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

17th January 2018

Ramada Plaza, Wrexham
Welcome

Chris Davies, Chair

North Wales Best Practice Club
The Farmer Review of the Construction Industry: ‘Modernise or Die’

Are We On The Right Track?

Mark Farmer
Constructing Excellence Wales
Wrexham, 17\textsuperscript{th} January 2018
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
The Modernise or Die Challenge Addressed to Clients, Industry & Government
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
Need to for clear leadership & institutional reforms that better integrate clients, industry & government

A productivity led change agenda letting innovation dict ate 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 premanufactured value on projects combined with a more integrated delivery model
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...

WHO NEXT?
But Discontent with Construction Performance is Now Coming from Elsewhere......
Post Grenfell Analysis Is Already Pointing To **Systemic** Failure In Whole Design, Procurement & Construction Process

- Poor Handover & Operational Readiness Protocols
- D&B Procurement Versus ‘Architect Led’
- Level of On Site Supervision
- Main Contractors holding Responsibility but no longer in control
- Lowest Price Procurement
- Falsification of Records / Covering up Mistakes
- ‘Value Engineering’ Equals Functionality Reduction
- Deskilling in professions & trades
- ‘Engineered’ Versus Prescriptive Building Regulations
- Conflicts of interest in product testing & warranty market
- Performance Based Specification
- Premature Completion Certification
- Deskilling in professions & trades
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Conflicts of interest in product testing & warranty market
Building a Safer Future

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

December 2017

Cm 9551
BETTER SKILLS & COMPETENCY

BETTER COMPLIANCE & ENFORCEMENT

ENABLED THROUGH TECHNOLOGY & PROCUREMENT
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

Digital Enablement From Design to Site to Asset

- Move towards manufacture led & hybrid construction
- Site Labour Intensity
- No. of Transactional Interfaces (Vertical Integration)
- No. of Works Interfaces (Horizontal Integration)
- Procurement models
MANUFACTURE LED & HYBRID CONSTRUCTION
The elements of the strategy

**Platforms strategy**
- Design
- Procurement
- Classification
- Manufacturing
- Prototyping
- Assembly
- Training

**Spaces**
- Analysis + rationalisation
- Function + adjacency
- Platform characteristics
- Platform types

The productivity gains available through the adoption of platforms will be achieved (but will require appropriate levels of standardisation) throughout the project lifecycle. The remainder of the document sets out some of the key aspects of:
- Design
- Procurement
- Manufacture
- Assembly
Lowering barriers to entry

Work to date on developing the DIMA solutions for the MOJ Prison Estates Transformation Programme shows that in order to be able to deploy DIMA 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 inevitably 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).
Increasing PMV – Industry Sector Relativity – Current & Potential Future State
But.....Increasing PMV Is Not Mutually Exclusive with SME Sector or Domestic Construction Market
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!
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

1. Procure for better value
2. Industry-led innovation
3. Skills for the future

Our Opportunity – The Construction Industry Sector Deal
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.
The ‘Sector Deal’ When Combined with Wider Autumn Budget Announcements Creates a ‘Game Changer’ Moment for Construction

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 £370bn³⁴, contributing £33bn in value added to the UK economy³⁵ and employing 3.1 million people (9 per cent of the total UK workforce)³⁶. 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

Industrial Strategy White Paper

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 onsite manufacturing technologies. This will accelerate change in the infrastructure and construction sector, ensuring new technologies 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 Apprenticeships 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.
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
Certain Government Departments & Agencies are Geared Up to Immediately Move To New Models

- Department for Education
- Ministry of Justice
- Education & Skills Funding Agency
- Ministry of Housing, Communities & Local Government
- Homes England
In The Meantime, Industry Itself is Moving Towards Change, Slowly but Surely...
Wales Should Seize The Opportunity of a Coordinated Industrial Strategy for Construction
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
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