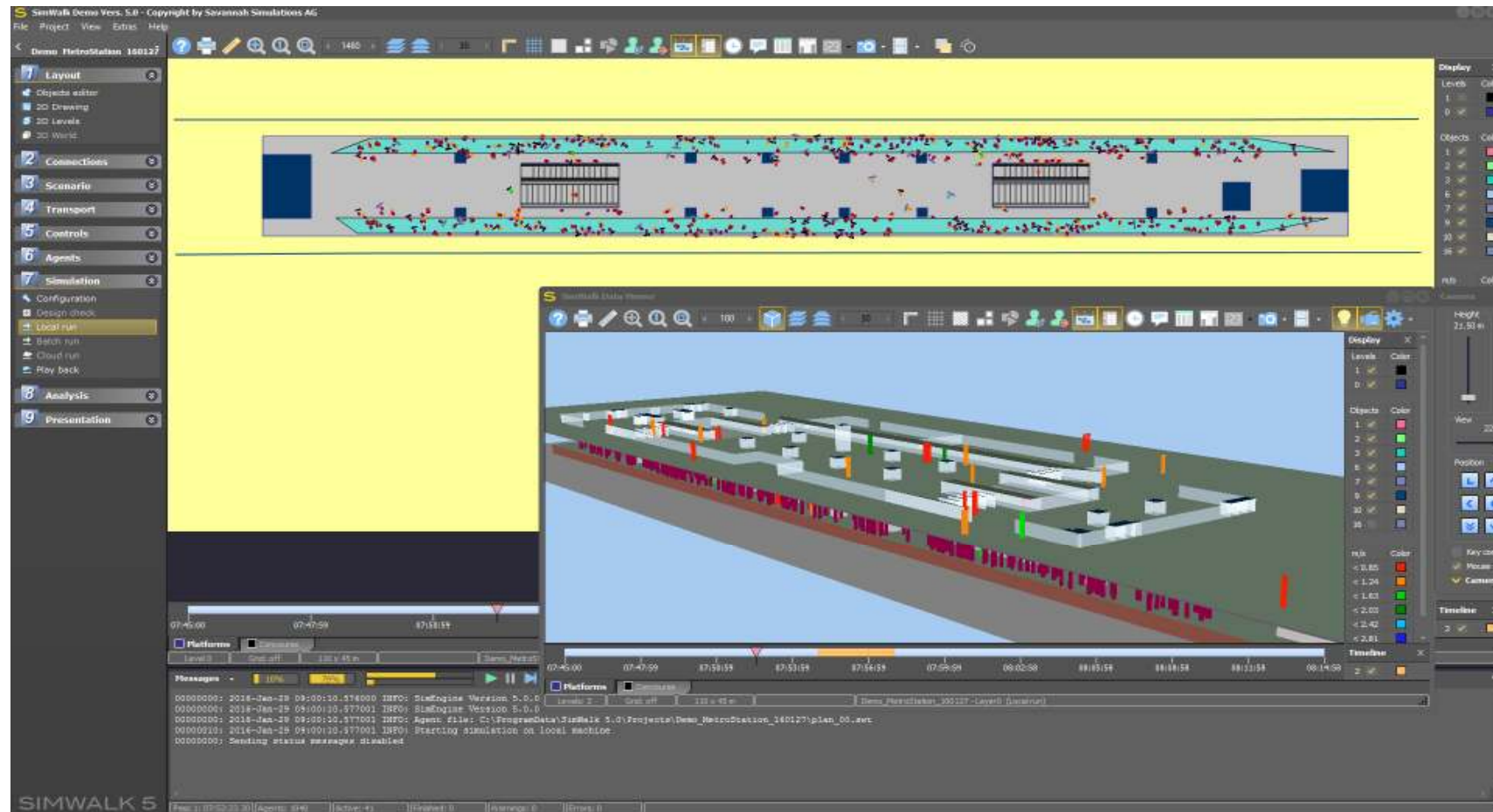


Presentation SimWalk Transport

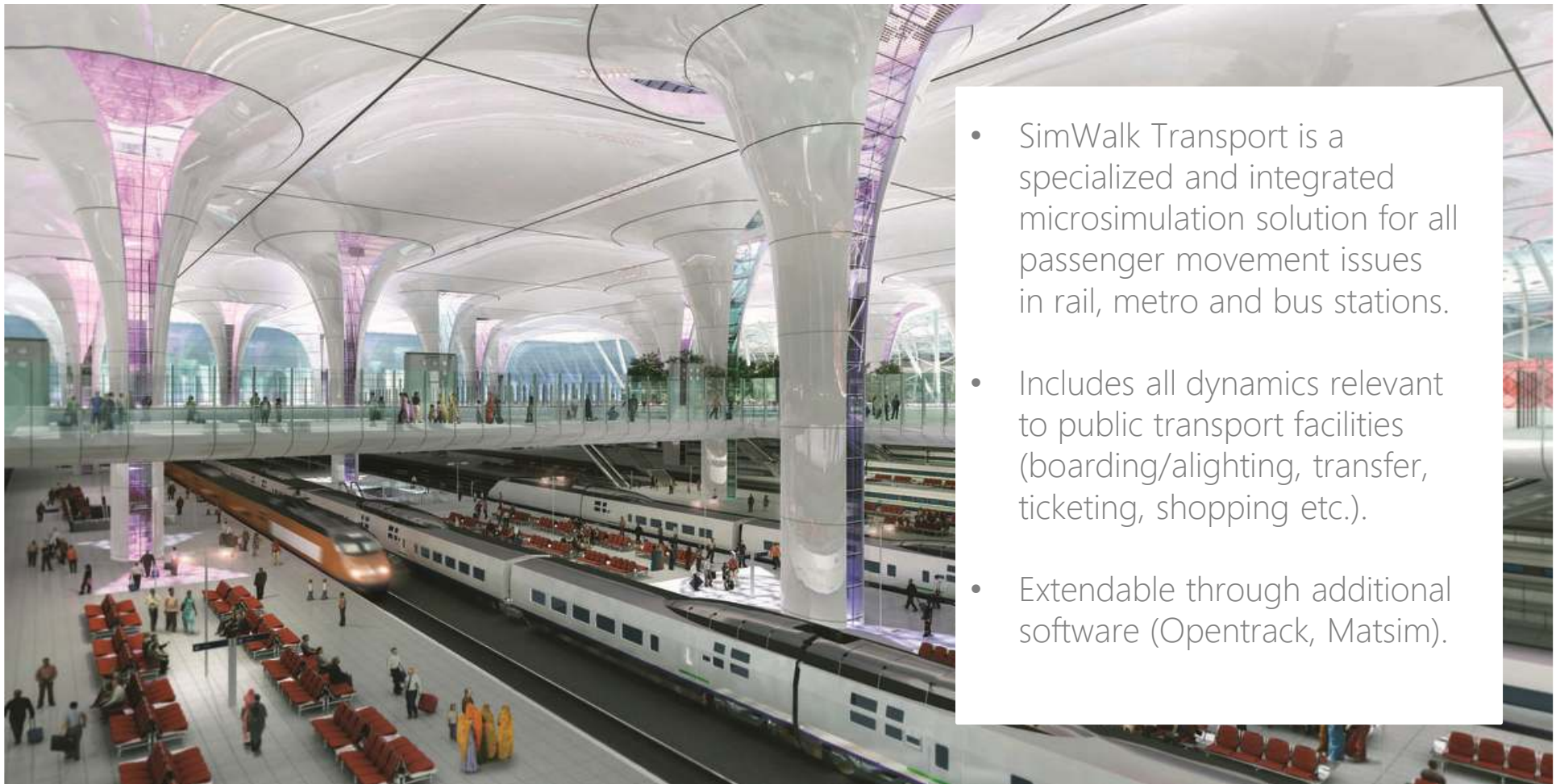
# Optimize passenger dynamics and station design



# Modeling and simulating rail and metro station dynamics



# What is SimWalk Transport in a nutshell ?



- SimWalk Transport is a specialized and integrated microsimulation solution for all passenger movement issues in rail, metro and bus stations.
- Includes all dynamics relevant to public transport facilities (boarding/alighting, transfer, ticketing, shopping etc.).
- Extendable through additional software (Opentrack, Matsim).

# Optimize passenger & rolling stock interaction

- Stations have to be efficient and resilient to rising capacity needs and passenger numbers.
- Passenger simulation allows to improve the efficiency of station designs and the operational interaction between rolling stock time schedules and passenger movement.
- Simulation of train type, door numbers / size, formation, stop points etc.

