



# Lean Design Institute

## VSM in the OR Course Syllabus

Objectives	Content (Topics)
<p style="text-align: center;"><b>Welcome and Course Orientation</b></p> <p>Familiarize students with the format of the presentation lessons and the structure of the online quizzes. Take a sample quiz.</p>	<ul style="list-style-type: none"> <li>• Learn to navigate the Articulate Presenter interface.</li> <li>• Try an interactive slide like the ones embedded in the lessons.</li> <li>• Take an online sample quiz, like the ones that will follow every other lesson.</li> </ul>
<p style="text-align: center;"><b>Introduction to Value Stream Mapping (VSM)</b></p> <p>Learn the basic definitions and concepts associated with the VSM technique. Get acquainted with the VSM in the OR Roadmap.</p>	<ul style="list-style-type: none"> <li>• Define VSM, its uses in the OR environment as well as the whole hospital.</li> <li>• Describe the benefits of the VSM method.</li> <li>• Understand the Global steps to conduct a VSM activity.</li> <li>• Introduce the VSM in the OR Roadmap.</li> <li>• Take a sample quiz.</li> </ul>
<p style="text-align: center;"><b>Lesson 1 - Identify the Customer</b></p> <p>Learn to identify the Customer as the person or group who receives the delivery of value.</p>	<ul style="list-style-type: none"> <li>• Define the customer.</li> <li>• Who is the customer in a hospital?</li> <li>• Lean and VSM support a patient-centric view of the OR.</li> <li>• Drawing the customer into the VSM.</li> </ul>
<p style="text-align: center;"><b>Lesson 2 - Identify the Value</b></p> <p>Learn to identify Value as the physical or service item for which the customer is willing to exchange consideration.</p>	<ul style="list-style-type: none"> <li>• Definition of value in general.</li> <li>• Value in the hospital.</li> <li>• Value comes in many forms, especially in the hospital.</li> <li>• Value in the OR.</li> <li>• Some rules for deciding what value to map.</li> </ul>
<p style="text-align: center;"><b>Lesson 3 - Identify the Processes</b></p> <p>Learn to identify a Process as a grouping of work steps that lead to the delivery of <i>Value</i> to a <i>Customer</i>.</p>	<ul style="list-style-type: none"> <li>• Defining a Process.</li> <li>• Process start and end points.</li> <li>• Example from Sterile Processing.</li> <li>• A process as an element of the value stream.</li> <li>• The Process Owner.</li> <li>• Drawing a process in the VSM.</li> </ul>
<p style="text-align: center;"><b>Lesson 4 - Draw the Process Relationships</b></p> <p>Learn to draw a graphical display of the relationship of processes as they are at the time of mapping.</p>	<ul style="list-style-type: none"> <li>• Basic VSM symbols.</li> <li>• The VSM canvas.</li> <li>• Mapping upstream and downstream.</li> <li>• Preparation materials.</li> <li>• Example.</li> </ul>

