

Next Generation Building

Tomohiko Yamanashi / Nikken Sekkei

nikken.jp

What is Nikken Sekkei?

Awards

3 of Nikken's projects have been shortlisted for WAF Awards 2011



OVERSEAS AWARDS

- ∨ 1993 AIA Honour Award
- ∨ American Architecture Award
- ∨ Cityscape Architectural Review Awards
- ∨ Design For Asia Award
- ∨ IABSE Outstanding Structure Award
- ∨ International Illumination Design Awards
- ∨ Monument of the Millennium
- ∨ The Annual Business Week / Architectural Record Award
- ∨ World Architecture Festival Awards

- ∨ AIA Guam and Micronesia Achievement Award
- ∨ ARCASIA AWARDS
- ∨ DuPont Benedectus Awards
- ∨ FIP Award
- ∨ IALD International Lighting Design Awards
- ∨ MIPIM Asia Award
- ∨ Real Estate Awards 2010
- ∨ World Architecture Award 2001

MAJOR JAPANESE AWARDS

- ∨ AJJ Annual Architectural Design Commendation
- ∨ BCS Award
- ∨ Good Design Award
- ∨ JAAF Award
- ∨ Japan Federation of Architects & Building Engineers Association Award
- ∨ Public Buildings Association Award
- ∨ The Prize of AJJ
- ∨ Urban Design Grand Prize
- ∨ The Best of New Offices

New Comp Nou



ICT is changing the way of making things.

Industry 4.0
in
Architectural Design, Construction and Sustainable Design

Six Changes caused by ICT
in
Architectural Design, Construction and Sustainable Design

Computer Simulation

Computational Design

Digital Fabrication

Internet of Buildings

Building Information Model

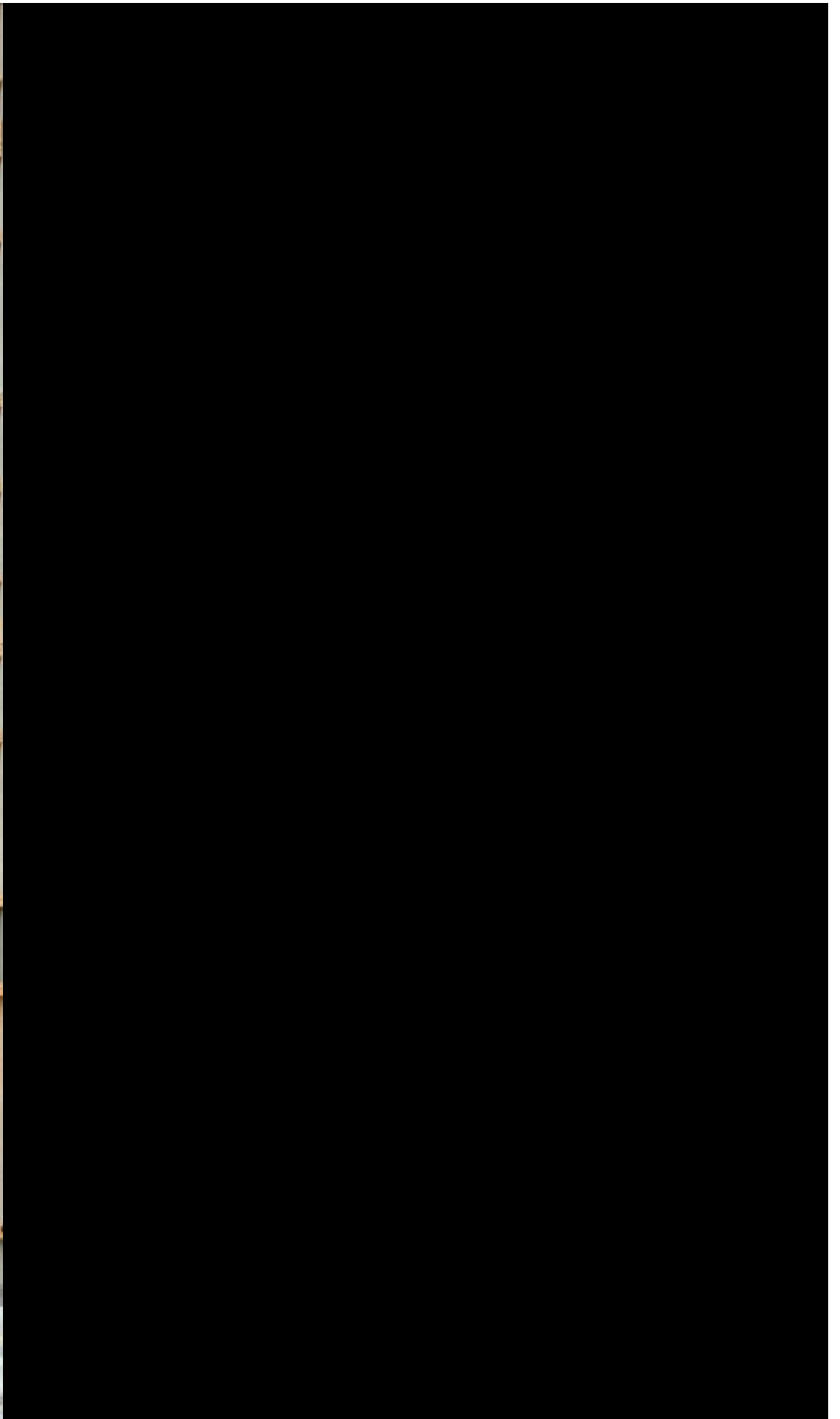
Artificial Intelligence

Our Challenges

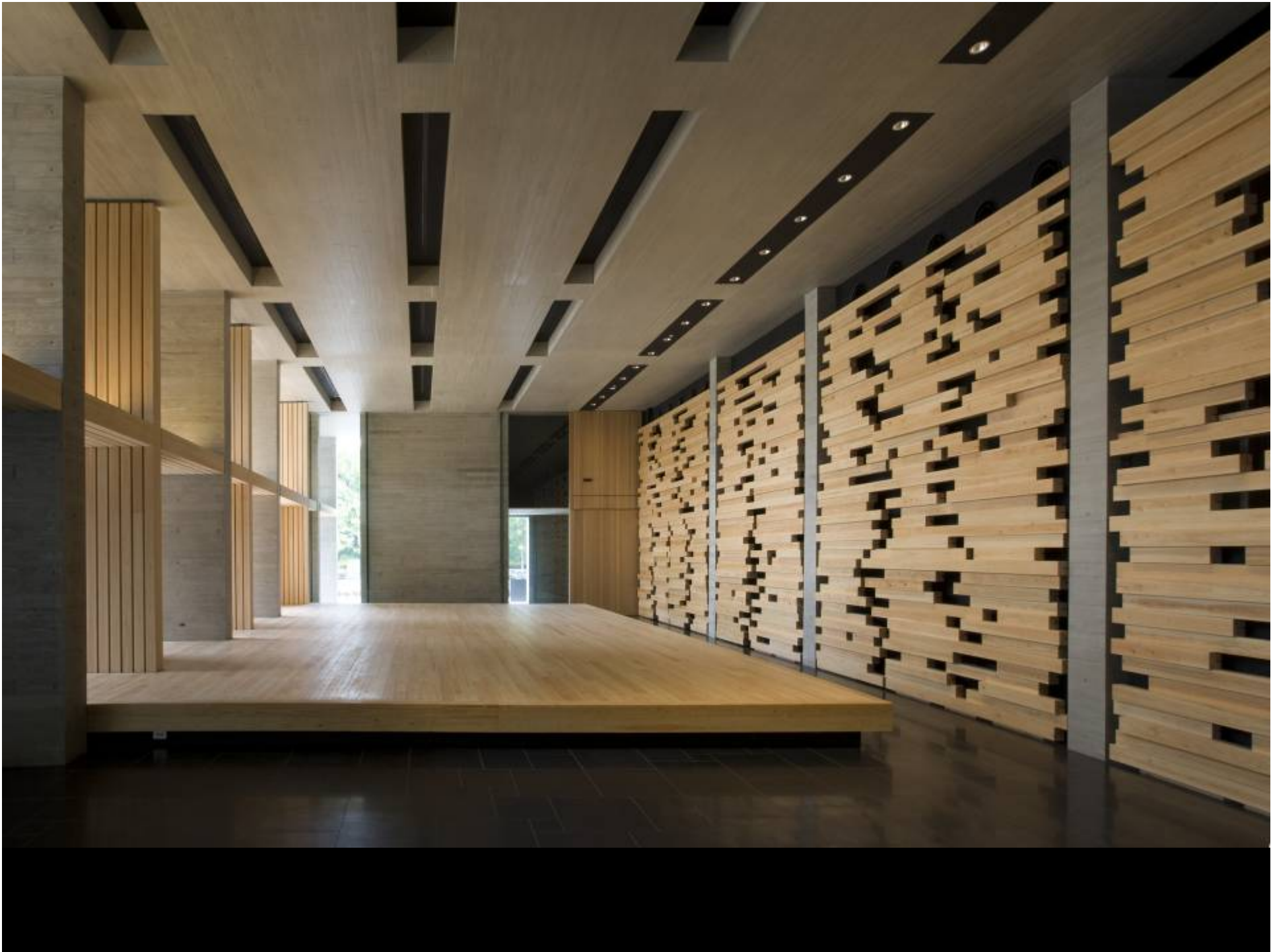
Mokuzai Kaikan
(The Headquarters of Lumber Wholesaler Association)

