

Getting products specified in a digital world.

Luke Johnston

IGS - BIM Solutions

www.igsgroup.com.au





About IGS

What is BIM?

What is BIM Content?

BIM & Specification Strategy

Manufacturer BIM Technology Examples

Associated Technologies & Applications

Agenda



Company Overview



- Established in 2009, IGS' services include:
 - BIM Content Creation for Building Product Manufacturers, Architects, Engineers & Contractors (AECs), specialising in Autodesk Revit
 - BIM Content Management Strategy and Software for AECs
 - BIM Content Distribution for Manufacturers
 - Visualisation / Virtual & Augmented Reality
 - Custom Product Specification / Configuration Software Development
- 75+ Manufacturer Clients Globally
- Highly Engaged with leading AECs globally (Including. IGS 'BIM Advisory Panel')



Manufacturer Clients





































































































































Industry Engaged







About Me



- Managing Director IGS
- Previously 8+ Years Marketing & Development Manager Britex
- Co-founder MelBIM
- Contributor:
 - Australia & New Zealand Revit Standards (ANZRS)
 - Collaborate ANZ
 - BuildingSmart





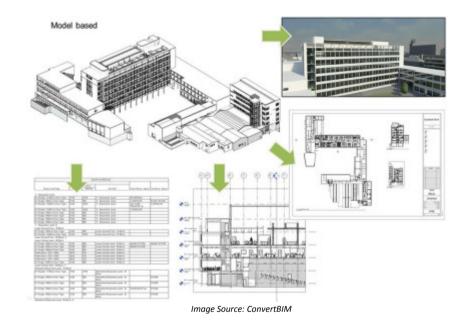
BIM (Building Information Modelling) is an intelligent <u>3D model-based</u> <u>process</u> that gives architecture, engineering, and construction (AEC) professionals the <u>insight and tools</u> to more efficiently <u>plan, design, construct, and manage</u> buildings and infrastructure.



'The Single Source of Truth'



- 2D Drawings: (Plans, Elevations, Details)
- 3D: Orbit, Render, VR, AR
- Schedules
- Costing
- Phasing
- Building Performance
- Building Analysis
- Clash Detection
- Manufacturing
- Asset Management
- Renovation / Demolition







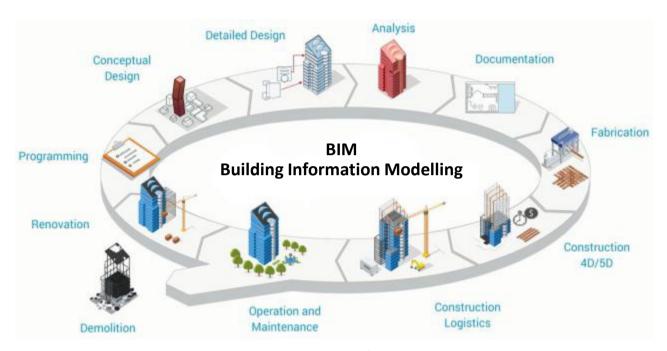


Image Source: tase.be



BIM Software 'Ecosystem'





Image Source: parametricmonkey.com





LOST INFORMATION & INEFFICIENCY ACROSS THE BUILDING LIFECYCLE



\$16 BILLION: THE COST OF INFORMATION GAPS

"Nearly \$16 Billion Lost <u>Annually</u> Due to the Inoperability of Data Between Architect, Constructor, and Owner" –N.I.S.T.

Why BIM?



BIM Content / Data Formats















?



"BIM Content - The Digital Building Blocks to Generate BIM Data"

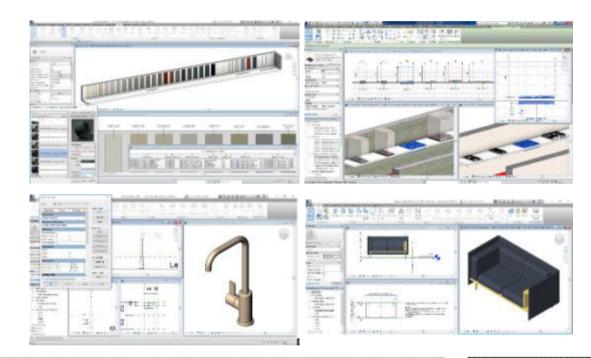


Data (Graphical)

- 2D
- 3D
- Materials

Data (Non-Graphical)

- Supplier Information
- Product Identifiers
- Performance Criteria
- Physical Properties
- Classification
- Cost





