



People Flow at Building scale

Tomi Sipilä, Offering Manager, KONE Corporation

4 OCTOBER 2024

Dedicated to
People Flow™

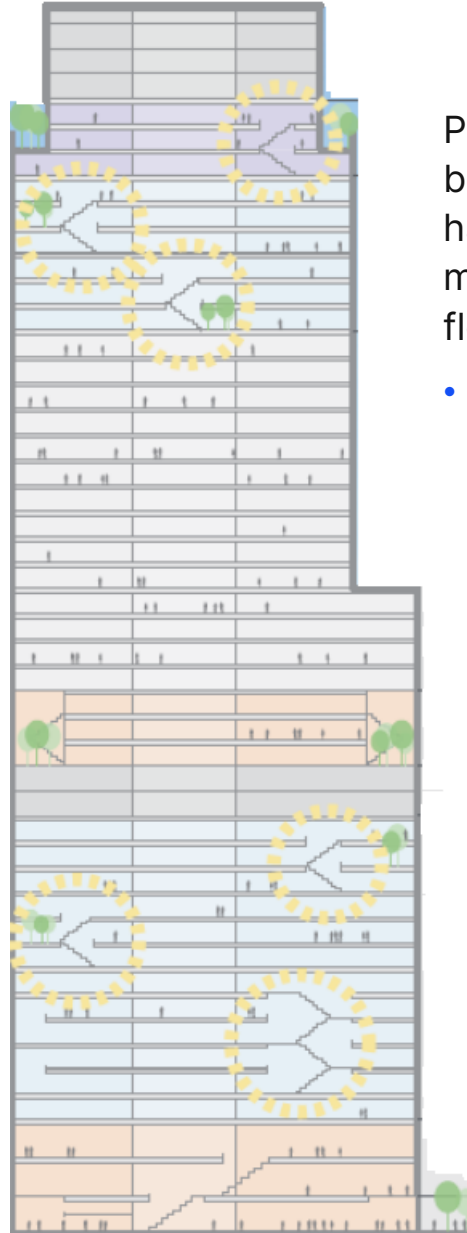
For planning
traffic in city area
scale, it is useful
to understand
traffic in
individual
building scale

Vertical Transport in Buildings



Understand

- Different users in building utilize facilities and lifts with different ways
- During the lifetime of the building it can go through multiple changes in how floors are utilized
 - Tenants change
 - Restaurants & cafes added or removed
 - Floor use changed to apartments
 - Floors added etc.
 - Internal stairs added etc



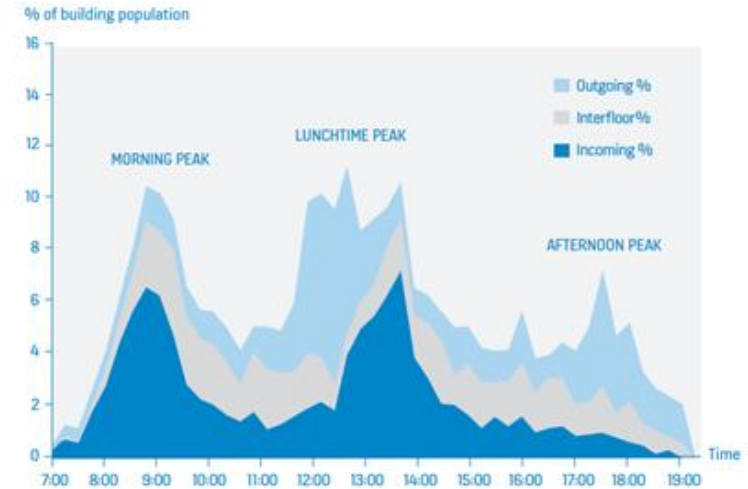
People flow in parts of the building with single tenancy have higher portion of movement between upper floors through the day

- **Demand for lift system is heavy**

People flow in parts of the building with multiple tenants is more stable and movement between upper floors is limited

- **Demand for lift system is moderate**

PEOPLE FLOW
MULTI-TENANT OFFICE, FLEXIBLE WORKING HOURS





Building-specific simulations

- Better understanding of building by simulation tool for complex configurations and using latest technology



Visualization of solutions and end-user experience

- Deeper understanding of building behavior with in-depth simulation tool for more flexibility and complex configurations

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, is to move out of its global headquarters in more than two decades to considerably smaller office space in response to post-pandemic hybrid working arrangements.

