INSTRUCTOR DETAILS:
Instructor: Dr. Jim Mason
Phone: 306-585-4710 (office), 306-789-6578 (home), 306-541-3601 (cell)
Office: Ed 540.5
Email: I would prefer you use the class URcourses site rather than James.Mason@uregina.ca
Office Hours: Book an appointment via URcourses or phone for a time that suits your schedule.

CLASS DETAILS:
Class Dates: September 6, 2018
Class Times: December 6, 2018
Class Location: Education 514 6:00 pm.

COURSE DESCRIPTION
This course prepares introduces managers to operations management (OM). It focuses on topics MBAs currently or would soon be facing as managers. What do MBAs need to know about Lean OM to help them in their careers? We’ll stress recent topics: lean operations management, six-sigma, value-stream mapping, and the A3 management process to solve problems, gain agreement, mentor, and lead. We’ll learn by applying these concepts to cases. Our perspective tends to be strategic and managerial as opposed to the technical or heavier quantitative material traditionally taught in our undergraduate classes.

LEARNING OBJECTIVES / OUTCOMES
The intent of the course is to develop an understanding of operations management. The key objectives are to:

• Introduce participants to the lean operations management thinking;
• Recognize the strategic role of operations management relative to the other functional areas of enterprise;
• Appreciate how a basic understanding of OM is important to all career paths.
• An A3 can be used wherever there is a need for people to work together to get clarity on a problem or proposal and then to create a set of realistic and effective countermeasures. A3s can be prepared by individuals, teams, or any leader and his or her report.
• With this easy-to-use product, a company gets the tool it needs to understand and use value-stream mapping so it can eliminate waste in production processes. Start your lean transformation or accelerate your existing effort with value-stream mapping.
• Managers and executives just beginning a lean transformation will learn valuable insights about how to sidestep the technical and people problems that lay ahead. Experienced lean thinkers will discover fresh insights about overcoming resistance to change.
COURSE EXPECTATIONS

This course will entail a combination of seminar discussions, case discussion, videos a field trip, and possibly guest speakers. As a result, regular attendance in class and active participation in classroom activities are expected. Students are expected to prepare in advance for class and be able to participate in class discussions. It is expected that students will read and prepare appropriately for every class. Please read each section of the detailed course outline for weekly expectations on all components of the course.

Cases & Discussions – Most cases will provide students with the opportunity to read and prepare the case in advance, and then participate and discuss the case in class. We may also complement the cases with guest speakers and video.

Field Trips- We have one possibly two site visits scheduled. One visit will start at 6:00 pm at the site.

Written Assignments – There will be two team case assignments and a final exam using the A3 format.

COURSE MATERIALS

1. Cases are to be ordered for the course and will be available on URCourses. Your student account will be charged.
3. Mike Rother, John Shook, Learning to See…2003, Lean Enterprise Institute
4. Freddy and Michael Ballé, The Gold Mine…2006, Lean Enterprise Institute

Comments on these texts can be found at the end of the detailed outline. Please read them before starting the assigned readings.

COURSE ASSESSMENT SUMMARY

You will be evaluated based on the following elements:

- Class participation: Being involved in the learning process 15%
- Canadian Tire Check-out Configuration: Group of three case analysis and recommendations 15%
- Mattel and the Toy Recalls (A) Group of three case analysis and recommendations 20%
- Take-home final case exam (individual effort): 50%

For a description of the grading system, consult the Faculty of Graduate Studies and Research link here: https://www.uregina.ca/gradstudies/current-students/grad-calendar/grading-system.html#gradingsystem

DESCRIPTION OF ASSESSMENT

Two A3 written case analysis will be done in teams of 3:
1. Canadian Tire Checkout Configuration. Due at the beginning of class October 11.
2. Mattel and the Toy Recalls (A). Due at the beginning of class November 1.

One A3 written individual case analysis for the final exam by the exam date.

ACADEMIC REGULATIONS

Grading | Marks will be posted on UR Courses, typically within 10 days. If you want feedback on any specific submission, email me directly to make an appointment. If you feel you have been marked unfairly, I am willing to re-mark, but subject to three key conditions: (1) I will only entertain grade changes at the end of the semester, not during; (2) you will need to provide a detailed written rationale of
why you feel you were marked unfairly; (3) to ensure consistency, all your evaluations will be re-marked. Contacting the Instructor | Classes are structured so there is ample time for consultation after every lecture. If you want to make an appointment outside of class time, email me. I also am happy to respond to email questions regarding the content or the evaluations. I usually response to emails within 24-48 hours during the work week. However, note that I will not respond to emails on evenings or weekends.

