

TSSC Lean Transformation Model & Top Management Key Roles

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Toyota Production System Support Center

TOYOTA



TSSC Mission

Our Mission

- Contribute to society by sharing Toyota Production System (TPS) knowledge with public institutions and improving the general level of the manufacturing industry in North America.
- Develop future Toyota leaders



1941 Ford
from the Ford Museum



TSSC History

MIT global study highlighting the principles of TPS
(The Machine that Changed the World)



Herman Miller

1987 88 89 90 91 92 93 94 95 96 97 98 99 2000 01 02 03 04 05 06 07 08 09 10 11 12 13

Based on interest in North America, Toyota Supplier Support Center, Inc. (TSSC) is established



April 2011,
TSSC became
Non-Profit



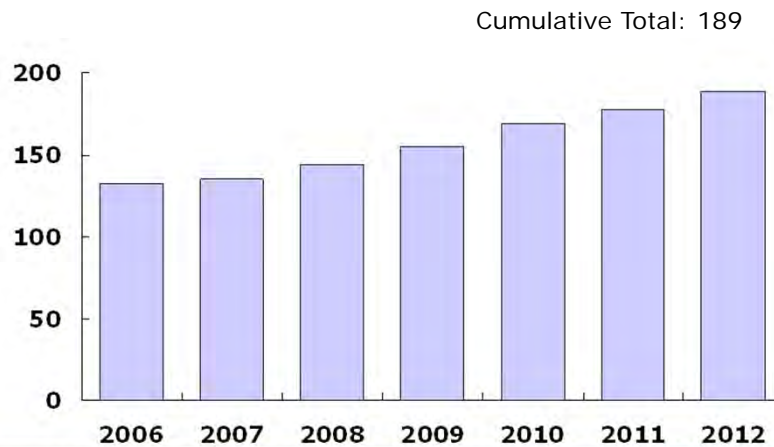
- TPS & Toyota Way introduced at Georgetown, Ky.



- Interest in Toyota Production System (TPS) is generated from popular published books.



TSSC Project Summary



Industries served: Auto, Education, Food, Furniture, Healthcare, Non-Profits

**A 'project' denotes each of the organizations (profit/nonprofit) that TSSC partners with throughout the year.*

TSSC Approach

Primary: Work closely with project companies on shop floor

- o Establish model line or area to demonstrate TPS
- o Develop people to continue TPS (with minimal TSSC support)
- o Learn by doing

Secondary: Training (1-2 day workshops):

- o TPS overview
- o Standardized work
- o Problem solving
- o Material and information flow

