AnyLogic Professional

Why AnyLogic Pro?

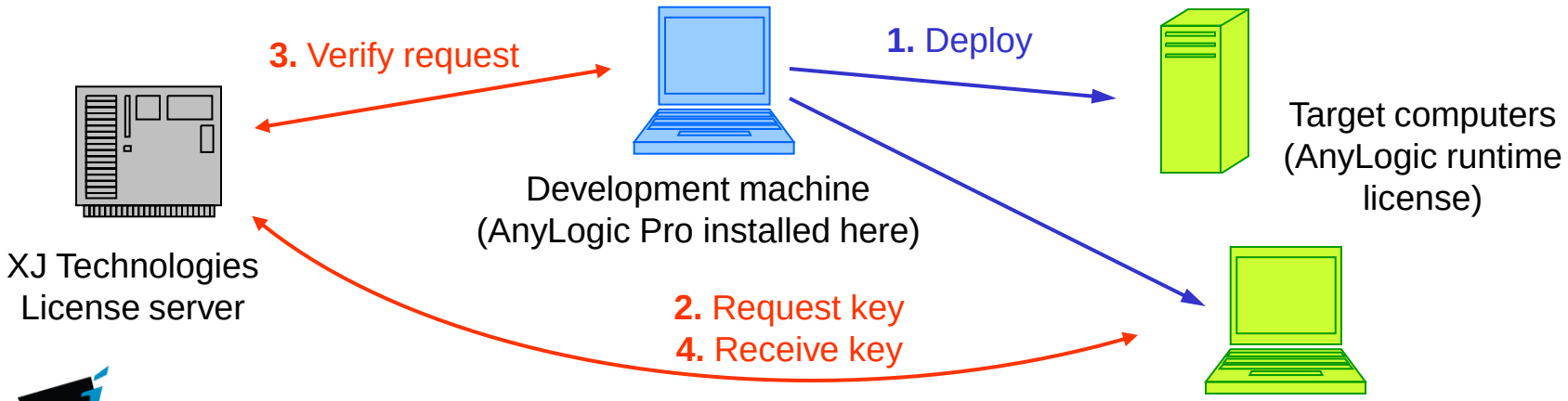
- Export your models and embed them into larger IT environments
- Develop your own libraries and solutions for specific areas
- Design sophisticated animations, use CAD drawings and GIS maps
- Work in teams, use version control software, debug at Java level
- Run complex experiments

AnyLogic Pro feature list

- You can export models as standalone Java applications
- Develop your own libraries, plug-in and share them
- Java level debugger
- Integration with version control software
- Easy integration with databases, spreadsheets and text files
- More UI elements
- Embedding of CAD drawings
- OptQuest is included
- More experiments:
- GIS integration, support of GIS in agent based modeling
- Pedestrian library is included
- Save, restore and export the simulation output
- Save and restore the complete snapshot of the model at runtime

