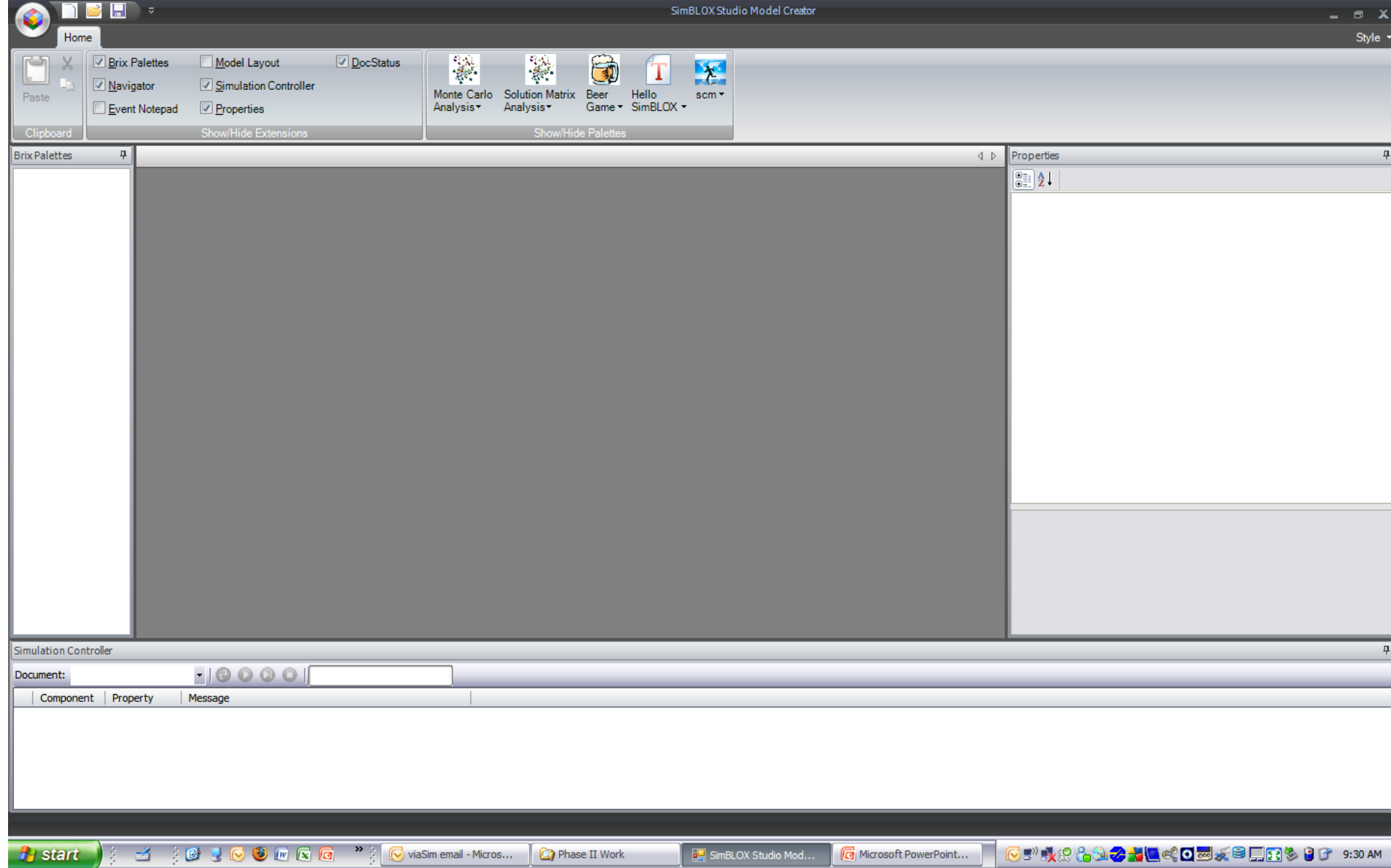




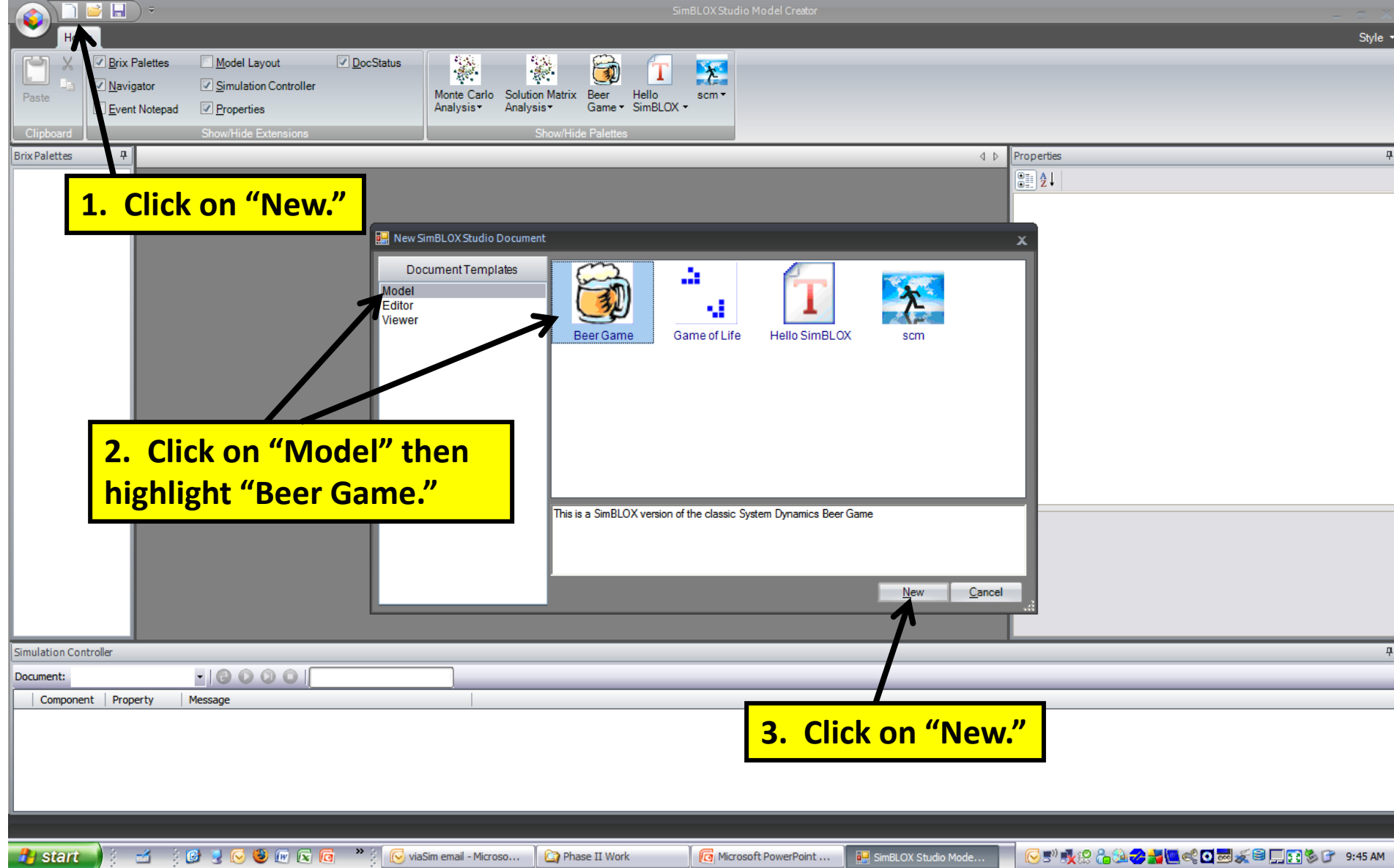
The Beer Game on Steroids (BGOS)

