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CONSTRUCTING EXCELLENCE
North Wales Club

# The Farmer Review of the Construction Industry
# 'Modernise or die'
# Are we on the right track?

## 17th January 2018

## Ramada Plaza, Wrexham

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# Welcome

## Chris Davies, Chair

## North Wales Best Practice Club

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REAL ESTATE & CONSTRUCTION CONSULTANCY

# The Farmer Review of the Construction Industry: '*Modernise or Die*'

## Are We On The Right Track?

**Mark Farmer**

Constructing Excellence Wales

Wrexham, 17th January 2018

# Reminder of Context



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# We Have a Burning Platform

# Future Prognosis for 'Business as Usual'

- Skilled labour depleted by 20-25% (before Brexit impact)
- Quality of new 'backfill' labour force reduced
- Increasing reliance on shrinking pool of experienced & competent labour force
- Main Contractors not in control of sub-contractors
- Sub-Contractors not in control of their labour force
- Designers being de-skilled by procurement routes & transactional interfaces
- Surveyors increasingly removed from understanding true cost rather than price
- Increasing litigation and contentious project failures
- On going commercial failures of businesses unable to control outcomes and hold 'risk'
- New disruptors and disruptive models emerging challenging status quo



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# The *Modernise or Die* Challenge Addressed to Clients, Industry & Government



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We need to train and retain more home grown talent

Through creating more attractive long term career opportunities

Which will prepare us to be able to do more with less resource in the future

To help do this we need to create a new type of demand for better outcomes

We need to then use that demand to underpin the evolution of new skills and training which will make us to be more productive & attract a new generation of workers



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# Condensed summary of Farmer Review Recommendation Themes

Need to for clear leadership & institutional reforms that better integrate clients, industry & government

A productivity led change agenda letting innovation dictate future skills development & which clients and the supply chain can either lead or respond to

The government has to play  a critical role in the strategic initiation of change across both of the above

**All of the above underpinned by a move to higher levels of <u>premanufactured value</u> on projects combined with <u>a more integrated delivery model</u>**



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# But.....

Our industry has proved unable to respond to positive stimuli for change in the past

It has not been able to mobilise any collective ability to reform itself

The issue now is whether it will react to a burning platform as a negative stimulus for change

How much will be push and how much will be pull?

IF NECESSITY IS THE MOTHER OF INVENTION, DISCONTENT IS THE FATHER OF PROGRESS.

# Discontent from Within....

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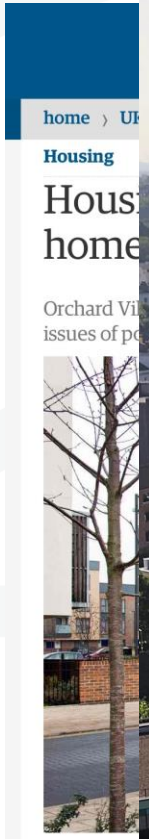
# But Discontent with Construction Performance is Now Coming from Elsewhere……



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# Post Grenfell Analysis Is Already Pointing To **Systemic** Failure In Whole Design, Procurement & Construction Process

Poor Handover & Operational Readiness Protocols

Main Contractors holding Responsibility but no longer in control

'Value Engineering' Equals Functionality Reduction

D&B Procurement Versus 'Architect Led'

Deskilling in professions & trades

Lowest Price Procurement

Performance Based Specification

Conflicts of interest in product testing & warranty market

Level of On Site Supervision

Falsification of Records / Covering up Mistakes

'Engineered' Versus Prescriptive Building Regulations

Premature Completion Certification

# Building a Safer Future

## Independent Review of Building Regulations and Fire Safety: Interim Report

Presented to Parliament
by the Secretary of State for Communities and Local Government
by Command of Her Majesty

December 2017

Cm 9551

Building

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FOCUS

# Analysis: Opinion split over Hackitt's Grenfell review

By Joey Gardiner | 5 January 2018

Head of review of Building Regulations and fire safety defends lack of detailed recommendations and says industry must take more responsibility

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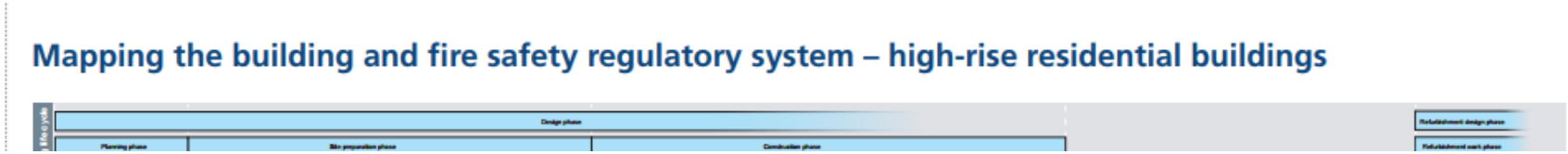


# BETTER SKILLS & COMPETENCY

# BETTER COMPLIANCE & ENFORCEMENT

# ENABLED THROUGH TECHNOLOGY & PROCUREMENT



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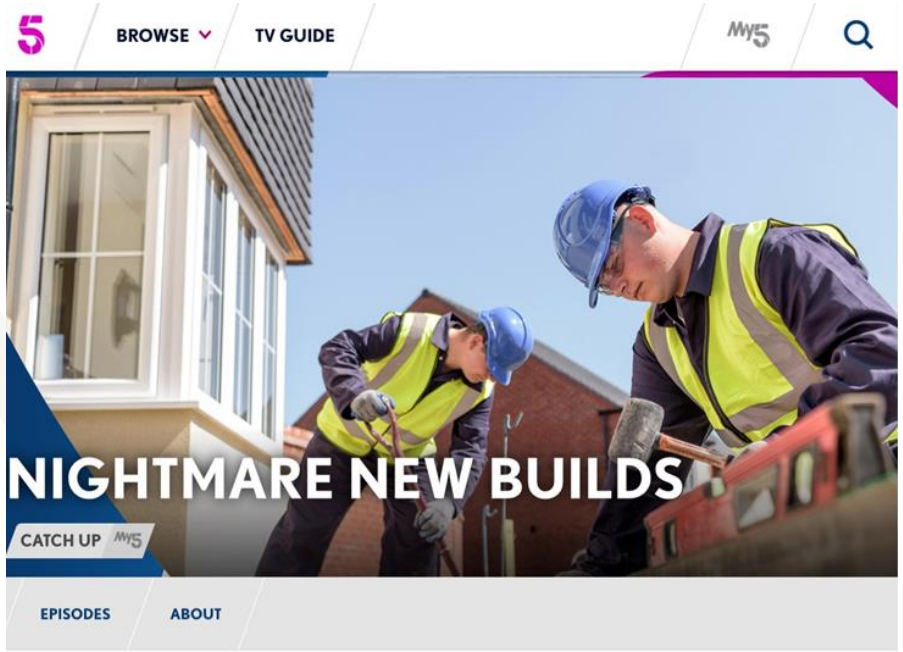
# HOMEBUILDING IS NOW IN THE EYE OF A GROWING PUBLIC SPOTLIGHT ELEVATED FROM THE REST OF CONSTRUCTION

