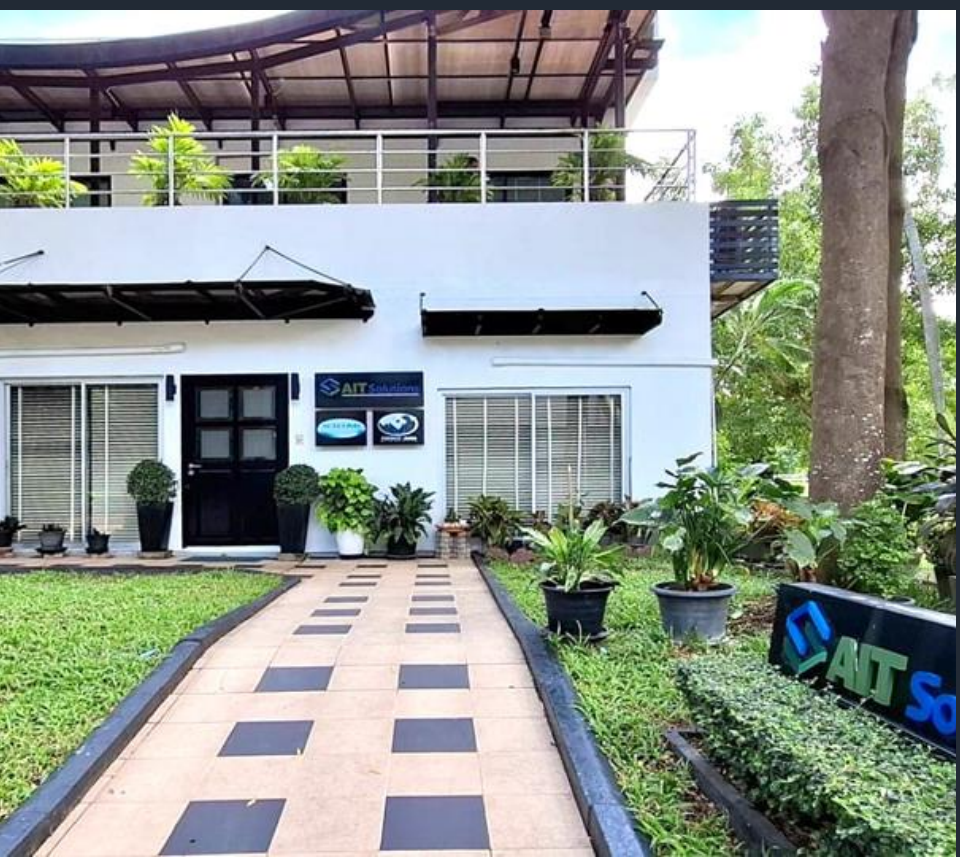




AIT Solutions



AIT Solutions



Established as an outreach center by AIT in 2010.

Connecting with industry and community partners to spread AIT's expertise in engineering, technology, infrastructure, and knowledge transfer activities.

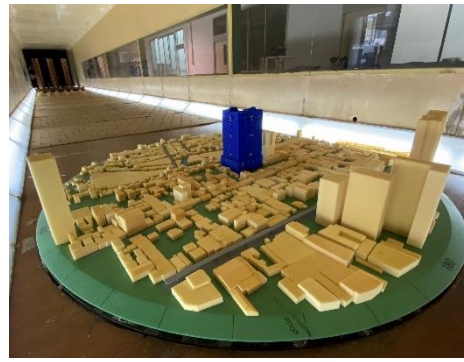
AITs core strength lies in **Structural Engineering** and **Software Development** domain.

Working across these two fields as well as allied fields and developed solutions for industry and government partners.

A photograph of a dense urban skyline featuring several prominent skyscrapers. The buildings vary in architectural style, with some having glass facades and others more traditional concrete structures. A construction crane is visible in the background. The sky is overcast with grey clouds. The text 'STRUCTURAL ENGINEERING' is overlaid in the center of the image.

STRUCTURAL ENGINEERING

Structural Engineering



Wind Tunnel Study



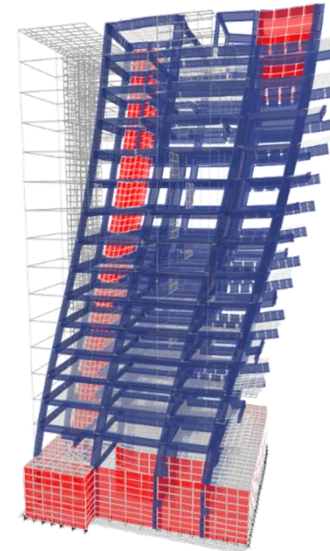
Construction
New Building



Structural Health
Monitoring (SHM)

