

DARREN HO

Design Portfolio



AI IN HEALTH: URBAN INTERVENTION

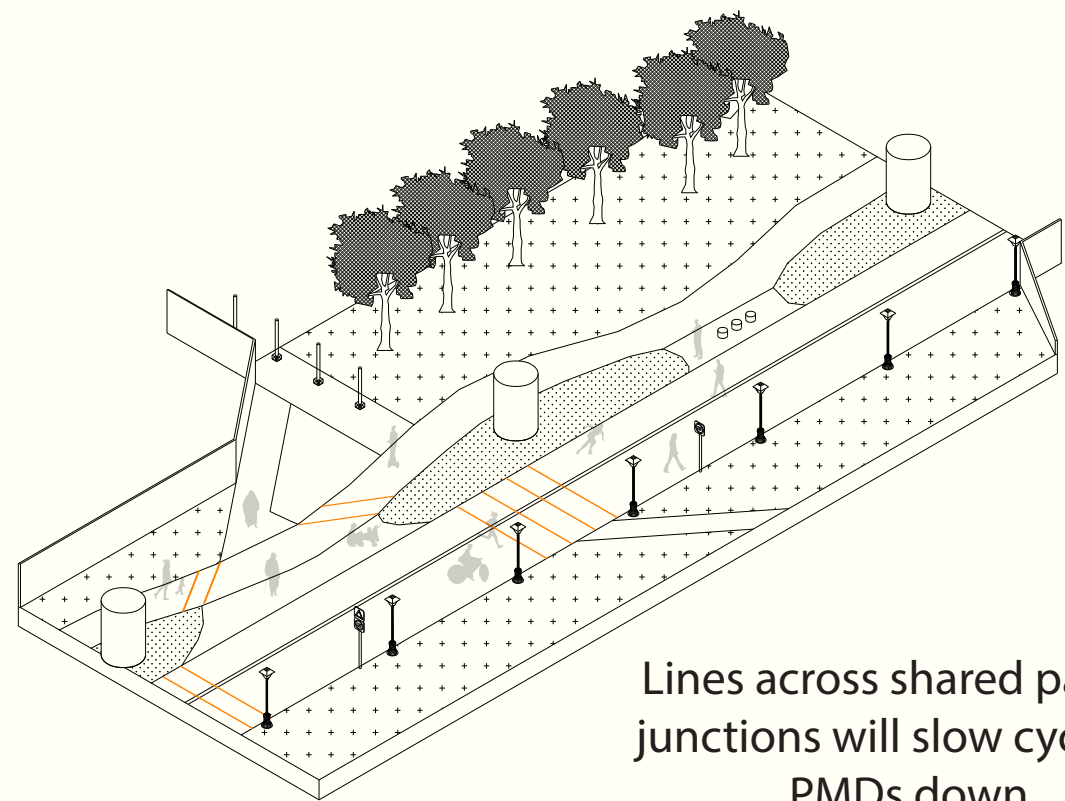
LKYCIC Ageing Urbanism

Prototyping Phase
Dec 2020 - July 2022

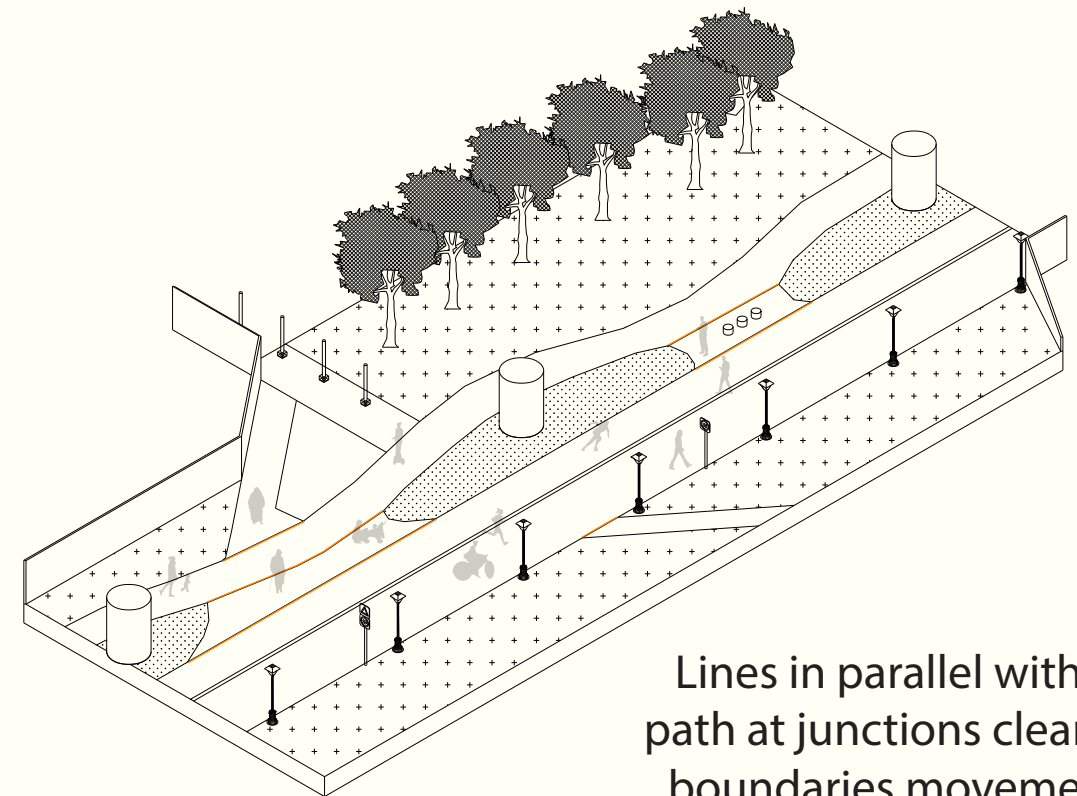


This prototyping phase aims to fulfill the following purpose and objectives:

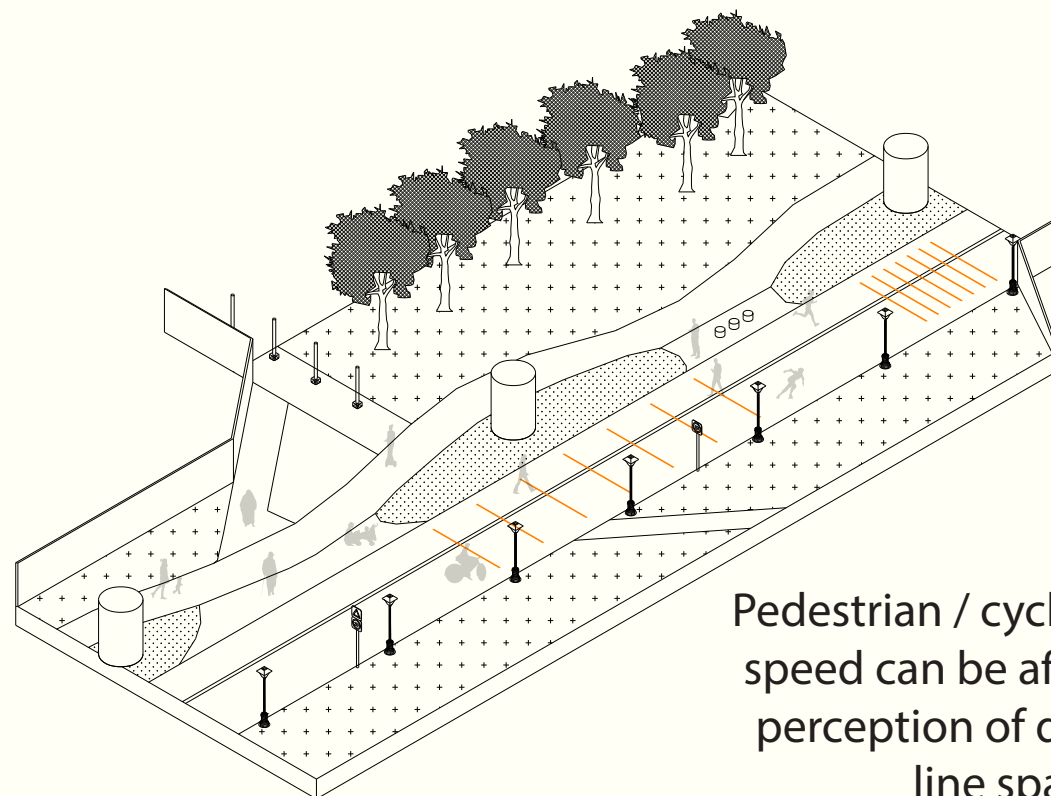
- i) To design prototypes considering implementable urban design and planning recommendations to improve walkable environment in Tampines
- ii) To fabricate, make, and install small-scale design prototypes at Tampines-Simei MRT viaduct park connector network.
- iii) To assess design prototypes with reference to their design ideas/objectives, usefulness, and feasibility of scaling up.



Lines across shared path at junctions will slow cyclists / PMDs down



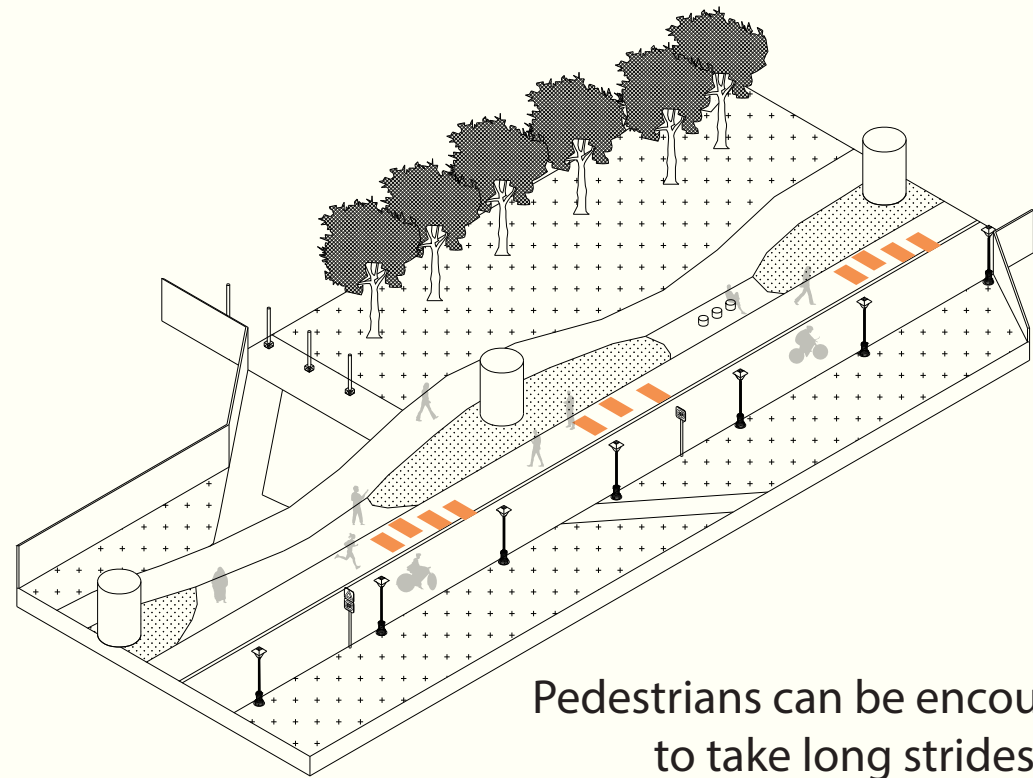
Lines in parallel with shared path at junctions clearly define boundaries movement / rest spaces