# For the Homebuilding Sector There are Some Very Real Public Pressures That Need to be Addressed



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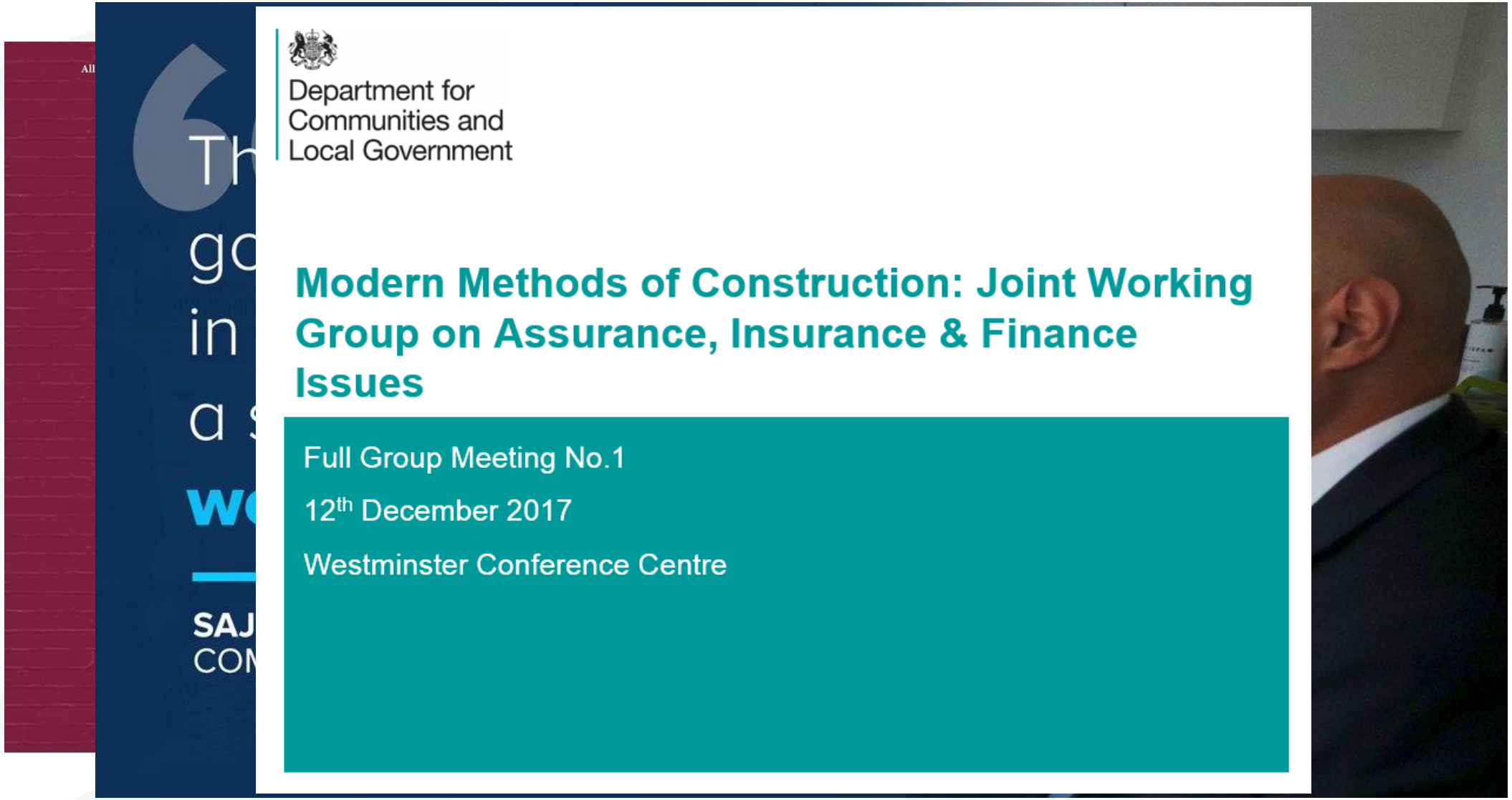

# An Understanding of the Root Causes of Delivery Failure Needs to Define the Solution

Design, Procurement and Construction Delivery Success

Move towards manufacture led & hybrid construction

- Site Labour Intensity
- No. of Transactional Interfaces

Digital Enablement From Design to Site to Asset

Move towards more integrated procurement models

- No. of Works Interfaces (Horizontal Integration)