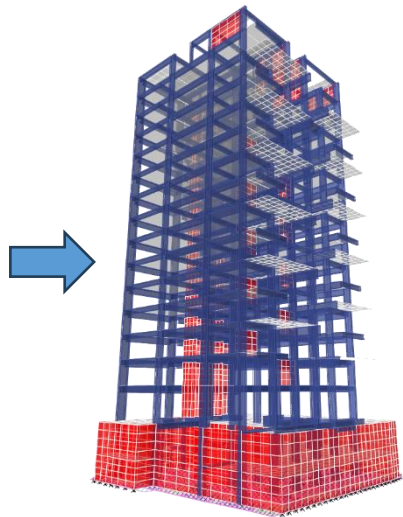


Strengthening Design
Existing Building

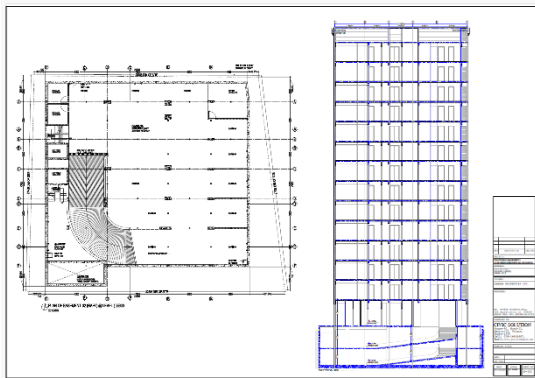


Structural Performance
Assessment

- Code Based Design Review
- Performance Based Design Review



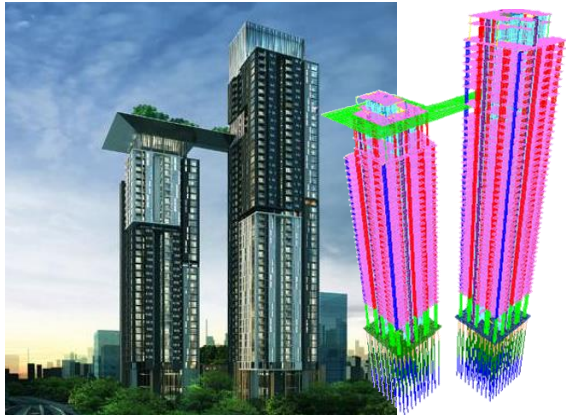
Computer Modeling



Structural Drawings
by Main Designer

Structural Performance Assessment

- Detailed structural analysis & design review
- Provide recommendations for structural improvement
- Enhance the structural performance
- Improve cost-effectiveness
- +200 tall building projects across the region including high earthquake activity area



