



is the construction industry  
responding effectively to the  
property and estates agenda?

# themes :

- successful delivery through early contractor involvement and collaboration
- digitisation and the transformation of design and construction
- gaining better value from a sustainable and resilient industry

# historically :

- Procurement - procedures designed to ensure accountability so contracts usually awarded on the basis of lowest bid
- Design separated from construction in this 'traditional' format
- Contract documentation assumed conflict and liability but time and cost overruns lead to costly and lengthy settlement of disputes

# a demand for change :

- A series of reports since 1960 described a dysfunctional industry (Emerson, Banwell, Latham)
- Two decades ago Egan's Construction Task Force reported on the scope for improving quality and efficiency in UK construction
- "There is no doubt that substantial improvements .... are possible"



THE REPORT OF THE CONSTRUCTION TASK FORCE

# Egan key objective :

“ to achieve radical improvements in the design, quality, customer satisfaction and sustainability of UK construction ”



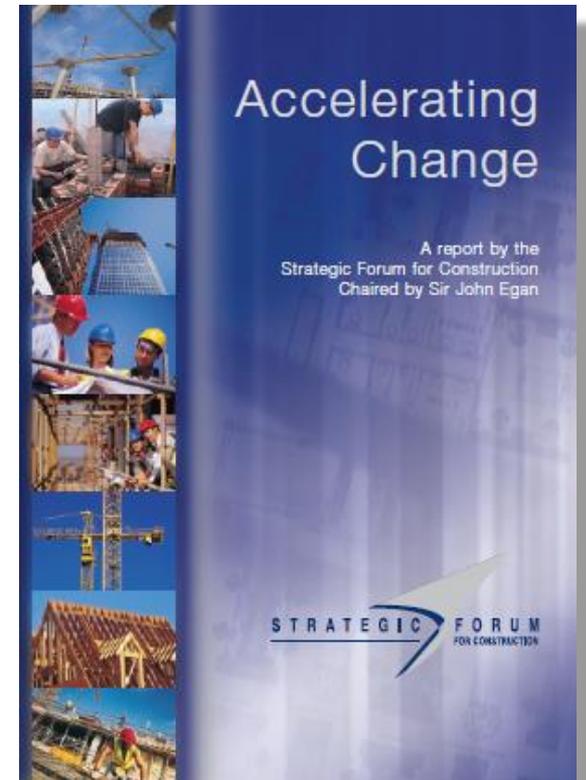
# advice to clients :

- traditional processes do not give best value
- form an integrated team at the outset
- use target and whole life costs
- select by best value not lowest cost
- seek continuous improvement
- work in collaboration



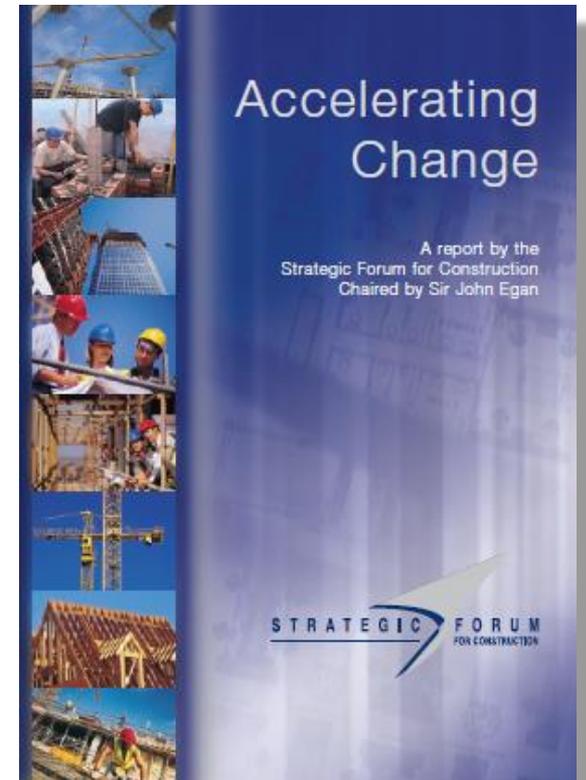
# making it happen :

