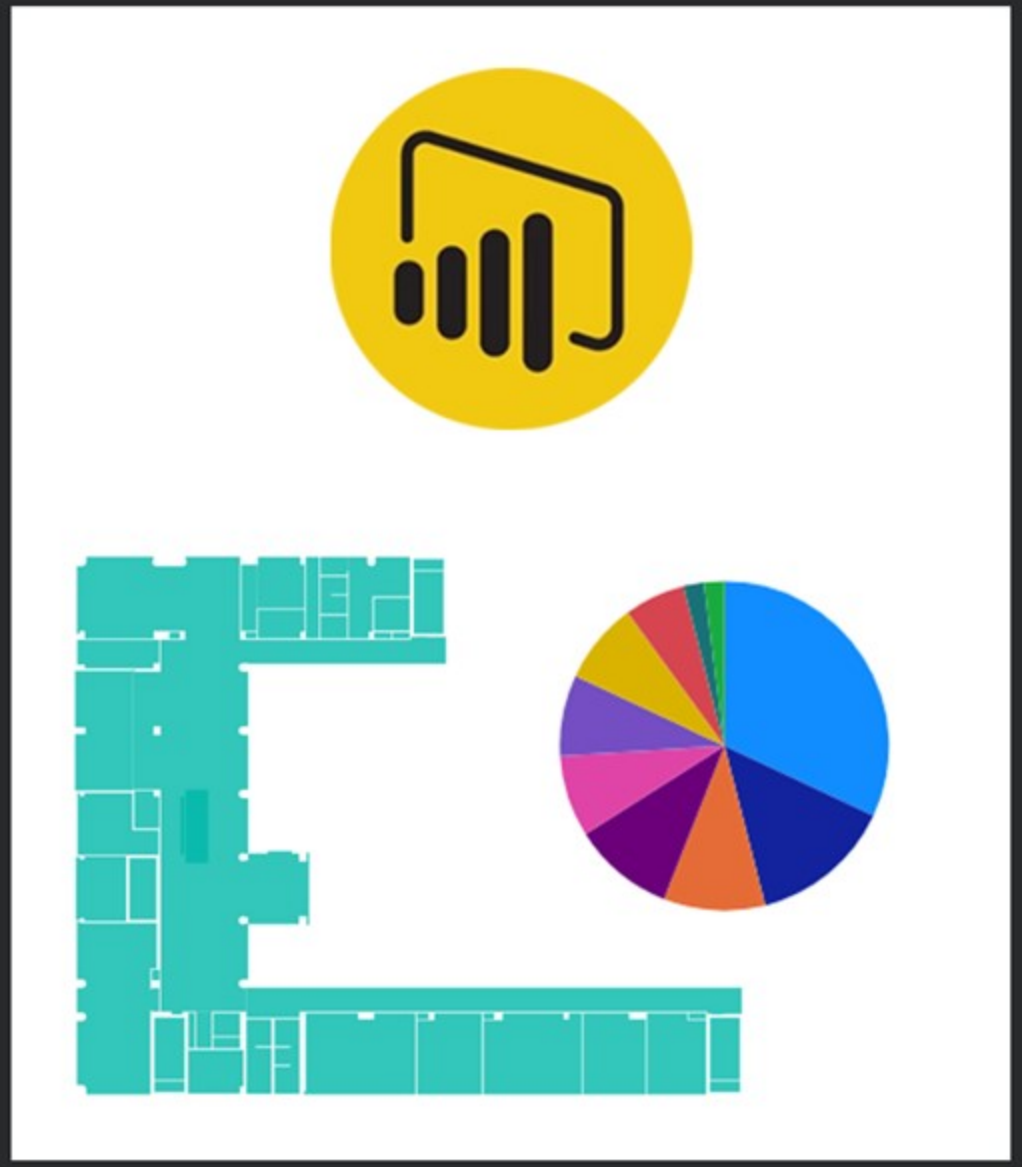
