



# Born digital: a symposium exploring digital architectural and built environment records

Monday 18 + Tuesday 19 April 2016

STOREY HALL

ANNEXE

SINGER

# ARCHIVING X

## AN AGILE APPROACH TO DOCUMENTING PARAMETRIC ARCHITECTURE

**WOODS  
BAGOT**



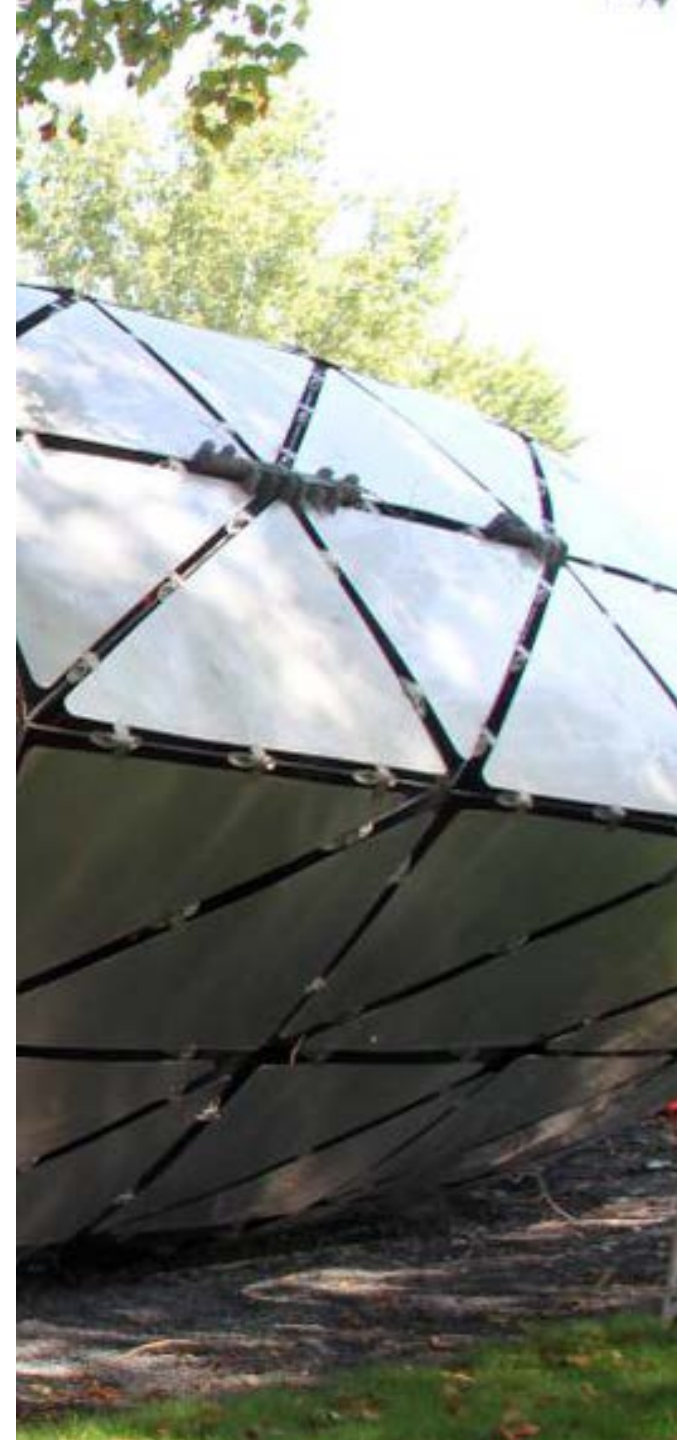
**OFFICE FOR  
DESIGN +  
ARCHITECTURE SA**



University of  
South Australia



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This repository


[Pull requests](#) [Issues](#) [Gist](#)


  


ONL-Oosterhuis-Lenard / iWeb


 2  7  2


 Code

 Issues 0


 Pull requests 0


 Wiki


 Pulse


 Graphs


No description or website provided.

 10 commits




 1 branch


 0 releases

 1 contributor









Branch: **master** 


[New pull request](#)

[New file](#) [Find file](#) [HTTPS](#)  <https://github.com/ONL-C>   [Download ZIP](#)

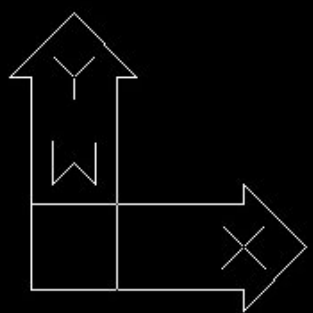
 **GijsJoosen** restructure images and renders 

Latest commit 57bdd59 on 26 Sep 2014

 0.0 credits and description	adjusted description.txt	a year ago
 1.0 documents	ignore	a year ago
 2.0 drawings	initial commit 15-09-2014	a year ago
 2.4 images and renders	restructure images and renders	a year ago
 3.0 3d models	initial commit 15-09-2014	a year ago
 README.md	Initial commit	a year ago
 iWeb unroller.jpg	added additional pictures of the Birth and Death of the iWeb	a year ago
 iWeb.png	added additional pictures of the Birth and Death of the iWeb	a year ago

 **README.md**







```
Visual LISP for AutoCAD <00.xref_root.dwg> - [unroller5.3.1.lsp]
File Edit Search View Project Debug Tools Window Help

;;init
(command "purge" "b" "catTot" "n")
(command "purge" "b" "cutTot" "n")
(command "purge" "b" "ss" "n")
(command "ucs" "w")
(setq refpntss (list (- (nth 0 refpnt) 500) (+ (nth 1 refpnt) 300) (nth 2 refpnt)))

;; selection entry
(setvar "osmode" 1)
(setq catclr 1
  name (getstring "\n Enter the element code:")
)

(print "Select carrier triangle elements: ")
(setq cat (ssget))

(print "Select curve triangle elements: ")
(setq cut (ssget))

pt1 (getpoint "\n Enter base point [A]: ")
pt2 (getpoint "\n Enter wide angle point of the carrier triangle [C]:")
pt3 (getpoint "\n Enter sharp angle point of the carrier triangle [B]: ")
pt4 (getpoint "\n Enter end point of the curve triangle [D]: ")
)

;;the nitty gritty

;; color-code the difference between the carrier and the curve triangle
(command "chprop" cut "" "c" cutclr "")

;;turn osnap off
(setvar "osmode" 0)

Edit: D:/00Projects/129webnh/078U/01 drawing/02 Lisp/unroller5.3.1.lsp (Visual LISP) L 00001 C 00001
```









