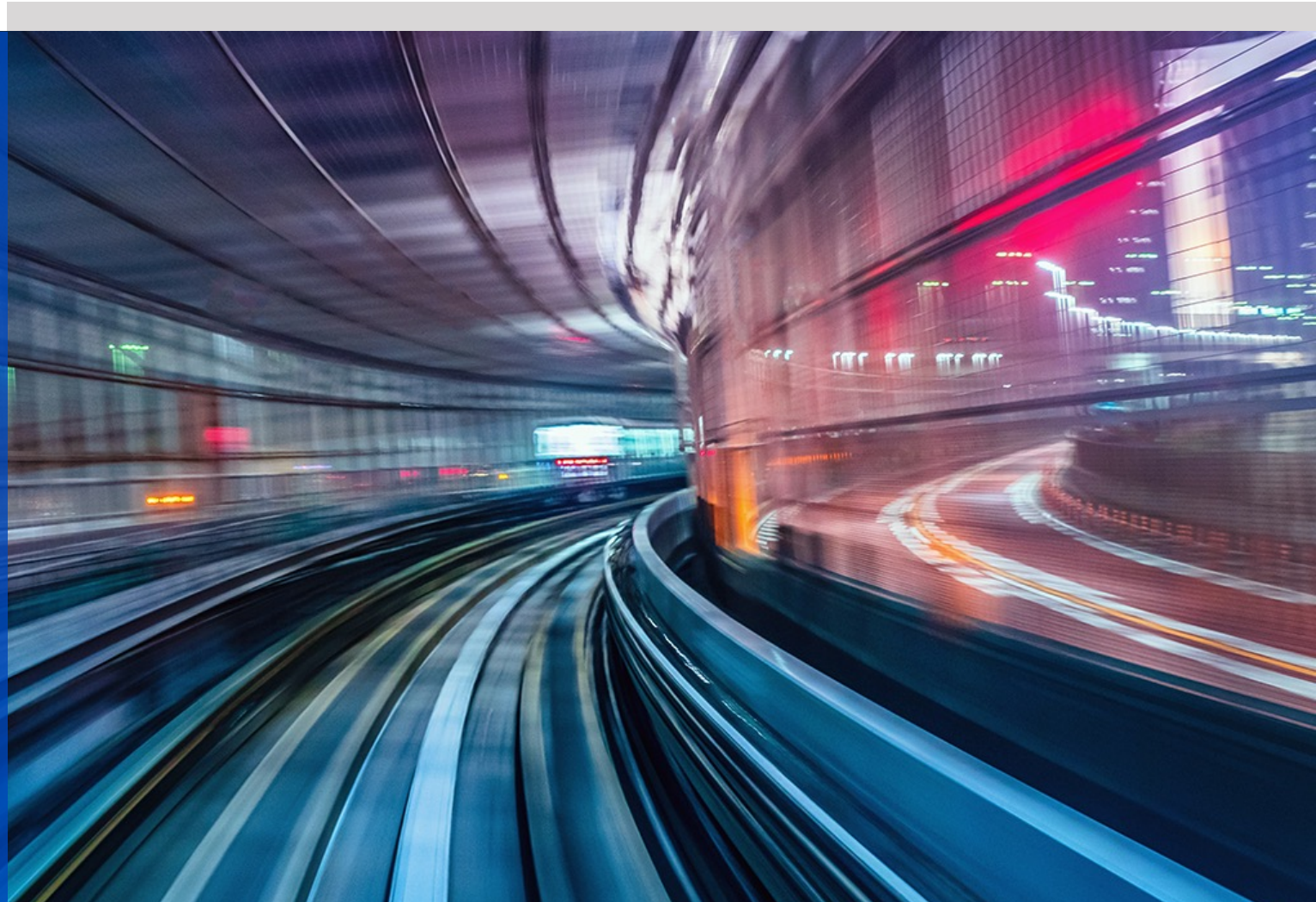


# The Future of UK Infrastructure Investment & Addressing the Project Delivery Challenge

23<sup>rd</sup> June 2021



# Presenters



**Simon Lawrence**

Head of Project Futures,  
Infrastructure & Projects  
Authority



**Rob Christie**

Head of Finance,  
EKFB JV



**James Atkinson**

Director of Infrastructure  
Solutions,  
Causeway Technologies

# Agenda

- Introductions
- The Future of UK Infrastructure Investment  
*Simon Lawrence – IPA Director Strategy, Performance and Assurance*
- Infrastructure project delivery and the challenges  
*James Atkinson – Causeway Technologies Director Infrastructure Solutions*
- Using technology to assist with the successful delivery of HS2  
*Rob Christie – EKFB Head of Finance*
- Questions & Answers



# The Future of UK Infrastructure Investment



Simon Lawrence

Head of Project Futures,

*Infrastructure & Projects Authority*





Infrastructure  
and Projects  
Authority

# The Future of UK Infrastructure Investment

**Simon Lawrence**

Head of Project Futures  
23rd June 2021



# What is the role of the IPA?

- Expert project delivery advice, support and assurance to government departments
- We work with industry to ensure projects are delivered efficiently and effectively, and to improve performance over time.
- We work on the overall project delivery system:
  - people that deliver projects
  - principles that are fundamental to the success of any project
  - overall performance of government's major projects.