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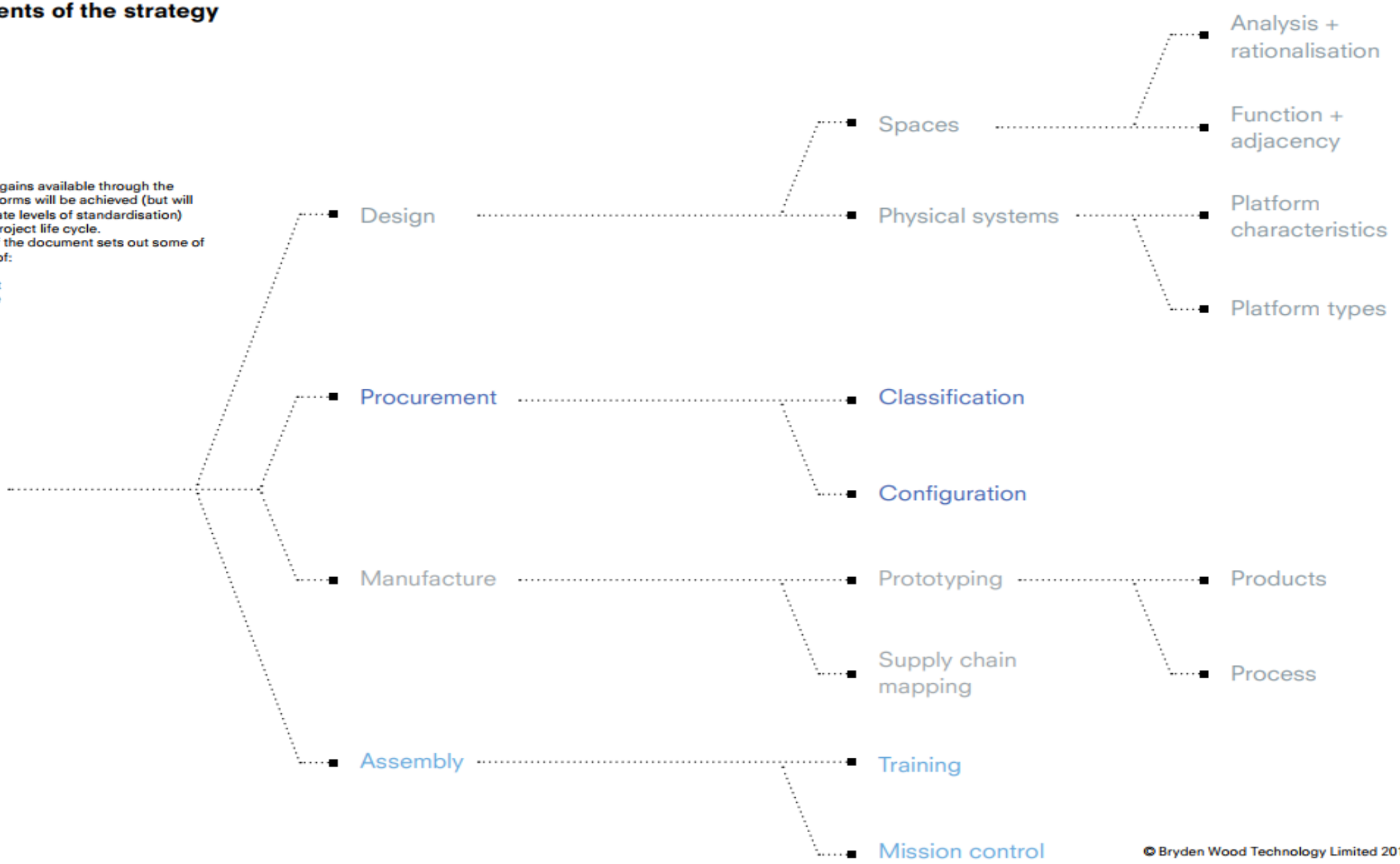
# MANUFACTURE LED & HYBRID CONSTRUCTION

## The elements of the strategy

The productivity gains available through the adoption of platforms will be achieved (but will require appropriate levels of standardisation) throughout the project life cycle.
The remainder of the document sets out some of the key aspects of:

- Design
- Procurement
- Manufacture
- Assembly

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# ‘Delivery Platform’ Thinking Can Revolutionise Public and Eventually Private Sector Construction

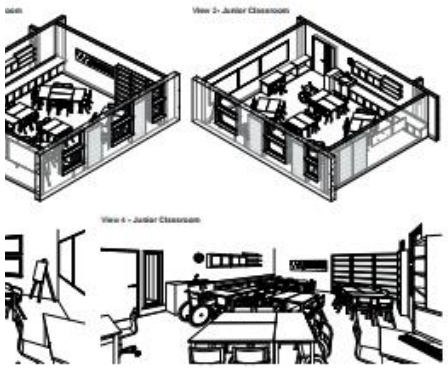
## Lowering barriers to entry

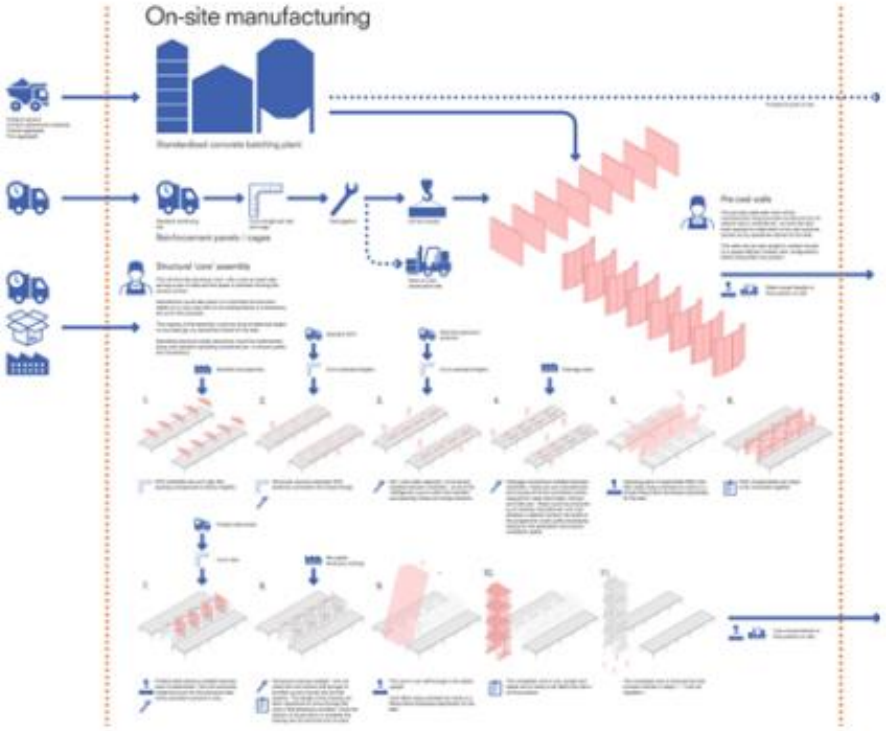
Work to date on developing the DfMA solutions for the MOJ Prison Estates Transformation Programme shows that in order to be able to deploy DfMA at scale, the component design should have a low barrier to entry to existing supply chains i.e. manufacturing the components should work with existing skills, processes and tools.

