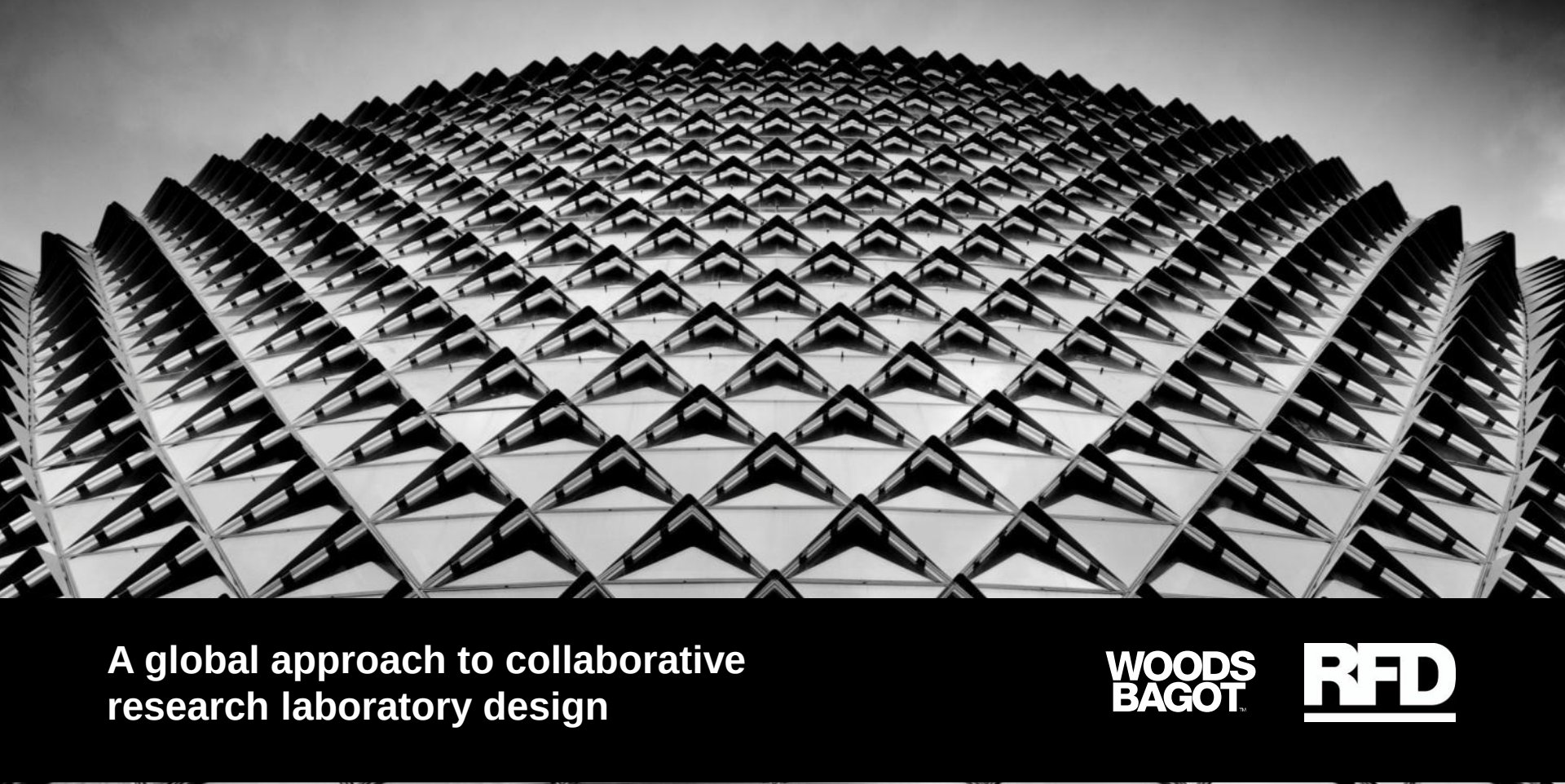

A global approach to collaborative research laboratory design

WOODS BAGOT

RFD

Research facilities for the future:

AGILITY: Designed to accommodate changing

- Research focus
- People and group sizes
- Instruments & equipment
- Protocols

Research facilities for the future:

BRANDING: Utilise design to
- Attract and retain top talent
- Appeal to funding sources
- Provide outreach opportunities

Research facilities for the future:

SCALE: Laboratory adaptability

- Structure supports change
- Infrastructure supports change
- Laboratories accommodate various group sizes

Research facilities for the future:

BLURRED: Research groups are

- Collocated by research focus
- Increasingly collaborative
- Crossing traditional institutional / departmental / disciplinary barriers
- Sharing costly instrumentation

BIOMEDICAL RESEARCH AREA COMPARISON SUMMARY

RESEARCH FACILITIES DESIGN

BUILDING	GROSS SQ. FT.	NET SQ. FT.	NET/ GROSS	COMPLETION DATE	LAB NET SQ. FT.			RATIO	DENSITY		LAB NSF/	GSF/	MAGNET SPACE	
					Lab	Support	Total	LS/L+LS	Lab/Gross	WORKSTN	WORKSTN	WORKSTN	NET SQ. FT.	NET/BLD NET
TELIOS Inc. Research	73,284	57,000	0.78	1992	12,358	4,800	17,158	0.28	0.23	130	132	564		
Pioneer Hi-Bred Research	42,366	24,112	0.57	1993	12,738	7,623	20,361	0.37	0.48	103	132	411		
Huntsman Cancer Research Institute	244,915	148,091	0.60	1998	37,860	37,478	75,338	0.50	0.31	390	193	628		
Amgen 29 Biotechnology Research	297,000	148,800	0.50	1998	31,200	43,400	74,600	0.58	0.25	325	230	914		
Imperial College SAFRB	277,579	169,542	0.61	1998	43,865	68,315	112,180	0.61	0.40	460	244	603	8,504	0.05
Stanford CCSR	201,700	130,000	0.64	2000	66,897	31,430	98,327	0.32	0.49	600	164	336		
Kings College New Hunts House	209,939	133,150	0.63	2000	37,372	33,056	70,428	0.47	0.34	360	196	583		
U of Nebraska RCE 1	284,000	160,862	0.57	2003	74,327	49,538	123,865	0.40	0.44	760	163	374		
Northwestern University Chem of Life	131,561	78,170	0.59	2004	36,812	15,910	52,722	0.30	0.40	321	164	410		
Biogen IDEC	349,152	181,559	0.52	2004	25,185	23,409	48,594	0.48	0.14	218	223	1,602		
IDEC NIMO	134,000	82,500	0.62	2004	15,453	4,347	19,800	0.22	0.15	97	204	1381		
Rensselaer Polytechnic Research	206,984	105,754	0.51	2004	36,900	35,900	72,800	0.49	0.35	416	175	498		
CMIER Chicago Childrens'	43,730	30,562	0.70	2004	13,030	12,957	25,987	0.50	0.59	136	191	322		
Florida Atlantic-Scripps	35,402	20,155	0.57	2005	9,773	6,219	15,992	0.39	0.45	87	184	407		
Univ of Hawaii JABSOM	92,800	62,000	0.67	2005	28,314	27,892	56,206	0.50	0.61	239	235	388		
Scripps- Drug Discovery	99,970	56,600	0.57	2005	28,520	13,540	42,060	0.32	0.42	230	183	435		
Scripps- Adv Technology	116,060	71,260	0.61	2005	13,400	13,630	27,030	0.50	0.23	110	246	1,055		
Scripps- Molec Biology	132,180	67,620	0.51	2005	30,890	23,220	54,110	0.43	0.41	395	137	335		
U of Maryland Dental	315,000	177,625	0.56	2005	26,291	19,709	46,000	0.43	0.15	215	214	1465		
U of Michigan Biomedical Engineering	52,466	38,737	0.74	2006	14,096	7,078	21,174	0.33	0.40	119	178	441		
Hauptman Woodward Institute	70,318	45,257	0.64	2006	13,034	10,332	23,366	0.44	0.33	148	158	475	6,310	0.14
Northwestern University Chem of Life	132,000	66,482	0.50	2007	21,987	30,363	52,350	0.58	0.40	320	164	413		
WSU Biotechnology Research	120,000	71,000	0.59	2009	21,600	27,300	48,900	0.56	0.41	324	151	370		
Denver VA Medical Center	140,000	90,062	0.64	2010	39,600	35,231	74,831	0.47	0.53	268	279	522		
U of North Carolina Genomics	224,121	116,997	0.52	2012	37,299	36,664	73,963	0.50	0.33	500	148	448	9,200	0.08
Max Planck Florida Institute for Neuroscience	113,000	50,180	0.44	2012	12,917	24,702	37,619	0.66	0.33	150	251	753		
Masdar Institute of Science & Technology	718,437	250,000	0.35	2013			151,232		0.21	546	277	1,316	21,400	0.09
CHA Pangyo Research Center	618,554	360,000	0.58	2014	48,065	52,463	100,528	0.52	0.16	611	165	1,012	15,800	0.04
South Australia Health & Medical Research Inst	315,009	187,849	0.60	2014	30,481	60,236	90,717	0.66	0.29	570	159	553	19,800	0.11
Translational Research Inst & Qatar Biobank	450,663	267,903	0.59	(2016)	19,616	75,646	95,262	0.79	0.21	290	328	1,554	17,900	0.07
AVERAGE			**0.58**					**0.47**	**0.35**	**315**	**196**	**686**		**0.08**

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S A H M R I

South Australian Health Medical Research Institute

INVESTING IN HUMANITY

“When land was the productive asset, nations battled over it. The same is happening now for talented people.”

Stan Davis & Christopher Meyer
futureWEALTH

Research Themes Leaders

Aboriginal Health –
Professor Alex Brown
Deputy Director, Aboriginal Research
Program Leader, SAHMRI
Professor of Population Health and
Research Chair Aboriginal Health
University of South Australia

Heart Health –
Professor Stephen Nicholls
Deputy Director, SAHMRI
Professor of Cardiology, University
of Adelaide

Cancer –
Prof Tim Hughes
Cancer Research Theme Leader
University of South Australia

Nutrition and Metabolism –
Professor Chris Proud
Theme Leader, Nutrition & Metabolism

Healthy Mothers, Babies & Children –
Professor Maria Makrides
Director, Women's & Children's
Health Research Institute, University
of Adelaide

Infection and Immunity –
Professor Steve Wesselingh
Executive Director, SAHMRI

Mind and Brain –
Professor Julio Licinio
Deputy Director, Translational
Medicine, SAHMRI
Strategic Professor of Psychiatry,
Flinders University School of Medicine

International Recruitment

Prof. Chris Proud
Theme Leader, Nutrition & Metabolism

A/Prof. David Lynn
EMBL Group Leader in Bio Informatics

A/Prof. Ville Makinen
EMBL Group Leader in Bio Informatics

Prof. Steve Nicholls
Theme Leader, Heart Health

A/Prof Geraint Rogers
Director, Microbiome Research

Mr Prab Takhar
Director Molecular Imaging

Prof. Alex Brown
Theme Leader, Aboriginal Health

Prof. Julio Licinio
Theme Leader, Mind & Brain

Prof. Neil Dear
Director of Research

Prof. Maria Makrides
Theme Leader, Healthy Mothers, babies & Children

Prof. Tim Hughes
Theme Leader, Cancer

Prof. Steve Wesselingh
Theme Leader, Infection & Immunity

BASIC FACTS

675 RESEARCH STAFF
9 RESEARCH MODULES
100% WET LAB ENABLED

VIVARIUM, CYCLOTRON, PUBLIC SPACE WITH CAFÉ, RETAIL
AND DISPLAY

GROSS FLOOR AREA – 25,000 SQM
COST - $200 MILLION
COMPLETION - MARCH 2014
LEED GOLD RATING

AND CO-LOCATED NEXT TO THE NEW $2 BILLION TRAUMA
AND TEACHING HOSPITAL, THE NEW ROYAL ADELAIDE HOSPITAL

The Vision

- SAHMRI Chair of the Board ……. a thing of the world in Adelaide
- SAHMRI …….

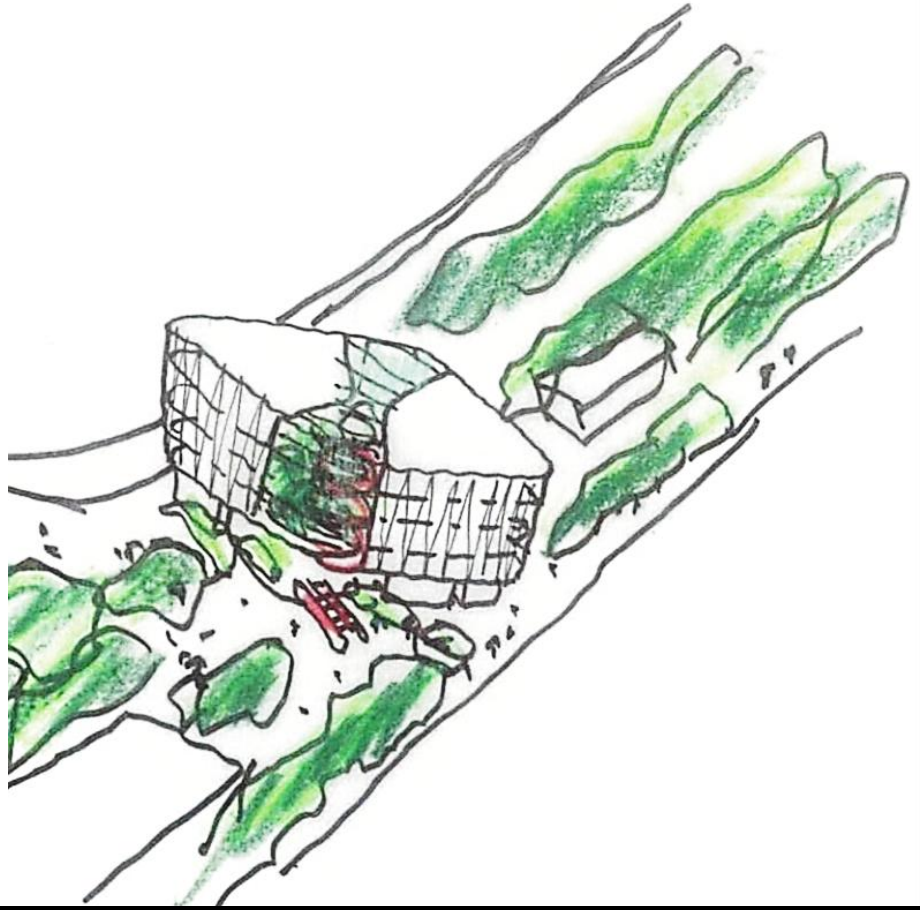
transform research into health

AN URBAN CATALYST IN REFORMING AN EXISTING PART OF THE CITY

DEMYSTIFYING MEDICAL RESEARCH TO THE PUBLIC

CENTRE OF EXCELLENCE IN TRANSLATIONAL RESEARCH

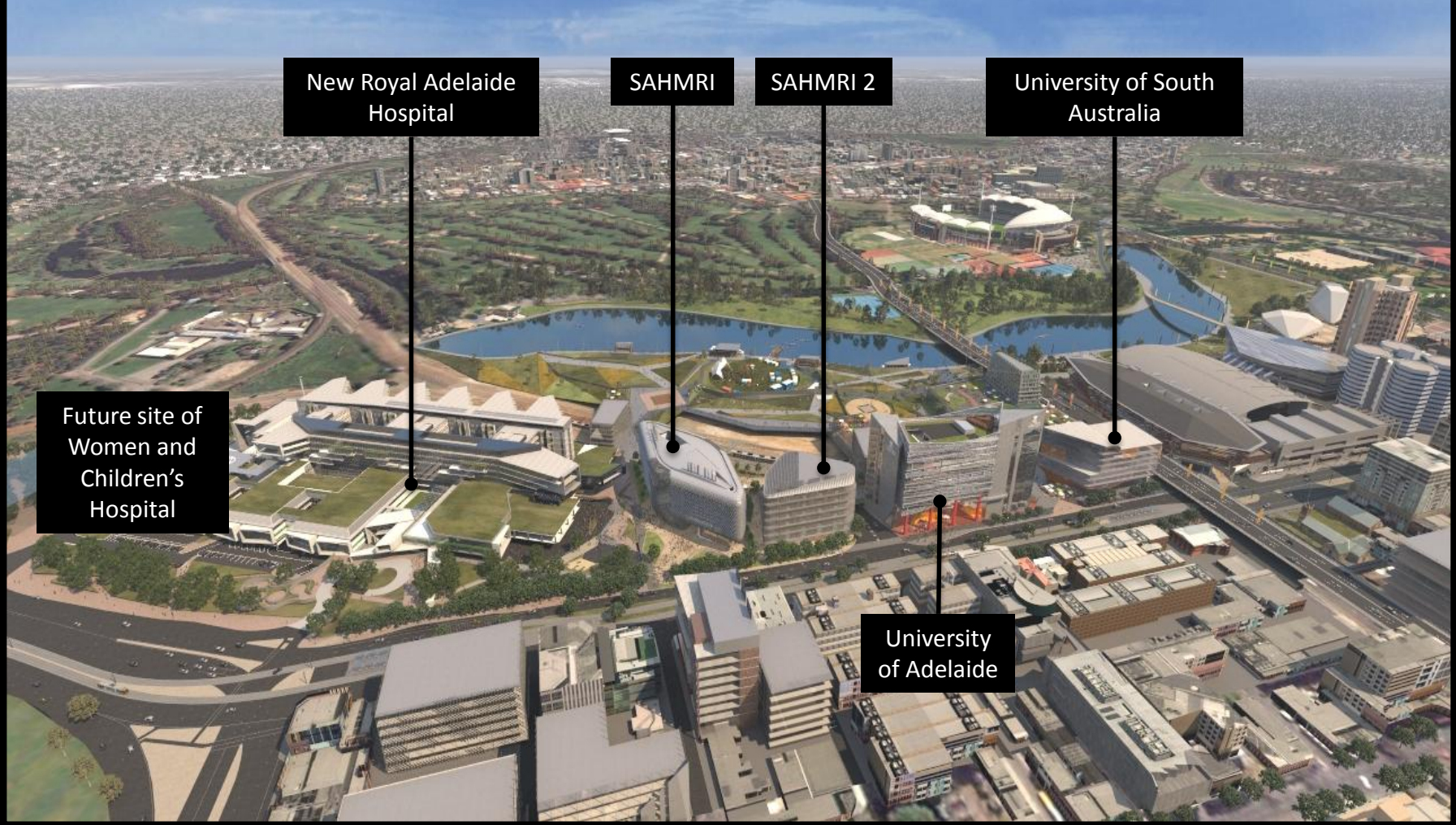
ENVIRONMENTAL RESPONSE INFORMED BY TECHNOLOGY
“PUTTING SCIENCE WITH DESIGN”