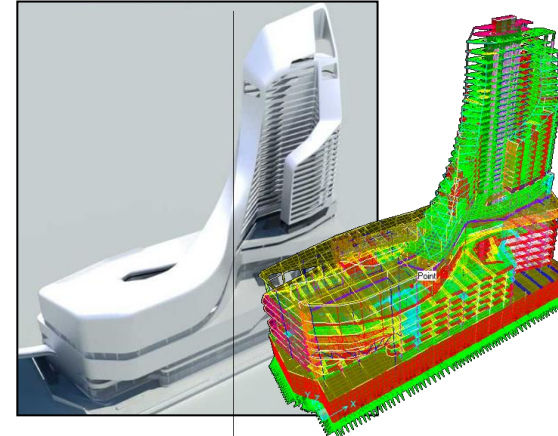
Star View

140 & 170 m height, 44 & 55 stories



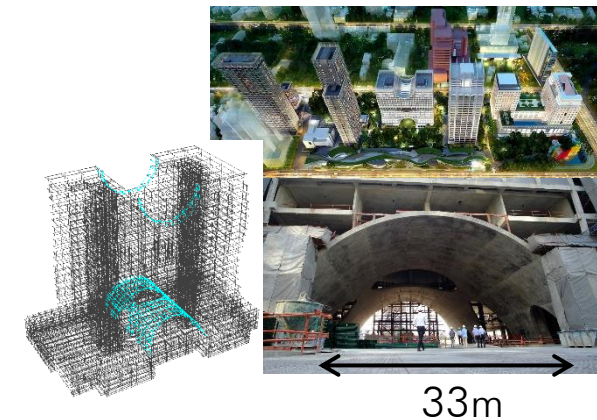
Precast High-Rise Building

130 m height, 37 stories



Central Embassy

222 m height, 65 stories



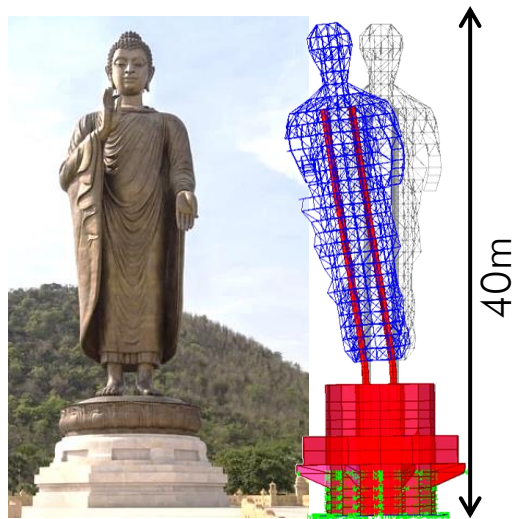
Sindhorn Village

193.2 m height, 51 stories

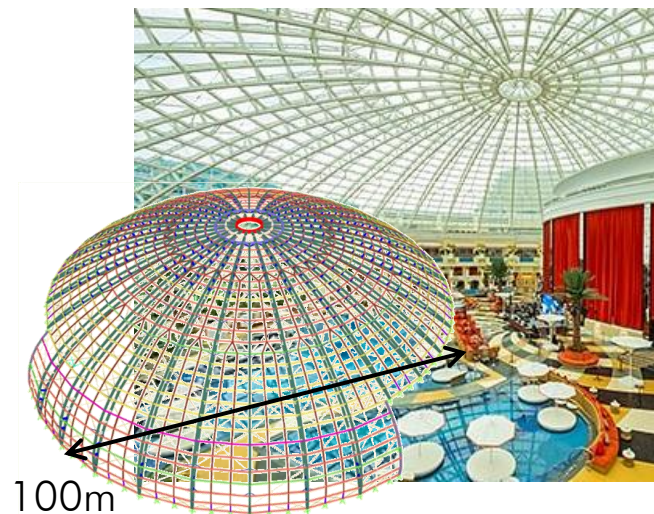
Structural Performance Assessment

- Detailed structural analysis & design review
- Provide recommendations for structural improvement
- Enhance the structural performance
- Improve cost-effectiveness
- +200 tall building projects across the region including high earthquake activity area

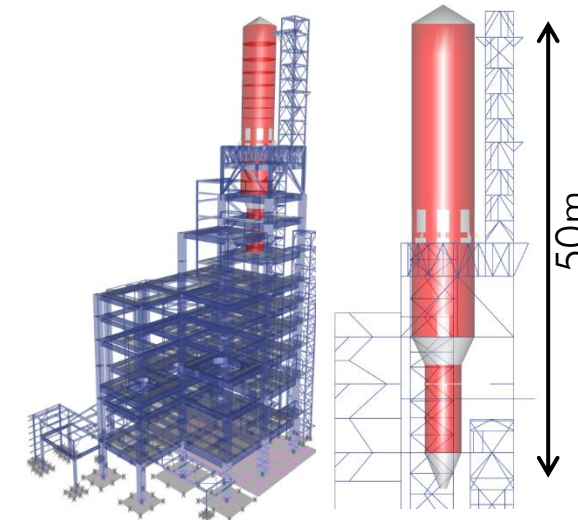
Complex Structural System



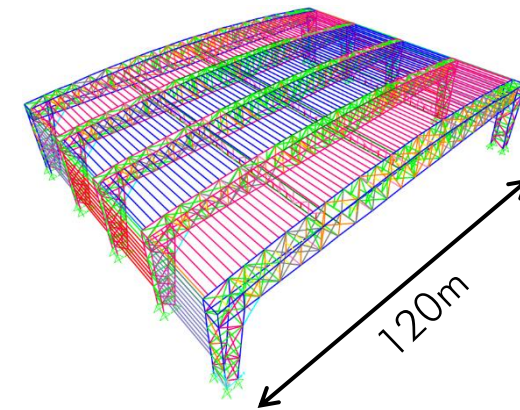
Phra Buddha Metta
Kanchanaburi, Thailand



Manila Bay Resort
Manila, Philippines



Degassing Pelletizer Structure
Viet Nam



Long Span Roof
Chonburi, Thailand

Structural Evaluation & Strengthening Design of Existing Buildings

- Detailed structural assessment based on as-built conditions
- Provide strengthening solutions (if required)



