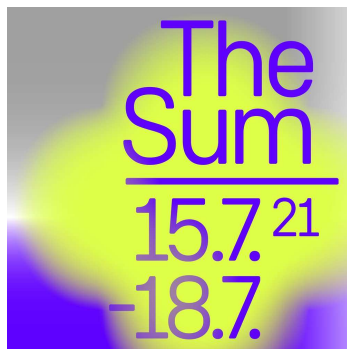


Summaery2021

Bauhaus Universität Weimar

28th AEC Global Teamwork Generation

Re-Imagine Collaboration



Camila Ribellato Baldin
Rohan Raj Das



Team formation and discipline interaction

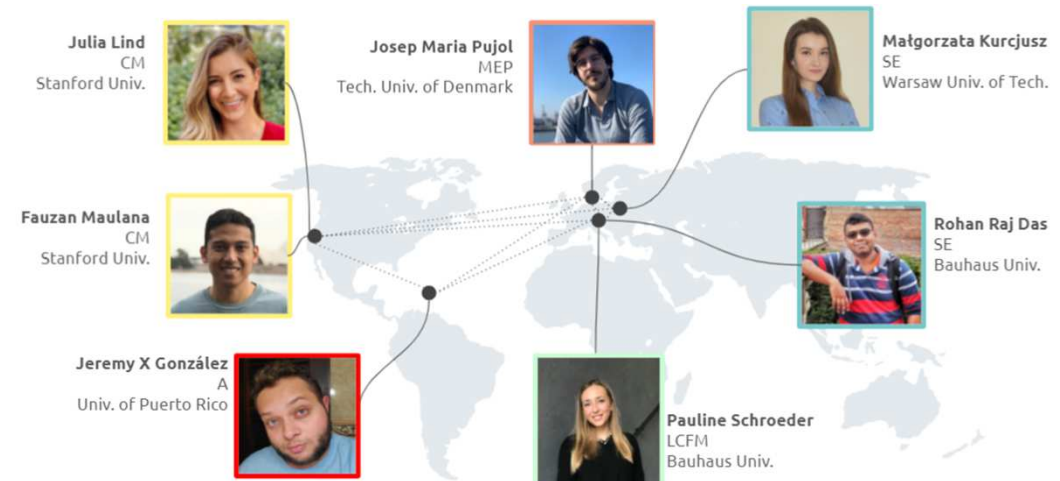


Island

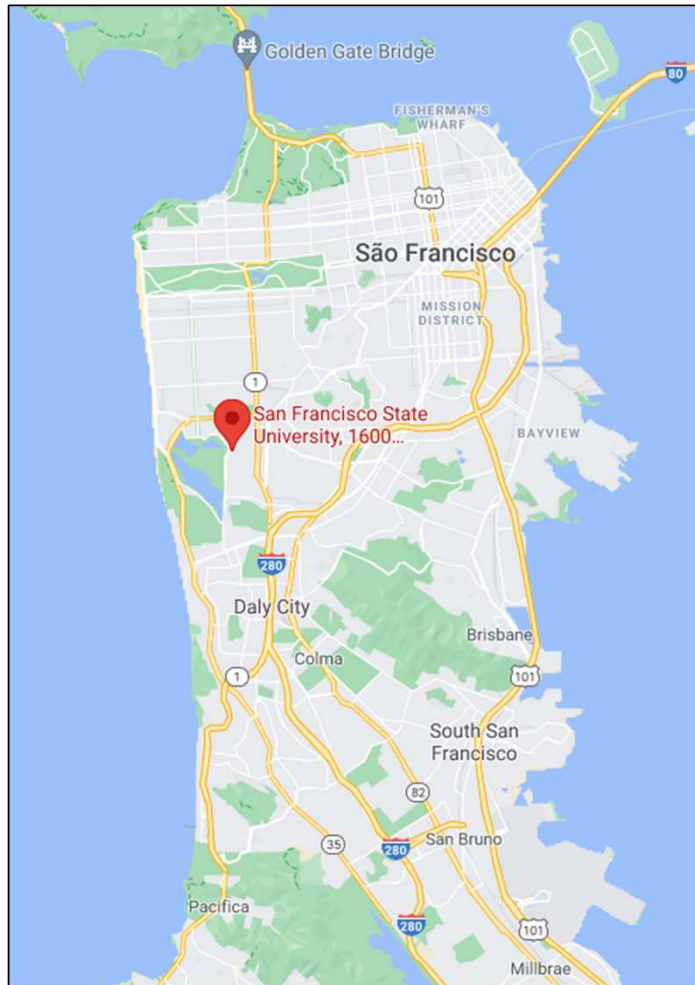
Our Team



Our Team



Brief Project Introduction



