



5D BIM (Estimating)
using Revit!

Thanks for the patience!

M

Moe Gyi • 2 months ago

Great tutorial! I wish I could watch some Cost Analysis tutorial from you. :)

REPLY

2 replies ^



1



Aussie BIM Guru • 2 months ago

Unfortunately I don't get to use Revit for cost very often - I usually have a QS on my projects. I will think of some tips and tricks for quantity takeoff however and produce a video about that in future though, thanks for the idea!

REPLY



2



M

Moe Gyi • 2 months ago

@Aussie BIM Guru it's ok. Just tips and tricks are more than enough for me. I'd gladly wait for it. Thank you so much for your effort!

REPLY

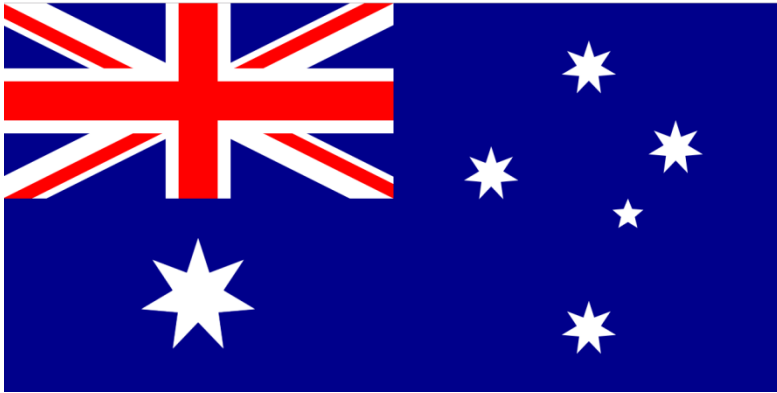


1



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Thanks for the motivation!



Ashley Dadd · 3rd

Principal at Elizabeth Ashley Pty Ltd



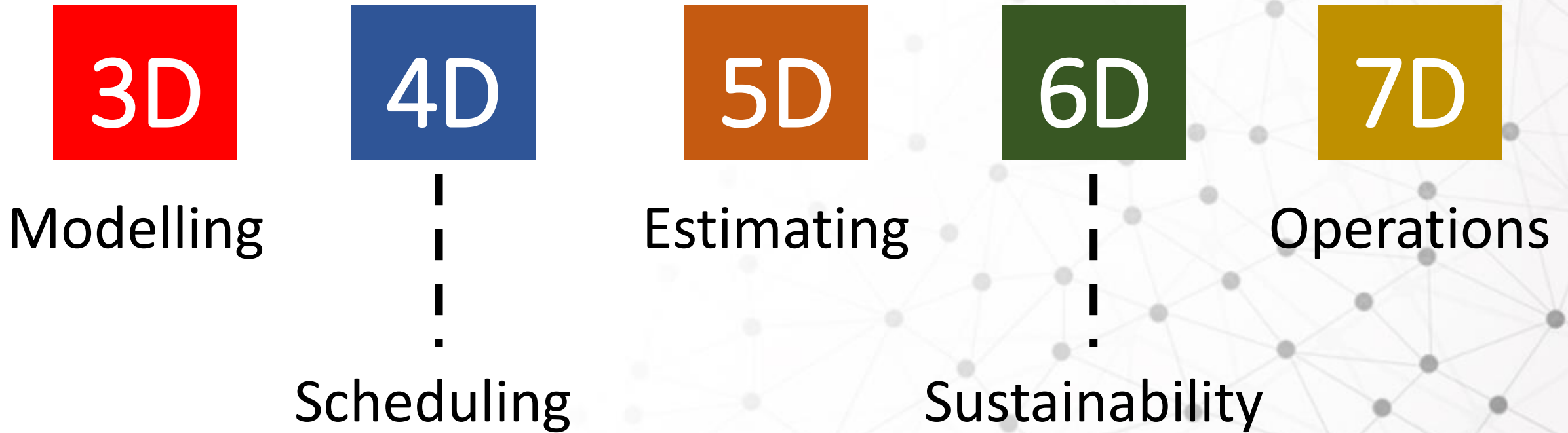
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In this Video

1. 5D BIM – What is it?
2. Key considerations
3. Four Methods in **Revit (demo)**
4. Concluding advice



BIM Dimensions



5D BIM

3D

4D

5D

6D

7D

Estimating



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Today's focus

Cost
planning



How much

Quantity
take-off



How many?