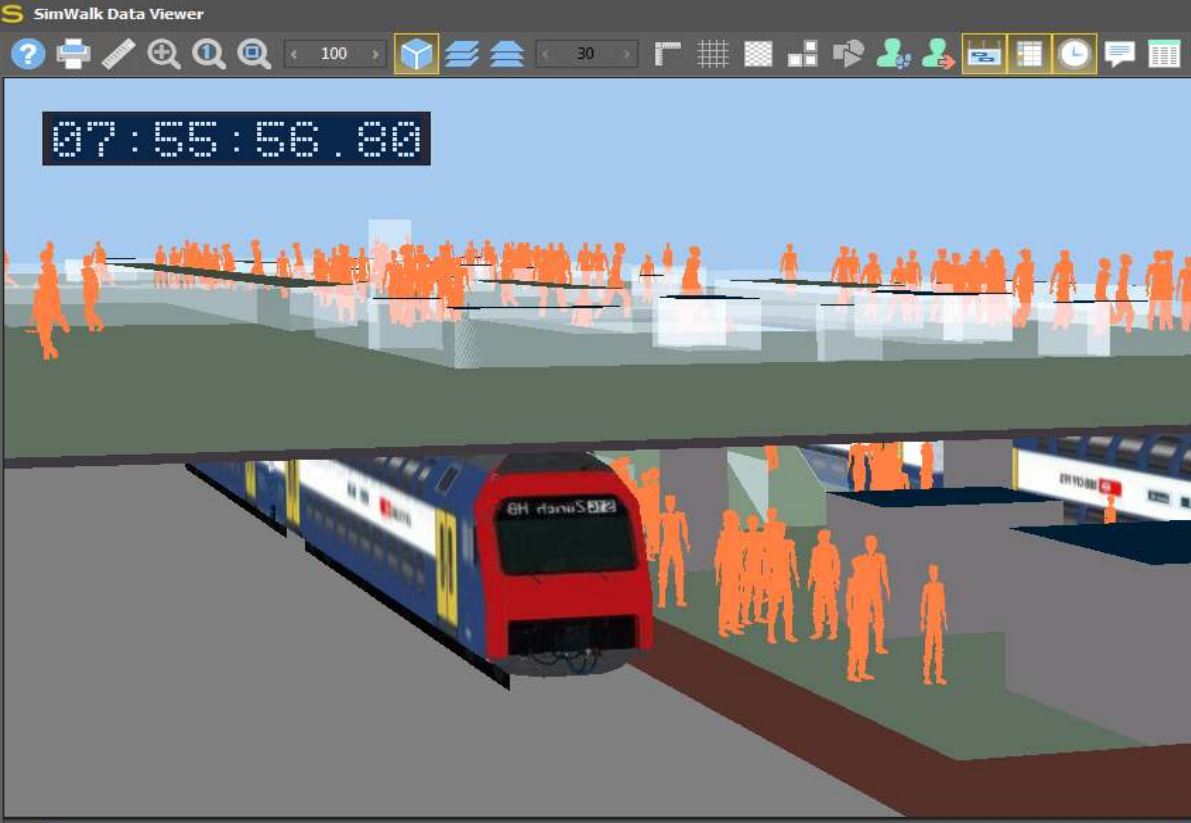


# Add traffic modeling and airport/rail link simulation

- SimWalk Transport can be extended with traffic modeling capabilities around stations as well as air / rail link simulation.
- Simulation of multimodal hubs (train, metro, bus, traffic) with all the dynamics involved.
- High performance computing allows to model large scenarios in close to real-time.