For more details, visit us at tssc.com

Toyota Production System



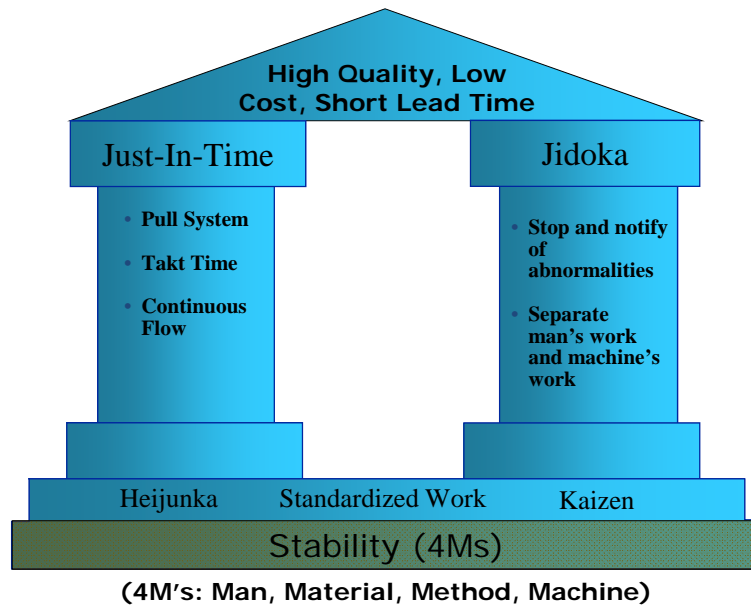
... An Integrated System

Toyota Production System

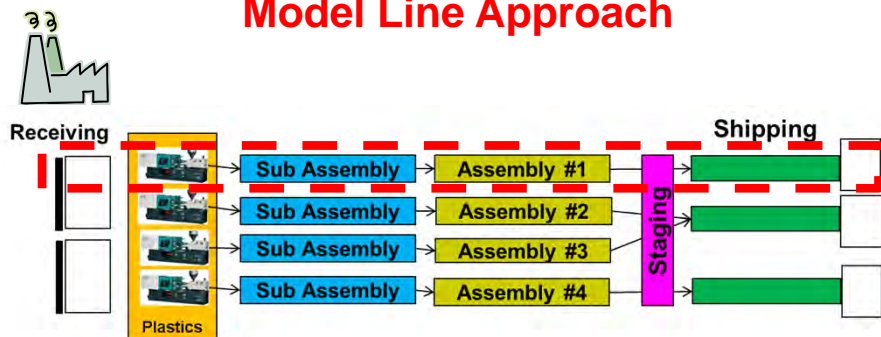
Philosophy:

1. Customer first
2. People are the most valuable resource
3. Kaizen
4. Focus on the workplace

Toyota Production System

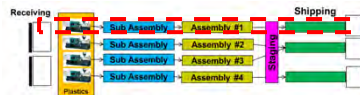


TSSC's Transformation Model: Model Line Approach



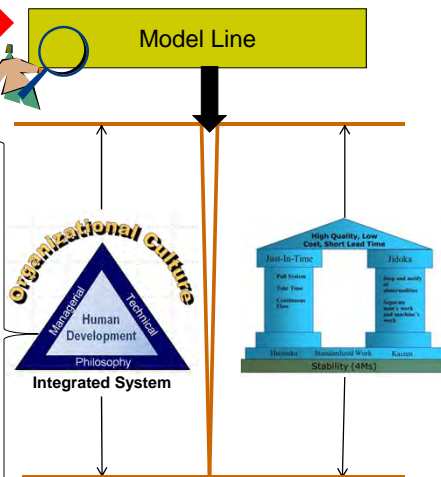
- ☐ Work closely with project company on the shop floor
- ☐ Establish model line or area to demonstrate TPS
- ☐ Develop people to continue TPS (with minimal TSSC support)

The Model Line Approach: “Inch wide, mile deep”

