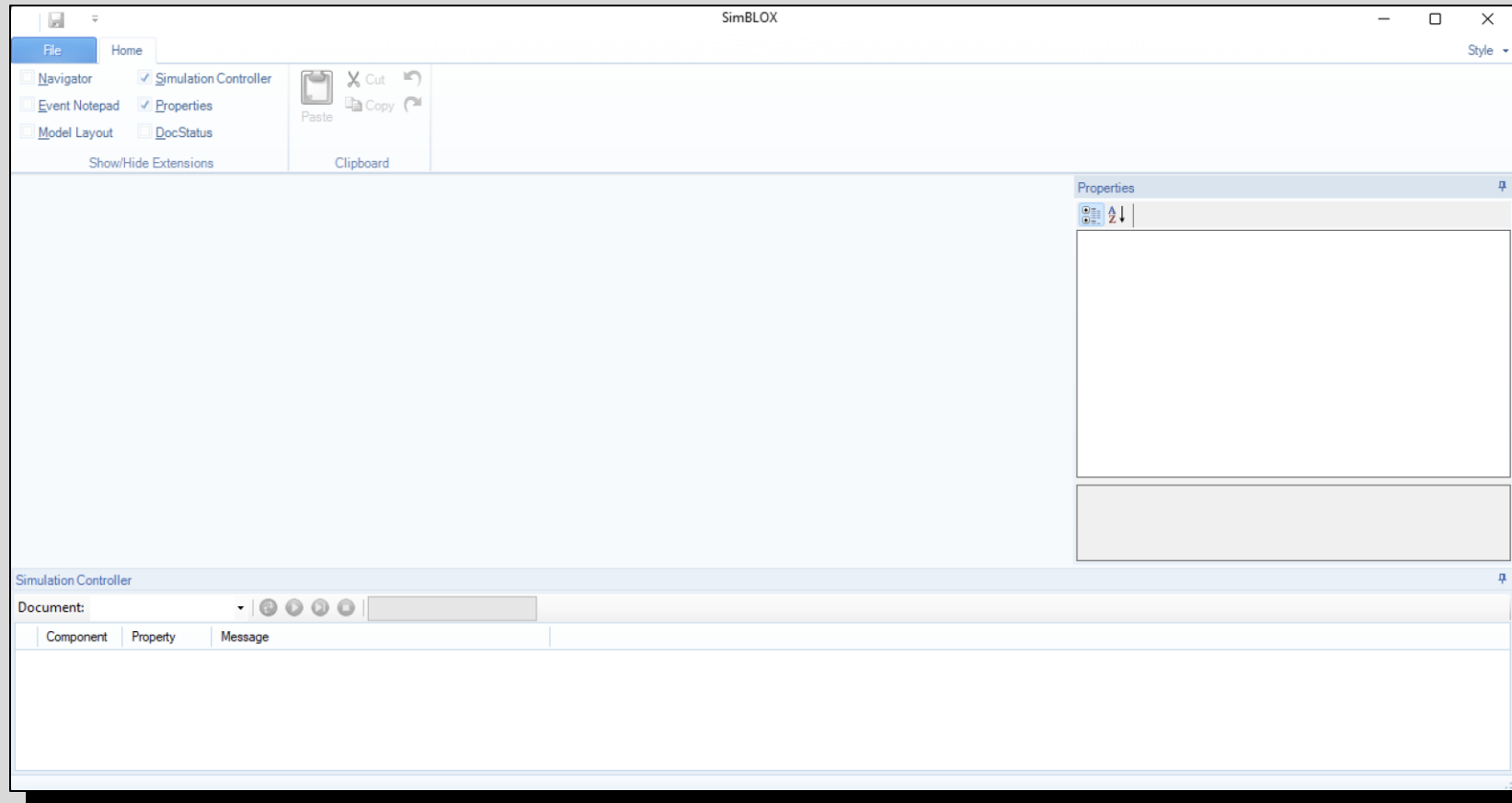


Beer Game on Steroids (BGOS) Tutorial:

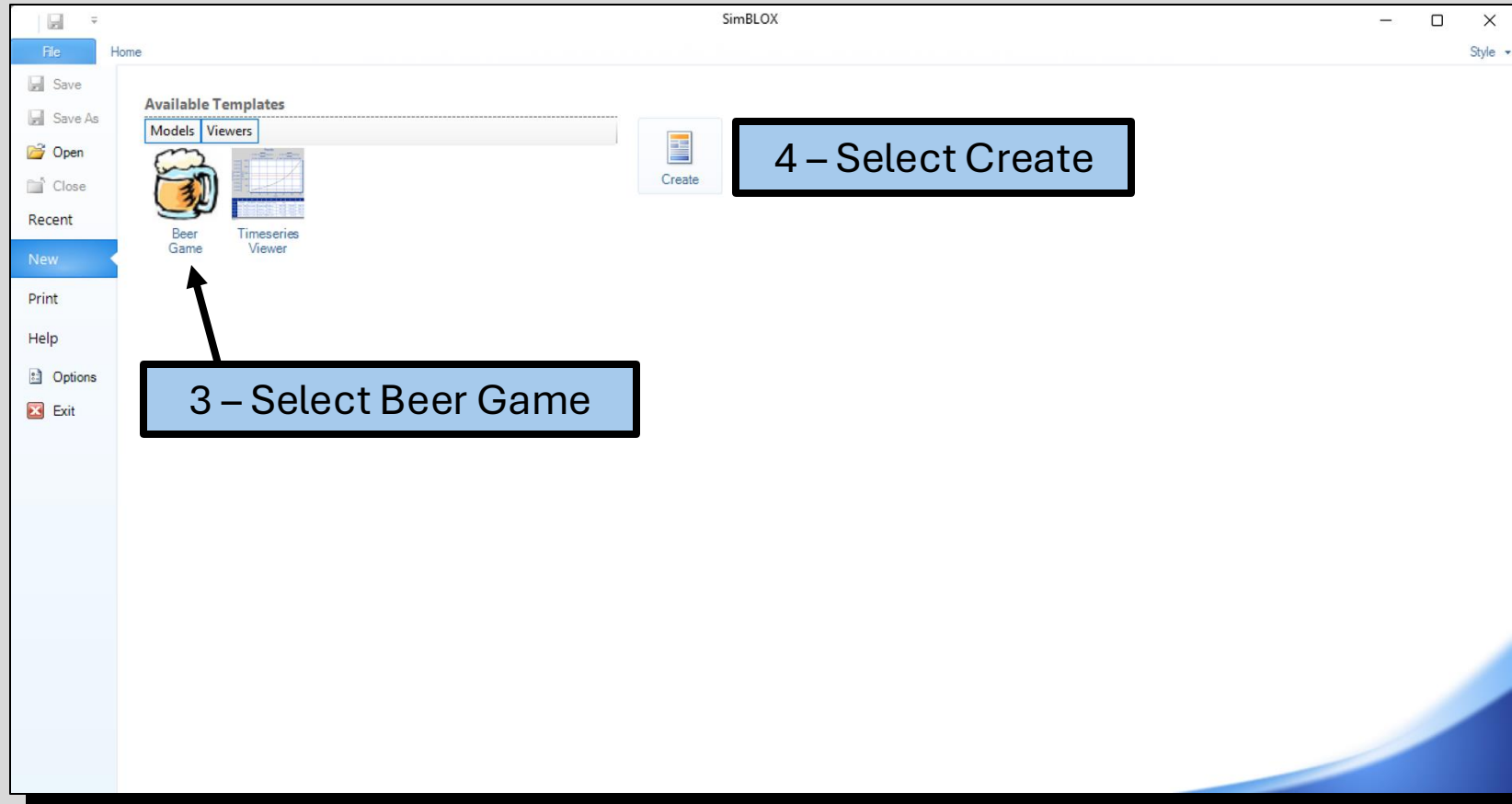
Building the basic traditional beer game

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



1 – Select File

2 – Select New

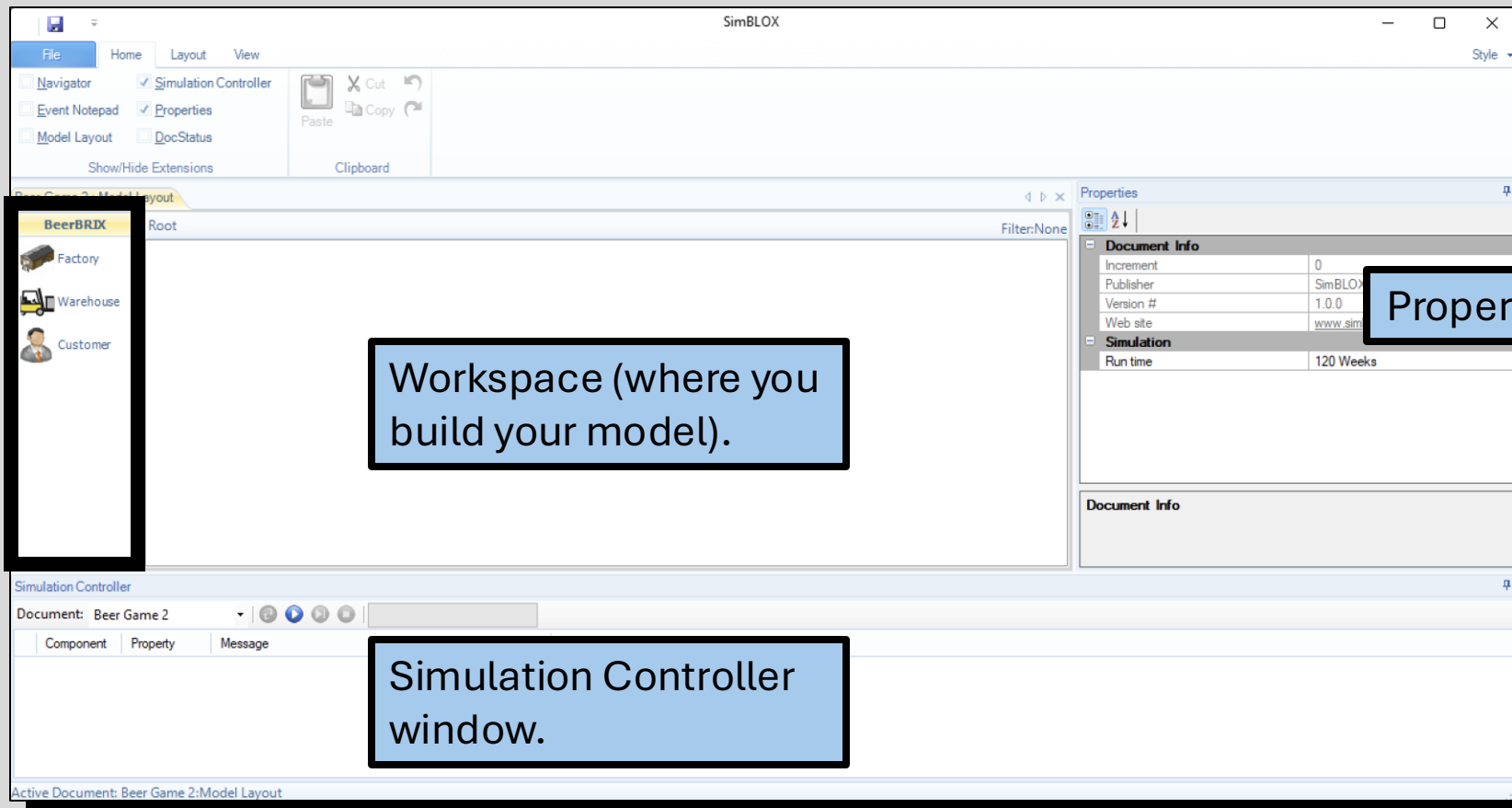


3 – Select Beer Game

4 – Select Create

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.

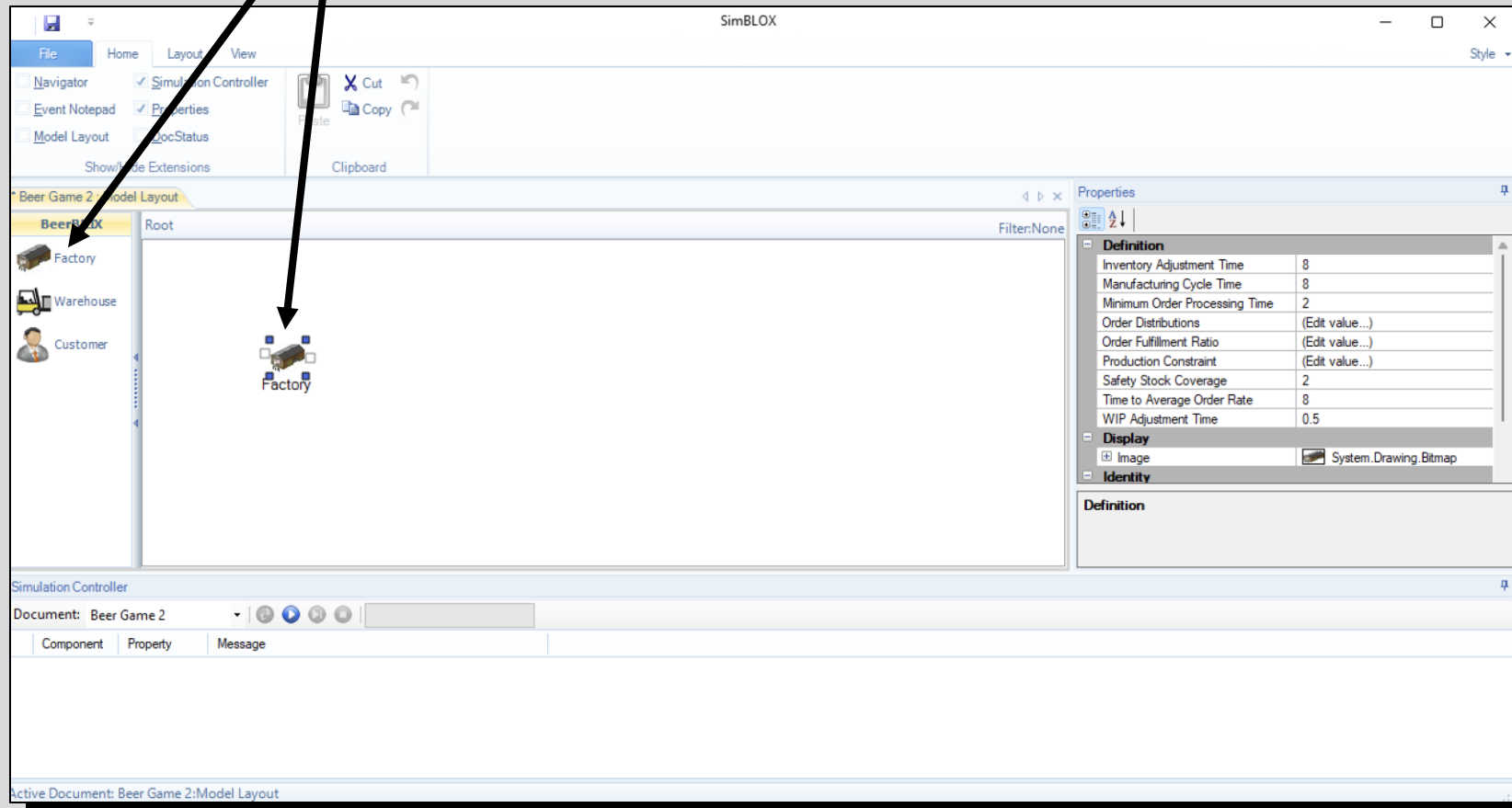
Beer Game on Steroids (BGOS) Tutorial:

