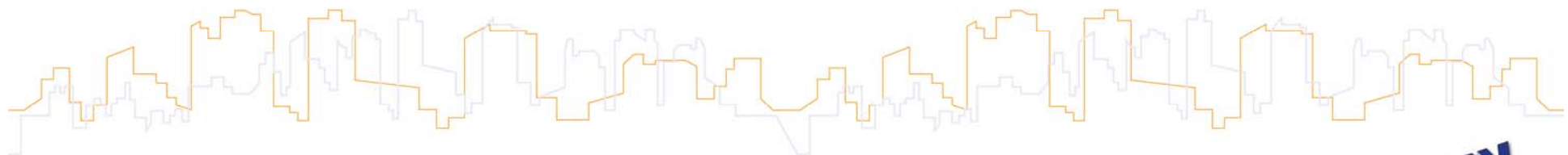


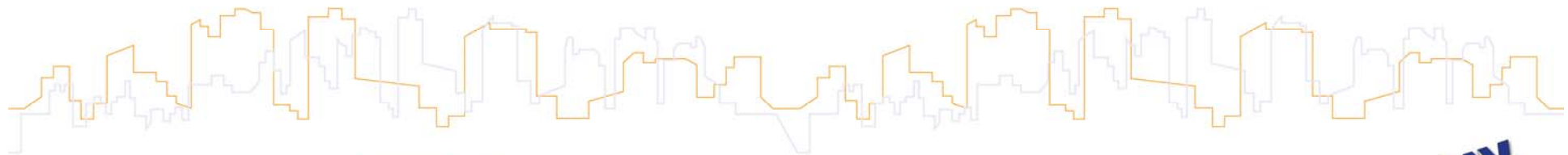
Breaking the Mould With Lean Construction

Four Convergent Trends In the Context of Construction 2025



The Ambitions and Challenge of “Construction 2025”

- **Lower Costs** - 33% reduction in the initial cost of construction and the whole life cost of built assets
- **Faster Delivery** - 50% reduction in the overall time, from inception to completion, for new build and refurbished assets
- **Lower Emissions** – 50% reduction in greenhouse gas emissions in the built environment
- **Improvement in Exports** – 50% reduction in the trade gap between total exports and total imports for construction projects and materials.



Understanding Disruptive Change

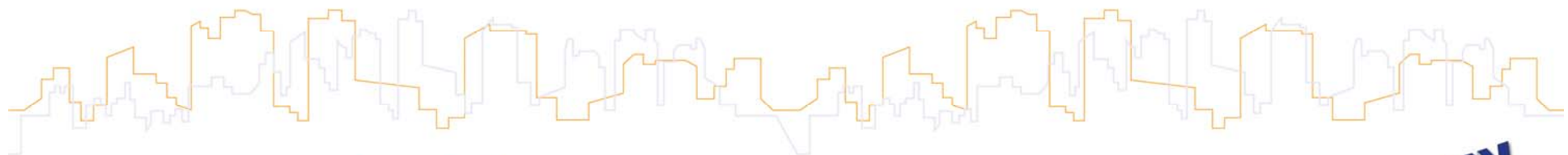
- **Definition:**

- Events, circumstances and conditions that force or demand a major change in behaviours, approaches and thinking in order to survive.
- **Can be both positive and negative**
 - Ice Age –
 - Negative for a great many mammals
 - Positive for Human Beings
 - Mass produced cars, lorries, tractors, earth moving equipment
 - negative for the horse carriage sector
 - positive for transport, farming and construction

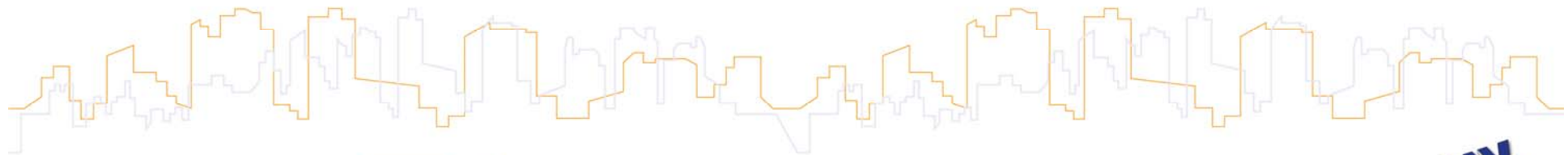


Keys (some) to Surviving and Prospering in Times of Disruptive Change

- Early Recognition and Acceptance of Emerging Trends and Patterns
- Ability and Joy in Learning
- Willingness and Ability to Adapt Creatively
- Culture of Challenge and Continuous Improvement