Extensions or requests for changes by students to final exams and assignments due dates will require the student to complete a formal request for deferral. The student completes the request, consults with the instructor who must sign the form, and the instructor then submits the form (and any supporting documentation provided by the student) to Faculty of Graduate Studies and Research (FGSR). The decision (approved or denied deferral) is made by FGSR and is usually only approved if there are extenuating circumstances (e.g., illness, death, etc). The decision is sent by mail to the student and it is the student’s responsibility to ensure the deferred requirements are met within the outlined time frame. It is also the student’s responsibility to follow-up with FGSR if they do not receive a response from FGSR on their submitted request. Requests for deferral received more than two (2) weeks after the final day of the examination period will be denied. The deferral form can be found on the FGSR website at: https://www.uregina.ca/gradstudies/forms.html.

**STUDENT RESOURCES**

**Accessibility Services**
If there is any learner who, because of a disability or other consideration, may have a need for accommodation(s), please contact the Centre for Student Accessibility before or at the start of the course https://www.uregina.ca/student/accessibility/. The Centre will advise how you proceed and the required communication with your instructor.

**Counseling Services**
If any learner is experiencing personal problems which may be affecting their studies, please consider consulting UofR Consulting Services. For more information check here https://www.uregina.ca/student/counselling/services/index.html

**Writing Assistance**
The Student Success Centre (www.uregina.ca/ssc) offers both on-line resources and in- person tutoring on writing skills.

**TENTATIVE CLASS SCHEDULE :**
A tentative one page summary is followed be a detailed class by class assignment schedule
<table>
<thead>
<tr>
<th>CLASS DATE</th>
<th>TOPIC</th>
<th>READING</th>
<th>CASE/ ASSIGNMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saturday Jan 5</td>
<td>Introduction to Lean Operations Management, Case approaches: Getting Started-What is an A3?</td>
<td>Operational Systems Thinking, Learning to See pp 3-38</td>
<td>SouthWest Airlines, Baltimore</td>
</tr>
<tr>
<td>Friday Jan 9</td>
<td>Root Cause Analysis; Impact of Variability</td>
<td>Learning to See pp 41-52</td>
<td>Laboratorio De Analisis Argentina</td>
</tr>
<tr>
<td>Saturday Jan 17</td>
<td>Process Analysis</td>
<td></td>
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<tr>
<td>Friday Jan 23</td>
<td>Value Stream Mapping</td>
<td>Managing to Learn pp 1-35</td>
<td>Darden Business Publishing Gets Lean (A)</td>
</tr>
<tr>
<td>Friday Feb 5</td>
<td>Field Trip: TBA</td>
<td>Managing to Learn pp 61-99</td>
<td>Going Lean as a Solution to....</td>
</tr>
<tr>
<td>Saturday Feb 14</td>
<td>Value Stream Mapping</td>
<td>Managing to Learn pp 101-127</td>
<td>Value Stream Mapping at SYSENTEG (A)</td>
</tr>
<tr>
<td>Friday Feb 20</td>
<td>No class- reading week</td>
<td></td>
<td></td>
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<tr>
<td>Friday Feb 7</td>
<td>Supply Chain</td>
<td>Supply Chain Management at Wal Mart</td>
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<tr>
<td>Saturday Mar 7</td>
<td>(A3 Written assignment! Teams of three) Complexity of Multinational Operations</td>
<td>Mattel and the Toy Recalls (A)</td>
<td></td>
</tr>
<tr>
<td>Friday Mar 13</td>
<td>Field visit: 8:00am-Capitol GMC 4920 Rochdale Blvd. Host: Dan Broderick, General Manager, Capitol GMC</td>
<td>Explore visual workplace management on the web</td>
<td></td>
</tr>
<tr>
<td>Saturday Mar 21</td>
<td>Six Sigma</td>
<td>Six Sigma: A Basic Overview</td>
<td>Six Sigma at Academic Medical Hospital (A)</td>
</tr>
<tr>
<td>Friday Mar 27</td>
<td>Approach to Lean Manufacturing</td>
<td></td>
<td>Locite Corporation Final case released! Individual effort!</td>
</tr>
<tr>
<td>Saturday Apr 4</td>
<td>No class- Easter</td>
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<td></td>
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</tbody>
</table>
DETAILED CLASS SCHEDULE: Readings, cases and videos on the course site. Please come prepared to discuss the cases. Videos to be viewed before class please.

