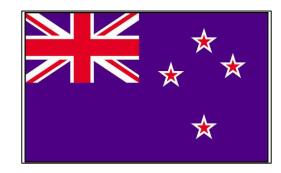


Constructing Excellence in the UK – latest experiences and trends





Don Ward Chief Executive www.constructingexcellence.org.uk

@UK_CCG





Constructing Excellence

The single organisation driving change in construction

The platform for industry improvement to deliver better value for clients, industry and users through collaborative working

"Better Together"

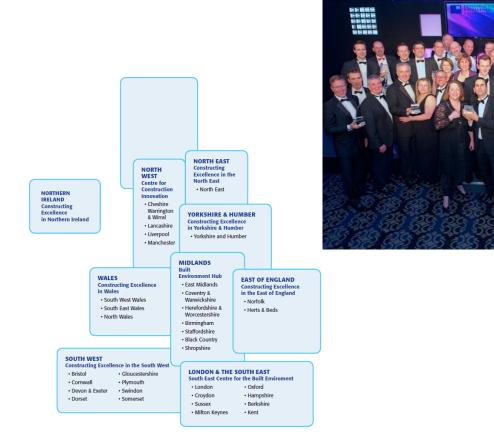




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@constructingexc @UK_CCG



The CE movement

80 national members, 9 regional Centres 35 local best practice Clubs, 670 G4C members, 8 partners in the CE International Alliance







0

National corporate membership The home for intelligent informed clients who are at the heart of CE





National members

Clients **BAE Systems** BBC **Birmingham City Council** Crossrail East Riding of Yorks Council EDF Energy (NNB) **Environment Agency Heathrow Airport Highways Agency Igloo Regeneration Imperial College** Lambeth Living London Underground Magnox Nationwide Building Society Northumbrian Water NuGen ProCure 21 Quintain **Rochdale Boroughwide**

Royal Mail Group Sandwell MBC SCAPE Scottish Water Westfield Group Worthing Homes Yorkshire Water

Contractors

Balfour Beatty Bowmer & Kirkland Cara Dawnus Higgins Interserve ITC Concepts Keltbray Kier Mace McGee Morrison Galliford Try Skanska Willmott Dixon

Consultants

Advance Aecom/Davis Langdon Capita Symonds CH2M Hill **Coaction Management** CWC DBD FaulknerBrowns Invennt LCMB **Room4** Consulting Synaps **Thurlow Associates** Trowers & Hamlin Turner & Townsend Waterman Wragge



Manufacturers & Suppliers 4Projects Astins Coubari Graphisoft Knauf Drywall Management Process Systems Polypipe Terrain Structural Timber Association

Tekla Waterloo Air Products

Associates

BRE British Property Federation Chartered Institute of Building Glenigan Institute of Collaborative Working UK Green Building Council University of Reading





9 members of the CE International Alliance





@constructingexc @UK_CCG

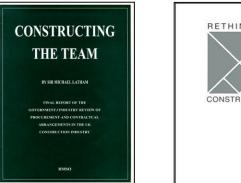
Other Alliance members

Australia Denmark Hong Kong Netherlands Norway New Zealand Qatar Singapore UK

UK construction improvement can be charted by a number of key reports



Latham.....Egan......Olympics....'Crisis'......'2025'...









1994.....1998.......2006......2010.....2013...



London 2012 was a great showcase for us

http://learninglegacy.independent.gov.uk/





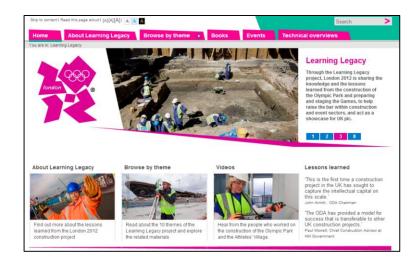


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| COMMITMENT TO PEOPLE While people leads to a name productive and segged workforce, fockbase recultance and reservice of and and engages load covenuesties peaking in construction present. | SUSTAINABILITY Socializability fais of the heart of the delivery of the General Autoincide approach will bring full and lating environmental, and and excession bandlo drough opportunity and approach will be approximated | andiscibuting, andebruitss, christi recorder and coupting noders lighting principle 9 The image will be small using 2nd porty dange measure and other tools for assessing design run 9 These disclosures to tools and communication schoologies will be anginesic |
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The Client Commitments



Client leadership Procurement & integration Commitment to people Sustainability Design quality Health and safety

The Action Plan

Step 1: Sign up to the Clients' Commitments

Step 2: Get your Supply Chain partners to sign up to the Construction Commitments

Step 3: Implement principles outlined in the 6 Clients' Commitments Guides on and undertake your project

Step 4: Measure performance on your project

Step 5: Check behaviours on your project using the Clients' Commitments Tracker diagnostic

tep 6: Analyse performance and identify/ implement improvement actions



Clients' Commitments Best Practice Guide

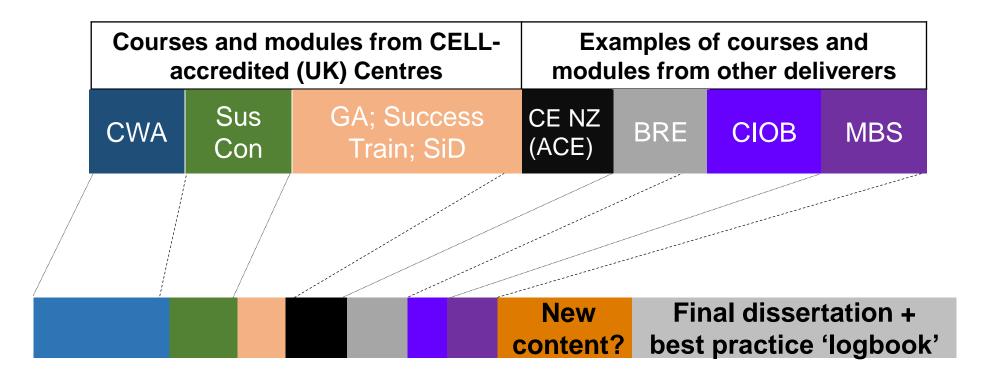
> Construction Clients' Grou

Written by clients for clients



'Mix-and-match' modular qualifications eg "Level 5 Diploma in Client Leadership"