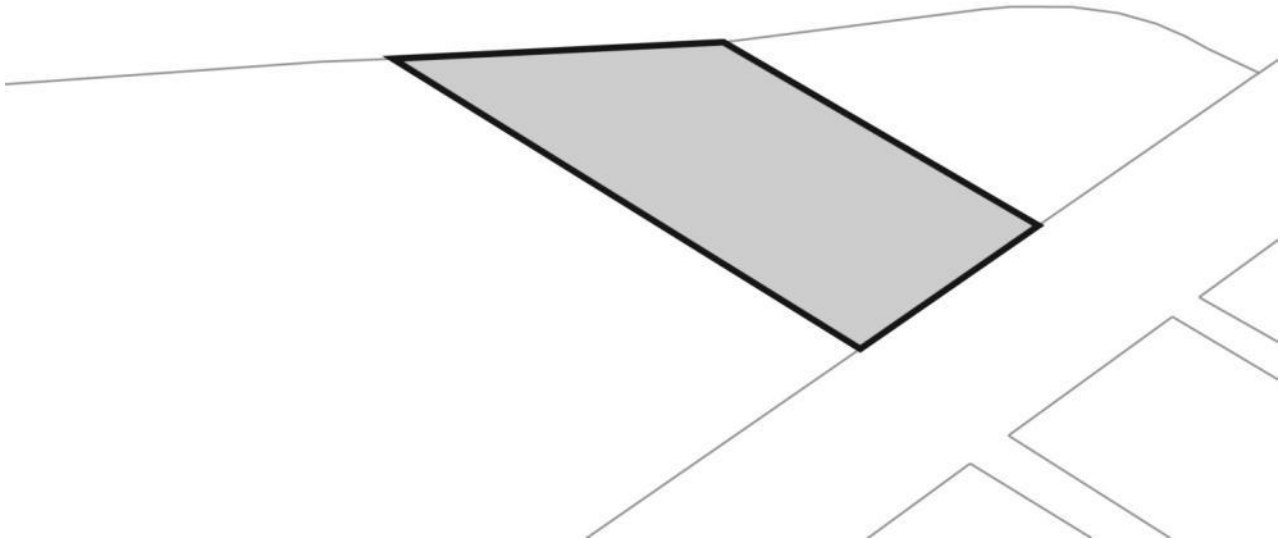
KEY IDEAS


Existing medical/
health precinct

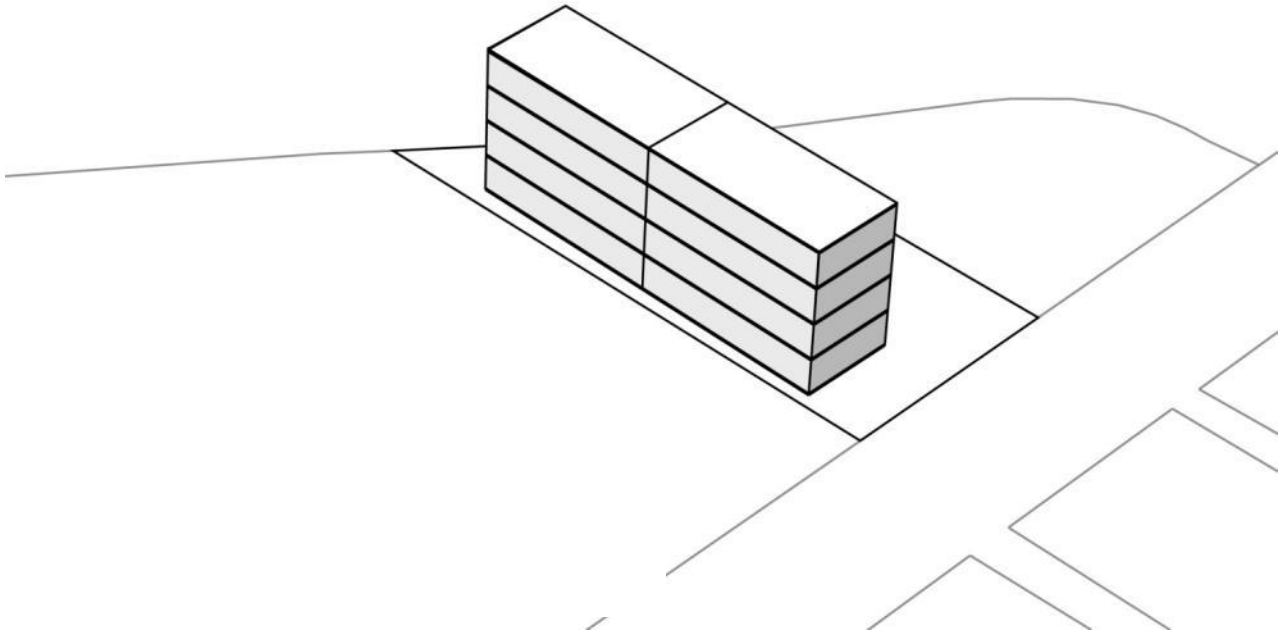

New medical/
health precinct



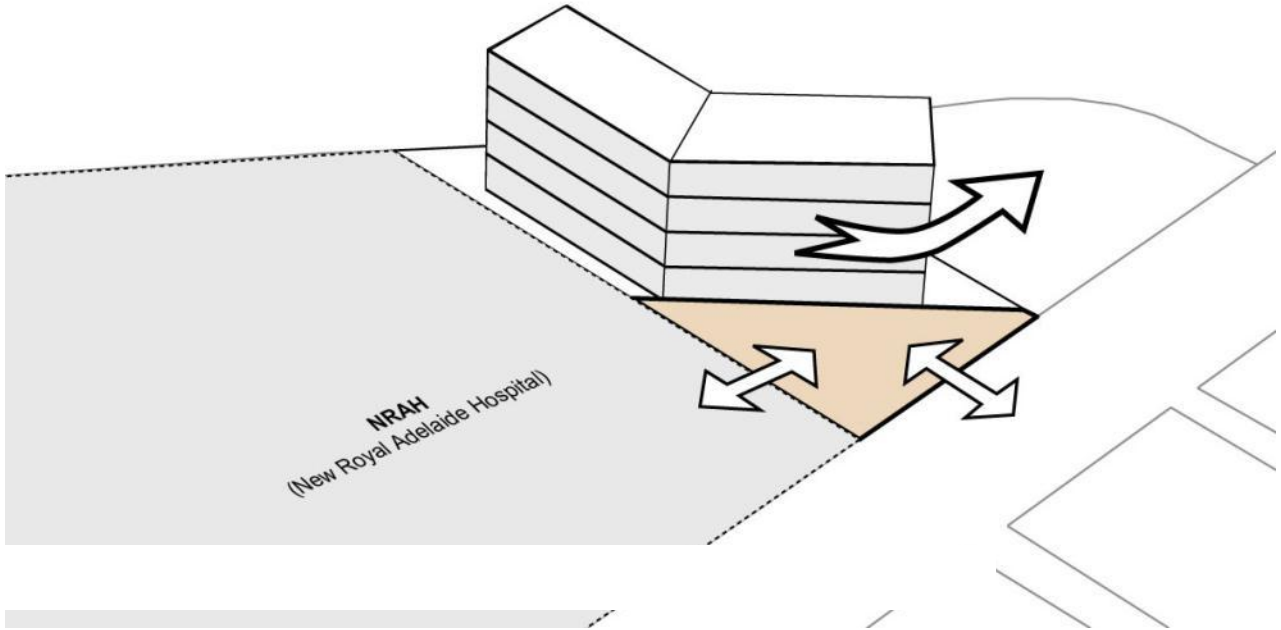
NORTH TERRACE BOULEVARD



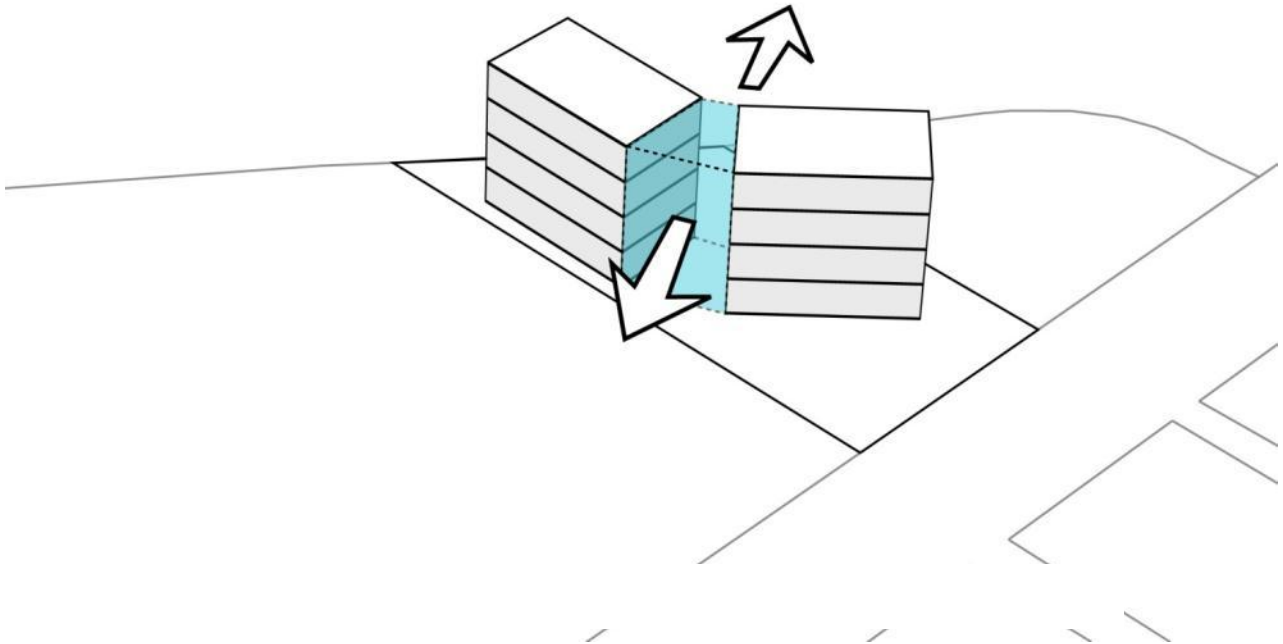
SITE 5800 sqm or 62,000 ft2



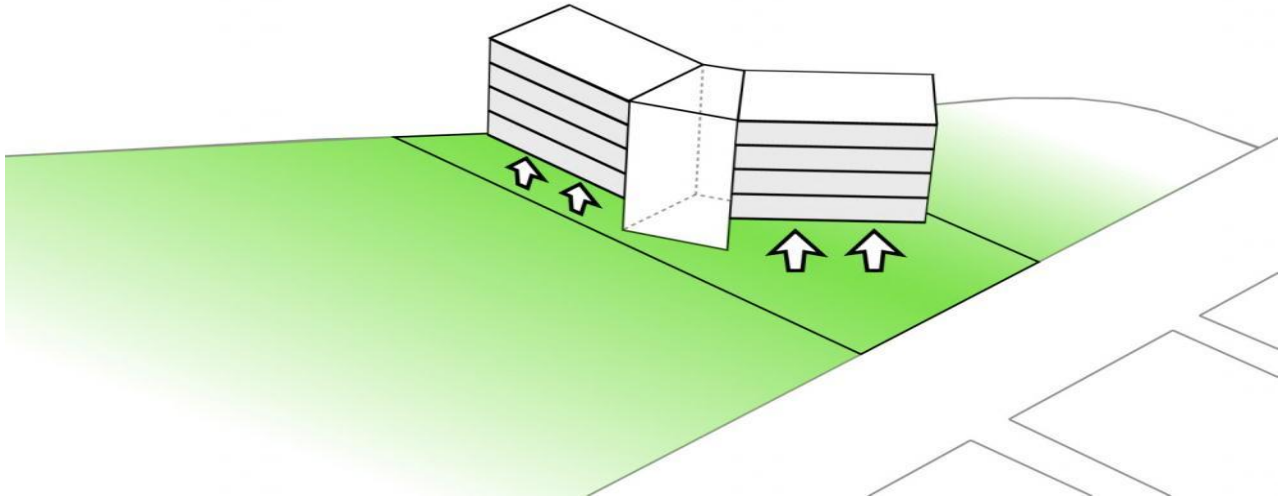
TWO SIMPLE 1000 sqm LAB MODULES
3500sqm or 37,000 ft2 Floor Plates



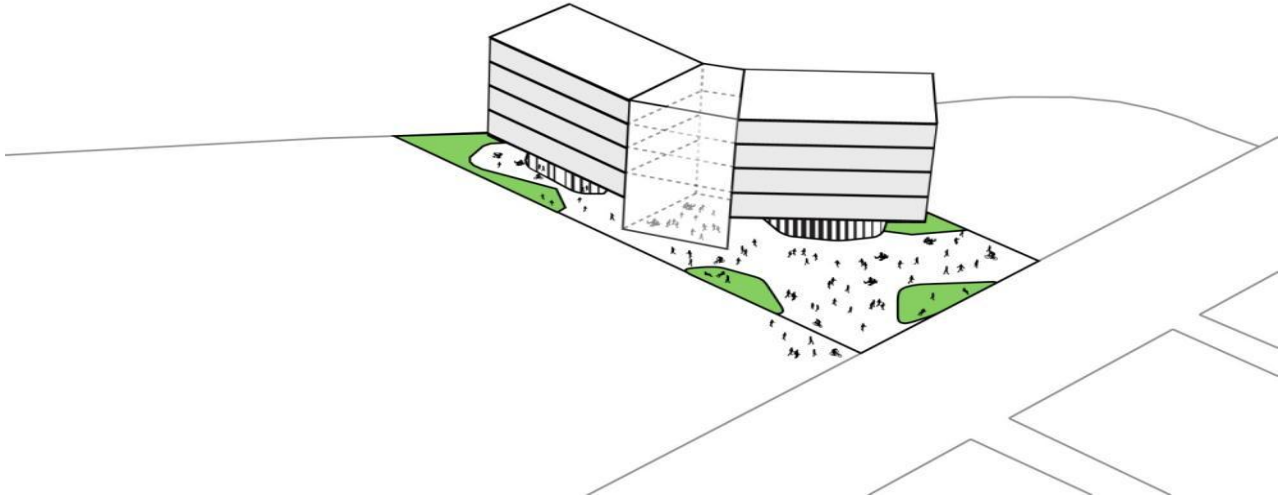
ROTATING A LAB MODULE PROVIDES A FORECOURT FOR BOTH SAHMRI AND THE NRAH



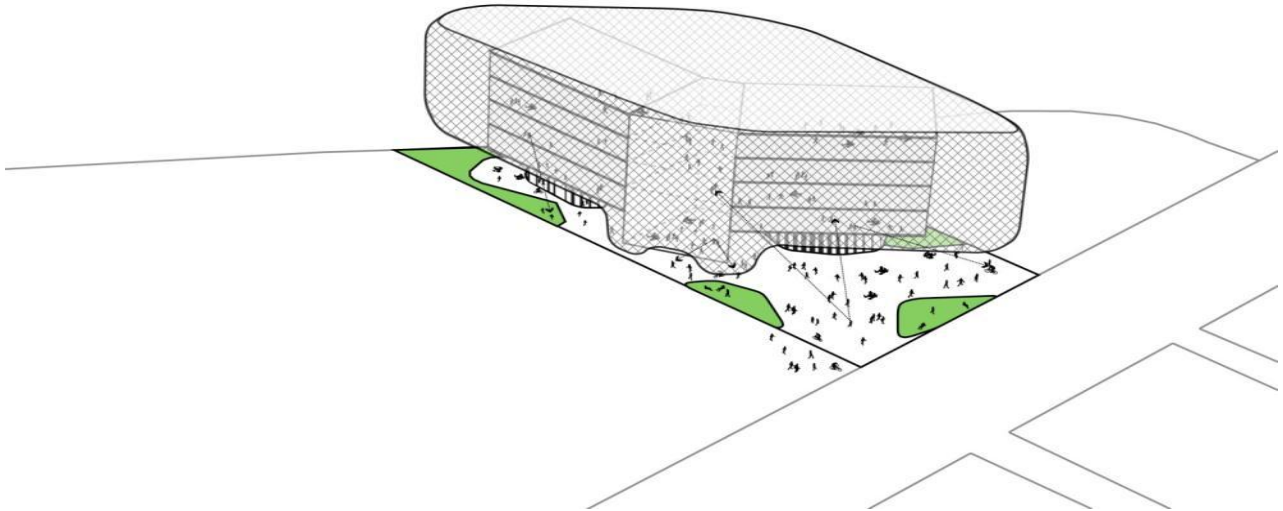
A CENTRAL ATRIA, ARRIVAL AND COLLABORATIVE HUB



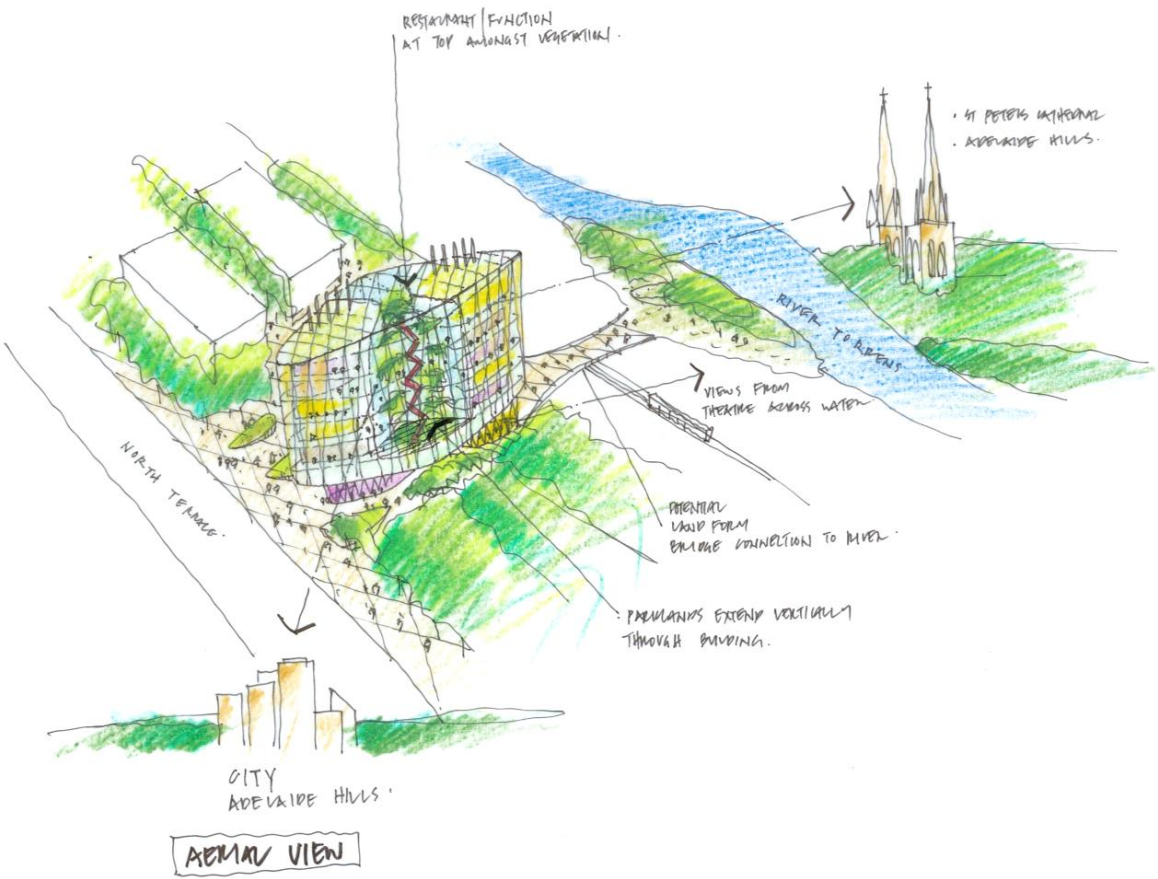
BY RAISING BUILDING WE ALLOW THE PARKLANDS TO EXIST BELOW



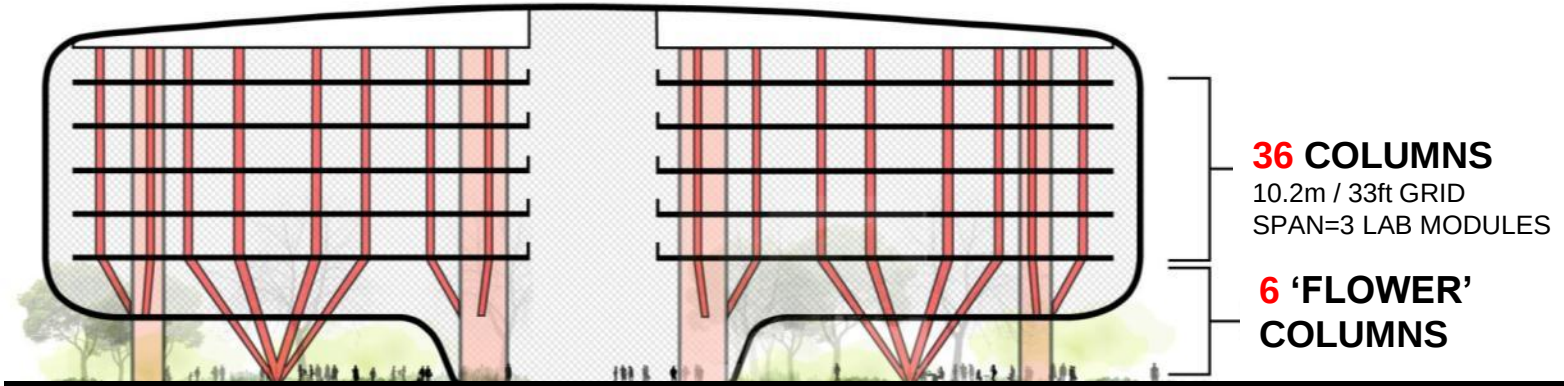
AN INTERACTIVE PUBLIC DOMAIN FOR THE COMMUNITY



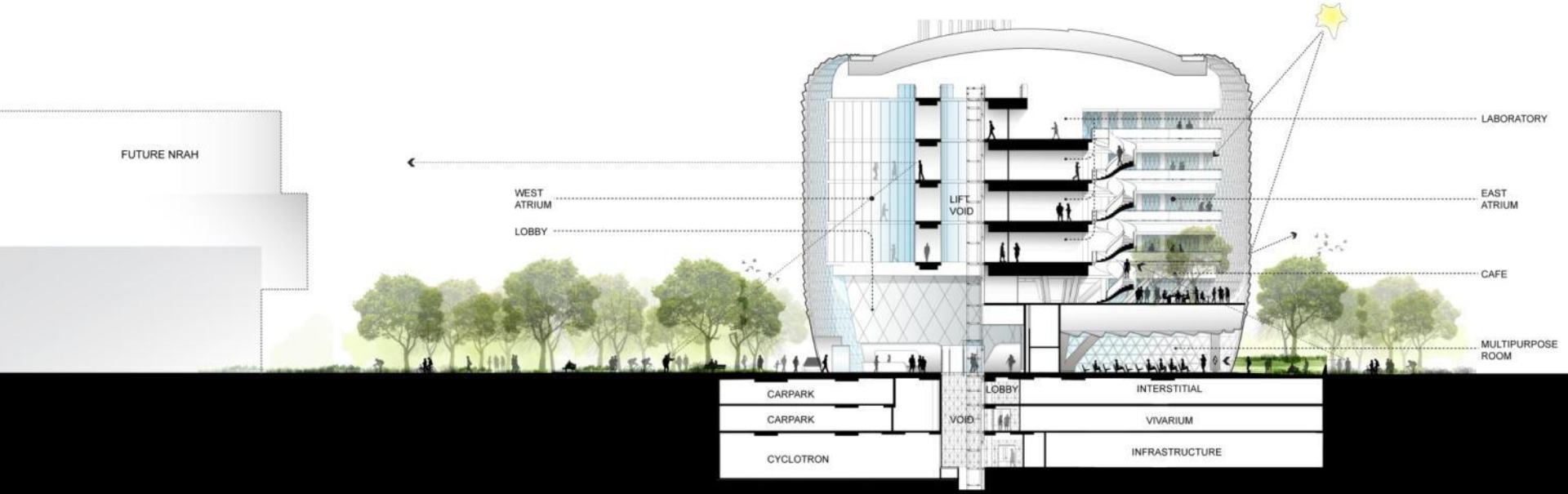
AN ENVELOPE THAT IS BOTH ENVIRONMENTAL AND CREATES A UNIQUE FORM



CONNECTED TO ITS CONTEXT



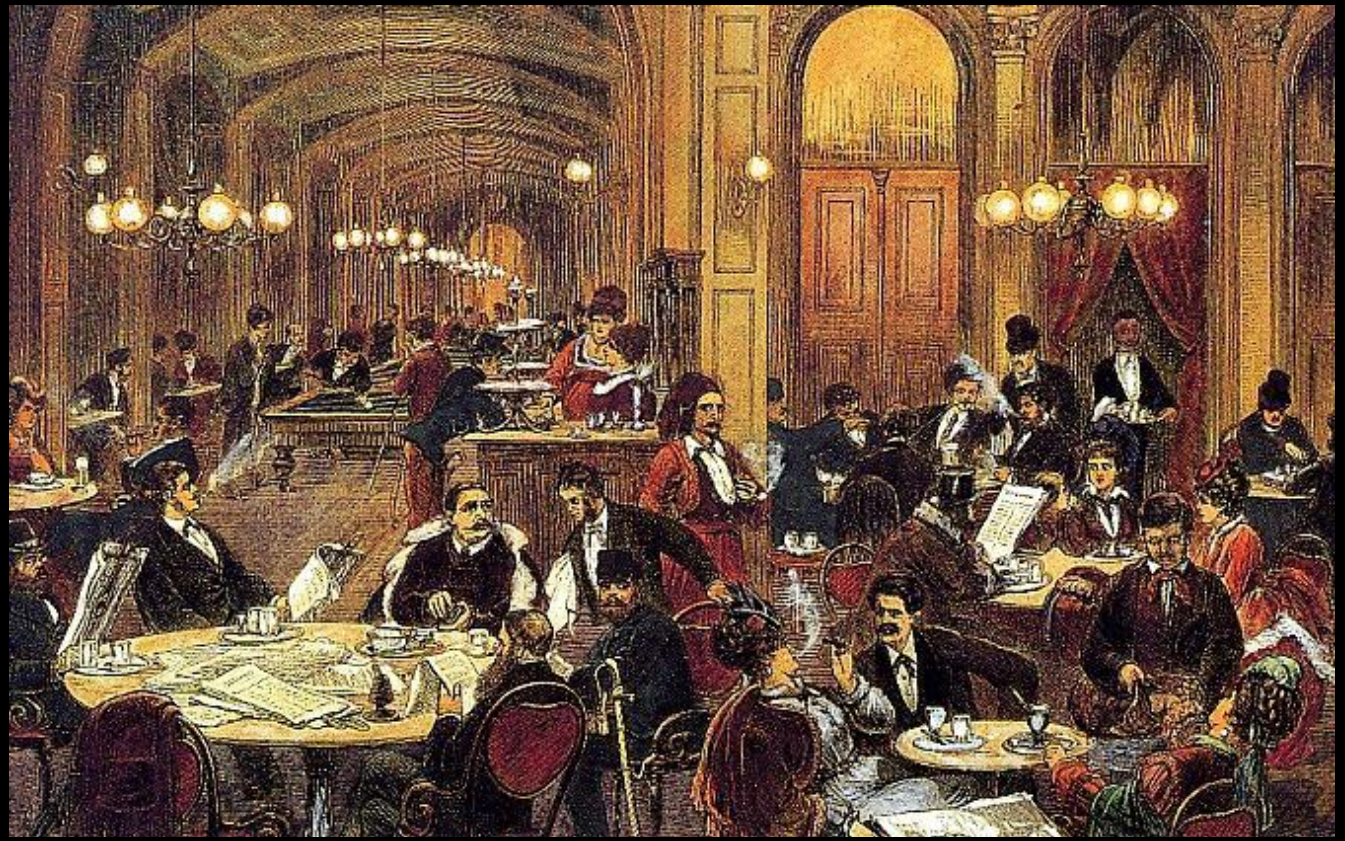
A BUILDING THAT “FLOATS”ABOVE THE GROUND



