

EPEI Wizard Tutorial

The EPEI wizard calculates the min possible and actual EPEI (Every Part Every Interval) intervals for multiple products going through a single station with differing demands and lot sizes. This tutorial will guide you through the steps to draw the following example using the EPEI Wizard.

Product A		
Cycle Time	3	Min
Qty Per Cycle	1	Item
Uptime Percent	95	%
Performance	99	%
Product Demand	85	Item Day
Activity Scrap	5	%
Downstream Scrap	5	%
Time Per Changeover	60	Min
Actual Lot Size	376.73	Item
Actual Lot Spare Time	78.70	Min

Product B		
Cycle Time	4	Min
Qty Per Cycle	1	Item
Uptime Percent	90	%
Performance	95	%
Product Demand	65	Item Day
Activity Scrap	6	%
Downstream Scrap	7	%
Time Per Changeover	45	Min
Actual Lot Size	297.41	Item
Actual Lot Spare Time	89.60	Min

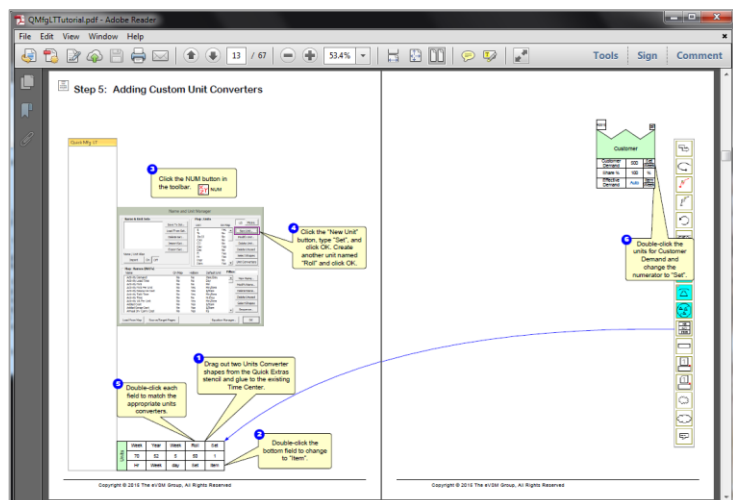
Product C		
Cycle Time	2	Min
Qty Per Cycle	1	Item
Uptime Percent	100	%
Performance	100	%
Product Demand	100	Item Day
Activity Scrap	5	%
Downstream Scrap	5	%
Time Per Changeover	30	Min
Actual Lot Size	443.21	Item
Actual Lot Spare Time	57.16	Min

Production Activity		
Activity Time	16	Hr Day
EPEI Min	1.50	Day
EPEI Actual	4	Day
WACT	2.87	Min
Weighted Qty Per Cycle	1.00	Item
Weighted OEE	83.94	%
Weighted Scrap	5.27	%

Viewing/printing eVSM Tutorial:

This tutorial is designed for two page layout. If printing, you will need double-sided print.

For on-screen viewing, save the PDF file to your PC and then open it in Acrobat Reader (not in a web browser). In the Acrobat menus, click "View>Page Display", make sure "Show Cover Page in Two Page View" is checked and then select "Two Page View".



Step 1: Start eVSM

1 On your Desktop, click the "Start eVSM" icon.

2 If you see a message like this, you must "Enable" macros.

3 Click to enable macros.

4 Click "Trust all from publisher" to avoid the security notice in future.

Recycle Bin

Start eVSM

Microsoft Visio Security Notice

Microsoft Office has identified a potential security concern.

Note: The digital signature is valid, but the signature is from a publisher whom you have not yet chosen to trust.