The financial services giant, which had up to 8,000 employees at its Canary Wharf headquarters during peak times before the pandemic, is to move to the former BT headquarters in the City of London.

Forbes

EDITORS' PICK

Why Amazon's Return To Office Mandate Is A Warning For The Future Of Work

Ann Kowal Smith Contributor @
Ann Kowal Smith explores workplace culture and collaboration.

Follow



Sep 30, 2024, 08:00am EDT

Updated Oct 1, 2024, 10:28am EDT



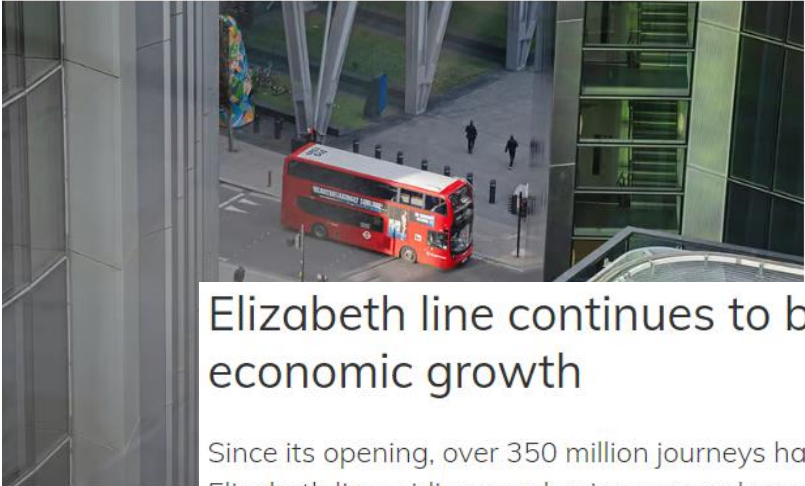
Amazon's return-to-work mandate is the canary in the workplace coal mine. GETTY

Amazon CEO Andy Jassy last week called all of the company's employees back to the office five days a week, part of an effort to preserve the company's

Britain | The road not taken

The future of public transport in Britain

The pandemic seems to have changed travel patterns for good



Elizabeth line continues to boost travel and economic growth

Since its opening, over 350 million journeys have been made on the Elizabeth line, aiding pandemic recovery by creating new travel opportunities, supporting regeneration, as well as boosting housing and social prospects.



