Bridging the Physical & Digital Divide in Infrastructure Workflow

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Why Digitise?
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$10+ trillion

39%
Why Digitise?

How do we do more with less?

Optimised project decisions & automated processes
... looking across the full life-cycle ...
based on the best possible project information
The buildingSMART Context

More sustainable, less expensive buildings & infrastructure...

...through optimised decision-making & automation efficiencies...

...enabled by data fusion via open digital Standards & Services...

...created by the buildingSMART community.
How to Optimize Decision-Making?

Metaverse helps presentation, collaboration & modelling
- design & constructability
- operations & refurbishment
- hazardous activities
- unlocks human creativity

Digital Twins consolidate data into information & allow scenario analysis
- across life-cycles
- between applications
- amongst organizations
- up & down the supply chain
- real time with historical

Open Standards enable data fusion
- common global communication formats
- whole-life data accessibility
- machine-readable, allowing automation
Evolution of Open Standards

User Vision

1. Consistent data communication standards
2. Automated connectivity between applications
3. Ecosystem with seamless integrated decision support

bSI Mission

1. Drive Adoption of current standards
2. Deliver & Drive Adoption of enhancements to current standards
3. Design, Deliver & Drive Adoption of next generation standards

Deployed Standards & Services

1. Automated Simulations
2. Ecosystems of Digital Twins
3. Next generation Data Standards, with built-in modularity, extendibility & connectivity (IFC 5); Certification ecosystem

Interface Standards (APIs)

Linking and Extendibility of Data Standards (bSDD, IDS)

Current Data Standards (IFC, UCM, IDM); Professional Certification

When

2022 2023 2024 2025 2026 2027
openBIM in Action – Auckland Airport

- 100+ models geolocated & exported to IFC
- 250,000+ existing structure elements modelled
- Merged BIM+GIS property sets for lifetime management
- Increased innovation; reduced time & cost

“openBIM enabled us to do more with less by being free to work between multiple tools ... It puts the output at the centre, which in the reality of a client organization is what matters most.”

Karl Fitzpatrick, Auckland Airport
Looking Ahead

How close are we to this digitalized world?

What are the real-life success stories?

How can we accelerate progress?