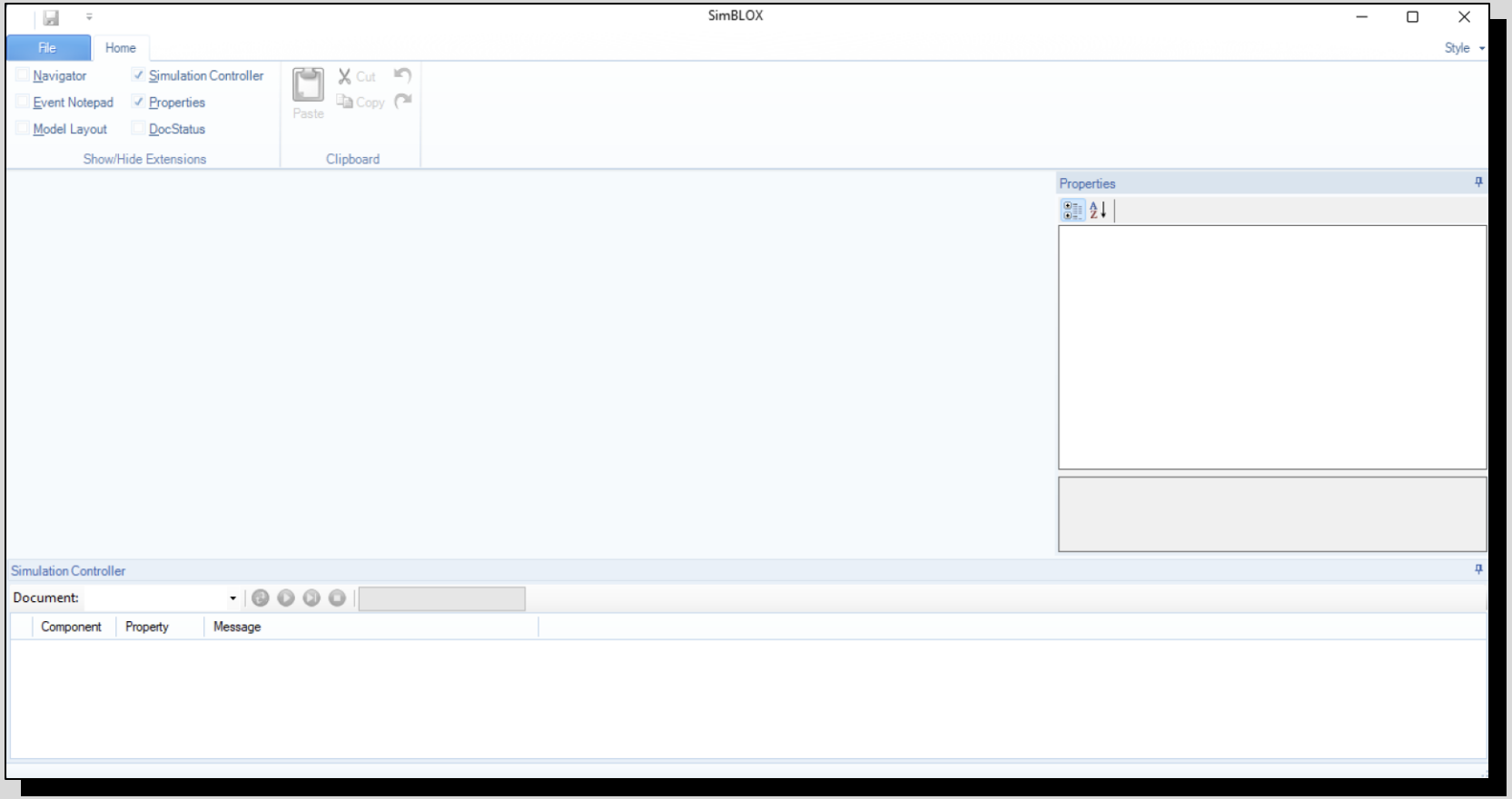
Beer Game on Steroids (BGOS) Tutorial:

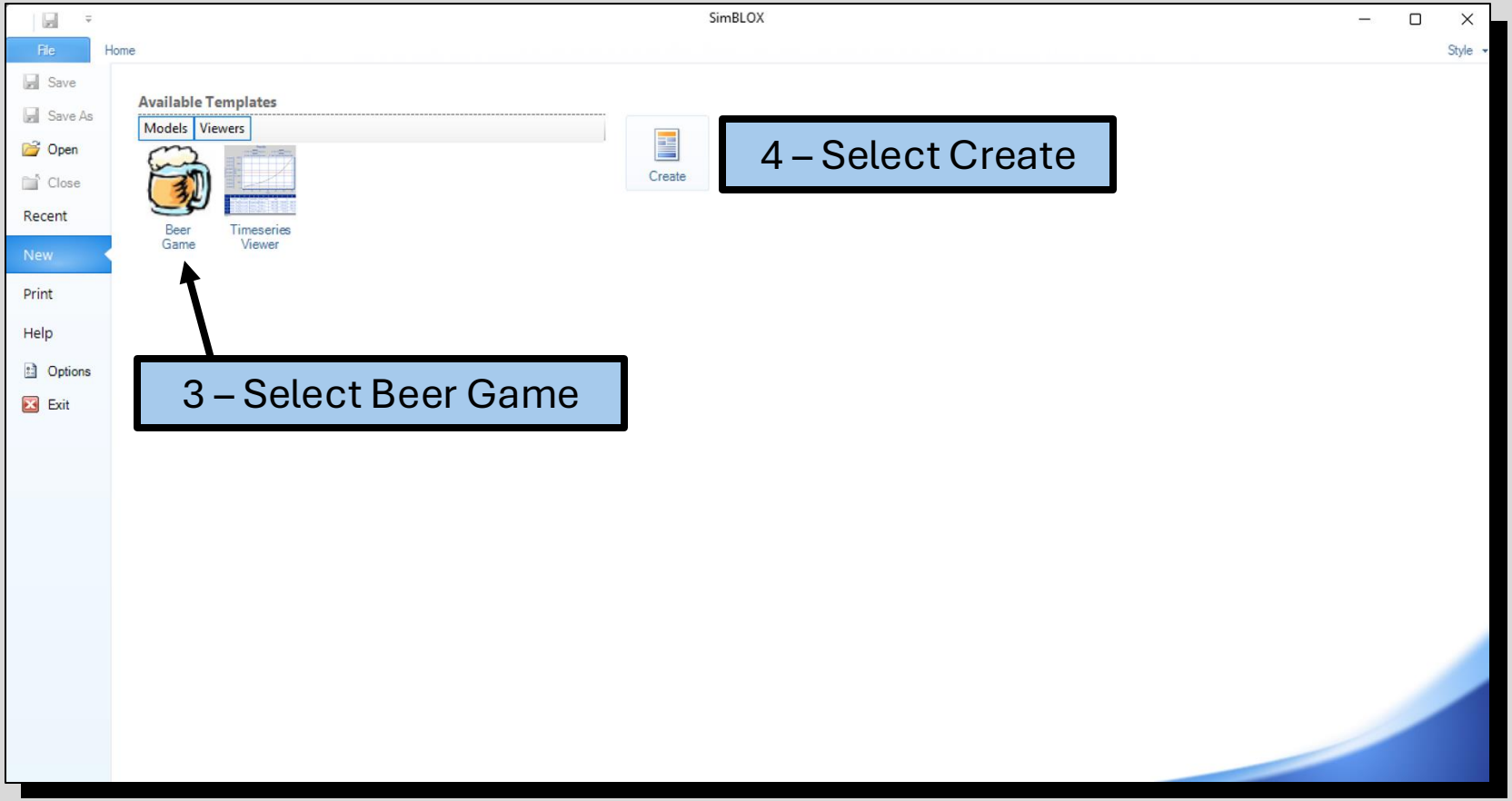
Building the basic traditional beer game

This is what you should see once you install and set up your BGOS environment.



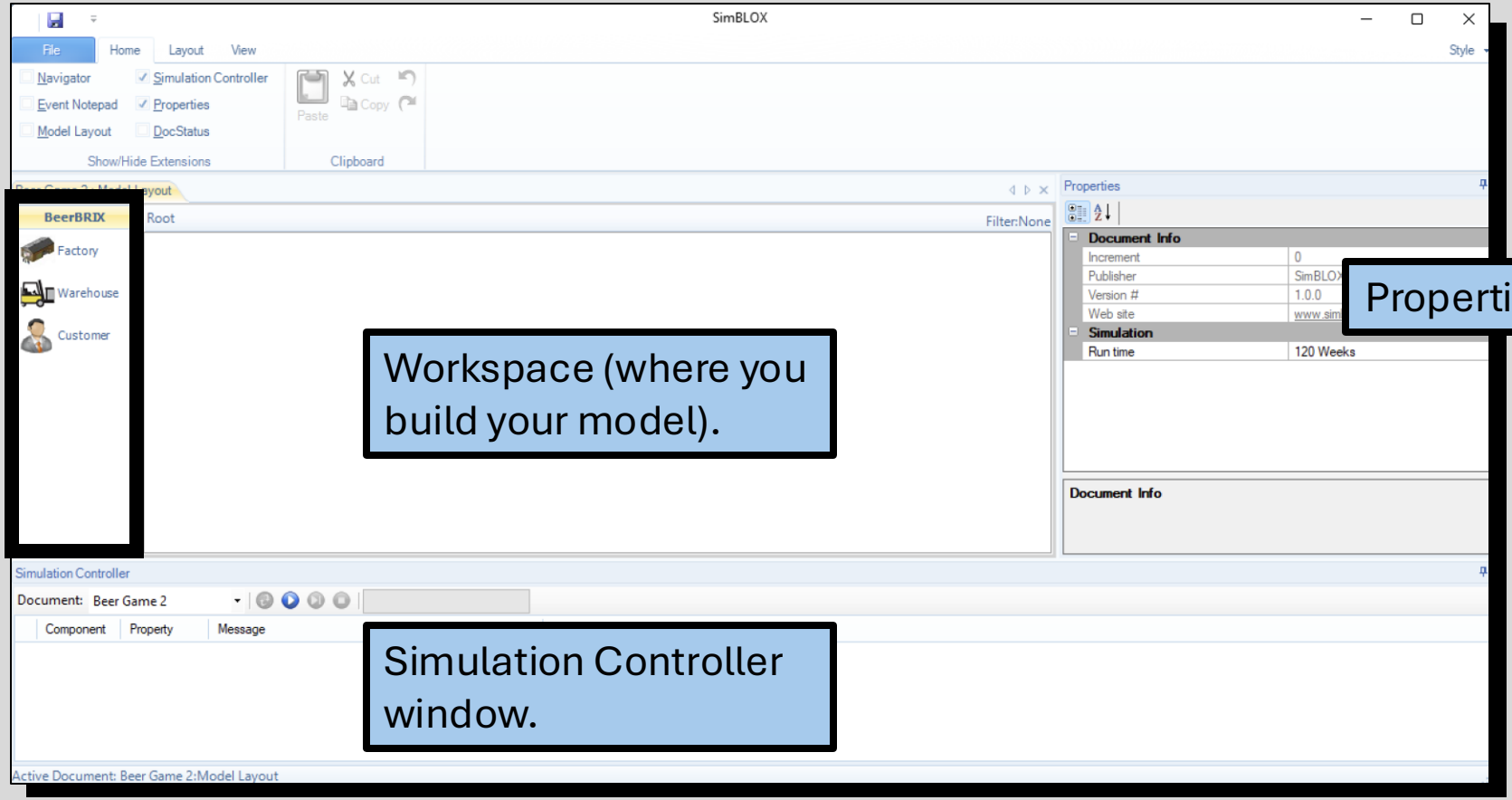
1 – Select File

2 – Select New



This is what you should see once you create a new Beer Game model file.

Here is the palette of icons to drag-and-drop into the workspace to build a model.



Workspace (where you build your model).

Properties window.

Simulation Controller window.

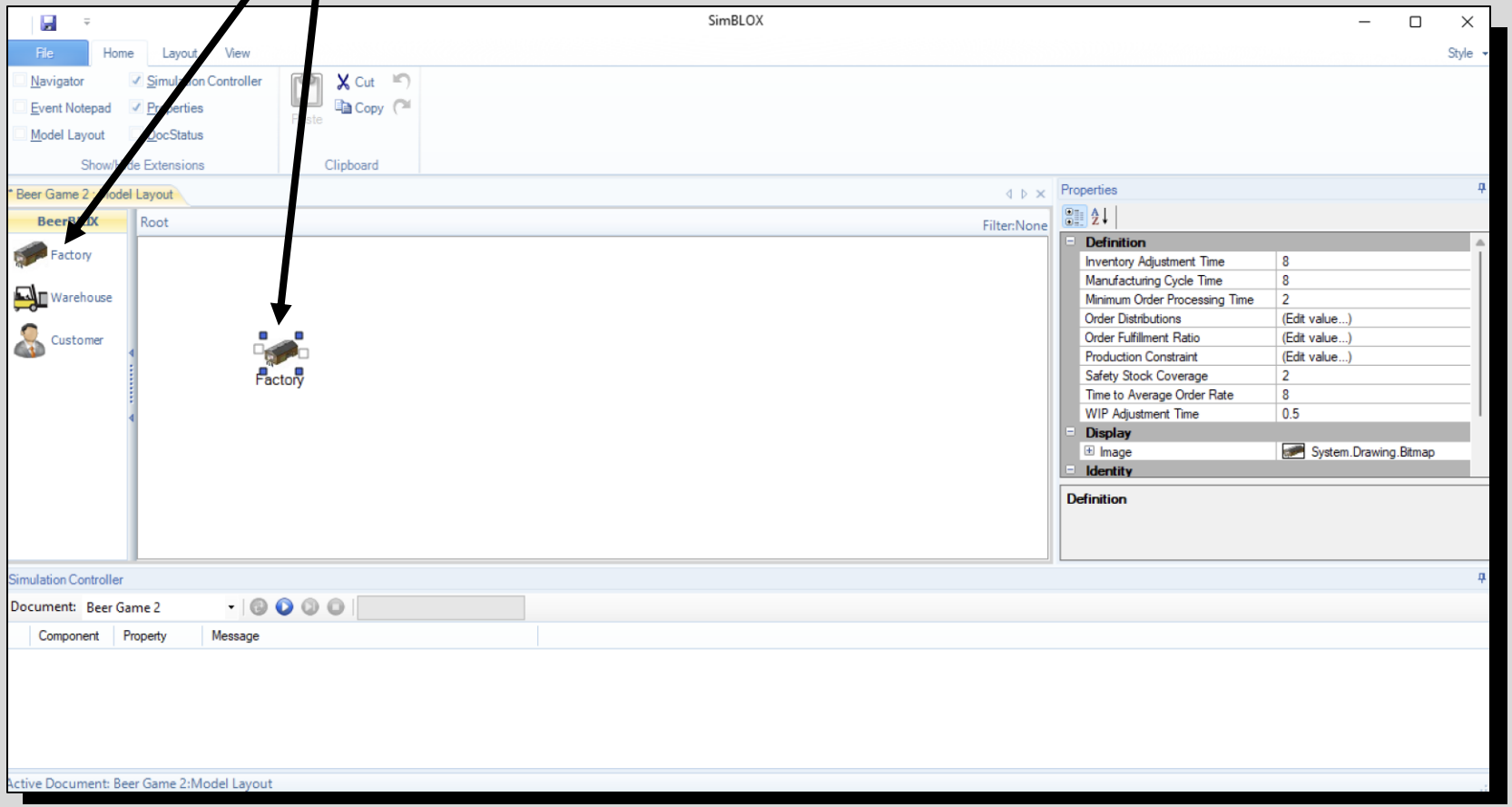
Beer Game on Steroids (BGOS) Tutorial:

Example Scenario

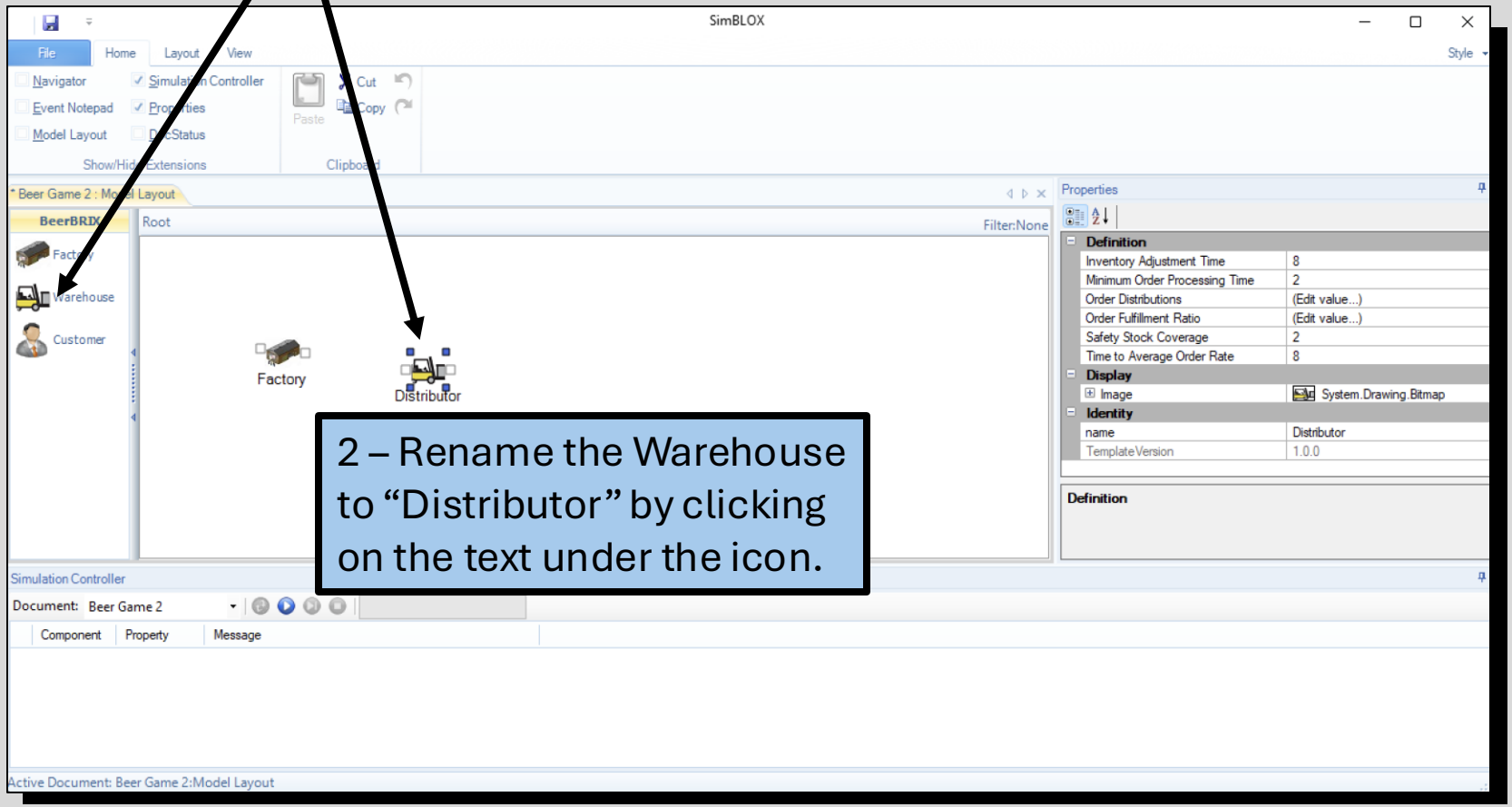
20% increase in customer demand

Starting at week 15

Drag-and-drop a Factory icon onto the Workspace.



1 – Drag-and-drop a Warehouse icon onto the Workspace.

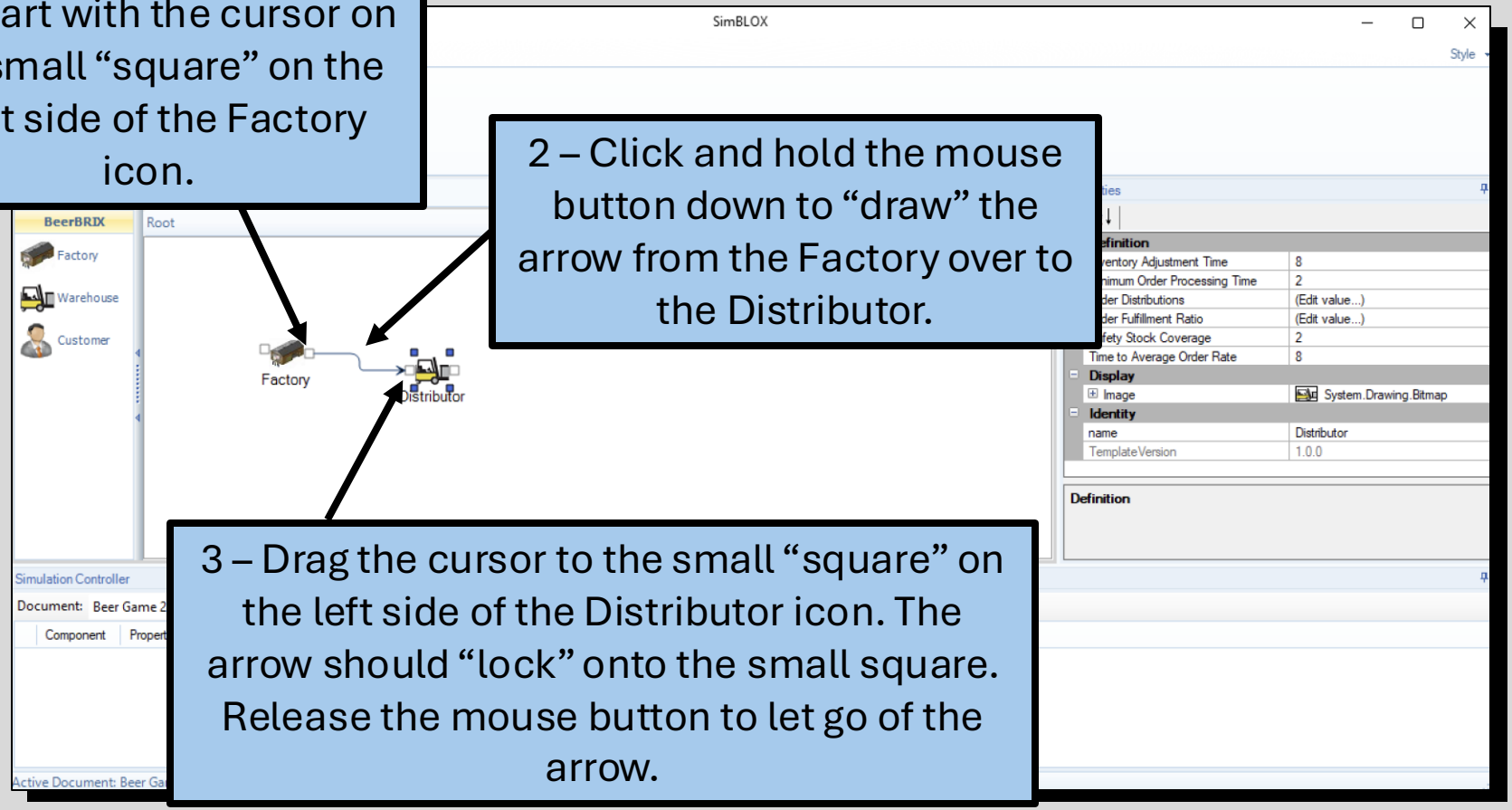


2 – Rename the Warehouse to “Distributor” by clicking on the text under the icon.