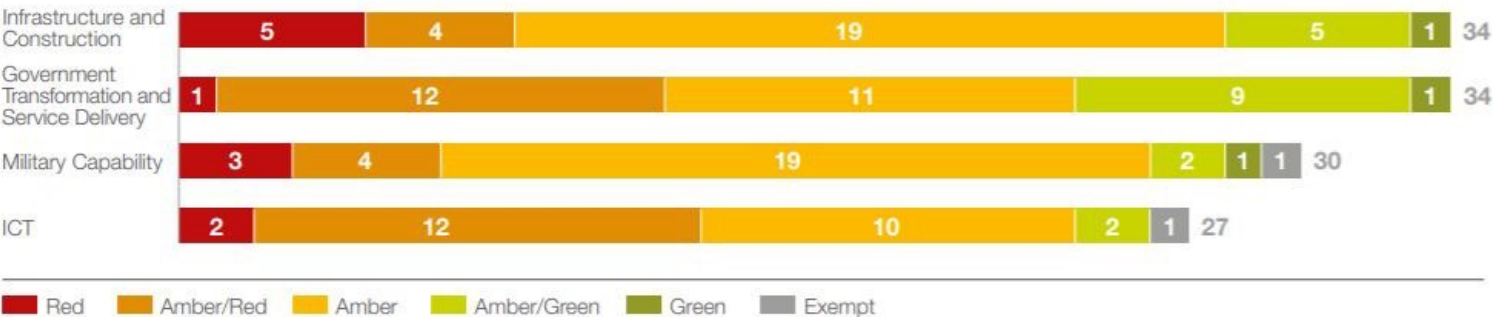
# Where we've come from

- The UK Government delivers some of the most challenging, complex and innovative projects in the world.
- Delivering major projects is difficult and delivery teams face many challenges and obstacles in delivering projects successfully.

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

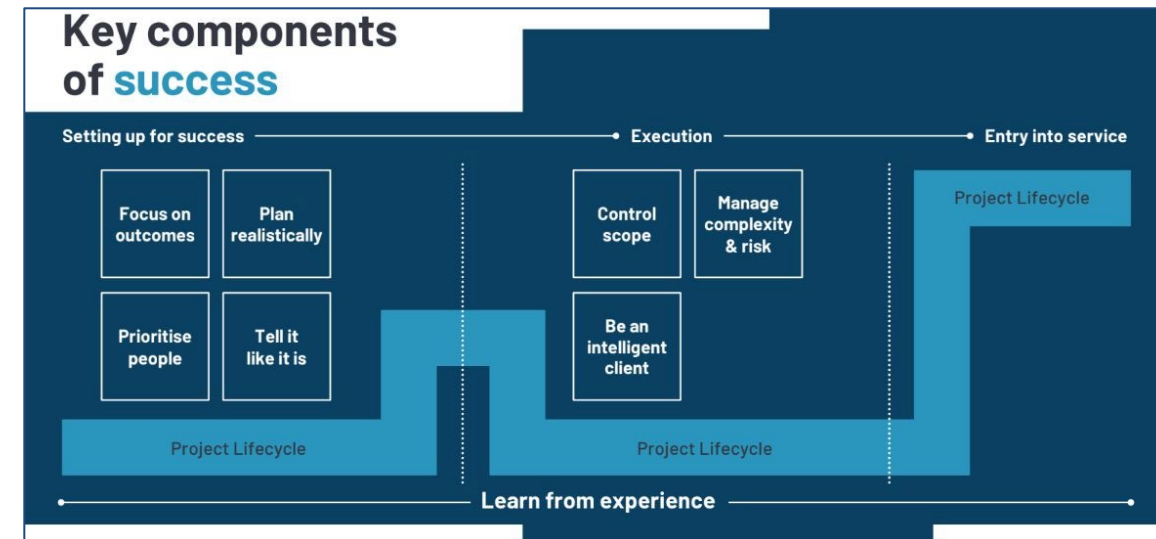
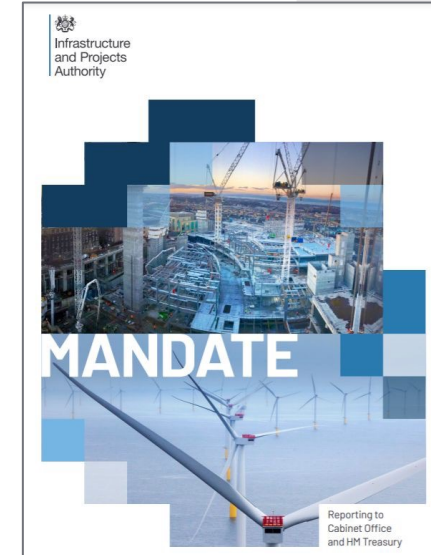
Figure 7: DCAs by Project Category





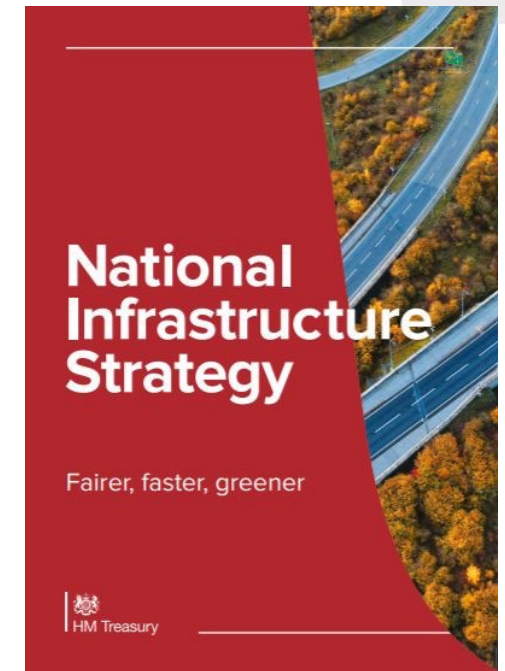
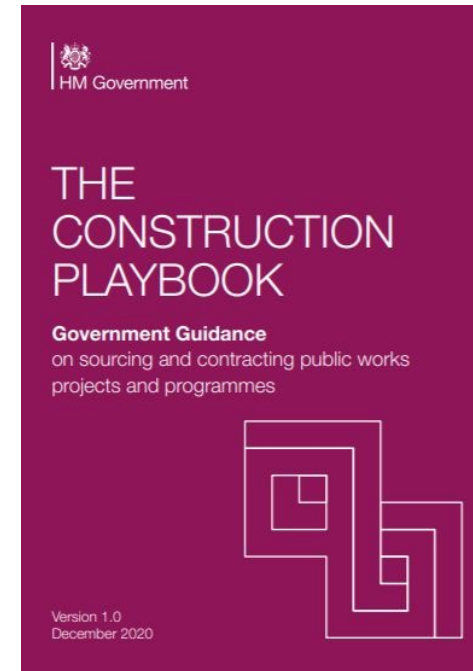
# What we have achieved within government

