO	Improve commercial capability across central government and the wider public bodies sector by expanding capability building interventions applied to commercial specialists (at Grade 6 and above) into new target populations.
					Amber	Amber	Amber/Green	Common Technology Services	CO	Enabling Government to transform the way Civil Servants work by supporting departments during the adoption of modern, flexible and secure technology that will increase their efficiency and deliver value for money.
			Amber/Green	Amber/Green	Amber	Red	Red	GOV UK Verify	CO	A new way to prove who you are online and for public service providers to be assured you are who you say you are.
					Amber	Amber	Amber/Green	Government as a Platform	CO	Development of common platforms for use by digital services across government to avoid duplication of effort.
			Amber/Red	Amber	Amber	Amber	Amber	Government Hubs Programme	CO	The Government Hubs Programme will consolidate and modernise the government's office estate, creating an office network that supports smarter working and great places to work.
							Amber	Transforming CCS	CO	The Transforming Crown Commercial Services (CCS) programme will encompass both digital delivery and organisational transformation to deliver the transformation vision that will transition CCS into a digitally enabled organisation that puts the customer at the heart of everything it does.

Annual Report

Annexes continued

2013	2014	2015	2016	2017	2018	2019	2020	Project Name	Dept	Description
							Amber/Green	**Transforming Government Security**	CO	Improve security outcomes by raising minimum standards, provide clarity for security across HMG, provide governance and security leadership to enable a better understanding and management of the threats and risks to government and its assets.
							Amber	**4th National Lottery Licence Competition**	DCMS	The project aims to run a competition to award the next National Lottery licence (4th), that delivers statutory duties of due propriety and player protection, while incentivising responsible innovation and maximising returns to good causes.
						Amber/Red	Amber	**5G Testbeds & Trials**	DCMS	To foster, build and lead the development of the UK's 5G ecosystem.
				Amber	Amber/Green	Amber	Amber/Green	**700 MHz Clearance Programme**	DCMS	Investing up to £600m to clear the 700MHz spectrum by mid-2020 for use for mobile broadband services in the future.
						Amber/Red	Amber/Red	**Birmingham 2022 Commonwealth Games**	DCMS	Delivery of the Birmingham 2022 Commonwealth Games.
				Amber/Red	Amber	Amber	Amber/Green	**Blythe House Programme**	DCMS	Ensure Blythe House is put to its most efficient and effective use in order to deliver maximum value for money and that its museums are able to care for their collections in the most efficient and effective way.
						Amber/Green	Red	**Local Full Fibre Networks**	DCMS	Designed to stimulate greater commercial investment in full fibre networks across the UK to deliver faster and more reliable connectivity.
							Red	**Rural Gigabit Connectivity Programme**	DCMS	The Rural Gigabit Connectivity Programme will pilot and test innovative approaches to deploying full fibre in the most difficult to reach areas where the market alone is unlikely to deliver.
			Amber/Red	Amber/Red	Amber/Red	Amber/Red	Amber/Red	**DEFRA UNITY PROGRAMME**	DEFRA	A multi-year programme to replace Defra ICT services.
				Amber/Red	Amber/Red	Amber/Red	Amber	**Apprenticeships Reform Programme**	DFE	To create more high quality apprenticeships, meet the skills needs of employers and the country, to create progression for apprentices and to widen participation and social mobility in apprenticeships.
	Amber/Red			Amber/Red	Amber/Red	Amber		**Priority School Building Programme 2**	DFE	Meeting the needs of the school buildings in the very worst condition across the country.
						Amber	Amber	**Social Work England**	DFE	Establishing a new specialist social work regulator, Social Work England, which will focus on public protection and practice improvement.
						Amber/Red	Amber/Red	**T Level Programme**	DFE	To manage the development and delivery of new T Level qualifications, closure and benefit realisation.
							Amber/Red	**Test Operation Services Transition Programme (TOpS)**	DFE	Established to oversee the delivery of the change from the Standards and Testing Agency's existing multi-contractor delivery arrangement for primary tests (national curriculum assessments) to the Test Operations Services (TOpS) prime contractor model.
Amber/Green	Amber	Amber/Green	Amber/Green	Amber/Red	Amber/Green	Amber	Amber/Green	**St Helena Airport**	DFID	Establishing sustainable air services to St Helena to promote economic development and increased financial self-sufficiency, leading eventually to graduation from UK Government support.
							Amber	**A12 Chelmsford to A120 Widening**	DFT	Widening the A12 to three lanes between junction 19 (north of Chelmsford) and junction 25 (A120 interchange).
	Amber/Red	Amber/Green	Amber	Amber	Amber	Amber/Green	Green	**A14 Cambridge to Huntingdon Improvement Scheme**	DFT	To improve the A14 which is a major national and inter-urban regional transport artery between Cambridge and Huntingdon to relieve congestion and support both national and regional economic growth.