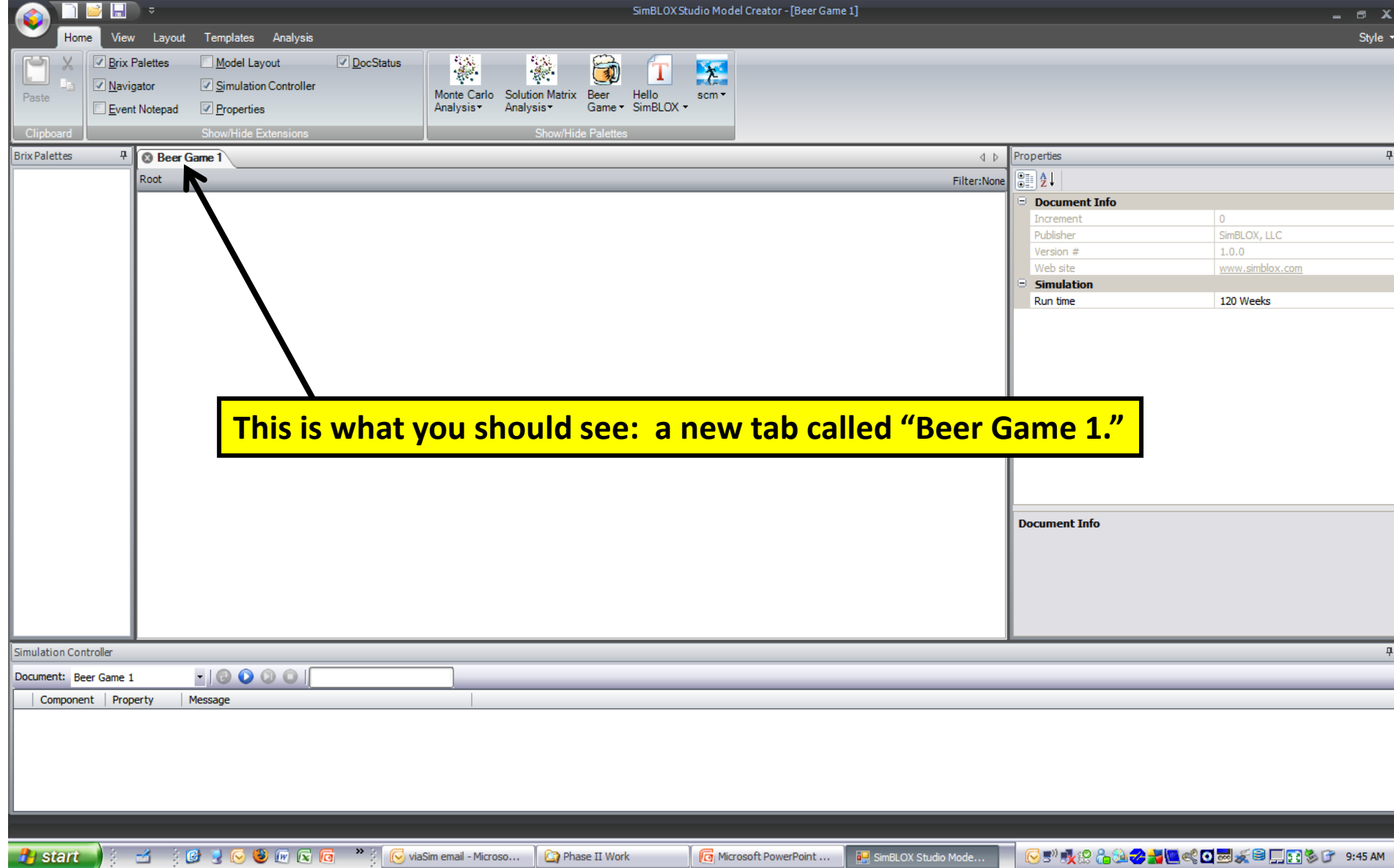
**A Freeware Tool for Teaching Supply Chain
Dynamics**