Early Adoption of BIM and Digital Fabrication







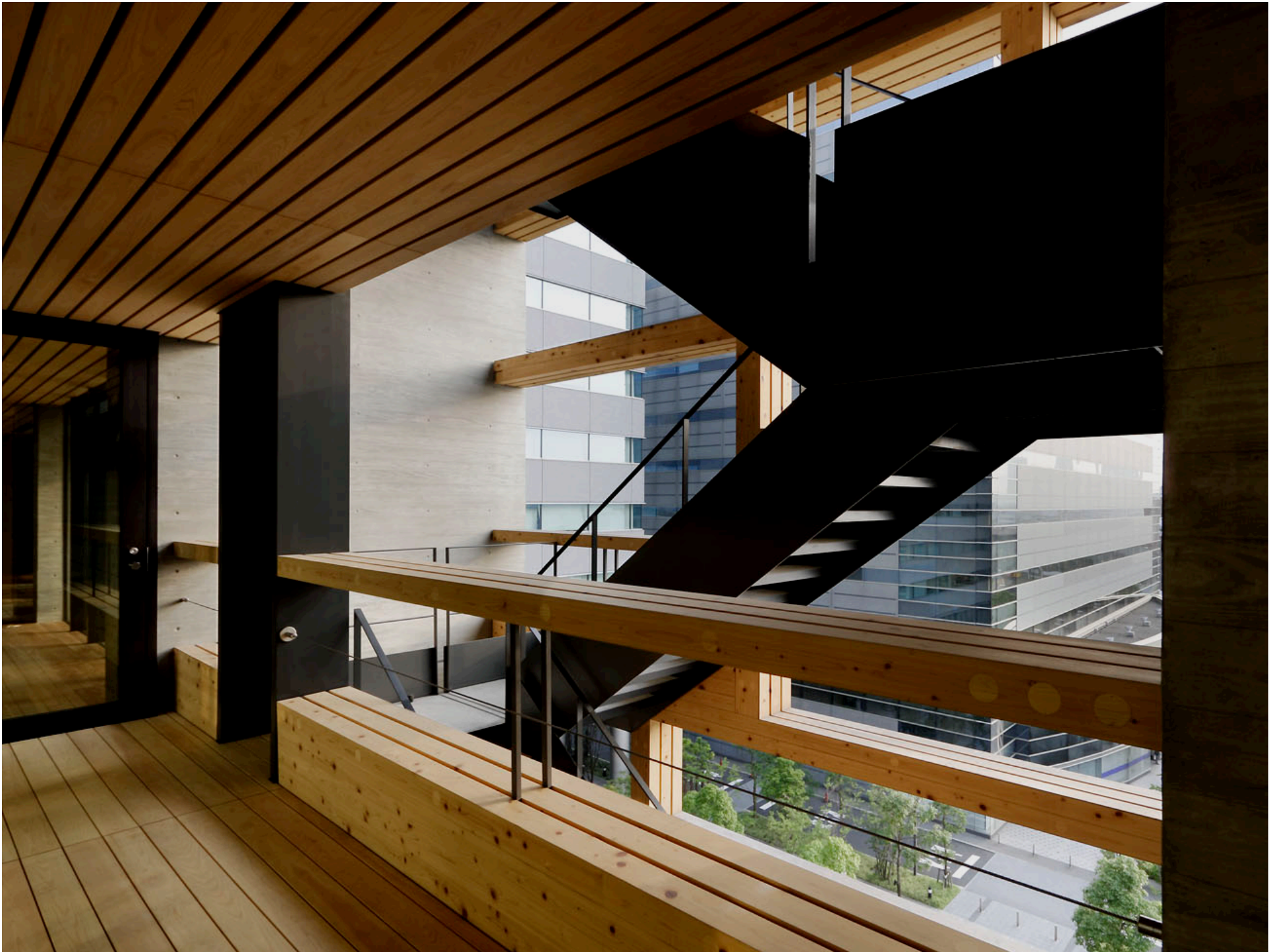


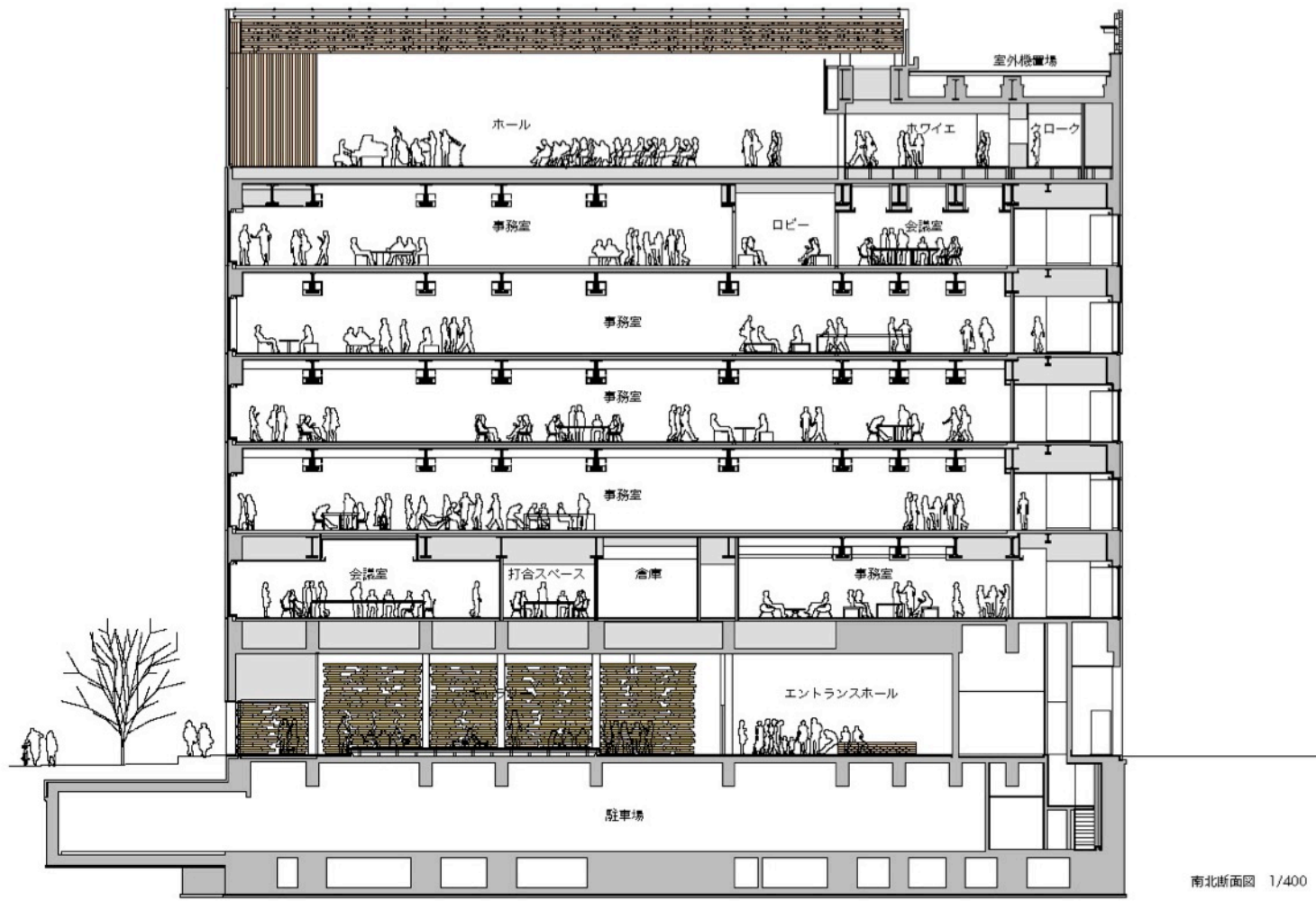












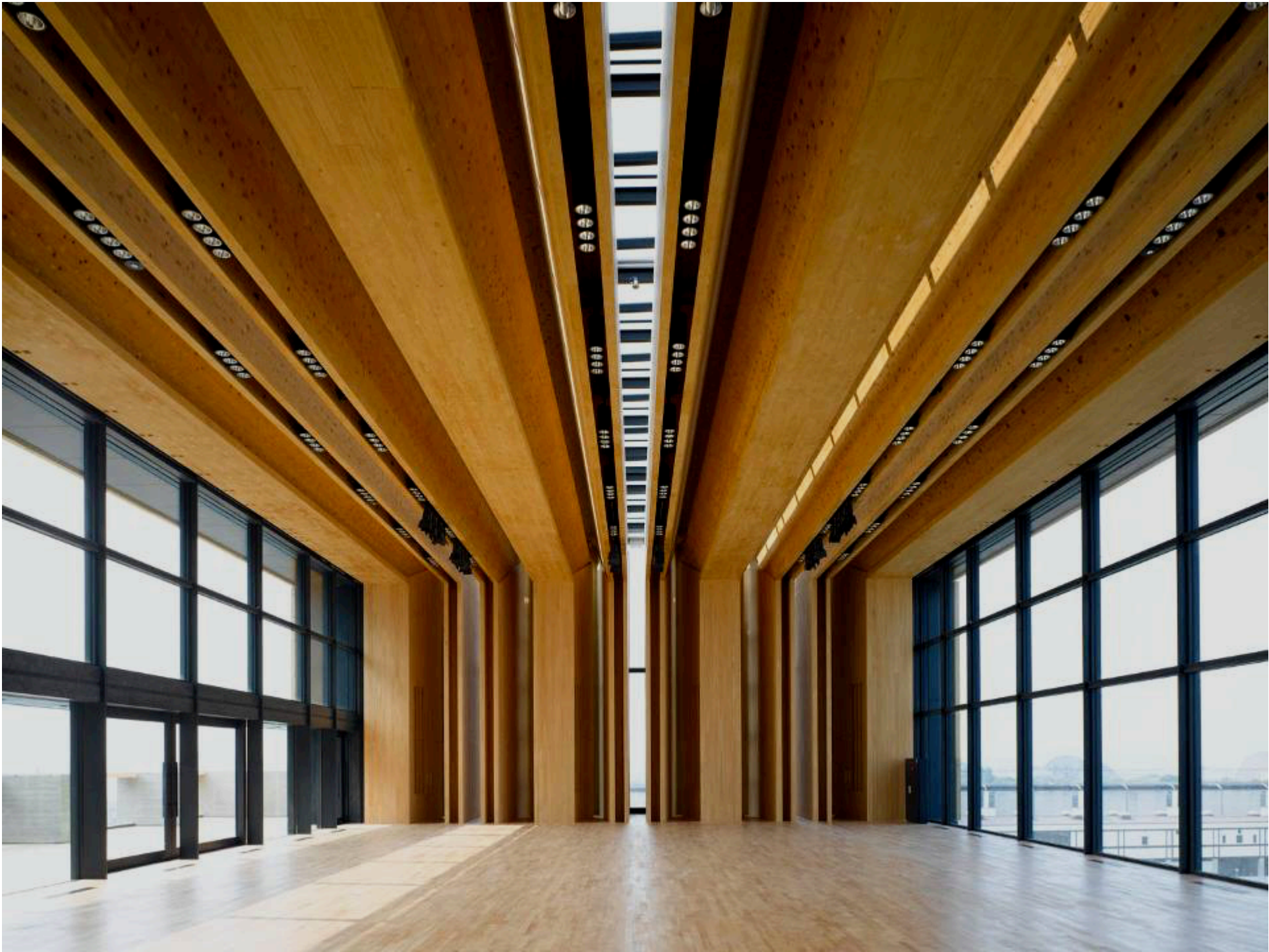
南北断面図 1/400