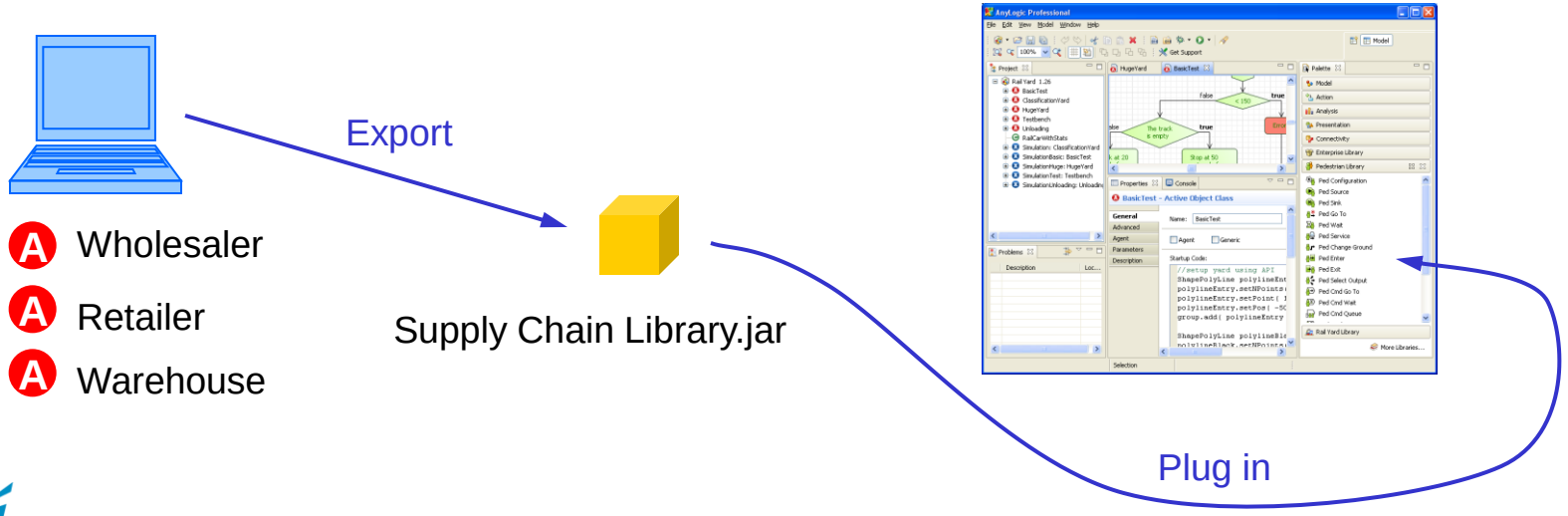
Export your models

- Advanced edition:
  - Run models from AnyLogic IDE, or
  - Export models as Java applets – restricted mode
- Pro edition:
  - Export models as Java applications
  - Integrate them with other software
  - Manage installations with AnyLogic runtime licenses



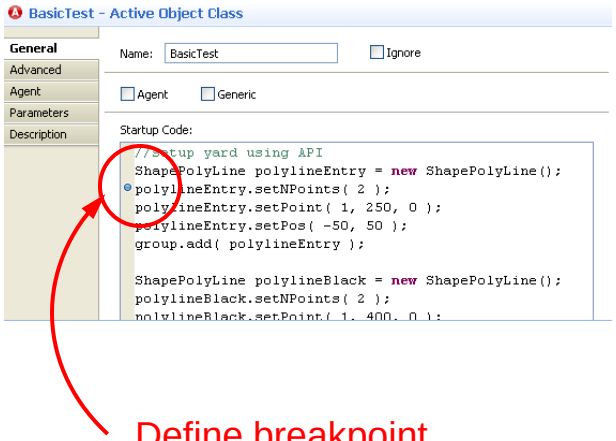
Develop your own libraries

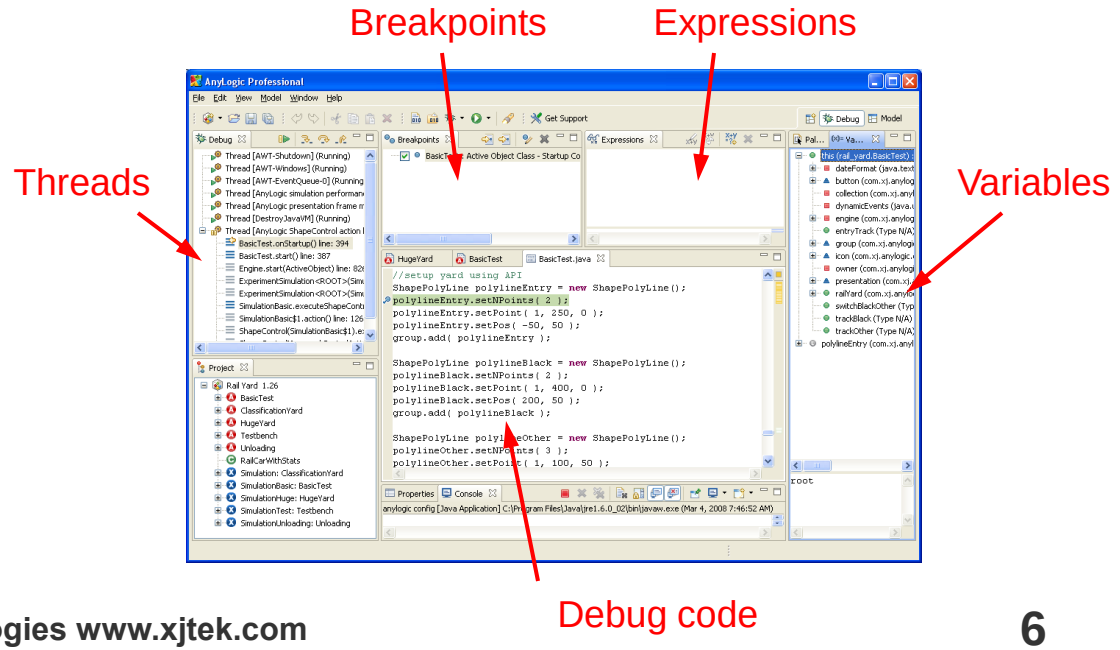
- Advanced edition:
  - Enterprise Library included
- Pro edition:
  - Package your set of Active Objects as a library
  - Plug in the library into AnyLogic IDE
  - Share the library with other people