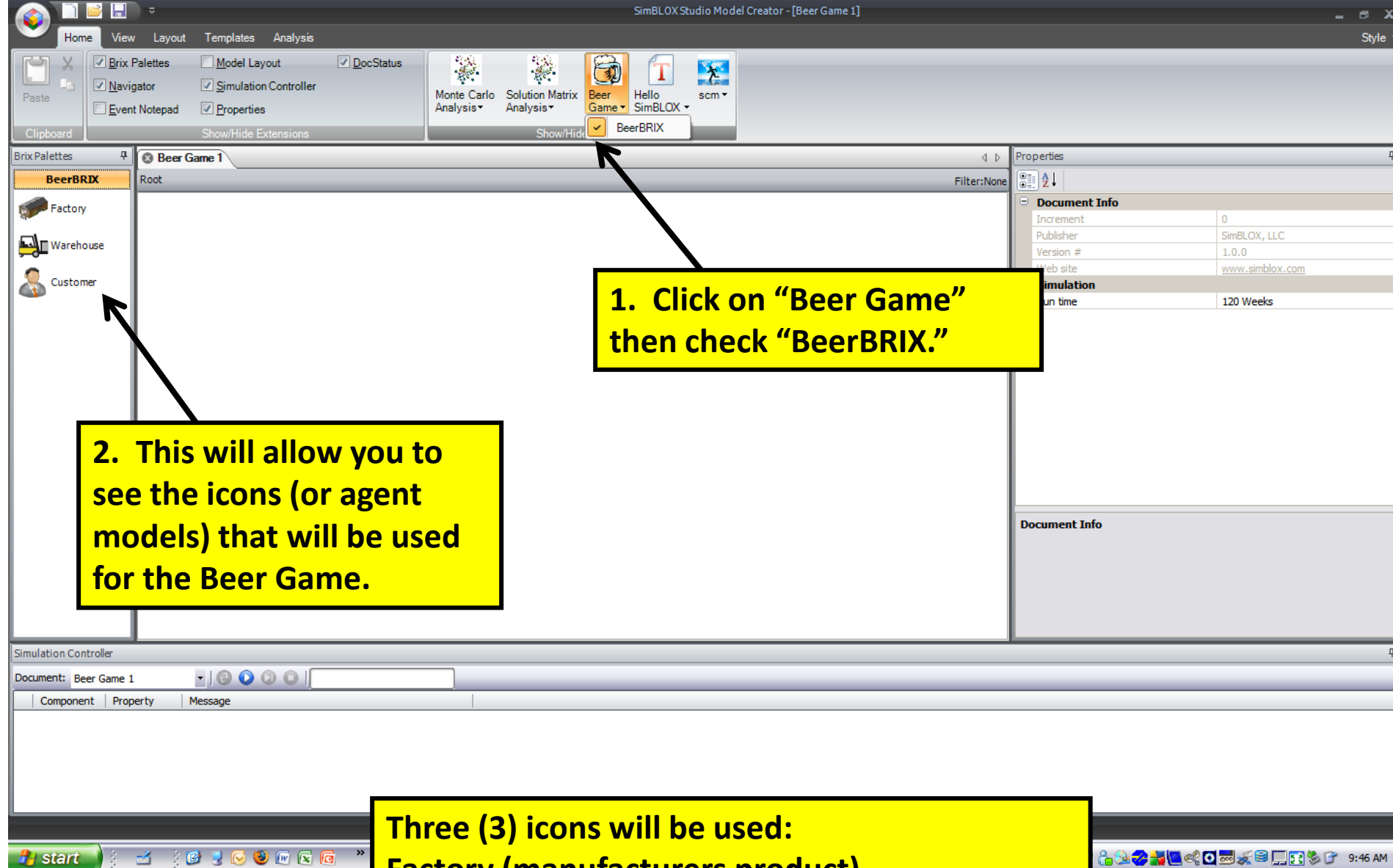
Build the Beer Game



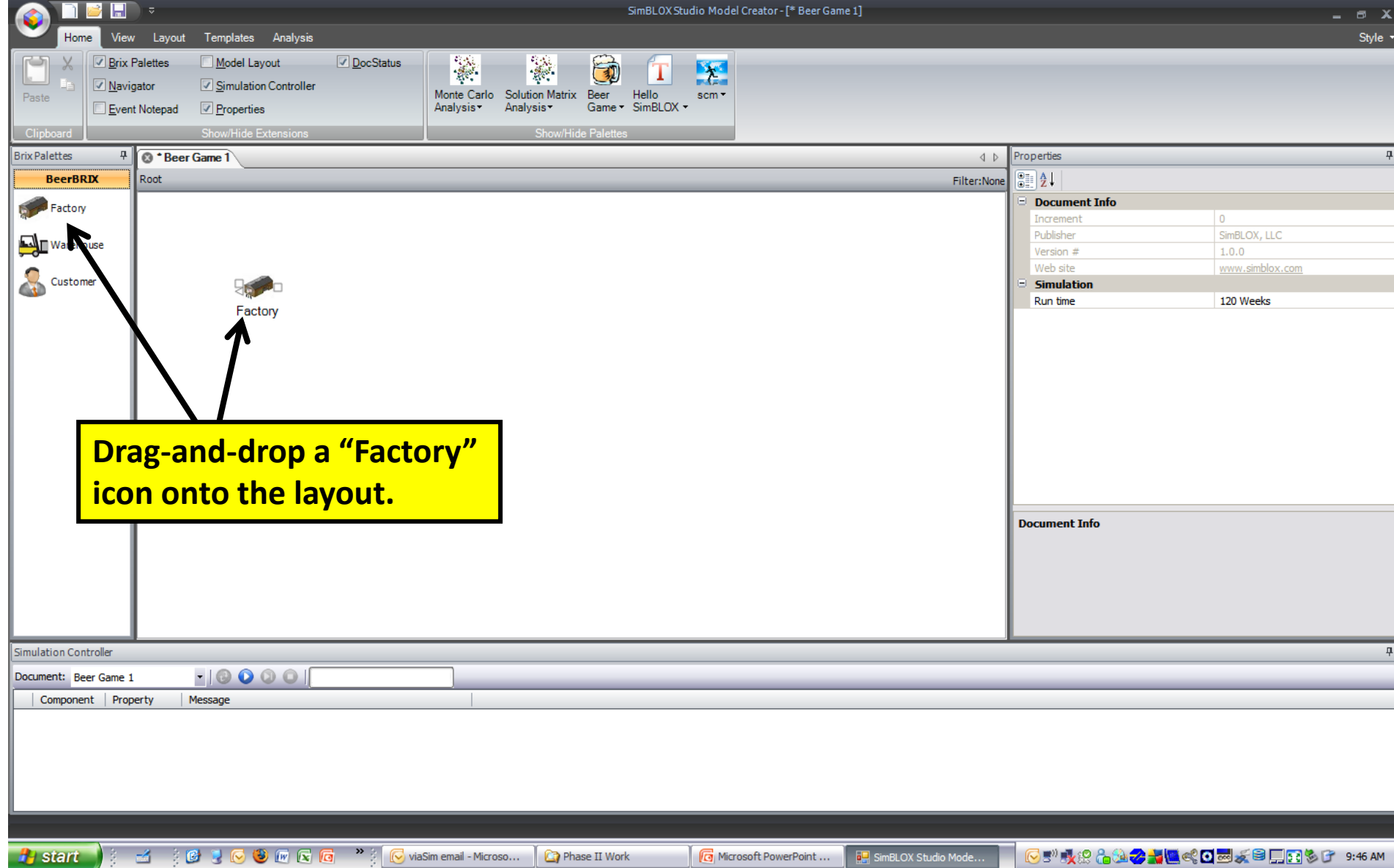
This is what you should see when you open BGOS.







Three (3) icons will be used:
Factory (manufacturers product)
Warehouse (stores product, no manufacturing)
Customer (orders/receives the end product)



SimBLOX Studio Model Creator - [* Beer Game 1]

Home View Layout Templates Analysis

Clipboard Paste

☒ Brix Palettes ☐ Model Layout ☒ DocStatus

☒ Navigator ☒ Simulation Controller

☐ Event Notepad ☒ Properties

Show/Hide Extensions

Monte Carlo Analysis Solution Matrix Beer Game Hello SimBLOX scm

Show/Hide Palettes

Brix Palettes

BeerBRDX

Factory Warehouse Customer

Root

Filter:None

Factory

Wholesaler

1. Drag-drop a "Warehouse" icon.

2. Rename the warehouse to "Wholesaler."

Properties

Definition

Inventory Adjustment Time	8 Weeks
Minimum Order Processing Time	2 Weeks
Order Distributions	(Edit value...)
Order Fulfillment Ratio	(Edit value...)
Safety Stock Coverage	2 Weeks
Time to Average Order Rate	8 Weeks

Display

Image System.Drawing.Bitmap

Identity

name	Warehouse
------	-----------

Simulation Controller

Document: Beer Game 1

Component Property Message

start

viaSim email - Microso...

Phase II Work

Microsoft PowerPoint ...

SimBLOX Studio Mode...