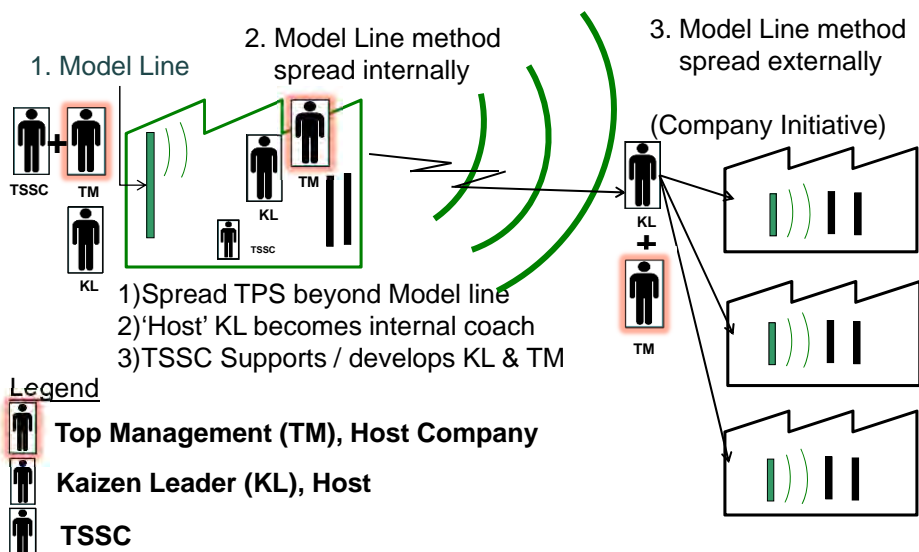


Key 3+1 top management roles

- | |
|---|
| 1) Strong, Visible TPS Commitment |
| 2) Understand TPS Correctly (principles & details) |
| 3) Make Problems Visible (build culture to expose & solve problems) |
| +1) Genchi Genbutsu (Go & See shop floor regularly to grasp the actual condition) |



TSSC's Transformation Model: Spreading the Model Line



Model Line Selection Guidelines

1. **Strong business need** for improvement in Quality, Lead-time, and/or Productivity
2. Feasible to make significant improvements in 9 -18 months.
3. Strong Operational Leaders that are humble, **eager**, and will learn TPS **by doing**
 - Executive & Top Management
 - Supervisors, Manager, General Managers
4. A **good learning area** to develop the host TPS Kaizen Leader & top management to spread TPS

Transformation Model Example

The Herman Miller Journey Recap



Herman Miller Model Line Example

Our Lean Journey – Getting to True North



Mr. Ohta's visit

Spread to all Hill Sites

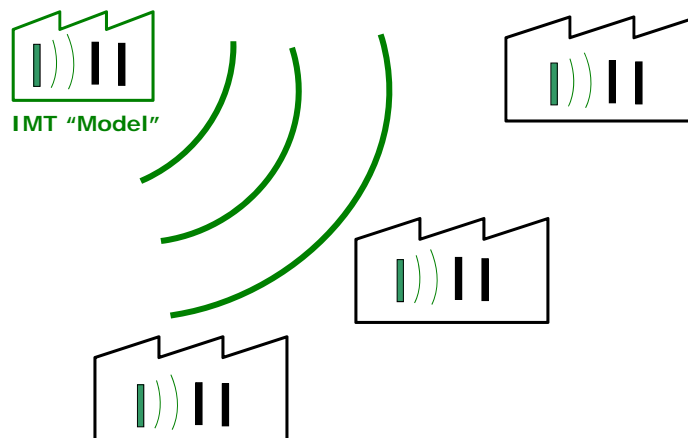
People focus vs. Metric focus

Suppliers and Dealers

Product Development and Sales

HermanMiller The Will to Win

Growing and Spreading – Model Lines





The Deublin Journey



LEI Summit, 2013



www.Deublin.com

The World's Largest
Manufacturer of
Precision Rotating
Unions

Deublin Company
Ron Kelner, President & C.O.O.

Leverage Global Expansion

- 14 Wholly-Owned Subsidiaries with Offices in 17 Countries Around the World

Waukegan, Illinois*

Quebec, Canada

Hofheim, Germany*

Bologna, Italy*

Milano, Italy

Nacka Strand, Sweden

Dalian, China*

Shanghai, China

Wien, Austria

São Paulo, Brazil

Emerainville, France

www.Deublin.com



Kawanishi City, Japan

Tokyo, Japan

Nagoya, Japan

Mexico, DF, Mexico

Wroclaw, Poland

Moscow, Russia

Singapore, Singapore

Gyeonggi-do, S. Korea

Barcelona, Spain

Andover, United Kingdom

*Manufacturing Operations

Smooth Sailing ... Successful



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Below the Surface ...



- **Tactical Problem**
 - Batch Production
 - Excess Inventory
 - Poor Service Levels

Below the Surface ...



Below the Surface ...