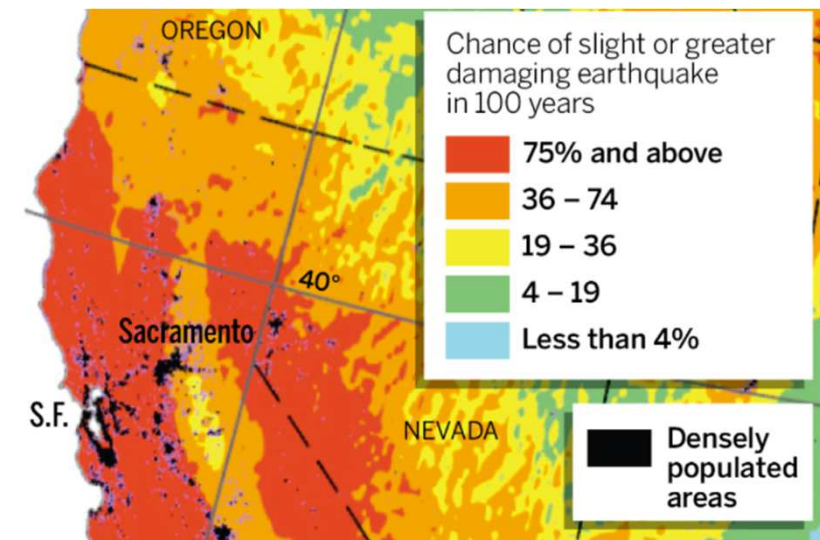
San Francisco State University

Seismic loads led
the design

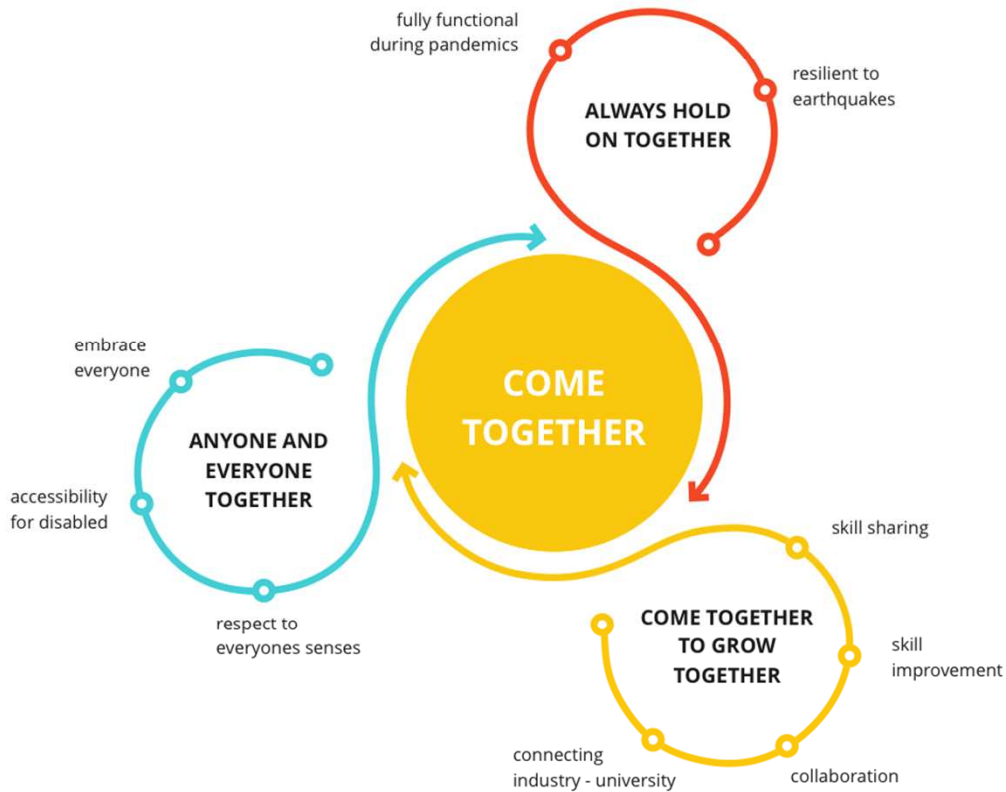
Wildfire:



Earthquake:



Brief Project Introduction

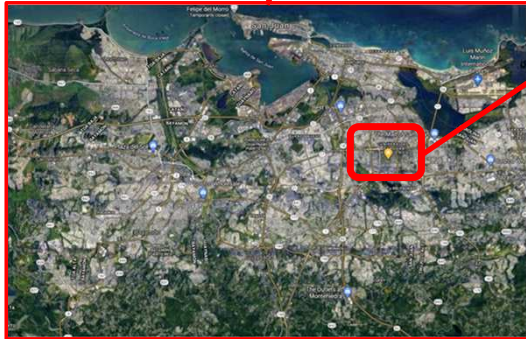


Brief Project Introduction ISLAND

Puerto Rico



San Juan



University of Puerto Rico

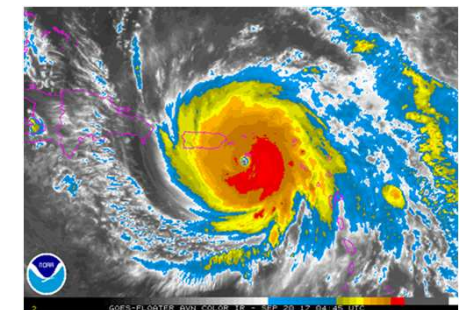


Natural Hazards:

Earthquakes



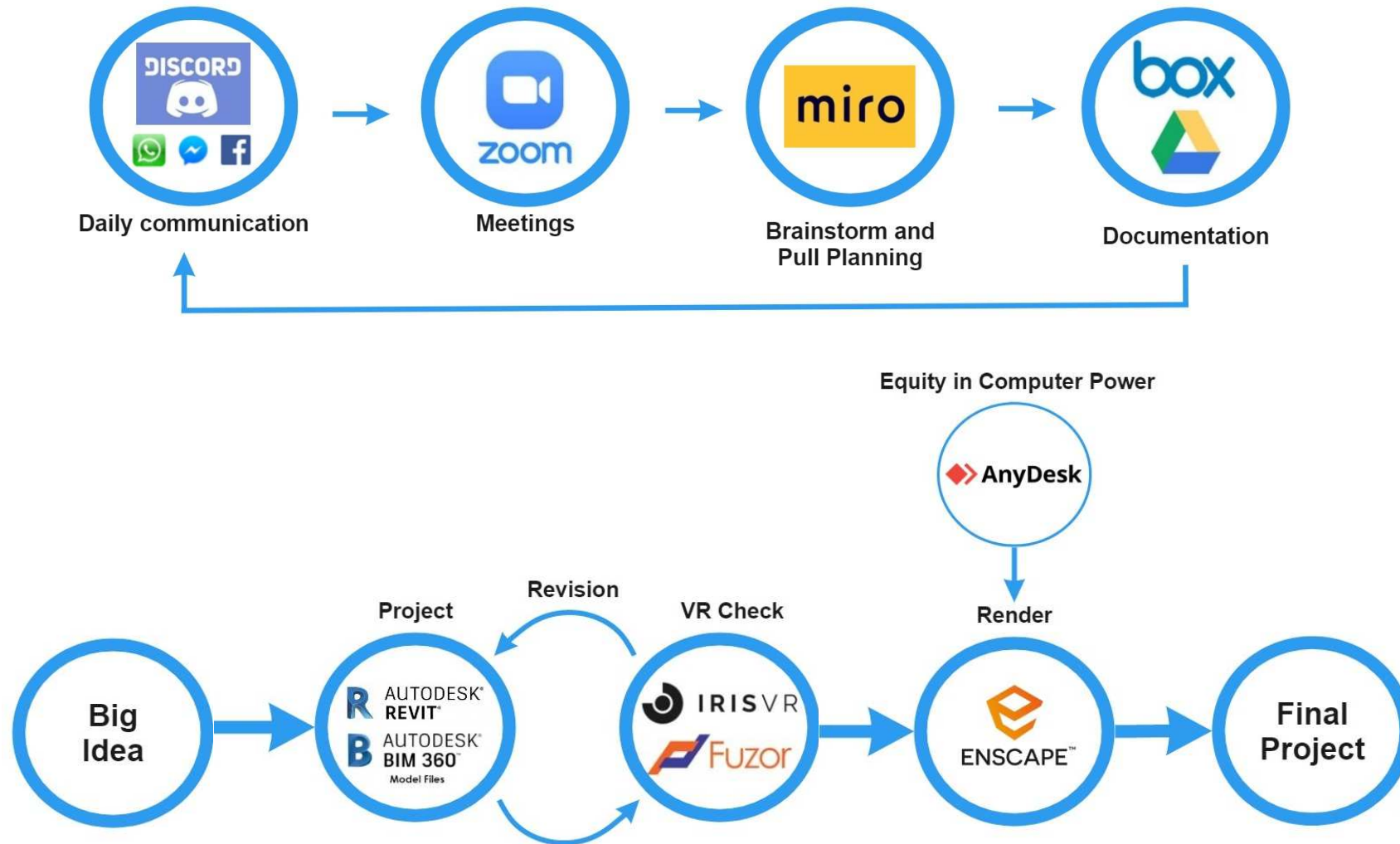
Hurricanes



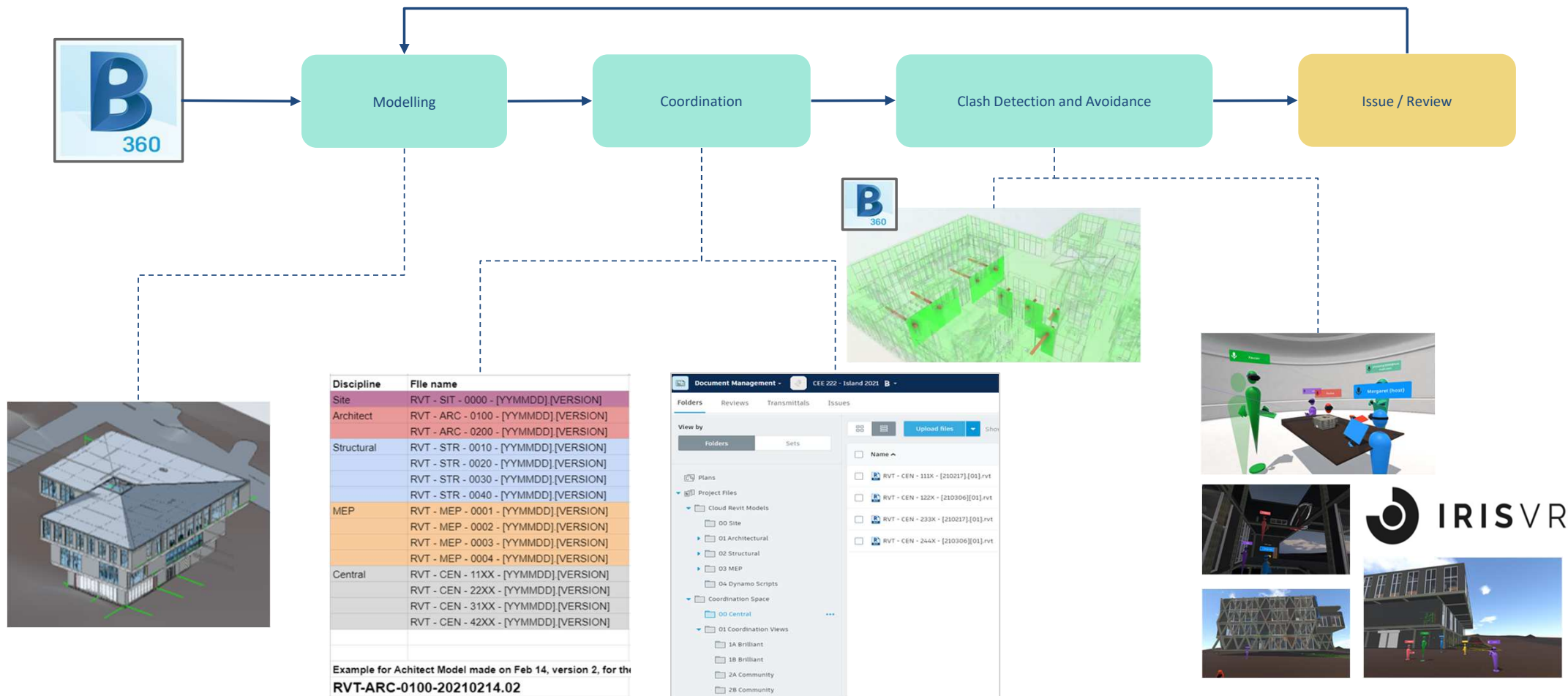
Brief Project Introduction ISLAND



Team collaboration



BIM and VR collaboration – Interdisciplinary work



Collaborative Design: A + SE + MEP + CM + LCFM

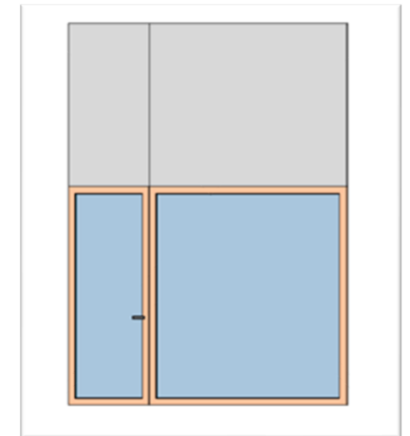