**Manila International Airport
(Terminal 1)**

Philippines | 77 years old

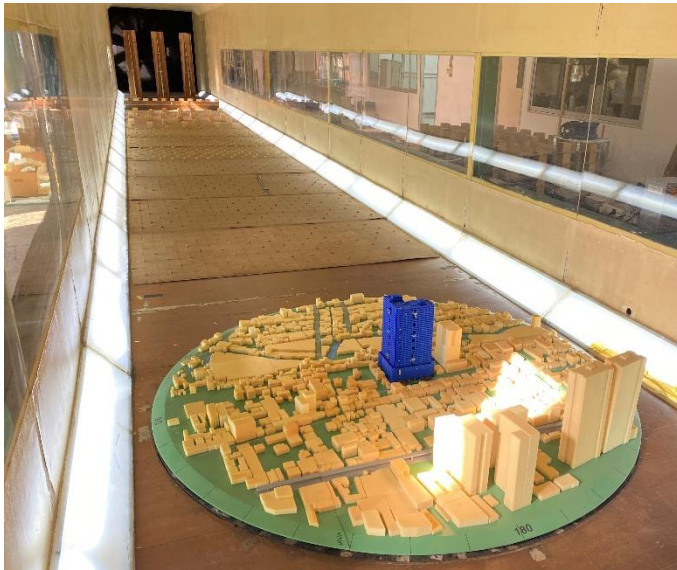


Wind Tunnel Testing

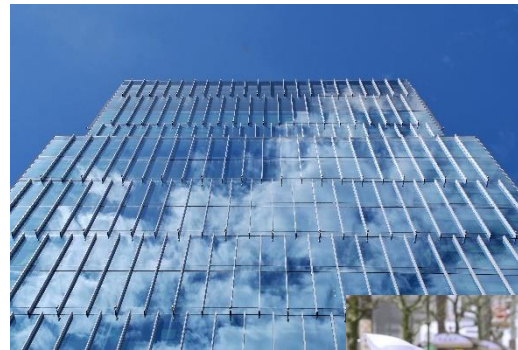
- Wind loads for structural design
- Cladding pressures for façade design
- Check public comfort and safety for outdoor planning
- Aerodynamic stability check for bridges



TU-AIT Wind Tunnel



Wind Tunnel Test for Buildings



Façade Design



Outdoor Planning



Wind Tunnel Test for Bridges



Phra Buddha Metta

Kanchanaburi, Thailand | 40 m



Supalai Icon

Bangkok | 212 m



Cresmont Residences

Metro Manila | 160 m



Tower 3

Phnom Penh | 322 m
(SOON TO BE THE TALLEST BUILDING IN
CAMBODIA)