- A stronger mandate for IPA ensures more rigorous oversight of project management from the outset.
- An 'assurance reset' with the requirement for projects to have the support of the IPA before they progress
- 'Sponsoring Major Projects Ministerial Programme', the Major Projects Leadership Academy (MPLA) and other world-class training.
- The principles for project success - intended to be used to guide thinking and behaviour in project delivery



# What we have achieved with industry

- Worked with industry on the delivery of government's priorities - industry modernisation, decarbonisation and levelling up.
- National Infrastructure Strategy - set out how government will address issues that have held back infrastructure
- Construction Playbook - sets out expectations from government and industry in order to achieve a healthy, productive, and profitable construction sector.



# Upcoming Priorities

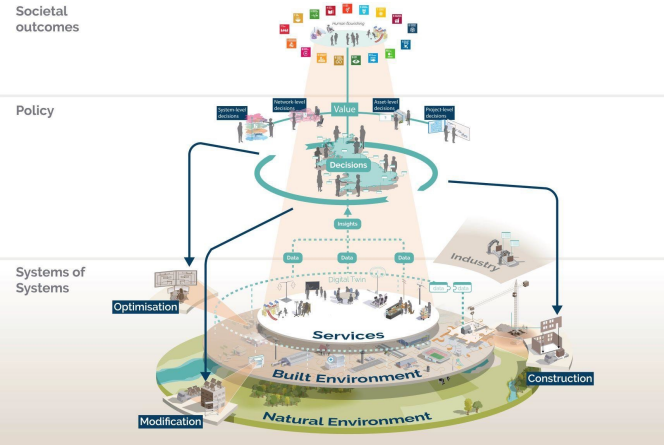
It is essential that we begin to recover and rebuild as a country and central to this is a drive to **transform our infrastructure to provide future resilience.**

We need to see **an unprecedented level of collaboration and innovation.**

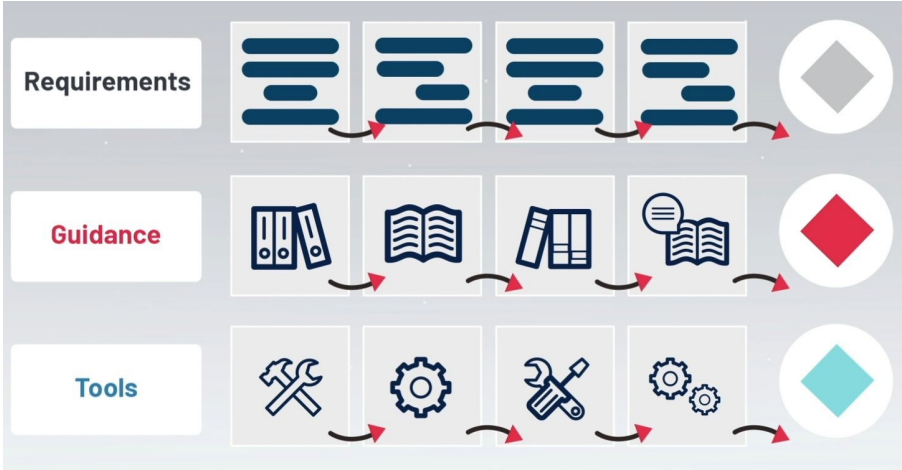
1. **Set our projects up for success from the outset** so they can boost growth, productivity and level up communities across the country.
2. To be innovative in the way we approach challenges.
3. **Decarbonise our economy** and the built environment is a systemic challenge.
4. Ensure we have **the right people with the right skills** for the 21st Century.



# Getting to Green: we are implementing key reforms with Departments



Delivering reforms to be more innovative in the way we approach challenges.

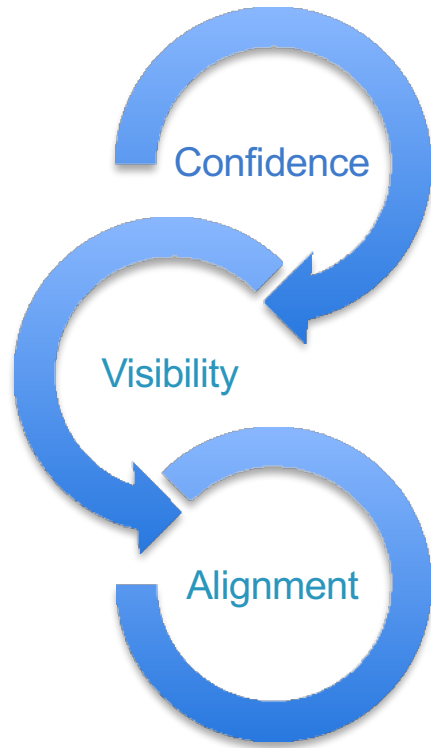


Rolling out new Government Project Delivery Framework with all best practice guidance in one digital hub



Launching Government Project Academy to develop, assess and accredit

# The Procurement Pipeline is Used to Provide Certainty Over the Short-Medium Term



The key points with respect to the importance of the Procurement Pipeline:

1. **Confidence:** Provides industry with confidence that government will continue to bring forward new work;
2. **Visibility:** Visibility of government's commitment to deliver infrastructure projects and programmes will incentivise firms to maintain capacity;
3. **Alignment:** A defined pipeline of work allows all sectors across industry and government to align their strategic objectives and demonstrates to private sector that new work can be brought forward.

