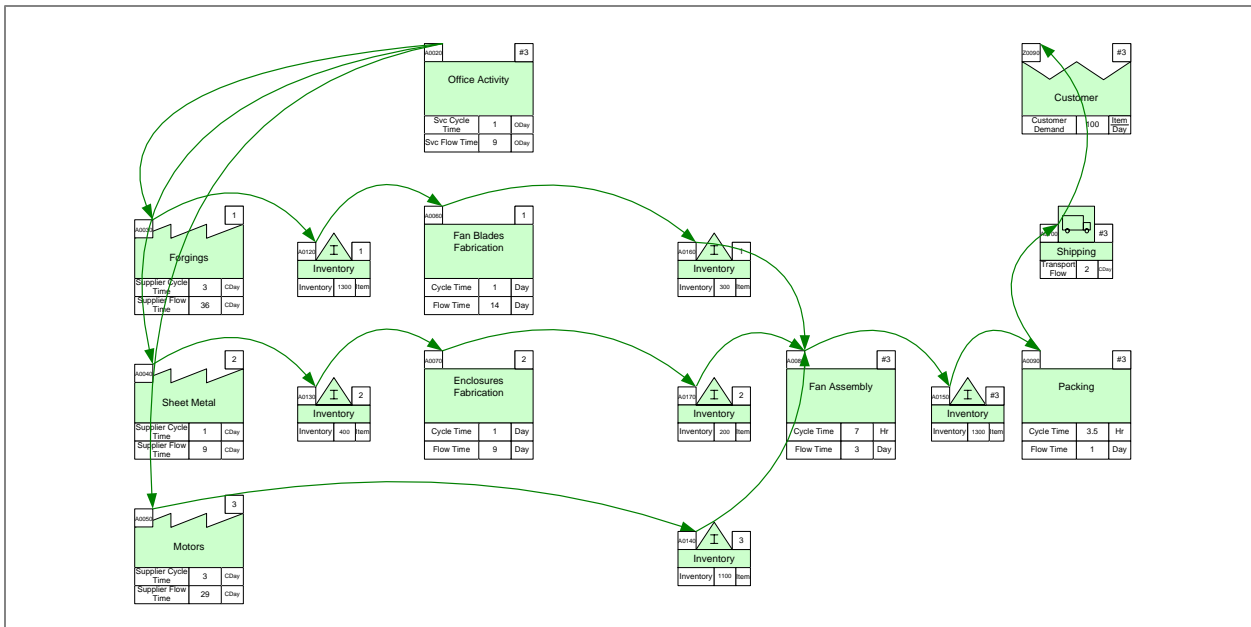
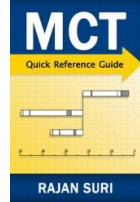


# Quick MCT Tutorial

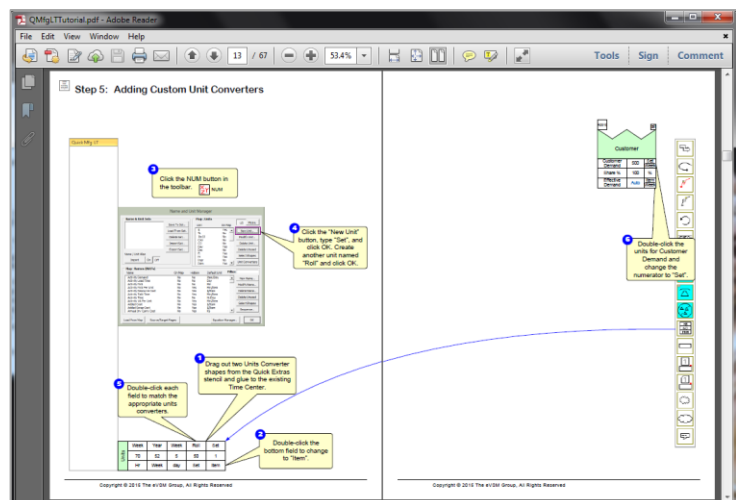
This tutorial will guide you through the steps to draw a simple map, perform common calculations, and plot charts using the Quick MCT stencil. Example adapted from the “MCT Quick Reference Guide” by Rajan Suri.



## 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”, and make sure “Two Page View” and “Show Cover Page in Two Page View” are checked.



# Step 1: Start eVSM

1 On your Desktop, double-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\Visio\Setup\Solutions\VisioIcons.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](#)

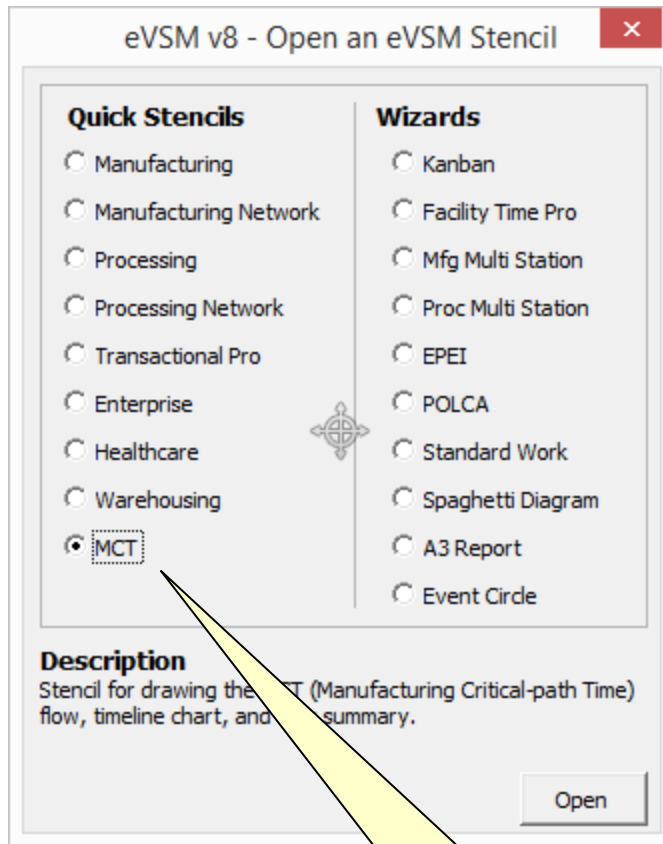
Trust all from publisher Enable Macros Disable Macros

This area intentionally left blank

## Step 2: Open the Quick MCT Stencil

**1** Click the Open button in the eVSM toolbar if the form does not appear.  Open

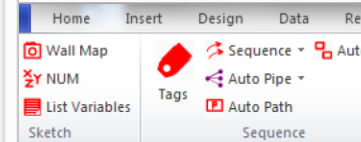
**3** The Quick MCT stencil will open on the left.



**2** Select MCT, and click Open.

the software to work, the eVSM toolbar must be active.

Click "eVSM" to see eVSM



ete To clear this page, right-click

# The eVSM Toolbar Buttons

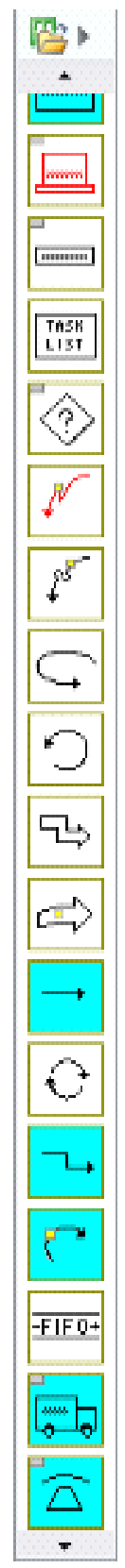
eVSM buttons similar to the ones below

eVSM™ tab to eVSM buttons

If you DO NOT see the eVSM buttons, please visit [www.evsm.com/v9/nobuttons](http://www.evsm.com/v9/nobuttons)

Right-click on the note and select the Cut command.

**4** Delete this graphic on the page by right-clicking on it, and selecting the Cut command.

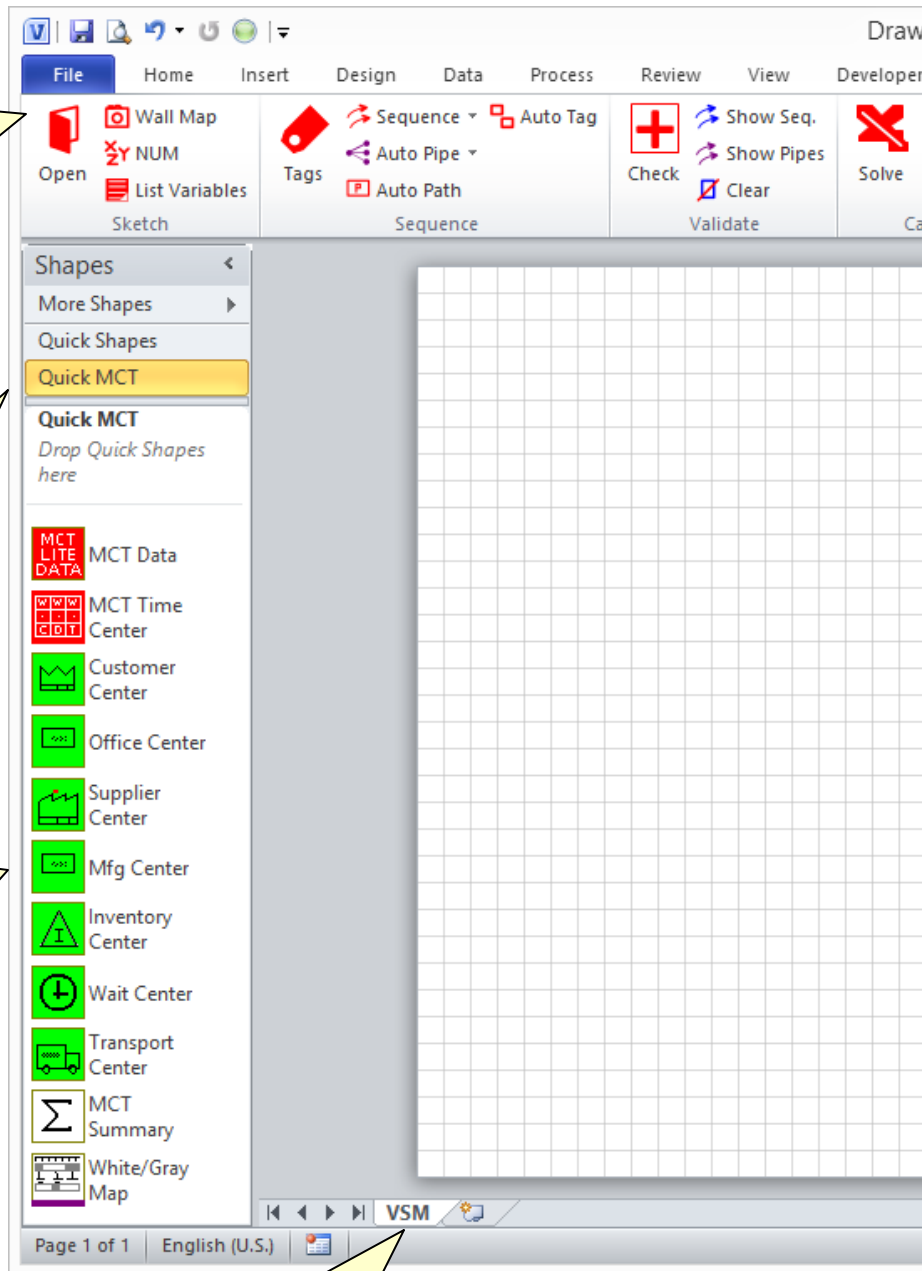


## Step 3: Explore the eVSM Environment

A new map is initiated by selecting your application area from the "Open" button. Only the stencils required for your selected application area will open on the left side.