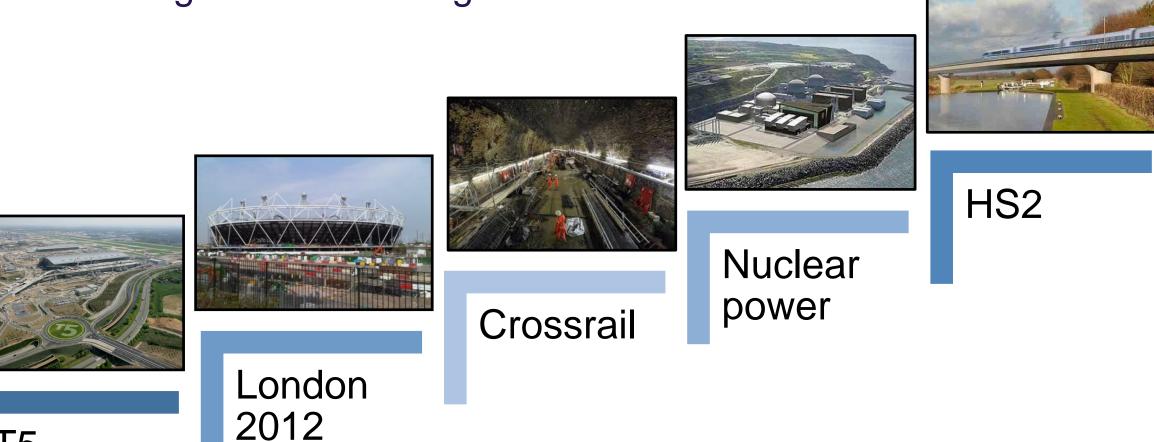




Influencing the mega projects of today to improve the industry of tomorrow

- and setting the bar ever higher for the next one



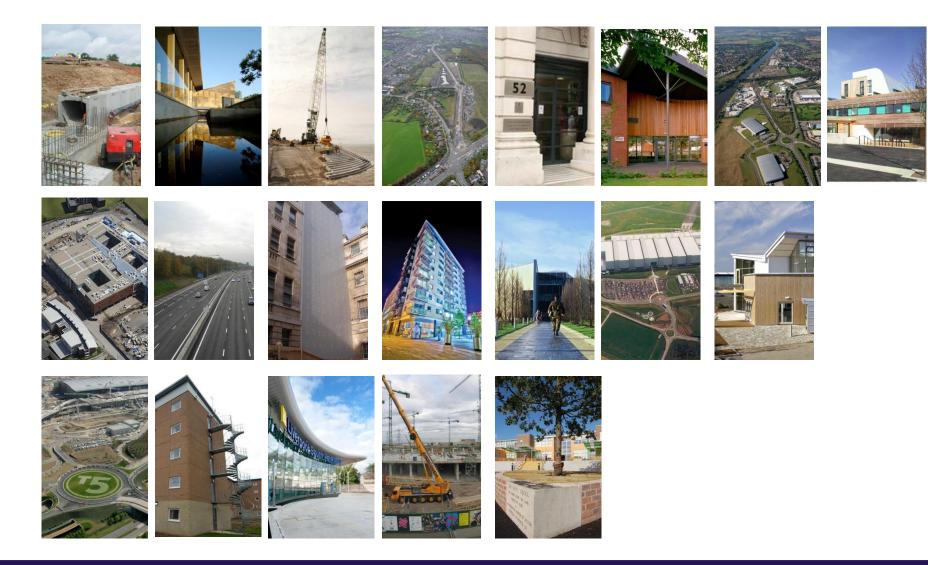


T5 Heathrow



Over 500 Demonstrations Projects covering all sectors, regions and sizes







"Completed 61 weeks ahead of schedule"

CONSTRUCTING EXCELLENCE International

"Saved over £1.4 million on whole life cost forecast "

"Vehicle movements cut dramatically - reducing carbon emissions by 85%"

"Level of recycled elements within the finished product, measured at 89%"

"Project completed £112k under budget"

"No reportable accidents"

"Reduced traffic management by around 6 months leading to huge cost/time savings"

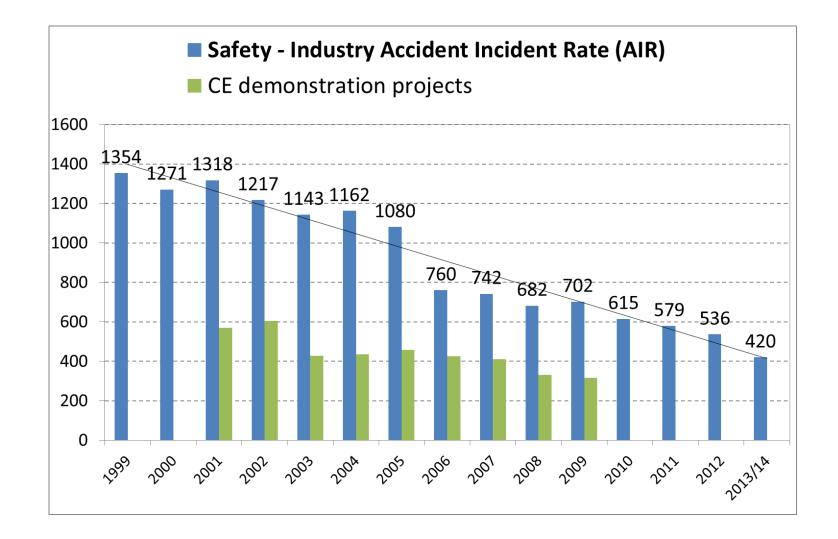
"The project has saved 44% on actual costs compared to the target budget which equates to £500,000"

"The Bypass opened 16 weeks ahead of schedule and within budget"

"50k tonnes of waste diverted from landfill"