CROSS SECTION

WEST ATRIUM LOBBY

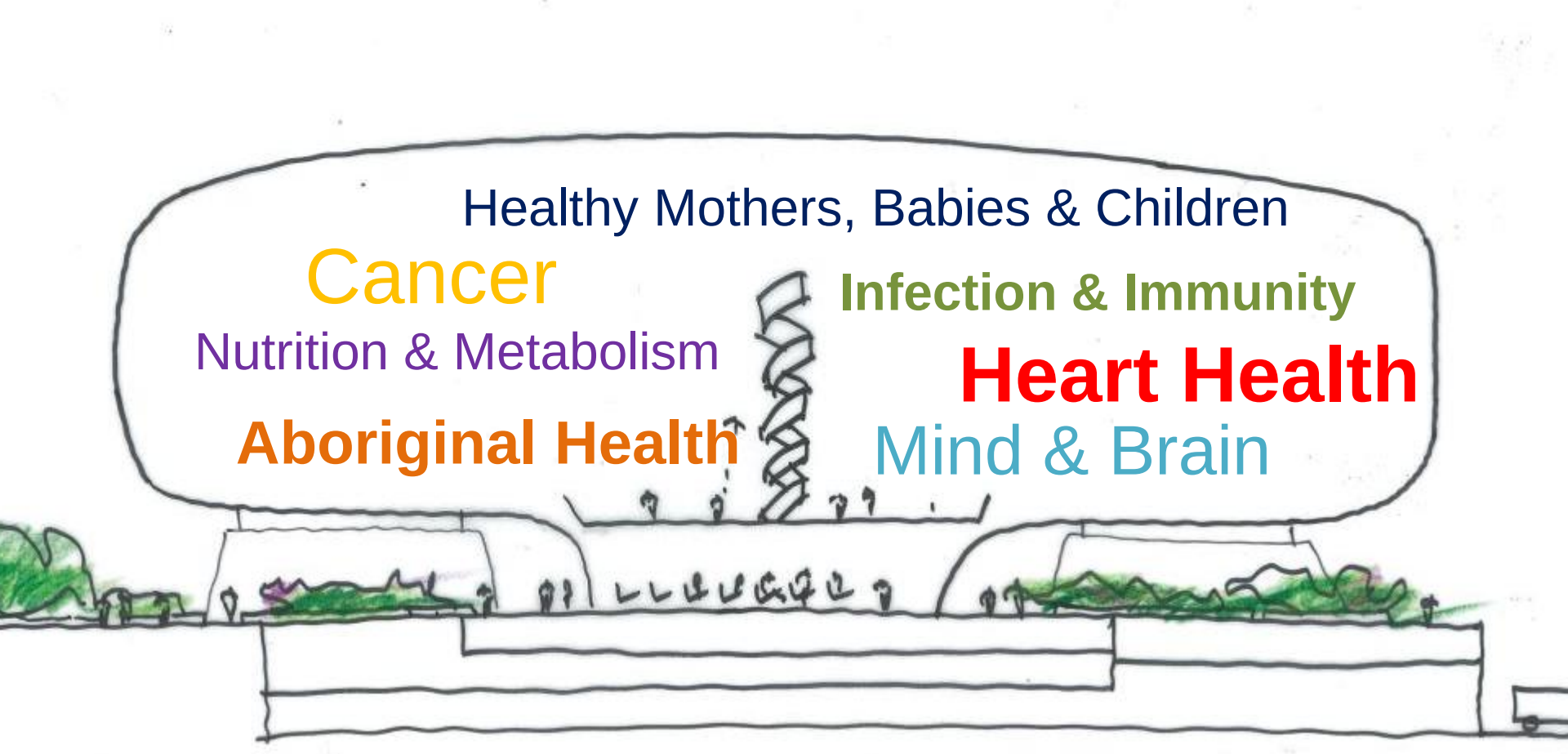
Open and transparent, fosters collaboration and knowledge sharing within and across different groups, ultimately creates synergies, ideas and innovations.



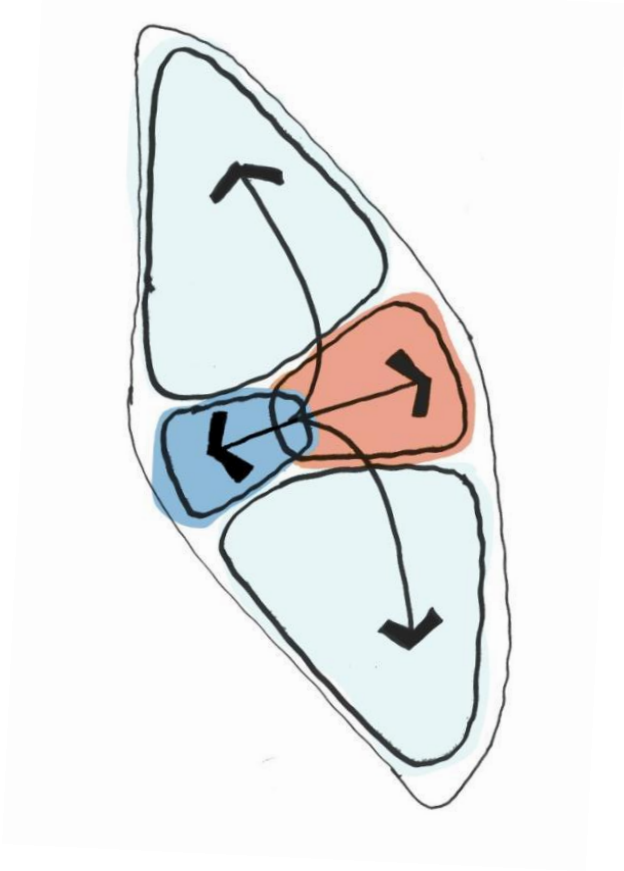
‘THE CLUB’ – TRANSACTIONAL KNOWLEDGE

TYPICAL WET LABORATORY

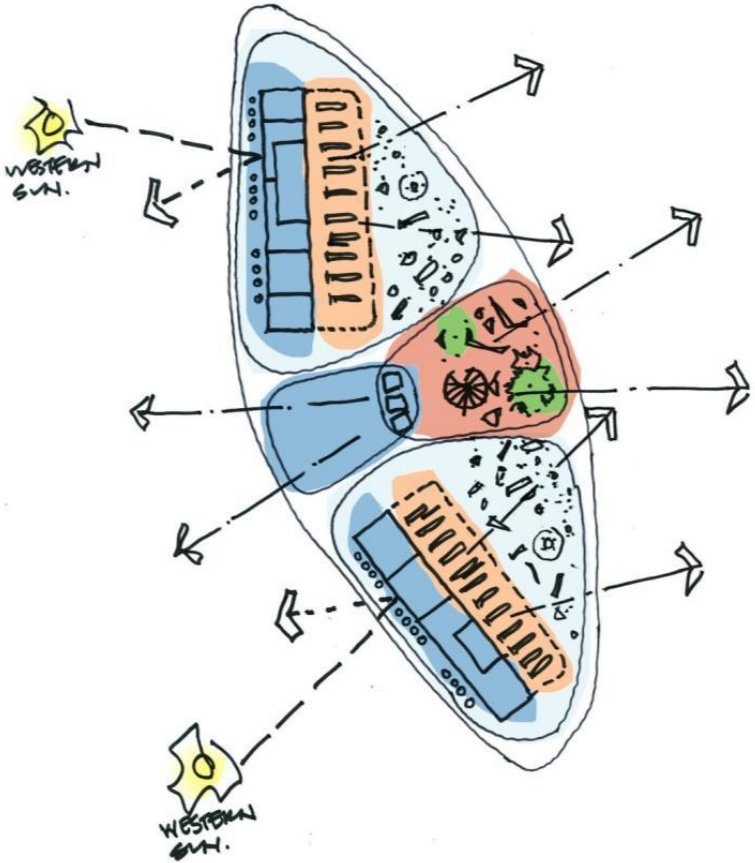
EAST ATRIUM CAFE



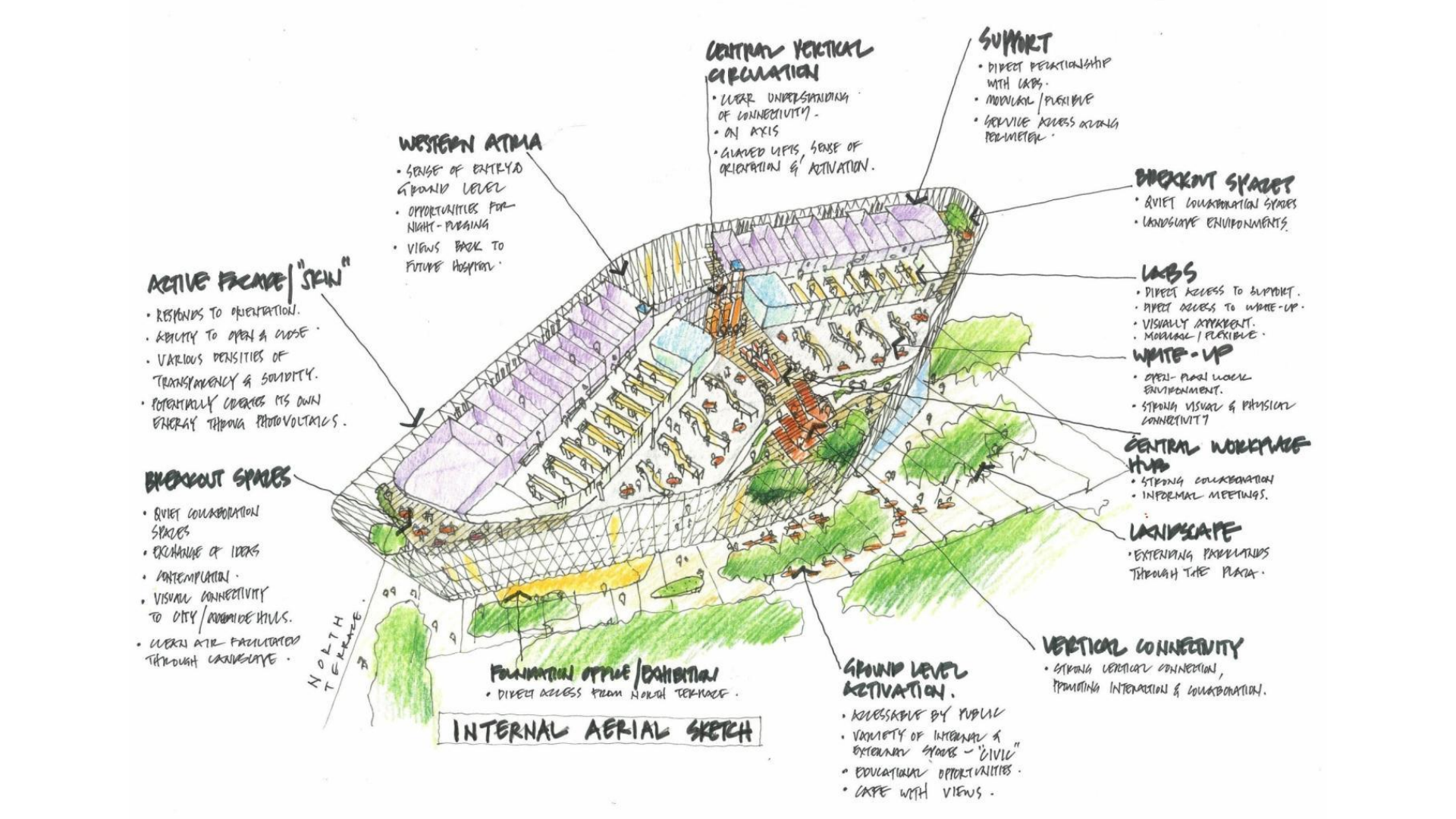
7 KEY RESEACH THEMES



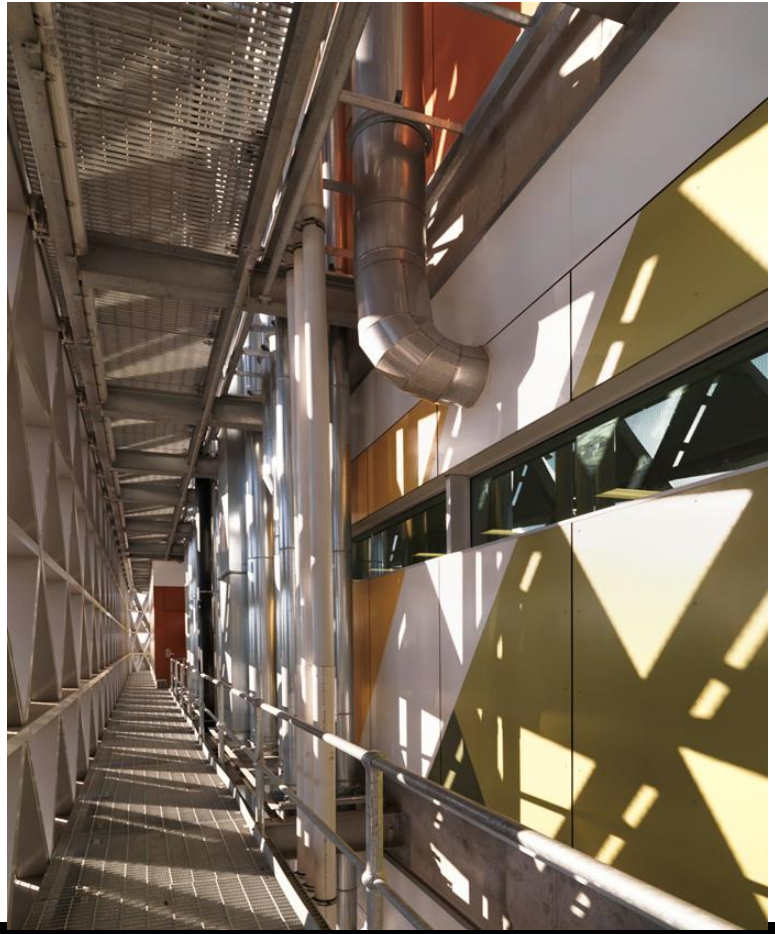
PLANNING PRINCIPLE DIAGRAM



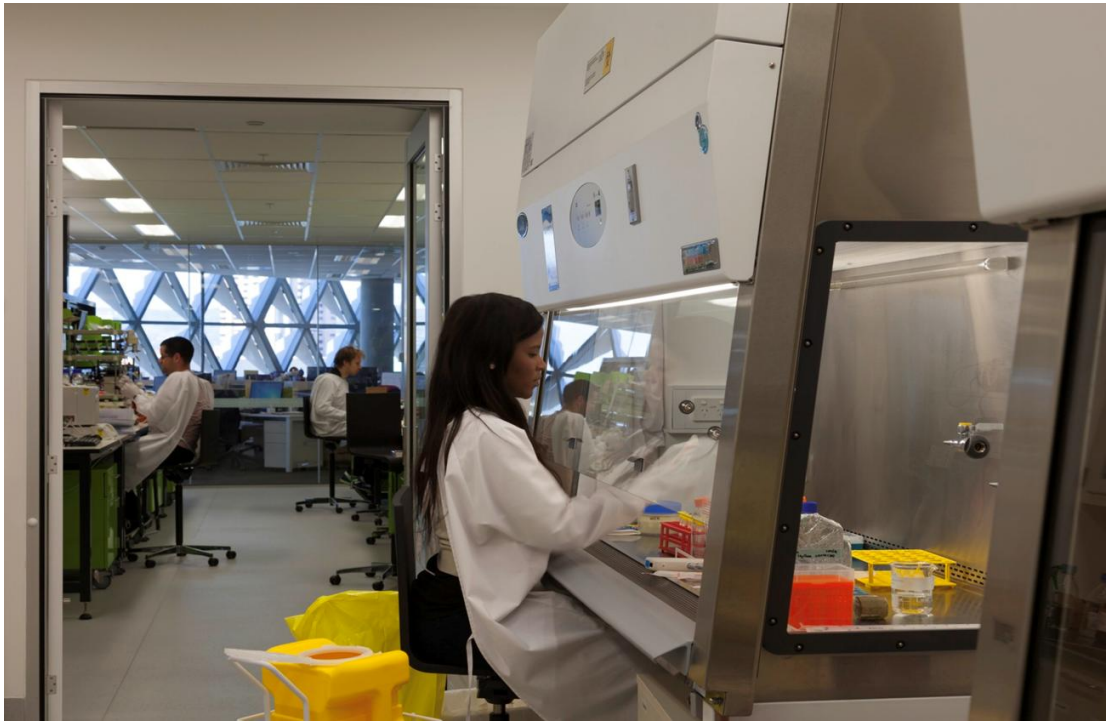
PLANNING ZONING DIAGRAM


CENTRAL VERTICAL CIRCULATION
• CLEAR UNDERSTANDING OF CONNECTIVITY.
• ON AXIS
• GLAZED LIFTS, SENSE OF ORIENTATION & ACTIVATION.
SUPPORT
• DIRECT RELATIONSHIP WITH LABS.
• MODULAR / FLEXIBLE
• SERVICE ACCESS ALONG PERIMETER.
BREAKOUT SPACES
• QUIET COLLABORATION SPACES
• LANDSCAPE ENVIRONMENTS
WESTERN ATRIA
• SENSE OF ENTRY @ GROUND LEVEL
• OPPORTUNITIES FOR NIGHT-TIME USE
• VIEWS BACK TO FUTURE HOSPITAL.
ACTIVE FACADE / "SKIN"
• RESPONDS TO ORIENTATION.
• ABILITY TO OPEN & CLOSE.
• VARIOUS DENSITIES OF TRANSPARENCY & SOLIDITY.
• POTENTIALLY CREATES ITS OWN ENERGY THROUGH PHOTOVOLTAICS.
LABS
• DIRECT ACCESS TO SUPPORT.
• DIRECT ACCESS TO WRITE-UP.
• VISUALLY APPARENT.
• MODULAR / FLEXIBLE.
WRITE-UP
• OPEN-PLAN WORK ENVIRONMENT.
• STRONG VISUAL & PHYSICAL CONNECTIVITY
CENTRAL WORKPLACE HUB
• STRONG COLLABORATION
• INFORMAL MEETINGS.
LANDSCAPE
• EXTENDING PARKLANDS THROUGH THE PLAZA.
BREAKOUT SPACES
• QUIET COLLABORATION SPACES
• EXCHANGE OF IDEAS
• CONTEMPLATION.
• VISUAL CONNECTIVITY TO CITY / RIVERSIDE HILLS.
• CLEAN AIR FACILITATED THROUGH LANDSCAPE.
NORTH TERRACE.
FOUNDATION OFFICE / EXHIBITION
• DIRECT ACCESS FROM NORTH TERRACE.
GROUND LEVEL ACTIVATION.
• ACCESSIBLE BY PUBLIC
• VARIETY OF INTERNAL & EXTERNAL SPACES – "CIVIC"
• EDUCATIONAL OPPORTUNITIES.
• CAFE WITH VIEWS.
VERTICAL CONNECTIVITY
• STRONG VERTICAL CONNECTION, PROMOTING INTERACTION & COLLABORATION.
INTERNAL AERIAL SKETCH


LEVEL 07 NORTH
Dry Space
Adelaide Uni CCRE & NGRL
2 x Offices
36 x Senior Workstations
18 x Student Workstations
CSIRO CAFHS
3 x Offices
14 x Senior Workstations
0 x Student Workstations
Flinders Mind & Brain
3 x Offices
22 x Senior Workstations
0 x Student Workstations
Shared Space
1 x Tenant Comms Room
2 x Compactus
1 x Large Open Meeting Room
1 x Large Meeting Room
1 x Meeting/Vid Conf Room
4 x Quiet Rooms
1 x Utilities
39 Lockers
1 x Tea Point
1 x Central Meeting
5 x Small open Meeting/Breakout
1 x Waste Holding
EAST ATRIUM
WEST ATRIUM
LIFT LOBBY
VOID
PLANT ROOM
PCC BRIDGE
LEVEL 07 SOUTH
Write- Up Space
Adelaide Uni CCRE & NGRL
1 x Office
9 x Senior Staff/Researchers Workstations
6 x Student Workstations
CSIRO CAFHS
1 x Office
6 x Senior Workstations
6 x Student Workstations
Flinders Mind & Brain
1 x Office
5 x Senior Workstations
6 x Student Workstations
Research Group X
1 x Office
4 x Senior Staff/Researchers Workstations
4 x Student Workstations
Shared Space
1 x Meeting Room
1 x Utilities
5 x Small Open Meeting/Breakout
24 Lockers
Wet Lab
Adelaide Uni CCRE & NGRL
24 x bench space in Open Lab
- 43.2 linear meters
2 x Electrophysiology Labs
1 x Patch Clamp Room
1 x Fume Hood Alcove
CSIRO CAFHS
20 x bench space in Open Lab
- 36 linear meter
Flinders Mind & Brain
14 x bench space in Open Lab
- 27 linear meters
Research Group X
8 x bench space in Open Lab
- 14.4 linear meters
Shared Space
1 x CT Room
1 x Fume Hood Alcove
1 x Biosafety cabinet Alcove
1 x Cell Culture Lab
1 x Microscope/Laser Capture Room
1 x PCR Lab
1 x Microscope Room
Equipment Corridor
1 x Lab Store
LEGEND
Adelaide Uni CCRE & NGRL
Adel Uni equipment in shared labs
CSIRO CAFHS
CSIRO equipment in shared labs
Flinders Mind & Brain
Flinders Mind & Brain equipment in shared labs
Research Group X (TBA)
Research Group X equipment in shared labs
Shared Space
LEVEL 07 FITOUT
Adelaide Uni CCRE & NGRL Research Group
Flinders Mind & Brain Research Group
CSIRO CAFHS Research Group