Emaar CBK Tower

Karachi, Pakistan | 152 m

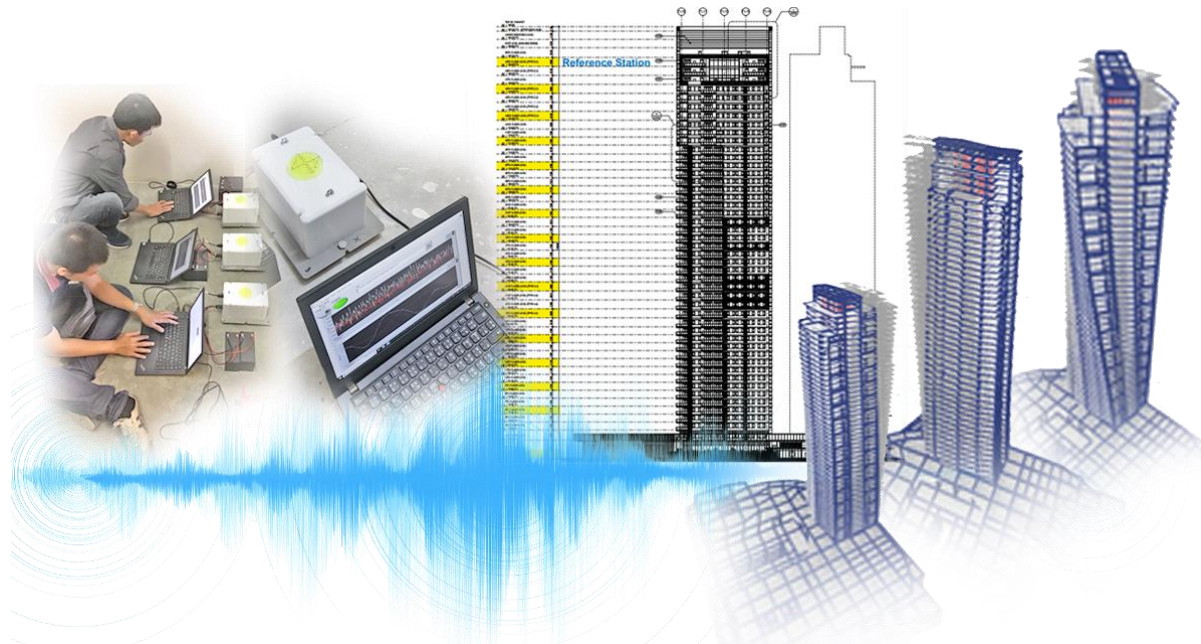


Address Siam-Ratchathewi

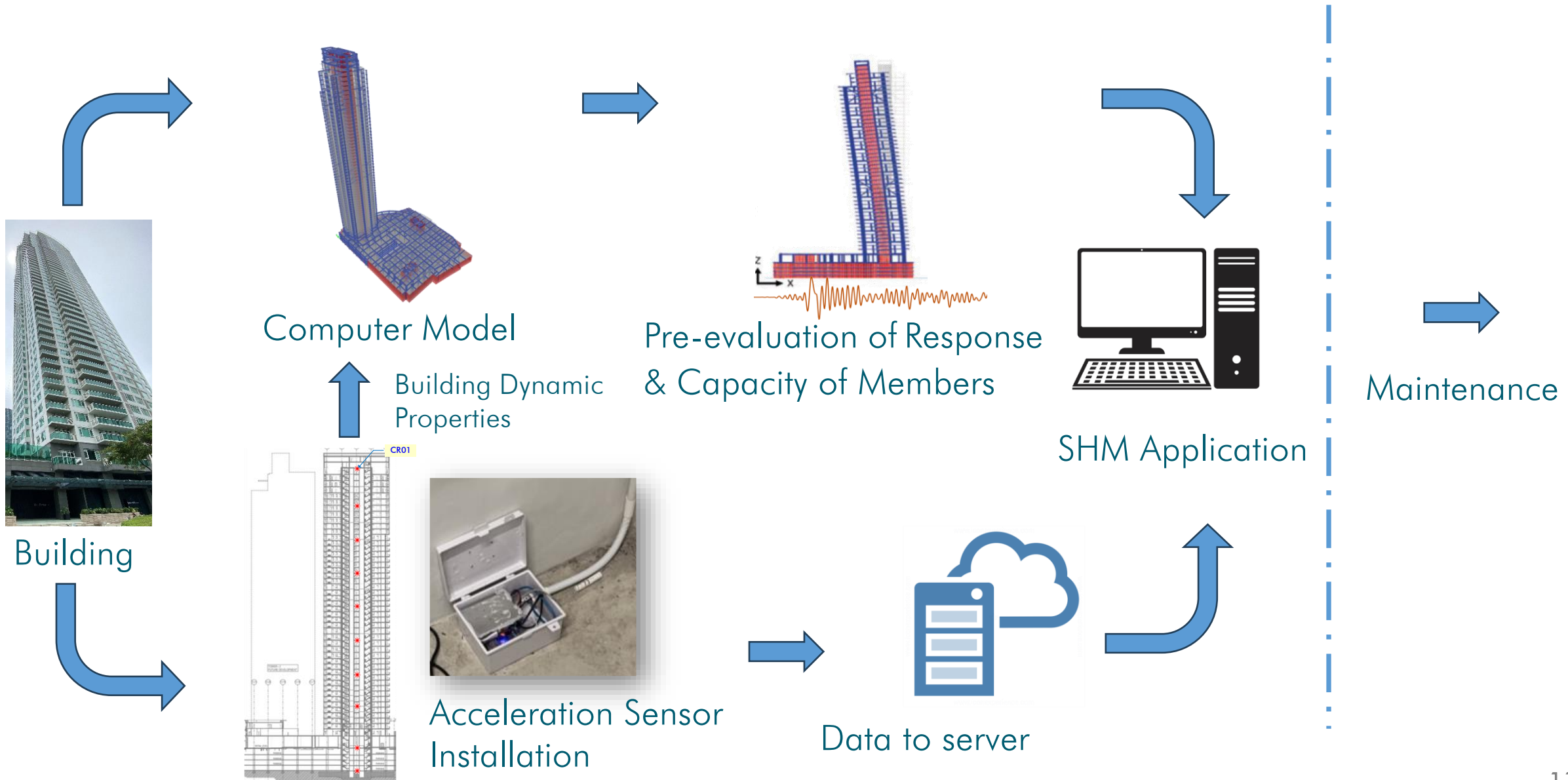
Bangkok | 210 m

Structural Health Monitoring (SHM)