Example Scenario

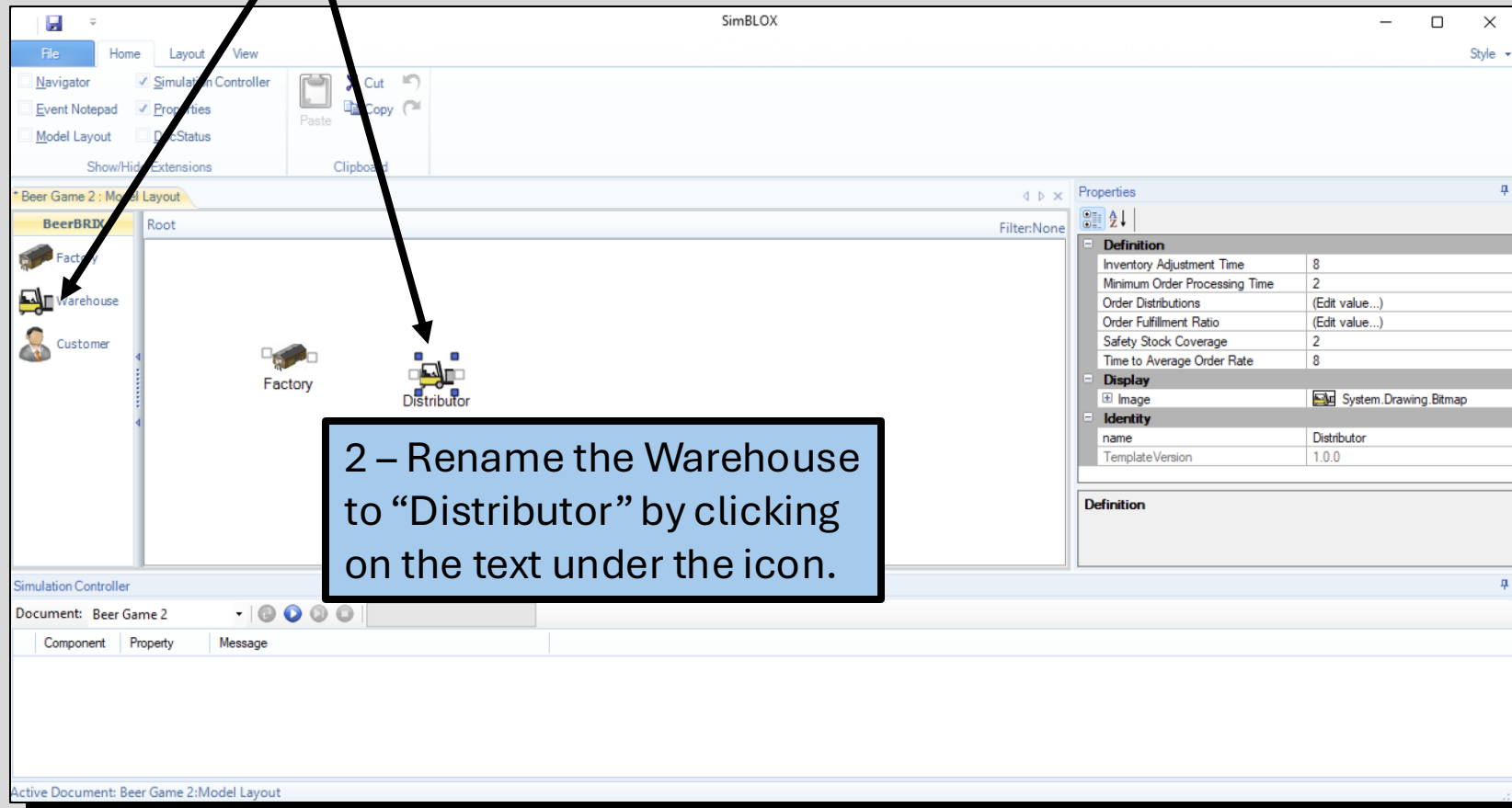
20% increase in customer demand

Starting at week 15

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



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

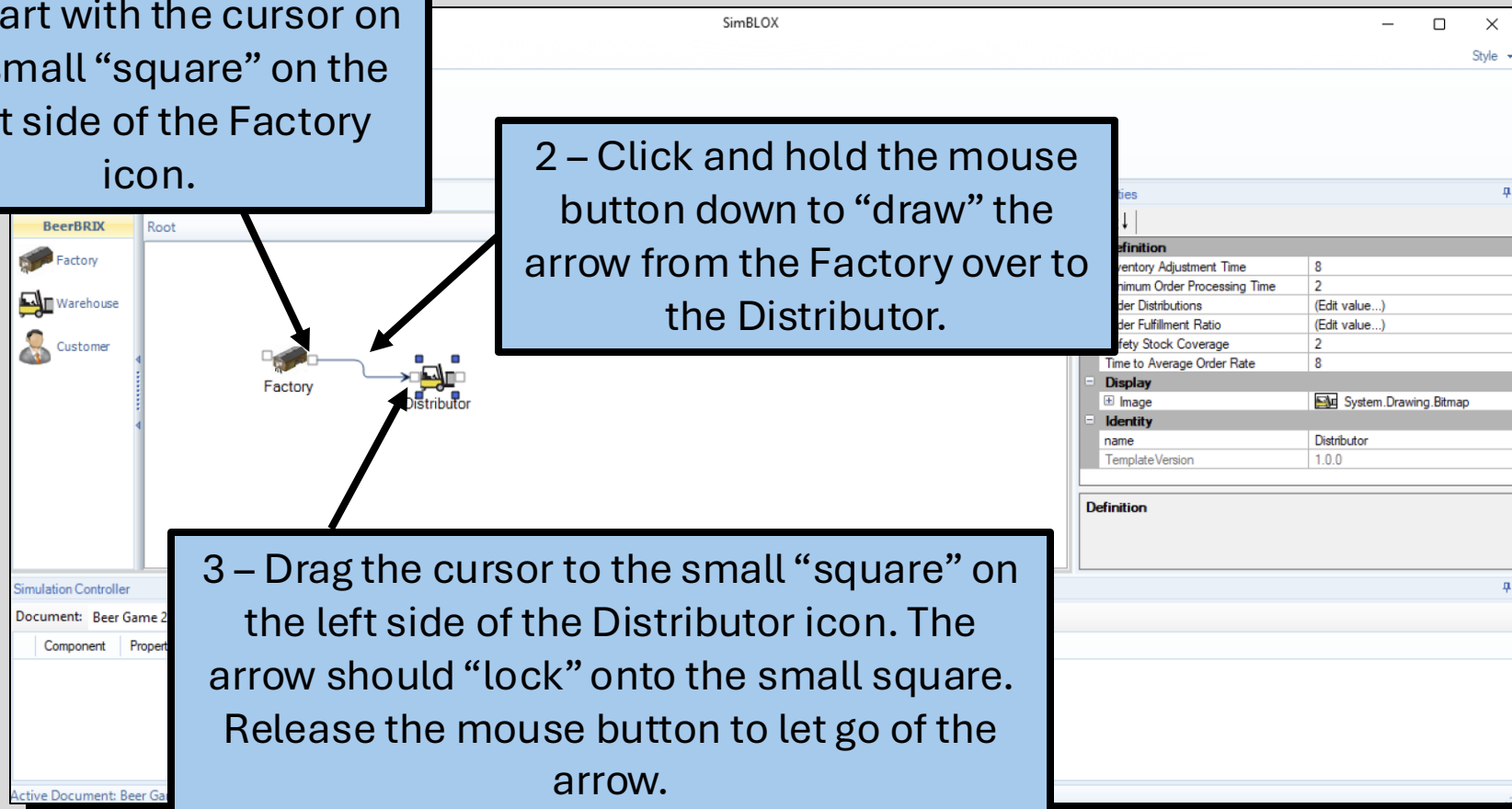


Connect the Factory to the Distributor.

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.

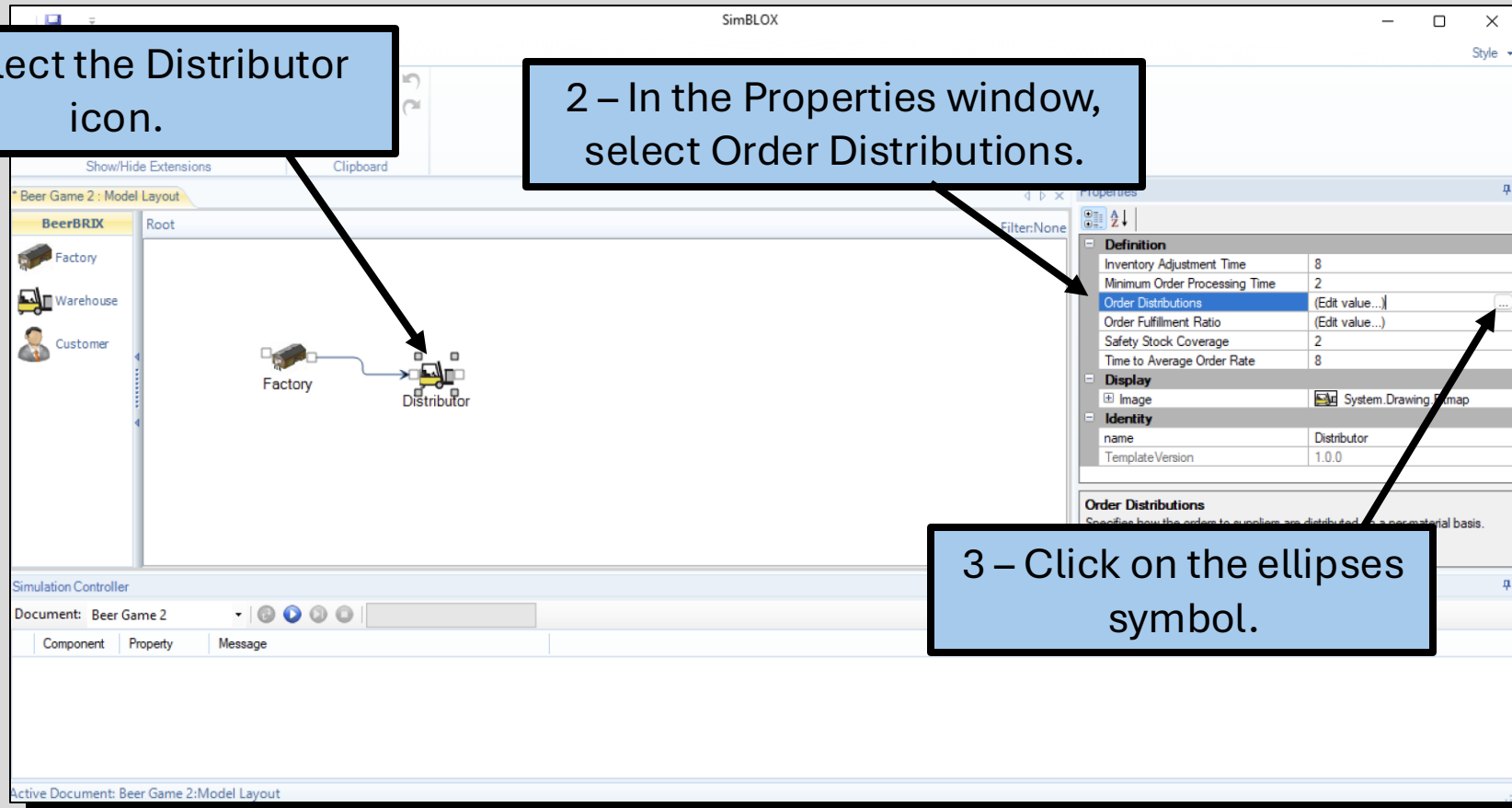


Assign orders from the Distributor to the Factory.

1 – Select the Distributor icon.

2 – In the Properties window, select Order Distributions.

3 – Click on the ellipses symbol.

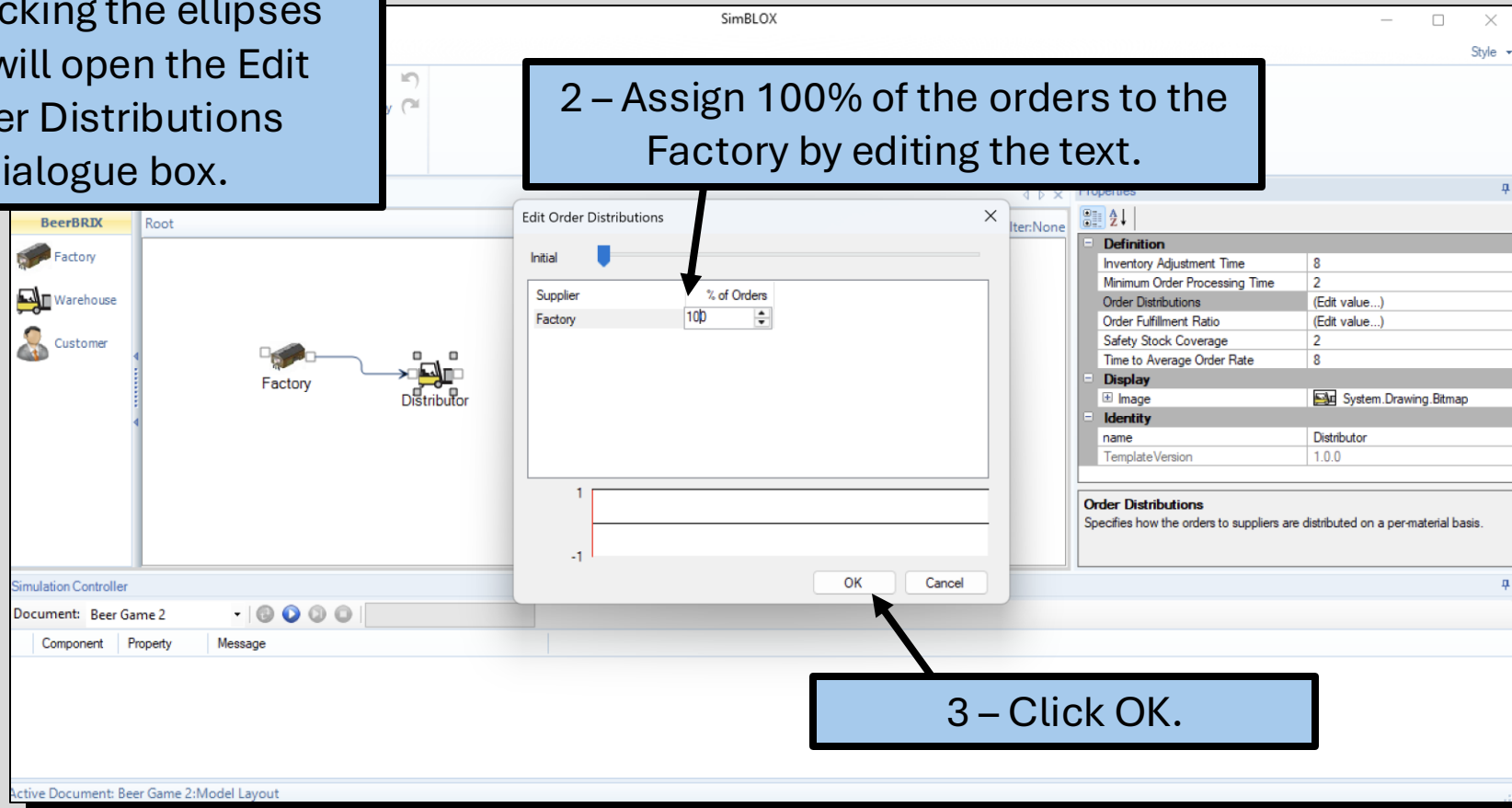


Assign orders from the Distributor to the Factory.

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

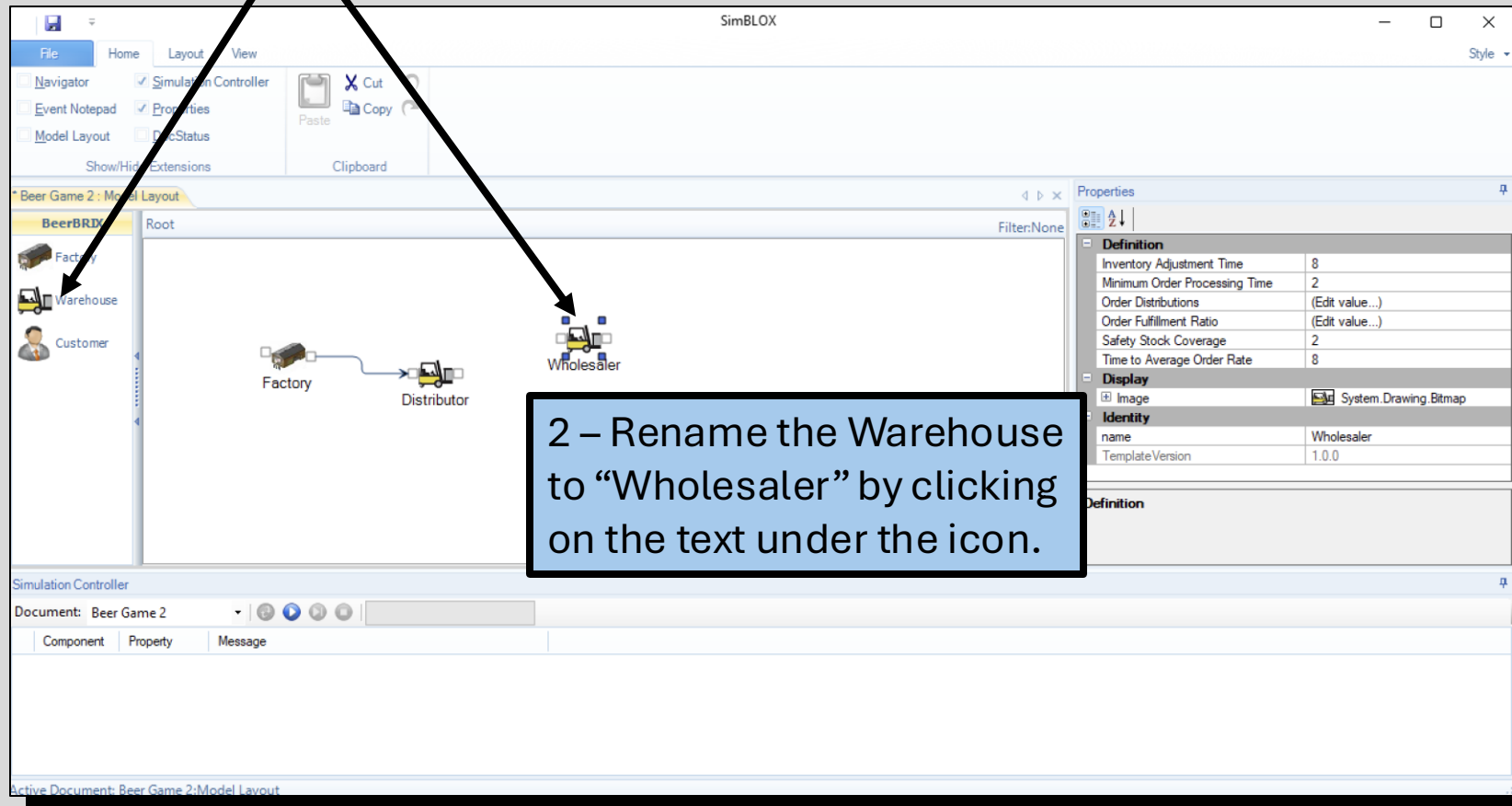
2 – Assign 100% of the orders to the Factory by editing the text.

3 – Click OK.



Add the Wholesaler.

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



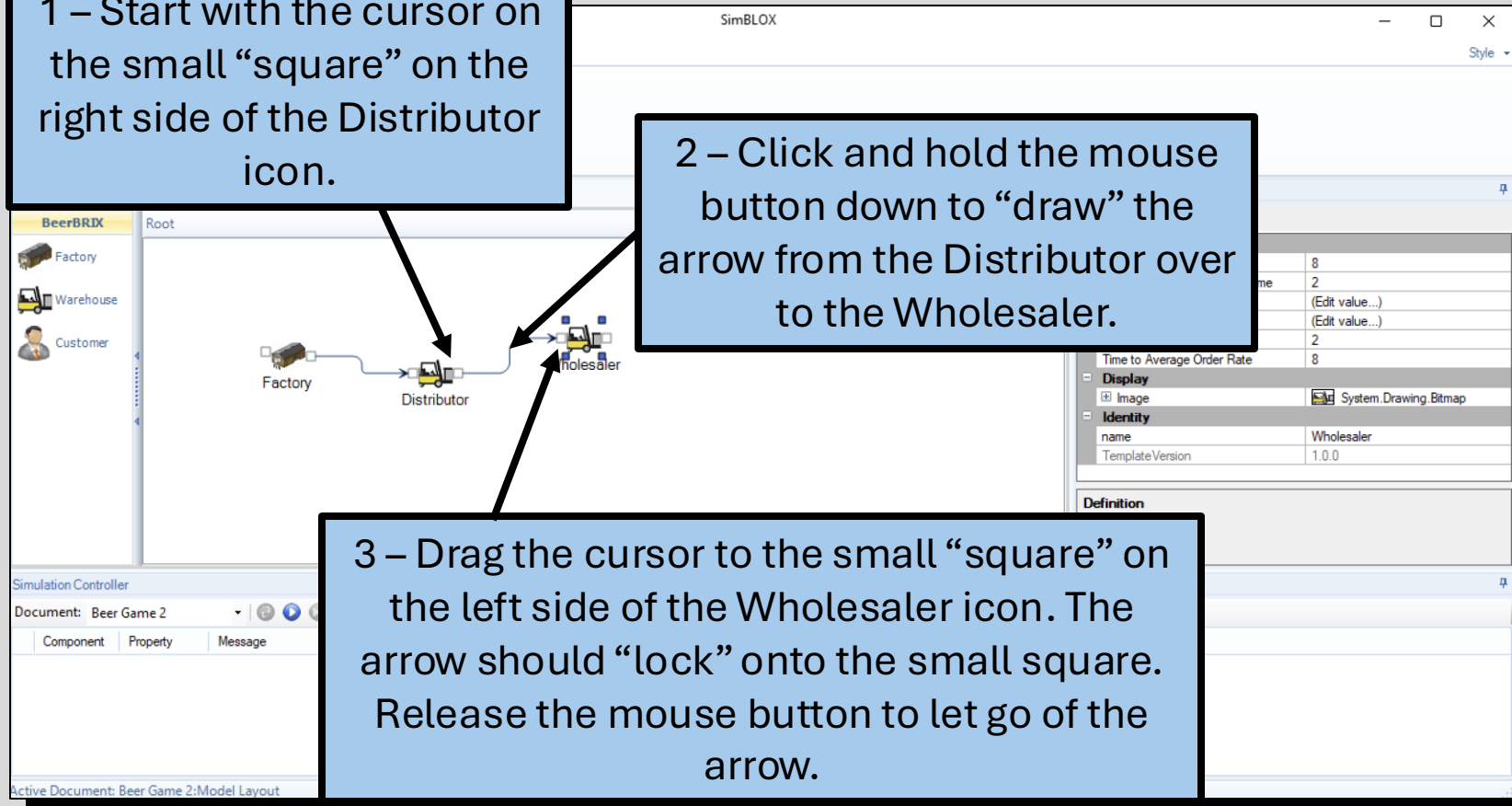
2 – Rename the Warehouse to “Wholesaler” by clicking on the text under the icon.