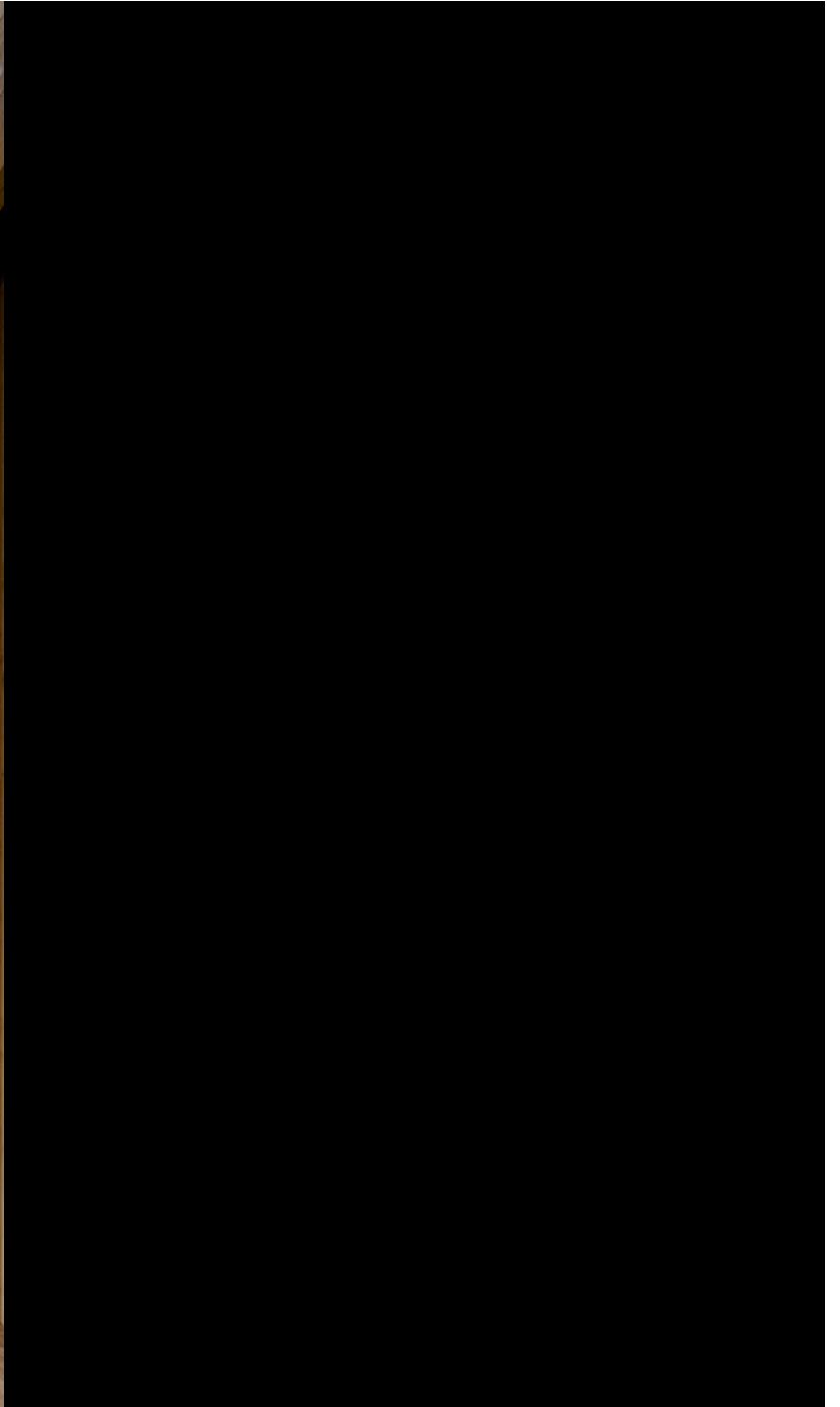




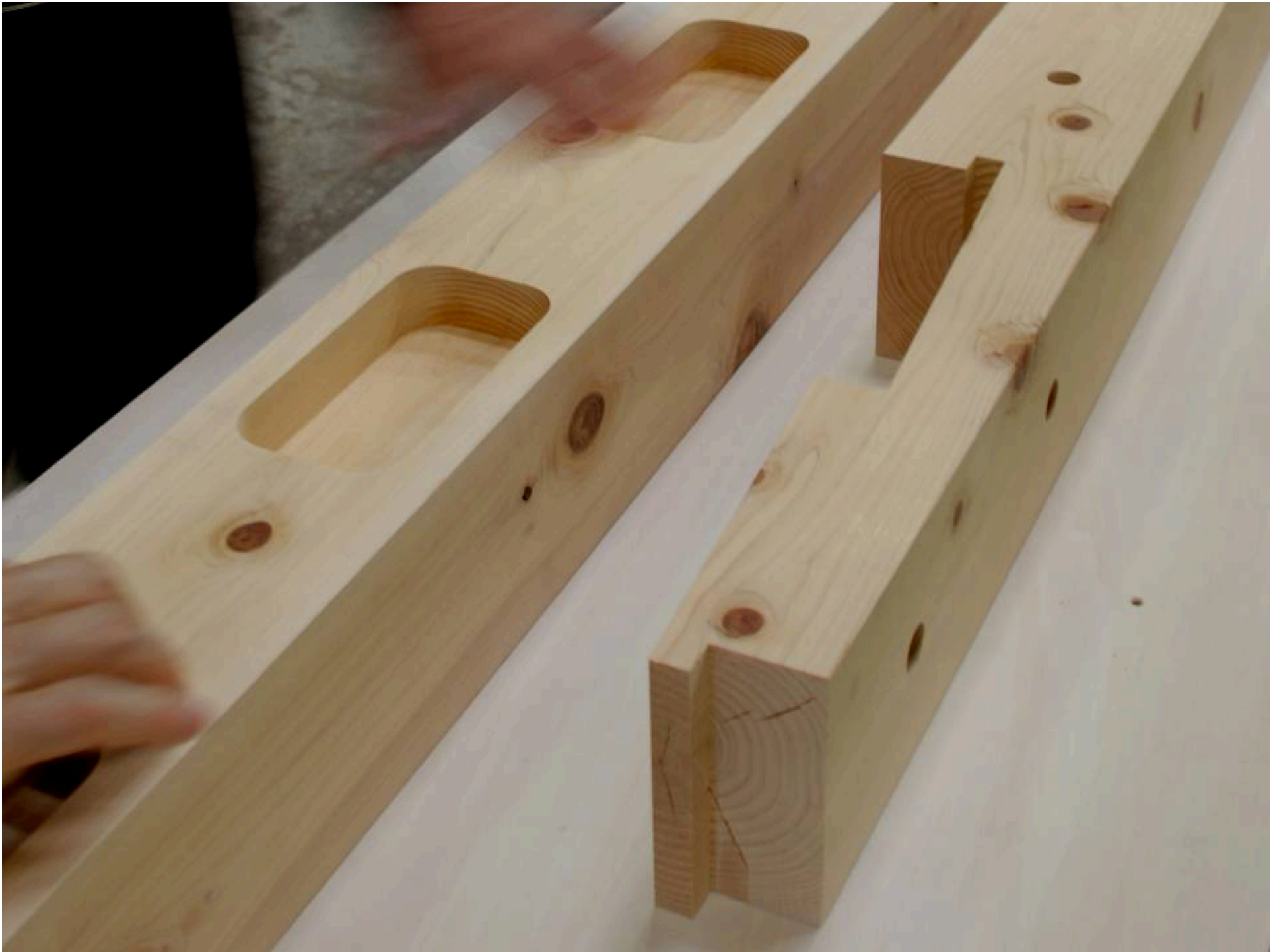






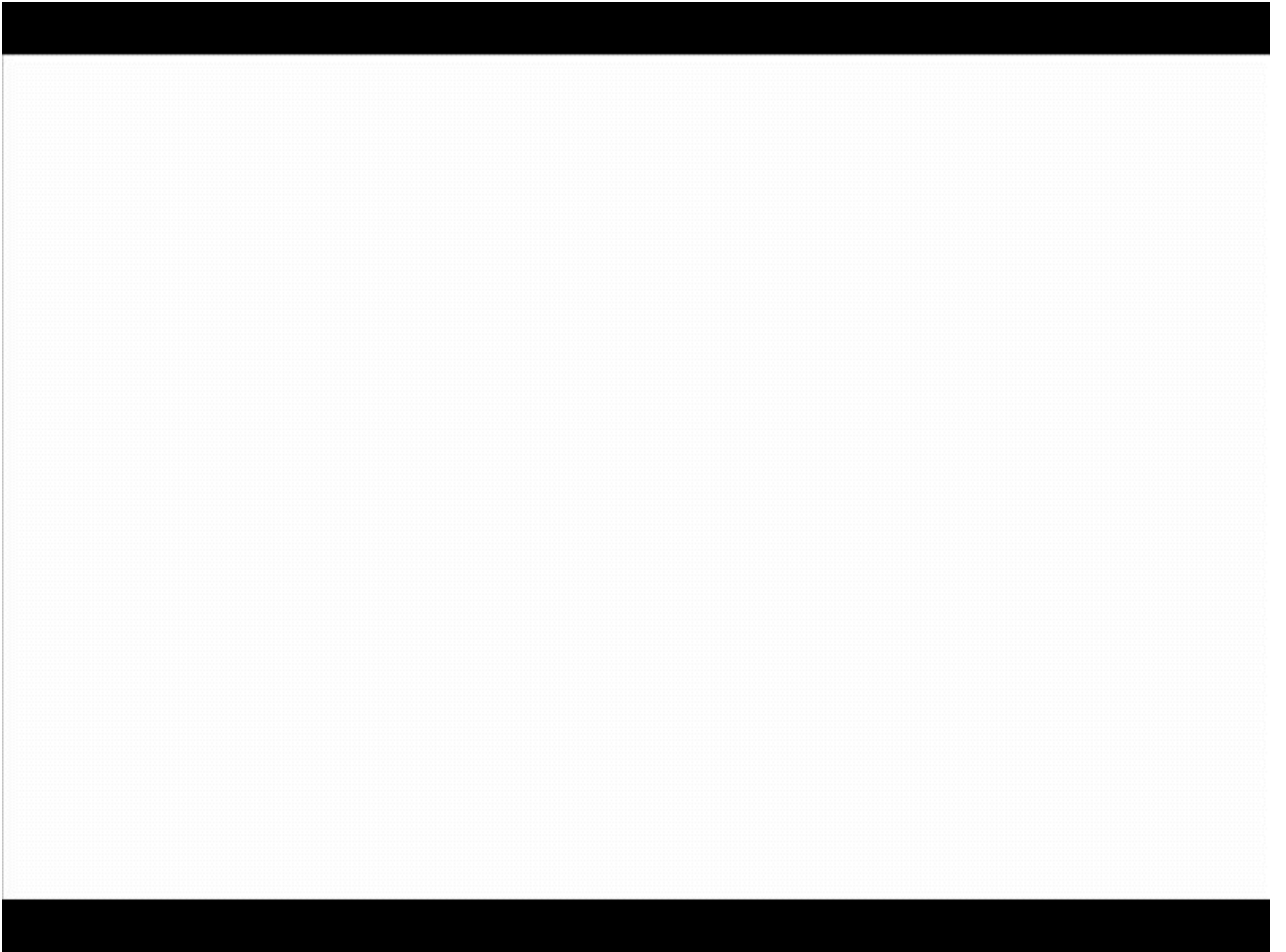






Hoki Museum
(A museum specialized for super realistic paintings)

