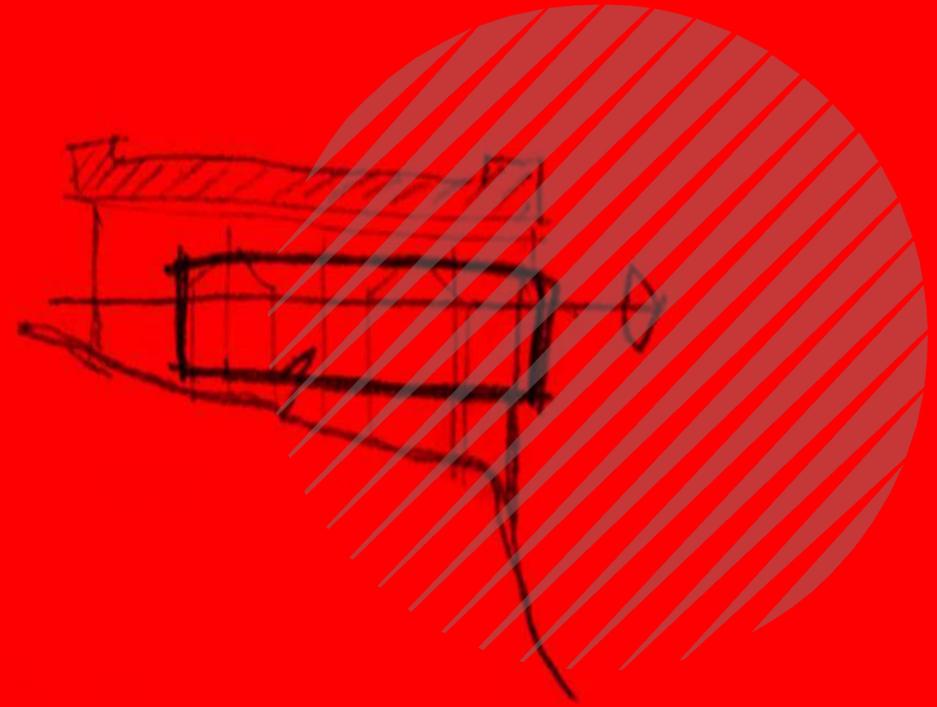


Building Information Model Client impact

Opus Architecture

Construction Clients Group Meeting
24 September 2008

Presenters:
David Ironside
Stefan Geelen



Opus Architecture

www.opusarch.co.nz



BIM is More



- ❑ BIM is more than the creation of a set of construction drawings. It is a data base offering huge potential to our clients.
- Costing
- Scheduling
- Performance Simulation
- Code Checking
- Visualisation
- Programming



Changed Expectations



- ❑ Ease of early visualisation
- ❑ More information up front, and thus change to traditional fee structures.



Office Fitout.



Changed Expectations



- ❑ Better integration across disciplines leading to savings in construction issues and thus costs – Queensland study 60-90% of variations from “poor” documentation (10-15% of building costs).



Changed Expectations



- ❑ Buildings are normally prototypes. It is better for the client to pay a little more for the construction of a virtual building and save on actual building costs.



