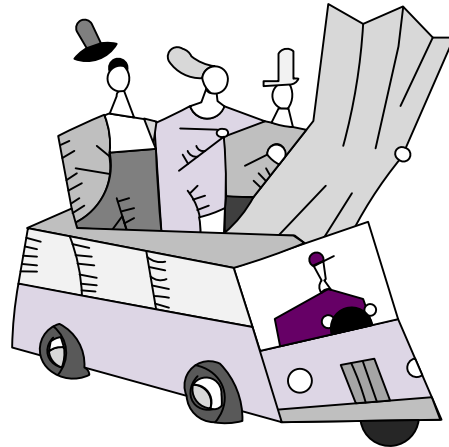


Process Improvement With eVSM



Transactional Mapping Workshop

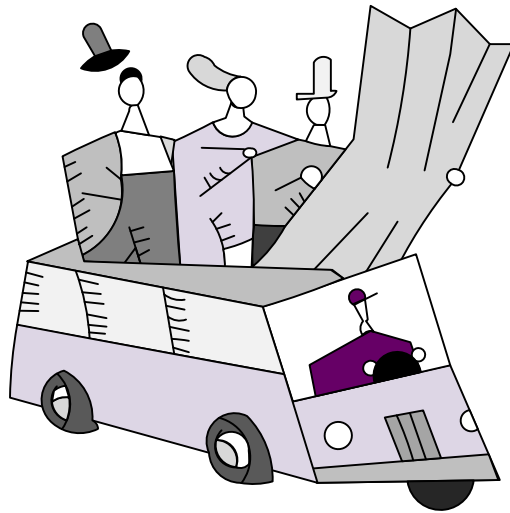
Known Issues Using Quick Transactional Pro

1. Approximate Demand Values

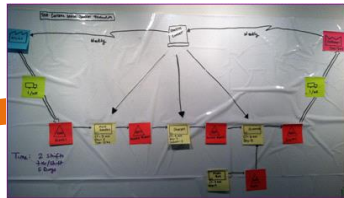
Quick Transactional Pro uses a small sample size to understand how demand flows through the system. This means that demand estimates associated with loops are very approximate. It is recommended that the sample size is increased for a “final run” to improve the accuracy. See Appendix A on how to do this.

eVSM Overview	3
Lean & eVSM Slides	8
Working with Quick Stencils	12
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Demand	24
Lead Time	38
Cost	40
Resource	42
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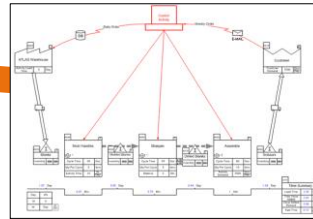
eVSM Overview



eVSM / Supporting Process Improvement



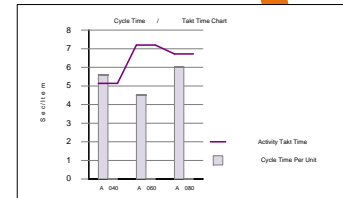
Wall Map



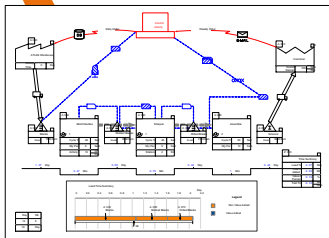
Capture



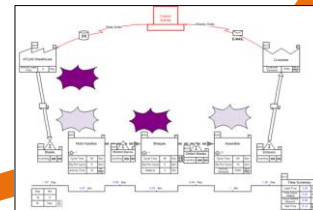
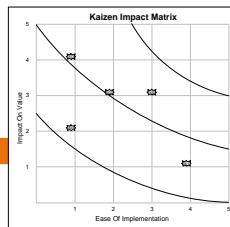
Improve



Analyze



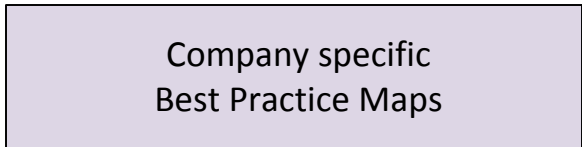
Prioritize



What is eVSM?

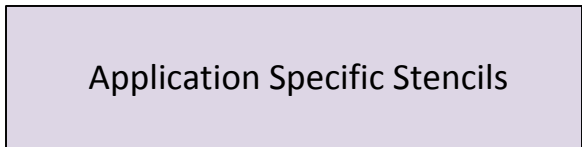
Best Practice Maps

Applying the standard



eVSM

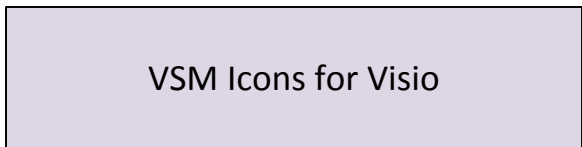
Standardized mapping & analysis



Use maps for calculations

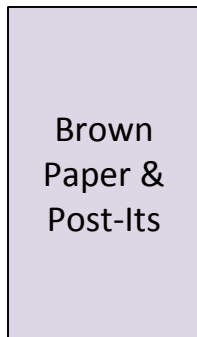


Capture wall maps



Collaborative Tools

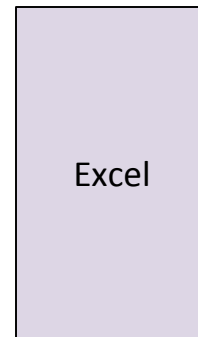
Group Interaction



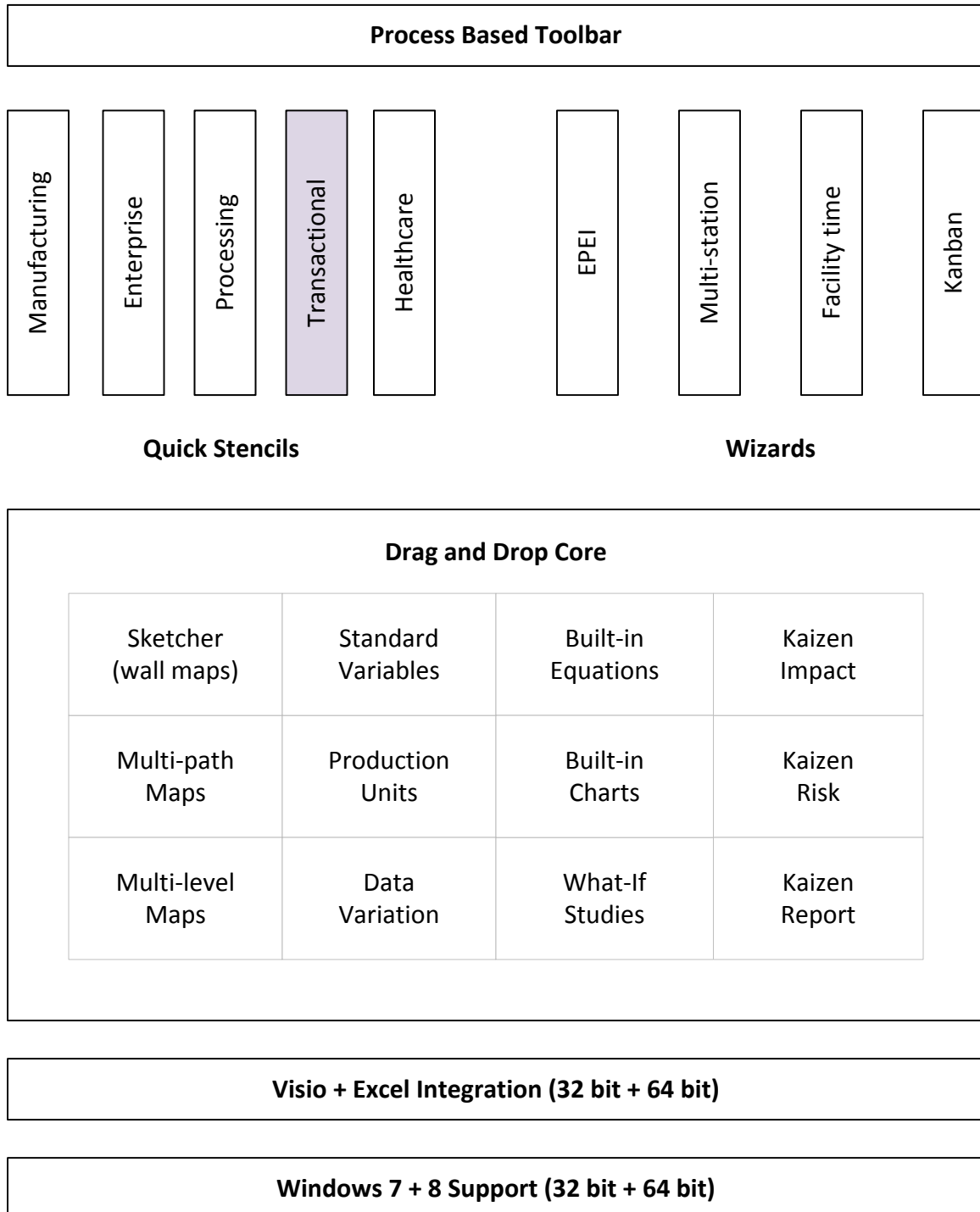
Diagramming



Data



eVSM Architecture



Transactional Concepts



Standard Variables



Design Macro Shapes

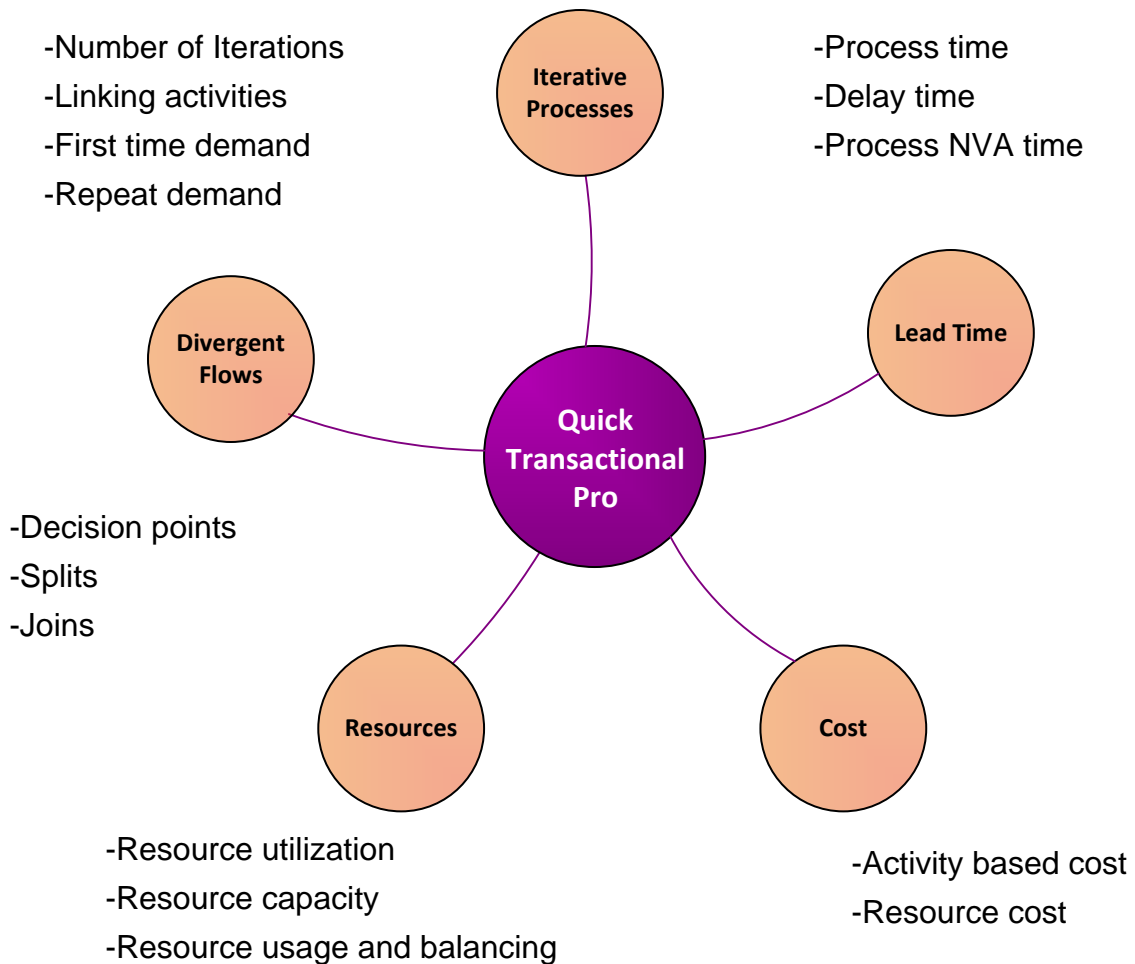


Built-in Equations

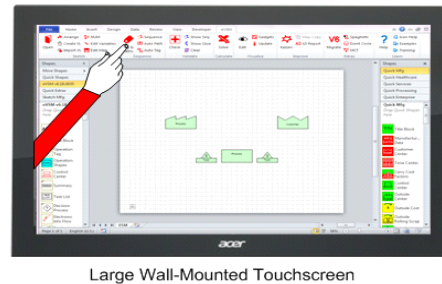
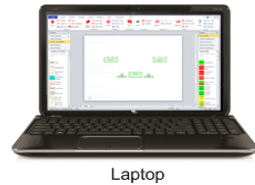


Built-in Charts

The technical concepts addressed by the Quick Transactional Pro stencil are shown below.



eVSM is a great drawing tool..



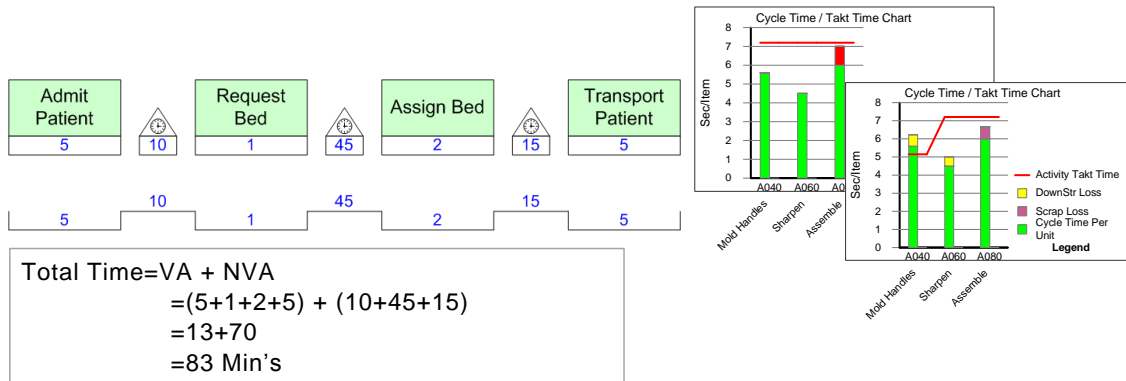
What is a LEAN Value Stream?

- Define value from the customer's perspective
- **Map the value stream**
- Create flow and eliminate waste
- Create pull where flow is difficult
- Seek perfection

- Minimize the LEAD TIME
- Adequate & Efficient CAPACITY
- Minimum COST

eVSM Quick Mapping Applications

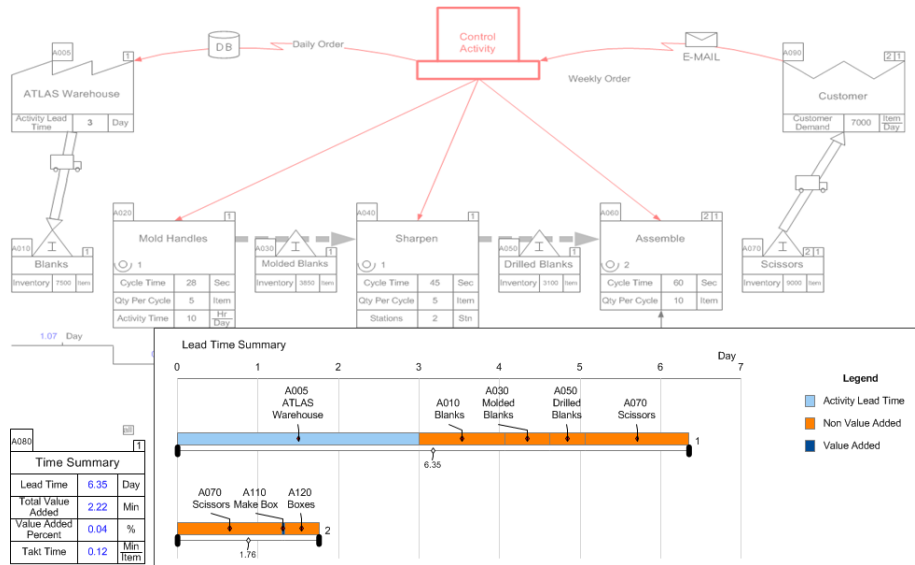
- Very fast way to map
- Drag, drop & enter values
- Automated calculation & charts



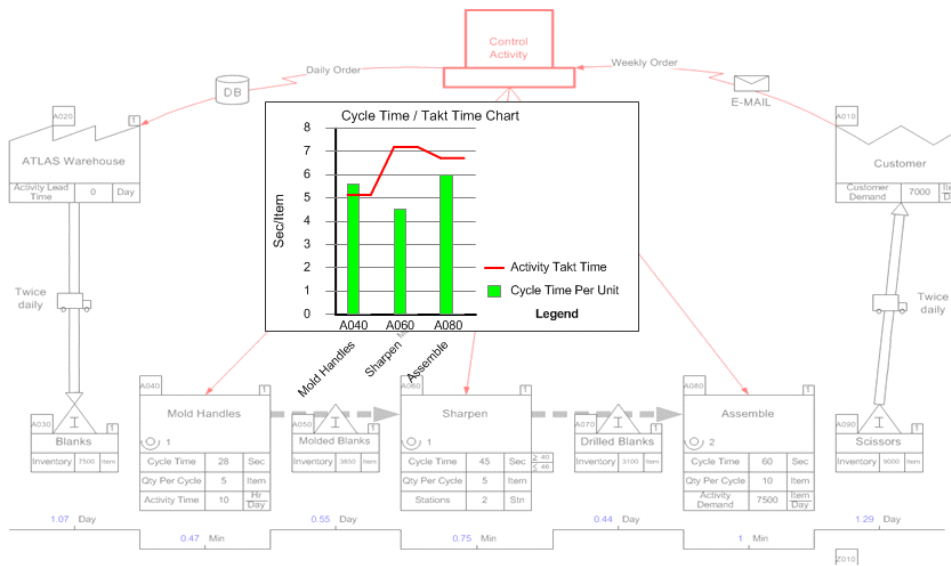
eVSM Quick Mapping Applications

Quick Mfg
Quick Processing
Quick Transactional
Quick Transactional Pro
Quick Enterprise
Quick Network