Modern commercial buildings

Mixed use buildings instead of single purpose

Combining public and private functions

Busy intersections of crossing Traffic patterns

Traffic dynamics require careful analysis

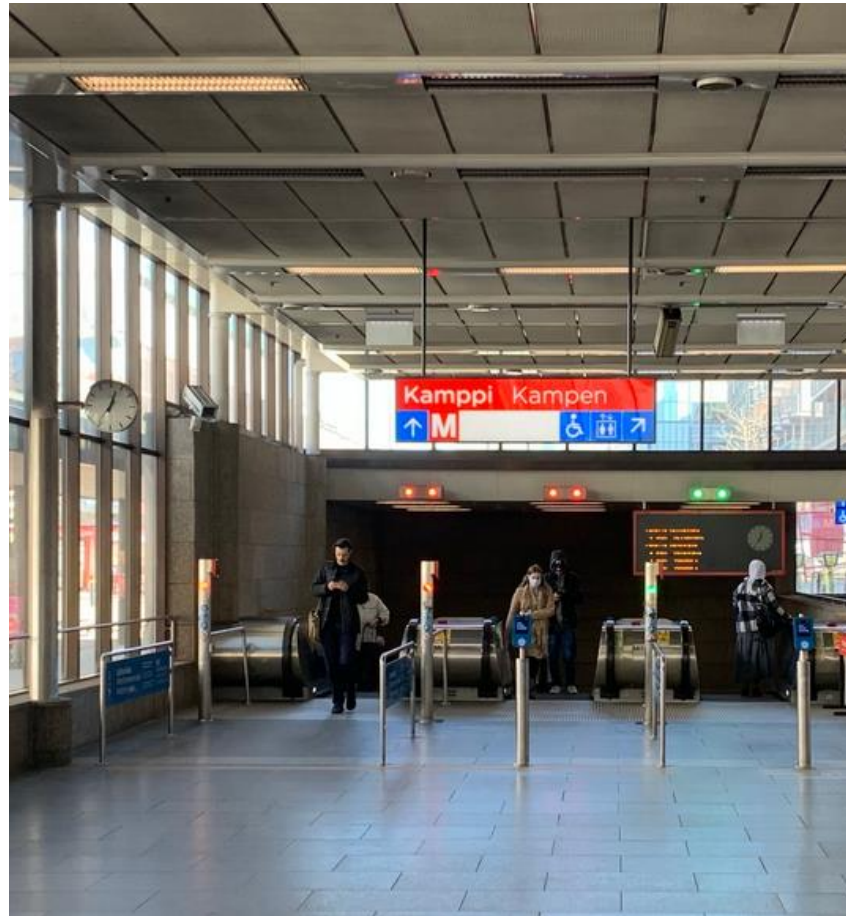




Escalators have superior transportation capacity compared to elevators
Up to 6000 passengers /hour