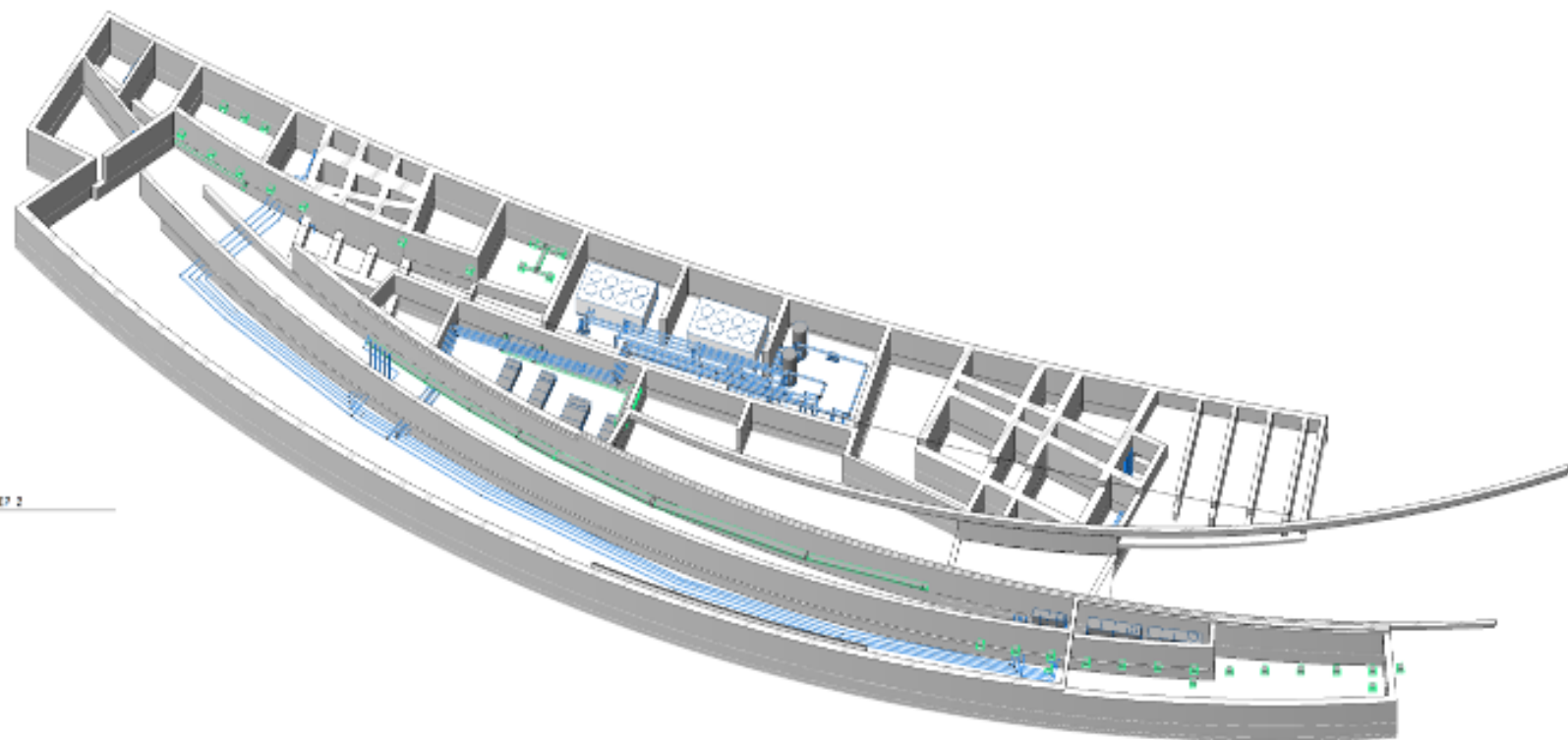
Controlling complex shapes with BIM



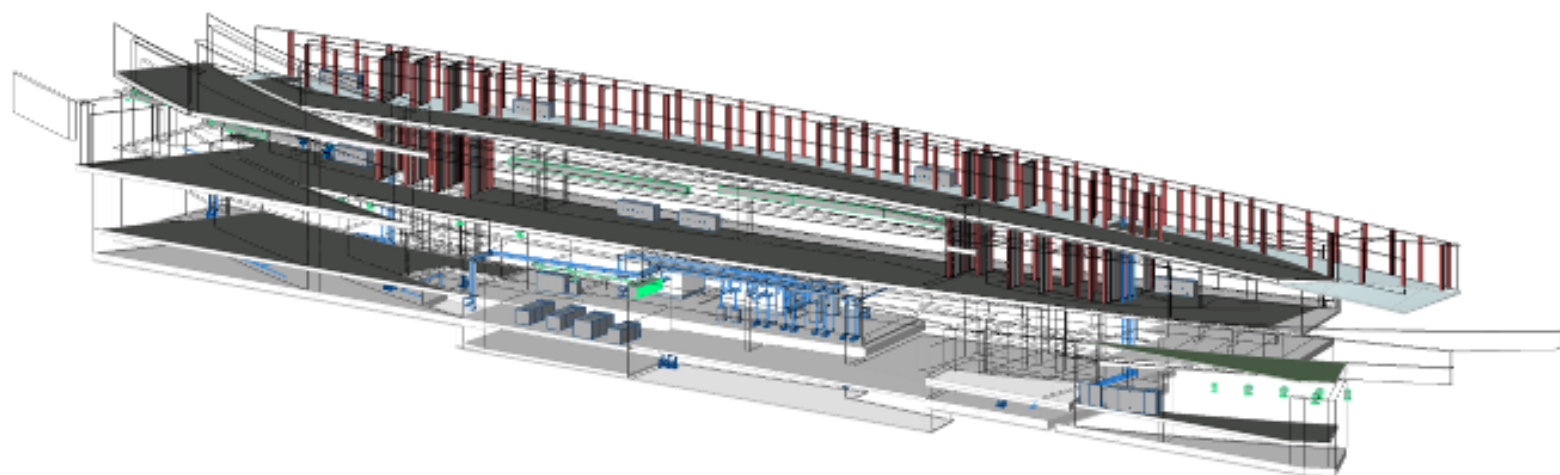




20.07.2



20.07.1





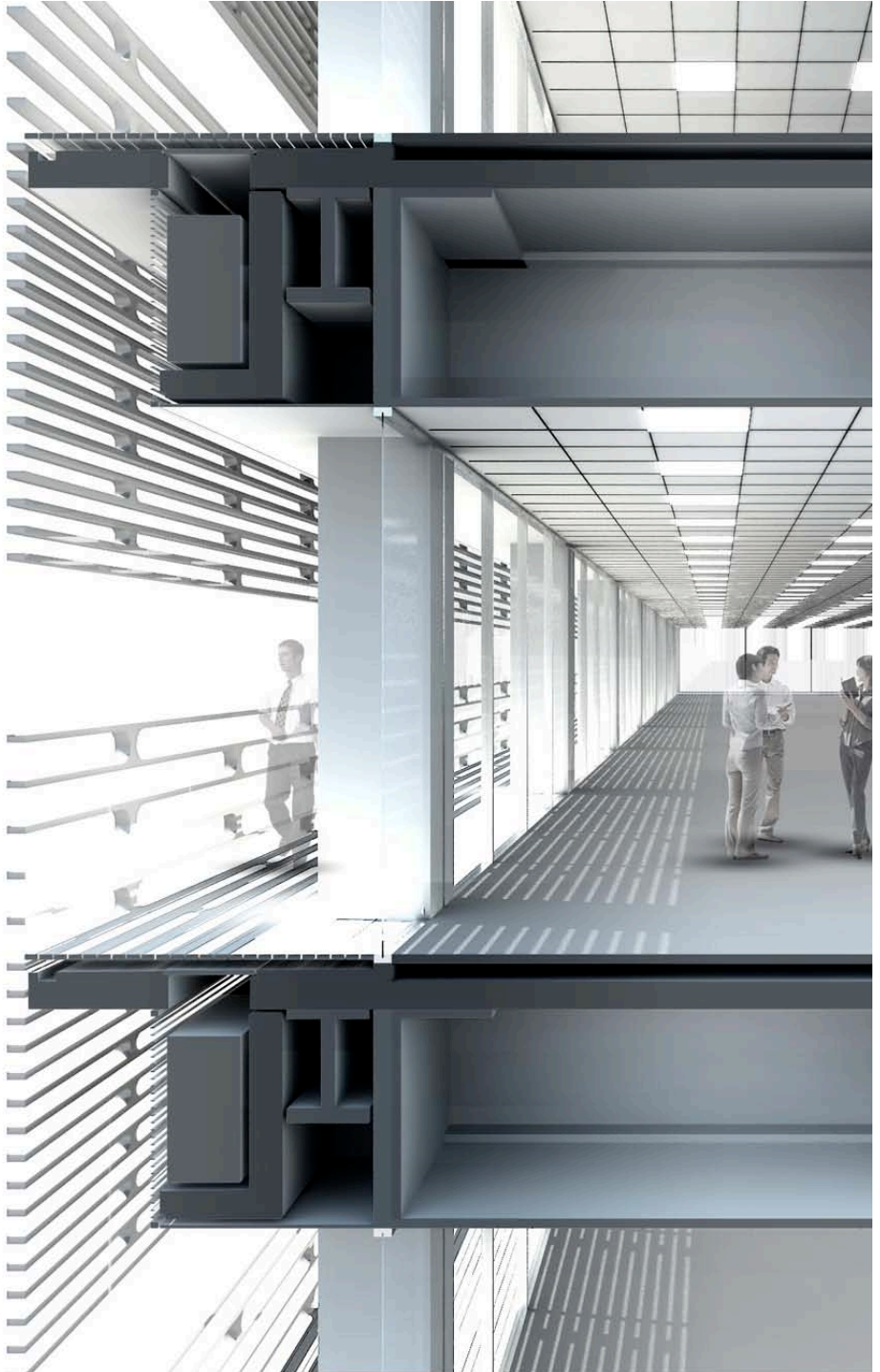
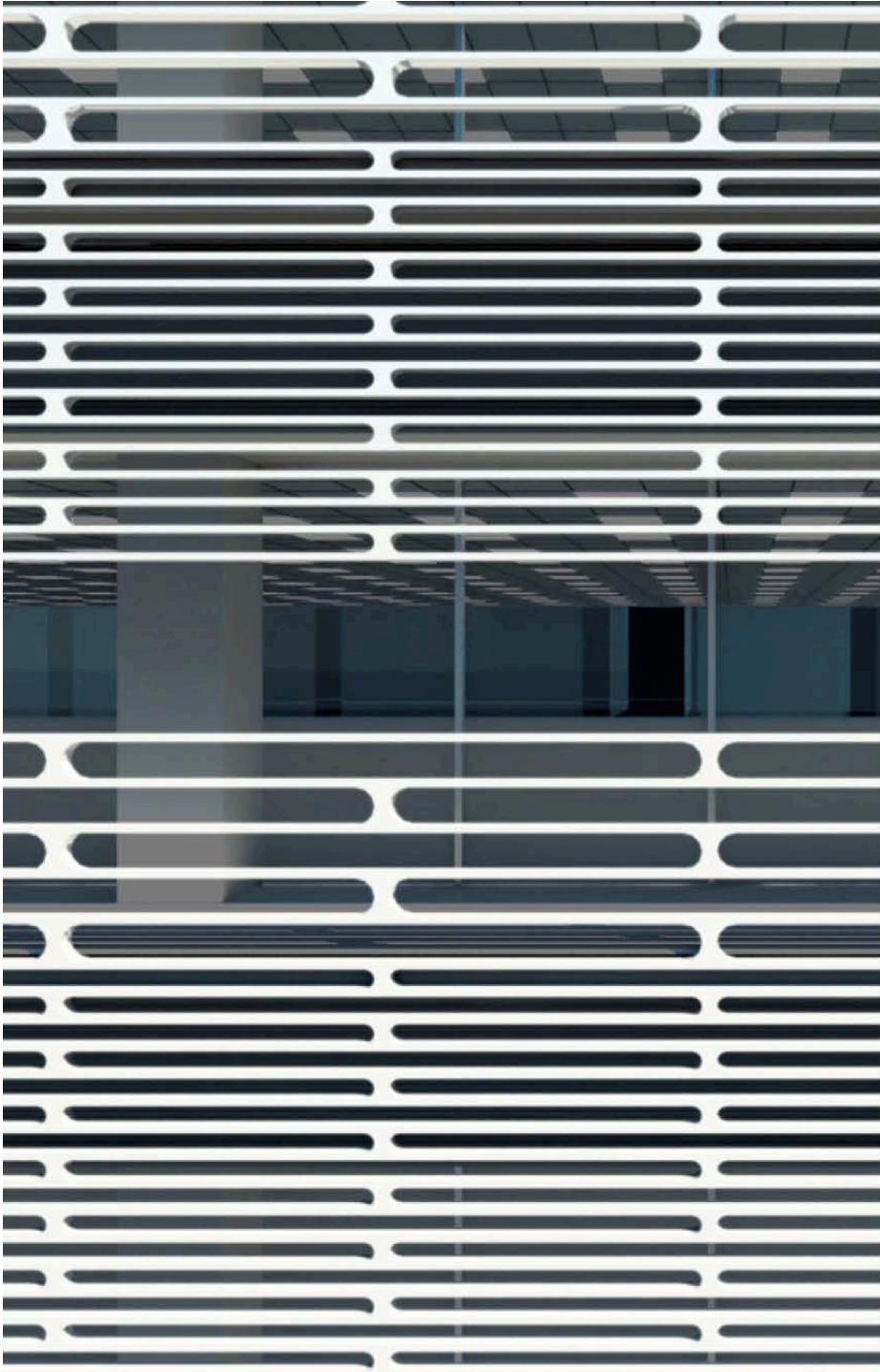