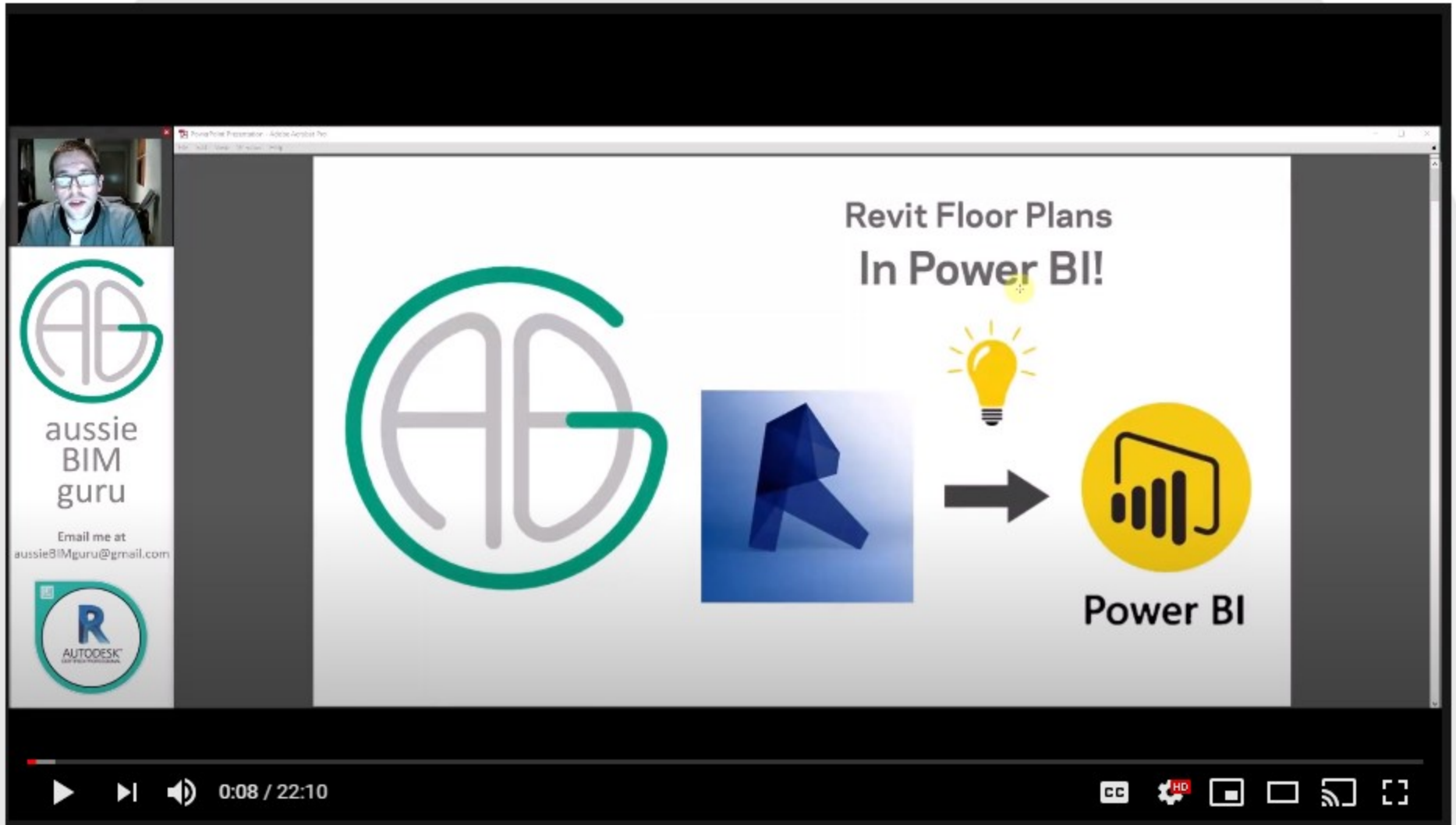


