

Hoshin Planning / Policy Deployment

Module 10.2

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These materials were developed as part of MIT's ESD.60 course on "Lean/Six Sigma Systems." In some cases, the materials were produced by the lead instructor, Joel Cutcher-Gershenfeld, and in some cases by student teams working with LFM alumni/ae. Where the materials were developed by student teams, additional inputs from the faculty and from the technical instructor, Chris Musso, are reflected in some of the text or in an appendix

Overview

➤ Learning Objectives

- What is Hoshin Planning?
- The Goals of Hoshin Planning
- The 5 Phases of Hoshin
- Implementation of Hoshin:
Ford Motors and Intel
- Disconnects
- Measurables
- Conclusions

➤ Session Design (10-15 min.)

- **Part I:** *Introduction and Learning Objectives (1-2 min.)*
- **Part II:** *Key Concept or Principle Defined and Explained (3-5 min.)*
- **Part III:** *Exercise or Activity Based on Field Data that Illustrates the Concept or Principle (Skip)*
- **Part IV:** *Common “Disconnects,” Relevant Measures of Success, and Potential Action Assignment(s) to Apply Lessons Learned (5 min.)*
- **Part V:** *Evaluation and Concluding Comments (2-3 min.)*

What is Hoshin Planning?

Hoshin (def.) – A statement of desired outcome for a year, plus means of accomplishing that outcome, and for measuring the accomplishment. ³

“Hoshin Kanri” ¹

- Shining metal or compass
- Ship in a storm on the right path
- Strategic policy deployment

Hoshin Planning (def.) – The process used to identify and address critical business needs and develop the capability of employees, achieved by aligning company resources at all levels and applying the PDCA cycle to consistently achieve critical results. ¹

Goals of Hoshin Planning

➤ Goals:

- **Align** employees throughout the company toward key company goals.
- **Align** all jobs and tasks whether routine or improvement work.
- **Re-align** the company's goals and activities effectively in the event of rapid external changes.

The Five Phases of Hoshin Planning³

Phase 1: Strategic Planning and Setting the Hoshin

- The Company Leader (President, CEO) sets vision.
- Consider external obstacles/opportunities.

Phase 2: Hoshin / Policy Deployment

- *Nemawashi* (def.) - Prepare the tree for transplanting.
 - Stakeholder consultation to achieve consensus.
- Senior executives assess if and how the president's vision can be realized.
- Catchball – A process (negotiation) of aligning Hoshins between levels, possibly through the use of factual (root/cause) analysis.
- Both levels must agree on goals, means, measures, metrics, and deadlines. This deployment is repeated at every level of management chain.

The Five Phases of Hoshin Planning (con't.)

Phase 3: Monitoring the Hoshin; Controlling with Metrics

- Monthly comparison of metrics against targets.
- Re-alignment if required.

