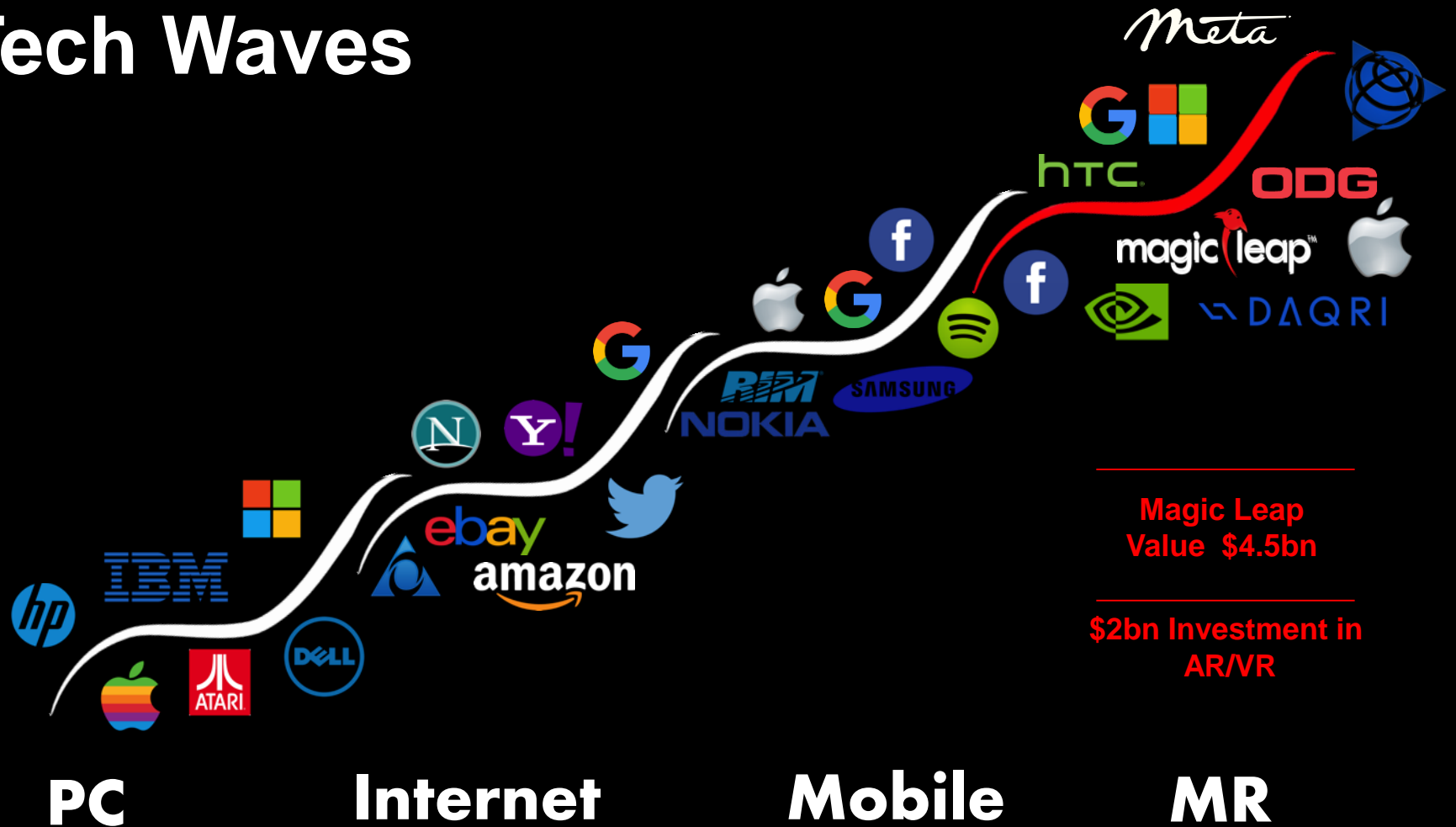


# Trimble Mixed Reality

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# Tech Waves



# Digital Realities...

## VR – Virtual Reality

Replacing your environment with digital content





# Digital Realities...

# AR – Augmented Reality

Enhancing your environment with digital content



# Digital Realities...

## MR – Mixed Reality

Merging the digital and the physical environments



# Trimble's First Mixed Reality Hard Hat



Patented Circa 1997



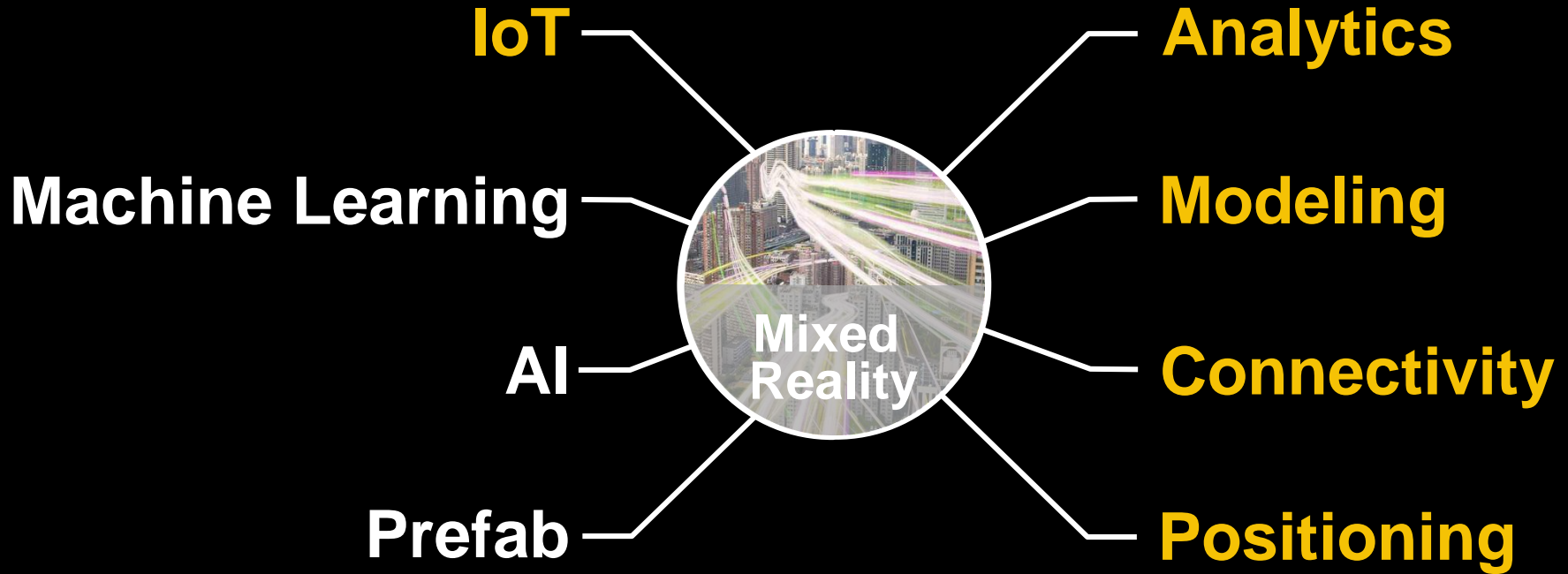
# Benefits of Mixed Reality

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# MR Synergy



