ARCADIS
Design & Consultancy for natural and built assets

CONSTRUCTING EXCELLENCE

BREXIT – Challenges and Opportunities:

Richard Bonner – UK Cities Director

19th July 2016

incorporating
EC HARRIS BUILT ASSET CONSULTANCY
Hyder

ARCADIS Design & Consultancy for natural and built assets

THE POTENTIAL IMPACT OF BREXIT

Process of Exit

1. Following withdrawal notification by UK, 27 remaining EU countries begin meeting **without the UK** to discuss what to do

2. For approval it needs a qualified majority – at least **15** countries covering **55%** of the total population

3. If no agreement is reached within two years, the EU treaties automatically cease to apply to the UK

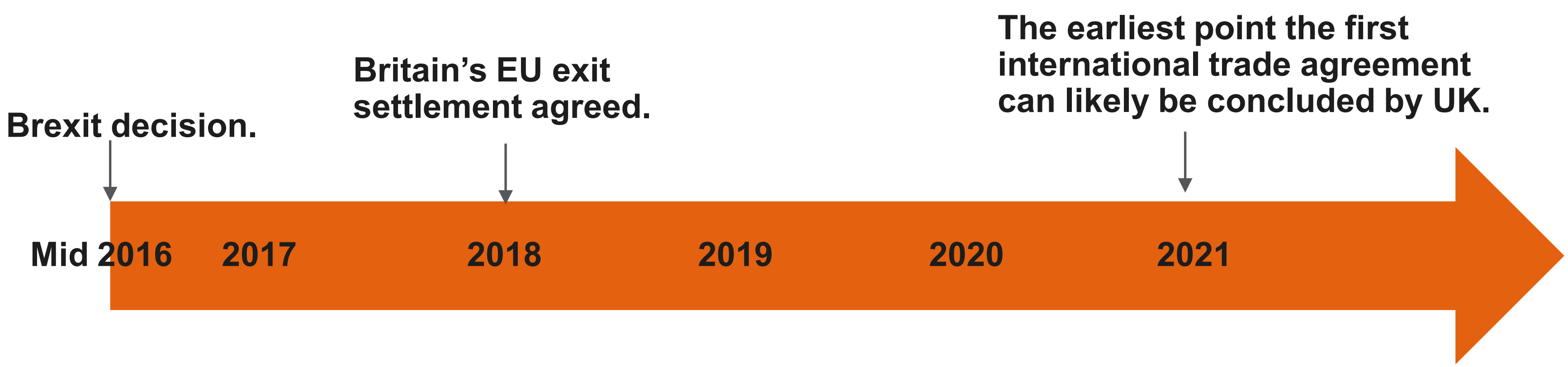
4. The negotiating deadline can be extended with unanimous support of all 28 member states.

5. The process suggests, Article 50, once invoked, is a one way street to exit.

Source: Financial Times

Process of Exit

- Britain's exit from the EU, and related discussions connected to trade, are expected to take at least **2 years**.
- It is highly unlikely other trading partners would enter trade agreement negotiations prior to conclusion of Britain's EU settlement.
- The quickest trade negotiations, for simple agreements, have taken a **minimum of three years** – most much longer.



To speed up trade negotiation process, UK could dump the EU's all or nothing approach.

Could strike initial agreements on removing tariffs on goods and revisit negotiations on services and non-tariff barriers at a later date. This would make sense for emerging market economies where tariffs are relatively high and the majority of UK trade is in goods – China, India and Brazil fit this category.

Source: Open Europe and Woodfords

Key Impacts on Construction Markets

Government focus.

Lower GDP.

Weaker sterling.

Labour.

The UK is entering a period of sustained, deep uncertainty.

What can be done by the industry?

- **Acclimatise to a ‘counter cyclical’ approach**
  - We expect demand for construction to fall in some sectors.
  - Critically need to keep building, as the UK needs investment and our industry cannot afford another crash.
  - Working together to reduce the cost of delivery and improve access to resources is the best way to avoid another downturn. If not, UK plc will have ‘wasted another crisis’.
- **Seal the deal or ride the market**
  - Significant exposure to currency and commodity price fluctuation whilst contracts are finalised.
  - Future uncertainty will result in extremely high hedging costs.
  - Skills in sealing the deal will become very valuable in a post-Brexit world.