■ Green ■ Amber/Green ■ Amber ■ Amber/Red ■ Red ■ Reset ■ Exempt

	Annual Report									
2013	2014	2015	2016	2017	2018	2019	2020	Project Name	Dept	Description
				Red	Amber	Amber	Amber	A303 Amesbury to Berwick Down	DFT	Freeflowing dual carriageway replacing the current single lane on the A303 between Amesbury and Berwick down including a twin bored tunnel under the majority of the world heritage site and a northern by-pass of Winterbourne Stoke.
						Amber/Green	Amber	A428 Black Cat to Caxton Gibbet	DFT	The scheme provides a new off-line two lane dual carriageway between Black Cat roundabout on the A1 in Bedfordshire and Caxton Gibbet roundabout on the A428 in Cambridgeshire.
Amber/Green	Amber/Green	Amber/Green	Amber/Green	Amber/Green	Amber	Red	Red	Crossrail Programme	DFT	A new high-frequency rail service which will increase rail-based capacity in London by up to 10% and cut journey times across London and the South East.
						Amber/Green	Amber	East Coast Mainline Programme	DFT	Improving capacity and frequency of the services on the East Coast Mainline, increasing passenger seat capacity to major stations along the route, reducing journey times and improving the customer experience through the introduction of new trains.
				Amber/Red	Amber/Red	Amber	Red	East West Rail Programme (Western Section)	DFT	The programme will reconstruct and upgrade a partly disused railway between Bicester and Milton Keynes /Bedford allowing for the introduction of new passenger services improving connectivity and journey times along the corridor.
				Amber/Red	Amber/Red	Amber/Red	Amber	Great Western Route Modernisation (GWRM) including electrification	DFT	An extensive programme to modernise existing infrastructure on the Great Western mainline. It will create faster and more reliable services, better stations and increased freight capacity.
				Amber	Amber	Amber	Amber	Heathrow Expansion Programme	DFT	The Heathrow Expansion Programme covered the Government's policy activities to enable delivery of a new Northwest runway at Heathrow Airport (subject to the granting of development consent). The funding and delivery of the programme is led by Heathrow Airport ltd.
Amber/Red	Amber/Red	Amber/Red	Amber/Red	Amber/Red	Amber/Red	Amber/Red	Red	High Speed Rail Programme (HS2)	DFT	HS2 will form the backbone of the UK's transport network, connecting eight out of ten of Britain's largest cities. By making it easier to move between the North, Midlands and South, cutting many journeys by half, HS2 will make it easier for people to live and work where they want.
Amber/Green	Amber/Green	Amber/Green	Amber	Amber	Red	Amber/Red	Amber	Intercity Express Programme	DFT	Renewing the UK's high speed train fleet on the Great Western and East Coast. Through Train Operating Companies IEP is a key means to deliver the passenger benefits including more capacity, improved reliability, reduced journey times, and better environmental performance.
			Amber	Amber/Red	Amber/Red	Amber	Amber	Lower Thames Crossing	DFT	A new free-flowing road crossing of the Lower Thames east of Gravesend and Tilbury. It will improve network resilience and the performance of the existing crossings at Dartford enabling local regional and national economic growth.
				Amber/Red	Amber/Red	Amber	Amber	Midland Main Line Programme	DFT	Modernisation of the Midland Main Line Route to provide more passenger capacity and reduced journey times into London and between major Midland cities.
				Amber/Red	Amber/Red	Amber	Amber	North of England Programme	DFT	The enhancements provided by the North of England Programme will support economic growth, bring improved journey times, offer additional train services and enable modern trains to run across the North.
			Amber	Amber	Amber	Amber/Red	Amber/Red	Rail Franchising Programme	DFT	To secure the provision of passenger rail services as set out under the Railways Act 1993 (as amended) by letting Rail Franchises.
				Amber/Red	Amber/Red	Amber/Green	Amber/Green	South West Route Capacity	DFT	Programme of infrastructure upgrades and new rolling stock to increase passenger capacity including enhancements works at Waterloo station.