Technology Trends

Trimble Technologies



Spatial Mapping



## Operation

Overlay as-built and meta-data onto real-world for O&M



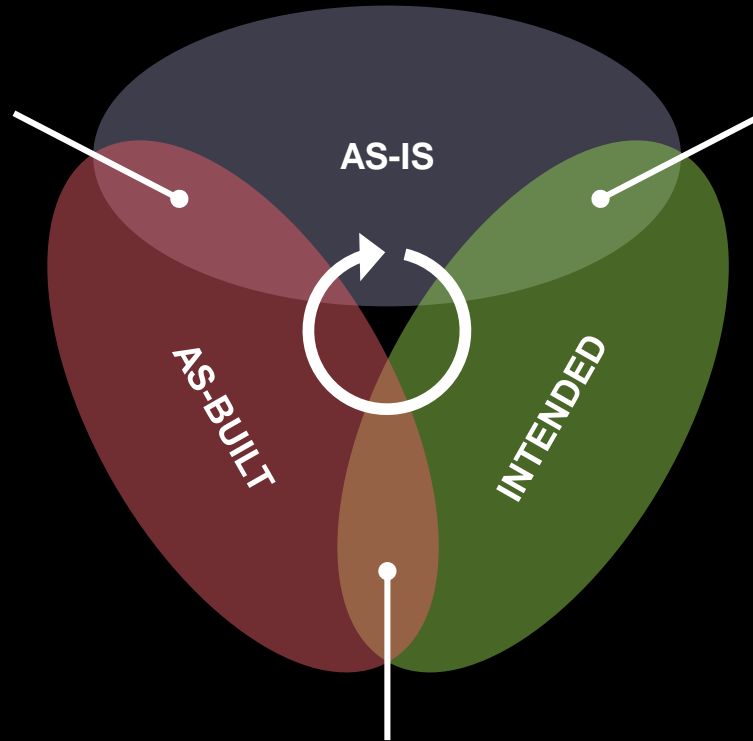
Trimble  
Operations

## Design

Visualize in-context design for iteration, review, and buy-in



SketchUp Viewer



## Build

Overlay design data onto project site for layout and QC



Trimble  
Connect



# The Architect

## Greg Lynn



*Mixed-reality bridges the gap between the digital and the physical. Using this technology I can **make decision at the moment of inception, shorten design cycle, and improve communication** with my clients.*

