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Digitizing New Zealand's Innovation Agency: A Client's Journey into BIM360

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Callaghan Innovation

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Learning Objectives

- Discover procurement methodologies for the successful appointment of consultants and contractors in high-trust digital environments.
- Discover the benefits and challenges of implementing ISO 19650 on small to medium-scale projects.
- Discover the benefits and challenges of working in a high-trust “live” BIM 360 environment that’s hosted by the client/building owner.
- Learn about unexpected client and stakeholder successes from adopting a high-trust, cloud-based, collaborative environment.

Description

This presentation is targeted at building owners, BIM managers and project stakeholders involved in collaborative design and construction projects.

Speakers

Hugh Evans is Design Lead for Callaghan Innovation and responsible for a team involved with the \$130m redevelopment of the Gracefield Innovation Quarter (GIQ) site, with implementation of new methodologies and technologies, to serve as an exemplar for innovation in the construction sector.

Hugh is a Chartered Professional Engineer with a track record of delivering leadership and technical advisory for multidisciplinary projects in Australia, New Zealand, Norway, Singapore, UK and USA. He has consulted on defence, corrections, museum and government commercial property projects in New Zealand that featured an early adoption of BIM Level 2.

Jason Howden is Associate Principal and Digital Innovation Leader for Warren and Mahoney, an Australasian architecture practice with 300 staff across 7 studios throughout New Zealand and Australia. For 25 years Jason has been at the forefront of BIM, leading its development, promotion and education around the world.

Jason is a complex-project specialist who has consulted on some of the world's largest public service facilities, including hospitals, laboratories, prisons and airports, with values ranging from \$100 million to over \$1.5 billion. As W+M's Digital Innovation Leader he works closely with our clients to develop bespoke technologies and processes to deliver the best possible outcomes for their projects.

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1. Discover procurement methodologies for the successful appointment of consultants and contractors in high-trust digital environments.

Procurement plans and planning is in alignment with the GIQ Project Delivery Framework, this has been developed across several standard frameworks and staged gateways to comply with NZ Government Property Procurement Guidelines and Procurement Rules.

Procurement Planning

- Governance Approvals
- The Treasury Better Business Case model
- Procurement stages
- New Zealand Construction Industry Council Guidelines
- Business input stages
- Managing Successful Programmes MSP™
- Prince2 project stages

BIM Pilot - Procurement

The opportunity to implement new BIM approaches early on was considered imperative to fully developing the BIM tools and capabilities across the entire range of GIQ Projects.

It was also important to communicate the planned work at GIQ Site and to engage with a wide representation of the consulting and contracting market, to build an understanding of the opportunities that presented across the GIQ projects.

For the first GIQ Project we undertook a two-stage procurement process, during which we shortlisted based on high-level capabilities, but reserved the opportunity to open to a wide audience of potential respondents.

Registration of Interest (ROI)

This enabled us to provide a summary of the project and a high-level overview of our primary prerequisites to enable a better understanding of the capabilities in the market.

We took the approach (as voted on by the GIQ team) to place individual ROI's for Architecture, Building Services, combined Structural, Civil & Geotechnical and Fire Engineering, allowing specialised organizations to respond.

- The following was issued:
 - Project summary and very general project information requirements.
 - Define stage drawings and extracts from GIQ Digital Twin (specific to discipline being appointed).
- We assessed on:
 - Project summaries - prior experience, project size and value.
 - Proposed personnel - capability & capacity to undertake the work.

3D/ BIM experience, including alignment with ISO 19650 and an example BIM Execution Plan (BEP).

Request for Proposal (ROP)

For the second stage we invited shortlisted consultancies to respond to a Request for Proposal, with response in the form of a presentation.

- The following was issued:
 - Organisational Information Requirements (OIR) & Project Information Requirements (PIR).
 - Exchange Information Requirements (EIR) & File Naming Conventions.
 - Conceptual Drawings (Elevations and Sections), Geotechnical, Fire, Accessibility and other reports.
 - Schedule of Pricing.
 - Series of questions about:
 - Innovation, design philosophy & safety in design.
 - LOD350 3D Model, BIM protocols and systems, with reference to ISO 19650.
 - Experience deploying Autodesk BIM 360 for purposes of design collaboration
- We assessed on:
 - Presentation and responses to plain language questions, PIR.
 - Named personnel.
 - Pre-appointment BEP.
 - Value.

Summary

The two stage approach allowed for an open market interaction, and in the second stage we were able to meet and discuss the project with the presentation team, providing the same Q&A and information to all parties and gaining a real understanding of who would be undertaking key roles, such as the Design Management, BIM Lead and Model Element Author roles.

2. Discover the benefits and challenges of implementing ISO 19650 on small to medium-scale projects.

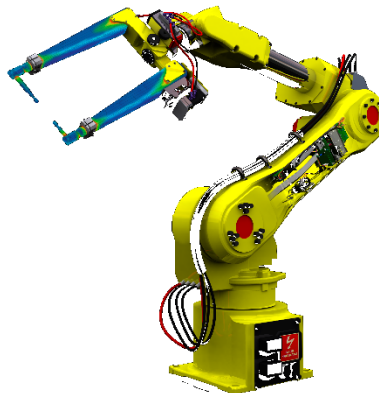
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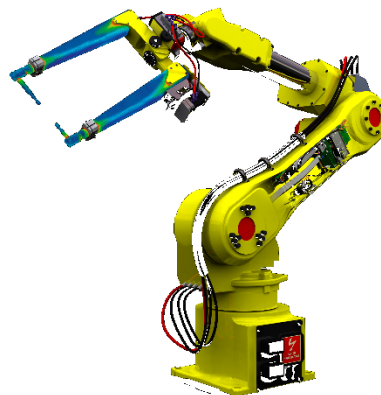
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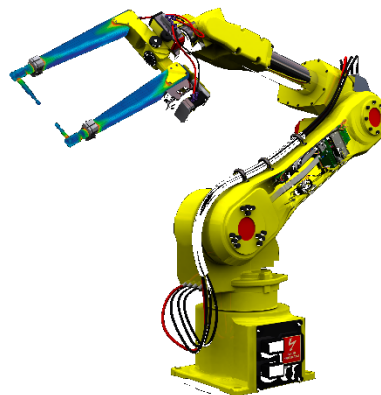
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