Sony City Osaka
(The Head R&D Center of Sony Corporation)

Bioskin = Internet of Buildings



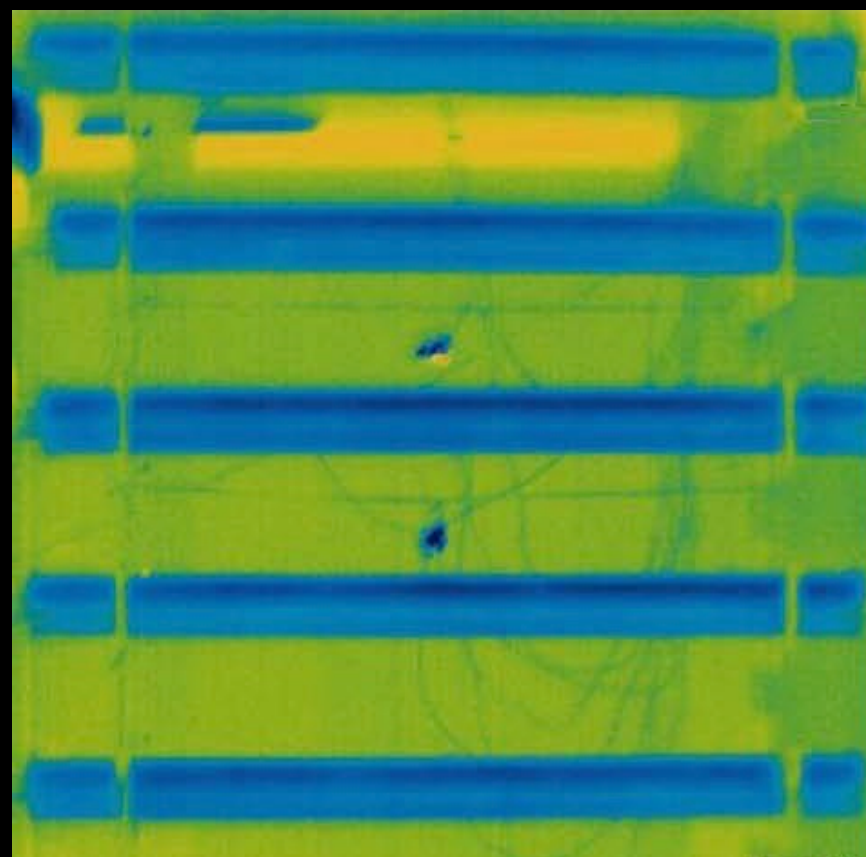






モックアップ実験

30°C 35°C 40°C



熱画像

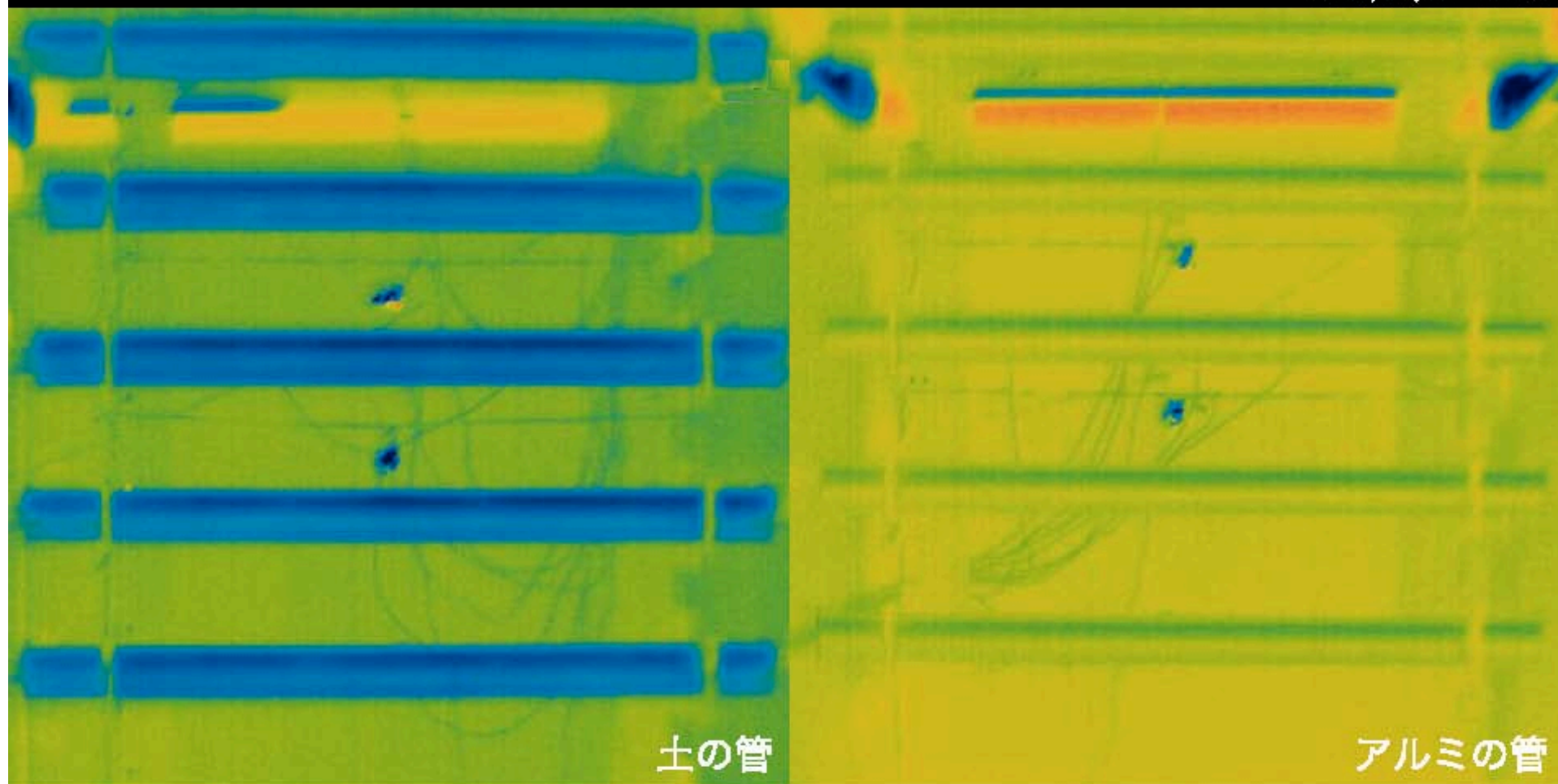
Thermograph 熱画像

30°C

35°C

40°C

2008/08/20 14:00

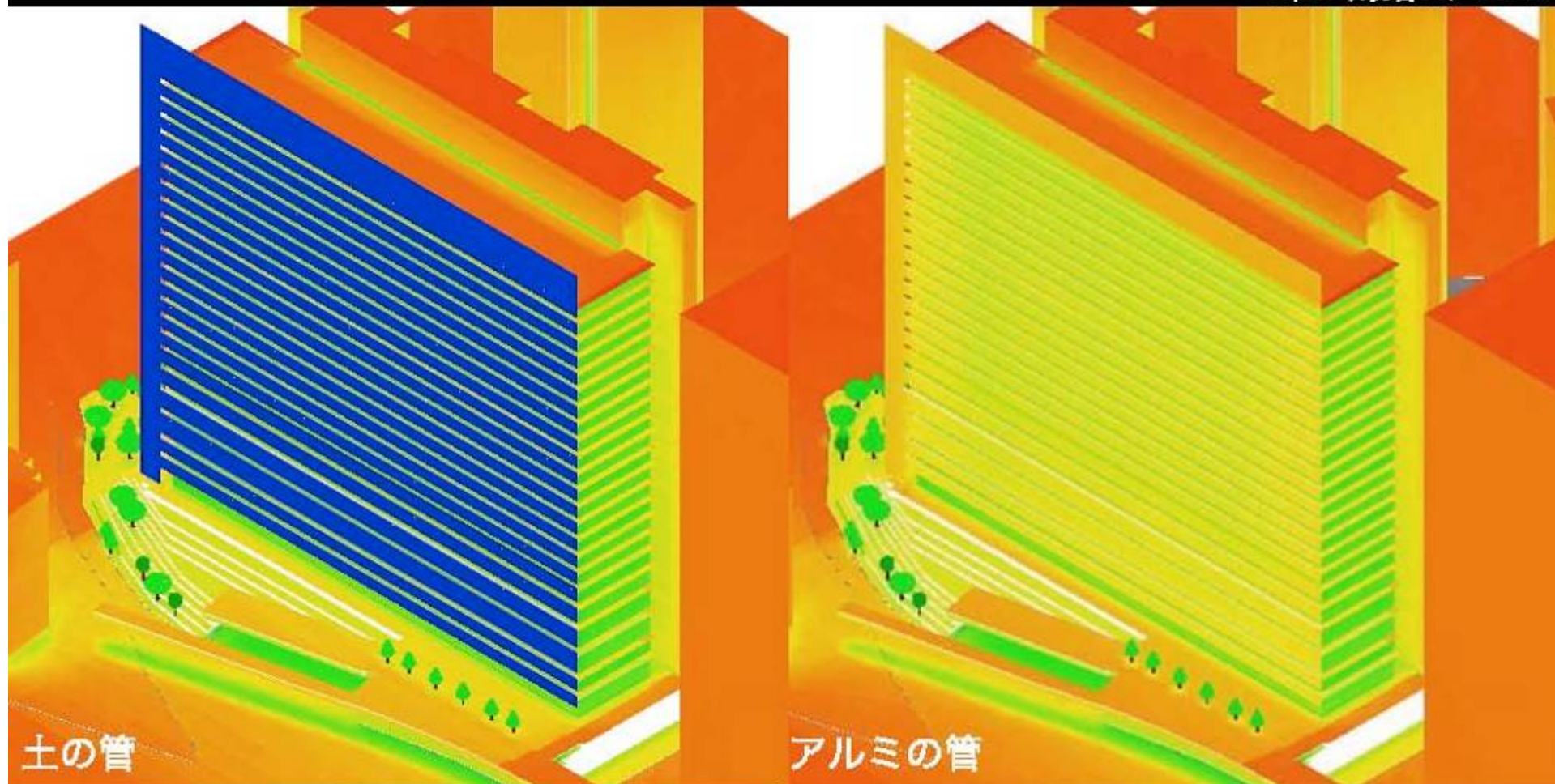


アルミと比べて表面温度が低くなることが実験により確認された。