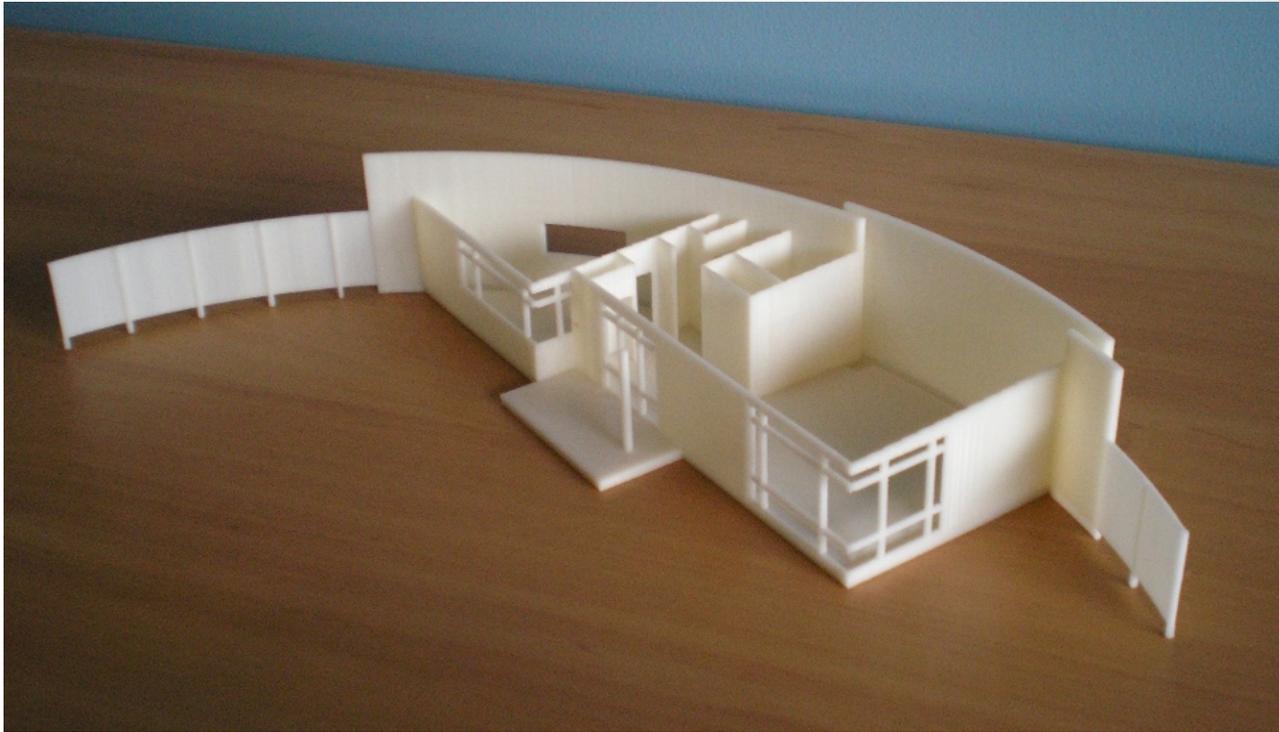
Changed Expectations



- ❑ For facility owners there is the potential to turn the construction BIM into a Building Management Tool.



BIM to 3D Printing



Hastings District Council Waste Water Info Centre

Building Information Model



What impact does it have on you the client?

BIM and its impact on the client



You the client have most to gain from engaging a team who will design, document, schedule, estimate, programme, construct, operate and maintain your asset throughout its lifecycle through the use of a Building Information Model

BIM and its impact on the client



- ❑ Whole life cycle approach
- ❑ Better results for the client through closer collaboration
- ❑ Early client understanding of the project through 3D imaging
- ❑ The Revit integration with other CAD packages
- ❑ Reduced risk
- ❑ The skewing of the traditional fee expenditure curve to the front end

