Foodstuffs HQ and Distribution Centre
OpenBIM in Handover
Supporting Evidence
Each project was delivered by separate project teams, however one client appointed Information Management Team oversaw the information exchange on both projects. Their role was critical in ensuring each discipline team on both project’s had correctly aligned their models. This alignment has meant that both projects seamlessly federate together in IFC based viewers or authoring tools capable of importing them.

The two buildings share a common cooling system, with the warehouse containing the main chillers. Having an information manager coordinating between the two projects helped ensure that the project’s information interfaces, like this example, were managed effectively.

Largely overshadowed by the office and warehouse, a third and smaller gate house building was also constructed, to house the security team.

The project is impressive in scale, with the warehouse becoming New Zealand’s largest distribution centre in terms of square metres. While being ten times smaller in size, the office building is not overshadowed by the warehouse, due to its impressive arched roof.

Underground services and structures, such as foundations and piles, were also modelled and verified during construction.
The Head Office
Without identifying clearly what you want as a client, you will not have a successful BIM process through to operations.

The Auckland Airport Asset Information Delivery Manual (AIDM) was a key contract document, which outlined the requirements for any BIM use on the Foodstuffs projects. The Lead Appointed Parties on each building project responded to the AIDM’s requirements and incorporated these into the project specific BIM Execution Plans.

OpenBIM was a key requirement for information delivery to the client and is clearly stated in the AIDM. The overarching approach was not to strictly define the work processes of the supply chain, but instead enable them to choose the best tools and processes for the job, provided both native and IFC models are delivered. During design phases, IFC exchange was more than sufficient for us as client to view progress and see the impact of future construction on our operations.

The document gave clear guidance on model location, asset information, classification systems and outlined the expected processes.

The Foodstuffs project is the first Auckland Airport project that has utilised the AIDM from the start of the project to handover.
The Information Managers on the project established and maintained a Model Element Authoring Schedule throughout the project and used this to review model content.

Through the As-built phase this the process was for the native model author to review their exported IFC file before submitting it to Revizto for further independent Quality Checking by the Information Manager. It was each parties responsibility to update the table to indicate if they believed the models complied with what was agreed in the project BEP.

If the model author indicated that the model complied but the information Manager disagreed, then any issues were noted at a high level in the MEA table and detailed issues were made within Revizto. The review process would continue until all relevant parties were in agreement, or a compromise was accepted, for one reason or another.

The upper left image shows that the Fire protection was complaint. While the Bottom left Image indicates that the Warehouse Architecture models had some issues that needed addressing. These were subsequently rectified.
A key part of this project was to ensure that the models used through construction were audited on site to verify what was modelled against what was built. The Information Management team owned this responsibility and established Revizto as the tool to federated IFC models and take them to the field using mobile devices. In many situations photos were captured and associated to issues to provide more context to the modelling teams tasked with resolving the issue. Close to 1000 issues were identified during site inspection, all of these were closed out.

Example 1

Identify issue on site and assign to be resolved

Attached photos showing as-built situation to aid modeller

Revise native model to reflect as-built situation

Update IFC to Revizto and close out issue as resolved.
On Site Verification

Example 2

- Issue identified on site by Information Manager and assigned to be resolved.

- Attached photos showing as-built situation to aid modeller.

- Model revised and re-shared to Revizto as IFC. Additional markups made.

- Final as-built model update.
The client established Aconex as the PDMS at the beginning of the project for all project teams to publish documents to, including models. This platform was not used heavily in terms of the BIM process as the project team wished to use Revizto for federating and coordinating models through the as-built process. Aconex was therefore mostly used for official data drops and communication between the projects teams and the client.

As openBIM was used, IFC models that were published to Aconex could be viewed online by the entire project team.