



People flow at building scale

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Dedicated to
People Flow™

For planning
traffic in city area
scale, it is useful
to understand
traffic in
individual
building scale

Traffic planning in office building





Concept Stack

Stage 2 Development

Throughout stage 2 the design team has refined the building stack in coordination with technical advice and client engagement but it stays true to the concept presented at Bid stage and now aligns well with Citi aspirations and user experience.

3 Destination Amenity locations support a diverse and future focused workplace.

Further optimisation of the BOH strategies in stage 3 will deliver an efficient and responsible scheme that maintains the building and all functions within.

The overview of the stack can be viewed on this page

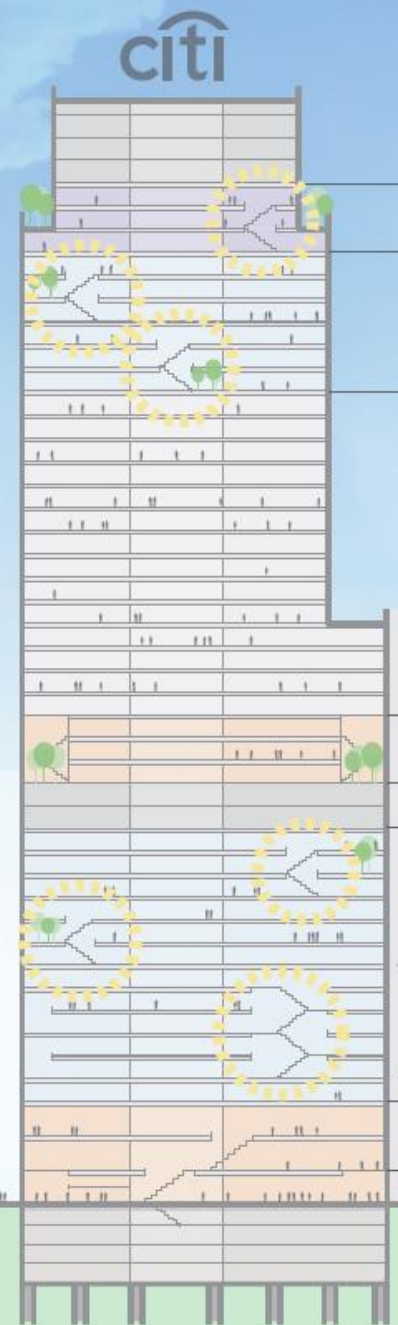
Client Suite (including serviced meeting rooms + boardroom)
 Brasserie
 Reception
Citi Business Lounge (with Citi Gold presence)
 Events Spaces
 Winter gardens

Primary Workspaces
 Citi Villages
 Internal Winter gardens
 Wellness and on floor amenities

Citi Partner Workspaces
 Tenant Sky Lobby (with dedicated F&B Offering)
 CAT A Upgrade Opportunity

Citi Lounge (with supporting F&B)
 Health + Well-being Suite (including Wellness Suite, Medical Centre + Fitness Centre)
 Get-Go
 Citi Works for Enterprise
 Citi Ante Space + Flexi Space

Knowledge Centre (including recruitment suite + serviced meeting space)
 Citi Reception
 Events Opportunities
 Social Hub with F&B
 Auditorium
Citi Plaza (including public gallery, grab&go + roaming concierge)
 Pass Office
 Courier Drop-off
 Citi Gold Kicker
 Loading Bay



Plant Levels : 43 - RF

Citi Beacon Levels : 40 - 42

Citi Villages Levels : 34 - 40

Citi Partners Levels : 20 - 33

Citi High Street Levels : 17 - 19

Plant Levels : 15 & 16

Citi Villages Levels : 04 - 14

Citi Square Levels : 01 & 02

Citi Plaza Level : Ground

Basement Levels : B04-B01



WHAT TO TAKE INTO CONSIDERATION ?