Structural Design



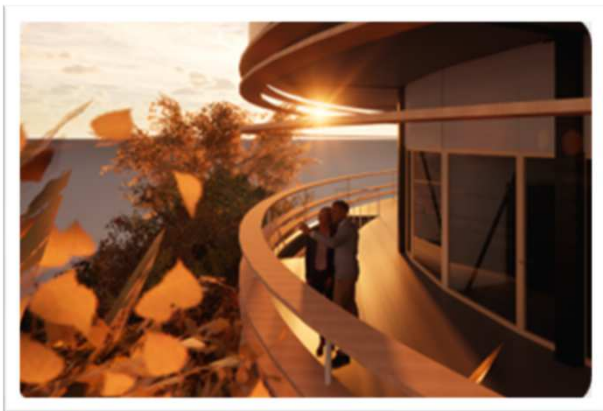
Cantilever and Facade



Facade Panels



Sun Light Analysis



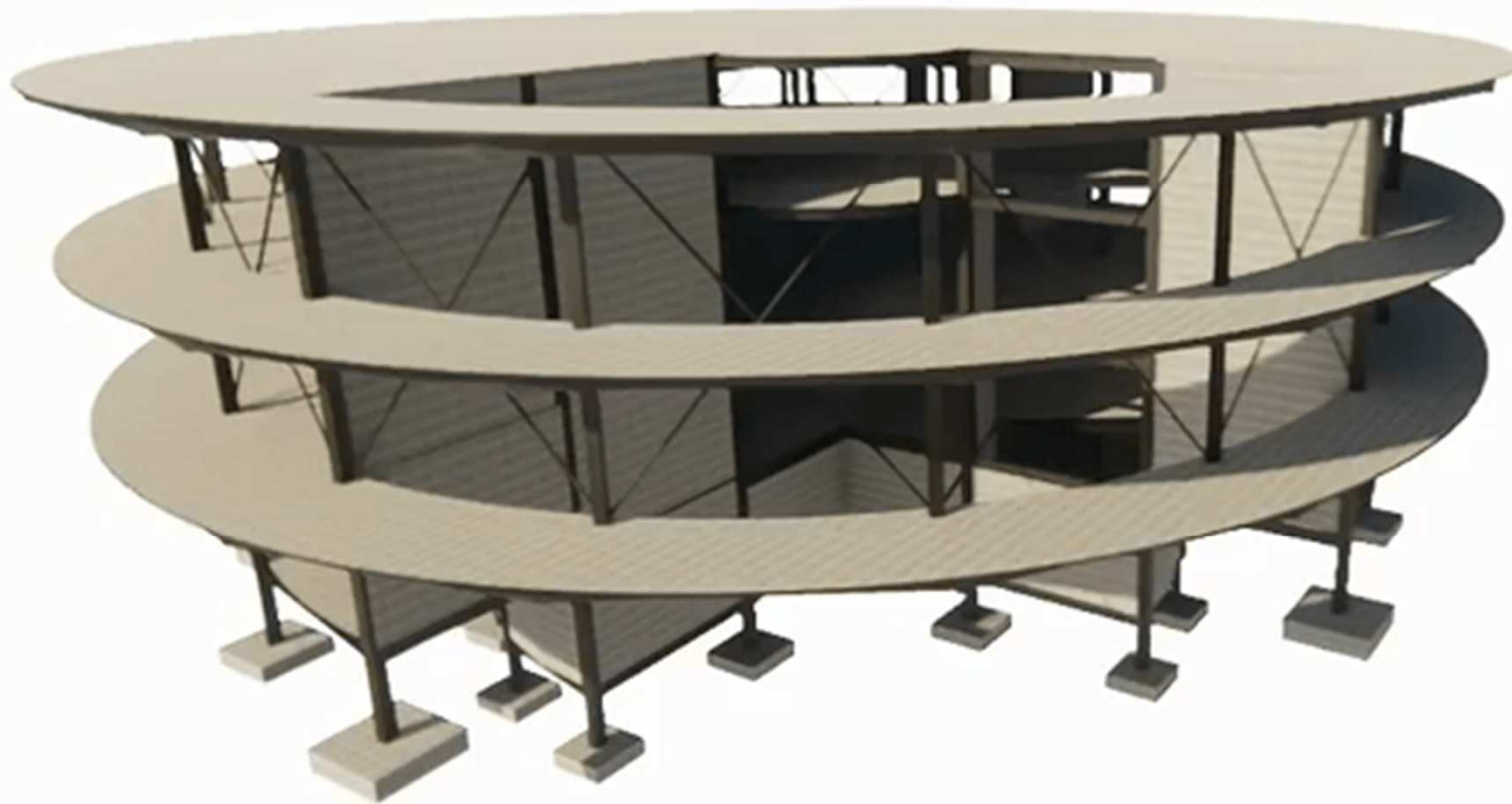
Cost Reduction



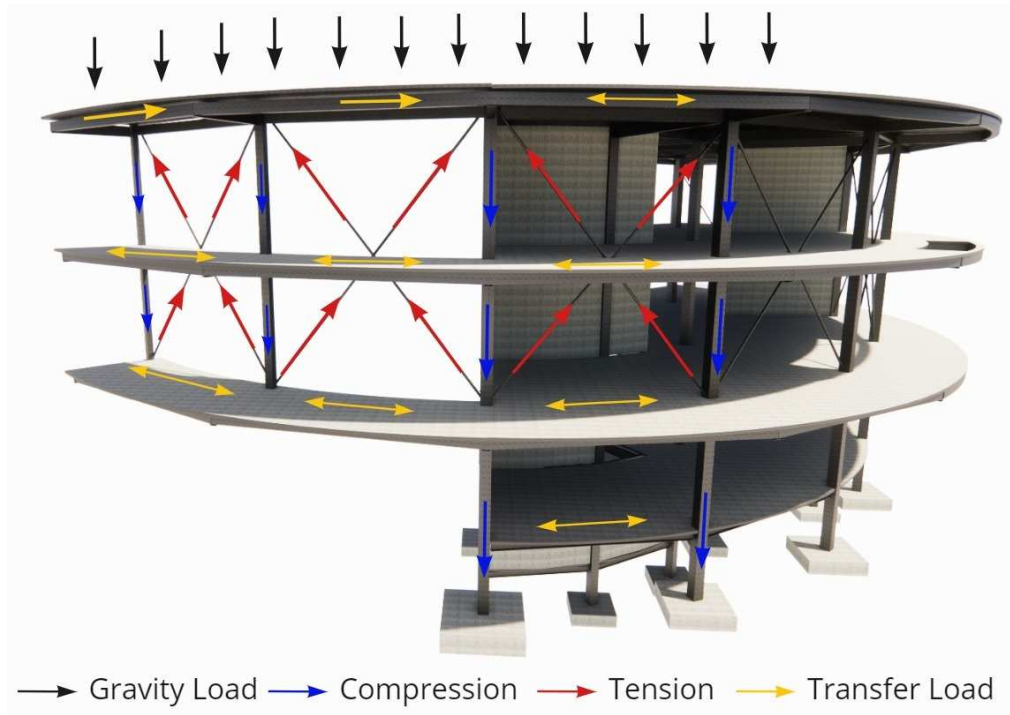


Structural concept and development – Pacific Team

Modal Analysis:



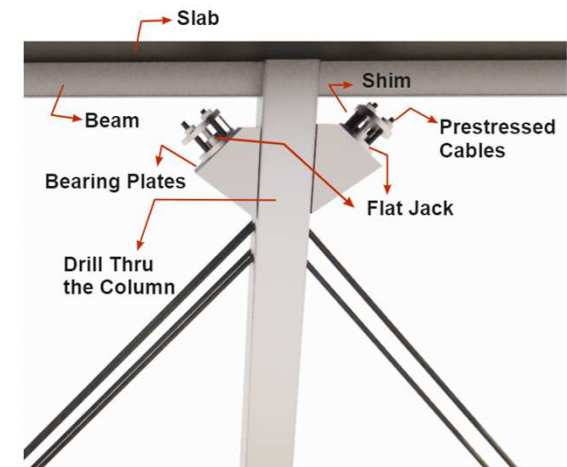
Structural concept and development – Pacific Team



Customized Detail for the cantilever

Design coordinated with CMs

The system provides lifetime structural health monitoring



Structural concept and development – Island Team

Goals:

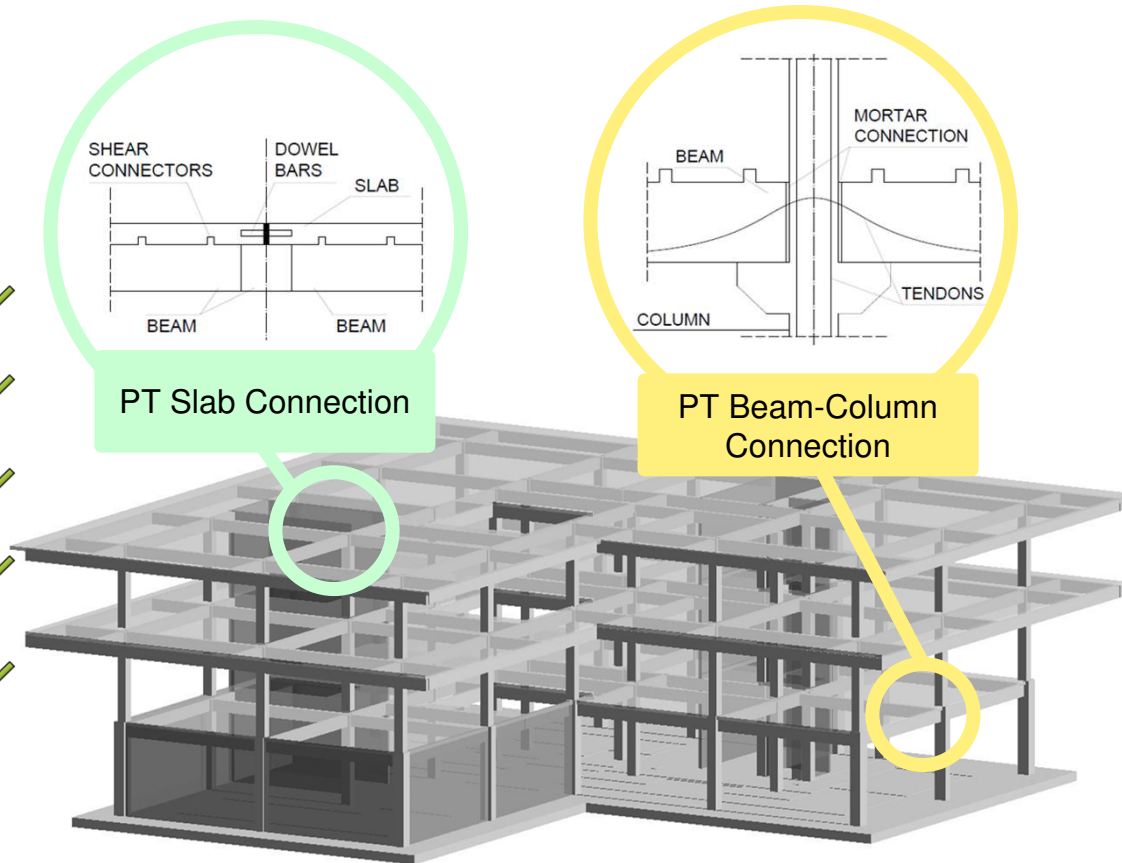
Local Material ✓

Local Expertise ✓

Modularity ✓

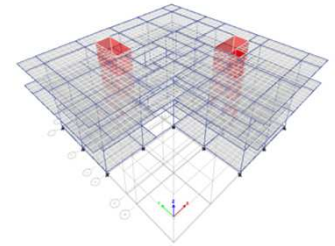
Prefabrication ✓

Resistance against
natural hazards ✓

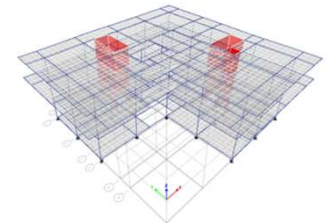


Modal Analysis:

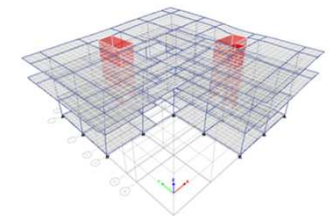
1st Mode



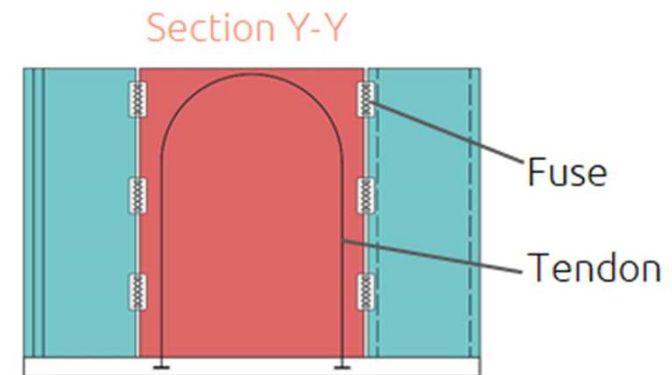
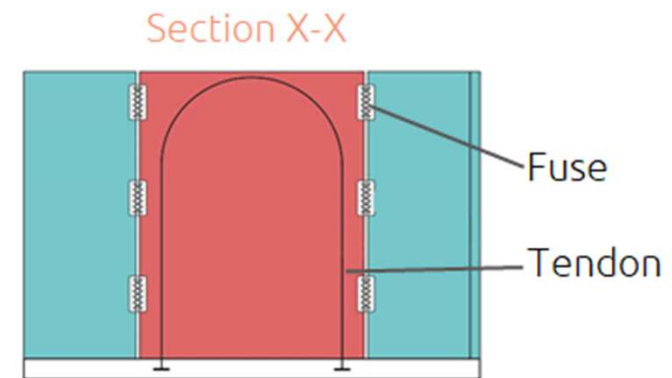
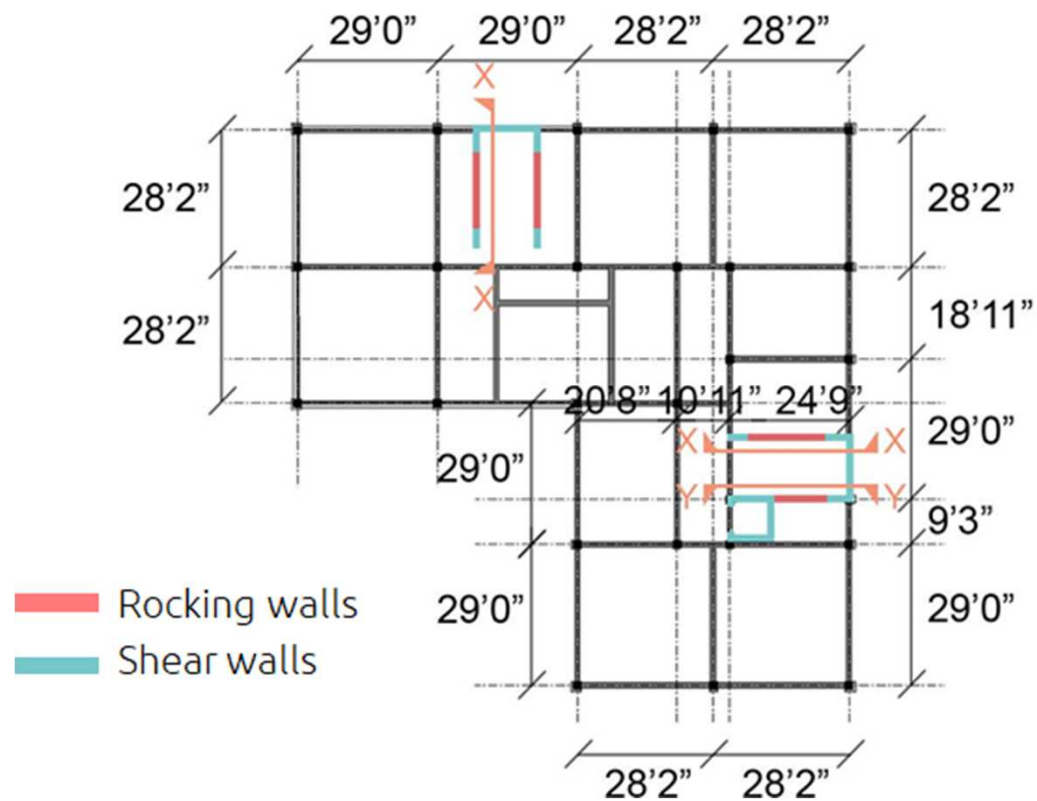
2nd Mode



3rd Mode



Structural concept and development – Island Team



Challenges



Winners of the Sustainability Challenge

Sponsored by:
[AR Green Consulting](#) (2017-to date)
 and
[Swinerton Builders](#) (2006-to date)

Competition themes:
 2020-2021: Equity



Sustainability - Equity



Winners of the IPD Challenge

Sponsored by:
[DPR Construction](#) (2009-to date)