Use Java-level debugger

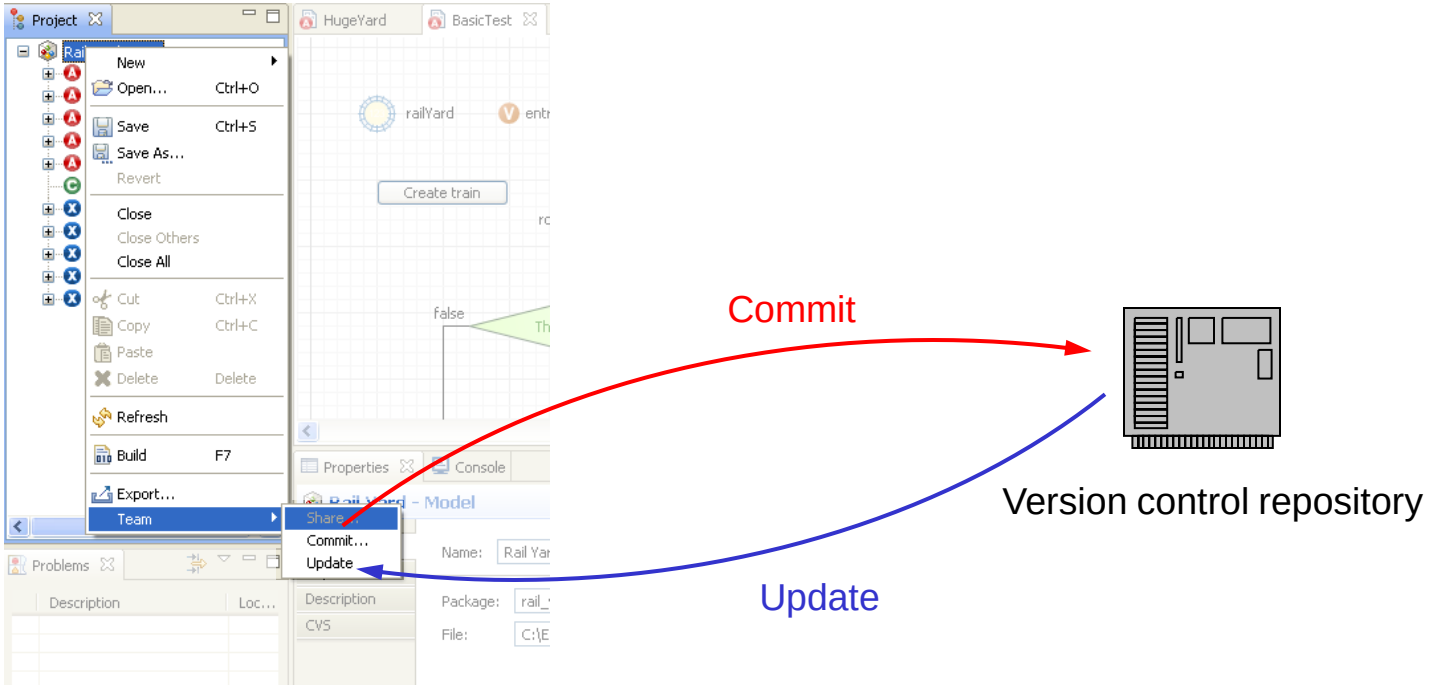
- Full-featured Java debugger included
  - Define breakpoints directly in property pages and in Java class editors
  - Run models in Debug mode and switch IDE to Debug perspective
  - Step through your code, inspect variable values, view threads





