



AnyLogic 6.6 New Features

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Full support for "classical" System Dynamics modeling

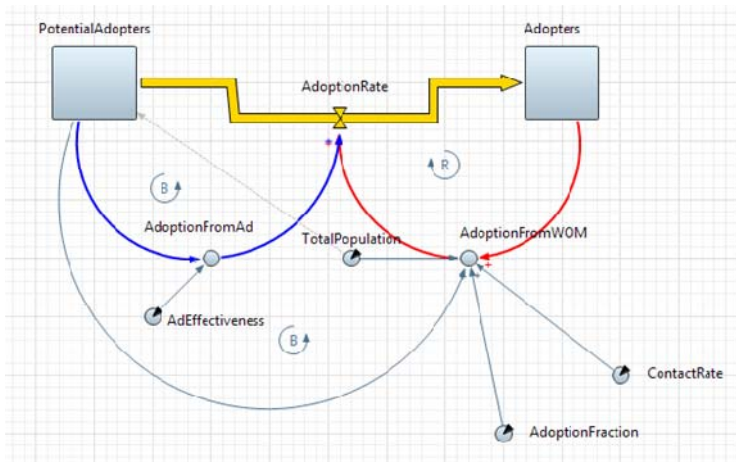
AnyLogic now provides full-featured support for the "classical" way of creating system dynamics models while keeping the older "AnyLogic way" available as an option.

The most important new feature is the ability to explicitly draw dependencies between system dynamics variables and enter the formulas later, which are then checked for consistency with the graphical structure. This is a natural workflow for most system dynamics modelers.

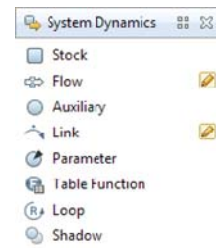
Other SD features include:

- **Flow** is now a separate object in the **System Dynamics** palette. Graphically, flow is a line and a valve that are either connected to a stock at each end or end in a "cloud". Flows can now be polylines.
- Stocks can now be of different sizes.
- You can customize the color of stocks and flows.
- Stocks are animated at runtime as their value changes, and the corresponding flows are animated as well.
- Creation of shadow variables has been made a lot easier. You simply drop the **Shadow** object from the palette and select the original variable from the list.
- The balancing/reinforcing loop icons can now be dragged/dropped from the palette.
- Dependency arcs can now have polarities.
- The Vensim™ to AnyLogic automatic model converter has been updated to reflect these changes.

Visual appearance of stock and flow diagrams is now a lot better



New System Dynamics palette

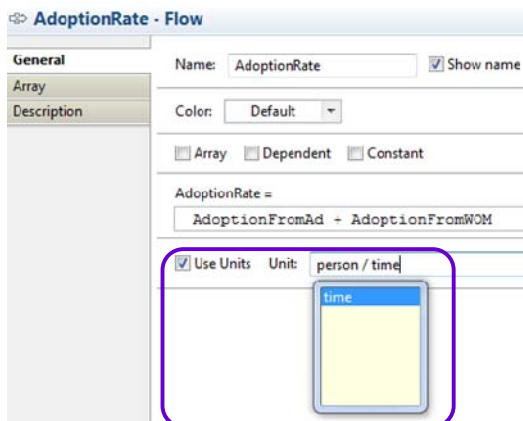


General	
Name:	PotentialAdopters <input checked="" type="checkbox"/> Show name <input type="checkbox"/> Ignore <input type="checkbox"/> Public
Color:	Default
<input type="checkbox"/> Array	
Initial value:	TotalPopulation
Equation mode:	<input checked="" type="radio"/> Classic <input type="radio"/> Custom
$d(\text{PotentialAdopters})/dt =$	-AdoptionRate
<input type="checkbox"/> Use Units	Unit: <input type="text"/>

New SD features

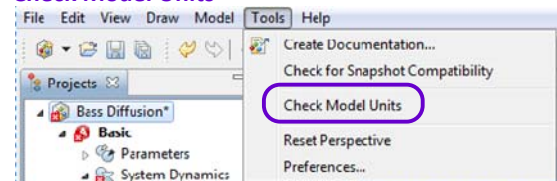
Unit checking

In AnyLogic 6.6 you can assign units to dynamic variables and parameters. These model elements now have a special field **Unit** which can be turned on and off. Units such as dollars, people, miles, time, etc. can be entered there and unit checking can be performed for all expressions. Incomplete or inconsistent units will be reported in the **Problems** view.