The left hand side has the Quick eVSM stencils which are optimized for specific application areas such as manufacturing vs office vs healthcare.

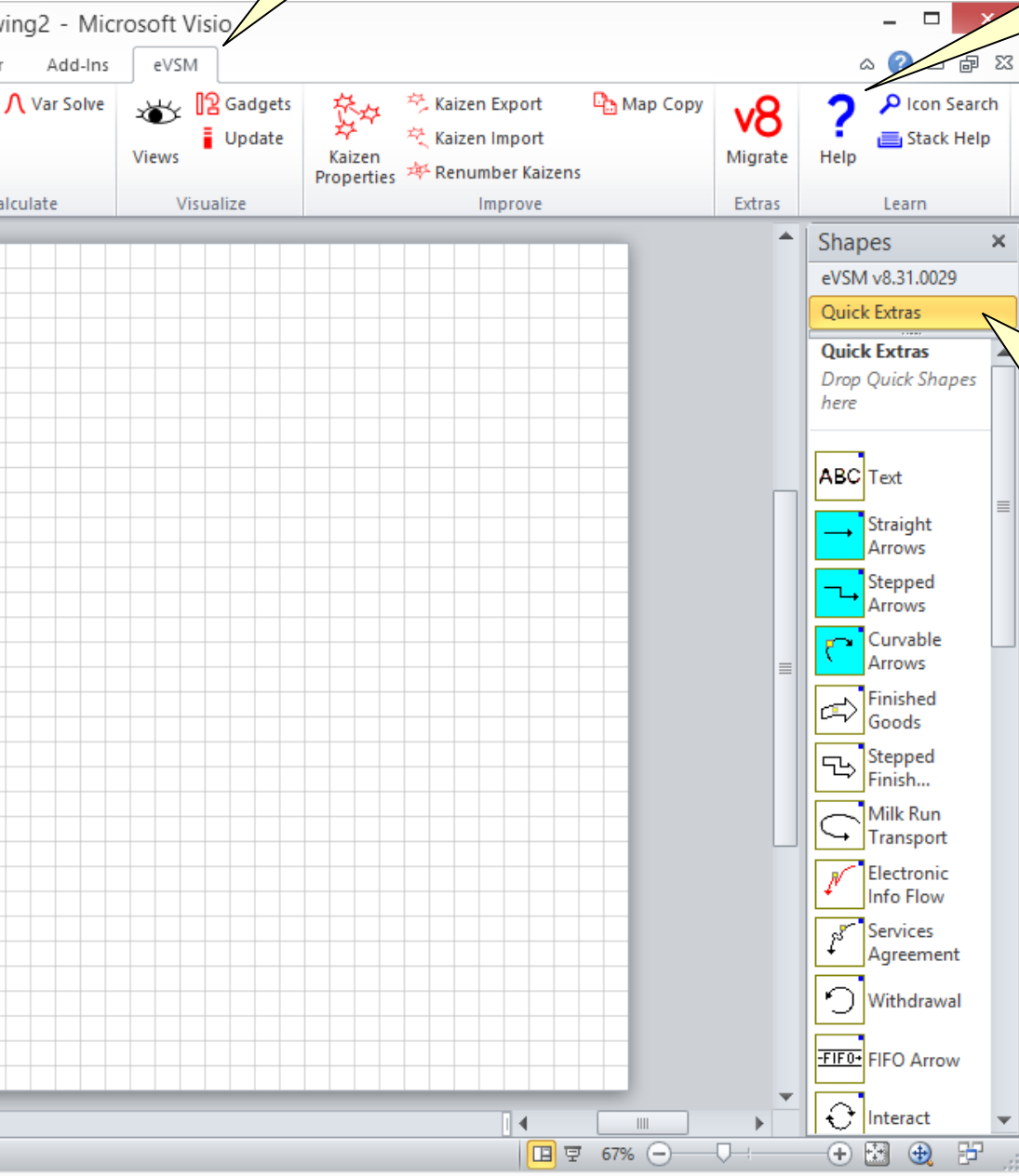
The Quick stencils contain macro shapes which are often collections of individual eVSM shapes with pre-built names, units, equations, and other properties.



A Visio file can have multiple pages which are accessed with these tabs. Each page gets locked to a chosen eVSM application and then not be used for other applications.

eVSM adds this toolbar to Visio as well as the stencils on the left and right. If the eVSM toolbar disconnects, click File>Save As and save the file, close the file, then re-open it. This tip can be used for other crashes in eVSM.

Hover over each button in the eVSM Toolbar to learn what it does. Detailed help and tutorials are available at the eVSM help site which can be accessed via this button.



The right side has two stencils. The main eVSM stencil, showing the eVSM version number, and the eVSM Extras stencil which is just a subset of the main stencil to help new users.

## Step 4: Learn Visio Basics

Quick MCT

**1** Do not re-size eVSM shapes. Instead grow the drawing page when needed. To re-size 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.

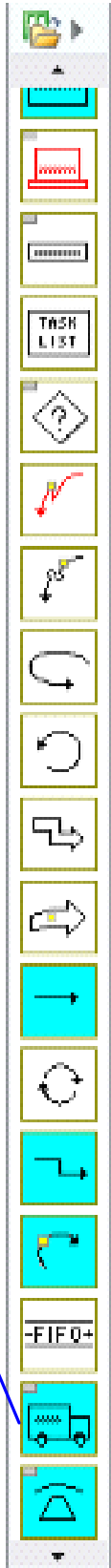
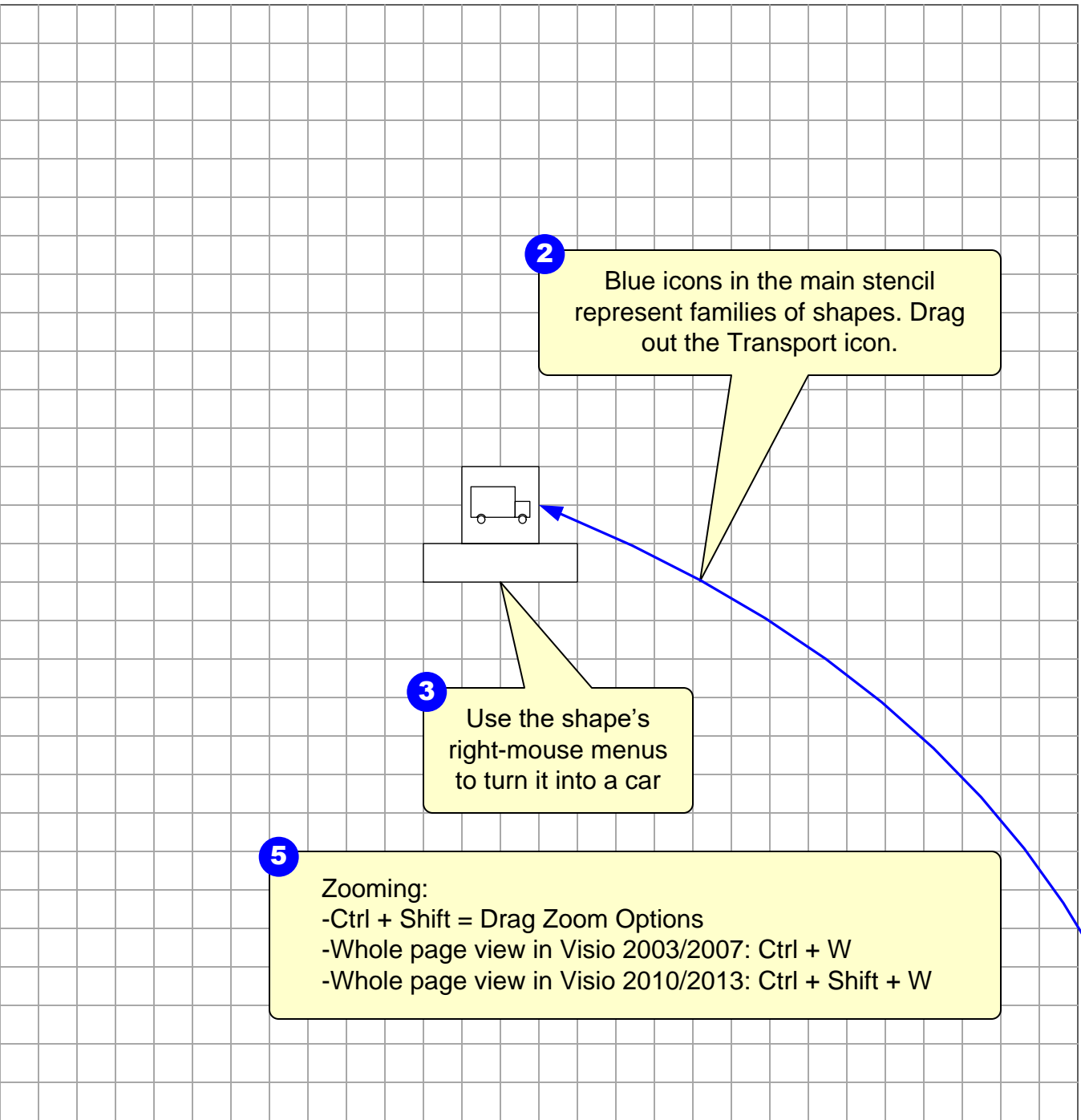