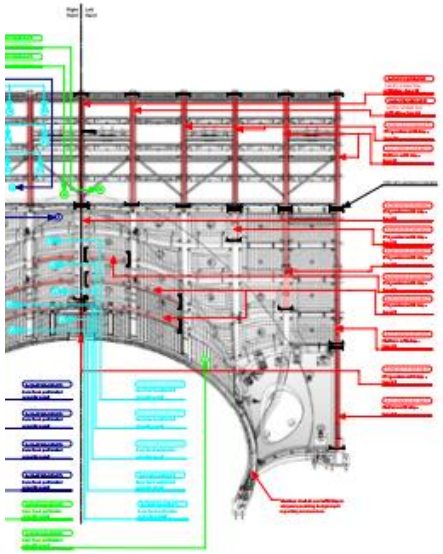
Platforms should therefore be made up from components with the following characteristics:

- Highly repeatable and can be manufactured at scale by a wide supply chain;
- Require no specialist skills or equipment that is not widely available;
- Can be manufactured, assembled and pre-tested using rigorous quality assurance to maintain consistency across the programme (in construction and into operation);
- Could be manufactured and assembled using local, semi-skilled labour (following standard training in relevant tasks) to facilitate the creation of apprenticeships and expansion of manufacturing skillset;
- Require minimum materials handling and processing (which inevitable introduces waste and non-value adding activity);
- Use materials that are widely available in the UK;
- Could be developed with MTC to optimise manufacturing processes (including adoption of some level automation if appropriate and desirable);

Excerpt from MOJ PETP value stream mapping exercise for component creation using upskilled local labour







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# Increasing PMV – Industry Sector Relativity – Current & Potential Future State

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# But.....Increasing PMV Is Not Mutually Exclusive with SME Sector or Domestic Construction Market

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# INTEGRATED PROCUREMENT

# We Need to Also Recognise that the Traditional 'Main Contractor' Model is Broken

ONE OFF TRANSACTIONAL LED CONTRACTING / CONSTRUCTION PROCESS ISN'T WORKING!



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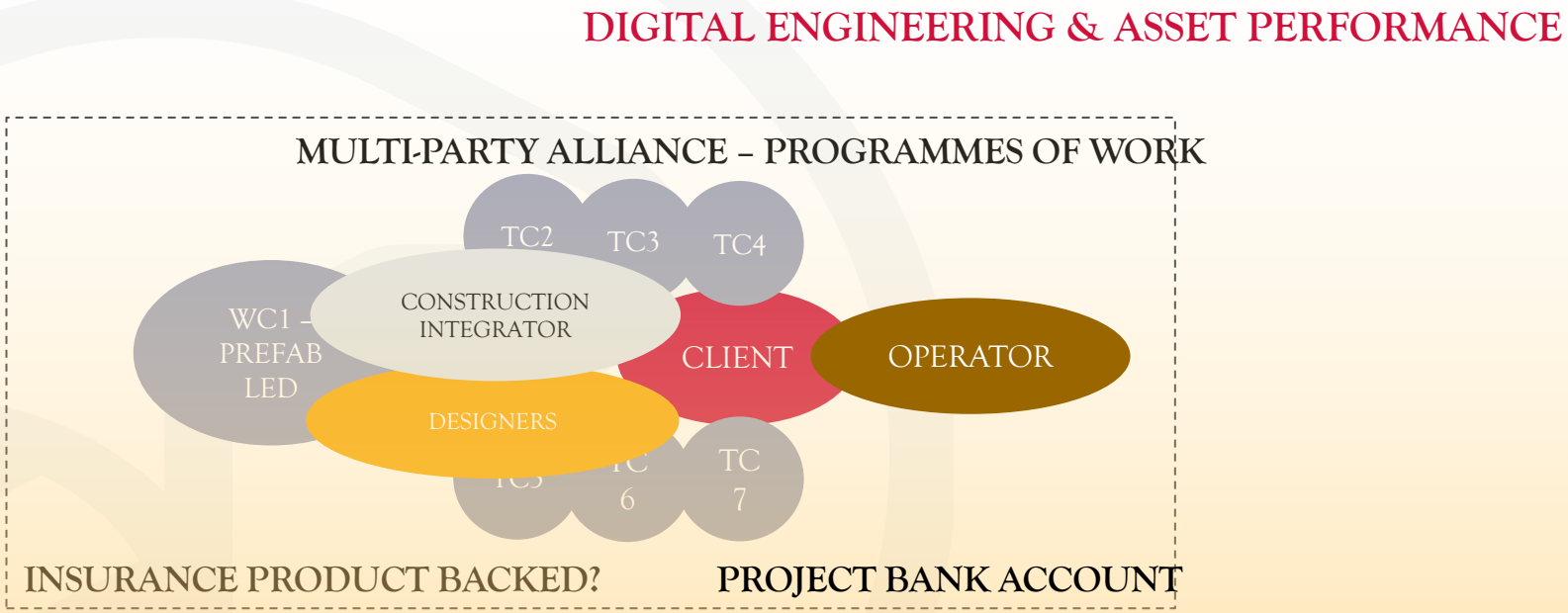
# We Need to Move to a New Organisational Model Combined with Higher Levels of Pre-Manufactured Value



# The Emerging Construction 'Sector Deal' Narrative is a Critical Milestone

## ...delivered through three key enablers

- More houses
- More rail capacity
- Improved car journeys
- Cheaper energy
- Better public services

Customer Pull

Industry Push

| | Digital | Manufacturing | Performance |
|---|---|---|---|
| 1 Procure for better value | | | |
| 2 Industry-led innovation | | | |
| 3 Skills for the future | | | |