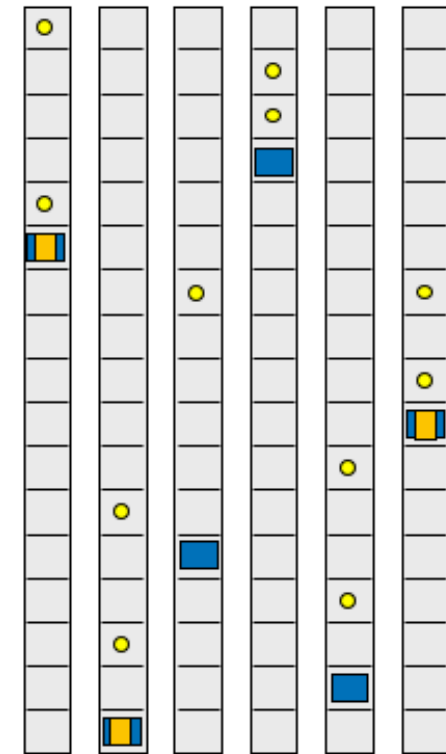
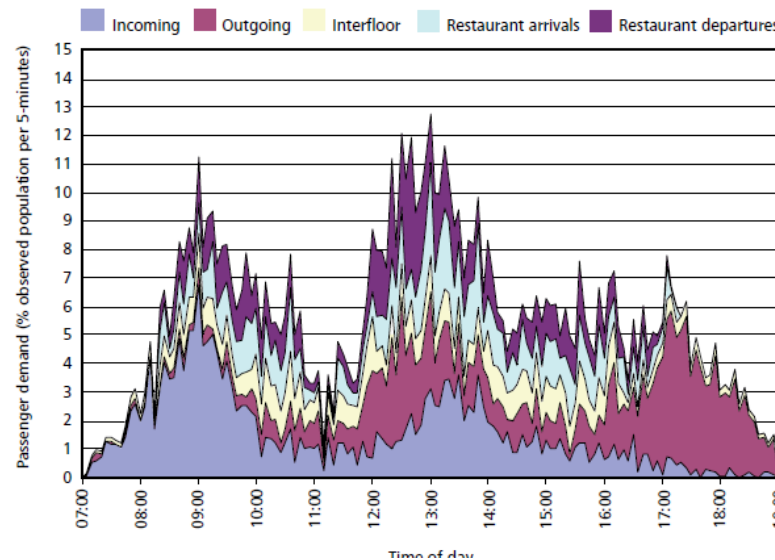
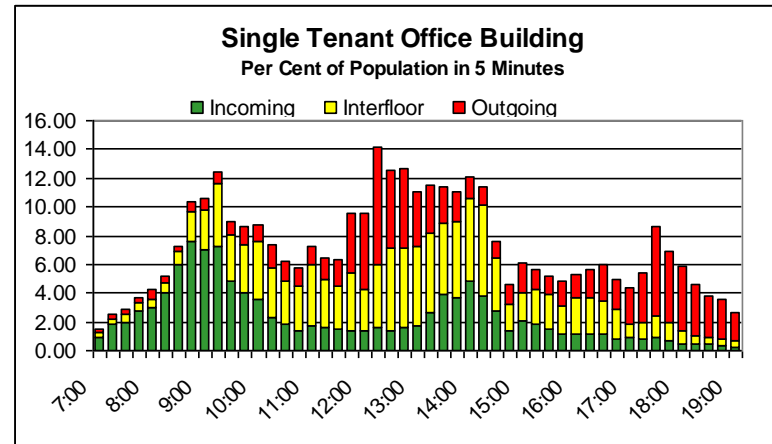
Office buildings

What to take into consideration ?

- Net lettable area
- Building Population / floor
- Functions in the building
- Single / Multiple Tenant
- Fixed or Flexible working hours

Future proofness ?

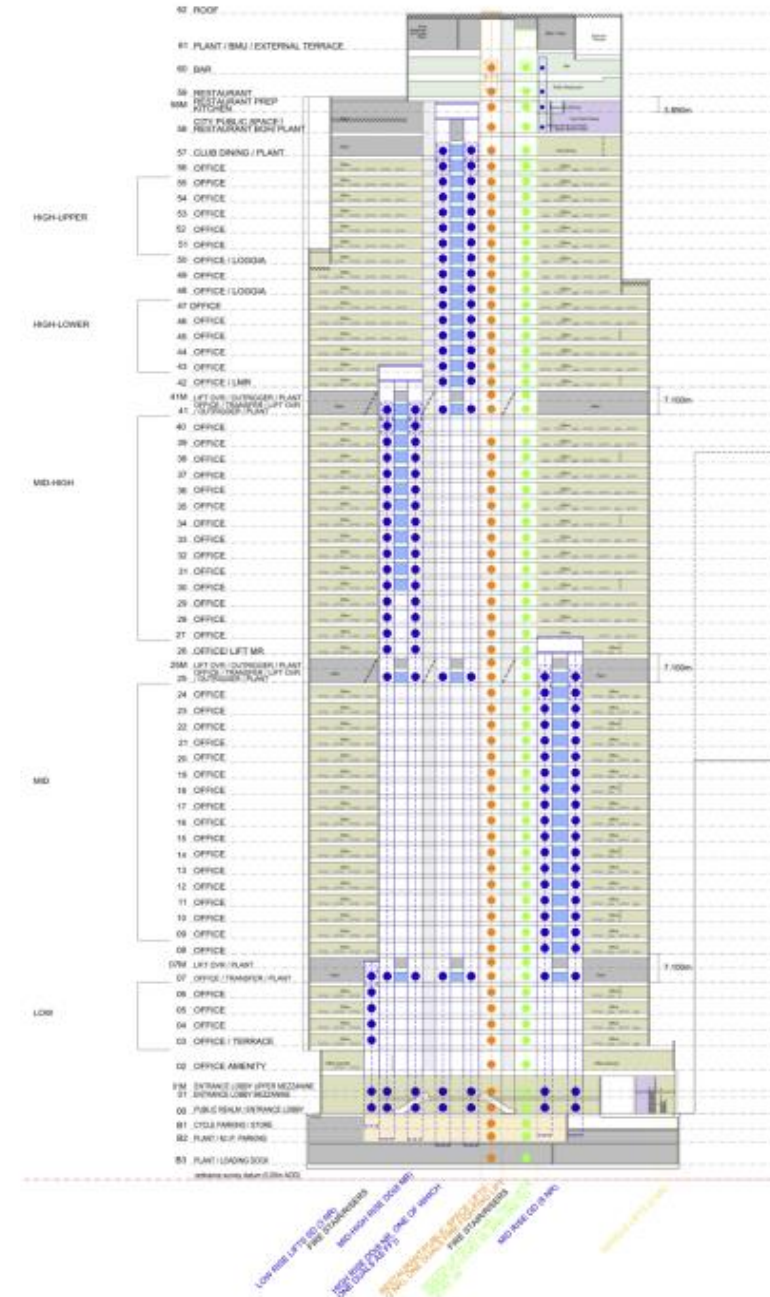
- Changes in population and office density
- Flexible working hours or remote work
- Several functions in one building
- Public functions add new population to the building