PLANNING – PERISTITIAL SERVICES ZONE



PLANNING – SUPPORT

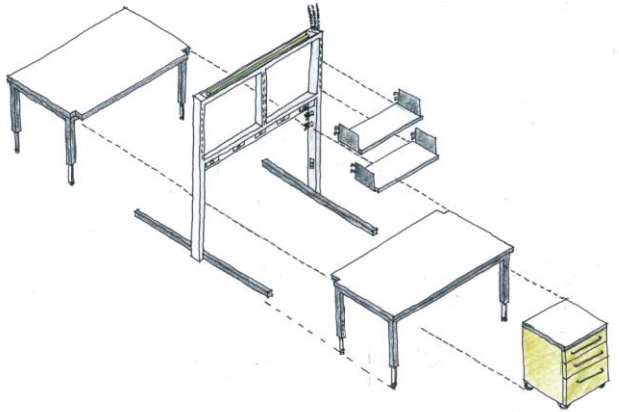
PLANNING – SUPPORT

PLANNING – CORE FACILITIES

PLANNING – CORE FACILITIES Cyclotron, Hot and Cold cGMP

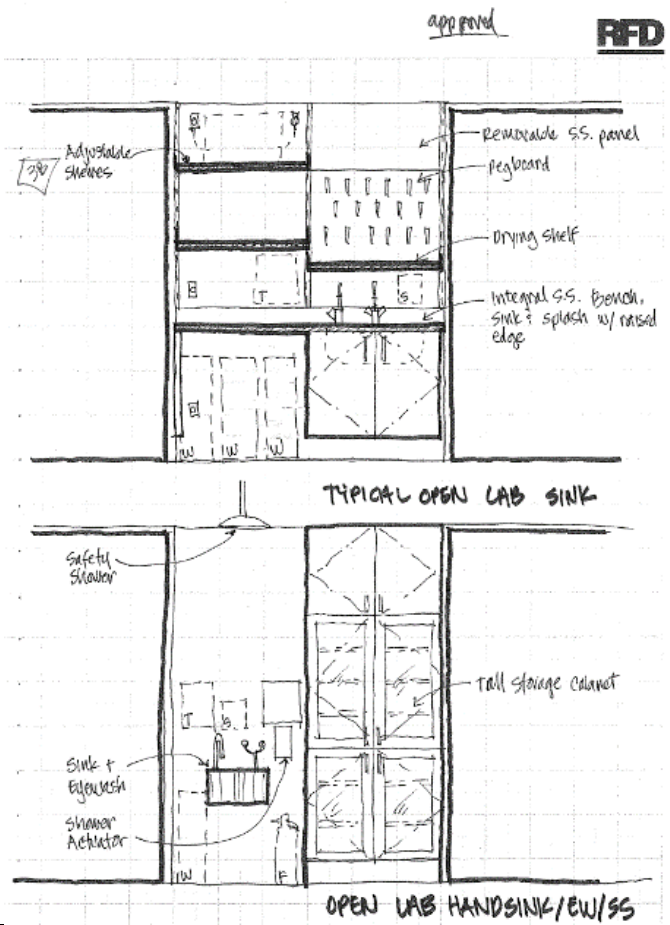
PLANNING – PC2 LINK

PLANNING – OPEN RESEARCH LAB

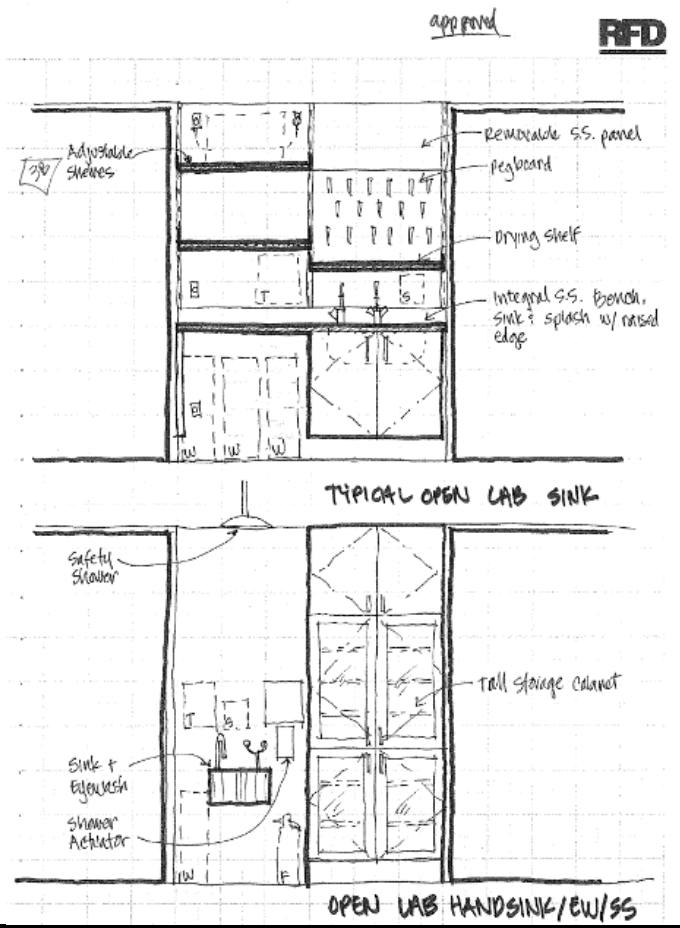


PLANNING – OPEN RESEARCH LAB

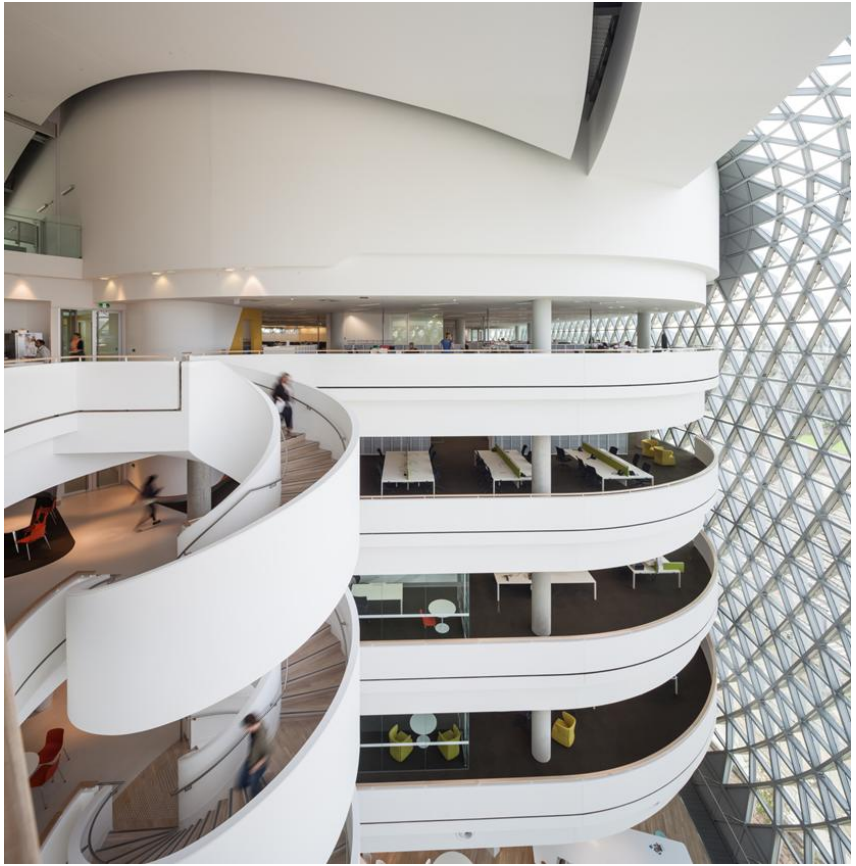
PLANNING – OPEN RESEARCH LAB



PLANNING – OPEN RESEARCH LAB



PLANNING – OPEN RESEARCH LAB



PLANNING – WRITE UP

PLANNING – ANIMAL HOUSE FACILITIES

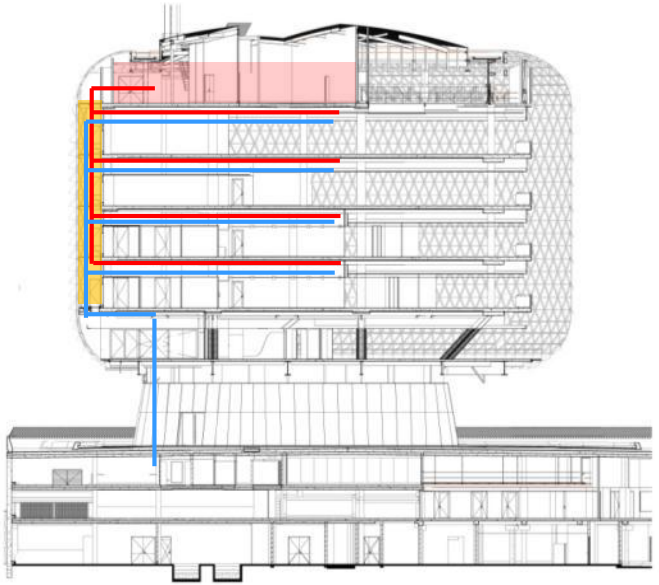
PLANNING – ANIMAL HOUSE FACILITIES

PLANNING – ANIMAL HOUSE FACILITIES

Central Building Plant

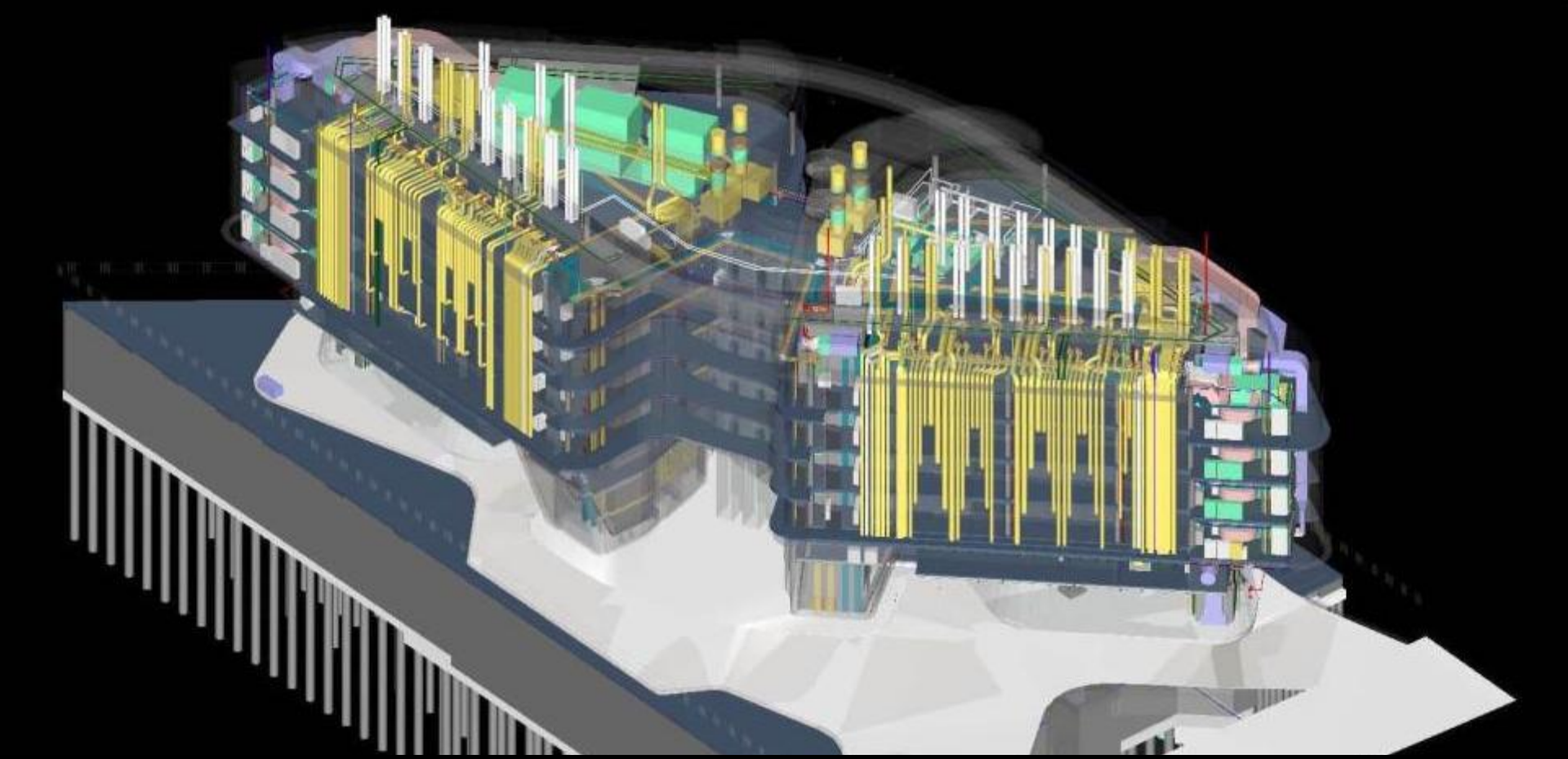
Lab Floor by Floor Plant

Peristitial Services Zone



East West Section

BUILDING SERVICES - FLEXIBILITY

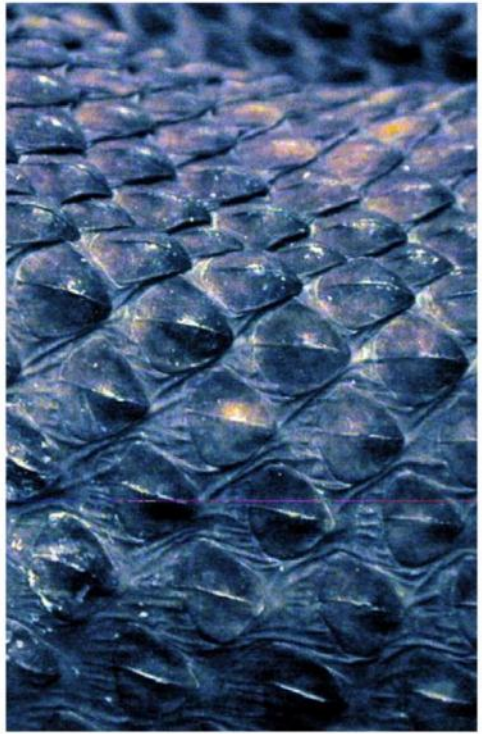


BUILDING SERVICES - FLEXIBILITY

A Responsive Skin

How can the shading device be optimised to provide consistent daylight, enhanced views, limited glare, reduced energy, and a unique form?

Inspired by the responsive behavior of nature




SINGULAR REPETITIVE SKIN

Parametrically integrating environmental, programmatic, and formal requirements to generate a shading system that changes accordingly...

...putting science into the design.

daylight needs

Facade Adjacent to Program that Requires Daylight Access

Facade Adjacent to Program that Does Not Require Daylight Access

solar load

High Solar Load

Medium Solar Load

Low Solar Load

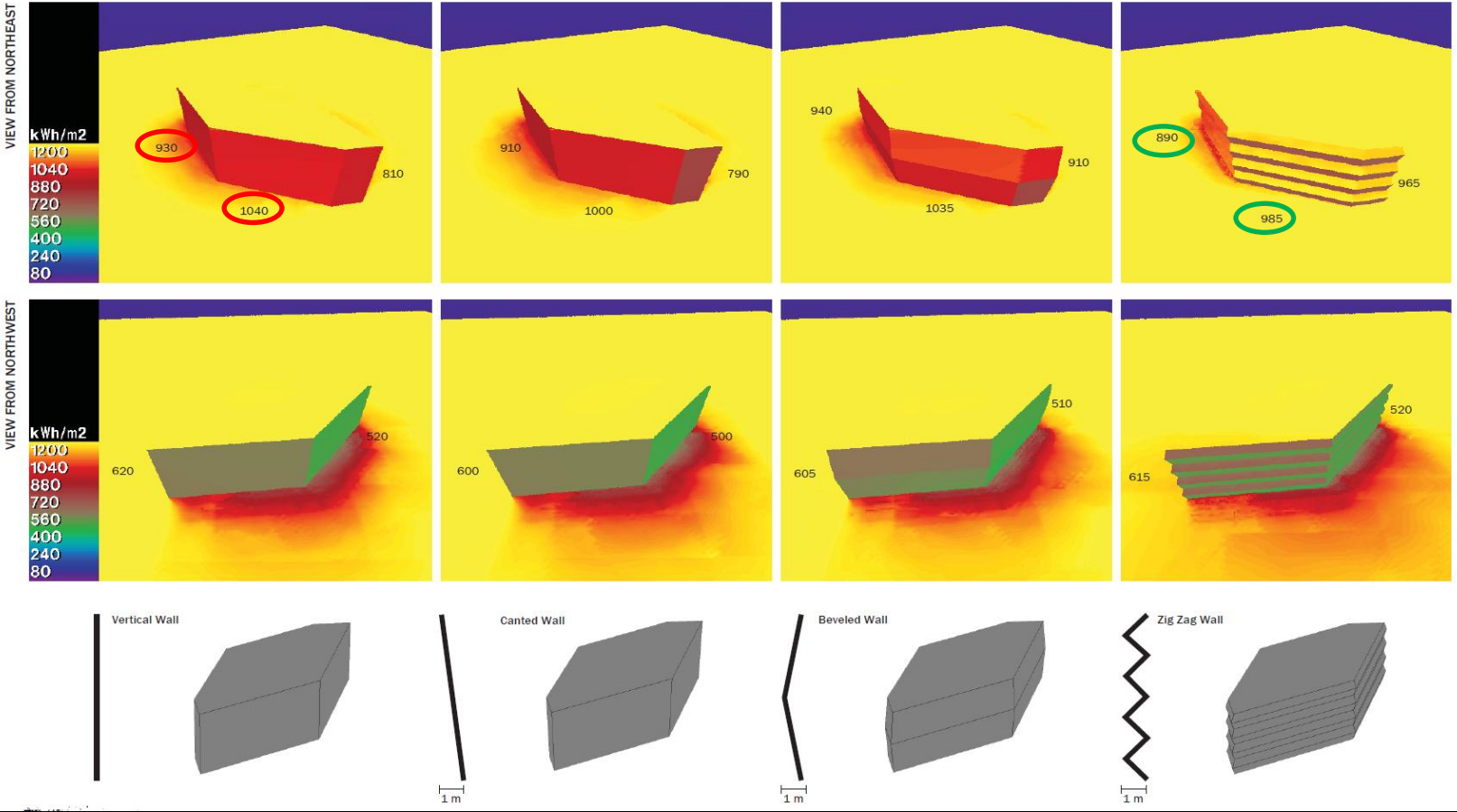
environmental control

Shaded

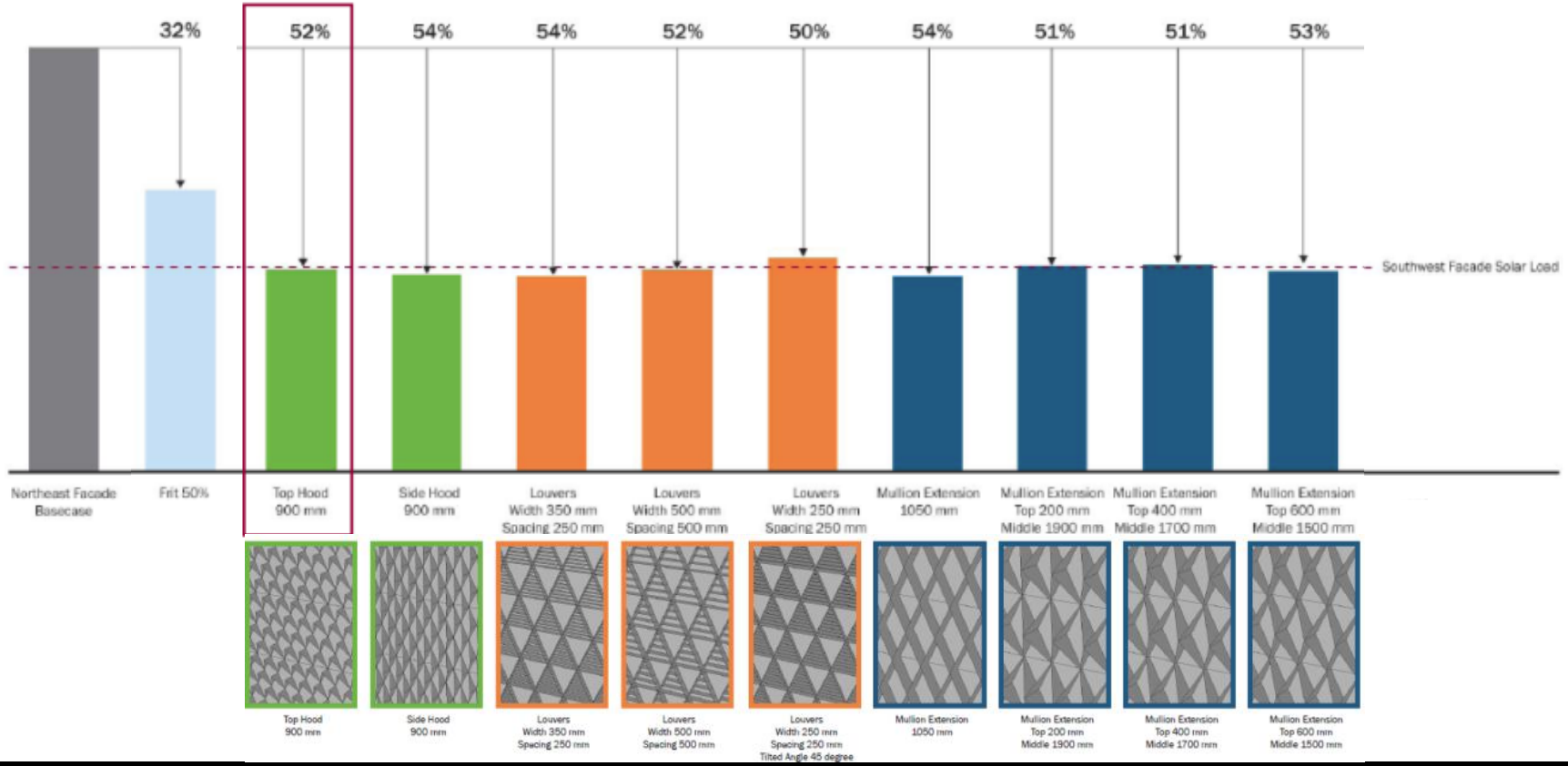
Glass

Opaque

FAÇADE REQUIREMENTS



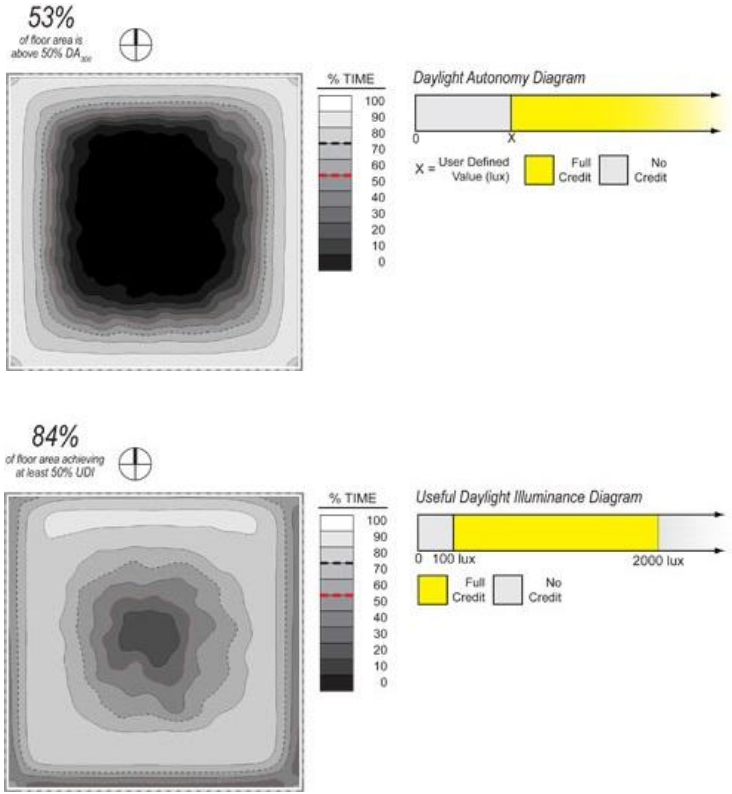
SOLAR EXPOSURE ANAYLSIS



SOLAR ENERGY ANALYSIS

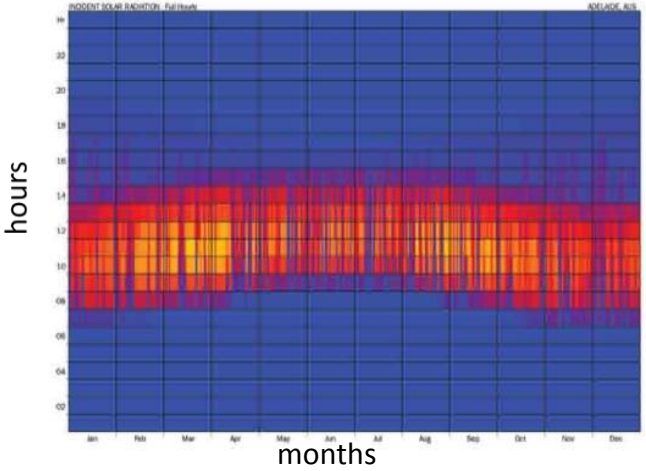
DYNAMIC DAYLIGHT METRICS

- Assess daylight over time
  - Typically impose daylit hour or working hour boundaries
  - Typically look at annual experience
  - Typically analyzed with tool called Daysim
- Average Annual Illuminance
  - Annually averaged daylight level (lux) at a point in a room for all daytime hours. Think of as “typical daylight”
- Daylight Autonomy (1989/2004)
  - Percentage of daytime hours that a point is above a certain light level
  - Think of as “daylight effectiveness”
- Useful Daylight Illuminance (2005)
  - Like Daylight Autonomy, but imposes an upper limit on light levels
  - Think of as “good daylight effectiveness”