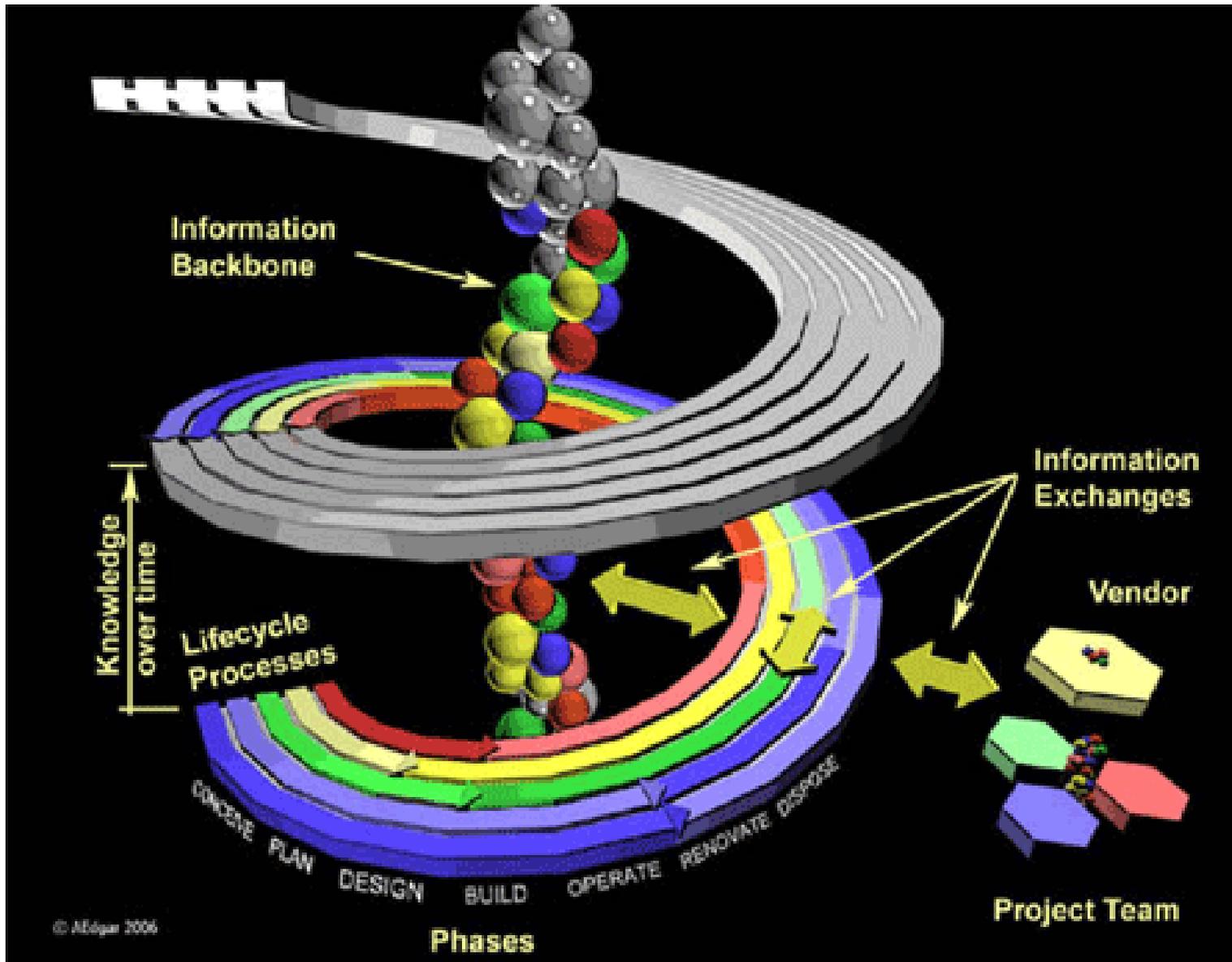
BIM and its impact on the client



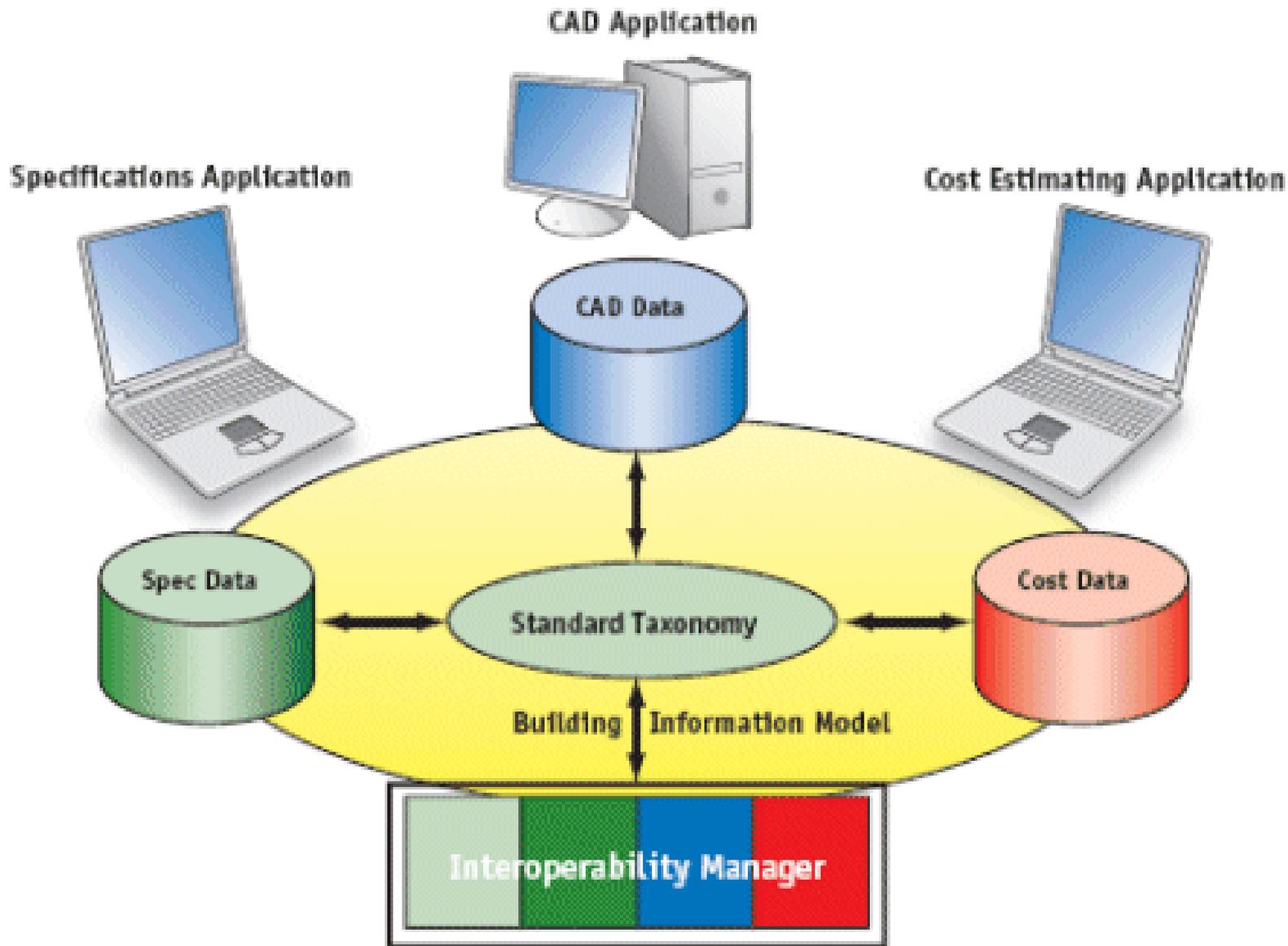
Whole life cycle approach

- Whole life cycle approach
- Support smarter, more sustainable design through the accurate analysis of materials, quantities, sun position, and solar effects.