Example BIM (Revit) Library



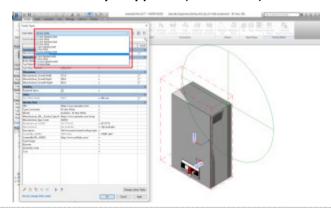
3 x Revit 'Families' (RFAs)

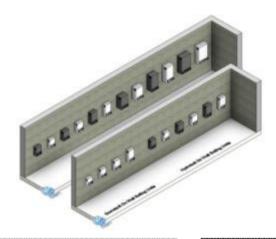


1 x Revit Project (RVT)



= many 'Types' (variants)







Example BIM (Revit) Library Outputs



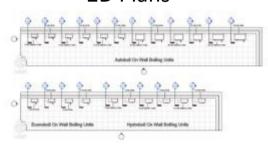
3D











Schedules (FF&E)

Family	Type	Model	Vanulation Sys	Sawheler	19%	Type Comments	Description	Vendelure_IR	Varuholom 1	ng Earybeisen	or Sevietors	ve libraledure
Specially Couloment, Felling Unit, Zip, Sn. Wall, Autoball	3 Litre Stationa Steel	Autobel - 1 Line Stainless Steel	10000	Te Australia	Management of	3 Live Shainless St	Visit reunted trata	Marris on the	911	140	434	386
Speciety Equipment, doing (mit, 25p., dn-Vret, Autobol	21,01919789	Autosol - 3 Little filmbe	2000002	ZD-Australia	MERCHANN DO	2 Litry White	visit rounted insis	HTDL/WWW.50	300	180	401	209
Specially Equipment, Stating 2nd, Zip, Con Well, Autobald	1 Life States Steel	Autobot - S Little Standard Sheet	208081	Zip-hushelin	Hips Dwwn Jip	Didde Statemen St	Yes reunted nets	Hips Person Jip	900	200	401	210
Epirolety Equipment, Stating Unit, Zip, Co. Wall, Autoball	State White	Autobed - 5 Litre Write	106062	Zin-Justinia	Myse Parameter	S Live Photo:	Visi reunitri traia	High Parties do	360	208	461	318
Specially Equipment, Enling (Int., Zip., On-Wall, Autotol	T.5 Utre Otention Sheet	Autobol - 7.5 Life Stainless Sharl	307964	Zip-Australia	Migrative op	7.5 Litre Stanker	Visit rounted insis	PROFITANT SO	360	294	536	216
Specially Squarest, States that Joy Children, Autocol	T31499 WM9	Autoor - 7.9 Little filming	201200	ZD-Australia	PERSONAL PROPERTY.	COLUMN YORK	Yest rounted ness		900	200	370	210
Specially Equipment, Stating Sell, Zip, Sn. Well, Autoball	16 Live Sparleys Sheet	Autoted - 10 Live Stateless Steel	311000	To Justinia	Hips French	III Live Daniess I	Cital recented train	High Party ale	360	308	400	260
Specially Equipment, Ending (Int., Tip., In- Well, Autobox	15 Litre White	Autobol - 15 Line Ninbe	94962	Zip-Assorbile	HOSPINSON PRO	15 Litre Fibrie	Vial rounted insis	reference on the	900	504	1000	300
Speciety Equipment, Doding thits, Zo, Chr. VM, Autosof	25 Life Statemen Sheet	Autocol - 25 Litre Stanlese Street	303057	DD-Australia	HERRITAY DO	25 Life Statemen S	Visit mounted india	PROGRAMM 20	360	384	100	290
Specially Equipment, Stating 2nd, Zip, Sn Well, Autoball	20 Libra White	Autobed - 20 Little Write	309060	Zip Australia	Hips Prove Jie	20 Live Plants	Vial reported train		MIS	201	190	390