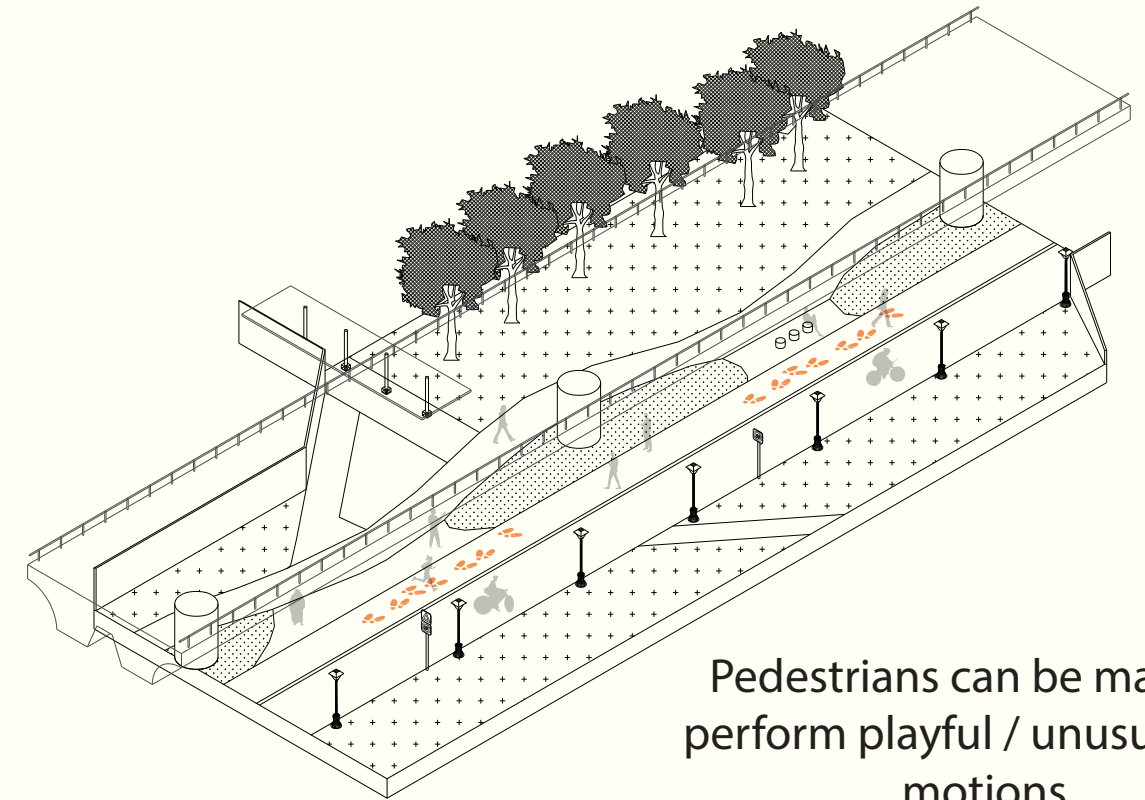
Pedestrian / cyclist movement speed can be affected due to perception of distance from line spacing

DESIGN OPTION 1

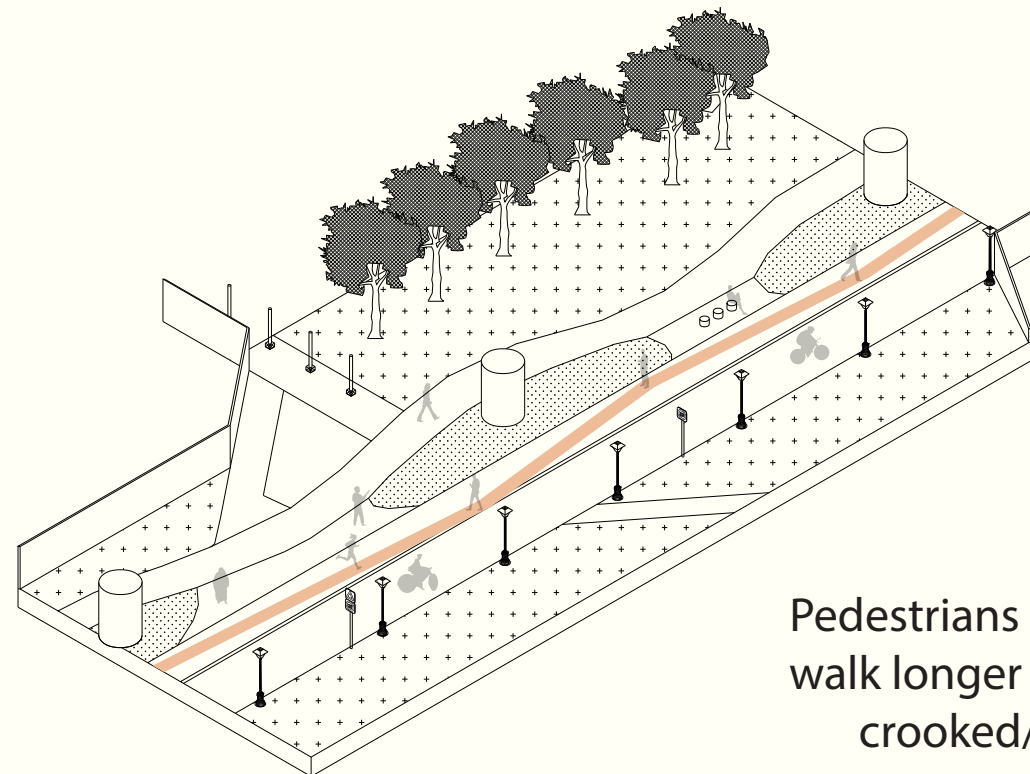
Bright coloured lines across shared walkways can affect pedestrian / cyclist movement behaviour