Group with Destination Control

Designed for Life

- Vertical village
- Transportation takes up significant share of building net area
- Shuttle and local transportation in compact form
- Population per area and internal mobility drive traffic
- Service, In-house logistics, emergency situations considered
- Simulation during design phase as basic dimensioning
- Adaptability for Repurposing buildings as sustainability factor
- Building's traffic profile contributing in city planning



'It has lost its appeal': Canary Wharf faces an uncertain future

London's docklands financial district is facing the loss of major firms such as HSBC and its owners are having to innovate to stem the exodus



Canary Wharf has been a victim of home working as companies move to smaller, more central premises. Photograph: Dan Kitwood/Getty Images

"It's not happening." This is the blunt assessment of the success of efforts to turn Canary Wharf into a shopping and leisure destination. "Mondays and Fridays are dead," says the frank shop worker. "This shop used to take a fair bit before Covid but now everything's changed."

HSBC to move out of Canary Wharf headquarters due to hybrid working

The bank, which aims to move to the former head office of BT, says it wants to reduce its global office space by 40%



HSBC's current location at Canary Wharf in Docklands, east London. Photograph: Ian West/PA

HSBC is to move out of its global headquarters in Canary Wharf after more than two decades to considerably smaller offices in the City of London, in response to post-pandemic hybrid working arrangements and a cost-cutting drive.

The financial services giant, which had up to 8,000 staff at the 45-floor tower at Canada Square during peak times before the pandemic, is to move to the