Specially Equipment, Enling and, Zin, On Wall, Automat	40 Line Stations Steel	Autobed - 40 Une Stateless Steel	540068	Zin-kontralia	Mys Parket de	oil Live Shanless !	Visi reunited insis	reference on the	7600	296	840	0.65
Speciety Equipment, Stoling (Init., 2tp., On-Wall, Autobol)	40 Litre White	Autobox - 40 Little Ninte	540052	Zip-Australia	MINISTER OF	HE LEW YORK	Yell mounted trata	High stywn 39	300	296	(640)	545
Specially Equipment, Stoling Still, Zip. Co-Visid Econolists	1.0 U.Bre 19786	Borrelot-13 GR4 White	201040	Zip Australia	High Peyer 20	15189 9999	Yell muried nets	High Person 39	900	180	246	209
Specially Equipment, Stating Sell, Zip, Co. Wall, Econolists	State Water	Tournal of Trains White	200062	Zip Justinia	John Cower ob	3 Like Write	Vial reported train	High Parties all	360	190	431	289
Spaniety Equipment, Foling Inst. Zip, Sn. Well, Econotesi	Suite White	Econolisi - 5 Litra White	506042	Zp-Australia	Miles Fewer (b)	5 Litre Philips	Visit rounted insta	PROPERTY PORTS	7600	294	1461	248
Speciety Equipment, Boding (Intl., Eq., On-Vint., Econotical	T31489 9769	Econolise - 13 USIs White	201242	Zp-Australe	High Person 20	COLUMN VALUE	Yes rounted nets	HTDS://www.20	(80)	207	173	210
Specially Equipment, Stating Unit, Zip. On Wall, Hydroball	1 Lite Starless Steel	Prydrotect : 3 Little Standard Street	2000065	Tip hashelin	High Payer of	3 Live Daniess III	Vial reported train	Hilps Farmus Ap.	MID	160	421	209
Specially Equipment, Enling link, Zie, Co. Wall, Hydrottel	T-Little White	Pydrobol - 3 Line White	1000002	Zip-Australia	High Swarm pip	3 Litre White	Visil recented insis	reference of	900	160	434	384
Speciety Equipment, Boding (Init., 25), (In-Well, Rydrotol)	State Station Steel	Pydrobol - 5 Little Stainless Steel	205067	ZD-Australia	HOLESWAY DO	5 Litre Statriess St	visit mounted insta	PROLETY WIRE 20	3600	294	401	218
Specially Soupment, Stating 2nd, Zip. Control, Hydrobol.	2 Little 1/784	Hydrobot - S Libra Nifebe	200000	Zip-Australia	Mps Pere Jip	D LEW YORK	Visit mounted make	High Francis	3600	201	401	218
Specially Equipment, Stating Unit, Zip, Sn. Wall, Hydrotted	Till Little Stantons Steel	Pythologi, 7.5 Libr Saintean Steel	207961	Zip-lookalin	Internation of	7 5 Live Daniers	Vial resorted train	Hilps if warm sign	360	208	438	346
Specially Coulpment, Folling (Int., Zo., On-Wall, Rydrotox)	T.S. Little White	Mydrobol - 7.5 Little Ninbe	367962	Ze-Australia	HOLDING TO WAR OR	2.5 Litry White	visit rounted insis	200 mary 1 agent	300	294	538	216