**4** Save your Visio file and then insert a new page via the right-mouse menus on the page-tabs.

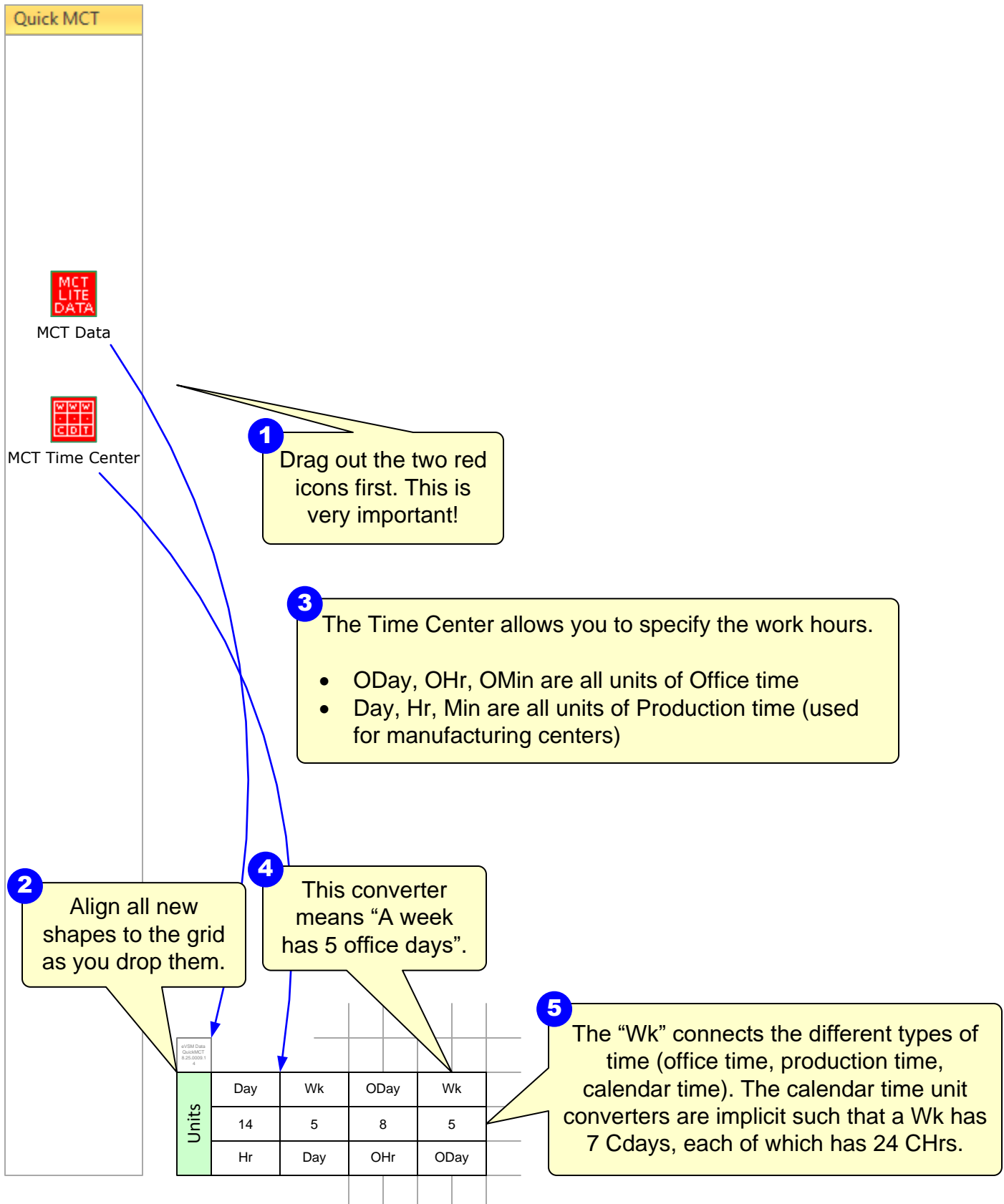
VSM

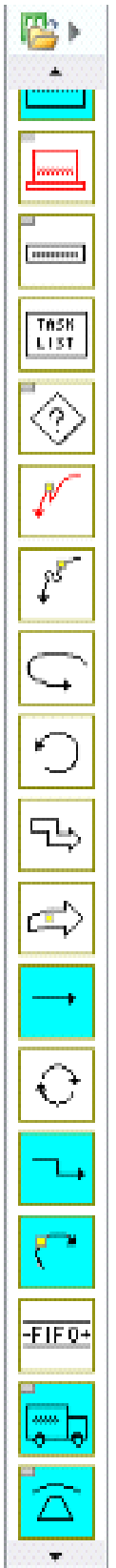
Quick\_eVSM



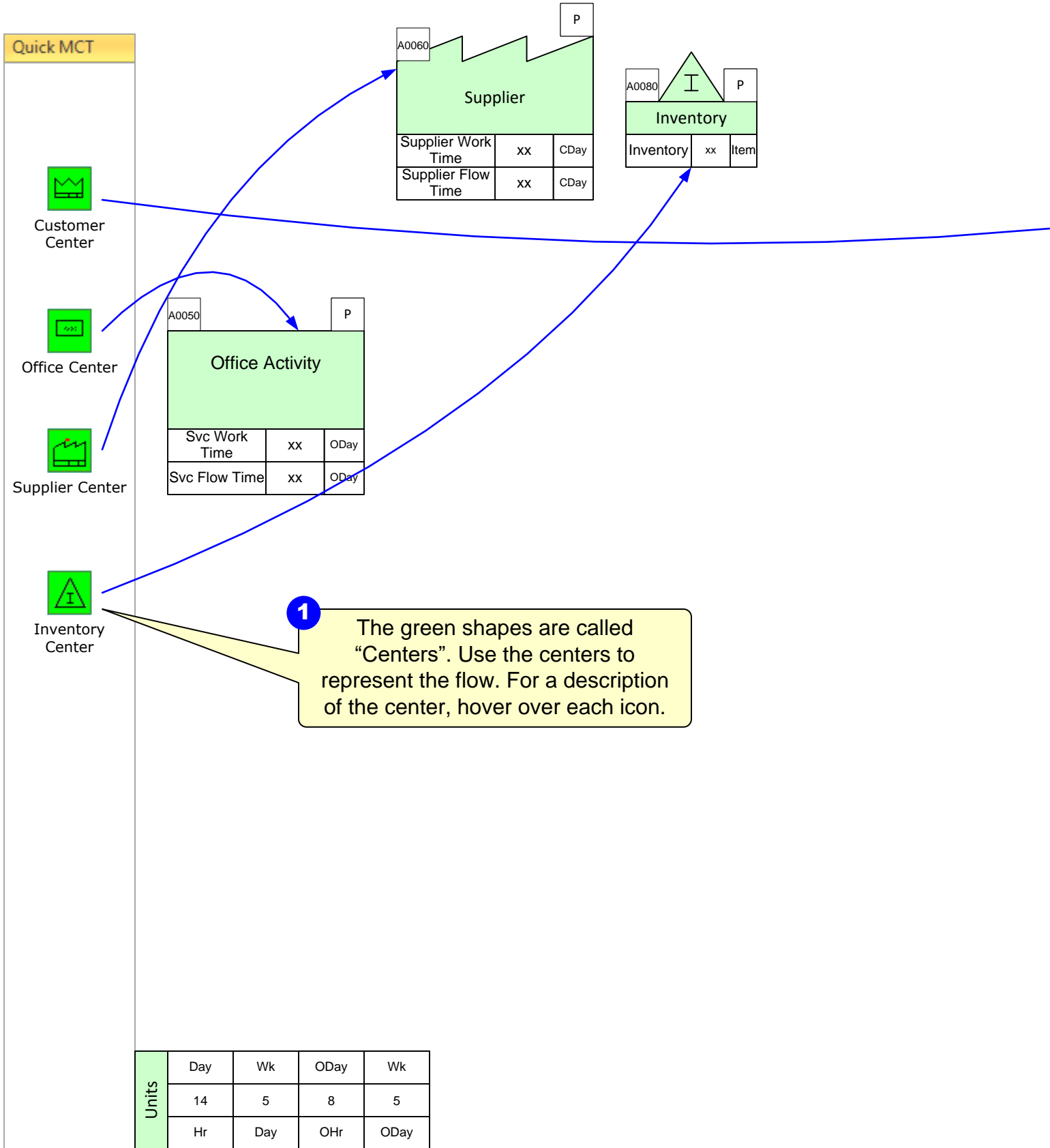


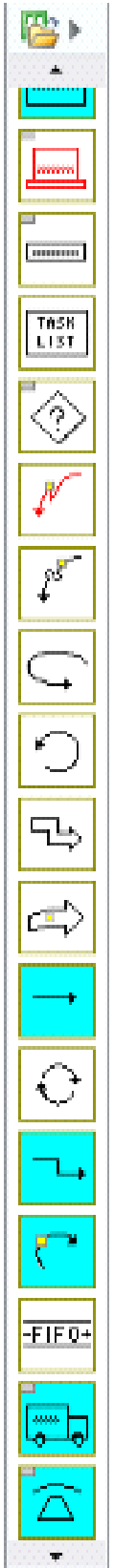
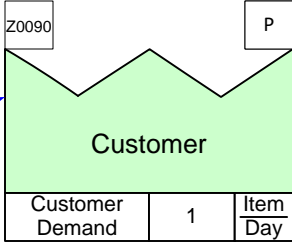
# Step 5: Initiate the map for Quick MCT












# Step 6: Start Drawing the Flow





# Step 7: Complete Drawing the Flow

**Quick MCT**

-  Customer Center
-  Office Center
-  Supplier Center
-  Mfg Center
-  Inventory Center
-  Wait Center
-  Transport Center

<b>Units</b>	Day	Wk	ODay	Wk
	14	5	8	5
	Hr	Day	OHr	ODay

A0060	P	
<b>Forgings</b>		
Supplier Work Time	3	CDay
Supplier Flow Time	36	CDay

A0080	I	P
<b>Inventory</b>		
Inventory	1300	Item

A0140	P	
<b>Fan Blades Fabrication</b>		
Work Time	1	Day
Flow Time	14	Day

A0050	P	
<b>Office Activity</b>		
Svc Work Time	1	ODay
Svc Flow Time	9	ODay

A0100	P	
<b>Sheet Metal</b>		
Supplier Work Time	1	CDay
Supplier Flow Time	9	CDay

