

# Lean Thinking – Resource List

## Manitoba Quality Network (QNET) Resource Centre

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The following resources are available in the **Manitoba Quality Network (QNET) Resource Library**. If you would like to find out more about how to access resources in the QNET library, please contact QNET – phone: (204) 949-4999, fax: (204) 949-4990 or email: mail@qnet.mb.ca.

### Videos

#### **5S FOR SAFETY: NEW EYES FOR THE SHOP FLOOR** (2 Tapes, 13 & 24 minutes)

The *5S for Safety: New Eyes for the Shop Floor* focuses on improving unsafe and hazardous conditions that exist before an accident has occurred. The program provides a complete introduction to the 5S system, shows how a 5S approach to safety can eliminate the competition between productivity and safety, shows the underlying causes of accidents and near misses in shop floor conditions, shows how to apply the step-by-step method and tools for focusing the 5S system for safety improvement, and shows “best practice” examples from top U.S. companies. (user guide included)

- 5S: An Introduction (13 minutes)
- 5S for Safety: New Eyes for the Shop Floor (24 minutes)

#### **5S SYSTEM WORKPLACE ORGANIZATION AND STANDARDIZATION** (7 tapes, 10 to 13 minutes each)

The 5S System is five powerful workplace principles that are the foundation for any plant floor competitive initiative. Actual examples from leading companies show firsthand how the 5S System removes safety hazards and improves work flow, while reducing defects, unplanned downtime and in process inventory. What’s more, 5S activities engage teams in controlling basic conditions in their own work areas, and energize them for continuous improvement of the work environment.

- Module One: Getting Started
- Module Two: The Workplace Scan
- Module Three: Sort
- Module Four: Set In Order
- Module Five: Shine
- Module Six: Standardize
- Module Seven: Sustain

#### **CANADIAN MANUFACTURES: GO LEAN** (1 tape, 12 minutes)

This video lays out what Lean Manufacturing is and what it means to big and small Canadian Manufacturers. It will show you how to lower costs and obtain faster lead times, which in turn will result in better cash flow, high profits and growth with direct examples from Manufacturers.

#### **FUNDAMENTALS OF LEAN (The)** (1 tape, 30 minutes)

Need to familiarize your company with the basic lean concepts? This tape provides an overview of lean and is a perfect introduction to lean for non-management as well as lean implementation teams. You'll see lean in action at major manufacturers and learn what results you can achieve in your facility. The Fundamentals of Lean covers:

- Cost reduction principle
- The seven deadly wastes
- The two pillars of lean: JIT and automation
- The 5S system
- Three stages of application: demand, flow, and leveling
- Standardized work
- Take time and pitch
- Total employee involvement

#### **WINNER’S CIRCLE (The)** (1 tape, 20 minutes)

A great introduction to quick changeover techniques, this best-selling tape compares the teamwork and speed necessary to be successful in Indy 500 car racing with what's needed to affect quick changeovers on the shop floor. You'll see the changeover on an 800-ton press reduced from 22 hrs. to 10 min.

## **Books**

### **5S FOR OPERATORS**

36 pages

#### **5 PILLARS OF THE VISUAL WORKPLACE**

5 Pillars of the Visual Workplace explains the principles, rationale and implementation details of the 5S System. Easy-to-read and apply, each section of the text is loaded with questions, outlines, summaries, diagrams and illustrations. 5S for Operators provides the foundational knowledge that is essential for implementing not just the 5S System, but overall manufacturing improvements like shorter equipment changeovers, just-in-time inventory, total quality management and total productive maintenance.

### **AUTONOMOUS MAINTENANCE FOR OPERATORS**

123 pages

*Japan Institute of Plant Maintenance, Ed*

Autonomous Maintenance for Operators teaches specific autonomous maintenance activities. For operators, supervisors, team leaders, and TPM coordinators, this book provides useful guidance and case study examples on autonomous maintenance. Activity boards, one-point lessons, photos, cartoons, and actual examples of implementation demonstrate the huge benefits of developing informed, motivated operators who take ownership of and improve their equipment. Readers will learn:

- 4 skills they can develop to keep equipment running smoothly.
- how to inspect for problems as they clean equipment.
- ideas for containing debris that shortens equipment life.
- tips for effective lubrication management.
- how to use activity boards, meetings, and one-point lessons to promote TPM goals.