Make your products <u>easier</u> and <u>faster</u> for designers to specify and you'll be specified more often.

What do designers get paid for?



Key Points About BIM Content



- AutoCAD is no longer the primary commercial project design authoring software for Architects, Engineers and Contractors. Therefore, providing 'CAD blocks' for your products no longer has the value it once did.
- Commercial projects are now being designed using BIM-enabling applications
- The most widely used BIM authoring / design / coordination software in Australia is Revit.
- Creating BIM content is time consuming. E.g. a Toilet / Chair Appliance may take 4-5 hours to create.
- By providing ready-to-use content for your products, you are saving clients considerable time (i.e. money) when it comes to them putting your products into their projects

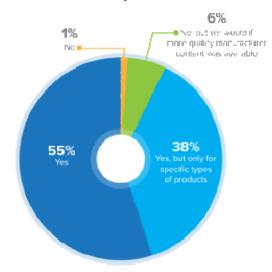


Survey Says...



In 2017 we asked 65 commercial design firms a series of questions about their Revit content needs and their utilisation of BIM content from product manufacturers.

Does your firm use manufacturer-specific content?





Survey Says...



....we also asked which specific product categories they were most needing BIM content from product manufacturers.

Has this changed?

	×	High Need -	Medium Need	Low Need -	N/A -
	Furniture	56.45% 35	22.58% 14	12.90%	8.06%
	Lighting	49.21%	25.40%	20.63%	4.76%
-	Washroom Accessories	48.28% 28	32.76%	10.34%	8.62% 5
	Plumbing Fixtures	46.67% 28	36.67% 22	13.33%	3.33%
	Appliances (eg. kitchen, laundry)	42.62% 20	32.79% 20	18.03%	6.56%
	Railings	44.07% 26	28.81% 17	13.56%	13.56%
	Medical Equipment	32.79% 20	19.67%	34.43%	13.11%
	Electrical Equipment	30.00%	36.67%	28.33%	5.00%
,	Storage / Racking / Lockers	30.51%	40.68%	20.34%	8.47%
	Materials (Paints, flooring, veneers, tiles)	28.33% 17	26.67%	35.00%	10.00%
	Laboratory Equipment	28.81%	27.12%	28.81%	15.25%

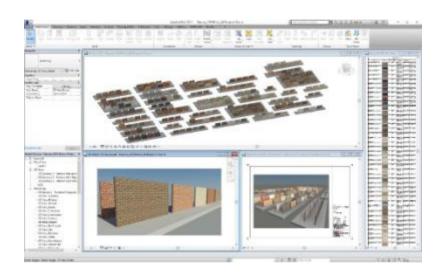
Bottom 16 categories not shown



What Do 'Most Needed' Categories Have in Common?



- Used frequently
- Time consuming to create
- Difficult to create (complex / parametric modelling)
- Teams only recently using BIM (i.e. Interiors)
- Clients want specificity during design phase
- Designers want certainty in constructability
- Perception of rapid obsolescence
- Requirements vary from project to project



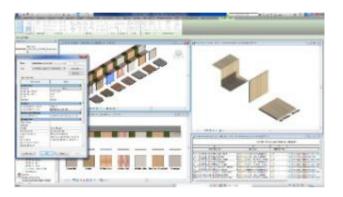


Manufacturer Content - Help or Hindrance?



Benefits

- Saves time
- Better accuracy (manufacturer generated)
- Greater design specificity than 'generic'
- Greater design flexibility (constraints / variants)
- Integration of critical design / specification data





Manufacturer Content - Help or Hindrance?



Drawbacks

- Manufacturer content has 'Bad PR'.
- Greater risk (unknown author / consistency)
- Model performance often as issue
- Requires various degrees of editing (data / geometry)
- Potential obsolescenece





BIM Content 'Quality' - What and Why?



- Consistency!!!
- Quality of documentation (i.e. 2D drawings)
- Visualisation Outputs (balance!)
- Performance in project model
 - Level of Detail
 - File size implications
 - · Ability to align, adjust, control
- Metadata: standard / structure / amount
- Ease to customize to project / firm standards
- Searchability (Naming / Thumbnails etc)

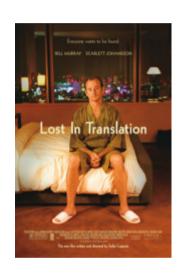






BIM Adoption Challenges for Manufacturers









Revit Drawings (2D & 3D Families)

CAD & BIM Drawings

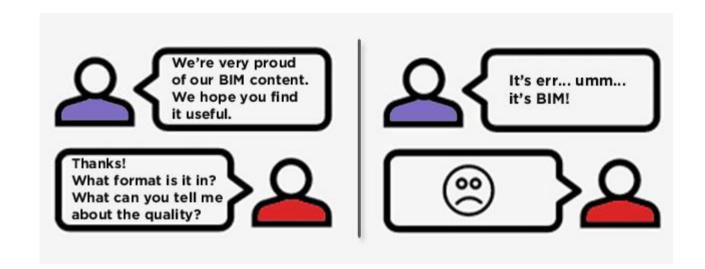


Revit/BIM Drawings
Revit Drawings



BIM Adoption Challenges for Manufacturers







BIM Adoption Challenges for Manufacturers

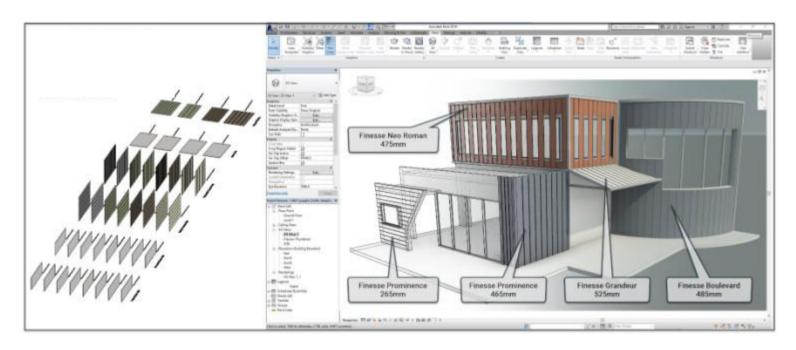


- Cost
- Time
- Minimal Understanding of Content Usage (Context)
- Content Creation Skills / Software Knowledge
- Choosing the right content provider
- Understanding industry standards / guidelines
- Bad advice