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In Simpler Terms



How much



\$



How many?



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For the Professionals

Note I am not a Quantity Surveyor



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Key considerations



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BIM is great at 5D
When done right!!!

Don't be a
bean counter!

Use this!



Not this!



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IF YOUR BIM MODEL ISN'T GOOD



YOU'RE GONNA HAVE A BAD TIME

imgflip.com



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Model it properly!

3D Revit Objects

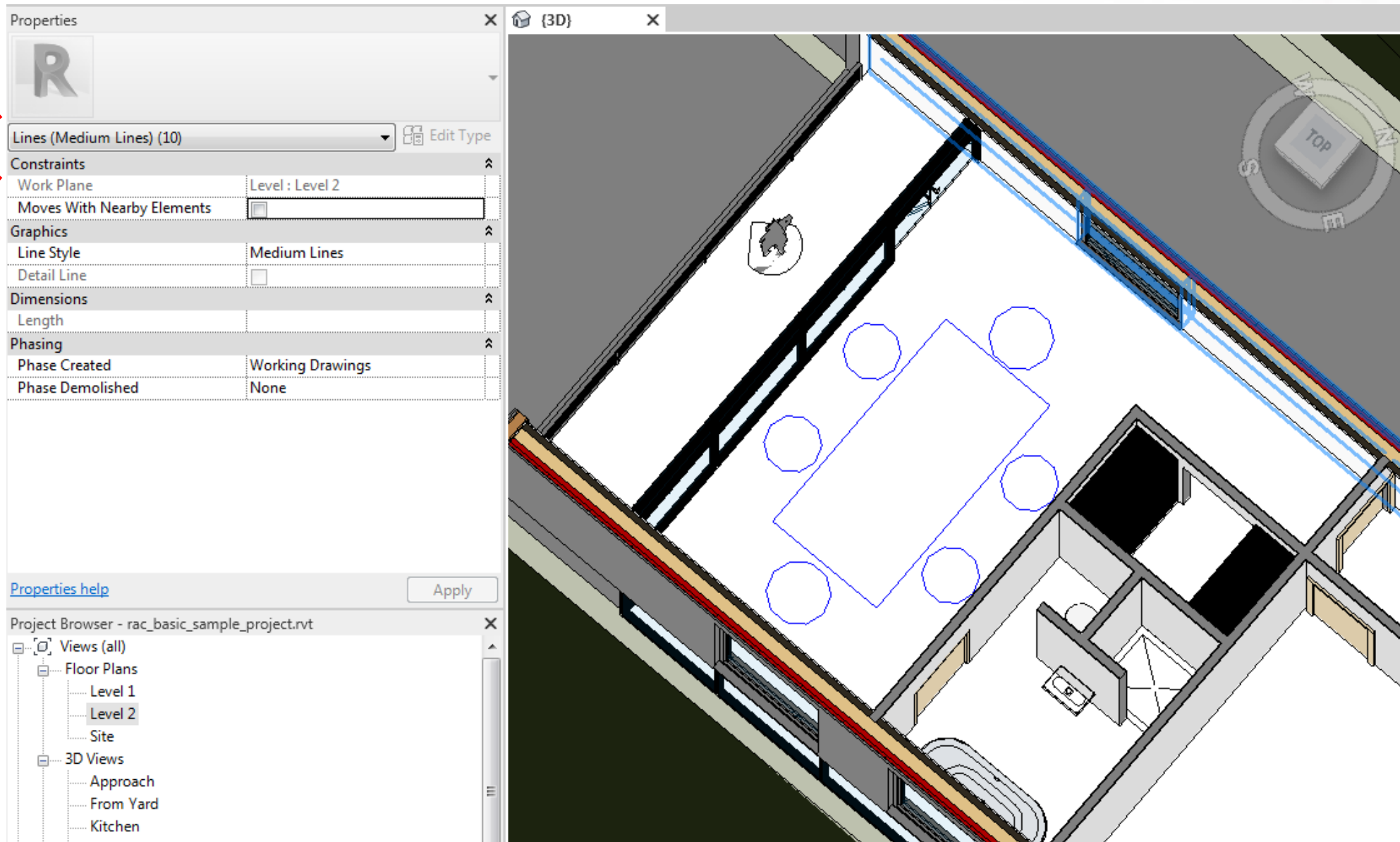
Modelled accurately

Data management is critical

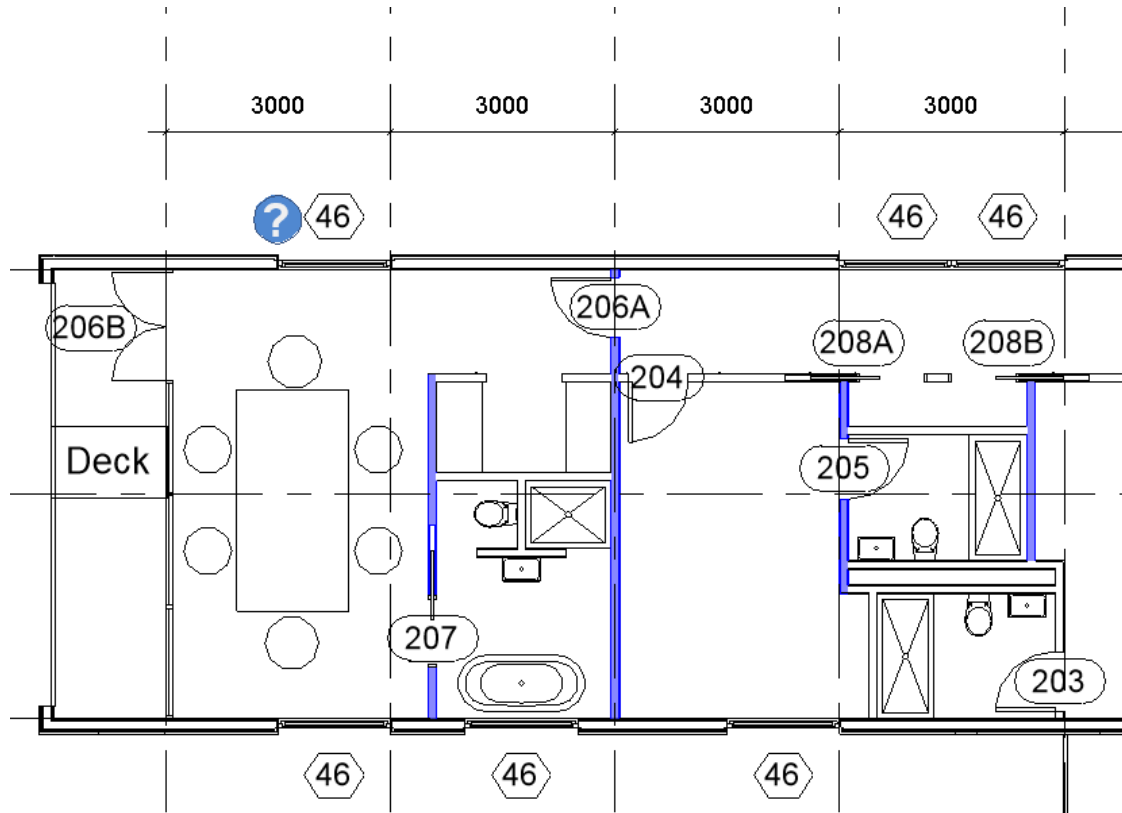
Categories used properly



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Room Legend ?