GREG  
LYNN  
FORM

# The Engineer AECOM

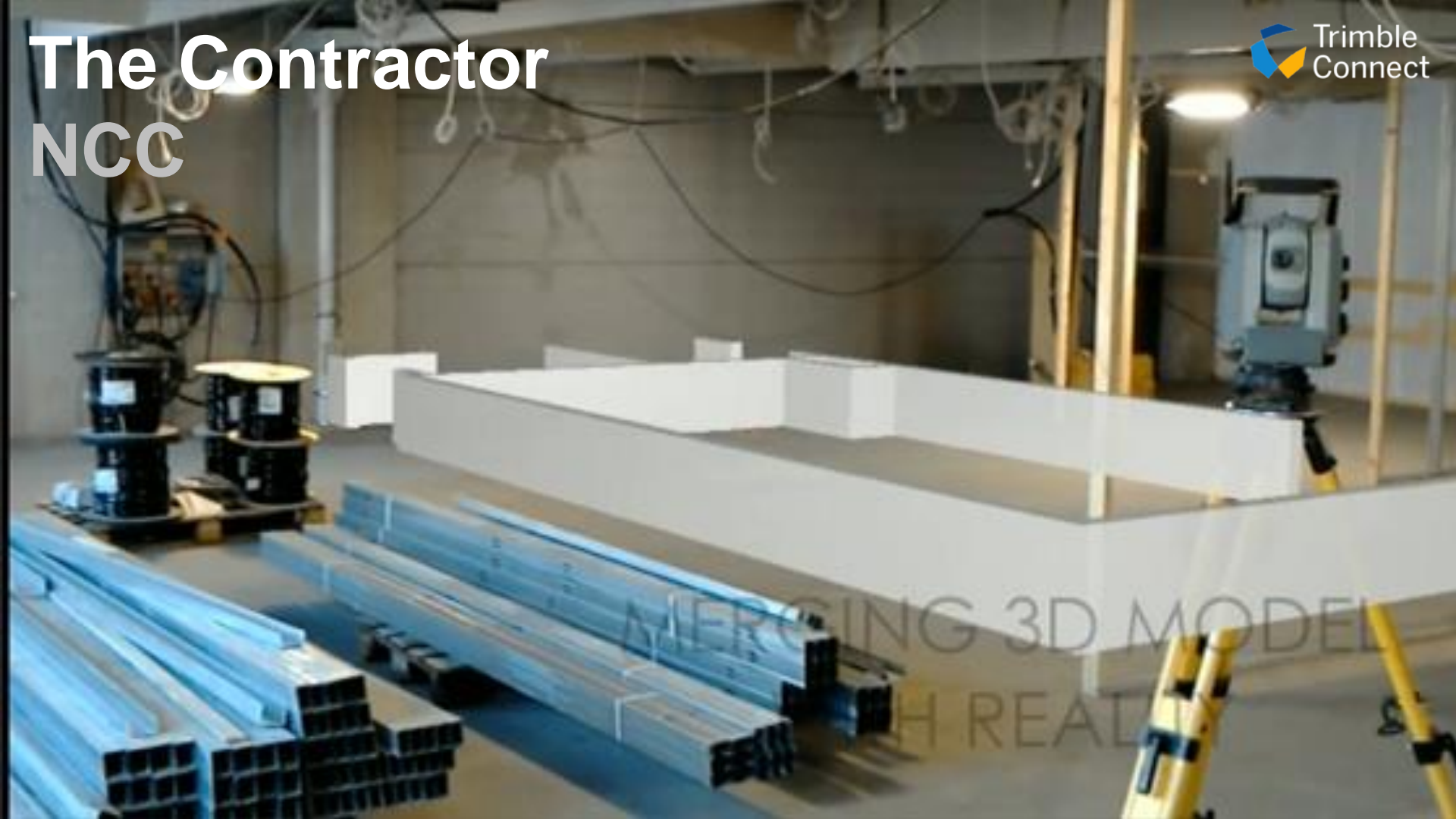


***Exploring complex structures in a mixed-reality environment has huge potential to accelerate the engineering design process***

**AECOM**



# The Contractor NCC



# Automated Progress Monitoring Cambridge

An aerial photograph of a construction site. A large, solid red rectangular building is the central focus. To its left and right, there are complex wireframe overlays in white and yellow, representing a 3D model or progress tracking of the construction. The ground is a mix of dark and light patches, possibly representing different materials or terrain. The overall image has a high-contrast, somewhat abstract appearance due to the overlays.