Pedestrians can be encouraged to take long strides



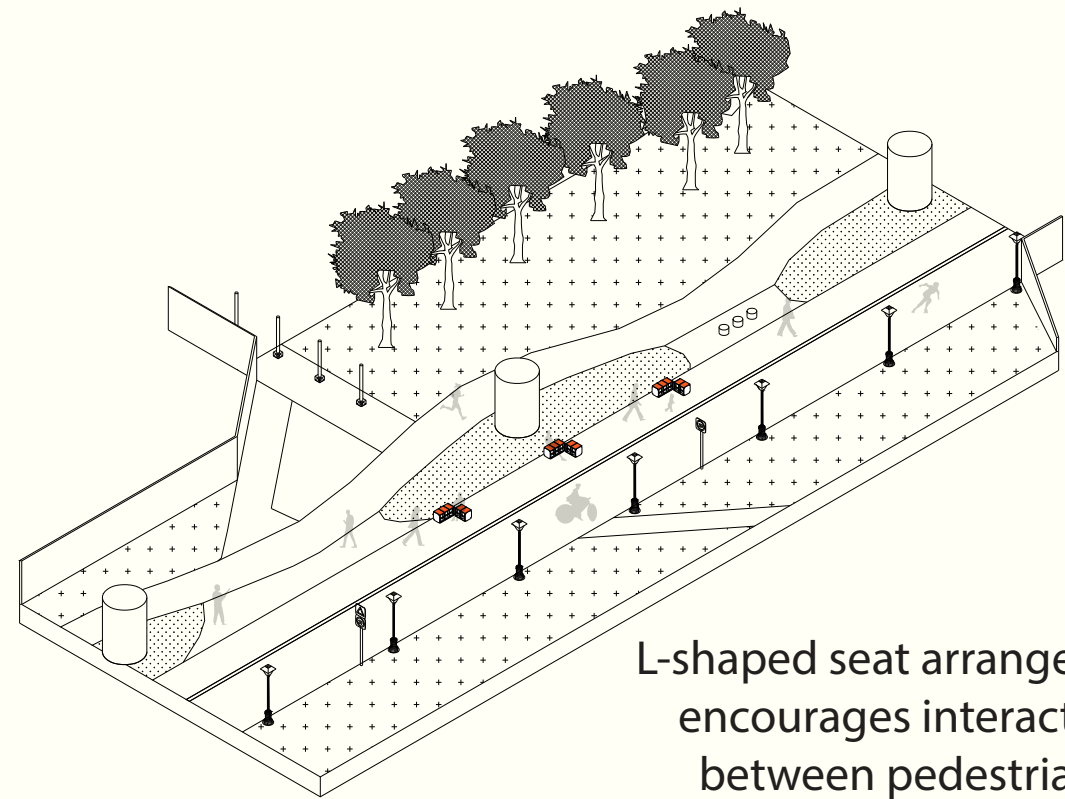
Pedestrians can be made to perform playful / unusual step motions



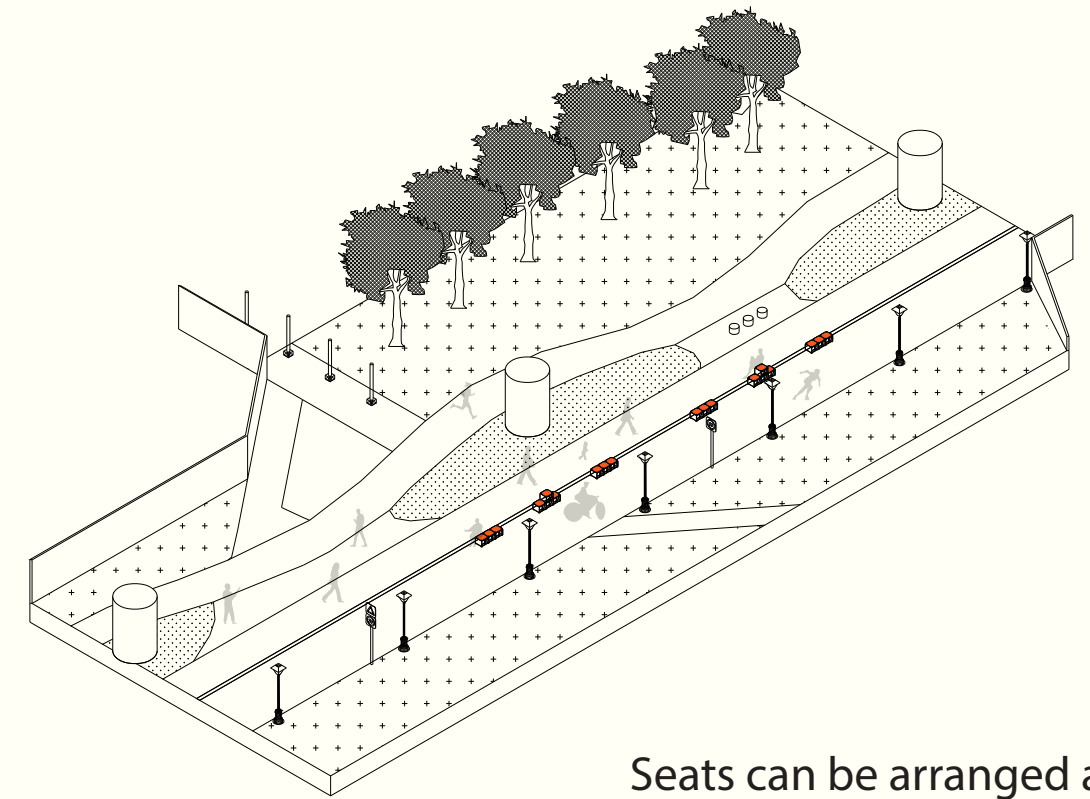
Pedestrians can be made to walk longer distances using crooked/zigzag lines