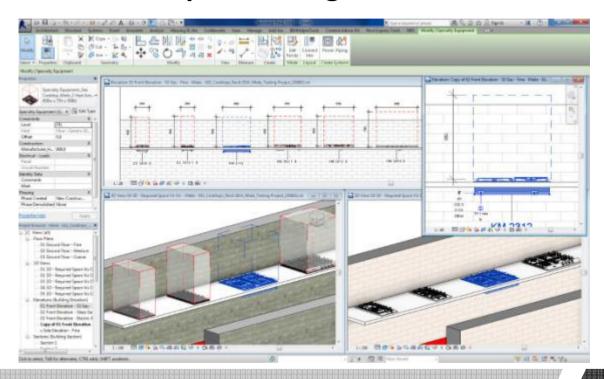
Food For Thought.....





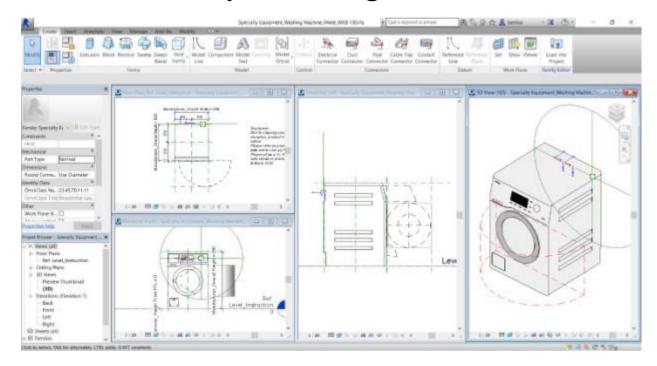






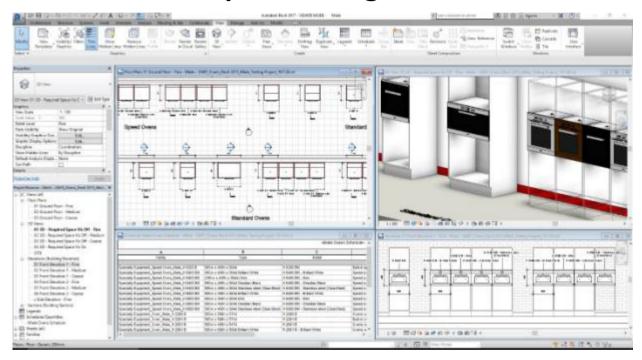






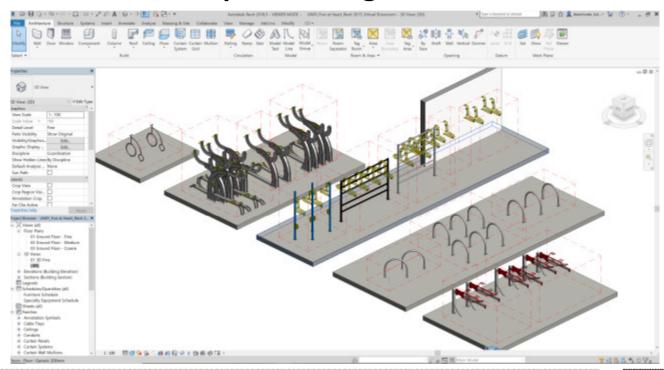














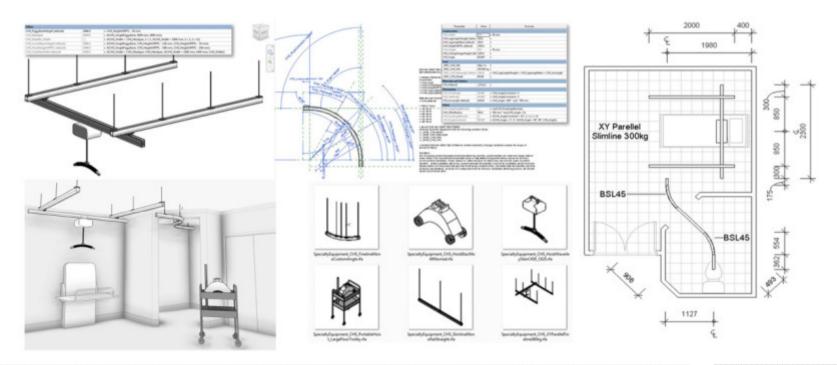






Complex Design Systems

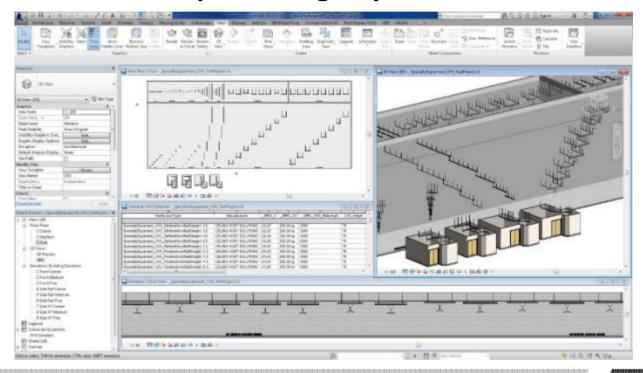






Complex Design Systems

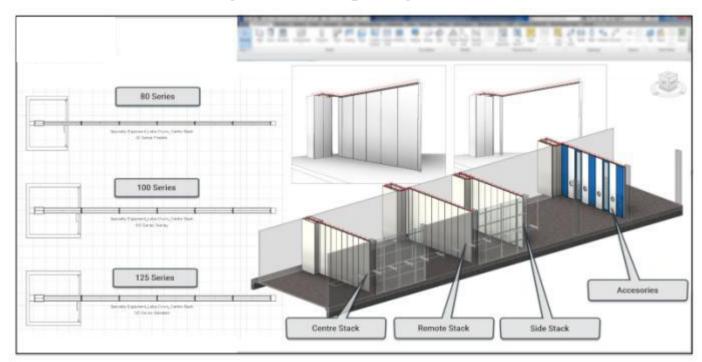