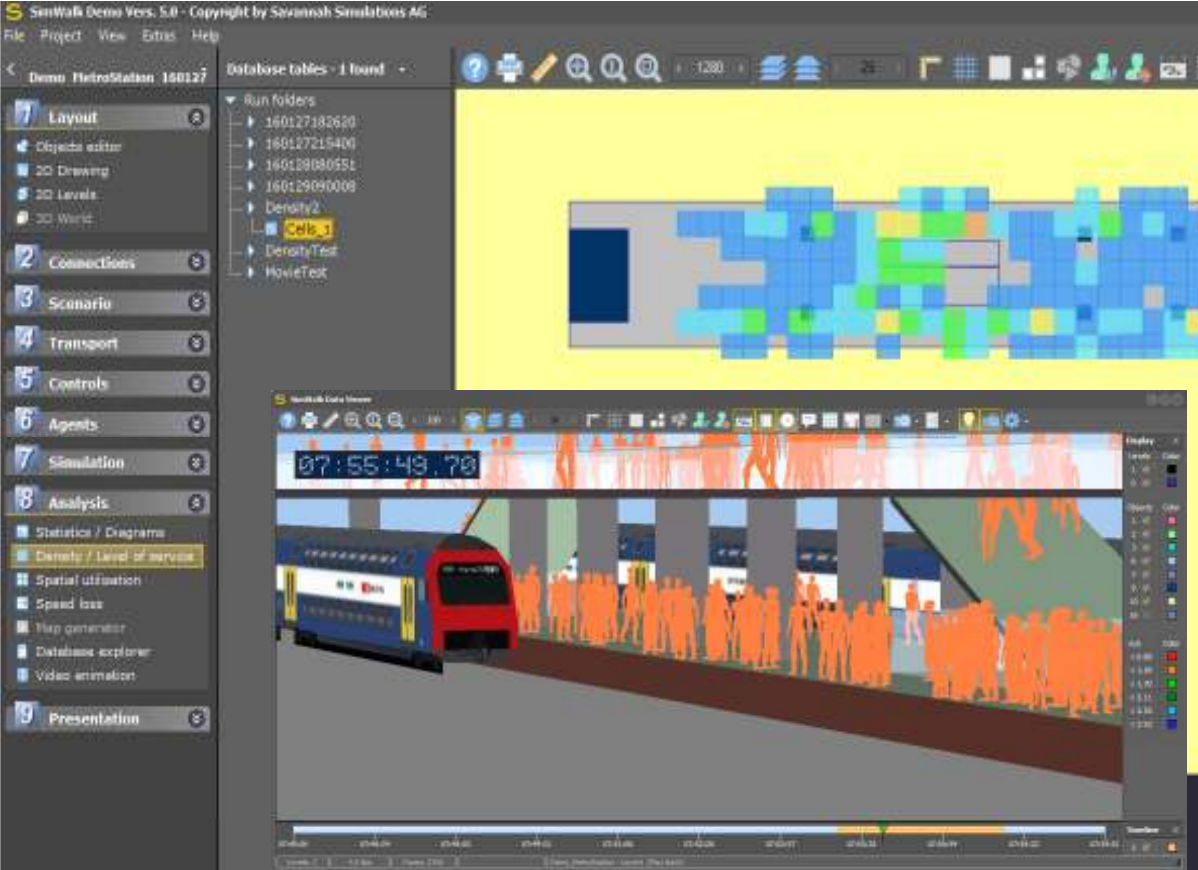
# Use a comprehensive feature set for your station simulation



The screenshot displays the SimWalk Data Viewer interface. At the top, there is a toolbar with various icons for navigation and simulation control. The main view shows a 3D rendering of a metro station platform. A red and blue train is stopped at the platform. Numerous orange human figures representing passengers are scattered across the platform and near the train. A digital display at the top left of the simulation area shows the time 07:55:56.80. The bottom of the interface features a timeline with time markers from 07:45:06 to 07:59:51. Below the timeline, there are status indicators for 'Levels: 2', '1.5 fps', and 'Faces: 2760'. The current simulation layer is identified as 'Demo\_MetroStation - Layer0 (Play back)'.

- SimWalk Transport integrates all objects and interactions needed for the comprehensive simulation of transport station dynamics.
- Escalators, stairs, lifts, ramps, tracks, platforms etc.
- Smart activity (traveling, shopping) and attractivity (attractive, dangerous) passenger routing
- Group modeling

# What can you analyse with Simwalk Transport?



The screenshot displays the Simwalk software interface. The top-left pane shows a project tree with folders for Layout, Connections, Scenario, Transport, Controls, Agents, Simulation, and Analysis. The Analysis folder is expanded, showing options like Statistics / Diagrams, Density / Level of service, Spatial utilization, Speed loss, Map generator, Database explorer, and Video animator. The main 3D view shows a train at a platform with many orange human figures representing passengers. A digital display above the train shows the time 07:55:49.70. A heatmap overlay is visible on the platform area, showing areas of high passenger density in red and yellow, and lower density in blue and green.