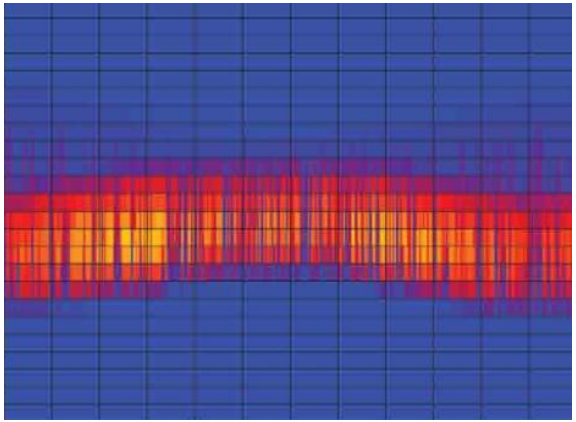


http://patternguide.advancedbuildings.net/using-this-guide/analysis-methods/useful-daylight-illuminance

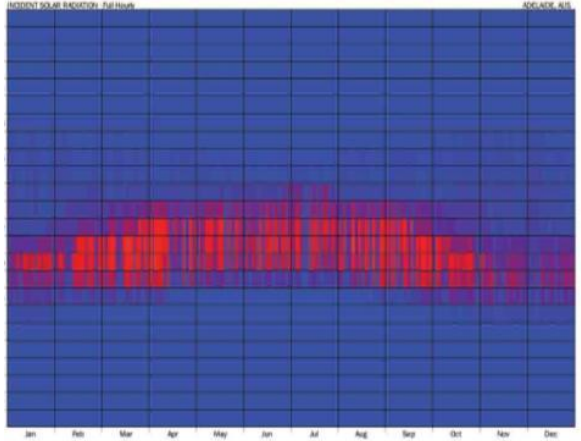
DAYLIGHT ANALYSIS



glass



frit



exterior shade

ENVIRONMENTAL CONTROL ANAYLSIS: REDUCED SOLAR LOAD

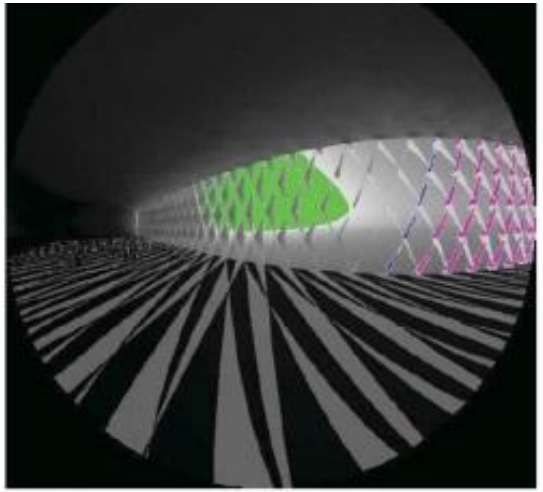
SAHMRI daylight analysis

- Different façade configurations evaluated for glare probability

Northeast Top Hood

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
8:00 AM	0.403	0.410	0.403	1.000	1.000	1.000	1.000	1.000	0.426	0.431	0.414	0.397
9:00 AM	0.418	0.445	0.478	1.000	1.000	1.000	1.000	0.470	0.486	0.437	0.413	0.405
10:00 AM	0.401	0.420	0.470	0.496	1.000	1.000	1.000	0.497	0.461	0.402	0.391	0.386
11:00 AM	0.376	0.380	0.410	0.447	0.465	0.466	0.472	0.457	0.398	0.362	0.365	0.361
12:00 PM	0.342	0.343	0.355	0.380	0.403	0.415	0.416	0.387	0.344	0.324	0.323	0.329
1:00 PM	0.306	0.303	0.314	0.331	0.343	0.351	0.353	0.336	0.309	0.298	0.300	0.300
2:00 PM	0.288	0.295	0.299	0.292	0.297	0.302	0.304	0.296	0.293	0.289	0.284	0.286
3:00 PM	0.278	0.283	0.280	0.265	0.262	0.265	0.269	0.267	0.276	0.272	0.274	0.277
4:00 PM	0.268	0.265	0.254	0.241	0.232	0.231	0.236	0.243	0.248	0.256	0.263	0.267
5:00 PM	0.251	0.244	0.232	0.218	0.211	0.209	0.213	0.219	0.227	0.234	0.242	0.249

Top Hood 700 mm



Side Hood 700 mm

VISUAL COMFORT ANALYSIS

McNeel
Rhinoceros 3d

Geometry Setout

McNeel
Grasshopper

Panelization

McNeel
Rhinoscript "Monkey"

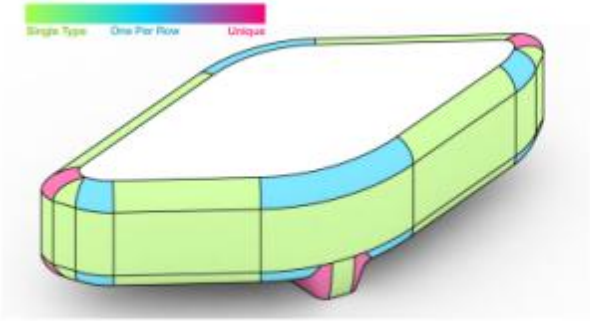
Analysis

Autodesk
Revit

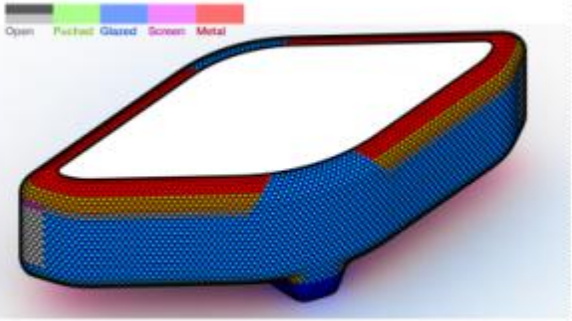
Rationalization

Microsoft
Excel

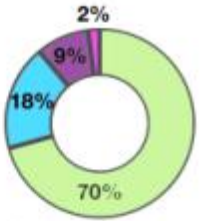
Statistical Breakdown



Zones Of Panel Optimization
Eastern Facade



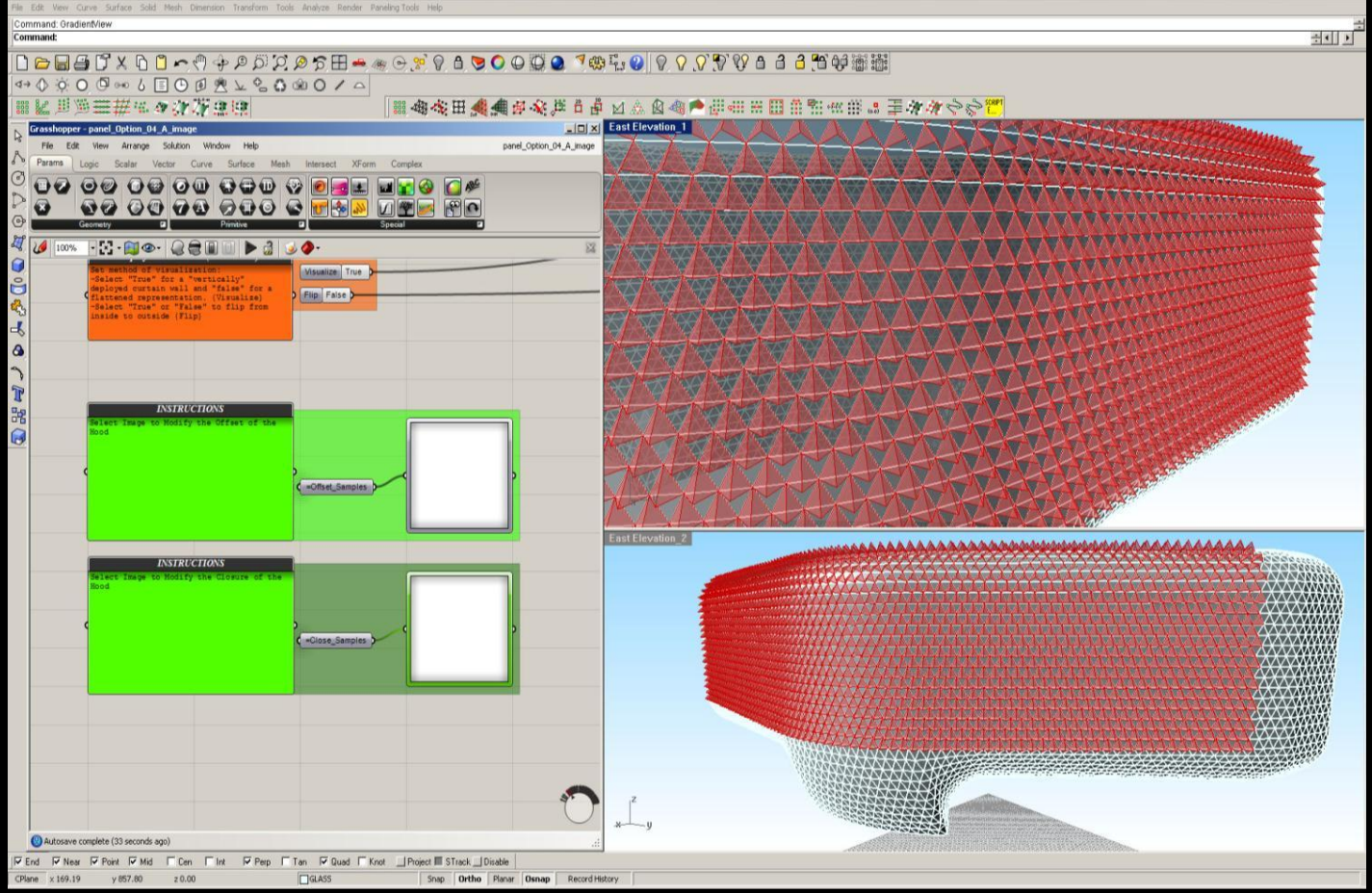
Zones Of Material Setout
Eastern Facade



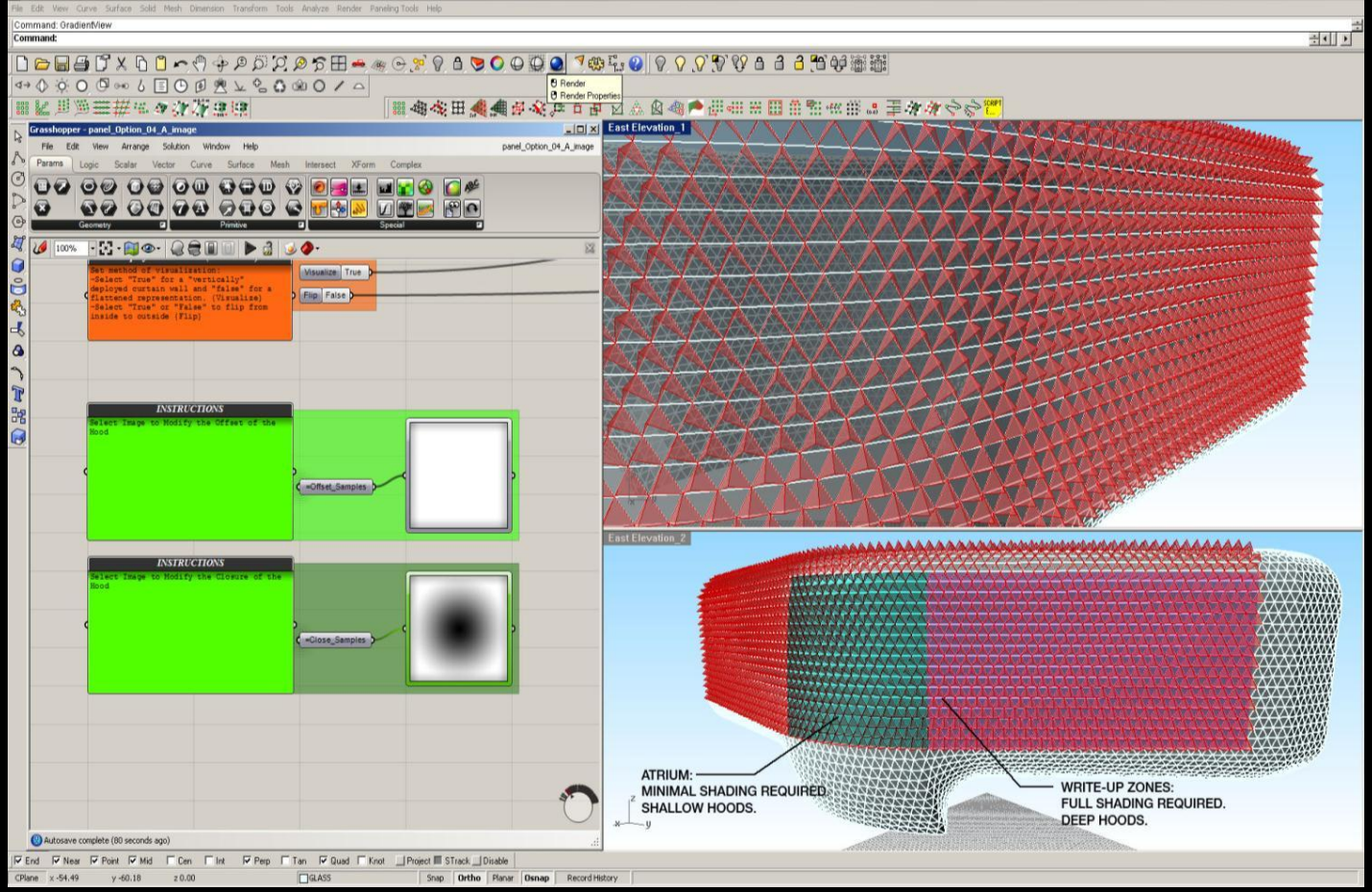
Panel Optimization

Panel Optimization

PARAMETRIC MODELLING PROCESS



PARAMETRIC TRANSFORMATION



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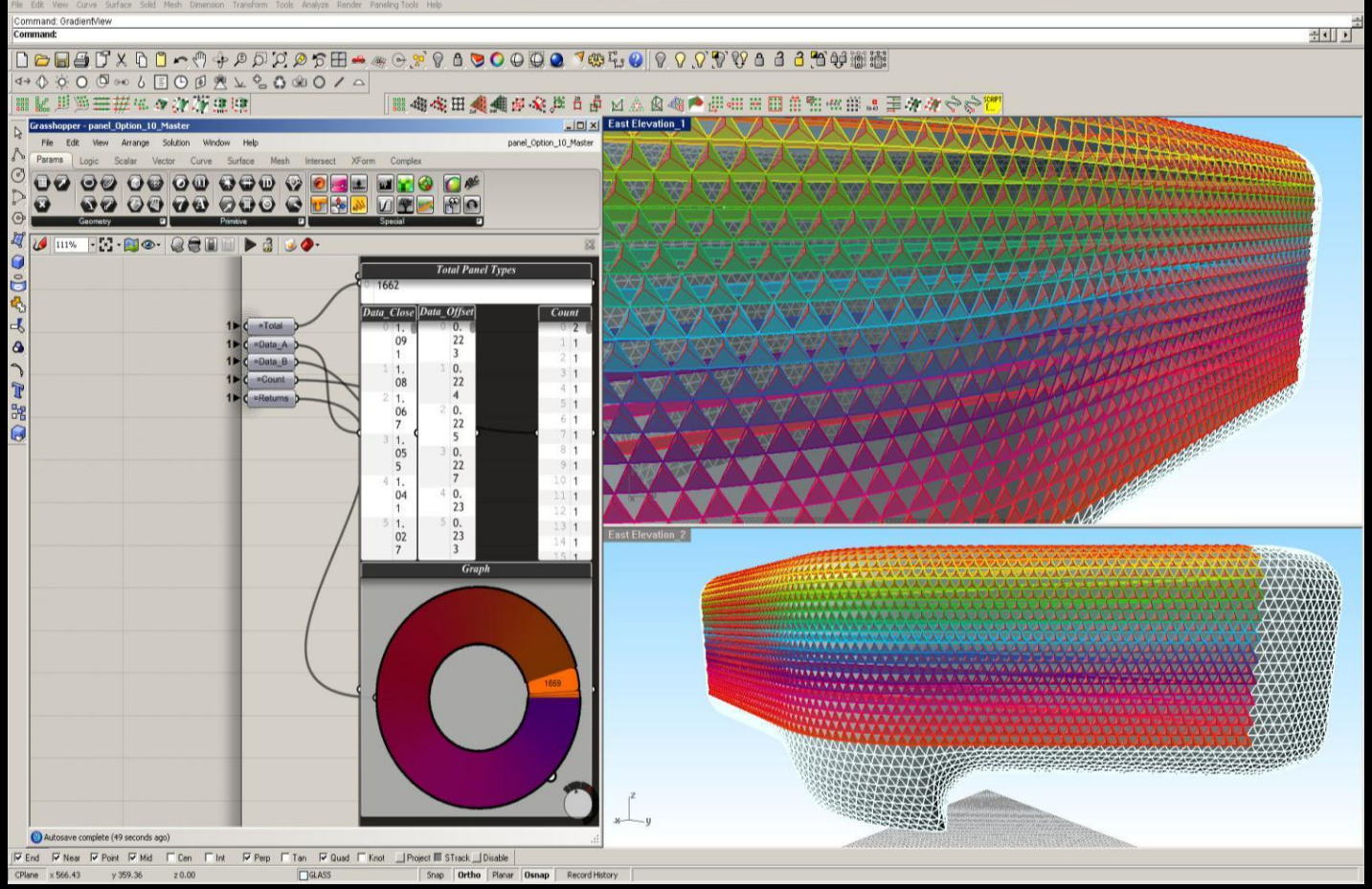
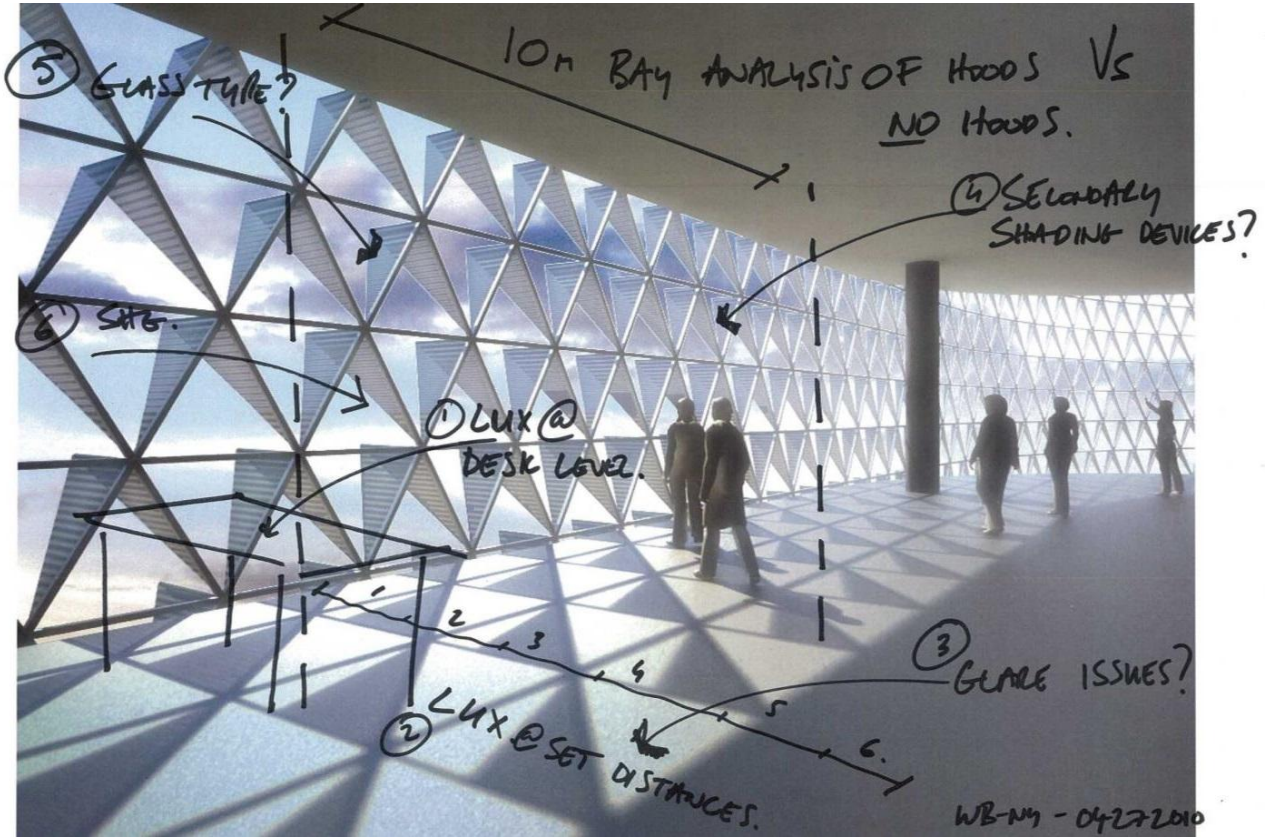
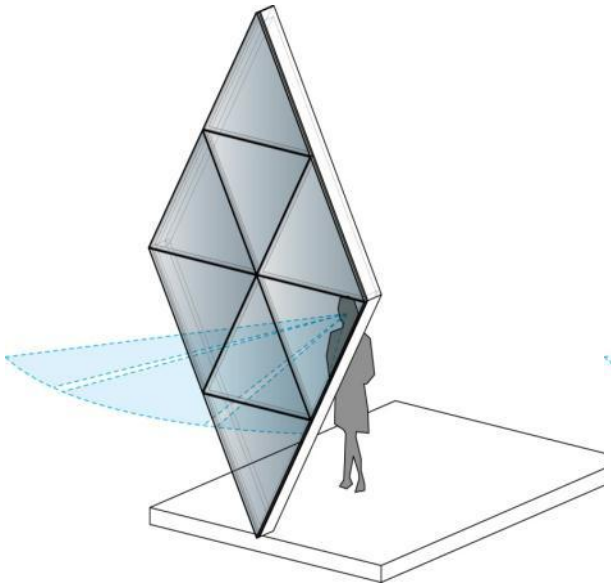


PARAMETRIC TRANSFORMATION

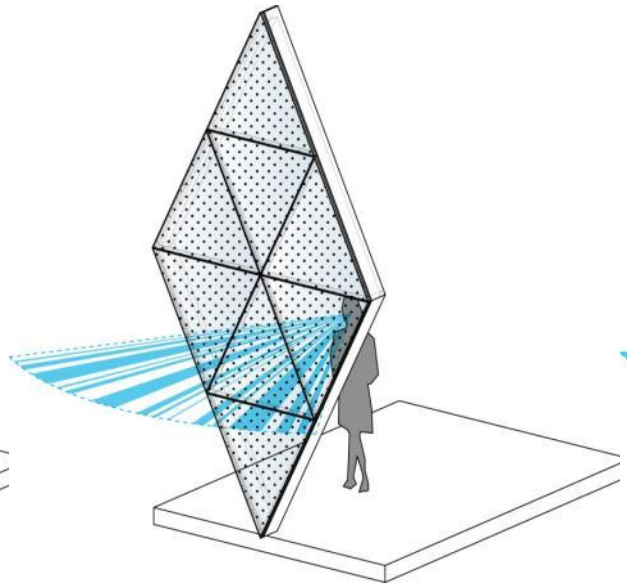
WHAT CAN WE ANALYZE?