A0120	I	P
<b>Inventory</b>		
Inventory	400	Item

A0150	P	
<b>Enclosures Fabrication</b>		
Work Time	1	Day
Flow Time	9	Day

**4** Do not worry about matching these Operation Tag numbers. They will get regenerated automatically later

A0110	P	
<b>Motors</b>		
Supplier Work Time	3	CDay
Supplier Flow Time	29	CDay

A0130	I	P
<b>Inventory</b>		
Inventory	1100	Item

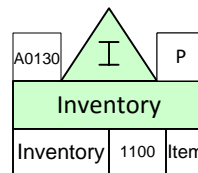
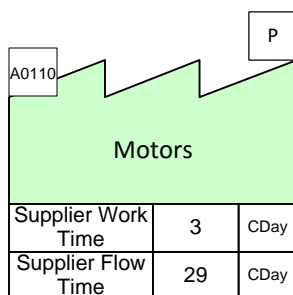
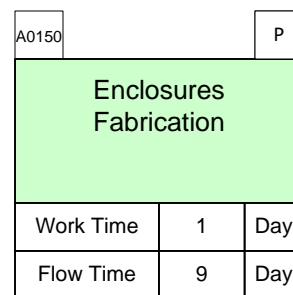
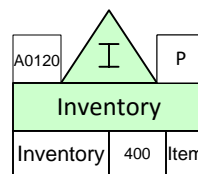
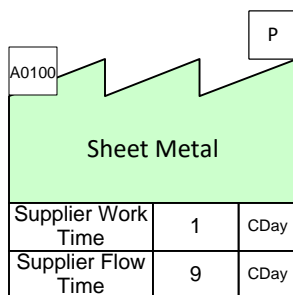
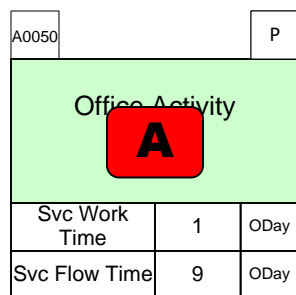
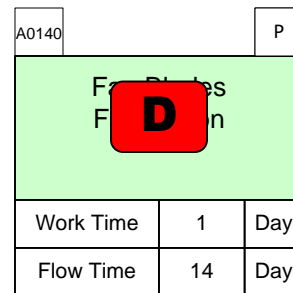
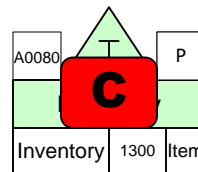
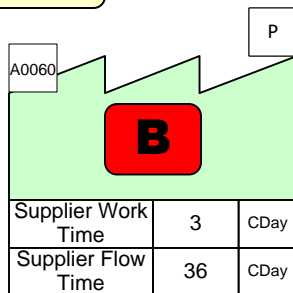


# Step 8: Specify the Flow Sequence

1

Sequence arrows are needed for upstream and downstream calculations. To add them, hold down the SHIFT key and select the green shapes in the order shown here.

Quick



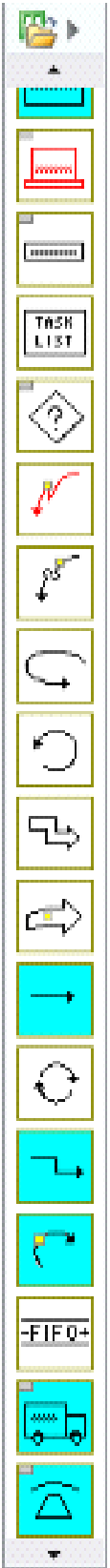
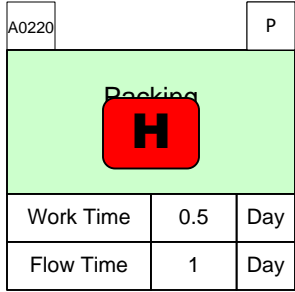
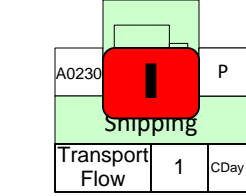
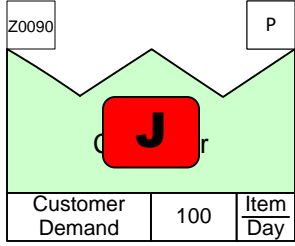
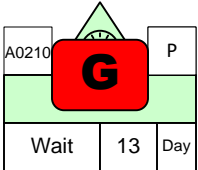
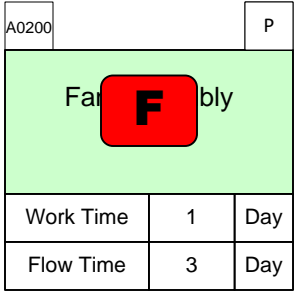
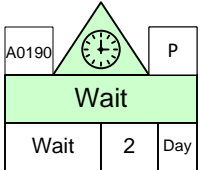
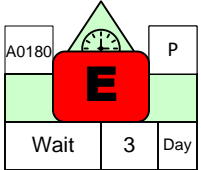
Units	Day	Wk	ODay	Wk
	14	5	8	5
	Hr	Day	OHr	ODay





2

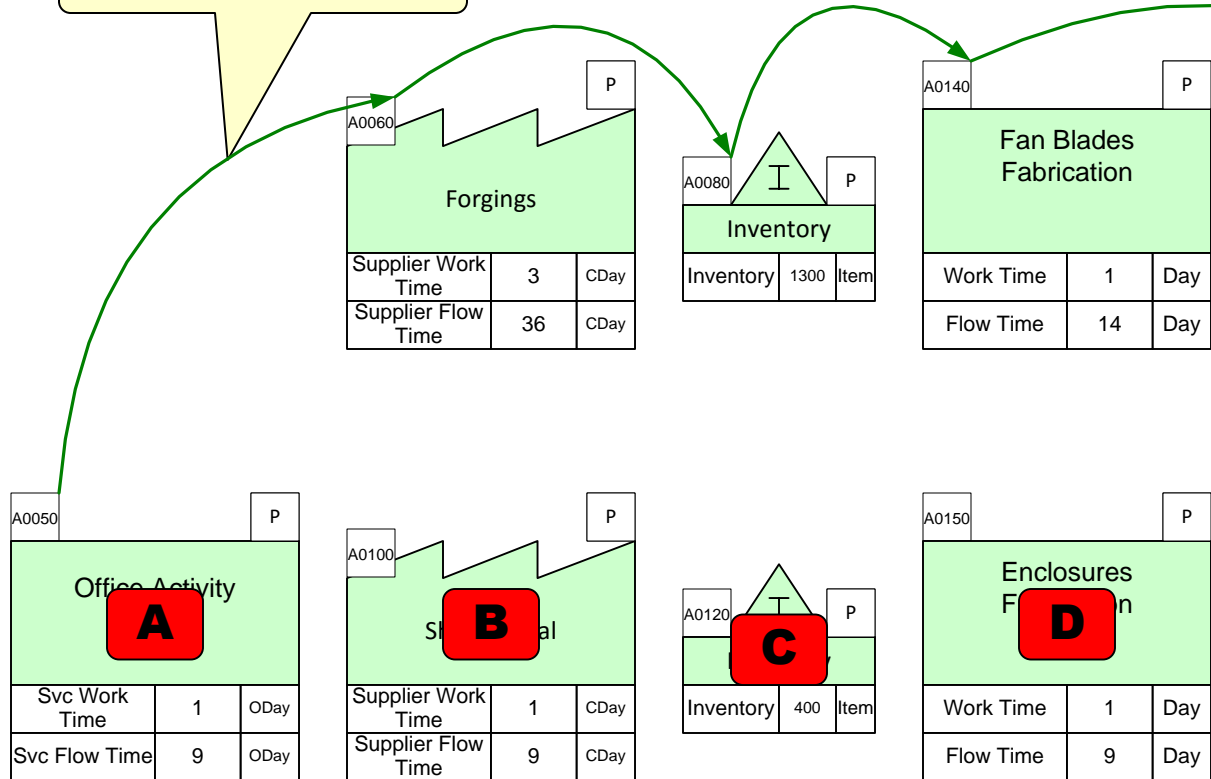
Click the Sequence button in the eVSM Toolbar.



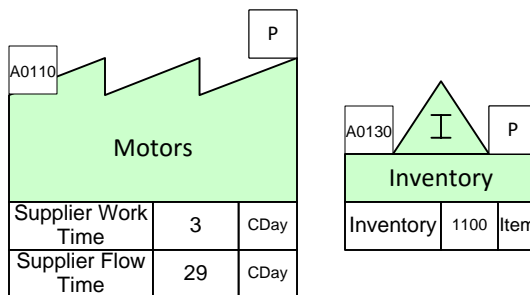
# Step 9: Specify the Flow Sequence Path 2

**1** Sequence arrows for path 1 are now connected.

## Quick MCT




**2** Hold the SHIFT key and follow the sequence for path 2.

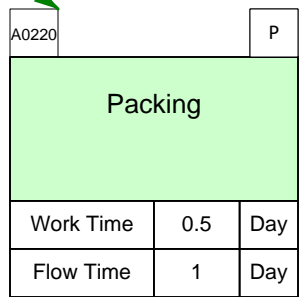
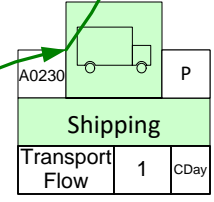
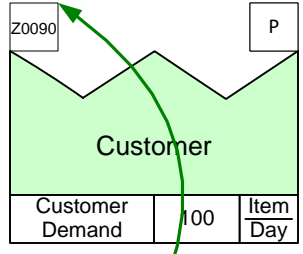
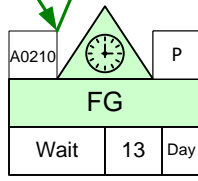
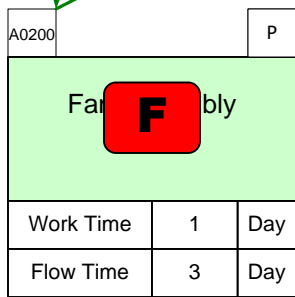
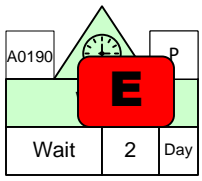
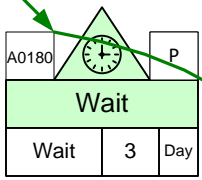