Connect the Factory to the Distributor.

1 – Start with the cursor on the small “square” on the right side of the Factory icon.

2 – Click and hold the mouse button down to “draw” the arrow from the Factory over to the Distributor.



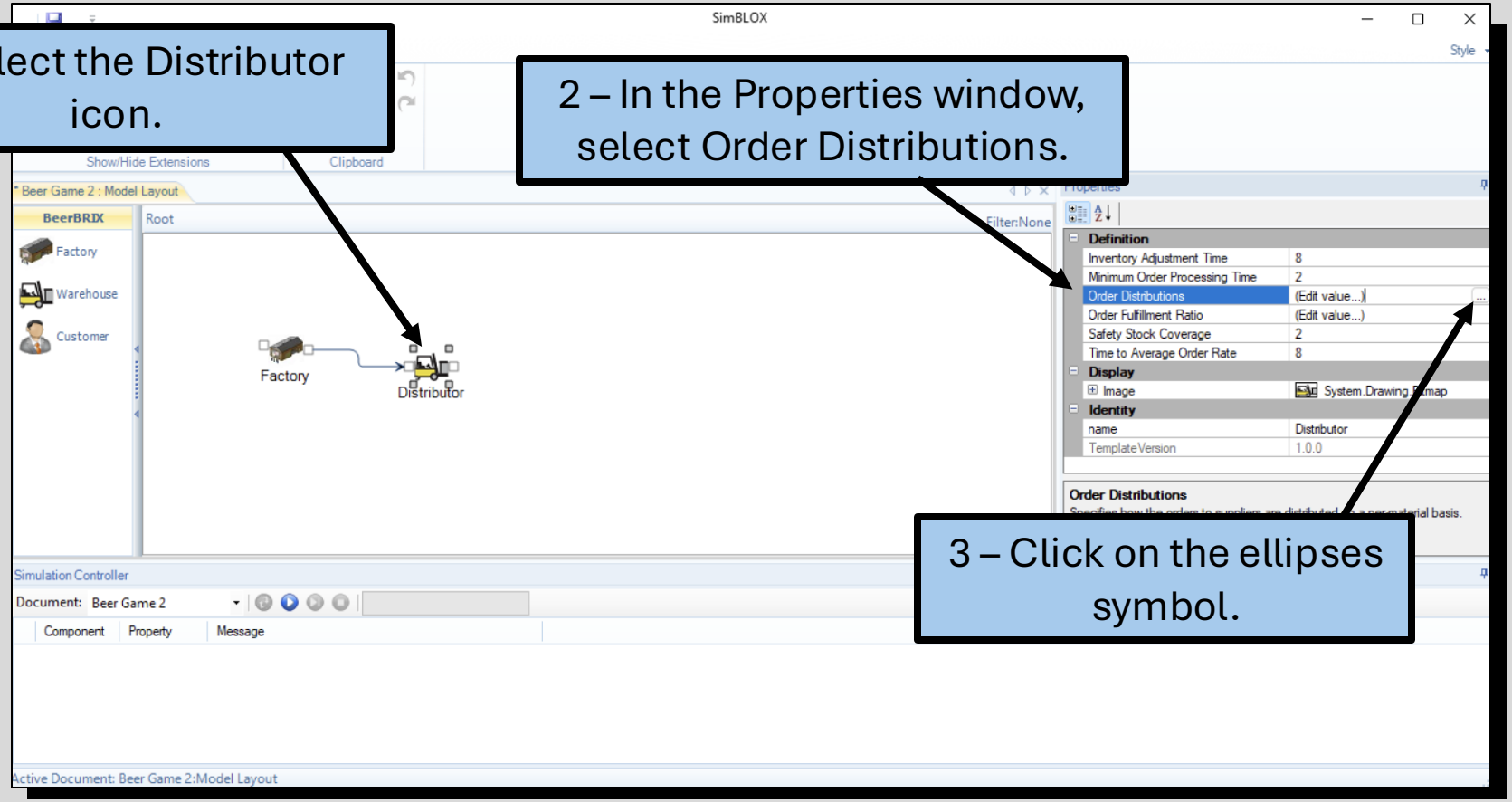
3 – Drag the cursor to the small “square” on the left side of the Distributor icon. The arrow should “lock” onto the small square. Release the mouse button to let go of the arrow.

Assign orders from the Distributor to the Factory.

1 – Select the Distributor icon.

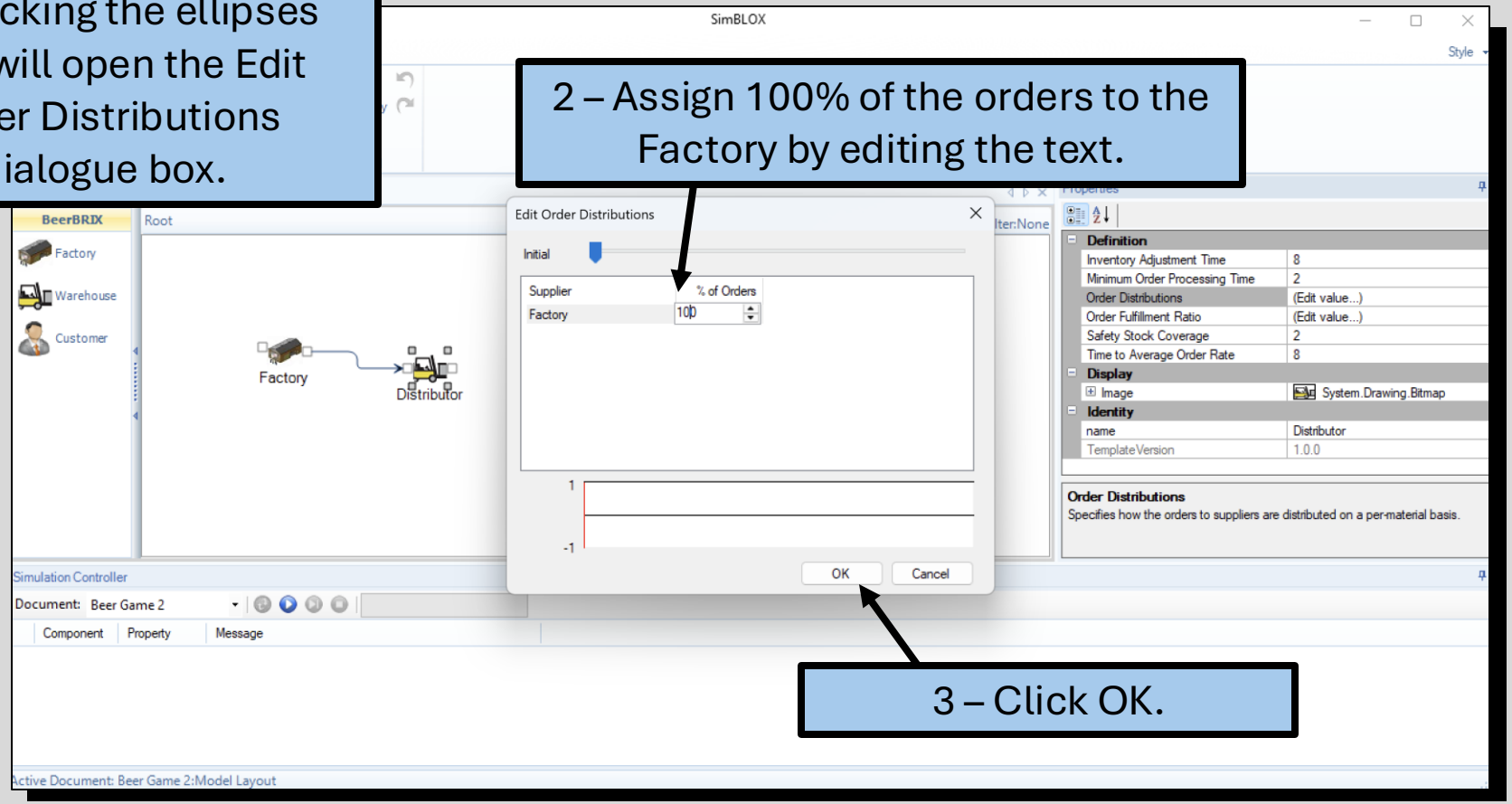
2 – In the Properties window, select Order Distributions.

3 – Click on the ellipses symbol.



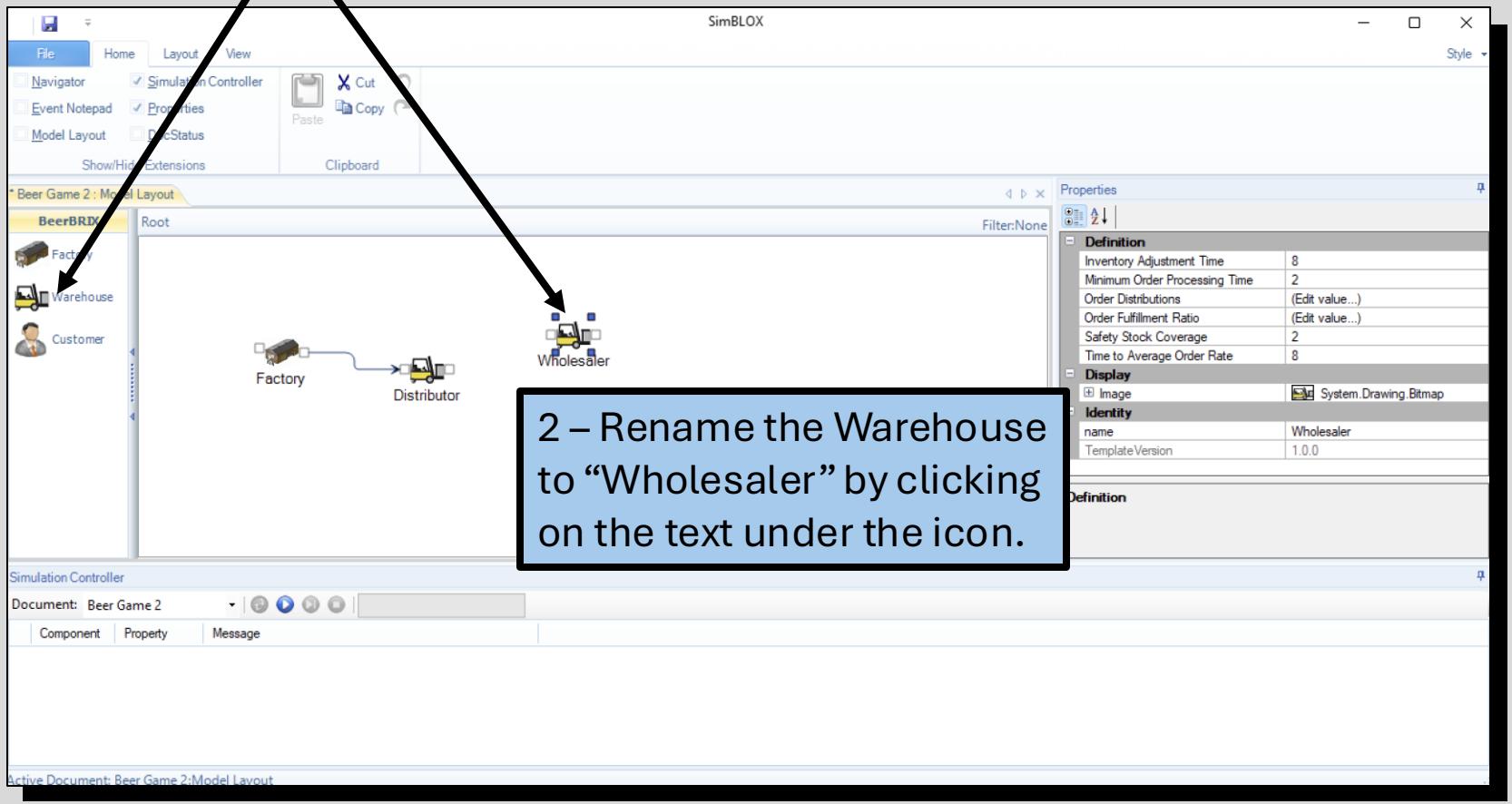
Assign orders from the Distributor to the Factory.

1 – Clicking the ellipses icon will open the Edit Order Distributions dialogue box.



Add the Wholesaler.

1 – Drag-and-drop a Warehouse icon onto the Workspace.

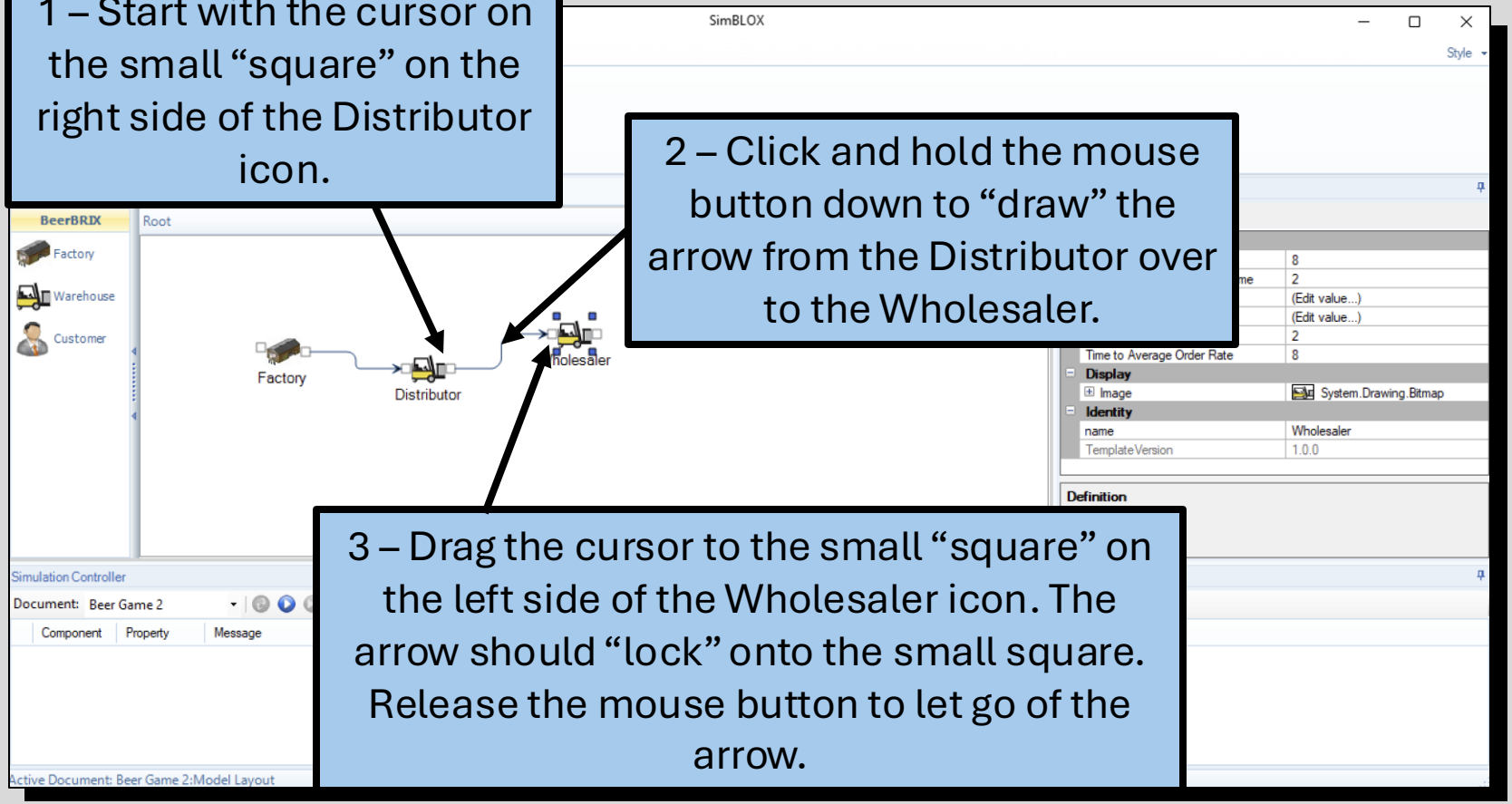


2 – Rename the Warehouse to “Wholesaler” by clicking on the text under the icon.

Connect the Distributor to the Wholesaler.

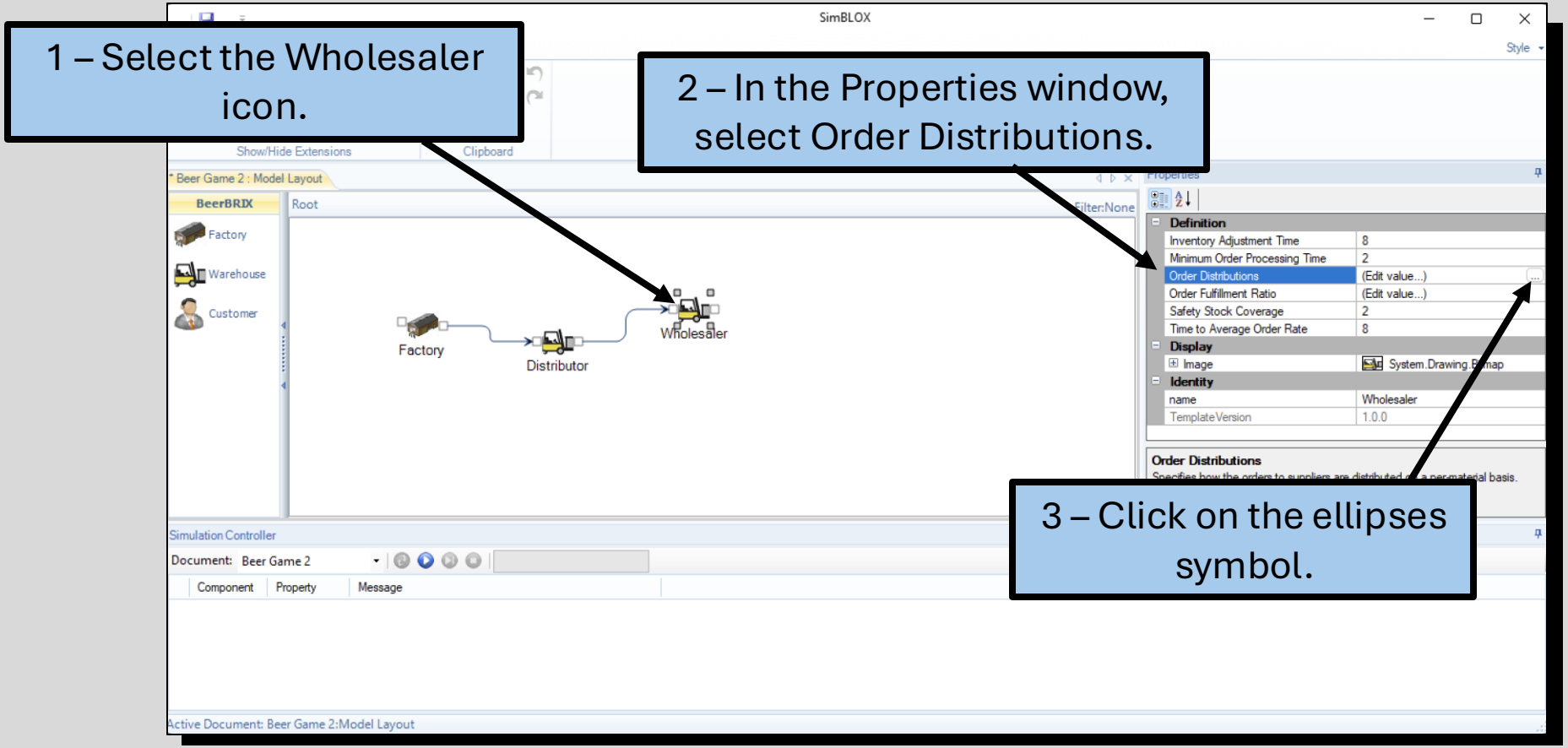
1 – Start with the cursor on the small “square” on the right side of the Distributor icon.

2 – Click and hold the mouse button down to “draw” the arrow from the Distributor over to the Wholesaler.



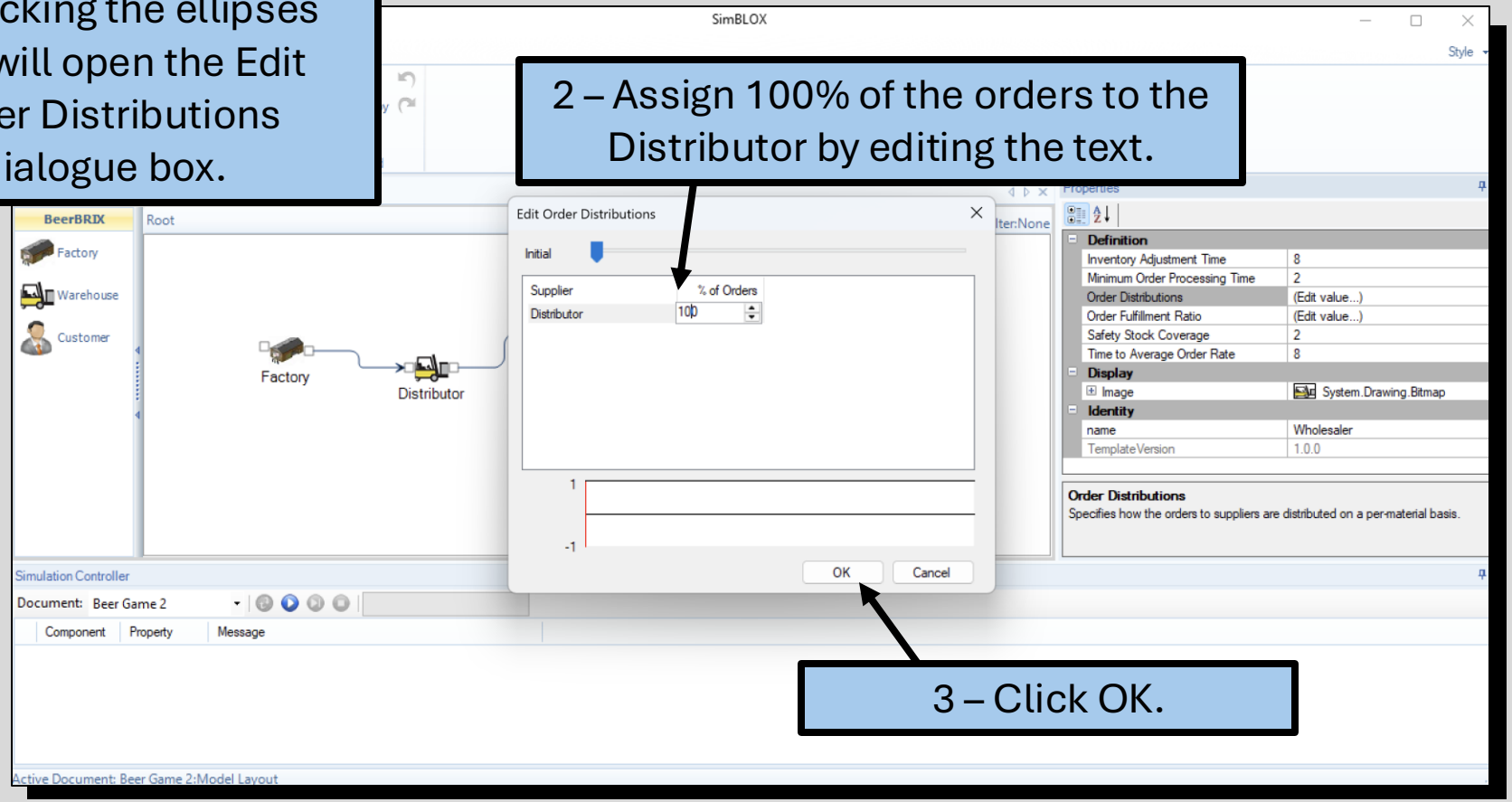
3 – Drag the cursor to the small “square” on the left side of the Wholesaler icon. The arrow should “lock” onto the small square. Release the mouse button to let go of the arrow.