 No colors defined



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Family Types

Type name:

Search parameters

Parameter	Value	Formula	Lock
Construction			
Function	Exterior	=	
Construction Type		=	
Materials and Finishes			
Handle Material	Metal - Aluminum	=	
Glazing Material	Glass	=	
Dimensions			
Offset	0' 2"	=	<input checked="" type="checkbox"/>
Thickness		=	<input checked="" type="checkbox"/>
Analytical Properties			
Visual Light Transmittance	0.900000	=	
Solar Heat Gain Coefficient	0.780000	=	
Construction Type Id	GSP4R	=	
Heat Transfer Coefficient (U)	0.6496 BTU/(h-ft ² ·°F)	=	
Analytic Construction			
Thermal Resistance (R)	1.5394 (h-ft ² ·°F)/BTU	=	
IFC Parameters			
Operation		=	
Identity Data			
Type Image		=	
Keynote		=	
Model		=	
Manufacturer		=	
Type Comments		=	

Manage Lookup Tables

[How do I manage family types?](#)

This is the only
data Revit gets
aside from
family name
and category!



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Family Types

Type name:

Search parameters

Parameter	Value	Formula	Lock
Construction			
Function	Exterior	=	
Construction Type		=	
Materials and Finishes			
Handle Material	Metal - Aluminum	=	
Glazing Material	Glass	=	
Dimensions			
Offset	0' 2"	=	<input checked="" type="checkbox"/>
Thickness		=	<input checked="" type="checkbox"/>
Analytical Properties			
Visual Light Transmittance	0.900000	=	
Solar Heat Gain Coefficient	0.780000	=	
Construction Type Id	GSP4R	=	
Heat Transfer Coefficient (U)	0.6496 BTU/(h-ft ² ·°F)	=	
Analytic Construction		=	
Thermal Resistance (R)	1.5394 (h-ft ² ·°F)/BTU	=	
IFC Parameters			
Operation		=	
Identity Data			
Type Image		=	
Keynote		=	
Model		=	
Manufacturer		=	
Type Comments		=	

How do I manage family types?

OK Cancel Apply

Family Types

Type name: 920x2040

Search parameters

Parameter	Value	Formula	Lock
Analytical Properties			
Analytic Construction	<None>	=	
Visual Light Transmittance		=	
Solar Heat Gain Coefficient		=	
Thermal Resistance (R)		=	
Heat Transfer Coefficient (U)		=	
IFC Parameters			
Operation		=	
Analysis Results			
CRN_Data_FRL		=	
Data			
CRN_Data_IsFireRated	<input type="checkbox"/>	=	
Other			
CRN_Door_ClearanceFactor	850.0	= if([CRN_Door_Dim-ClearWi	<input checked="" type="checkbox"/>
CRN_Door_ClearanceFactor	850.0	= (CRN_Door_ApproachType1	<input checked="" type="checkbox"/>
CRN_Door_ClearanceFactor	850.0	= (CRN_Door_ApproachType2	<input checked="" type="checkbox"/>
Identity Data			
CRN_Data_Code1	D.XX	=	
CRN_Data_Comment1	Single Leaf Door, Solid Core	=	
CRN_Data_Comment2		=	
CRN_Data_RoomNumber1		=	
CRN_Door_ApproachType1	0	=	
CRN_Door_ApproachType2	0	=	
Description	Solid Leaf Door	=	

How do I manage family types?