**THE FUTURE IS  
UNKNOWNABLE**

AGI

HYPERBODY  
RESEARCH  
GROUP



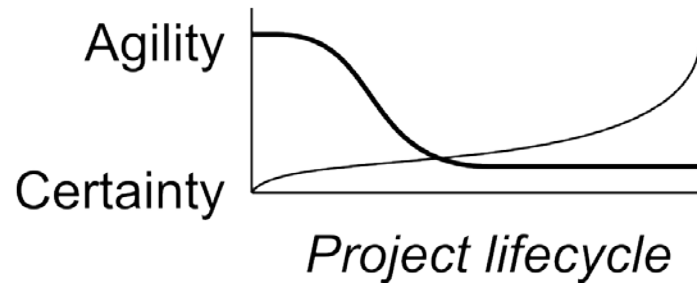
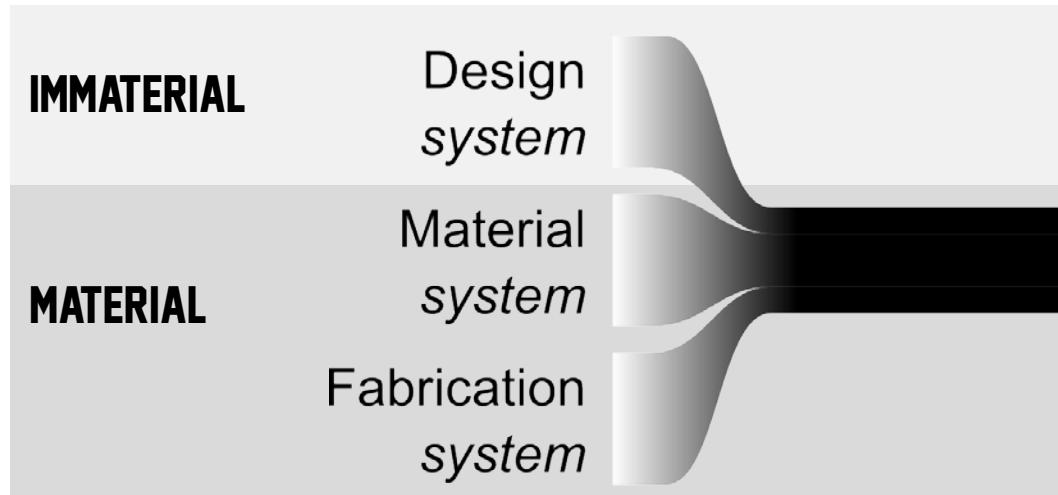


**GHOST**

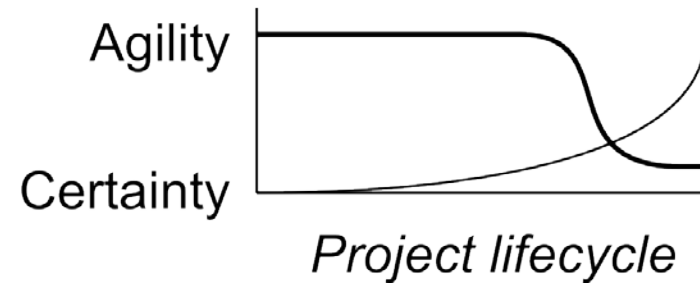
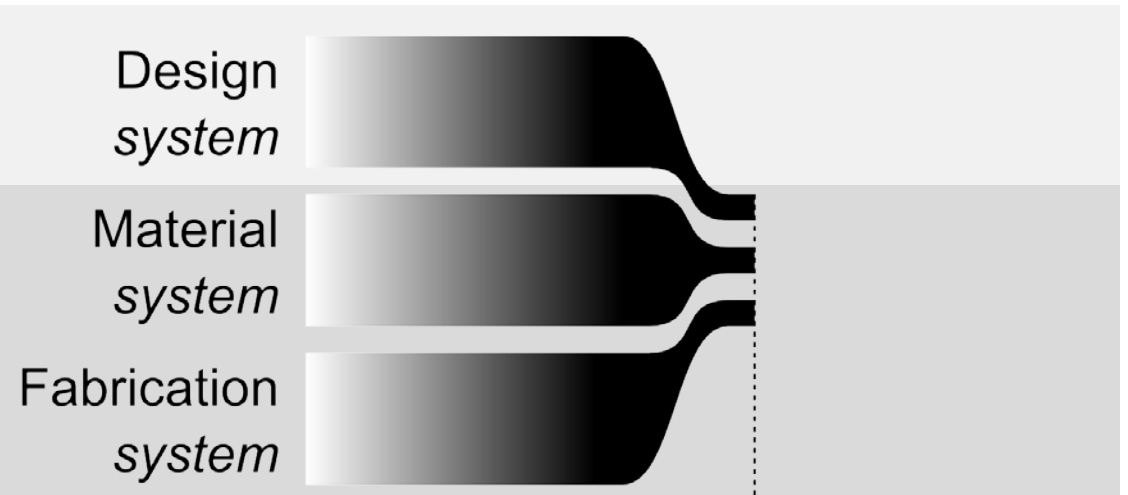


# DECOUPLE THE SYSTEMS

Coupled systems



Decoupled systems





**AGILE**

**METHODS**

# AGILE DESIGN PROCESS FOR ARCHITETURE

- Client satisfaction by *early and continuous* delivery of *valuable* software
- Welcome changing requirements, even in late development
- Working design systems delivered ***frequently*** (weeks rather than months)
- Close, daily cooperation between stakeholders and designers
- Projects are built around motivated individuals, ***who should be trusted***
- Face-to-face conversation is the best form of communication (co-location)
- Working design systems are the principal measure of progress
- Sustainable development, able to maintain a constant pace
- Continuous attention to technical excellence and good design
- Simplicity—the art of maximizing the amount of work not done—is essential





21<sup>st</sup> - 25<sup>th</sup> September | Protospace | BK | TU Delft | NL

**AGILE FAB**

**INTERNATIONAL WORKSHOP**

**busting the last ghosts of modernism**

Modernism dictates that each design should be tailored to the materials that we intend to use. This creates an intimate link between the materials we choose and the architecture we produce. Therefore if material availability changes, it is difficult to change the materials of a building. Digital meta design systems could support a more 'agile' approach to material specification and procurement in architecture. However current systems tend to embed the material into the design system. The disruptive nature of current developments in materials science provide uncertainty to the material systems of architecture. At the same time an increasing focus on resource scarcity suggests that we should embrace the uncertainty of the materials we choose. But what does this mean for digital architecture? Is there an opportunity emerging here that we have yet to embrace? This workshop deliberately sets out to explore what it means to design without a specific material in a series of pavilions for Delft, Adelaide, Beijing and Tianjin.

<b>DAY 1</b> introductions Material, system and context definition	<b>DAY 2</b> meta systems Agile Fabrication System prototyping	<b>DAY 3</b> :hyper concept Design Meta System definition	<b>DAY 4</b> local system Material Systems application	<b>DAY 5</b> agile system Construction system definition
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**Featuring:**  
HAS OOSTERHUIS | NL  
Hyperbody / Delft (Delftshuis Leerdam)