Complex Design Systems







Product Selection Via Custom Application







Product Selection Via Custom Application

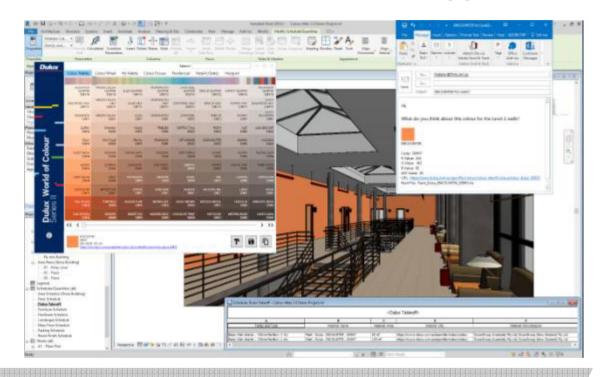






Product Selection Via Custom Application

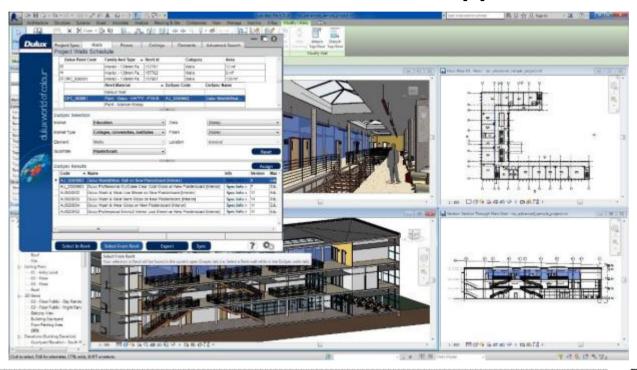






Product Selection Via Custom Application

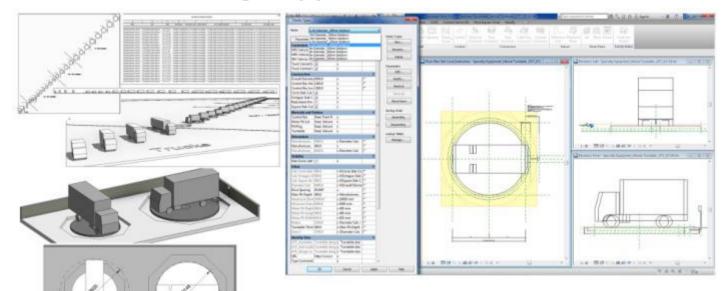






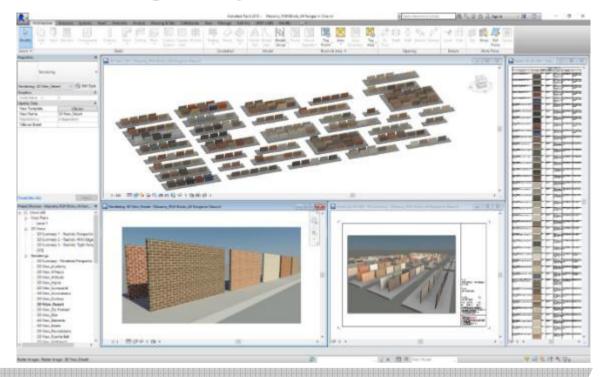