All the analytics you need to improve your station operation:

- Passenger density maps
- Speeds and delay time
- Connection transfer times
- Passenger counts & flow rates
- Boarding / alighting analysis
- Platform analysis
- Passenger route choice
- Levels of service (LOS)
- Object capacities (stairs etc.)
- Queuing time

# Extensive rail and metro rolling stock model library

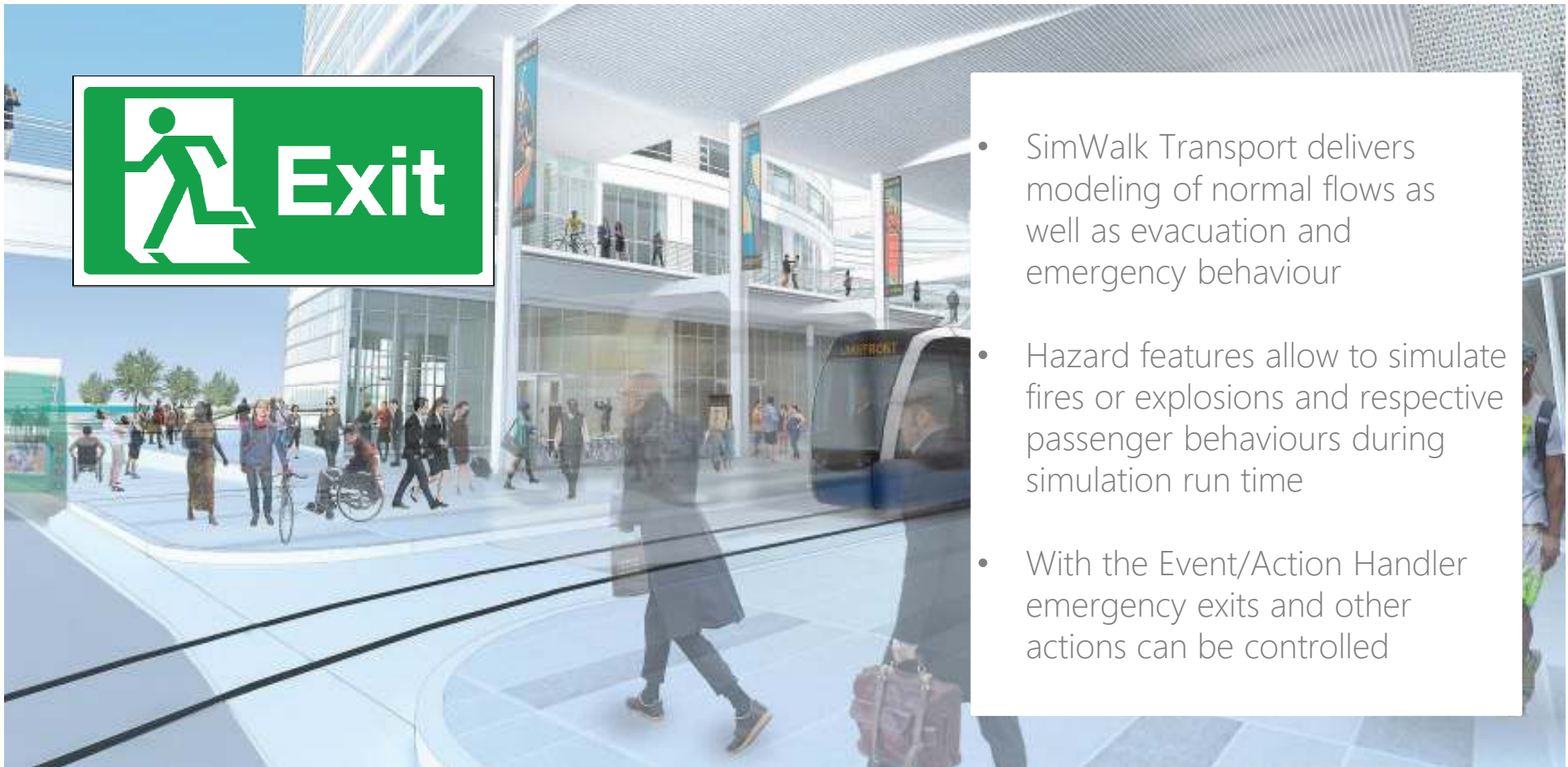
SimWalk Transport includes a growing rolling stock library to create new or re-use existing vehicle types to be used in simulation.