REVIT PLANS TO POWER BI USING DYNAMO PART 1

BY THE AUSSIE BIM GURU



Getting Revit Views into Power BI!

5,895 views • Aug 9, 2019

161 0 SHARE SAVE

Aussie BIM Guru
10.8K subscribers

ANALYTICS EDIT VIDEO

Thanks for the algorithm!

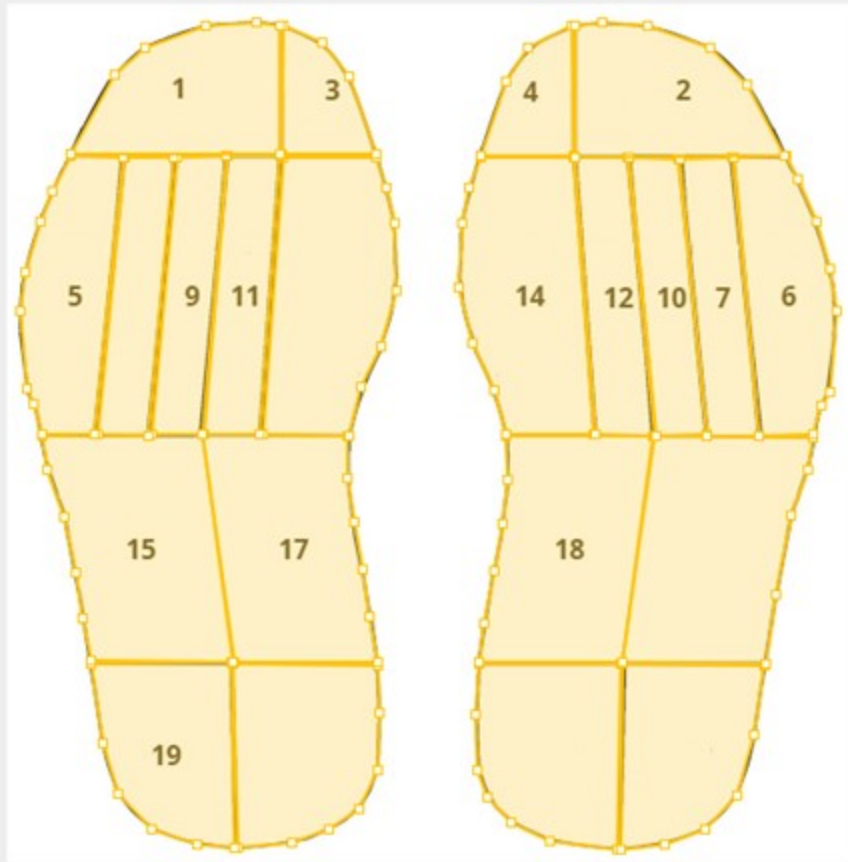
Pierpaolo Canini • 1st
BIM Something presso Hell
11h ...

Hi Gavin, I actually made something to do this when you put out the original PowerBi video. I'm more than happy to send it to you and close the circle ahaha. I uploaded it on my GitHub. Take a look maybe it can be useful. Thank you man for the inspiration, love what you're doing.

SYNOPTIC DESIGNER FOR POWER BI

Synoptic Designer is the companion tool of **Synoptic Panel**, a certified custom visual for Microsoft Power BI created by OKViz.