DESIGN OPTION 2

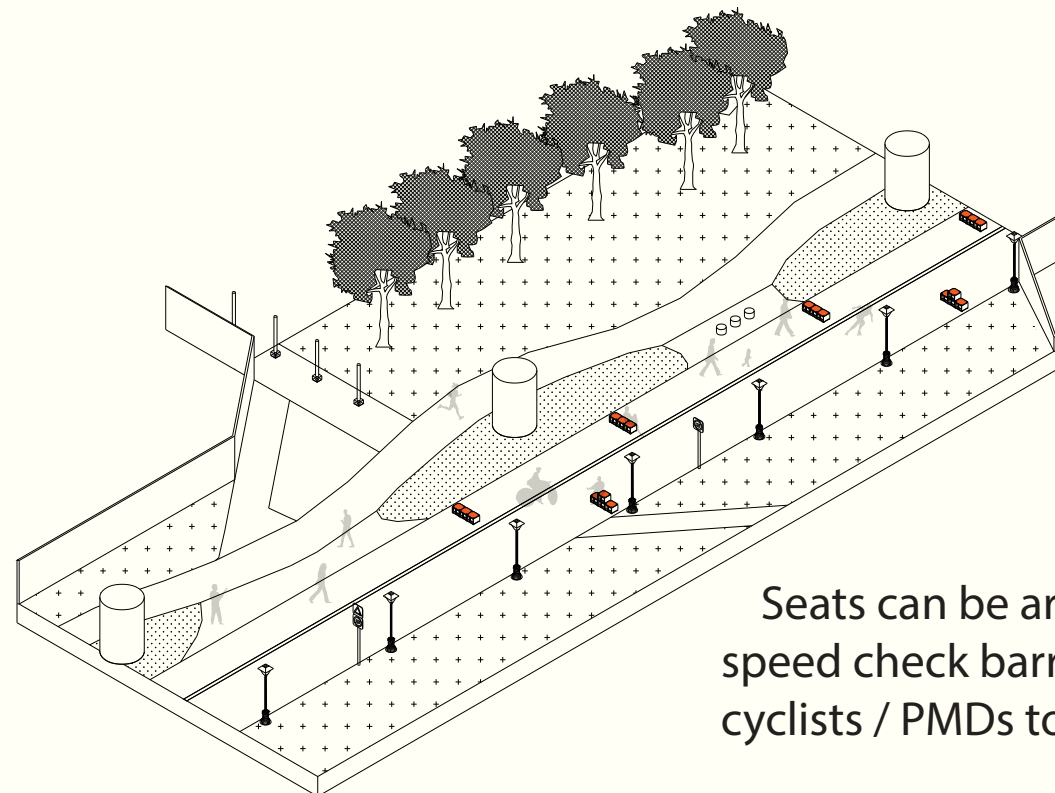
Attractions can nudge pedestrian walking behaviour



L-shaped seat arrangement encourages interaction between pedestrians



Seats can be arranged as partitions to separate pedestrian and cycling paths



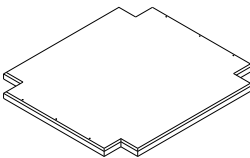
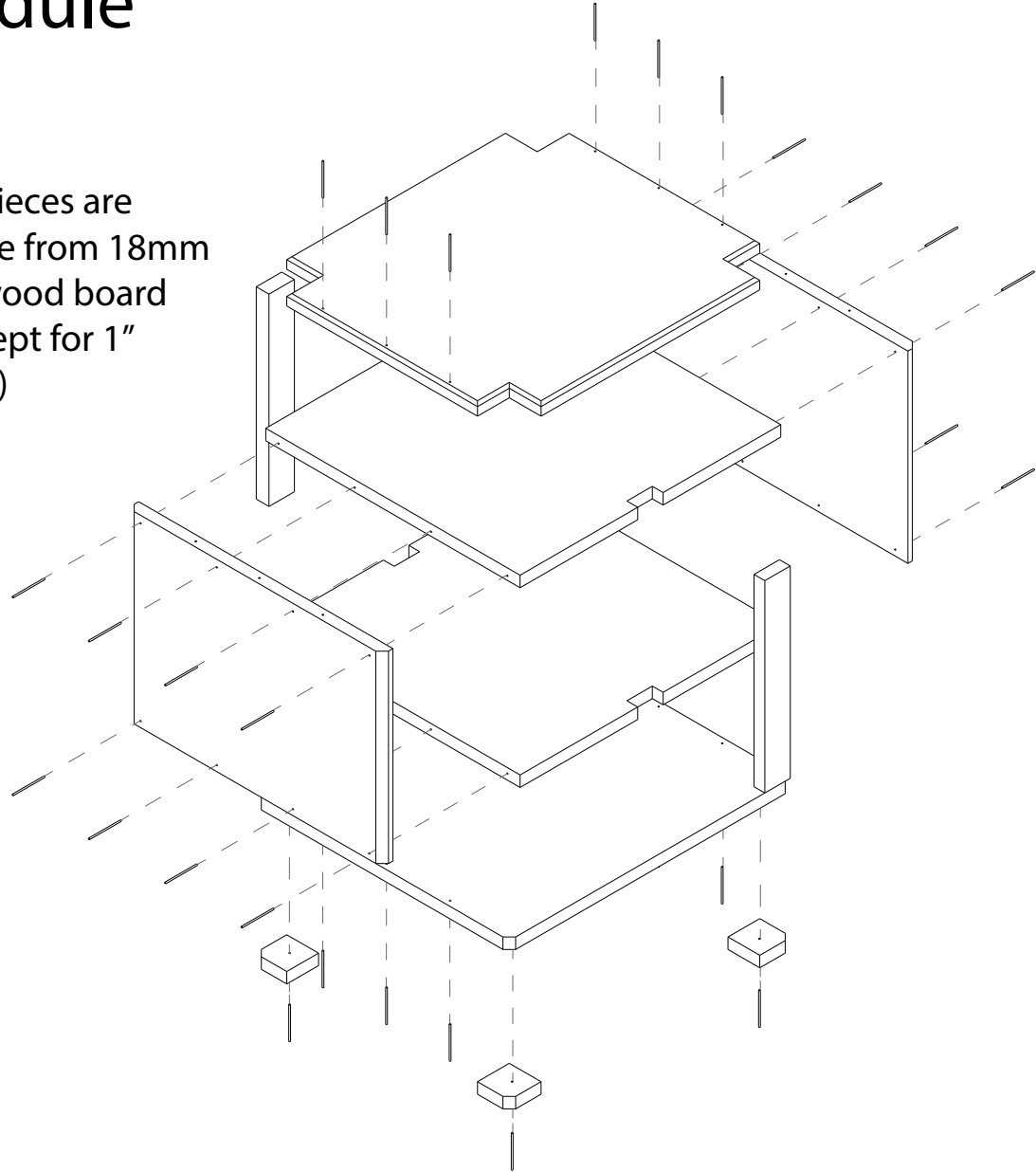
Seats can be arranged as speed check barriers to force cyclists / PMDs to slow down