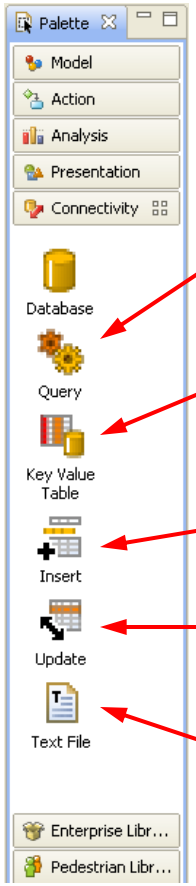
Use version control software

- Access version control directly from AnyLogic
  - Keep history of changes you make to the model
  - Share model components with other team members



Read and write to DB without coding

- A set of easy-to-use objects to access external data



Query: populates an agent based model (or any collection) with objects whose properties are read from a table

Key Value table: loads a <key,value> table from a database and lets the user to access it

Insert: inserts a row into a table

Update: updates a row in a table; the row is identified by a key

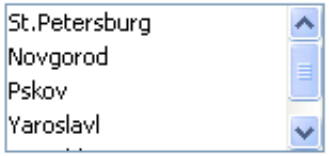
Text file: offers simple API to read and write from text files

Use extended set of UI elements

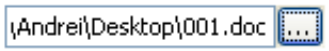
- In addition to the controls available in Advanced:

- Pro edition offers more interactive UI elements:

Combobox



List box

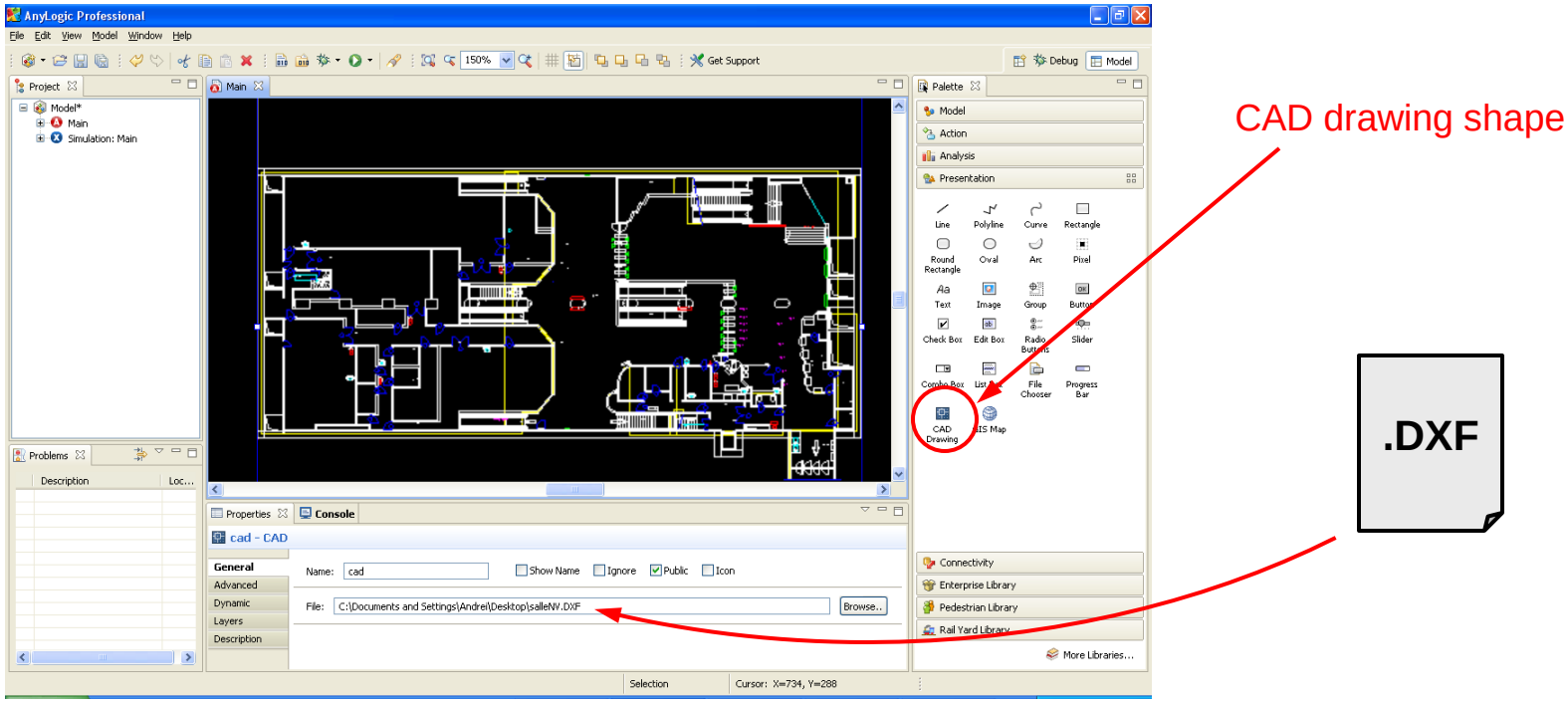


File chooser

Progress bar

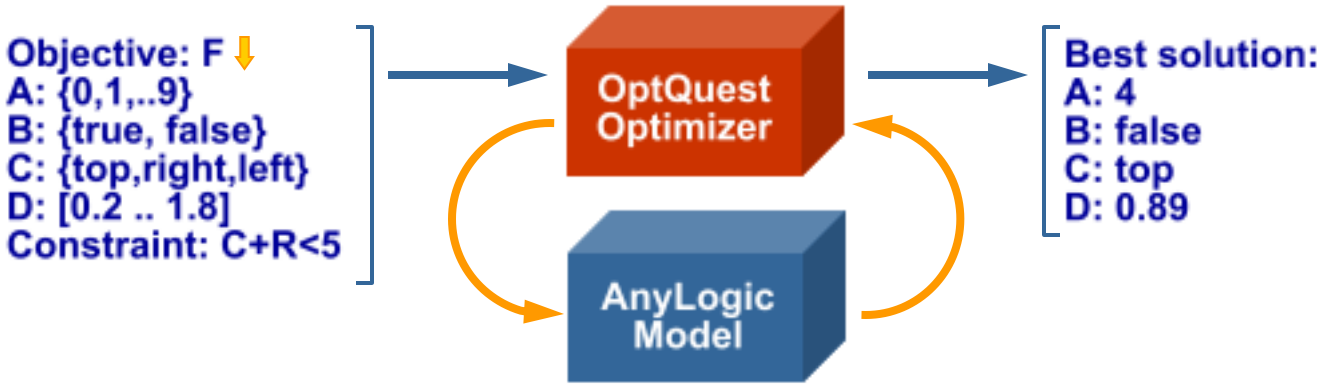
Use CAD drawings in animations

- Insert drawings (DXF format) in your presentation
  - Choose layers to display
  - The drawing will scale when AnyLogic presentation is zoomed



Use OptQuest at no additional cost

- While in Advanced edition OptQuest is an option, in AnyLogic Pro it is included by default
  - Search for the best solution
  - Define constraints and requirements
  - Optimize under uncertainty
  - Use optimizer to calibrate your models