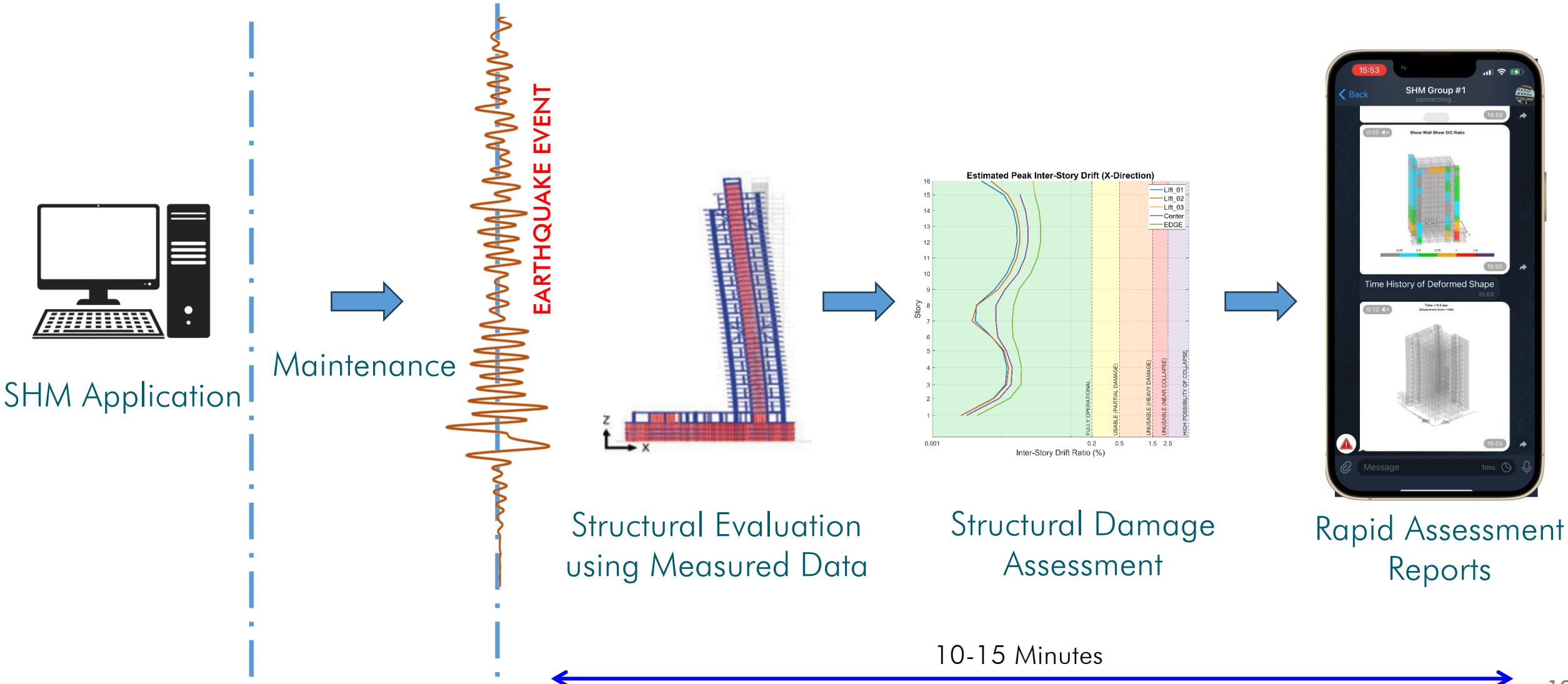
- In association with Earthquake Research Center of Thailand
- Evaluate the response of the buildings using acceleration sensors during earthquakes
- Enable damage detection for post-earthquake assessment
- Check the safety of structural system
- Determine re-occupancy of residents after earthquake



Structural Health Monitoring (SHM)

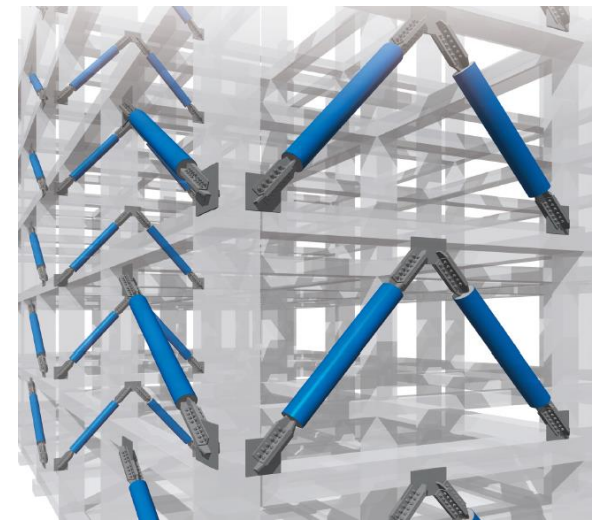


Structural Health Monitoring (SHM)