# NICPP 2020 Commission

The commission brought together central government departments and delivery bodies undertaking or involved in infrastructure construction programming



Department  
for Transport



Department  
of Health



Ministry of Housing,  
Communities &  
Local Government



Environment  
Agency



Ministry  
of Justice



Department for  
Business, Energy  
& Industrial Strategy



Department  
for Education



highways  
england



Department  
for Environment  
Food & Rural Affairs



Ministry  
of Defence



Department for  
Digital, Culture  
Media & Sport



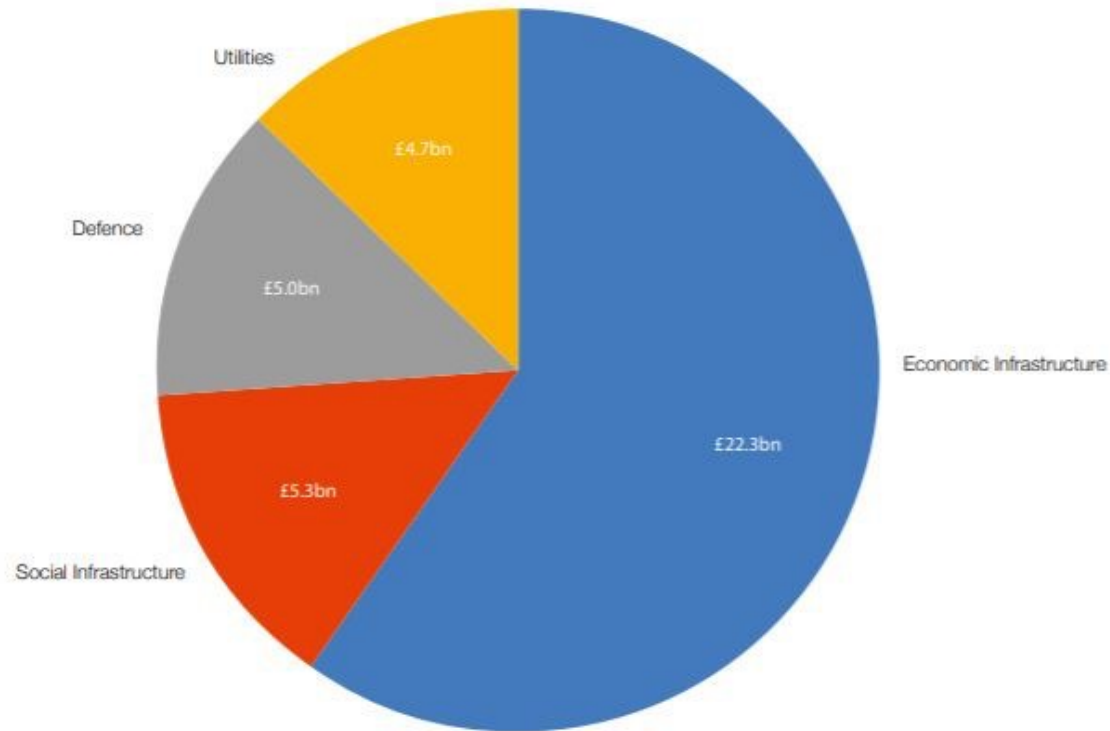
Homes  
England

For the purpose of this Procurement Pipeline IPA also worked with devolved administrations, local authorities and housing associations to gather data