9:46 AM

SimBLOXStudio Model Creator - [* Beer Game 1]

Home View Layout Templates Analysis

Clipboard Paste

☒ Brix Palettes ☐ Model Layout ☒ DocStatus

☒ Navigator ☒ Simulation Controller

☐ Event Notepad ☒ Properties

Show/Hide Extensions

Monte Carlo Analysis Solution Matrix Analysis Beer Game Hello SimBLOX scm

Show/Hide Palettes

Brix Palettes

BeerBRDX

Factory Warehouse Customer

Root

Filter:None

Properties

Document Info

Increment	0
Publisher	SimBLOX, LLC
Version #	1.0.0
Web site	www.simblox.com

Simulation

Run time	120 Weeks
----------	-----------

Document Info

Simulation Controller

Document: Beer Game 1

Component	Property	Message
-----------	----------	---------

Click the box on the right side of the Factory and “drag” an arrow connection over to the box on the left side of the Wholesaler.

start

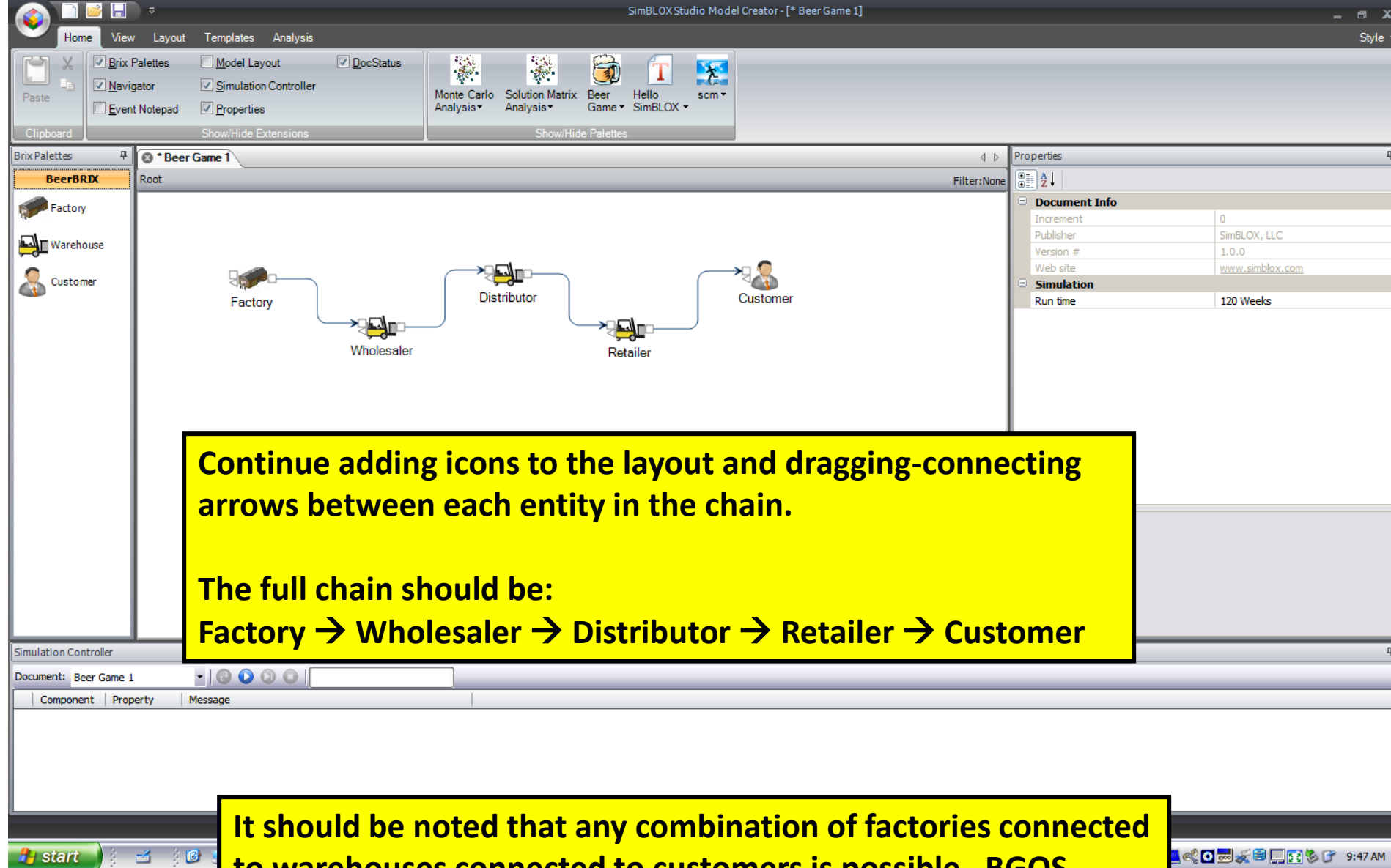
viaSim email - Microso...

Phase II Work

Microsoft PowerPoint ...

SimBLOX Studio Mode...

9:47 AM



Continue adding icons to the layout and dragging-connecting arrows between each entity in the chain.

The full chain should be:

Factory → Wholesaler → Distributor → Retailer → Customer

It should be noted that any combination of factories connected to warehouses connected to customers is possible. BGOS automatically aggregates orders/shipments accordingly if, for example, there are multiple customers connected to a single warehouse.

SimBLOX Studio Model Creator - [* Beer Game 1]

Home View Layout Templates Analysis

Clipboard Paste

Extensions: Brix Palettes, Navigator, Event Notepad, Model Layout, Simulation Controller, Properties, DocStatus

Show/Hide Extensions

Palettes: Monte Carlo Analysis, Solution Matrix Analysis, Beer Game, Hello SimBLOX, scm

Show/Hide Palettes

Brix Palettes: BeerBRDX, Factory, Warehouse, Customer

* Beer Game 1

Root

Filter: None

Diagram: Factory → Wholesaler → Distributor → Retailer → Customer

Properties

Definition	
Order Distributions	(Edit value...) ...
Orders	(Edit value...)
Display	
Image	System.Drawing.Bitmap
Identity	
name	Customer

Simulation Controller

Document: Beer Game 1

Component | Property | Message

Windows: viaSim email - Microso..., Phase II Work, Microsoft PowerPoint..., SimBLOX Studio Mode...

9:49 AM

1. Clicking on any icon will highlight all its inputs in the Properties box on the right. Click on the Customer.

2. Select "Order Distributions" and then click on the ellipses button on the far right.

SimBLOX Studio Model Creator - [* Beer Game 1]

Home View Layout Templates Analysis

Clipboard Paste

Model Layout DocStatus

Navigator Simulation Controller

Event Notepad Properties

Show/Hide Extensions

Monte Carlo Analysis Solution Matrix Analysis Beer Game Hello SimBLOX scm

Show/Hide Palettes

Brix Palettes

BeerBRDX

Factory Warehouse Customer

Root

Filter:None

Factory Wholesaler

Edit Order Distributions

Initial

Supplier	% of Orders
Retailer	100

1

-1

OK Cancel

Properties

Definition

Order Distributions (Edit value...)

Orders (Edit value...)

Display

Image System.Drawing.Bitmap

Identity

name Customer

Order Distributions

Specifies how the orders to suppliers are distributed on a per-material basis.

Simulation Controller

Document: Beer Game 1

Component Property Message

start

9:48 AM

Set the “% of Orders” to 100, indicating that 100% of the Customer orders are going to the Retailer.

In this case, if more than one Retailer was connected to the Customer, the Customer could distribute orders in any way and even change this distribution over time so that there is a shift in orders as the simulation progresses.

SimBLOX Studio Model Creator - [* Beer Game 1]

Home View Layout Templates Analysis

Clipboard Paste

Model Layout DocStatus

Navigator Simulation Controller

Event Notepad Properties

Show/Hide Extensions

Monte Carlo Analysis Solution Matrix Analysis Beer Game Hello SimBLOX scm

Show/Hide Palettes

Brix Palettes

BeerBRDX

Factory Warehouse Customer

Root

Filter:None

Properties

Definition

Inventory Adjustment Time	8 Weeks
Minimum Order Processing Time	2 Weeks
Order Distributions	(Edit value...)
Order Fulfillment Ratio	(Edit value...)
Safety Stock Coverage	2 Weeks
Time to Average Order Rate	8 Weeks

Display

Image System.Drawing.Bitmap

Identity

name	Distributor
------	-------------

Order Distributions

Specifies how the orders to suppliers are distributed on a per-material basis.