■ Green   ■ Amber/Green   ■ Amber   ■ Amber/Red   ■ Red   ■ Reset   ■ Exempt

Annexes continued

2013	2014	2015	2016	2017	2018	2019	2020	Project Name	Dept	Description
Amber/Green	Amber/Green	Amber	Amber	Amber/Green	Amber	Amber	Amber	Thameslink Programme	DFT	A significantly enhanced high-frequency rail service which will increase rail-based capacity in London and across the wider South East and provide new journey opportunities.
							Amber	Clinical Triage Platform (CTP)	DHSC	A digital programme to collectively help the NHS in England's urgent and emergency care system manage demand, support patient flow and optimise patient discharge.
				Amber/Red	Amber/Green	Amber	Amber	Data Processing Services Programme	DHSC	To deliver a modern data platform to improve how NHS Digital manages, analyses and provides access to data for healthcare planning and research.
							Amber/Red	GP IT Futures Programme	DHSC	A new procurement framework to replace the General Practice Systems of Choice (GPSoC) to create an open, competitive and innovative market that will underpin the requirements set out in the NHS Long Term Plan.
Red	Red	Amber/Red	Amber/Red	Amber	Amber/Red	Amber		Health & Social Care Network	DHSC	A key transitional stage in achieving the vision of making digital health and social care services ubiquitously available over the internet.
					Amber/Red	Amber/Red	Red	IT Infrastructure Sourcing Programme	DHSC	Implementing a mix of internal and external supplier towers and a strengthened retained IT organisation.
							Amber	Local Health and Care Records	DHSC	The programme aims to create an information sharing environment that helps our health and care services continually improve treatments, ensures that care is tailored to the needs of each individual, and empower people to make informed choices about their own health. On a secondary level the programme allows detailed analysis of data to support research and inform new treatments or care pathways.
	Red				Amber/Red	Amber/Red	Amber/Red	Medical Examiners Programme	DHSC	Introducing the role of medical examiners to provide a system of effective medical scrutiny applicable to all deaths that do not require a coroner's investigation.
	Amber/Red	Amber	Amber/Green	Amber	Amber/Red	Amber	Amber/Red	National Proton Beam Therapy (PBT) Service Development Programme	DHSC	Develop NHS Proton Beam Therapy centres to treat patients for whom evidence supports proton therapy as the most clinically effective treatment.
				Amber	Amber	Amber	Amber	NHS UK	DHSC	Transforming the website NHS Choices, and designing a digital service that better connects patients to the information and services that they need.
Amber	Amber/Red	Amber	Amber	Amber	Amber	Amber	Amber/Red	PHE Science Hub	DHSC	To create an integrated national centre of excellence for public health science, to act as an enabling platform to ensure the scientific expert advice for protection of the public's health against threats.
Amber/Red	Amber/Red	Amber	Amber/Green	Amber/Green	Amber	Amber/Green	Amber/Green	Fraud, Error and Debt Programme	DWP	Delivers major transformational outcomes designed to ensure the Department manages fraud, error and debt in a systematic way.
							Red	Health Transformation Programme	DWP	To offer a more joined-up service to disabled people by integrating the services that deliver Personal Independence Plan (PIP) and Work Capability Assessments.
Amber/Red		Amber/Red	Amber	Amber	Amber	Amber	Amber	Universal Credit Programme	DWP	Replaces six separate benefits and tax credits for working-age people, bringing together in and out of work systems into one, to make work pay.
						Amber	Amber/Red	Atlas Programme (IPA ID 2410)	FCO	To support the FCO's Diplomacy 20:20 agenda and the Government's shared services strategy through the implementation of a modern Oracle Cloud based Enterprise Resource Planning (ERP) system.