DESIGN OPTION 3

Position and type of seat can influence pedestrian / cyclist movement and resting behaviour

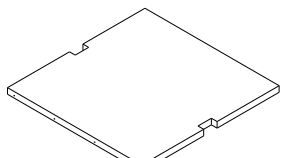
Prototype bench module

All pieces are made from 18mm plywood board (except for 1" nails)



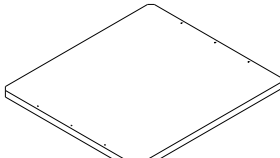
x 1

449mm x 400mm cross shaped 18mm plywood board



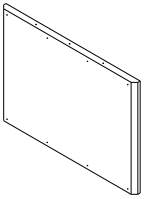
x 2

415mm x 400mm H-shaped 18mm plywood board



x 1

449mm x 400mm 18mm plywood board



x 2

400mm x 291mm 18mm plywood board



x 2

291mm x 40mm 18mm plywood board

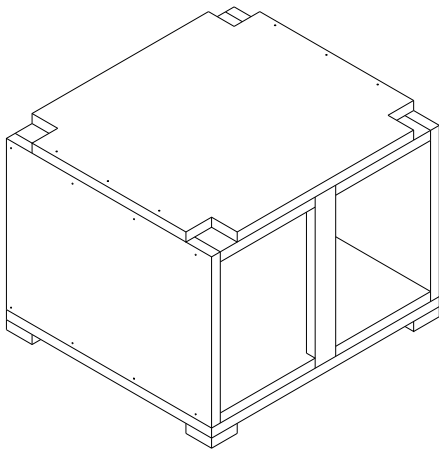


x 4

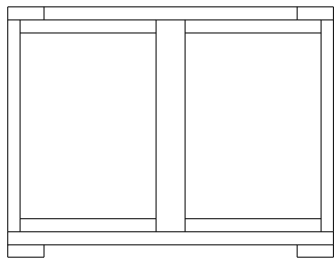
50mm x 50mm 18mm piece

1" x 32"

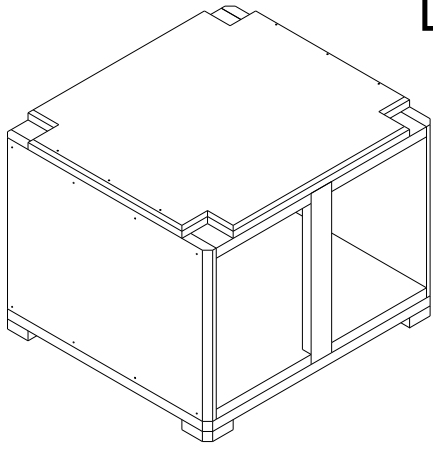
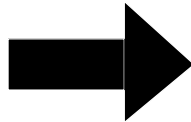
1" nail



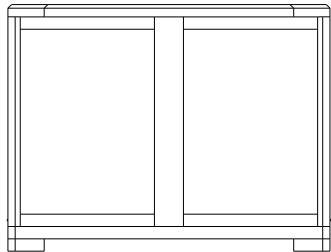
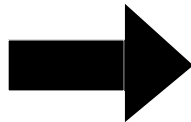
Original module



Original module



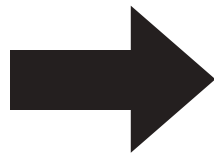
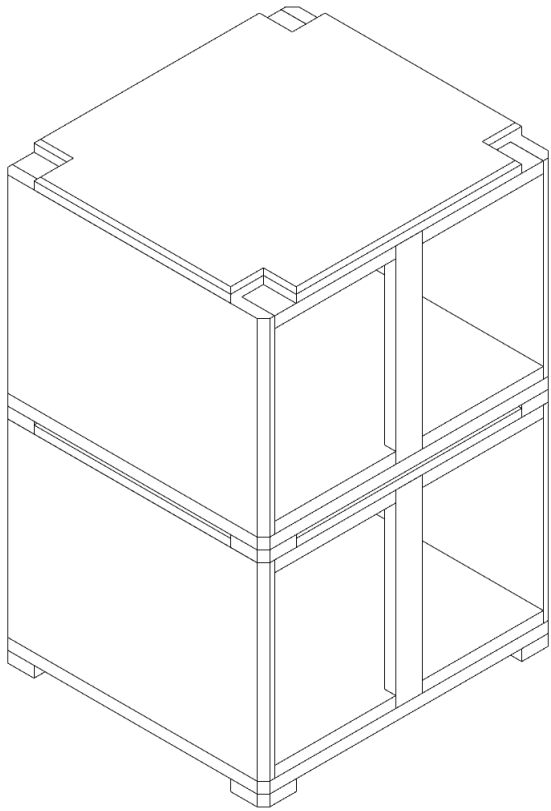
Chamfered module



Chamfered module

Detailing

Chamfer / smoothen the sharp edges of the module to make it suitable for seating / prevent possible injuries from hitting the edges



