



Who is Investa?



- > Commercial Office Specialists
- > 43 commercial office buildings
 Australia wide
- > Over 1100 tenants
- > Over 1,000,000m2 of commercial office space
- > Manages assets worth over \$8.7billion
 - ICPF, IOF, LAT
- > Portfolio & Asset Management
- > Commercial Development

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⊕Bris**BIM**×

ASSET LOCATIONS

- Brisbane 8
- Sydney 24 Canberra 1
- Melbourne 6
- Perth 3

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259 Queen St, Brisbane

120 Collins St, Melbourne

40 Mount St, Sydney

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What do we want from BIM?



- Utopia!
- Fully integrated As-Builts and O&M
- Accurate geometric representation

 - Wayfinding tool
 Precise equipment locations
- Easy access to accurate, concise data
 - Mechanical equipment schedules
 - Fire door schedules
 - Commissioning data
 - Updatable database
- Tenant fit out reckoner



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Where are we coming from?



- Coca Cola Place (The ARK)
- Investa successfully delivered an award winning A-Grade 28,500m2 office building
- Completed May 2010
- The first full BIM commercial office project in Australia
- What happened post completion?

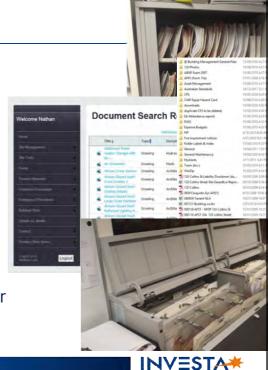


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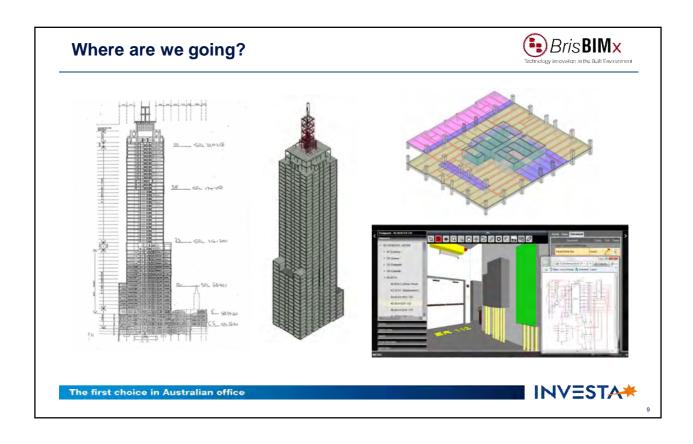


Where are we now?

- The Facilities Management industry
 - Barcodes and traditional CAFM systems
 - Perceived as a little mysterious
- Investa
 - Viewed as a key support function
 - "Traditional" drawing management
 - Version control issues
 - Non standardised information storage
 - Microsoft Sharepoint/Windows Explorer



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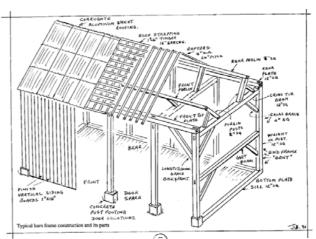




Design Overview



- Traditional design process had been employed
- Architects model was in 3D, others were doing whatever worked for them
- Standard coordination issues, but what's the difference!
- Architects model wasn't really being used by other disciplines