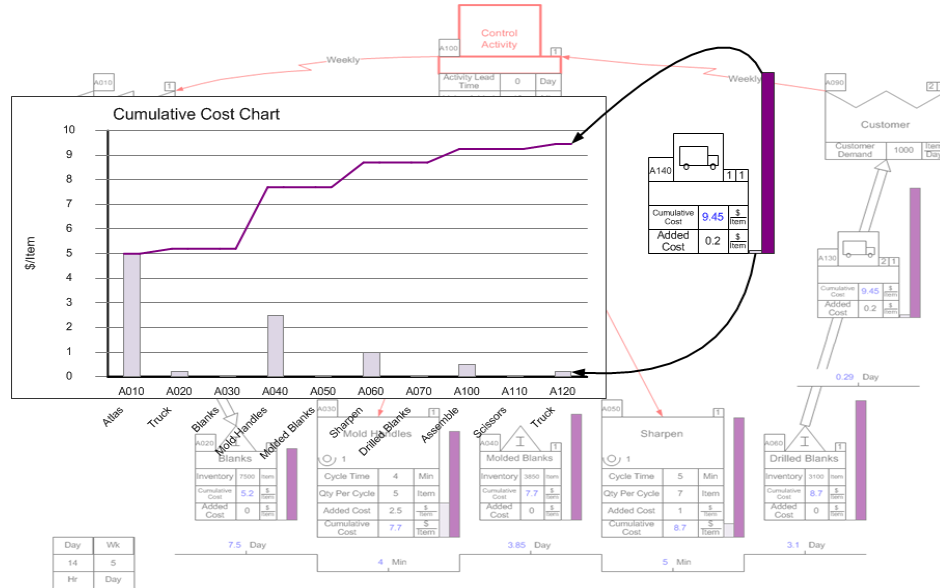
Visualizing Lead Time



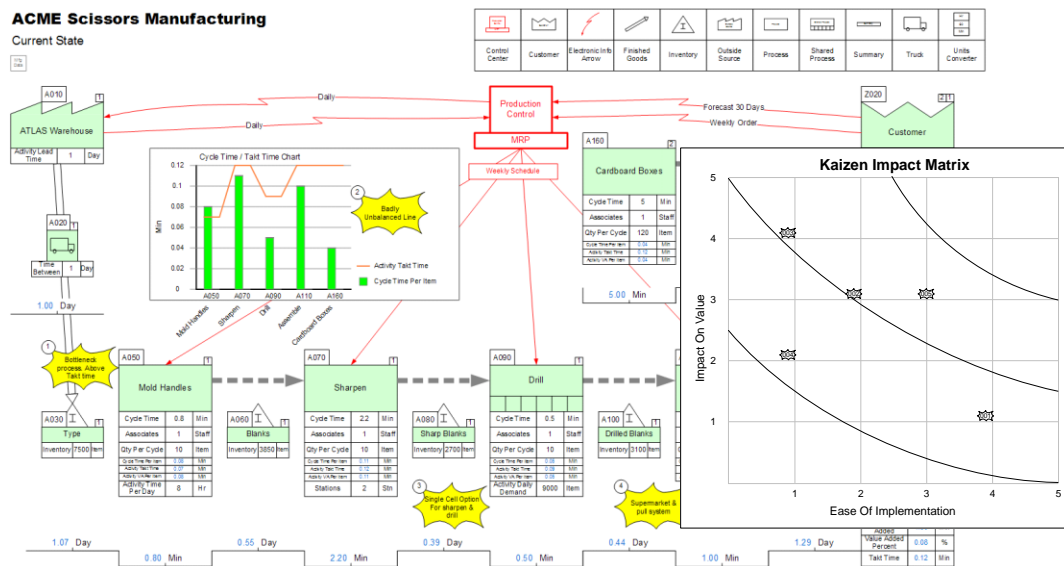
Visualizing Capacity



Visualizing Cost

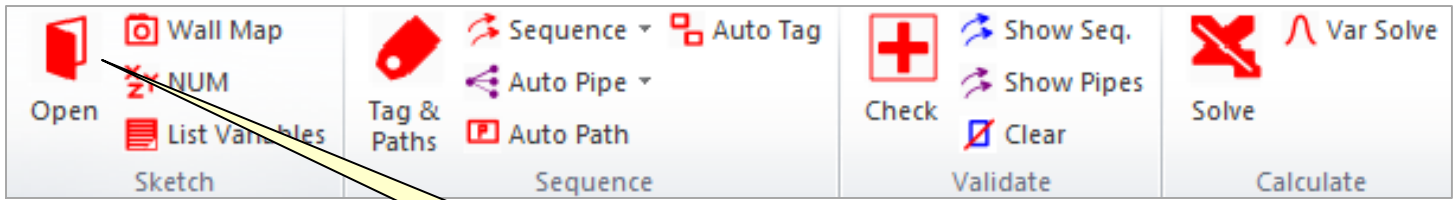


Kaizen – Ideas in Context

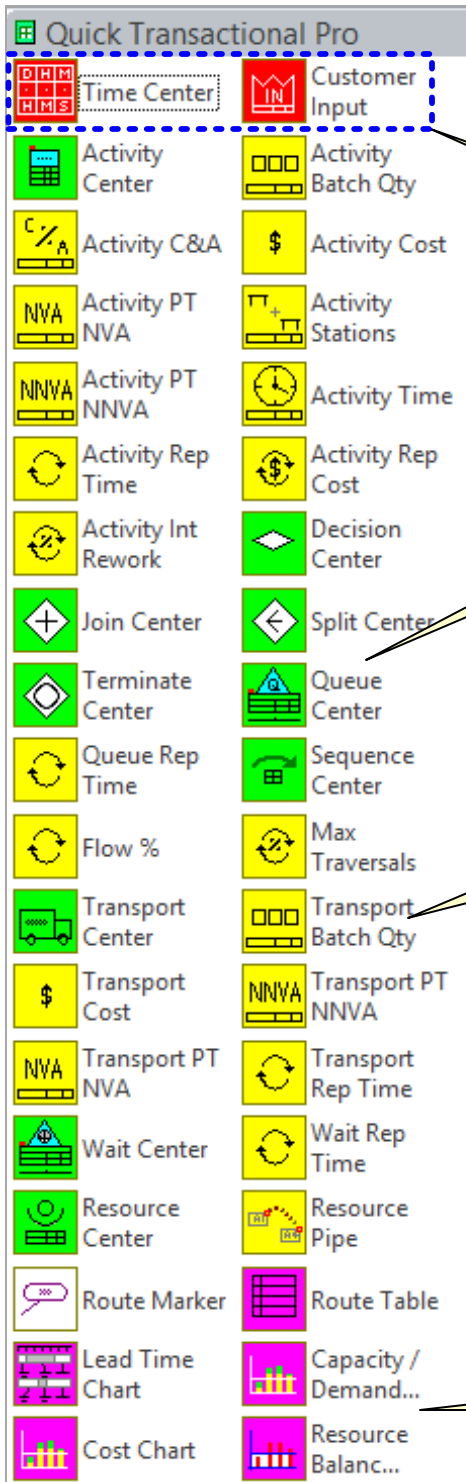


Working with Quick Stencils

eVSM Toolbar



Quick Stencil



1 Access each Quick Stencil and Wizard using the Open button.

2 Drag out the red icons FIRST on each new page

3 Use the Green icons to draw the Flow

4 Yellow icons represent optional "Add-on" variables

5 Automatic Charts

Views	Gadgets Update	Kaizen Properties	Kaizen Export Kaizen Import Renumber Kaizens	Map Copy	v8 Migrate	Help	Icon Search Stack Help
Visualize			Improve		Extras		Learn

Main Stencil

A0030

Process		
Functions		
Information Systems		
PT	2	Min
LT	1	Hr
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

- Enable Flying Connector
- Name Help**
- Select all with Name
- Select all with Name on Path
- Edit Name.. (Cycle Time)
- Edit .. (Min)

6 For variable name help, select any variable and use the right-mouse button menu "Name Help" for a description of the variable.

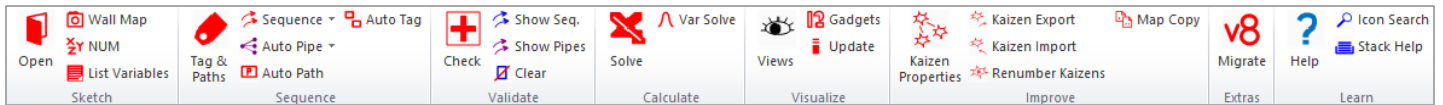
eVSM Toolbars for Visio Versions

The documentation for eVSM is focused around Visio 2010. This is a reference page comparing the eVSM and Visio toolbars in both 2003/2007 and 2010/2013.

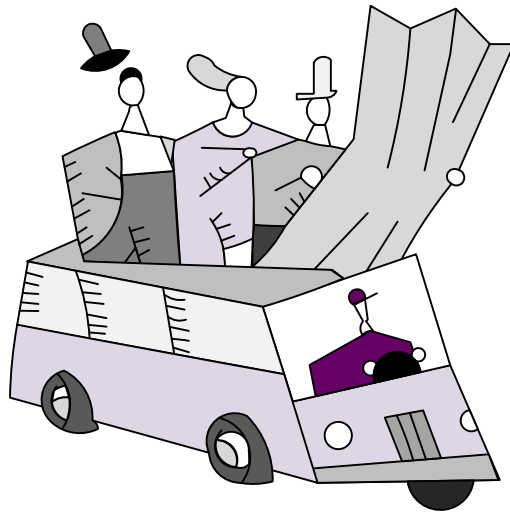
eVSM Toolbar in Visio 2003/2007



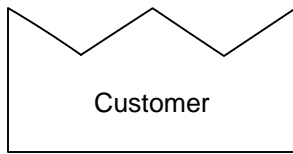
eVSM Toolbar in Visio 2010/2013



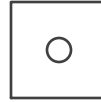
Building Blocks of a Transactional Map



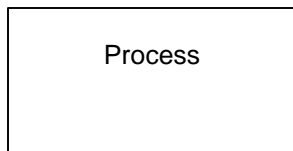
Quick Transactional Pro Shapes



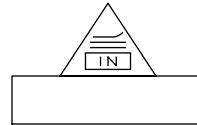
Customer Input



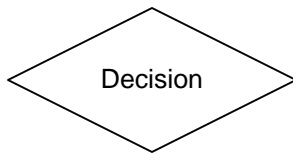
Terminate Center



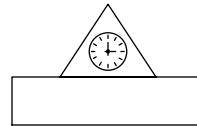
Activity Center



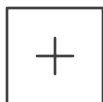
Queue Center



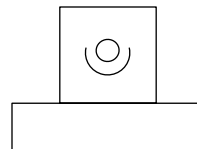
Decision Center



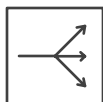
Wait Center



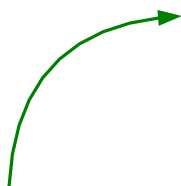
Join Center



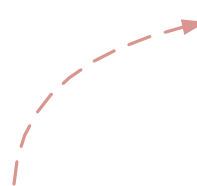
Resource Center



Split Center



Sequence Arrow



Pipe Arrow

Glossary of Terms

Activity Time : Available Time per period after subtracting planned breaks.

Added Cost : Cost added at this activity to process first time entities that is not explicitly modeled by resources connected to this activity

Flow % : The % of upstream output directed to this leg of the route

Functions : Roles or functions contributing to this activity

LT : Time that the first time entity is within the activity

Max Traversals : The number of times the same entity can repeat this path(sequence arrow)

Period Cost : The total cost of this value stream per period

PT : “hands-on” Time to process a first time entity

Repeat Demand : The demand for repeat entities to be processed at this point

Repeat LT : Time that the repeat entity is within the activity

Repeat PT : Time to process a repeat entity

Repeat Resource PT : Resource Usage Time Per repeat entity

Resource PT : Resource time to process a first time entity

Resource Time : Resource available time after subtracting planned breaks.

Route Activity Ratio : Ratio between process time/lead time for this route

Route Cost : Total cost for a route, including first-time and rework activities

Route Cost Per Period : Cost per period for this route

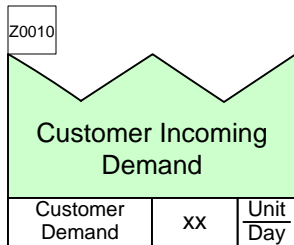
Route Demand : Demand per period for this route

Route Lead Times Total : Total Lead time for a route including time for first and repeat entities and with duplication in the presence of parallel route activities

Route Percent : Percent of demand using this route

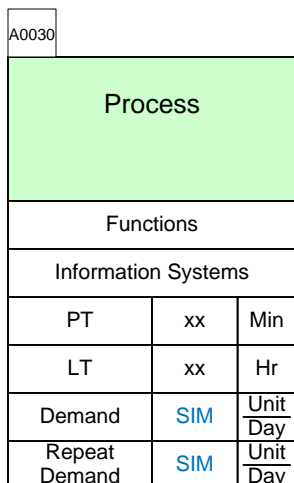
Route Process Times Total : Total process time for a route including time for first and repeat entities and with duplication in the presence of parallel route activities

Customer Input



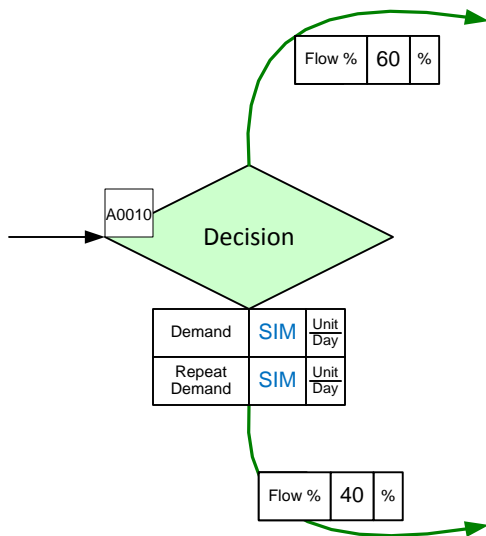
- The incoming documents that “trigger” the value stream
- Only one such shape allowed per value stream map
- Arrows can only come OUT from this shape

Activity Center



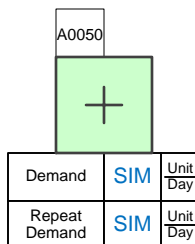
- Functions : Departments or Roles (Sales, Controller, ..)
- Information Systems : (SAP, Excel_HR..)
- PT : Process Time (Touch Time)
- LT : Lead Time (Work In to Work Out)
- Demand : First time demand
- Repeat Demand : Loop demand

Decision Center



- The percentages coming out of the decision center must equal 100%.
- Any work item will go down ONE of the arrows and based on the percentages and probability

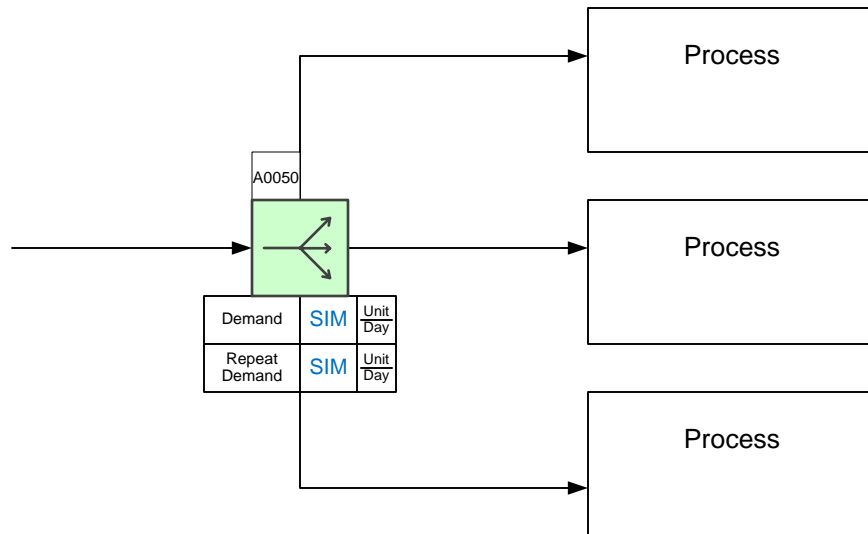
Join Center



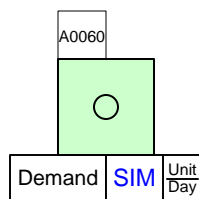
- Multiple inputs
- Only ONE output
- Multiple work items coming in create one work item going out

Split Center

- A Split center can only have one input, with multiple outputs.

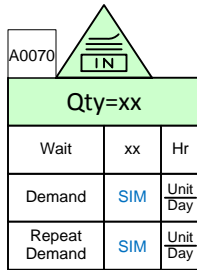


Terminate Center



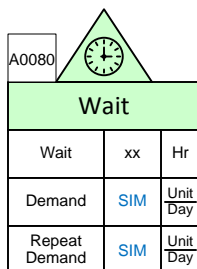
- Processes can only terminate at Terminate Centers

Queue Center



- Specify the quantity in the text field.
- Specify “wait” as the time for the queue to clear.

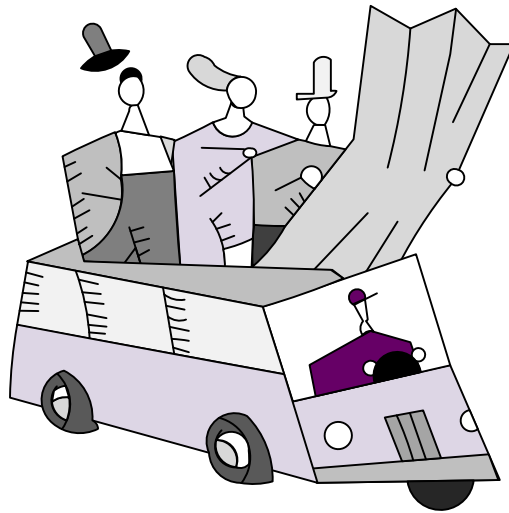
Wait Center



- Useful where activities only happen periodically (Ex : Bills get sent out at the end of each day)

Transactional Exercises

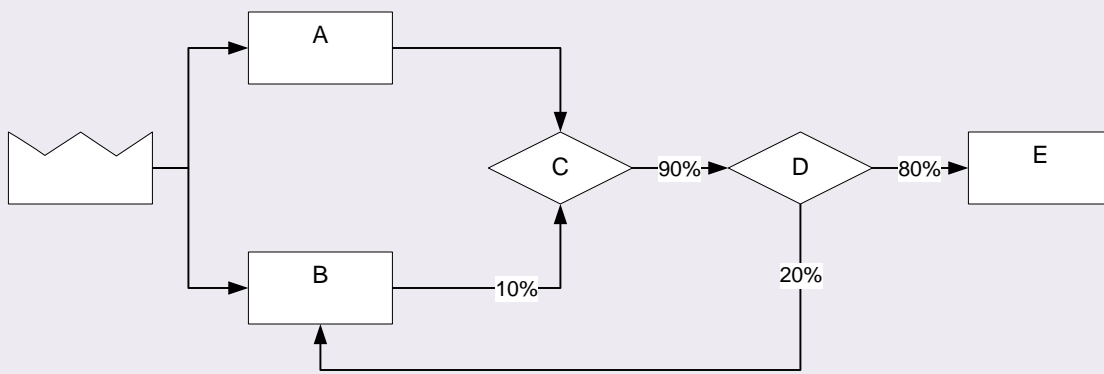
The following exercises will make you familiar with the terms and calculations in Quick Transactional Pro.



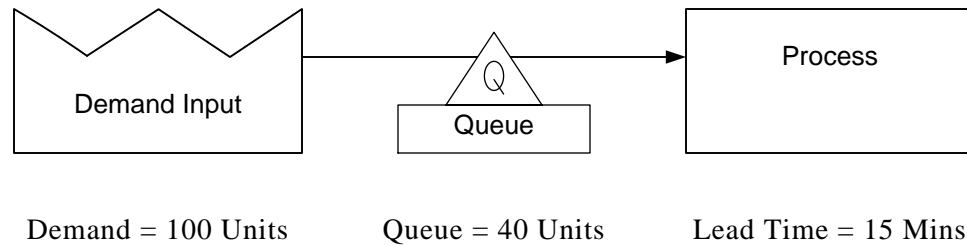
Demand

Importance of Demand on a Value Stream Map

- In a transactional map, work units are transformed along the process, sometimes loop back, split into multiple parallel processes and have processes join together before proceeding.
- This makes the understanding of “demand” at any step particularly challenging. Once demand is understood at a step, it can be “extracted” in considering its capacity, and then its contribution to overall cost and lead times.



Exercise 1

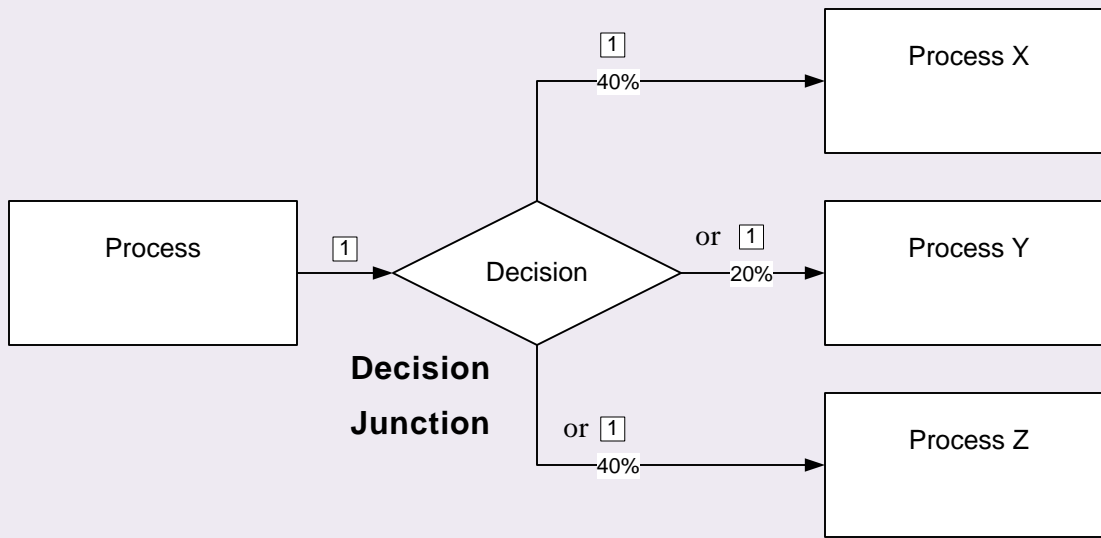


Q1 : If there is an Input Demand of 100 Units, what will the demand at the Process be?

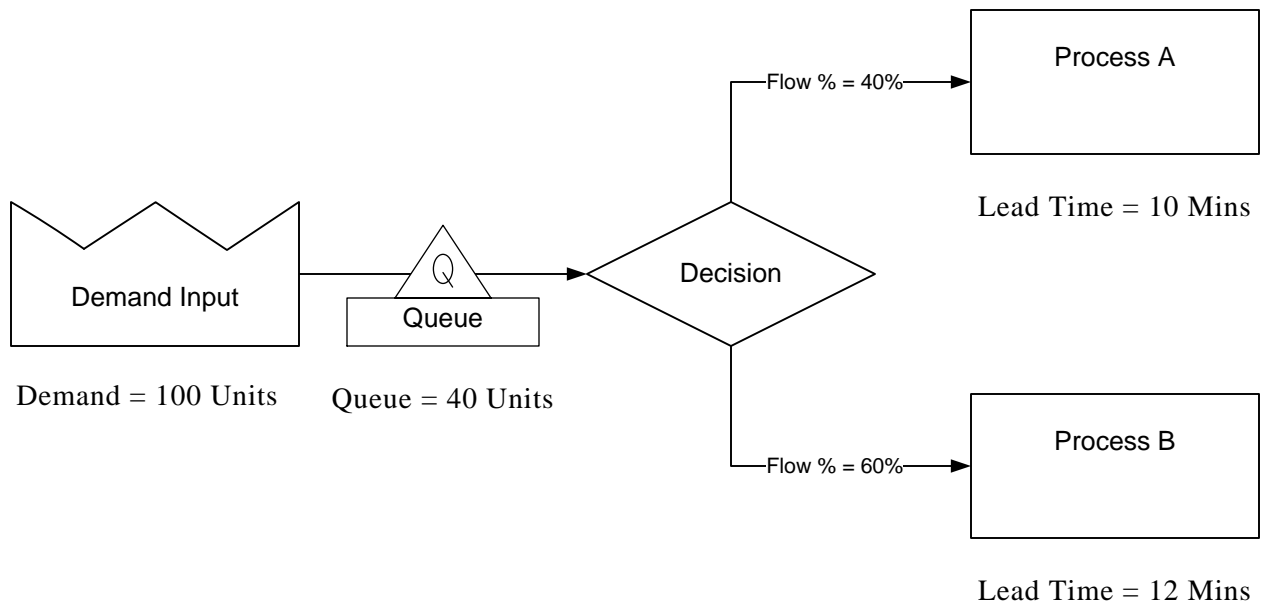
Q2 : What will the demand be at the Process if the number of Units in the Queue is increased from 40 to 50?

Decision Construct

- A junction where incoming work units are routed to ONE of the outgoing paths based on the Flow % values and probability.