NIMISH BILORIA | NL  
Hyperbody, Tu Delft

TIM MCGINLEY | AUS  
University Of South Australia

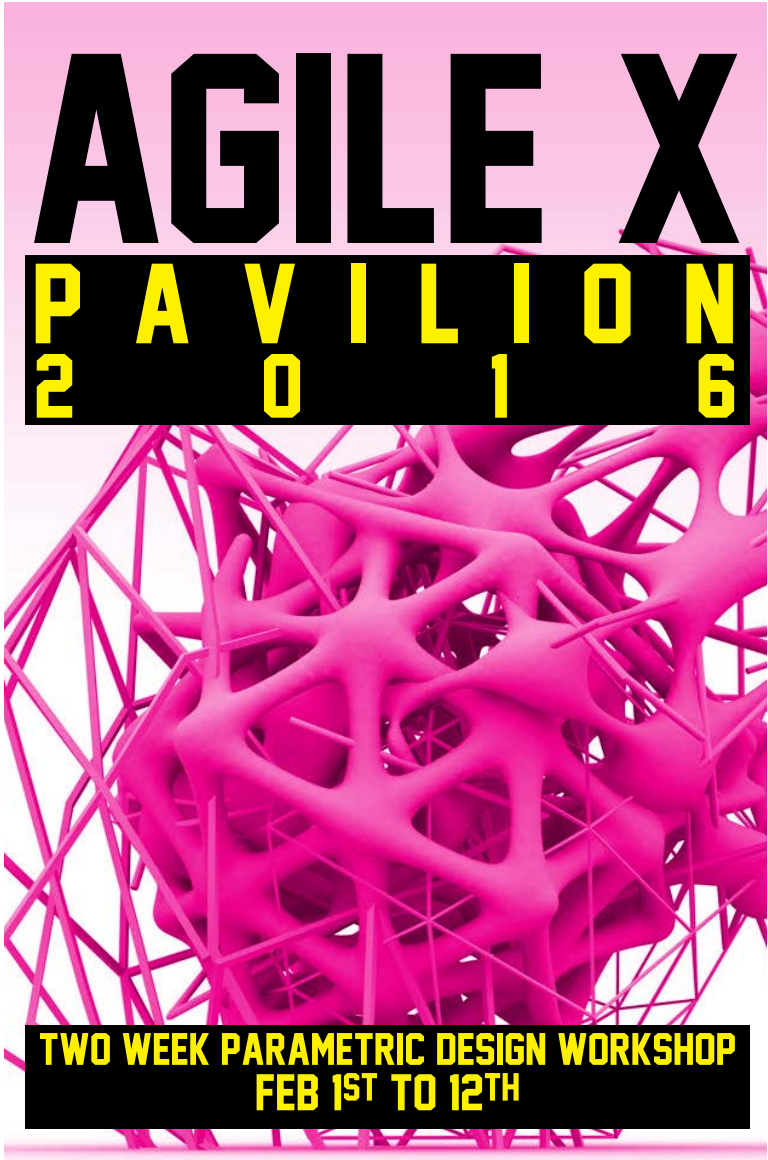
QIANG SHENG | CN  
Beijing Jiaotong University

JIA REY CHANG | NL  
Hyperbody, Tu Delft

MATT MURPHY | UK  
Bassman Lyons Architects

SINAN YUAN | CN  
Tianjin University

DAVID KROLL | AUS  
University Of South Australia



**AGILE X**

**PAVILION**

**2016**

**TWO WEEK PARAMETRIC DESIGN WORKSHOP**

**FEB 1<sup>ST</sup> TO 12<sup>TH</sup>**



**BUIL 5040**  
ADVANCED CONSTRUCTION  
IN THE WORKSHOP

SP3 - 1LD4 - 22.04

**BUIL 2024**  
CONSTRUCTION  
IN THE WORKSHOP

**AGILE X 3**

FABRICATING A PAVILION FOR THE  
NATIONAL ARCHITECTURE  
CONFERENCE AT ODASA

**WOODS BAGOT**

Office for Design+Architecture

University of South Australia

JPE



21<sup>st</sup> - 25<sup>th</sup> September | Protospace | BK | TU Delft | NL

# AGILE FAB

## INTERNATIONAL WORKSHOP

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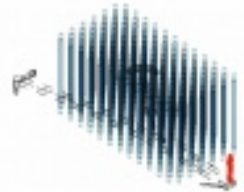
## ROTTERDAM



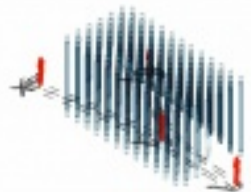
WATER



WATER STREAMS?

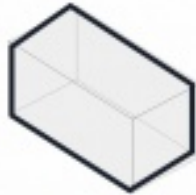


PATH DETECTION

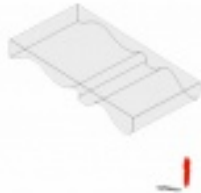


REPELLANT

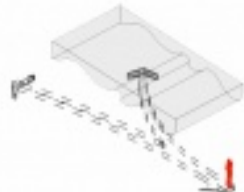
## TIANJIN



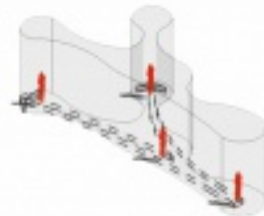
FOG/SMOKE?



FOG SWARM?

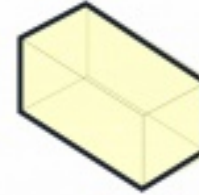


PATH DETECTION

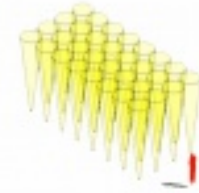


ATTRACTION

## ADELAIDE



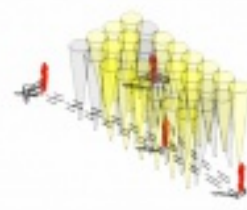
HEAT/SUN?



MAGNIFY HEAT



PATH DETECTION



TEMPORAL INVERSION





ADELAIDE /



ROTTERDAM /



CHINA /

File Edit View Curve Surface Solid Mesh Dimension Transform Tools  
Analyze Render Panels Help

Command: Grasshopper

Command:

Standard CPanes Set View Display Select Viewport Layout Visibility Transform

Viewport  
Title Top  
W... 373  
H... 499  
Pr... P.  
Camera  
Le... 50.0  
R... 90.0  
X... 425  
Y... 771  
Z... 289  
Lo... Pla...  
Target  
X... 425  
Y... 771  
Z... 21  
Lo... Pla...  
Wallpaper  
Fil...  
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Gr...  
Top Perspective Front Right

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Analyze Render Panels Help

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X... 425  
Y... 771  
Z... 289  
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Target  
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Y... 771  
Z... 21  
Lo... Pla...  
Wallpaper  
Fil...  
S...  
Gr...  
Top Perspective Front Right

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Analyze Render Panels Help

ve completed successfully

Command:

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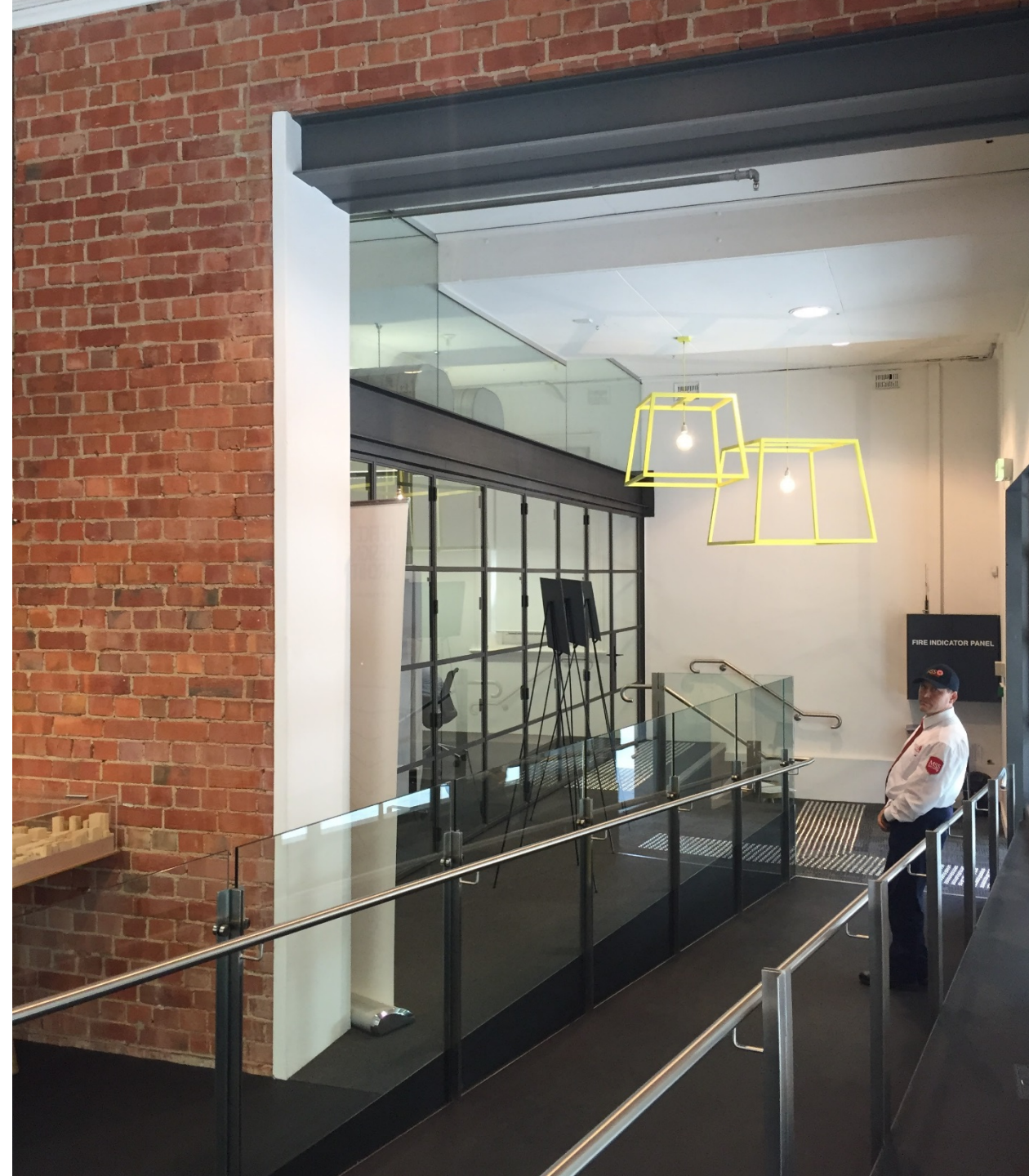
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Gr...  
Top Perspective Front Right