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.

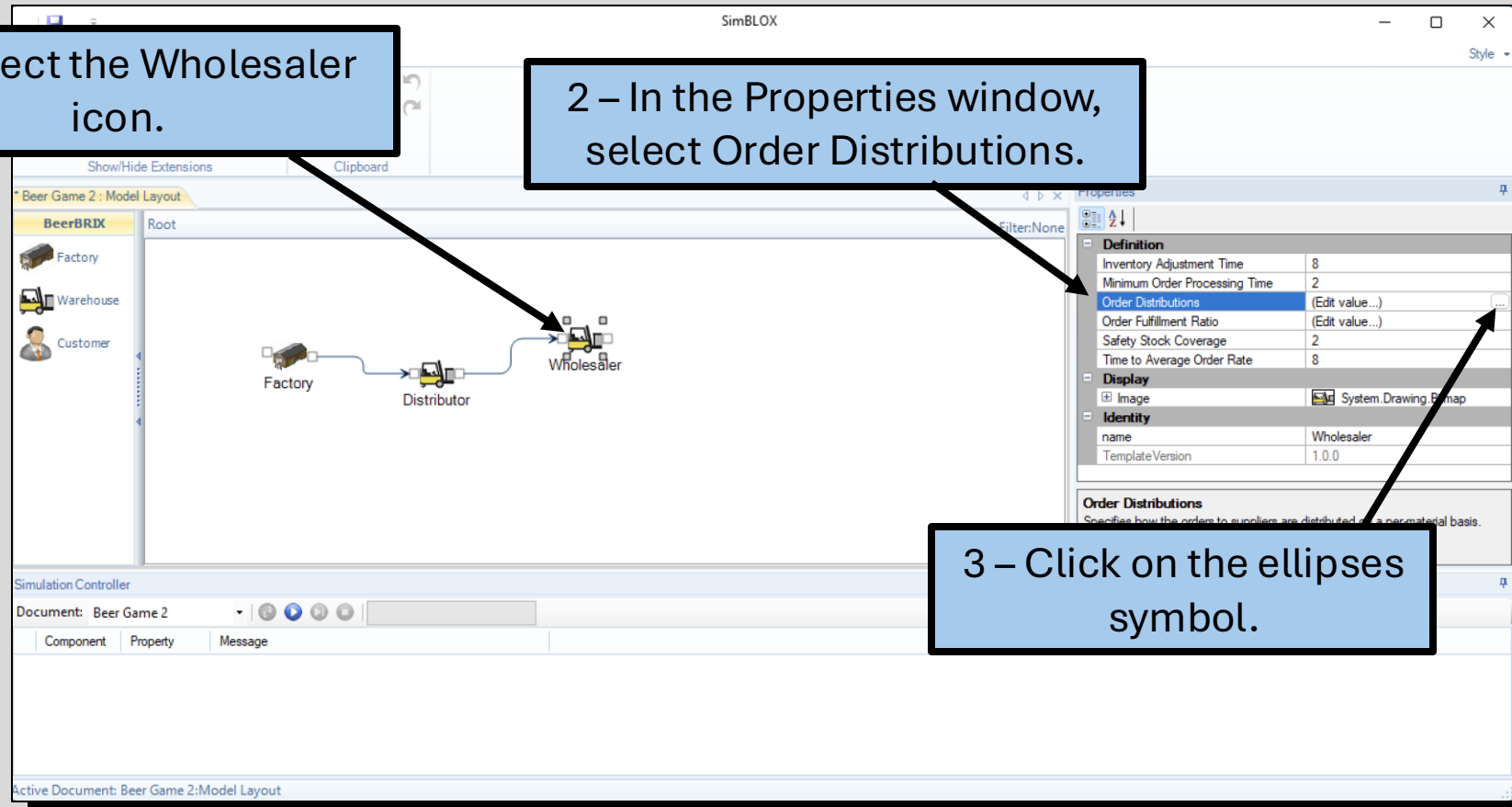


Assign orders from the Wholesaler to the Distributor.

1 – Select the Wholesaler icon.

2 – In the Properties window, select Order Distributions.

3 – Click on the ellipses symbol.

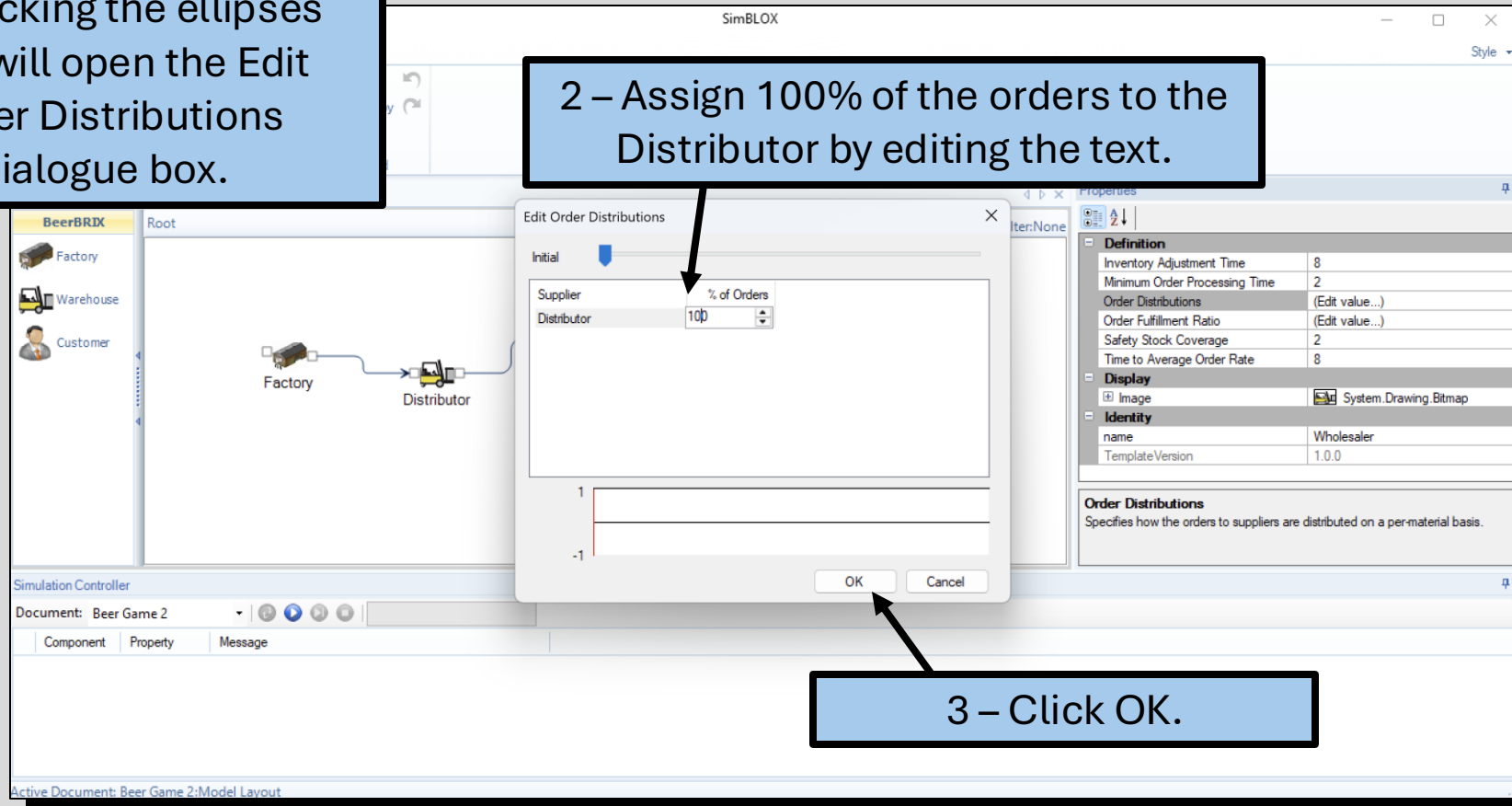


Assign orders from the Wholesaler to the Distributor.

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

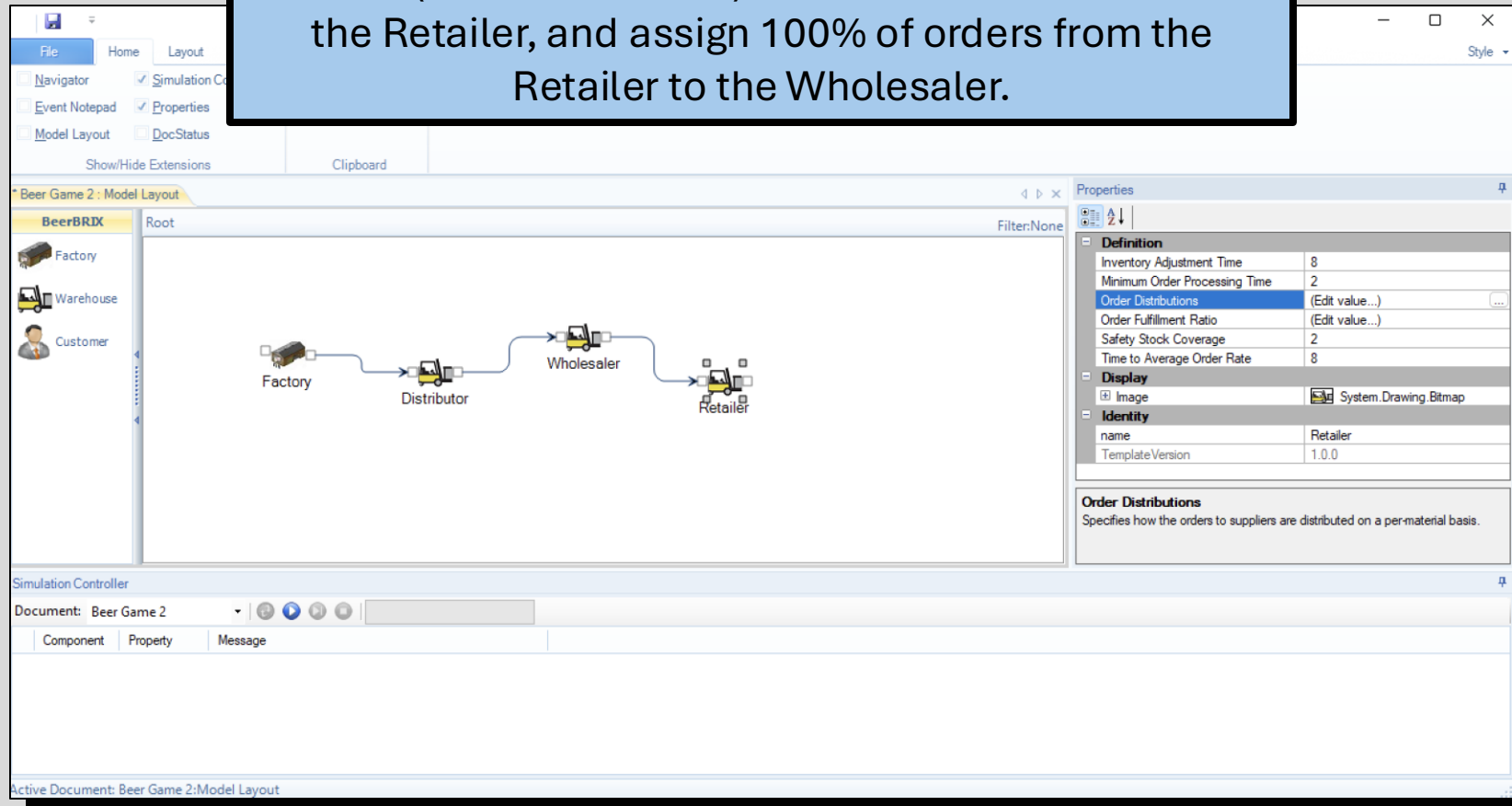
2 – Assign 100% of the orders to the Distributor by editing the text.

3 – Click OK.



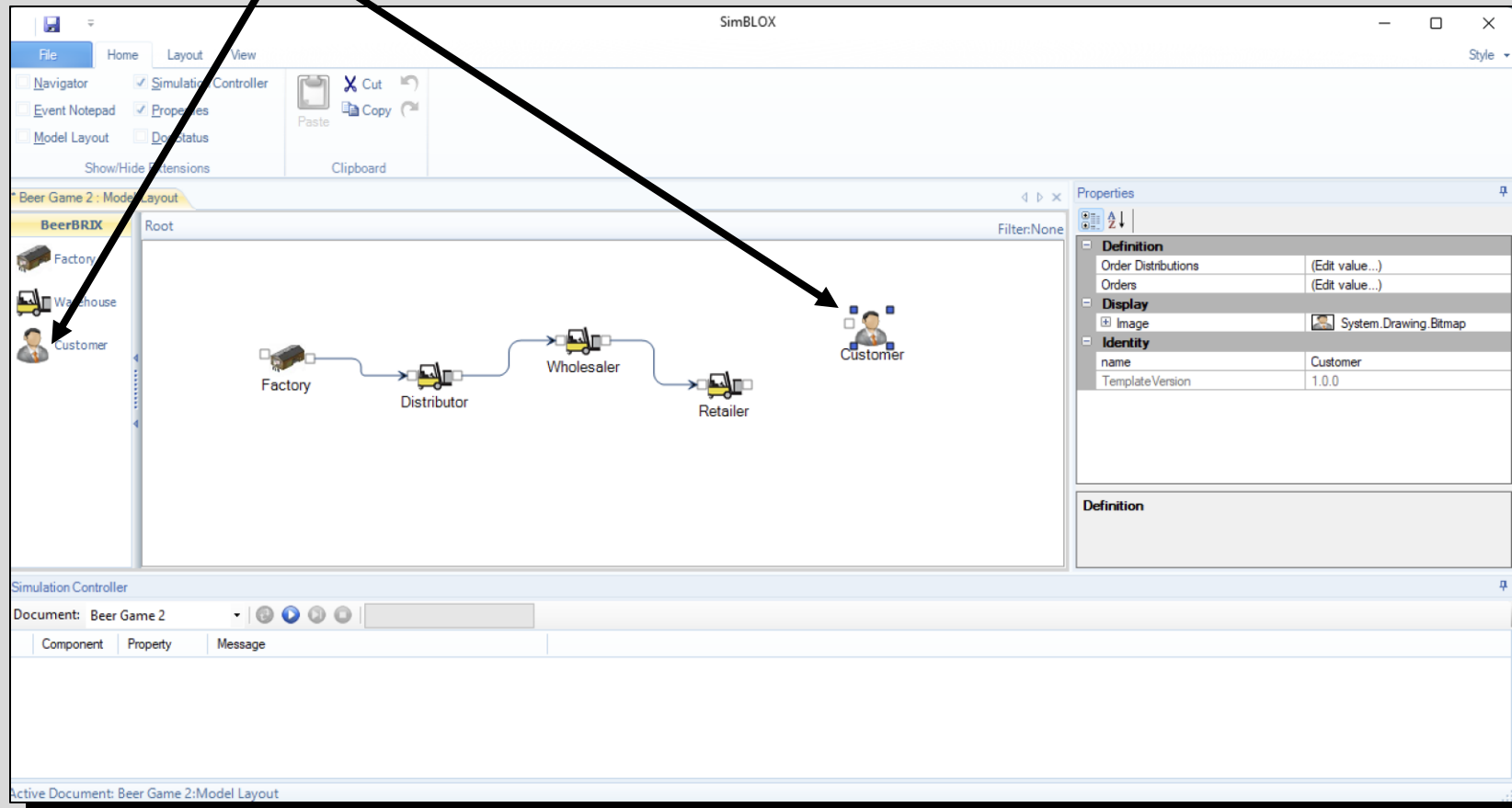
Add the Retailer.

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.