■ Green   ■ Amber/Green   ■ Amber   ■ Amber/Red   ■ Red   ■ Reset   ■ Exempt

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2013	2014	2015	2016	2017	2018	2019	2020	Project Name	Dept	Description
					Amber/Red	Amber	Amber/Red	Echo 2 Programme	FCO	A joint initiative between DfID, FCO and the British Council to re-procure the current Connectivity and Voice & Video services, covering a network of over 500 offices in over 170 countries.
						Amber	Amber	Washington Embassy Refurbishment	FCO	Refurbishment and upgrading of key buildings on our Washington, USA, compound.
				Amber/Red	Amber	Amber/Red	Amber/Green	Building Our Future Locations Programme	HMRC	HMRC will be a transformed organisation operating from 13 large, modern Regional Centres (RCs), 5 Specialist Sites and a London Headquarters equipped with the digital infrastructure and training facilities needed to support and motivate our people, and from which we can better serve our customers as an effective, efficient and impartial tax and payments authority.
			Amber/Red	Amber	Amber	Amber/Red	Amber/Red	Customs Declaration Services	HMRC	To provide a more flexible customs declaration system to meet future needs.
				Amber/Red	Amber	Amber/Red	Amber/Green	Making Tax Digital for Business	HMRC	Delivering modernised IT to digitise tax reporting for businesses and agents and delivering a better customer experience.
							Amber	Securing our Technical Future	HMRC	The programme will migrate all HMRC services within the data centres to the new supported platforms, Cloud and Crown Hosting (for physical assets), enabling HMRC to fully exploit the benefits of Cloud and Crown hosting opportunities.
		Amber/Red	Amber	Amber	Amber/Red	Amber	Amber	Tax-Free Childcare	HMRC	Responsible for delivering the childcare service through which parents can apply for Tax-Free Childcare and the DfE's 30 hours free childcare initiative.
					Amber	Amber	Amber/Green	Asylum Accommodation and Support Transformation (AAST)	HO	Aims to deliver an asylum accommodation and support model which will ensure the safety and security of service users and their host communities and represents value for money for the UK Government, learning the lessons from previous asylum support contracts.
			Exempt	Amber/Red	Amber	Amber	Amber/Green	Cyclamen Project	HO	Cyclamen equipment provides the capability to detect and intercept, and thereby deter the illicit movement of radiological materials into the United Kingdom.
							Amber/Green	DBS Service Transition	HO	The Disclosure and Barring Service (DBS) Transition Programme has been established to transfer services securely, and in doing so maintain the capability and capacity of DBS to achieve its core responsibilities.
		Amber	Amber/Red	Amber/Red	Amber/Red	Amber	Amber/Red	Digital Services at the Border (DSAB)	HO	To deliver digital services that will provide systems capable of transforming the way that Border Force (BF) and its partners operate.
Exempt	Amber/Red	Amber	Amber	Amber	Red	Amber/Red	Amber/Red	Emergency Services Mobile Communications Programme (ESMCP)	HO	Aims to replace the mobile communications service used by the three Emergency Services and other public safety users with an Emergency Services Network (ESN).
			Amber	Amber/Green	Amber/Green	Amber/Green	Amber/Red	Home Office Biometrics (HOB) Programme	HO	Home Office wide convergence programme for biometrics within Government, covering border security, law enforcement and intelligence.
		Amber	Amber/Red	Amber	Amber	Amber	Amber/Red	Immigration Platform Technologies (IPT)	HO	Delivering the technology and information systems to support the immigration service now and in the future.
		Amber	Red		Amber	Amber/Red	Amber/Red	Metis Programme	HO	To move to an updated Enterprise Resource Planning tool (ERP) and a common shared service model to provide transactional human resource (HR), finance (including payroll) and procurement services