Construction Leadership Council

Our Opportunity – The Construction Industry Sector Deal

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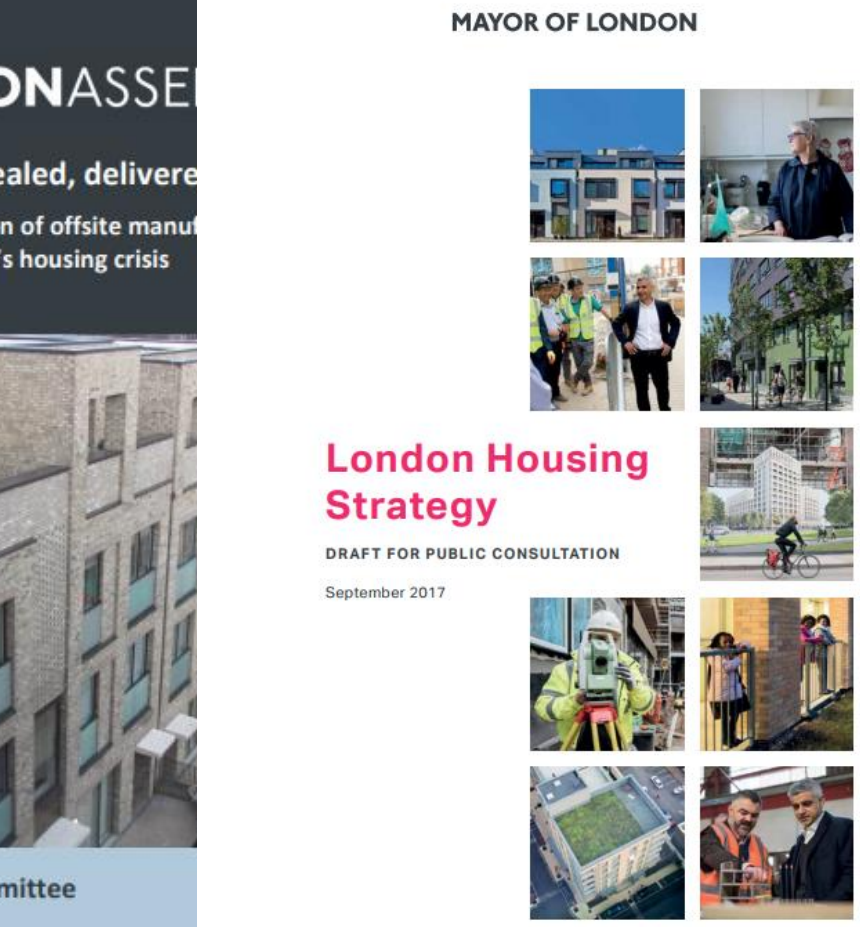
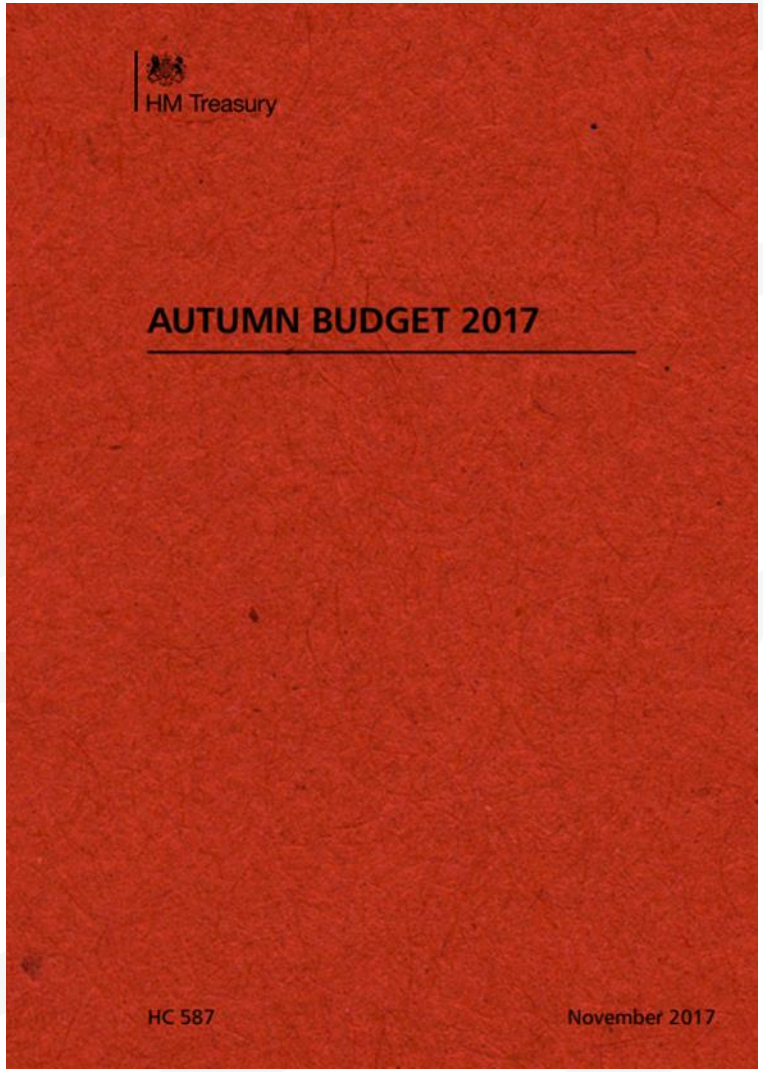
# In UK Encouraging Wider Institutional & Policy Reforms Led by Both Government & Industry Have Been Taking Place in the Last 15 Months



# The 'Sector Deal' When Combined with Wider 2017 Autumn Budget Announcements Creates a 'Game Changer' Moment for Construction




**5.25 Construction skills** – The government will support industry to help ensure that there is a workforce fit to build these homes, providing £34 million to scale up innovative training models across the country, including a programme in the West Midlands. The government is working with industry to finalise a Construction Sector Deal that will support innovation and skills in the sector, including £170 million of investment through the Industrial Strategy Challenge Fund. Construction skills will also be a focus for the National Retraining Scheme. (31)

**5.15** The reforms above will ensure that there is more land for housing, but the private sector and local authorities will need support to ensure homes get built on that land as soon as possible. The government will strengthen the ability of the Homes and Communities Agency (to be renamed Homes England) to use investment and planning powers to intervene more actively in the land market.