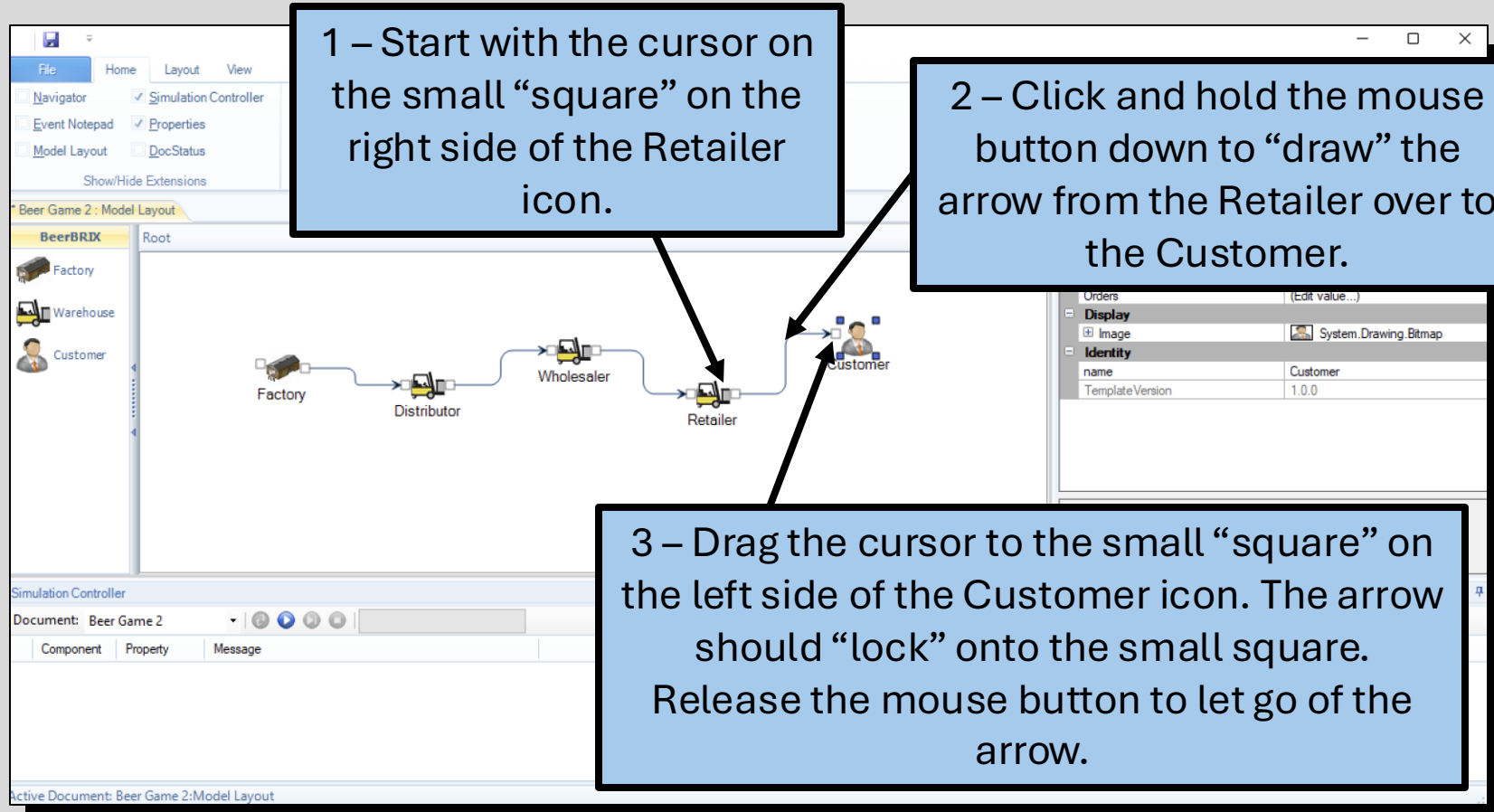


Add the Customer.

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



Connect the Retailer to the Customer.

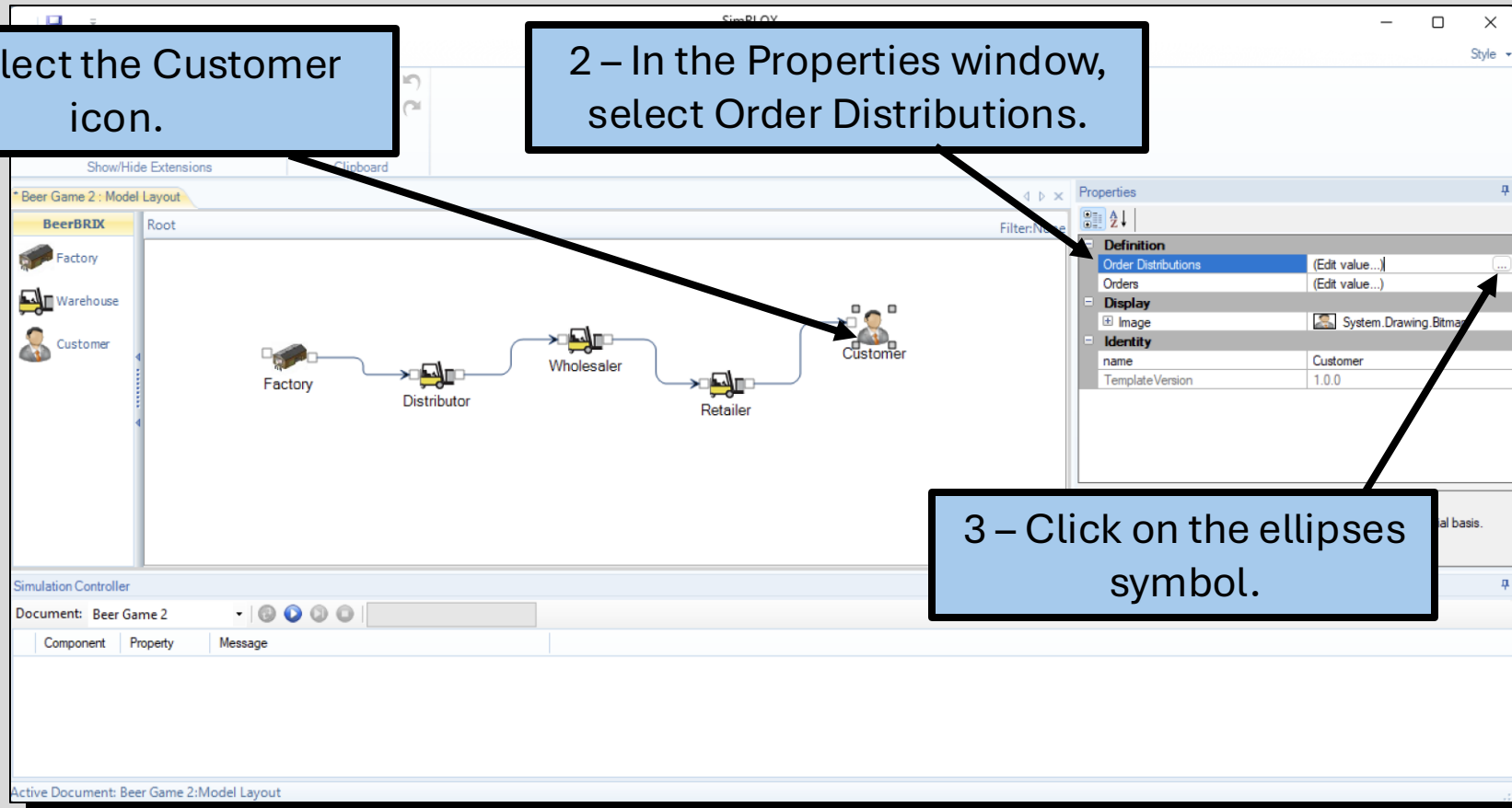


Assign orders from the Customer to the Retailer.

1 – Select the Customer icon.

2 – In the Properties window, select Order Distributions.

3 – Click on the ellipses symbol.

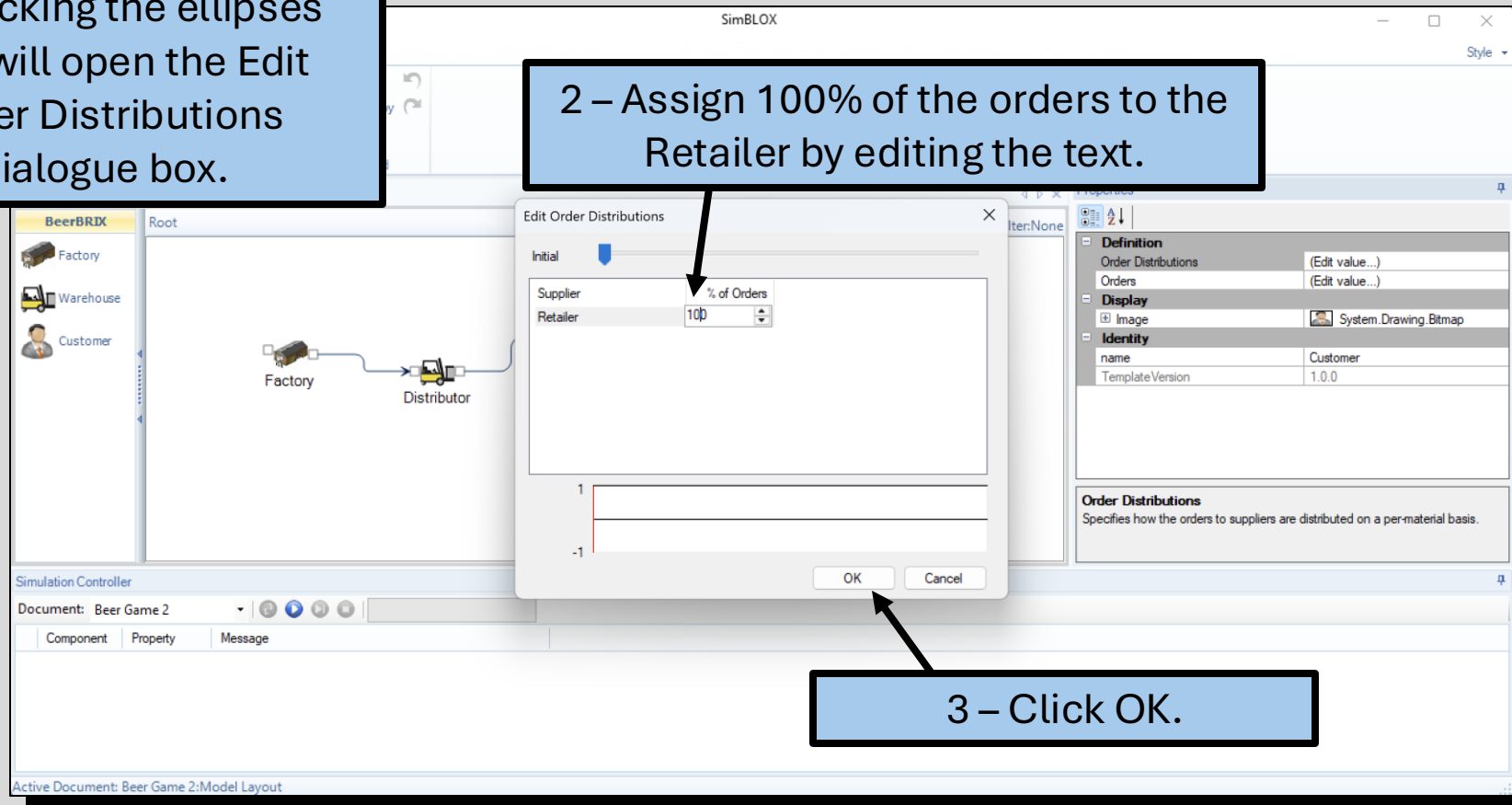


Assign orders from the Customer to the Retailer.

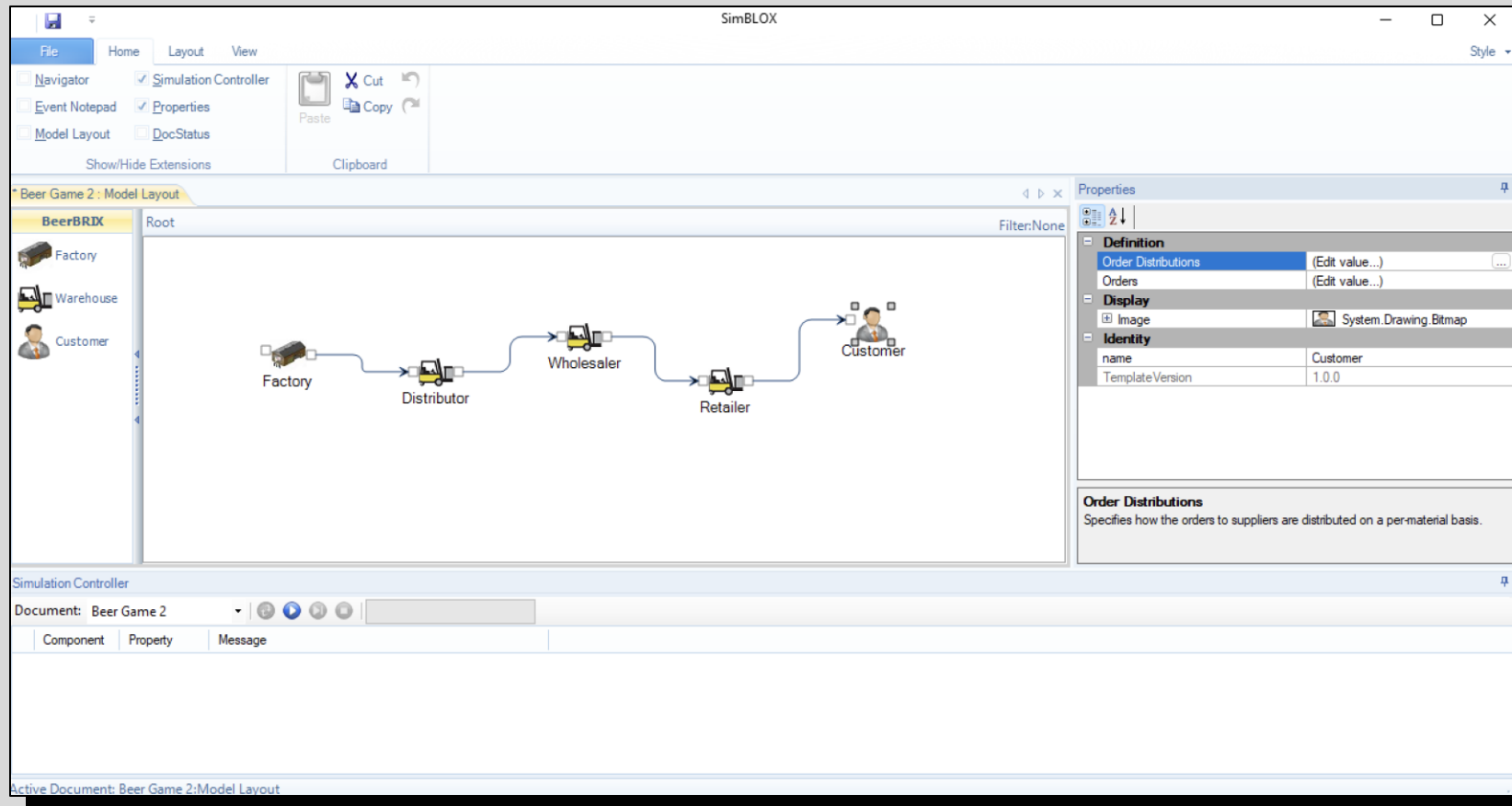
1 – Clicking the ellipses icon will open the Edit Order Distributions dialogue box.

2 – Assign 100% of the orders to the Retailer by editing the text.

3 – Click OK.



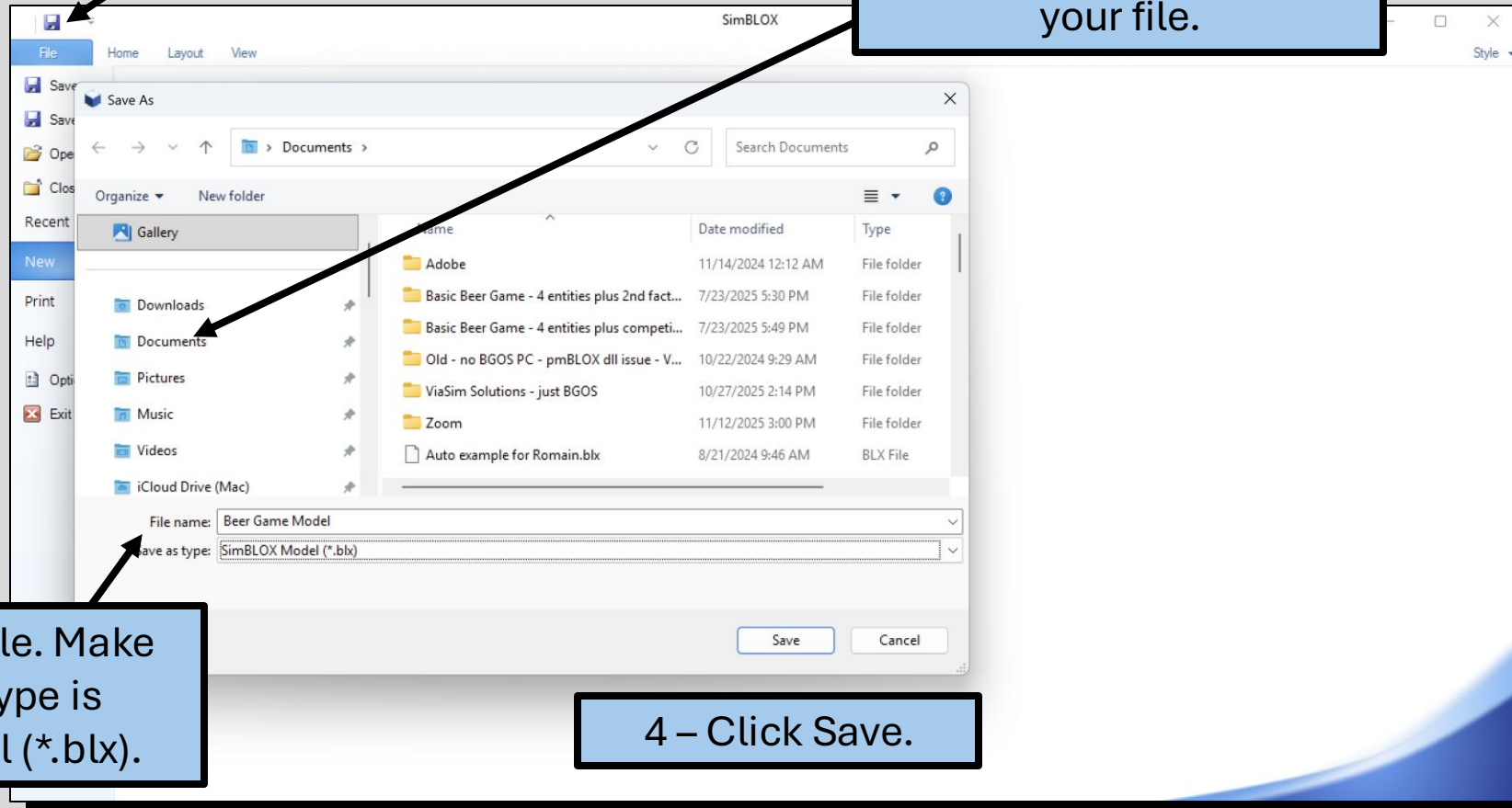
Your beer game model should look like this.
It is now ready to run a simulation.



Saving your model.