Simulation Controller

Document: Beer Game 1

Component	Property	Message
Wholesaler		Validating B
Distributor		Creating sir
Retailer		Orders are
		Orders are
		Orders are
		The analysi

start

9:52 AM

Factory

Wholesaler

Edit Order Distributions

Initial

Supplier	% of Orders
Wholesaler	100

OK Cancel

Repeat this process of setting order distributions to 100% for each entity in the model that has a supplier attached to it. In this case, this is required for:

- Customer**
- Retailer**
- Distributor**
- Wholesaler**

SimBLOX Studio Model Creator - [* Beer Game 1]

Home View Layout Templates Analysis

Clipboard Paste

Model Layout DocStatus

Navigator Simulation Controller

Event Notepad Properties

Show/Hide Extensions

Monte Carlo Analysis Solution Matrix Beer Game Hello SimBLOX scm

Show/Hide Palettes

Brix Palettes

BeerBRDX

Factory Warehouse Customer

Root

Filter:None

Factory Wholesaler Distributor Retailer Customer

Properties

Definition

Order Distributions (Edit value...)

Orders (Edit value...)

Display

Image System.Drawing.Bitmap

Identity

name Customer

Defines the orderbook profile (in units per week).

Simulation Controller

Document: Beer Game 1

Component Property Message

1. Click on the Customer again to show its inputs.

2. Select "Orders" and then click on the ellipses button on the far right.

start

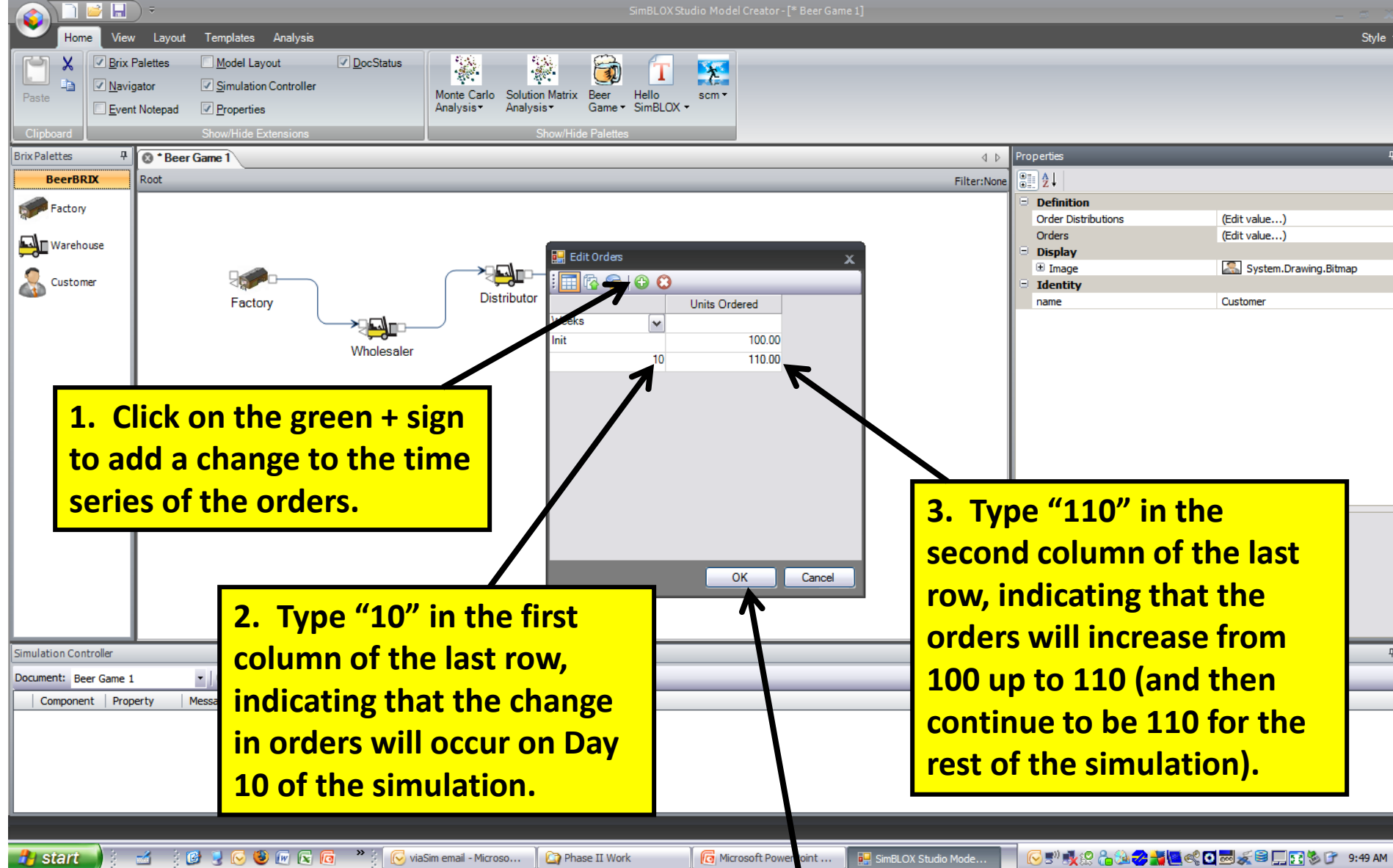
viaSim email - Microso...

Phase II Work

Microsoft PowerPoint ...

SimBLOX Studio Mode...

9:49 AM



1. Click on the green + sign to add a change to the time series of the orders.

2. Type "10" in the first column of the last row, indicating that the change in orders will occur on Day 10 of the simulation.

3. Type "110" in the second column of the last row, indicating that the orders will increase from 100 up to 110 (and then continue to be 110 for the rest of the simulation).

4. Click OK to accept the change.

SimBLOX Studio Model Creator - [* Beer Game 1]

Home View Layout Templates Analysis

Clipboard Paste

Model Layout DocStatus

Navigator Simulation Controller

Event Notepad Properties

Show/Hide Extensions

Monte Carlo Analysis Solution Matrix Analysis Beer Game Hello SimBLOX scm

Show/Hide Palettes

Brix Palettes

BeerBRDX

Factory Warehouse Customer

Root Filter:None

Factory Wholesaler Distributor Retailer Customer

Definition

Order Distributions (Edit value...)

Orders (Edit value...)

Display

Image System.Drawing.Bitmap

Identity

name Customer

Orders

Defines the orderbook profile (in units per week).

Simulation Controller

Document: Beer Game 1

Component Property Message

start

viaSim email - Microso...