CPI: x 826 y 400 z 0.00 Millir Default Grid: Ort Pla Osr Smar Gun Record



# AGILE X

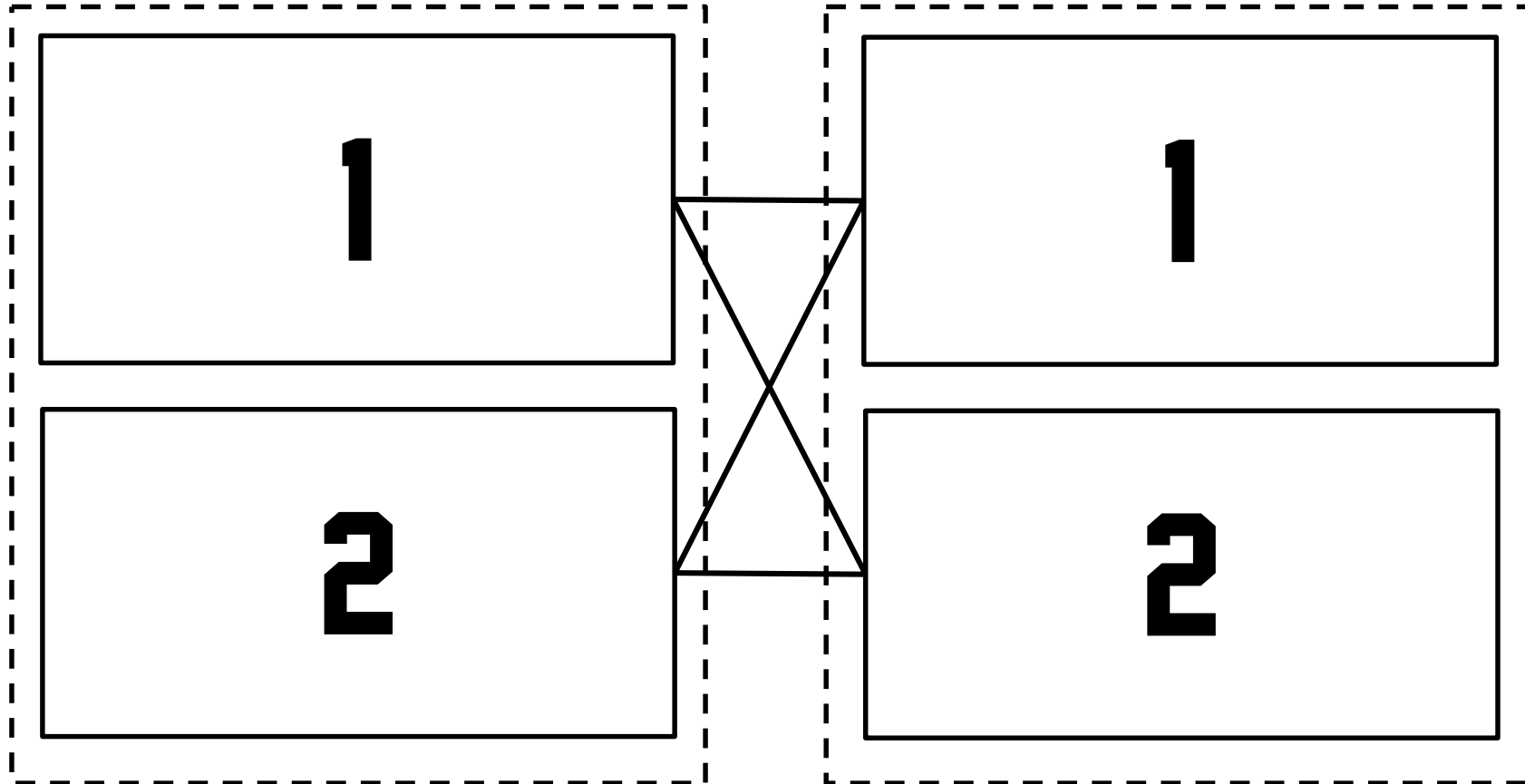
PAVILION  
2016





# GHOST

# MATERIAL



# AX 2 ADL

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KOLN SEP

1 BOR

# ROAD MAP

NEXT WEEK: 8

TEAM

IMMATERIAL 1

MATERIAL 1  
MATT + ARCHITECTURE

MATERIAL 2

IMMATERIAL 2

RE

TUE

WED

THU

FRI

Decision WITH MATT  
OUTLINE OUTLINE  
OUTLINE OUTLINE

Sketch of MATERIAL SYSTEM

MATERIAL MATERIAL

Sketch of MATERIAL SYSTEM

Sketch of MATERIAL SYSTEM

Sketch of MATERIAL SYSTEM

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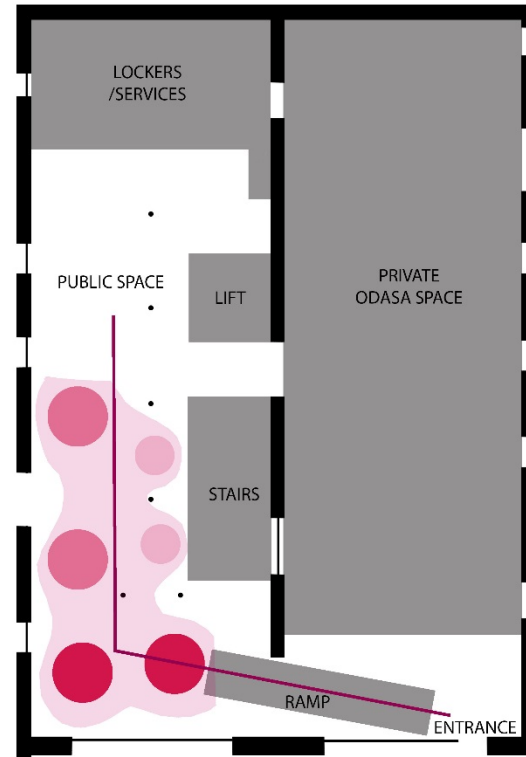
Sketch of MATERIAL SYSTEM