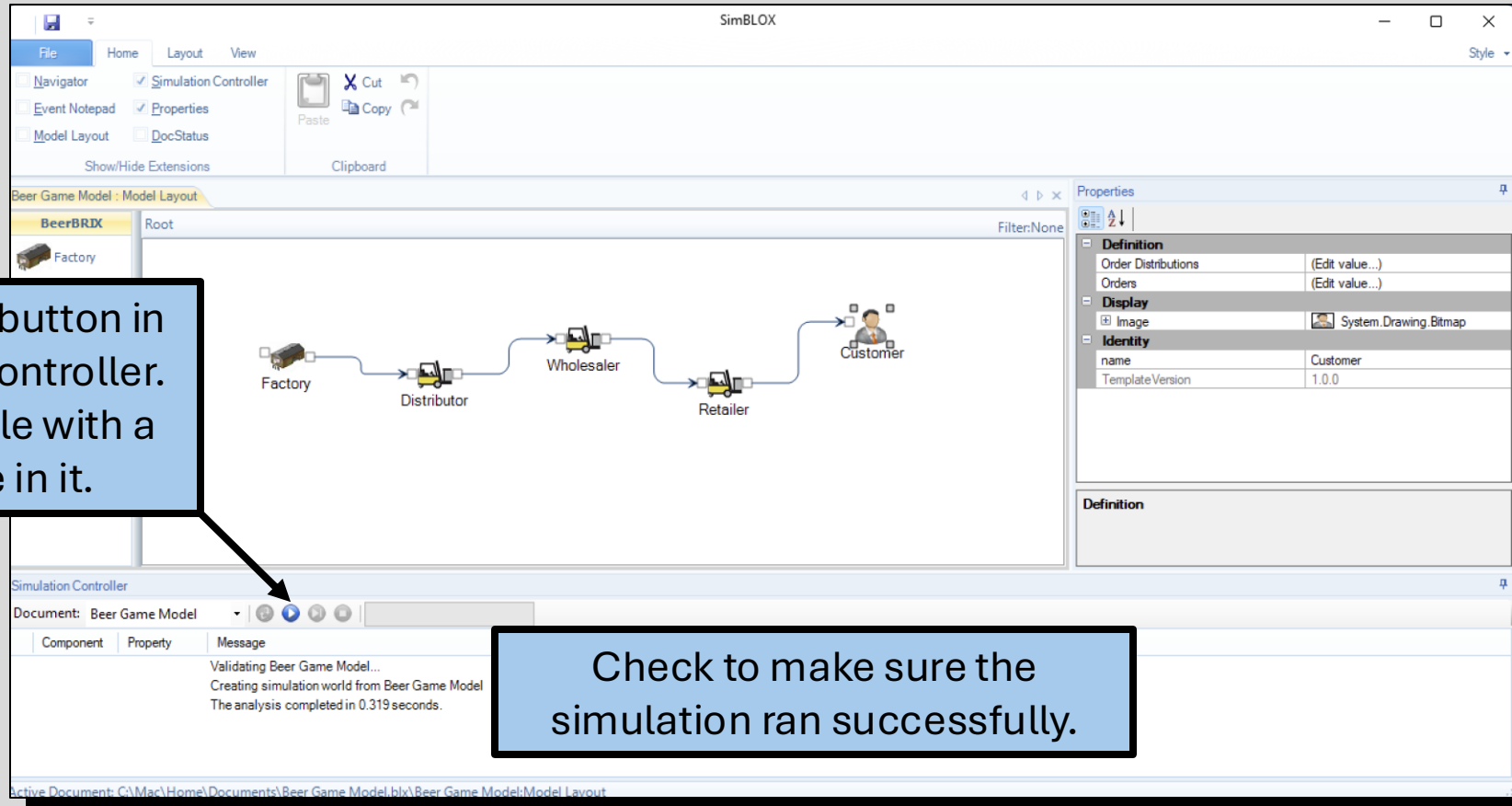
1 – Click on the Save icon
(or select Save As from File
menu).

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



Running a simulation.

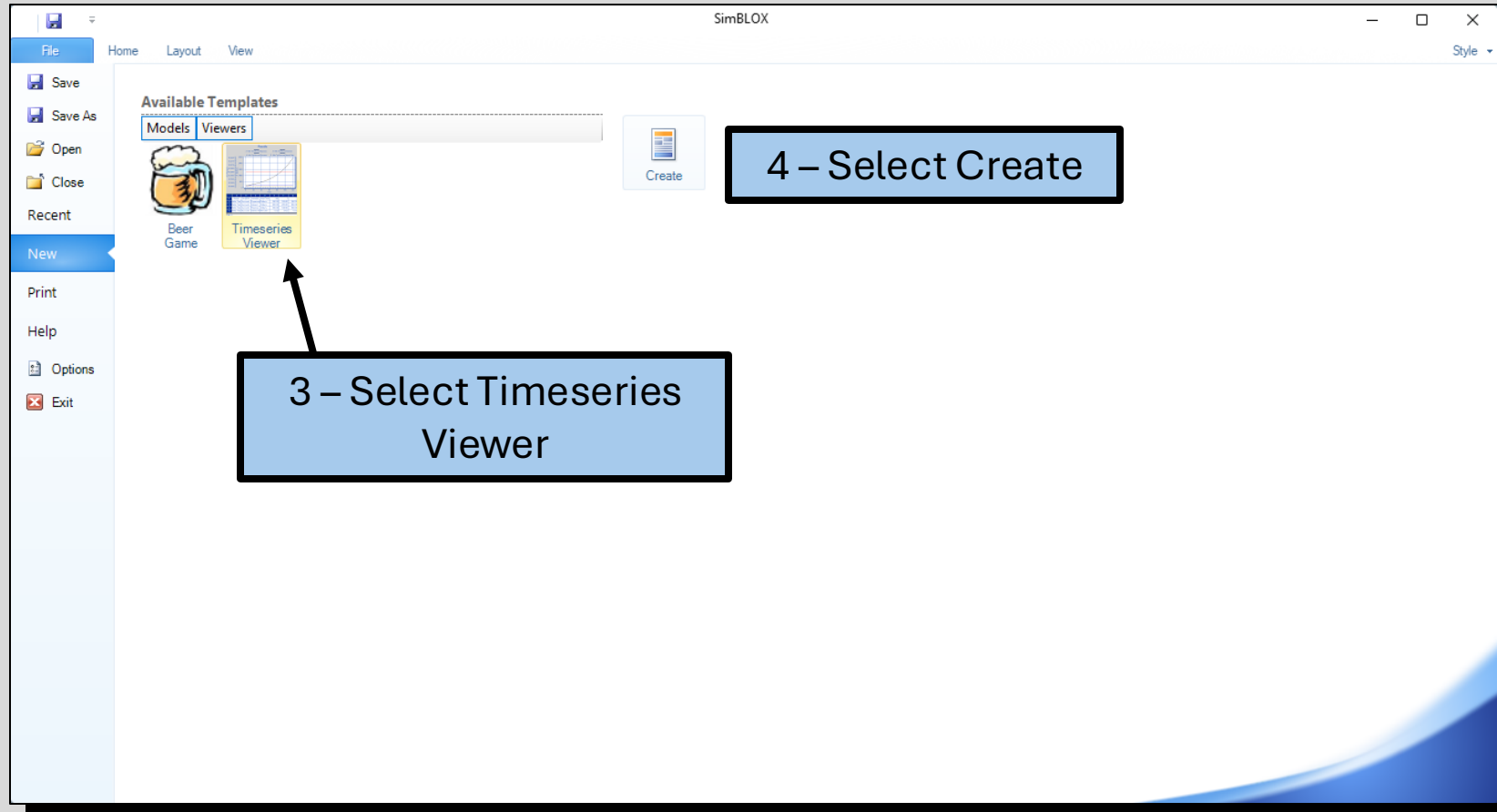
Click on the Run button in the Simulation Controller. It is the blue circle with a white triangle in it.



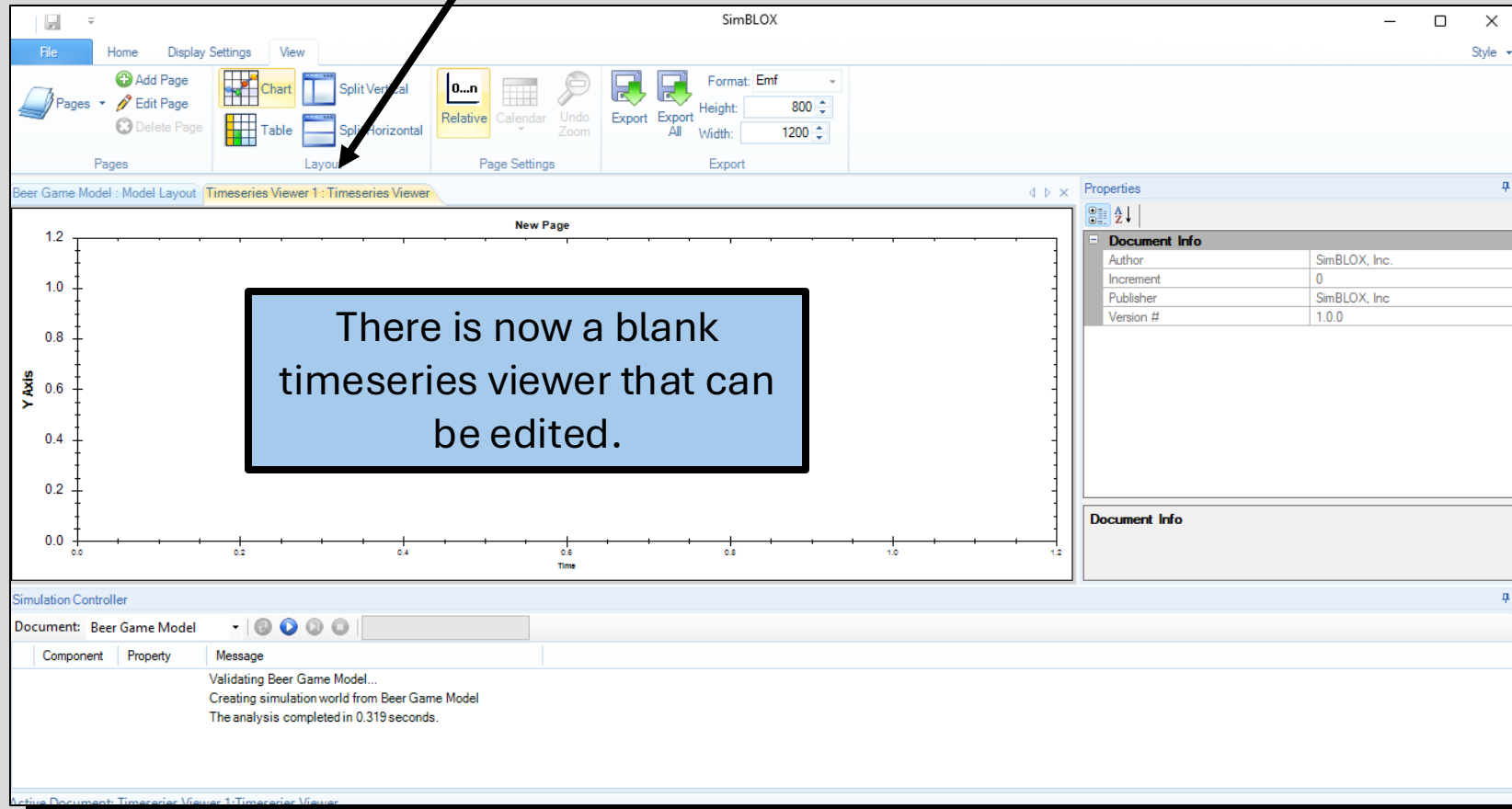
Fantastic, you have a working simulation. Now let's look at how to display results.

1 – Select File

2 – Select New



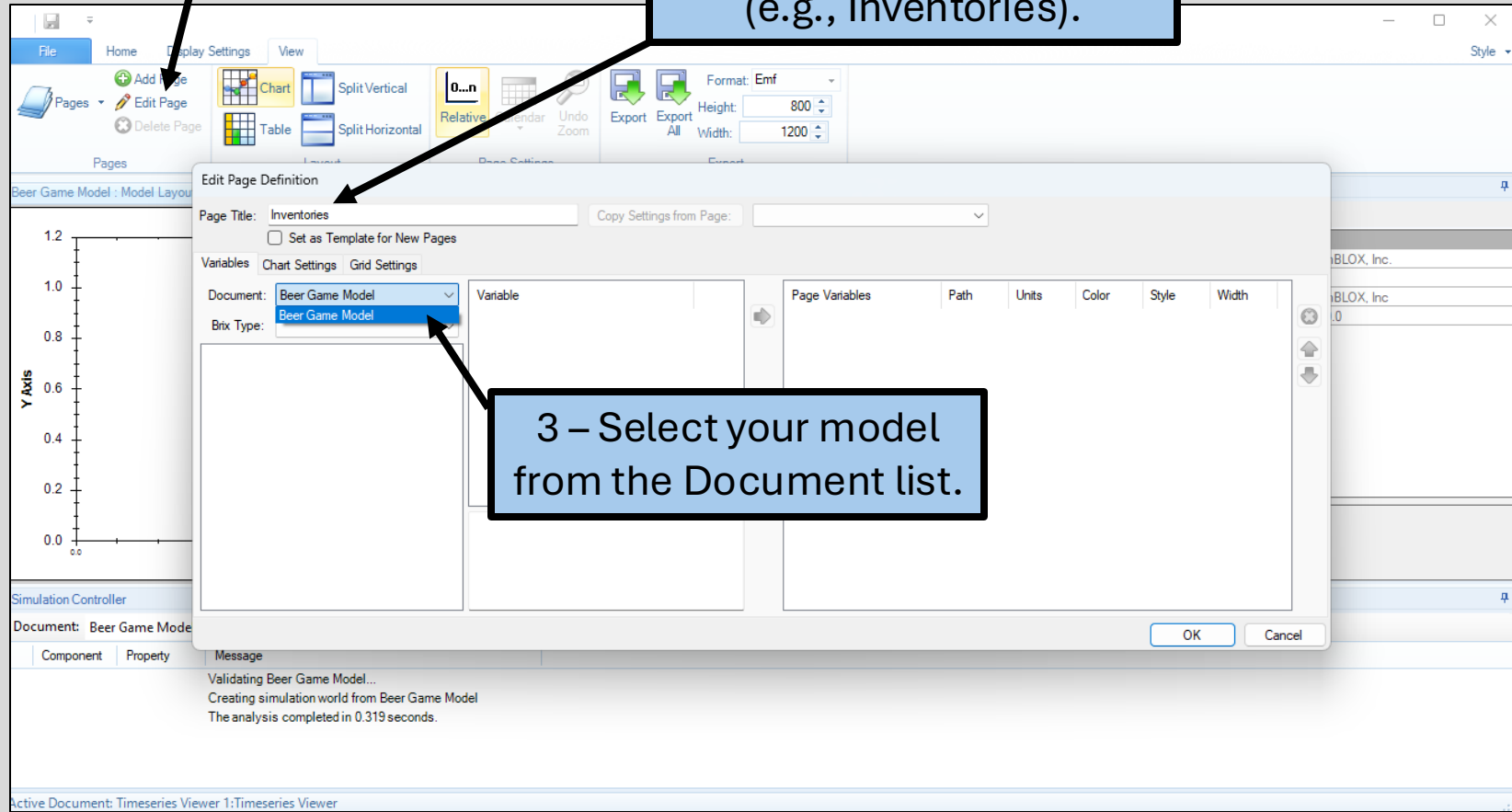
Notice that a new tab has been added. There are now 2 tabs: one for the model (.blx file format) and one for the timeseries viewer (.tvw file format).

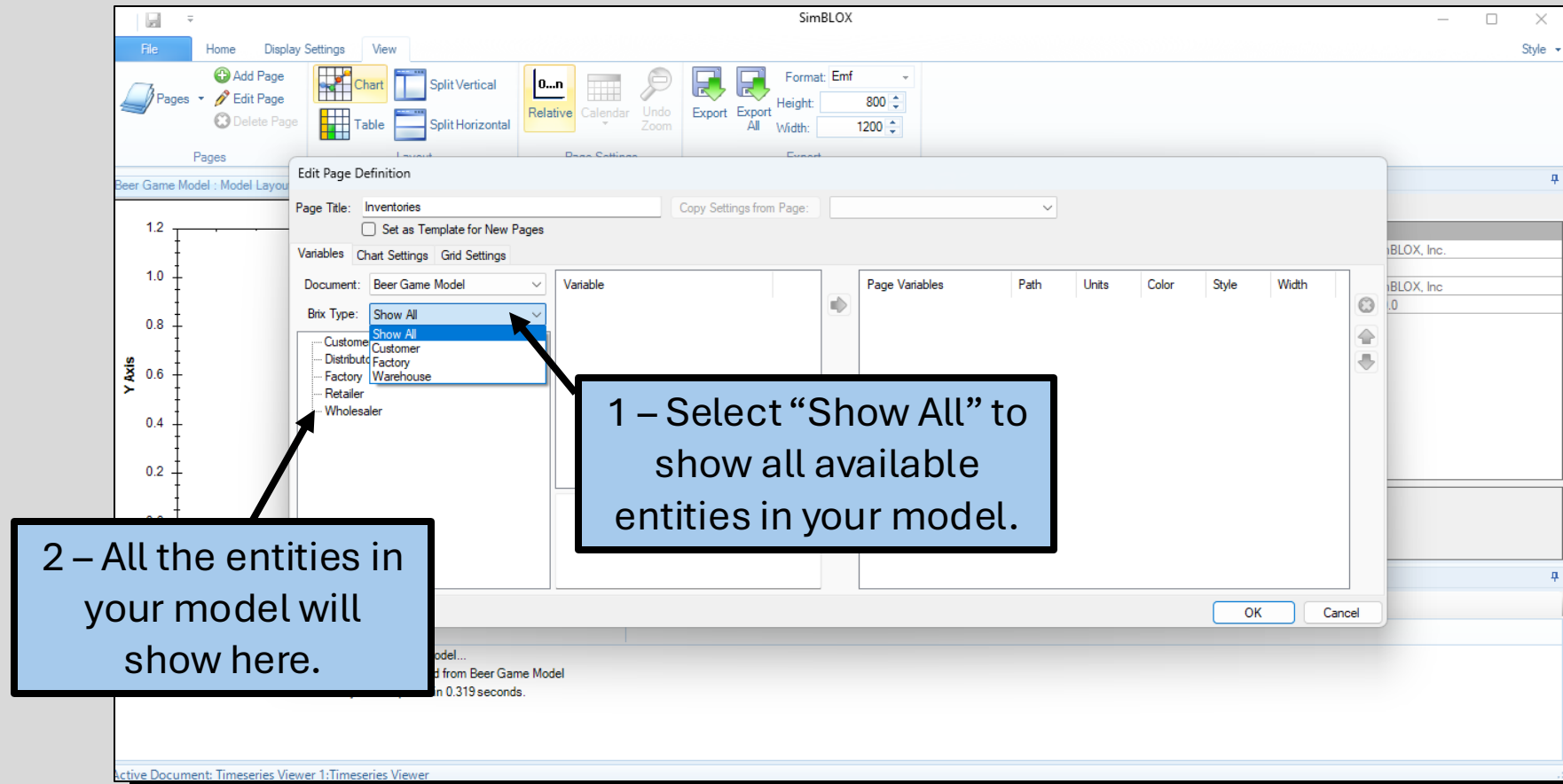


1 – Click “Edit Page”

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

3 – Select your model
from the Document list.