Legend: ■ Green ■ Amber/Green ■ Amber ■ Amber/Red ■ Red ■ Reset ■ Exempt

Annexes continued

2013	2014	2015	2016	2017	2018	2019	2020	Project Name	Dept	Description
				Amber/Red	Amber	Amber	Amber/Red	National Law Enforcement Data Programme (NLEDP)	HO	Will replace the current Police National Computer (PNC) and Police National Database (PND) systems with one modernised solution.
	Amber/Red	Amber/Red	Amber	Amber	Amber	Amber	Amber	Technology Platforms for Tomorrow (TPT)	HO	Delivering modern End User Devices and collaboration tooling, replacing the Department's legacy application estate with the use of cloud services.
Amber	Amber/Green	Amber/Green	Amber/Green	Amber	Amber	Amber	Amber	A400M	MOD	Delivery of A400M ATLAS Air Transport Aircraft.
							Amber/Red	Armed Forces Recruitment Project	MOD	The Armed Forces Recruiting Programme (AFRP) is the tri-Service (tS) programme responsible for delivering a single, common tS Recruiting Operating Model for the Armed Forces.
				Amber/Red	Amber	Amber	Amber	Armour MBT 2025	MOD	An extension of the Army's MBT capability as part of a balanced force, credible and employable against current and emerging threats, across the mosaic of conflict, and the identification of future capability options beyond 2035.
			Amber	Amber	Amber	Amber	Amber	Armoured Cavalry 2025	MOD	To deliver an integrated multi-role capability that will include the delivery of the AJAX armoured fighting vehicle and its training solution into service.
			Amber	Amber/Red	Red	Red	Amber/Red	Armoured Infantry 2026	MOD	Deliver an Armoured Infantry that is more capable, with enhanced lethality and upgraded situational awareness, better integration with dismounts and improved combined arms cooperation.
	Amber/Green	Red	Amber/Red	Amber	Amber/Red	Amber/Red	Amber/Green	Army Basing Programme	MOD	An infrastructure led transformation programme to enable the Army 2020 structure and withdraw of personnel from Germany.
Amber	Amber	Amber/Red	Amber/Red	Amber/Red	Red	Amber	Amber	Astute Boats 1-7	MOD	The design, development and manufacture of Astute class submarines.
	Amber/Red	Amber/Red	Amber	Amber	Amber	Amber	Amber/Red	Carrier Enabled Power Projection	MOD	An integrated and sustainable joint capability, interoperable with NATO and coalition allies. The project will enable the projection of UK Carrier Strike and Littoral Manoeuvre power, the ability to support a Special Forces raid as well as delivering Humanitarian Assistance and Defence Diplomacy.
						Amber/Green	Amber	Clyde Infrastructure	MOD	Managing the design, delivery and transition into operational use, new build and updated infrastructure facilities in HMNB Clyde (Faslane and Coulport).
Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Complex Weapons	MOD	Delivers Complex Weapons for use by the 3 Front Line Commands.
			Amber/Red	Amber/Red	Amber/Red	Amber	Amber	Contracting, Purchasing and Finance	MOD	To provide a single online end to end procurement system for all MOD procurement activity.
Green	Green	Amber	Amber	Red	Red	Amber	Amber	Core Production Capability	MOD	Delivers safe nuclear reactor cores to meet the Royal Navy's submarine programme, now and for the long term.
Exempt	Exempt	Green	Amber/Green	Amber	Amber	Amber	Red	Crowsnest Programme	MOD	Equip 10 Merlin Mk2 helicopters with an advanced airborne surveillance system to meet the Force Protection requirement of the Maritime Task Group.
			Amber/Red	Amber/Red	Amber/Red			Defence Estate Optimisation	MOD	Helping create a smaller, better and a more efficient estate to deliver the required Military Capability.
Exempt	Amber/Green	Amber/Red	Amber/Red	Amber/Red	Amber/Red	Amber	Amber	DREADNOUGHT	MOD	The design, development and manufacture of the Dreadnought ballistic missile submarines.
			Amber	Amber	Amber			Fleet Solid Support	MOD	Auxiliary Shipping to provide stores, ammunition and food sustainment to Naval Forces at Sea.
			Amber	Amber	Amber/Red	Amber	Amber/Red	Future Beyond Line Of Sight	MOD	Replaces the existing UK sovereign SKYNET 5 secure space-based satellite communications capability.