Phase 4: Check and Act

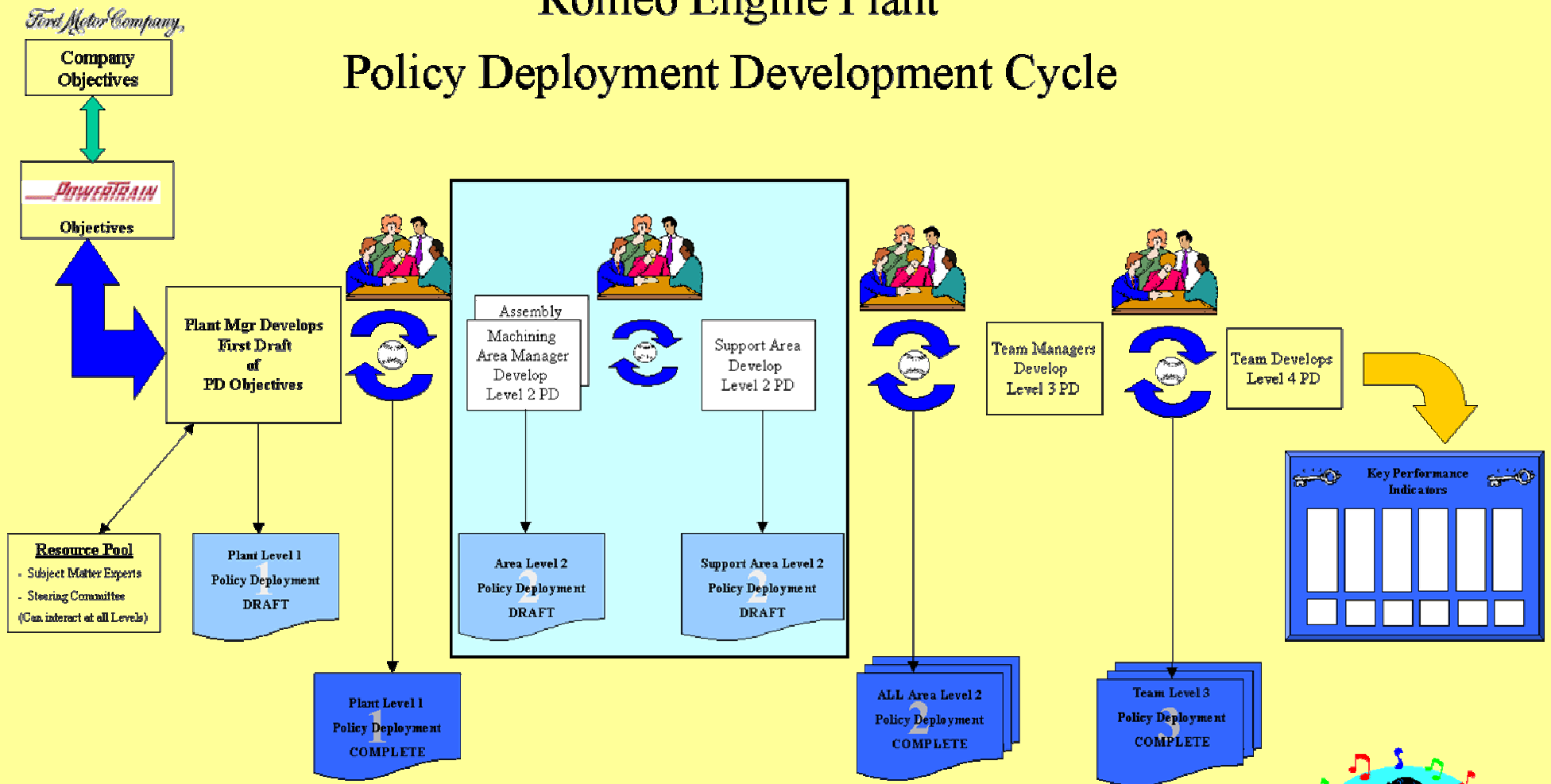
- Monitor and evaluate Hoshin process, procedures, and policy.
- Recommend improvements to Hoshin process based on recent experiences, shortcomings.

Phase 5: President's Diagnosis

- The President/CEO consults with business units/divisions regarding Hoshin driven endeavors as well as Hoshin process.
- Hoshin process is adjusted as required for future use.