- **Strategic Problem**
 - **People-Dependent Process**
 - **Mature Workforce**



Deublin Company

Journey began March, 2008



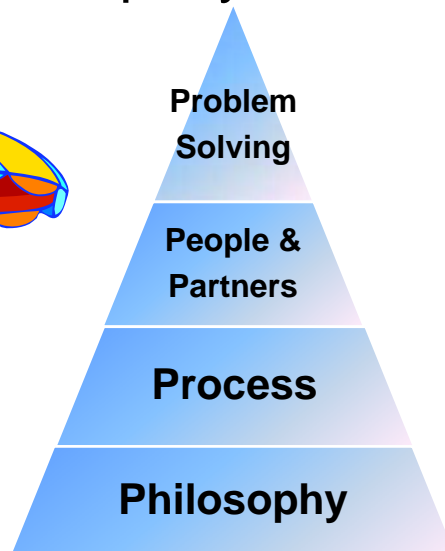
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Deublin Company

Journey began March, 2008

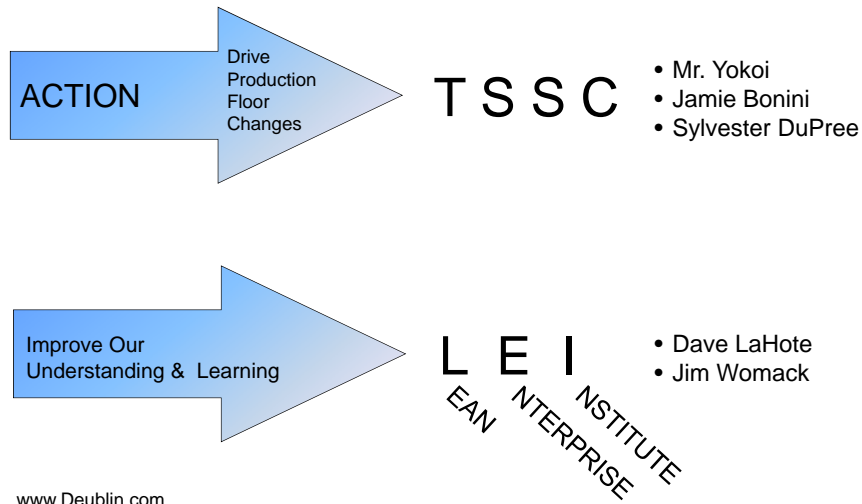


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From: Liker, Jeffrey K., The Toyota Way, McGraw-Hill, 2004

Two Paths of Coaching



DPS *(Deublin Production System)*

• **Implement - Tools**

- Cells
- Standardized Work
- One-Piece Flow
- Pull System (Kanban)
- Value Stream (Model Line)

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DPS *(Deublin Production System)*

E
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Y

- **Implement - Tools**

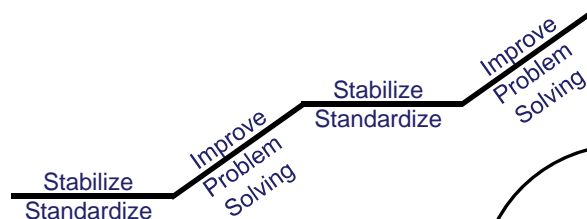
- Cells
- Standardized Work
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DPS *(Deublin Production System)*

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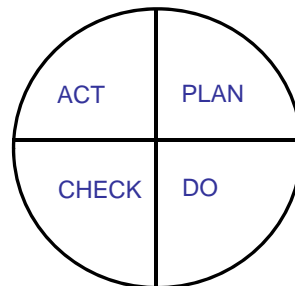
- **LEARNING/COACHING**
- **STABILIZE/STANDARDIZE/IMPROVE**