EDITOR | GALLERY | ABOUT



AREAS

1
Area name (to display
162, 89, 162, 13, 148, 11, 118, 13, 82, 26, 64,

2
Area name (to display
337, 91, 337, 13, 353, 11, 380, 13, 417, 26,

3
Area name (to display
219, 89, 163, 89, 164, 13, 187, 23, 203, 43

4
Area name (to display

EXPORT TO POWER BI

SUBMIT TO GALLERY

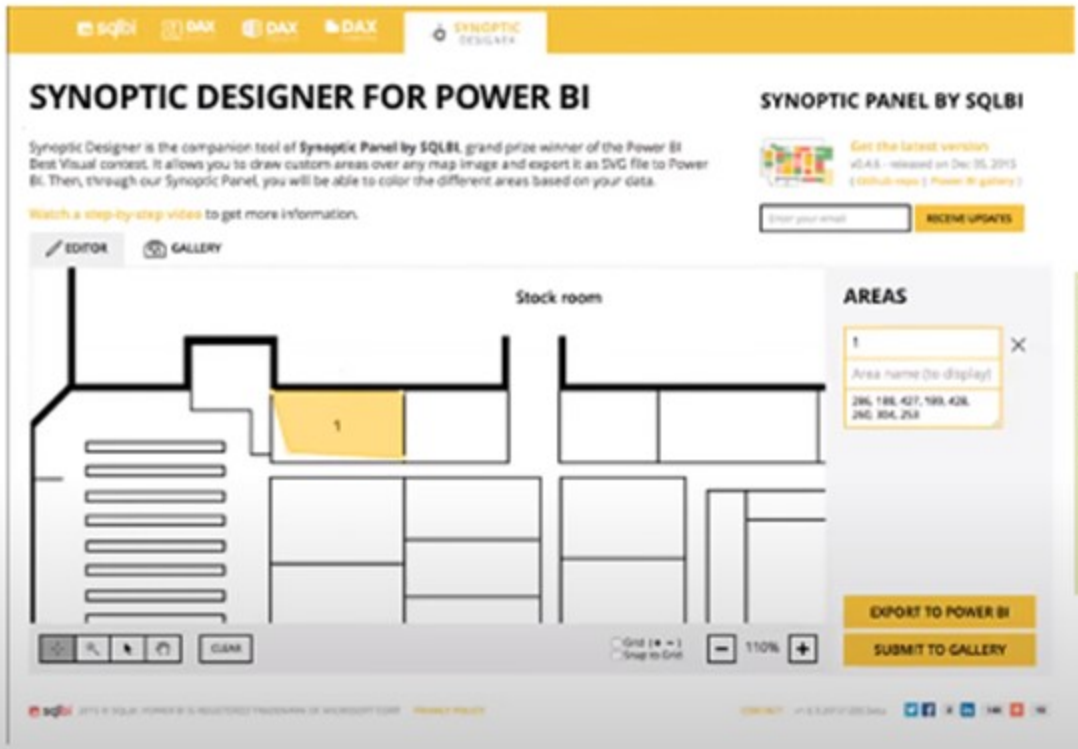
CHANGE IMAGE | CLEAR

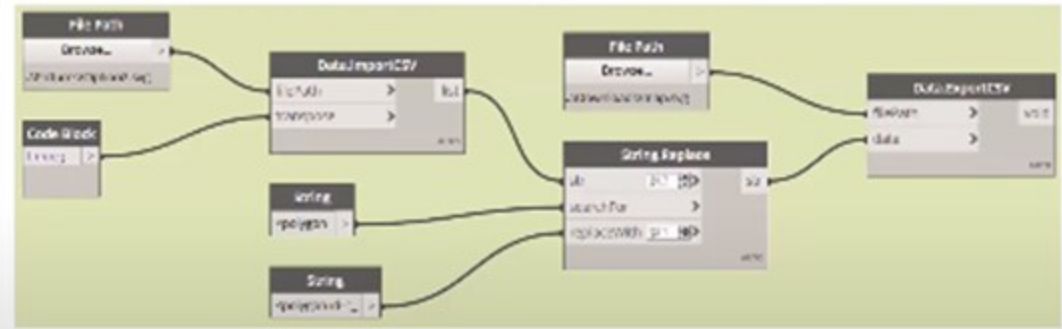
Grid (+ −)
Snap to Grid

− 100% +

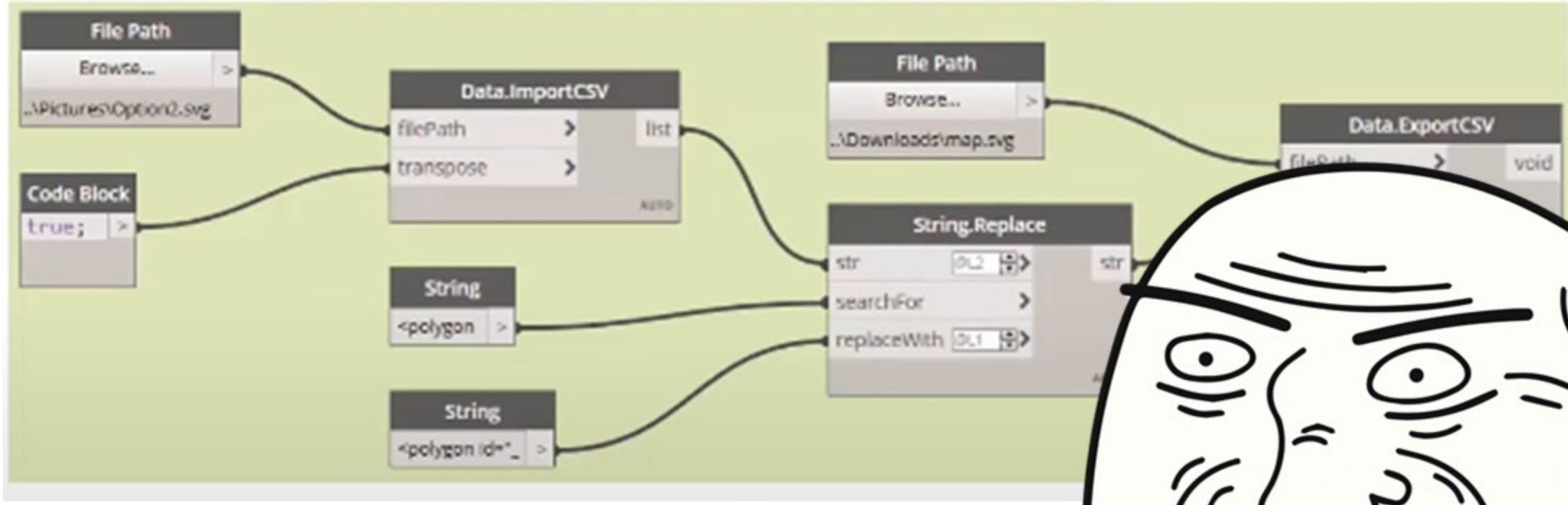
SFCDI / Achintya Bhat

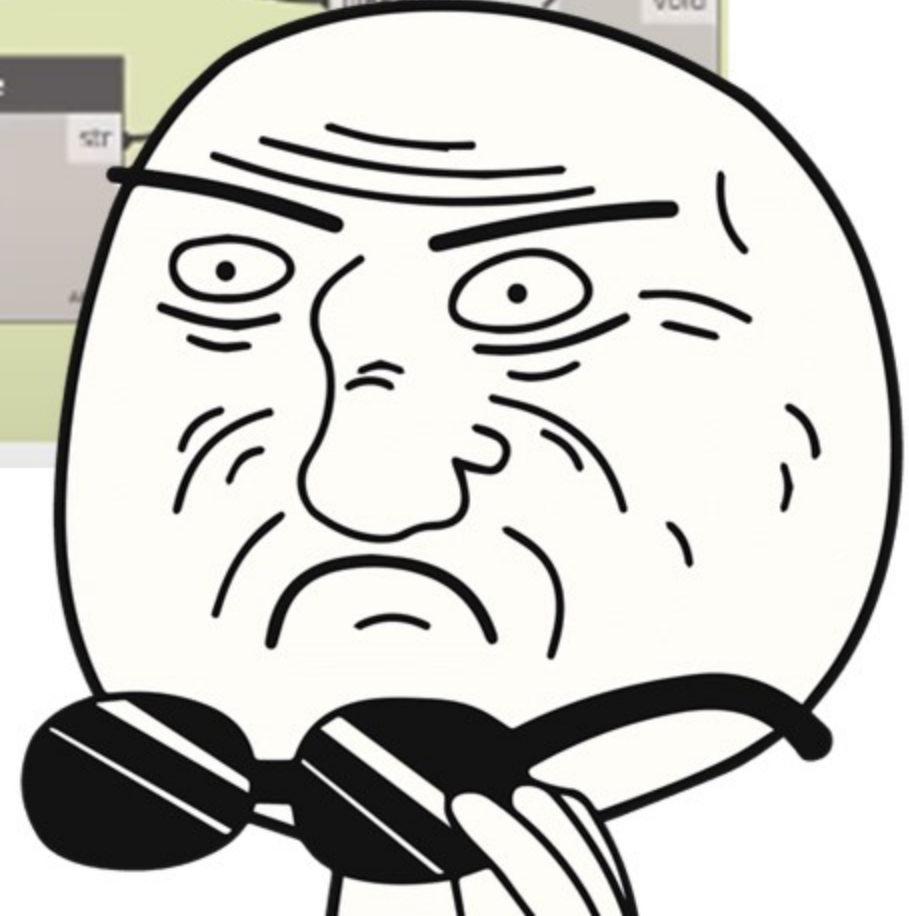
Modify svg file for Power BI





What I spotted

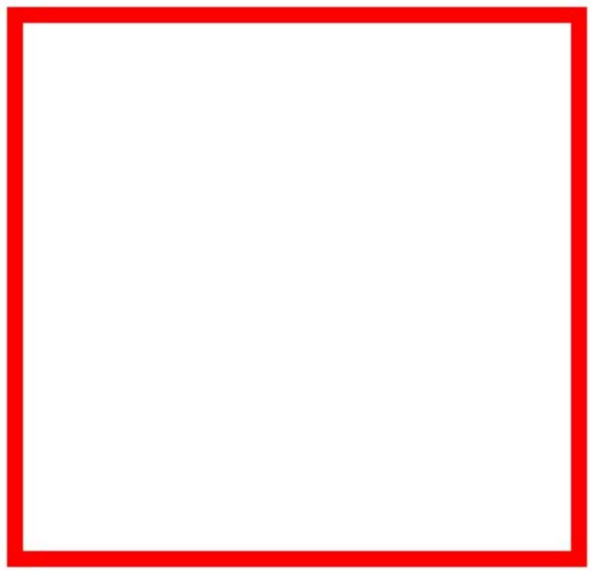