### **BASICS OF FMEA (The)**

76 pages

*Robin E. McDermott, Raymond J. Mikulak & Michael R. Beauregard*

Failure mode and effect analysis (FMEAs) can actually help prevent failures, defects, and errors because FMEAs identify special causes of variation before they occur. This is why the automotive industry's QS-9000 standard requires their use. But FMEA is a valuable tool for any industry in which prevention is important. This book:

- Explains failure mode and effect analysis simply and concisely.
- Discusses when to use FMEAs (e.g., during design, manufacturing, etc.)
- Shows how to perform FMEAs step-by-step.

### **BASICS OF MISTAKE PROOFING (The)**

65 pages

*Michael R. Beauregard, Raymond J. Mikulak & Robin E. McDermott*

The Basics of Mistake-Proofing is an informative guide that:

- Provides a simple 5-step mistake-proofing process.
- Shows how to do mistake-proofing based on FMEAs.
- Gives examples of each type of mistake-proofing and when to use it.

### **BASICS OF PERFORMANCE MANAGEMENT (The)**

76 pages

*Jerry L. Harbour, Ph.d.*

This handy guide is the perfect introduction to the core aspects of performance measurements. With clear descriptions of the various types of performance measurements, you'll be able to connect the right type of measurements to the right output--whether the purpose is to diagnose a problem or to indicate performance towards a goal. This book contains brief examples of all types of performance measures and explains how to create effective performance measures. It also gives you a five-step method for developing a performance measurement system that includes selecting performance measurement families and hierarchies tailored to different levels within the organization. A special feature of this book is a section on performance measurement displays to encourage active measurements.

### **BASICS OF PROCESS MAPPING (The)**

77 pages

*Robert Damelio*

This book introduces process mapping and shows you how to use it in your organization. The two levels of process mapping detailed are relationship mapping and cross-functional mapping. This book contains a case study of both levels of process mapping and guidelines for when to use each type. It also explains the relationship of process mapping to flowcharting. Use it as a wonderful hands-on team resource, a training supplement, and a reference.

## **CELLULAR MANUFACTURING: ONE PIECE FLOW FOR WORKTEAMS**

96 pages

*The Productivity Press Development Team*

Cellular Manufacturing: One-Piece Flow for Workteams introduces production teams to basic cellular manufacturing and teamwork concepts and orients them for participating in the design of a new production cell. Use this book to get everyone on board to reduce lead time, work-in-process inventory, and other profit-draining wastes.

## **CREATING CONTINUOUS FLOW**

103 Pages

*Mike Rother & Rick Harris*

Continuous flow is the ultimate objective of lean production. This publication is an action guide that sharpens your eyesight and equips you with the skills to achieve and maintain truly efficient continuous flow of materials. The focus is on operator-based cells because it is important to be able to design simple, inexpensive, flexible and reliable operator-based processes.

## **FOCUSED EQUIPMENT IMPROVEMENT FOR TPM TEAMS**

138 pages

*Japan Institute of Plant Maintenance, Ed*

Focused equipment improvement (FEI) is one of the pillars of TPM. This book gives shopfloor TPM teams, including production workers, maintenance technicians, engineers, and managers, a strong framework for further improving equipment performance. FEI looks at specific losses or design weaknesses that everyone previously thought they just had to live with.

## **HENRY FORD'S LEAN VISION**

224 pages

*William Levinson*

This book is a hands-on reference that provides the reader with proven principles and methods that can be applied in any business or service enterprise. It covers all aspects of building and running a successful enterprise, including Ford's principles for human relationships and the management of physical resources.

## **IDENTIFYING WASTE ON THE SHOPFLOOR**

89 pages

*The Productivity Press Development Team*

An excellent guide to quickly understanding, identifying, and eliminating shop floor waste. From inventory waste to process-related waste, Identifying Waste on the Shopfloor covers every type of waste generating event, policy, and mindset. The book then gives you tools to effectively eliminate them from your manufacturing processes.