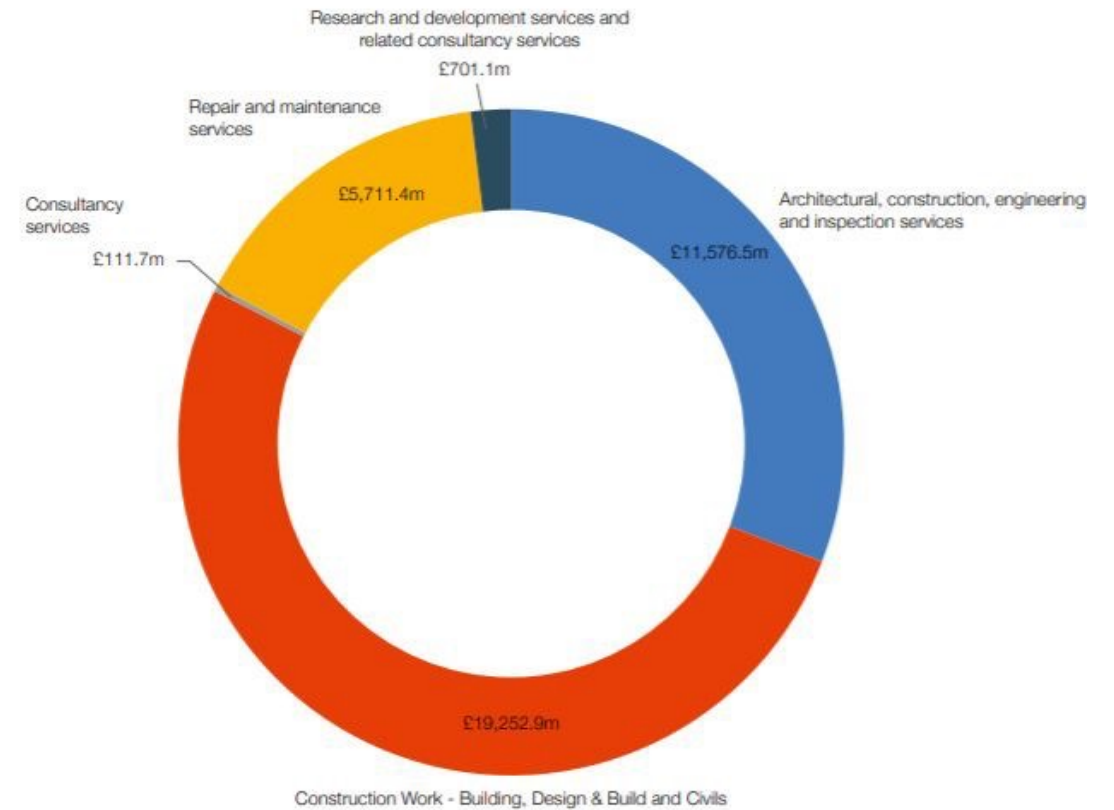


# Procurement Pipeline Overview

Estimated maximum contract value of procurements in the pipeline by sector (£'bn)



Estimated maximum contract value of procurements in the pipeline by work type (£'m)



# Plans for the 2021 Pipeline



**Strategic** – setting out planned investment through SR period and direction of travel for the next decade.



**Tactical** – setting out planned procurements for the next 12 months in order to provide certainty of new work.



# Call to action

- Government has a laser focus on our major projects and their role in rebuilding the country and fueling economic recovery.
- The IPA will critical to the delivery of this ambitious vision.
- It is only by **working together in a sustainable way** that we can achieve these ambitions.
- We need to see an unprecedented level of collaboration and innovation.





# Infrastructure Project Delivery and the Challenges



James Atkinson

*Director*

*Infrastructure Solutions*

# The Construction industry today

**6%**

The UK construction industry accounted for 6% of gross domestic product (GDP) in 2018.

**£117bn**

The UK construction industry accounts for £117 billion of output.

**60%**

**Global Workforce**

There are 2.4 million construction industry jobs in the UK in Q3 2018, 6.8% of all jobs.

**37%**

**of all self-employed**

37% of all self-employed jobs are in construction.







# Industry Challenges

1.5%



Average pre-tax profit margin achieved by the UK top 100 construction contractors

69%



Of UK projects exceed budgets

60%



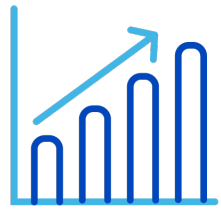
Of projects are delivered late

67%



Of young people aged 18-24 would never consider a career in construction

# The Productivity Problem



1%

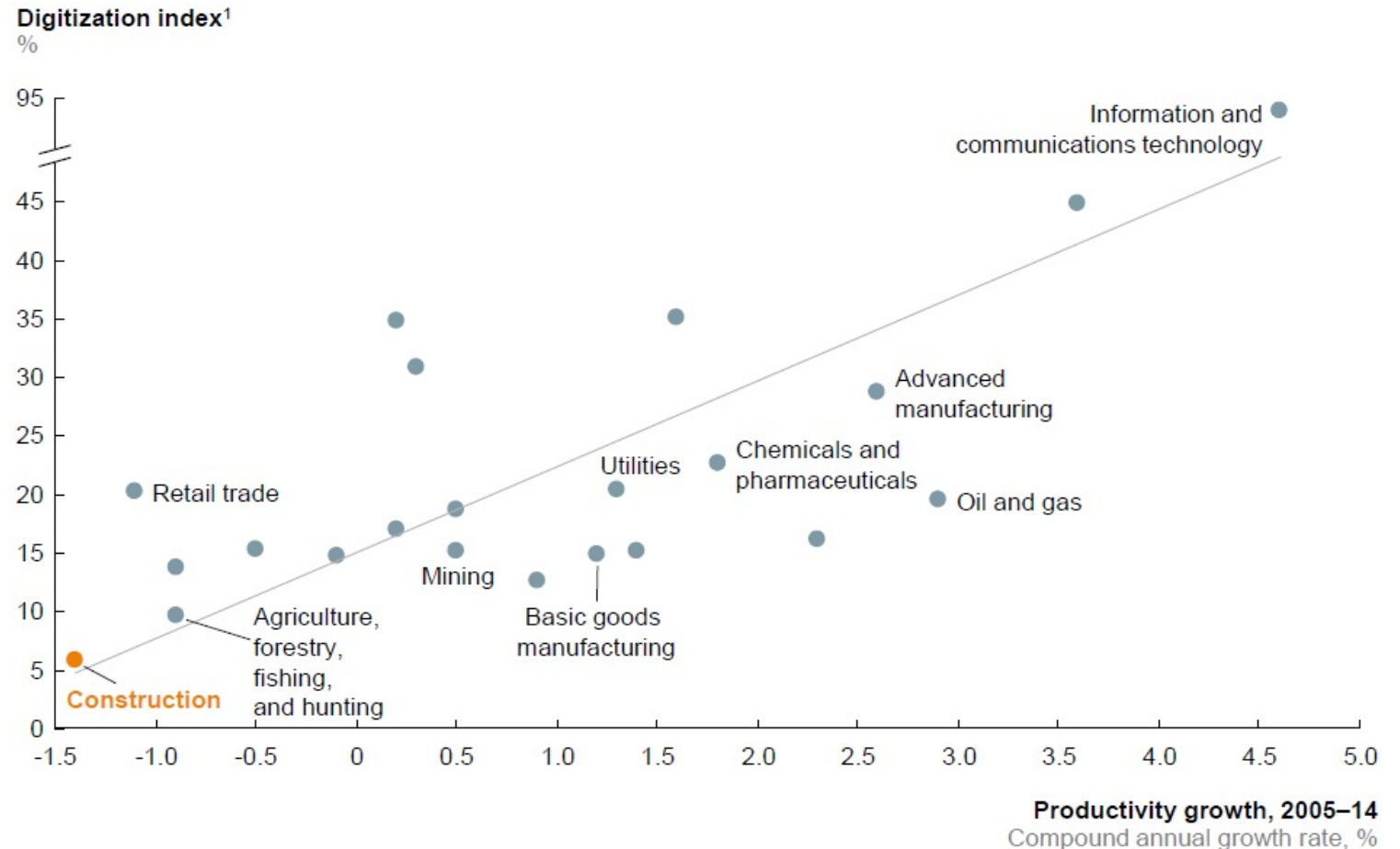
Increase in annual productivity growth in 20 years.

