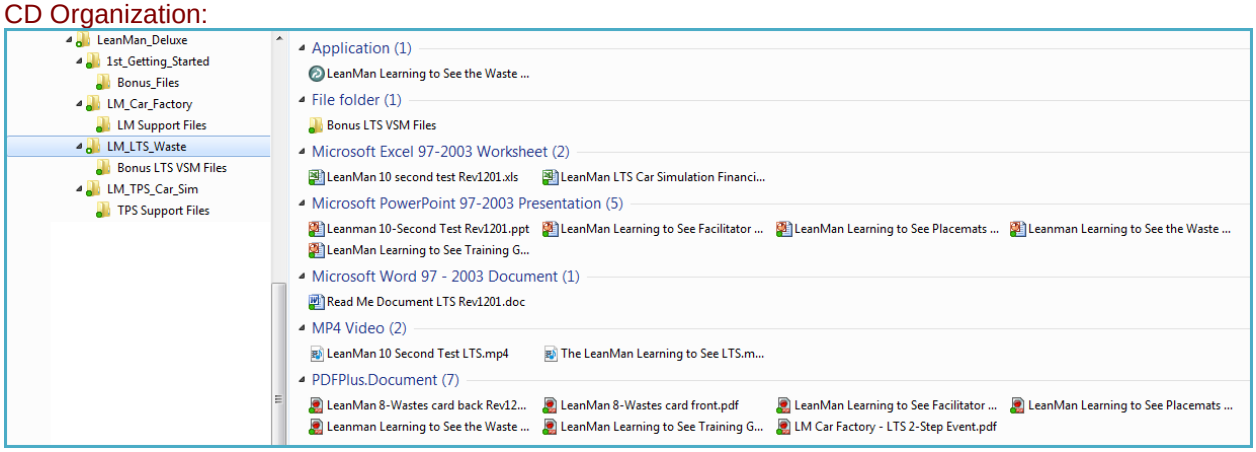
Read Me Document LTS Rev1701.doc

CD Organization:



The first action should be to look at each file type or name shown in the directory. Here you will find some navigation information to help you use the files provided with the product, starting with this Read Me Document file.

The Train the Trainer Macromedia ™ Flash Movie will help the facilitator become familiar with the Learning to See presentation materials and to ease the apprehension of performing the presentation. The flash movie may also be suitable for display as the main presentation method leading into the participant exercises, or for introducing new members of the team to the lean concepts. New in 2012 are the two additional MP4 facilitator training movies about the 10-Second Teat and Learning to See The Waste.

The 10-Second Test Excel file provides metric calculations for the 10-Second Test activity. Record your observations over a period of time (a few days) and plot the results to obtain the estimate of pure waste to eliminate from your process. Use the shortened participant form during the simulations to practice the method.

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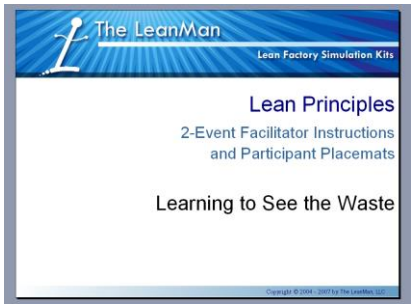
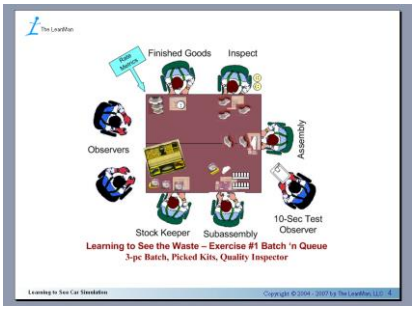
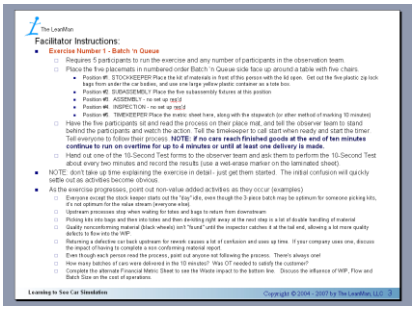
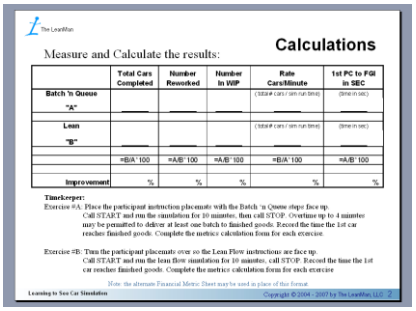


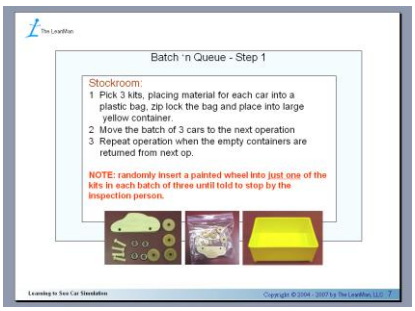
The 2-Event Learning to See the Waste simulation is provided in both PowerPoint and Adobe formats. The participant placemat set is also provided pre-printed and laminated. This is the simplest and best first event for you to perform. It will get you used to the Car Factory materials and help to make all of the more complex simulation events easier to understand and to facilitate. Total time can be under 30 minutes for both Batch 'n Queue and Lean Flow.