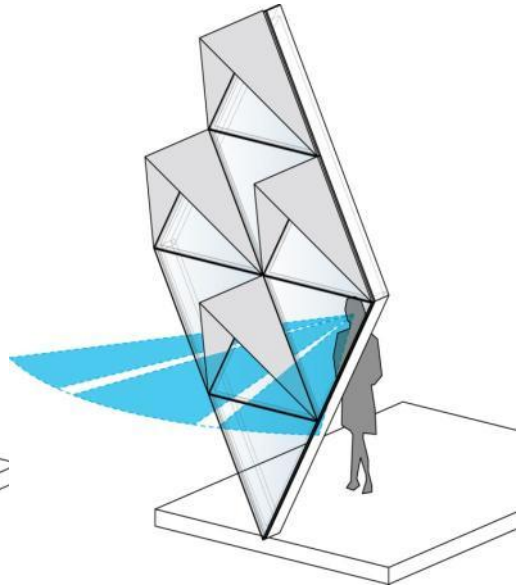
DAYLIGHT ANALYSIS



glass

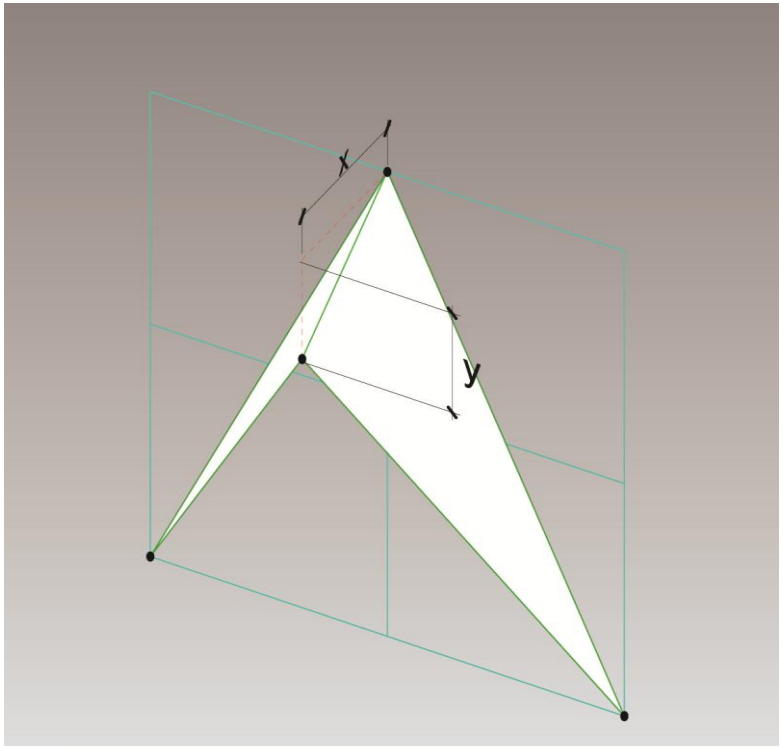


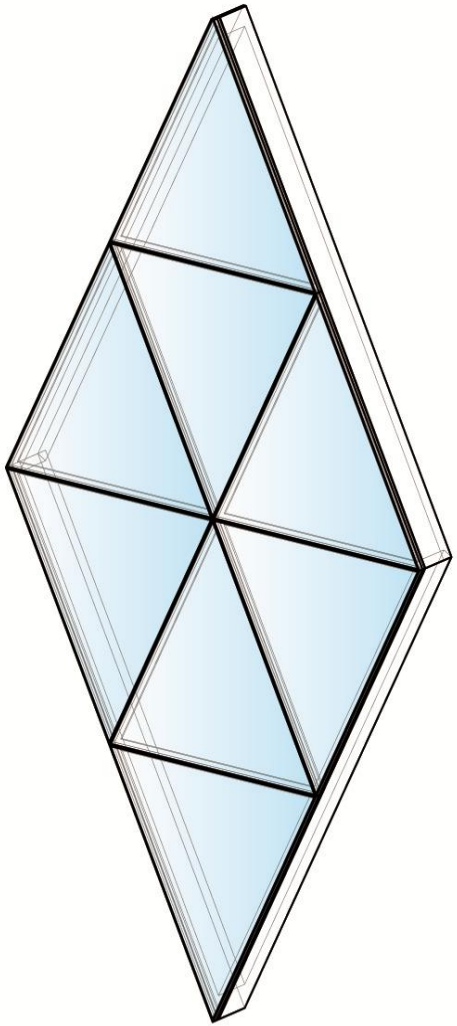
frit

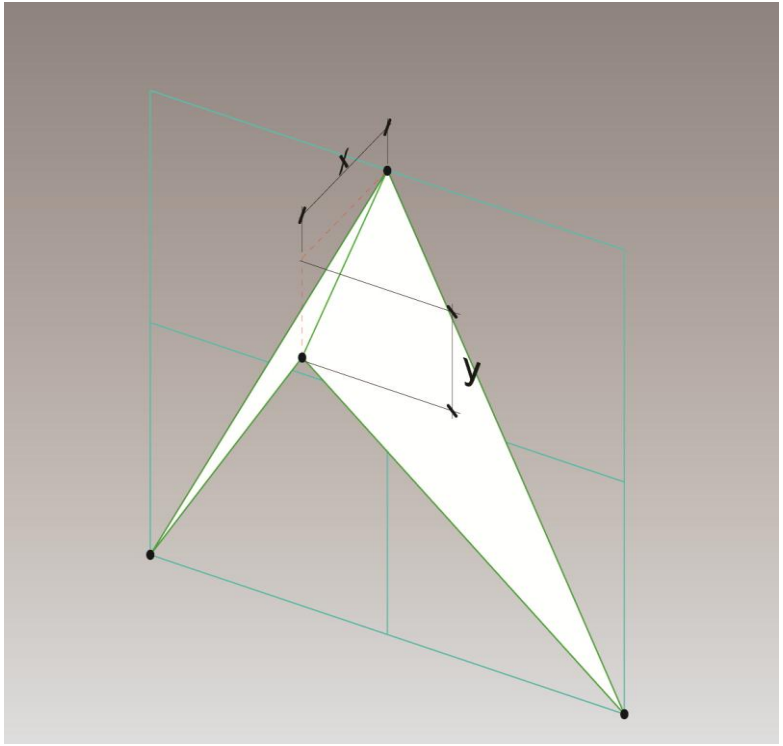


exterior shade

ENVIRONMENTAL CONTROL ANALYSIS


x
y

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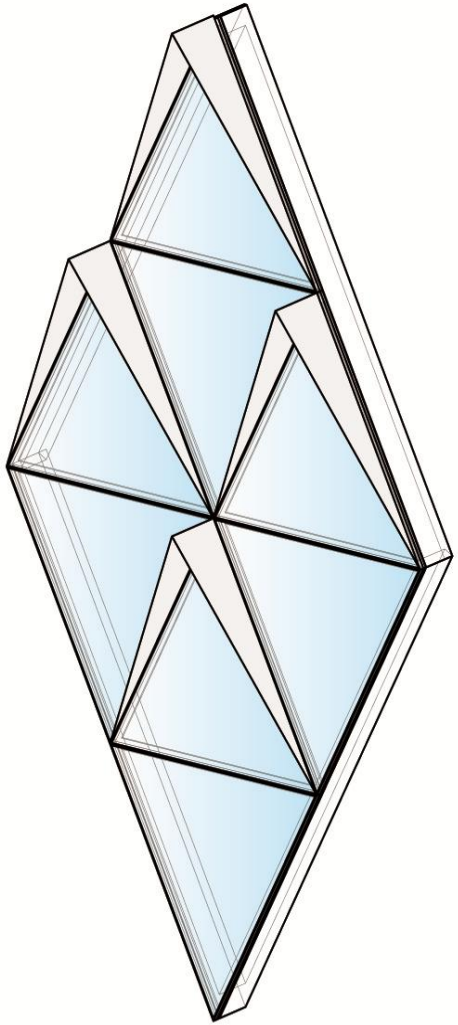

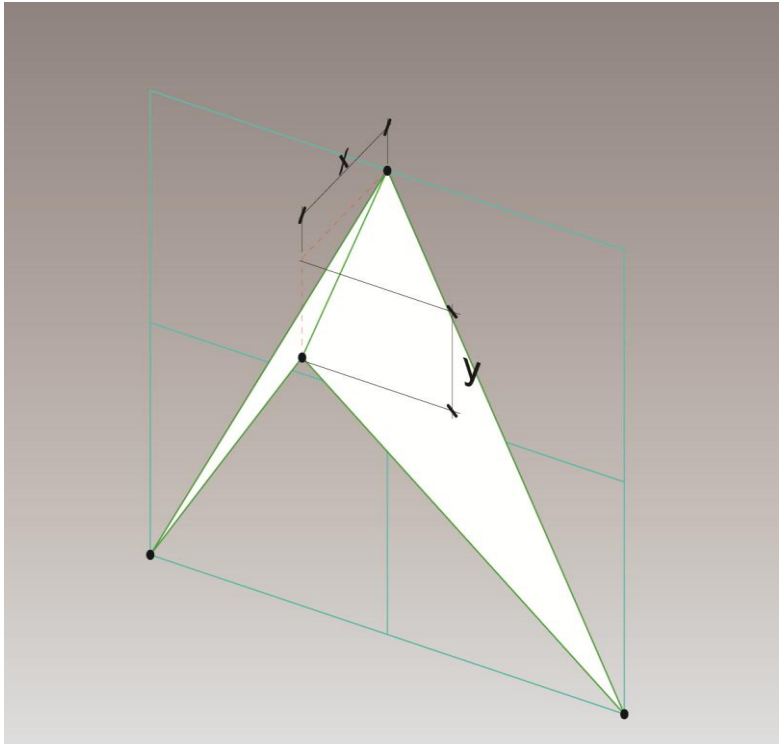
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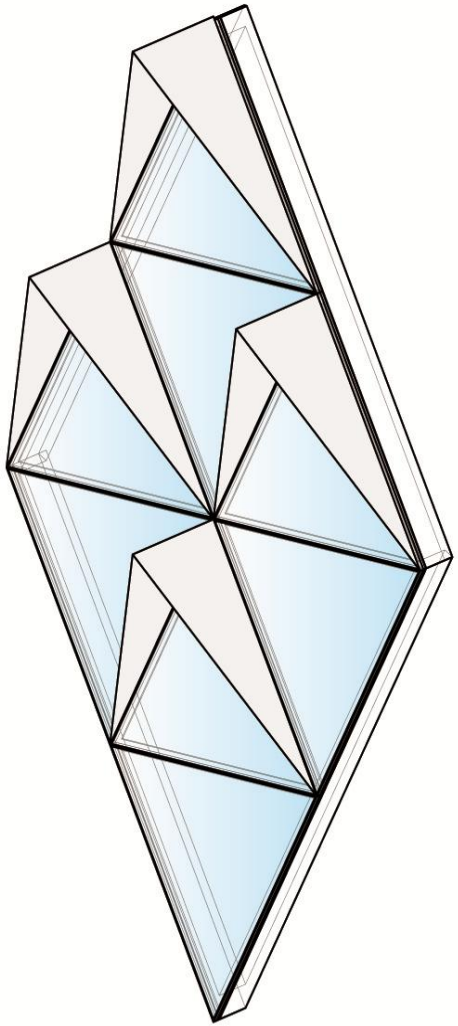

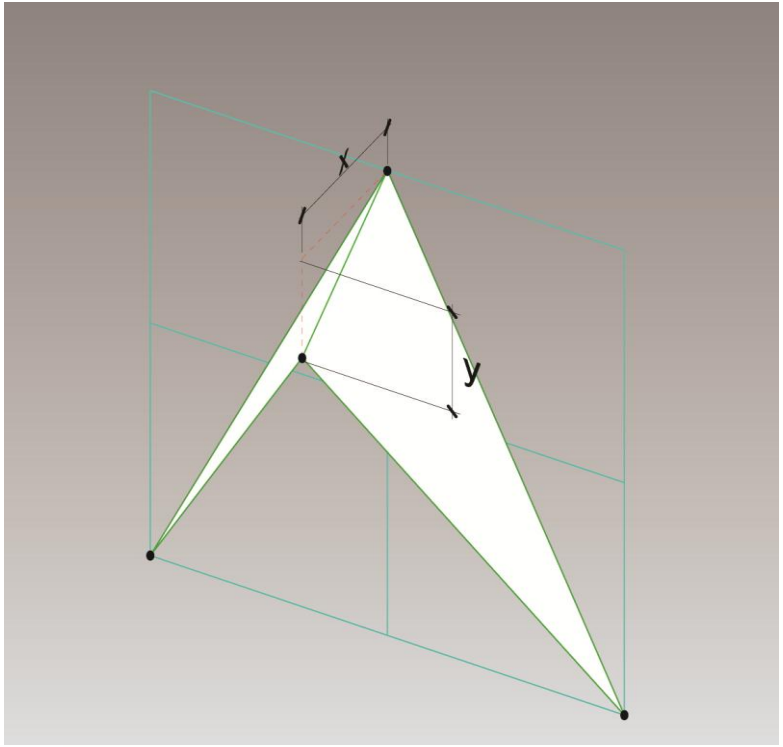
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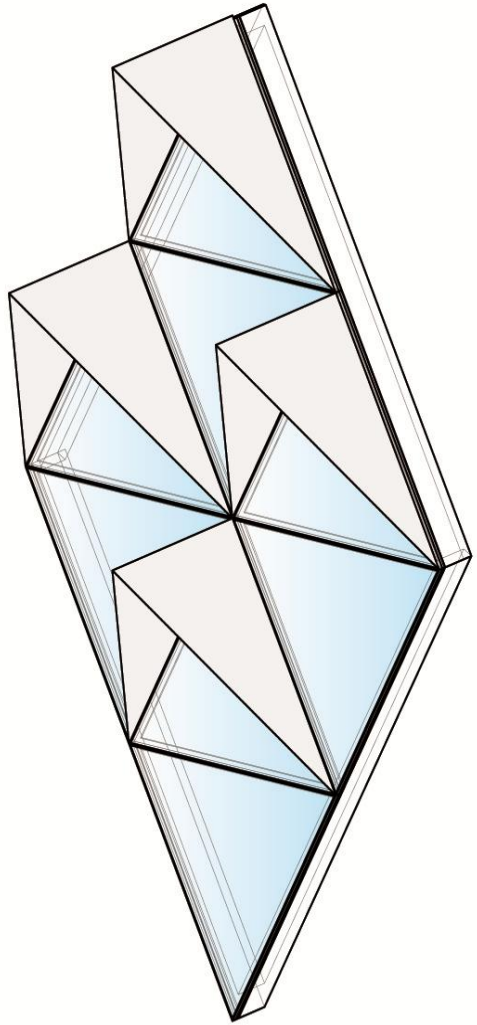

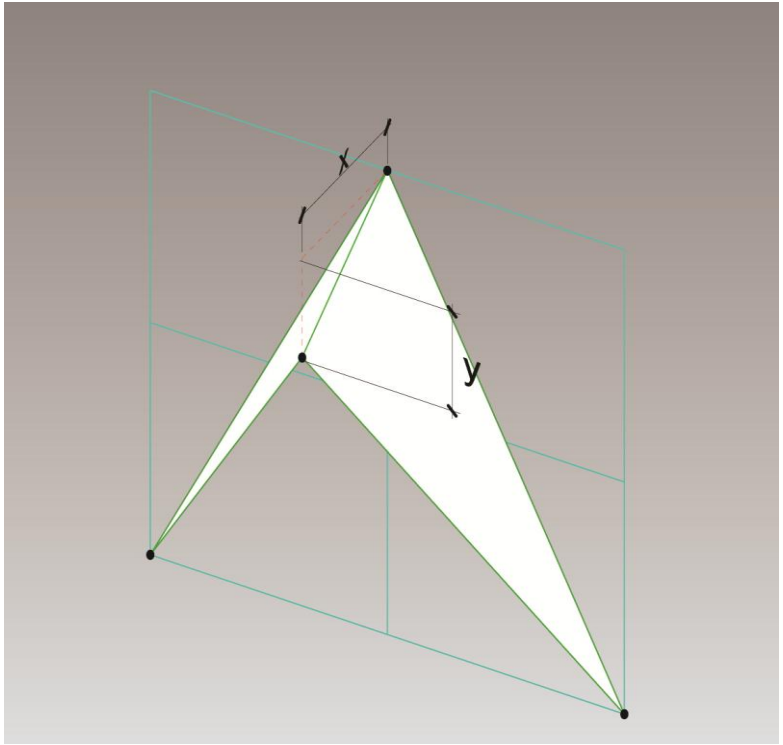
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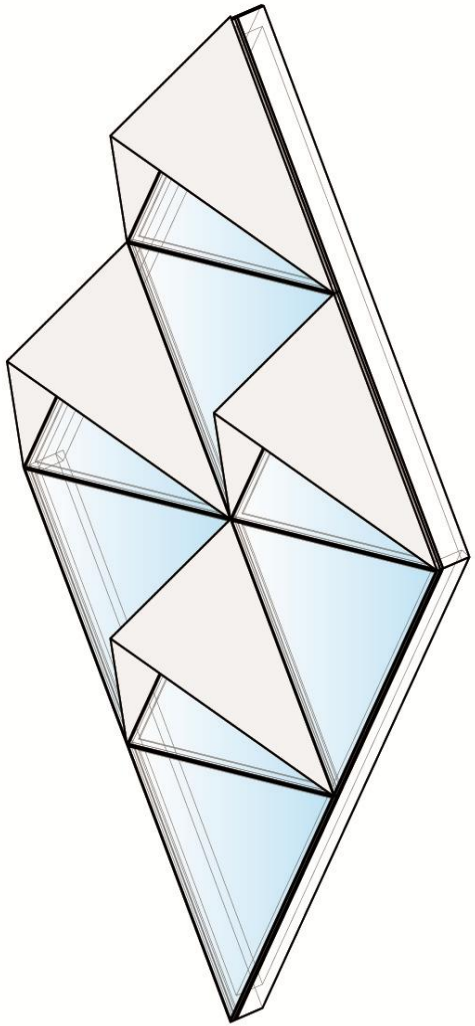

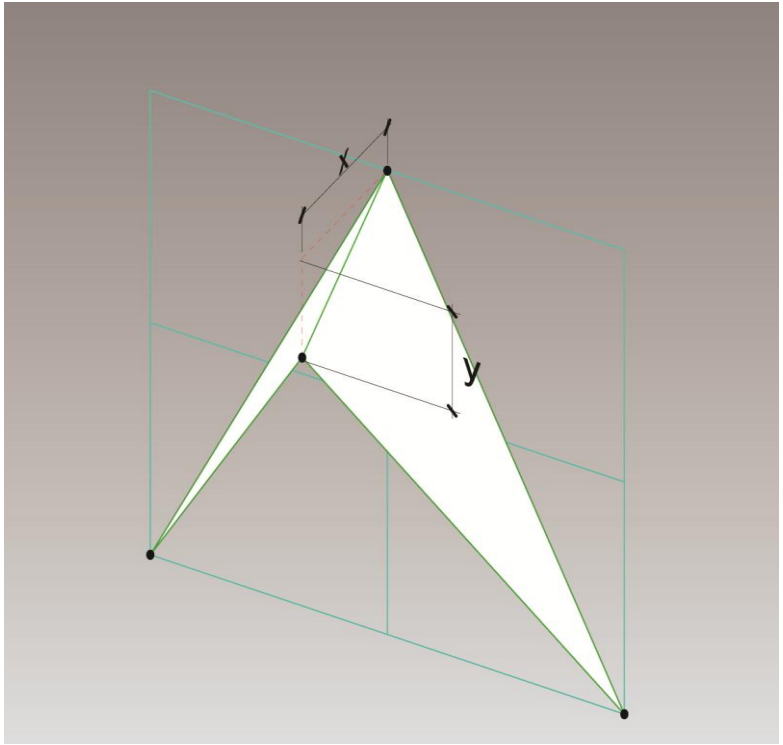
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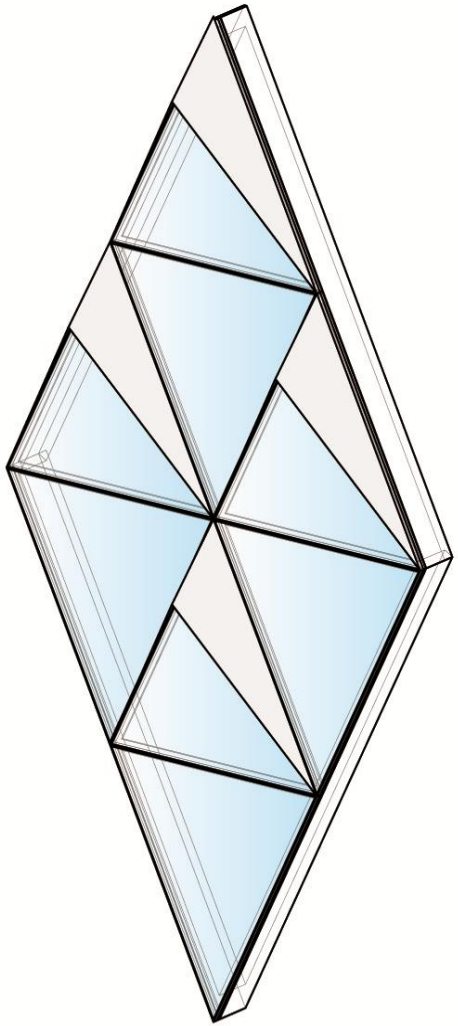