Whole life cycle approach



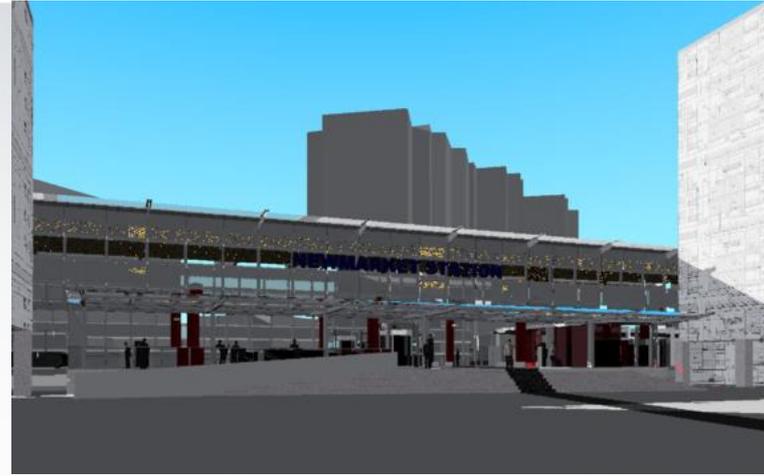
Whole life cycle approach



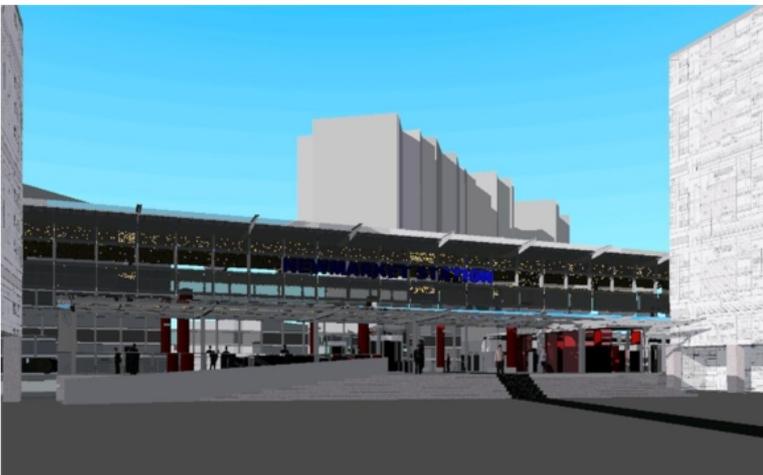
Solar shading studies



Winter Equinox 8am



Winter Equinox 10am



Winter Equinox 3pm



Winter Equinox 5.15pm

BIM and its impact on the client

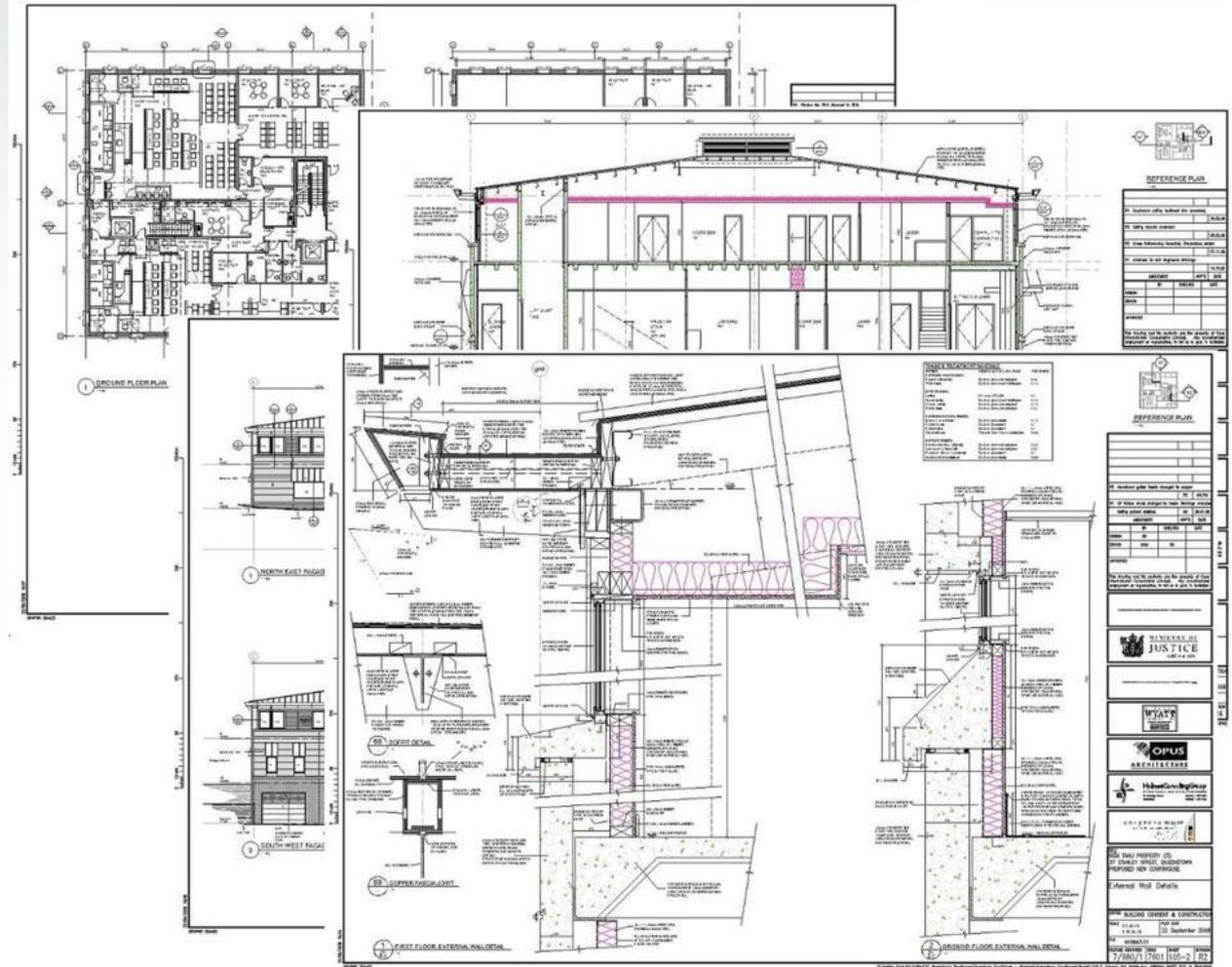


- ❑ Better results for the client through closer collaboration
- ❑ In a nut shell building information modelling translates the design into a **SHARED LANGUAGE** of design intent and construction solutions, budget and project timeline:
- ❑ The advantages of a shared language between the design team are as follows:
 - Better coordination and quality
 - BIM eliminates defects caused by un-coordinated or poorly detail drawings
 - Better coordinated drawings means less problems on site with clashes reducing cost variations

BIM and its impact on the client



- ❑ Traditional CAD drawings:
- ❑ FLAT
- ❑ Hard to coordinate



BIM and its impact on the client



- ❑ BIM model:
- ❑ Easy to understand
- ❑ Coordination made easy all disciplines working within the one model

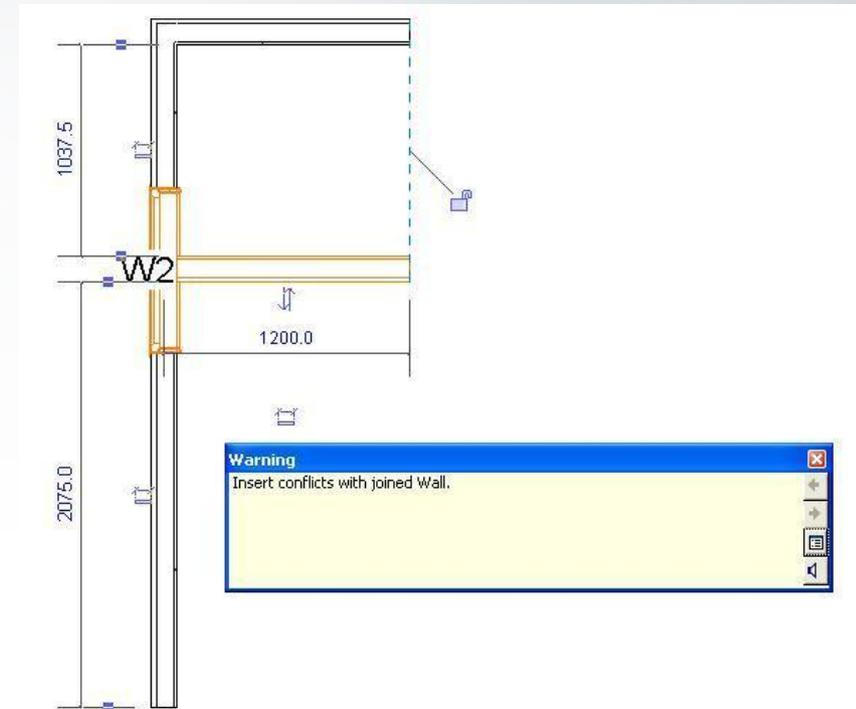


Examples of better coordination



- ❑ The BIM software we use is Revit and it manages clashes between objects such as walls, ductwork, beams etc