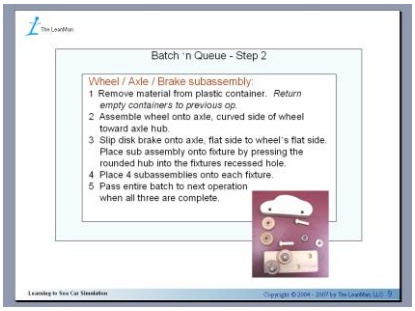
The guide shows all setups, provides talking points for the facilitator; with suggestions for follow up after each step to include elements of 5S and Waste review.

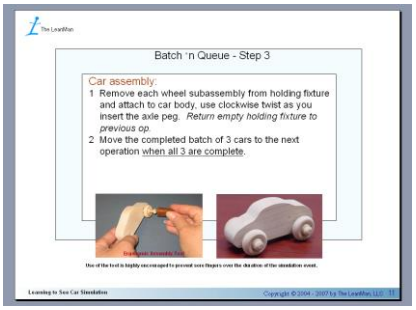


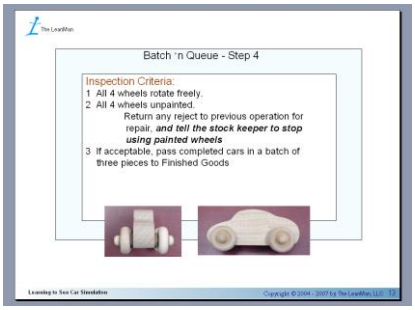


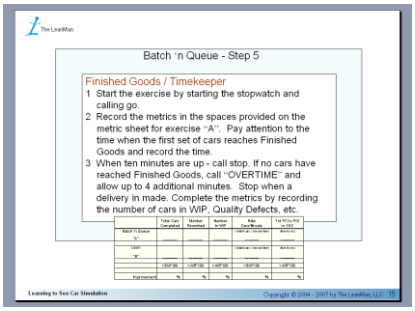












The table and participant set up for the first event, Batch 'n Queue flow, is provided using graphical representations of the training room. A detail set up and instruction 1-page laminated placemat helps the facilitator set the materials into their proper place. The 10-Second Test form is also provided for one or two participants to perform during the event.

Metrics reporting is important and must be done with meaning. There are two methods provided. The very simple method records a few characteristics of the event timing and quality.

A more complex financial metrics method is also provided and is supported by an Excel file on the CD

Financial Chart Learning to See the Waste	Run 'A' Batch 'n Queue		Run 'B' Lean Flow	
		$	#	$
# Cars delivered x $500 ea = **Total Sales =**	3	$ 1,500.00	18	$ 9,000.00
Cost of Goods Sold				
Sales Material = # cars sold x $100 ea	3	$ 300.00	18	$ 1,800.00
Labor = # workers x $165 ea	5	$ 825.00	3	$ 495.00
Labor OT = # minutes OT x $40 ea worker	4	$ 800.00	0	$ -
Overhead = # Chairs used x $10 ea	5	$ 50.00	3	$ 30.00
Scrap = # nonconforming cars x $100 each	3	$ 300.00	1	$ 100.00
Total of COGS =		$ 2,275.00		$ 2,425.00
Capital Charges				
Work in Process				
Stockroom = # undelivered kit bags picked x $100 ea	2	$ 200.00		
Wheel/Axle/Brake Subassy = # Subassembly Items built x $10 ea	11	$ 110.00	3	$ 30.00
Car Assy = # Undelivered cars built x $60 ea	2	$ 120.00	1	$ 60.00
Inspection = # Cars in inspection x $100 ea	3	$ 300.00		
Ship = # Cars in Finished Goods x $100 ea	0	$ -	0	$ -
Facilities				
# Tables used x $15 ea	2	$ 30.00	1	$ 15.00
# Fixtures used x $10 ea	5	$ 50.00		
Total Capital Charge =		$ 810.00		$ 105.00
Sales – COGS – Capital Charges =**EVA =**		$ (1,585.00)		$ 6,470.00