Competition themes:
 2020-2021: Buildings as Products



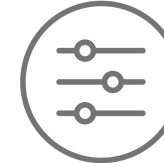
DPR – Building as a product



Winners of the IT Challenge

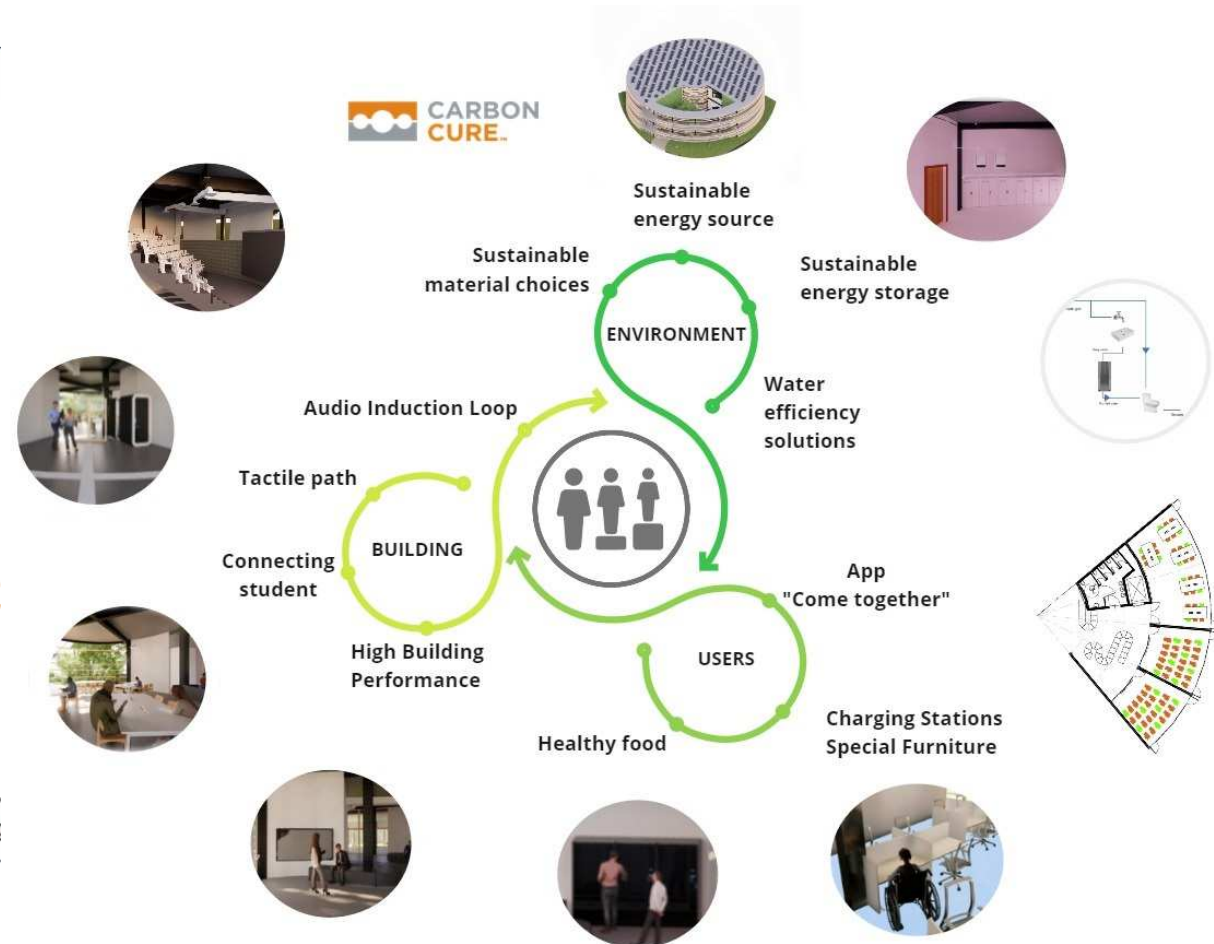
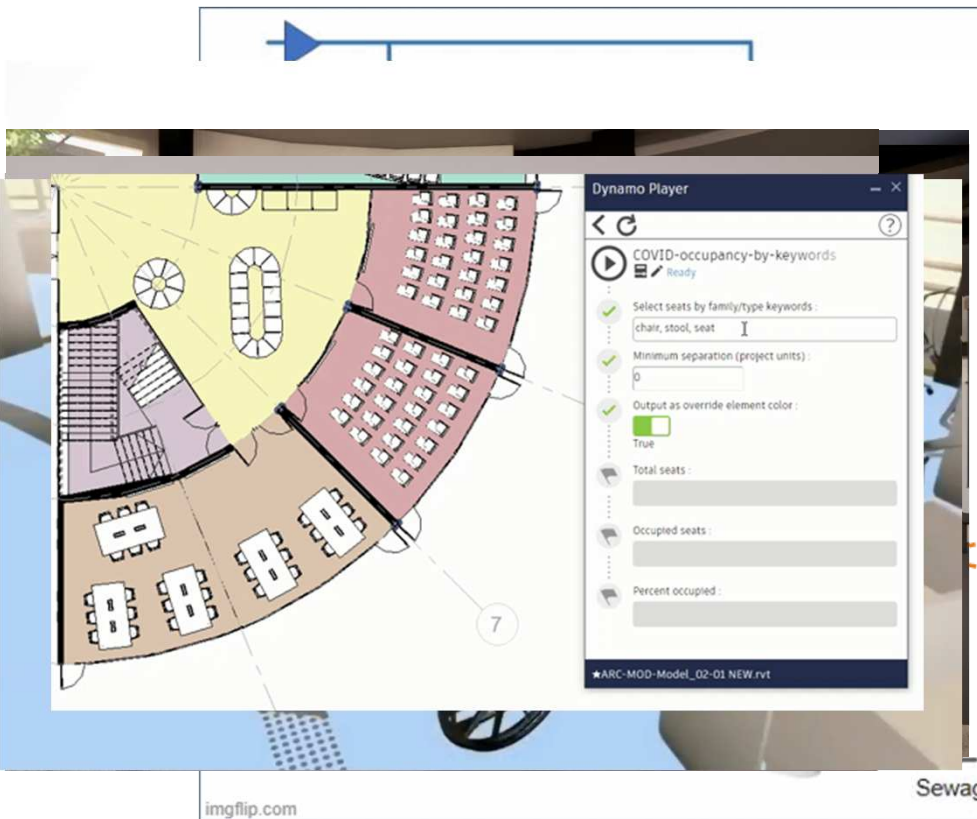
Sponsored by:
[BUROHAPPOLD Engineering](#) (2019-to date)