表面温度シミュレーション

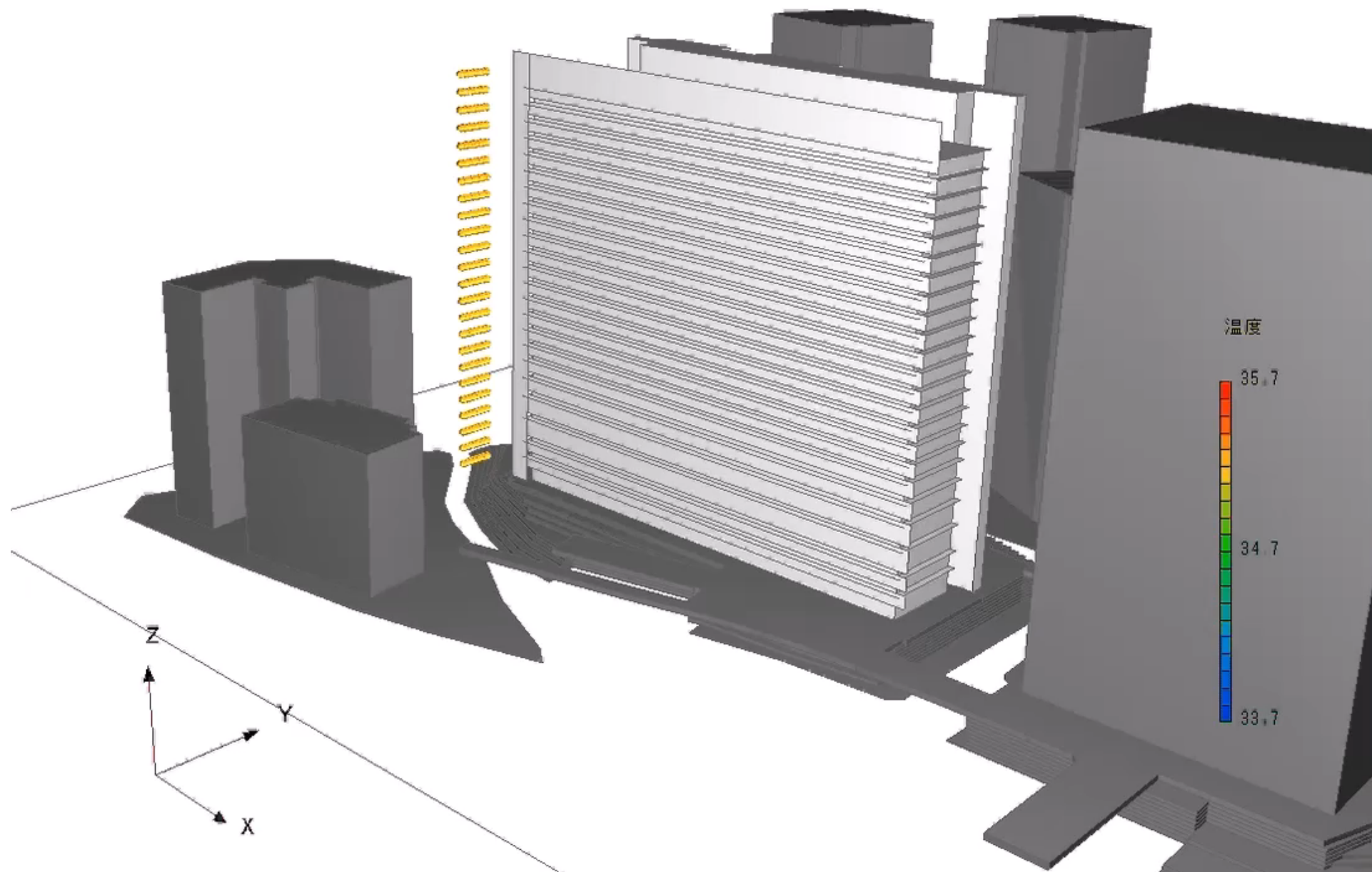
20°C 30°C 40°C

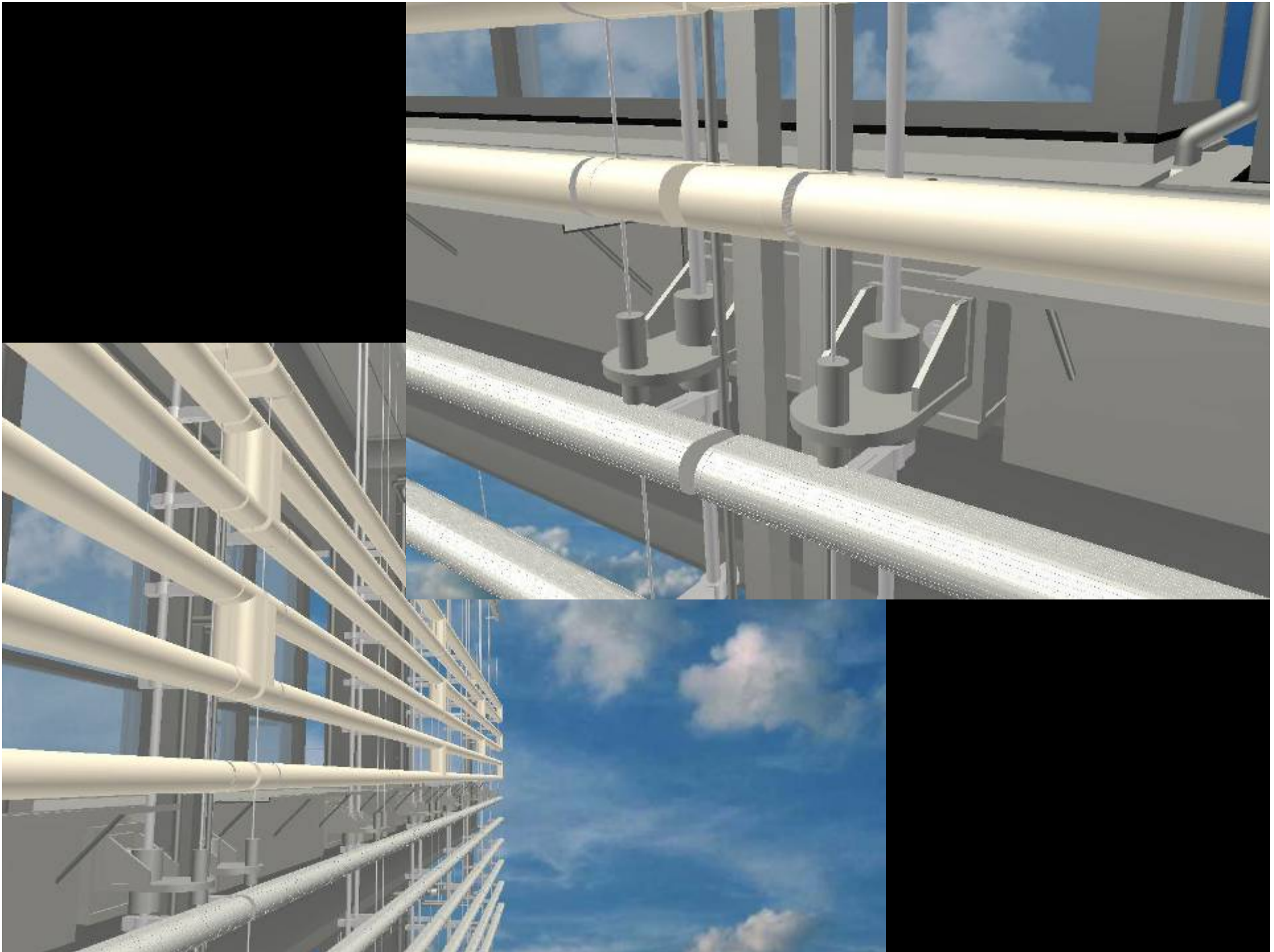
07/25 (最暑日) 14:00



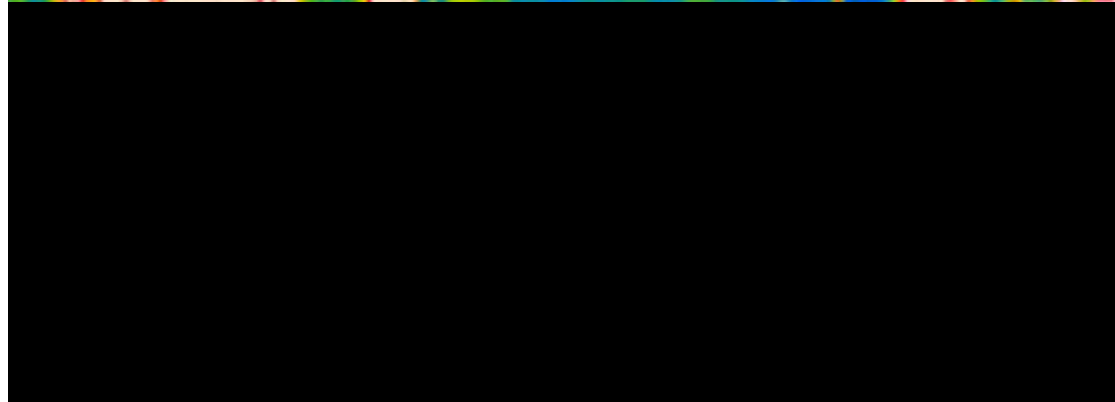
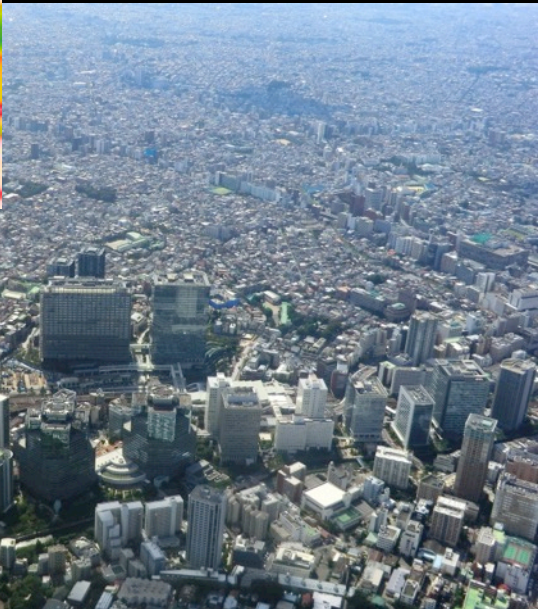
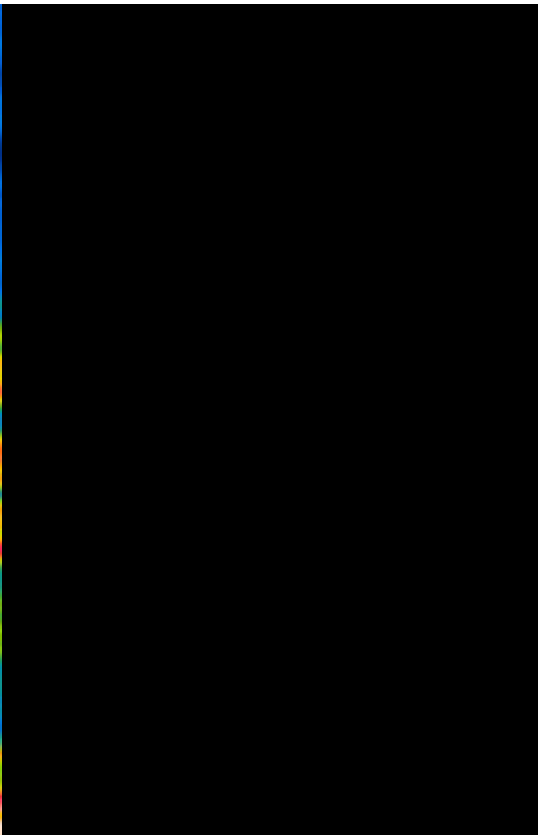
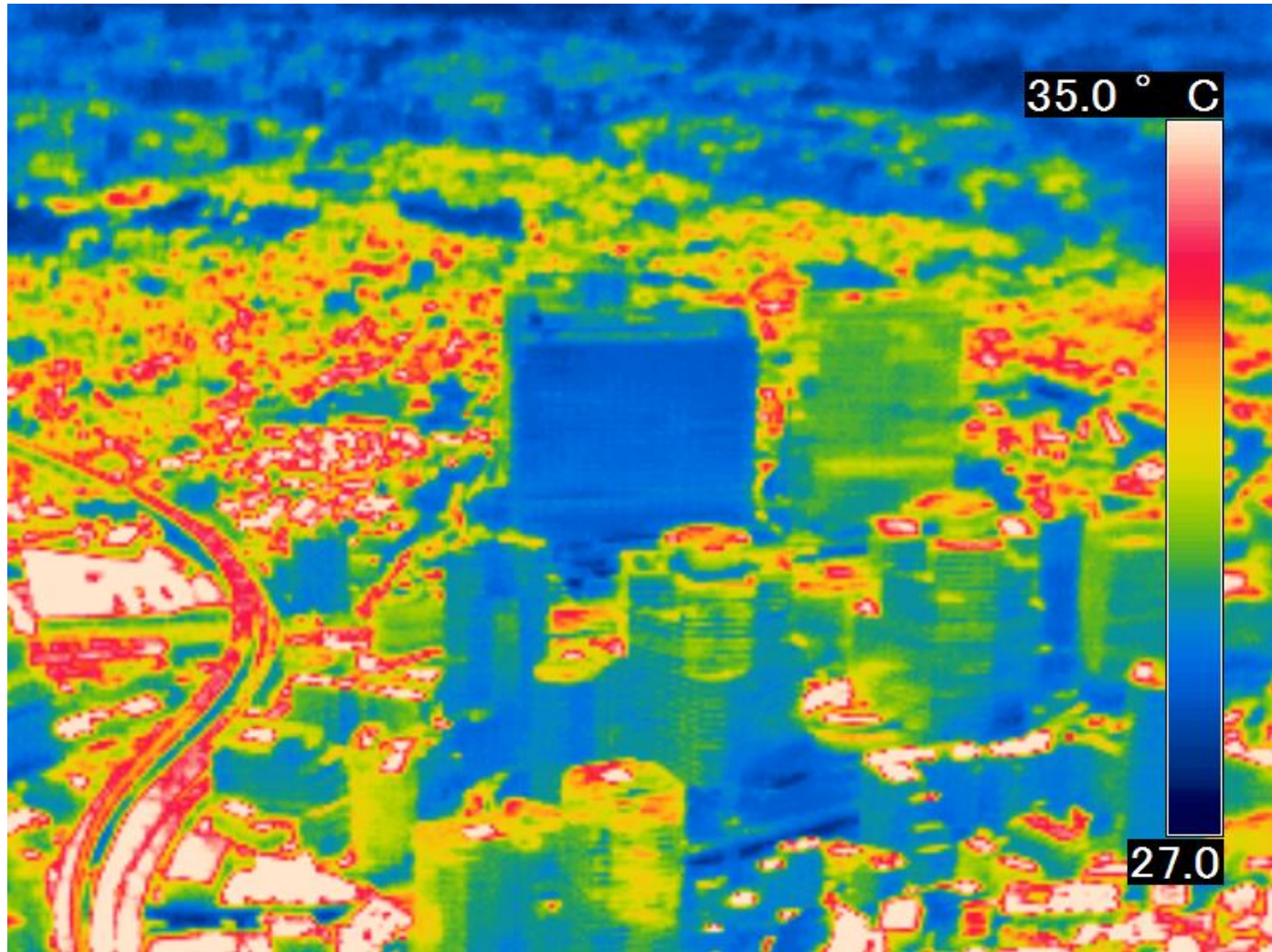
最暑日には表面温度がアルミより 10°C程度低くなる。