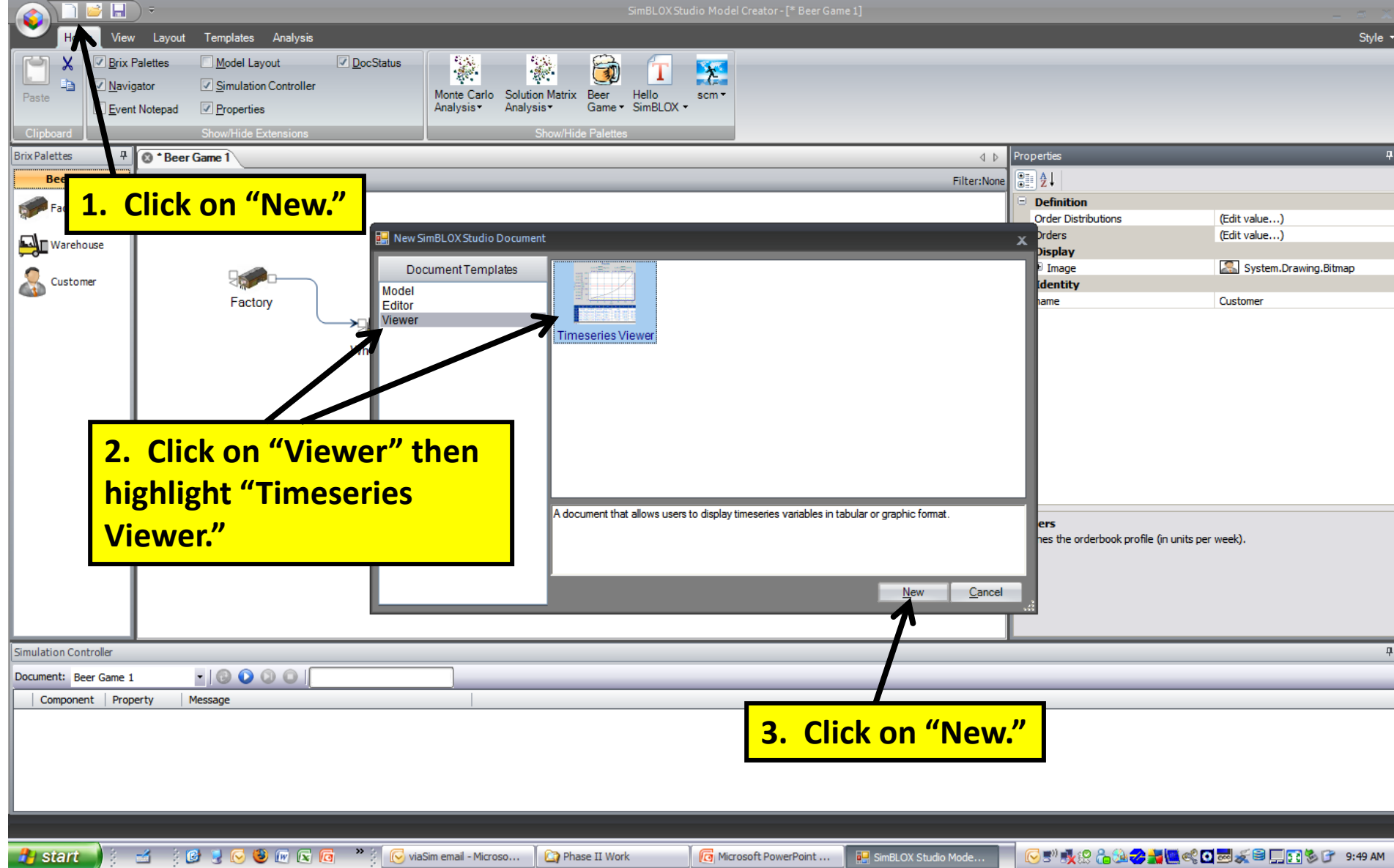
Phase II Work

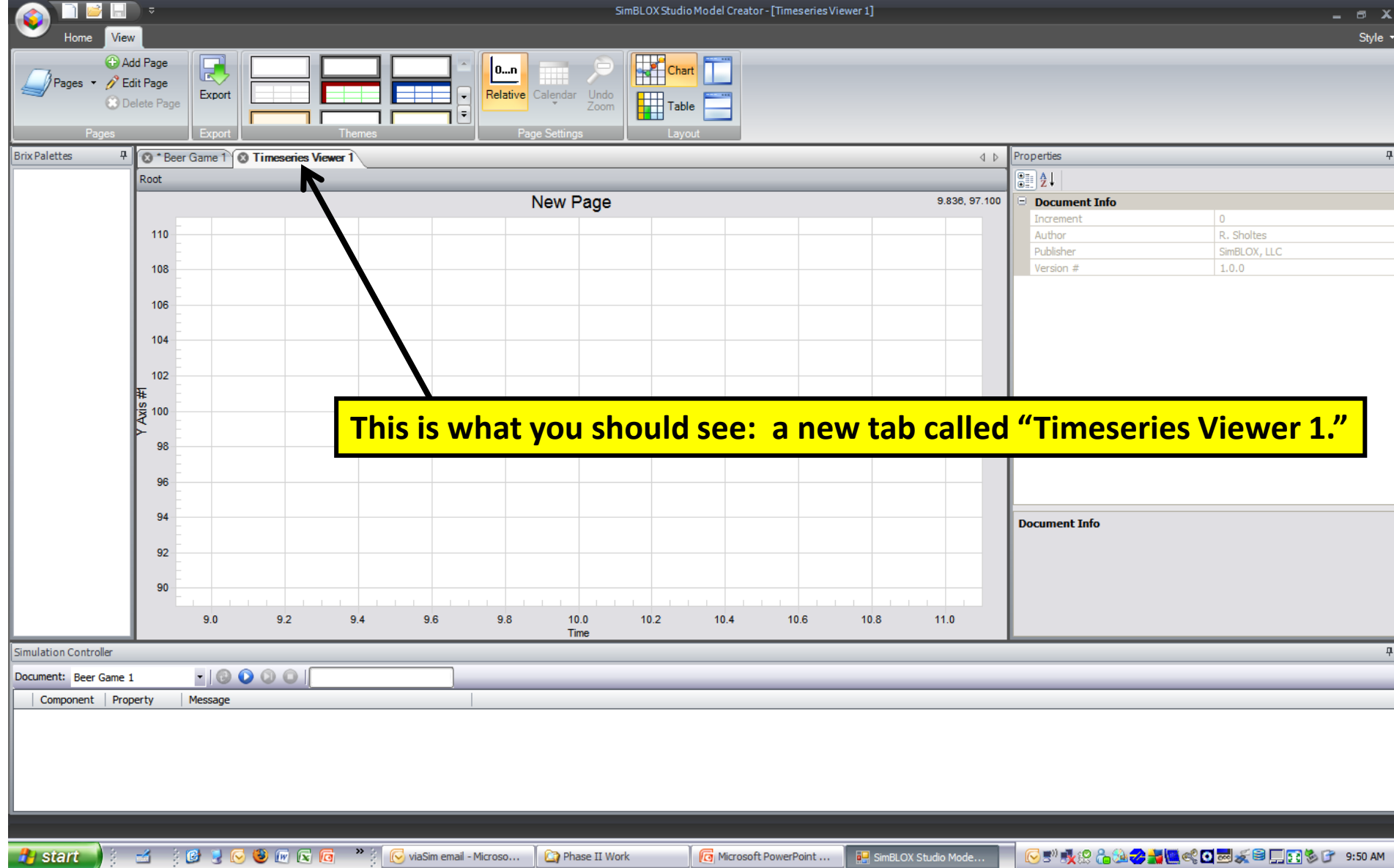
Microsoft PowerPoint ...