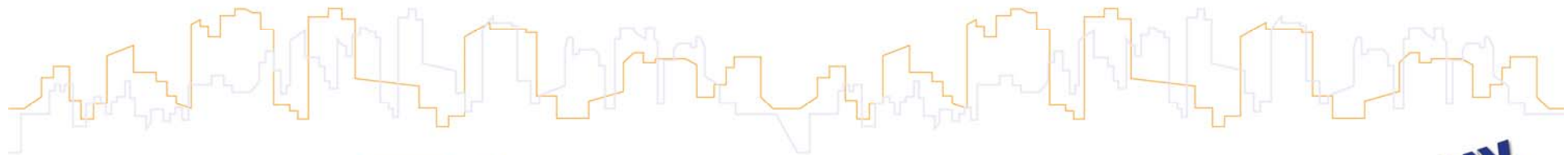


A simple example of disruptive change



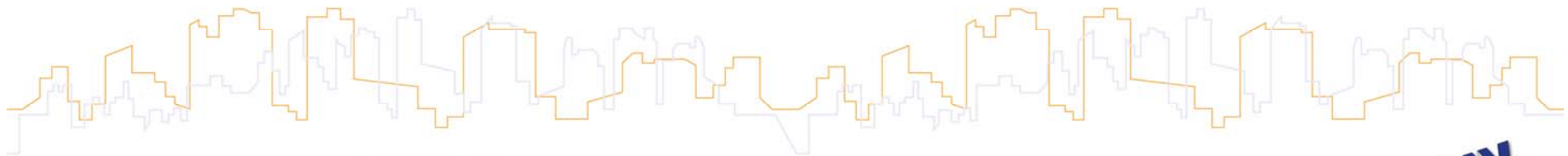
Fosbury's Moment

- An outsider - the practice of the day did not suit him
- New technology (foam landing pits not sand) allowed him to explore his own potential with a 100% focus on jumping (value) and not 50% on landing (waste)
- For 2 years he worked through awkward, experimentation and developments until he refined his system
- He delivered his method successfully to a world audience at the 1968 Olympics
- Every young high jumper after that time took up his method which persists even today after 45 years
- This was disruptive change in high jumping

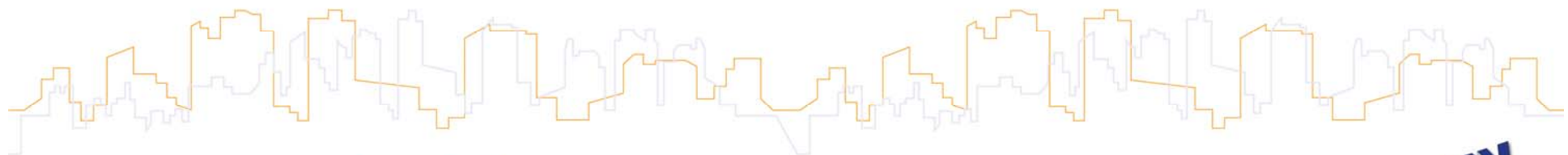


Four Convergent, Dynamic Trends

- **Technology**
 - BIM 3D/4D modelling
 - Other IT enabled technologies, e.g. laser scanning
- **People**
 - Older generation exited the industry in larger numbers after 2012
 - Younger generation entering - two key characteristics
 - Lacking in assumptions and opinions of how it should be done
 - Raised in a sophisticated, 3D, 4D IT environment – Games, Virtual worlds , etc.
- **Experience and Acceptance of**
 - Collaboration
 - Continuous Improvement
- **Lean Construction**
 - A Single Comprehensive and Unifying Approach
 - Proven in Construction



These have the makings for positive disruptive change



SKANSKA

 **mace**

 **COSTAIN**

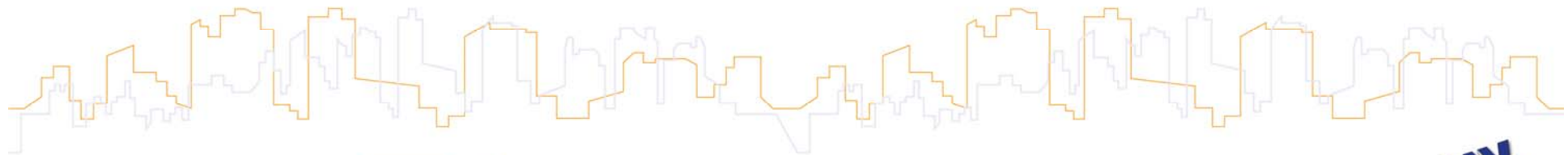
 carillion

 **Colas**

LCI-UK

What is Lean?