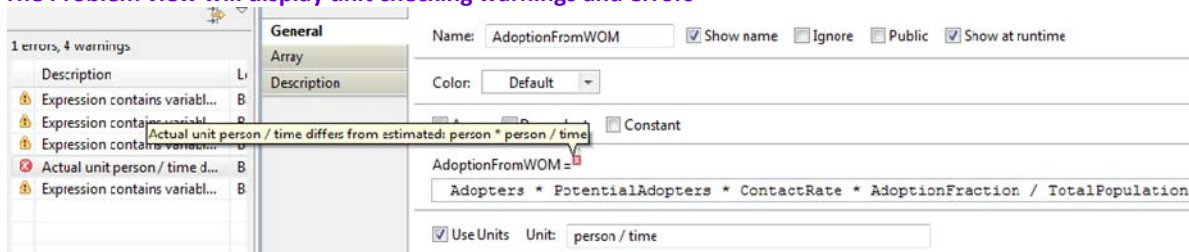


Dynamic variables and parameters now have Use units checkbox and Unit editor with autocompletion

To perform unit checking choose Tools | Check Model Units



The Problem view will display unit checking warnings and errors

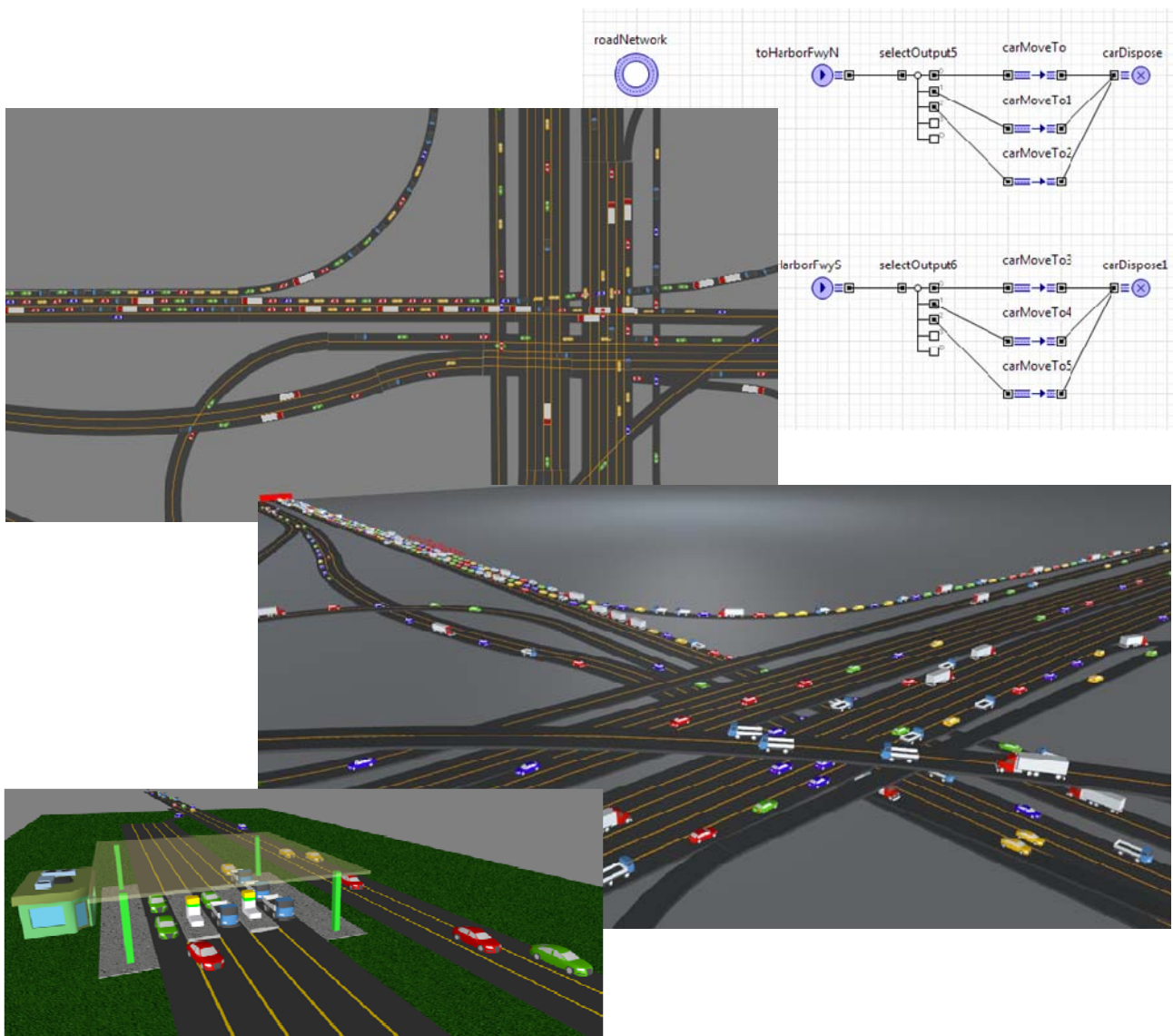


Unit editor. Results of unit checking

Road Traffic Library [preview version]

The new **Road Traffic Library** allows you to create, simulate and visualize vehicle traffic models. The library enables a very efficient level of physical vehicle movement modeling while supporting a high level of detail. It is eminently suitable for modeling multiple traffic scenarios: highway traffic, street traffic, on-site transportation at manufacturing sites, parking lots, or basically any system with vehicles, roads, and lanes. The library can be used to model very large scale traffic systems since it allows you to represent parts of the system at a higher-level of abstraction using discrete event or system dynamics methods that are less computationally demanding.