Presentation

Presentation 4-5pm  
ODA SA

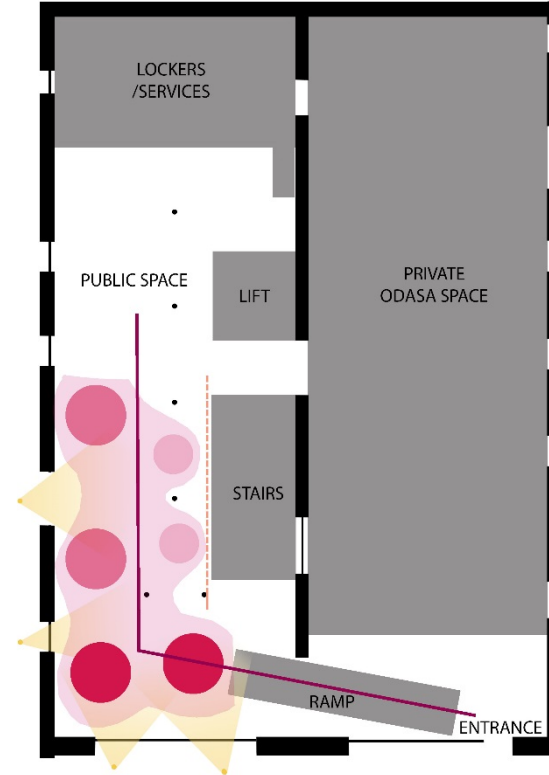


# GHOST

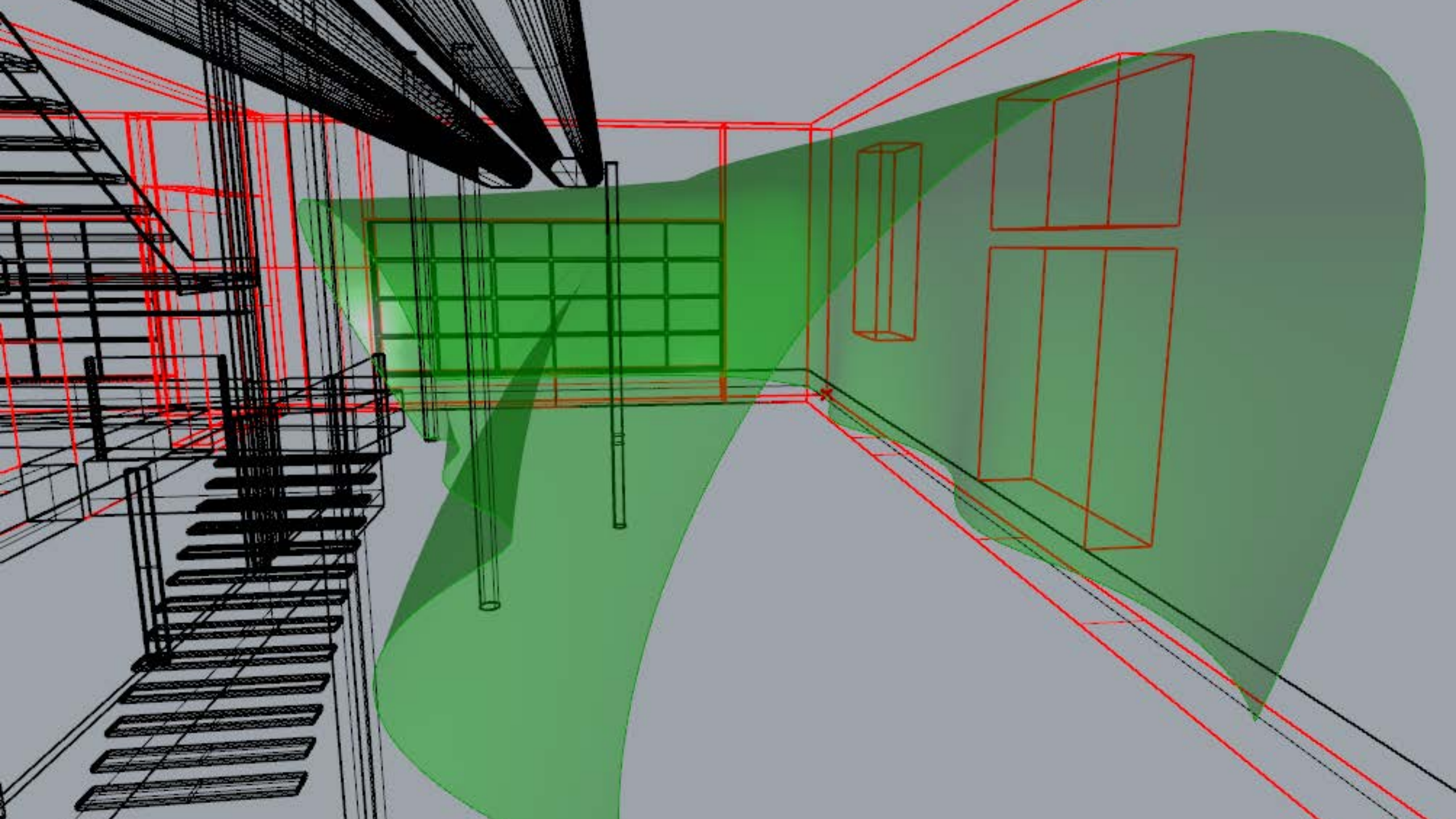


- Directing movement
- Entrance
- Exhibition
- Hygge
- Ghost envelope

# APERTURE



- Directing movement
- Entrance
- Exhibition
- Hygge
- Ghost envelope
- Perforation
- Privacy





# DECISION MATERIAL AVAILABILITY LOCAL FABRICATION AFFECT ON GHOST

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South Australia



AGILE X 2016  
STANBROOK, VIC



**NEXT\_top\_architects**

Page Liked · 13 February ·

#nextarch by @morphotype #next\_top\_architects  
#agilex #architecture #pavilion #design workshop  
Having built the #designghost using #agilex  
processes we are still able to easily adapt the  
materials. Keeping track of the applicability and  
relevance of material systems throughout the life of  
the project. @unisa.architecture "