Choose variables to plot on the graph.

1 – Select “Customer”

2 – Select “Orders”

3 – Click the green arrow to add the variable to the graph.

4 – The variable “Orders” should appear in the Page Variables list.

5 – Edit the Color, Style, and Width of the line for the variable here.

Page Variables	Path	Units	Color	Style	Width
Orders	Beer Ga...		DarkRed	Solid	2

Add Retailer Inventory to the chart.

1 – Select “Retailer”

2 – Select “Inventory”

3 – Click the green arrow to add the variable to the graph.

4 – The variable “Inventory” should appear in the Page Variables list.

5 – Edit the Color to Green.

Page Variables	Path	Units	Color	Style	Width
Orders	Beer Ga...		Dark Red	Solid	2
Inventory	Beer Ga...		Green	Solid	2

Add Wholesaler Inventory to the chart.

1 – Select “Wholesaler”

2 – Select “Inventory”

3 – Click the green arrow to add the variable to the graph.

4 – The variable “Inventory” should appear in the Page Variables list.

5 – Edit the Color to Orange.

Page Variables	Path	Units	Color	Style	Width
Orders	Beer Ga...		DarkRed	Solid	2
Inventory	Beer Ga...		Green	Solid	2
Inventory	Beer Ga...		Orange	Solid	2

Add Distributor Inventory to the chart.

1 – Select “Distributor”

2 – Select “Inventory”

3 – Click the green arrow to add the variable to the graph.

4 – The variable “Inventory” should appear in the Page Variables list.

5 – Edit the Color to Blue.

Edit Page Definition

Page Title: Inventories

☐ Set as Template for New Pages

Copy Settings from Page: [dropdown]

Variables | Chart Settings | Grid Settings

Document: Beer Game Model

Brx Type: Show All

Variable List:

- ChangeInExpectedOrders
- CustomerHappiness
- DesiredInventory
- DesiredInventoryCoverage
- DesiredProduction
- DesiredProductionStartRate
- DesiredShipmentRate
- ExpectedOrderRate
- Inventory
- InventoryCoverage
- The current warehouse inventory level

Page Variables

	Path	Units	Color	Style	Width
Orders	Beer Ga...		DarkRed	Solid	2
Inventory	Beer Ga...		Green	Solid	2
Inventory	Beer Ga...		Orange	Solid	2
Inventory	Beer Ga...		Blue	Solid	2

Simulation Controller

Creating simulation world from Beer Game Model
The analysis completed in 0.319 seconds.

Active Document: Timeseries Viewer 1:Timeseries Viewer

Add Factory Inventory to the chart.

1 – Select “Factory”

2 – Select “Inventory”

3 – Click the green arrow to add the variable to the graph.

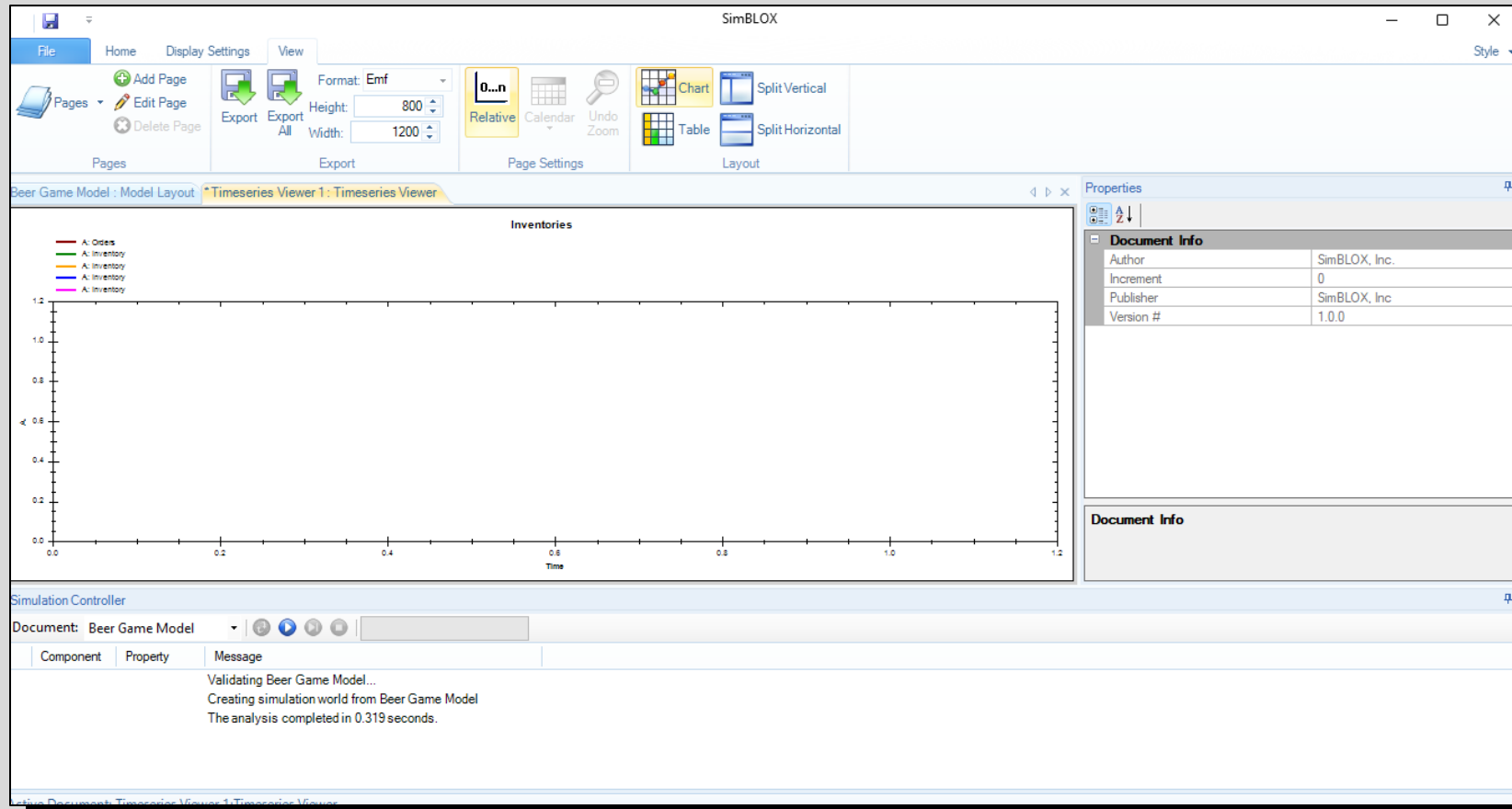
4 – The variable “Inventory” should appear in the Page Variables list.

5 – Edit the Color to Magenta.

6 – Click OK.

Page Variables	Path	Units	Color	Style	Width
Orders	Beer Ga...		DarkRed	Solid	2
Inventory	Beer Ga...		Green	Solid	2
Inventory	Beer Ga...		Orange	Solid	2
Inventory	Beer Ga...		Blue	Solid	2
Inventory	Beer Ga...		Magenta	Solid	2

Your blank timeseries viewer chart should look like this.



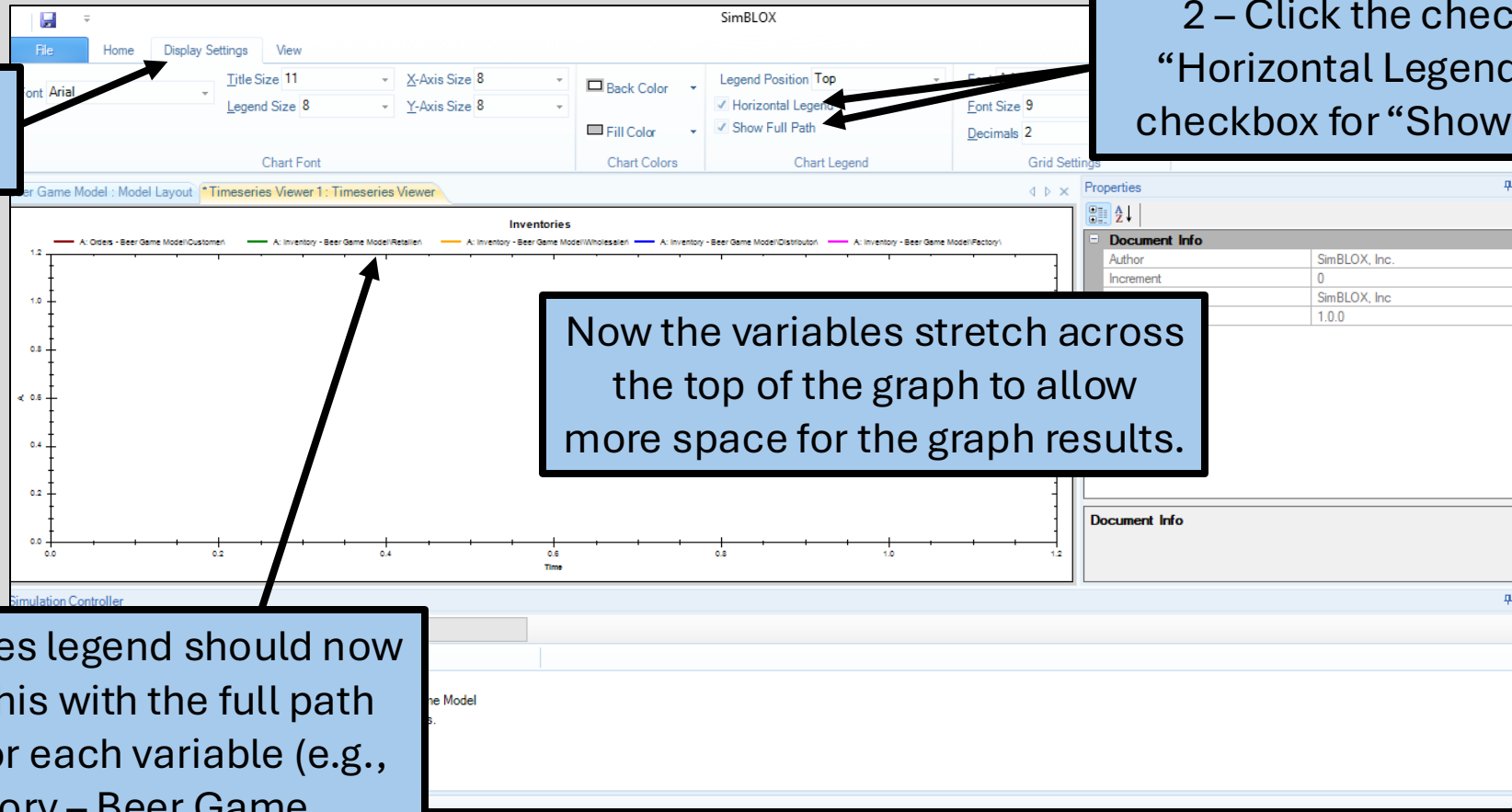
Let's make the chart more readable.

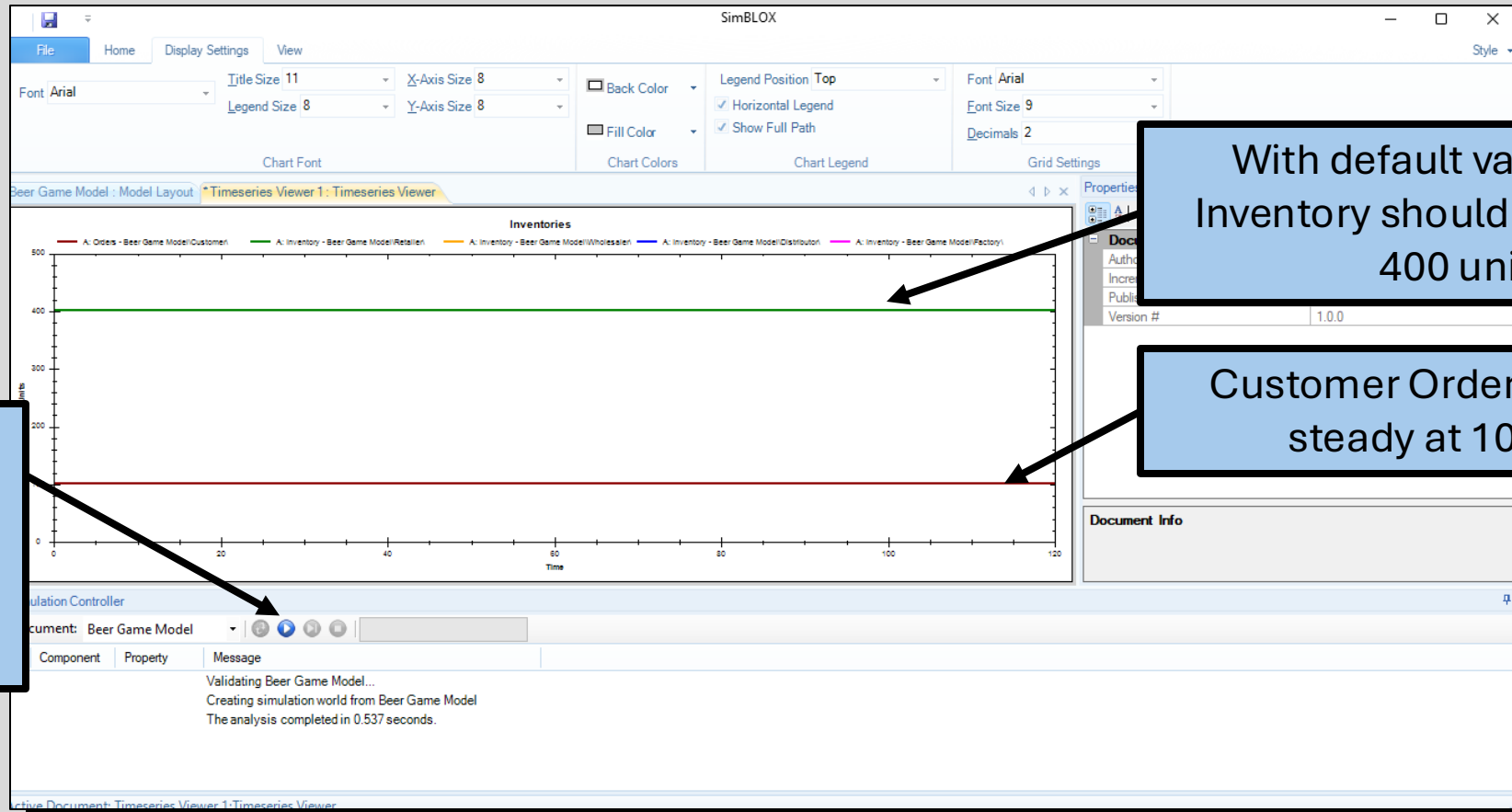
1 – Select “Display Settings”

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.

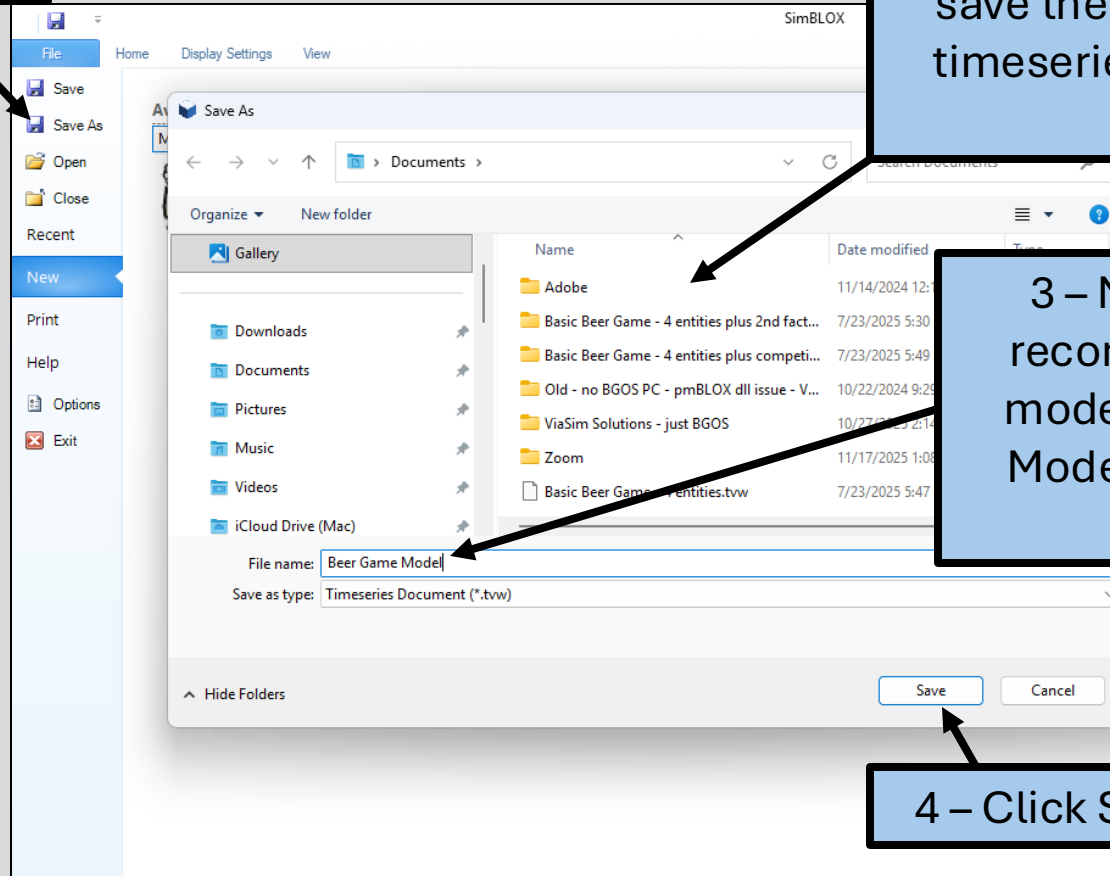
Save the timeseries viewer chart.

1 – Click Save As.