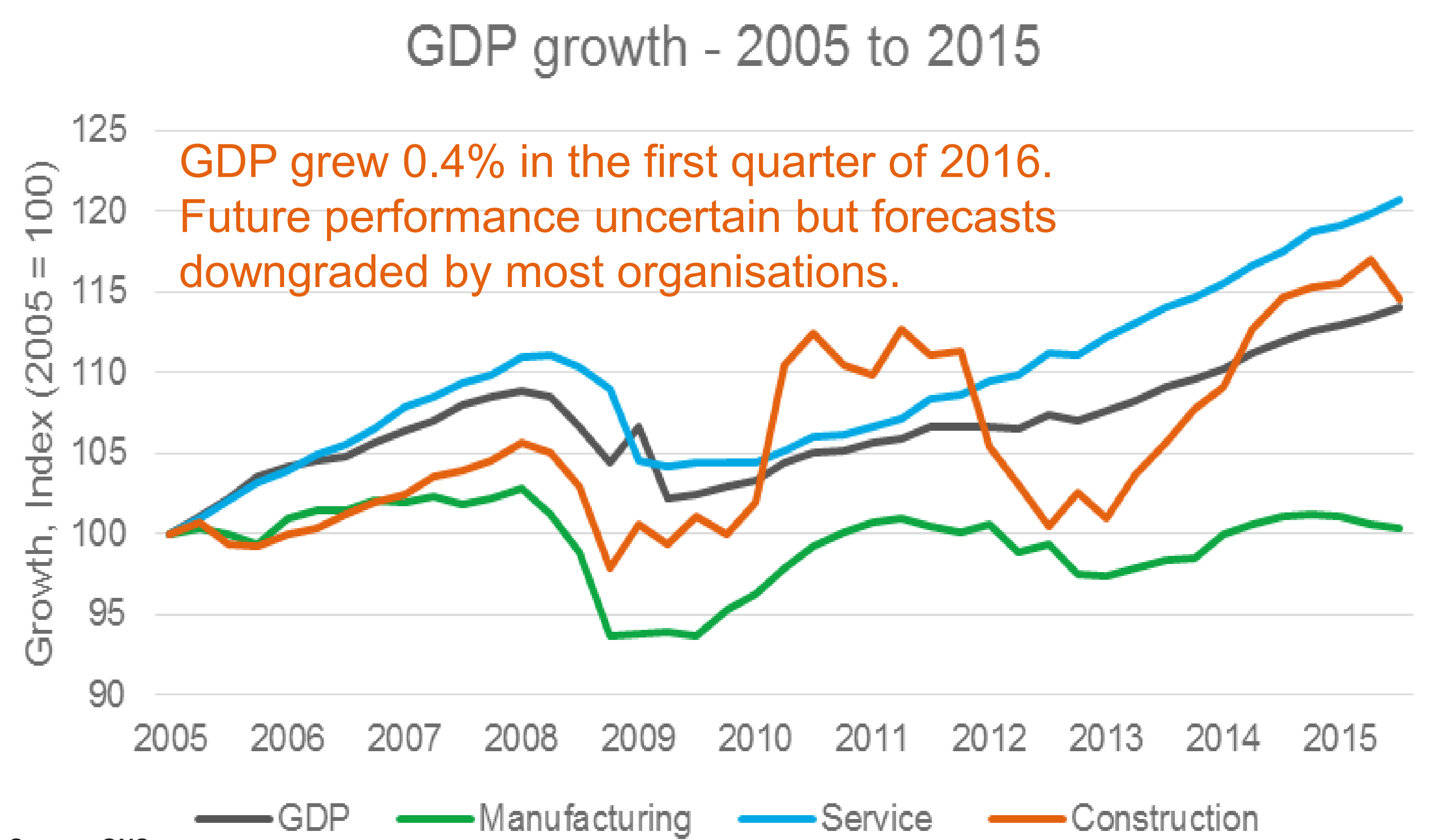
Government must keep investing

What can be done by the industry?

- **Make better use of the people we have**
  - Labour will get a lot more scarce.
  - Productivity in construction has flat-lined for 20 years.
- **Work smarter, not harder**
  - Some see Brexit as an opportunity for re-invention.
  - UK has poor record on construction productivity growth, there are opportunities to improve.
- **Look beyond the UK**
  - UK construction has global reputation for excellence
  - Digital solutions mean we can work anywhere in the world and people based anywhere in the world can work for us.

