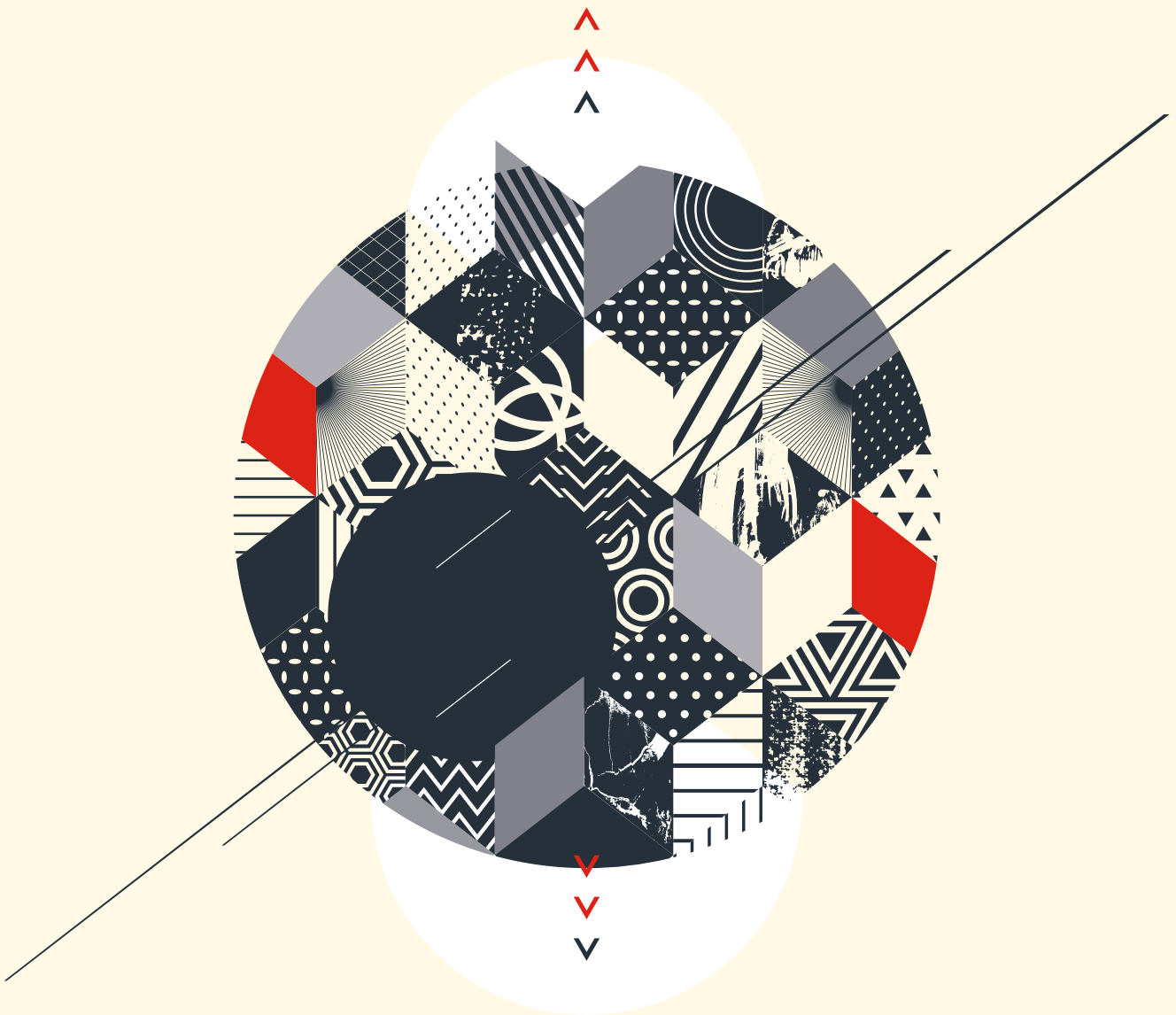


LONDON 27 SEPTEMBER, 2016
GUEST SPEAKER **PAUL FLETCHER** PRESENTED:

“THE FOURTH INDUSTRIAL REVOLUTION AND THE BUILT ENVIRONMENT”



EXECUTIVE SUMMARY

The evolving nature of how people live is creating a much needed catalyst for change in the built environment industries.

Kim Vernau, CEO, BLP Insurance highlights the key points raised at an interactive discussion on “Building as a Service” organised for industry peers. Guest speaker Paul Fletcher led the thought provoking session, providing the context for change and posing the question of just how smart do we need to be to meet the needs of an agile society.