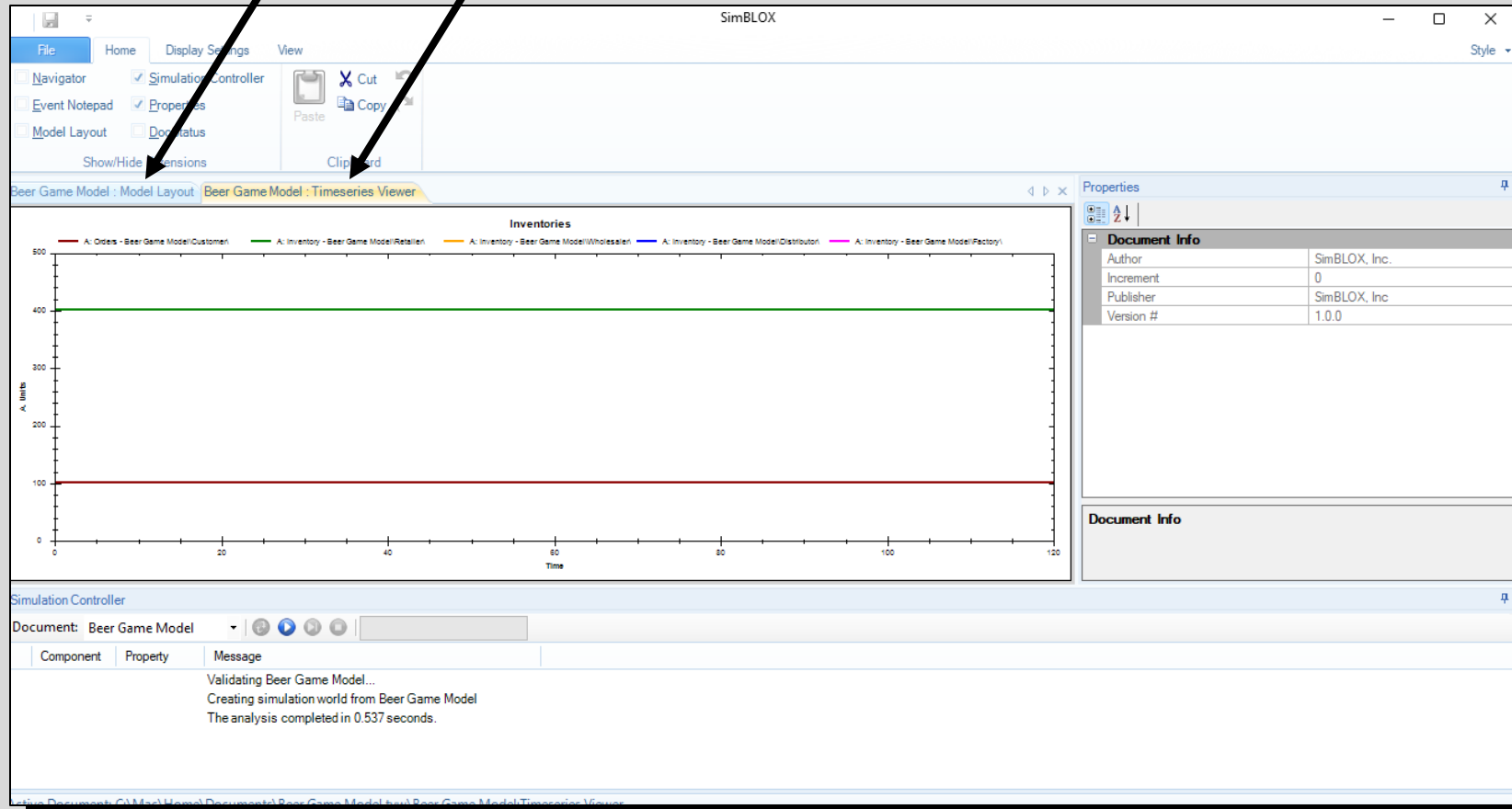
2 – Select the folder or location where you want to save the file. It is highly recommended to put the timeseries viewer file in the same location as the model to simplify organization.

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.

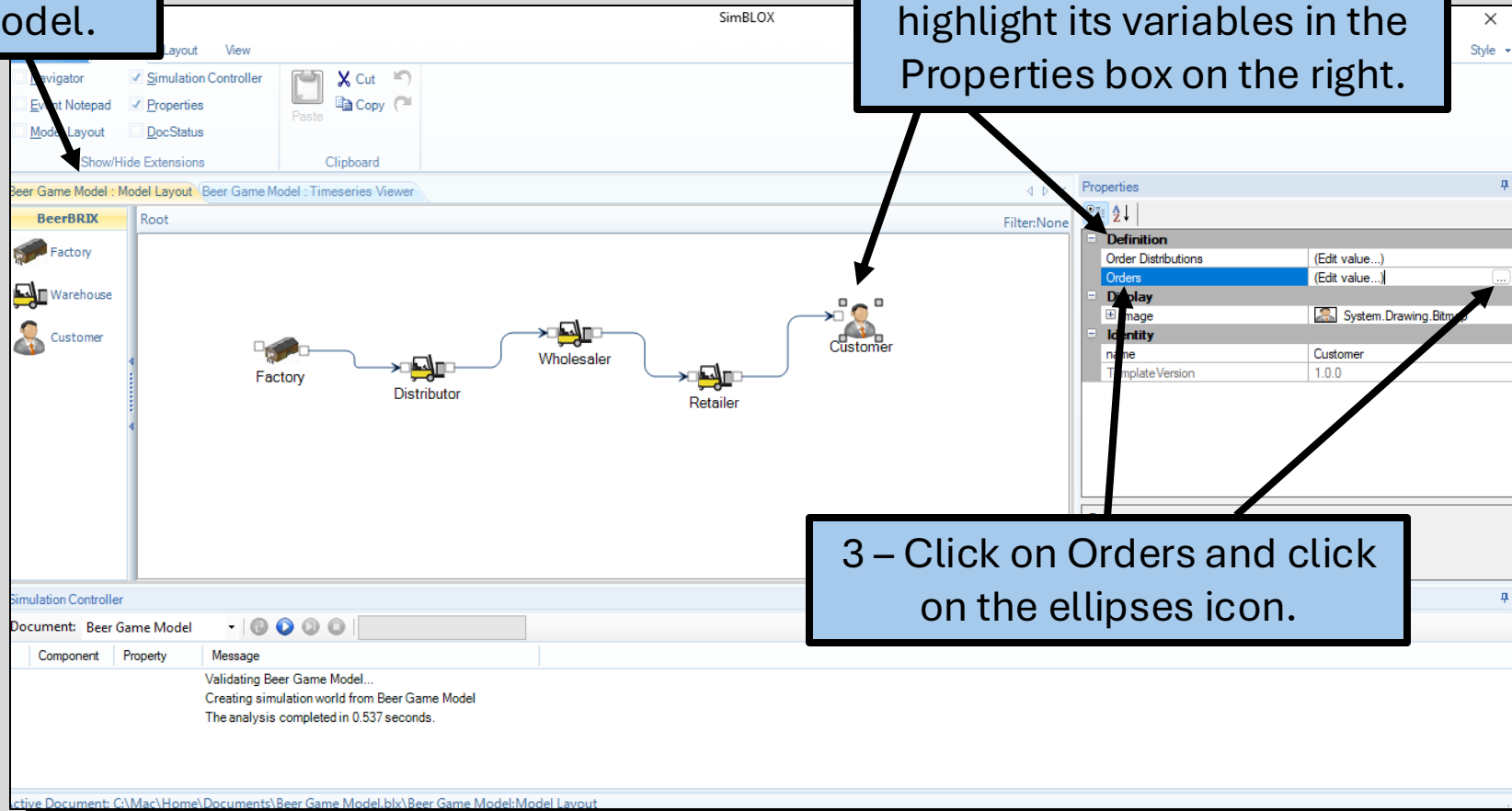


Now let's add the “bump” in demand for the traditional beer game.

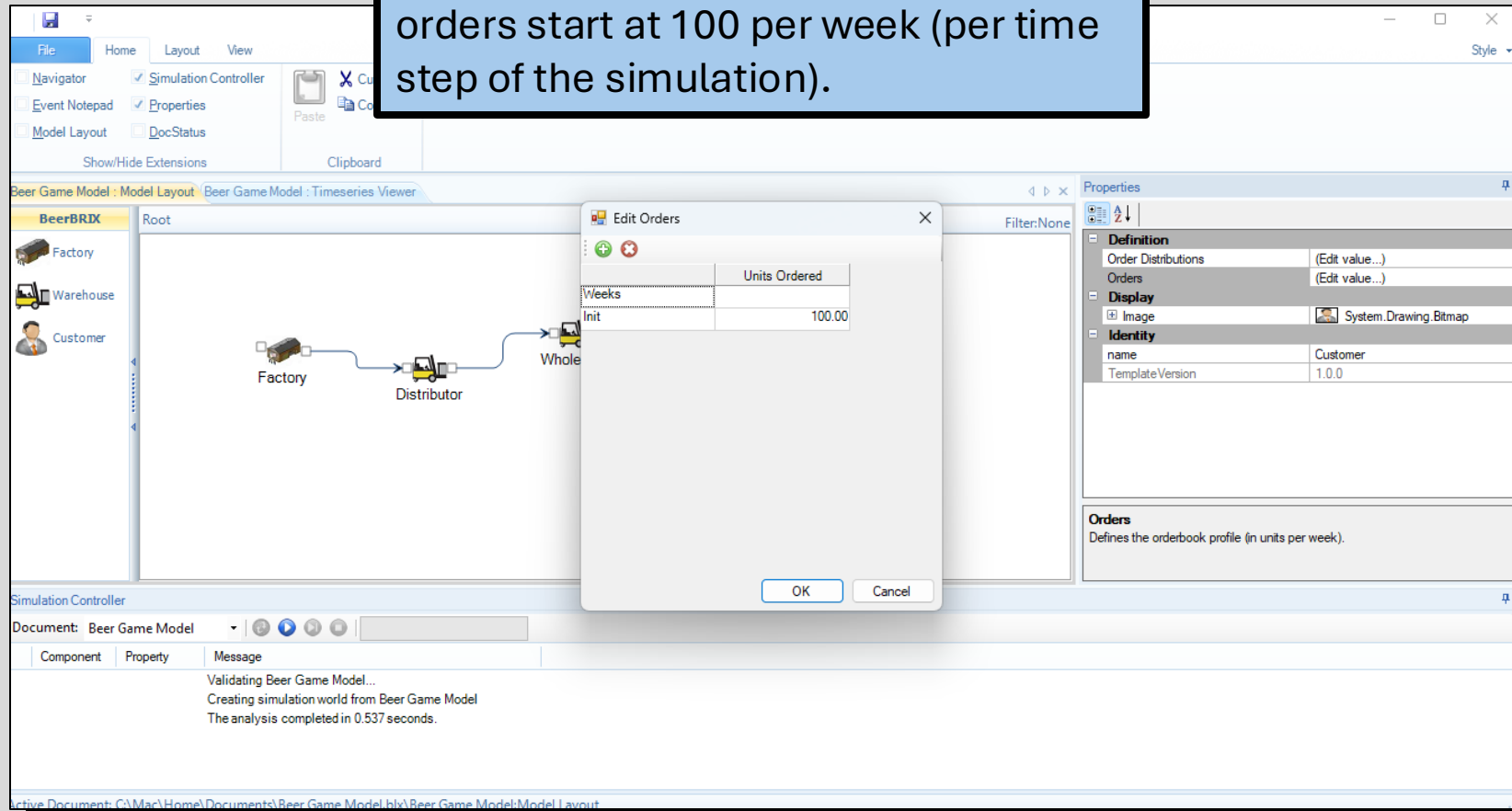
1 – Select the model tab to get back to the model.

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.

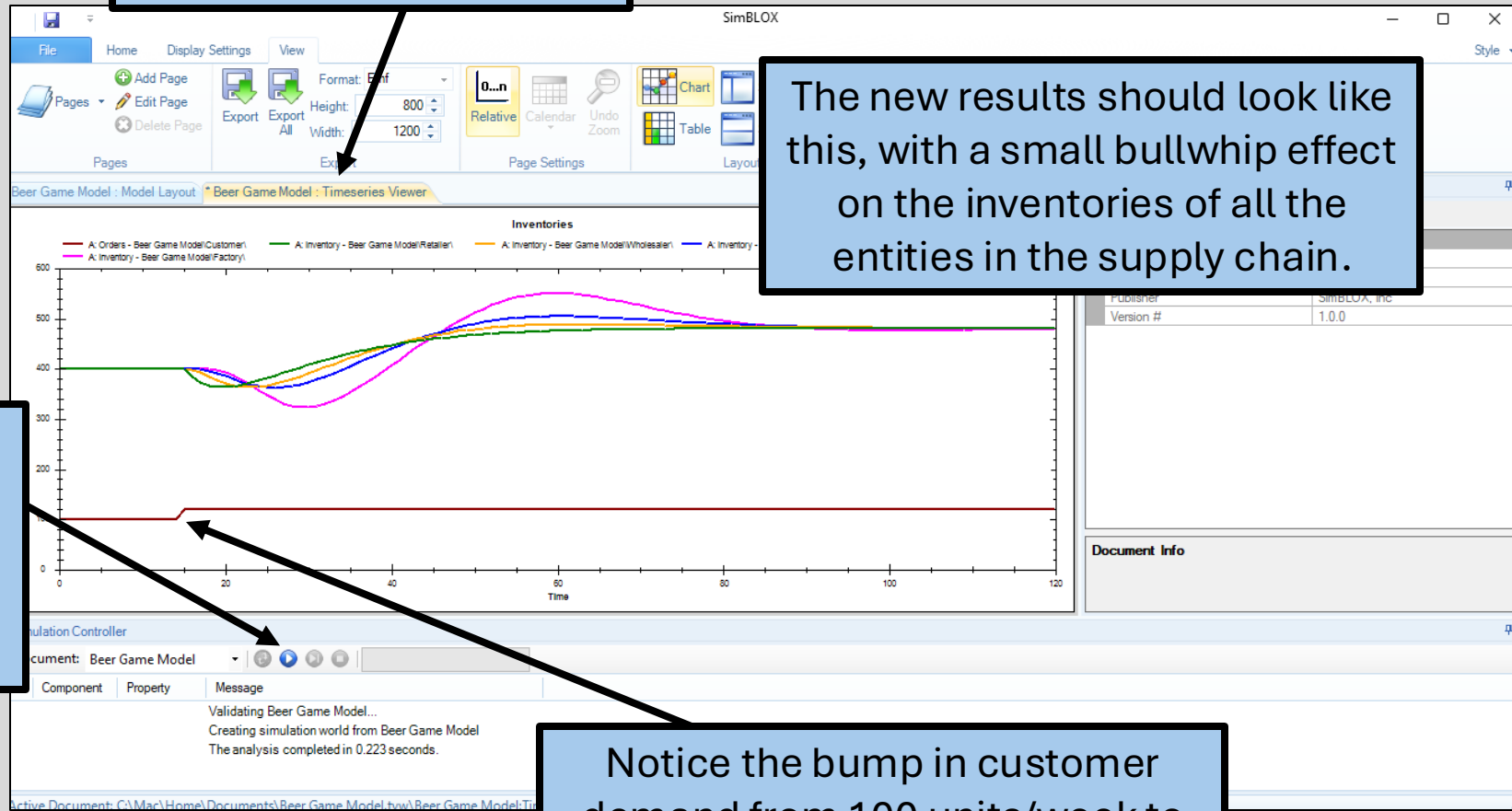
The screenshot shows the SimBLOX software interface. In the center, the 'Edit Orders' dialog box is open, displaying a table with two columns: 'Weeks' and 'Units Ordered'. The table has two rows: 'Init' with a value of 100.00, and '15' with a value of 120.00. The background shows a 'Beer Game Model' diagram with components like 'Factory', 'Distributor', and 'Whole'. The 'Edit Orders' dialog box has 'OK' and 'Cancel' buttons at the bottom. Four numbered callouts are present: 1 points to the green '+' icon in the dialog box; 2 points to the '15' in the 'Weeks' column; 3 points to the '120.00' in the 'Units Ordered' column; and 4 points to the 'OK' button.

Weeks	Units Ordered
Init	100.00
15	120.00

1 – Select the timeseries viewer tab.

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

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



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.

	A	B	C	D	E	F
Model	Beer Ga...	Beer Ga...	Beer Ga...	Beer Ga...	Beer Ga...	Beer Ga...
1	SimBRIX	Customer	Retailer	Wholes...	Distributor	Factory
2	Variable	Orders	Inventory	Inventory	Inventory	Inventory
3	Time/Un...	Units	Units	Units	Units	Units
4	Init	100.00	400.00	400.00	400.00	400.00
5	1	100.00	400.00	400.00	400.00	400.00
6	2	100.00	400.00	400.00	400.00	400.00
7	3	100.00	400.00	400.00	400.00	400.00
8	4	100.00	400.00	400.00	400.00	400.00
9	5	100.00	400.00	400.00	400.00	400.00
10	6	100.00	400.00	400.00	400.00	400.00
11	7	100.00	400.00	400.00	400.00	400.00
12	8	100.00	400.00	400.00	400.00	400.00
13	9	100.00	400.00	400.00	400.00	400.00
14	10	100.00	400.00	400.00	400.00	400.00

Document Info

Author	SimBLOX, Inc.
Increment	0
Publisher	SimBLOX, Inc.
Version #	1.0.0

Simulation Controller

Document: Beer Game Model

Component	Property	Message
		Validating Beer Game Model...
		Creating simulation world from Beer Game Model
		The analysis completed in 0.102 seconds.