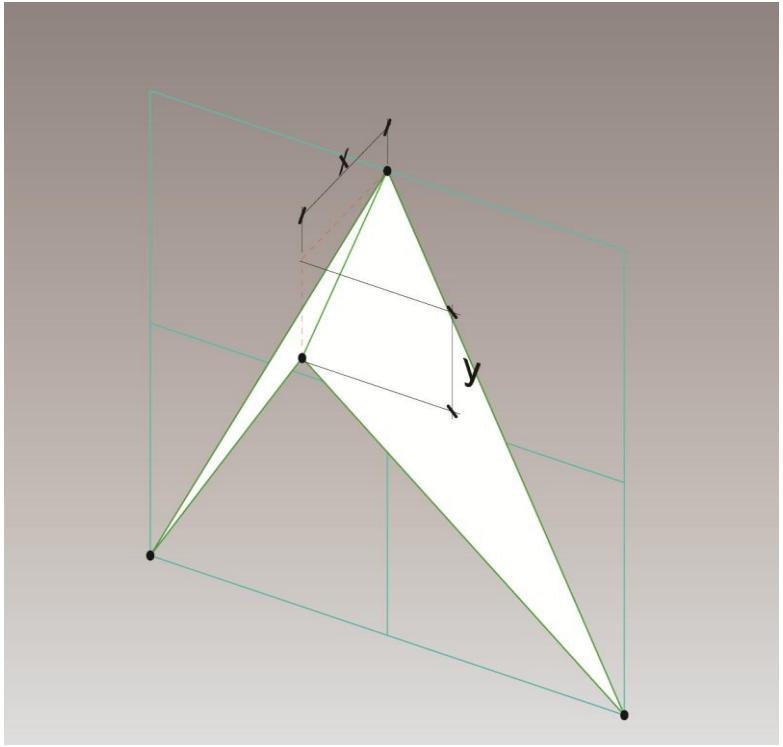
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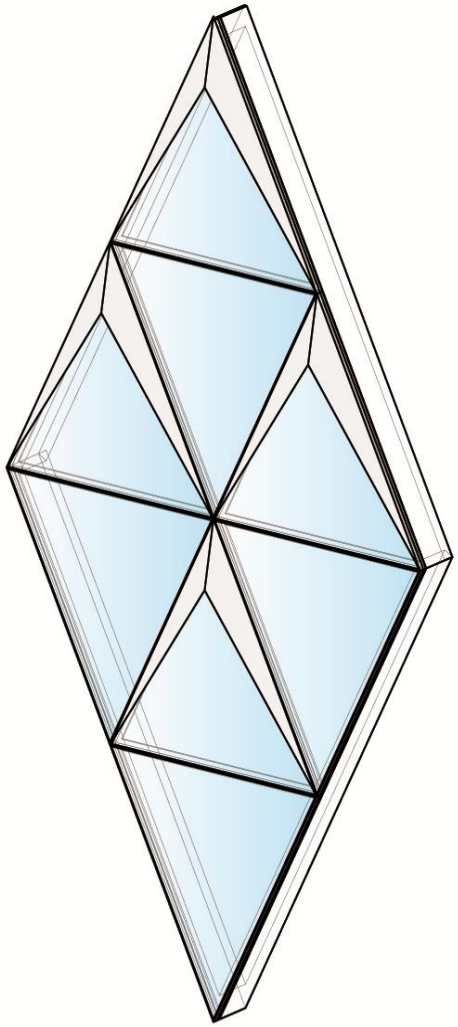

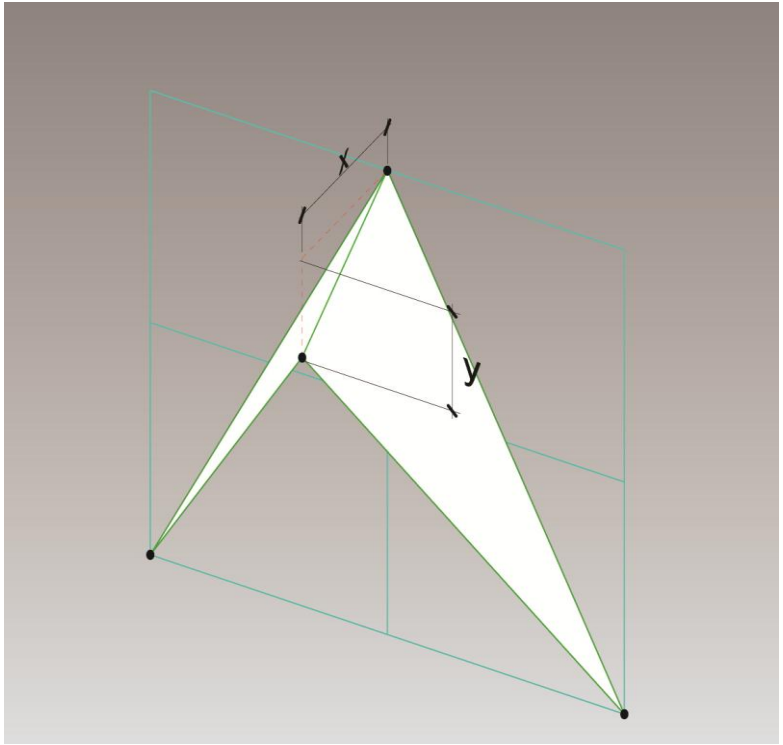
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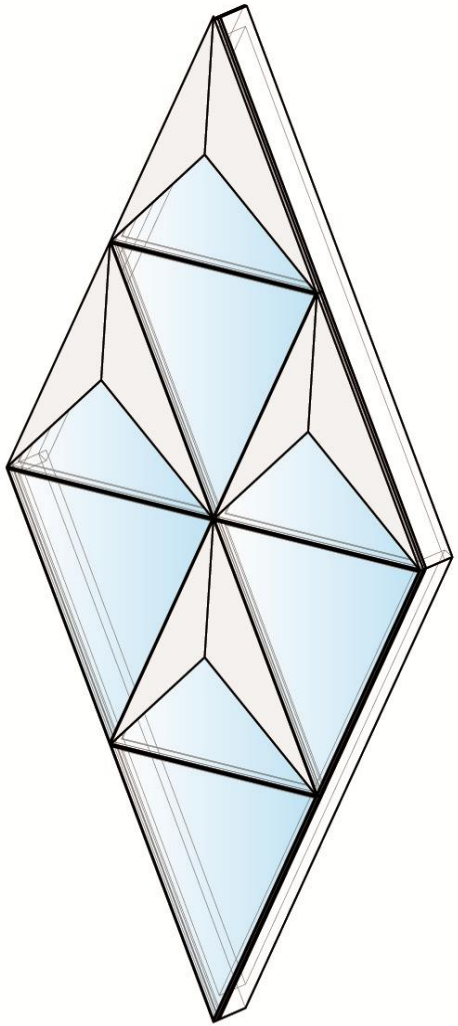
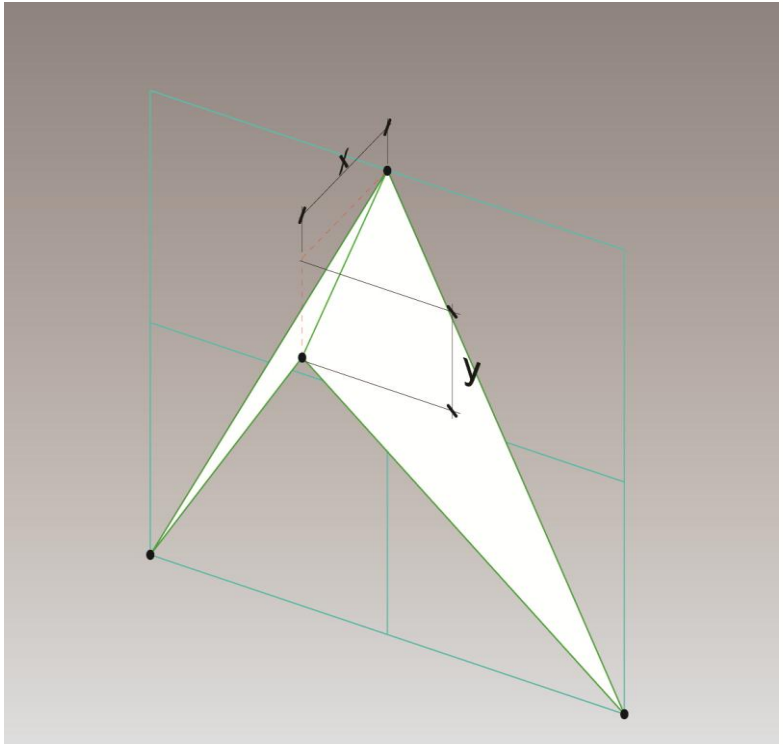
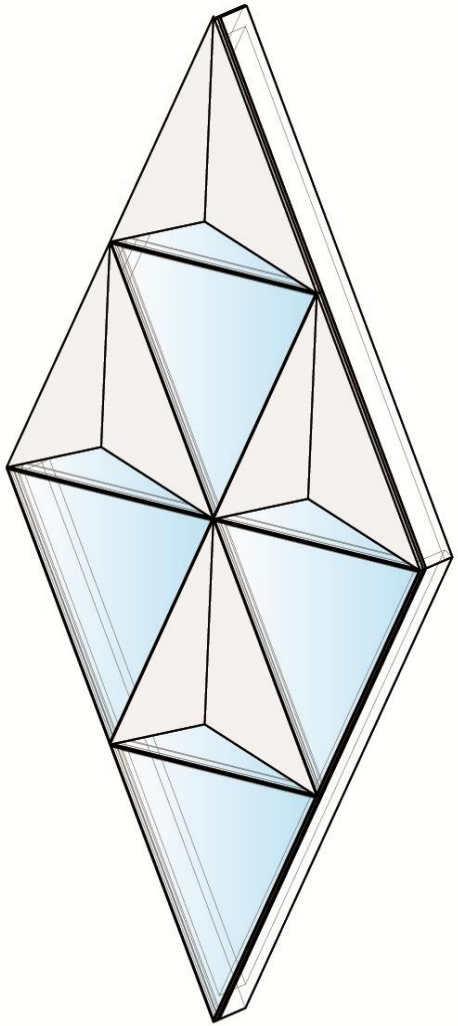
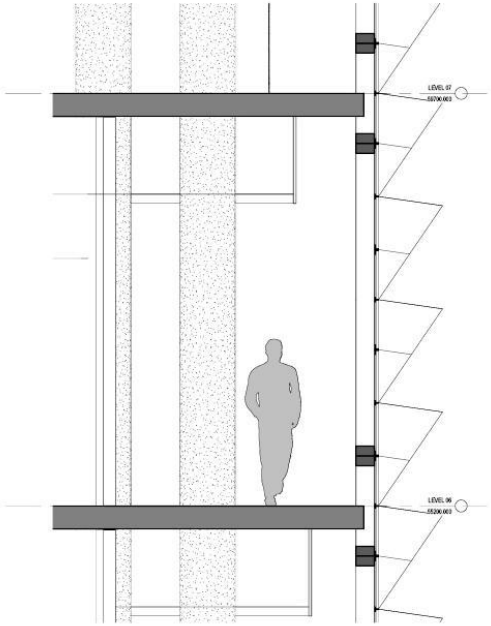
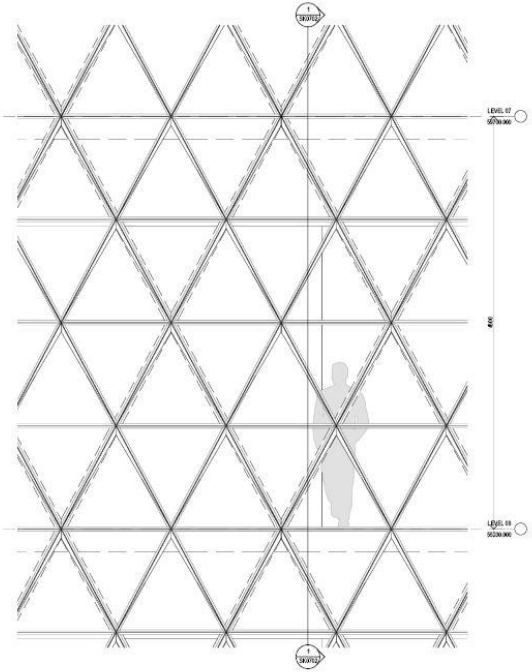



x
y





1 Wall Type - East Typical
1 : 20



2 Elevation - East Curtain Wall
1 : 20

LEGEND:

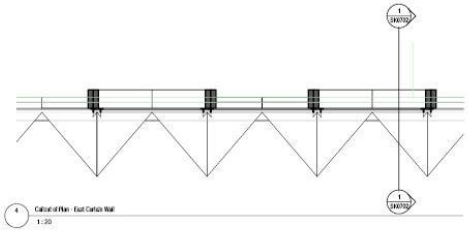
G1 PPG SOLARBAN 70 v.l. 43in

M1 STRUCTURAL STEEL TUBE EXTRUSION

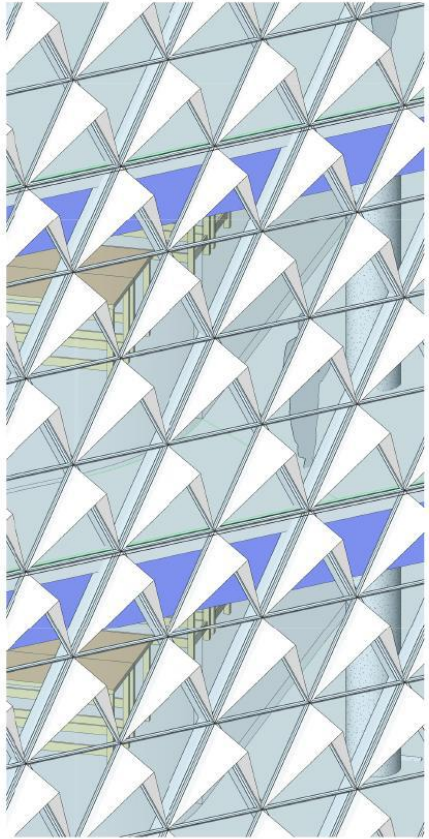
M2 200 x 100mm EIAGRID FOR PRIMARY STRUCTURAL FRAME

M3 ALUMINUM TEE TRANSOM FOR SECONDARY GLASS FACETING FRAME

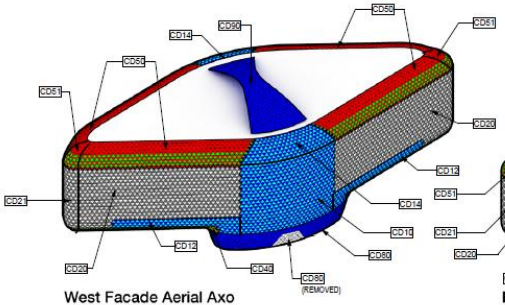
P1 EMPTY PANEL



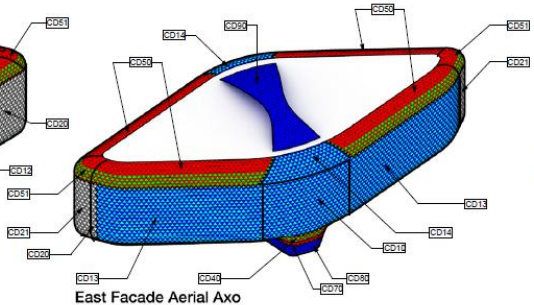
4 Callout of Plan - East Curtain Wall
1 : 20



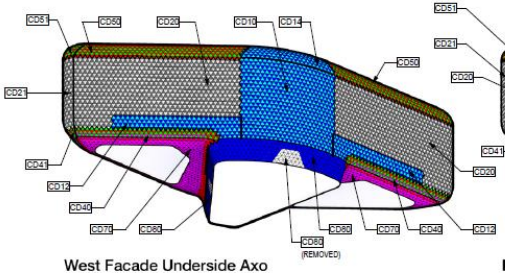
3 Wall Type - East Curtain Wall Isometric



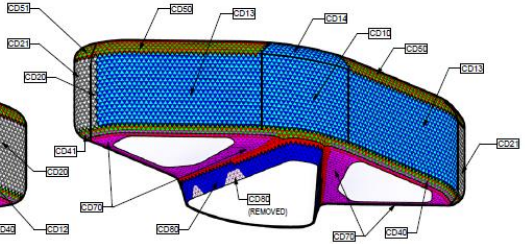
West Facade Aerial Axo



East Facade Aerial Axo



West Facade Underside Axo



East Facade Underside Axo

	Material Type/ Area Totals	Type_01	Type_02	Type_03	Type_04	Type_05	Type_06	Type_07	Type_08	TOTAL
Counts	Bays	4342	2667	2593	1135	1222	1418	1472	117	14966
	Unique Sizes*	502	89	177	108	354	27	23	24	1428
Bay Surface Areas	Glass	2906	1880	0	0	0	0	0	0	4786
	(flat) Metal	0	0	1616	0	0	0	0	0	1616
	(expanded) Metal	0	0	0	719	0	0	0	0	719
	(perforated) Metal	0	0	0	0	713	0	0	0	713
	Bird Mesh	0	0	0	0	0	1022	1063	0	2085
	Surface Area Grand Total									9919
Material Areas	(screen) Metal**	0	1728	0	0	0	0	1420	0	3148

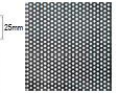
*Counts are specific to the edge dimensions and do not take into account screen configurations
** Material area accounts for depth of screen

Zones									
	CD10, CD12, CD13, CD14	●	●						
	CD20, CD21						●	●	
	CD40, CD41	●		●	●	●			
	CD50, CD51			●	●				
	CD70			●		●			
	CD80	●							●
	CD90	●							

CD90 Frit pattern

40% Frit to CD90 only

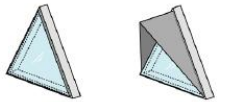
Perforation Pattern



25% Open Area 3mm holes

Area Table Note

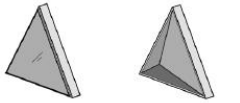
The above surface areas are measured from Rhino and AutoCAD 3D models generated by the design team and based on the split up of the integrated structural facade systems indicated on these drawings. All due care has been taken to ensure the accuracy of the above, but these are not guaranteed, and the tenderers are advised to make their own assesment on the accuracy of this information. The models have been provided for information as part of the tender, any discrepancies found between the 3D models and the information provided above should be advised by the tenderer at tender submission stage in writing. If no issues are raised at tender submission, it will be considered that the tenderer has assessed the information provided and has found no significant differences.



Type_01 CD10, 12, 80 & 90
- Glass

Type_02 CD13 & 14
- Glass
- Sun Shade

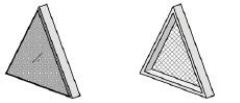
Glazed Panels



Type_03 CD40, 50
- Flat Metal

Type_04 CD51
- Pressed Metal

Solid Metal Panels

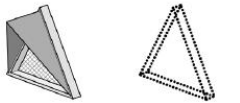


Type_05 CD40 & CD70
- Metal

Type_06 CD20
- Birds Mesh

Perforated Metal Panels

Open Panels

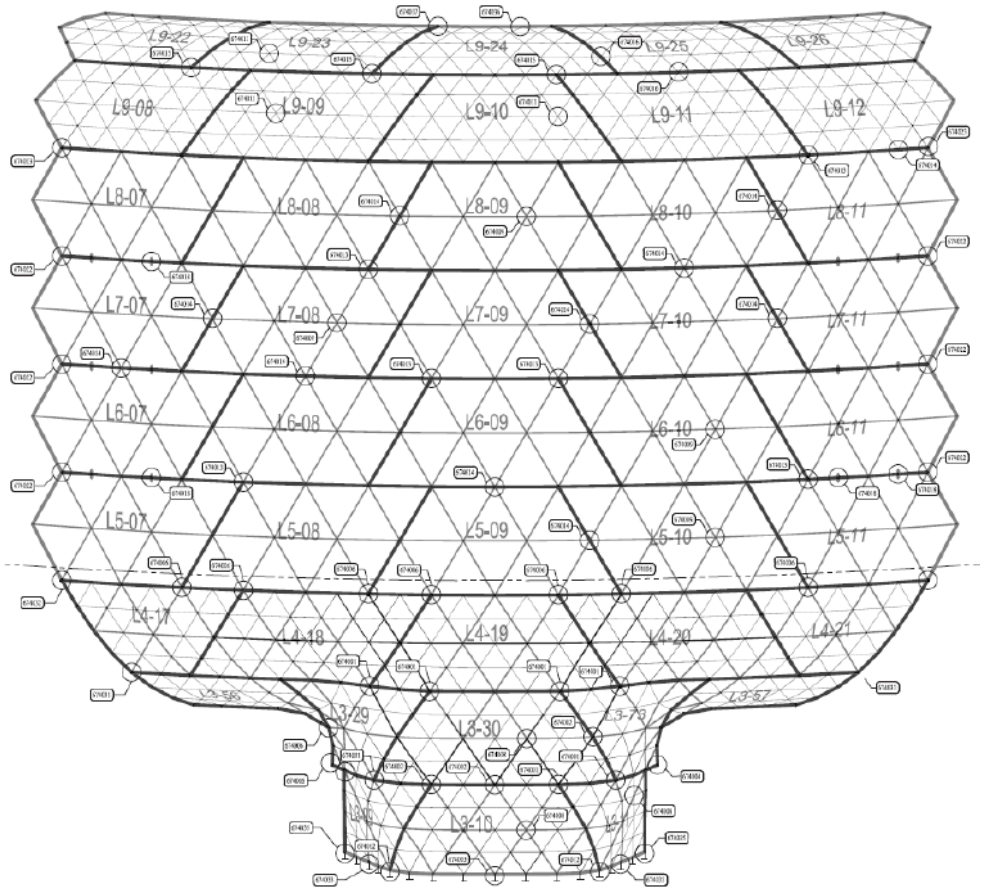


Type_07 CD21
- Birds Mesh
- Sun Shade

Type_08 CD80
- Removed (Atrium entries)