Assign orders from the Wholesaler to the Distributor.



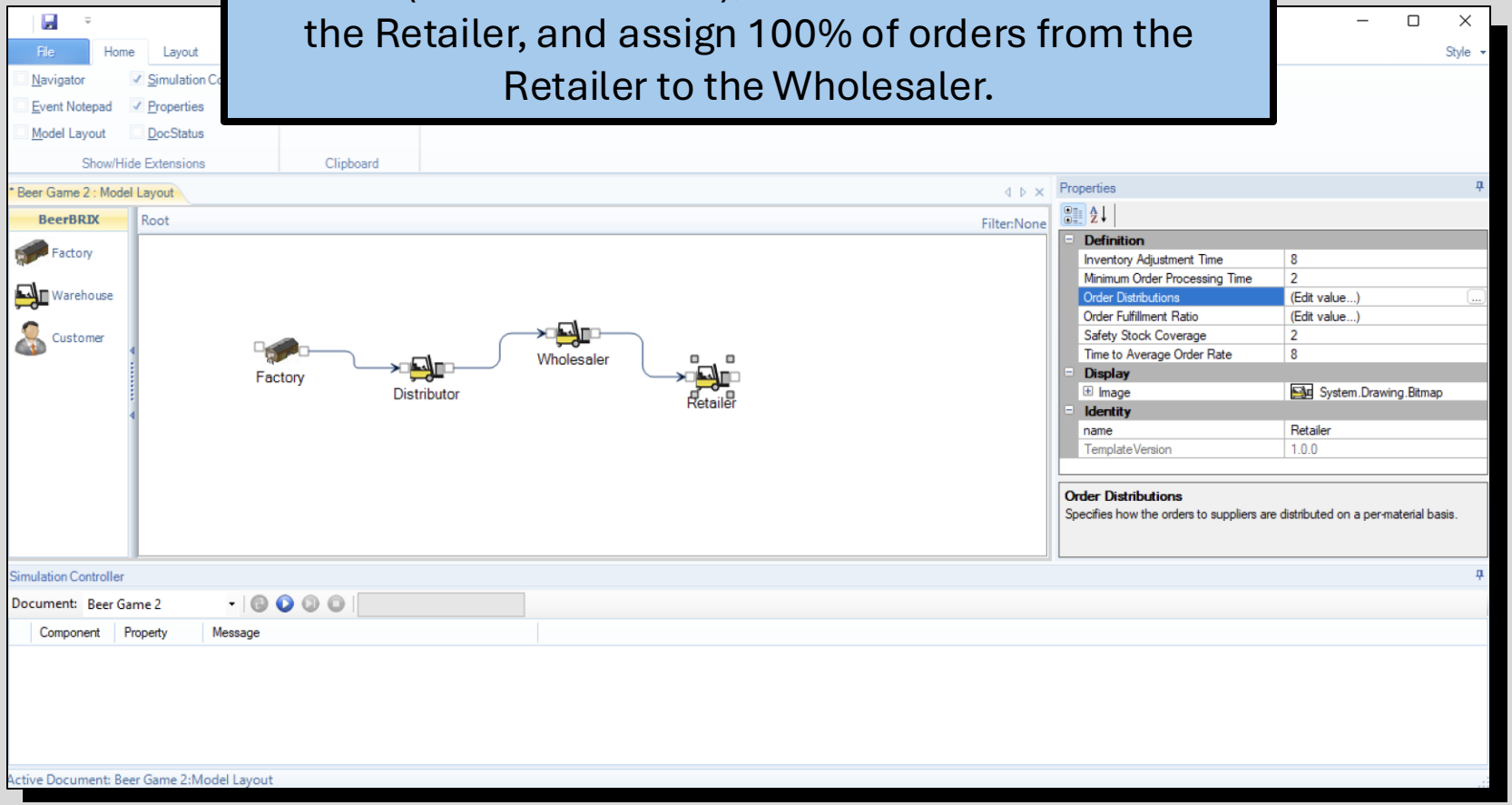
Assign orders from the Wholesaler to the Distributor.

1 – Clicking the ellipses icon will open the Edit Order Distributions dialogue box.



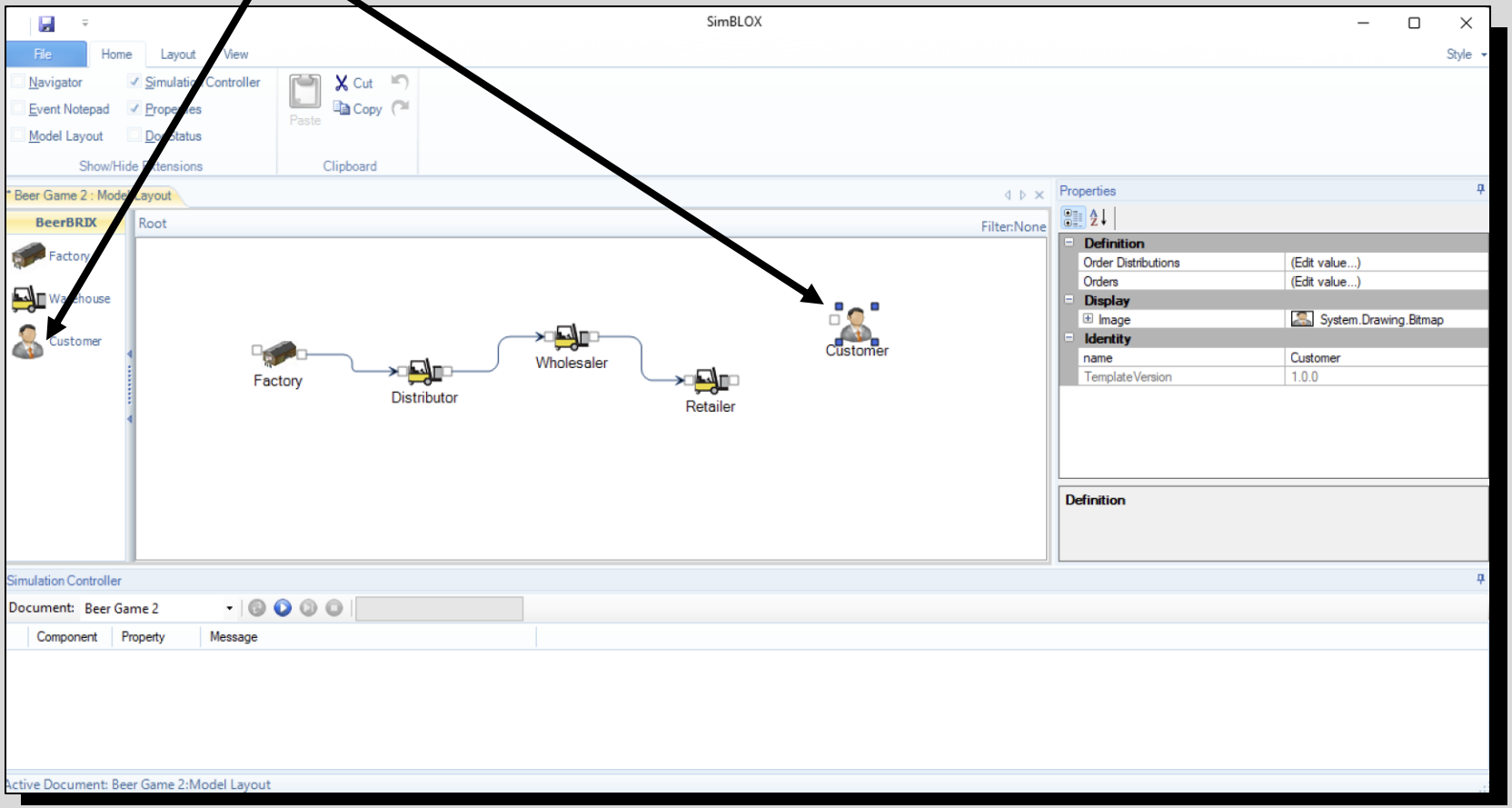
Add the Retailer.

Repeat the steps in slides 10 through 13 to add a Retailer (Warehouse icon), connect the Wholesaler to the Retailer, and assign 100% of orders from the Retailer to the Wholesaler.

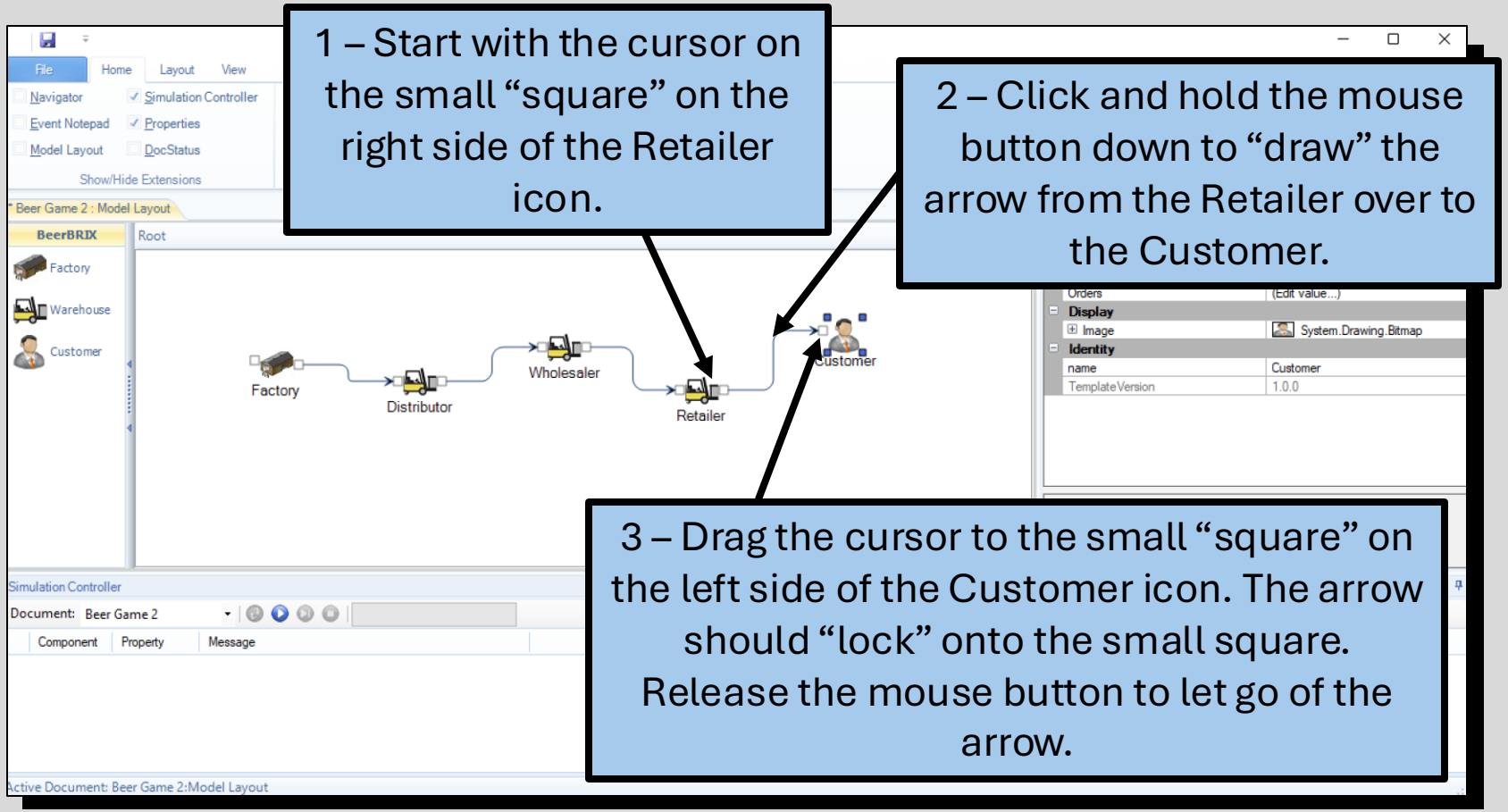


Add the Customer.

1 – Drag-and-drop a Customer icon onto the Workspace.



Connect the Retailer to the Customer.

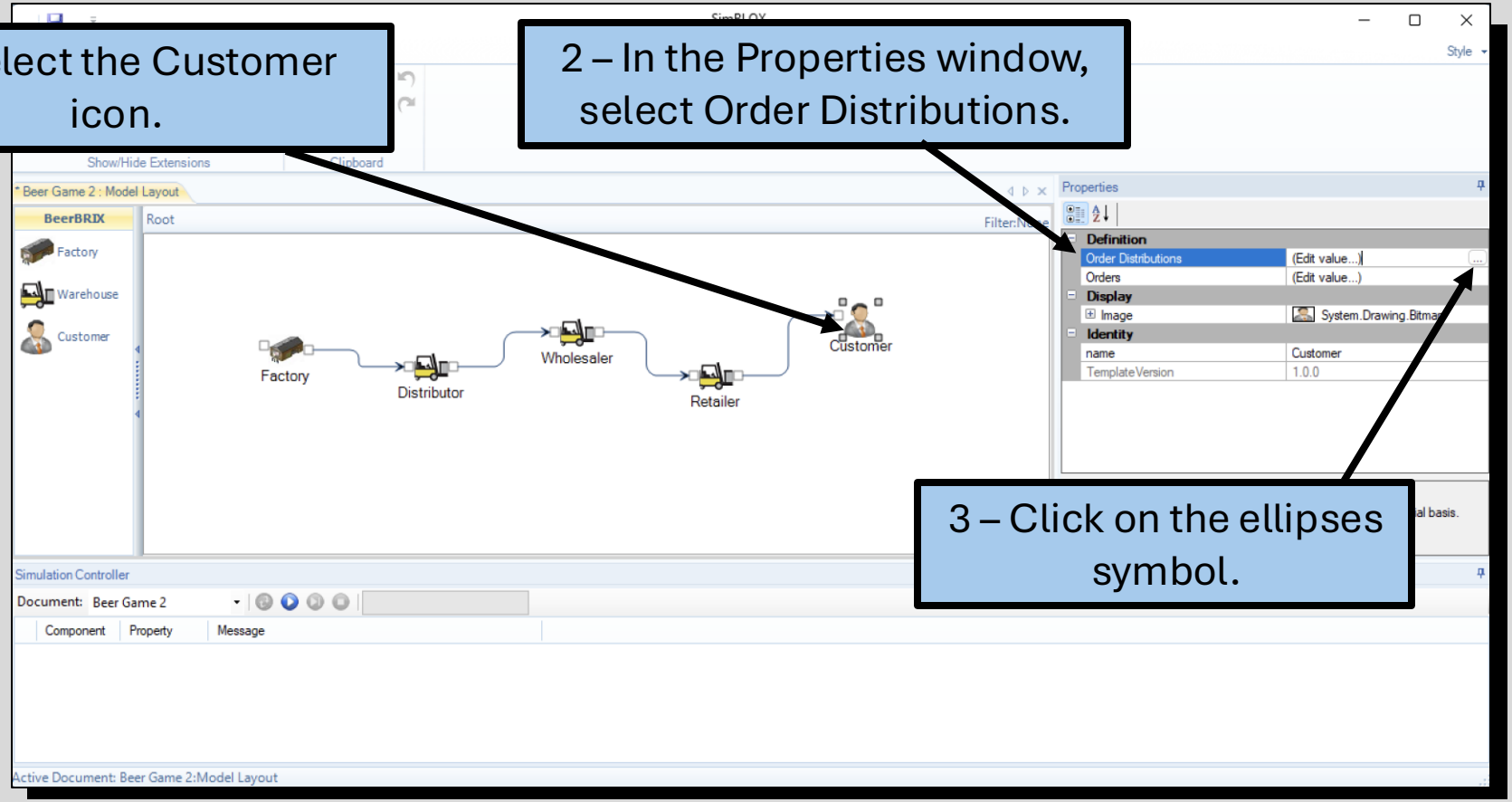


Assign orders from the Customer to the Retailer.

1 – Select the Customer icon.

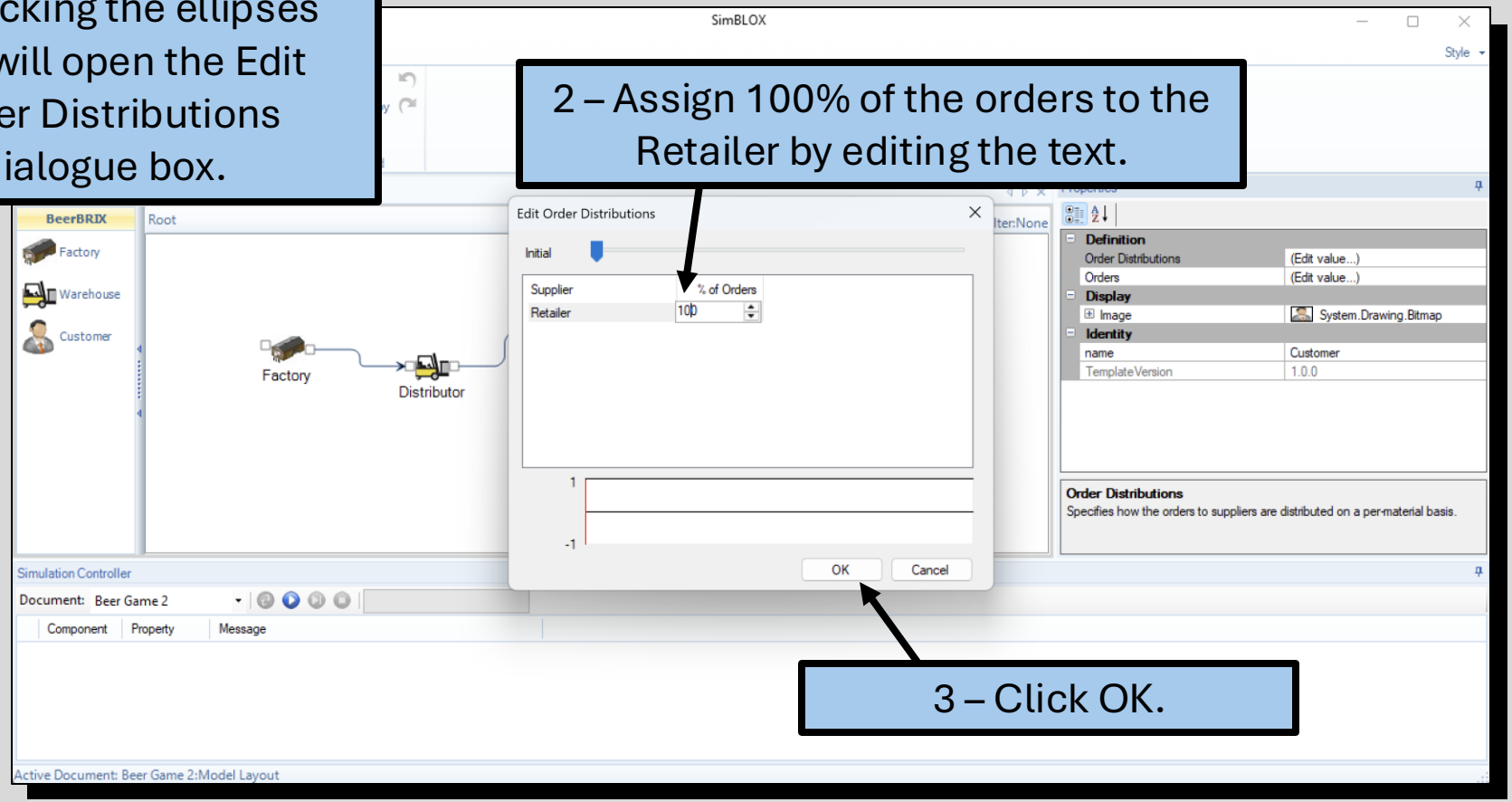
2 – In the Properties window, select Order Distributions.

3 – Click on the ellipses symbol.

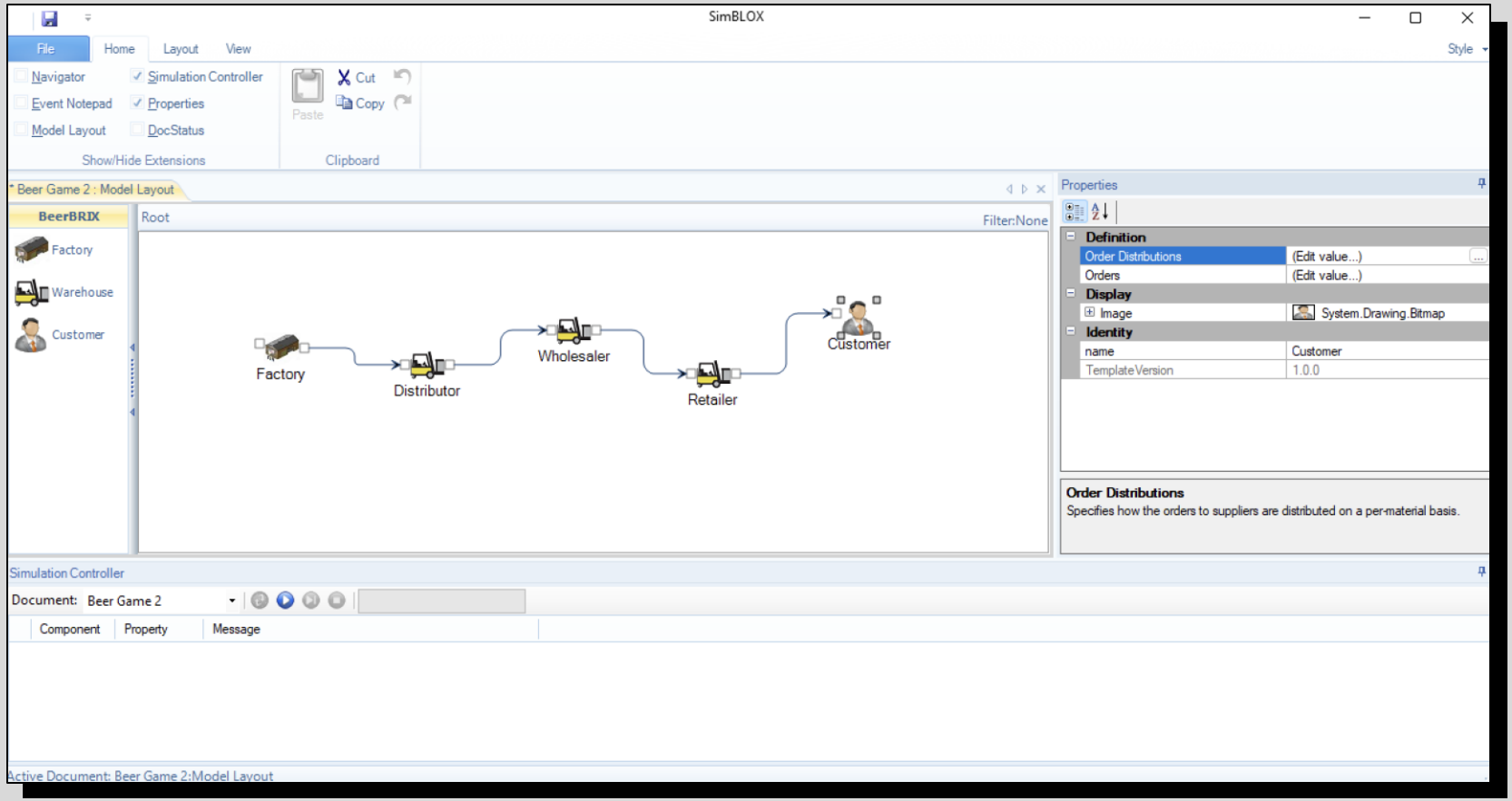


Assign orders from the Customer to the Retailer.