- SVG objects are in the form of **Polygons**
- SVG data can be **read** and **rewritten**!

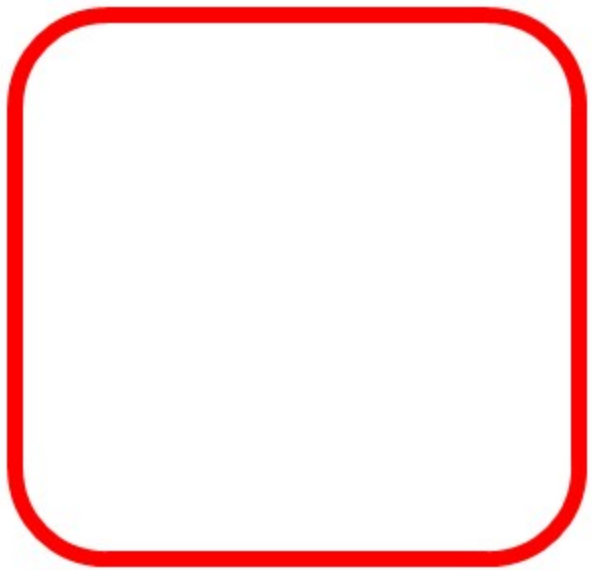
Eureka!

Segmentation of polygons



Basic **polygons** are made of straight edges, with start/end points.

Segmentation of polygons



Polygons do not typically support arcs, splines and enclosed regions.