Modern commercial buildings

Mixed use buildings instead of single purpose

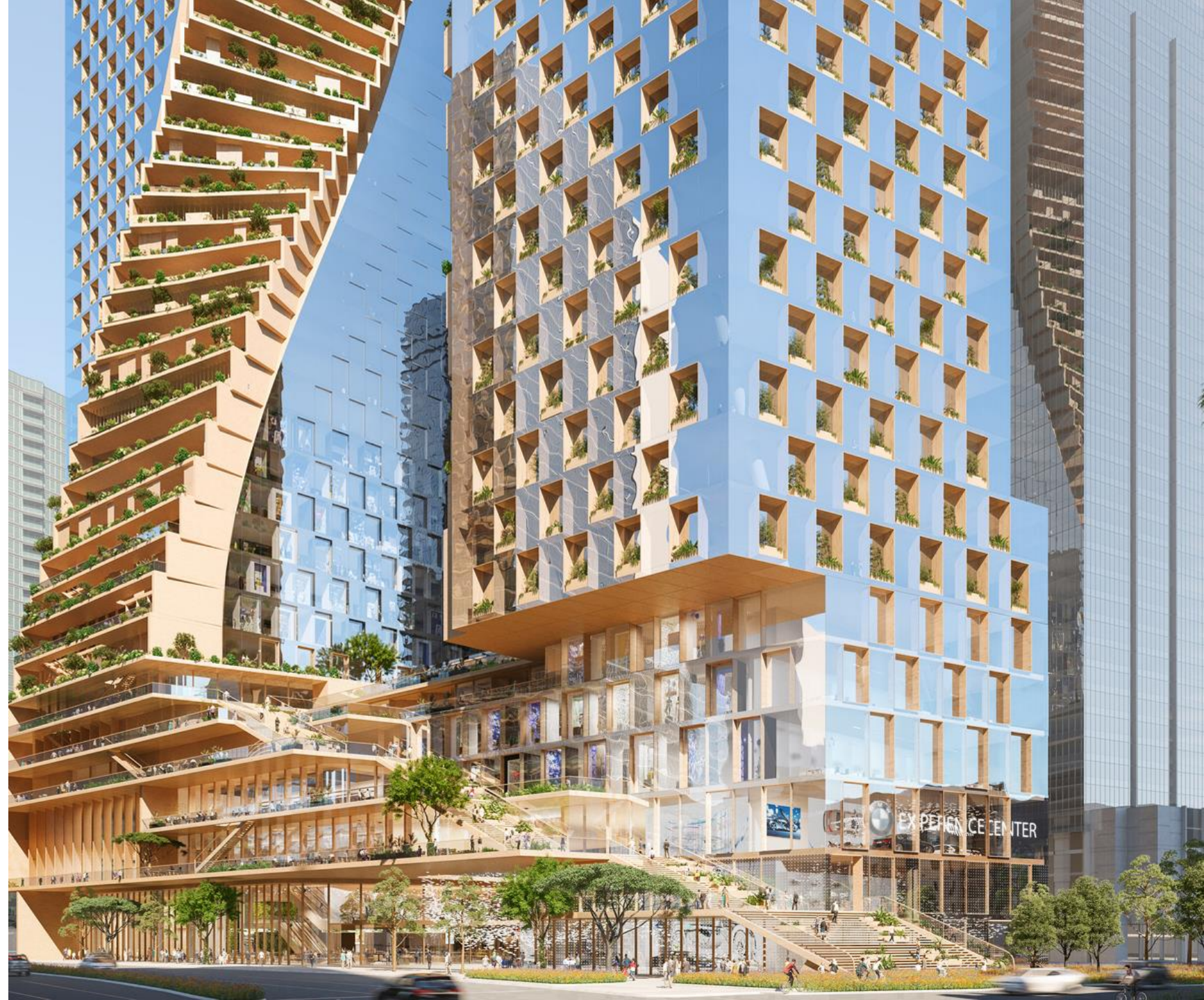
Combining public and private functions

Floors at top open to public to contribute to community

Flexible use of the office space during the day

Wellness driving active life in buildings

Smart systems to adapt to changes



A wide-angle, low-angle shot of a modern double-sided escalator. The escalator is filled with people: three people are ascending on the left side, and two are descending on the right. The central divider between the two sides is a vertical wall of green plants. The walls are light-colored with recessed lighting strips. The overall atmosphere is clean, bright, and modern.

Escalators have superior transportation capacity compared to elevators
Up to 6000 passengers /hour

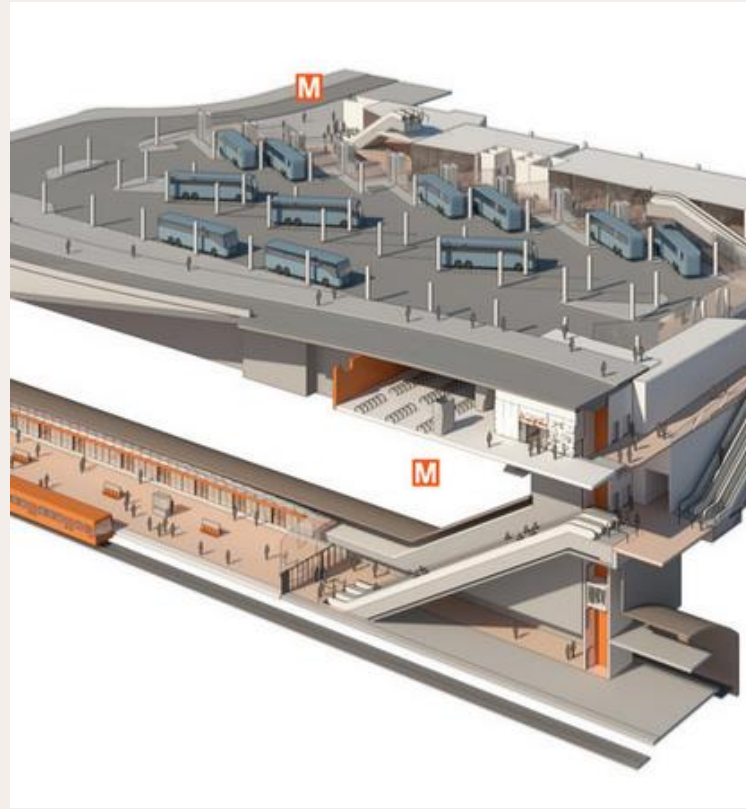
Transit hubs and stations of the future

Urban environments are evolving fast. Transit hubs and stations need to cater to a growing number of passengers, their changing needs and lifestyle trends.