1 – Clicking the ellipses icon will open the Edit Order Distributions dialogue box.



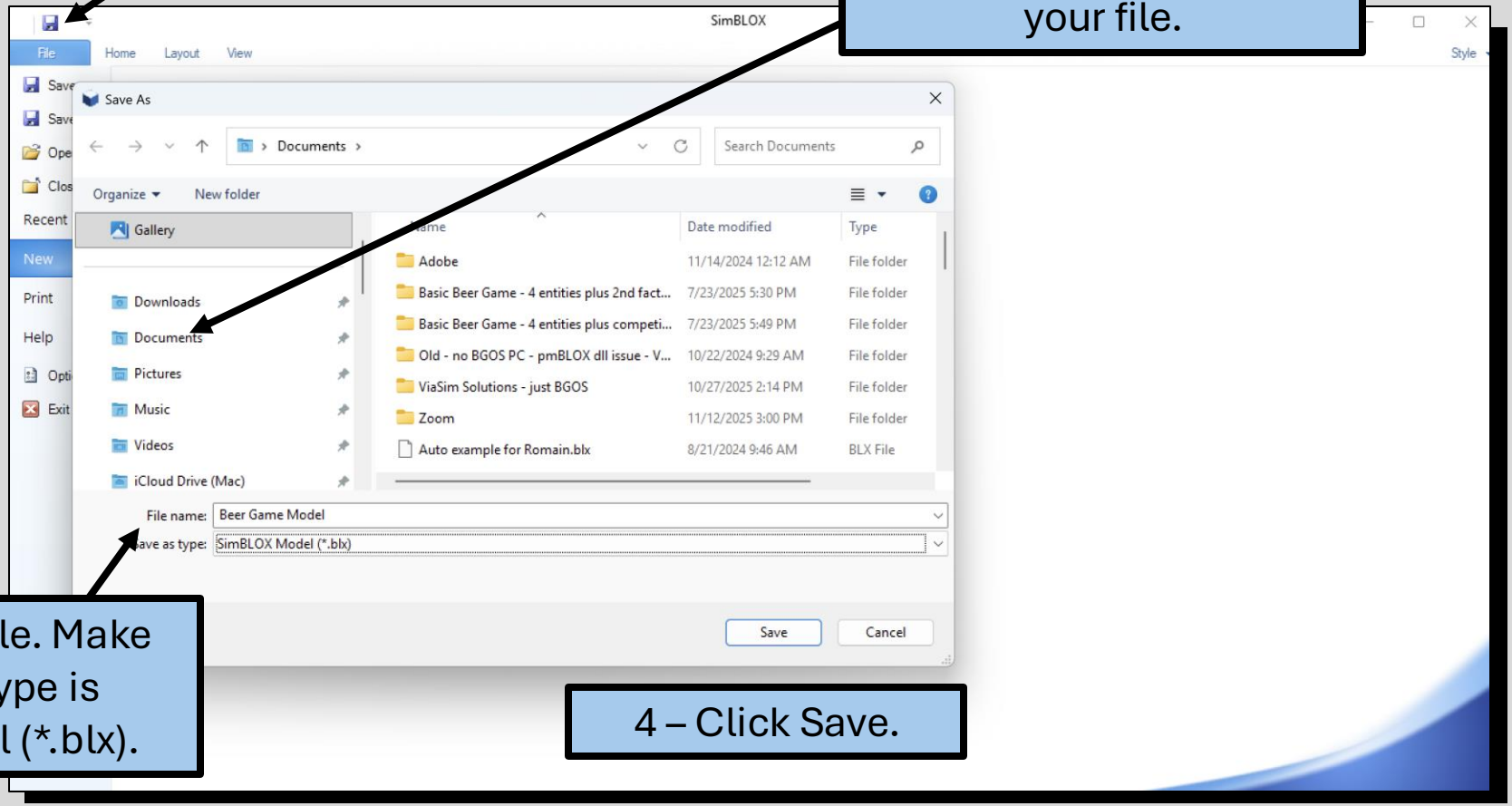
Your beer game model should look like this.
It is now ready to run a simulation.



Saving your model.

1 – Click on the Save icon (or select Save As from File menu).

2 – Select the folder where you want to save your file.

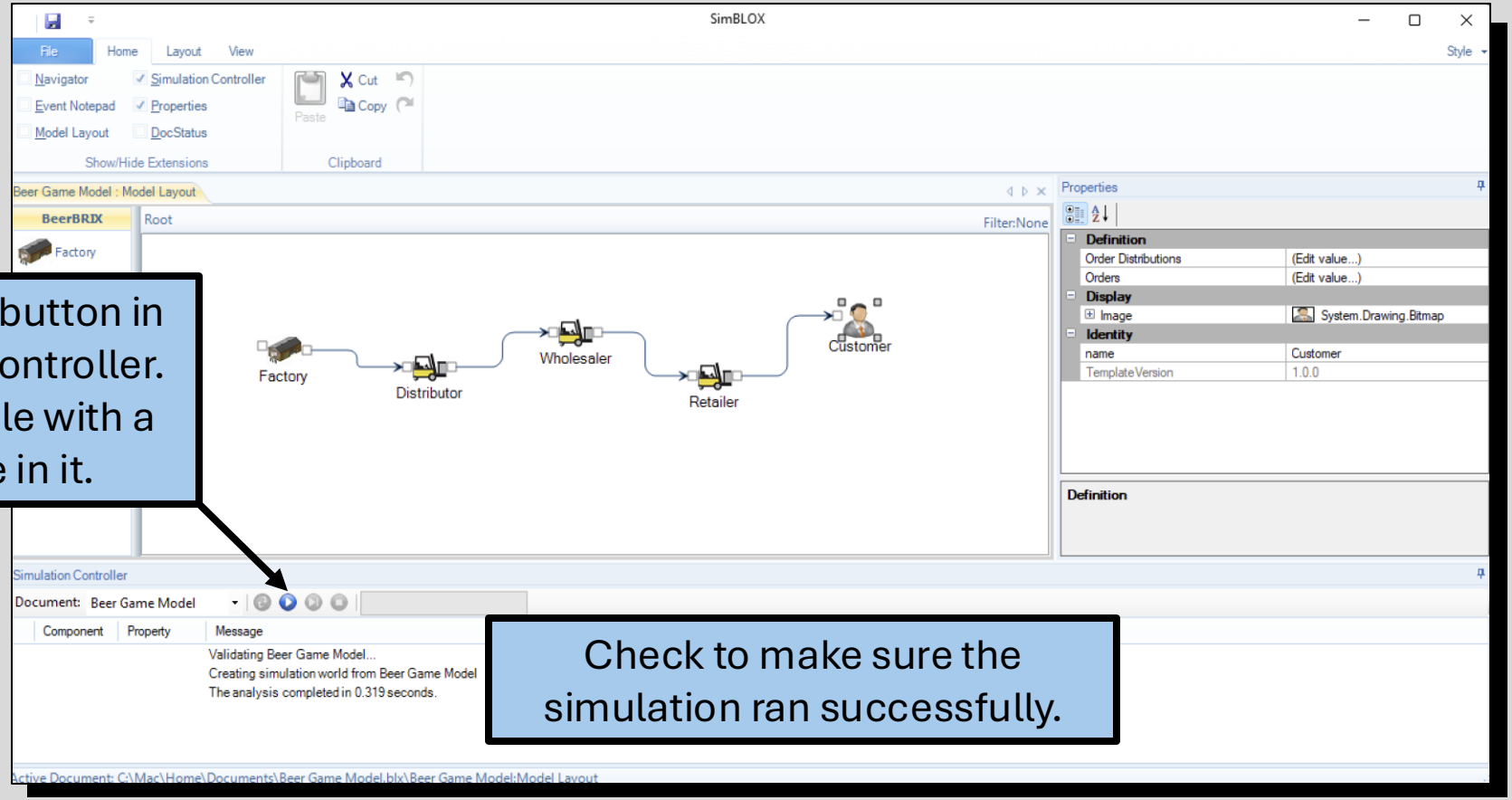


3 – Name your file. Make sure the file type is SimBLOX Model (*.blx).

4 – Click Save.

Running a simulation.

Click on the Run button in the Simulation Controller. It is the blue circle with a white triangle in it.

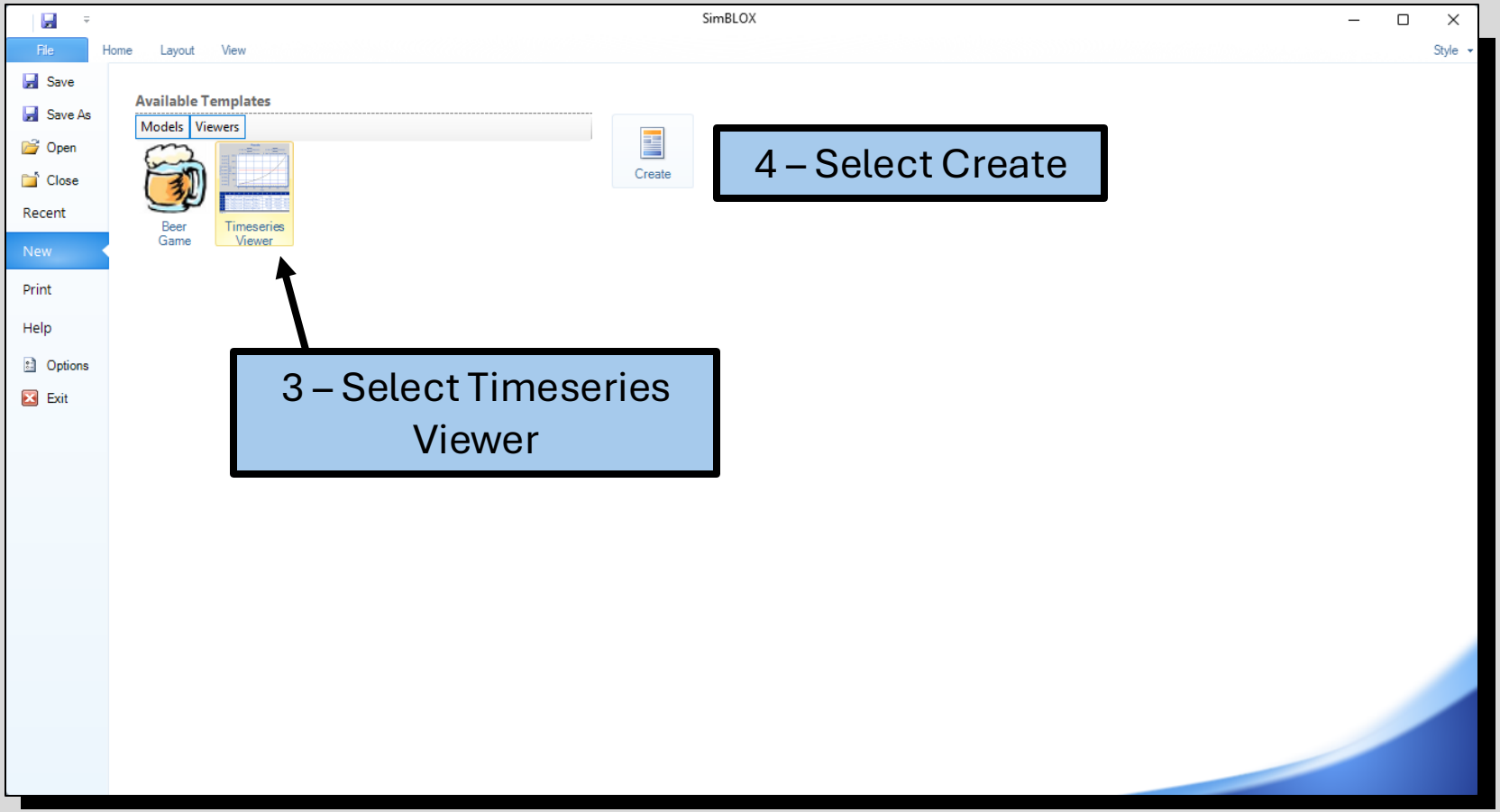


Check to make sure the simulation ran successfully.

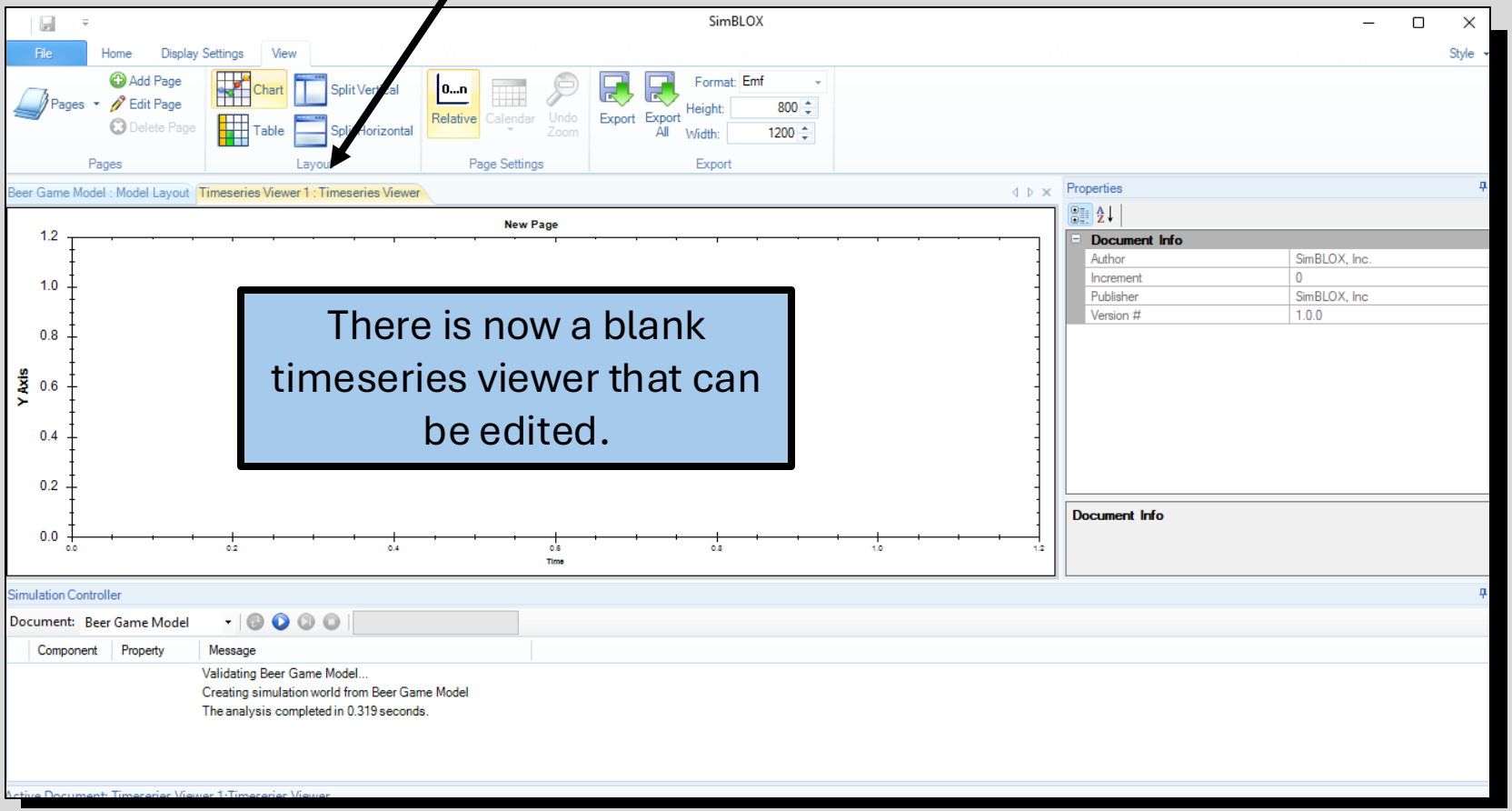
Fantastic, you have a working simulation. Now let’s look at how to display results.

1 – Select File

2 – Select New

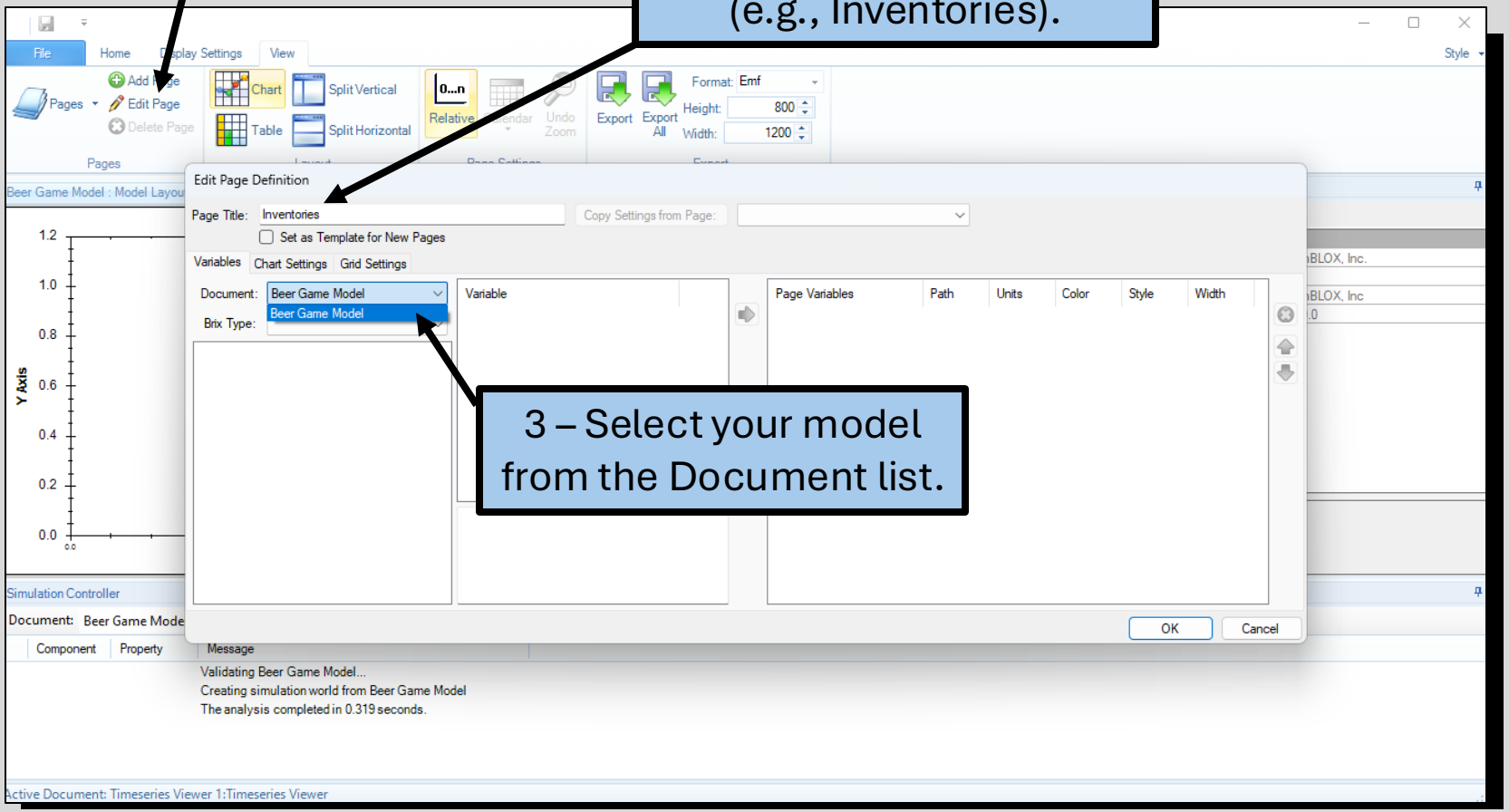


Notice that a new tab has been added. There are now 2 tabs: one for the model (.blx file format) and one for the timeseries viewer (.tvw file format).