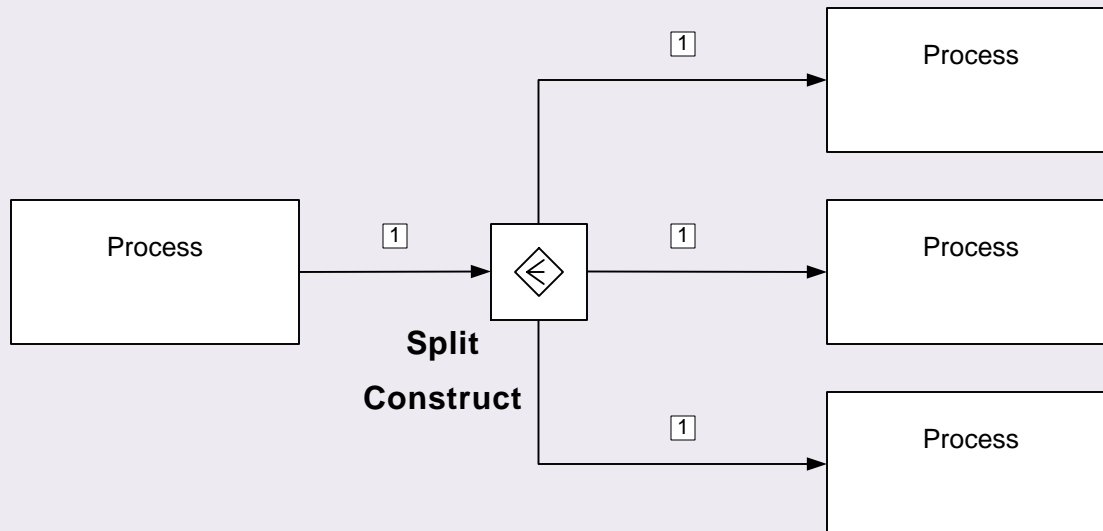
Exercise 2



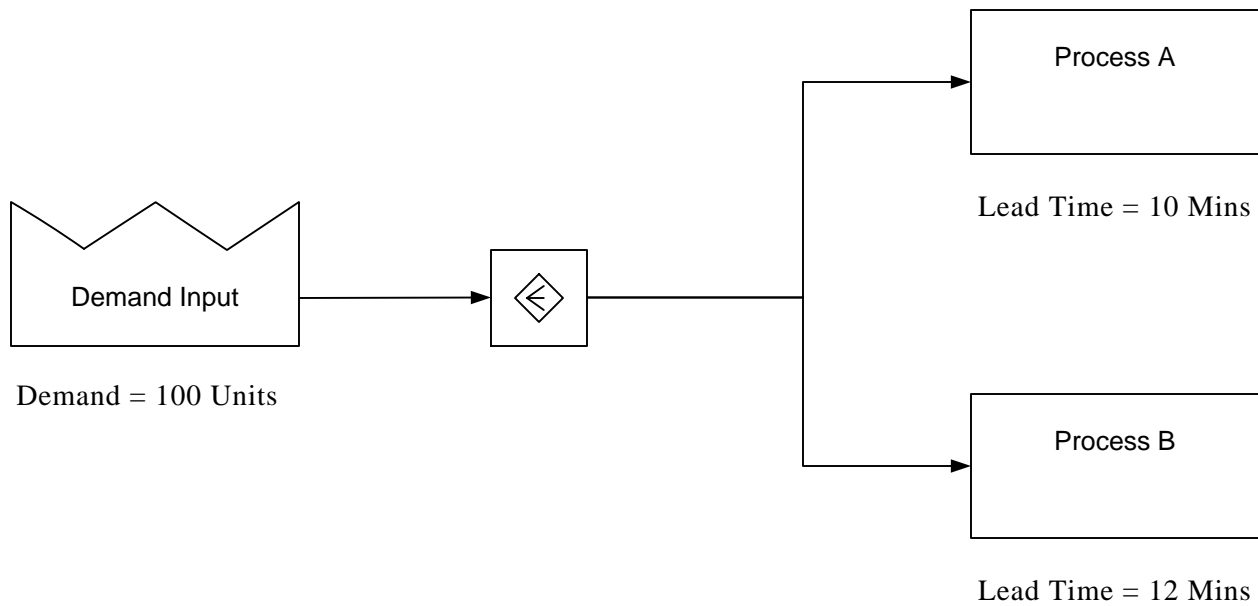
Q1 : What is the demand at Process B?

Split Construct

- A junction with exactly one incoming path and two or more outgoing paths. The work unit from the incoming path results in a work unit on EACH of the outgoing paths.



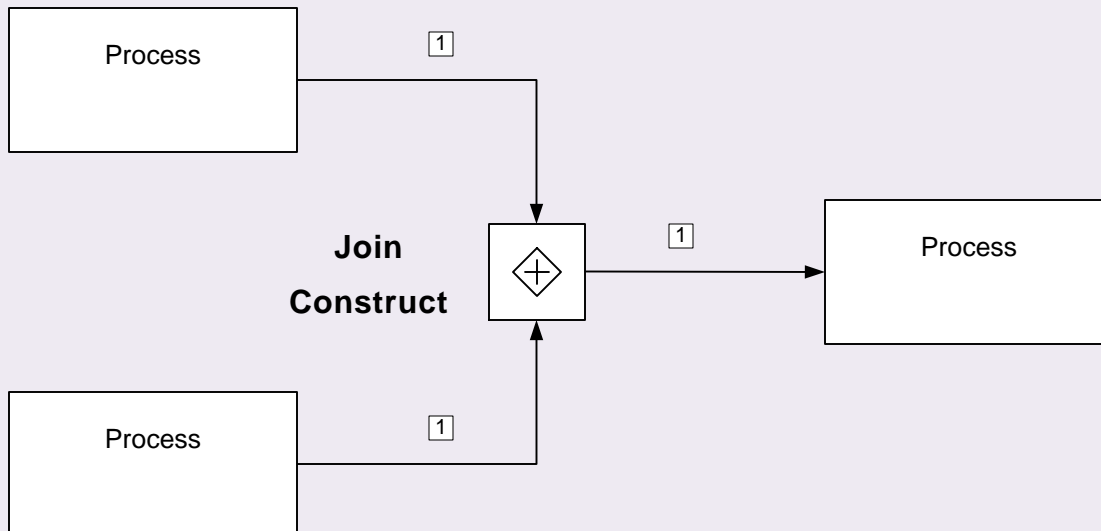
Exercise 3



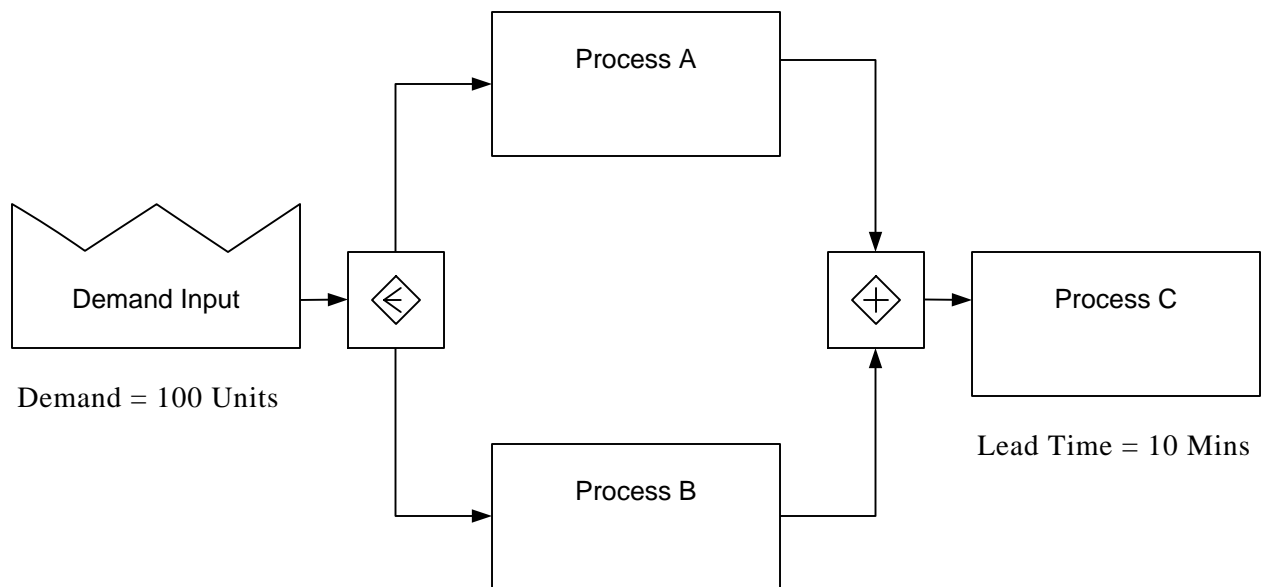
Q1 : What is the demand at Process A?

Join Construct

- A junction with 2 or more incoming paths. Work Units on all incoming paths are needed for the work to move forward. There is only ever 1 outgoing path.



Exercise 4



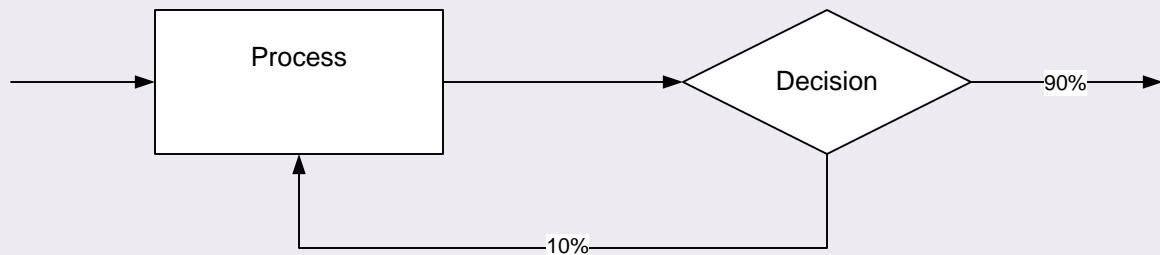
Q1 : What is the demand at Process C?

First Time and Repeat Work

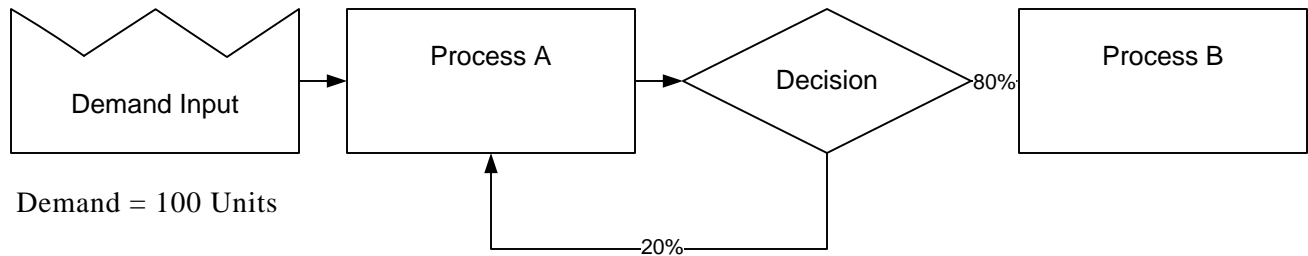
- When work units go through an activity first time they may take a different time to process compared to when the same unit comes through again (because of iteration or rework).

Process Time = 30 mins

Repeat Process Time = 10 mins



Exercise 5

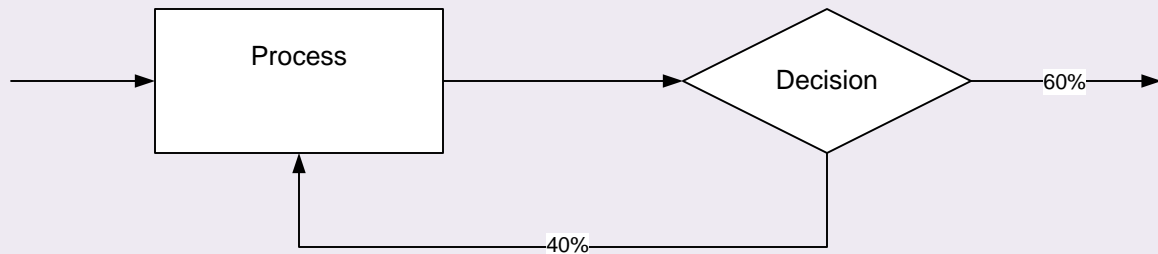


Q1 : What is the demand at Process B?

Q2 : What is the demand at Process A if entities only ever loop back a maximum one time ?

Max Traversals

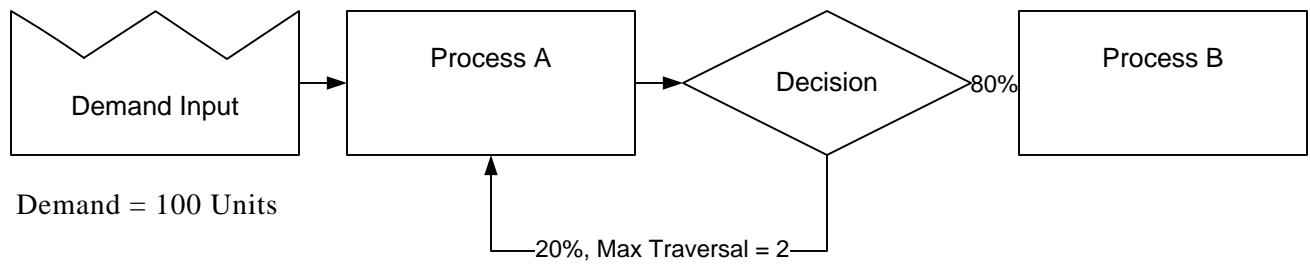
- Maximum number of times a work unit can traverse a leg



Max Traversals = 1

So 40% of the units when they come the decision box loop back. Those same units when they come back to the decision box again never loop again because max traversals for the loop back is set to 1.

Exercise 6



Q1 : What is the repeat demand at Process A?

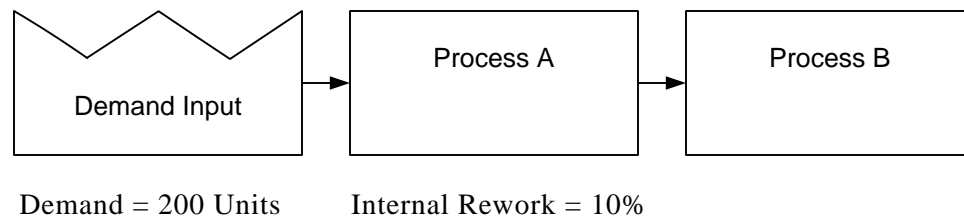
Internal Rework

- Internal Rework represents the % of units undergoing rework internally within the activity.

Activity		
Internal Rework	10	%

So if 100 work units come into this activity, then 10 of them have an internal rework step before the work unit exits the activity. So the first time demand is 100 and the effective repeat demand is 10. It assumes that the rework time to correct is the repeat process time, and also that rework is done only once per defective item.

Exercise 7

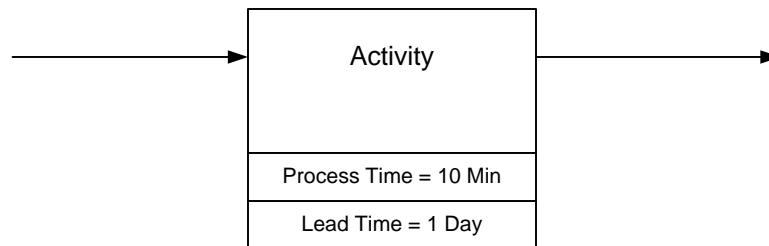


Q1 : What is the demand at Process B?

Q2 : What is the First Time and effective Repeat Demand at Process A?

Lead Time

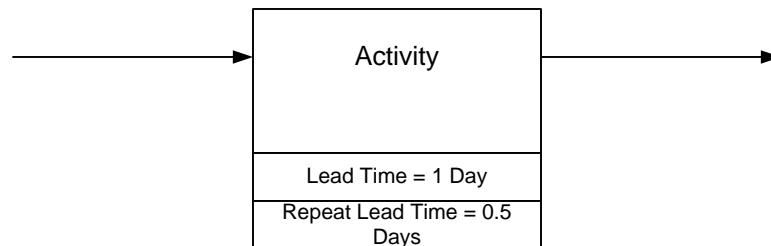
Exercise 8



Q1 : What's the lead time contribution to any work unit passing through this activity?

Day	Wk	Year
8	5	52
Hr	Day	Wk

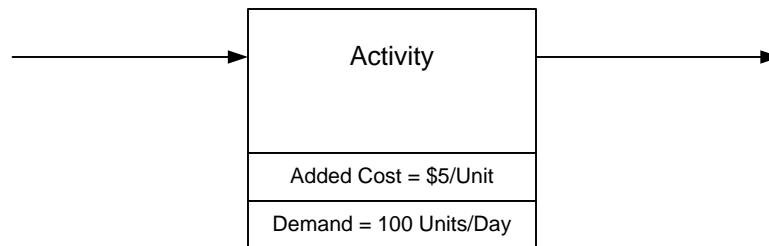
Exercise 9



Q1 : What's the lead time contribution to a work unit that passes through the same activity a total of 4 times?

Cost

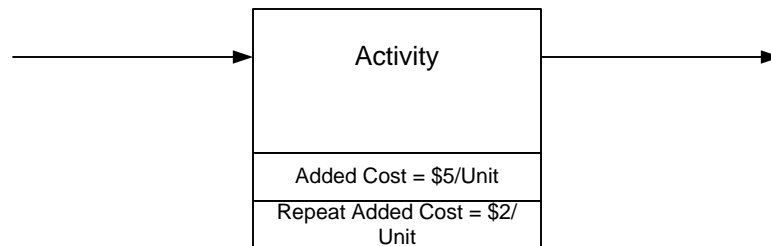
Exercise 10



Q1 : What's the added cost to any work unit that passes through this activity?

Q2 : What's the daily cost of this activity?

Exercise 11



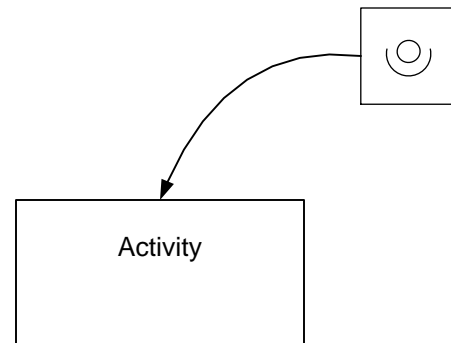
Q1 : What's the added cost contributed to a work unit that passes through this same activity a total of 4 times?

Q2 : What's the percent reduction in added cost if it only passes through 3 times?

Q3 : If Demand = 300/Day and Repeat Demand = 150/Day, what's the total cost of the activity per day?

Resource

Exercise 12



Demand = 100 Unit/Day

Auditor

Available Time = 4 Hrs/Day

Process Time = 8 Min/Unit

Cost = \$40/Hr

Efficiency = 80%

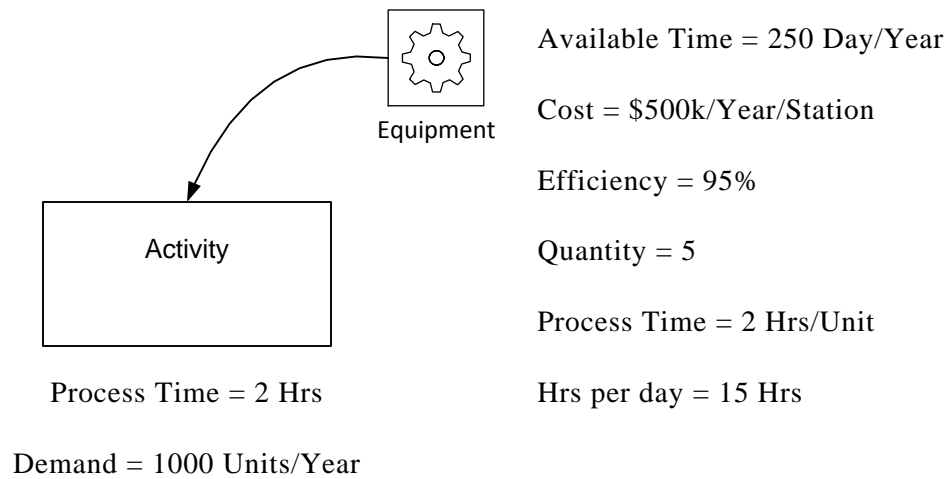
of Auditors = 4

Q1 : How much of the auditing time is used each day?

Q2 : What are the costs of the used time and the available time?

Q3 : What is the auditor's utilization percent?

Exercise 13



Q1 : What is the utilization % of the equipment?

Q2 : What is the used cost of the equipment for this activity?

ACME Case Study



ACME Industries

ACME Proposals Fulfillment Process - Overview

The leadership at ACME Industries has become increasingly concerned about the time taken to respond to customers' RFQ's (Request for quotation) with proposals. They have received customer complaints about the long length of time quoted for response and additionally about proposals that are not then received by the quoted times. They have tasked a team to investigate and make recommendations towards improving the process, increasing customer satisfaction, and closing more sales.

Value Stream Walk 1 / Understand the Process

You start at the back end of the process to understand the value stream. Ultimately proposals go to a weekly management meeting where there are three possible outcomes. 10 percent of the proposals are rejected, 60 percent are approved, and 30 percent get marked up with a change request and are sent back to the sales team that created the initial RFQ package and goes into their queue . Typically the same proposal will only go through one such change request.

You see that there are two submissions sent to the management meeting for each proposal, the technical specification and the contract. Only proposals with both components available are discussed in the meeting. The components originate from engineering and legal departments respectively.

You first go and visit the engineering group to understand the process behind the technical specification. Their work is triggered by RFQ packages from the sales group and sits in a queue until ready to be worked upon

The legal department receives the same RFQ package from the sales group and works in parallel to engineering to create the contract piece of the proposal. They also have an incoming queue for RFQ's.

You next visit the sales group who create and send the RFQ package to both the engineering and legal departments. They deal both with new RFQ's from the customer and with the change requests from the management meeting. Their job is to create a new or revised RFQ package as necessary. The RFQ packages then go to both engineering and legal.

Team Exercise 1 / Draw the Basic Wall Map

With your group, read the information below and then:

1. Draw a wall value stream map showing the customer, queues, activities and decisions and end points using the template cutouts provided.
2. Draw and annotate arrows to show the percentage flows from the management meeting decisions.

Value Stream Walk 2 / Collect Timing & Queue Data

On your second walk through you collect more data about each of the activities in the value stream and try to gain insight into any waste and opportunities.

Time

The office and most operations run 8 hours a day and 5 days a week.

Management Meeting

Occurs only once a week, lasts all day and can handle up to 150 proposals. You sit in on part of a session and note that while each contract is unique there are often just slight variations.

Engineering

There is a 1 week queue of RFP packages (approx 50) in Engineering and it takes about a week for a technical specification to be completed after it starts getting worked upon. It takes 45 minutes of actual work per RFQ package. Change Requests to packages normally take 30 minutes or so of work time with a 2 day completion time.

Legal

The legal department has 200 RFQ in their incoming queue and estimates a 2 week time to clear these. Their process time for creating a contract for a new RFQ is 60 minutes, and it typically gets delivered a week after work starts on it. RFQ Change Requests typically take about 45 minutes with a 3 day clearing time.

Sales

Sales deals with both new RFQ's from the customer and with the change requests from the management meeting. The process time for creating a new RFQ package is about 10 min's while that for a revised package is 5 minutes. It typically takes them a week to deliver the package to both engineering and legal once they start work on it, but only takes 1 day if it is a Change Request. They currently have 80 RFQ's in their queue which is estimated as a 2 week backlog. The group receives 100 new RFQ's from the customer each week.