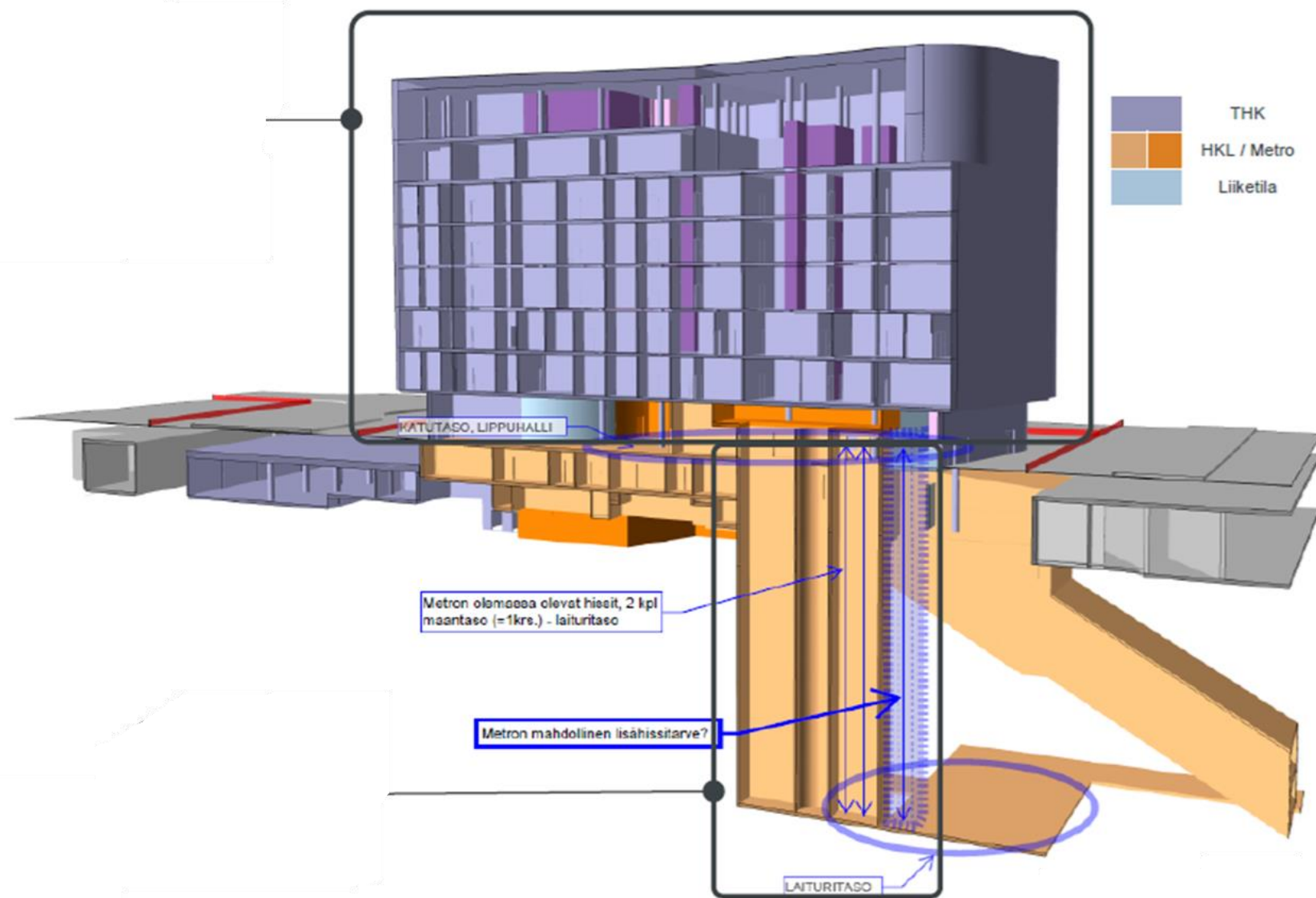
Case Kamppi

- Existing Helsinki Metro station
- Busy city center hub
- New development on top of the station **Kamppi Health and Wellbeing Center**