Miscellaneous

Tampines-Simei MRT corridor viaduct

3D point cloud scans

3D Scanner: FARO Focus 3D

Point cloud editors: Autodesk Recap, CloudCompare



Long Elevation



Street View



Short Elevation

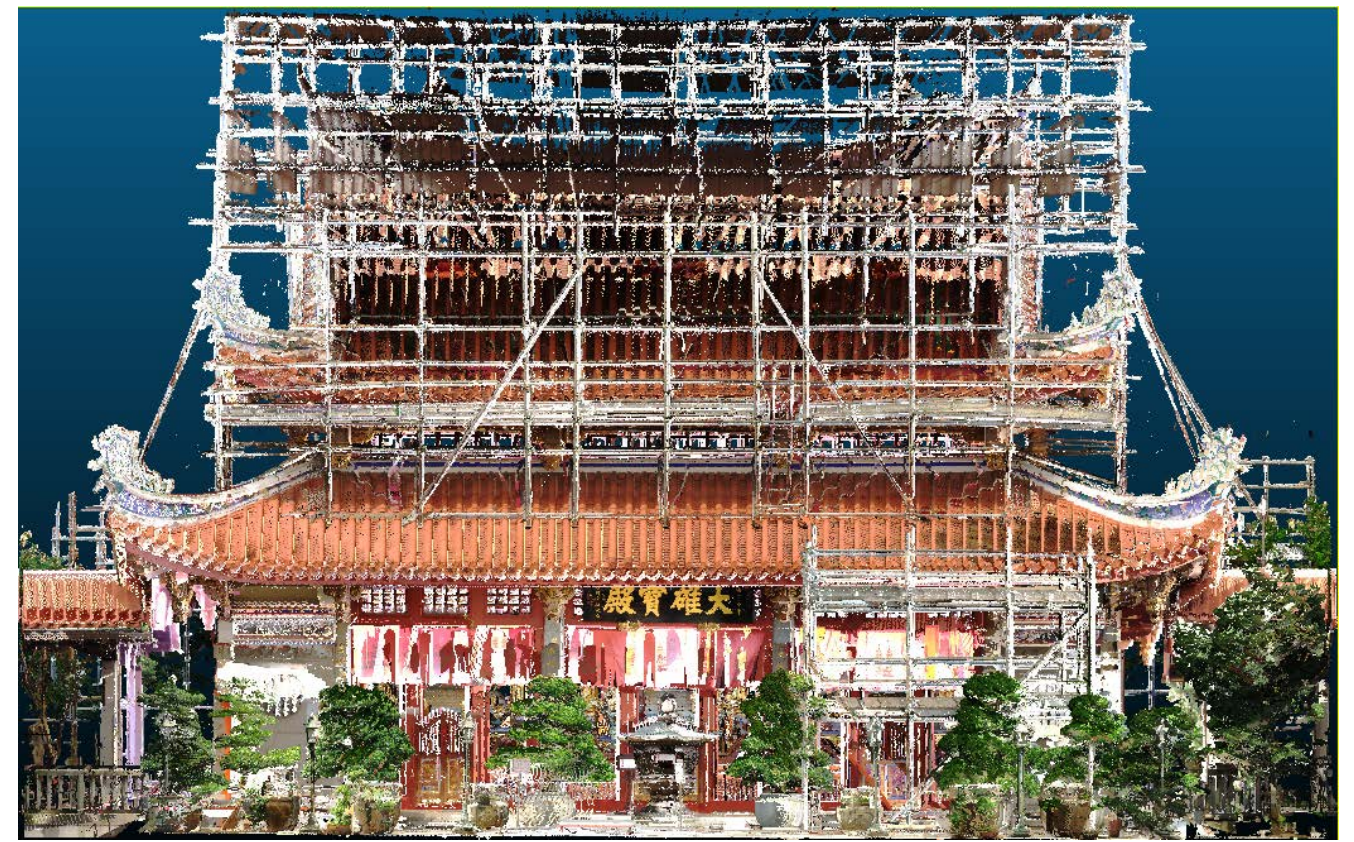
Miscellaneous

Lian Shan Shuang Lin Monastery