Team Exercise 2 / Estimate Lead Time

1. Add the data collected to the value stream map.
2. Estimate lead times for the value stream.
3. Note any lead time info you would like to know but is proving difficult to calculate

Value Stream Walk 3 / Collect Capacity & Cost Data

The team has noted some significant incoming queues into sales, engineering and legal and wants to understand staffing availability, usage and constraints in each of these areas. You go to each of the three areas and collect data on resource availability and cost.

Engineering

6 Engineers, 4Hrs per day for this activity, \$30/Hr, 80% efficiency (to account for walking, interrupts etc..)

Legal

5 Paralegals, 4Hrs per day for this activity, \$30/Hr, 80% efficiency

Sales

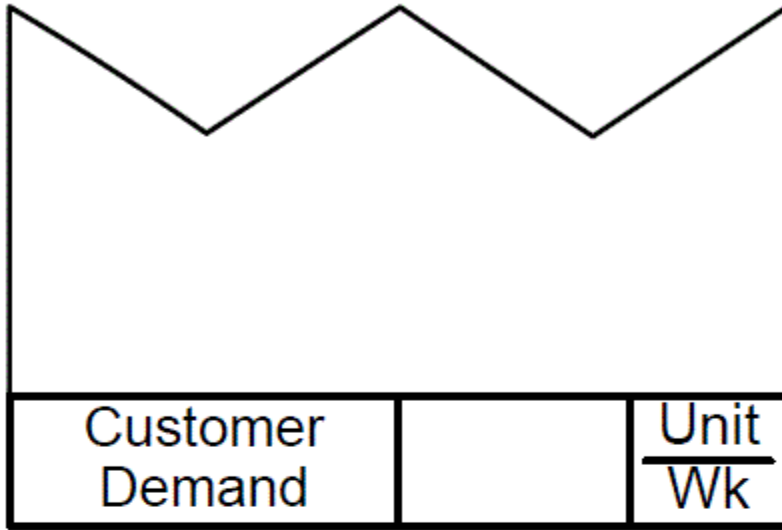
1 RFQ specialist, 6Hrs per day for this activity, \$30/Hr, 80% efficiency

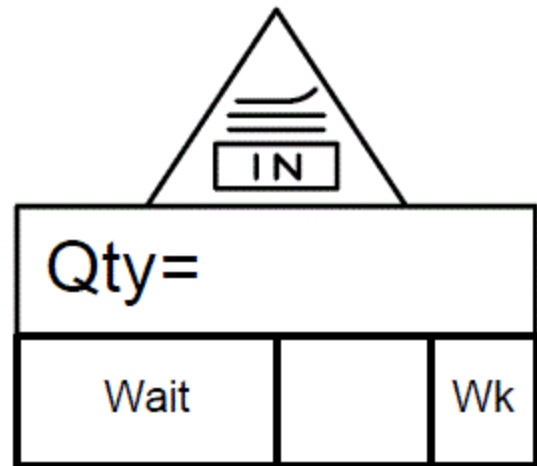
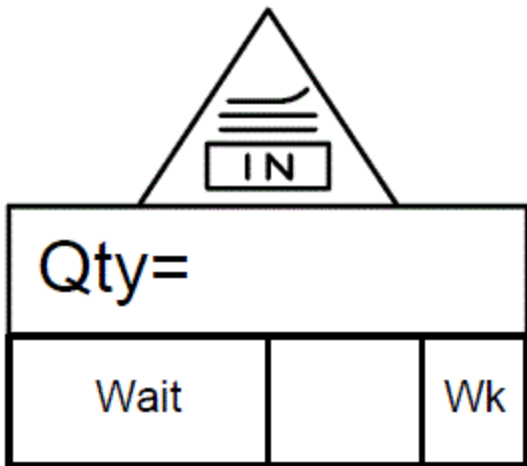
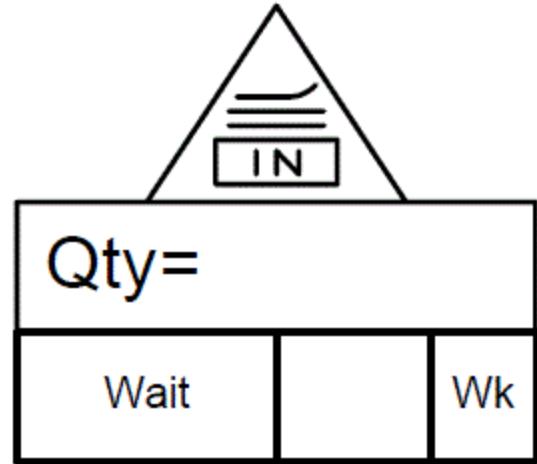
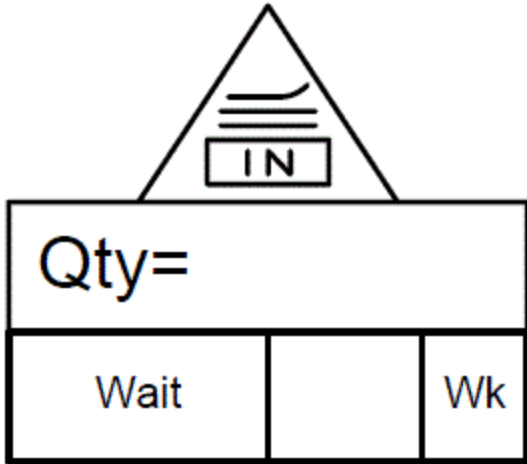
Team Exercise 3 / Estimate Utilizations

1. Add the data collected to the value stream map.
2. Estimate staff utilizations
3. Estimate staffing costs

Team Exercise 4 / Identify Opportunities

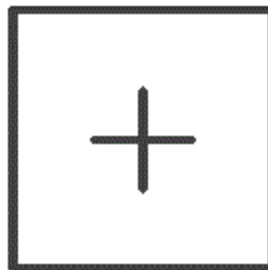
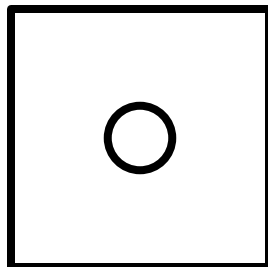
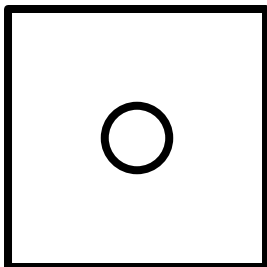
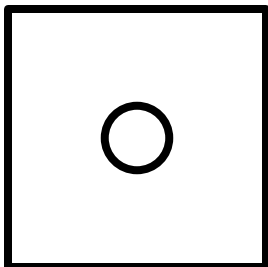
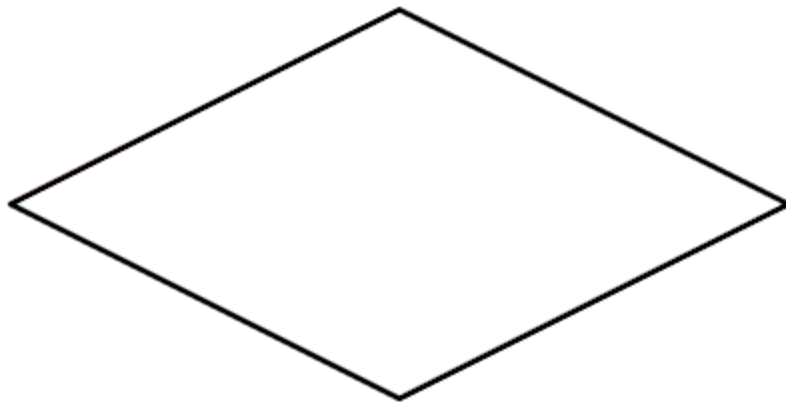
1. Identify problems in the value stream leading to the large lead times and lead time variability
2. Add kaizen bursts to the map in each problem area
3. Use color coding to designate a set you will recommend that need to be solved
4. Create a revised map (Future State) with a lead time at less than 50% of the current value and with reduced variance

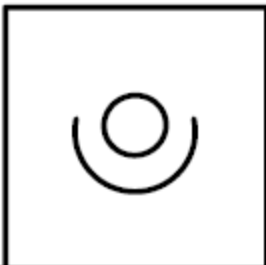




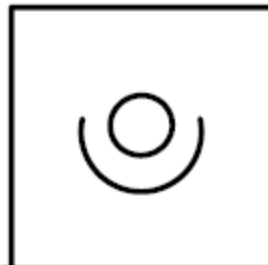
Activity Center		
Functions		
Information Systems		
PT		
LT		Wk
Repeat PT		Min
Repeat LT		Day
Batch Qty		Unit
Activity Time		$\frac{\text{Day}}{\text{Wk}}$

Activity Center		
Functions		
Information Systems		
PT		
LT		Wk
Repeat PT		Min
Repeat LT		Day
Batch Qty		Unit
Activity Time		$\frac{\text{Day}}{\text{Wk}}$

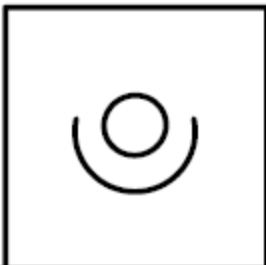




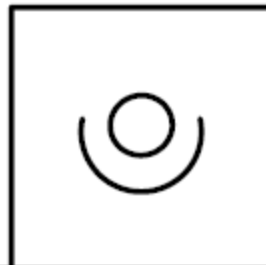
Resource Quantity		RQ
Resource Time		$\frac{\text{Hr}}{\text{Day}}$
Resource Rate		$\frac{\$}{\text{Hr}}$
Efficiency		%



Resource Quantity		RQ
Resource Time		$\frac{\text{Hr}}{\text{Day}}$
Resource Rate		$\frac{\$}{\text{Hr}}$
Efficiency		%



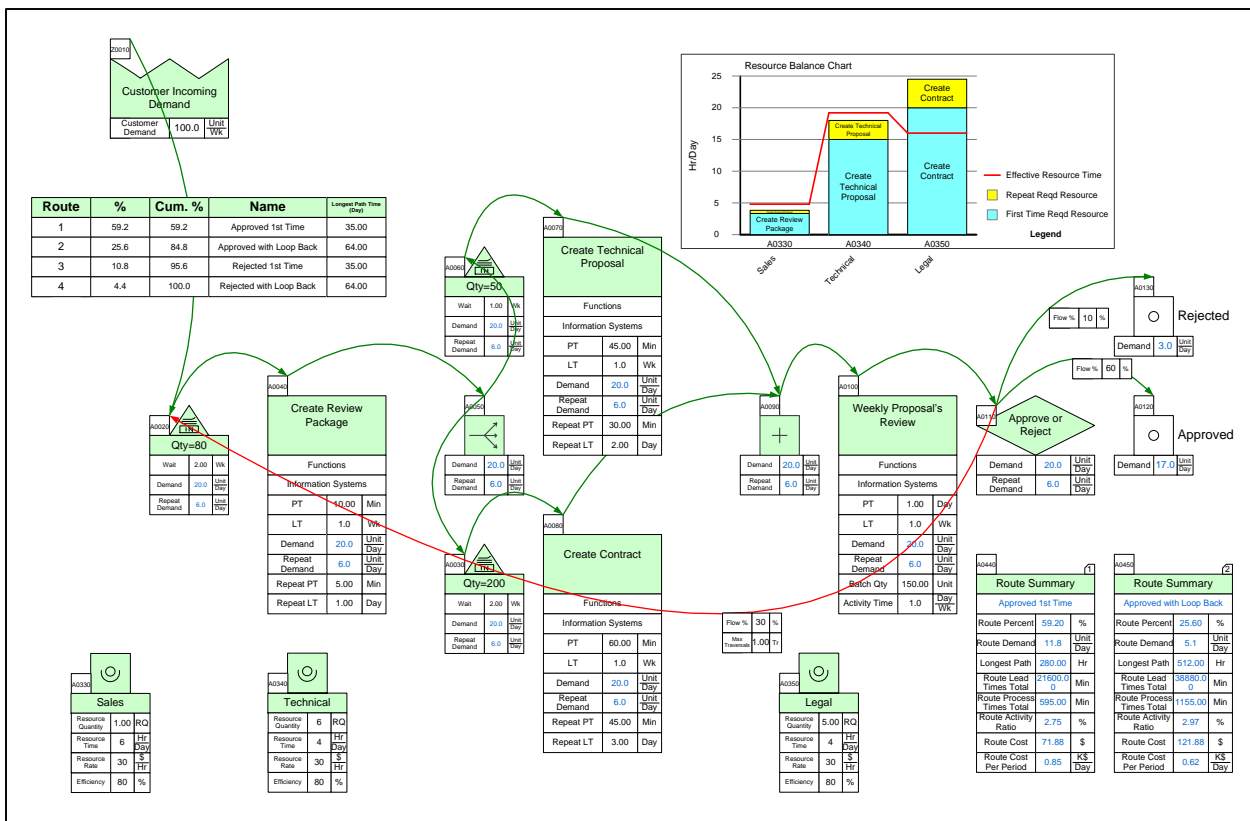
Resource Quantity		RQ
Resource Time		$\frac{\text{Hr}}{\text{Day}}$
Resource Rate		$\frac{\$}{\text{Hr}}$
Efficiency		%



Resource Quantity		RQ
Resource Time		$\frac{\text{Hr}}{\text{Day}}$
Resource Rate		$\frac{\$}{\text{Hr}}$
Efficiency		%

Quick Transactional Pro Tutorial

This tutorial will guide you through the steps to draw the map below in eVSM using the Quick Transactional Pro stencil.



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.

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

6

If the buttons in the toolbar disconnect, Save the drawing, close Visio, and re-open the drawing to continue working.

7

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.

8

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

VSM

Quick_eVSM

Step 3: Initiate the map for Quick Transactional Pro

1 Click the Open button. Select Transactional Pro and click OK. Open

2 Drag out the two red icons first. This is very important!

3 Enter available hours per day here. This is actual work hours after subtracting break time.

4 Align all new shapes to the grid as you drop them.

5 Enter the incoming customer demand here. Double-click the unit field to change it

Warning: Red shapes identify the application stencil and MUST be the first things dropped onto a new page

Quick Transactional Pro

Customer Input

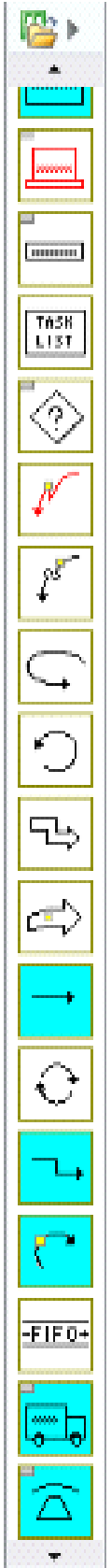
Time Center

Z001
0

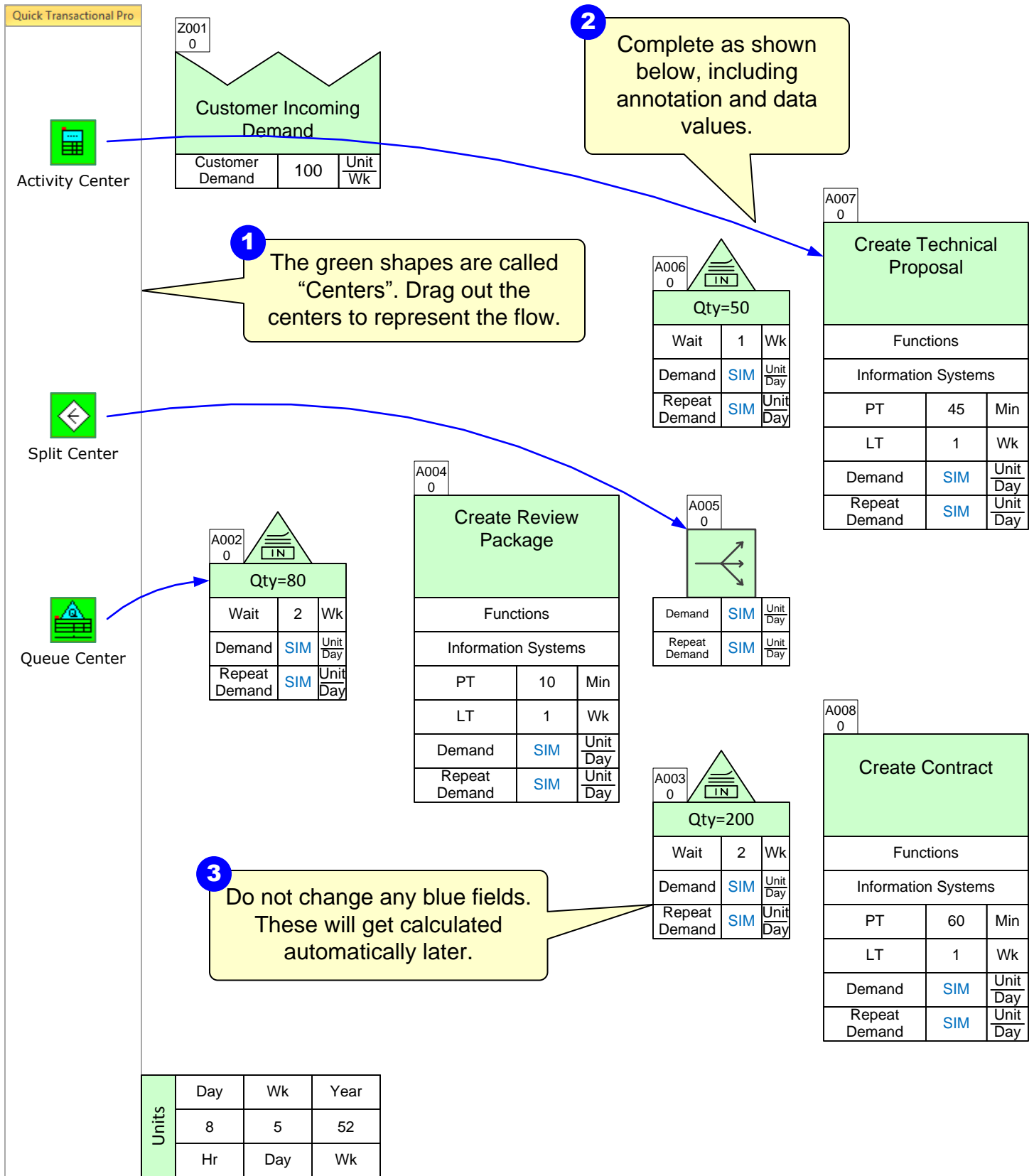
Customer Incoming Demand

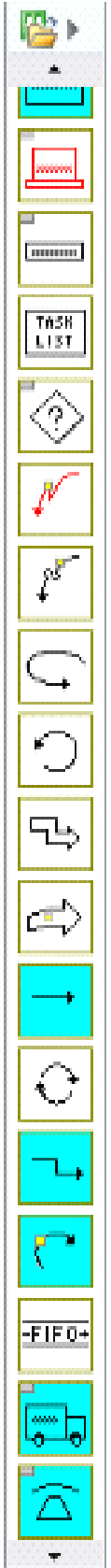
Customer Demand	100	Unit Wk
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Units	Day	Wk	Year
	8	5	52
	Hr	Day	Wk

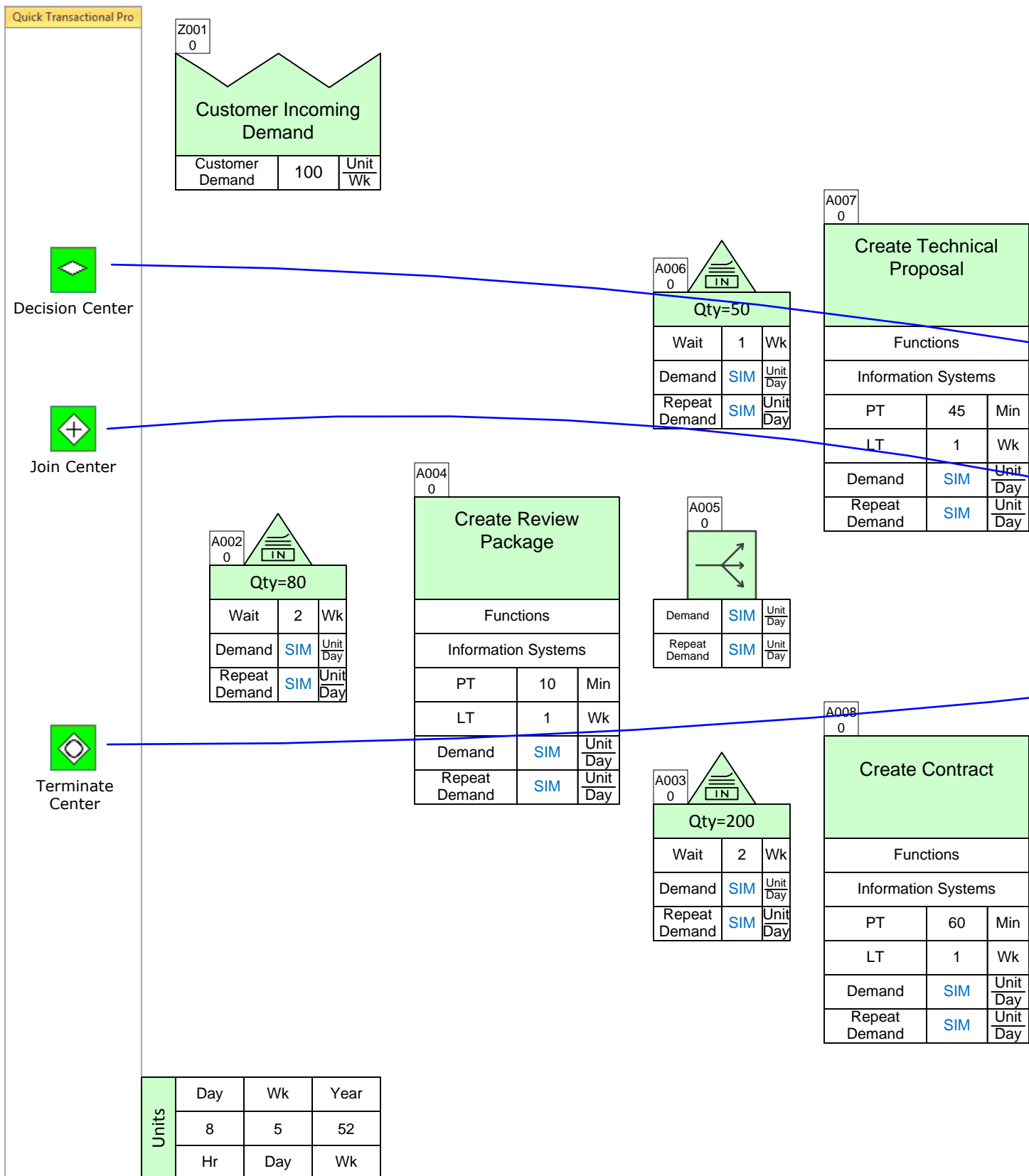


Step 4: Draw the flow





Step 5: Draw the flow



1 Complete as shown below, including annotation and data values.

2 Double-click the Terminate Centers to add text.

A009
0

Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A010
0

Weekly Proposal's Review		
Functions		
Information Systems		
PT	1	Day
LT	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A011
0

Approve or Reject		
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A0150

Deny		
Demand	SIM	Unit Day
Demand %	Auto	%

A0170

Approve		
Demand	SIM	Unit Day
Demand %	Auto	%

3 Double-click on the unit to change it into a different one via the form wherever needed

Make sure you use the right units everywhere!