File : vaio_14時_1364.iFLD







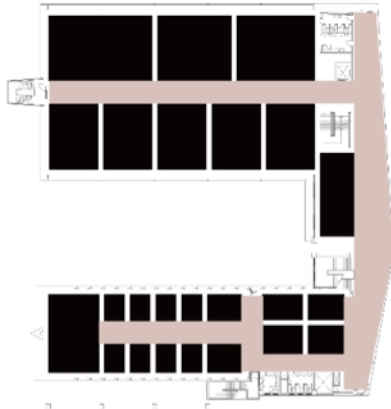


Toho Gakuen School of Music

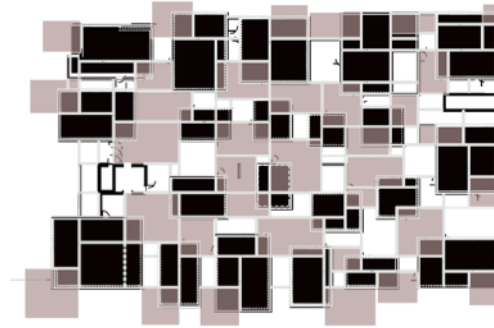
Computational Design

Concept Diagram

OLD

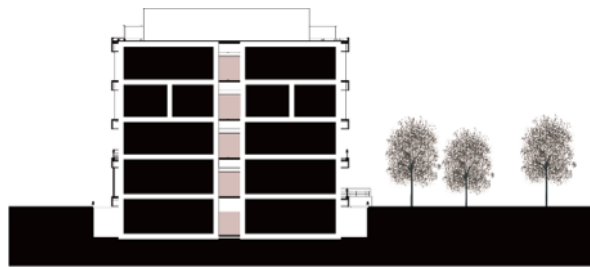


NEW

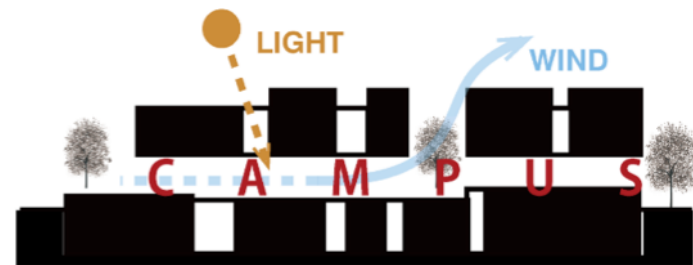