SimBLOX Studio Mode...

9:49 AM

The model is now ready to be simulated.





1. To add variables to the chart, click on "Edit Page."

2. Select the document "Beer Game 1."

3. Select "Show all" BRIX.

4. Select an entity that is in the model.

5. Select the variable that you want to see for that entity.

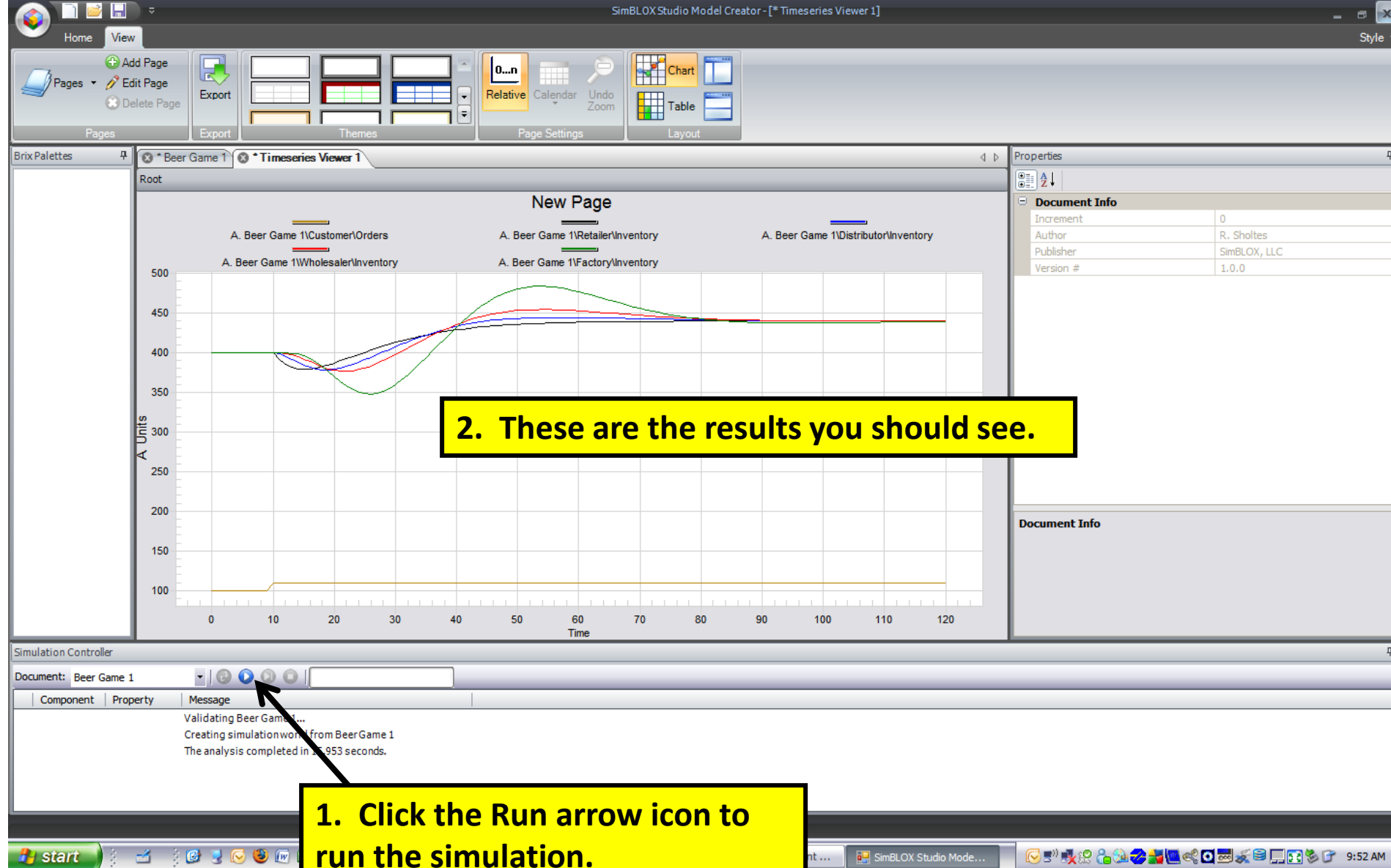
6. Click the green arrow to move the variable to the list of variables shown on the Timeseries Viewer.

8. Click OK.

Entity	Variable
Customer	Orders
Retailer	Inventory
Distributor	Inventory
Wholesaler	Inventory
Factory	Inventory

7. The full list should contain the following:

Entity	Variable
Customer	Orders
Retailer	Inventory
Distributor	Inventory
Wholesaler	Inventory
Factory	Inventory



SimBLOX Studio Model Creator - [* Beer Game Model - Basic]

Home View Style

Pages Add Page Edit Page Delete Page Export Themes Page Settings Chart Table

Brix Palettes Beer Game Model - Basic Beer Game Model - Basic

Root

	A	B	C	D	E	F
1	Model: Beer Gam	Beer Gam	Beer Gam	Beer Gam	Beer Gam	Beer Gam
2	SimBRIX: Customer	Retailer	Distributo	Wholesale	Factory	
3	Variable: Orders	Inventory	Inventory	Inventory	Inventory	Inventory
4	me/Units: Units	Units	Units	Units	Units	Units
5	Init	100.00	400.00	400.00	400.00	400.00
6	1	100.00	400.00	400.00	400.00	400.00
7	2	100.00	400.00	400.00	400.00	400.00
8	3	100.00	400.00	400.00	400.00	400.00
9	4	100.00	400.00	400.00	400.00	400.00
10	5	100.00	400.00	400.00	400.00	400.00
11	6	100.00	400.00	400.00	400.00	400.00
12	7	100.00	400.00	400.00	400.00	400.00
13	8	100.00	400.00	400.00	400.00	400.00
14	9	100.00	400.00	400.00	400.00	400.00
15	10	110.00	400.00	400.00	400.00	400.00
16	11	110.00	391.33	398.80	399.90	400.00
17	12	110.00	385.42	395.70	399.21	399.89
18	13	110.00	381.74	391.75	397.62	399.42
19	14	110.00	379.78	387.70	395.18	398.26
20	15	110.00	379.16	384.16	392.09	396.13
21	16	110.00	379.59	381.41	388.65	392.84
22	17	110.00	380.79	379.55	385.24	388.32

Properties

Document Info

Increment	0
Author	R. Sholtes
Publisher	SimBLOX, LLC
Version #	1.0.0

Document Info

Simulation Controller

Document: Beer Game Model - Basic

Component Property Message

start viaSim email - Microso... Phase II Work Microsoft PowerPoint... SimBLOX Studio Mode... 9:56 AM

To see the output in table form, select the "Table" icon.