£1.3trillion



Of additional value could have been created through higher productivity.

Lower digitization in construction relative to other industries has contributed to the productivity decline





# Government Major Projects Portfolio

## IPA Delivery Confidence Assessment

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



# What are the contributors?



## **Inaccurate Estimates**

Inaccurate & out of date  
Data



## **Cost Control Challenges**

Lack of transparency,  
inconsistency, historical, high  
level



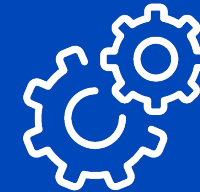
## **Unintegrated Supply Chain**

limited data transfer & lack of cost  
transparency



## **Lack of Digitalisation**

Inconsistent unstructured  
systems, manual processes



## **Fragmentation**

Multiple stakeholders, differing  
approaches, inconsistency

# Client Efficiency Targets

**£2.3bn**

Efficiency savings targeted over 5 years through RIS2 for Highways England

**£400bn**

Productivity improvements achieved by 2040 through digital revolution



# Transport Infrastructure Efficiency Strategy

Infrastructure investment is trebling to a historic high.

Efficient delivery is critical to drive growth and productivity, and to realise better outcomes for transport users.

1. Enabling delivery
2. Exploiting digital technology
3. Improving our understanding of costs and performance



# Using technology to assist with the successful delivery of HS2



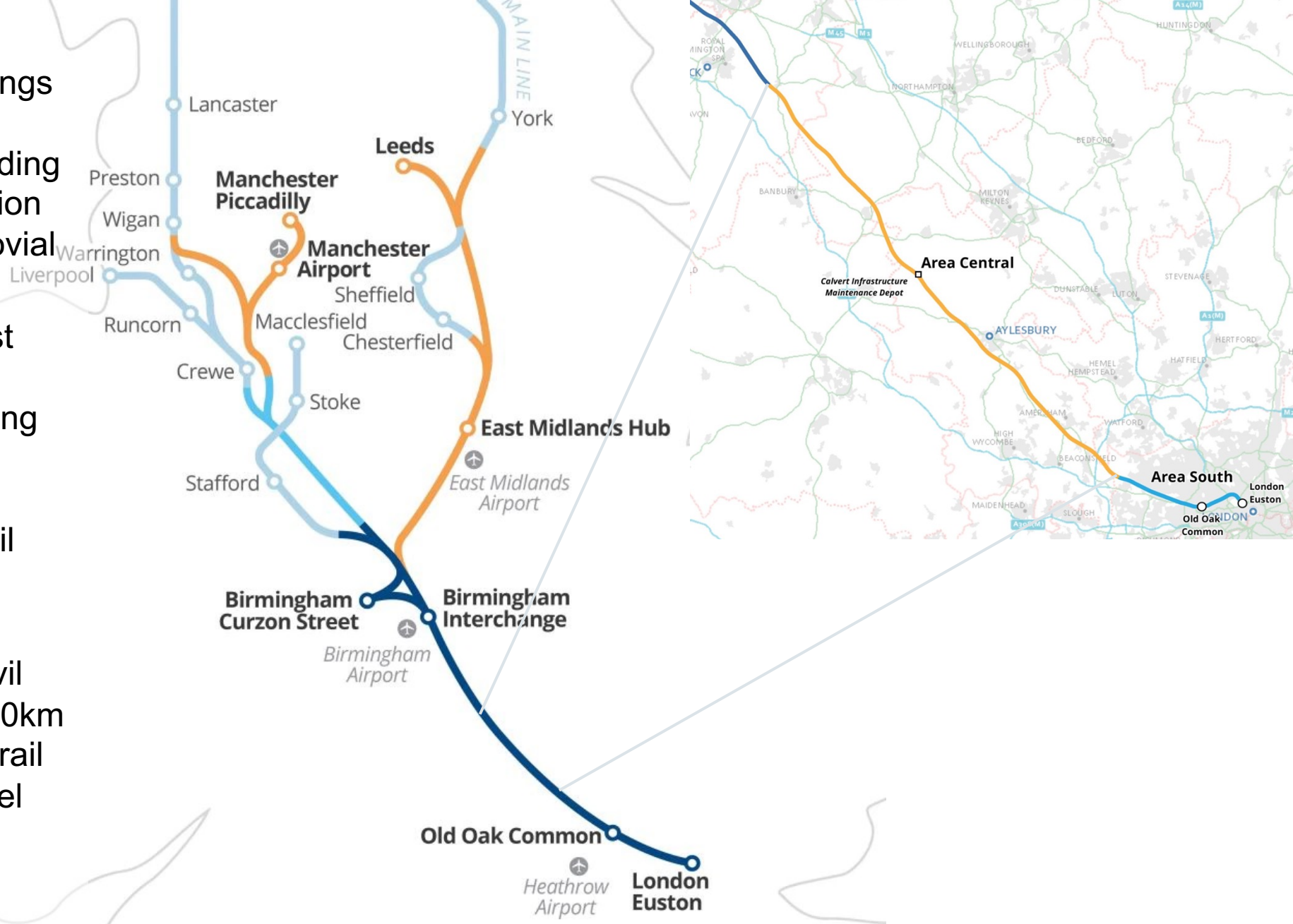
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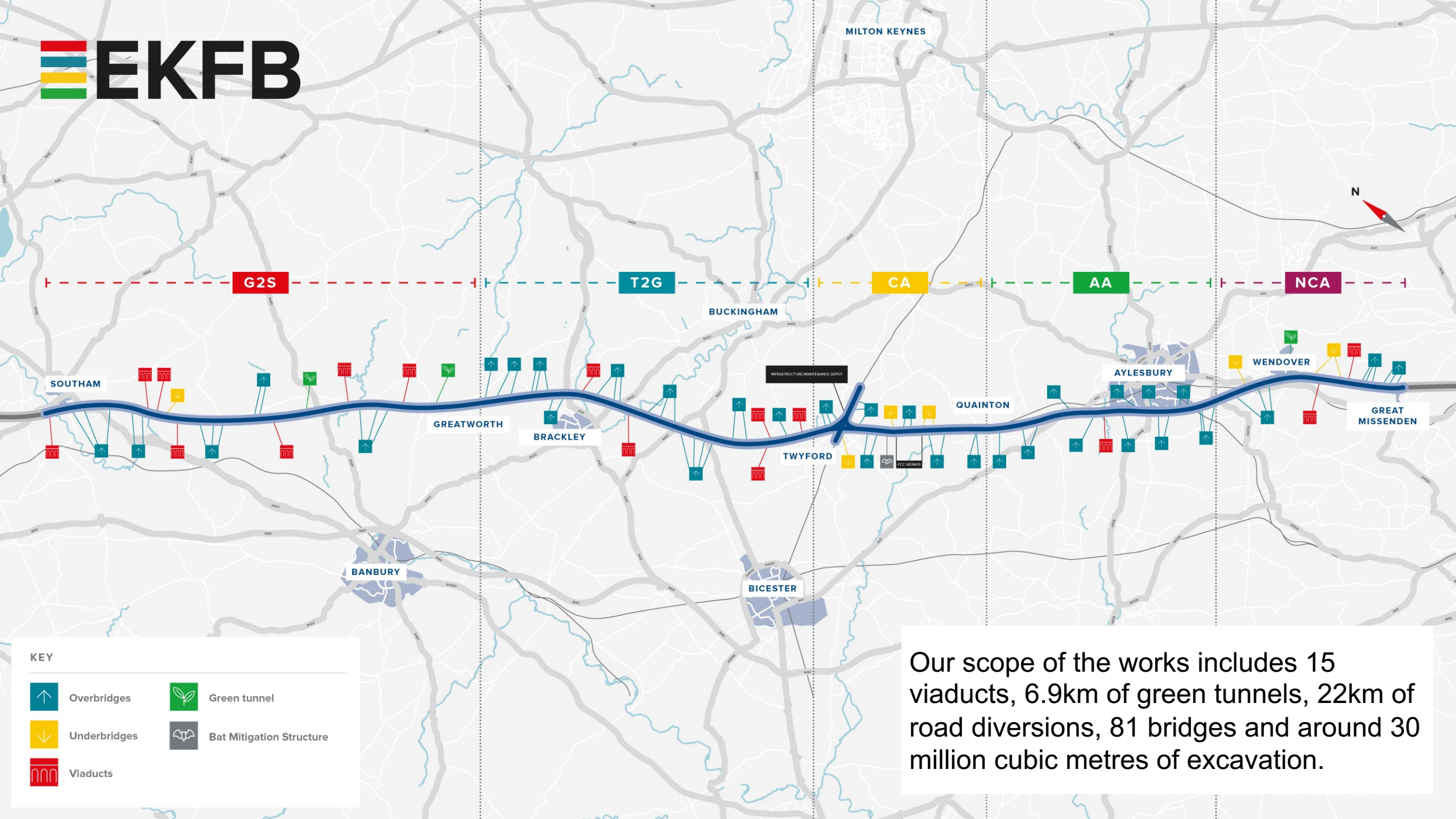


EKFB is a joint venture that brings together international, market leading expertise from four leading civil engineering and construction companies: Eiffage, Kier, Ferrovial Construction and BAM Nuttall.






All four partners bring specialist experience in the design, construction, operation, financing and maintenance of railway networks, including some of Europe's largest high speed rail projects.

We are proud to have been appointed by HS2 to deliver civil engineering works across an 80km section of the new high speed rail link between the Chiltern Tunnel and Long Itchington Wood.