File Path: C:\Program Files\evsm\Setup\Solutions\evsmIcons.vss

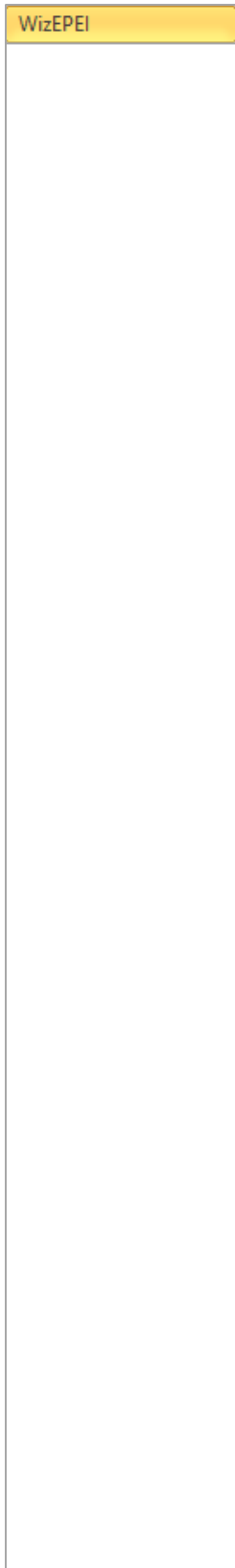
Macros have been disabled. Macros might contain viruses or other security hazards. Do not enable this content unless you trust the source of this file.

[More information](#)

[Show Signature Details](#)

Trust all from publisher Enable Macros Disable Macros

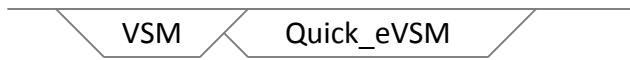
Step 2: Learn eVSM Basics



2 Avoid re-sizing eVSM shapes. Instead grow the drawing page when needed. To resize the page, hold down the "Ctrl" key, and then drag any page edge to the required size. This method works on all four edges of the page.



5 Save your Visio file and then insert a new page via the right-mouse menus on the page-tabs.



1

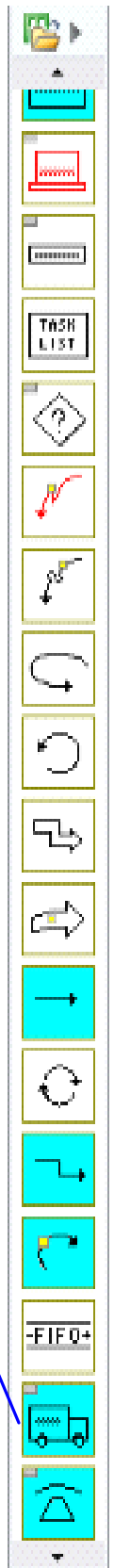
eVSM Help resources are available in the Learn module of the toolbar. Hover over each one to see what they do.

3


Blue icons in the main stencil represent families of shapes. Drag out the Transport icon.

4

Use the shape's right-mouse menus to turn it into a car



Step 3: Initiate an EPEI Wizard Map

1 Click the Open button and select EPEI under the wizard column.  Open

2 Drag out the red Process shape first.

WizEPEI

Process

Product

5 Drag out three Product centers.

A0240	Product XX		P
Cycle Time	xx	Min	
Qty Per Cycle	1	Item	
Uptime Percent	100	%	
Performance	100	%	
Product Demand	xx	Item Day	
Activity Scrap	0	%	
Downstream Scrap	0	%	
Time Per Changeover	xx	Min	
Actual Lot Size	Auto	Item	
Actual Lot Spare Time	Auto	Min	

A0250	Product XX		P
Cycle Time	xx	Min	
Qty Per Cycle	1	Item	
Uptime Percent	100	%	
Performance	100	%	
Product Demand	xx	Item Day	
Activity Scrap	0	%	
Downstream Scrap	0	%	
Time Per Changeover	xx	Min	
Actual Lot Size	Auto	Item	
Actual Lot Spare Time	Auto	Min	

A0260	Product XX		P
Cycle Time	xx	Min	
Qty Per Cycle	1	Item	
Uptime Percent	100	%	
Performance	100	%	
Product Demand	xx	Item Day	
Activity Scrap	0	%	
Downstream Scrap	0	%	
Time Per Changeover	xx	Min	
Actual Lot Size	Auto	Item	
Actual Lot Spare Time	Auto	Min	

6 Lot Spare Time is divided by product but should probably be lumped together.

Step 4: Fill in values

WizEPEI

1 Annotate the map with the appropriate values.

Product A		
Cycle Time	3	Min
Qty Per Cycle	1	Item
Uptime Percent	95	%
Performance	99	%
Product Demand	85	Item Day
Activity Scrap	5	%
Downstream Scrap	5	%
Time Per Changeover	60	Min
Actual Lot Size	Auto	Item
Actual Lot Spare Time	Auto	Min