Safety has improved significantly





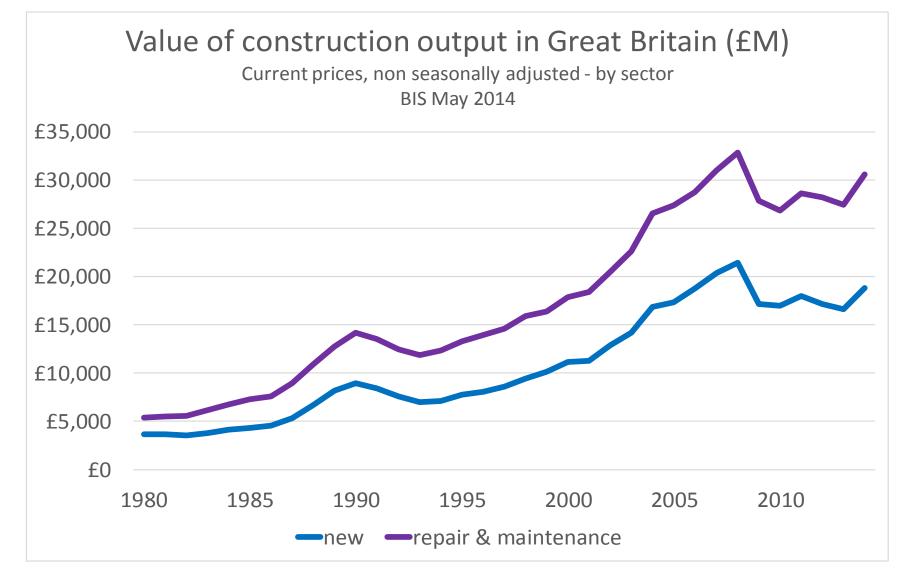
69% improvement, *c.*5% year on year

Although only 48% of employee reportables are reported (HSE)



Construction output in Great Britain

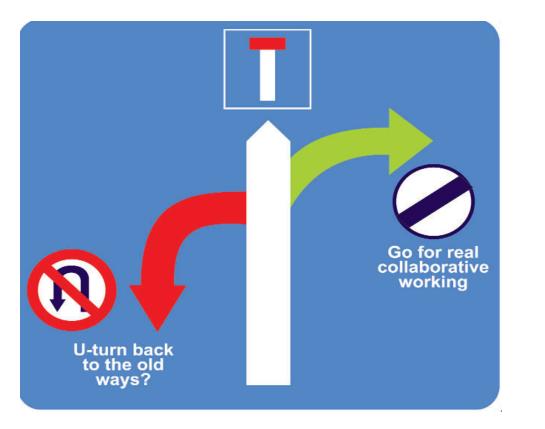






'Economic climate change' means companies faced a stark choice





Collaborative Working Champions 'Survival Guide', 2009

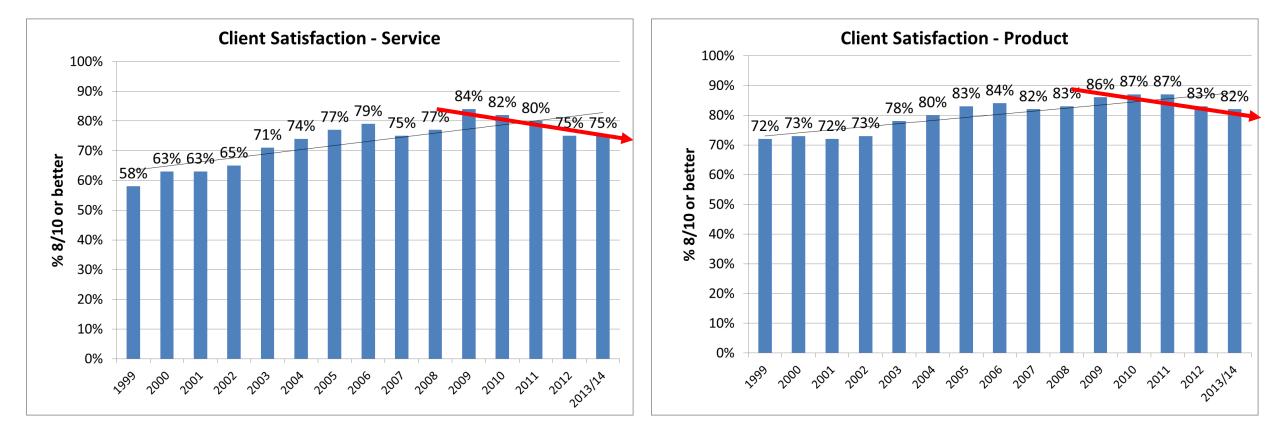


Never waste a good crisis, 2009



Client satisfaction suffered in the recession

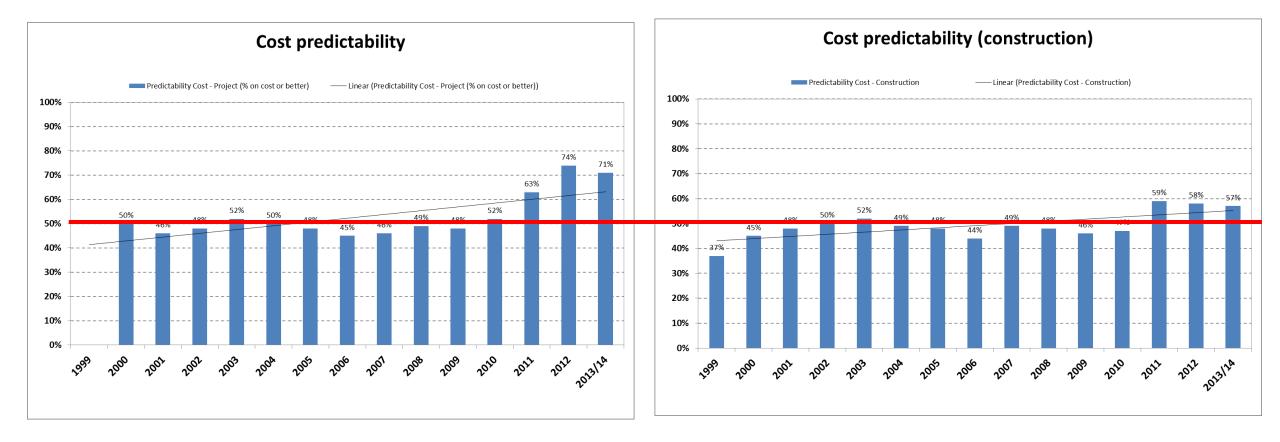






Predictability remains a challenge (cost)

