



STADIUM CROWD SIMULATION

TECHNICAL KEY FEATURES

- Simulate up to 100,000 individuals
- Quick & easy modeling
- Applicable to every kind of stadium or arena
- 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

Facing great challenges regarding crowd safety, security and capacity management?
Analyze crowd behavior with simulation software!

STADIUM CROWD SIMULATION

Crowd Safety, security and capacity management are important issues during the design and construction phases of stadiums and arenas. Even if the location is already in use, new and existing conditions will regularly have to be reconsidered because every event or activity in the stadium has its own organization and therefore guidelines for safety and capacity. And of course, you want your visitors feeling safe and satisfied about their visit.

- How much time do I need to evacuate my stadium?
- Does my stadium meet the requirements of sports confederations?
- What is the maximum safety capacity in relation to the entry flow rate and holding capacity?
- How many emergency exits, toilets, lockers and staff do I need and where do I need them?
- What positions for catering are most suitable to maximize both safety & security requirements and commercial revenues?

These are all issues that can be answered with simulation software by modeling and analyzing pedestrian flows.

Using simulation software will repay itself by ensuring safety, increasing spectator experience and creating commitment from unions and governments.

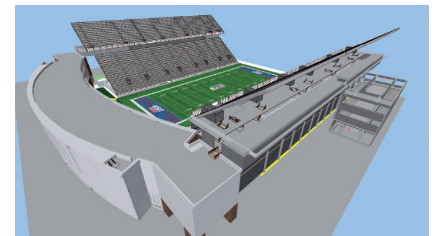
SIMULATION SOLUTIONS

Simulation software provides solutions during the design, construction and operational phase, in order to:

- Determine technical requirements for your stadium, based on their expected use or authority demands (FIFA, UEFA, National FA's, Government);
- Determine commercially attractive areas within your stadium;
- Gain insight into complete infrastructure, visitor flows, bottlenecks and (safety)risks;
- Test and compare different alternative (emergency) scenarios, such as evacuations, partial evacuations and in- and outflow of visitors;
- Develop evacuation- and contingency plans;
- Develop and evaluate mobility- and infrastructure plans;
- Save time and money by testing various functionalities of your stadium during the design phase.

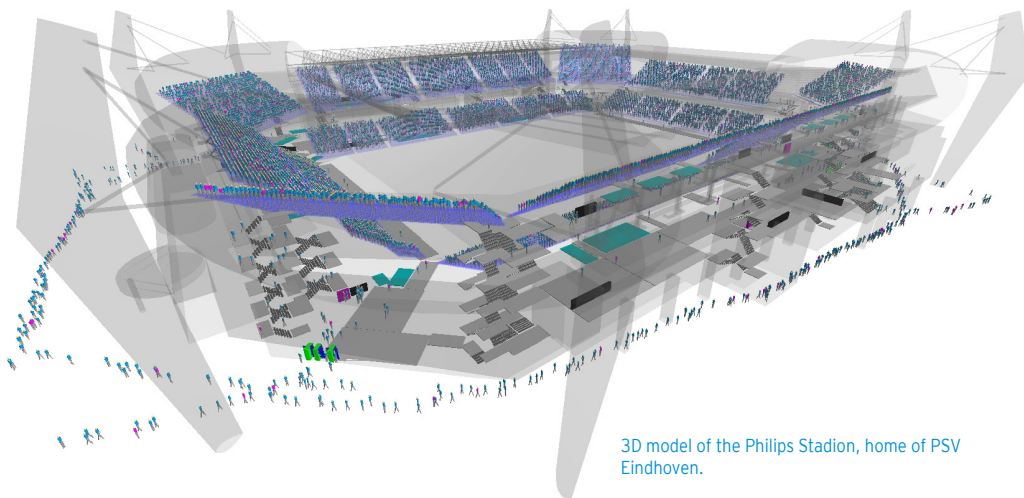
GET INSIGHT INTO PEDESTRIAN FLOWS AND BOTTLENECKS IN YOUR STADIUM

Simulating visitor flows gained ground the last few years. An important reason is that safety and security of visitors has become one of the main issues during large scale events and during the construction of stadiums. In addition it gives answers to complex issues related to capacity management and commerce in stadiums. Simulation software gives insight into visitor flows and possible bottlenecks in the modeled situation. Many different parties, such as venue owners event organizers, soccer clubs, architects, authorities, 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 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 projects include: An evacuation study for 'De Kuip' (existing Feyenoord Stadium) and a study regarding inflow, outflow and evacuations of the Arena Do Grêmio Stadium in Alegrense in Brazil (new design).



3D model of the Philips Stadion, home of PSV Eindhoven.