Product B		
Cycle Time	4	Min
Qty Per Cycle	1	Item
Uptime Percent	90	%
Performance	95	%
Product Demand	65	Item Day
Activity Scrap	6	%
Downstream Scrap	7	%
Time Per Changeover	45	Min
Actual Lot Size	Auto	Item
Actual Lot Spare Time	Auto	Min


Product C		
Cycle Time	2	Min
Qty Per Cycle	1	Item
Uptime Percent	100	%
Performance	100	%
Product Demand	100	Item Day
Activity Scrap	5	%
Downstream Scrap	5	%
Time Per Changeover	30	Min
Actual Lot Size	Auto	Item
Actual Lot Spare Time	Auto	Min

2 Do not change the blue Auto fields. These will get calculated later.

Step 5: Sequence Arrows



1 To add sequence arrows, hold down the SHIFT key and select the shapes in the correct order.

2 Click the Sequence button.  Sequence

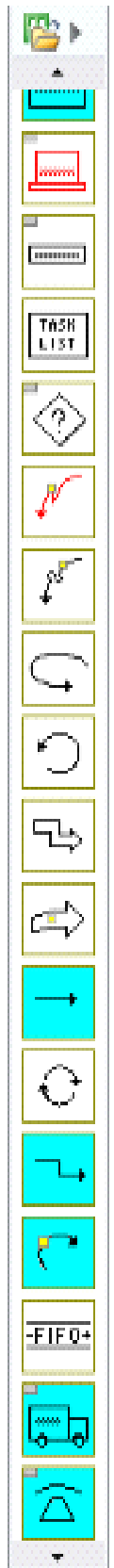
A0240	P	
A		
Cycle Time	3	Min
Qty Per Cycle	1	Item
Uptime Percent	95	%
Performance	99	%
Product Demand	85	Item Day
Activity Scrap	5	%
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Time Per Changeover	60	Min
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A0250	P	
B		
Cycle Time	4	Min
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Performance	95	%
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Activity Scrap	6	%
Downstream Scrap	7	%
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A0260	P	
C		
Cycle Time	2	Min
Qty Per Cycle	1	Item
Uptime Percent	100	%
Performance	100	%
Product Demand	100	Item Day
Activity Scrap	5	%
Downstream Scrap	5	%
Time Per Changeover	30	Min
Actual Lot Size	Auto	Item
Actual Lot Spare Time	Auto	Min


A0230		P
Productivity D		
Activity Time	16	Hr Day
EPEI Min	Auto	Day
EPEI Actual	4	Day
WACT	Auto	Min
Weighted Qty Per Cycle	Auto	Item
Weighted OEE	Auto	%
Weighted Scrap	Auto	%