Open Panels

FOR TENDER


L9-22
L9-23
L9-24
L9-25
L9-26
L9-08
L9-09
L9-10
L9-11
L9-12
L8-07
L8-08
L8-09
L8-10
L8-11
L7-07
L7-08
L7-09
L7-10
L7-11
L6-07
L6-08
L6-09
L6-10
L6-11
L5-07
L5-08
L5-09
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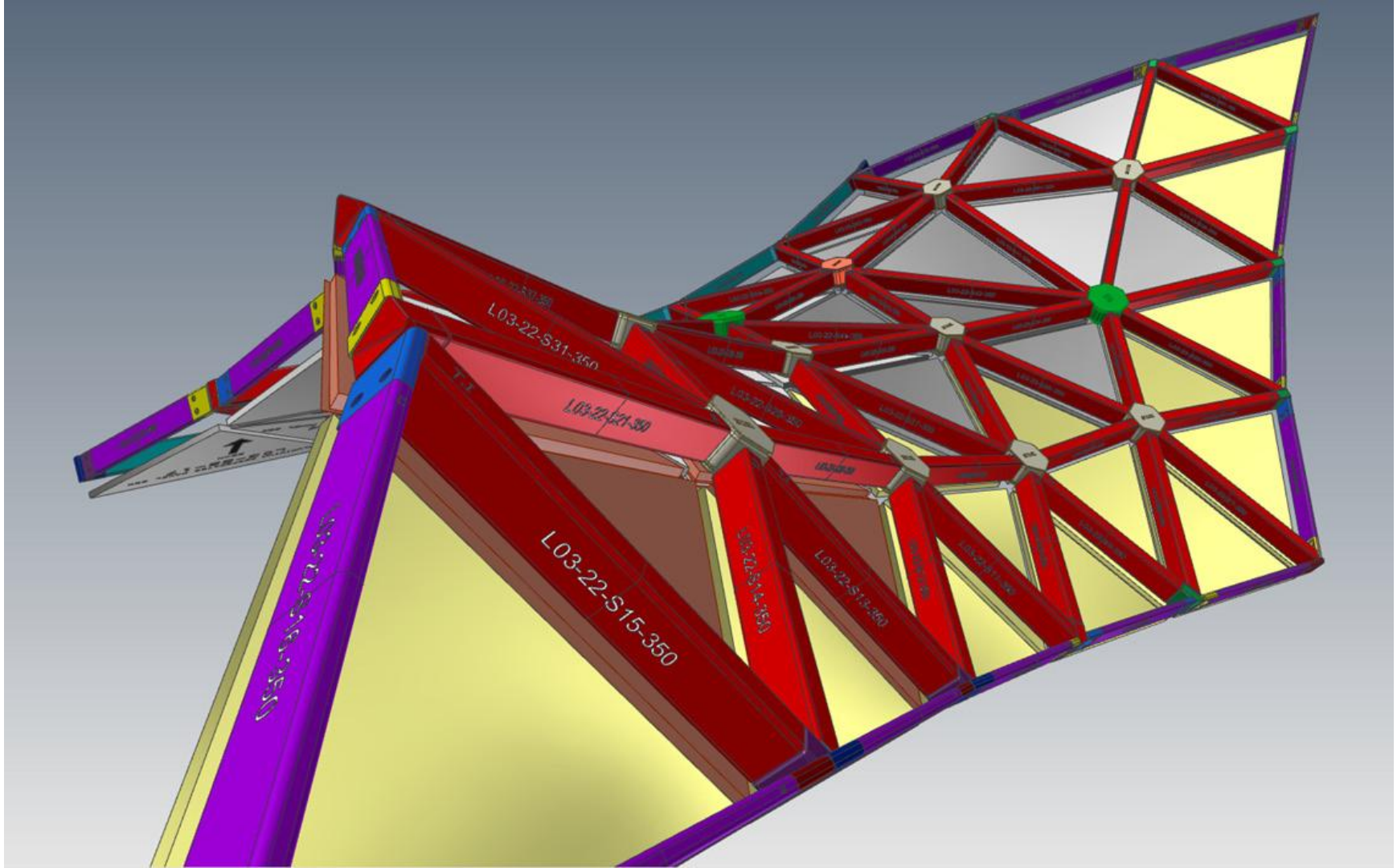
L4-20
L4-21
L3-29
L3-30
L3-18


L03-22-S31-350
L03-22-S21-350
L03-22-S15-350
L03-22-S14-350
L03-22-S13-350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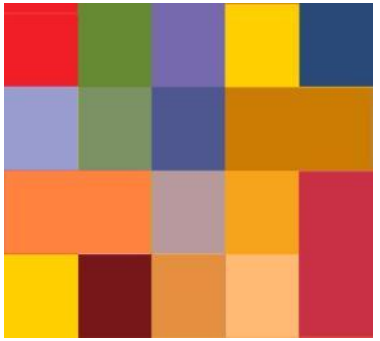

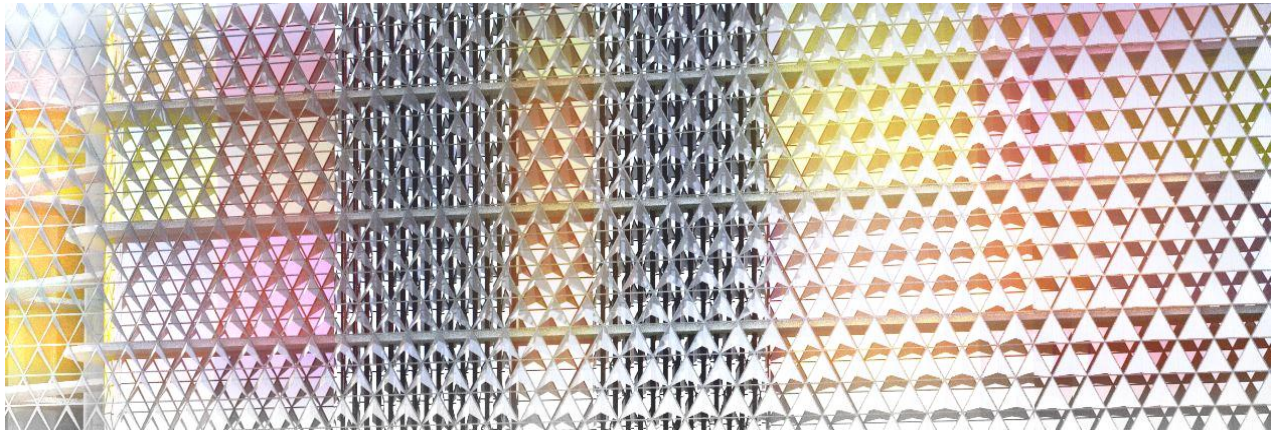

COLOUR- WESTERN FACADE

Reality in play
‘a thing of the world in Adelaide’


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Nutrition Research
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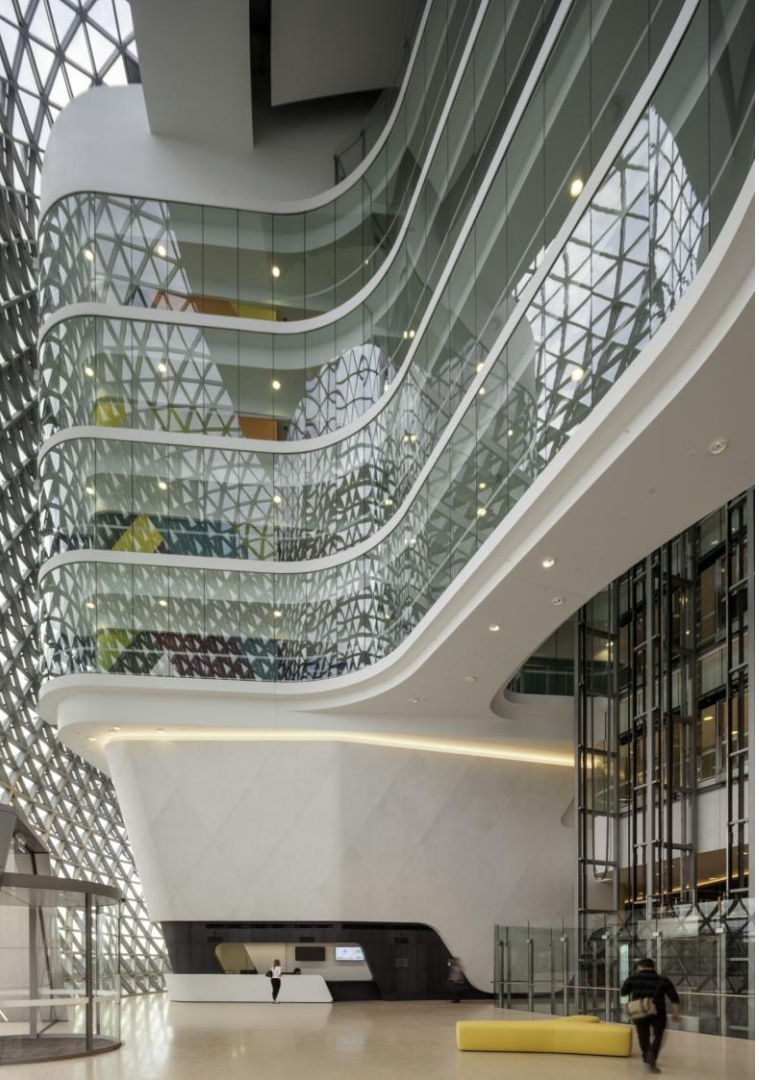

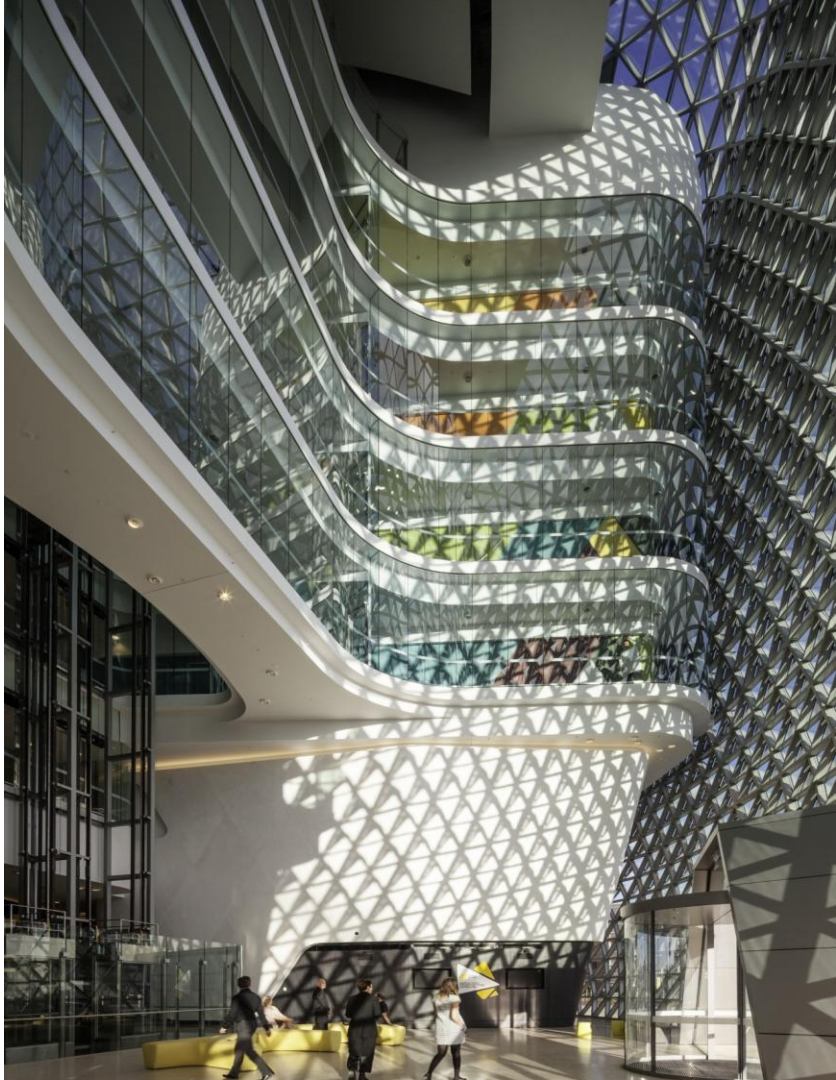

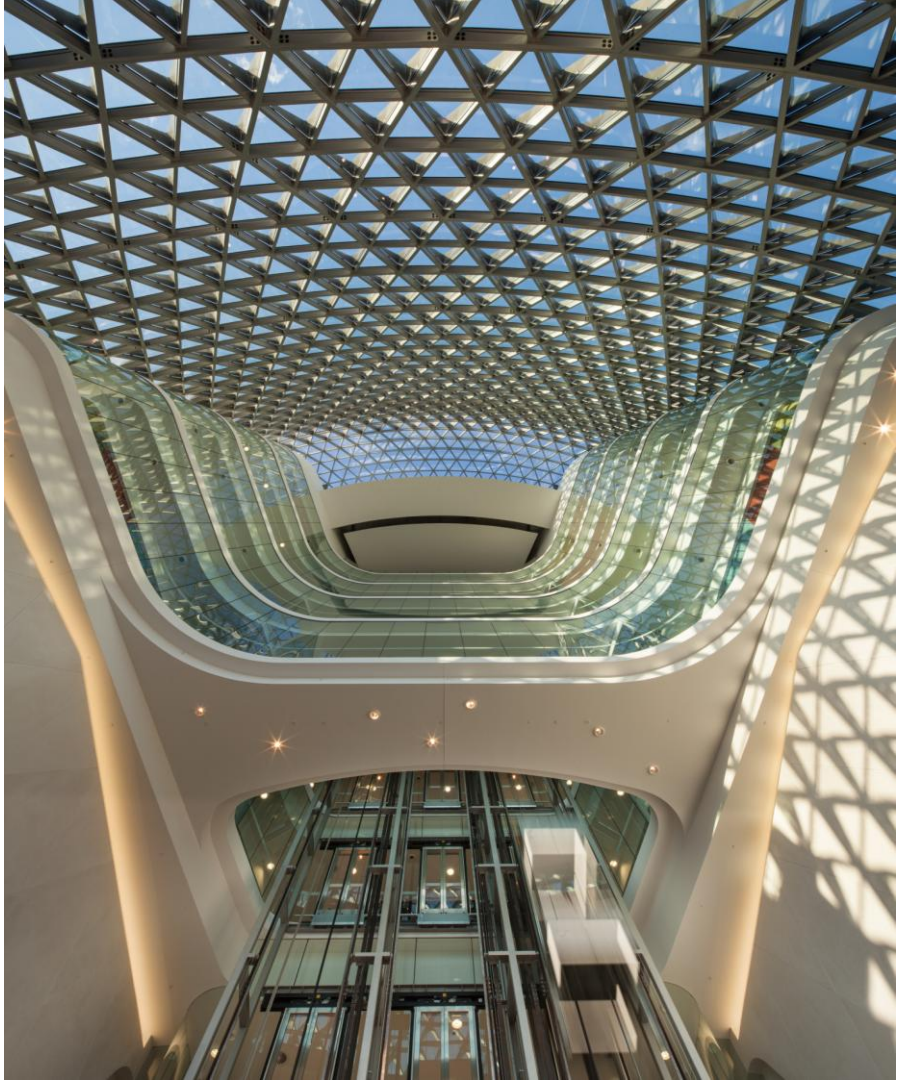

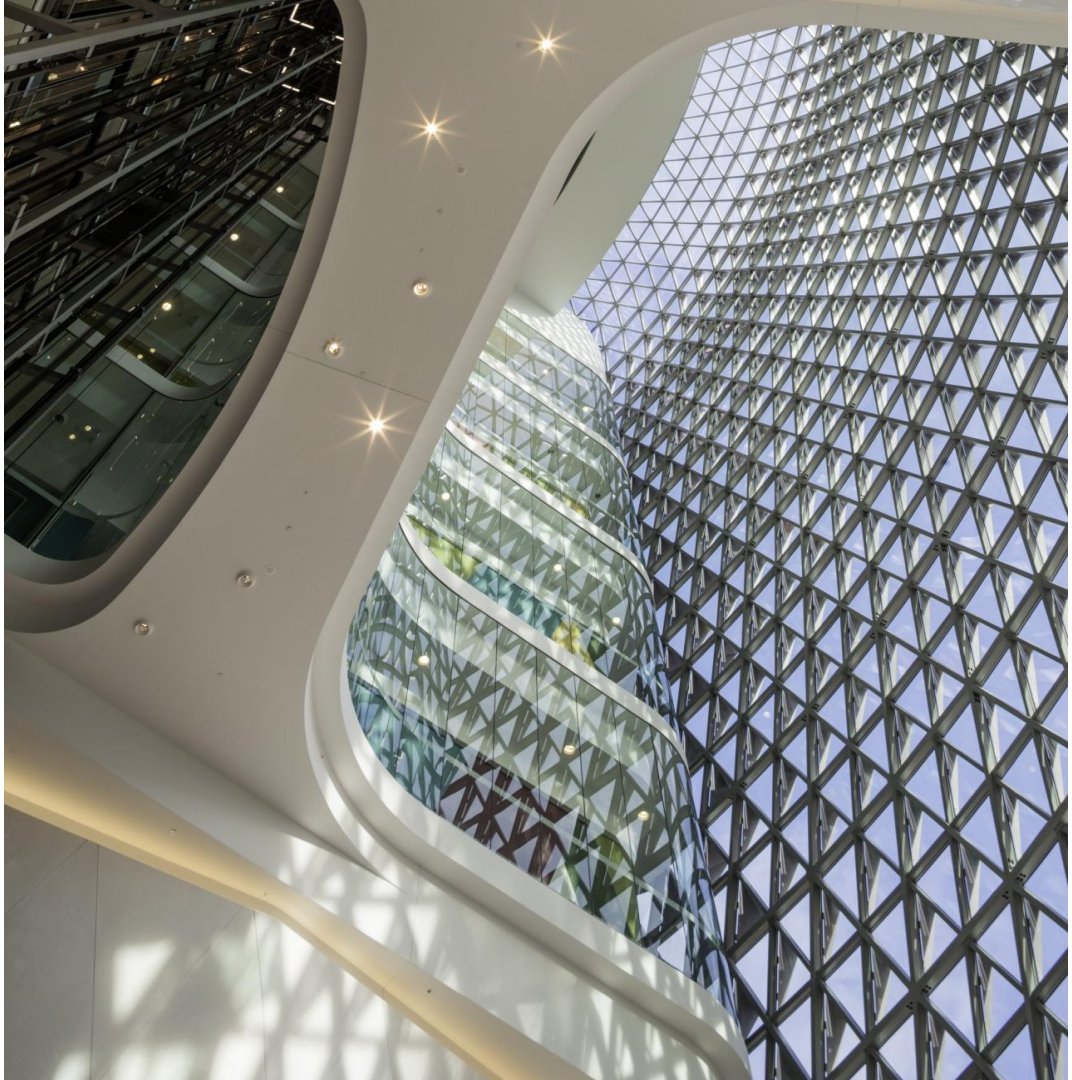

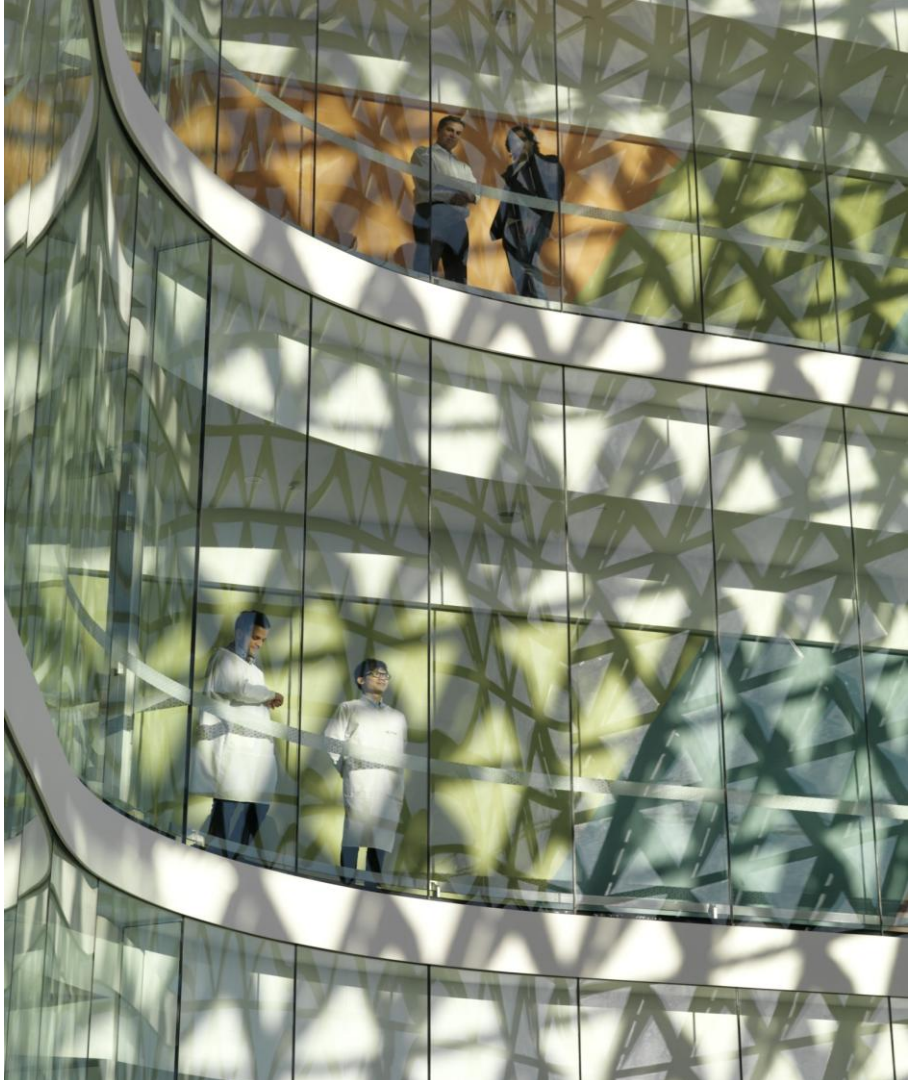

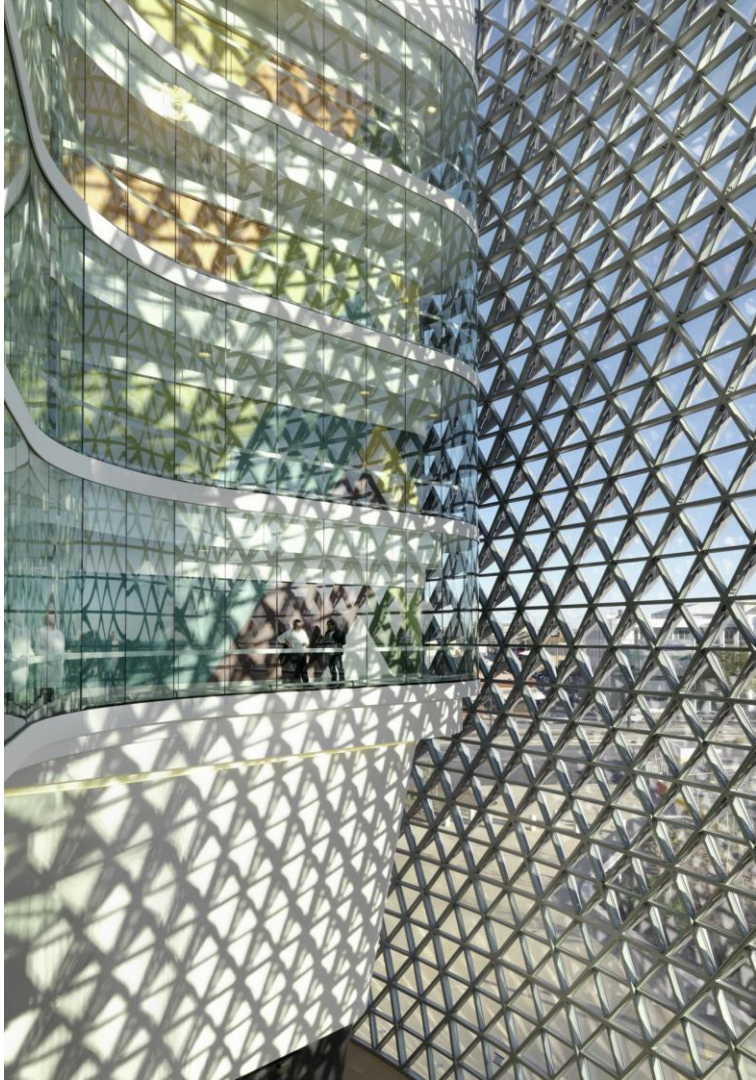


CORNING


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SAHMRI
South Australian Health & Medical Research Institute

SAHMRI researchers find the genes that make us fat, prompting hope for Type 2 diabetes

Tuesday 11, August 2015

South Australian scientists have unlocked the secrets of the fat gene and are a step closer to treatments that could reverse obesity and eventually prevent Type-2 diabetes.