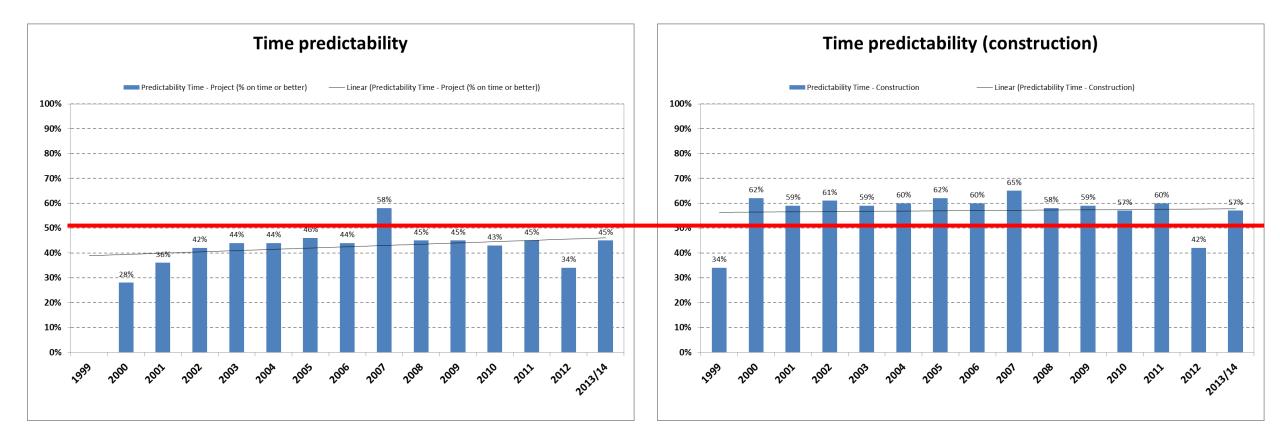






Predictability remains a challenge (time)







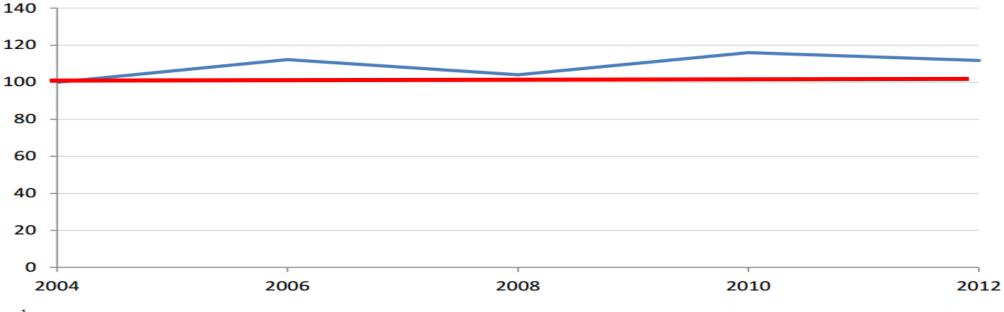
Waste to landfill is not yet reducing



Digest of waste and resource statistics, DEFRA, 2015

Waste from the construction sector in relation to its economic performance.

Figure 6.6: Graph showing index of tonnes of waste per £ of GVA for the UK's construction sector¹, 2004 – 2012 (*Tonnes of waste per £ of GVA is a Waste Prevention Metric*)

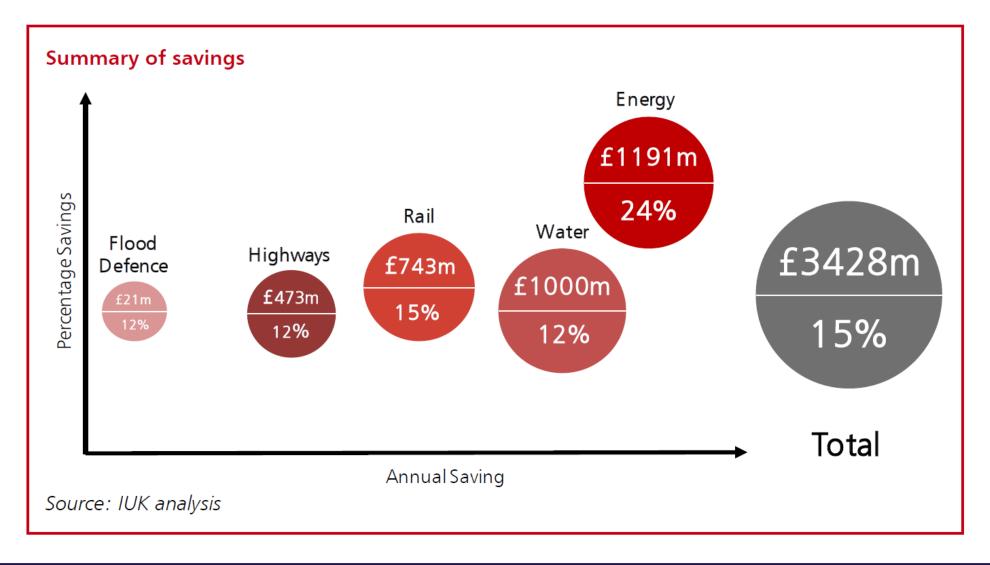


¹ Classifications are based on NACE Codes. Construction is defined as NACE Code F (which includes dredging).



Infrastructure Cost Review savings



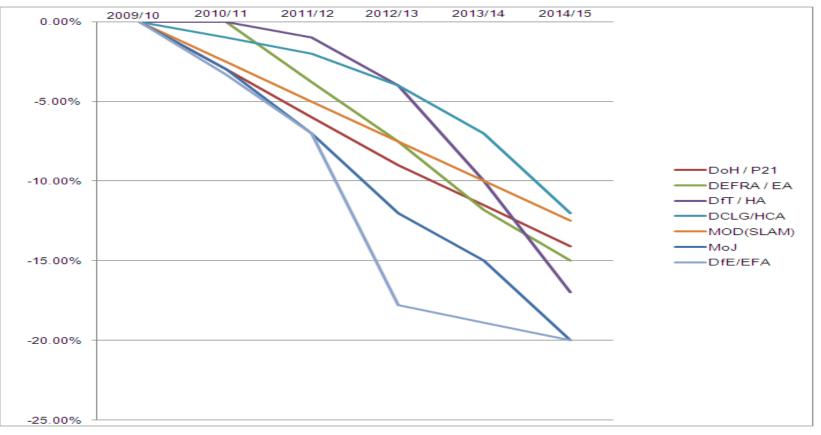




Departmental cost reduction trajectories



Chart 2: Department Cost Reduction Trajectories



Source: Cabinet Office



The National Infrastructure Plan Charter









Table A.1: Highways Agency and Environment Agency procurement timescales

| Date of contract notice publication | Average working days to complete procurement | |
|-------------------------------------|--|--|
| 2010 | 216 | |
| 2011 | 235 | |
| 2012 | 208 | |
| 2013 | 125 | |
| Source: Cabinet Office | | |