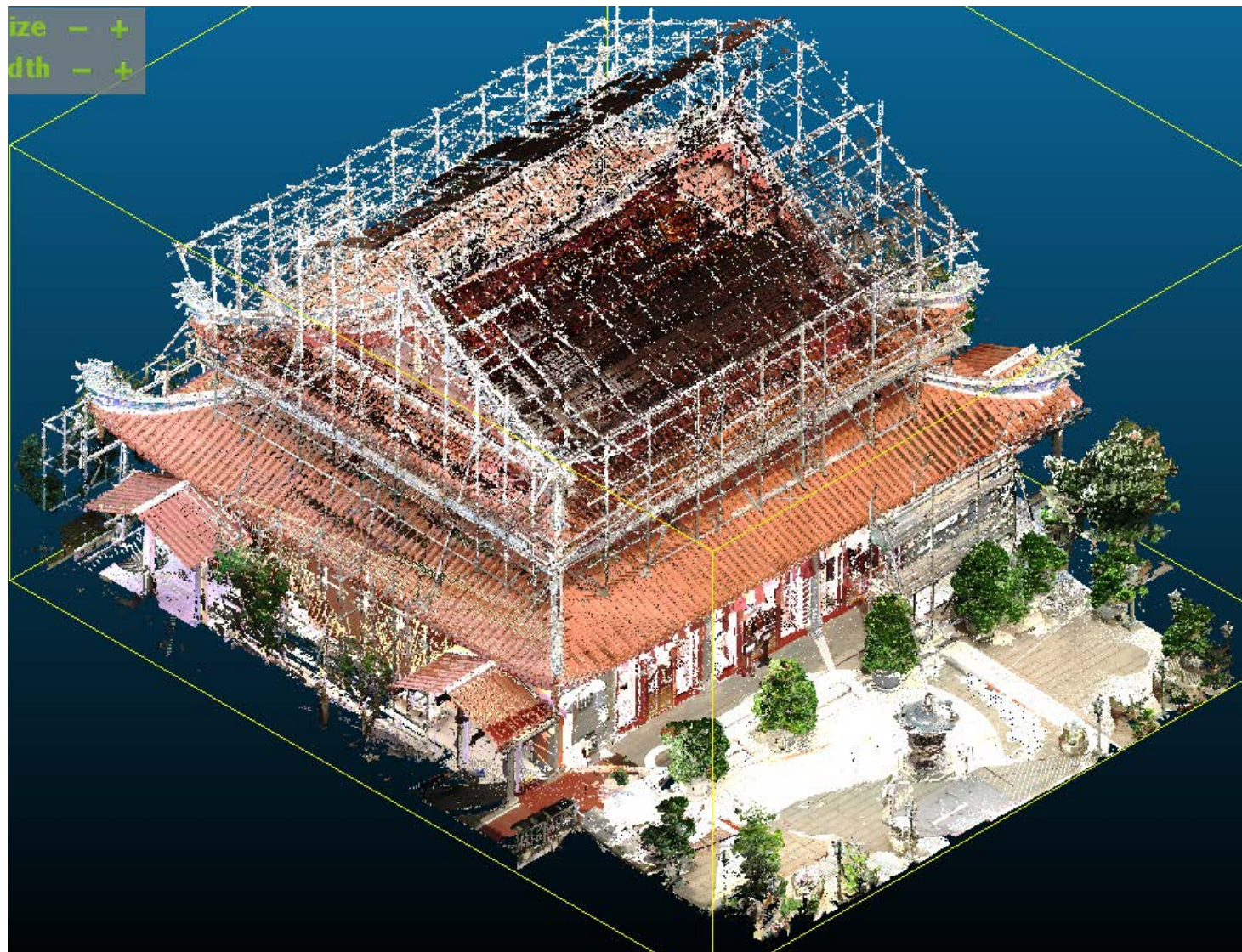
3D point cloud scans

3D Scanner: FARO Focus 3D

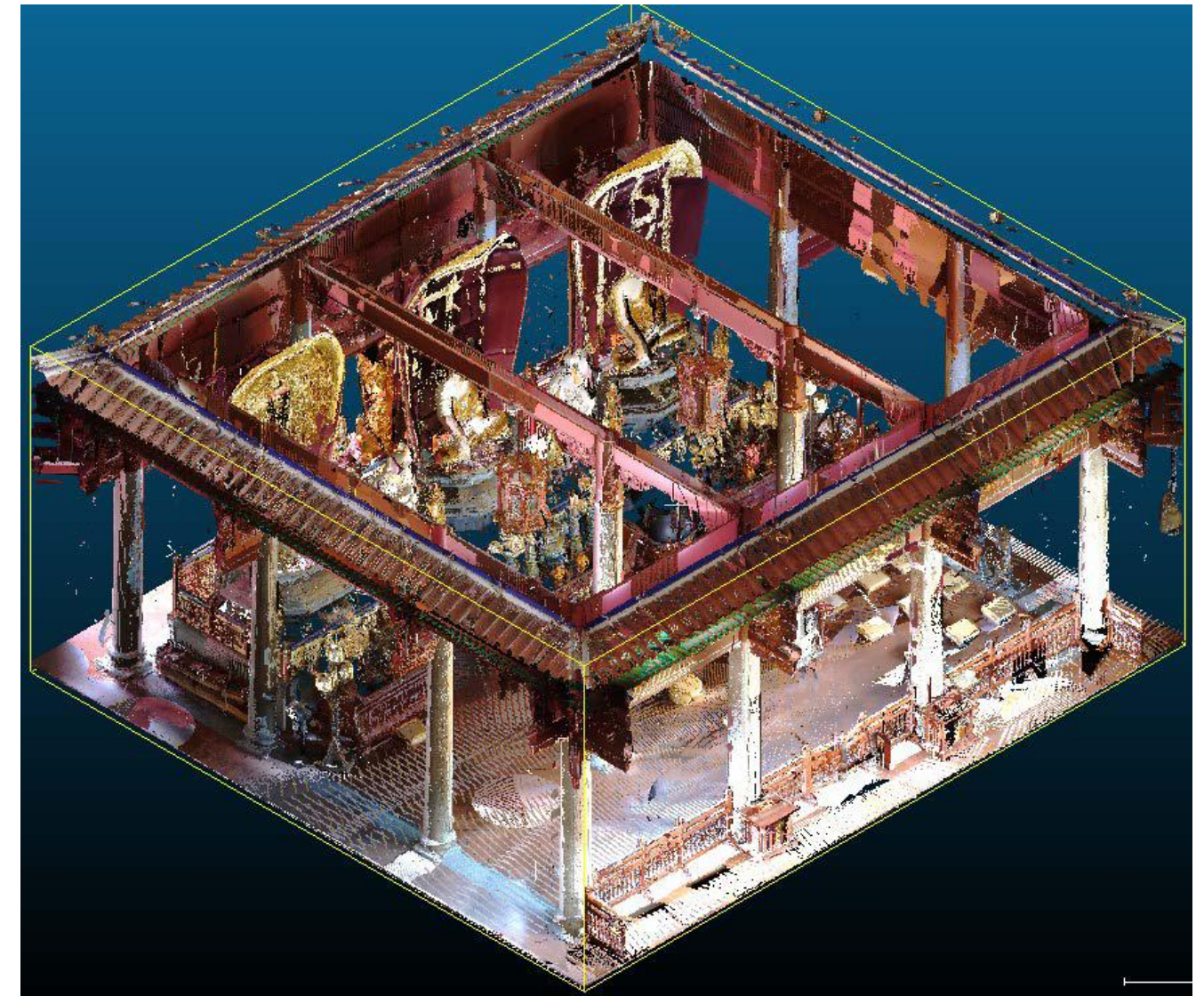
Point cloud editors: Autodesk Recap, CloudCompare



Front View (Da Xiong Bao Dian)



Isometric view (Da Xiong Bao Dian)



Isometric view (Da Xiong Bao Dian interior)