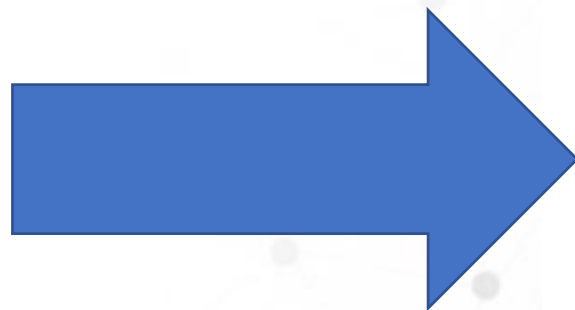
OK Cancel Apply



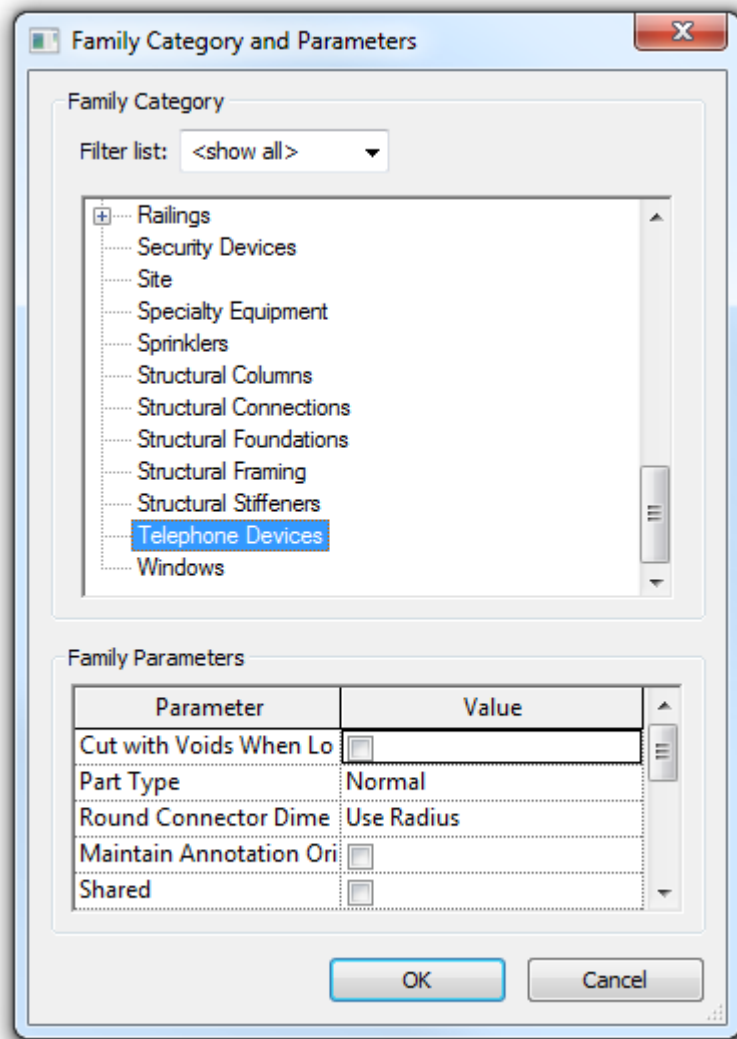
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Imagine...



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Hey, check out these

... **Telephone Devices**



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Have a Strategy

Software doesn't dictate to us,
we dictate to it!



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Four methods in Revit



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1. Unit Cost by Count



How many chairs?
x Unit cost



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Demonstration



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2. Rate Cost by Data



Kitchen bench @
\$XXX per linear m

Total = Width x Rate



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Demonstration



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3. Rate Cost by Inherent Data



Floor @
\$XXX per m2

Total = Area x Rate



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Demonstration



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4. Rate Cost by Material



Paint @
\$XXX per m2

Total = Area x Rate



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Demonstration



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Bringing it all together



Dynamo/Plugins

Or

Export/merge in Excel



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Things to remember



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When in doubt, **check**

When not in doubt,
check anyway



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Remember, you are **not** the QS

Amused Quantity
Surveyor



Over confident
Revit architect



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But they should appreciate it

Humble
architect



Appreciated
Quantity
Surveyor



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And remember

No half-measures
(literally)



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