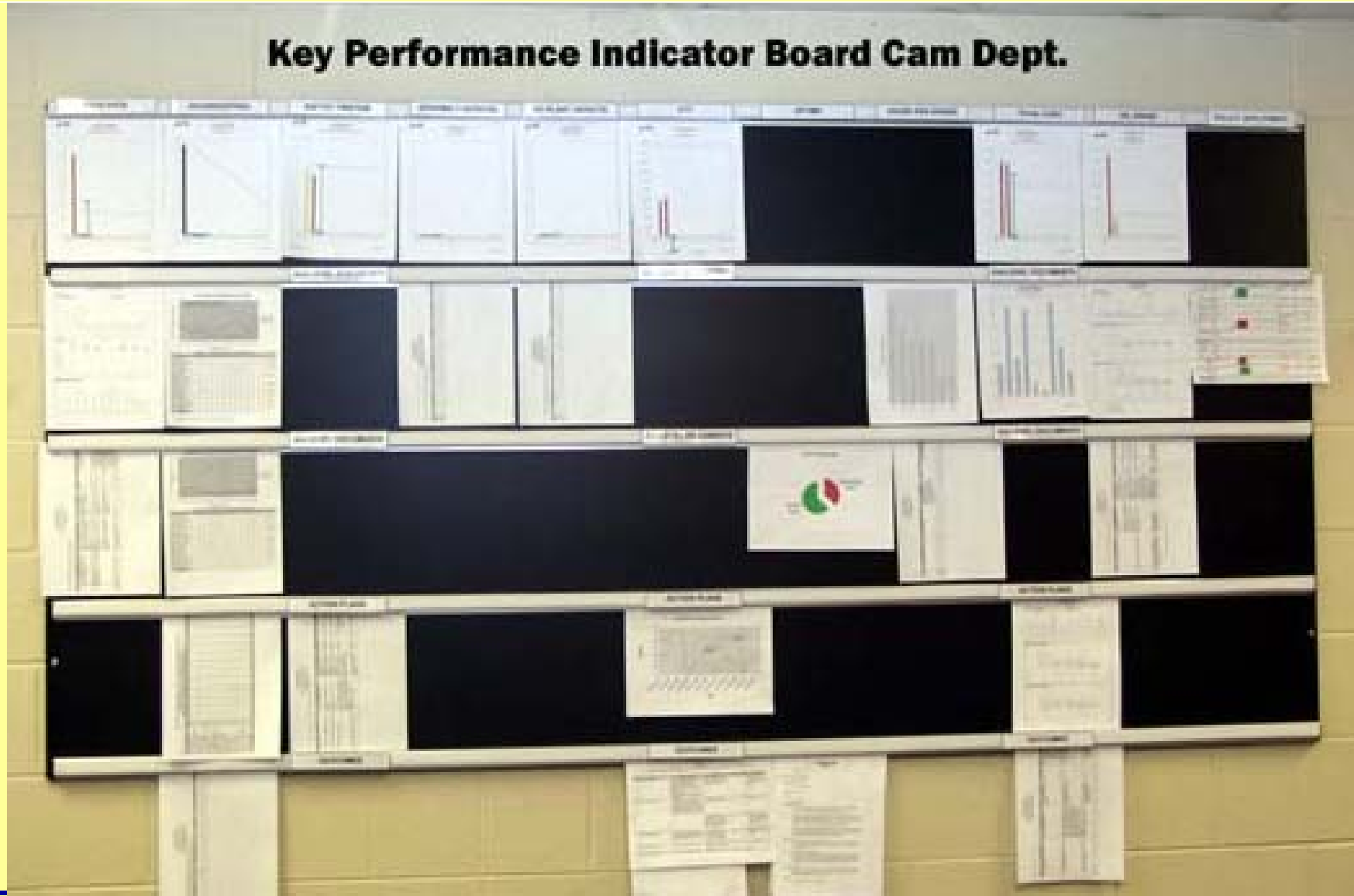
Romeo Engine Plant Policy Deployment Development Cycle