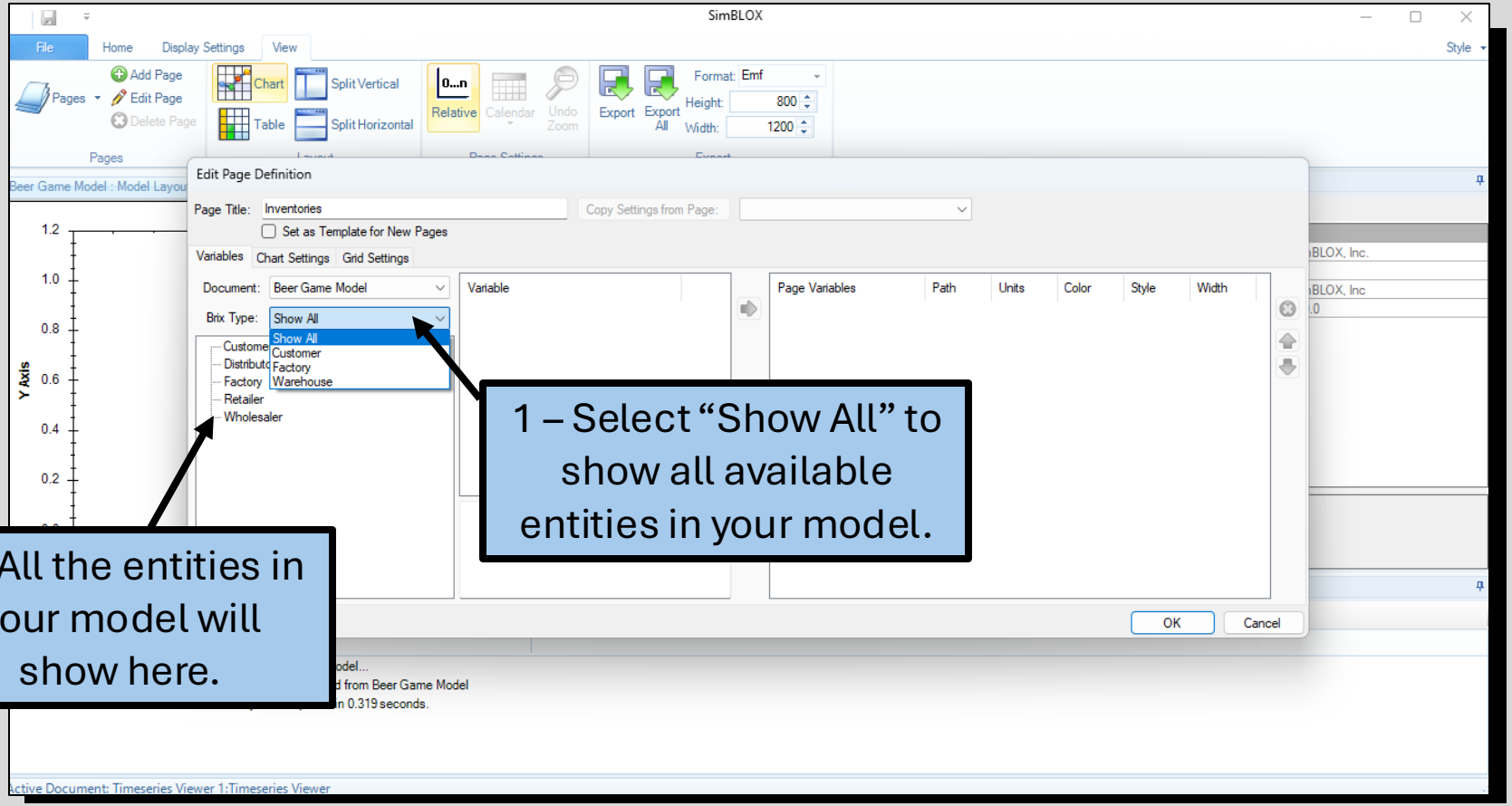


1 – Click “Edit Page”

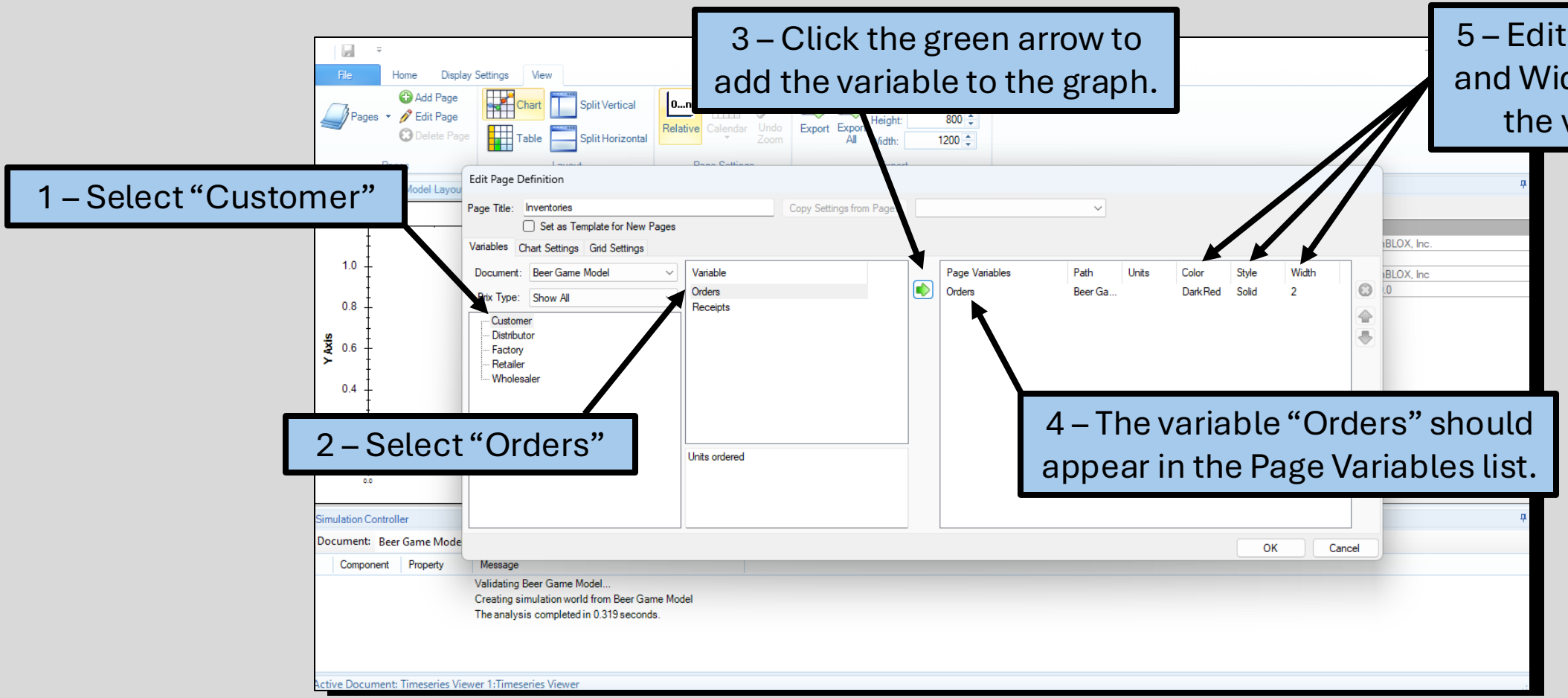
2 – Give the page a name (e.g., Inventories).



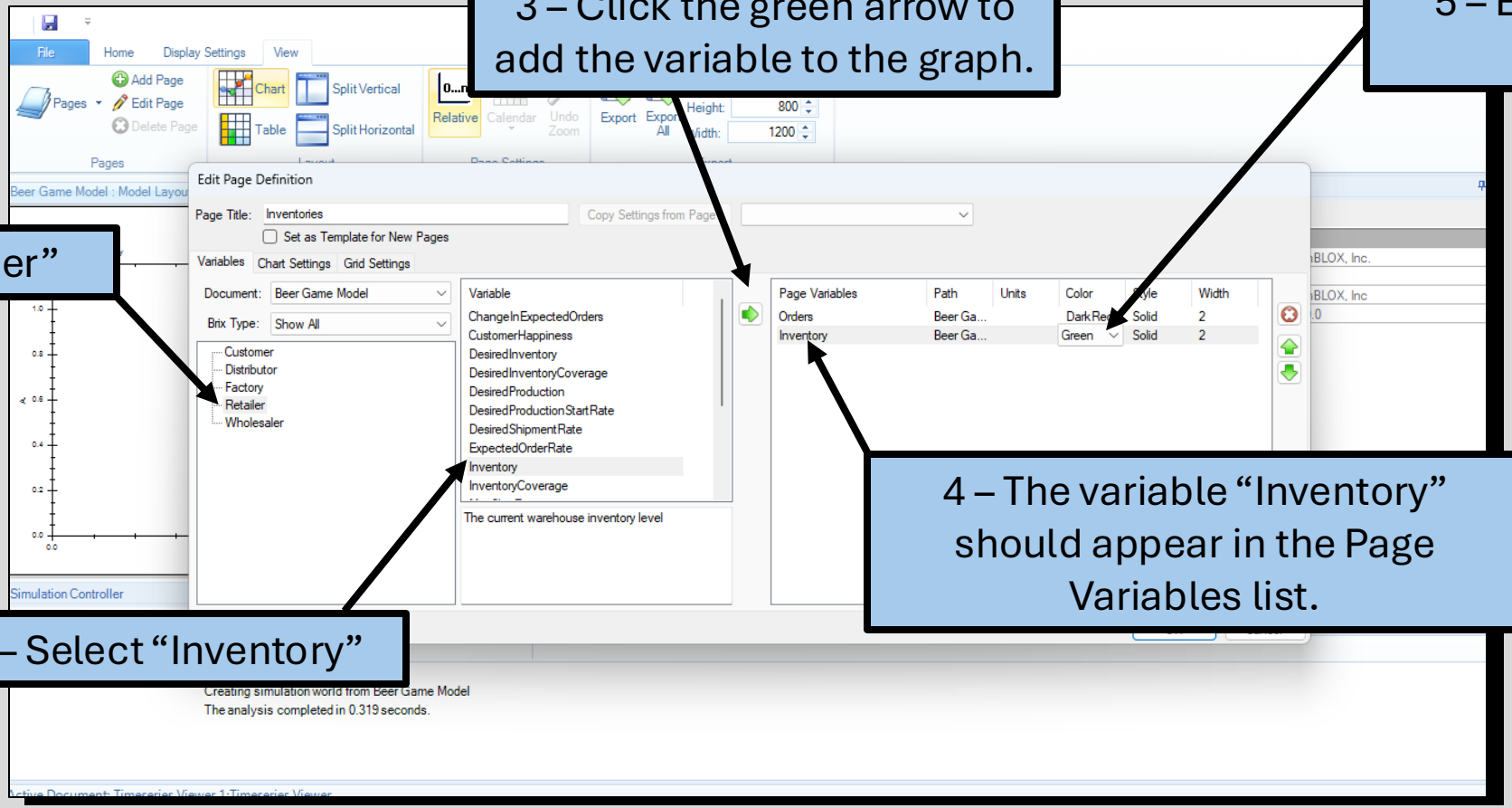
3 – Select your model from the Document list.


SimBLOX
File
Home
Display Settings
View
Style
Pages
Add Page
Edit Page
Delete Page
Chart
Split Vertical
Table
Split Horizontal
Relative
Calendar
Undo Zoom
Export
Export All
Format: Emf
Height: 800
Width: 1200
Edit Page Definition
Page Title: Inventories
Copy Settings from Page:
Set as Template for New Pages
Variables
Chart Settings
Grid Settings
Document: Beer Game Model
Brix Type: Show All
Show All
Customer
Factory
Warehouse
Retailer
Wholesaler
Variable
Page Variables
Path
Units
Color
Style
Width
OK
Cancel
Y Axis
1.2
1.0
0.8
0.6
0.4
0.2
1 – Select "Show All" to show all available entities in your model.
2 – All the entities in your model will show here.

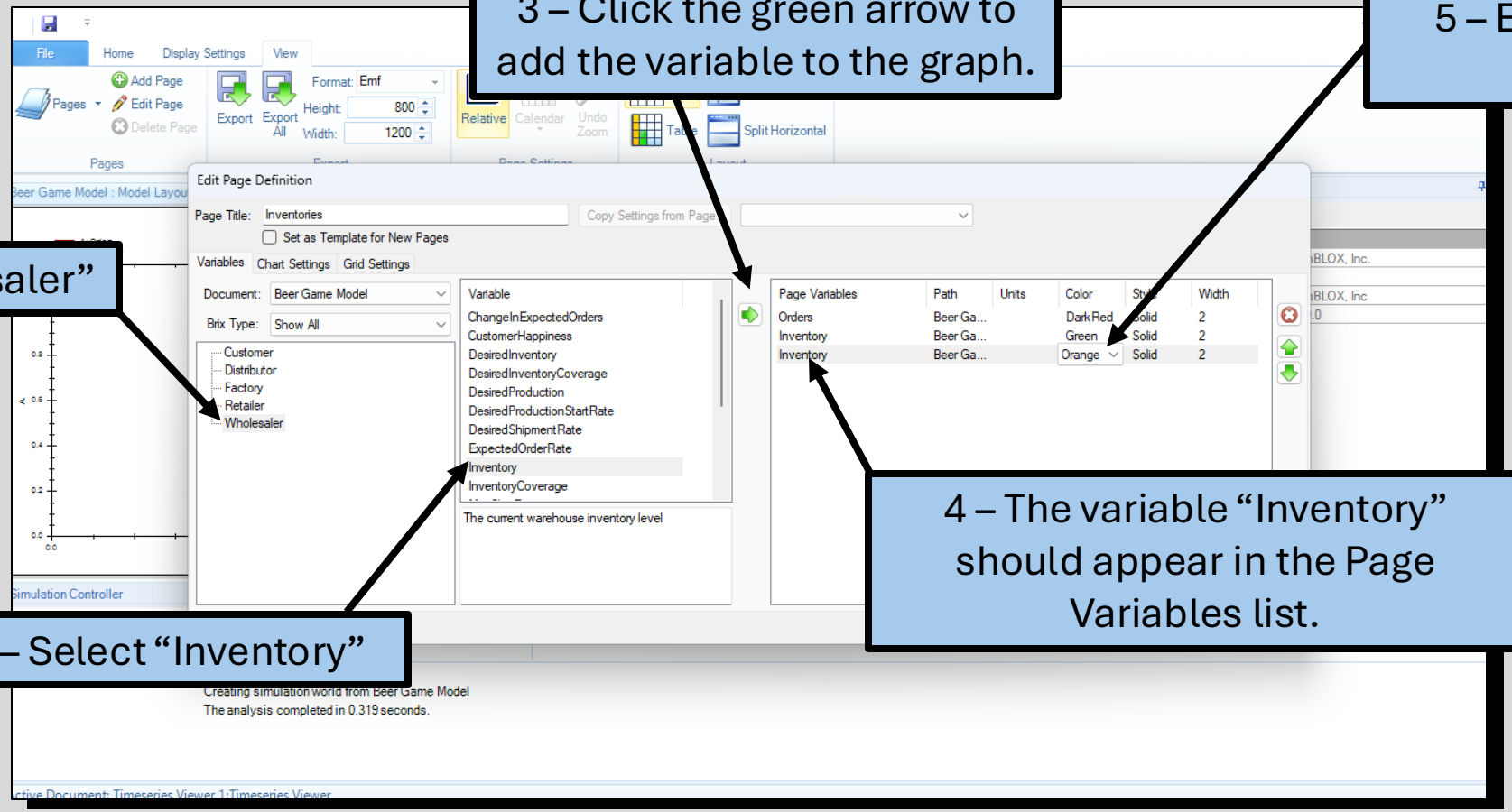
Choose variables to plot on the graph.



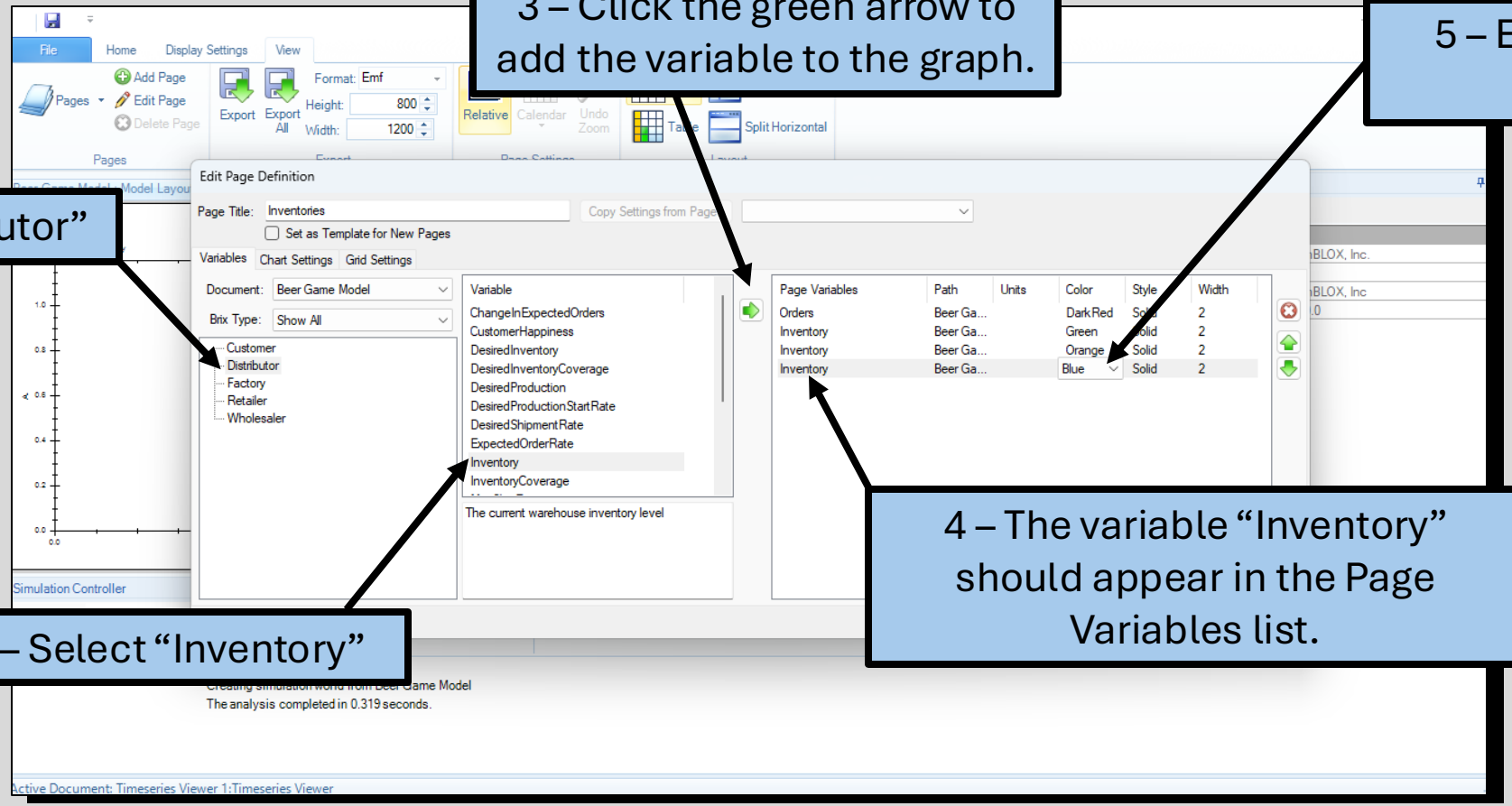
Add Retailer Inventory to the chart.



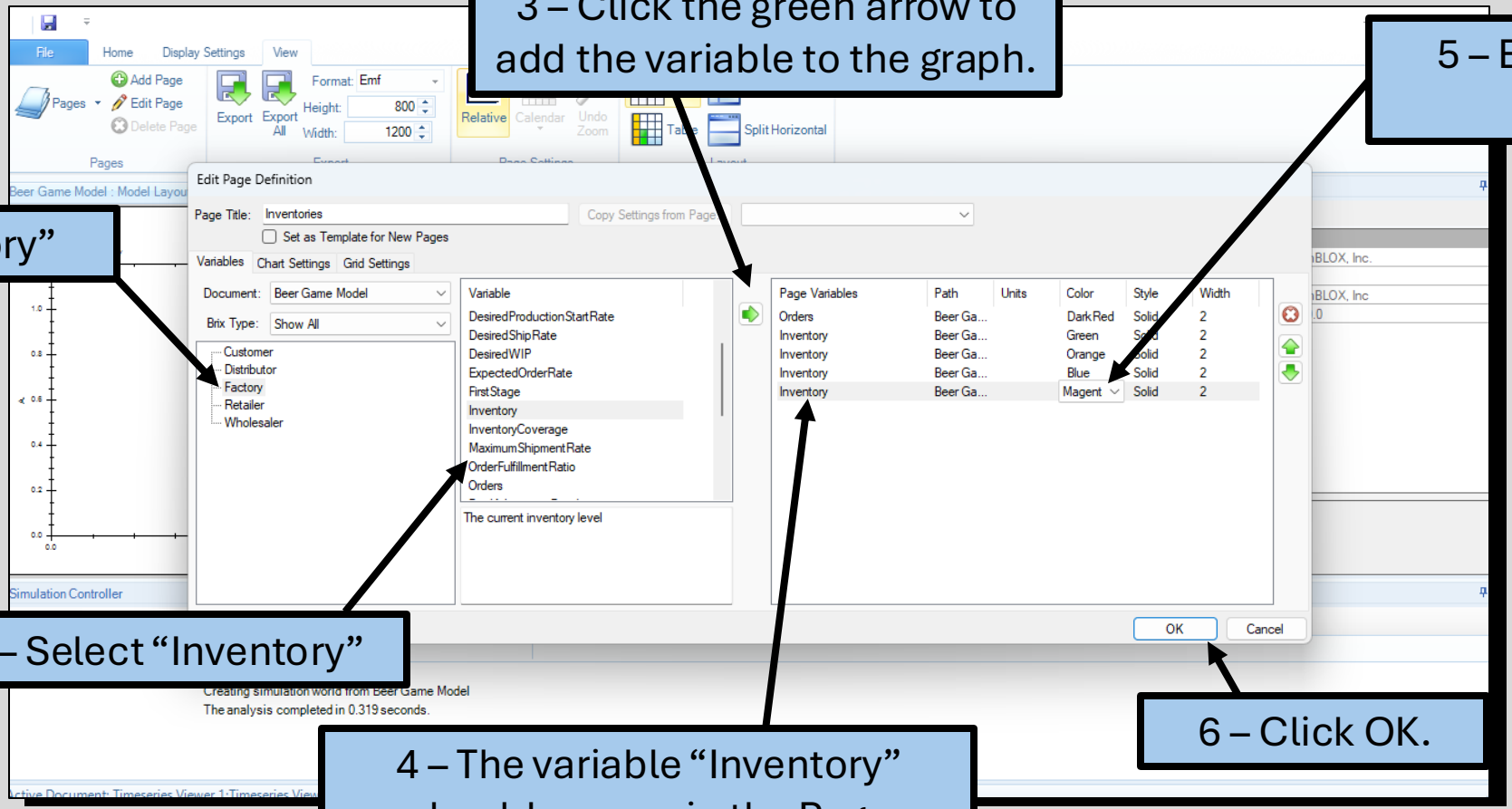
Add Wholesaler Inventory to the chart.



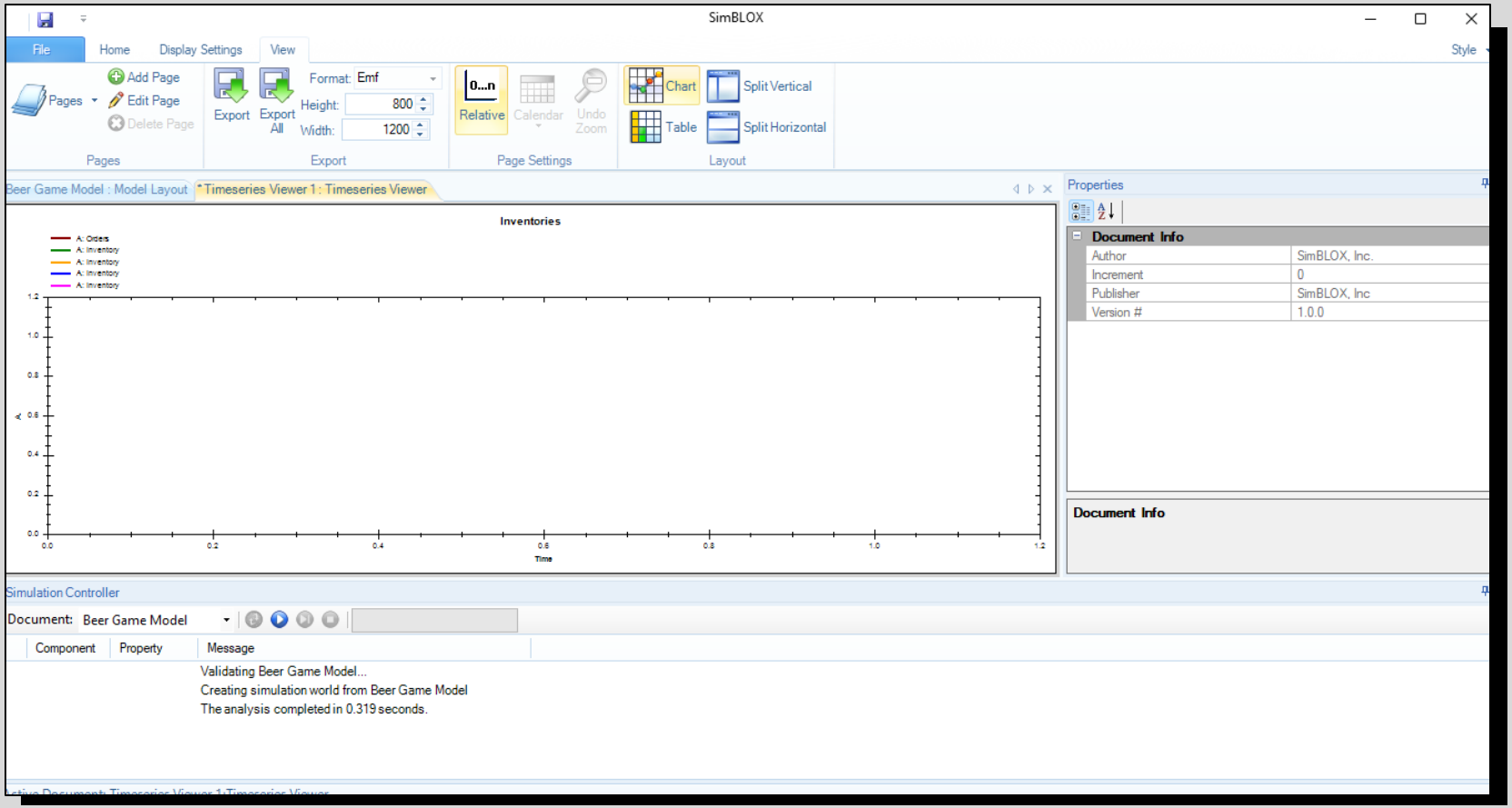
Add Distributor Inventory to the chart.