National Infrastructure Plan drivers - roads



Table 1.A: Change in congestion on Road Network in England from 2010

| Year | Low Forecast | Central Forecast | High Forecast |
|---|--------------|------------------|---------------|
| 2020 | 6 per cent | 15 per cent | 26 per cent |
| 2030 | 22 per cent | 41 per cent | 67 per cent |
| 2040 | 33 per cent | 62 per cent | 109 per cent |
| Source: Draft National Networks Policy Statement 2013. Percentages have been rounded to nearest whole number | | | |

Table 1.B: Change in congestion on Strategic Road Network from 2010⁵

| Year | Low Forecast | Central Forecast | High Forecast |
|--|--------------|------------------|---------------|
| 2020 | 2 per cent | 19 per cent | 42 per cent |
| 2030 | 32 per cent | 71 per cent | 137 per cent |
| 2040 | 52 per cent | 120 per cent | 256 per cent |
| Source: Draft National Networks Policy Statement 2013. Percentages have been rounded to nearest whole number | | | |



National Infrastructure Pipeline by sector



Dec 2013: 646 projects or programmes, £377 Billion

| Sector | Number of projects | Number of programmes | Overall value (£m) |
|--|-----------------------|-------------------------|-----------------------|
| Communications | 1 | 6 | 14,395 |
| Energy | 275 | 40 | 218,899 |
| Flood | 42 | 25 | 3,959 |
| Intellectual Capital | 6 | 2 | 855 |
| Transport | 121 | 62 | 121,463 |
| Waste | 34 | 0 | 2,304 |
| Water | 1 | 31 | 15,195 |
| Total | 480 | 166 | 377,072 |
| Source: HM Treasury Major Infrastructure Tracking unit | | | |



New procurement models

Integrated Project Insurance (IPI) Cost Led Procurement (CLP) Two Stage Open Book (2SOB)

Originally proposed in the Final report to Government by the Procurement/Lean Client Task Group, July 2012







Clients' drivers – procuring for value? Or too many constraints?

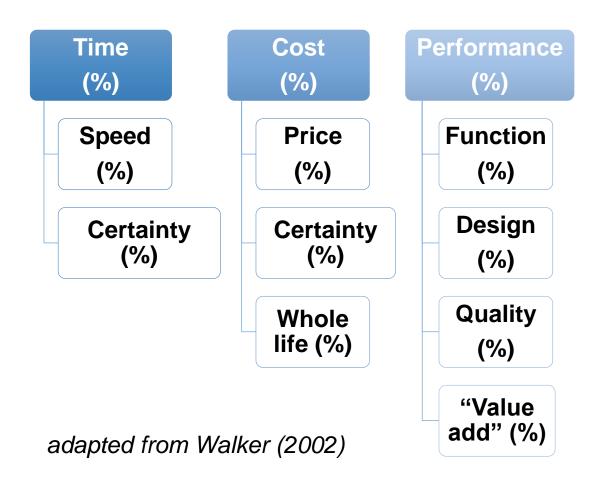






Prioritisation of client objectives





Examples of value add may include:

- Social value, eg local employment
- Environmental benefit
- Future revenue from the facility



'Social value' in procurement

Construction means local jobs and apprenticeships



The "economic multiplier" (£2.84) has made a compelling argument for investment in construction for growth and employment





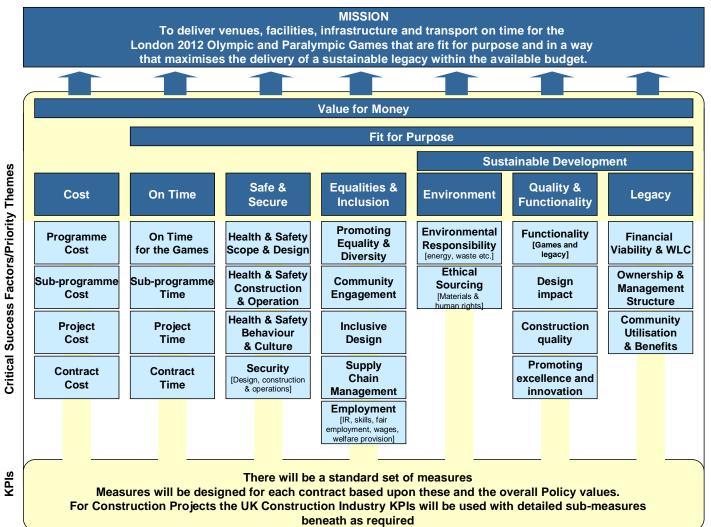
LEK report for UKCG, 2009/2012 *

- £1 investment generates nearly £3 of economic impact
 - Construction is a local industry
- Imports < 8% of total supply
 - Construction is a domestic industry
- Extra £1-£2 end value (eg better education)
- Just about the highest such factor
 - * Construction in the UK economy
 - The benefits of investment



ODA 'balanced scorecard' for procurement







"New models of construction procurement" July 2014

- Early supplier engagement, transparency of cost, integrated team working and collaborative working
- Adoption will contribute considerably to the reductions in the cost of construction
- Cost certainty, providing better long-term value
- What projects should cost, and will cost
- Commended by the Government's Chief Construction Advisor, adopted widely over the coming years









Two-stage open-book procurement



| PROJECT | SAVINGS | OTHER BENEFITS |
|--|---------------|---|
| Cookham Wood Youth Justice Board - Ministry of Justice | 20% | Cost and programme certainty; lean programming; Innovation through collaboration; reduced prospective operating costs |
| Project Horizon | 17% (+16%) | Improved whole life value; improved warranties and quality control; employment and skills commitments; increased recycling/reduced landfill |
| Supply Chain Management Group, Hackney/Haringey | 14% | Improved end user satisfaction; reduced defects; reduced waste to landfill, carbon emissions; improved employment and skills |
| Archbishop Beck school, Liverpool | 20% | Improved programme certainty; innovations through early engagement of the team; improved local employment and skills commitment |