SimBLOX Studio Model Creator - [* Beer Game Model - Basic]

Home View Style

Pages Add Page Edit Page Delete Page Export Themes Page Settings Layout

Brix Palettes Beer Game Model - Basic Beer Game Model - Basic

Root

	A	B	C	D	E
1	Model: Beer Gam	Beer Gam	Beer Gam	Beer Gam	Beer Gam
2	SimBRIX: Customer	Retailer	Distributo	Who	
3	Variable: Orders	Inventory	Inventory	Inver	
4	me/Units: Units	Units	Units	Units	
14	9	100.00	400.00	400.00	400.00
15	10	110.00	400.00	400.00	400.00
16	11	110.00	391.33	398.80	398.80
17	12	110.00	385.42	395.70	395.70
18	13	110.00	381.74	391.75	391.75
19	14	110.00	379.78	387.70	395.18
20	15	110.00	379.16	384.16	392.09
21	16	110.00	379.59	381.41	388.65
22	17	110.00	380.79	379.55	385.24

Save As

Save in: SD Conference - Albuquerque - Jul 26-31

My Recent Documents Desktop My Documents My Computer My Network

File name: Simulation Output - 1

Save as type: Excel workbook (*.xls)

Save Cancel

Properties

Document Info

Increment	0
Author	R. Sholtes
Publisher	SimBLOX, LLC
Version #	1.0.0

Document Info

Simulation Controller

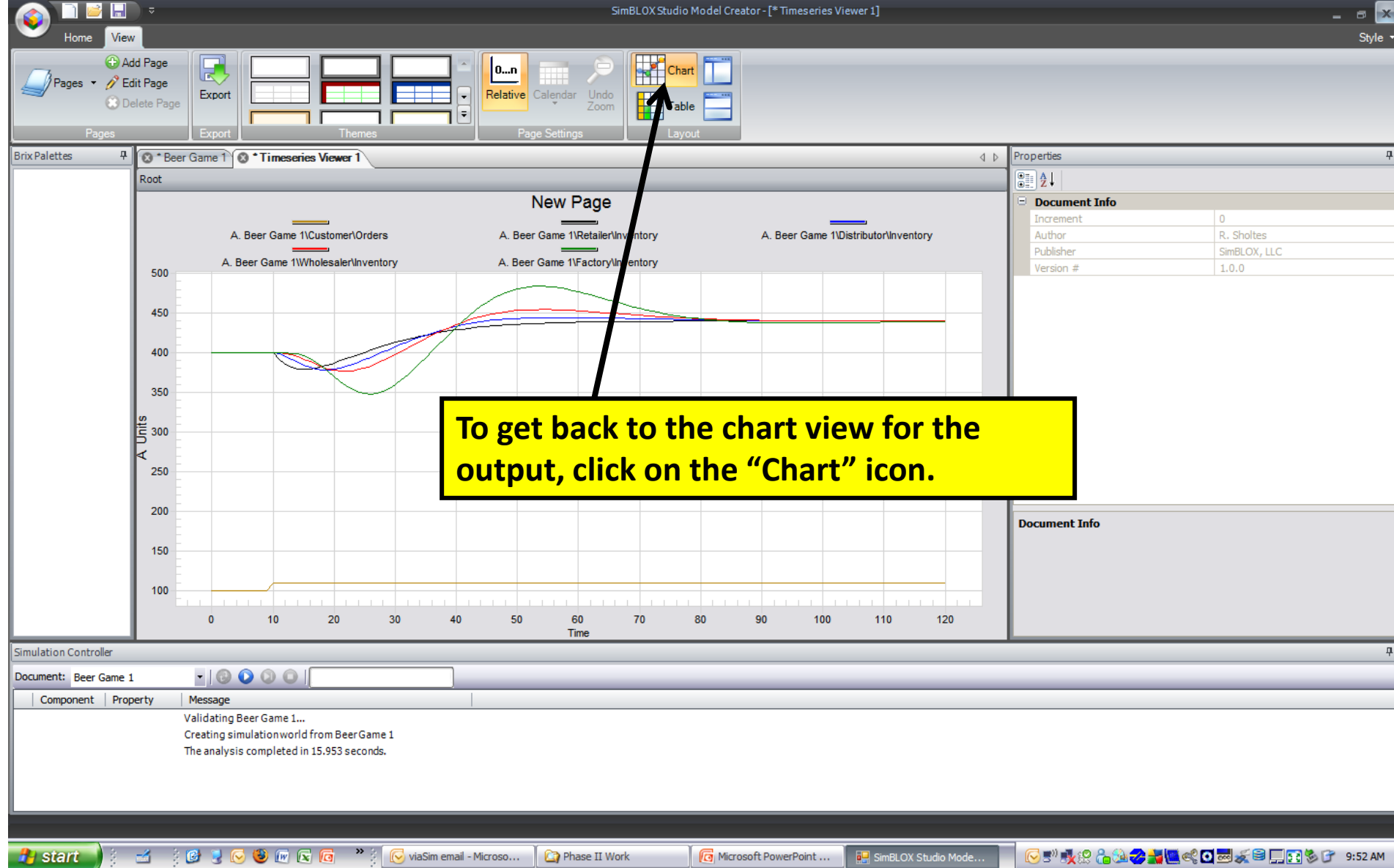
Document: Beer Game Model - Basic

Component Property Message

1. To export the table output to MS Excel, click on the "Export" icon.

2. Name the file, select the folder where you want to save the file, and click Save.

start viaSim email - Microso... Phase II Work Microsoft PowerPoint... SimBLOX Studio Mode... 9:57 AM



SimBLOX Studio Model Creator - [Beer Game Model - Basic]

Home View Layout Templates Analysis

Clipboard Paste

☒ Brix Palettes ☐ Model Layout ☒ DocStatus

☒ Navigator ☒ Simulation Controller

☐ Event Notepad ☒ Properties

Show/Hide Extensions

Monte Carlo Analysis Solution Matrix Analysis Beer Game Hello SimBLOX scm

Show/Hide Palettes

Beer Game Model - Basic Beer Game Model - Basic

Root

Filter:None

Factory Wholesaler Distributor Retailer Customer

To get back to the model, select the tab for the model. In this case, the model was saved as "Beer Game Model - Basic.blx" and the viewer was saved as "Beer Game Model - Basic.viewer."

Properties

Document Info

Increment	0
Publisher	SimBLOX, LLC
Version #	1.0.0
Web site	www.simblox.com

Simulation

Run time	120 Weeks
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Simulation Controller

Document: Beer Game Model - Basic

Component Property Message

start viaSim email - Micros... SD Conference - Alb... Microsoft PowerPoin... SimBLOX Studio Mod... 11:26 AM

SimBLOX Studio Model Creator - [* Beer Game Model - Basic]

Home View Layout Templates Analysis

Clipboard Paste

Model Layout DocStatus

Navigator Simulation Controller

Event Notepad Properties

Show/Hide Extensions

Monte Carlo Analysis Solution Matrix Analysis Beer Game Hello SimBLOX scm

Show/Hide Palettes

Brix Palettes

BeerBRDX

Factory Warehouse Customer

Root

Filter:None

Factory Wholesaler Distributor Retailer Customer

Properties

Definition

Inventory Adjustment Time 2 Weeks

Minimum Order Processing Time 2 Weeks

Order Distributions (Edit value...)

Order Fulfillment Ratio (Edit value...)

Safety Stock Coverage 2 Weeks

Time to Average Order Rate 8 Weeks

Display

Image System.Drawing.Bitmap

Identity

name Retailer

Simulation Controller

Document: Beer Game Model - Basic

Component Property Message

start

TT email - Microsoft O...

Personal

Microsoft PowerPoint ...

SimBLOX Studio Mode...

11:46 AM

1. If you want to change inputs for any of the entities in the supply chain, click on the entity in the layout.

2. Then make the desired change to the desired input variable.