## **JUST-IN TIME FOR OPERATORS**

70 pages

*The Productivity Press Development Team*

A concise and practical guide to introduce equipment operators, assembly workers, and other frontline employees to the basic concepts, techniques, and benefits of JIT practices. Just-in-Time for Operators presents concepts and tools in simple and accessible language.

## **KAIZEN FOR THE SHOPFLOOR**

87 pages

*The Productivity Press Development Team*

This book takes you through the critical steps in conducting a very effective kaizen event - one that is well planned, well implemented, and well documented. Kaizen for the Shopfloor distills the complexities of jumpstarting lean processes into an easily accessible format for the frontline employees who make lean possible. This book:

- Provides learning strategies and overviews in each chapter
- Details the planning and preparation stages for kaizen events
- Maps out the implementation process
- Offers tips on how to present your results to company management

## **KAIZEN TEIAN 1**

217 pages

### **Developing Systems for Continuous Improvement Through Employee Suggestions**

*Japan Human Relations Assoc. (Ed.) (Originally published by Nikkan Kogyo Shimbun, Ltd.)*

This book focuses on their role as a catalyst for spurring employee ideas and facilitating. The book volume explains many aspects of running a proposal program on a day-to-day basis and provides cartoon examples of successful kaizen teian programs.

## **KAIZEN TEIAN 2**

221 pages

### **Guiding Continuous Improvement Through Employee Suggestions**

*Japan Human Relations Association (Ed.)*

More than a guide to establishing a proposal system, this book presents methods for teaching know-how. It gives each reader the principles for thinking creatively about improving his or her own work. This highly practical book is filled with easily understood explanations and examples of how to teach your employees to pursue excellence through kaizen teian.

## **KANBAN FOR THE SHOPFLOOR**

96 pages

*The Productivity Press Development Team*

Kanban is the name given to the inventory control card used in a pull system. The primary benefit of kanban is to reduce overproduction v the most critical of the seven deadly wastes. A kanban system produces exactly what is ordered, when it is ordered, and in the quantities ordered. It is essentially a work order that also moves with the material. Each kanban identifies the part or subassembly unit and indicates where each one came from and where each is going. Used this way, kanban acts as a system of information that integrates your plant, connects all processes one to another, and connects the entire value stream to customer demand.

## **KEEPING SCORE**

224 pages

### **Using the Right Metrics to Drive World Class Performance**

*Mark Graham Brown*

All organizations spend thousands of hours collecting and reading data. However, many of these hours are nothing more than wasted time because organizations analyze the wrong metrics - which leads to inaccurate decision-making. Keeping Score ensures that you look at the right metrics. Keeping Score will show you how to:

- Evaluate your current approach to measurement.
- Pinpoint incorrect performance measurements.
- Select the right financial metrics.
- Measure customer satisfaction and value.
- Measure quality of products and services before they reach customers.
- Perform process measurement.
- Track supplier performance.
- Measure employee satisfaction.
- Redesign metrics and systems used to collect and report data.

## **LEAN OFFICE (The)**

133 Pages

*Jim Thompson*

Written in an easy, humorous style that allows new ideas to be absorbed in slowly, The Lean Office shows how to use just-in time techniques to streamline your office. It shows how lean production systems can nurture employee involvement and put excitement back into continuous improvement. Providing the tools needed to improve office productivity, The Lean Office helps reduce employee stress and frustration, while improving productivity.

## **LEAN PRODUCTION SIMPLIFIED**

170 Pages

*Pascal Dennis*

This book covers each of the components of lean within the context of the entire lean production system. It offers an insider's view of lean manufacturing as a whole and its components, its origins and underlying principles, its goals, and the activities that support involvement, such as kaizen circles and suggestion systems. The Author's straightforward common sense approach makes this book an easily accessible "on the floor" resource for every operator.

## **LEAN SIX SIGMA: COMBINING SIX SIGMA QUALITY WITH LEAN SPEED**

322 pages

*Michael L. George*

Separately, Lean Production and Six Sigma have changed the face of the manufacturing business. Together, they become an unprecedented tool for improving product and process quality, production efficiency, and across-the-board profitability. Lean Six Sigma introduces you to today's most dynamic program for streamlining the performance of both your production department and your back office, and providing you with the cost reduction and quality improvements you need to stay one step ahead of your competitors.