# Normal flows and evacuation behaviour of passengers



- SimWalk Transport delivers modeling of normal flows as well as evacuation and emergency behaviour
- Hazard features allow to simulate fires or explosions and respective passenger behaviours during simulation run time
- With the Event/Action Handler emergency exits and other actions can be controlled

# SimWalk Transport 360 –the permanent station model

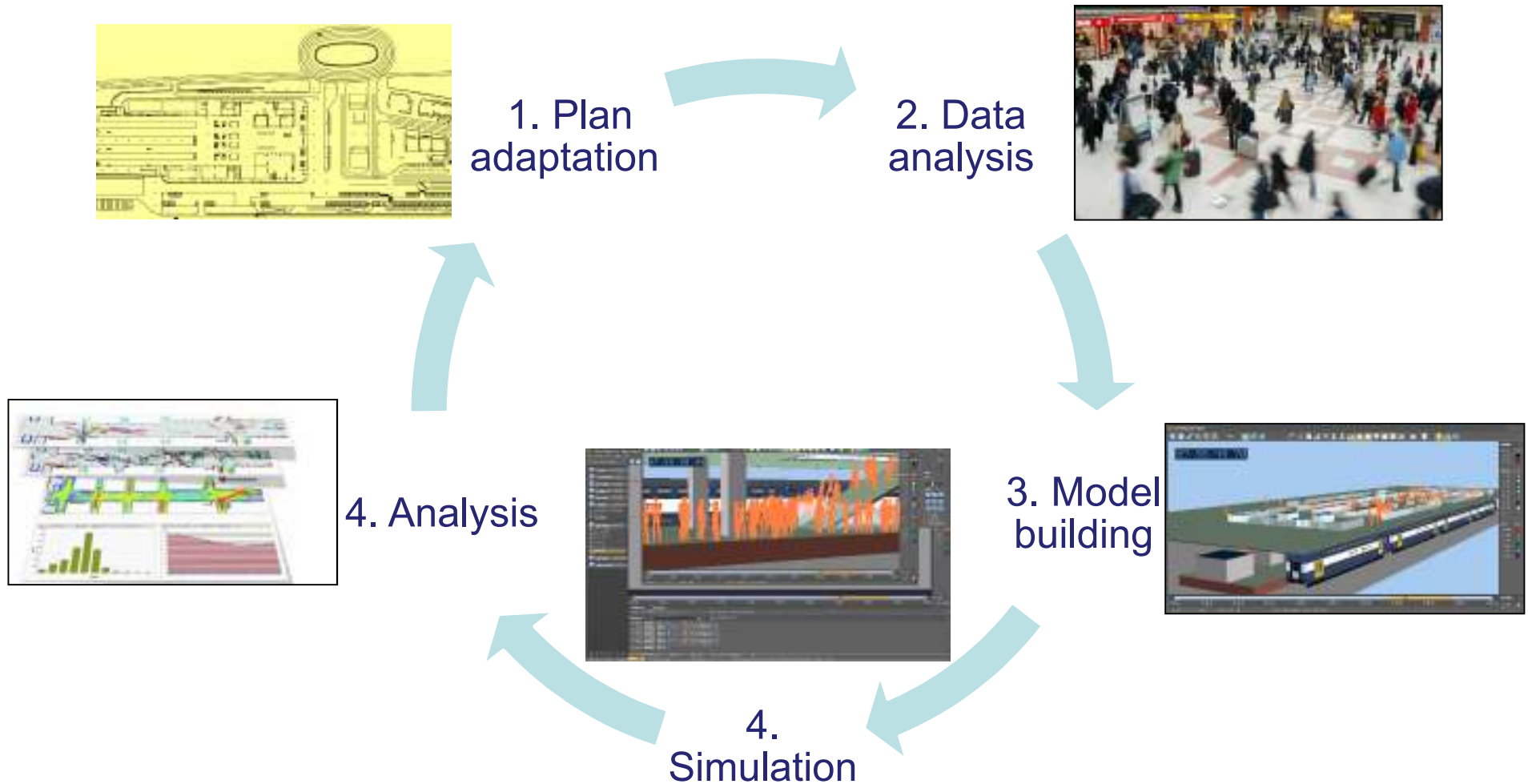
- SimWalk-360 is a permanent, comprehensive station model which can be accessed anytime by any user
- Integrated with other station applications and management systems
- Based on service level agreements and hosted on the cloud with specified user access



# Cloud and high-performance computing capabilities

- 64-bit architecture and parallel processing provide high performance computing on desktop workstations
- Optional cloud and high-performance cluster computing allow scalable simulation calculation
- Permanent model SimWalk-360 based on real-time HPC computing

# SimWalk Transport modeling & simulation loop



# Summary