Select Unit

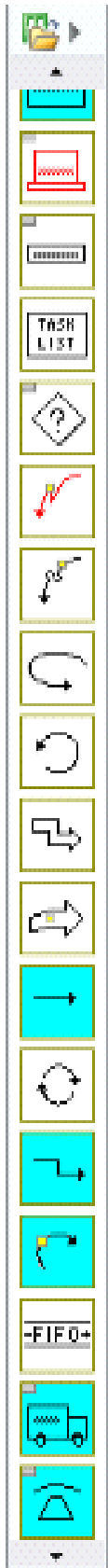
Double-Click to Select Unit

- Day
- Hr
- Min
- Sec
- Wk
- Year

Note: If your desired unit is missing from the list make sure there is a unit converter between the desired unit and a unit in this list


Manage Names and Units..

Cancel OK



Step 6: Sequence Arrows

2 Click the Sequence button to attach sequence arrows.



Sequence

Quick Transactional Pro

Units	Day	Wk	Year
	8	5	52
	Hr	Day	Wk

Z001
0

Customer **A** boming

Customer Demand	100	Unit Wk
-----------------	-----	---------

A002
0

B

Wait	2	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A004
0

Create Review **C**

Functions		
Information Systems		
PT	10	Min
LT	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A006
0

E

Wait	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A005
0

D

Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A003
0

IN

Qty=200

Wait	2	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A007
0

Create Technical **F**

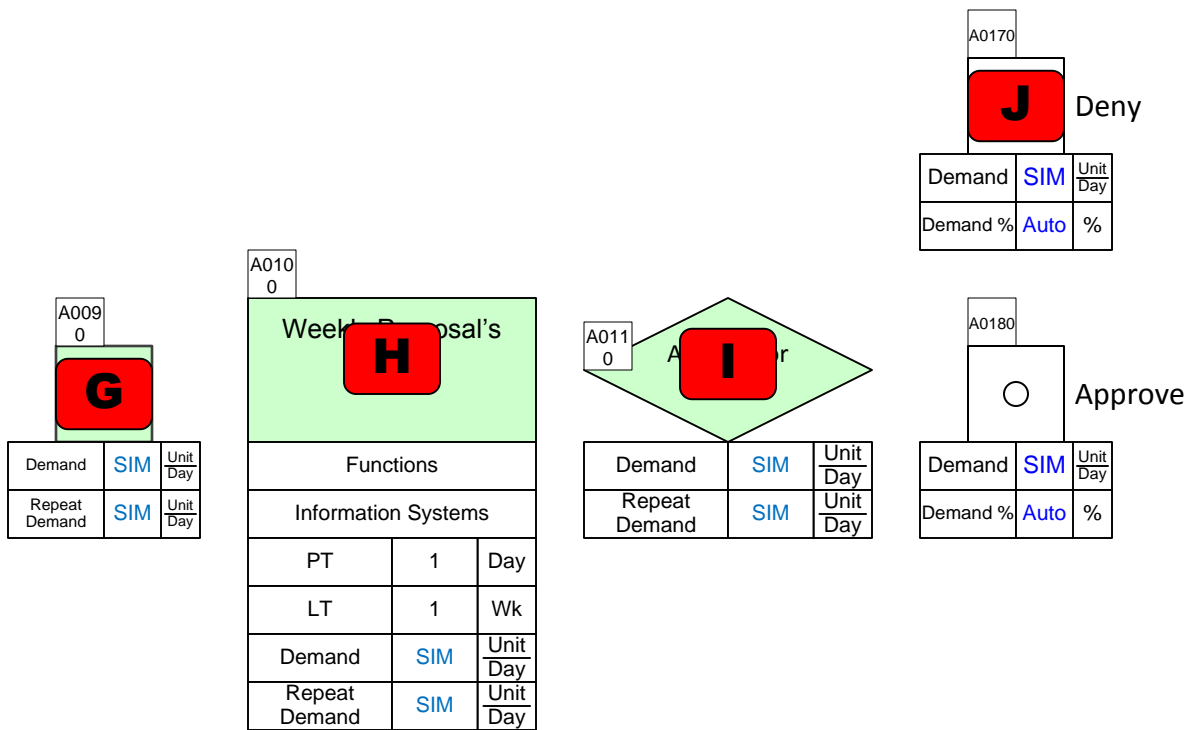
Functions		
Information Systems		
PT	45	Min
LT	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A008
0

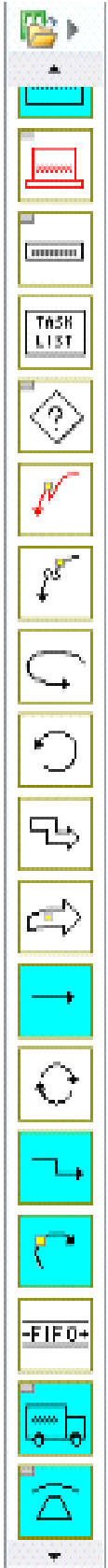
Create Contract

Functions		
Information Systems		
PT	60	Min
LT	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

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



3 You can draw sequence arrows between small groups of shapes. You do not have to do the whole set in one go.




Step 7: Sequence Arrows part 2

Quick Transactional Pro


Z001 0	Customer Incoming Demand	
Customer Demand	100	Unit Wk

3 Click the Sequence button add attach sequence arrows.



Sequence

4 Sequence arrow visibility can be switched on and off using the Show Seq. button.



Show Seq.

A002 0	Qty=80	
Wait	2	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A004 0	Create Review Package	
Functions		
Information Systems		
PT	10	Min
LT	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A006 0	Qty=50	
Wait	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A005 0	A	
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A007 0	Create Technical Proposal	
Functions		
Information Systems		
PT	45	Min
LT	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

2 Hold down the Ctrl key again and select the green shapes in the order shown here.

A003 0	B	
Wait	2	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A008 0	Cre C tract	
Functions		
Information Systems		
PT	60	Min
LT	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

Units	Day	Wk	Year
	8	5	52
	Hr	Day	Wk

The sequence arrows are now connecting route one.

A009
0

Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A010
0

Weekly Proposal's Review		
Functions		
Information Systems		
PT	1	Day
LT	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A011
0

Approve or Reject		
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

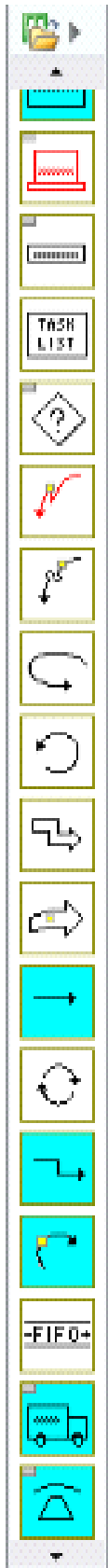
A0170

Deny		
Demand	SIM	Unit Day
Demand %	Auto	%

A0180

Approve		
Demand	SIM	Unit Day
Demand %	Auto	%

There is generally only ONE sequence arrow between any two shapes



Step 8: Sequence Arrows part 3

2 Click the Sequence button add attach sequence arrows.



Sequence

Quick Transactional Pro

Units	Day	Wk	Year
	8	5	52
	Hr	Day	Wk

Z001
0

Customer Incoming Demand		
Customer Demand	100	Unit Wk

A002
0

Qty=80		
Wait	2	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A004
0

Create Review Package		
Functions		
Information Systems		
PT	10	Min
LT	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A006
0

Qty=50		
Wait	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A005
0

[Sequence Icon]		
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A003
0

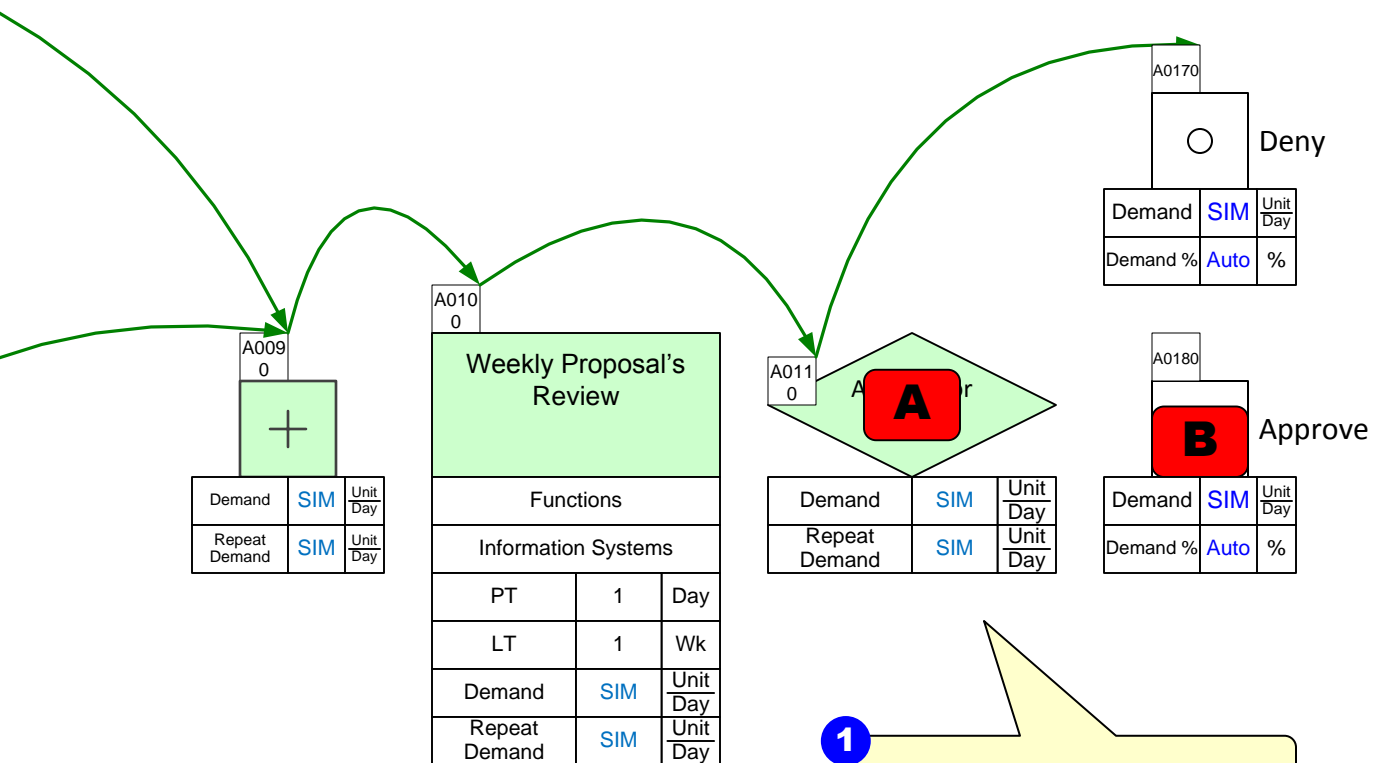
Qty=200		
Wait	2	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A007
0

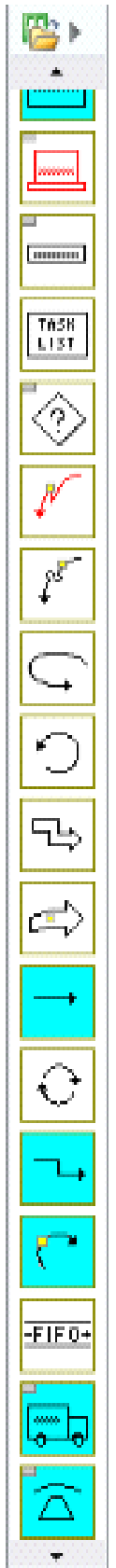
Create Technical Proposal		
Functions		
Information Systems		
PT	45	Min
LT	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A008
0

Create Contract		
Functions		
Information Systems		
PT	60	Min
LT	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

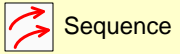


1 Hold down the Ctrl key again and select the green shapes in the order shown here.



Step 9: Sequence Arrows part 4

2 Click the Sequence button add attach sequence arrows.



Quick Transactional Pro

Units	Day	Wk	Year
	8	5	52
	Hr	Day	Wk

Z001
0

Customer Incoming Demand		
Customer Demand	100	Unit Wk

A002
0

B		
Wait	2	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A004
0

Create Review Package		
Functions		
Information Systems		
PT	10	Min
LT	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A006
0

Qty=50		
Wait	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A005
0

[Sequence Arrow]		
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A003
0

Qty=200		
Wait	2	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A007
0

Create Technical Proposal		
Functions		
Information Systems		
PT	45	Min
LT	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A008
0

Create Contract		
Functions		
Information Systems		
PT	60	Min
LT	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

1 Hold down the Ctrl key again and select the green shapes in the order shown here for the loop back.

A009
0

Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A010
0

Weekly Proposal's Review		
Functions		
Information Systems		
PT	1	Day
LT	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A011
0

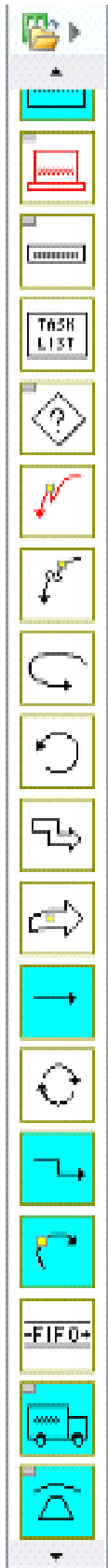
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A0170

Demand	SIM	Unit Day
Demand %	Auto	%

A0180

Demand	SIM	Unit Day
Demand %	Auto	%



Step 10: Sequence Arrow add-ons

Quick Transactional Pro

 Sequence Center

 Flow %

 Max Traversals

Units	Day	Wk	Year
	8	5	52
	Hr	Day	Wk

Z001
0

Customer Incoming Demand		
Customer Demand	100	Unit Wk

1 All of the centers are now connected with sequence arrows.

A002
0

Qty=80		
Wait	2	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A004
0

Create Review Package		
Functions		
Information Systems		
PT	10	Min
LT	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A006
0

Qty=50		
Wait	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A005
0

[Split]		
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A003
0

Qty=200		
Wait	2	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

A007
0

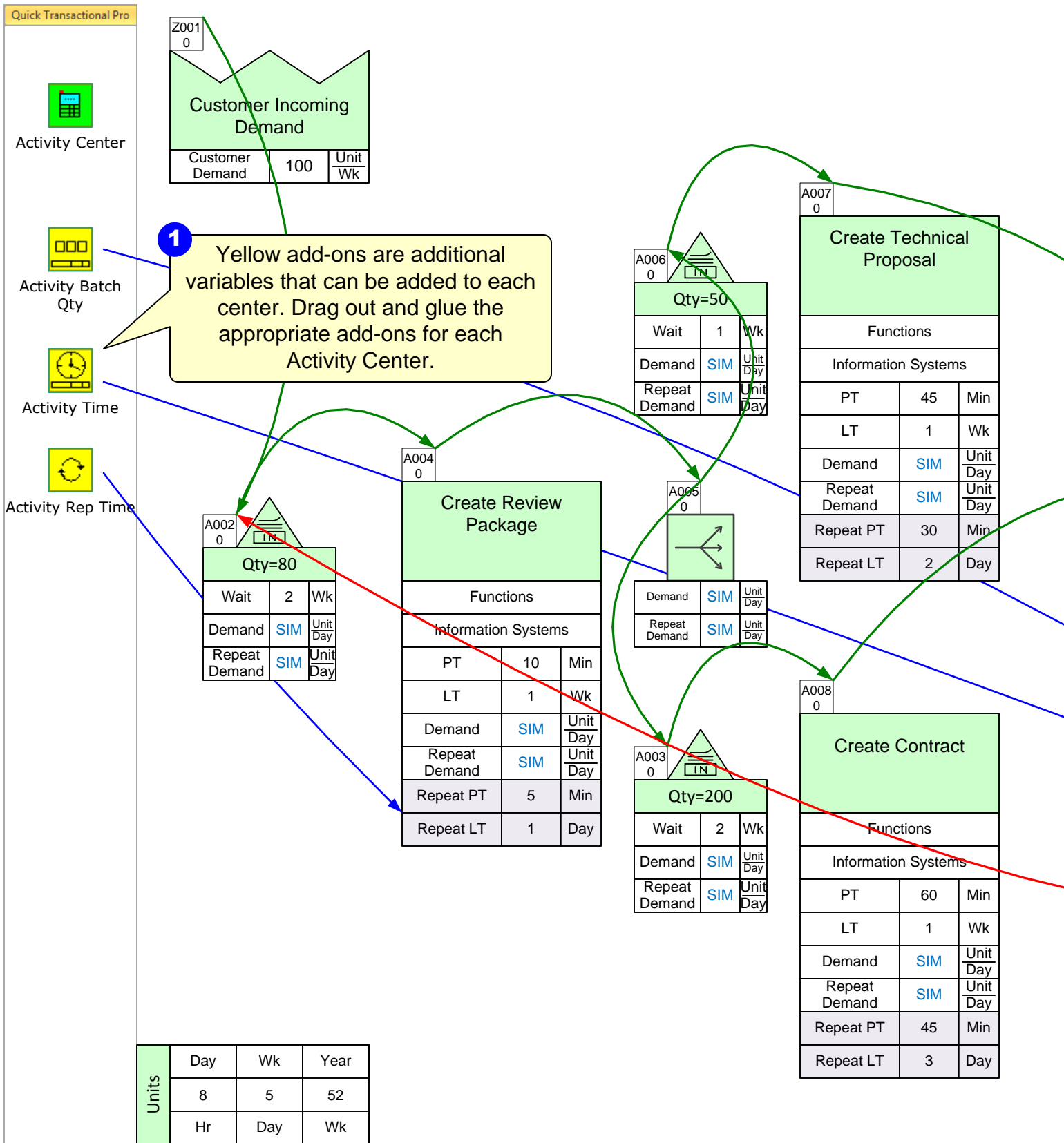
Create Technical Proposal		
Functions		
Information Systems		
PT	45	Min
LT	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

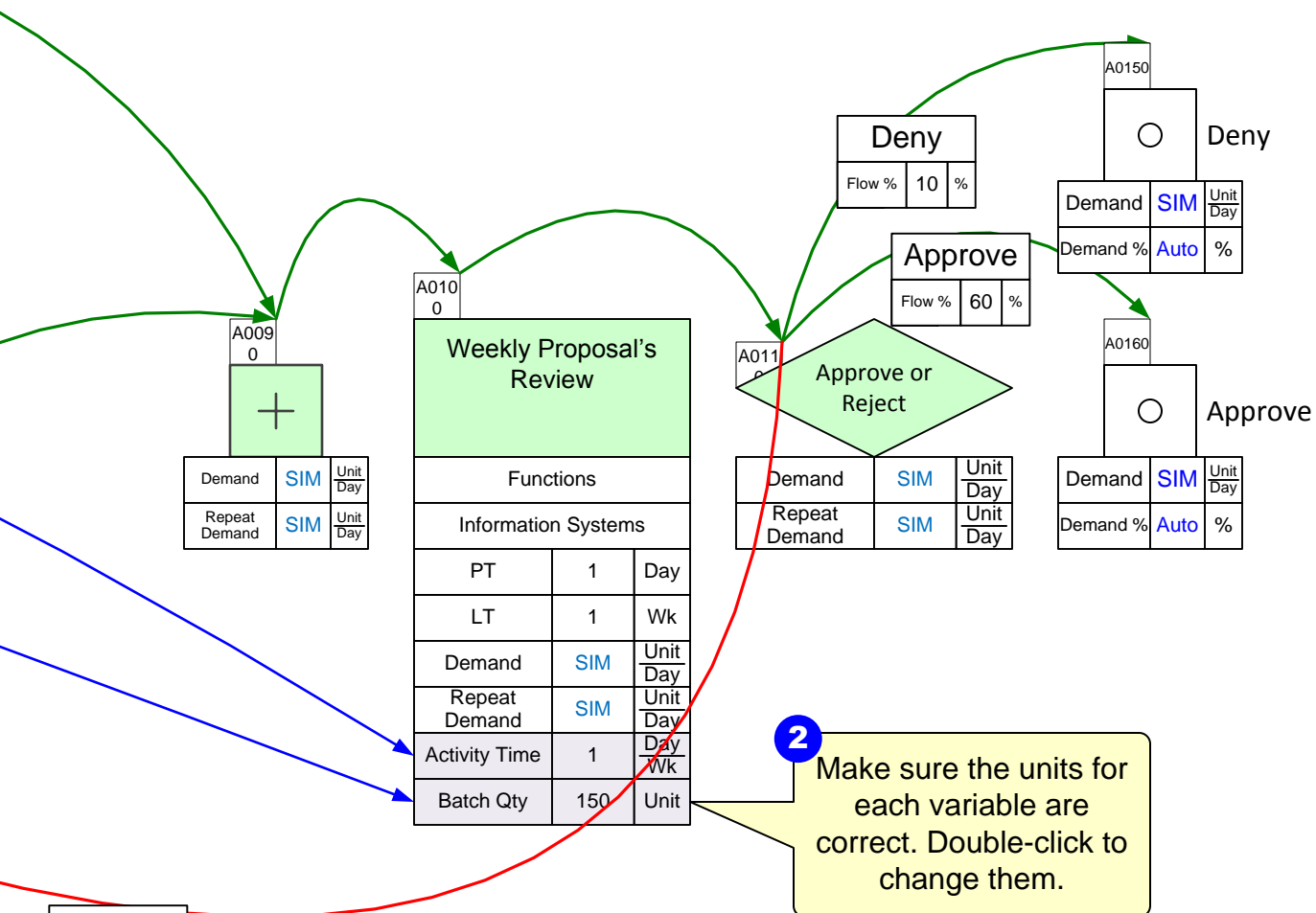
A008
0

Create Contract		
Functions		
Information Systems		
PT	60	Min
LT	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

5 It's a good idea to color loopback arrows in red to make them stand out. Make sure all arrowheads are in the correct direction

