

Allianz Arena

HOW DO PEOPLE REACH  
THEIR DESTINATIONS?





Pedestrian zones, underground stations, major events – whenever there are many people, things can quickly become confusing. But not for you! PTV Viswalk assists you in simulating and analysing the walking behaviour of any number of pedestrians in a realistic and reliable manner.

## FUNCTIONS

Walking always was and remains the most prevalent mode of transport. But unlike vehicles, pedestrians do not follow strict rules. They spontaneously stop, change directions or make sudden turns. We have accepted the challenge and have developed a solution that takes into account the psychology of human walking behaviour.

- ▶ CAD import
- ▶ Dynamic potential field for fastest path calculation
- ▶ Simulates walking behaviour based on the scientifically proven Social Force Model
- ▶ Calculation of analytical output such as journey times, density levels, level of service (LOS), queuing times and waiting times
- ▶ Realistic simulation inside and outside of buildings
- ▶ Generates 2D and 3D animations concurrently



In combination with PTV Vissim you cannot only simulate pedestrian behaviour but also their interaction with traffic and transport. Here are some examples:

#### RAILWAY STATION PLANNING

- ▶ Analyse the effects of a station's architecture, such as platforms, corridors, escalators and lifts, on the route choice in a building
- ▶ Model pedestrians interacting with public transport
- ▶ Analyse how the behaviour of passengers getting on and off the train affects the trains' dwell times

#### TRAFFIC PLANNING

- ▶ Model the impact of pedestrian flows on vehicles
- ▶ Evaluate different traffic scenarios (e.g. analyse the impacts of signal control systems at complex intersections on waiting time, and plan pedestrian crossings or adjust the infrastructure to the actual traffic and pedestrian volumes)
- ▶ Take pedestrians' needs into account for urban planning

## USE CASES

### FACILITY PLANNING

- ▶ Analyze capacity and use space efficiently
- ▶ Avoid bottlenecks and remove possible spatial barriers when planning new buildings or assessing the current conditions of existing office space
- ▶ Compare alternative planning variants by the relation of costs to results

### EVENT PLANNING

- ▶ Visualise the flow of people based on simulation results
- ▶ Realistic routing shows you where facilities like shops, restrooms and escape routes can be placed in an optimal way
- ▶ Evaluate capacities and security procedures
- ▶ Display the simulation results in a comprehensive 2D or 3D environment

### EVACUATION ANALYSIS

- ▶ Pedestrian safety is of paramount concern, in particular in public places
- ▶ Evaluate numerous structural and organisational measures aimed to reduce and control unmanageable behaviour of people in emergency situations
- ▶ Analyse potential danger and plan pedestrian flows in buildings, stadiums and other facilities
- ▶ Simulate escape routes and evacuation scenarios in high-rise buildings and tunnels



## ADVANTAGES

- ▶ Based on latest scientific findings
- ▶ Models any number of pedestrians
- ▶ Easy to use
- ▶ Descriptive and convincing results
- ▶ Seamless integration with Vision Traffic suite
- ▶ Strong services available

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## HOW DOES PTV VISWALK FIT INTO THE VISION TRAFFIC SUITE?