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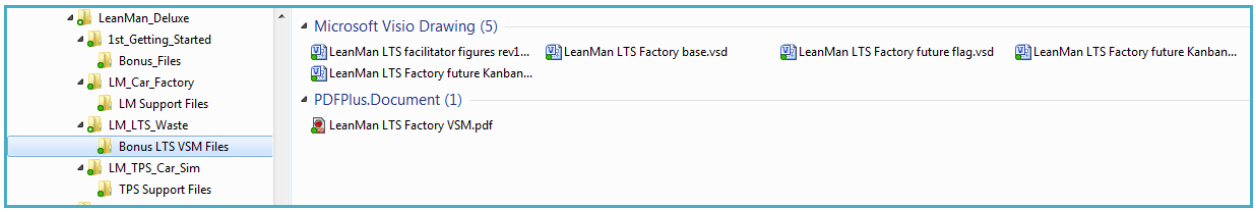
I'm often asked – why do the complex metric? The inclusion of fixtures, tooling and facilities improvements and the reduction in work in process inventory make a tremendous impact on the bottom line – it's not just a method of eliminating people, but rather total cost.

Take a look at the chart above at the improvement in EVA with Lean Flow. What better way to prove the concepts than to really show them?



The LTS bonus files include a Value Stream Map for the LTS event. The VSM is in Adobe Acrobat and in the native Visio file format.

Also included in the Visio files are the graphics used to create the presentation slides and participant placemats. Use them to edit, add or change the features of the presentation materials to customize them for your use.

Facilitator Notes:

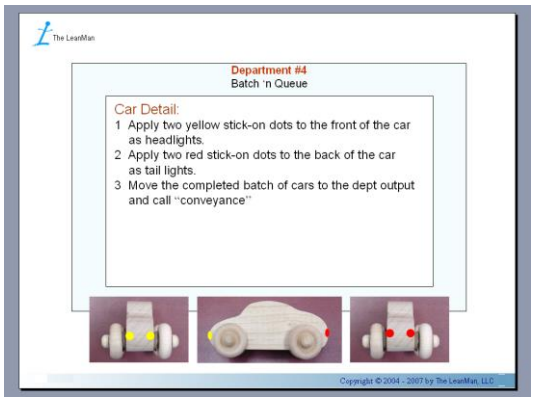
The Learning to See the Waste 2-event simulation is simple to perform, easy to set up and facilitate, and requires only a very few steps. Both events can be performed in under 30 minutes. For this reason, it is often overlooked as too simple. Yet – it is one of the most powerful demonstrations of the power of Lean Flow available. Don't miss the opportunity to present your students with the epiphany – the sudden understanding and enlightenment that this event makes possible. It has that real W O W factor!!! This simulation can be performed with very large groups by adding a Car Factory Kit for every 8 people. I've run 6 teams simultaneously with great success. Clients have run as many as 30 teams using one facilitator assistant for every 5 teams to present to groups as large as 240.

The LTS simulation uses a 3-piece batch size, but feel free to adjust batch size to control the amount of time the simulation requires. The simulation can be run with any number in the batch up to five pieces; the more per batch the longer the exercise takes to perform. Another variant is to let the two events run until all 20 cars in the Car Factory Kit are fully assembled instead of the 10 minutes stated on the placemats. Caution – this can be painful to watch in Batch mode – for an hour at least. Lean Flow is still under 10 minutes. This in itself can be a way to show executives the power of lean.

The simulation can be run with as few as 5 participants, but additional people to act as material movers (conveyance) and observers for the 10-Second Test increase the number of active participants. Moving tables at distance and setting up functional departments for the Batch 'n Queue also adds some reality to the event, and also allows a more obvious condensation into a smaller setting for Lean Flow.

Adding Quality Control functions such as nonconforming material reject cards; lot reject versus single item reject methods; and "rework hospital" versus in-line rework methods add to the realism of the flow. Methods that mimic the training audience's own quality methods should be used. Some fun can be had in the Batch 'n Queue event by having a real quality department person selected from the participants to review and initial each reject card before rework can be performed, and then have the person inspect the rework performed and initial again before letting the car back into the stream. Have this person sit across the room and use a material mover (conveyance person) to transfer the material when required. In like fashion, you can add a materials person to order replacement parts for the "rework hospital."

Having participants swap seats between each exercise is recommended to keep the learning curve consistent. Swap observers and hands-on participants between events. For example, if 8 people are available, have 5 sit and run the Batch 'n Queue and 3 perform the 10 second test. Then have the 5 stand and observe while the 3 sit to run the Lean Flow.



Add a third assembly person to the event to apply small (1/4 dia) Avery 05790 red and Avery 05792 yellow color dots for head and tail lights (available at OfficeMax, Office Depot or Staples)

The dots should be applied half on the end and half wrapped to the side of the car body. Doing this will make pulling them off after the even very easy. If they are applied full flat to the car body end they adhere fairly well and will require scrapping with a fingernail to remove.

Good luck in your lean endeavors.

The LeanMan