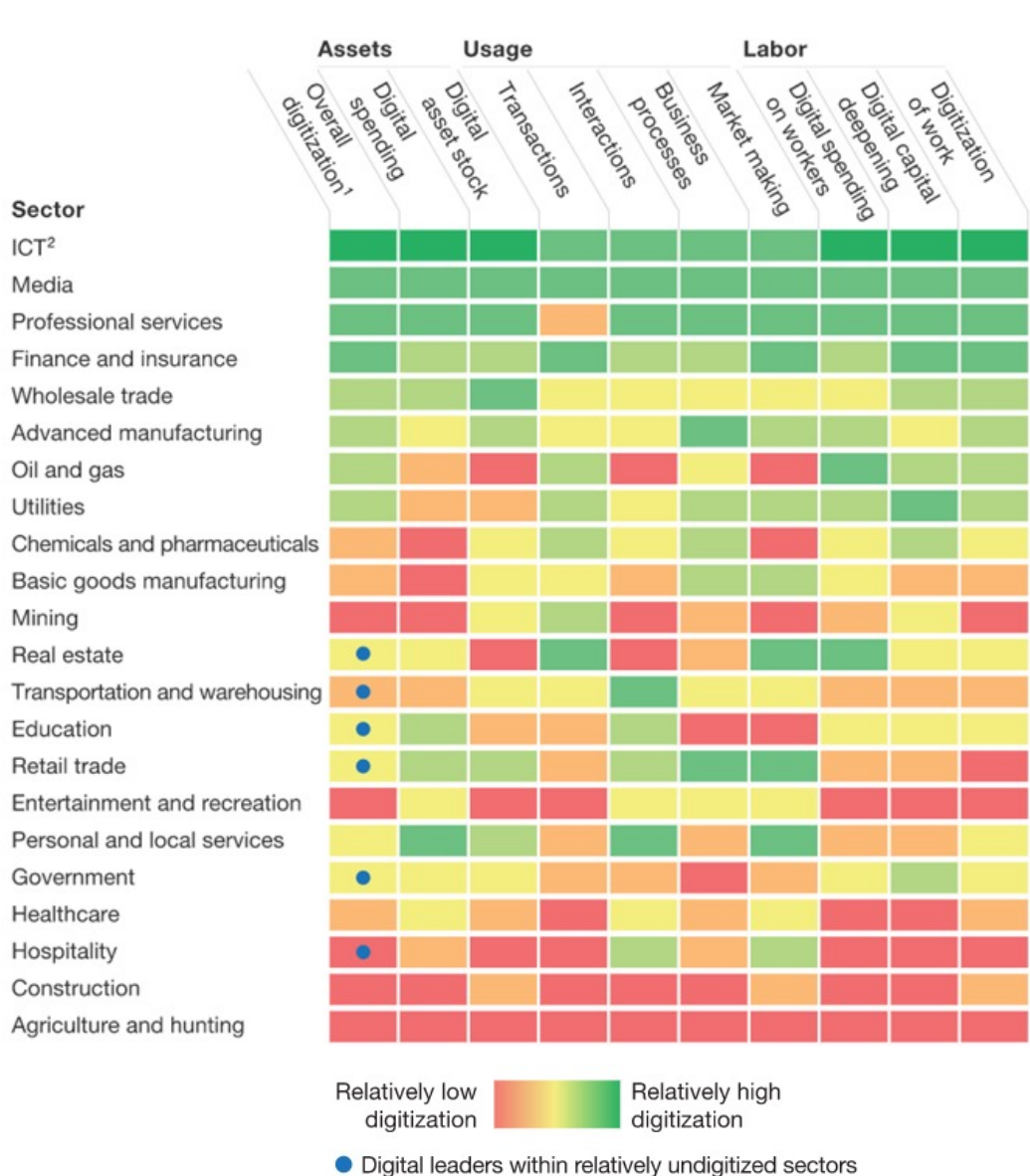


#### KEY

- |  |              |   |                          |
|--|--------------|---|--------------------------|
|  | Overbridges  |  | Green tunnel             |
|  | Underbridges |  | Bat Mitigation Structure |
|  | Viaducts     |   |                          |

Our scope of the works includes 15 viaducts, 6.9km of green tunnels, 22km of road diversions, 81 bridges and around 30 million cubic metres of excavation.

# The league table for the Industries



Huge scope to improve, develop and move up the table - source is McKinsey.com

Source: McKinsey Global Institute Analysis

# As an industry where are we?

Product has not  
changed in  
principle, just the  
processes

We live in a world  
of convenience  
(Amazon)

Technology needs  
to be supported by  
people / users –  
rushing is not the  
answer

Heavy investment  
in technology can  
come at a price as  
margins are not  
significant in the  
industry





# Challenges

Backdrop of Brexit  
and the pandemic  
alongside a split  
public opinion of  
the project

Geographical  
challenges -  
logistics

Focus on ensuring  
strong payment  
compliance and  
auditability of cost

Consolidation of  
reporting across  
all JV's



# Solutions

Creation of cost management systems aligned to processes designed for the JV

Integration with key logistic systems to develop the procure to pay side with controlled delivery of goods to site plus supply chain systems (aggregates) – the supply chain are fundamental to project delivery

Targeted processes that have been historically manual and digitised / automated where possible

Fully integrate with the customer to create an IPT ethos– removes the client / contractor division



# The future

*Systems alignment  
from the start –  
potentially client  
driven*

*Target key processes  
for digitisation*

*Ensure the IPT  
philosophy continues  
(it works!)*

*Reduce multi-system  
integration when not  
required*





Q&A





# Learn more

If you are seeking advice on transforming your infrastructure projects, get in touch:

[www.causeway.com](http://www.causeway.com)

# THANK YOU

**CAUSEWAY** 

Increasing profitability with modern commercial control



How to increase profitability with modern commercial control

Construction firms are relying on outdated processes that drain profits from every project, without fail.

But the right digital tools help you understand your real-time performance, giving you time to focus on increasing profitability.

80%

of large projects are over budget <sup>1</sup>

20%

longer to finish large projects than scheduled <sup>1</sup>

COSTS MANAGEMENT

Commercial teams are struggling to perform essential functions of their roles, and it's draining value from the project



Highly skilled people are wasting time rekeying data into multiple systems



Thousands of pounds lost every month because of incorrectly allocated plant



CVRs can take weeks to produce and fail to report on real-time costs

Companies are struggling to maximise productivity, and it's draining value from the project



Electronic Invoicing



Efficient Subcontract and Plant Ordering



Instant Performance Reporting

INFRASTRUCTURE: IMPROVING COST CONTROL IN 2021


**CAUSEWAY** 




Infrastructure: Improving Cost Control in 2021

A guide to helping your commercial team get the most out of every project

HOW TO STOP SPREADSHEETS FROM PUTTING YOUR COMMERCIAL PERFORMANCE AT RISK

**CAUSEWAY** 



How to stop spreadsheets from putting your commercial performance at risk

A Guide for Infrastructure Construction Projects