Units	Day	Wk	ODay	Wk
	14	5	8	5
	Hr	Day	OHr	ODay



3

Click the Sequence button in the eVSM Toolbar.  Sequence

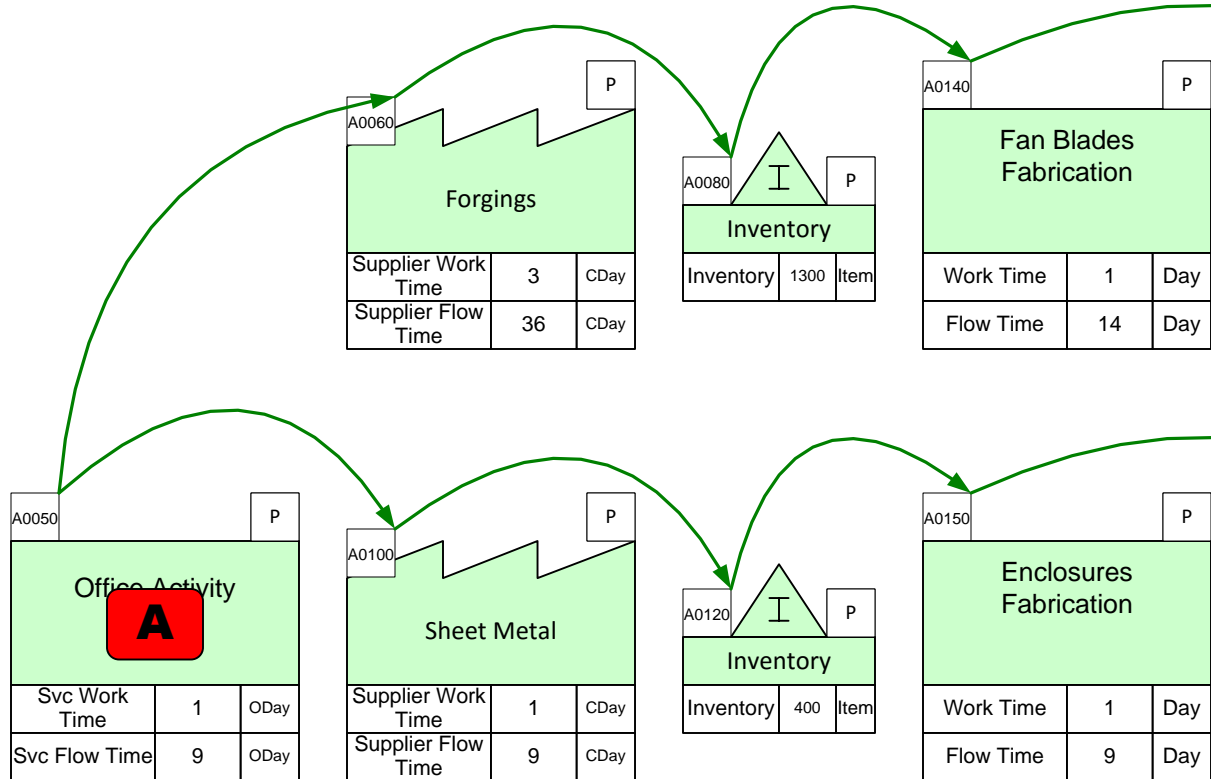


TASK LIST

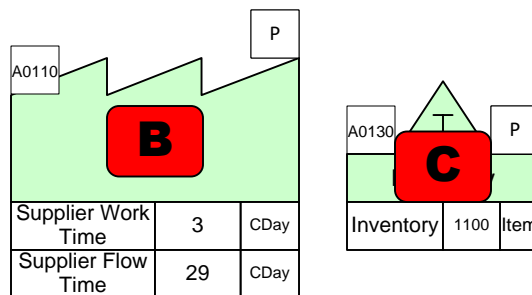
**-FIFO+**

# Step 10: Specify the Flow Sequence Path 3

## Quick MCT



**1** Hold the SHIFT key and follow the sequence for path 3.



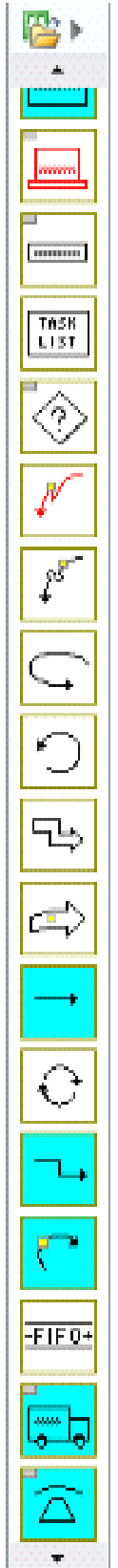
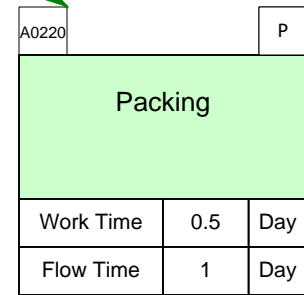
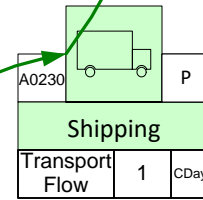
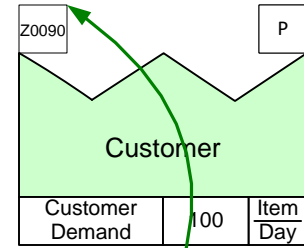
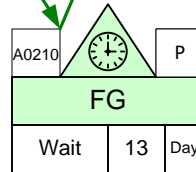
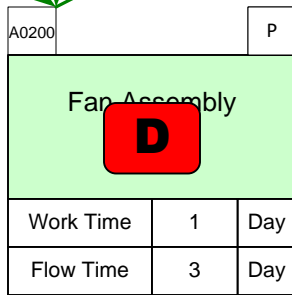
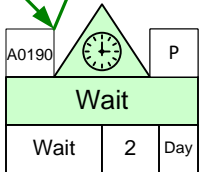
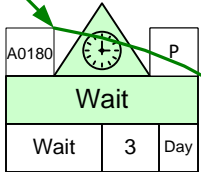
Units	Day	Wk	ODay	Wk
	14	5	8	5
	Hr	Day	Ohr	ODay

2

Click the Sequence button in the eVSM Toolbar.



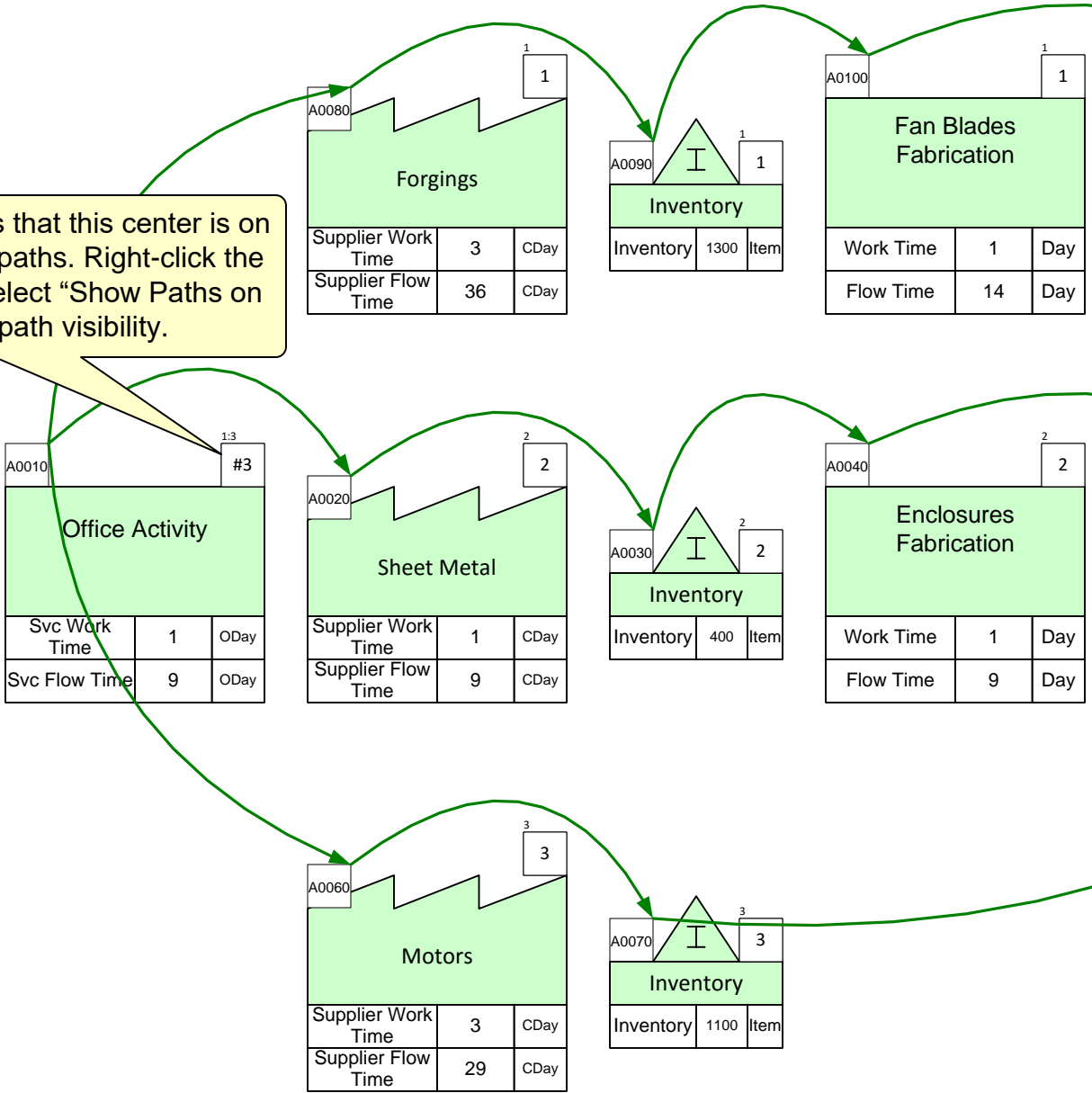
Sequence



# Step 11: Auto Path and Auto Tag

## Quick MCT

**2** A "#3" indicates that this center is on three different paths. Right-click the path list and select "Show Paths on All" for path visibility.