Add Factory Inventory to the chart.

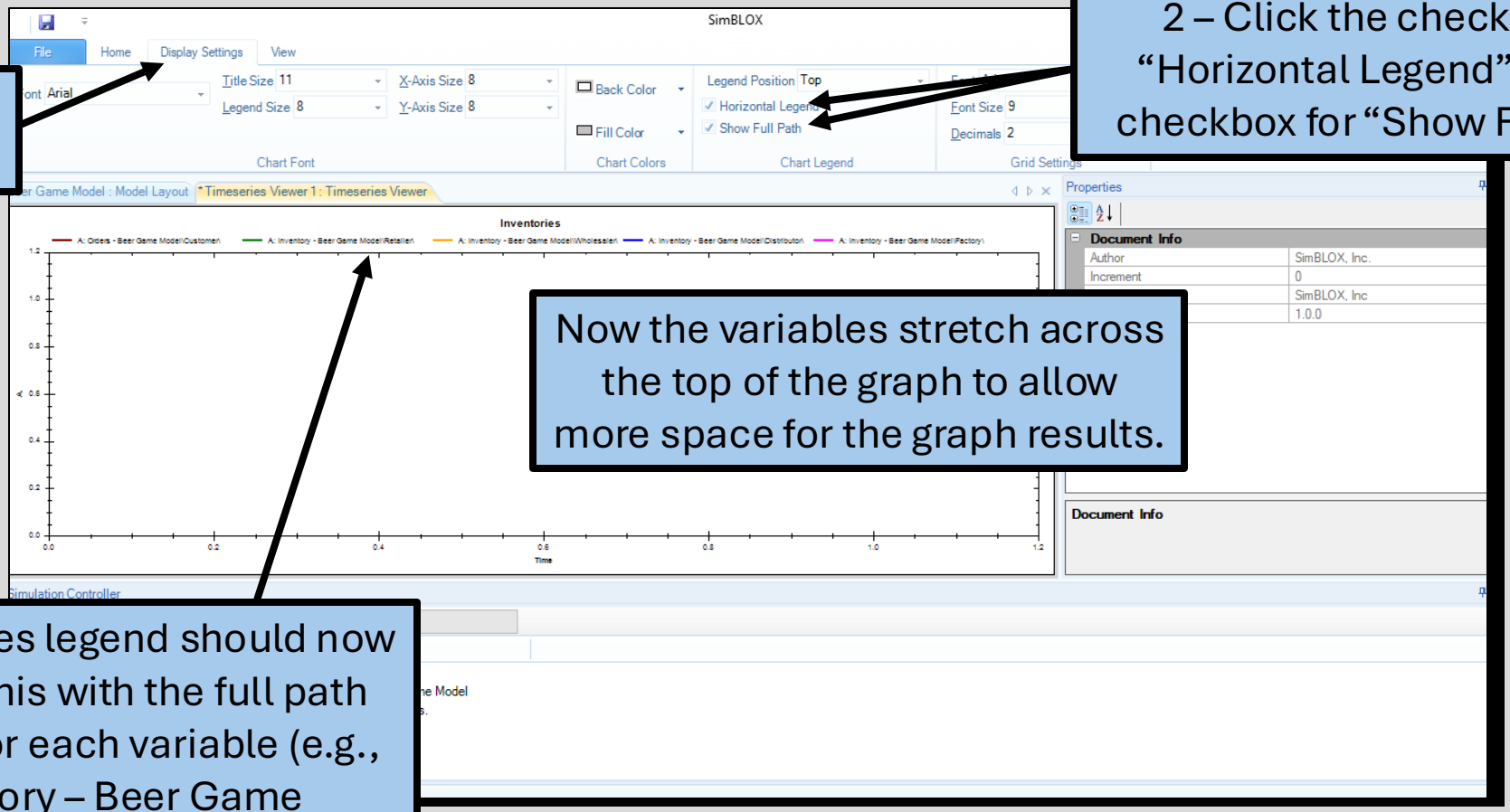


Your blank timeseries viewer chart should look like this.



Let's make the chart more readable.

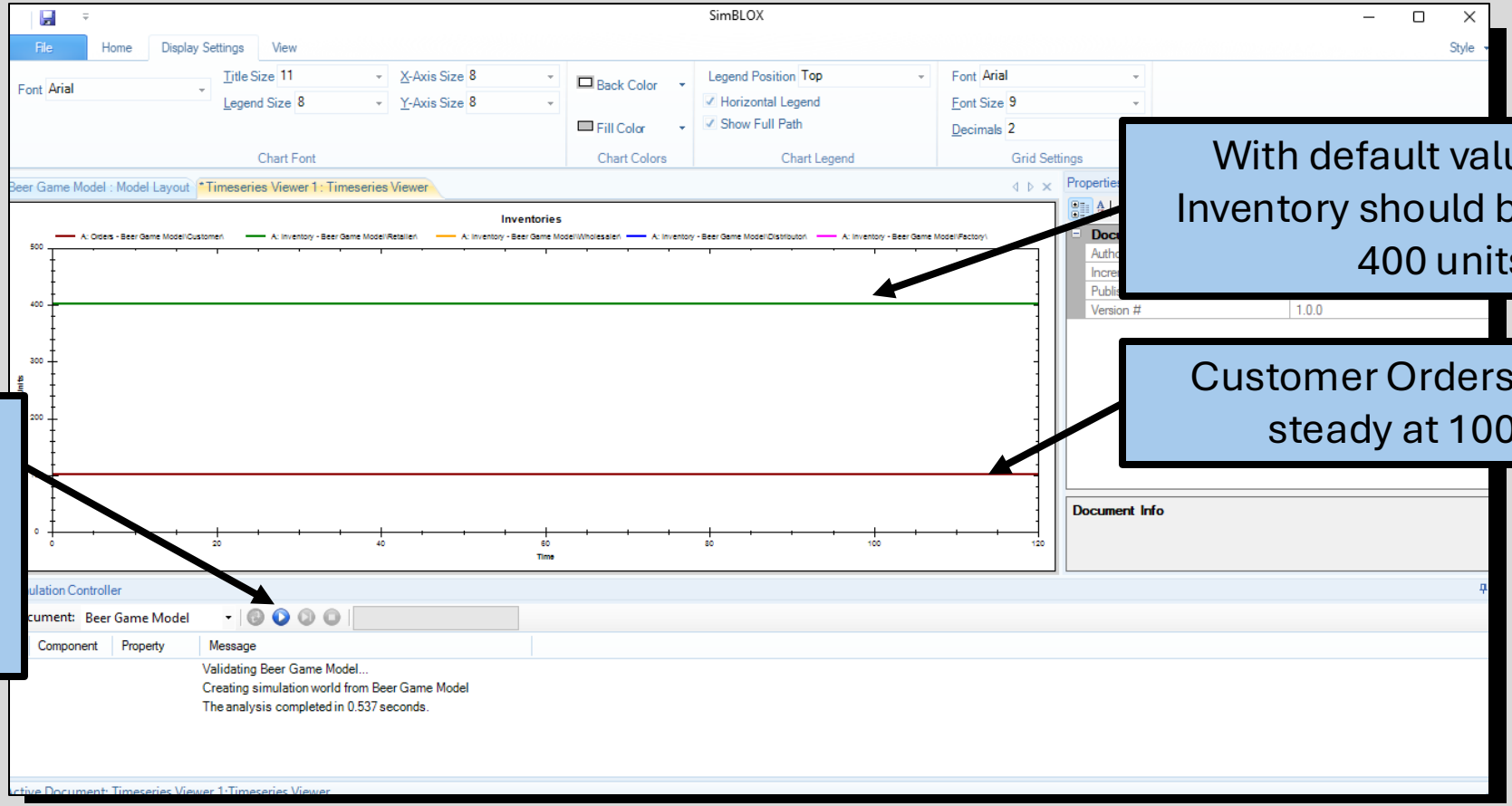
1 – Select "Display Settings"



2 – Click the checkbox for "Horizontal Legend" and the checkbox for "Show Full Path."

Now the variables stretch across the top of the graph to allow more space for the graph results.

The variables legend should now look like this with the full path showing for each variable (e.g., Inventory – Beer Game Model\Retailer\).



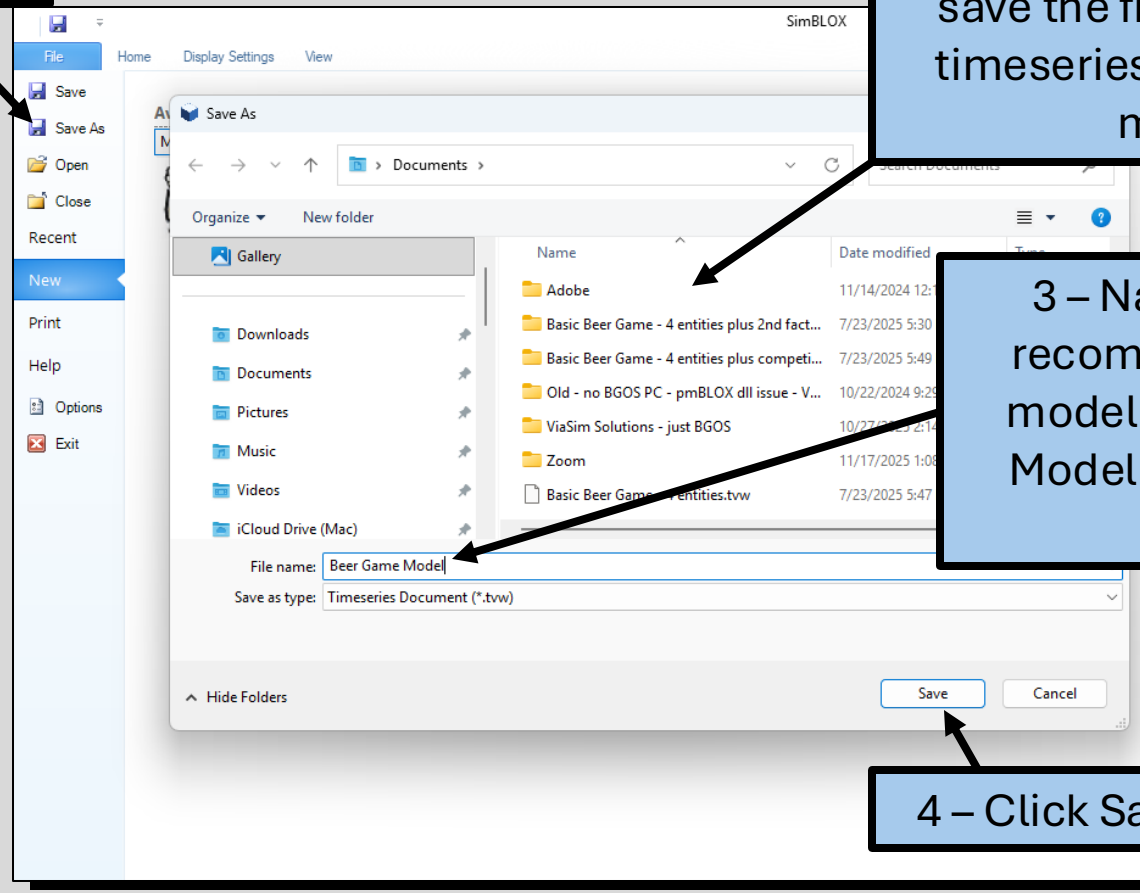
1 – Click the Run button in the Simulation Controller to plot results.

With default values, each Inventory should be steady at 400 units.

Customer Orders should be steady at 100 units.

Save the timeseries viewer chart.

1 – Click Save As.

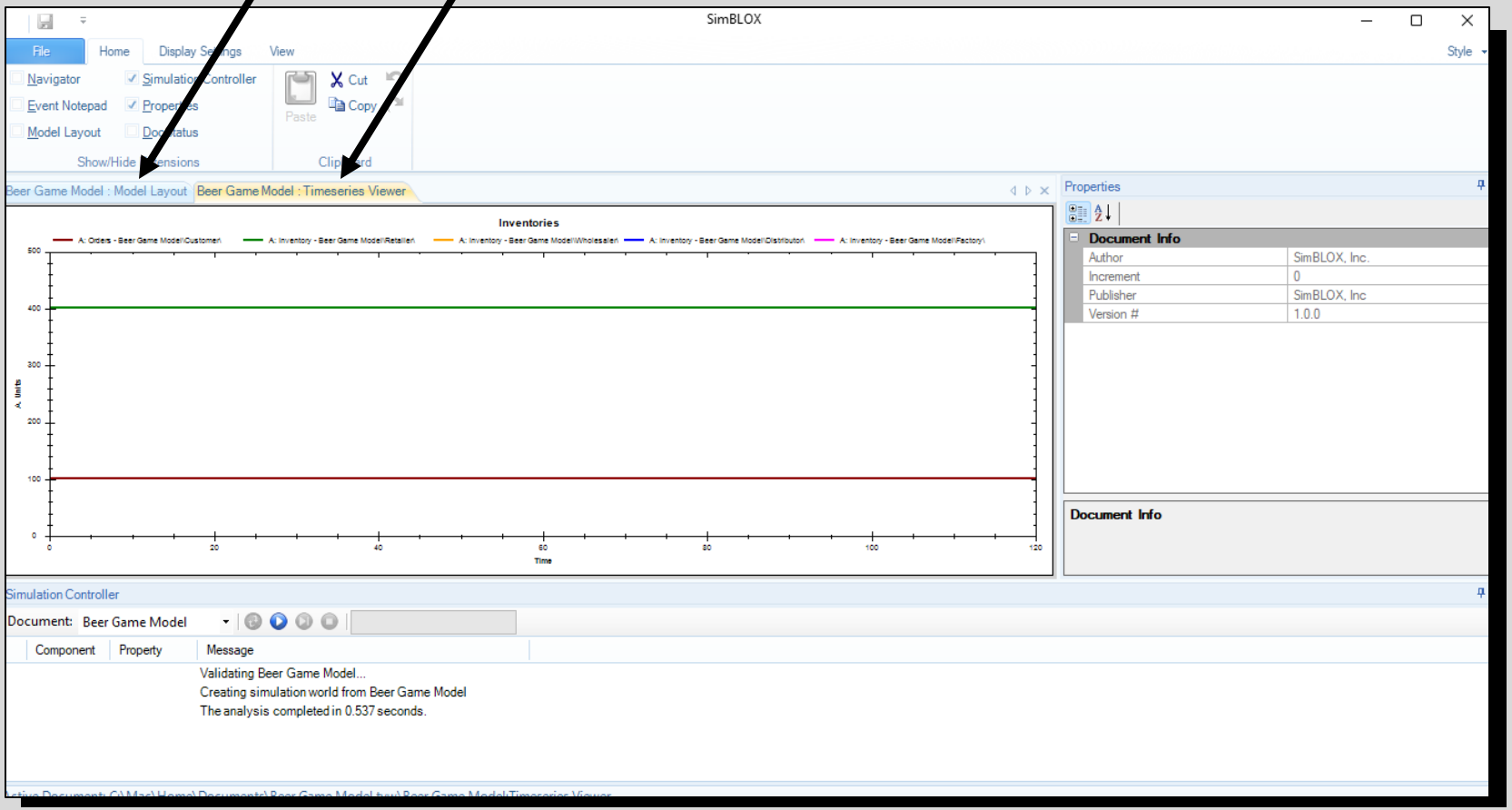


2 – Select the folder or location where you want to save the file. It is highly recommended to put the timeseries viewer file in the same location as the model to simplify organization.

3 – Name the timeseries viewer file. It is highly recommended to use the same file name as the model to simplify organization (e.g., “Beer Game Model”). Notice that this file will have a different extension (.tvw).

4 – Click Save.

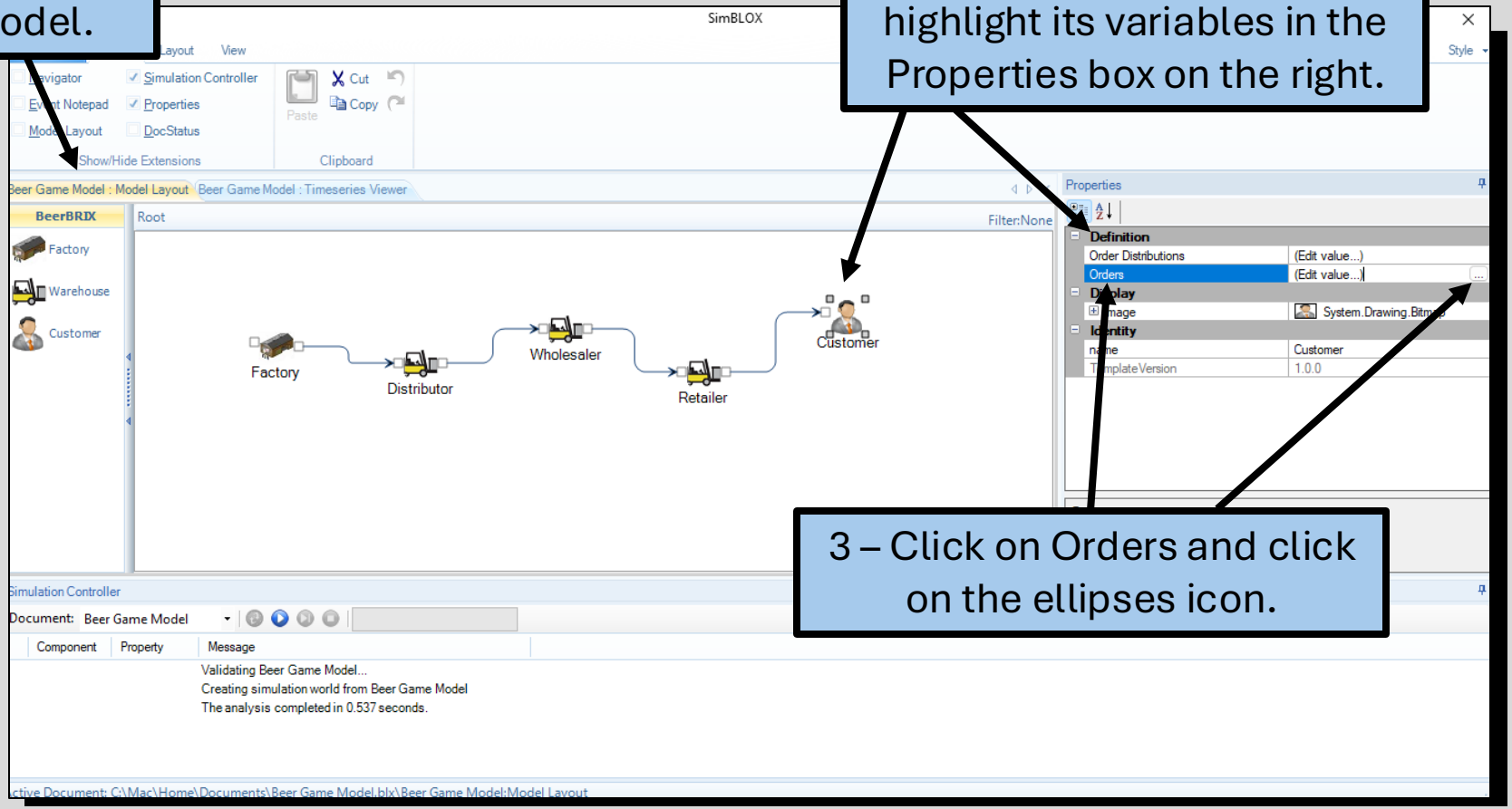
Your screen should look like this, with 2 tabs (one for the model and one for the timeseries viewer) both sharing a similar name.



Now let's add the "bump" in demand for the traditional beer game.

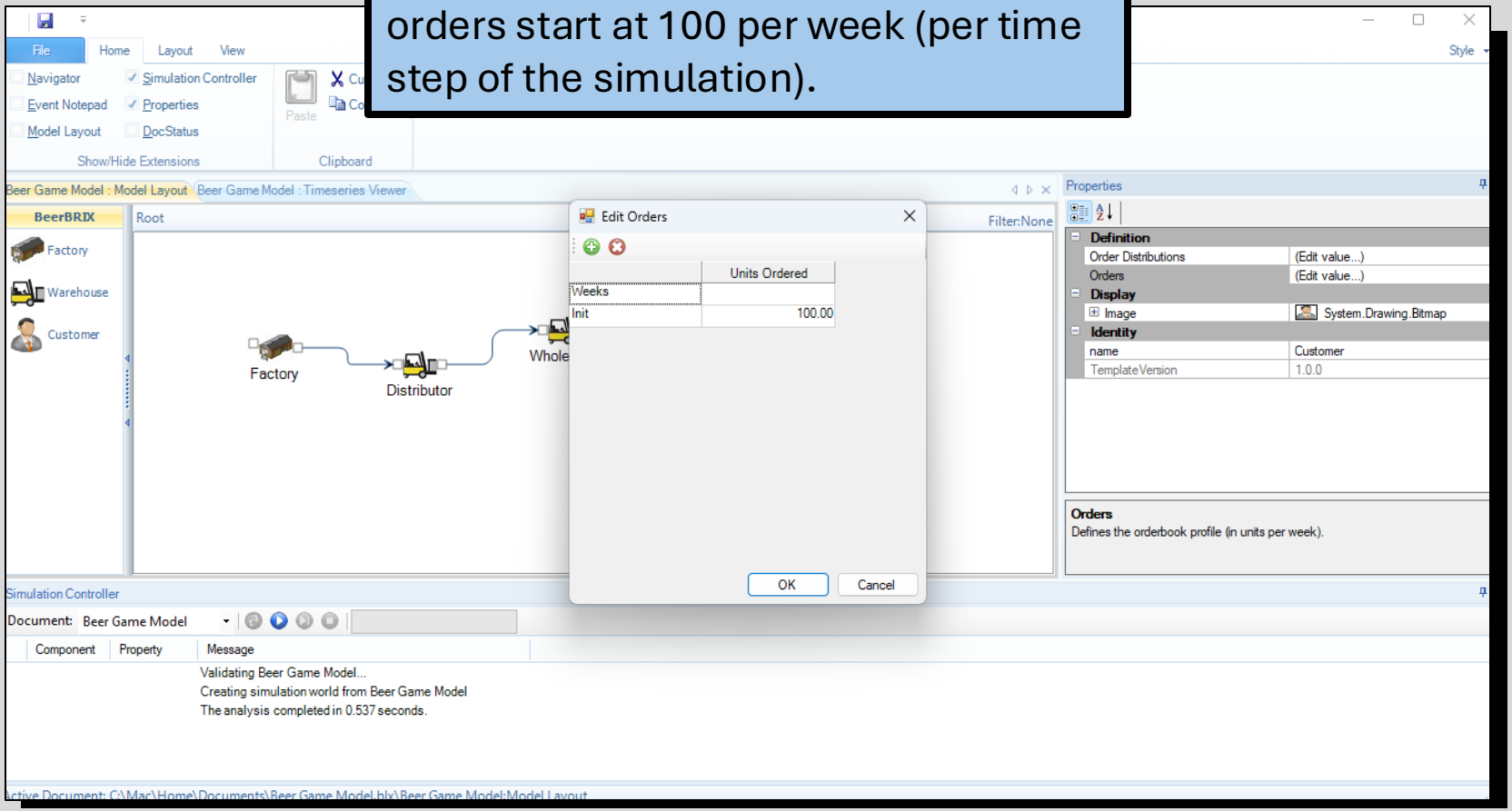
1 – Select the model tab to get back to the model.