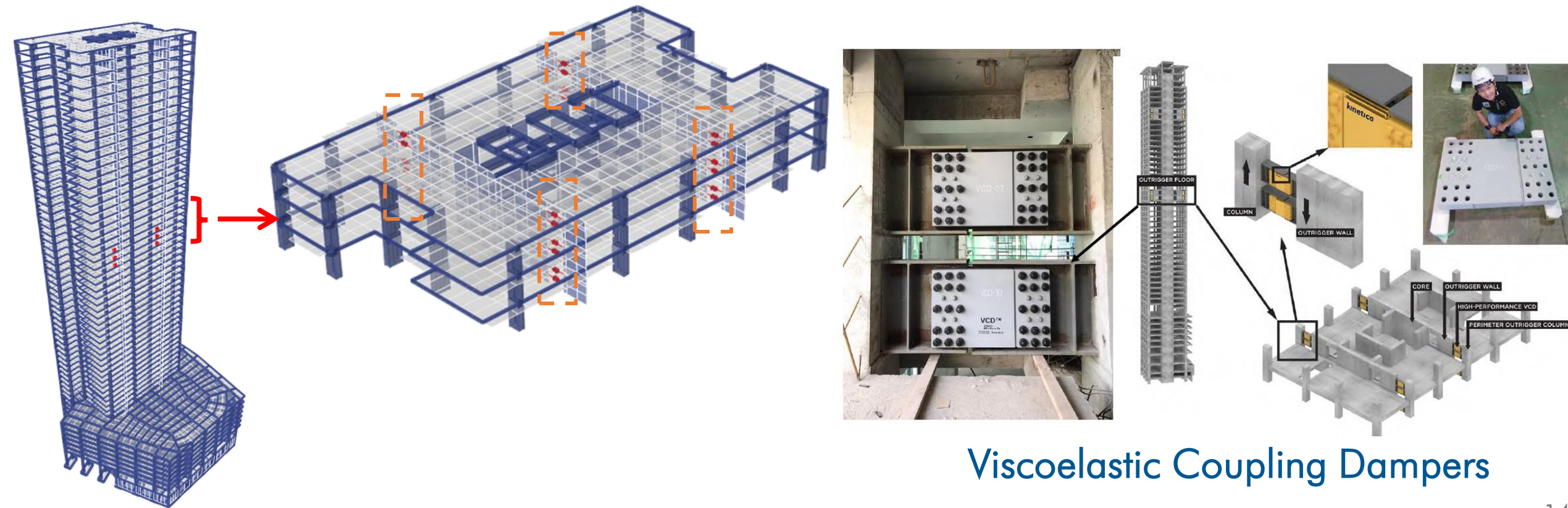


Performance Based Seismic Design + Energy Dissipation Devices




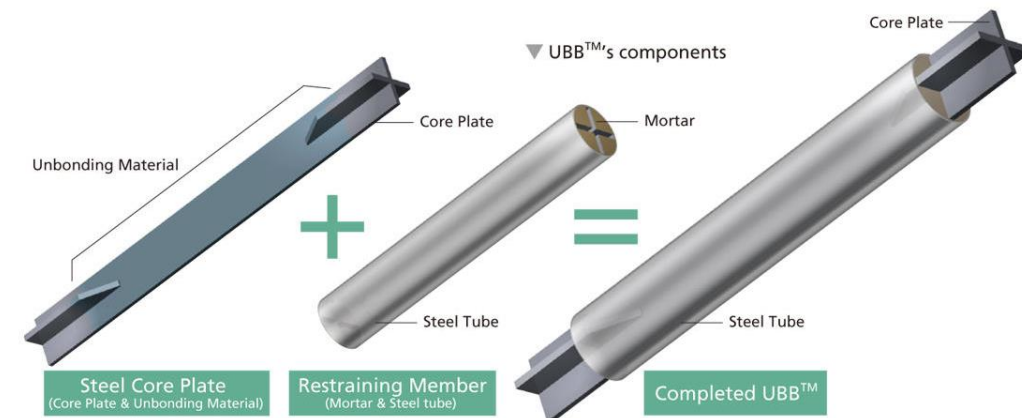
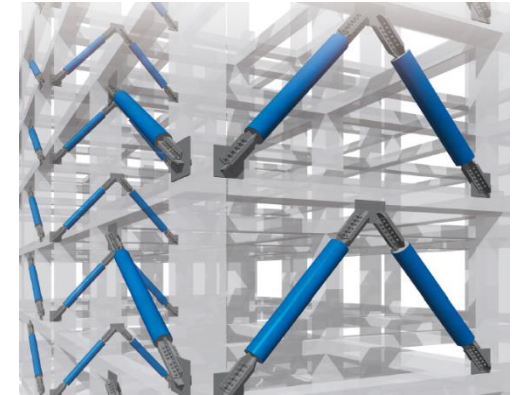
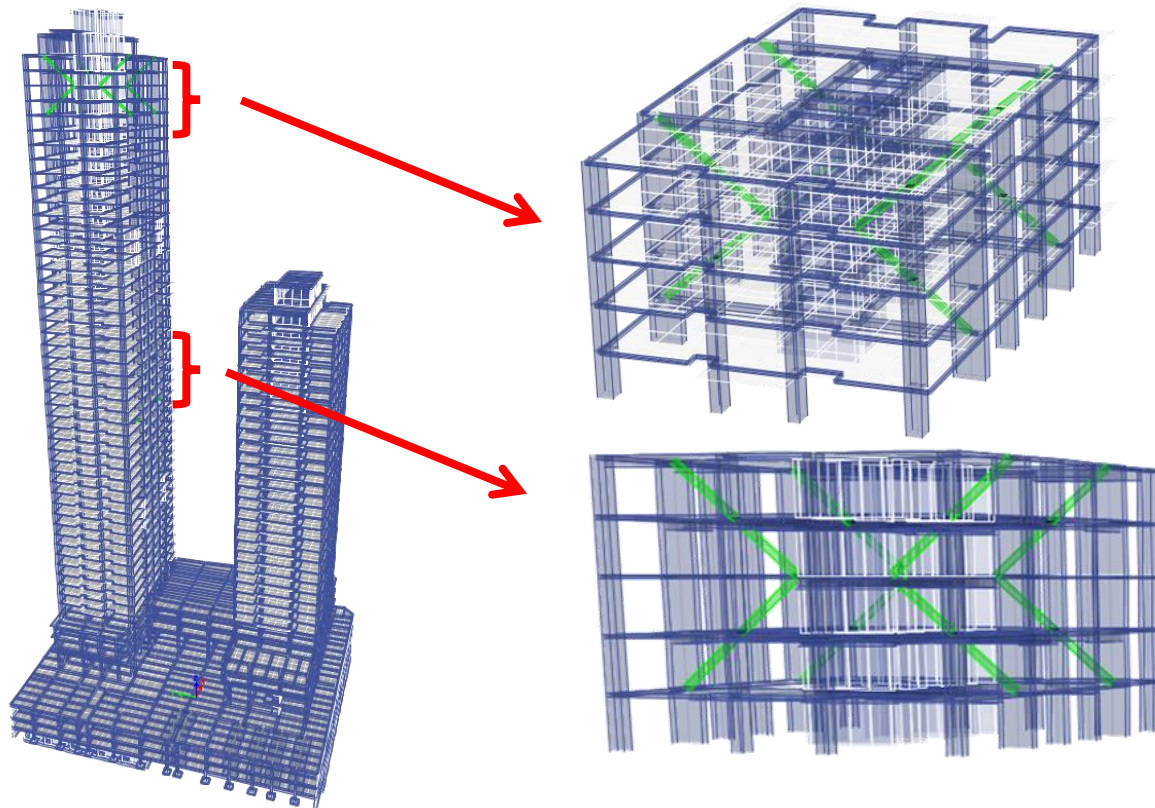
Performance Based Seismic Design + Energy Dissipation Devices