SVG (Shape) file format

```
<g>
<polygon id="2936478" points="66250, 47498.0000000001 66250, 47223.0000000001 66250, 46948.000000000
<polygon id="2936487" points="62873.0000000001, 53545.9669315973 62873.0000000001, 53291.1060029215
<polygon id="2936854" points="50503.0000001525, 53545.9669315977 50503.0000001525, 53293.1554649852
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<polygon id="3051395" points="22409.9999996953, 46069.9669315985 22157.9999997105, 46069.9669315985
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<polygon id="3073183" points="11327, 48973.9999999999 11652, 48973.9999999999 11977, 48973.999999999
<polygon id="3261078" points="36750, 7112.99999990855 36750, 6837.99999990855 36750, 6562.9999999085
<polygon id="3261101" points="36750, 1322.99999999992 36750, 1047.99999999993 36750, 772.99999999934
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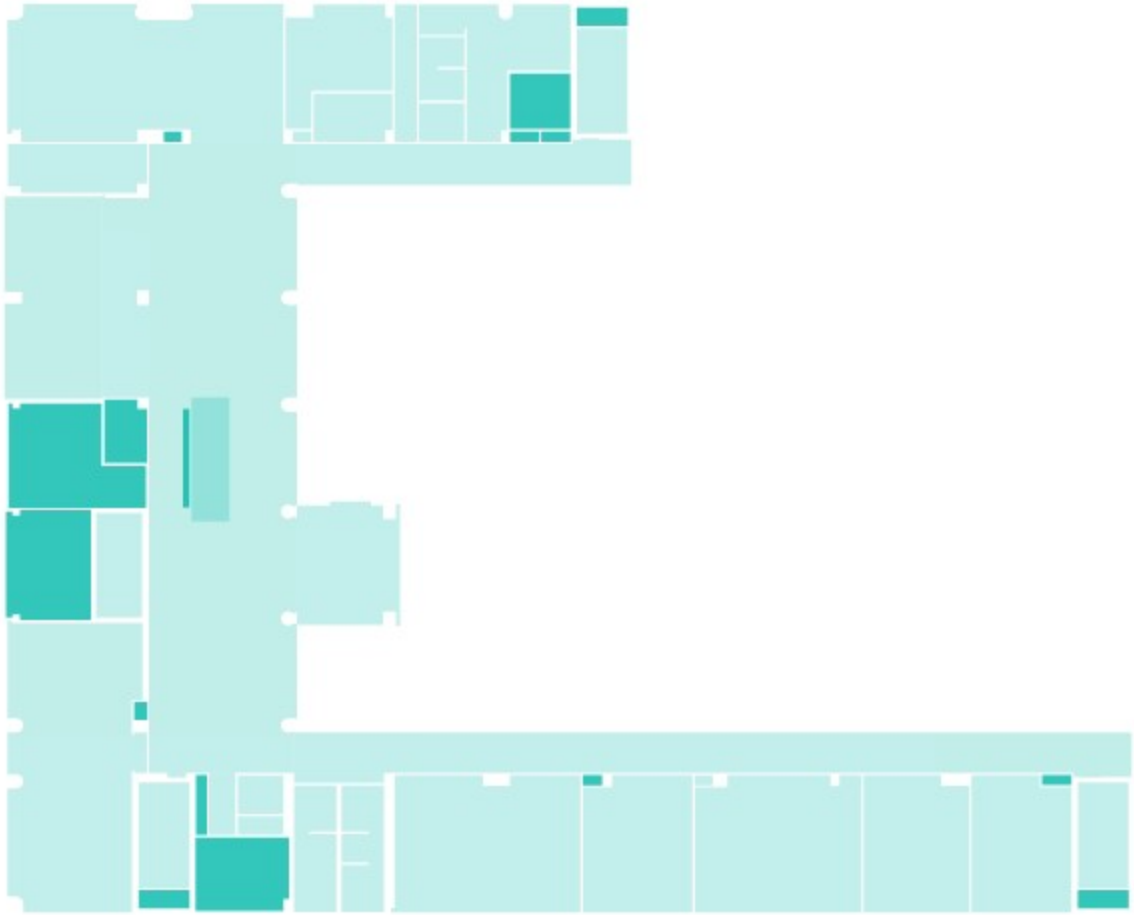
Id by Id



Count of Department by Department

Name	Id	Area
COMMS RM	3072897	23.74
COMMS RM	3261311	11.66
EDB	3073183	2.30