Now is the time to improve productivity

UK Economic Performance



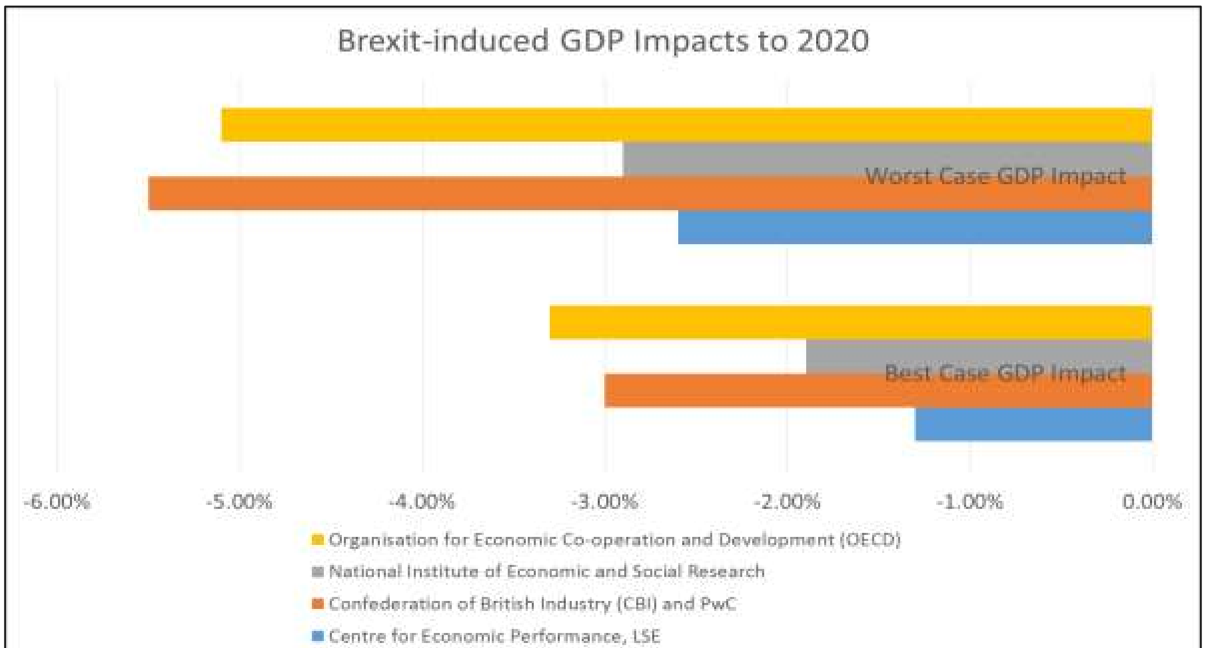
Source: ONS

Construction historically over-corrects.

Economic Impact

	Organisation	Stated View	Date Made	Short Term (to 2020) Best Case GDP Impact	Short Term (to 2020) Worst Case GDP Impact
1	Centre for Economic Performance, LSE	Neutral	1Q2016	-1.30%	-2.60%
2	Confederation of British Industry and PwC	Bremain	1Q2016	-3.00%	-5.50%
3	National Institute of Economic and Social Research	Neutral	1Q2016	-1.90%	-2.90%
4	Organisation for Economic Co-operation and Development (OECD)	Bremain	2Q2016	-3.30%	-5.10%
			AVERAGE	**-2.38%**	**-4.03%**

The overall profile emphasises the downbeat predictions of Brexit impact on the economy.



The vast majority of forecasts of Brexit-induced impacts on GDP are negative.