If Smart Buildings are dependent on the internet of things are those ‘things’ good enough and are the buildings we create any better? Indeed, how is combining them ‘smart’?

INTRODUCTION

Technology is fundamentally changing the very concept of what we consider a building to be. The interconnectivity of people and the way the environments in which we live and work enable that connectivity, is increasingly blurring the lines between people, buildings and digital.

Smart buildings, the internet of things and artificial intelligence are all gathering momentum as the fourth industrial revolution evolves, providing a context for change. The success of the built environment industries in their ability to respond to evolving consumers’ wants and needs and changing lifestyle choices, all lies in strategic innovation. Only smart thinking can provide the catalyst for change.

DISRUPTION IS COMING, ARE YOU READY?

It is anticipated that the UK will need to deliver a million new homes by 2020 to keep up with housing demand. The reality is that construction delivery can’t keep up with these supply requirements and the industry is rapidly reaching crunch point. Indeed, it is widely reported that the UK is in the midst of a chronic housing shortage.

It is not just the huge gap between supply and demand that is the issue. Buildings are not improving; they are at best static, if not declining in terms of performance, cost and quality. Numerous factors have been blamed and various government initiatives have sought to provide a solution, but there is no silver bullet. It is a change in mind-set that is really required for the industry to be able to reap the benefits that harnessing technology should bring.

Standing still is not an option. Disruption to the built environment is already taking place, driven by growing expectations and demand from the end consumer. Consumers are becoming increasingly astute about how good or bad their environment is, in terms of enabling them to live as they wish with all the latest mod cons.

The result is that we are seeing the consumer becoming all powerful and driving change. Consider Airbnb, a company whose success lies in disrupting the rental markets, as just one of a myriad of examples.

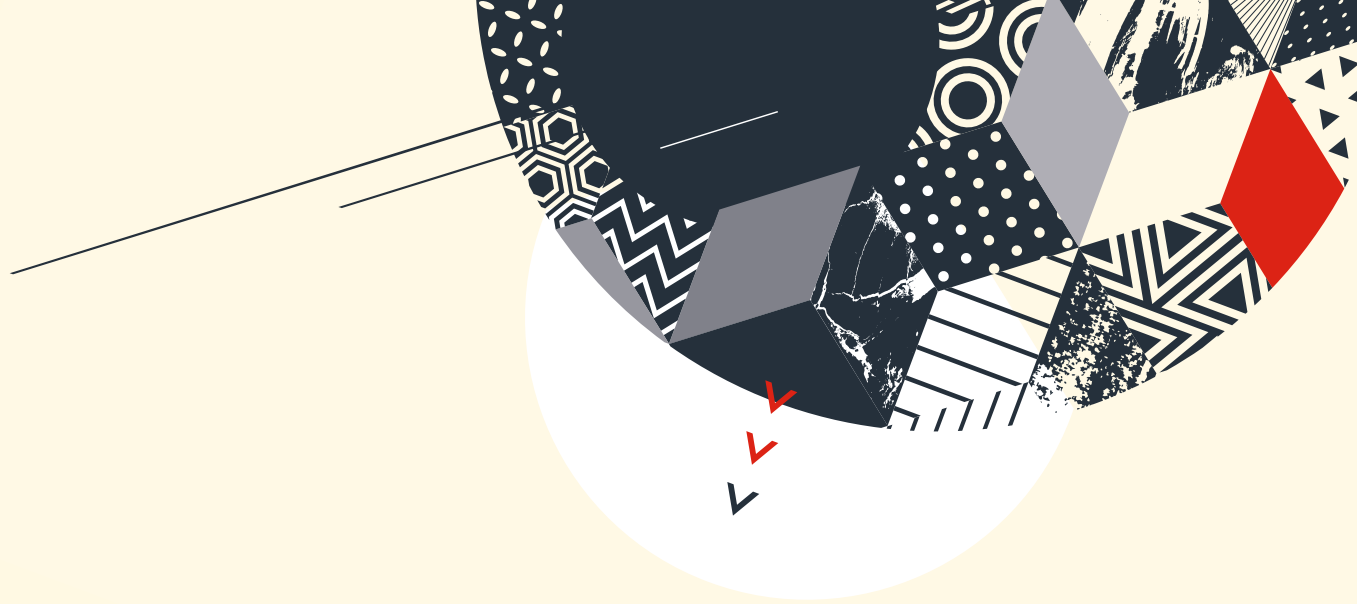
Innovation is clearly essential, yet it is being stifled by an industry that is inherently conservative. Across Europe innovation has fallen behind for the past two years, with construction innovation being one of the lowest, according to the European Commission’s 2016 Innovation Scorecard. Furthermore, the internet of things is evolving at a rate which the building industry is finding increasingly difficult to keep up with.