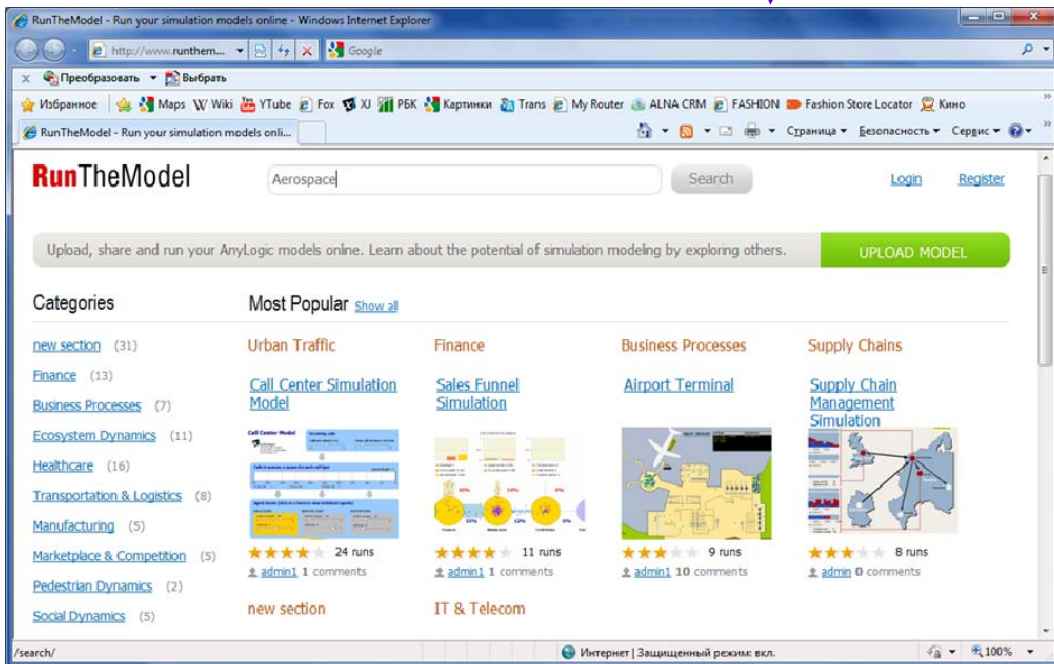
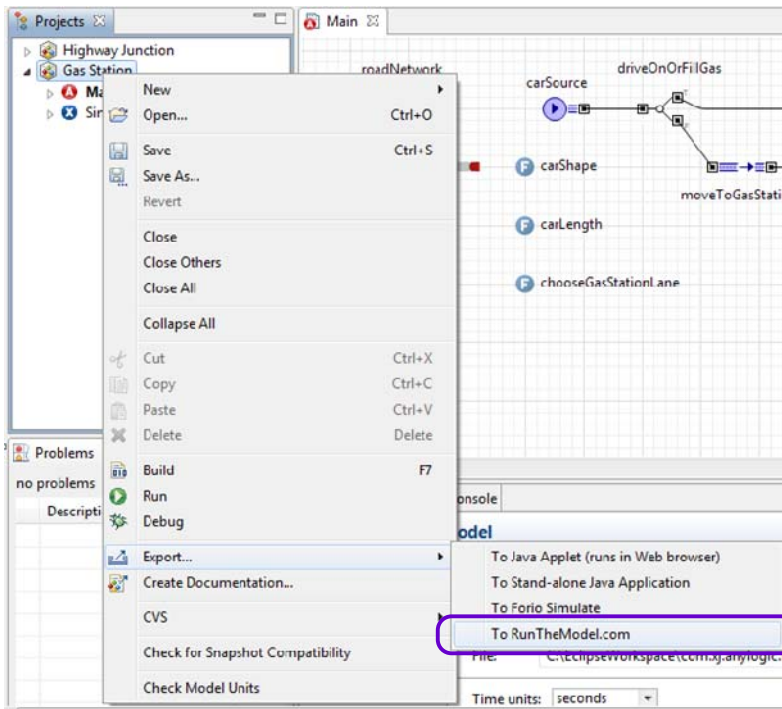
Naturally, the Road Traffic Library integrates well with AnyLogic **Enterprise Library**, **Pedestrian Library**, and **Rail Library**, which means you can readily combine vehicle traffic models with models of trucks, cranes, ships, trains, passenger flows, manufacturing or business processes. This will facilitate multi-transport models such as urban planning, evacuation simulation complex supply chains, and a host of other applications.



Flowchart of a traffic model. 2D and 3D animation of road traffic models

Share your models with RunTheModel.com

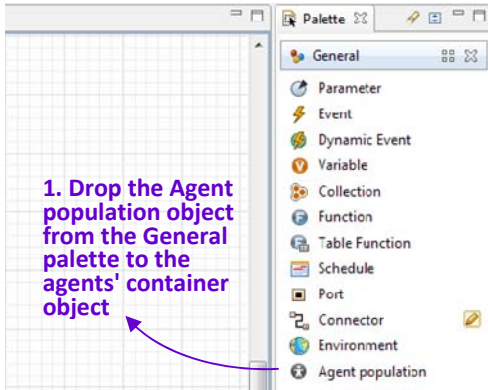
We have launched a unique new simulation community portal – RunTheModel.com (site currently in Private Beta). It is the place to search, run, share, and discuss simulation models online. AnyLogic models can be uploaded directly from the development environment. You can review others' models, identify possible collaborators, or get new ideas for your next project.