- Lean is a Business, Operational, Organisational and Developmental Strategy for High Performance and Continuous Improvement
- Which has Philosophy, Principles, Methods and Practices that apply to all elements of business management and development.



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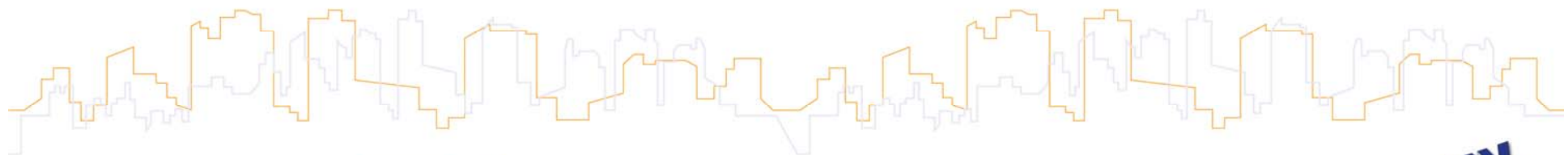
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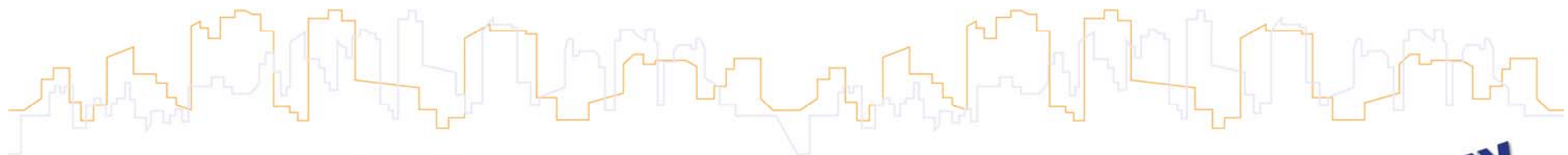
Lean Continuous Challenge is about:

- Challenging everything
- High Performance
- Sustained High Performance
- Collaboration not Competition, while challenging ourselves and each other to higher levels of performance
- A right balance of resources and reserves – Lean is not mean



What is Lean Construction?

The Lean Philosophy, Principles, Methods and Practices Adapted and Applied to All Elements of Construction



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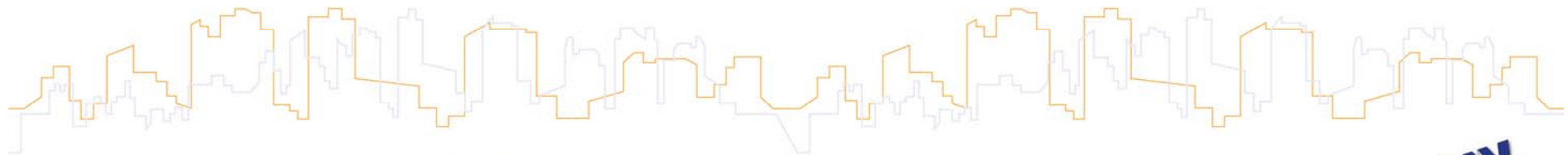
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Does Lean Work in Construction?

- Yes
- There is a proven pattern of success throughout every sector of the construction industry which you have been sampling today
- Lean is recognised by the UK government as an effective approach to business and process improvement



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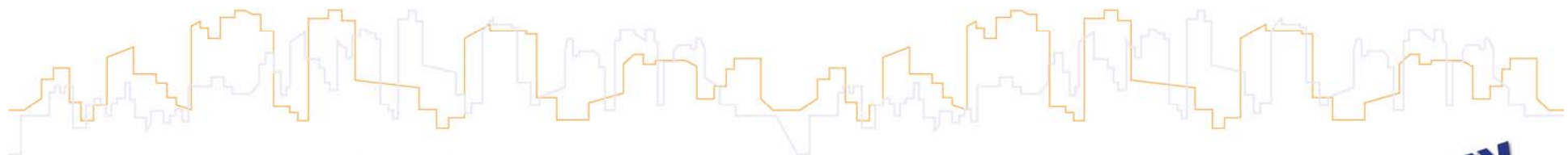
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Raising the bar

- Construction 2025 has set high level goals
- The Lean Construction Institute's strategy development paper "From Ambition to Realisation" outlines the creation of a deployable delivery strategy
- Everyone who has direct experience of Lean Construction knows that it is doable