Legend: ■ Green ■ Amber/Green ■ Amber ■ Amber/Red ■ Red ■ Reset ■ Exempt

2013	2014	2015	2016	2017	2018	2019	2020	Project Name	Dept	Description
					Amber/Red	Amber/Red	Red	Future Maritime Support Programme	MOD	Commercial arrangements for the provision of Ship & Submarine Engineering and Naval Base Services.
					Exempt	Exempt	Exempt	Joint Crypt Key Programme	MOD	To support the department's Information Assurance Capability.
				Amber/Red	Amber/Red	Amber/Red	Amber	Land Environment Tactical Communication and Information Systems	MOD	A transformational change programme that will 'information-enable' the Land Environment in the full conduct of operations.
Amber/Green	Amber	Amber	Amber	Amber	Amber/Red	Amber/Red	Amber	Lightning Programme	MOD	To deliver a multi-role, carrier-capable aircraft, to be operated jointly by the Royal Air Force and Royal Navy.
				Amber	Amber/Red	Amber/Red	Amber	Maritime Patrol Aircraft	MOD	To deliver a Maritime Patrol Aircraft (MPA) to provide persistent, responsive, effective and adaptive Military Capabilities in the Under Water, Above Water, Littoral and Land environments.
Green	Green	Amber/Green	Amber/Green	Amber/Red	Amber/Green	Amber	Green	Maritime Sustainment Programme	MOD	The Military Afloat Reach and Sustainability (MARS) Tankers will replace the current single hulled tankers operated by the Royal Fleet Auxiliary.
Exempt	Exempt	Amber	Amber/Green	Amber/Red	Red	Amber/Green	Amber	MARSHALL	MOD	Delivering a sustainable Air Traffic Management capability.
					Amber	Amber	Amber	Mechanised Infantry Programme	MOD	Delivers agile Mechanised Infantry able to operate at reach, at speed, in complex terrain and with low logistic need.
					Amber	Amber/Red	Amber/Red	MODnet Evolve	MOD	Sustain OFFICIAL and SECRET Information Communications and Technology (ICT) services in the Base and Base Overseas environments from the end of the ATLAS New Style of IT (Base) (NSOIT(B)) contract.
			Amber	Amber	Amber/Red	Amber/Red	Amber	New Style of Information Technology (Base)	MOD	To deliver a cost-effective and modern 'New Style of IT' across the Defence estate.
				Exempt	Amber/Red	Amber	Amber	New Style of Information Technology Deployed	MOD	The provision of an IT system which will deliver operational information service to Land, Air, Maritime and Joint users in all physical environments.
Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Nuclear Warhead Capability Sustainment Programme	MOD	To deliver and sustain the capability (skills, technology, science, personnel, production and support) to underwrite the UK nuclear warhead stockpile now and in the future.
				Amber	Red	Amber/Red	Amber	PROTECTOR	MOD	Delivery of a Remotely Piloted Air System.
Red	Red	Amber/Red	Amber	Amber	Amber	Amber	Amber	Queen Elizabeth Programme	MOD	Deliver 2 x Queen Elizabeth Class aircraft carriers, capable of operating Lightning II and Merlin aircraft (Crowsnest/ASW), as key elements of the Carrier Enabled Power Projection Programme (CEPP).
Exempt	Exempt	Amber/Green	Amber/Green	Amber/Green	Amber/Red	Amber/Red	Red	Spearfish Upgrade Programme	MOD	To update the UK's submarine weapon systems. This includes improvements to the safety system to minimise residual risks and deliver improved performance against increasingly capable threats.
Exempt	Exempt	Exempt	Exempt	Exempt	Amber/Green	Amber/Green	Amber	Type 26 Global Combat Ship Programme	MOD	Procure 8 x Anti-Submarine Warfare (ASW) ships and associated support.
					Exempt	Exempt	Amber	Type 31e	MOD	Aims to deliver a pipeline of credible, affordable and exportable warships enabling Defence to increase its global footprint.