The establishment of a Strategic Forum, its report building on and reaffirming the principles set out in 'Rethinking Construction'



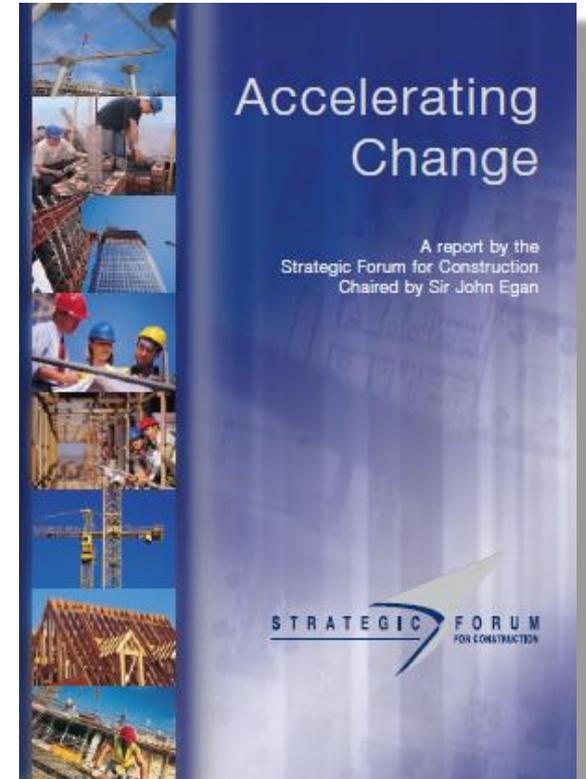
# integration the key :

“ Integrated team working is key. Integrated teams deliver process efficiency and by working together over time can help drive out the old style adversarial culture and provide safer projects using a qualified , trained workforce. ”



# integration the key :

“ By continuously improving the performance through the use of integrated teams, the industry will become more successful. This will in turn enable it to attract and retain the quality people it needs, which will enable it profitably to deliver products and services for its clients. ”



