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## Digital Construction Winner 2018

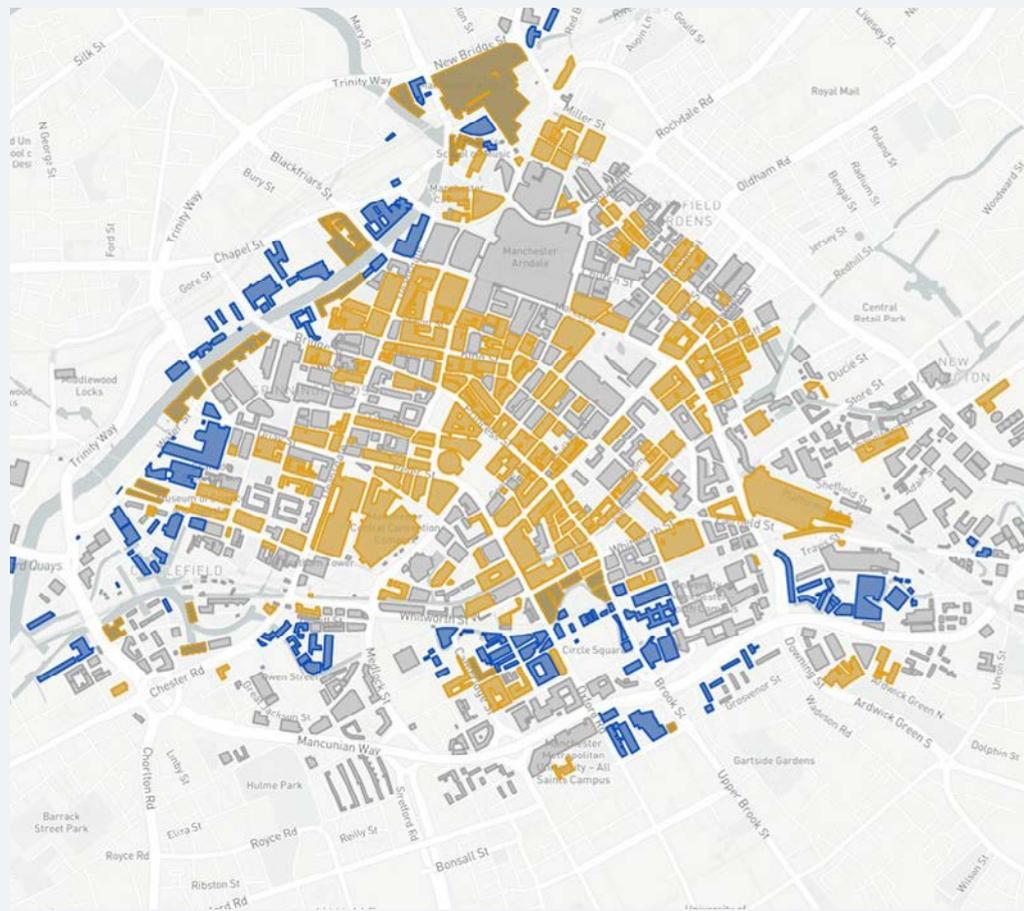
### VISUALISE

#### The Judges say...

This project addresses an industry-wide problem of connecting and integrating information from multiple sources. Collaboration with multiple stakeholders has helped to provide engagement and buy-in up and down the supply chain.

Organisations such as Skanska are responsible for building and managing/maintaining multiple infrastructure assets (energy, transport, urban and other systems) for local authorities, transport infrastructure operators, utilities companies and facilities such as hospitals and schools. These physical assets are often widely geographically distributed across a city/region and may be under, on or above ground level. Many assets are currently managed within 'closed systems' and based around asset type where data may be available but is not effectively utilised.

A project consortium led by Skanska with BRE, SMEs 3DRepo, Unit9, The Carto Group and asset owners (including Hampshire County Council and Great Ormond Street Hospital) utilised their in-house resources to deliver VISUALISE. This is a fully integrated system to support effective and efficient management and future construction of physical infrastructure assets.



**Contract value:** £1m project with £680k Innovate UK funding with balance funded by consortium

**Type of work:** Research project

#### Actions

- Consortium partners pooled their staff/skills, software/digital solution development capabilities, key infrastructure and supporting data, and industry-wide access.
- Developed a single environment for integrated data visualisation and analytics capability.
- Combined with Building Information Modelling (BIM) and 3D mapping enabled by GIS.
- Allowed stakeholders to understand project processes across large sites.

#### Impacts

- Better intelligence and functionality for asset managers leading to better asset management.
- Reduced risk of failure thereby improving security of supply.
- Improved lifetime performance and better value to asset owners.
- Estimated 8% saving in the cost of infrastructure asset management allowing for reinvestment and a more aligned strategy.

#### Lessons learned

VISUALISE enabled Hampshire Highways to understand weather patterns, landscape management and street lighting correlations. It identified that grass cutting activity near and around streetlights was more prevalent than other parts of the verges – the light was causing the grass to grow faster and more supply chain activity was required to maintain. Lowering the LUX output of the lights saved electricity, reduced the grass cutting regime and saved money.

The lessons learned from this first stage solution form the basis of the business plan to leverage commercial investment for development of a full solution; a unified, geospatially referenced web-based 3D interface that connects disparate information from massive infrastructure data sources down to individual BIM components for long term asset management and reports in real time.