2 – Click on the Customer to highlight its variables in the Properties box on the right.

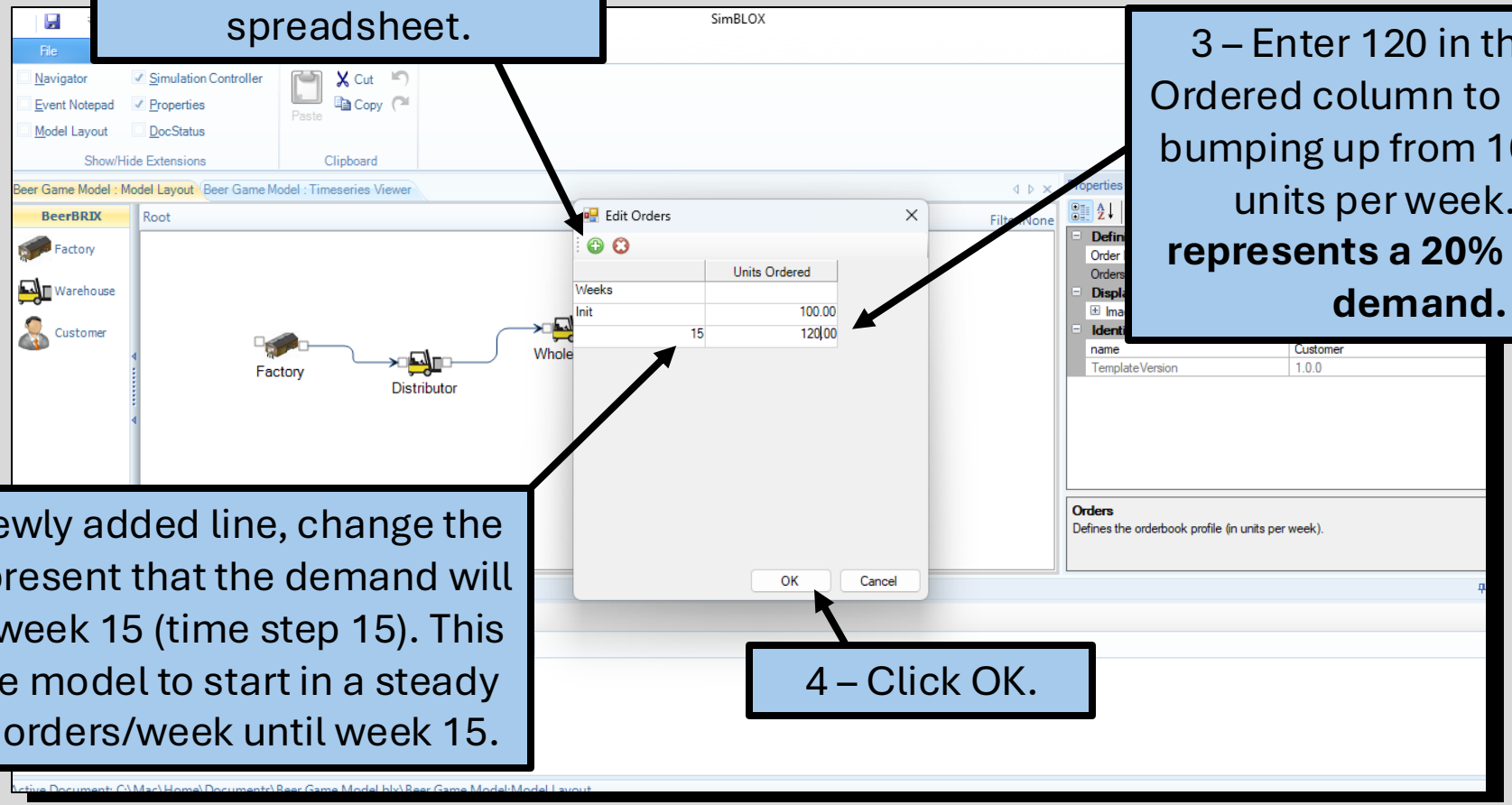


3 – Click on Orders and click on the ellipses icon.

This opens the Edit Orders dialogue box for the Customer. By default, the orders start at 100 per week (per time step of the simulation).



1 – Click the green + icon to add a line to the order spreadsheet.

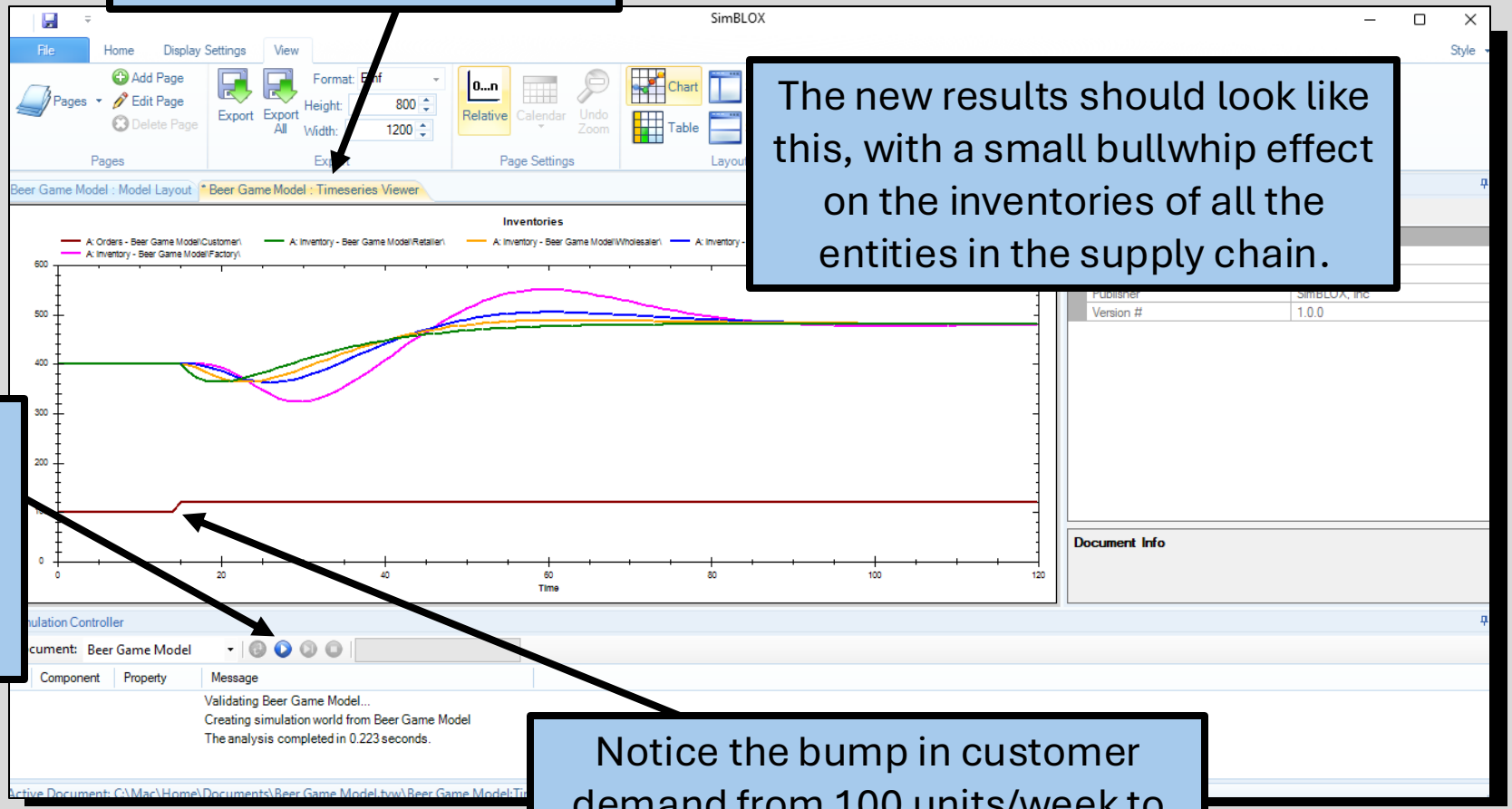


3 – Enter 120 in the Units Ordered column to represent bumping up from 100 to 120 units per week. **This represents a 20% bump in demand.**

2 – On the newly added line, change the 1 to 15 to represent that the demand will bump up at week 15 (time step 15). This will allow the model to start in a steady state of 100 orders/week until week 15.

4 – Click OK.

1 – Select the timeseries viewer tab.

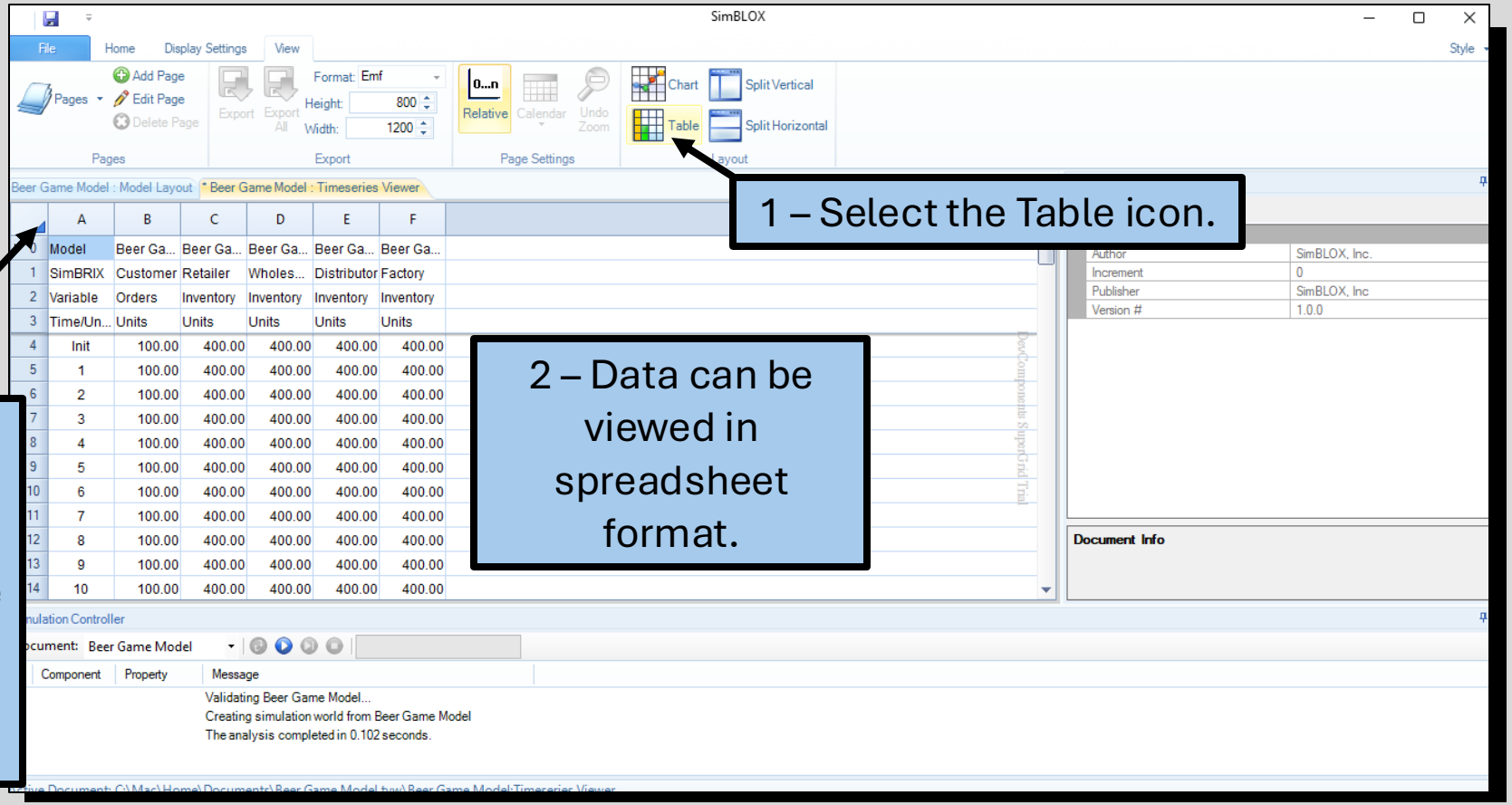


2 – Click the Run button in the Simulation Controller to plot results.

The new results should look like this, with a small bullwhip effect on the inventories of all the entities in the supply chain.

Notice the bump in customer demand from 100 units/week to 120 units/week starting at week 15 (time step 15).

Results can also be viewed in a table format and can be exported to any data program (e.g., MS Excel spreadsheet).



1 – Select the Table icon.

2 – Data can be viewed in spreadsheet format.

3 – Data can be copied by selecting the blue triangle here. Once copied, the data can be pasted into a spreadsheet.

Beer Game on Steroids (BGOS) Tutorial:

Example Scenario

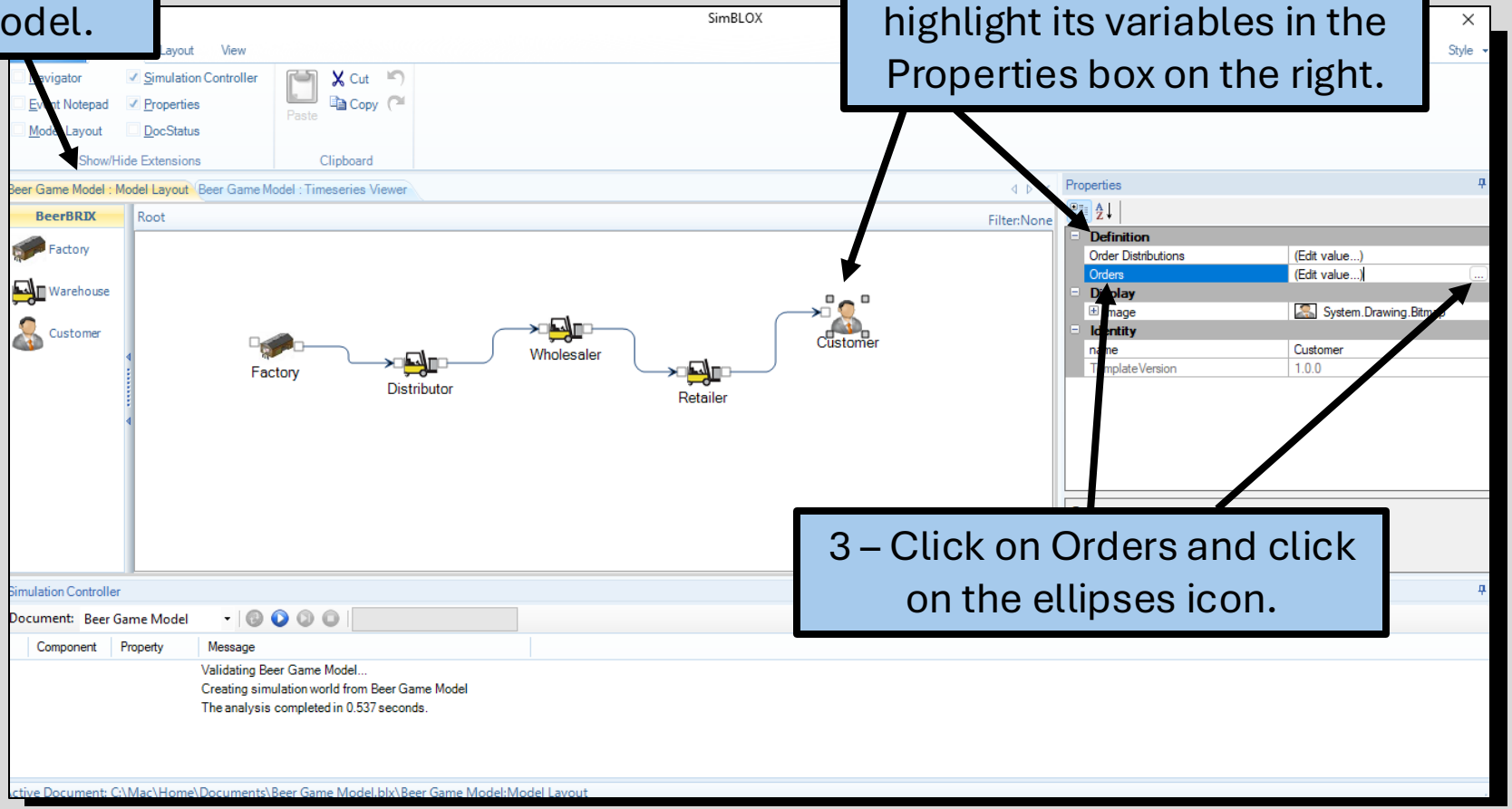
30% increase in customer demand

Starting at week 15

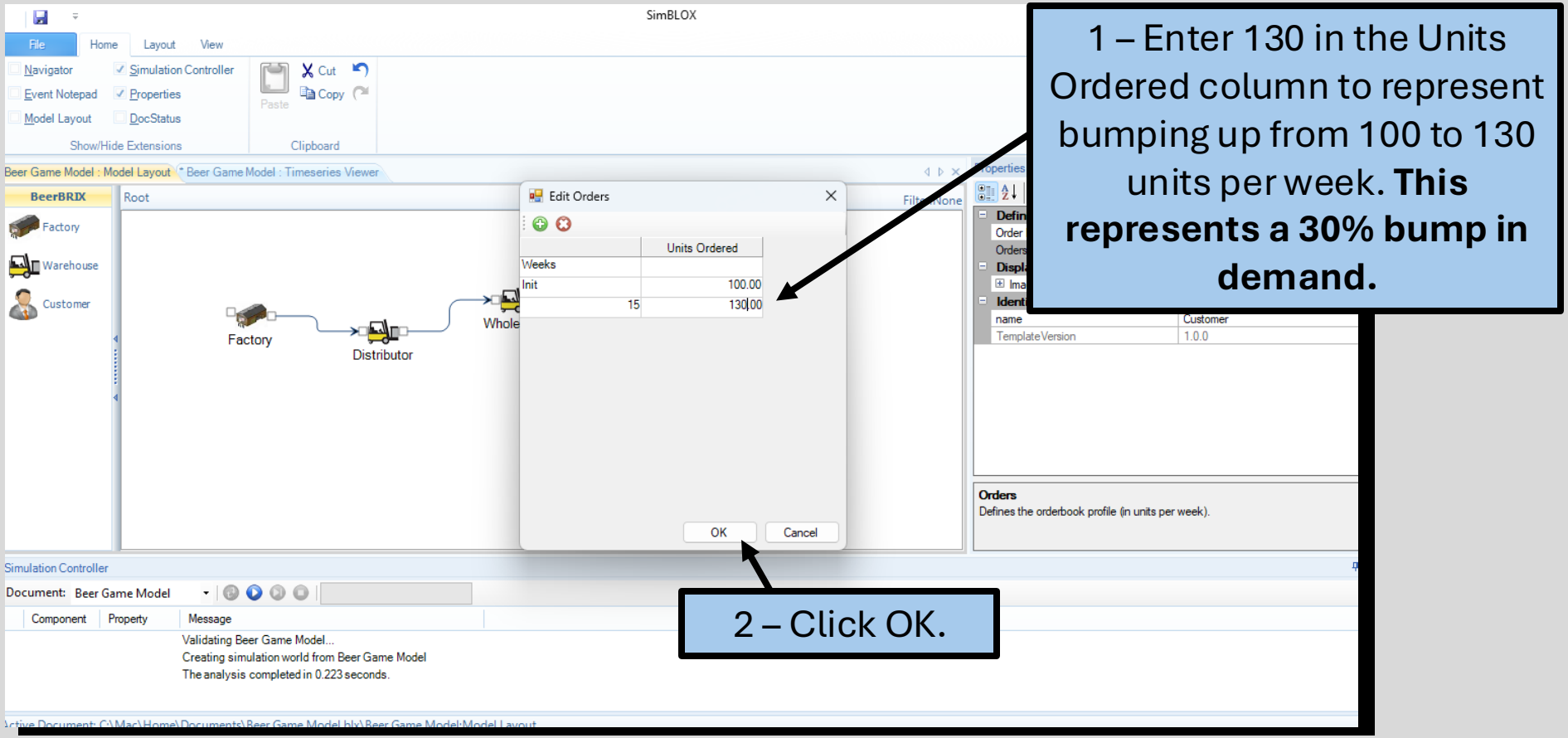
Change the “bump” in demand.

1 – Select the model tab to get back to the model.

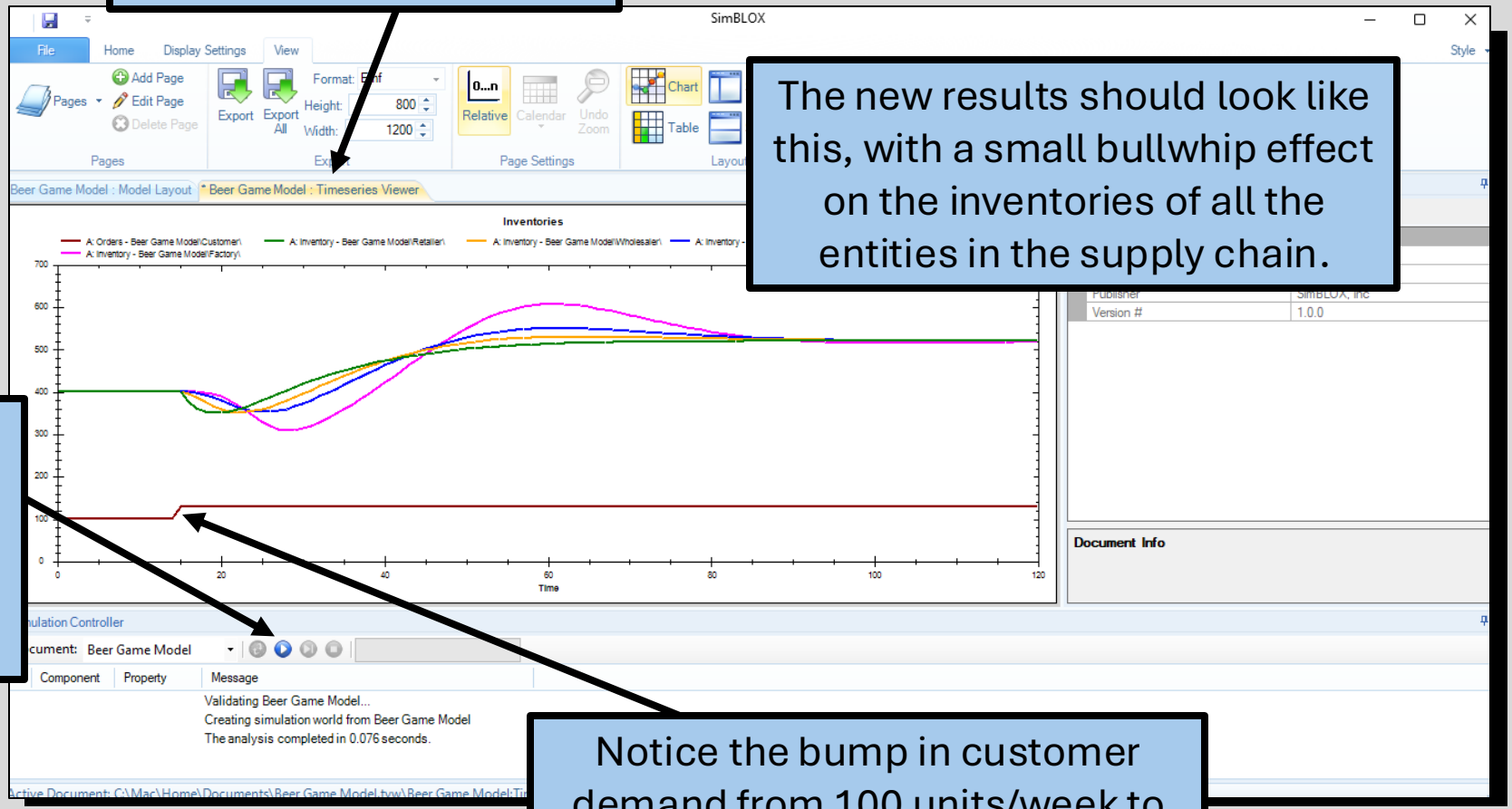
2 – Click on the Customer to highlight its variables in the Properties box on the right.