Competition themes:
 2020-2021: Parametric Adaptability

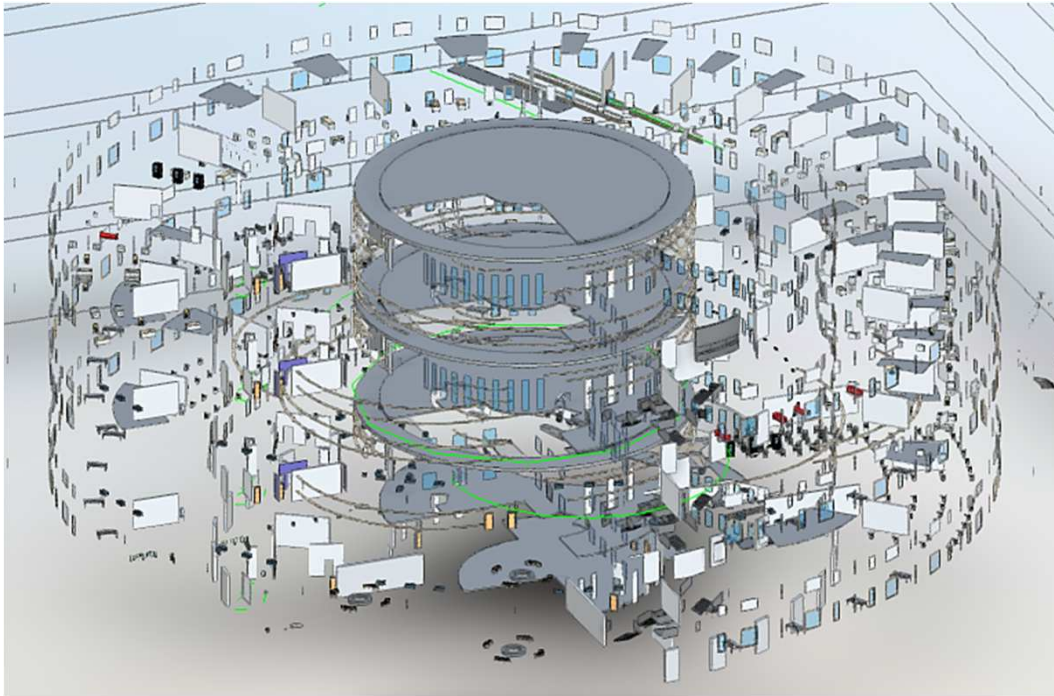


Parametric Adaptability

Sustainability and Equity - Pacific Team



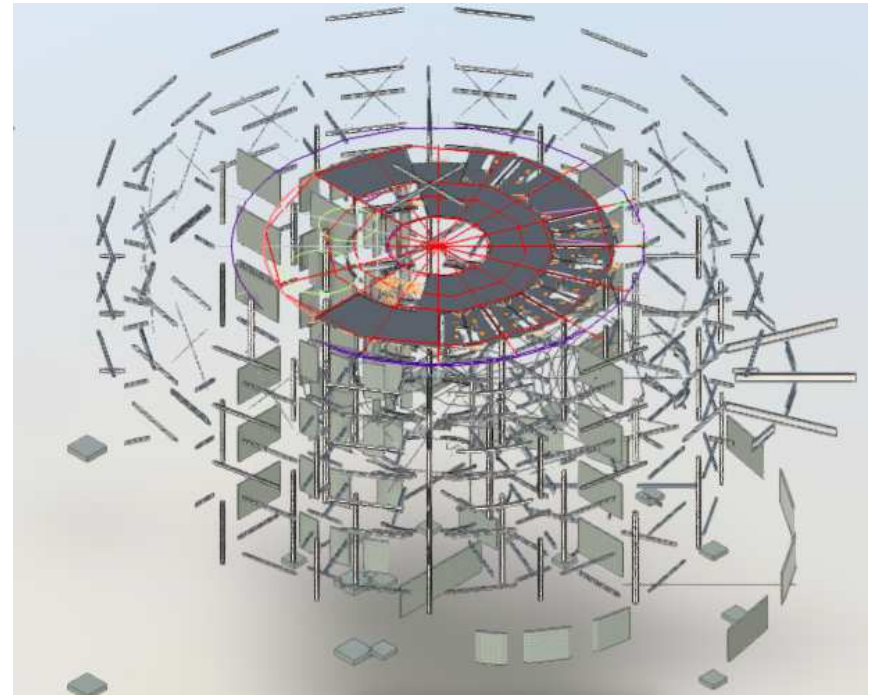
DPR Challenge Building as Products - Pacific Team



2209 Total Architectural Elements
72% Prefab Rate



Winners of the IPD Challenge



549 Total Structural Elements
95% Prefab Rate

Explode the building and look at the **LEGO**



Parametric Adaptability - Island Team

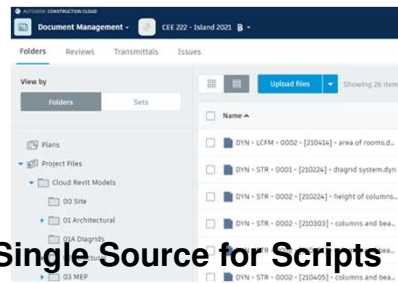
Agile Computational
Processes

Analysis of Building
Performance

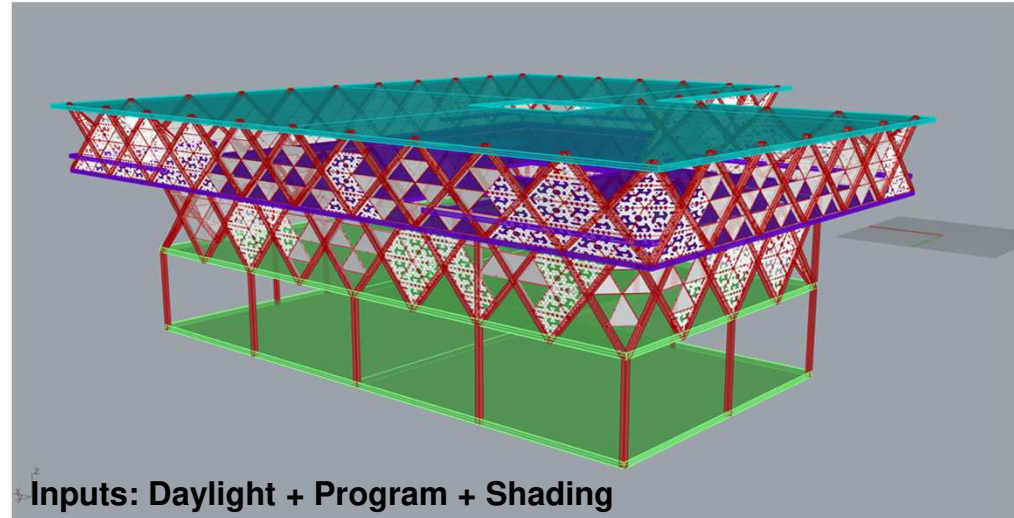
LEED Gold

Centralized Script
Sharing

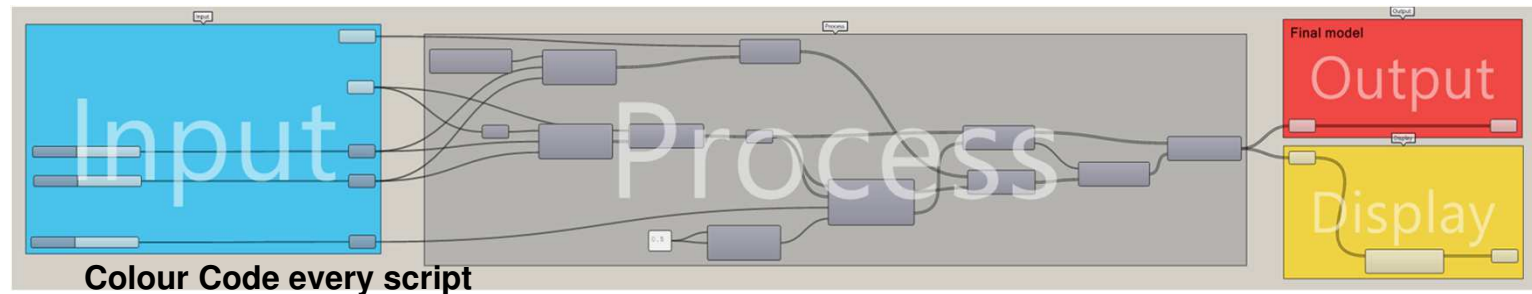
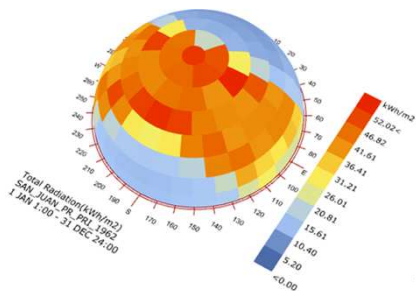
ROI + Adaptability



Single Source for Scripts



Inputs: Daylight + Program + Shading



Colour Code every script

Thank you!

All presentations can be found at Stanford University website:
<http://pbl.stanford.edu/AEC%20projects/projpage.htm#AEC2021>



AEC Global Teamwork Project