Units	Day	Wk	ODay	Wk
	14	5	8	5
	Hr	Day	OHr	ODay





# Step 12: Add a Time Summary and Calculate

**1** Drag out the MCT Summary center onto the map.

Quick MCT



MCT Summary

A0080 1

Forgings			
Supplier Work Time	3	CDay	
Supplier Flow Time	36	CDay	

A0090 1

Inventory			
Inventory	1300	Item	

A0100 1

Fan Blades Fabrication			
Work Time	1	Day	
Flow Time	14	Day	

A0010 #3

Office Activity			
Svc Work Time	1	ODay	
Svc Flow Time	9	ODay	

A0020 2

Sheet Metal			
Supplier Work Time	1	CDay	
Supplier Flow Time	9	CDay	

A0030 2

Inventory			
Inventory	400	Item	

A0040 2

Enclosures Fabrication			
Work Time	1	Day	
Flow Time	9	Day	

A0060 3

Motors			
Supplier Work Time	3	CDay	
Supplier Flow Time	29	CDay	

A0070 3

Inventory			
Inventory	1100	Item	

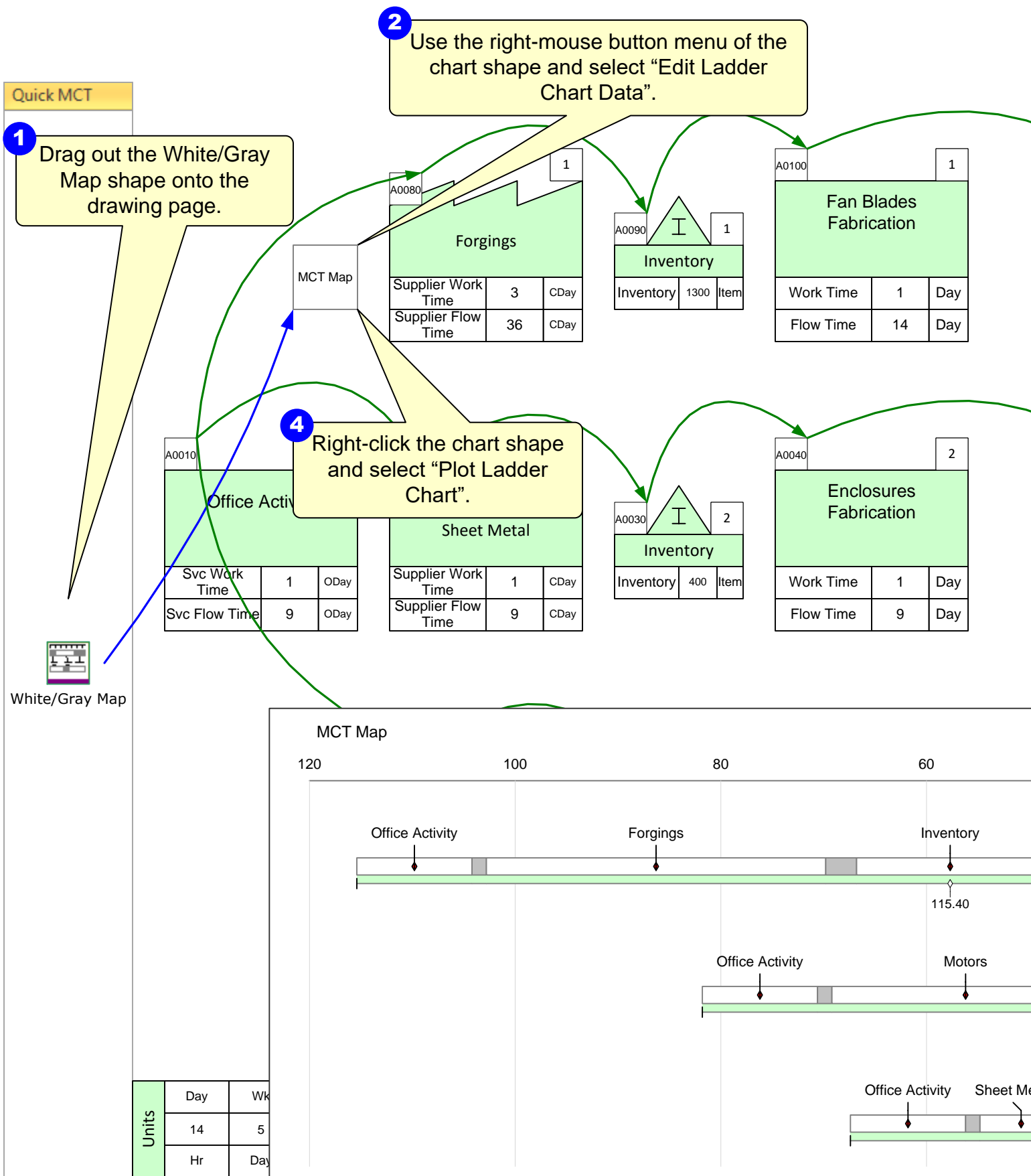
Units	Day	Wk	ODay	Wk
	14	5	8	5
	Hr	Day	OHr	ODay







# Step 13: Add Timeline Chart to Summarize all Paths



**Multi-Tag Multi-Var Chart Data**

**Tag Prefix**

<input checked="" type="checkbox"/> A	<input checked="" type="checkbox"/> N
<input checked="" type="checkbox"/> B	<input checked="" type="checkbox"/> O
<input checked="" type="checkbox"/> C	<input checked="" type="checkbox"/> P
<input checked="" type="checkbox"/> D	<input checked="" type="checkbox"/> Q
<input checked="" type="checkbox"/> E	<input checked="" type="checkbox"/> R
<input checked="" type="checkbox"/> F	<input checked="" type="checkbox"/> S
<input checked="" type="checkbox"/> G	<input checked="" type="checkbox"/> T
<input checked="" type="checkbox"/> H	<input checked="" type="checkbox"/> U
<input checked="" type="checkbox"/> I	<input checked="" type="checkbox"/> V
<input checked="" type="checkbox"/> J	<input checked="" type="checkbox"/> W
<input checked="" type="checkbox"/> K	<input checked="" type="checkbox"/> X
<input checked="" type="checkbox"/> L	<input checked="" type="checkbox"/> Y
<input checked="" type="checkbox"/> M	<input type="checkbox"/> Z

**Chart Title**  
MCT Map

**Variables To Chart**

Name	Display
White Space	NBAR
Gray Space	SBAR

**X-Axis**  
Num. Unit: CDay, Denom. Unit: none

**X-Axis Scale**  
Auto:  Manual:   
Inches Per Unit: .08

**Path Plotting Options**  
 Combine Path Filters  
 Separate Path Filters  
 Connect Paths

**Display Options**  
 Show Key  
 Show Activity Colors  
 Show Path Names

**X-Axis Labels**  
 Ascending  
 Descending

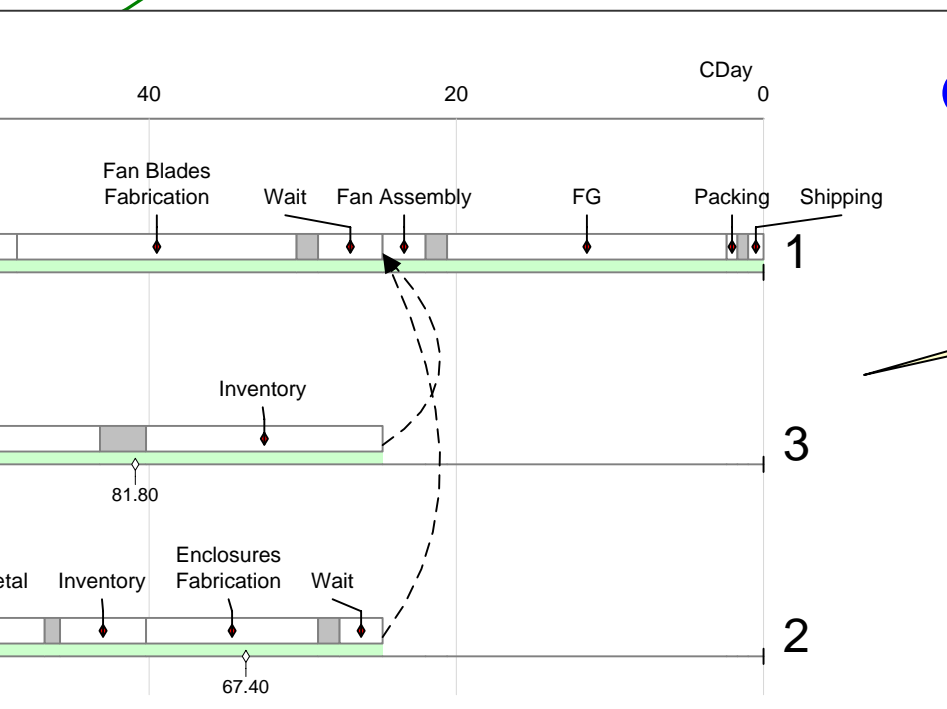
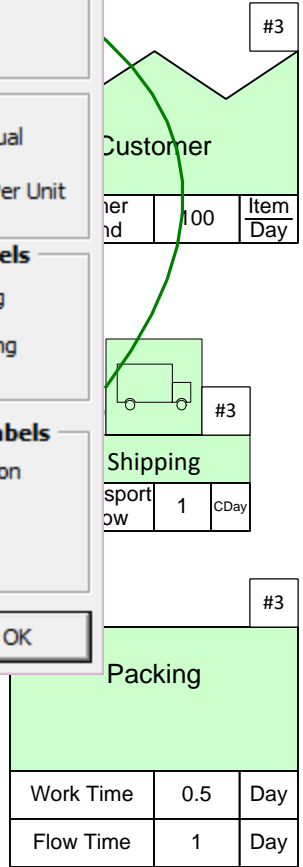
**Tag Type**  
 Even No's  
 Odd No's  
 Color Tags  
 White Tags