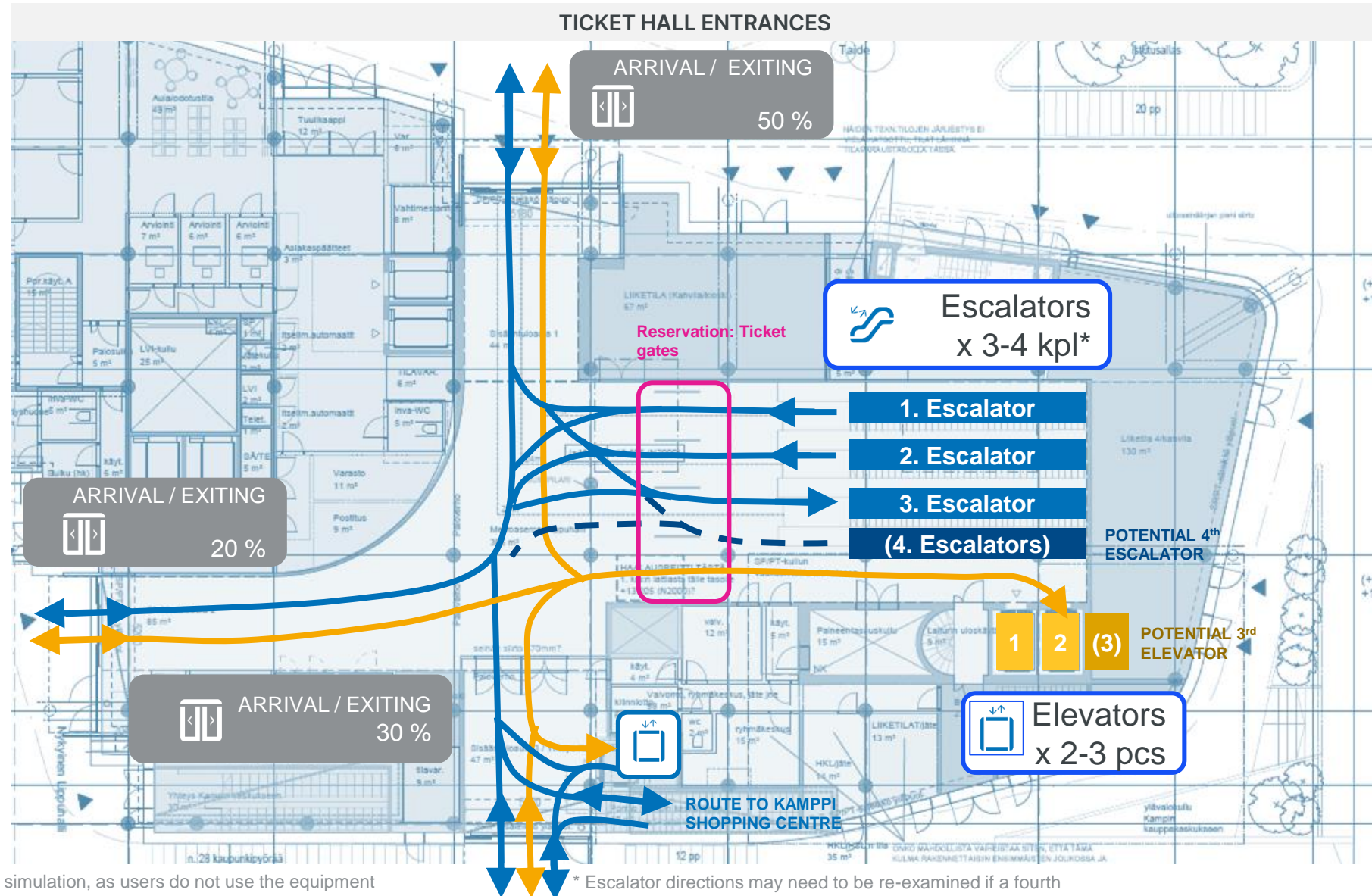


City of Helsinki builds a Health and Well-being Centre on the top of a busy metro station





-



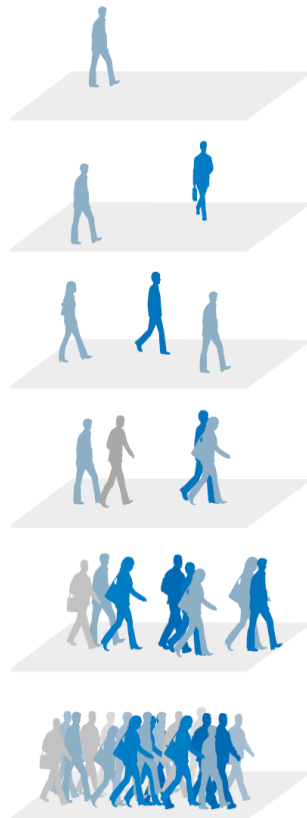
* Escalator directions may need to be re-examined if a fourth escalator is added.

The increase in passenger flows will not cause significant congestion in the ticket hall

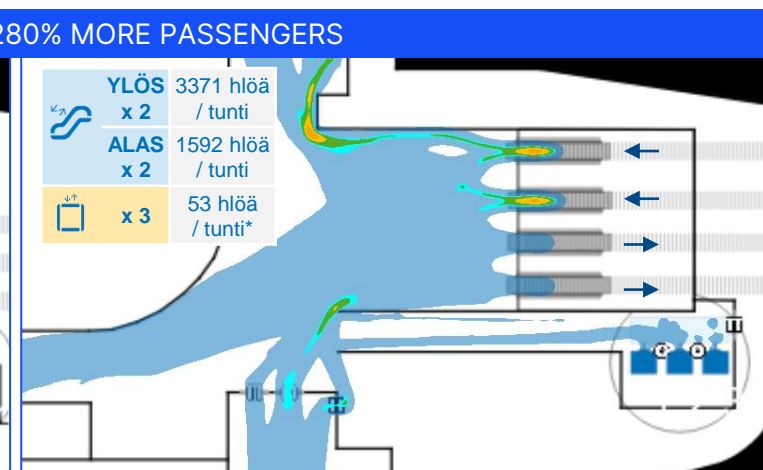
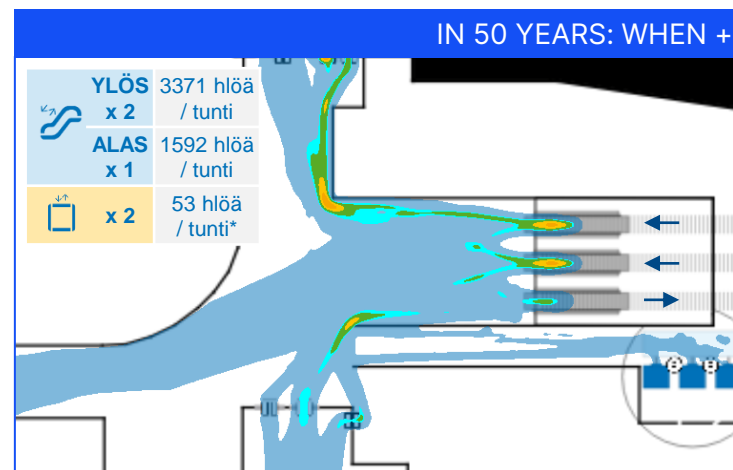
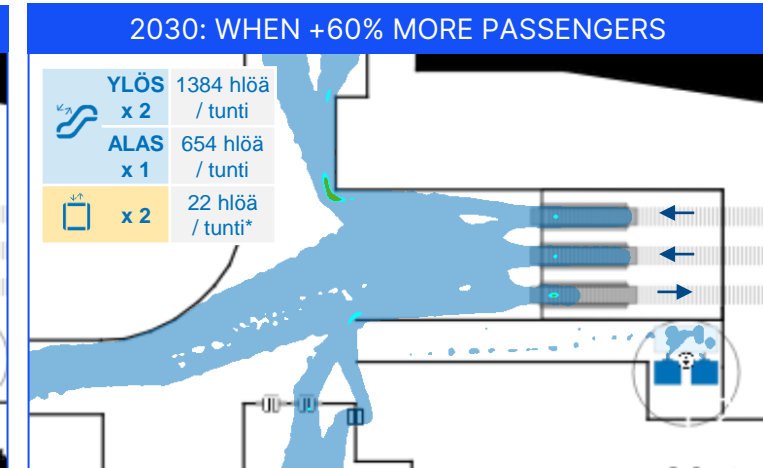
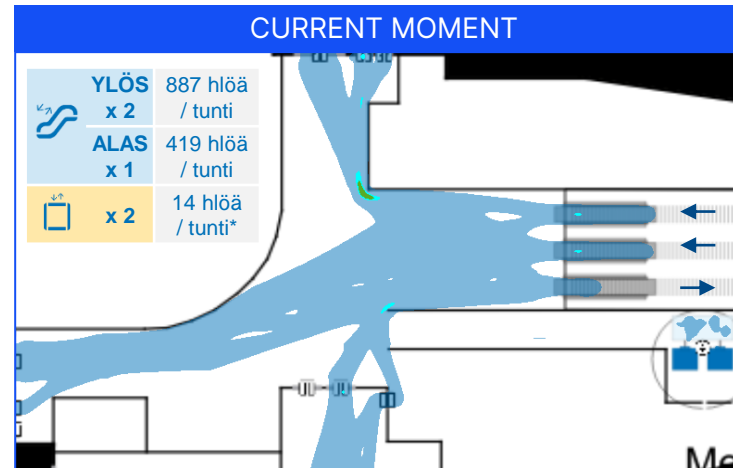
FRUIN LEVEL OF SERVICE