Units	Min	Hr
	60	60
	Sec	Min

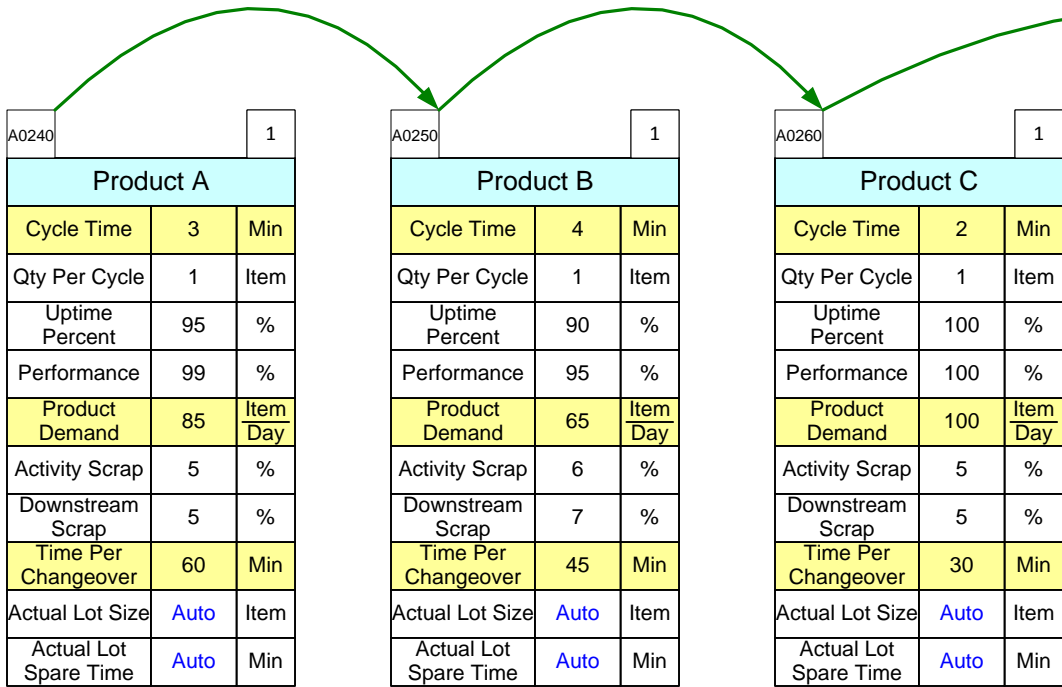


Step 6: Auto Path




1 Click the Auto Path button.  Auto Path


2 Click the Show Seq button for sequence arrow visibility.  Show Seq.



Step 7: Perform Calculations

WizEPEI

1 Click the "Check" and button fix any problems flagged  Check

2 Click the "Solve" button to calculate  Solve

A0240		1
Product A		
Cycle Time	3	Min
Qty Per Cycle	1	Item
Uptime Percent	95	%
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A0250		1
Product B		
Cycle Time	4	Min
Qty Per Cycle	1	Item
Uptime Percent	90	%
Performance	95	%
Product Demand	65	Item/Day
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Downstream Scrap	7	%
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A0260		1
Product C		
Cycle Time	2	Min
Qty Per Cycle	1	Item
Uptime Percent	100	%
Performance	100	%
Product Demand	100	Item/Day
Activity Scrap	5	%
Downstream Scrap	5	%
Time Per Changeover	30	Min
Actual Lot Size	443.21	Item
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
3 Notice the blue values have all been calculated.

Step 8: Visualize with Charts

WizEPEI



Product Wheel



EPEI Chart

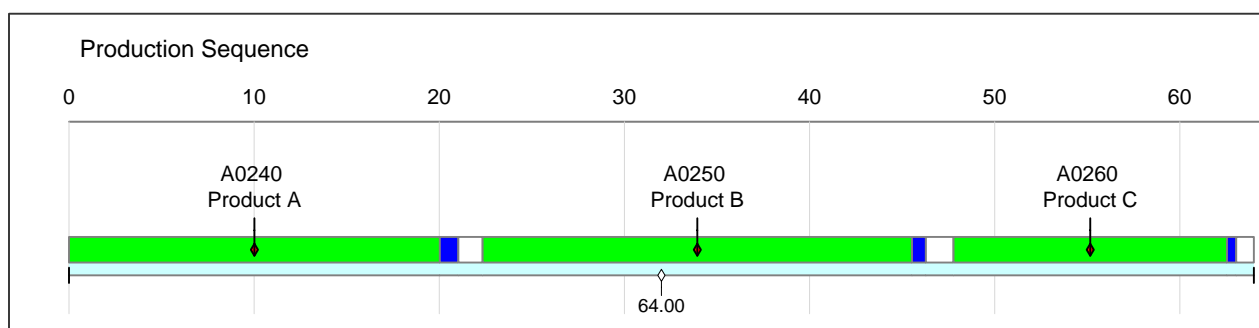
1 Drag out the Product Wheel and EPEI Chart.

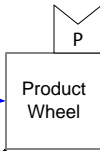
A0240	1	
Product A		
Cycle Time	3	Min
Qty Per Cycle	1	Item
Uptime Percent	95	%
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Product C		
Cycle Time	2	Min
Qty Per Cycle	1	Item
Uptime Percent	100	%
Performance	100	%
Product Demand	100	Item Day
Activity Scrap	5	%
Downstream Scrap	5	%
Time Per Changeover	30	Min
Actual Lot Size	443.21	Item
Actual Lot Spare Time	57.16	Min

3 Right-click and select Plot Ladder Chart.





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A0230		1
Production Activity		
Activity Time	16	Hr Day
EPEI Min	1.50	Day
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