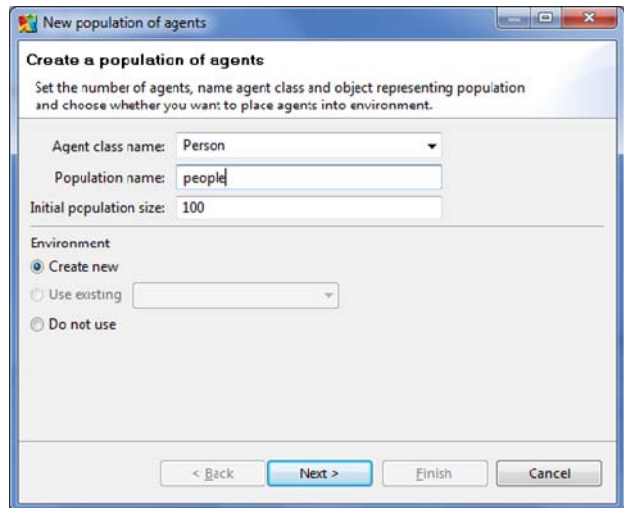
RunTheModel.com – a unique web resource for simulation models

Agent wizard – the easy way to create agent based models

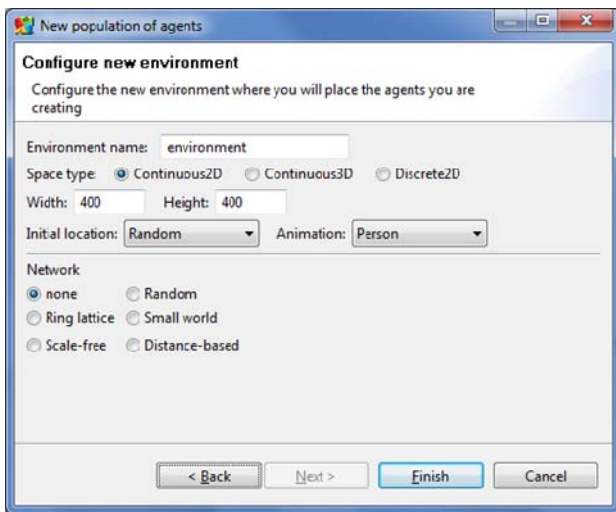
Creating new agent populations in AnyLogic models is now a matter of a single drag and drop. The new object **Agent Population** in the **General** palette creates a new agent class and sets up a collection of agents, their animation, and environment in the upper level active object.



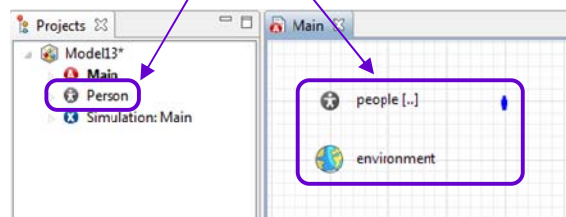
2. Setup the agent class name, the name of the population and the initial number of agents