Design Application Studies





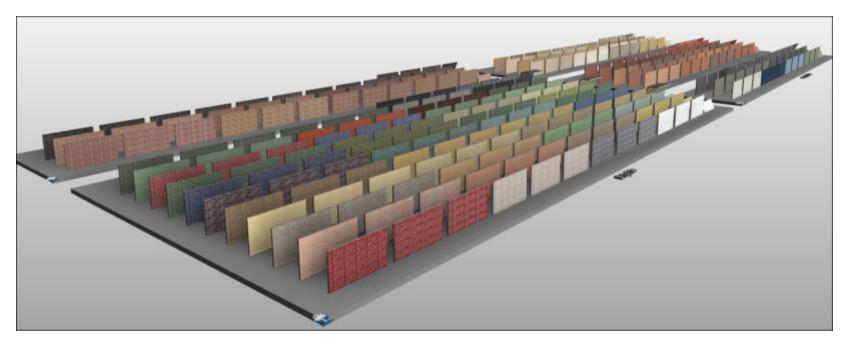












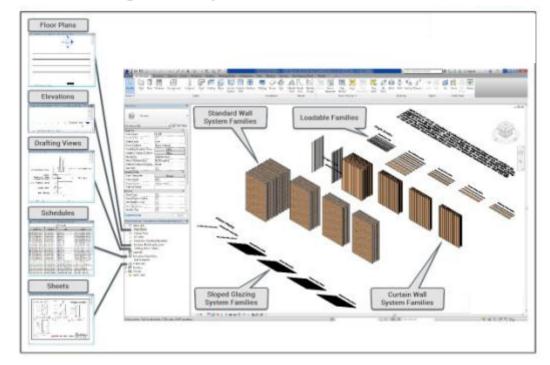






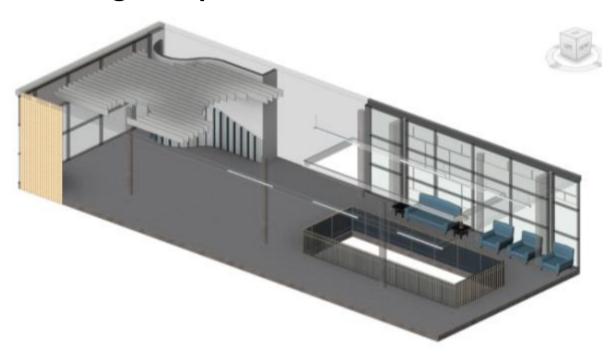






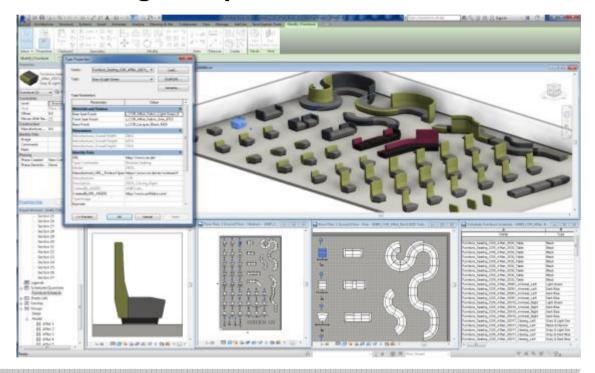






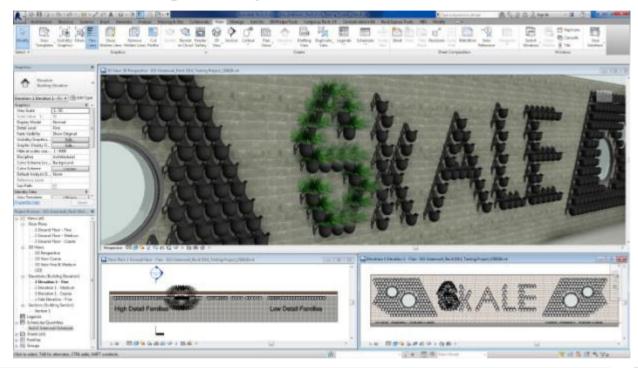








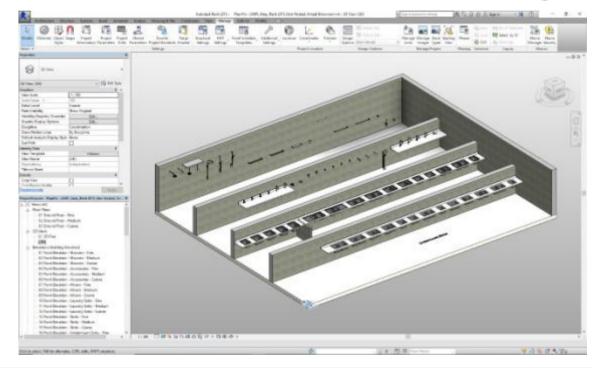






'Virtual Showroom' Product Browsing

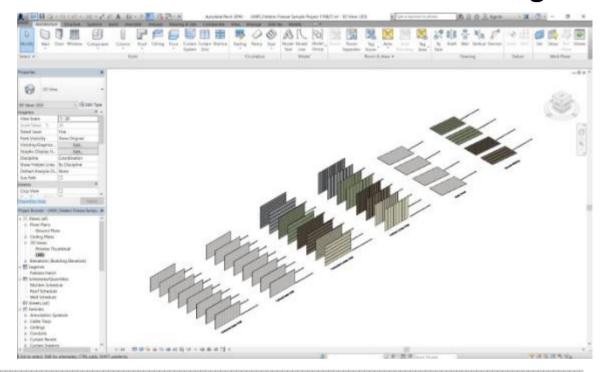