Like



Comment



Share

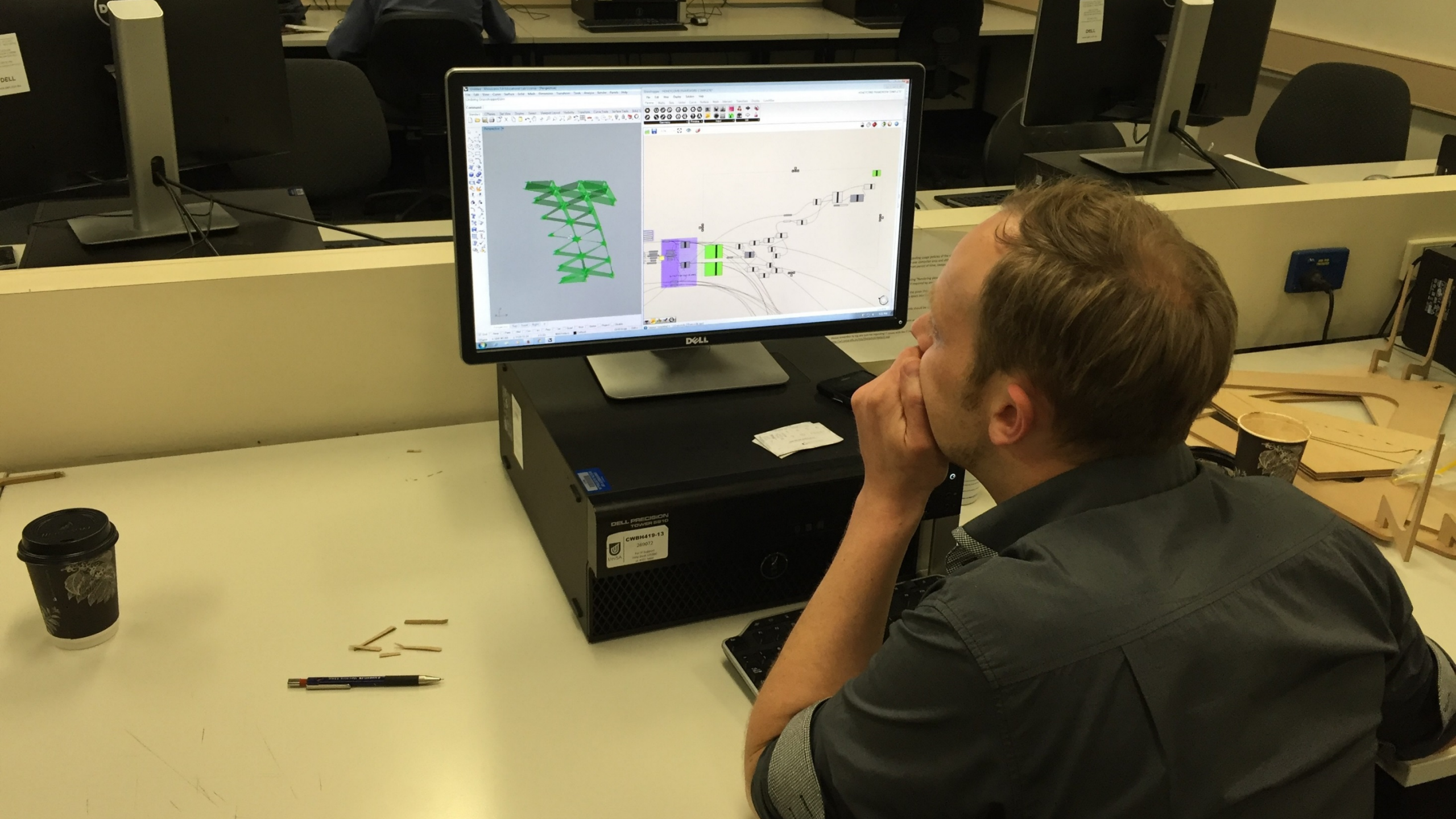


2



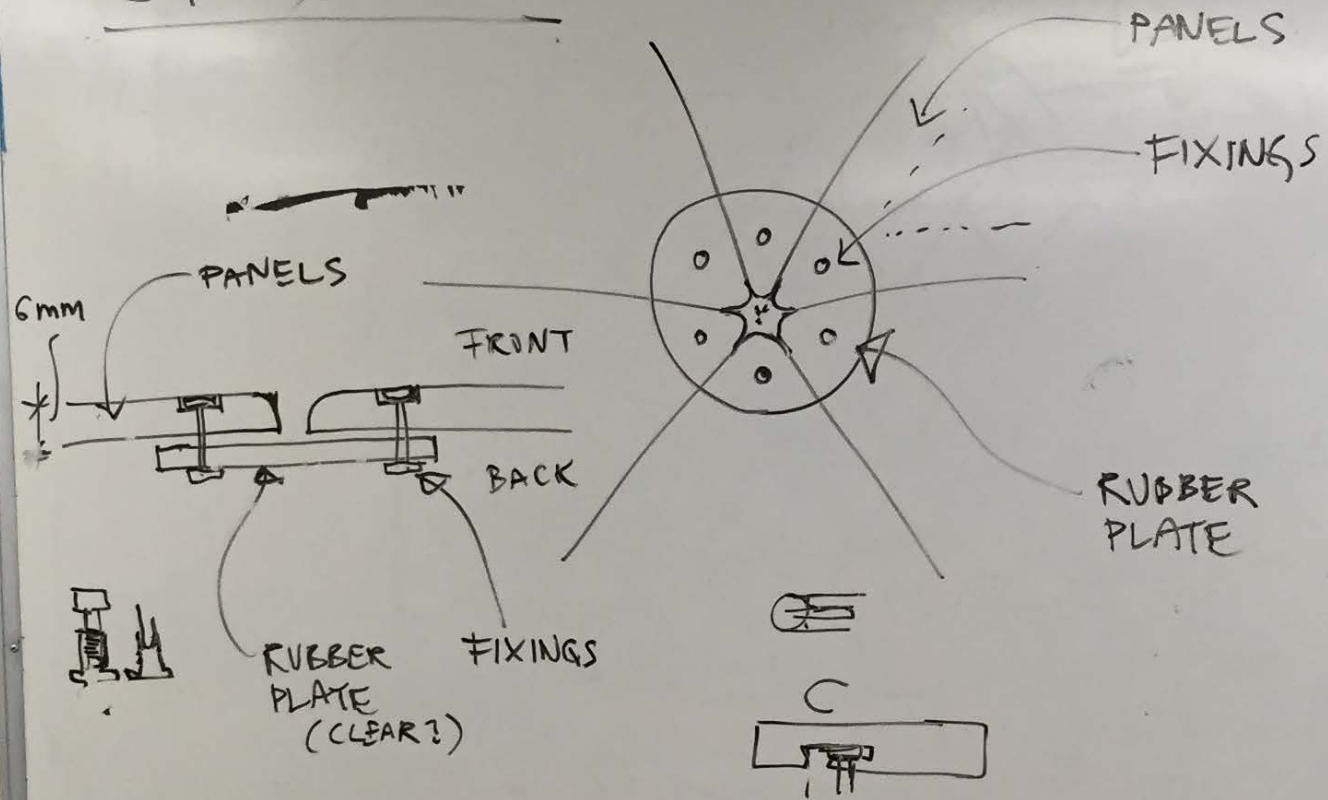
Write a comment...