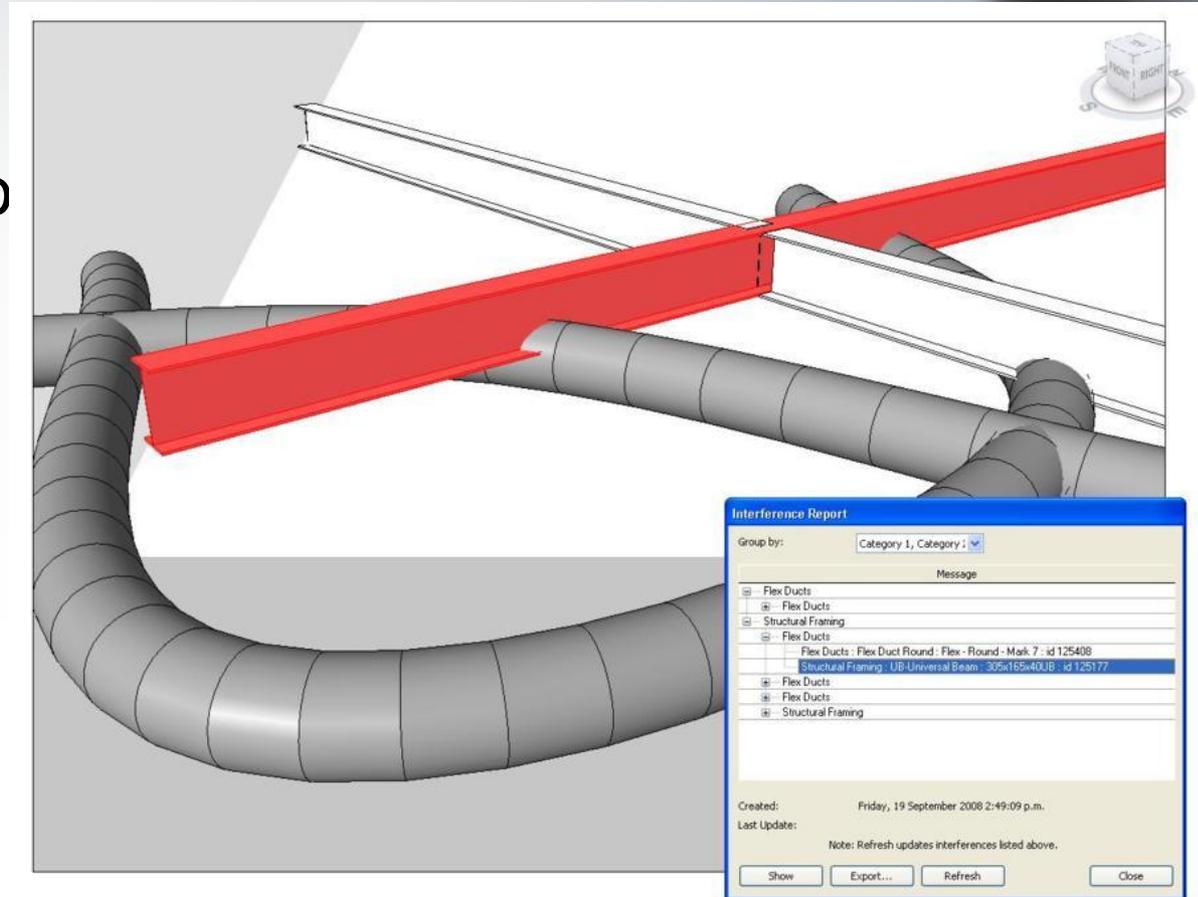
- ❑ First example Revit flags a warning telling the user that the window clashes with a wall



Examples of better coordination



- ❑ In second example Revit has been told to do an interference check and it has flagged a collision between a structural beam and a mechanical duct.



BIM and its impact on the client



- ❑ The skewing of the traditional fee expenditure curve to the front end
- ❑ Seamless integration of designs and documentation is key to driving project success, as is effective collaboration across teams and geographies. Revit platform delivers this in conjunction with streamlined processes and effective workflows ensuring designs are created and delivered efficiently.
- ❑ This process has an impact on fee expenditure.