TICKET HALL TRAFFIC

A ≥ 3.3 m ² /person	LEVEL OF SERVICE A Walking speeds freely selected; conflicts with other pedestrians unlikely.
B 2.3 – 3.3 m ² /person	LEVEL OF SERVICE B Walking speeds freely selected; pedestrians respond to presence of others.
C 1.4 – 2.3 m ² /person	LEVEL OF SERVICE C Walking speeds freely selected; passing is possible in unidirectional streams, minor conflicts for reverse or cross movement.
D 0.9 – 1.4 m ² /person	LEVEL OF SERVICE D Freedom to select walking speed and to pass others is restricted; high probability of conflicts for reverse or cross movement.
E 0.5 – 0.9 m ² /person	LEVEL OF SERVICE E Walking speeds and passing ability are restricted for all pedestrians; forward movement is possible only by shuffling; reverse or cross movements are possible only with extreme difficulty; volumes approach limit of walking capacity.
F < 0.5 m ² /person	LEVEL OF SERVICE F Walking speeds are severely restricted; frequent, unavoidable contact with others; reverse or cross movements are virtually impossible; flow is sporadic and unstable.



STREET LEVEL MORNING TRAFFIC at 8-9 AM



Transit hubs and City centers of the future

Urban environments are evolving fast. Cities need to cater to a growing number of people, their ever-changing needs and lifestyles.

It is necessary to ensure that city hubs and buildings are designed to meet modern-day people flow dynamics - sustainability, efficiency and ensuring accessibility for all.



An aerial night photograph of a city, likely Helsinki, featuring a large river, a Ferris wheel, and a prominent stadium with a curved roof. The city lights are visible in the background.

Thank you!

Do you have questions or
want further information?
We are happy to support!

Suvi Valkama suvi.valkama@teliacompany.com

Yiheng Xu xu.yiheng@ramboll.com

Tomi Sipilä tomi.sipila@kone.com

Sakari Lindholm sakari.lindholm@ramboll.fi

RAMBOLL

KONE

 **Telia**