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Construction Overview

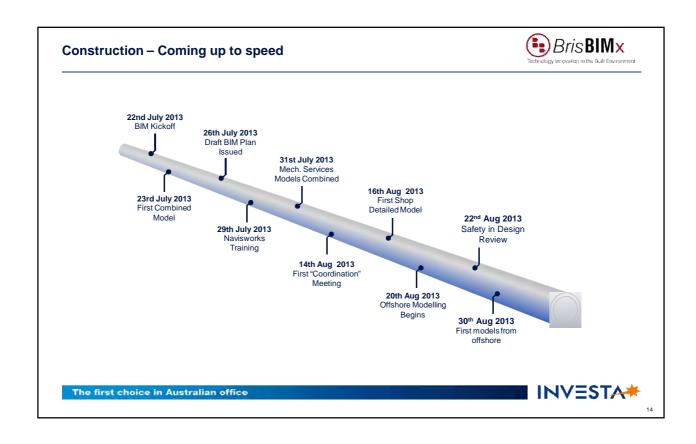


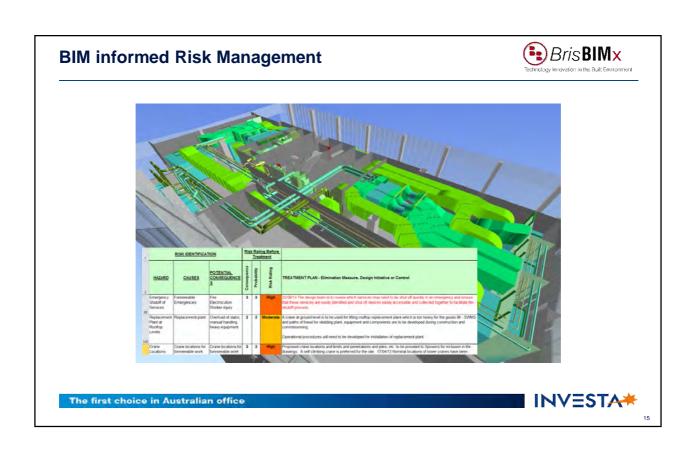


- BIM started 7 months after construction had begun
- Internal BIM manager was appointed
- Culture change exercise for the builder Educate and enable key individuals
 - Then let's worry about COBie
 - Then tenant fit-outs
 - Then tie it all together
 - Hopefully...

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Facilities Management



"...an integrated approach to operating, maintaining, improving and adapting the buildings and infrastructure of an organisation in order to create an environment that <u>strongly supports the primary objectives of that organisation</u>."

Bev Nutt, 2004

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What does an FM do?



- Maintains the physical asset
 - Hard and Soft services
- Ensures the safety of occupants
 - Security
 - Emergency Management
- Ensures compliance of the asset
 - Essential Services
 - Compliance with local authorities
- Caters to the needs of occupants
 - Occupancy churn
 - Building reuse



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Gathering Intelligence



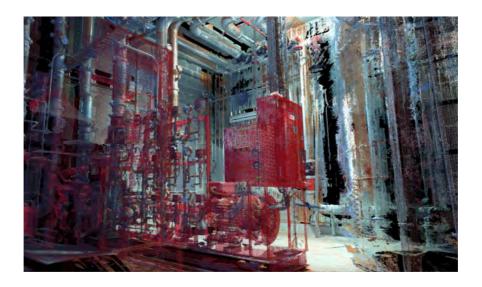
- BIM for Operations clause was contained with the Development Agreement It was a little loose...
- Needed to capture and frame content to suit a "yet to be defined" home
- BIM/FM software procurement strategy and timing was still to be understood
- Interactive O&M's needed to be migrated into the chosen BIM/FM software How?
- COBie The Saviour?

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Model Verification – Point Cloud Scanning





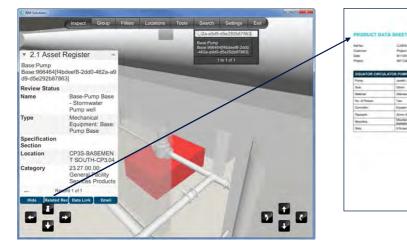
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Asset Data





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Ok, now how are we going to use it ..?



Ran a software RFP with AECOM – November 2014



- Define how we wanted to interact with the model and data:
 - -Functional requirements: Vendor System, Usability, Aspirations
 - -Existing system interoperability
 - -Hardware requirements: Needed to fit corporate IT rather than a specialist environment
- This was a challenge for the software vendors, as well as Investa
- Turned into a bespoke software procurement process that challenged the business (quite different to a business as usual activity)

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Was it a Success?



- Well, yes. Kind of...
- We gained a clear understanding of our own needs
 - What is it that we're trying to achieve? And;
 - What do we need to be able to deliver it?
- Debunked a number of misnomers of lifecycle BIM
 - There is no silver bullet



- We have a working knowledge of "friction points" within the D&C phases
- Developed a solid understanding of BIM within the AEC Industry

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What were, and are the Challenges?



- Attempting to establish a BIM process after the project had commenced
- Aligning expectations understanding each others perspectives
- Multi formatted authoring files CADduct, Revit, CAD
- As-Built issue lead times
- A continual learning process/culture change for our business:
 - Investa Design and Construction BIM standards
 - Tenant model management living, breathing models with multiple authors, security of published models
 - Ongoing base building model management On-costs?
 - Completely new way of interacting with tenants and R&M contractors
 - Sub-Contractor/Design Engineer BIM capability

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