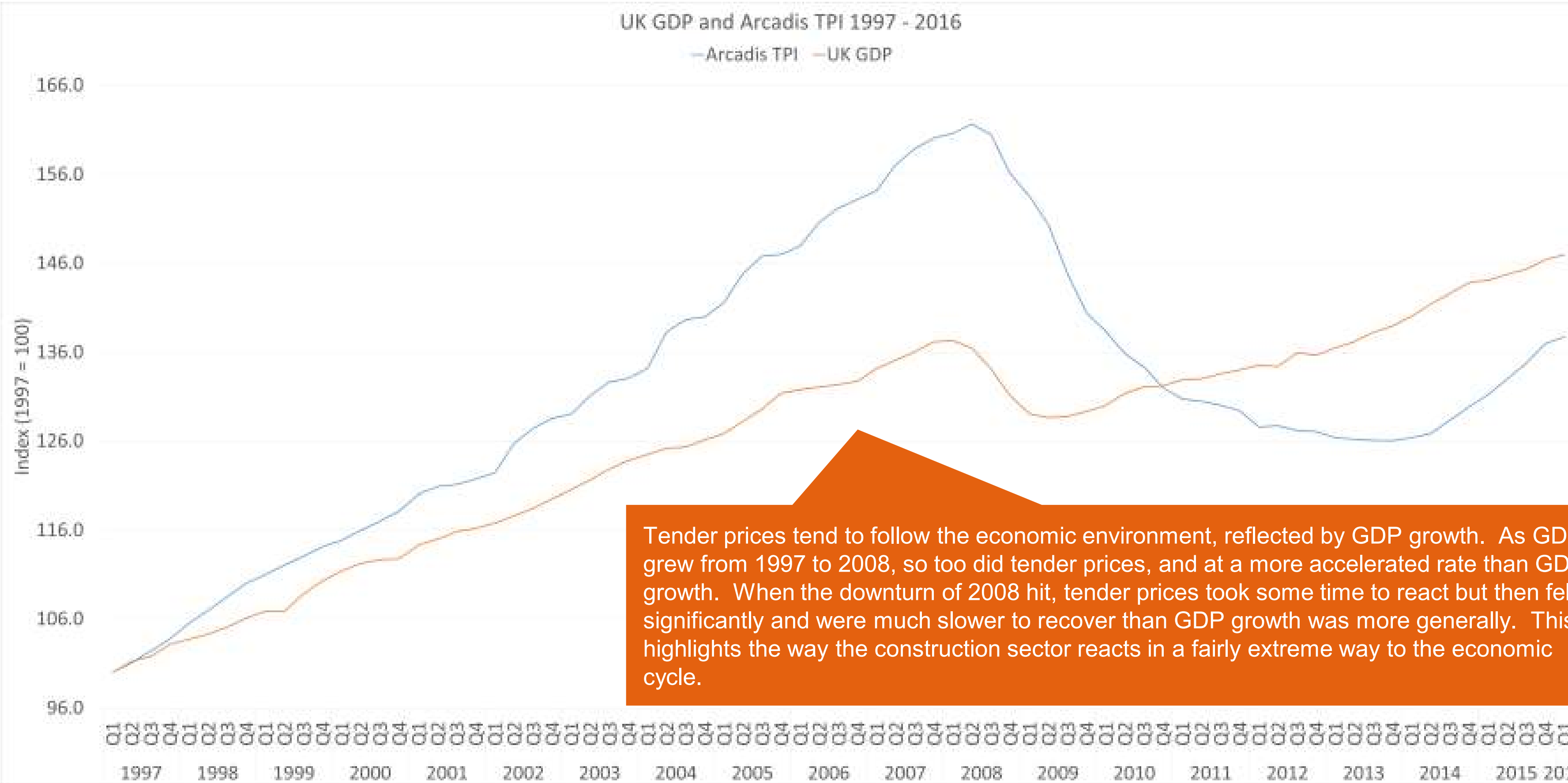
Treasury estimates a worst case GDP impact of -9.5% and best case -3.4% to 2030.

Only Open Europe forecast a potential positive impact of 1.6% to 2030.

BREXIT

Source: Various and Arcadis

GDP vs. TPI



Tender prices tend to follow the economic environment, reflected by GDP growth. As GDP grew from 1997 to 2008, so too did tender prices, and at a more accelerated rate than GDP growth. When the downturn of 2008 hit, tender prices took some time to react but then fell significantly and were much slower to recover than GDP growth was more generally. This highlights the way the construction sector reacts in a fairly extreme way to the economic cycle.

There is a correlation between price growth and GDP

Investment Tensions

Weak pound

- May attract more foreign investment, at least short term.
- More expensive and difficult access to finance domestically.

Shifting confidence

- Will benefit investments perceived as a haven from trouble such as Gold and government bonds.
- Will adversely impact investments perceived as exposed to weak sterling and reduced domestic economic performance such as Real Estate Investment Trusts (REITS)

Markets hate uncertainty but love volatility. The uncertainty of the next few years will mean plenty of opportunities to lose or make money.

Investment Tensions

The share prices of the developers and housebuilders implies a cut in asset value and in all probability – activity

24/Jun - upon opening, share prices of major REITs crashed but rallied a bit by lunchtime.