It is necessary to ensure that stations are designed and developed to meet modern-day standards of sustainability, efficiency, and accessibility for all.



Neighborhood or City context



- Population at the station's capture area
- Traffic profile of that area
- Station design can affect how easily accessible the station is and how it integrates to its surrounding
- Escalators can increase the capture area

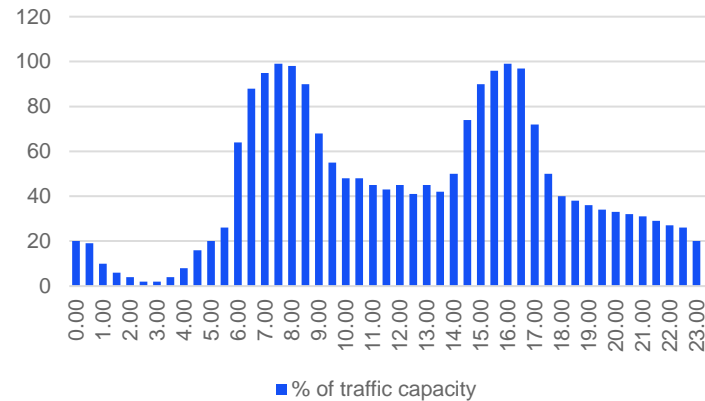
Infrastructure buildings

What to take into consideration ?

Infrastructure buildings are distinct in regards of their usage purpose, peak times, and the number of passengers they need to accommodate.

Considering the following questions can help navigate towards the right solutions for your infrastructure complex:

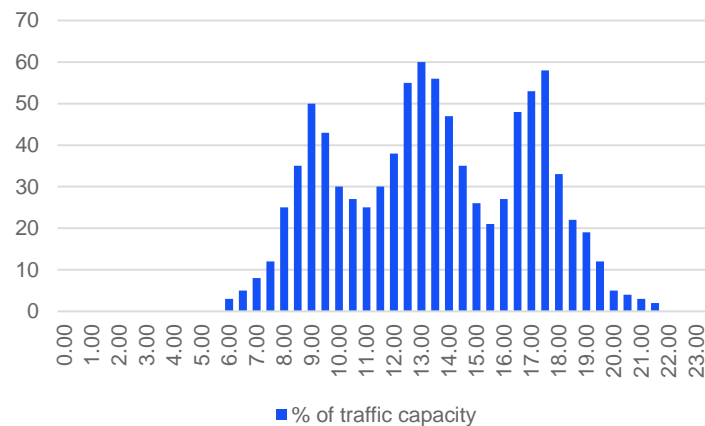
- How many people use the building and how?
- What are the connected routes and potential bottlenecks within my building?
- What is the operating environment of my equipment - is it indoors, outdoors, or both?
- What do my passenger circulation area, safety zones, access levels and intended travel times look like?
- What load and speed, step width, inclination and vertical rise of my escalators is best?
- What safety, sustainability and wellbeing aspects (sanitization, comfort level) are important to consider?



A typical **24-hour metro station** experiences two peaks, one for each rush hour.

Both peaks are preceded and followed by a build-up period, which stretches longer into the evening when people travel for dinner, social gatherings, service appointments, etc.

Metro station equipment is designed for maximum efficiency via direct routes for transporting passengers.



Shopping centers experience three peaks - at the beginning of the day, during lunch, and after work.

After the third peak the number of visitors quickly decreases. Many centers close for the night.

Equipment in shopping centers are designed to expose passengers to the various available offers. Routes are indirect and intended to circulate passengers through the building.



Reference for customer needs

- UITP (L'Union Internationale des Transports Publics) is the International Association of Public Transport
- **Improving Passenger Flow and Crowd Management** is a recent study on needs and technologies for passenger flow information.
- Some key objectives for improving passenger flow
 - Optimise the resources and adapt the supply of transport
 - Provide passengers with reliable information
 - Maximising the value of the passenger dwelling time and improving potential new revenue streams