Sep-6 Readings: Learning to See pp 3-38

Video: Introduction to Lean Manufacturing (16 mins) (perhaps, time permitting))

Case: Southwest Airlines in Baltimore

The case provides information about process activities and information flows for turning a plane around. It allows for detailed analysis of resource utilization, capacity, & bottlenecks.

These questions may help your preparation:

1. How does Southwest Airlines (SWA) compete? What are their advantages compared to other airlines? Are they sustainable?
2. The plane turnaround process requires coordination among the twelve functional groups at SWA to service, in a brief period of time, an incoming plane match up with its new passengers and baggage for a prompt departure. Please evaluate the turnaround process at Baltimore resource utilization, capacity, bottlenecks, information flows, etc. How well is the process working?
3. Why is the operational performance at Baltimore eroding? Identify the issues that require action!
4. What would you recommend Matt Hafner do?

Sep 13-Readings: Learning to See pp 41-82

Video: Building a Lean Culture (20 mins)

Case: Laboratorio De Análisis Argentina

This case deals with capacity analysis in a service business context.

These questions may help your preparation:

1. What are the key success factors for LAA?
2. What are the capacity constraints?
3. How is variability affecting capacity at LAA? What can the company do to help control variability?
4. What changes would you suggest Anya Soles make to lab operations?
5. What is the cost of adding capacity? What is the cost of not having sufficient capacity?
6. What does Dr. Cavallo refer to with his slogan: “Doing what others don’t do”.
7. What does this mean for LAA’s operations?
Sep 20—Readings: Learning to See pp 85-102

Video: Mapping Your Value Stream (33 mins)

Case: Anna Pessah: Lean Thinking at Summit Funding A

This case illustrates how Lean thinking can be applied in a financial services enterprise and the application of an A3 approach.

These questions may help your preparation:

1. What is Lean? What are the challenges of applying Lean in a financial services setting? How did Anna address and overcome these challenges?
2. Were the pods a good idea? Specifically address these questions posed in the case study:
   a. How many FTEs of each type would be needed if the eight proposed pods were created, and all funders were at the company headquarters (the mothership)?
   b. How would that compare with the base case (i.e., a pool of funders, funding coordinators, and CD drawers, all physically located at the mothership but not organized into pods)?
   c. Was there some other type of system that would yield similar results with a lower cost and better results?
   d. How many funders would be needed if each branch had its own funder?
   e. Under what conditions might it be better if each branch had its own funder?
3. What are your recommendations regarding the VOE process? How would you implement your suggestions?
4. How should Anna prioritize the branches for a Lean imitative? What are the challenges?
5. How should she respond to the Project Ninja imitative?

Sep 27- Readings: Managing to Learn pp 1-35

Case: Pediatric Orthopedic Clinic at the Children’s Hospital of Western Ontario.

This case allows us to explore process analysis in service operations and the impact of variability.

These questions may help your preparation:

1. What is activity utilization at every step in the process? What is direct labor utilization?
2. How is variability affecting capacity at the clinic? How can variability be controlled?
3. Where is the bottleneck in the process? What are the clinic’s capacity constraints?
4. What is the economic cost of wait times?
5. What recommendations would you make and why?

There is/was a trial program available at:

Oct 4- Readings: Managing to Learn pp 37-59

Case: Darden Business Publishing Gets Lean

This case focuses on the introduction of continuous process improvement at Darden in an effort to improve through-put.

These questions may help your preparation:

1. Identify issues captured on the value stream map in Exhibit 3.
2. Try to understand “cause and effect” and look for leading indicators so your recommendations address their root cause.
3. Consider a way to cluster issues by root cause.

Oct 11- A3 written assignment! To be done in teams of three!

Readings: Managing to Learn pp 37-59

Case: Canadian Tire Check-out Configuration

You are asked to play the role of Glen Butt in evaluating three check-out configurations. Capacity and trade-offs are linked.

These questions may help your preparation:

1. If customer flow in Canadian Tire’s new Concept 20/20 stores increases by 20% as expected, would the company’s rule of thumb (to have enough check-outs to handle a peak flow of one customer every seven seconds, page 7) have to change?
2. Assuming that customer flow increases by 20%, how many check-outs would be required (capacity) to meet peak flow in a store for each of the three options?
3. What are the quantitative and qualitative pros and cons for each alternative?
4. As Glen Butt, which option would you recommend? Why?