**4.52 Construction** – The government is taking a series of steps to improve the cost effectiveness, productivity and timeliness of infrastructure delivery. The government will use its purchasing power to drive adoption of modern methods of construction, such as offsite manufacturing. Building on progress made to date, the Department for Transport, the Department of Health, the Department for Education, the Ministry of Justice, and the Ministry of Defence will adopt a presumption in favour of offsite construction by 2019 across suitable capital programmes, where it represents best value for money.



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# The 'Sector Deal' When Combined with Wider Autumn Budget Announcements Creates a 'Game Changer' Moment for Construction

HM Government

Indust
Strate

Building a Britain fit fo

November 2017

## Construction Sector Deal

*The government and the construction sector, through the Construction Leadership Council and with the leadership of Andrew Wolstenholme, have agreed a Sector Deal to transform the productivity of the sector benefiting the wider economy.*

Construction is one of the largest sectors in the UK economy – with a turnover of £370bn[194], contributing £138bn in value added to the UK economy[195] and employing 3.1 million people (9 per cent of the total UK workforce)[196]. The deal will substantially boost the sector's productivity, through greater investment in innovation and skills, creating new and well-paid jobs and maximising its export potential. This will also reduce the environmental impact, improve the efficiency and reduce whole life cost of new projects and buildings to help build the houses, schools, hospitals and major transport projects we need.

### What is in the deal?

The deal, the first of a series we intend to negotiate with the construction sector, contains commitments to work collaboratively in three key areas:

### Procuring for Value

In the months ahead the sector and the government will work to ensure construction projects across the public and private sectors are procured and built based on their whole life value, rather than just initial capital cost. The sector will aim to develop a procurement standard and work with the Infrastructure and



Projects Authority to develop cost and performance benchmarks for assets and contractors and monitor outcomes including increased housing capacity, productivity and pre-manufactured value among other initiatives.

### Industry-led Innovation

A joint commitment to invest in a transformative programme which brings together the construction, digital technology, manufacturing, materials and energy sectors to develop and commercialise digital and offsite manufacturing technologies. This will accelerate change in the infrastructure and construction sector, ensuring new technologies that can help deliver the government's planned investments in infrastructure and our 2015 commitment to deliver a million homes by the end of 2020 and half a million more by the end of 2022 are commercialised as quickly as possible.

### Skills for the Future

The construction sector, with support from the government, will work closely in the coming months to drive increased investment in skills development, whilst adopting a more strategic and co-ordinated approach to recruitment, and equipping workers with the skills that they will need for the future. This will be achieved through a joint commitment to implement reforms to the Construction Industry Training Board to make it more strategic and industry led, and to enable the sector to make best use of funding from the Apprenticeship Levy.

To improve the productivity of construction, the *Transforming Infrastructure Performance* programme will use the power of government spending to help drive the adoption of modern methods of construction. This will build on the commitment made by five government departments to adopt a presumption in favour of offsite construction by 2019 across suitable capital programmes where this represents best value for money. This will bring together government and industry to facilitate implementation of the Construction Sector Deal, including £170m of investment through the Industrial Strategy programme, *Transforming Construction*, which will support innovation and skills in the sector.