## **LEAN THINKING: BANISH WASTE AND CREATE WEALTH IN YOUR CORPORATION**

350 pages

*James P. Womack & Daniel T. Jones*

A ground-breaking guide to the latest concept in management from the authors of *The Machine That Changed the World*. According to the authors, the most dynamic business management concept is embodied in the term "lean management." The authors explain what lean management is, how it works, and how it can help create a more profitable, streamlined and effective organization. The book shows how to create a lean enterprise, and provides examples from over twenty firms who have successfully used the idea.

## **LEARNING TO SEE**

102 pages

*Mike Rother & John Shook*

This book provides information on value stream mapping to create value and eliminate MUDA in the process. The process is broken down in to five easy steps to achieve the Lean Thinking goal in your organization.

**MACHINE THAT CHANGED THE WORLD (The)**

323 Pages

*James P. Womack , Daniel T. Jones & Daniel Roos*

This is a readable book on the changes that are reshaping manufacturing. It tells the story of Lean Production in the Japanese Auto Industry. It discusses the keys to Lean Production which are; teamwork, communication and efficient use of resources. It explains in concrete terms what lean production is, how it really works and how it spreads beyond the automobile industry.

**MISTAKE-PROOFING FOR OPERATORS  
THE ZQC SYSTEM**

80 pages

*The Productivity Press Development Team*

The Zero Quality Control System (ZQC) is a mistake-proofing approach that prevents defects by monitoring processing conditions at the source and correcting errors that cause defects. This book introduces operators and assembly workers to the basic methodology of ZQC in an easy-to-read format that covers all aspects of this important manufacturing improvement strategy.

**NEW ORGANIZATIONAL REALITY (The)**

275 pages

*Marilyn K. Gowing, John D. Kraft & James Campbell Quick*

Organizations and businesses today are faced with increasing demands to become leaner, less hierarchical and more adaptive. These demands are the result of global competition and rapid technological change. Many organizations have responded by corporate restructuring and downsizing, often "outsourcing" many functions originally assigned to permanent employees. This book uses three separate sections to help answer questions that many employers will have in regards to Downsizing, Restructuring and Revitalization.

**OEE FOR OPERATORS**

82 pages

*The Productivity Press Development Team*

OEE for Operators makes basic OEE concepts accessible to shopfloor workers - the employees who have the most to gain from tracking and improving the effectiveness of the operating equipment. It is the comprehensive education of all employees that ensures participation and success when reducing equipment-related losses. OEE for Operators is written for a broad audience, using simple, clear language.

**OFFICE KAIZEN: TRANSFORMING OFFICE OPERATIONS  
INTO A STRATEGIC COMPETITIVE ADVANTAGE**

174 Pages

*William Lareau*

This book presents a unified, consistent approach that enables businesses to establish a strategic competitive advantage by significantly improving the efficiency, quality and productivity of their office and administrative processes. It emphasizes making continuous improvements over the long haul.

**PULL PRODUCTION FOR THE SHOPFLOOR**

102 pages

*The Productivity Press Development Team*

Pull Production for the Shopfloor gives your shopfloor workers the information they need to understand, plan, and implement pull production. It introduces production teams and managers to basic pull production concepts, enabling them to begin understanding, planning, and implementing this lean tool. Use this book to get everyone on board to reduce work in process inventory, lead-time, and other profit-draining expenses. This book will enable plant managers to explain and thereby get support the support they need from higher management for their pull implementation efforts.

**QUALITY-CENTERED STRATEGIC PLANNING  
A STEP-BY-STEP GUIDE**

240 pages

*John R. Dew, Ed.D.*

This guide covers all elements of developing and implementing a strategic plan--listening to the customers needs, creating an organizational vision and values, scanning the future, closing the gaps between current and desired future states, implementing and tracking the results of the plan, and overcoming obstacles to strategic planning. Plus, each section contains actual examples from industry, the volunteer sector, and/or government.