Oct 18- Readings: Managing to Learn pp 61-99

Case: Value Stream Mapping at SYSINTEG (A)
This case focuses on the application of Value Stream Mapping as a means of identifying waste in a supplier's logistics-services activities. We are given the information needed to construct a Value Stream Map, identify value-added and non-value-added activities, and develop opportunities for reaching 50% improvement in throughput time.

1. Draw your own Current State Map of the process.
2. Identify the Value Added (VA), Non-Value Added, and necessary Non-Value Added (nNVA) steps in the process.
3. How can we improve the process?
4. Visualize a Future State map.

Oct 25 - Readings: Managing to Learn pp 101-127

Video: Creating a Lean Chain of Support (35 mins) (time permitting)

Case: Half a Century of Supply Chain Management at Wal-Mart

Wal-Mart, the world’s largest retailer, was trying to recover from a series of missteps that had seen competitors such as dollar stores and Amazon.com close the performance gap. Competitors had copied many aspects of Wal-Mart’s distribution system, including cross-docking products, eliminating storage time in warehouses, positioning stores around distribution centers, and widespread adoption of electronic data interchange (EDI), as well as ordering and shipping from suppliers.

These questions may help your preparation:

1. Put yourself in James Neuhausen’s position and evaluate Wal-Mart supply chain.
2. How is Wal-Mart doing?
3. Are their supply chain capabilities still a source of competitive advantage?
4. As Johnnie Dobbs, Wal-Mart’s executive vice-president of logistics, where would you spend your money or focus your energy?
5. As Johnnie Dobbs, what recommendations would you make to the chief executive officer (CEO)?

Nov 1 - Readings: Managing to Learn pp 101-127.

Case: Mattel and the Toy Recalls (A) (Written Assignment)

On July 30, 2007 the senior executive team of Mattel under the leadership of Bob Eckert, chief executive officer, received reports that the surface paint on the Sarge Cars, made in China, contained lead in excess of U.S. federal regulations. It was
certainly not good news for Mattel, which was about to recall 967,000 other Chinese-made children’s character toys because of excess lead in the paint.

These questions may help your preparation:

1. What are the characteristics of the toy industry and how do they affect toy making?
2. What challenges do toy companies face in managing off-shoring?
3. What are Mattel’s key strengths? What is the nature of the product problem faced by Mattel?
4. What organizational practices have contributed to the problem?
5. What can Mattel do to enhance product quality?
6. Which toys should be recalled? What should the recall strategy be?


Nov 8- Reading week, no classes.

Nov 15- Field Visit at 6:00 pm!
Capital GMC, 4020 Rochdale Blvd.\Host: Dan Broderick, GM Capital GMC

Nov 22-Reading: Six Sigma: A Basic Overview

There’s a lot more to Six Sigma than its usefulness as a cost-cutting tool. Properly developed and implemented, it can be a powerful and motivating tool for managing an organization. This is why managers must ensure that Six Sigma is seen as a strategy for achieving business objectives, rather than simply a cost-saving initiative.

Case: Six Sigma at Academic Medical Hospital (A)

Six Sigma has evolved to mean different things in different circumstances as you saw in the article. AHM is a teaching medical center tied with the medical school of a small rural community’s state university. The case provides a comprehensive overview of Six Sigma, as well as an opportunity to: (i) assess the pilot results from the process changes and determine if the project team can assert that significant improvements have been achieved over the current system; and explore the change Acceleration Process and specifically the Acceptance level of stakeholders.

These questions may help your preparation:
1. What issues now confront Jane McCrea and the Foundations Team? What critical opportunities should the team consider at this stage of the project?
2. Assess the pilot results in terms of the statistical significance of the improvements seen via the implemented changes. What should the team say to the Project Sponsor, Dr. Hamilton, and to the Project Champion, Dr. Elbridge, about the results?
3. What is the current environment at NHM? What are the obstacles to AHM adopting Six Sigma?
4. Was the Foundations Team effective?
5. Based upon what you know of the project’s results, limitations, and key stakeholders, what would you recommend as the next step for McCrea in her role as the Black Belt of the ED Wait Time Project? What strategies would you offer to ensure her success as a Black Belt?