Step 11: Add-on variables





Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day

Weekly Proposal's Review		
Functions		
Information Systems		
PT	1	Day
LT	1	Wk
Demand	SIM	Unit Day
Repeat Demand	SIM	Unit Day
Activity Time	1	Day Wk
Batch Qty	150	Unit

Deny		
Flow %	10	%

Approve		
Flow %	60	%

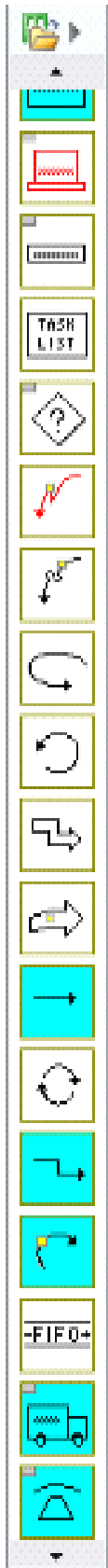
Deny		
Demand	SIM	Unit Day
Demand %	Auto	%

Approve		
Demand	SIM	Unit Day
Demand %	Auto	%


LoopBack		
Flow %	30	%
Max Traversals	1	Tr


2 Make sure the units for each variable are correct. Double-click to change them.

Be careful about numerator and denominator units when changing units



Step 12: Perform calculations

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

2 Click the "Solve" button to calculate.  Solve

Quick Transactional Pro

Z001
0

Customer Incoming Demand

Customer Demand	100.0	Unit Wk
-----------------	-------	---------

A002
0

Qty=80

Wait	2.00	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A004
0

Create Review Package

Functions		
Information Systems		
PT	40.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Repeat PT	5.00	Min
Repeat LT	1.00	Day

A006
0

Qty=50

Wait	1.00	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A005
0

Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A003
0

Qty=200

Wait	2.00	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A007
0

Create Technical Proposal

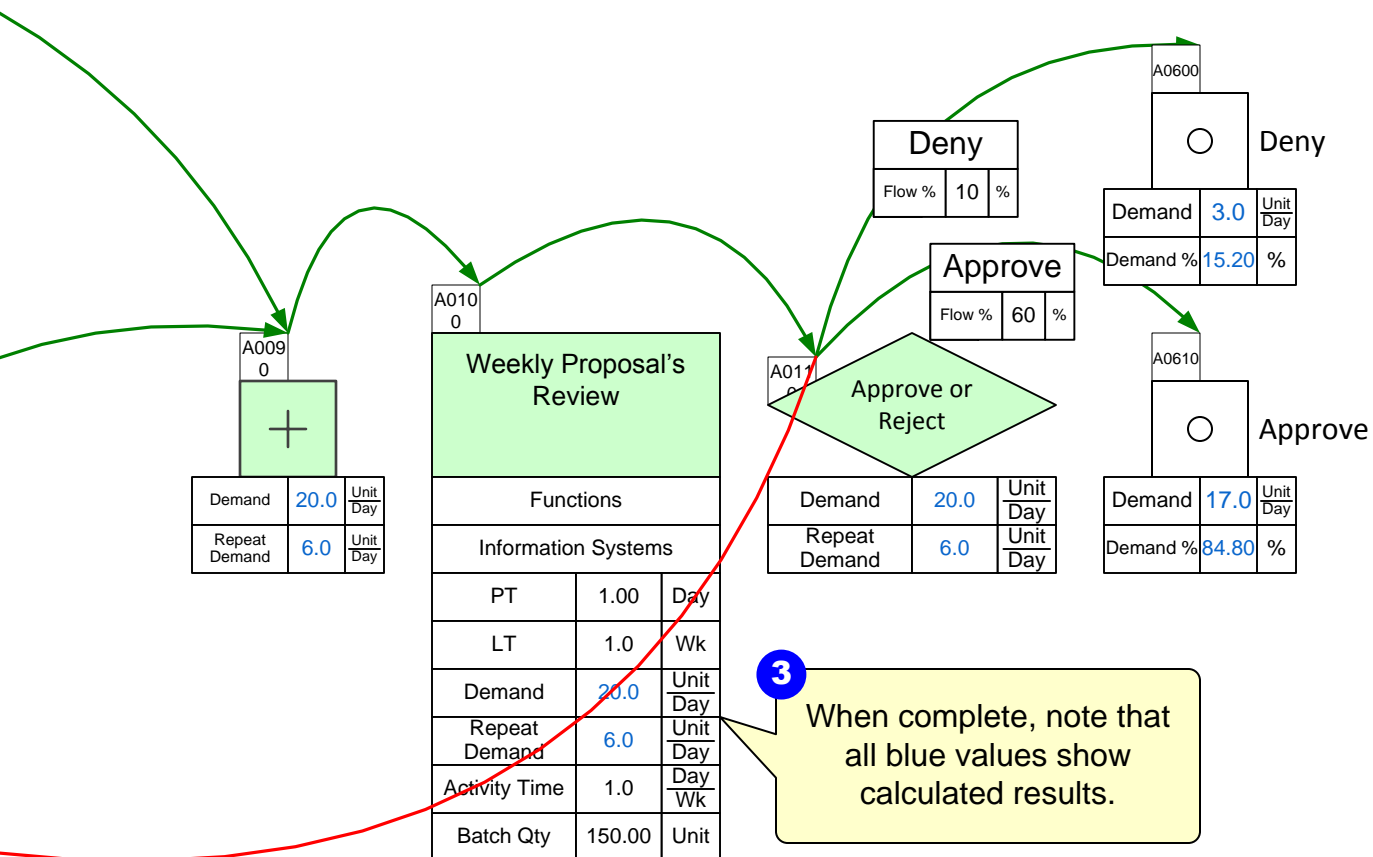
Functions		
0.00		
PT	45.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Repeat PT	30.00	Min
Repeat LT	2.00	Day

A008
0

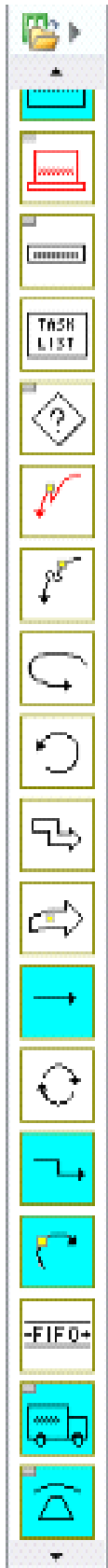
Create Contract

Functions		
Information Systems		
PT	60.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Repeat PT	45.00	Min
Repeat LT	3.00	Day

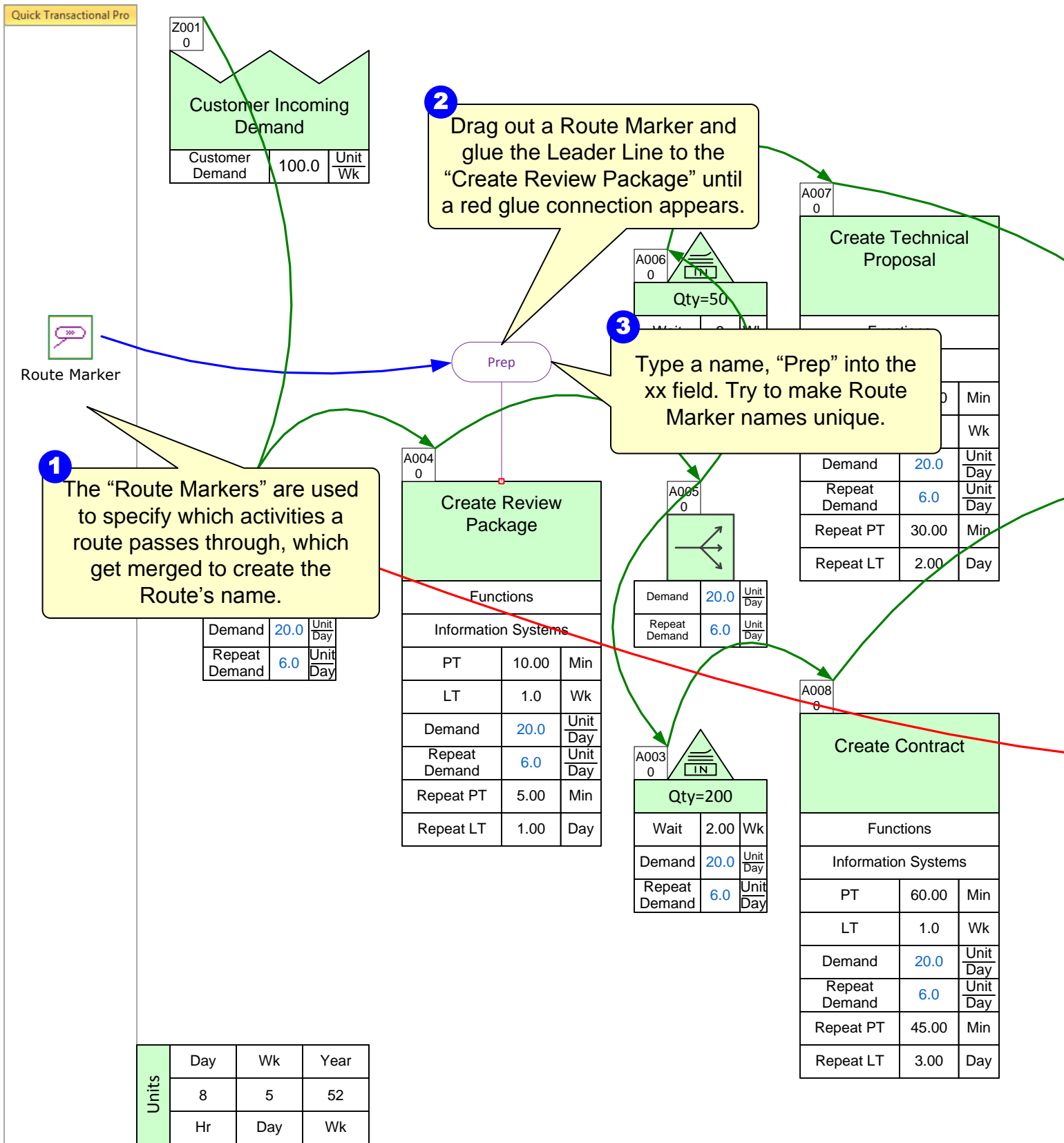
Units	Day	Wk	Year
	8	5	52
	Hr	Day	Wk



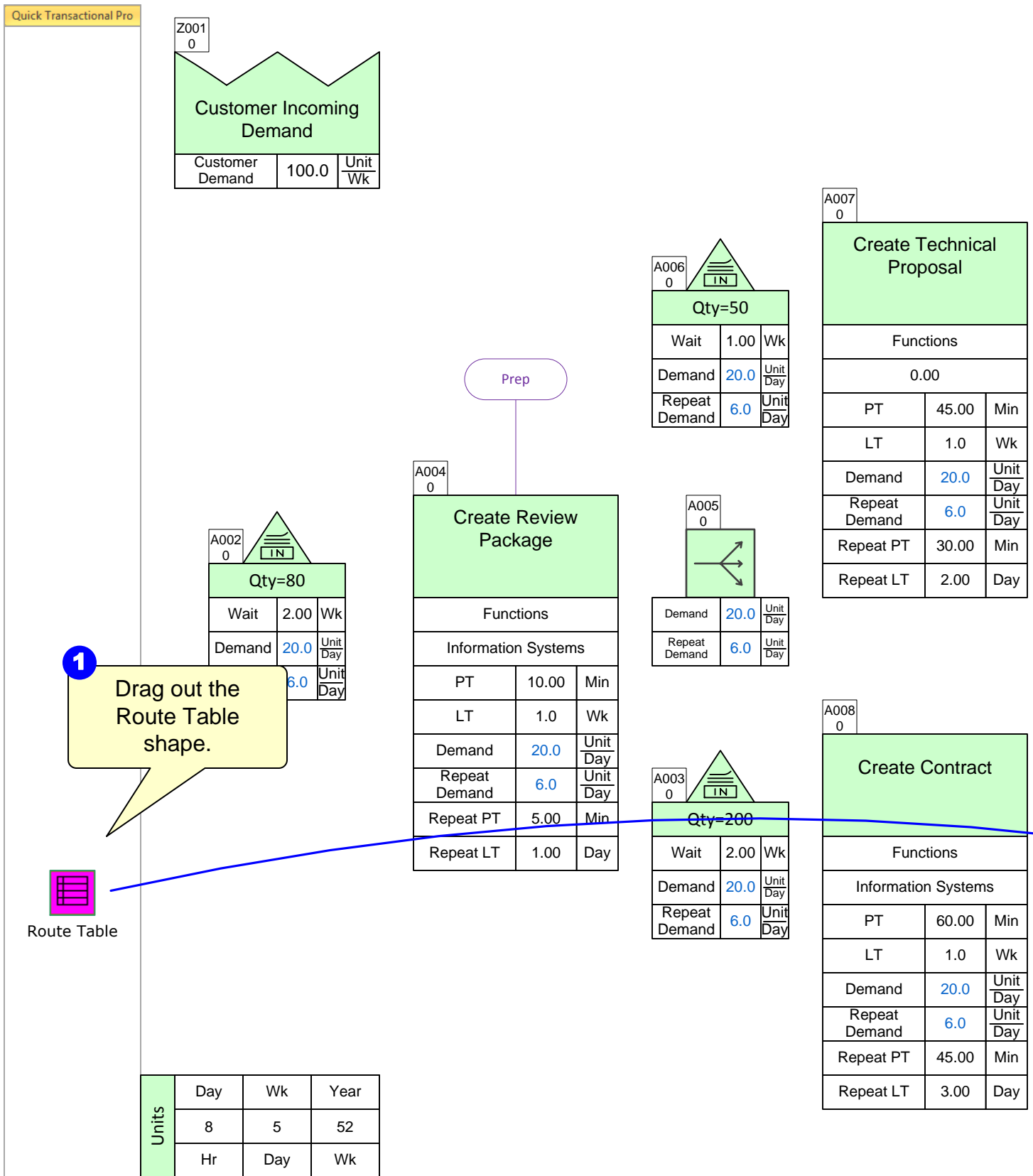
3 When complete, note that all blue values show calculated results.



Step 13: Route Markers



Step 14: Route Table



Step 15: Plot Lead Time chart

Quick Transactional Pro

Z001
0

2 Right-click the icon and select "Edit Ladder Chart Data".

4 Drag out two Route Filter Shapes and glue to the Lead Time Chart icon. Double-click one of them to change it to Route 2.

5 Right click the icon and select "Plot Ladder Chart" to plot.

1 Drag out Lead Time Chart icon

Route Filter

Lead Time Chart

A010
0

Qty=80		
Wait	2.00	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A001
0

Create Review Package		
Functions		
0.00		
PT	10.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A003
0

Qty=50		
Wait	1.00	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A002
0

Create Technical Proposal		
Functions		
0.00		
PT	45.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Repeat PT	30.00	Min
Repeat LT	2.00	Day

A006
0

Create Contract		
-----------------	--	--

A005
0

Create Technical Proposal		
Functions		
0.00		
PT	10.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

Longest Lead Time Segments for each Route

Units

Route	Route Name	Route Traversals	Route %	Cumulative Route %	Lead Time (longest)	Termination Name
	Txt	Unit/Day	%	%	Day	Txt

Multi-Tag Multi-Var Chart Data

Tag Prefix

A N
 B O
 C P
 D Q
 E R
 F S
 G T
 H U
 I V
 J W
 K X
 L Y
 M Z

All None

Chart Title
Longest Lead Time Segments for each Route

Variables To Chart

Name	Display	
PT VA	SBAR	Add..
PT NNVA	SBAR	Modify..
PT NVA	SBAR	Delete
Eff Repeat PT	SBAR	Move Up
DT	SBAR	Move Down
Repeat DT	SBAR	
Wait	SBAR	
Repeat Wait	SBAR	

X-Axis

Num. Unit: Day
Denom. Unit: none

Set Min X
 Set Max X

X-Axis Scale

Auto Manual

.25 Inches Per Unit

Path Plotting Options
 Combine Path Filters
 Separate Path Filters

Display Options
 Show Key
 Show Activity Colors

X-Axis Labels
 Ascending
 Descending

Tag Type

Even No's
 Odd No's
 Color Tags
 White Tags

Chart Description
Shows lead times for different routes, including rework

Individual Bar Labels
 Tags & Description
 Tags Only
 Description Only
 None

Plot Type
 Linear Polar / Round

Cancel OK

35.00	App
64.00	App
35.00	Deny
64.00	Deny
43.70	

Route Table

3 Match the X-Axis Scale by first selecting Manual and setting the scale to 0.25 inches per unit, then click OK.

A007
0

+

Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A008
0

Weekly Proposal's Review

Functions		
Information Systems		
PT	1.00	Day
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A009
0

Approve or Reject

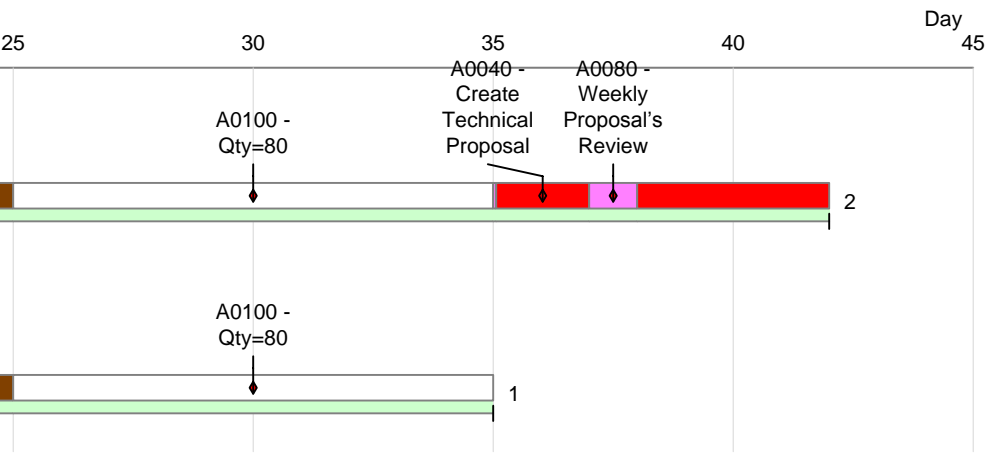
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

Deny

Demand	3.0	Unit Day
Demand %	15.20	%

Approve

Demand	17.0	Unit Day
Demand %	84.80	%




- Legend**
- PT VA
 - DT
 - Wait
 - Eff Repeat PT
 - Repeat DT

Step 16: Adding resources

1 Delete all charts and chart shapes from the map.

2 Click the Show Seq. button to hide the sequence arrows.



Quick Transactional Pro

Z001
0

Customer Incoming Demand		
Customer Demand	100.0	Unit Wk

3 Drag out the Resource Centers and fill in the data.



Resource Center

4 Select a Resource Center, and then press the SHIFT key and select the activity center that the resources are being piped into. Then click the Auto Pipe button in the toolbar. Repeat for the rest of the resources.

A010
0

Qty=80		
Wait	2.00	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A000
0

Create Review Package		
Functions		
0.00		
PT	45.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Repeat PT	30.00	Min
Repeat LT	2.00	Day

A003
0

Qty=50		
Wait	1.00	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A000
0

Create Technical Proposal		
Functions		
0.00		
PT	45.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Repeat PT	30.00	Min
Repeat LT	2.00	Day

Resource PT	10	Min Unit
Repeat Resource PT	5	Min Unit

A002
0

Resource PT	45	Min Unit
Repeat Resource PT	30	Min Unit

A005
0

Qty=200		
Wait	2.00	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A006
0

Create Contract		
Functions		
Information Systems		
PT	60.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Repeat PT	45.00	Min
Repeat LT	3.00	Day

A015
0

Sales		
Resource Quantity	1.00	RQ
Resource Time	6	Hr Day
Resource Rate	30.00	\$ Hr
Efficiency	80	%

A016
0

Technical		
Resource Quantity	6.00	RQ
Resource Time	4	Hr Day
Resource Rate	30.00	\$ Hr
Efficiency	80	%

Route	Route Name	Route Traversals	Route %	Cumulative Route %	Lead Time (longest)	Termination Name
	Txt	Unit/Day	%	%	Day	Txt
1	Prep Check App	11.84	59.20	59.20	35.00	App
2	Prep Check Prep Check App	5.12	25.60	84.80	64.00	App
3	Prep Check Deny	2.16	10.80	95.60	35.00	Deny
4	Prep Check Prep Check Deny	0.88	4.40	100.00	64.00	Deny
Summary		20.00	100.00	100.00	43.70	

Units	Day	Wk	Year
	8	5	52
	Hr	Day	Wk

Route Table

6 Click the Solve button to incorporate the resource data.

5 Fill in the Pipe Arrow data.

Check

Weekly Proposal's Review

Functions		
Information Systems		
PT	1.00	Day
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Activity Time	1.0	Day Wk
Batch Qty	150.00	Unit