Plant Level Key Indicator Board

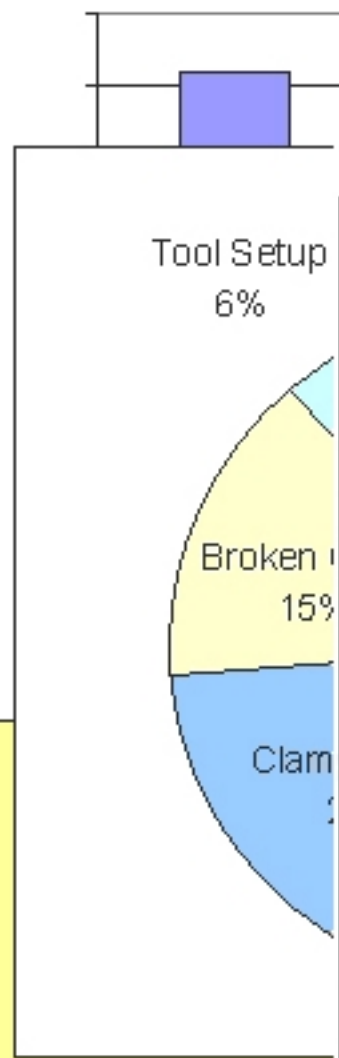


Team Level Key Performance Indicator Board



CI Block Machining Overhead Cost Pareto

CI Block Machining Scrap Pareto May 2000



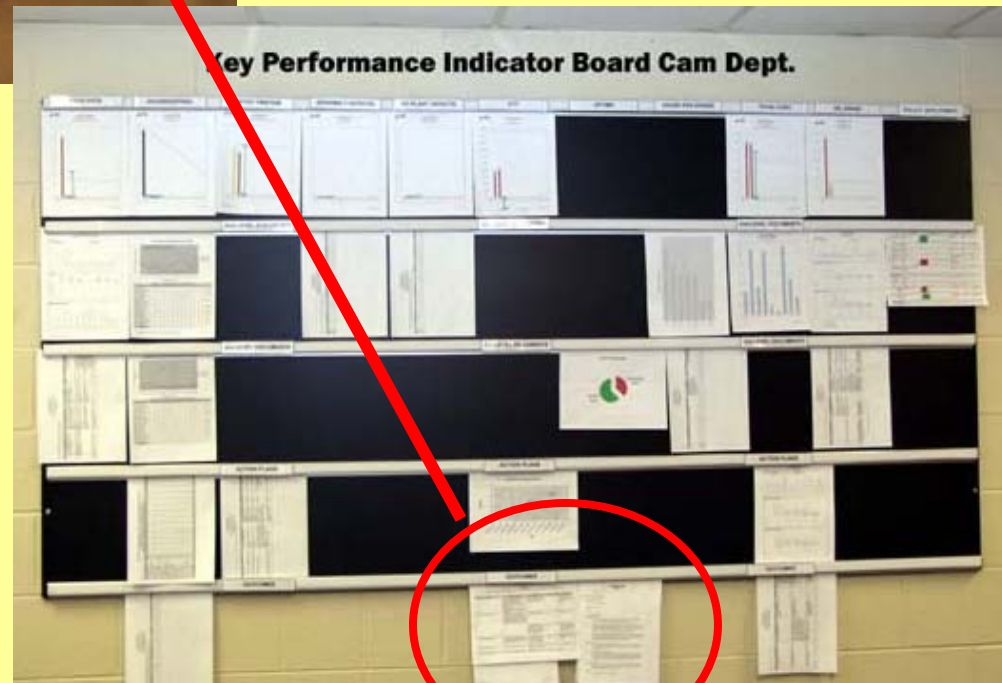
Item	Description	Action Plan	Responsibility	Due Date	Status
1	Chips on Locator	a) Interim Action - install clips from station each shift	Operators	6/2/00	Started 6/2/00
		b) Investigate additional fix & lines for station	OP30 SGA Team	6/21/00	Preliminary sketch complete
		c) Add chip guards to prevent chip build-up	Millwright	6/29/00	SGA millwright working with group, projected implementation over summer's in town 7.00
2	Clamp Failure - OP30 Station 7	a) Air switch adjusted to detect cracked clamp arm	Electrician	6/5/00	Complete
		b) Develop DOE to determine appropriate clamp pressure, may be set to 1kg	M. Paris N. ValdeG rnt	6/29/00	Meetings scheduled to begin discussion
		c) Need vendor support to evaluate clamp design & strength	Ingersoll	7/15/00	Ingersoll evaluating
3	Broken Cutter - OP30 Station 7	a) Investigate tool change frequency	Swissson	6/9/00	Complete
		b) Interim - reduce tool change frequency to 5000 pcs (from 6000 pcs)	M. Paris N. ValdeG rnt	6/12/00	complete - needs to be re-evaluated after broken clamp arm issue resolved.



Source: Ford Motor Company



Direct Linkage from SGA Actions to Plant Performance Indicators !



Performance Planning: Intel's Fab 11-X Facility

- Within the Plant, do not use Hoshin planning, or other such formalized objective-setting/ tracking procedure.
- Employees expected to execute their roles in a proactive fashion in accordance with the following priorities:
 1. Safety
 2. Quality
 3. Output
 4. Cycle Time
 5. Cost
- Plant Progress is monitored and compared to expectations set by corporate direction – production, introduction of new products.
 - Newsletter
 - Bimonthly BUM meetings
 - Informal communication – “water cooler”
- Annual negotiation of expectations at the Plant Manager level.