# Constructing Excellence :

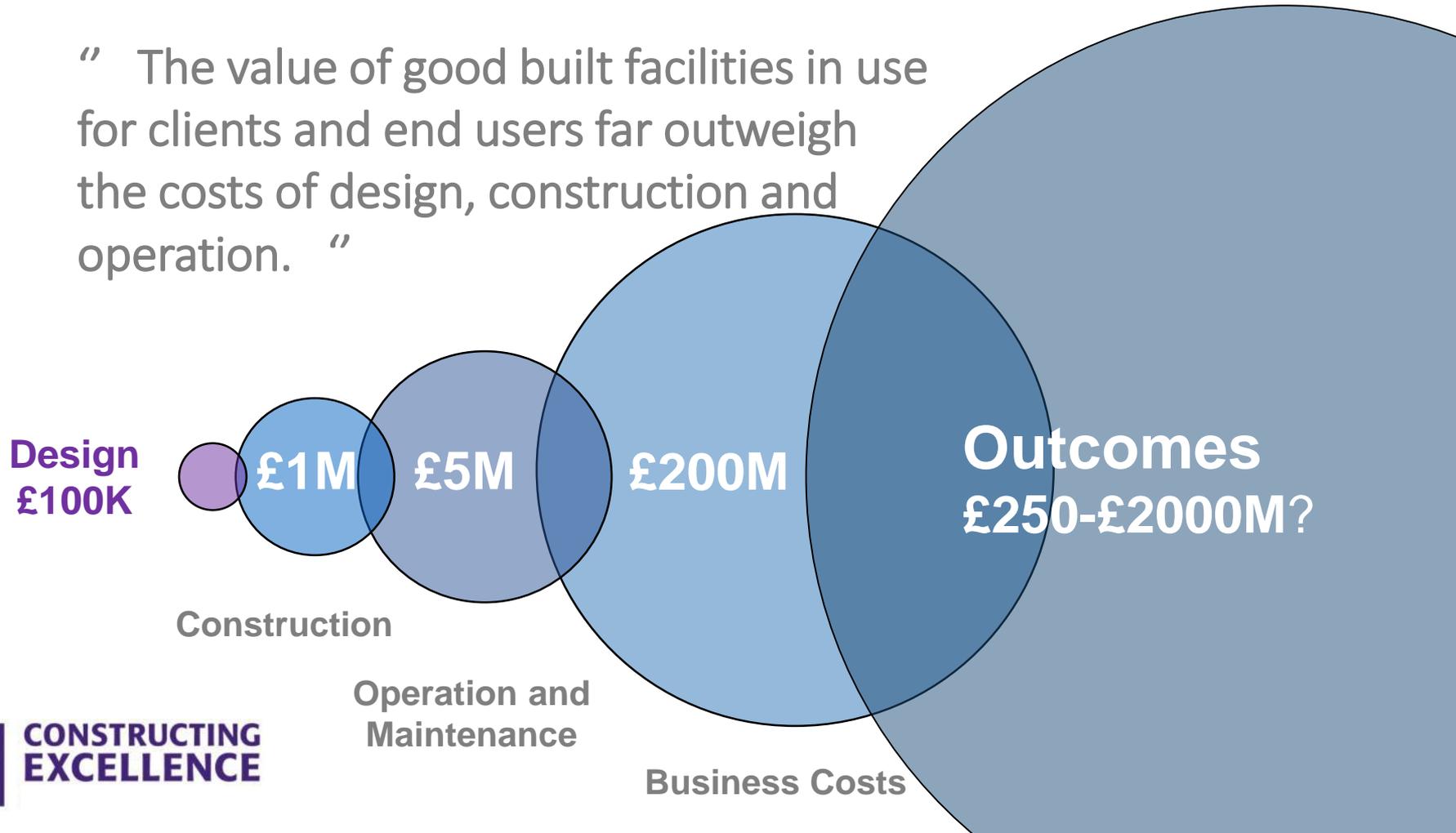
- merged the Strategic Forum and Best Practice programme
- a platform to stimulate, debate and drive much needed change in the construction sector by knowledge sharing and transfer
- members are representative of the whole supply chain and share a vision for change through innovation and collaboration
- national, regional and local - [www.cemanchester.org.uk](http://www.cemanchester.org.uk)



2003

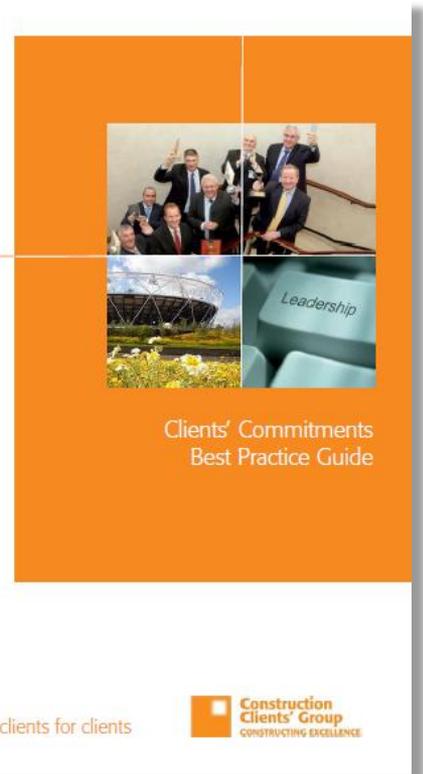
# understanding value :

“ The value of good built facilities in use for clients and end users far outweigh the costs of design, construction and operation. ”



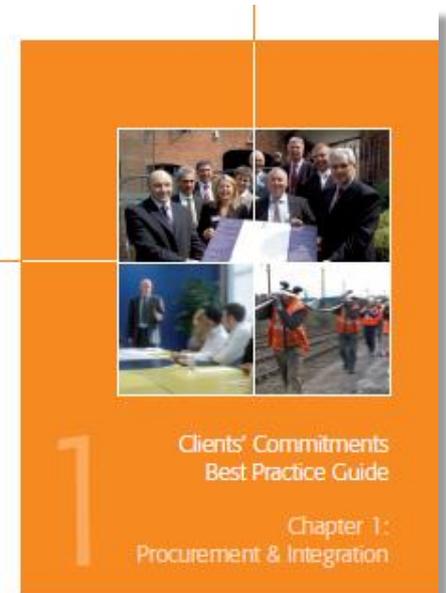
# guidance for clients :