Beer Game on Steroids (BGOS) Tutorial:

Example Scenario

30% increase in customer demand

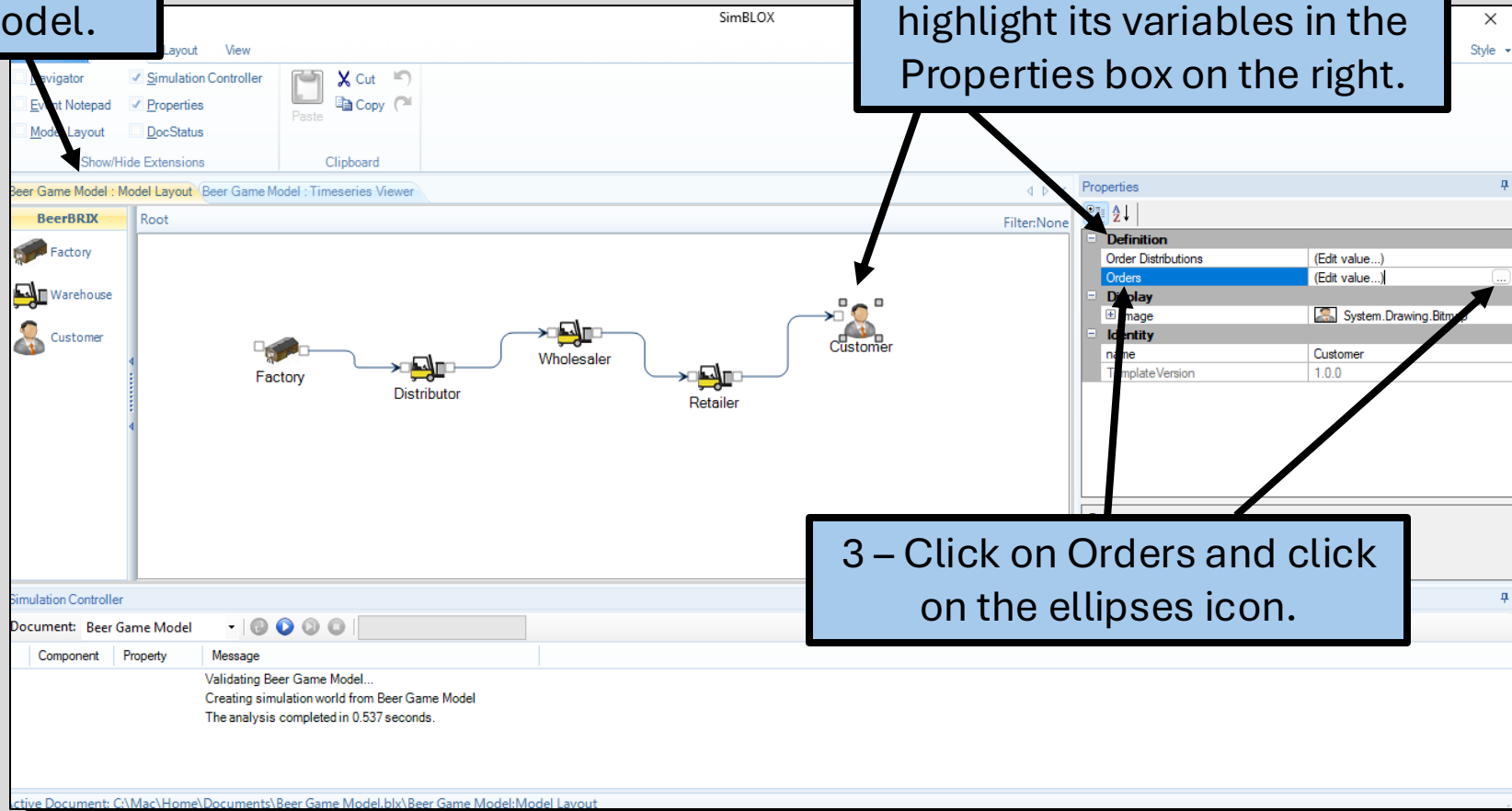
Starting at week 15

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 Clipboard

Beer Game Model : Model Layout Beer Game Model : Timeseries Viewer

BeerBRIX

Root

Factory Warehouse Customer

Factory Distributor Whole

Edit Orders

Weeks	Units Ordered
Init	100.00
15	130.00

OK Cancel

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.

Active Document: C:\Mac\Home\Documents\Beer Game Model.blx\Beer Game Model\Model Layout

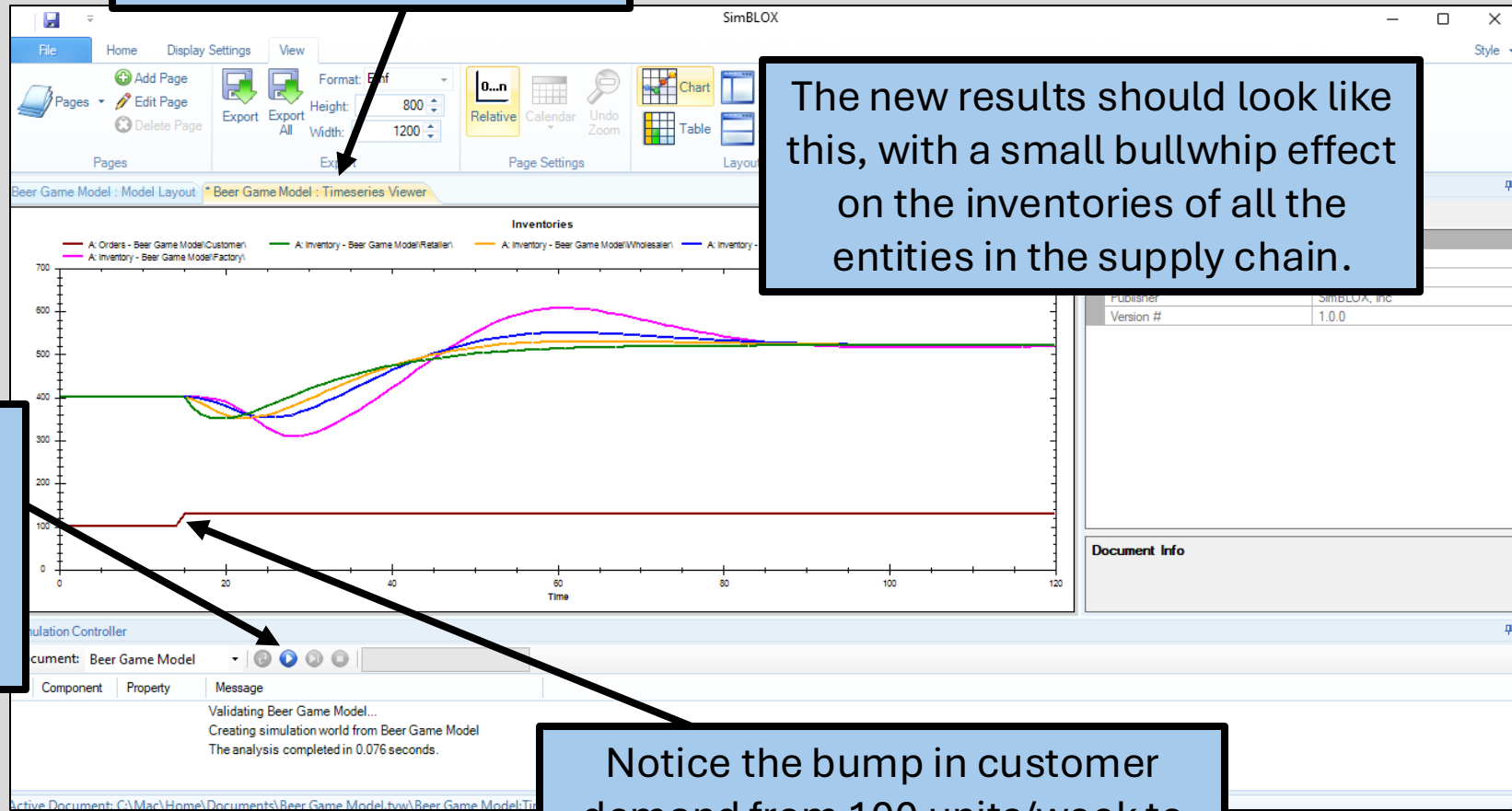
1 – Enter 130 in the Units Ordered column to represent bumping up from 100 to 130 units per week. **This represents a 30% bump in demand.**

2 – Click OK.

1 – Select the timeseries viewer tab.

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

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



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.

	A	B	C	D	E	F
Model	Beer Ga...	Beer Ga...	Beer Ga...	Beer Ga...	Beer Ga...	Beer Ga...
1	SimBRIX	Customer	Retailer	Wholes...	Distributor	Factory
2	Variable	Orders	Inventory	Inventory	Inventory	Inventory
3	Time/Un...	Units	Units	Units	Units	Units
4	Init	100.00	400.00	400.00	400.00	400.00
5	1	100.00	400.00	400.00	400.00	400.00
6	2	100.00	400.00	400.00	400.00	400.00
7	3	100.00	400.00	400.00	400.00	400.00
8	4	100.00	400.00	400.00	400.00	400.00
9	5	100.00	400.00	400.00	400.00	400.00
10	6	100.00	400.00	400.00	400.00	400.00
11	7	100.00	400.00	400.00	400.00	400.00
12	8	100.00	400.00	400.00	400.00	400.00
13	9	100.00	400.00	400.00	400.00	400.00
14	10	100.00	400.00	400.00	400.00	400.00

Document Info

Author	SimBLOX, Inc.
Increment	0
Publisher	SimBLOX, Inc.
Version #	1.0.0

Simulation Controller

Document: Beer Game Model

Component	Property	Message
		Validating Beer Game Model...
		Creating simulation world from Beer Game Model
		The analysis completed in 0.102 seconds.

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

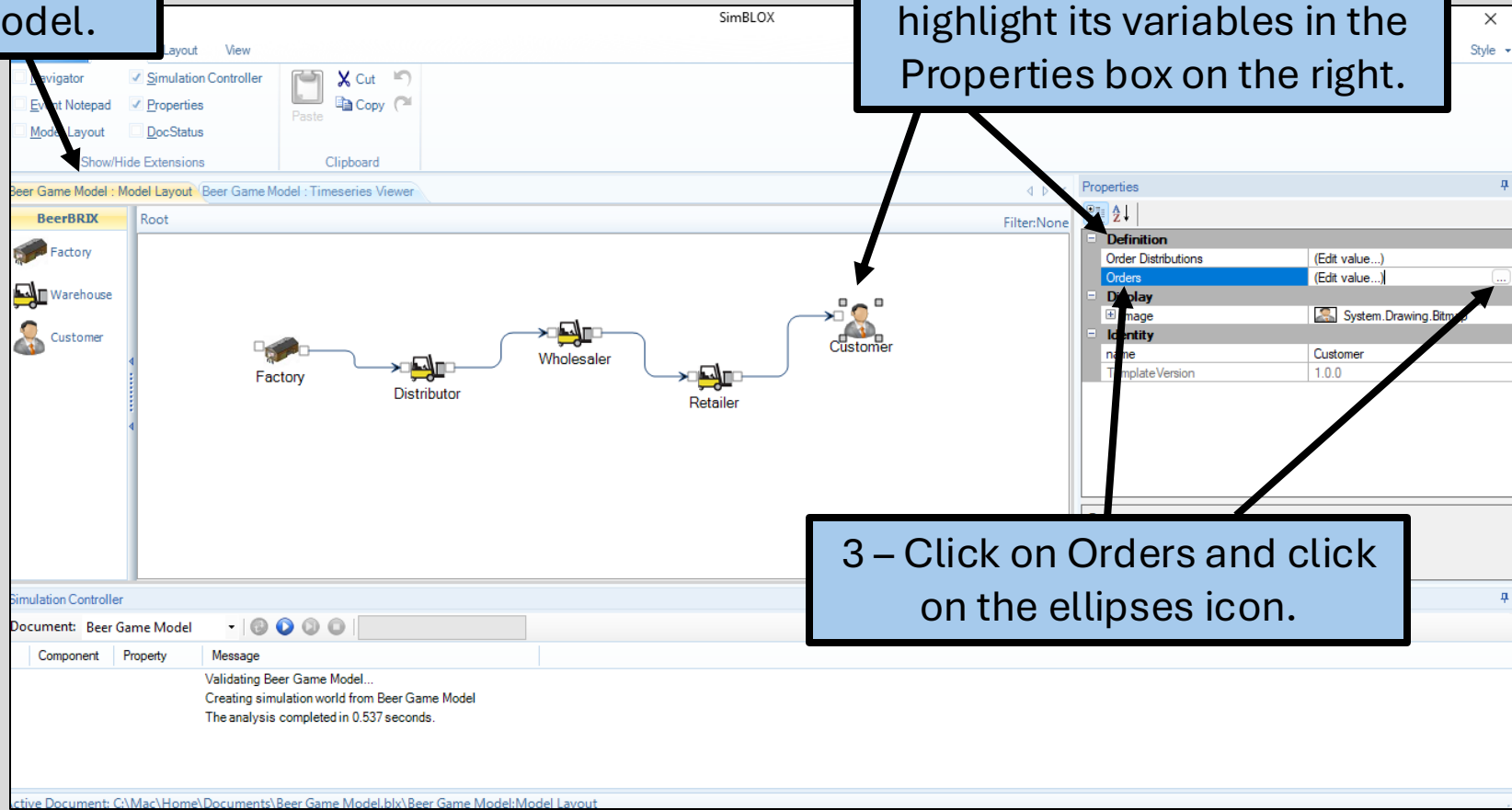
Starting at week 30

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.

SimBLOX

File

Navigator

Simulation Controller

Event Notepad

Properties

Model Layout

DocStatus

Show/Hide Extensions

Clipboard

Beer Game Model : Model Layout

Beer Game Model : Timeseries Viewer

BeerBRDX

Root

Factory

Warehouse

Customer

Factory

Distributor

Whole

Edit Orders

Weeks	Units Ordered
Init	100.00
15	110.00
30	90.00

OK

Cancel

Component

Property

Message

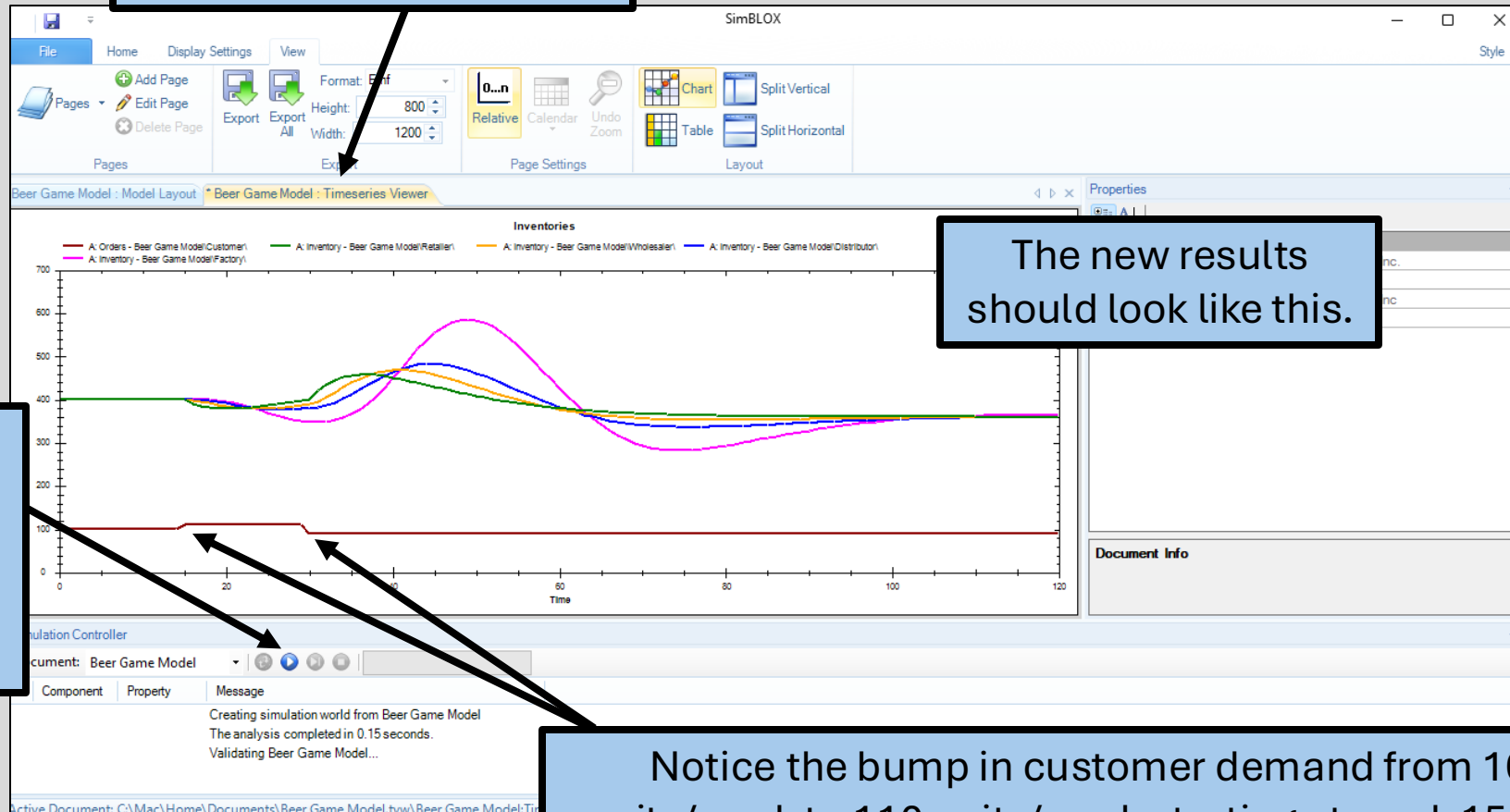
Validating Beer Game Model...

Creating simulation world from Beer Game Model

The analysis completed in 0.076 seconds.

Active Document: C:\Mac\Home\Documents\Beer Game Model.blx\Beer Game Model\Model Layout

1 – Select the timeseries viewer tab.



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).

The screenshot shows the SimBLOX software interface. The 'View' ribbon is active, and the 'Table' icon is highlighted. The 'Beer Game Model : Timeseries Viewer' tab is selected, displaying a data table. A blue triangle is visible in the top-left corner of the table. The 'Document Info' panel on the right shows the author as SimBLOX, Inc. and the version as 1.0.0. The 'Simulation Controller' panel at the bottom shows the document as 'Beer Game Model' and the message 'Validating Beer Game Model... Creating simulation world from Beer Game Model. The analysis completed in 0.102 seconds.'

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.

	A	B	C	D	E	F
Model	Beer Ga...	Beer Ga...	Beer Ga...	Beer Ga...	Beer Ga...	Beer Ga...
1	SimBRIX	Customer	Retailer	Wholes...	Distributor	Factory
2	Variable	Orders	Inventory	Inventory	Inventory	Inventory
3	Time/Un...	Units	Units	Units	Units	Units
4	Init	100.00	400.00	400.00	400.00	400.00
5	1	100.00	400.00	400.00	400.00	400.00
6	2	100.00	400.00	400.00	400.00	400.00
7	3	100.00	400.00	400.00	400.00	400.00
8	4	100.00	400.00	400.00	400.00	400.00
9	5	100.00	400.00	400.00	400.00	400.00
10	6	100.00	400.00	400.00	400.00	400.00
11	7	100.00	400.00	400.00	400.00	400.00
12	8	100.00	400.00	400.00	400.00	400.00
13	9	100.00	400.00	400.00	400.00	400.00
14	10	100.00	400.00	400.00	400.00	400.00

Document Info

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Simulation Controller

Document: Beer Game Model

Component	Property	Message
		Validating Beer Game Model...
		Creating simulation world from Beer Game Model
		The analysis completed in 0.102 seconds.