3. Setup the environment properties



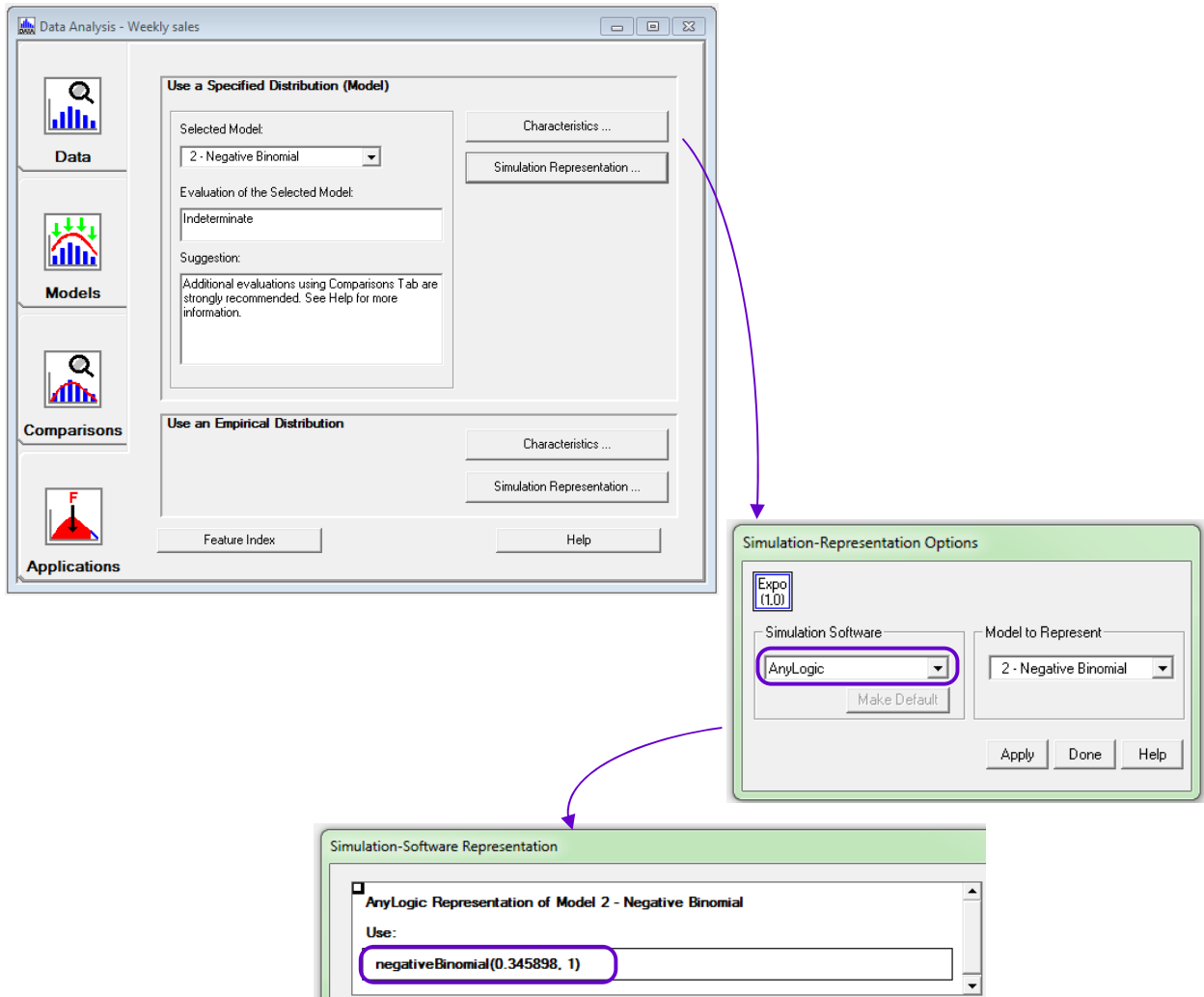
4. The wizard creates the agent class, the collection of agents in Main object, agent presentation and the environment



Agent Population object, Agent wizard, and results of its work

ExpertFit™ now integrated with AnyLogic

The well known distribution fitting software ExpertFit now supports AnyLogic. You can use ExpertFit to process your data sets, determine the best-fitting distribution, and obtain its analytical form in AnyLogic syntax.



New example models

Main example set (**Examples** folder on the **Welcome** page):

- Highway Junction
- Gas Station
- Airport
- Terrorist Attack On A City Square

Small **How-To Models**:

- External JAR files
- Model Running Step By Step
- Storage With Initial Stock



New example models

Other new features and improvements

More collection types

The AnyLogic **Collection** object now supports more collection types: **HashSet**, **LinkedHashSet**, **TreeSet**, **HashMap** and **TreeMap**.

New 3D shape: Arc

The Arc graphical element can now be displayed in 3D animation. Arc can optionally have slope (**dZ** property), which can be used to visualize highway junctions in road traffic models.

Show at runtime option is now available for presentation shapes

Now you can create presentation shapes that are visible only at design time and not at runtime.

Copy chart image to clipboard

At runtime you can get an image of a chart onto the clipboard by selecting **Copy chart image** from the context menu..

X and Y axes in the graphical editor

Axes in the graphical editor are now drawn as thick black lines with arrows.

USB Dongle activation for University Researcher and Educational license types

Users with University Researcher and Educational licenses can now share AnyLogic via the supplied USB dongle.

Rail Library is now available in AnyLogic Educational

We encourage educational users to build rail models and help us to further improve the library.

German and Chinese UI localization

With the help of our German and Chinese partners we have completed the translation of AnyLogic UI text elements to those languages