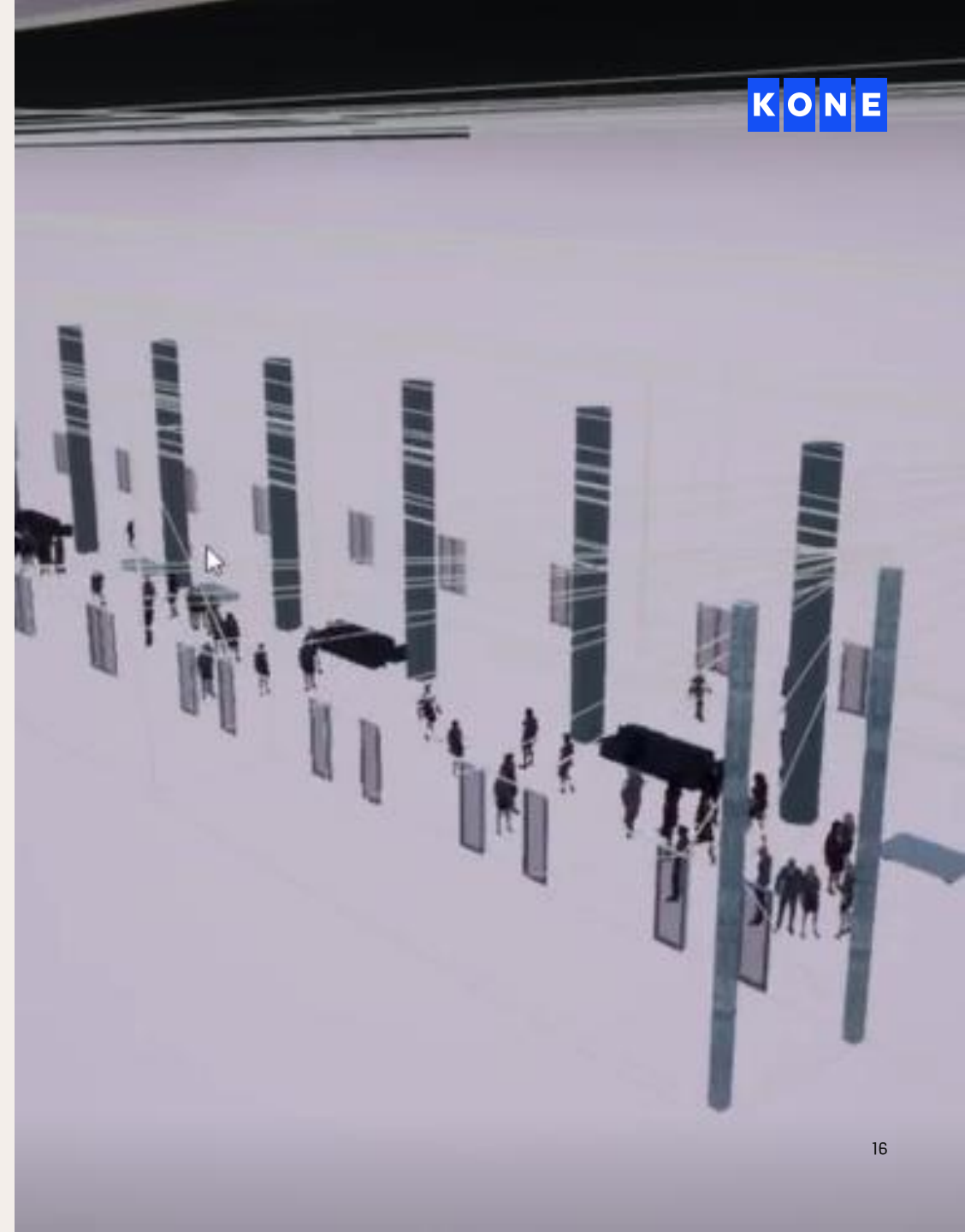


Building digital twins with AWS

KONE is working with AWS on creating and testing digital twins to simulate the people flow in buildings. Especially for stations it is crucial to understand the movement of people and goods, and adjust technical operations to avoid congestions and holdups.

Digital twins allow for comprehensive information gathering, testing, and the development of new products and services. All this is to improve the efficiency of stations and the user experience within.

Digital twins are the virtual replication of processes, service, or devices that are capable of simulating natural behaviors, usage and work processes in real life.