**Chart Description**  
Chart Description

**Individual Bar Labels**  
 Tags & Description  
 Tags Only  
 Description Only  
 None

**Plot Type**  
 Linear  
 Polar / Round

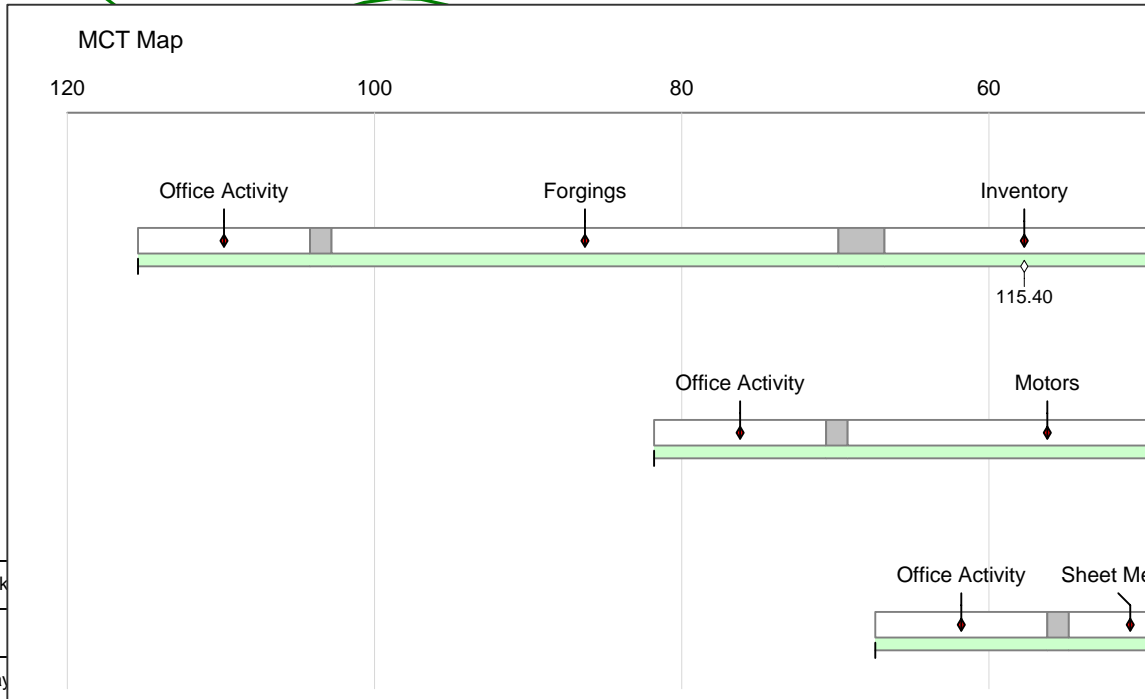
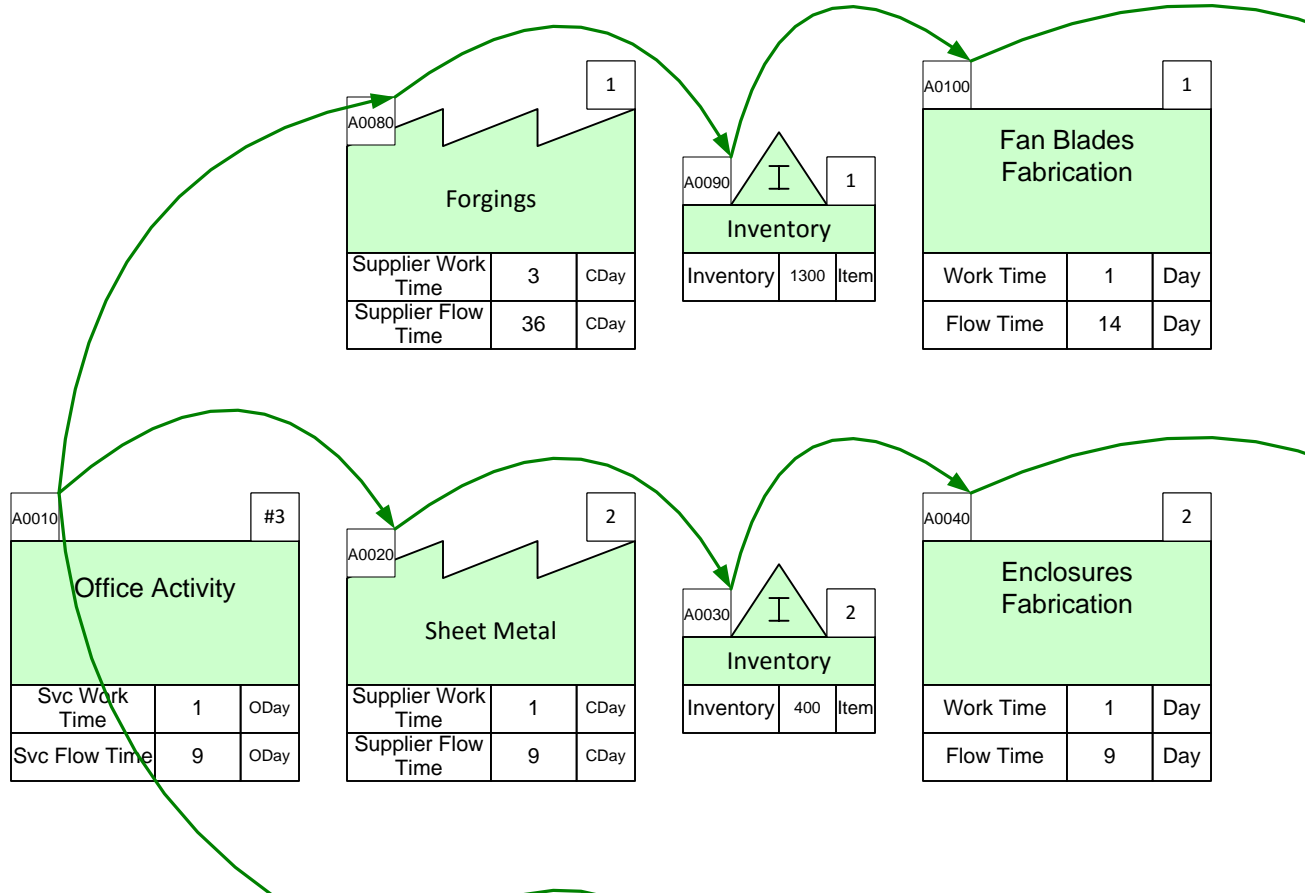
**3** Select the "Connect Paths" option and click OK.



**5** Note how the three paths are summarized in the chart. Downstream duplicate activities in paths 2 and 3 are removed and referenced back to path 1.

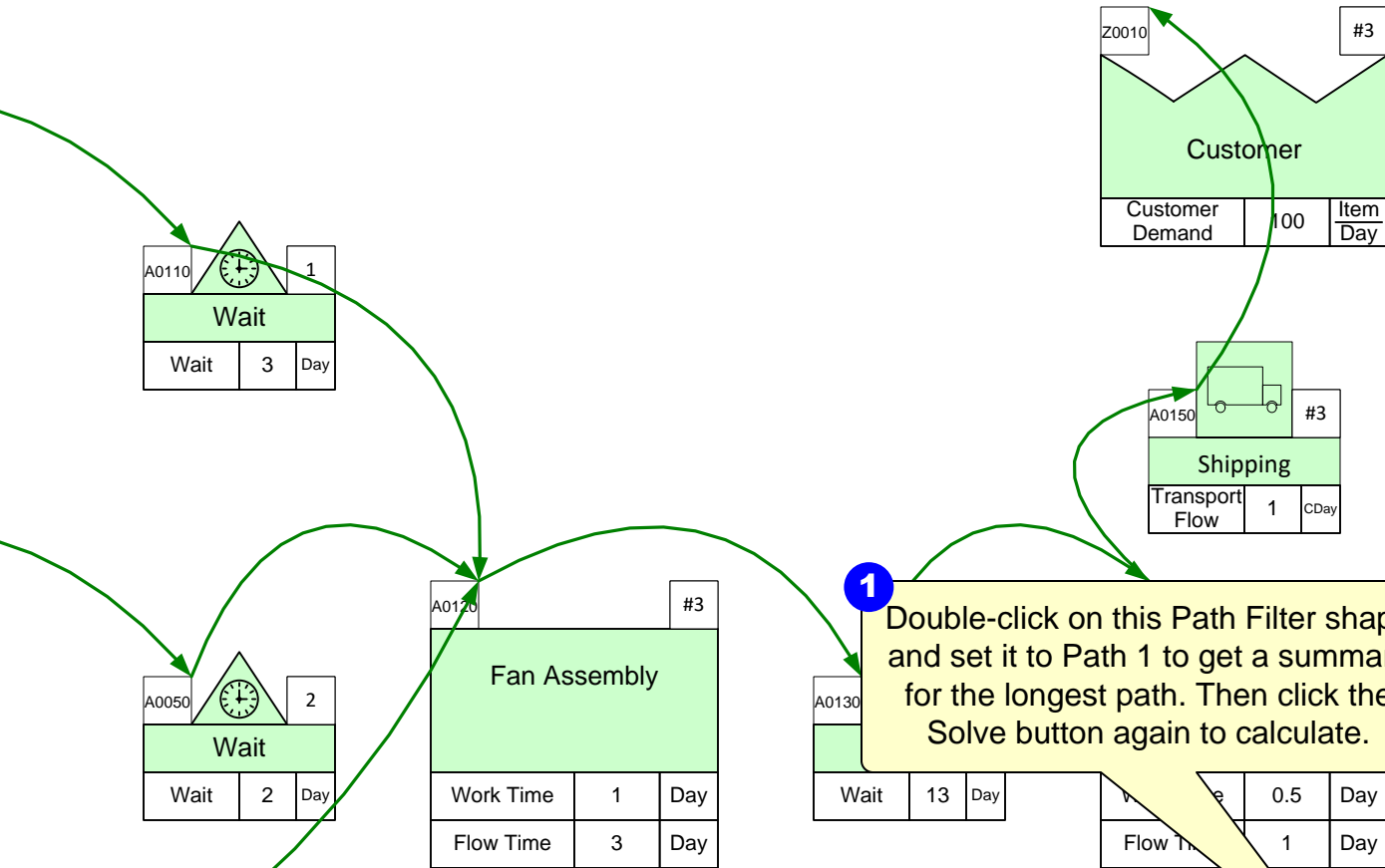
# Step 14: Filter Summary by Longest Path

## Quick MCT

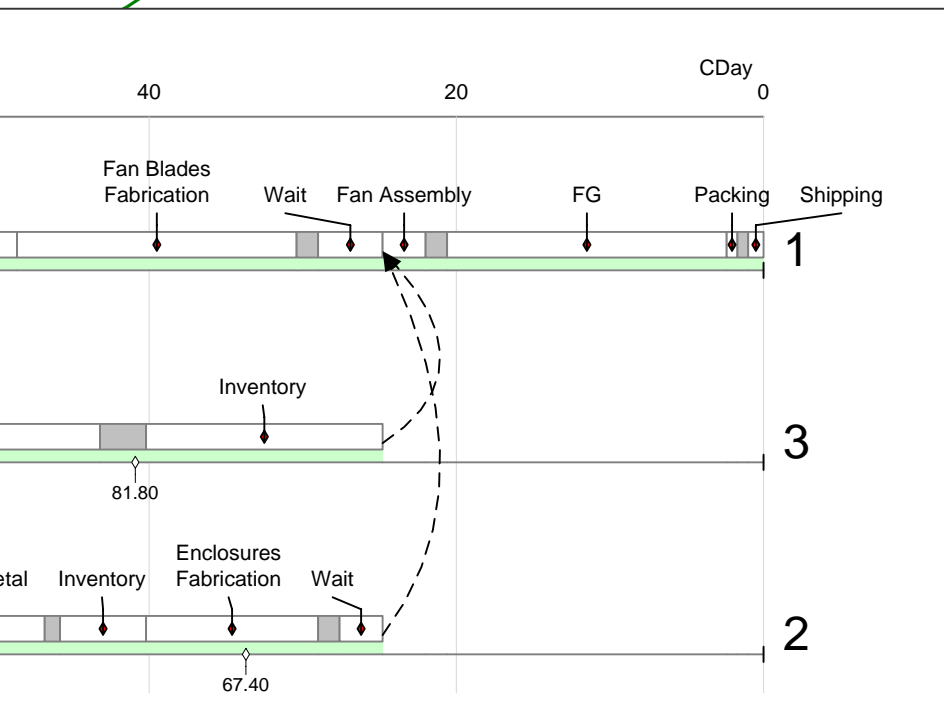


Units	Day	Wk
	14	5
	Hr	Day





**1** Double-click on this Path Filter shape and set it to Path 1 to get a summary for the longest path. Then click the Solve button again to calculate.