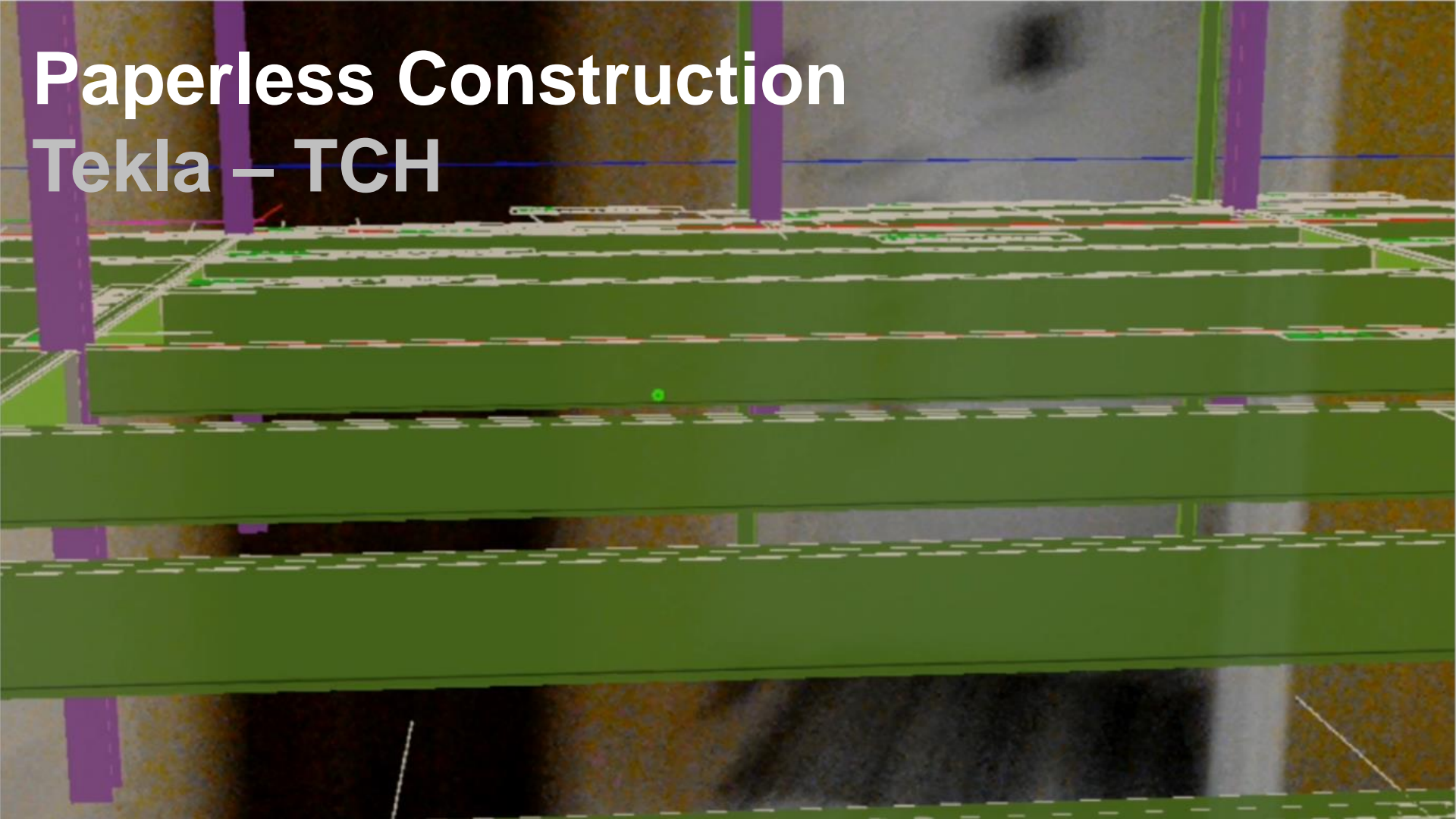


# Prefabrication



# Paperless Construction

## Tekla – TCH





*Replacing traditional and error prone workflows with a **more productive and accurate solutions***



The official hard hat solution  
for Microsoft HoloLens

ANSI-certified  
Endorsed by Microsoft  
Released in 2018

The image shows two white hard hats resting on a metal surface at a construction site. Each hard hat is equipped with a black sensor unit, identified as the Trimble Connect for HoloLens. The background is a blurred view of a construction area with various materials and structures. The text is overlaid in the center of the image.