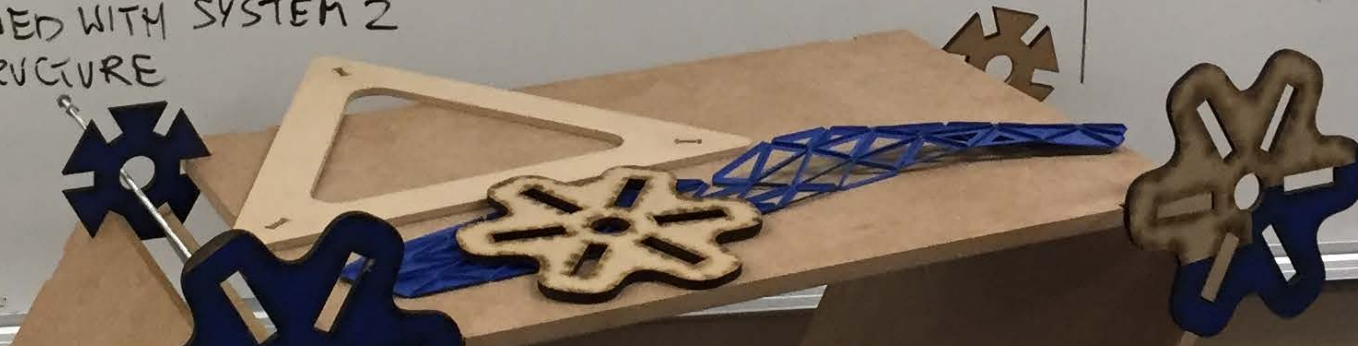
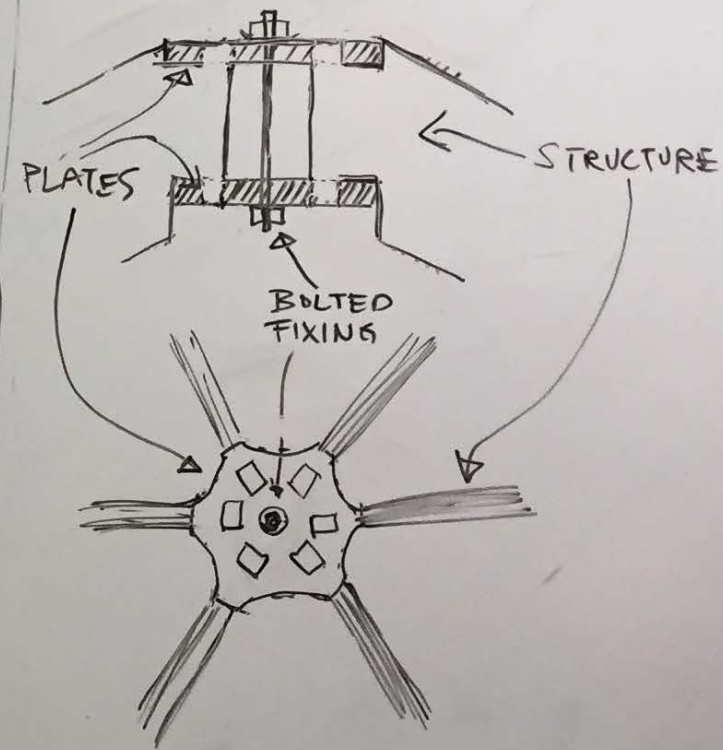