'Virtual Showroom' Product Browsing

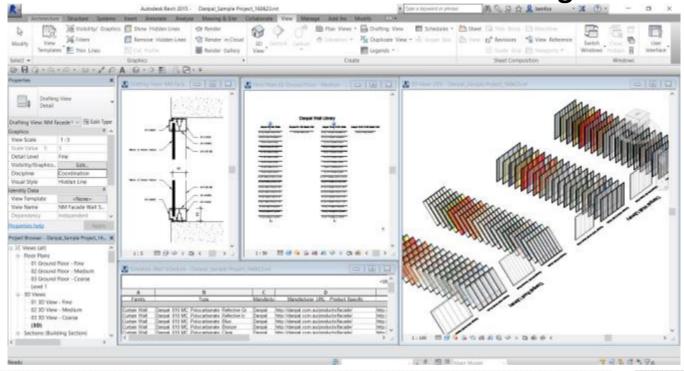






'Virtual Showroom' Product Browsing

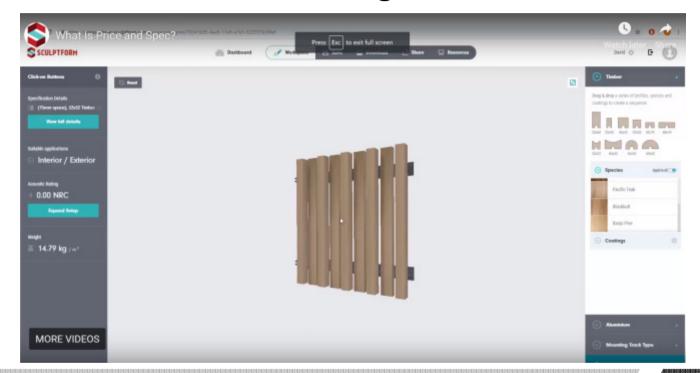






Online Configurators







Immersive Product Research / Selection









Immersive Product Browsing / Selection

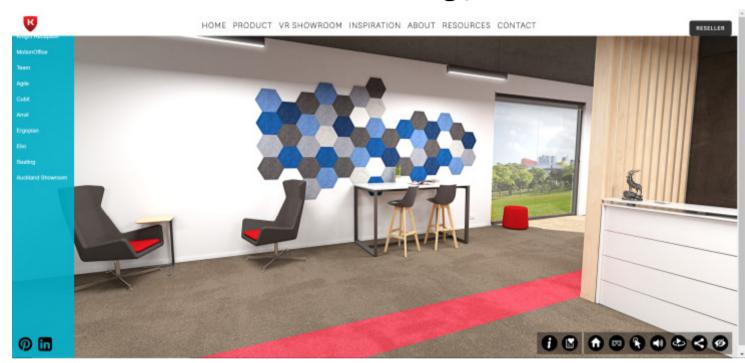






Immersive Product Browsing / Selection











Thank You!