Cost-led procurement

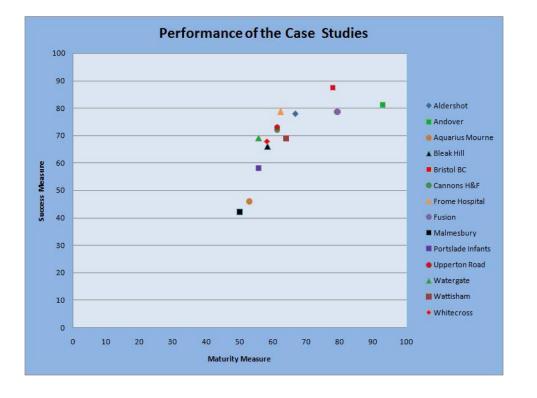


| PROJECT | SAVINGS | OTHER BENEFITS |
|---|----------------------------|--|
| Rye Harbour, Environment Agency | 6% | Streamlined up-front procurement processes; continuous development of the project team; innovation through ECI and collaborative working; significant time savings |
| Upper Mole, Environment Agency | 15% targeted savings | Driving innovation through the supply chain; integration and collaborative working; benefitting the local labour force and economy |
| Anchor Property Delivery Transformation | 9% | Improved services for customers and efficiency; supply chain integration; continuous improvement of client skills incl cost, risk & value engineering |
| North West New-build Housing (Procure Plus) | 20% | 6 previously unemployed local residents all achieved NVQ qualifications and then supported into future employment |



Integrated Project Insurance

Integrated Project Team (or Alliancing or Integrated Project Delivery) with an insurance and QA 'wrap' to cover financial loss





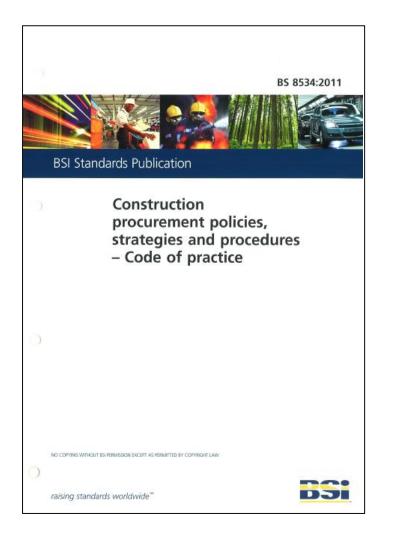


Dudley College Centre for Advanced Building Technologies and Construction Skills' (CABTech) is the first project to trial this radical new approach



BS 8534:2011: Construction procurement policies, strategies and procedures – code of practice



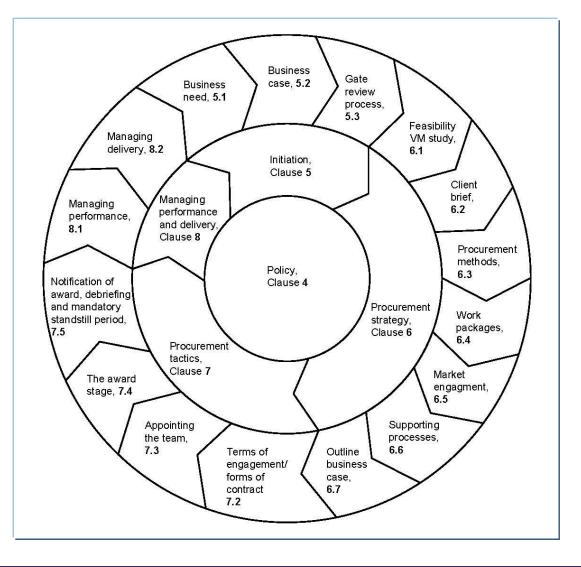


A basis for the new ISO TC59/SC18 on "Construction Procurement"



The procurement cycle





Business need Business case Gate review process Feasibility VM study Client brief Procurement methods Work packages Market engagement Supporting processes Outline business case Terms of engagement/forms of contract Appointing the team, incl. pregualification... The award stage Notification of award... Managing performance Managing delivery



2.3M people work in our industry, the biggest single industry sector from design to manufacturing to installation to maintenance