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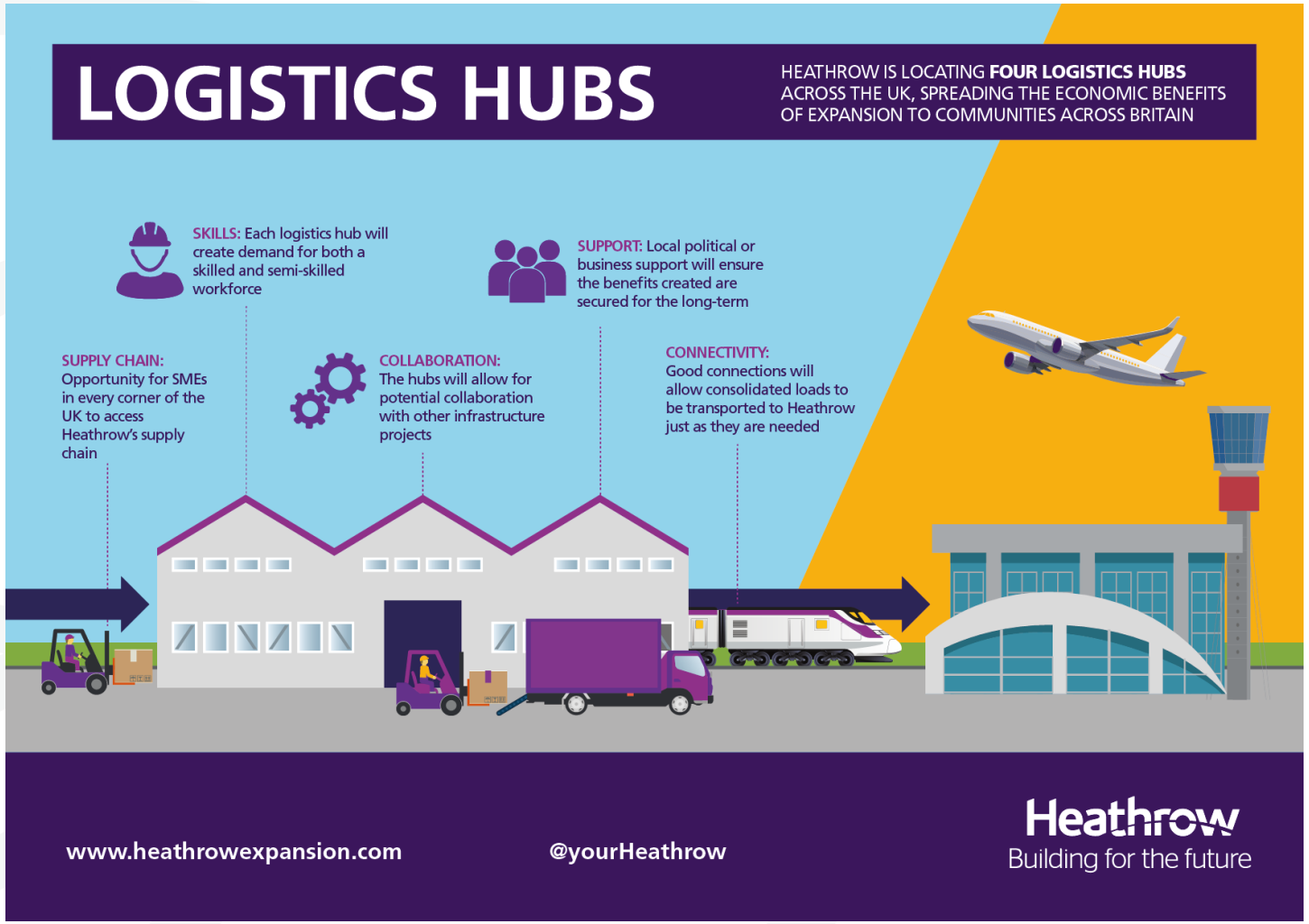
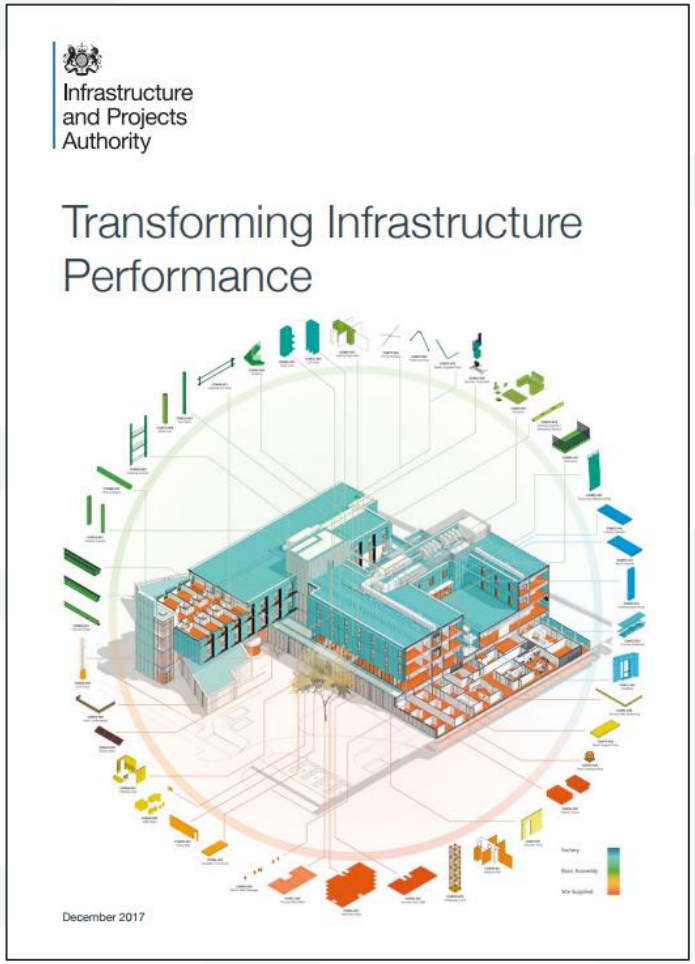
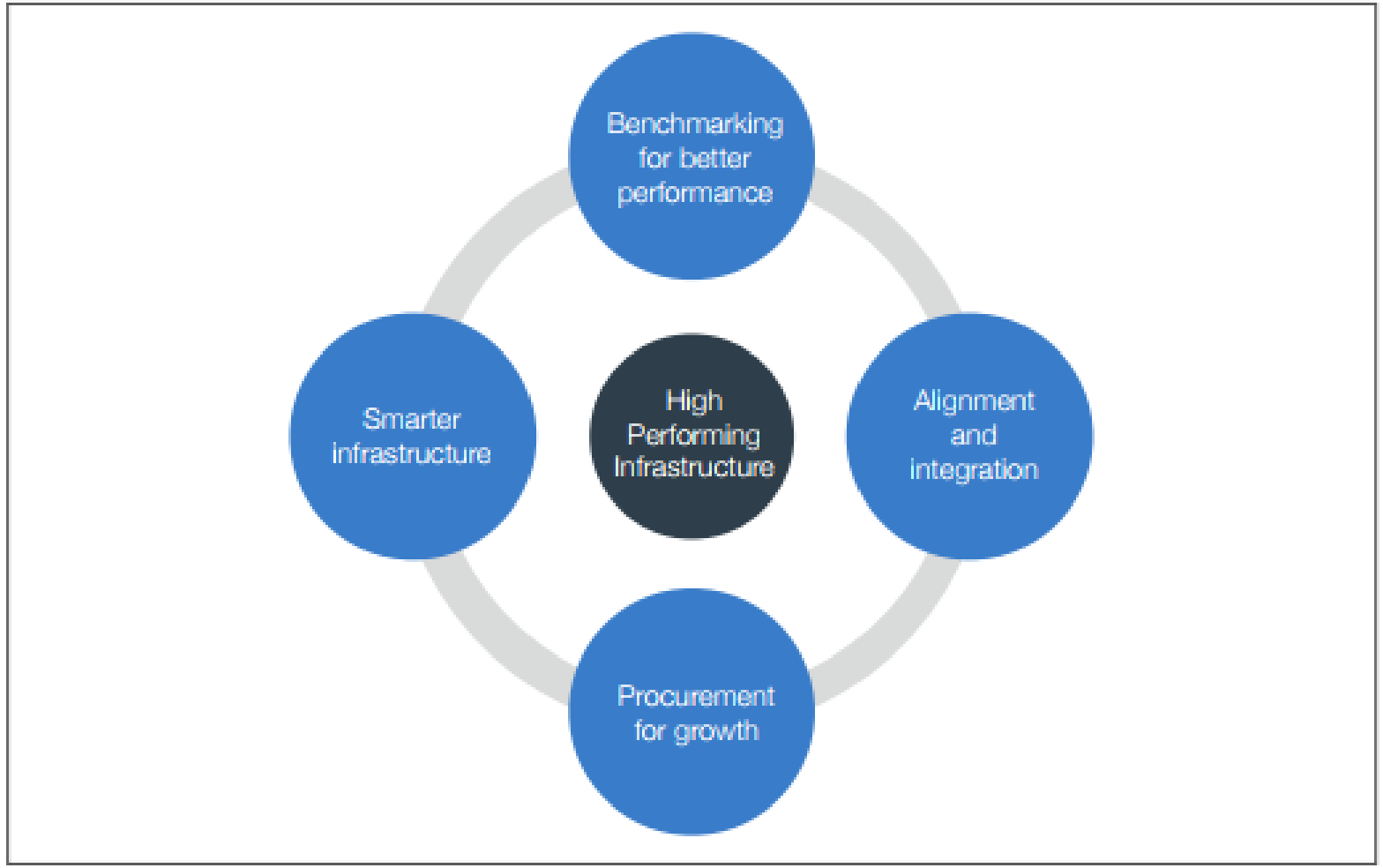
# Major Regulated Industry Clients Will Also Increasingly Embrace Different Models