StationTwin

Stations

Dashboard

Simulator

Log Out

Urheilupuisto

WEST ELEVATORS

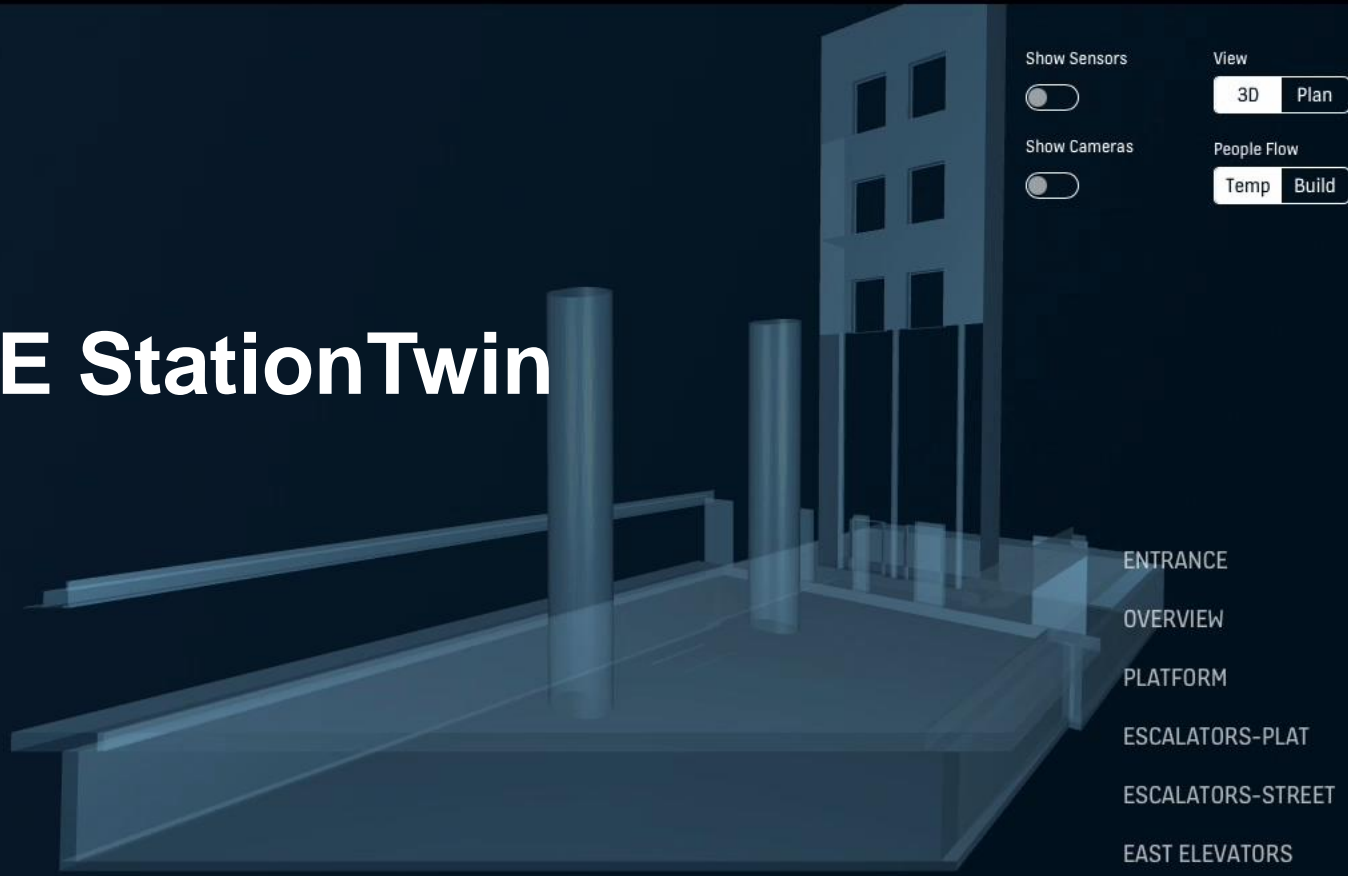
Start Date: July 19, 2022 | End Date: July 19, 2022

Occupant Count (last 24 hours): 1923 (down arrow) 166 (up arrow) 790

Station Health

- Alert: Equipment failure at Elevator1
- Alert: Safety risk at elevator group A
- All Clear: No Issues Detected
- All Clear: No Issues Detected
- All Clear: No Issues Detected
- All Clear: No Issues Detected

KONE StationTwin



Show Sensors

Show Cameras

View: **3D** Plan

People Flow: **Temp** Build

- ENTRANCE
- OVERVIEW
- PLATFORM
- ESCALATORS-PLAT
- ESCALATORS-STREET
- EAST ELEVATORS
- WEST ELEVATORS**



LIVE

KONE's role in urban infrastructure developments

Elevators, escalators, and autowalks are generally acknowledged for being the most effective means of transporting large numbers of people with different needs between floor levels.

How they are arranged within a building has a huge impact on the flow of people, the passenger's wellbeing and the overall operations, safety, efficiency, and design of the building.

For decades KONE has been providing industry-leading elevators, escalators, and autowalks globally. Together with our partners and industry leaders we are at the forefront of future innovations in the infrastructure industry.

[Read more here →](#)





Passenger flow

KONE solutions

[PEOPLE FLOW PLANNING AND CONSULTING ↗](#)

[KONE EXPERIENCE CAR ↗](#)

[KONE INFORMATION ↗](#)

[KONE HEALTH & WELLBEING SOLUTIONS ↗](#)

[KONE DX ELEVATORS & DX UPGRADES ↗](#)

[KONE ECOMOD™ UPGRADES DX ↗](#)

[KONE ECOMOD™ SAFETY UPGRADES ↗](#)

[KONE ECOMOD™ MODULAR ↗](#)

[MODERNIZATION PACKAGES](#)

[KONE ELEVATOR CALL ↗](#)

[SERVICE DELIVERY API ↗](#)

[KONE ELEVATOR CALL API ↗](#)

[KONE PARTNER SOLUTIONS ↗](#)

[KONE EBULI \(PROSPACE, MONOSPACE\) ↗](#)