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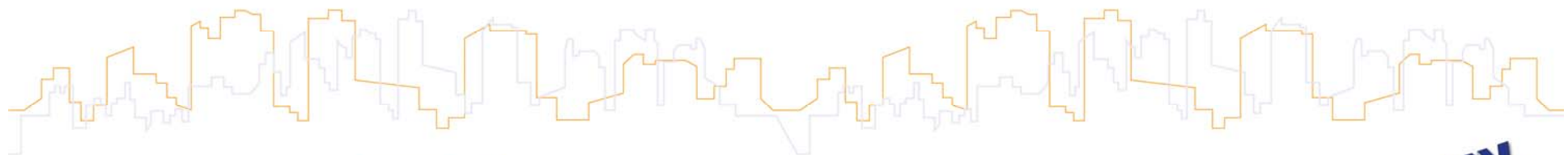
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The Pivotal Moment is Now

- The UK Construction Industry succeeded in designing, building and delivering a superior and sustainable infrastructure for the 2012 Olympics
- Our challenge now is to build a sustainable and superior Lean Construction capability and a world class construction legacy for the UK



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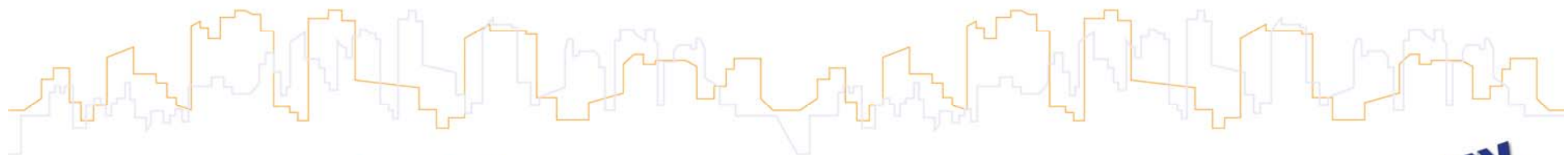
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Lean

A Single Unifying Approach

- Creating Value and Eliminating Waste in the Service of the Customer and Community
- Wealth is the outcome of this process



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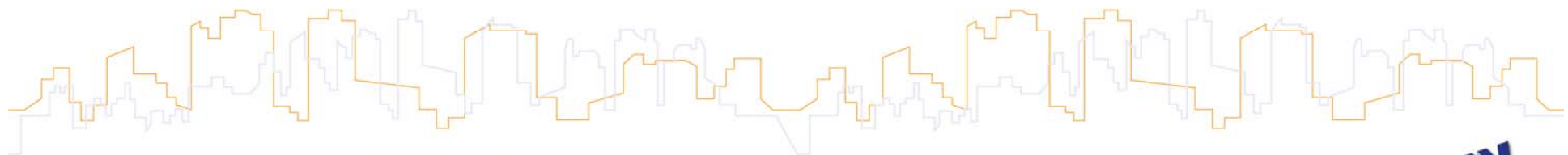
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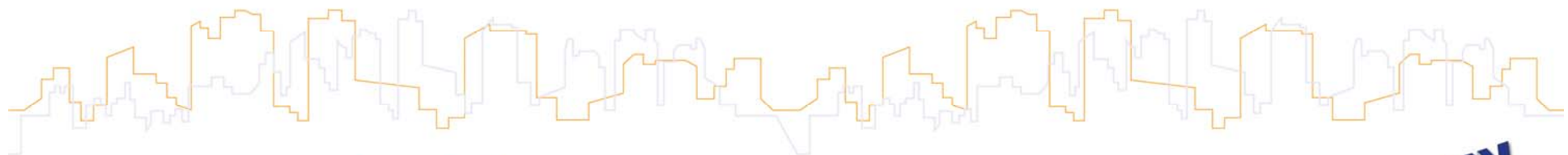
Getting over the bar



Fosbury Links

Fosbury You Tube videos:

- 1968 Olympics:
 - [http:// www.youtube.com/watch?v=Z_slwv6SAxc](http://www.youtube.com/watch?v=Z_slwv6SAxc)
- Interviews with Fosbury
 - <http://www.youtube.com/watch?v=WCCuEIEdSRg>
 - <http://www.youtube.com/watch?v=gGqQXDkpgss>
 - <http://www.youtube.com/watch?v=0uaVNmA9PqY>



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LCI-UK Summit

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2014

Lean Infrastructure

Meeting the challenges of Construction 2025