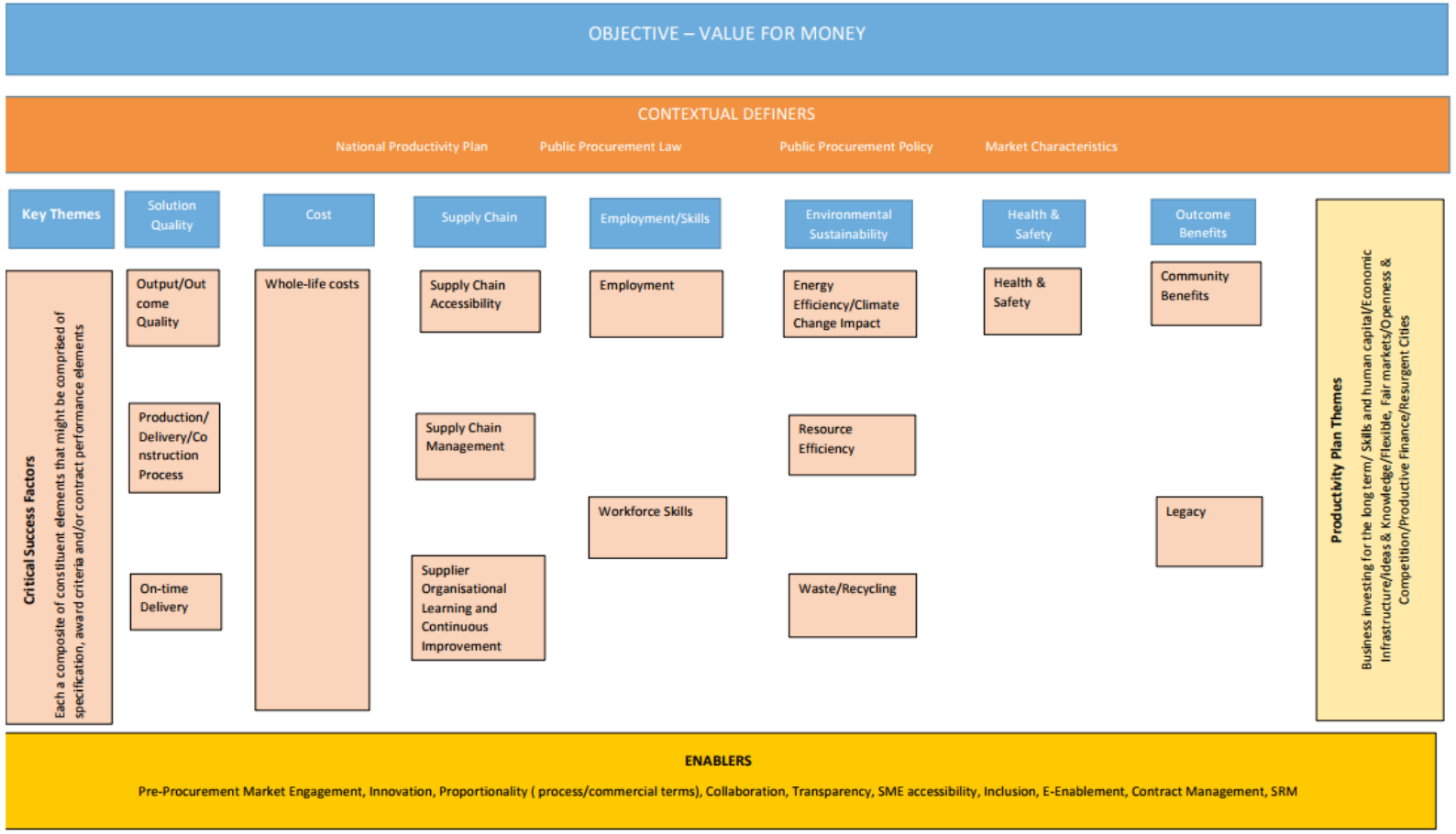


# ‘Transforming Infrastructure Performance’ Sets Out A Bold Strategy To Embrace Digital, Manufacturing & Performance With Reformed Procurement At The Heart



# ‘Transforming Infrastructure Performance’ Sets Out A Bold Strategy To Embrace Digital, Manufacturing & Performance With ‘Smart Construction’ Reformed Procurement At It’s Heart




Procurement for Growth

Balanced Scorecard Template



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# Certain Government Departments & Agencies are Geared Up to Immediately Move To New Models

Department for Education

Ministry of Justice

Ministry of Housing, Communities & Local Government

Education & Skills Funding Agency

Homes England

# In The Meantime, Industry Itself is Moving Towards Change, Slowly but Surely…

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# Wales Should Seize The Opportunity of a Coordinated Industrial Strategy for Construction

Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

COLEG CAMBRIA

citb
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CWKC

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CONSTRUCTING EXCELLENCE IN WALES

# New Hybrid Integration Skills – New Career Families

FUTURE SKILLS & TRAINING ENABLEMENT NEEDS TO:

- BE STRATEGIC, SPANNING TRADE, TECHNICAL & PROFESSIONAL LEVELS
- INTEGRATING HE & FE SECTORS BETTER WITH INDUSTRY
- DEMAND LED, DRIVEN BY HIGH EFFICIENCY AGGREGATION, DEMAND PLANNING & BROKERAGE

# Closing.....

*Modernise or Die* is a challenge which has echoed around the construction sector & hopefully raised awareness of unprecedented looming problems

New drivers for change are starting to impact that we have not seen before – skills crisis & discontent combining with an unprecedented technology opportunity

Emerging central & regional government policy has the potential to strategically initiate the industry on its modernisation journey

But.....we are still not yet at an irreversible tipping point and words need to turn into action



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