- the Construction Client Group is at the heart of Constructing Excellence
- guidance prepared by clients for clients
- focusses on the six areas where clients can make a positive difference to enable better value



# procurement and integration :

- engage your supply chain early in the decision making process
- select your partners on best value rather than lowest cost
- use collaborative working principles on fair payment and risk

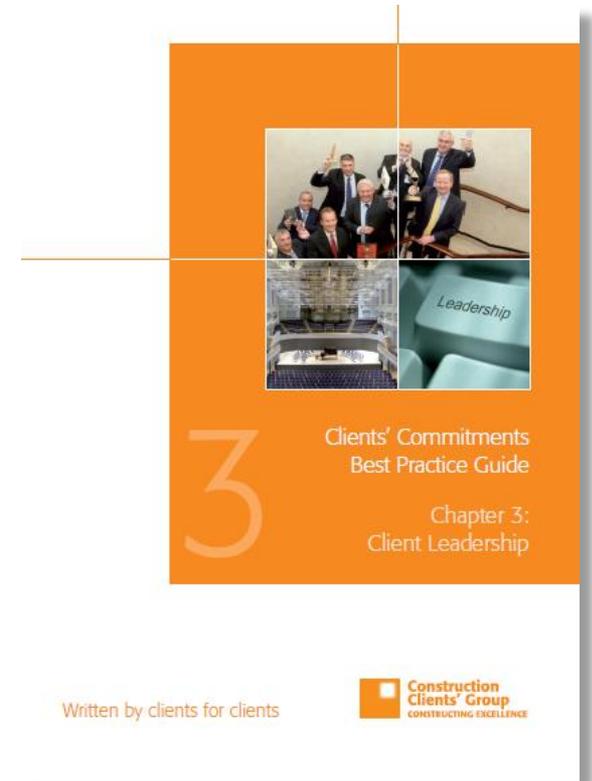


Written by clients for clients



# client leadership :

- communicate your business case clearly to your supply chain
- always procure on long term and overall best value rather than short term capital cost
- champion best practice and collaborative working
- challenge your supply chain partners to innovate and improve performance



# early involvement

- early involvement of supply chain partners releases knowledge and expertise
- construction input offers improvement in buildability, efficiency and elimination of waste
- specialist knowledge and product development vested in sub-contractors
- opportunities for innovation, increased pre-manufacture
- continuous product improvement by product manufacturers

# emerging frameworks :

- long term relationships and appointment of supply chain on quality and not only on cost
- quality assessment includes: capacity and experience, design quality, ability to work as a team, commitment to key principles
- costing on basic framework, open book, pain/gain share against target costs
- mutual benefits by continuous improvement

# frameworks in action :

- the North West Construction Hub, Yorbuild and the NHS Procure 22 typify such frameworks
- replaces lowest price tendering with long-term, collaborative relationships
- results is less waste, less duplication, local engagement and greater efficiencies
- monitoring of performance and continuous improvement



ProCure22

# government strategy :

## Lower costs

33%

reduction in the initial cost of construction and the whole life cost of built assets