Young people's interests include



The planet

IT

Social media

Fairness in society

Fun

Money

Fulfilment

A "career" with one company is NOT a priority





We create amazing products all over the world

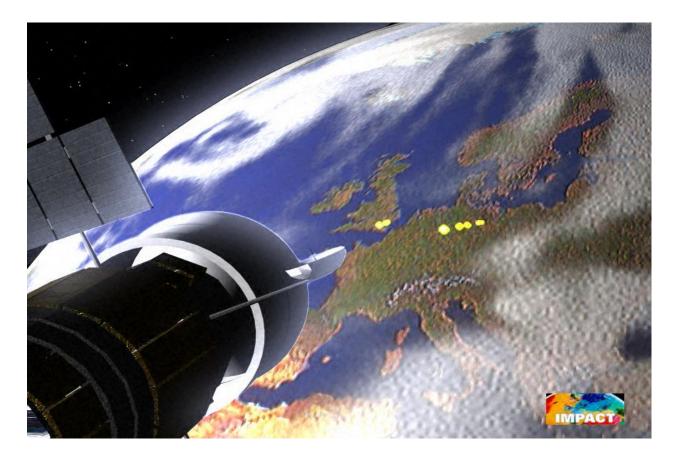


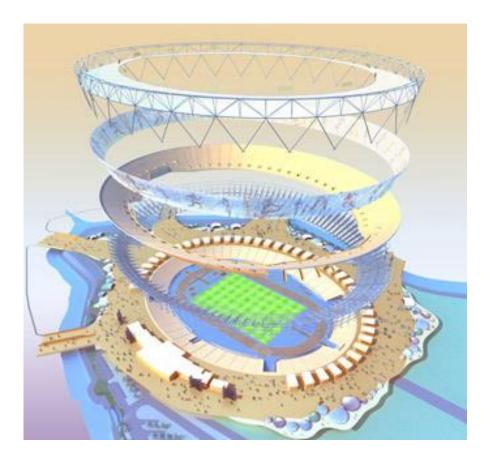




We use amazing technology









TV has a (largely positive) appetite









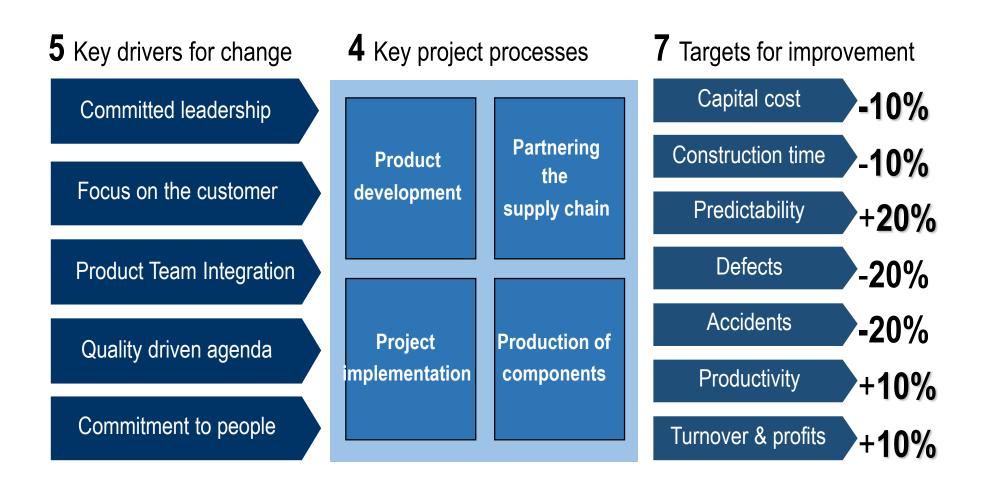






Rethinking Construction, 1998

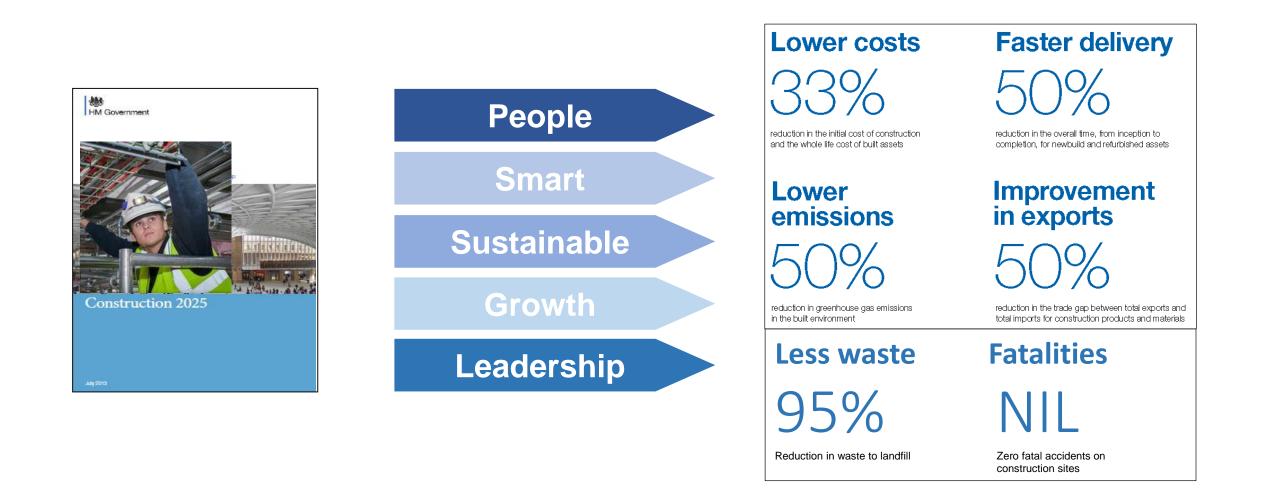






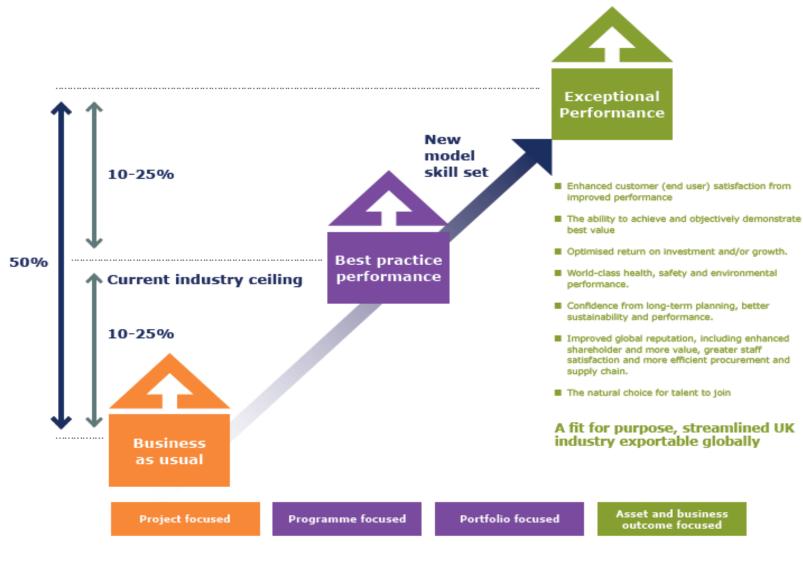
Construction 2025, BIS, 2013





Exceptional performance will require new models and new skills





Intelligent informed clients...

CONSTRUCTING EXCELLENCE International

An intelligent client

- Thinks international, long-term, programmes not projects
- Demands detailed data about assets and performance
- Tests new procurement methods
- Builds alliances and an integrated supply chain
- Incentivises teams to delivers
 more efficiently, predictably
- Produces outcomes not outputs
- Shares the rewards

The value adder

- Rewarded for the value created
- Collaborative
- Innovative
- Solution focused
- Integrated capability
- Strategic business
 relationship
- High levels of investment
- Data rich
- Lean

The transactional

- Commoditised service
- Transacted engagement
- Lower margins
- Clearly defined role
- Bought in competition



Intelligent industry

An intelligent client

- Thinks international, long-term, programmes not projects
- Demands detailed data about assets and performance
- Tests new procurement methods
- Builds alliances and an integrated supply chain
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The transactional