**Video:** Six Sigma (30 mins) (time permitting)

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**Nov 29**

**Case:** UPS and HP: Value Creation Through Supply Chain Partnerships

The case is written from an interdisciplinary perspective and can be studied from two distinct viewpoints: from the service provider and from the customer.

These questions may help your preparation:

1. How and why should service level agreements be designed?
2. How and why should total cost structures be established?
3. How and why to cultivate trust and risk sharing?

**Nov 30 - Final case to be released on URCourses site! Remember, it is to be an individual effort.**

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**Dec 6 - Implementing Lean’s 5S in Manufacturing**

**Reading:** LeanMan 5S powerpoints file

**Class activity:** A 5S Simulation
Overview of the Gold Mine

A growing number of successful companies are turning to lean thinking to maintain a competitive edge in a global economy of falling prices, rising quality, and relentless competition. Yet while there are many excellent resources that teach both the tools and principles, no single book addresses what might be the most important lean discipline of all—the human challenge of creating and sustaining the commitment of the people doing the work.

The Gold Mine deftly weaves together the technical and human pieces of implementing lean manufacturing in an engaging story that readers will find both compelling and instructive. Authors Freddy and Michael Ballé have produced the first integrated and systematic approach to a set of ideas that have maximized value and minimized waste throughout the world.

At the heart of The Gold Mine is Bob Woods, a curmudgeonly sensei coaxed out of retirement by his son Mike to help boyhood friend Phil Jenkinson save his struggling company. Despite terrific products and a backlog of orders, Phil's company cannot generate enough cash from its operations to pay its bills. And so Mike enlists Bob to help his pal fix this crisis.

“You're trying to deal with your mess as if it was a technical problem,” Bob tells Phil. “Move this machine here, change this design there, which it is to some extent, but … it's all about people. You have a leadership problem not just a production or business problem.” As Phil begins to tackle the key challenges necessary to improve his company's operations, he comes to understand the deeper points of lean. Readers will also draw powerful insights from his journey.

The Gold Mine presents all the key lean principles, ranging from well-known ideas such as pull and flow, to lesser-known yet equally important principles such as jidoka and heijunka. The book also reveals lean as a system—using a realistic story to show how the principles are interrelated and how they lead to useful tools such as kanban or 5S. Freddy Ballé draws from his authority of one of Europe's preeminent lean veterans, bringing his knowledge to life in the context of a dramatic human story of managers and employees struggling to apply these tools and ideas in a successful turnaround.

“Mastery of the technical details of lean thinking is never enough. A transformation will fail without the most important element: the engagement of the people doing the work,” says publisher James Womack. “The Gold Mine is the first book to comprehensively introduce all the lean tools by means of a vivid personal story showing how hearts and minds are won over. It will spark ah-ha's from everyone who has been there and provide profound insight for those who are just getting started. In the words of Bob Woods, that 'it's all about people.'
“Reading The Gold Mine is like eavesdropping on a sensei dispensing gems to a client,” says co-publisher Daniel Jones. “The Ballés draw from a remarkable perspective of wisdom and experience. Readers, especially those individuals working on the shop floor, will gain revelation and inspiration by living through the experiences of the hero. This is an experiential novel that will resonate deeply with people who relate it to their own lives.

While The Gold Mine represents LEI’s first book of fiction, Womack envisions it as a natural complement to the workbooks that have established themselves as the leading guides for learning lean. “The Gold Mine was created on the premise that people have different learning styles, and that a set of ideas based on the shop floor—where the action takes place—can be grasped intuitively by illustrating how one particular company responds,” he says. “It complements our established products by presenting a different but equally vital method of sharing knowledge.”

1. Chapter 1 of Gold Mine

What is your fundamental business challenge?

2. Chapter 2 of Gold Mine

From your experience, trace a value stream all the way from raw material through production and into the arms of the customer. More importantly, what problems have been revealed as a result? What factors cause value not to flow?

3. Chapter 3 of Gold Mine

There are several key challenges in this chapter. Where and how are they you producing waste? With your study group, develop a list of items that reveal waste. How can you tell, just by seeing and without asking any questions, how well things are operating? Consider how often your work produces examples of the seven wastes.

4. Chapter 4 of Gold Mine

There is a key takeaway in this chapter: after takt time, standardized work is the second foundation of lean practice, one that is all too often obscured by the glamour of flow, kanban, and other exotic terms. Mastering Five S is a fundamental starting point to improve operations.
5. Chapter 5 of Gold Mine

This chapter shows how the greatest challenges in lean truly involve people. Please use this chapter to explore the role and actions of supervisors and line workers. What are your takeaways?