## Lower emissions

50%

reduction in greenhouse gas emissions in the built environment

## Faster delivery

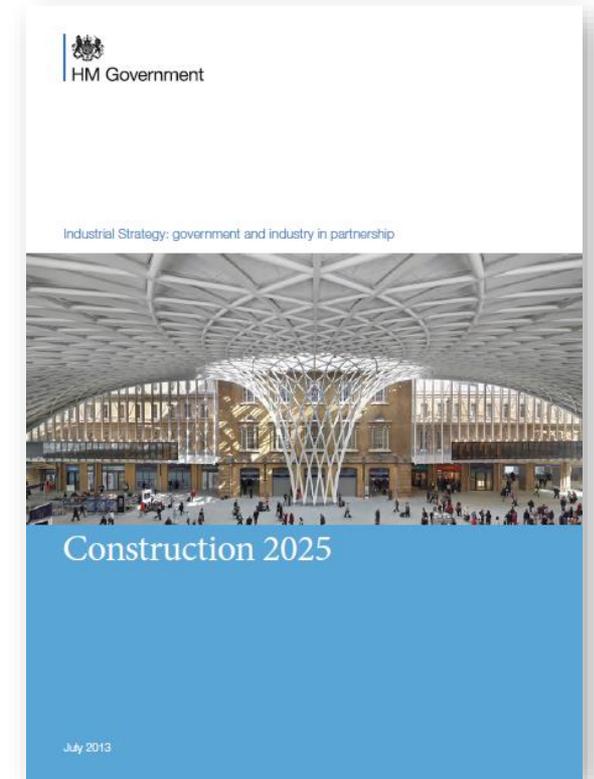
50%

reduction in the overall time from inception to completion for newbuild and refurbished assets

## Improvement in exports

50%

reduction in the trade gap between total exports and total imports for construction products and materials



A joint report of a Government and Industry working group

2013

# commitments :

- competitive advantage in smart design and digital technology – BIM to be mandated
- drive out carbon from the built environment
- drive procurement efficiency and explore options for gains in the process
- encourage innovation and remove barriers to innovation
- *“ in short, radically transform the industry ”*

# BIM – the key to collaboration

mandated from 2016, Digital Engineering and Design has given a series of benefits:

- fully integrated design, better quality of information for construction, reduced errors, facilitates DfMA
- improved co-ordination with direct input to the model from other designers, specialist subcontractors
- building data enables ongoing effective facilities management