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Achieving Vision 2025



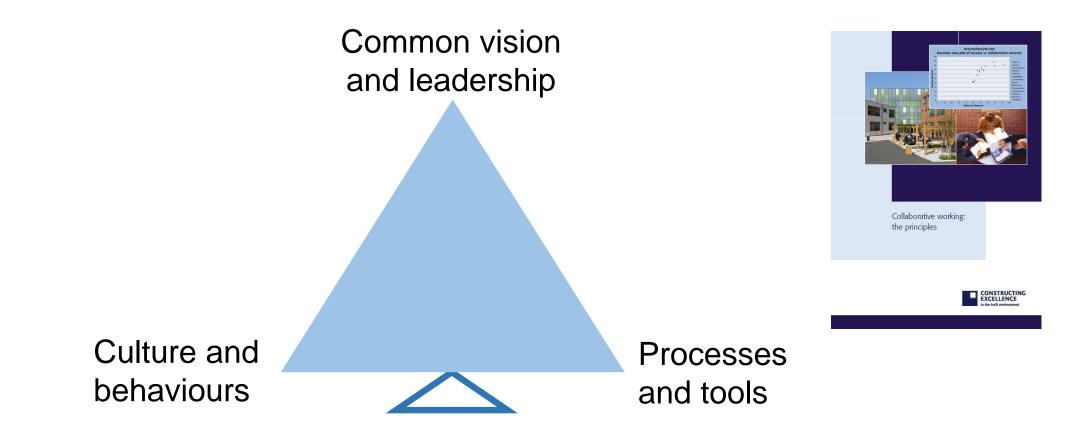
 \Rightarrow Respect for people \Rightarrow Collaborative working BIM \Rightarrow \Rightarrow Lean, Industrialisation \Rightarrow Value in use \Rightarrow Sustainability





Three overriding principles of collaborative working







There are 6 critical success factors for collaborative working

Early involvement

Selection by value

Common processes and tools => BIM

Measurement of performance

Long-term relationships

Aligned commercial arrangements

Collabo







continuous

improvement



Areyouthereyet.c

Proposed UK study tour

Activities

- Client stakeholder meetings
- Site visits "industrial tourism"
- Workshop/teach-in
- Conference with CE members
 - eg on international markets

Subjects

- Procurement
- BIM
- Collaborative working & Lean

Sectors

- Offices
- Crossrail
- Highways
- Olympic legacy

Stakeholders

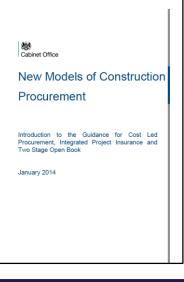
- Clients
- Government
- Leading industry players







Peter Hansford, UK Government Chief Construction Advisor





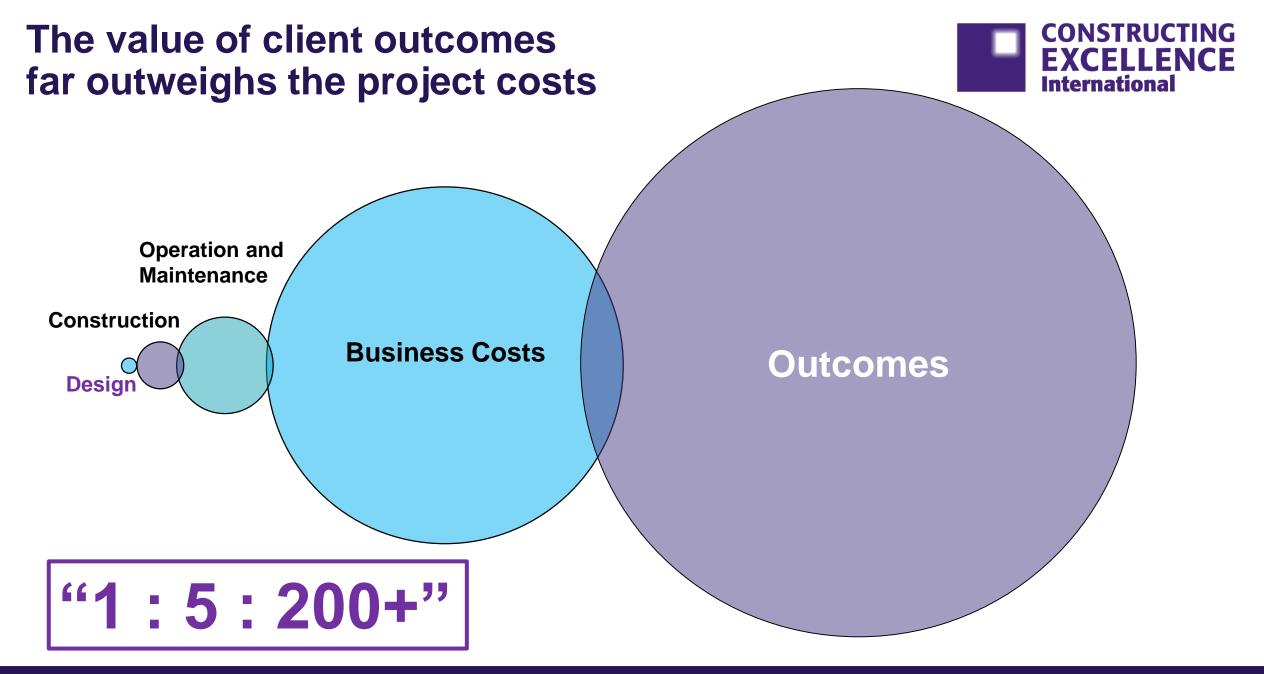


Above all, customers want value and we need to understand how clients and users measure it (£, happy residents, CO2, time, social value etc)









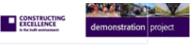


St Francis of Assisi Academy, Liverpool - sustainability delivering value



Green values help academy top new league table

"A school which offers its pupils a green-focused education has won plaudits for having the best teaching standards in the country...." *The Independent*, 11 Jan 2007





The Audemy of Schemistr of Asses is a 900 place. Audemy for 11-16 year old students in the Kensington area of Learpool, One of the Government's new flagstap audemies, it was composed by the Norker Catholic Church and Church of English, with the DCM.

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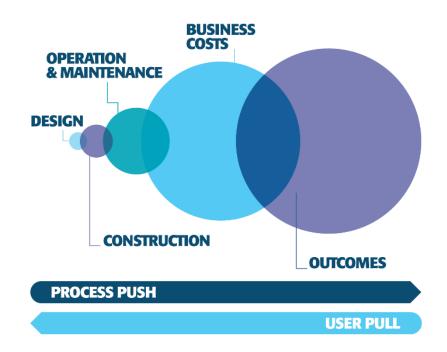




"Constructing Excellence"

Better ideas and inspiration Better evidence and intelligence Better conversations and connections Better influence and leadership





Contact

don.ward@constructingexcellence.org.uk www.constructingexcellence.org.uk