Construction workers try  
**Trimble Connect for HoloLens**  
for the first time...



## The Trimble XR10 with HoloLens 2

The first device created with the  
Microsoft HoloLens  
Customization Program



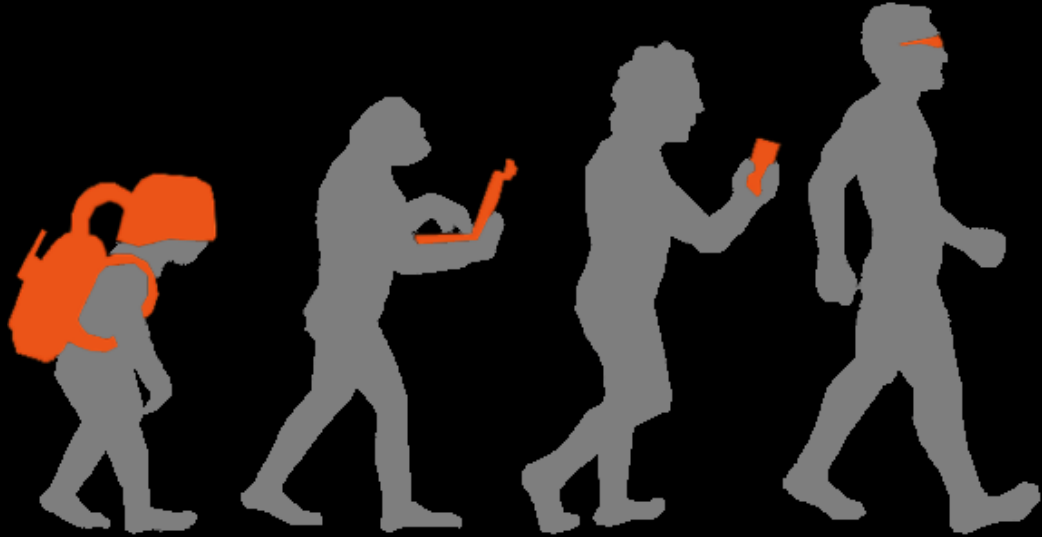
# Facility Management Brookfield



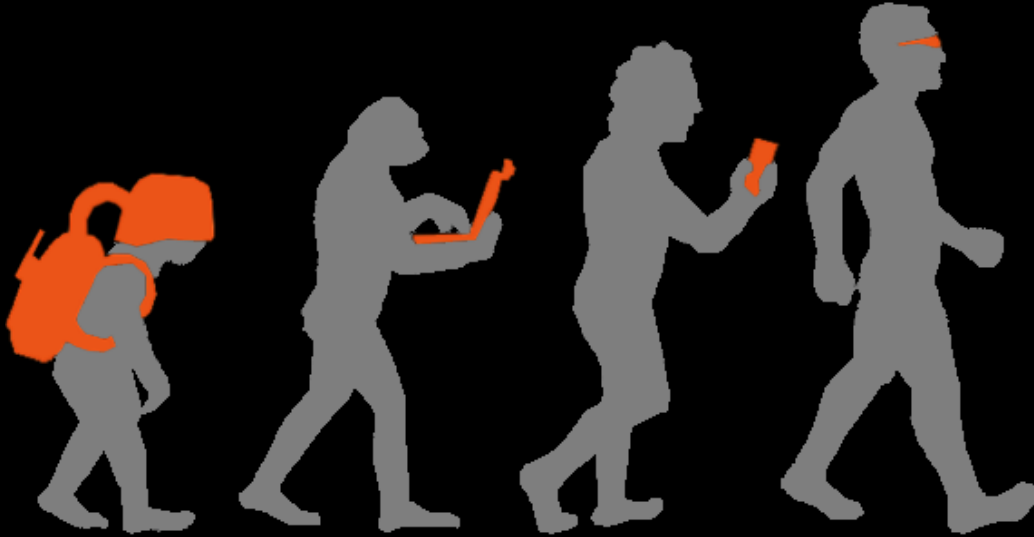
Trimble  
Operations



*Visualizing digital content in context to  
improve on-site **productivity, safety, and  
quality of work***



**What's next?**



# Thank You

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