Performance Planning: Intel's Fab 11-X Facility

- Intel does not use Policy Deployment in Fab 11-X
- Intel Corporate does use a similar process
- Why would Intel not have a process to deploy initiatives and projects in the plant?
 - The necessity for complete standardization – “Copy Exactly”
 - Cannot tolerate process changes without complete top-down control
 - Entire groups dedicated to developing improvements and innovations in manufacturing processes
 - Short Cyclespeed – benefits from in-the plant improvements are not significant, breakthrough improvements are needed.
 - Huge market share – market is not sensitive to improving “the little things”

Disconnects

➤ Technical Factors

- Forms, meetings, and protocol add to the administrative overhead.
- Perfect information flow from lower levels is difficult.
- Financial costs associated with implementation of Hoshin methods.
- Proactive hoshin planning is more difficult than reactive planning.

➤ Social Factors

- “Policy Deployment” is often misinterpreted as a way of telling people how to do their jobs.
- Implementation would mean a change in the culture of the company.
- Formality of forms and protocol may foster sense of distrust between managers and employees or working groups.

Measurables

- Are all employees aligned with the company's goal and vision?
 - Are they all engaged in tasks which strive to achieve the company's main objectives?
- Do managers know which employees are assigned to each of his/her subtasks?
- Are Hoshin objectives met?
- Is the Hoshin process itself assessed and improved on an ongoing basis?
- Do all employees have opportunity to participate in planning process?

Concluding Comments

- Hoshin Planning uses a set of forms and procedures for formal initiative planning in order to align employees to company goals and objectives and encourage employee involvement in the planning process.
- Standardization of process is considered extremely important.
 - Each company implements its own version of the phases
- Hoshin Planning can be a very efficient and useful planning tool – in the right environment.
 - Example 1: Ford Romeo Plant – Uses traditional Hoshin Planning methods.
 - Example 2: Intel Fab 11x – Does not use a formal procedure.

Appendix: Instructor's Comments and Class Discussion for 10.2

- Implementation of Hoshin-Kanri is never a one-time event – each year the quality of the catch-ball and the reach to front-line operations is improved
- Note the connection between Hoshin-Kanri and regular forums or meetings – were progress on the metrics is tracked and addressed
- Thing to look for in a hoshin board:
 - Are the charts current? (if not, they are for show)
 - Is there subdata that's being used for root cause analysis? (if so, they are living the hoshin)
- Hoshin may not be practical with fast clockspeed industries
 - Faster clockspeed often requires better coordination—best done from top down
- Annual hoshin does not mean that the overall mission of the organization will change every year

Appendix: Instructor's Guide

Slide	Time	Topic	Additional Talking Points
1-2	2-3 min	Introduction, overview and learning objectives	<ul style="list-style-type: none"> • Identify overall themes
3-6	3-5 min	Key Concept and definitions	<ul style="list-style-type: none"> • Definition of Hoshin, Hoshin Planning • Goals of Hoshin Planning (Company alignment) • The six phases of Hoshin
7-13	8-12 min	Examples of Hoshin Implementation	<ul style="list-style-type: none"> • Company using Hoshin: Ford's Romeo Plant • Company not using Hoshin: Intel's Fab 11x facility
14	2-3 min	Disconnects	<ul style="list-style-type: none"> • Technical: Costs, Efficiency, Advanced Planning • Social: Distrust, Formality, Culture
15	1-2 min	Measurables	<ul style="list-style-type: none"> • Questions to gauge alignment • Evaluation of processes to make sure that all phases of Hoshin are indeed in place.
16	1-2 min	Concluding comments	<ul style="list-style-type: none"> • Summarize definitions and examples • Hoshin Planning is a concept which must be adopted by each individual company according to the company's specific needs.

Bibliography

- 1. Four Practical Revolutions in Management, Shoji Shiba and David Walden.
- 2. Lean Production Simplified, A Plain-Language Guide to the World's most Powerful Production System, Pascal Dennis, 2002.
- 3. Hoshin Planning, the Developmental Approach, Bob King, 1989.
- 4. Lean Production Simplified, a Plain-Language Guide to the World's Most Powerful Production System, Pascal Dennis, Productivity Press, 2002.