- High-rise Building located in High Seismic Zone (Manila, Philippines)
- Reduced Floor Displacements & Structural Damages due to Earthquake
- Energy Dissipation Devices by  **NIPPON STEEL ENGINEERING**



Performance Based Seismic Design + Energy Absorber Devices

- High-rise Building located in High Seismic Zone (Manila, Philippines)
- Reduced Floor Displacements & Structural Damages due to Earthquake
- Energy Dissipation Devices by  **NIPPON STEEL ENGINEERING**



Buckling Restrained Braces (BRB) 15



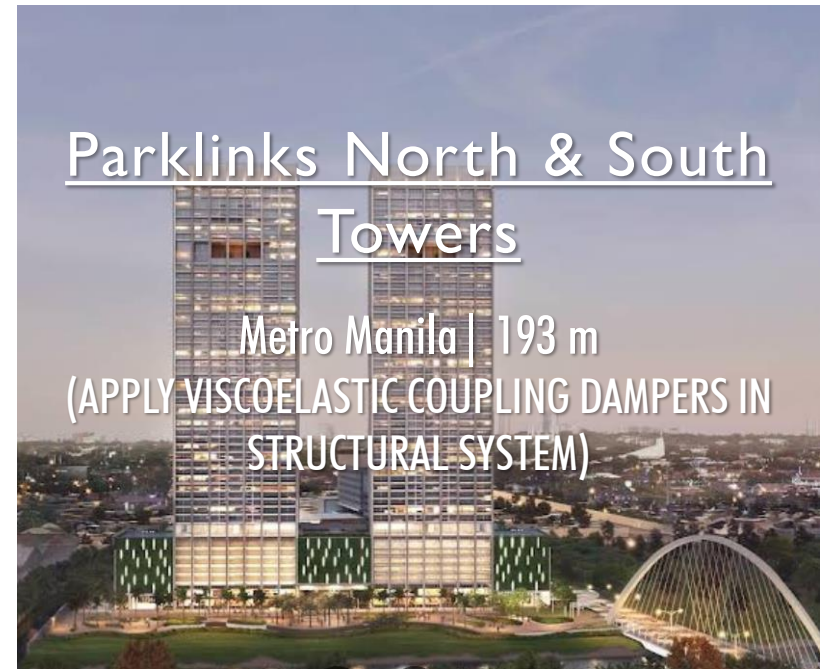
Park Central Towers

Metro Manila | 200 m & 239 m
(FIRST BUILDING IN PHILIPPINES WITH
VISCOELASTIC COUPLING DAMPERS)



The Westin Manila Sonata Place

Metro Manila | 189 m
(APPLY BUCKLING RESTRAINED BRACES IN
STRUCTURAL SYSTEM)



Parklinks North & South Towers

Metro Manila | 193 m
(APPLY VISCOELASTIC COUPLING DAMPERS IN
STRUCTURAL SYSTEM)



Connor at Greenhills

Metro Manila | 175 m
(APPLY VISCOELASTIC COUPLING DAMPERS IN
STRUCTURAL SYSTEM)

Thank you



AIT Solutions

Our Services

- Wind tunnel testing
- Performance-based seismic design
- Structural design review
- Structural health monitoring
- Structural evaluation of existing buildings
- Software development

E-mail: solutions@ait.ac.th

Ph: +66 2 524 6388

www.solutions.ait.ac.th