**QUICK CHANGEOVER FOR OPERATORS  
THE SMED SYSTEM**

77 pages

*The Productivity Press Development Team*

The powerful knowledge contained in this book can make your workplace more productive, your job simpler, and everything more satisfying. It's about how to do equipment or product changeovers in record time--often in less than 10 minutes. The method you'll learn here is called SMED, short for "Single-Minute Exchange of Die" (the "single" here means a single-digit number of minutes)

## **THE SHOPFLOOR SERIES (see each title for description of the book)**

The Shopfloor Series books make practical information accessible by presenting major concepts and tools in simple, clear language and at a reading level that has been adjusted for operators by skilled instructional designers. One main idea is presented every two to four pages so that the book can be picked up and put down easily. Each chapter begins with an overview and ends with a summary section. Helpful illustrations are used throughout. The following books are from the Shopfloor Series:

- 5S for Operators - 5 Pillars of the Visual Workplace
- Autonomous Maintenance for Operators
- Cellular Manufacturing - One-Piece Flow for Workteams
- Focused Equipment Improvement for TPM Teams
- Identifying Waste on the Shopfloor
- Just-in-Time for Operators
- Kaizen for the Shopfloor
- Kanban for the Shopfloor
- Mistake-Proofing for Operators - The ZQC System
- OEE for Operators
- Pull Production for the Shopfloor
- Quick Changeover for Operators - The SMED System
- Standard Work for the Shopfloor
- TPM for Every Operator
- TPM for Supervisors
- TPM Team Guide

### **STANDARD WORK FOR THE SHOPFLOOR**

85 pages

*The Productivity Press Development Team*

Standard Work for the Shopfloor introduces production teams and managers to basic standard work concepts and applications. Use this book to get everyone on board to maintain quality, efficiency, safety and predictability. This book will enable plant managers to explain and thereby get the support they need from higher management for their performance improvement efforts.

### **TPM FOR EVERY OPERATOR**

137 pages

*The Japan Institute of Plant Maintenance*

A simple way to immerse your frontline workers in the basics of Total Productive Maintenance. This book explains the TPM activities carried out by equipment operators themselves: autonomous maintenance, focused improvement, and safety initiatives. Anyone in your company who needs to understand TPM will benefit from reading this book.

### **TPM FOR SUPERVISORS**

96 pages

*The Productivity Press Development Team*

This small book presents the basic methodology of TPM and focuses on hands-on activities for shopfloor teams to maximize equipment effectiveness. TPM for Supervisors offers an overview of the basic features of TPM as well as the implementation process in an easy-to-follow presentation. It focuses on the important role of supervisors in maximizing equipment effectiveness.

### **TPM TEAM GUIDE**

175 pages

*Kunio Shirose*

TPM Team Guide gives simple explanations of basic TPM concepts such as the six big losses, and emphasizes the integration of TPM activities with production management. Chapters describe the team-based improvement process step by step, from goal to standardization of the improved operations. Team leaders will learn how to hold effective meetings and deal with the human issues that stand in the way of success. The tools for team problem solving and the steps for preparing a good presentation of results are detailed here as well.

### **VALUE STREAM MANAGEMENT FOR THE LEAN OFFICE**

170 Pages

*Don Tapping & Tom Shuker*

This book provides you with a complete system for lean implementation in the office by applying its eight step process to the context of a customer service case study based on an actual implementation. This book offers a thorough overview of basic lean concepts, methods for identifying the administrative activities that need improvement, guidelines and checklists, and definitions of common lean terms and concepts. Comes with a CD-ROM.

### **WHO MOVED MY CHEESE**

96 pages

*Spencer Johnson & Kenneth H. Blanchard*

Change can be a blessing or a curse, depending on your perspective. The message of *Who Moved My Cheese?* is that all can come to see it as a blessing, if they understand the nature of cheese and the role it plays in their lives. *Who Moved My Cheese?* is a parable that takes place in a maze. Most of us reading the story will see the cheese as something related to our livelihoods--our jobs, our career paths, the industries we work in--although it can stand for anything, from health to relationships. The point of the story is that we have to be alert to changes in the cheese, and be prepared to go running off in search of new sources of cheese when the cheese we have runs out.