# SYSTEM 1



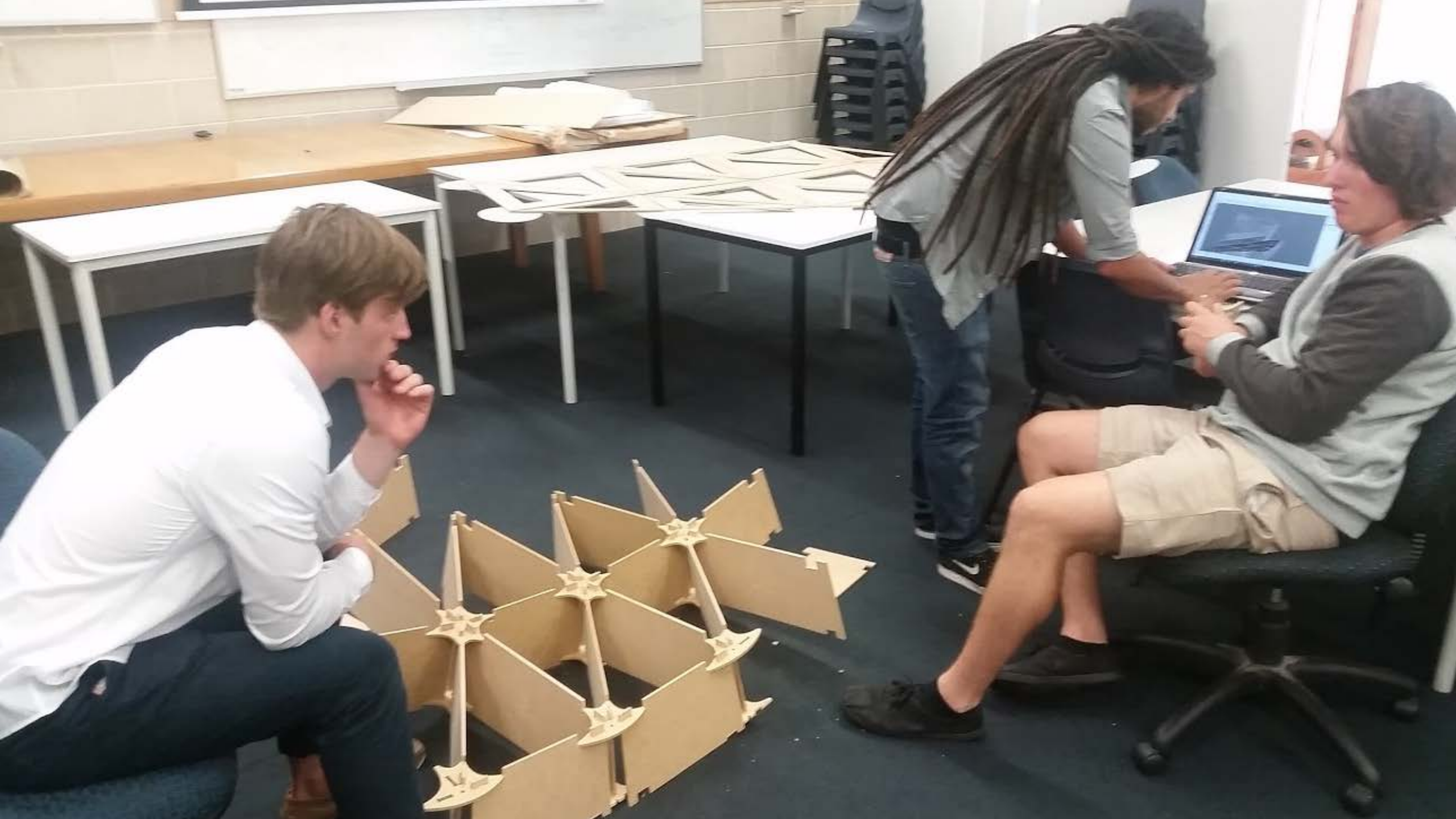
- SUSPENDED FROM CEILING RAILS
- OR
- COMBINED WITH SYSTEM 2 AS STRUCTURE

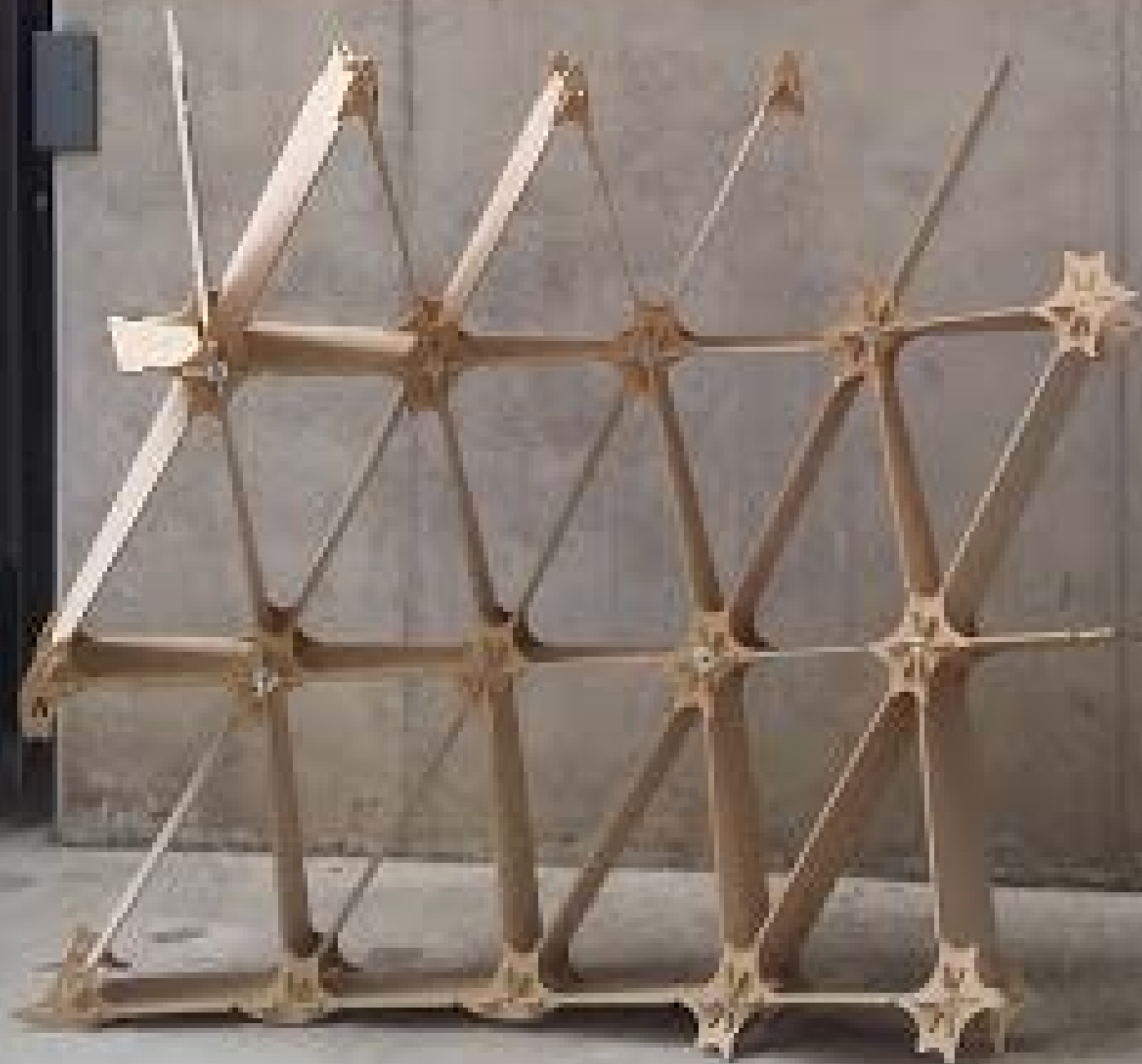
# SYSTEM 2 (STRUCTURE)













# AGILE X 3

FABRICATING A PAVILION FOR THE  
NATIONAL ARCHITECTURE  
CONFERENCE AT ODASA

**WOODS  
BAGOT**



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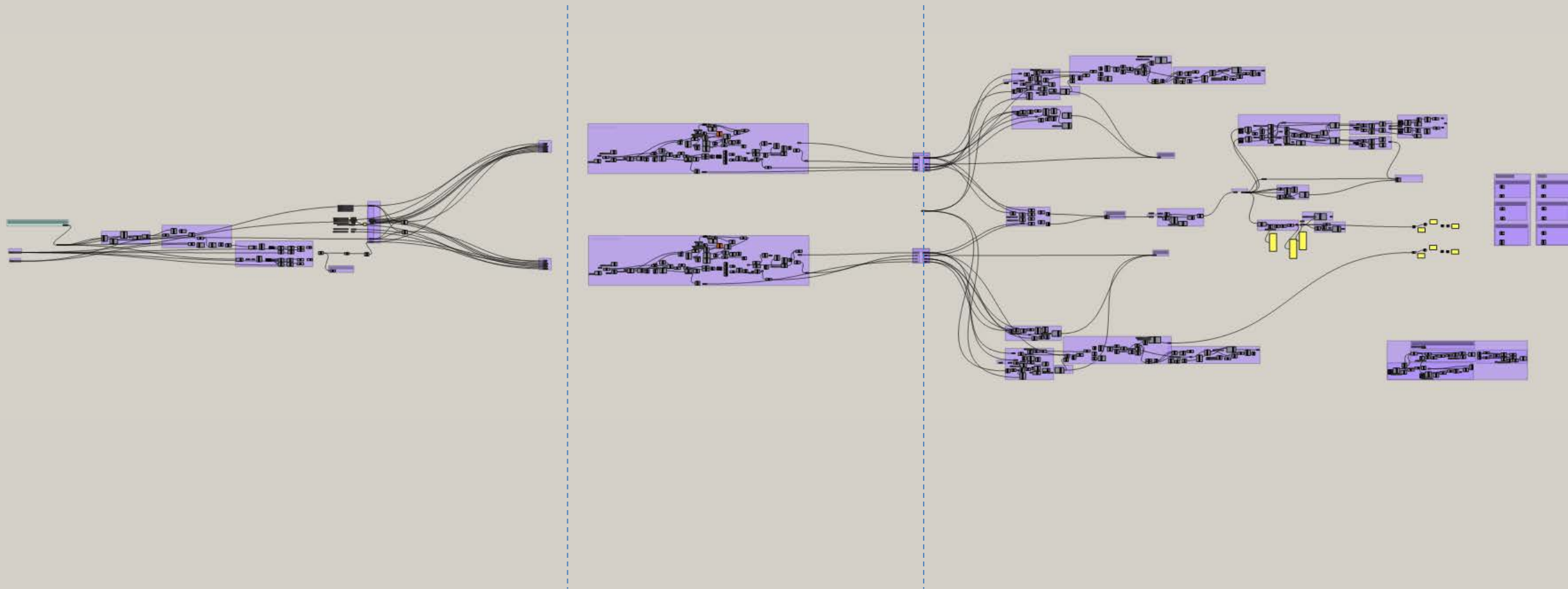
University of  
South Australia



# GHOST

# MATERIAL

# FABRICATION



AX 3 ADL

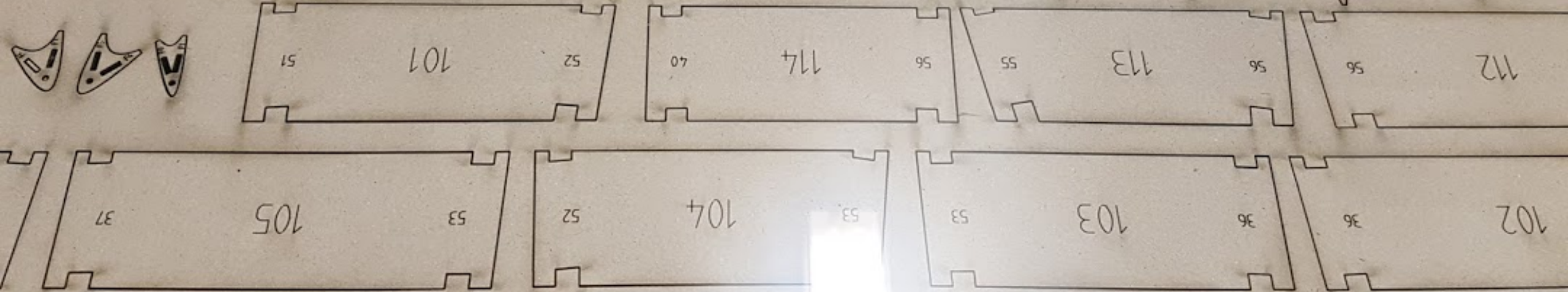








3.0















**WHAT IS NEXT**



**GHOST**

**MATERIAL**

**BLOCK**

**DISTRICT**

**CITY**

# AGILE X CHINA 2017











**THANKS**