TOP 10 FALLERS

TIDM	Name	Price	+/-	%+/-
ALD	ALDERMORE	149.50	-56.20	-27.32
PSN	PERSIMMON	1,537.00	-561.00	-26.74
VM.	VIRGIN MONEY	274.00	-92.40	-25.22
DLN	DERWENT LONDON	2,566.00	-864.00	-25.19
TW.	TAYLOR WIMPEY	145.10	-47.30	-24.58
BWY	BELLWAY	2,076.00	-658.00	-24.07
IAG	INTL CONSOL AIR	403.30	-124.70	-23.62
CRST	CREST NICHOLSON	447.20	-137.80	-23.56
MSLH	MARSHALLS	251.30	-72.80	-22.46
BDEV	BARRATT DEVEL.	448.00	-129.50	-22.42

All data delayed by at least 15 minutes | as at 13:09

24/Jun – housebuilders were most of the top 10 fallers on the FTSE.

The referendum result triggered some bitter falls.

Brexit Labour Impacts

	Unit	Optimistic	Central	Pessimistic
Annual net immigration	Thousands	-56	-84	-116
Estimated loss of workforce (OECD 75% estimate)	Thousands	-42	-63	-87

OECD modelled post-Brexit scenario

The decline in immigration also reduces labour force growth. It is assumed that 75% of the foregone migrants would have been in the labour force, consistent with evidence of the participation of recent EU immigration inflows.

Post Brexit, the most obvious would be to extend the Points-Based System (PBS), which currently applies to non-EU immigrants.

UK PBS Tiers

Tier	Type	Currently in use?
1	Entrepreneur/Investor	Y
2	Skilled Graduates	Y
3	Low skilled workers for labour shortages	N
4	Students	Y
5	Working holidays	Y

Brexit and the market

- There is enough data to suggest that the UK economy was slowing before Brexit.
- Post –Brexit, there is currently insufficient data to call the timing and amplitude of a turn in the market. Industry commentators have asserted the following so far:
  - There will almost certainly be a downturn based on current sentiment and uncertainty affecting the commercial and industrial sector
  - This is likely to affect prices in the next 12 months but the exact timing will be determined by a trigger event
- We are aware of projects on hold worth £million for completion by MC and ourselves.
- However the market is not completely closed
  - British Land sale of Debenhams Oxford St post Brexit at reported 3% yield
  - Aberdeen Asset Management ability to dispose of good quality assets without discount to NAV
- With inflation still affecting labour costs and also being driven by adverse currency movement, it will likely take a major correction in markets to change contractor pricing behaviour. Project cancellation is the most likely trigger point.

Brexit and procurement

Key areas of consideration:

- Competitive – minimise the cost of bidding to the supply chain and provide opportunities for the supply chain to innovate to drive savings
- Collaboration – consider open book and shared savings procurement arrangements to drive efficiency-based rather than top-sliced discounts
- Timescales – Keep procurement as quick and efficient as possible
- Supply chain engagement – Engage sub-tiers where possible in procurement process to develop value solutions based on an accurate price
- Risk allocation – assure quality information so that the supply chain can securely allocate risk
- Risk management – Avoid 'design and dump' without consideration of how the risk transfer will work in practice
- Integration – Consider early involvement and integration of project teams
- Leadership – Clear client leadership needed to set the agenda for the procurement event.

Design & Consultancy
for natural and
built assets

What can the Government do?

Public Sector

- Government guarantee scheme to underwrite overseas investment in regeneration and growth; helping to reassure nervous investors and sending clear message that UK remains growth – focussed
- Statement confirming commitment to the Government's vision for devolution, this will continue to see geographically balanced activity, creating and maintaining much needed activity across the country and supporting stable, self sustaining communities
- Procurement reforms to clarify the position on OJEU, and perhaps more importantly, make it easier and less challenging to enter into innovative partnership models with the private sector and other public sector bodies

Labour Market

- Early clarity on status of existing EU Nationals working in the EU. Prolonged uncertainty could be damaging. With reducing migration, declining new entrants and aging workforce, losing migrant workers could make things worse
- Help to create right incentives and conditions for clients and industry to adopt pre-manufactured solution. Need to reduce our reliance on labour and improve productivity making industry more attractive for younger people
- Use policy tools to help ‘smooth’ construction demand cycles. Use housing stimulus and infrastructure commitments to avoid damaging long term capacity

Infrastructure

- Commitment to the three big H’s, namely Heathrow, Hinckley and HS2. Heathrow needs to be dealt with swiftly to demonstrate we are open to business

- If growth does slip into the red, take advantage of low interest cost of borrowing to drive pan UK programmes of shovel ready infrastructure projects. – sustaining further housing and commercial property development

- Get commitment from Government and quangos to commit to long term programme of investment in infrastructure to insulate against worst affects of any recession – five year investment programmes in rail, roads, water and regulated utilities.