Approve or Reject

Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

Deny

Demand	3.0	Unit Day
Demand %	15.20	%

Approve

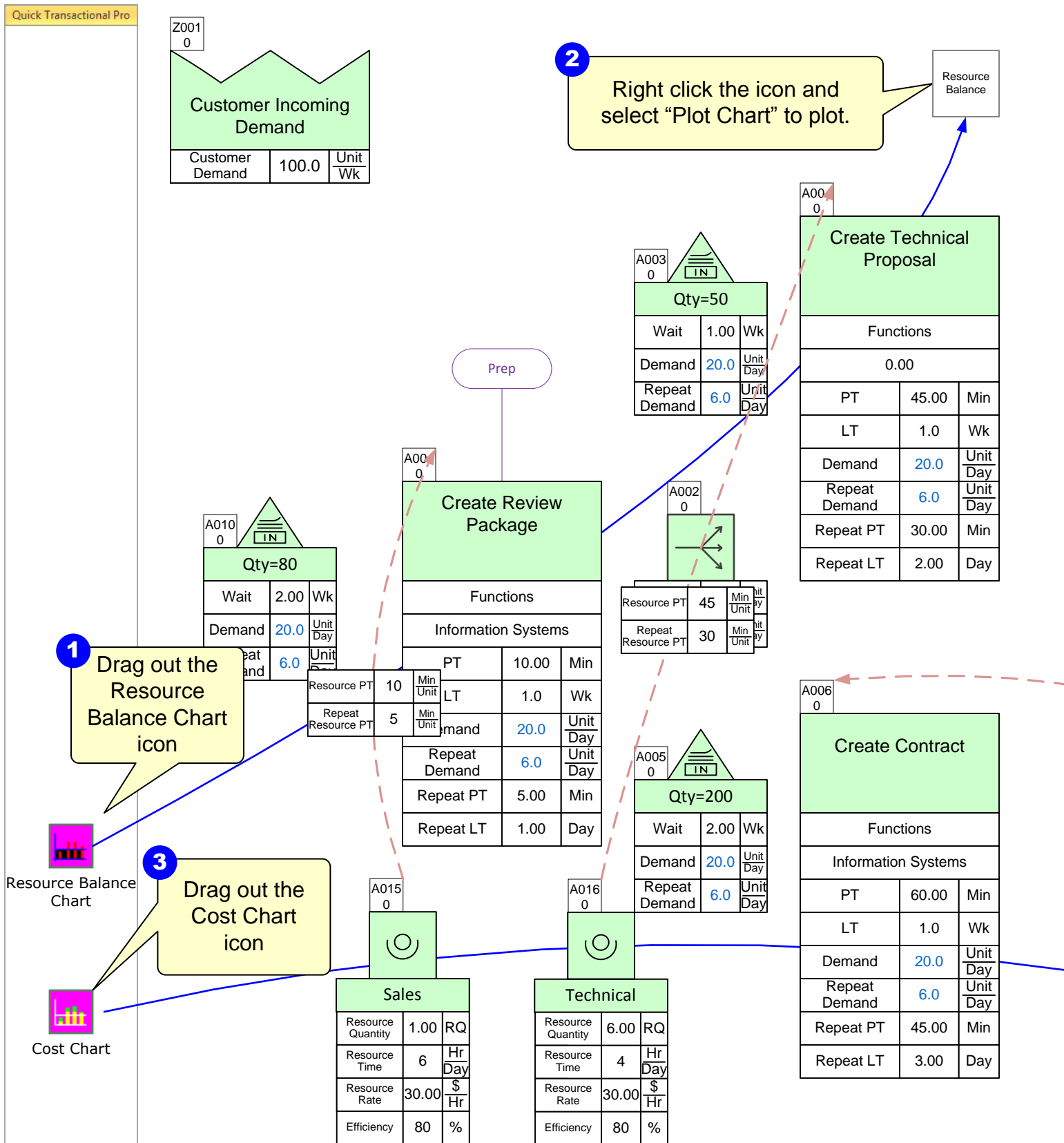
Demand	17.0	Unit Day
Demand %	84.80	%

Resource PT	60	Min Unit
Repeat Resource PT	45	Min Unit

Legal

Resource Quantity	5.00	RQ
Resource Time	4	Hr Day
Resource Rate	30.00	\$ Hr
Efficiency	80	%

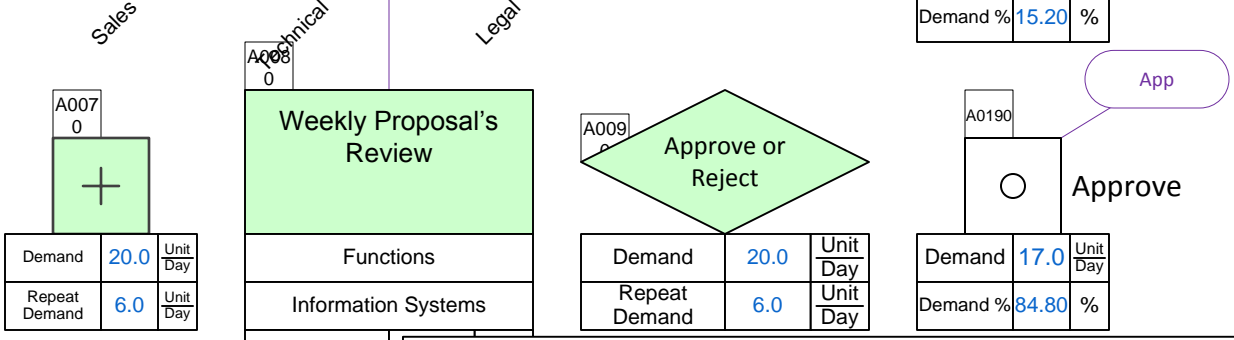
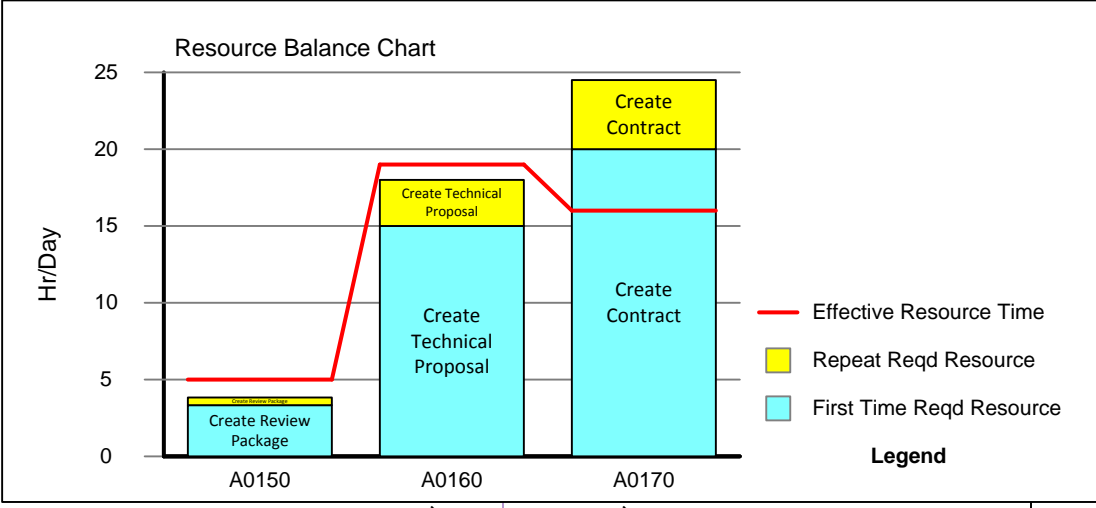
Step 17: Resource Balance Chart and Activity Cost Chart



Route	Route Name	Route Traversals	Route %	Cumulative Route %	Lead Time (longest)	Termination Name
	Txt	Unit/Day	%	%	Day	Txt
1	Prep Check App	11.84	59.20	59.20	35.00	App
2	Prep Check Prep Check App	5.12	25.60	84.80	64.00	App
3	Prep Check Deny	2.16	10.80	95.60	35.00	Deny
4	Prep Check Prep Check Deny	0.88	4.40	100.00	64.00	Deny
Summary		20.00	100.00	100.00	43.70	

Units	Day	Wk	Year
	8	5	52
	Hr	Day	Wk

Route Table

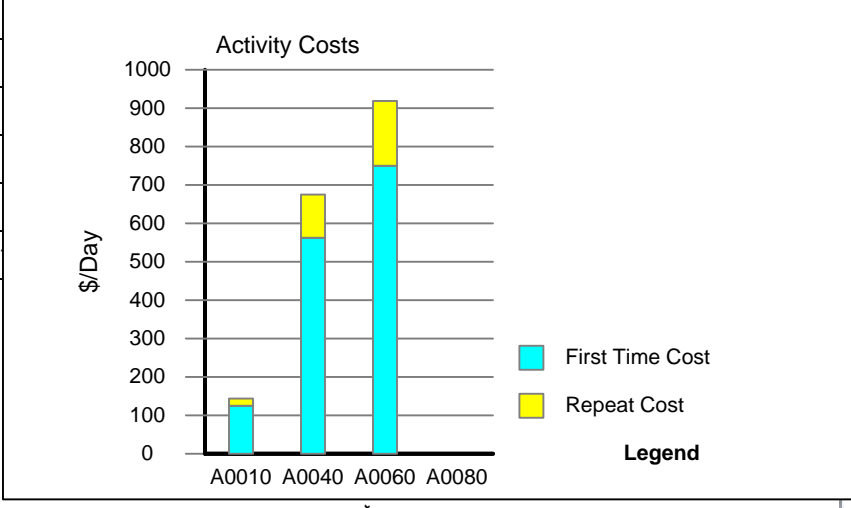


Resource PT	60	Min Unit
Repeat Resource PT	45	Min Unit

4 Right click the icon and select "Plot Chart" to plot.

Legal	
Resource Quantity	5.00 RQ
Resource Time	4 Hr/Day
Resource Rate	30.00 \$/Hr
Efficiency	80 %


Activity Cost



Create Review Package
 Create Technical Pr..
 Create Contract
 Weekly Proposal's R..

Step 18: Add Kaizen Starbursts

Quick Transactional Pro

1 Click the Show Pipes button to hide the resource pipes on the map.  Show Pipes

3 Right-click the starburst and select "Edit Kaizen".

2 Drag out kaizen starbursts from the Quick Extras stencil on the right and fill in the problems.

Z001
0

Customer Incoming Demand		
Customer Demand	100.0	Unit Wk

001
2 week back log

A010
0

Qty=80		
Wait	2.00	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A001
0

Create Review Package		
Functions		
0.00		
PT	10.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Repeat PT	5.00	Min
Repeat LT	1.00	Day

A003
0

Qty=50		
Wait	1.00	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A004
0

Create Technical Proposal		
Functions		
0.00		
PT	45.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Repeat PT	30.00	Min
Repeat LT	2.00	Day

002
2 week queue for contracts

A005
0

Qty=200		
Wait	2.00	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

003
Bottleneck at the Create Contract process

A006
0

Create Contract		
Functions		
Information Systems		
PT	60.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Repeat PT	45.00	Min
Repeat LT	3.00	Day

A015
0


Sales		
Resource Quantity	1.00	RQ
Resource Time	6	Hr Day
Resource Rate	30.00	\$ Hr
Efficiency	80	%

A016
0

Technical		
Resource Quantity	6.00	RQ
Resource Time	4	Hr Day
Resource Rate	30.00	\$ Hr
Efficiency	80	%



Step 29: Plot the Kaizen Impact Matrix

3 To generate a Kaizen report in Excel, click the Kaizen Export button in the toolbar.  Kaizen Export

Quick Transactional Pro

Z001
0

Customer Incoming Demand		
Customer Demand	100.0	Unit Wk

001
2 week back log

A010
0

Qty=80		
Wait	2.00	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

1 Drag out the Kaizen Impact Matrix and right-click to plot.

Kaizen Impact Matrix

Prep

A001
0

Create Review Package		
Functions		
Information Systems		
PT	10.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Repeat PT	5.00	Min
Repeat LT	1.00	Day

A003
0

Qty=50		
Wait	1.00	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A004
0

Create Technical Proposal		
Functions		
0.00		
PT	45.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Repeat PT	30.00	Min
Repeat LT	2.00	Day

002
2 week queue for contracts

A002
0

Qty=200		
Wait	2.00	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

003
Bottleneck at the Create Contract process

A006
0

Create Contract		
Functions		
Information Systems		
PT	60.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Repeat PT	45.00	Min
Repeat LT	3.00	Day

A015
0

Sales		
Resource Quantity	1.00	RQ
Resource Time	6	Hr Day
Resource Rate	30.00	\$ Hr
Efficiency	80	%

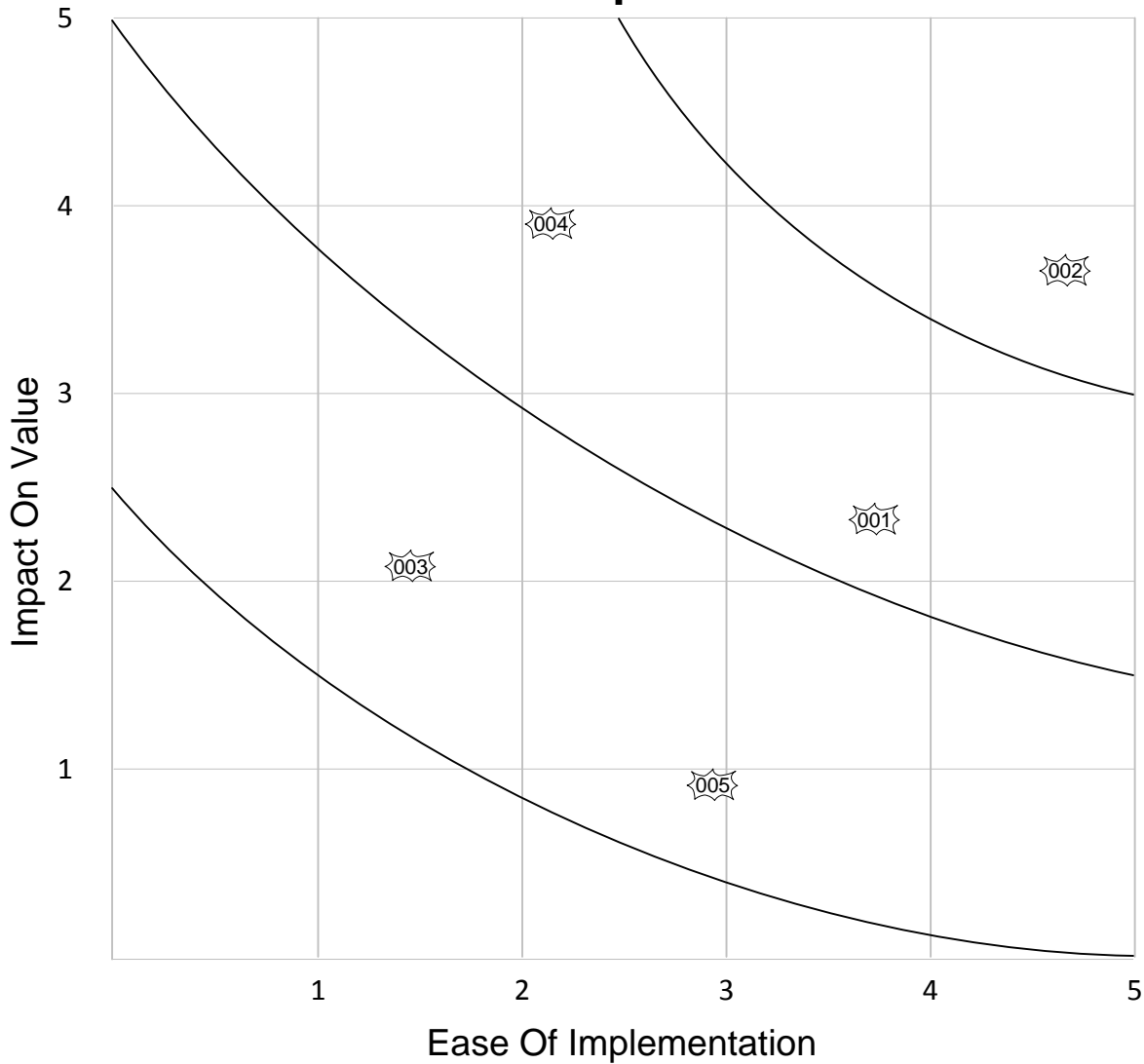
A016
0

Technical		
Resource Quantity	6.00	RQ
Resource Time	4	Hr Day
Resource Rate	30.00	\$ Hr
Efficiency	80	%



Route	Route Name	Route Traversals	Route %	Cumulative Route %	Lead Time (longest)	Termination Name	Units	Day	Wk	Year
	Txt	Unit/Day	%	%	Day	Txt		8	5	52

Kaizen Impact Matrix



e..

KAIZEM KEY

≥ xx

≤ xx

△ a

c b

Exp

I

Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Activity Time	1.0	Day Wk
Batch Qty	150.00	Unit


005 High percent of rework/change

2 Drag out the Kaizen Key Creator.

Quantity	A0170	RQ
Resource Time	4	Hr Day
Resource Rate	30.00	\$ Hr
Efficiency	80	%


- (001) 2 week back log
- (002) 2 week queue for contracts
- (003) Bottleneck at the Create Contract process
- (004) 1 week delay from periodic meeting
- (005) High percent of rework/change

Step 20: Creating a future state map

1 Use the Map Copy button to copy the whole map to a new page in the file.  Map Copy

Quick Transactional Pro

Z001
0




Customer Incoming Demand

Customer Demand	100.0	Unit Wk
-----------------	-------	---------

001
2 week back log

A010
0



Qty=80

Wait	2.00	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day


Prep

A001
0

Create Review Package

Functions		
Information Systems		
PT	40.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Repeat PT	5.00	Min
Repeat LT	1.00	Day

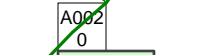
A003
0



Qty=50

Wait	1.00	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A002
0



Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A004
0


Create Technical Proposal

Functions		
0.00		
PT	45.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Repeat PT	30.00	Min
Repeat LT	2.00	Day

003
Bottleneck at the Create Contract process

002
2 week queue for contracts

A005
0



Qty=200

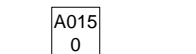
Wait	2.00	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A006
0

Create Contract

Functions		
Information Systems		
PT	60.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Repeat PT	45.00	Min
Repeat LT	3.00	Day

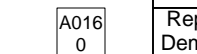
A015
0



Sales

Resource Quantity	1.00	RQ
Resource Time	6	Hr Day
Resource Rate	30.00	\$ Hr
Efficiency	80	%

A016
0

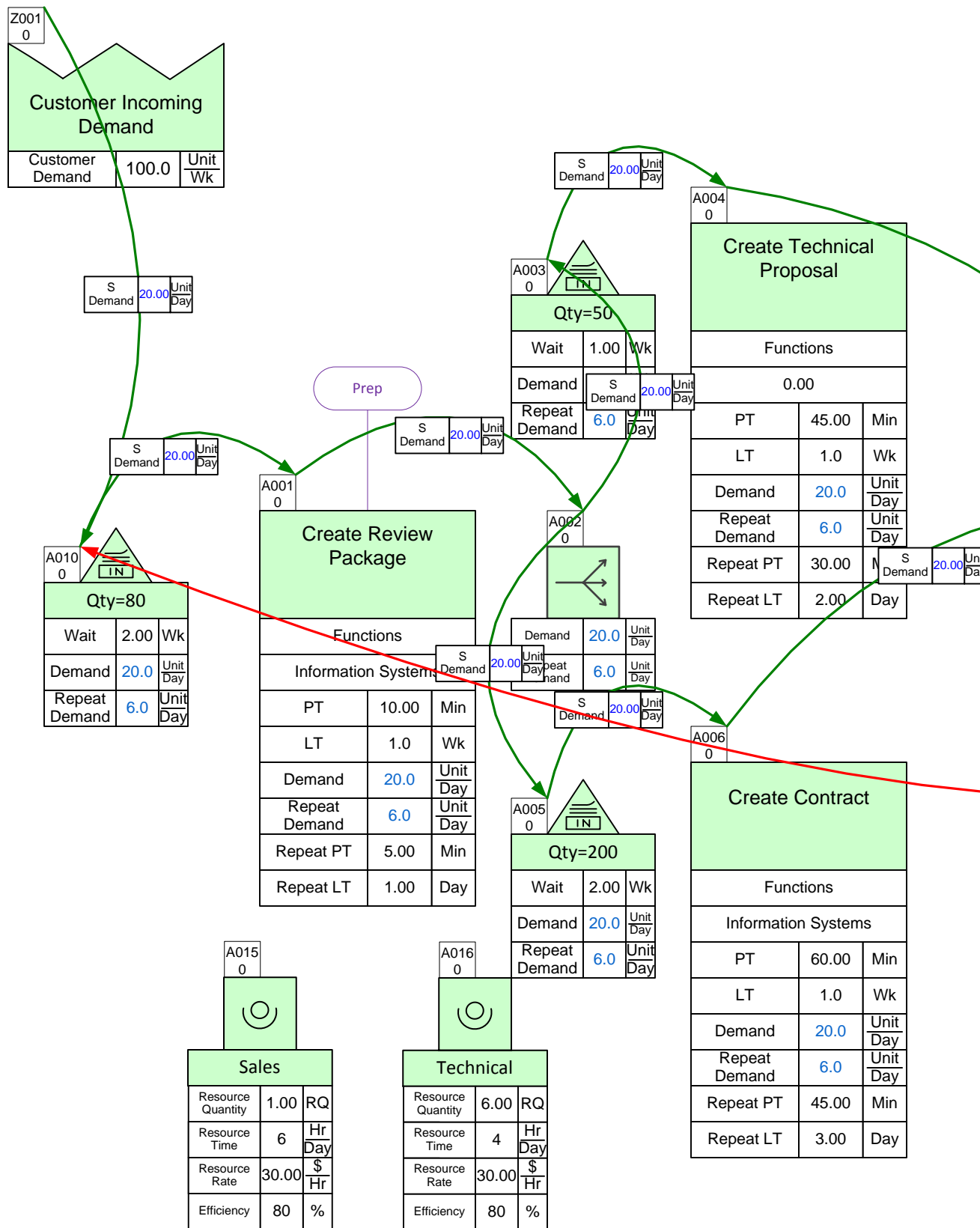


Technical

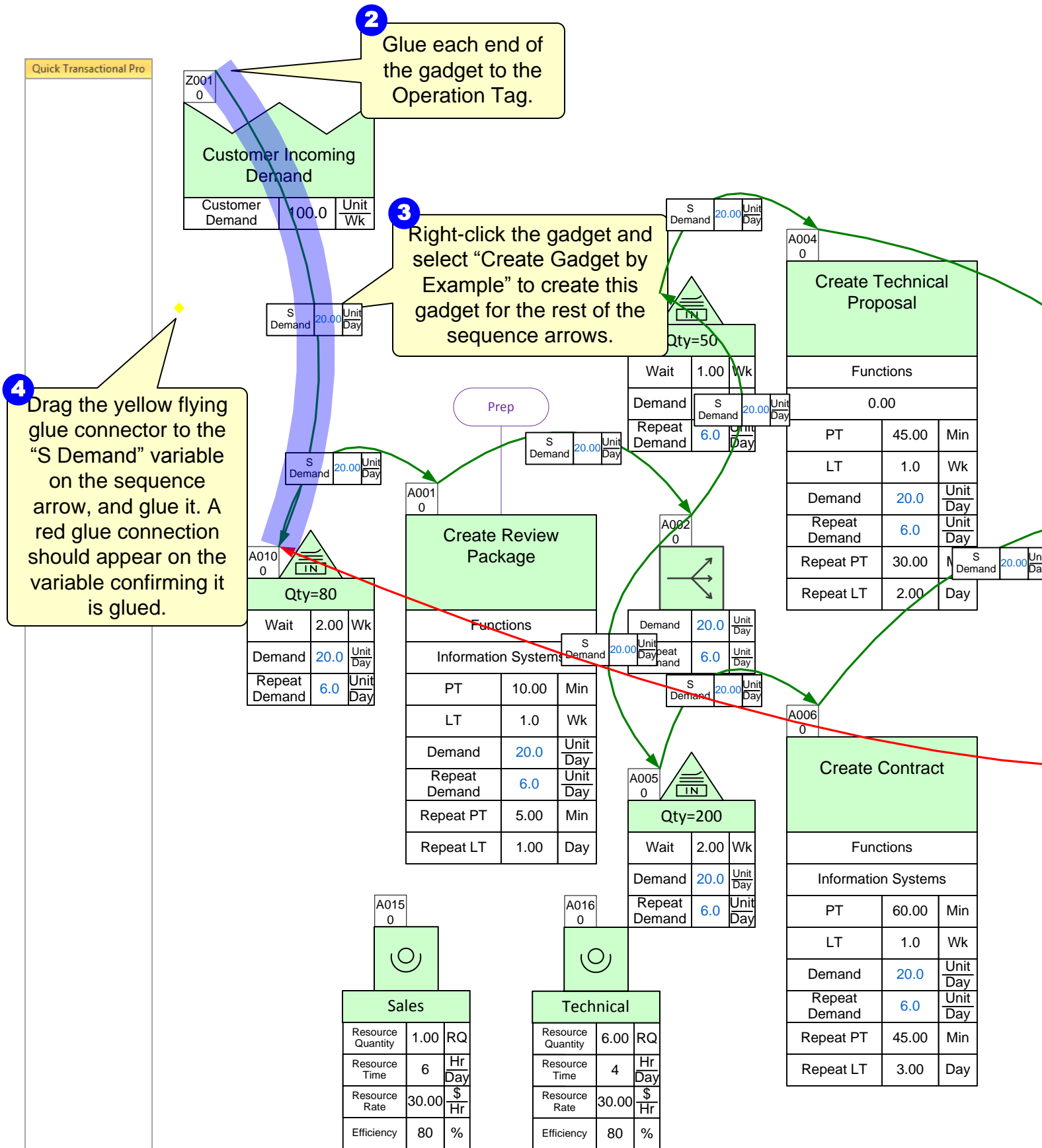
Resource Quantity	6.00	RQ
Resource Time	4	Hr Day
Resource Rate	30.00	\$ Hr
Efficiency	80	%