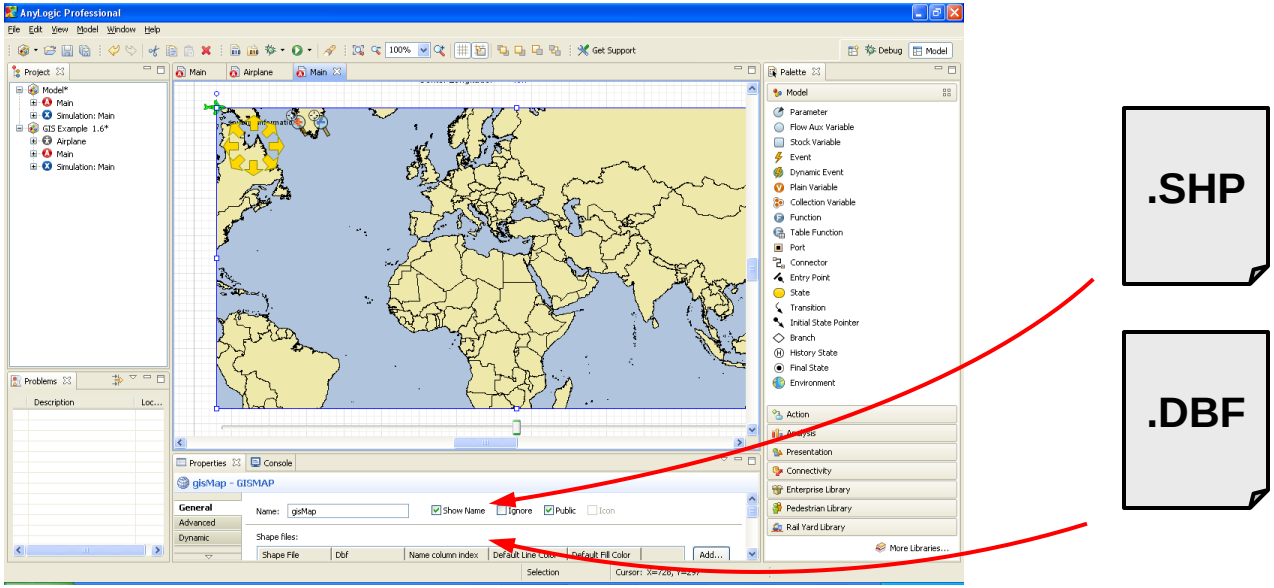


Extended set of experiment types

- Advanced edition:
  - Simulation, Parameter Variation, Optimization (option)
- Pro edition also includes:
  - Compare runs: compare simulation outputs for different parameter sets
  - Sensitivity analysis: explore how sensitive are the simulation results to variation of the model parameters
  - Monte Carlo: run a (stochastic) simulation a number of times, obtain the collection of outputs and view them as a histogram
  - Calibration: tune parameters of the model so that its behavior in particular conditions matches a known (observed) pattern
  - Custom experiment: develop your own scenario using AnyLogic API

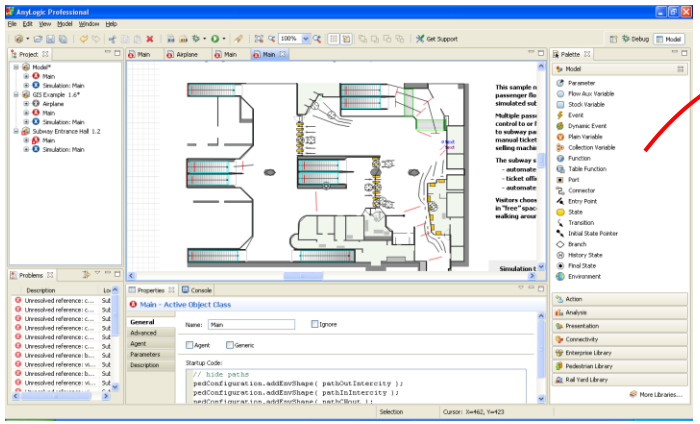
Embed GIS maps. Let agents live there

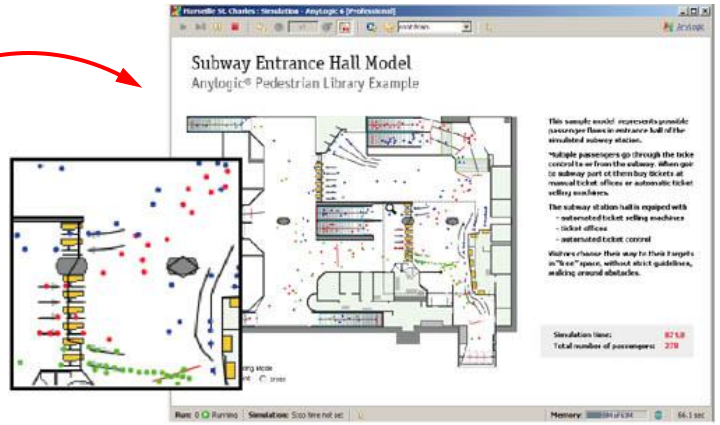
- Develop geography-aware models
  - Insert GIS maps in AnyLogic presentation
  - Link model coordinates with latitude and longitude
  - Control maps via API (scale, move, fill regions, etc)
  - Use Agent space type “GIS Space”