Emerging Construction Methods

Off site manufacture is a potential solution but does it suit housebuilding?

- UK housebuilding is currently subject to significant labour constraints – OSM represents an addition to capacity that makes more productive use of scarce skilled labour.
- Evidenced by mature markets such as Japan and Germany where OSM accounts for more significant volumes.
- There are a number of benefits that could be realized:
  - Schedule certainty and reduction
  - Greater quality and performance
  - Safety benefits.

Source: Apple Green/Construction Manager Magazine

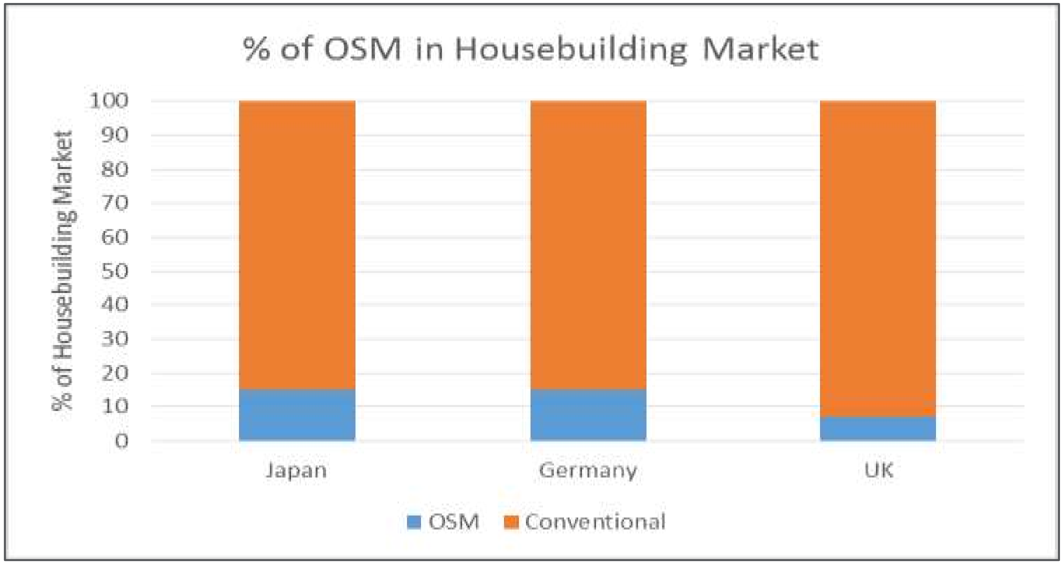
OSM offers many potential benefits for the housebuilding sector.

Why has off site manufacture not been widely adopted if it is so good?

Based on £/m2 in GIFA for a location in South East England at 1Q2016 levels off site manufacture is around 10% more expensive.

Evidence suggests there is currently a cost premium attached to using off site manufacture

How big could the off site manufacture housebuilding sector be?



Laing O'Rourke and Legal & General have both launched high profile initiatives with investments totalling £160m – representing a generation of more capital intensive OSM which could potentially double the size of the UK OSM residential sector.

More mature markets such as Japan have greater proportions of OSM usage in housebuilding. However, the supply chain is more consolidated, less speculative development and lower expected life spans for houses.

Emerging Methods of Construction

On Site Robotics

On site robotics will be a model better suited to the dynamics of traditional build-to-sell housebuilding…

Source: Construction Robotics

On site robots will provide the ability to flex production with sales rates.

SAM – short for semi-automated mason can lay about 800 to 1,200 bricks a day. One human plus one SAM equals the productivity of having four or more masons on the job.

Robots are already being used on site in the United States

Robotics in construction will take significant investment…

But who will pay for the robots?

And what is the next resulting pinch point? The BIM design needed to drive the robot, or the scaffold and the plumbing?

Source: Building Design Construction Network

Source: Robotics Business Review

Robots have revolutionised other industry sectors such as manufacturing, boosting productivity by 60% since 1994.

Concluding thoughts

- Whilst it is clear the Government have a role to play, particularly in focussing policy and investment in housing and infrastructure, and providing means for investor confidence
- As clients and supply chain we have our own responsibilities:
  - Significant improvements in productivity and efficiency
  - Keep investment programmes running, and increase efficiency in procurement
- Lets avoid talking ourselves into negative growth

There will be uncertainty but we need to create the opportunities to sustain our markets

Questions?