6. Chapter 6 of Gold Mine

Your key takeaway is to get a feel for pull production as opposed to push production. It is important to realize that for a just-in-time system to deliver lean results in terms of labor cost and capital utilization, the pull signal must be “leveled” as much as it can be, both in mix and volume.

7. Chapter 7 of Gold Mine

Kanban is a scheduling tool which immediately exposes problems at the point of the problem, so they may be resolved right away.

8. Chapter 8 of Gold Mine

The key point of this chapter is that while many try to lean their operations, few succeed. People too often get mesmerized by technicalities of the lean tools and completely miss several core principles of lean: never by-pass a problem and work with the operators to continuously improve operations. Are you walking the walk or just talking the talk?

9. Chapter 9 of Gold Mine

The focus of this chapter is on management, and the need to maintain both a big picture outlook and a detailed vision of the operation at the same time. Perhaps value stream mapping should be introduced later rather than early. The tool may well become a distraction from “genchi gembutsu”: go and see.

10. Chapter 10 of Gold Mine

The overall message in this chapter is that the race to lean is never ending. The true secret of success is that, regardless of how expert one becomes, each of us remains a student who must be open to and devoted to continuing our lean voyage of discovery.
Overview of Managing to Learn-
Managing to Learn by Toyota veteran John Shook, reveals the thinking underlying the vital A3 management process at the heart of lean management and lean leadership. Constructed as a dialogue between a manager and his boss, the book explains how “A3 thinking” helps managers and executives identify, frame, and then act on problems and challenges. Shook calls this approach, which is captured in the simple structure of an A3 report, “the key to Toyota’s entire system of developing talent and continually deepening its knowledge and capabilities.”

The A3 Report is a Toyota-pioneered practice of getting the problem, the analysis, the corrective actions, and the action plan down on a single sheet of large (A3) paper, often with the use of graphics. A3 paper is the international term for a large sheet of paper, roughly equivalent to the 11-by-17-inch U.S. sheet.

“The widespread adoption of the A3 process standardizes a methodology for innovating, planning, problem-solving, and building foundational structures for sharing a broader and deeper form of thinking that produces organizational learning deeply rooted in the work itself,” says Shook, who 10 years ago co-authored Learning to See, a groundbreaking LEI publication that taught readers how to map value streams to identify and eliminate waste. Learning to See has sold more than 173,000 copies and been translated into 12 languages.

Management expert James Womack, Ph.D., LEI founder and chairman, predicts Managing to Learn will have as deep an impact on the way lean companies manage people as Learning to See had on managing processes. “Readers will learn an underlying way of thinking that reframes all activities as learning activities at every level of the organization, whether it’s standardized work and kaizen at the individual level, system kaizen at the managerial level, or fundamental strategic decisions at the corporate level.”

A unique layout puts the thoughts of a lean manager struggling to apply the A3 process to a key project on one side of the page and the probing questions of the boss who is coaching him through the process on the other side. As a result, readers learn how to write a powerful A3—while learning why the technique is at the core of lean management and lean leadership.

Overview of Learning to See-
Value-stream maps are the blueprints for lean transformations and Learning to See is an easy-to-read, step-by-step instruction manual that teaches this valuable tool to anyone, regardless of his or her background.

This groundbreaking workbook, which has introduced the value-stream mapping tool to thousands of people around the world, breaks down the important concepts of value-stream mapping into an easily grasped format. The workbook, a Shingo Research Prize recipient in 1999, is filled with actual maps, as well as engaging diagrams and illustrations.

The value-stream map is a paper-and-pencil representation of every process in the material and information flow, along with key data. It differs significantly from tools such as process mapping or layout diagrams because it includes information flow as well as material flow. Value-stream mapping is an overarching tool that gives managers and executives a picture of the entire production process, both
value and non value-creating activities. Rather than taking a haphazard approach to lean implementation, value-stream mapping establishes a direction for the company.

To encourage you to become actively involved in the learning process, Learning to See contains a case study based on a fictional company, Acme Stamping. You begin by mapping the current state of the value stream, looking for all the sources of waste. After identifying the waste, you draw a map of a leaner future state and a value-stream plan to guide implementation and review progress regularly.