[MATERIALS + WOODEN SHAFT ↗](#)

[KONE AUTOMATIC BUILDING DOORS ↗](#)

KONE global reference projects

Americas

- New York
- Toronto
- Seattle
- San Diego
- Boston
- Atlanta
- Chicago
- Salt Lake City
- Las Vegas McCarran
- Miami Dade
- Phoenix
- San Diego

Europe

- London Underground
- Crossrail
- ProRail
- StorStockholms Lokaltrafik
- SZDC, Czech Rep.
- Deutsche Bahn
- Berlin Central Station
- Helsinki Metro
- Dworzec Łódź Fabryczna

Europe

- Westbahnhof
- Metro Københavns
- Paris
- Toulouse
- Lyon
- Nice
- Marseille
- Schiphol
- Heathrow
- Gatwick
- Oslo
- Stockholm
- Helsinki
- Vienna
- Munich

Middle East

- Dubai Metro
- Doha Metro
- Riyadh Metro
- Cairo Metro
- Tehran Metro
- Tel Aviv Metro
- Bodrum
- Muscat

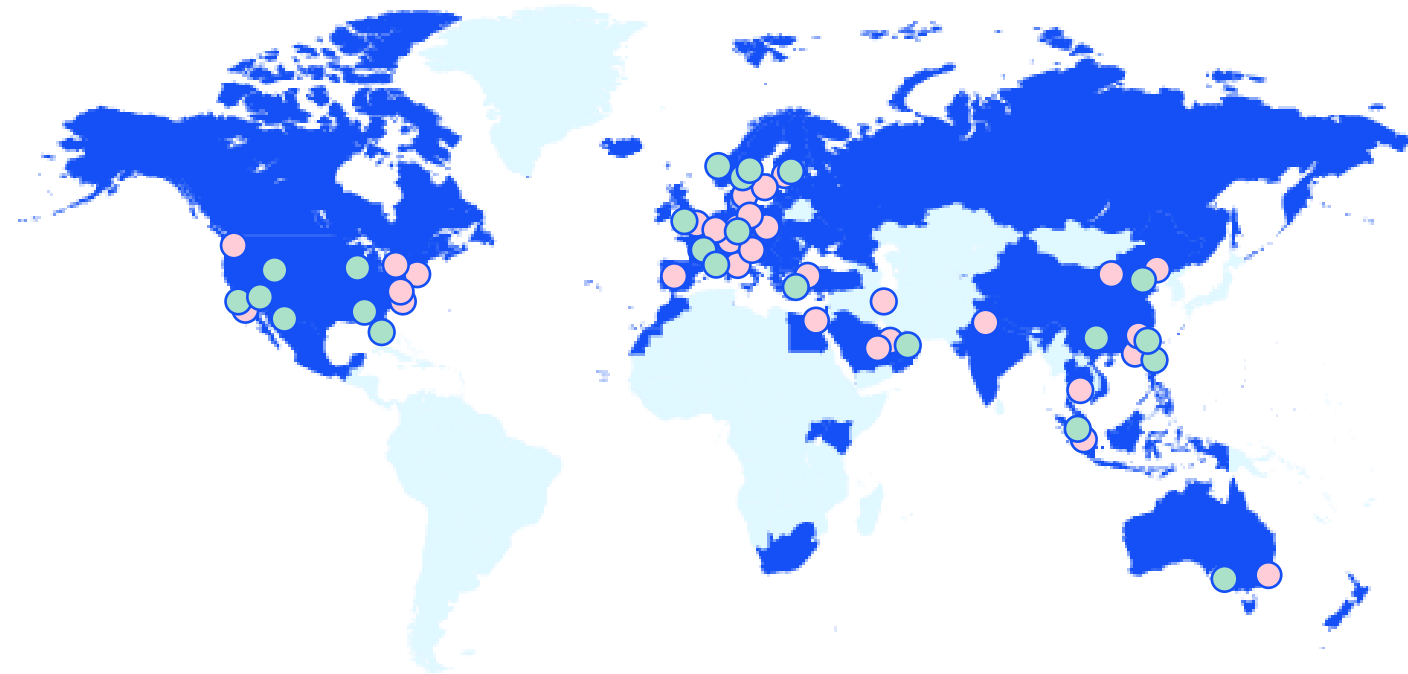
Asia & Pacific

- Delhi Metro
- Sydney Trains
- Singapore
- Bangkok Mass Transit
- Adelaide
- Sepang

China

- Beijing
- Shanghai
- Chongqing
- Nanjing
- Nanning
- Shenzhen
- Wuhan
- Wuxi
- Suzhou
- Harbin
- Hong Kong
- Taipei
- Kaohsiung
- Beijing
- Shanghai
- Taipei
- Kunming
- Shenzhen

- Public transportation
- Airports





Thank you!

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People Flow™