Model pedestrian dynamics

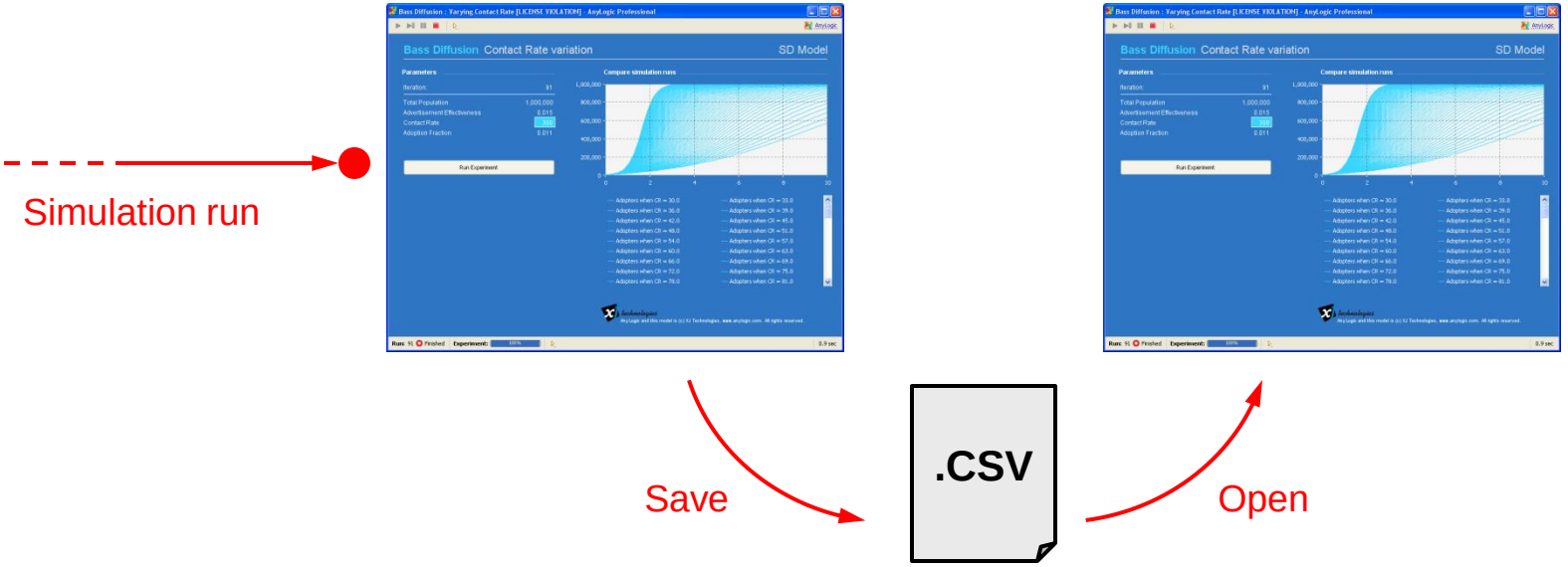
- Be aware:
  - Traditional (discrete-event, queuing) modeling may give incorrect results in areas with dense pedestrian movement!
- Use AnyLogic Pedestrian Library
  - To accurately model interaction of pedestrians with each other and the environment (walls, turnstiles, escalators, stairs, etc.)
  - Visualize pedestrian movement and collect statistics





Save, restore and export simulation output

- Statistics, datasets, histograms, and charts…
  - …that belong to the experiment UI can be saved to a file and loaded again without re-running the model
  - The file format is .csv – you can open it with spreadsheet and text editors



Save and restore the model snapshot

- The full state of a model during runtime…
  - Can be saved to a file
  - Then restored at a later time so the simulation can continue from the same point
- Is used for:
  - Resilience (periodically save state of a “heavy” simulation)
  - Skipping warm-up period (simulate warm-up once, save state, and reload it for different scenarios)
  - Running distributed simulations when roll-backs are needed