3 – Click on Orders and click on the ellipses icon.


SimBLOX
File
Home
Layout
View
Navigator
Simulation Controller
Event Notepad
Properties
Model Layout
DocStatus
Show/Hide Extensions
Cut
Copy
Paste
Clipboard
Beer Game Model : Model Layout
Beer Game Model : Timeseries Viewer
BeerBRIX
Factory
Warehouse
Customer
Root
Factory
Distributor
Edit Orders
Units Ordered
Weeks
Init
100.00
15
130.00
OK
Cancel
Orders
Defines the orderbook profile (in units per week).
Simulation Controller
Document: Beer Game Model
Component
Property
Message
Validating Beer Game Model...
Creating simulation world from Beer Game Model
The analysis completed in 0.223 seconds.
1 – Enter 130 in the Units Ordered column to represent bumping up from 100 to 130 units per week. This represents a 30% bump in demand.
2 – Click OK.

1 – Select the timeseries viewer tab.

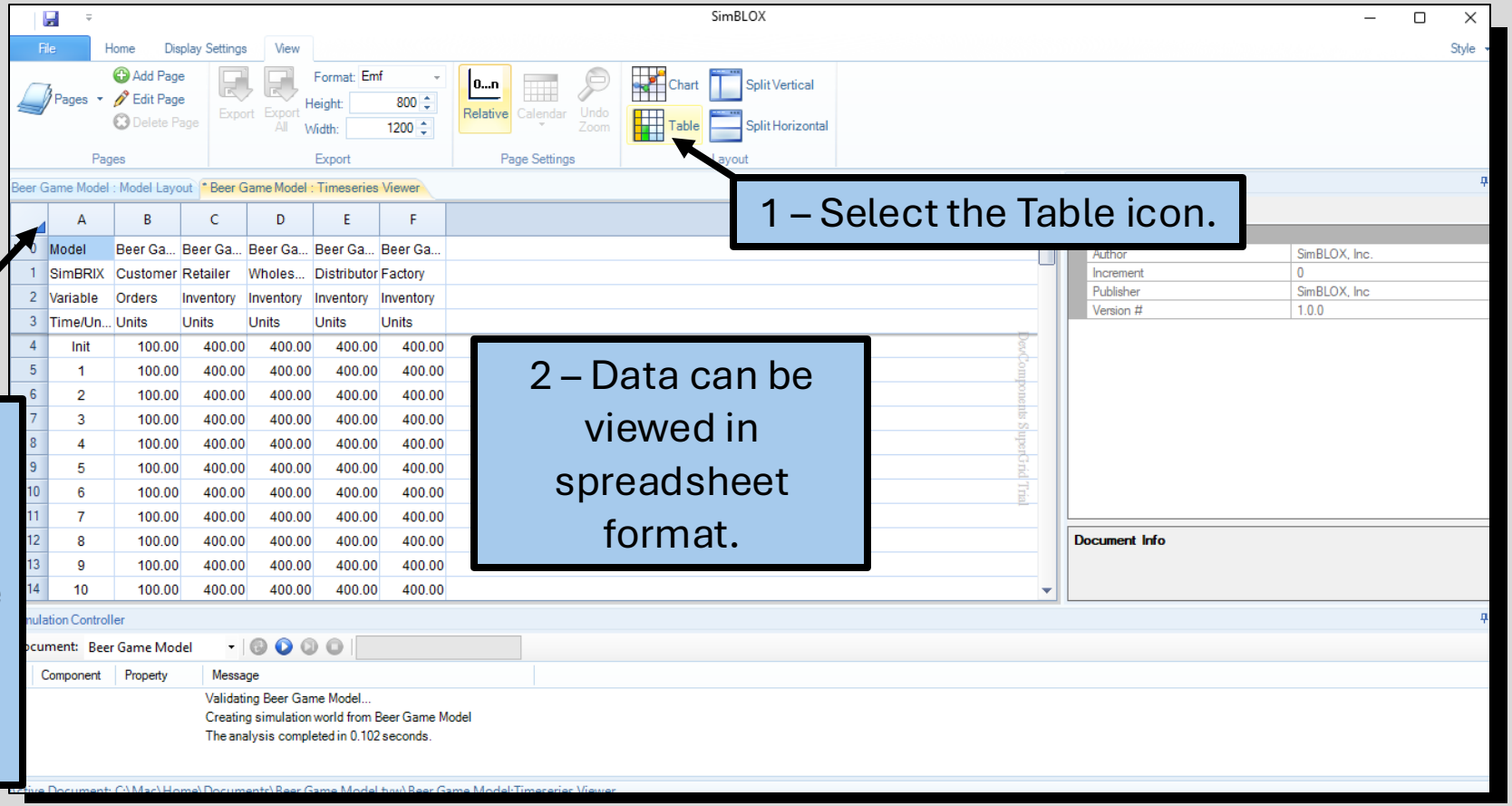


2 – Click the Run button in the Simulation Controller to plot results.

The new results should look like this, with a small bullwhip effect on the inventories of all the entities in the supply chain.

Notice the bump in customer demand from 100 units/week to 130 units/week starting at week 15 (time step 15).

Results can also be viewed in a table format and can be exported to any data program (e.g., MS Excel spreadsheet).



1 – Select the Table icon.

2 – Data can be viewed in spreadsheet format.

3 – Data can be copied by selecting the blue triangle here. Once copied, the data can be pasted into a spreadsheet.

Beer Game on Steroids (BGOS) Tutorial:

Example Scenario

10% increase in customer demand

Starting at week 15

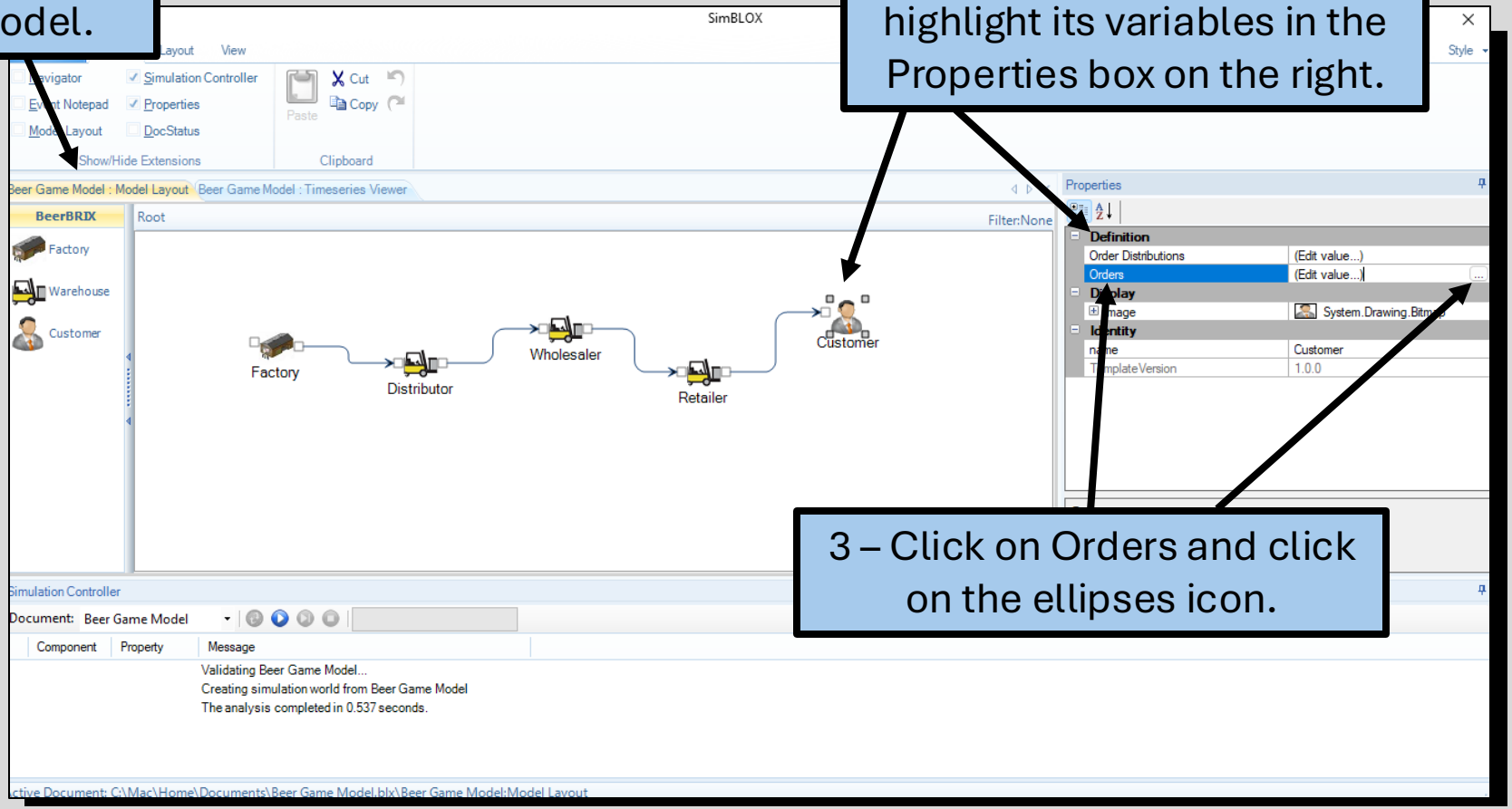
Followed by a 20% decrease in customer demand

Starting at week 30

Change the demand profile from the Customer.

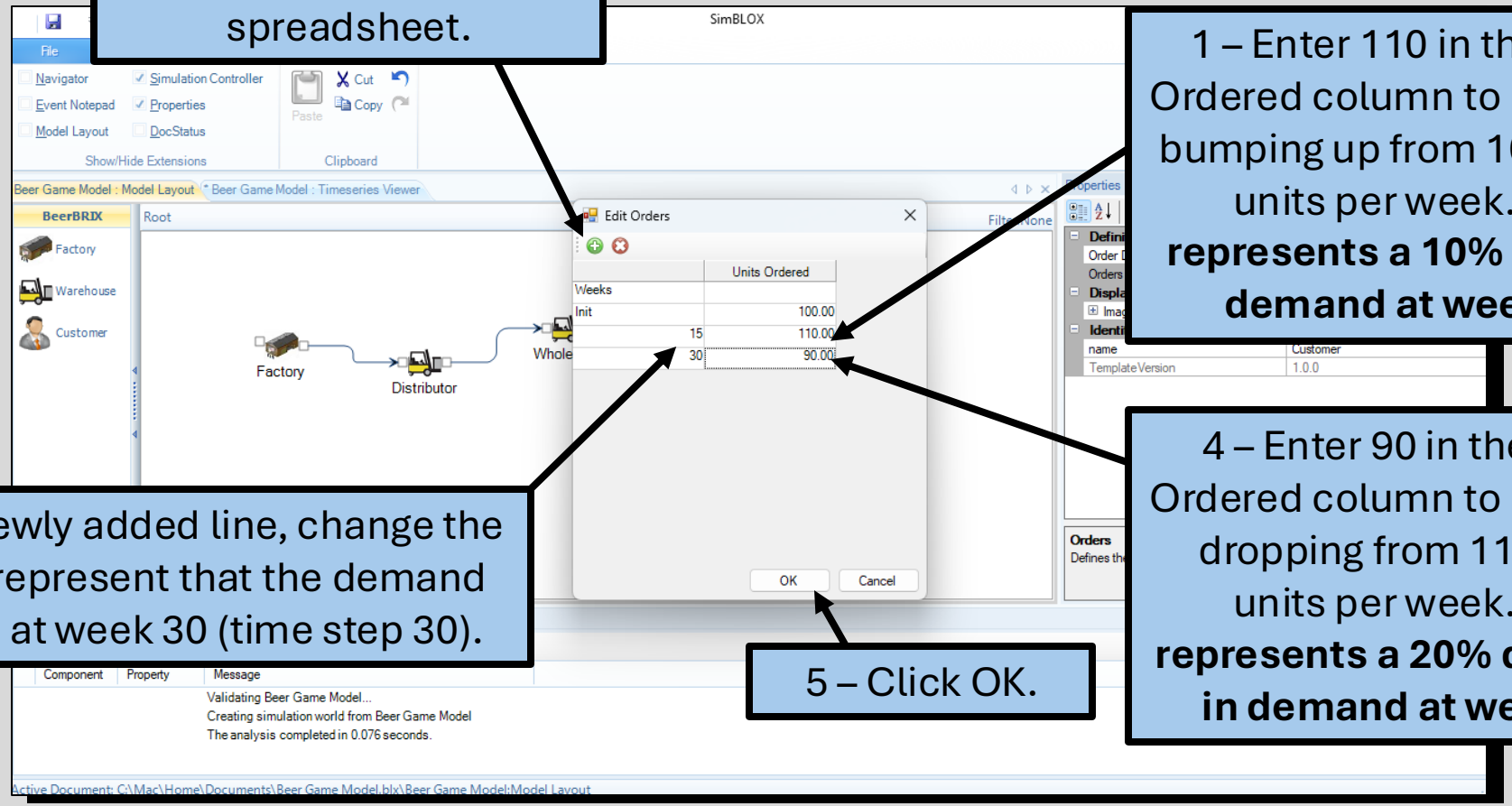
1 – Select the model tab to get back to the model.

2 – Click on the Customer to highlight its variables in the Properties box on the right.



3 – Click on Orders and click on the ellipses icon.

2 – Click the green + icon to add a line to the order spreadsheet.



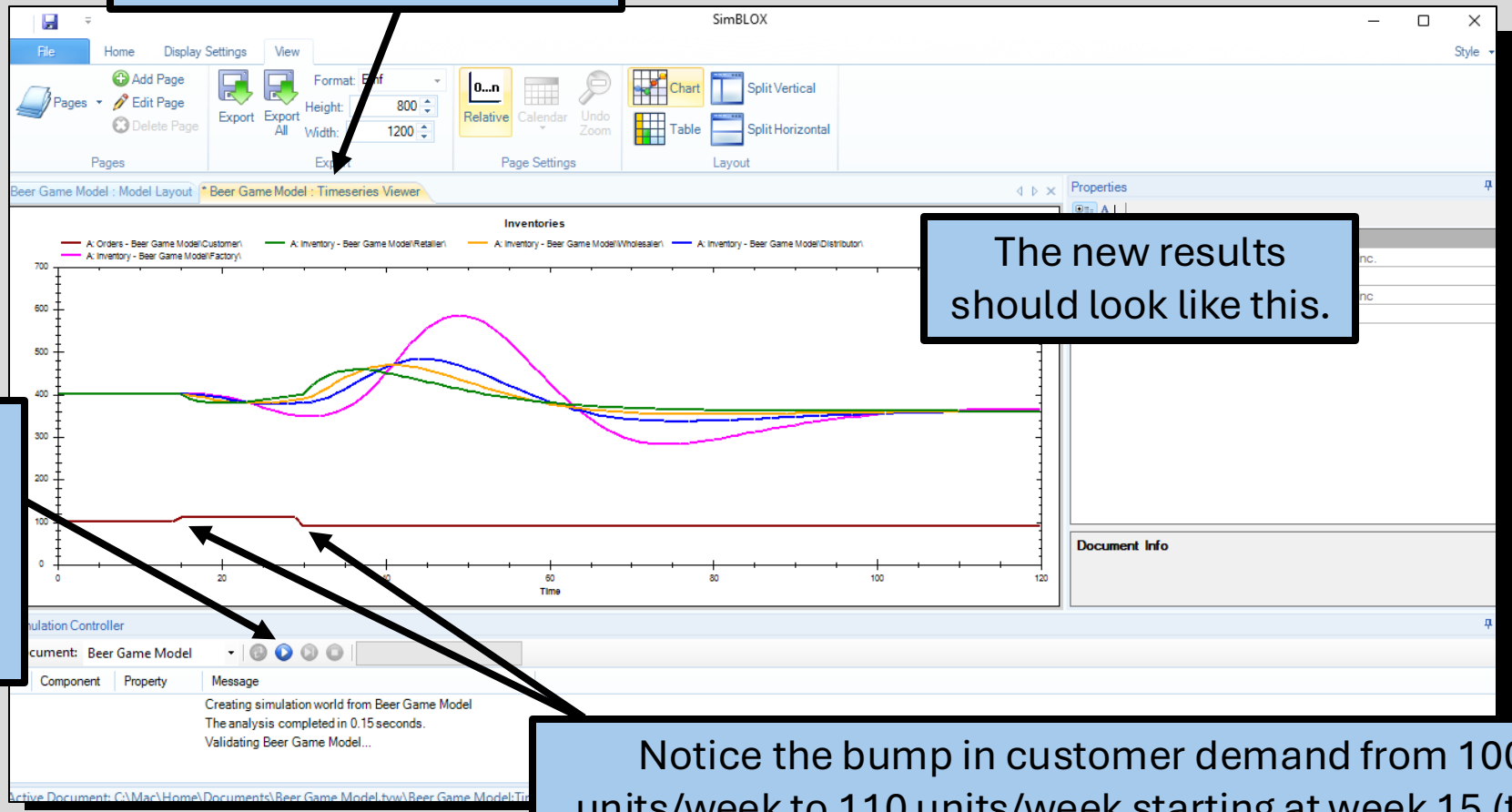
1 – Enter 110 in the Units Ordered column to represent bumping up from 100 to 110 units per week. **This represents a 10% bump in demand at week 15.**

3 – On the newly added line, change the 16 to 30 to represent that the demand will change at week 30 (time step 30).

4 – Enter 90 in the Units Ordered column to represent dropping from 110 to 90 units per week. **This represents a 20% decrease in demand at week 30.**

5 – Click OK.

1 – Select the timeseries viewer tab.

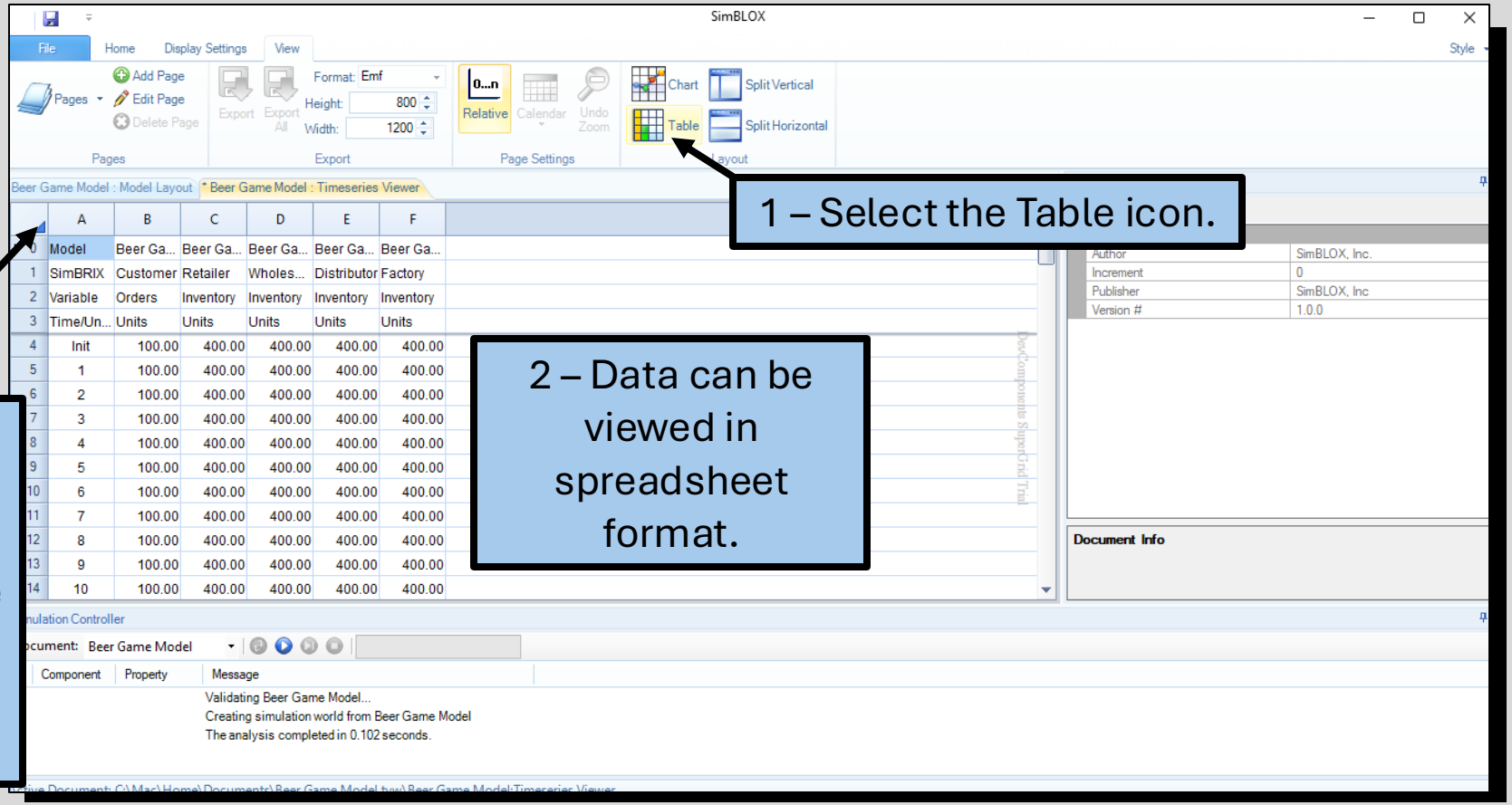


The new results should look like this.

2 – Click the Run button in the Simulation Controller to plot results.

Notice the bump in customer demand from 100 units/week to 110 units/week starting at week 15 (time step 15) and a drop in demand from 110 units/week down to 90 units/week starting at week 30.

Results can also be viewed in a table format and can be exported to any data program (e.g., MS Excel spreadsheet).



1 – Select the Table icon.

2 – Data can be viewed in spreadsheet format.

3 – Data can be copied by selecting the blue triangle here. Once copied, the data can be pasted into a spreadsheet.