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<p><b>Lesson 5 - Establish Process Times</b> Learn to establish process times, either estimated or timed by a mapping team member.</p>	<ul style="list-style-type: none"> <li>• Each process must have a time.</li> <li>• Process times must be reasonable.</li> <li>• Estimating times versus timing processes.</li> <li>• The 80/20 rule for process times.</li> <li>• Accounting for variability.</li> </ul>
<p><b>Lesson 6 - Gather Ancillary Data</b> Learn to capture other relevant data elements like changeover times, batch sizes, downtime, number of shifts, and number of people.</p>	<ul style="list-style-type: none"> <li>• The VSM Data Box.</li> <li>• Defect rate.</li> <li>• Non-Value-Adding designation.</li> <li>• Staffing.</li> <li>• Number of Shifts.</li> <li>• Changeover/Turnover time.</li> <li>• Process uptime (Availability)</li> <li>• Distance travelled.</li> <li>• Process Maturity level.</li> <li>• The Standard Work Definition.</li> </ul>
<p><b>Lesson 7 - Identify Process Delays</b> Learn to spot every time the value is not being worked on. That non-value-adding time is a “delay”</p>	<ul style="list-style-type: none"> <li>• Definition of “delay”.</li> <li>• Examples of delays in the OR.</li> <li>• How to document delays in the VSM.</li> <li>• How delays contribute to total Lead-time.</li> <li>• Estimating versus timing delays.</li> </ul>
<p><b>Lesson 8 - Calculate Performance Metrics</b> Learn to answer the basic performance questions: How long does it take to deliver value? How much time is the value sitting waiting to be worked on? How many steps/feet do employees in the VS walk to deliver value?</p>	<ul style="list-style-type: none"> <li>• Definition of Lead-time.</li> <li>• The Timeline aka the Castle Wall.</li> <li>• Other relevant metrics: Staffing.</li> <li>• Other relevant metrics: Distance travelled</li> <li>• Other relevant metrics: Average Process Maturity Level.</li> </ul>
<p><b>Lesson 9 - Identify Sources of Waste</b> Learn to identify and document all the activities you found that do not add value to the value stream’s customer.</p>	<ul style="list-style-type: none"> <li>• What is waste.</li> <li>• Forms of Waste: Overproduction.</li> <li>• Forms of Waste: Transportation.</li> <li>• Forms of Waste: Motion.</li> <li>• Forms of Waste: Waiting.</li> <li>• Forms of Waste: Over-processing.</li> <li>• Forms of Waste: Excess Inventory.</li> <li>• Forms of Waste: Defects.</li> <li>• Forms of Waste: Ineffective Use of Computers.</li> <li>• Forms of Waste: Human Potential.</li> </ul>

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<p align="center"><b>Lesson 10 - Brainstorm Solutions</b></p> <p>Learn how to develop solutions as a team and by consensus. When in doubt, take a “Field Trip”.</p>	<ul style="list-style-type: none"> <li>• Taking stock of where you are in the VSM Roadmap.</li> <li>• The role of Mentors.</li> <li>• Documenting suggestions for improvement. The Kaizen Burst.</li> <li>• Focusing suggestions around Lean principles.</li> <li>• Displaying the VSM with all suggestions.</li> </ul>
<p align="center"><b>Lesson 11 - Solutions to Kaizen Events</b></p> <p>Learn that an idea is not a solution until we make a plan to implement it.</p>	<ul style="list-style-type: none"> <li>• Define Kaizen.</li> <li>• Types of Kaizen.</li> <li>• Process Improvement from within.</li> <li>• The role of the Kaizen Team Leader.</li> <li>• Scoping a Kaizen project.</li> <li>• When to use outside help.</li> </ul>
<p align="center"><b>Lesson 12 - Project Plan</b></p> <p>Learn how to bring all the identified opportunities for improvement into one Master Plan.</p>	<ul style="list-style-type: none"> <li>• The single project view.</li> <li>• The Value Stream view.</li> <li>• The project follow-up view.</li> </ul>
<p align="center"><b>Lesson 13 - Future State</b></p> <p>Learn to de-draw the VSM flowchart incorporating the identified improvements.</p>	<ul style="list-style-type: none"> <li>• What is the Future State VSM?</li> <li>• The impact of selected projects.</li> <li>• Drawing the Future State VSM.</li> </ul>
<p align="center"><b>Lesson 14 - Present Results</b></p> <p>Learn the basic elements of a Report-out presentation and roles during it.</p>	<ul style="list-style-type: none"> <li>• Basic elements of a Progress Report aka The Report-Out presentation.</li> <li>• Who prepares the report?</li> <li>• Management’s role in the report-out.</li> <li>• Reporting results.</li> <li>• Follow up after the report-out.</li> </ul>
<p align="center"><b>Lesson 15 - Next Steps</b></p> <p>Discuss suggestions for next steps in your Lean journey after completing a Value Stream Analysis.</p>	<ul style="list-style-type: none"> <li>• Taking stock of all the work done.</li> <li>• Getting started with Kaizen.</li> <li>• Leadership support is a must.</li> <li>• Pigheaded determination is a must.</li> <li>• Coaching and Mentoring is a must.</li> </ul>
<p align="center"><b>Certificate Exam</b></p> <p>Take a 30 question online exam, in order to earn a certificate of completion.</p>	<p>Questions will be asked regarding the content of every lesson, with a target of 1 minute per lesson.</p>