MCT Summary		
MCT Total	115.40	CDay
Total Gray Time	7.90	CDay
Total White Time	107.50	CDay
White Time %	93.15	%

A vertical toolbar on the right side of the interface contains various icons for simulation and editing, including a trash can, a question mark, a checkmark, a refresh symbol, a path filter, a solve button, and a FIFO+ queue icon.

# Step 15: Identify Improvement Ideas

**1** Drag out Kaizen Starbursts from the Quick Extras stencil on the right.

002 Large Flow Time at Forgings

**2** Double-click to add text.

Quick MCT

A0080 1

Forgings			
Supplier Work Time	3	CDay	
Supplier Flow Time	36	CDay	

A0090 1

Inventory		
Inventory	1300	Item

A0100 1

Fan Blades Fabrication		
Work Time	1	Day
Flow Time	14	Day

A0010 #3

Office Activity		
Svc Work Time	1	ODay
Svc Flow Time	9	ODay

A0020 2

Sheet Metal			
Supplier Work Time	1	CDay	
Supplier Flow Time	9	CDay	

A0030 2

Inventory		
Inventory	400	Item

A0040 2

Enclosures Fabrication		
Work Time	1	Day
Flow Time	9	Day

A0060 3

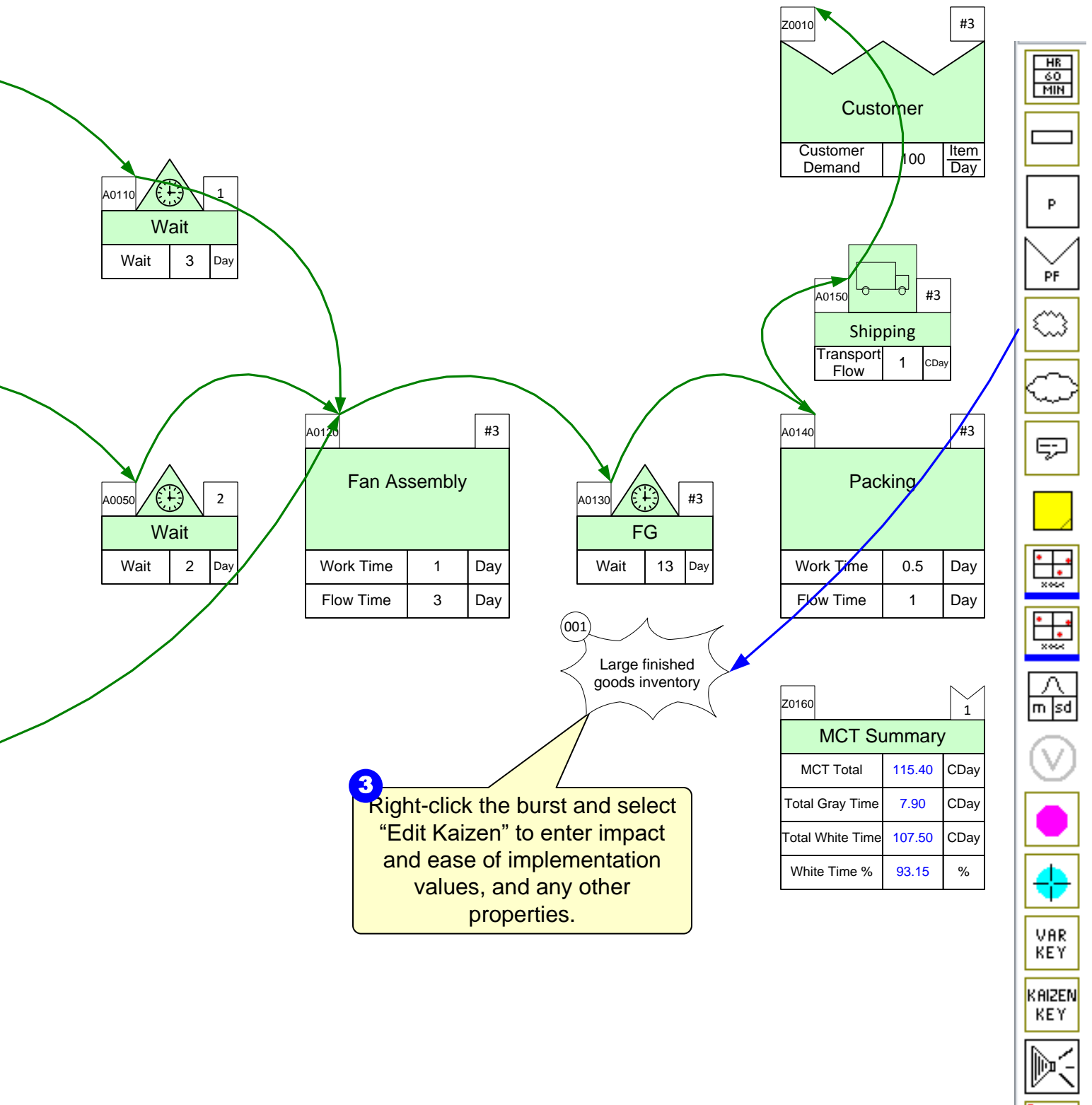
Motors			
Supplier Work Time	3	CDay	
Supplier Flow Time	29	CDay	

A0070 3

Inventory		
Inventory	1100	Item

Units	Day	Wk	ODay	Wk
	14	5	8	5
	Hr	Day	OHr	ODay





# Step 16: Kaizen Impact Matrix

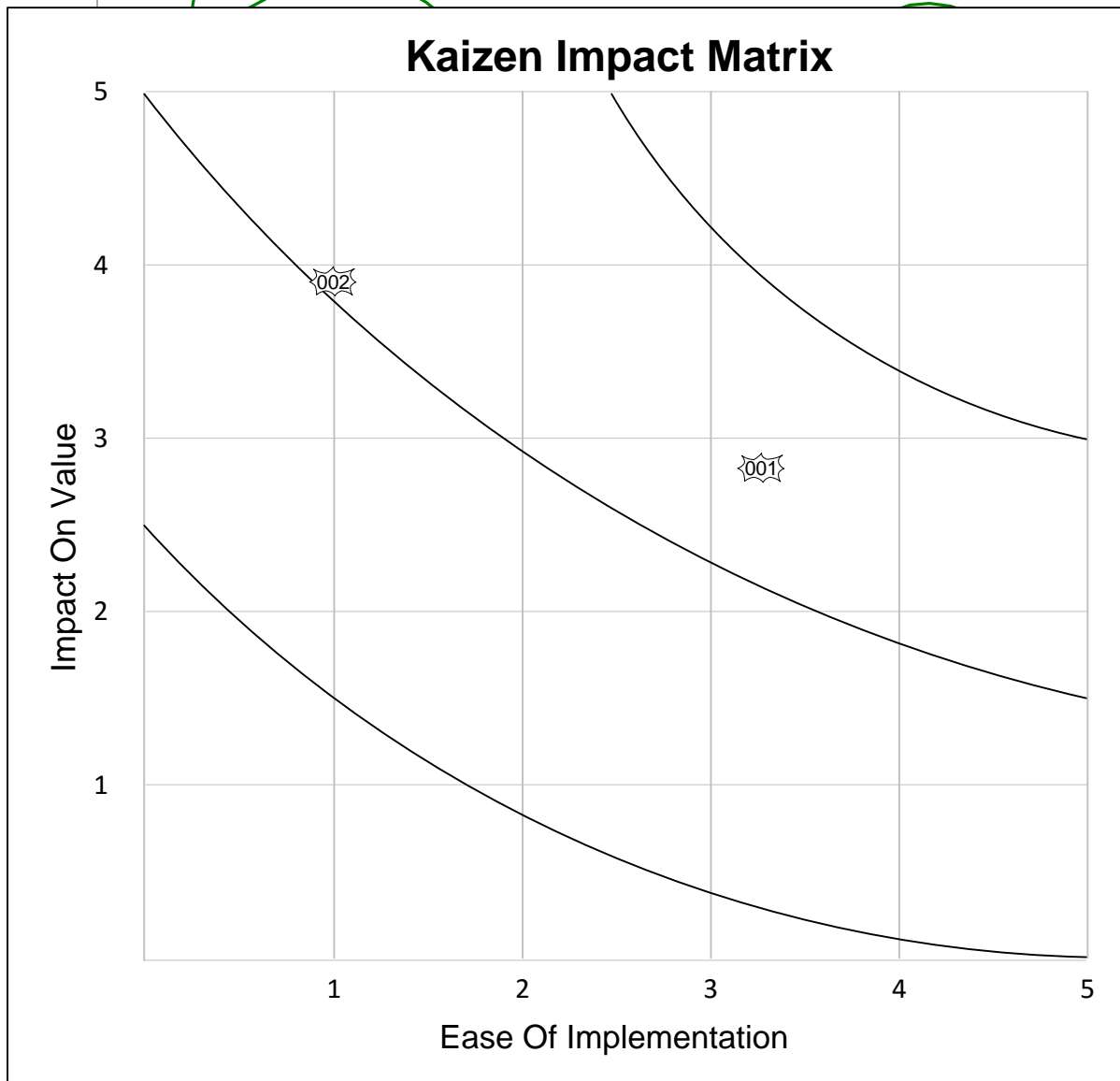
## Quick MCT

002  
Large Flow Time at Forgings

A0080	1	
Forgings		
Supplier Work Time	3	CDay
Supplier Flow Time	36	CDay


A0090	1	
Inventory		
Inventory	1300	Item

A0100	1	
Fan Blades Fabrication		
Work Time	1	Day
Flow Time	14	Day



2	
asures cation	
1	Day
9	Day



**1** Click the Kaizen Export button in the toolbar to export the kaizen properties to Excel.  Kaizen Export

**2** Drag out the Kaizen Impact Matrix from the Quick Extras stencil and right-click to plot.

A0110
Wait
3
Day

Kaizen Impact Matrix

Z0010	#3
Customer	
Customer Demand	100
Item	Day

A0150	#3
Shipping	
Transport Flow	1
CDay	

A0050	2
Wait	
Wait	2
Day	

A0120	#3
Fan Assembly	
Work Time	1
Day	
Flow Time	3
Day	

A0130	#3
FG	
Wait	13
Day	

001 Large finished goods inventory

A0140	#3
Packing	
Work Time	0.5
Day	
Flow Time	1
Day	

Z0160	1
MCT Summary	
MCT Total	115.40
CDay	
Total Gray Time	7.90
CDay	
Total White Time	107.50
CDay	
White Time %	93.15
%	

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