Step 21: Hide/Show - Demand Visualization

Quick Transactional Pro



Step 22: Demand Visualization – Line Thickness Gadget



Quick Transactional Pro

Z001	0
Customer Incoming Demand	
Customer Demand	100.0 Unit/Wk

S Demand	20.00 Unit/Day
----------	----------------

S Demand	20.00 Unit/Day
----------	----------------

A010	0
Qty=80	
Wait	2.00 Wk
Demand	20.0 Unit/Day
Repeat Demand	6.0 Unit/Day

A001	0
Create Review Package	
Functions	
Information Systems	
PT	10.00 Min
LT	1.0 Wk
Demand	20.0 Unit/Day
Repeat Demand	6.0 Unit/Day
Repeat PT	5.00 Min
Repeat LT	1.00 Day

S Demand	20.00 Unit/Day
----------	----------------

Wait	1.00 Wk
Demand	S Demand 20.00 Unit/Day
Repeat Demand	6.0 Unit/Day

S Demand	20.00 Unit/Day
----------	----------------

A005	0
Qty=200	
Wait	2.00 Wk
Demand	20.0 Unit/Day
Repeat Demand	6.0 Unit/Day

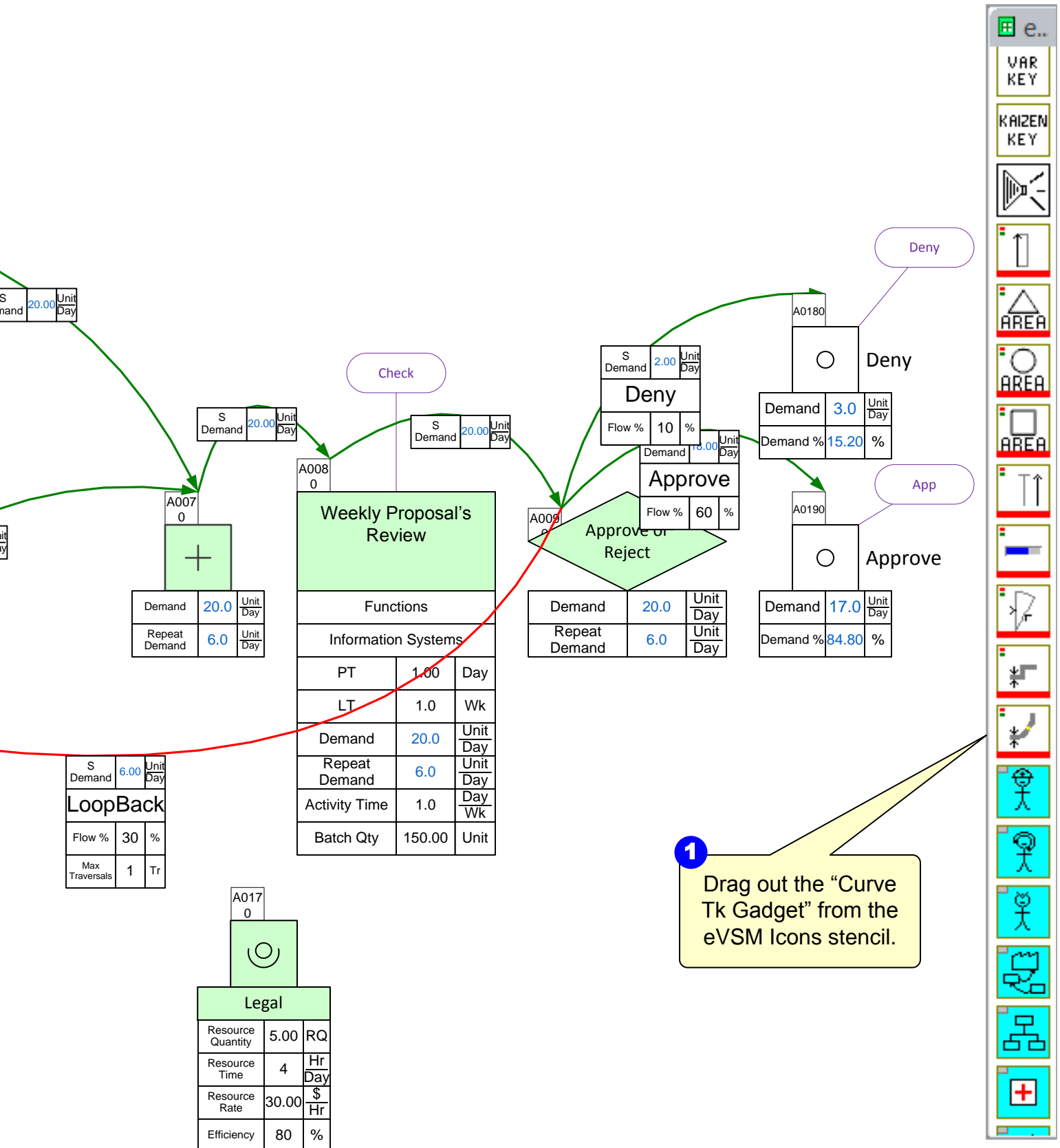
A004	0
Create Technical Proposal	
Functions	
0.00	
PT	45.00 Min
LT	1.0 Wk
Demand	20.0 Unit/Day
Repeat Demand	6.0 Unit/Day
Repeat PT	30.00 Min
Repeat LT	2.00 Day

A006	0
Create Contract	
Functions	
Information Systems	
PT	60.00 Min
LT	1.0 Wk
Demand	20.0 Unit/Day
Repeat Demand	6.0 Unit/Day
Repeat PT	45.00 Min
Repeat LT	3.00 Day


A015	0
Sales	
Resource Quantity	1.00 RQ
Resource Time	6 Hr/Day
Resource Rate	30.00 \$/Hr
Efficiency	80 %

A016	0
Technical	
Resource Quantity	6.00 RQ
Resource Time	4 Hr/Day
Resource Rate	30.00 \$/Hr
Efficiency	80 %

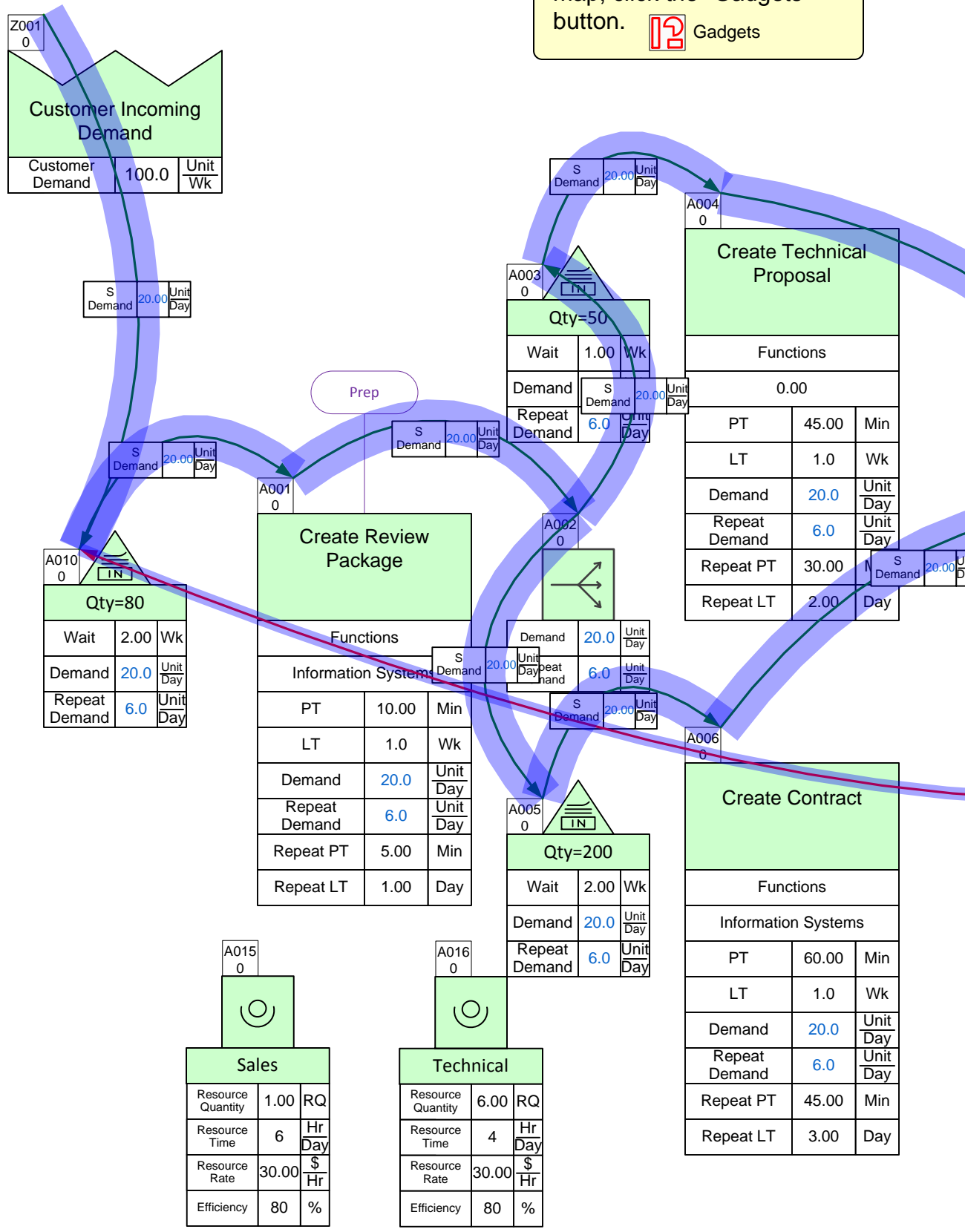
Units	Day	Wk	Year
	8	5	52
	Hr	Day	Wk



Step 23: Managing Gadgets

2 To manage gadgets on the map, click the "Gadgets" button.  Gadgets

Quick Transactional Pro



Z001 0

Customer Incoming Demand		
Customer Demand	100.0	Unit Wk

S Demand	20.00	Unit Day
----------	-------	----------

A010 0

Qty=80		
Wait	2.00	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A001 0

Create Review Package		
Functions		
Information Systems		
PT	10.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Repeat PT	5.00	Min
Repeat LT	1.00	Day

A003 0

Qty=50		
Wait	1.00	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A004 0

Create Technical Proposal		
Functions		
0.00		
PT	45.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Repeat PT	30.00	Min
Repeat LT	2.00	Day

A005 0

Qty=200		
Wait	2.00	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day

A006 0

Create Contract		
Functions		
Information Systems		
PT	60.00	Min
LT	1.0	Wk
Demand	20.0	Unit Day
Repeat Demand	6.0	Unit Day
Repeat PT	45.00	Min
Repeat LT	3.00	Day

A015 0

Sales		
Resource Quantity	1.00	RQ
Resource Time	6	Hr Day
Resource Rate	30.00	\$ Hr
Efficiency	80	%

A016 0

Technical		
Resource Quantity	6.00	RQ
Resource Time	4	Hr Day
Resource Rate	30.00	\$ Hr
Efficiency	80	%



TOC ChapHead

Chapter Sections

Text Block



Icons



Toolbar buttons

00

Index Entry

Page Number ,

Icon Name

Process

A

Page

Pag

s

TOC Heading

Questions

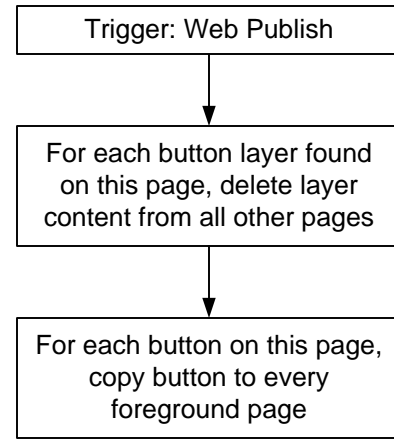
Content

Entry for Button Index

Entry for Icon Index

Program Logic

- This page contains the masters for the navigation buttons.
- Every shape on this page which is associated with a layer with the letters "MJ" in it should be copied to every foreground page and be put in exactly the same position it is on this page. It can only be located in the designated left margin.
- Each button is on a different layer. User can create new buttons on new layers. Each layer must have the letters "MJ" in it
- User can replace buttons as layer name is maintained.
- On every web publish all shapes with a pinx of < 0.325 will first be deleted
- Hyperlinks on buttons can be edited on this page only.
- The 3 Index chapters will only be created if their respective button exists on this page (layer names of these buttons are fixed and cannot be changed)



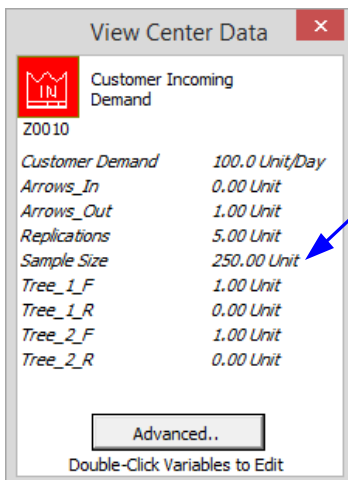
Appendix A

Increasing Sample Size to Improve Accuracy

A sample set of units originating at the customer shape is sent through the value stream, one at a time, and forks at decision points based on the Flow % variables. This method is used to approximate demand and repeat demand values at each point. The accuracy of these values increases if the sample size is increased, but at the expense of higher compute times.

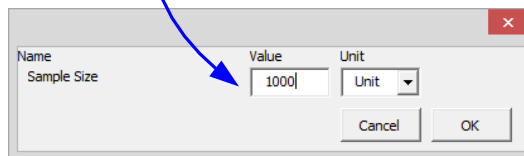
The default sample size is set to 250 units. In the example on the right, the demands at Process A and B are approximately their 40 and 60 theoretical values. We recommend after creating a map, make a “final run” and increase the sample size to improve the accuracy. To do that, follow the steps below.

1. Select the Customer Center, then click the List Variables button in the toolbar.  List Variables

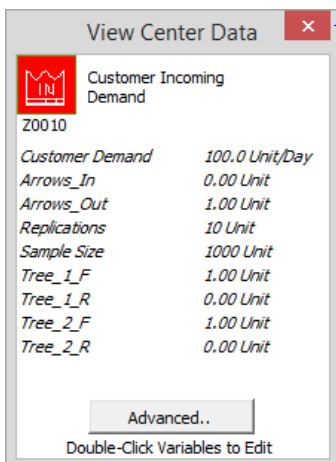


2. Double click the “250.00 Unit” to change the number.

3. Change the Value to 1000 and click OK.



4. Change the number of Replications from the default of 5.00 Units to 10.

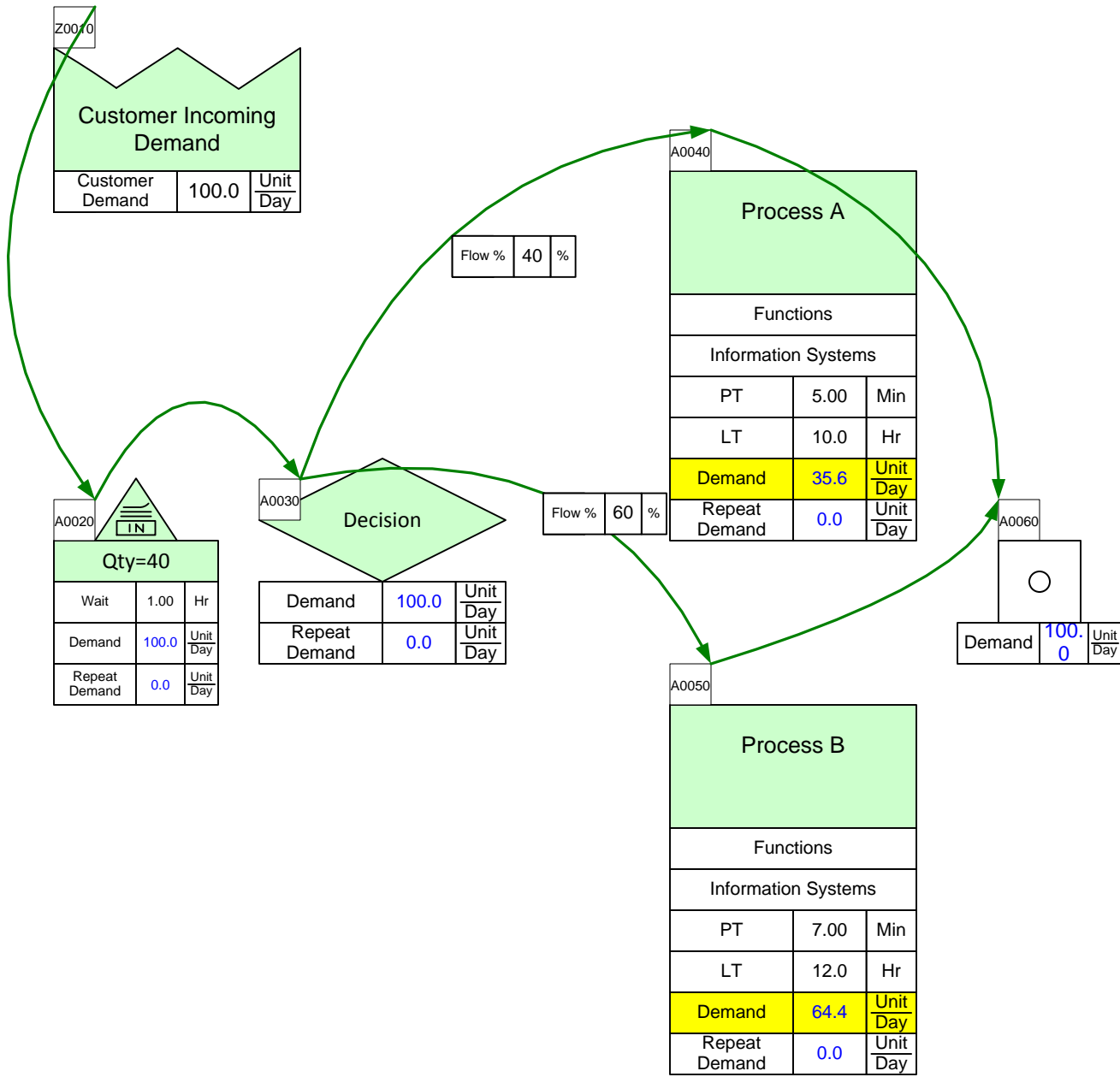


5. Click the X in the top right corner to get out of the List Variables form.

6. Click the Solve button in the toolbar to run the simulation again with the new sample size and number of replications.



7. The demand numbers will now be closer to their theoretical values.

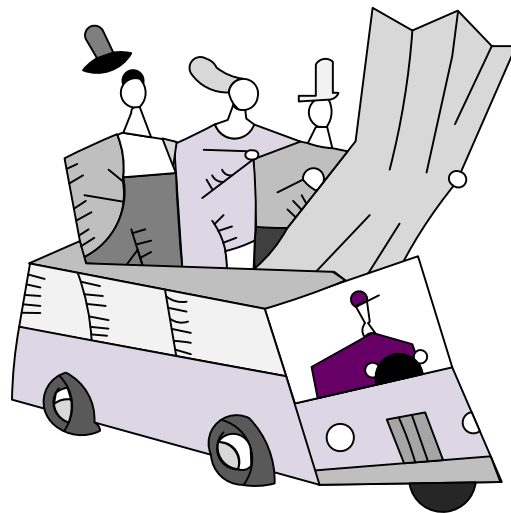


Route	%	Cum. %	Name	Longest Path Time (Day)
1	64.4	64.4	Route 1	1.63
2	35.6	100.0	Route 2	1.38

Day	Wk	Year
8	5	52
Hr	Day	Wk

eVSM Data
Quick Entry
Ver. 8.21 2006.0

Training Evaluation & Reflection



eVSM Training Evaluation Form

Name: _____

Title/Role: _____

Email: _____

Please indicate your impressions of the items listed below.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. The training met my expectations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I will be able to apply the knowledge learned.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The training objectives for each topic were identified and followed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The content was organized and easy to follow.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The materials distributed were pertinent and useful.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The trainer was knowledgeable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. The quality of instruction was good.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. The trainer met the training objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Class participation and interaction were encouraged.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Adequate time was provided for questions and discussion.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. How do you rate the training overall?	Excellent <input type="checkbox"/>	Good <input type="checkbox"/>	Average <input type="checkbox"/>	Poor <input type="checkbox"/>	Very Poor <input type="checkbox"/>
12. What aspects of the training could be improved?					

eVSM Training Evaluation Form

1. Describe the next mapping activity you are involved in.
2. Do you plan to use the tools you have learned about in the workshop? If so, how?
3. What challenges do you envisage in applying these tools?
4. What advantages will you realize in applying these tools?
5. Other Comments?