Green   Amber/Green   Amber   Amber/Red   Red   Reset   Exempt

Annexes continued

2013	2014	2015	2016	2017	2018	2019	2020	Project Name	Dept	Description
Red	Amber/Red	Amber/Green	Amber	Amber	Amber	Amber	Amber/Green	WATCHKEEPER	MOD	An unmanned air system (UAS) platform that will provide Intelligence, Surveillance, Target Acquisition and Reconnaissance capability to the land tactical commander in the context of Joint Operations.
Amber	Amber/Red	Amber	Red	Amber/Red	Amber/Red	Amber/Green	Amber/Red	Electronic Monitoring	MOJ	Implementing a new electronic monitoring system and a service for the day-to-day monitoring of subjects wearing the devices.
							Amber	Glen Parva New Build Prison	MOJ	This project is to design, build and procure private services to operate a new, Category C resettlement prison at Glen Parva.
						Amber/Red	Amber	HMCTS Facilities Management Reprocurement Project (FMRP)	MOJ	To re-procure replacement contracts for the expiring Total Facilities Management (TFM) contracts which provide services to the HMCTS estate.
	Amber/Red	Amber/Red	Amber/Red	Amber/Red	Amber/Red	Amber/Red	Amber/Red	HMCTS Reform	MOJ	Modernise the infrastructure and deliver a better and more flexible service to court users; modernise and transform courts and tribunal service to increase efficiency, improve service quality and reduce the cost to the taxpayer.
				Amber	Amber	Amber/Red	Amber/Red	MoJ Future FM	MOJ	To re-procure the expiring facilities management contracts which provide services to the shared estates cluster.
						Amber/Green	Green	Prison Education Programme	MOJ	Provision of education services for adult prisons in England.
							Amber/Red	Prison Technology Transformation Programme (PTTP)	MOJ	The programme has been commissioned to replace the common technology solution across all public prisons in England and Wales. It will also provide new technology services to HMPPS HQ and Prisons (Staff/Users) who are still on the legacy 'Quantum' prison system. Providing staff across the prison service with modern, mobile technology services that are a pleasure to use, and which make their duties easier to perform.
						Amber/Red	Amber/Green	Prisoner Escort and Custody Services (PECS) Generation 4	MOJ	Prisoner Escort and Custody Services (PECS) Generation 4 Programme, procures business critical contracts ensuring the continued safe and decent movement of prisoners between police stations, courts & prisons.
						Amber/Red	Amber/Red	Probation Programme	MOJ	Aims to open commercial discussions with Community Rehabilitation Companies (CRCs) , that run probation services, to agree an option for early termination of contracts by mutual agreement and negotiate amendments to contracts to secure service improvements during an exit period.
							Amber	Wellingborough New Build Prison	MOJ	This project is to design, build and procure private services to operate a new, Category C resettlement prison at Wellingborough.
						Amber	Amber/Red	YOUTH JUSTICE REFORM PROGRAMME	MOJ	To make youth custody a place of safety, both for children and those who work there; and to improve the life chances of children in custody.
		Amber	Amber	Amber	Amber	Amber	Amber	NCA Transformation Programme	NCA	The NCA's Transformation Programme will deliver the culture, capability and capacity to enable the NCA to be a world-class law enforcement agency, leading the work to cut serious and organised crime.
Amber/Green	Amber/Green	Amber/Green	Amber/Green	Amber	Amber	Amber	Amber	Census & Data Collection Transformation Programme	ONS	Delivering a successful 2021 Census, researching how to make it the last of its kind and transforming the work of ONS in how we collect, process and analyse data.

■ Green   ■ Amber/Green   ■ Amber   ■ Amber/Red   ■ Red   ■ Reset   ■ Exempt