Manchester Central Library Transformation,

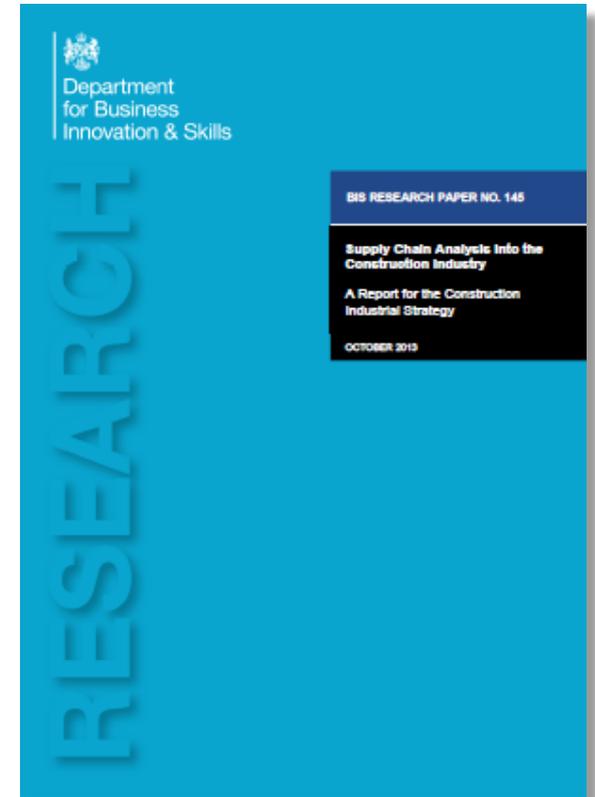


Constructing Excellence Award 2014 – RIBA Award 2016

# the supply chain

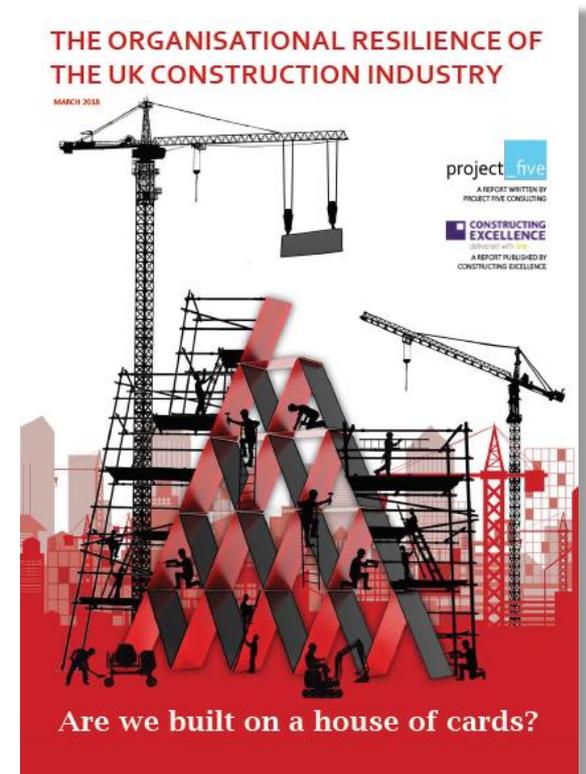
the industry represents 7% of the economy but

- ‘ current low levels of investment affect the future productive capacity ‘
- ‘ the industry has a problem around productivity ‘
- ‘ is affected by long term issues of underachievement, low profitability, investment and training ‘

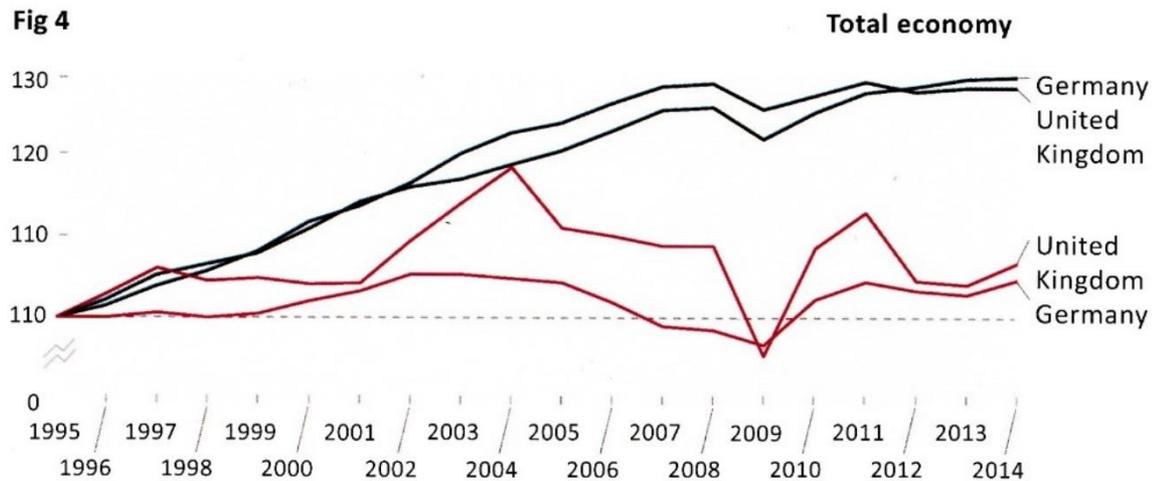


# resilience :

- ‘ a resilient construction sector is good for the UK but needs to be more productive, more profitable and able to deliver value and efficiencies to its clients ‘
- it will have improved economic performance, invest in research, development and raising skill levels
- is it fully fit for the range of disruptive factors we are experiencing?