At the same time, disruption to the employment landscape is inevitable as changes to business models brought on by technological and socio-economic developments continue to take hold. The global workforce is expected to experience a significant shake-up between job categories and functions over the next five years according to the World Economic Forum’s 2016 The Future of Jobs report.

Job categories in decline between 2015 to 2020 include those in the installation and maintenance, construction, extraction, manufacturing and production fields. This is perhaps relatively unsurprising in the built environment industries, given the increasing prominence of build-offsite and other modern methods of construction. On the other hand, architecture and engineering, business and financial operations, and sales related professions are all jobs anticipated to be on the rise, but not as we traditionally know them. This isn’t a continuation of business as normal but a disruption of the unknown.

NAVIGATING CHANGE WITH INNOVATION

Strategic innovation is essential if we are going to create smart buildings that people want to live and work in. The built environment industries need to embrace the catalyst for change brought on by technological advancements and respond to the consumers’ ultimate needs to create better buildings.



Better questions lead to better answers

Innovation is more than just adopting new technologies, or digitalising existing systems and processes. Building Information Modelling (BIM), for example, has sought to understand how buildings and processes can be made more efficient through digital means, but that is not innovation. It is harnessing technology to address problems that have been around for years and years, rather than being innovative.

The emphasis needs to focus on the “what” instead of the “how”. By asking better questions about what a building should be providing for the consumer, only then can the industry hope to achieve smart answers around building requirements.

Buildings as a Service

To respond to evolving consumer demands organisations will need to change how they operate, by moving away from being product centric towards providing a more service orientated culture. The internet of things is no longer about purchasing the latest shiny gadget; it is about the ability of the consumer to access a service. This is already in action with the SaaS (Software as a Service) model, where instead of buying software you rent it for a nominal fee. So far, this has been extended to platforms (PaaS) and hardware (HaaS) models, so is it really far-fetched to think that we could soon have a “Buildings as a Service” model? What is clear is that if there is going to be any chance of achieving so-called smart buildings, innovation in the construction industry needs to be on a similar trajectory to the internet of things.

Innovation is nothing without creativity

Creativity is a vital skill when it comes to innovation. According to the World Economic Forum's 2016 The Future of Jobs report, it is anticipated that it will leap from the tenth most important skill for the work environment in 2015, to third place by 2020.

In the construction industry creativity is currently only considered around the act of design, but its potential is much more than that. It is about using creative skills in a different way to approach problems and understanding, such as taking insight from new technologies to create new opportunities. It is this

creativity around design thinking which the industry needs to enhance if it's going to be disrupted.

Strategic innovation

Having a vision and driving that vision towards value lies at the heart of strategic innovation. By giving meaning to a product or service you can find the route to value. It is this reason why products like the iPhone are so successful; users attach a meaning to the device, such as the fact that it enables you to stay in touch with loved ones. Better questions around what a phone is and its meaning for the end consumer have resulted in better in-use scenarios. When it comes to the built environment industries, it's questionable as to whether we have lost the meaning of what a building actually is and means.

Innovation can be evolutionary, by extending existing products and services into an entirely new marketplace or by adapting and bringing new products and services to an existing client base. Revolutionary innovation, on the other hand, is the rarefied step of creating whole new products and services for a whole new marketplace. It all comes down to using innovation strategically and, regardless of the approach, it should be focused on planning to disrupt an industry or intentionally gearing up for a disruption that's coming.

CONCLUSION

Every player in the built environment industries will need to at some stage adapt or innovate in order to stay relevant and competitive. There is no getting away from the fact that disruption is coming as the fourth industrial revolution evolves, but there is every opportunity to embrace this catalyst for change.

There is no hard and fast answer as to what this disruption will ultimately mean for the built environment industries. However, it is imperative that a dialogue is conducted even if this means challenging some of the fundamental principles and premises of the construction industry as we know it today.

What is a building and what is stopping us from making buildings better? Only with smart questions can the industry ever hope to achieve smart buildings.



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IMAGES FROM 27 SEPTEMBER, 2016, AT THE ZETTER TOWNHOUSE, LONDON.



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BLP
90 Fenchurch Street
London
EC3M 4ST
United Kingdom

T: +44 (0) 20 7204 2424
E: rsvp@lunchwithblp.com
W: blpinsurance.com