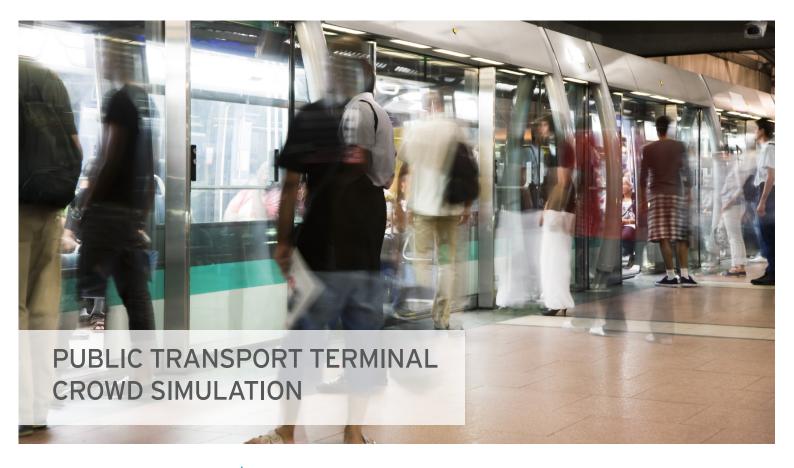


#### APPLICATION AREA PUBLIC TRANSPORT TERMINAL CROWD SIMULATION



# Optimize passenger flows, improve passenger experience and keep all passengers safe at your public transport terminal with simulation software.

## THERE IS NO SUCH THING AS AN ORDINARY DAY

Public transport terminals have many goals, including: optimizing passenger flows, improving passenger experiences and keeping all passengers safe. Achieving these goals is challenging since stakeholders such as retailers, architects, local authorities and transport operators will all acknowledge they have a stake in a well—run public transport terminal. But all have different, sometimes conflicting, priorities. Furthermore, due to delays and rush hours, there is no such thing as an 'ordinary day or hour'.

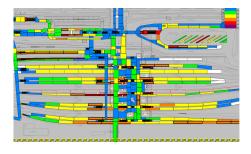
Travelers need enough time to catch their next train or bus. Retailers want to know what the most commercial attractive areas are. Platforms should offer enough capacity, even during rush hour. In case of emergency the terminal should be evacuated safe and quickly. And how exactly does a crowd behave when there is a delay at the transport operator?

#### **TECHNICAL KEY FEATURES**

- Simulate up to 100,000 individuals
- Quick & easy modeling
- Applicable to every kind of infrastructure & venue
- Analyze an area up to two square kilometer
- Realistic crowd movements with unique agent properties
- Amazing 3D visualization
- Detailed output results
- Import drawing & models based on industry standards







Gain insight into pedestrian flows and the visitors density through graphs.

#### SIMULATION SOLUTIONS

Simulation software is the solution for simulating passenger flows at public transport terminals and can be used to evaluate the performance and safety of a terminal. Simulation software enables you to:

- Determine commercial attractiveness of terminal locations by flow measurements;
- Evaluate the capacity and safety of platforms, stairs, walkways, etc. and increase passenger satisfaction;
- Gain insight in the effects of changes in the track allocation of transport operators on passenger flows;
- Gain insight in the effects of delays or cancellations on the complete passenger flow or certain transfers;
- Determine the best spots for turnstiles or fare gates without causing bottlenecks;
- Test and compare different scenarios, such as demanded infrastructures by police, (partial) evacuations, in– and outflow of passengers, etc.;
- Gain insight in the complete infrastructure, pedestrian flows, bottlenecks and (safety) risks;
- Present the infrastructural design of the transport terminal, including pedestrian flows in a 2D and 3D visualization to your stakeholders;
- Enhance safety by developing and testing evacuation plans;
- Save time and money by testing various functionalities during the design phase of a transport terminal.

#### **COMPLEX LOGISTICS ISSUES**

Simulating pedestrian flows has gained ground the last few years. An important reason is that safety of people has become one of the main issues within all kinds of infrastructures. In addition it provides answers to complex, logistic issues related to commerce and capacity management. Many different parties, such as railway maintainers, architects, authorities and emergency services. are already using simulation software to support their mission. INCONTROL offers its own crowd simulation platform Pedestrian Dynamics®.

### **EXPERIENCE INCONTROL**

The experience of projects and knowledge of the INCONTROL developers and engineers are used for the ongoing development of the software. Together with the network of INCONTROL, which will be used optimally at all times and made available for every customer, INCONTROL offers state—of—the—art simulation solutions. Examples of solutions include: A study for a new design of a public transport terminal Utrecht.