# productivity :

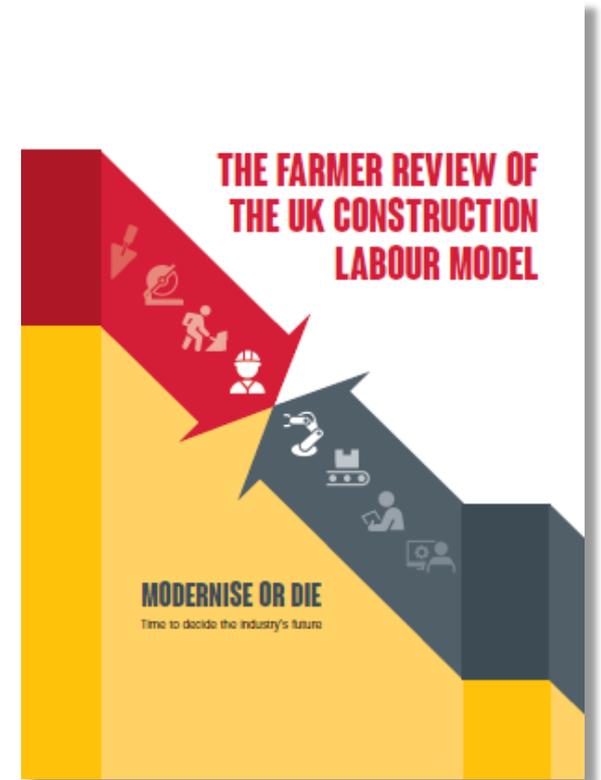


McKinsey&Company Source: Organization for Economic Co-operation and Development

- a key factor in under-achieving in sector resilience

# modernise or die :

- Farmer identifies ‘ critical symptoms of failure and poor performance ‘
- the first issue is again productivity which leads to low profitability
- it locks us into a low wage, low skill economy relative to other industries
- We must ‘ invest in new technology and manufacturing capability to boost capacity and productivity reducing our reliance on labour ‘



# modernise or die :

- Farmer cites the need for:
- early contactor involvement in design
- greater collaboration
- simplified/standard procurement
- whole life value not just construction cost



# smart construction :

the review includes construction as a key industry where significant gains in efficiency and productivity can be made

it seeks to ' transform the UK industry by ensuring digitalisation at scale to realise productivity increase and the creation of highly skilled jobs '



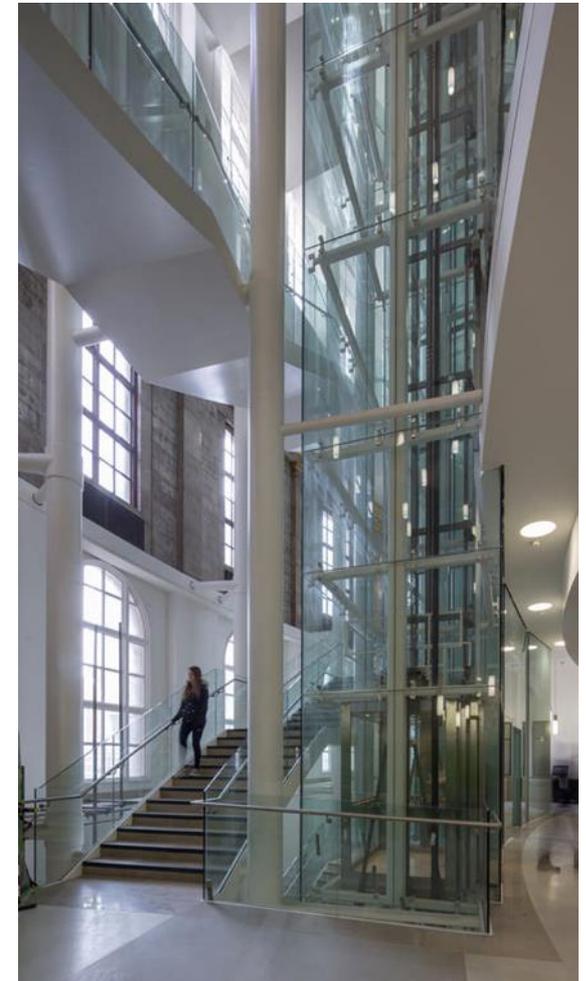
# a new future :

- together these reports point to a more collaborative, integrated design and construction process involving key members of the supply chain interchanging digital data with a shift to the greater pre-manufacture of components and site integration
- this will result in increasing element of activity in a healthier and more attractive working environment, the potential for automation and robotic assembly and a higher quality product

# next steps :

two decades on from 'Rethinking Construction' we still have work to do

- we need to prepare for this collaborative environment with greater use of digital technology in design and construction
- seek greater process industrialisation
- anticipate a smaller, more skilled and diverse workforce



# clients role :

we cannot wait another two decades!

clients have a key role to play in delivering a collaborative, innovative, highly skilled, more productive, profitable and resilient industry ....

- demand more!
- thankyou