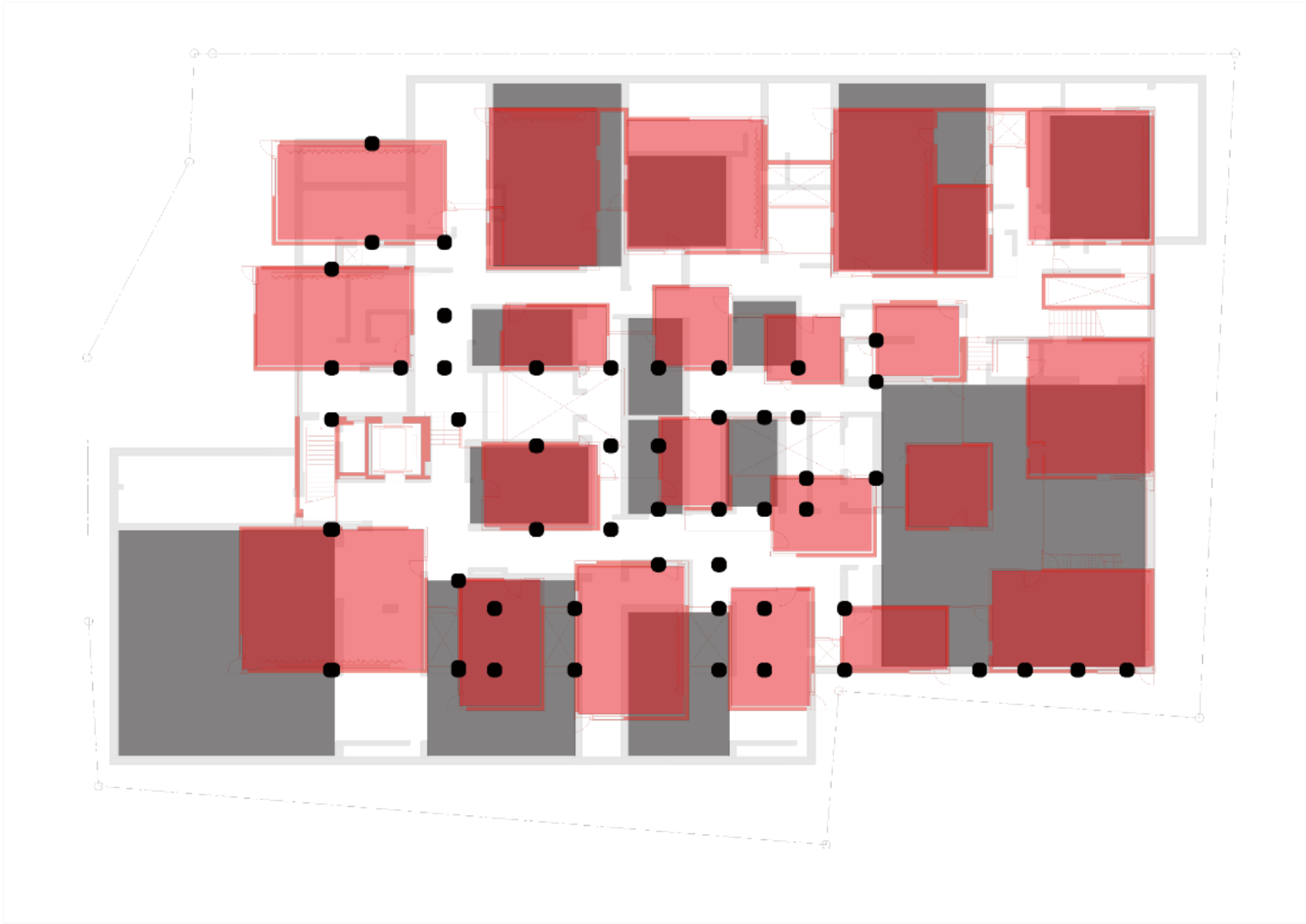
Concept Diagram

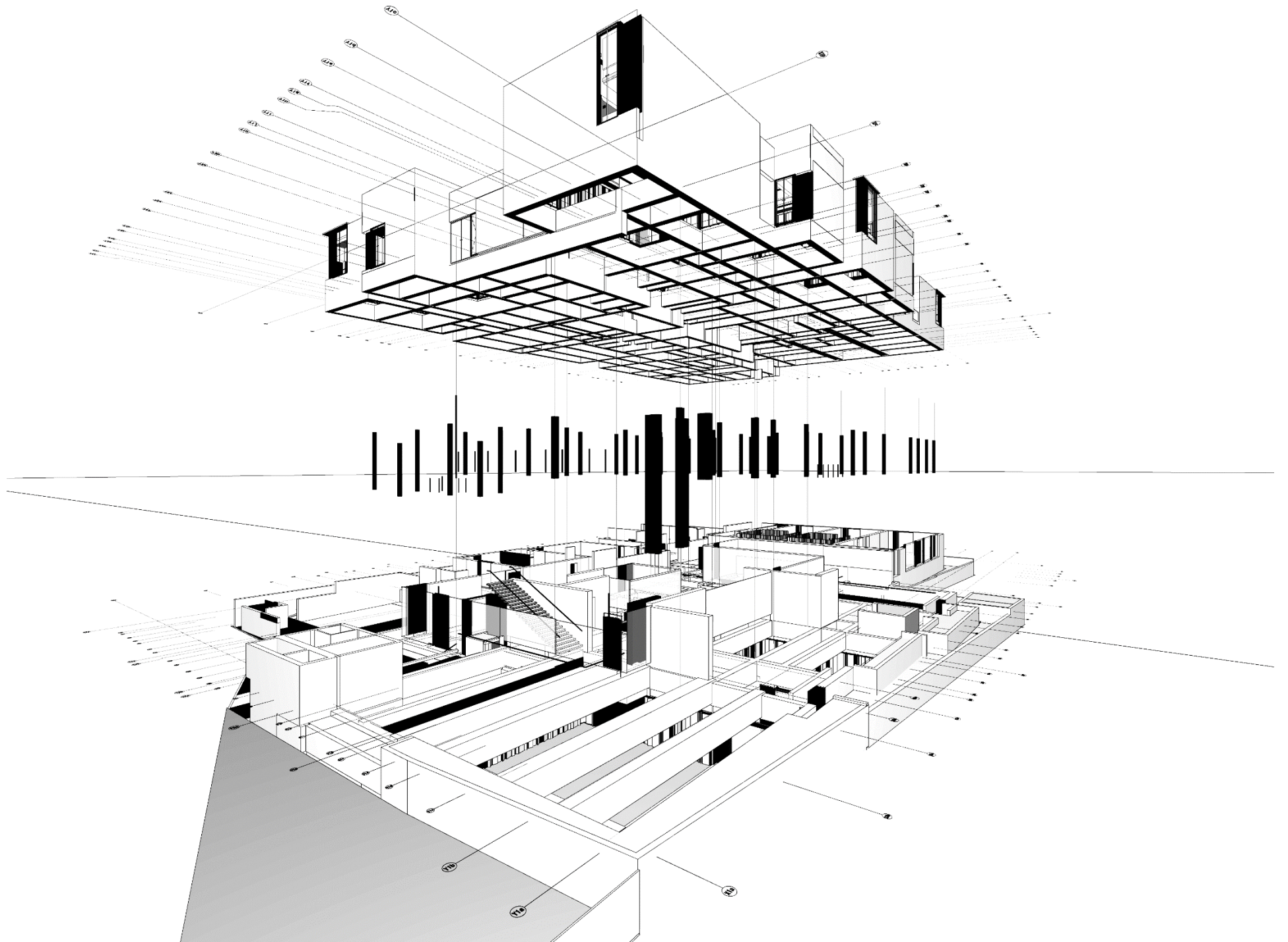
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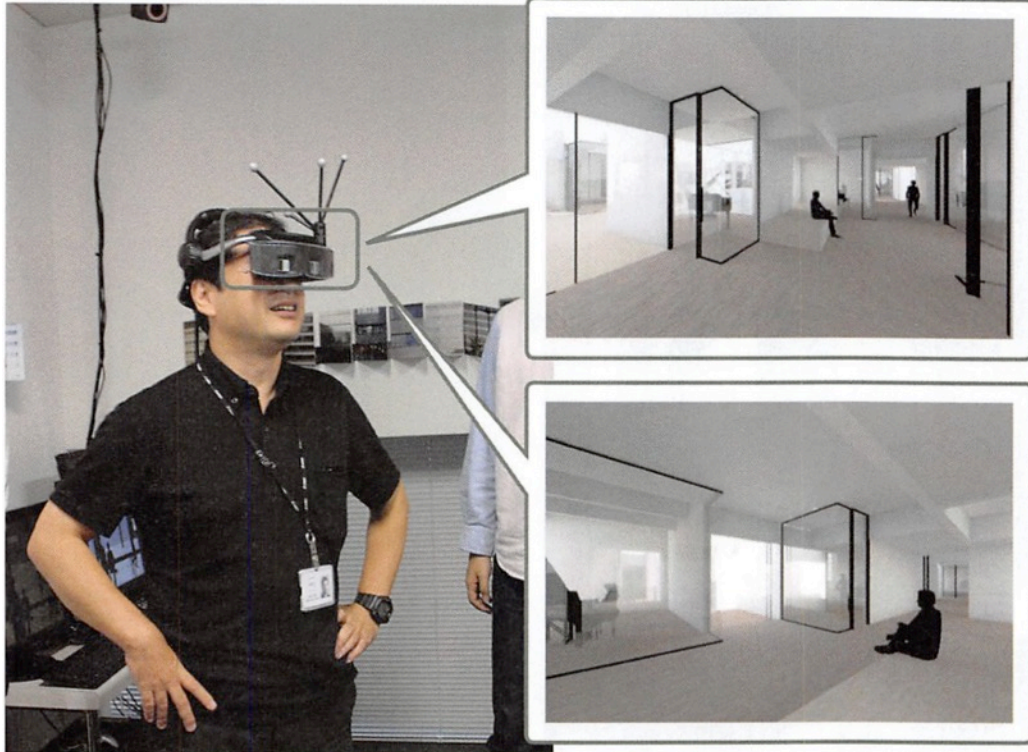


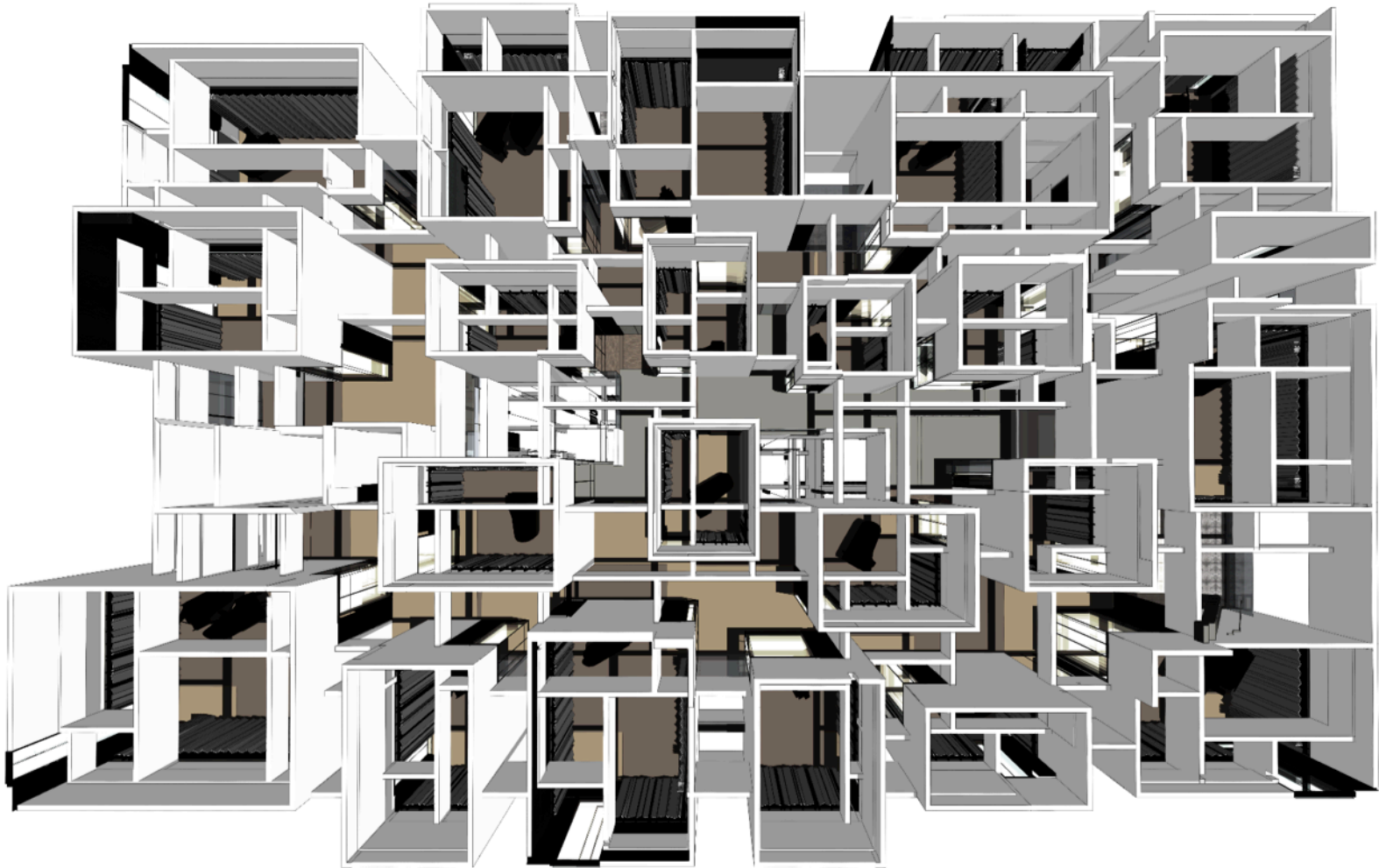
NEW













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