EDB	3261339	2.18
EDB	3261352	1.05
FHR	3261368	0.67
FHR	3261378	0.82
FHR	3261389	1.00
FHR	3283711	0.69
FHR	3285355	1.05
FIRE CTL ROOM	3261477	9.03
PLANT	3261406	40.07
PLANT	3261416	31.99
RISER	3054393	3.30
RISER	3072881	3.30
RISER	3261101	3.30
Total		**136.14**

136.14

Area

What we will do (Part 1)

1. Take rooms from a Revit model by level
2. Obtain their boundary
3. Segment any curved edges
4. Create polygons
5. Write an SVG file

What we will do (Part 2)

1. Splice element Id's into the SVG polygons
2. Write room data to Excel
3. Use Excel as our Power BI data source
4. Download synoptic panel visual
5. Connect our SVG visual to our data

Custom packages

I'm using

Revit 2020.2.3

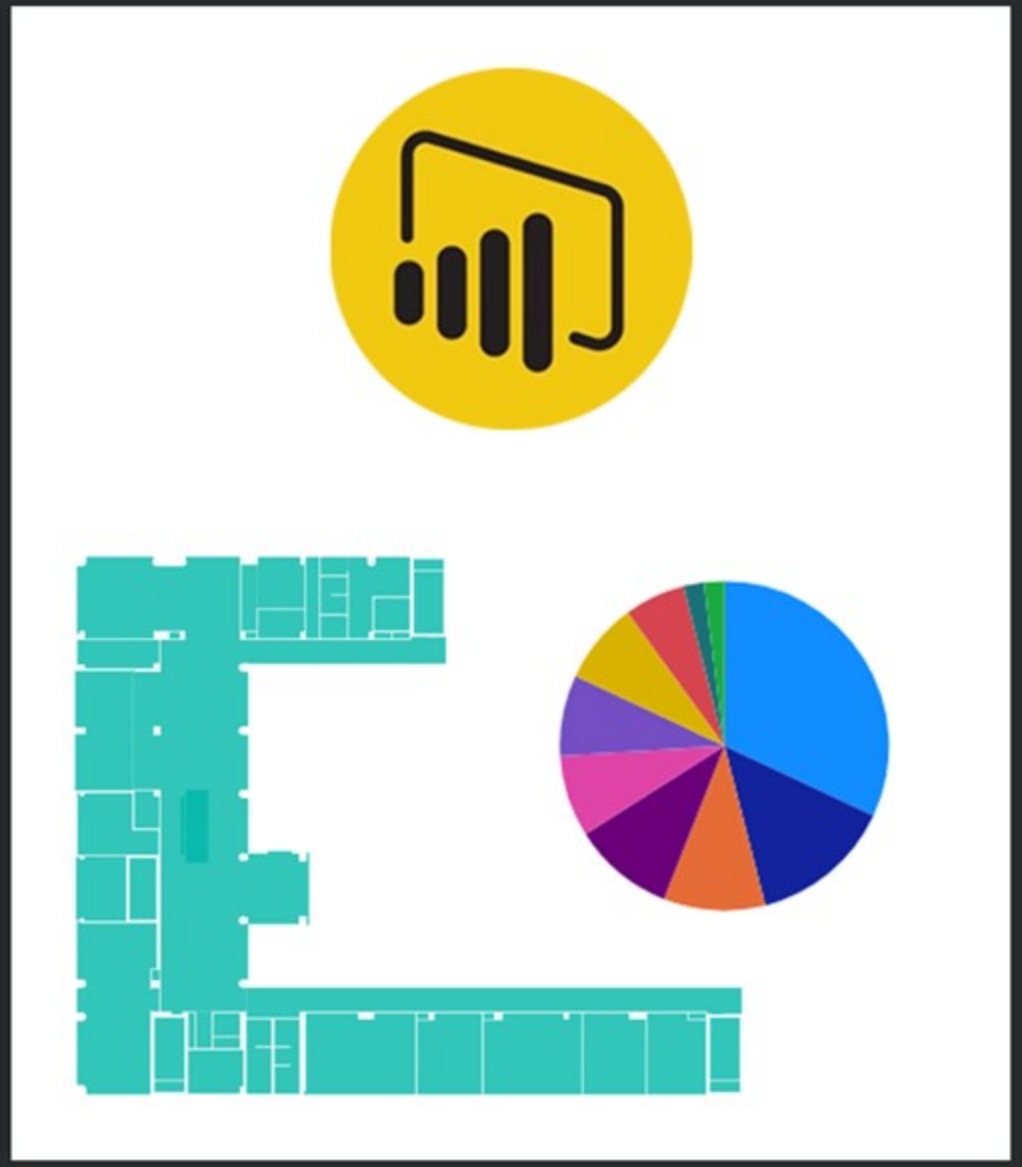
Dynamo 2.3

What we will do (Part 2)

1. Splice element Id's into the SVG polygons
2. Write room data to Excel
3. Use Excel as our Power BI data source
4. Download synoptic panel visual
5. Connect our SVG visual to our data

Files are on github

https://github.com/aussieBIMguru



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