- **DEEP UNDERSTANDING**
 - Gain through experimentation

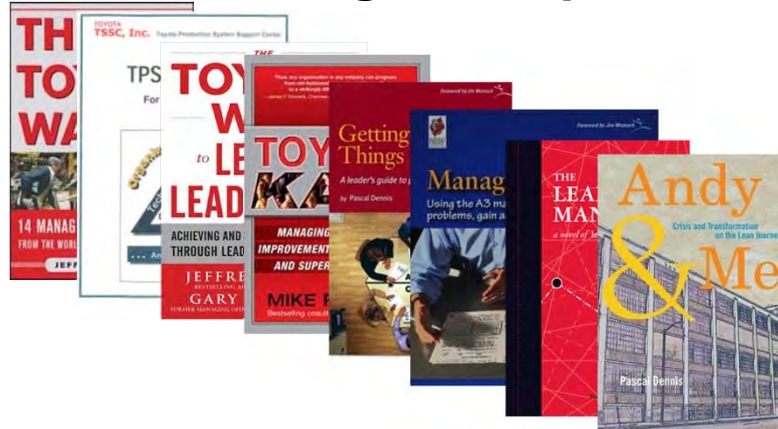
PERSISTENCE & PATIENCE

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DPS (Deublin Production System)

Understanding Concepts



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DPS (Deublin Production System)

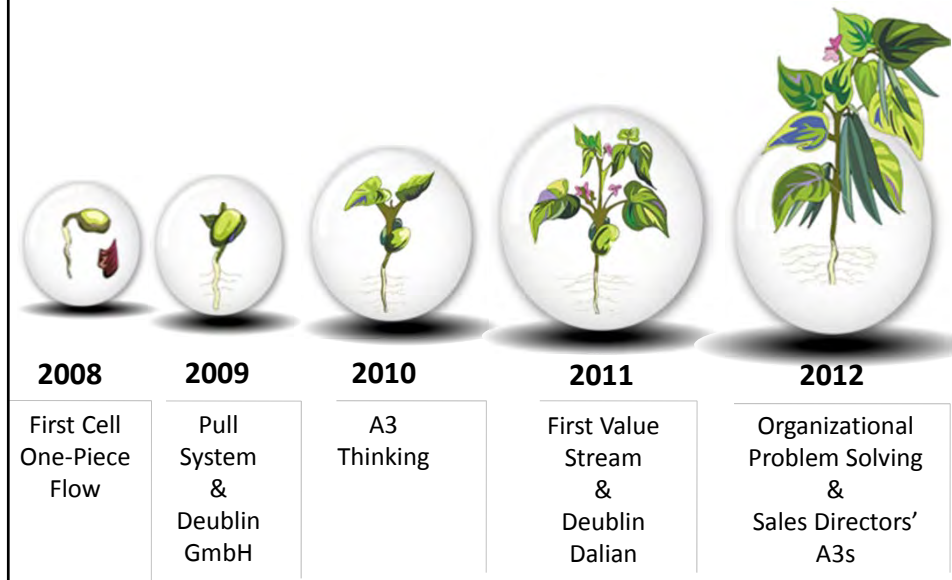
Understanding Concepts



Learn by Doing

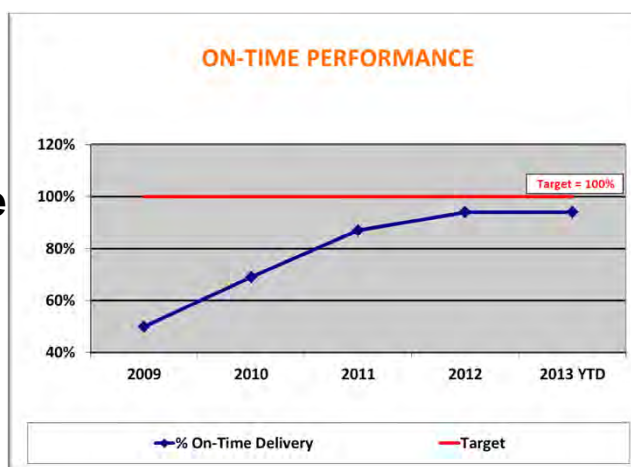
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Our growth over the years



Key Performance Indicators

- **OTP**
- **Lead Time**
- ↑ **Inventory 95%**



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Key Performance Indicators

- OTP

- Lead Time

↓ • Inventory
0.8 Days



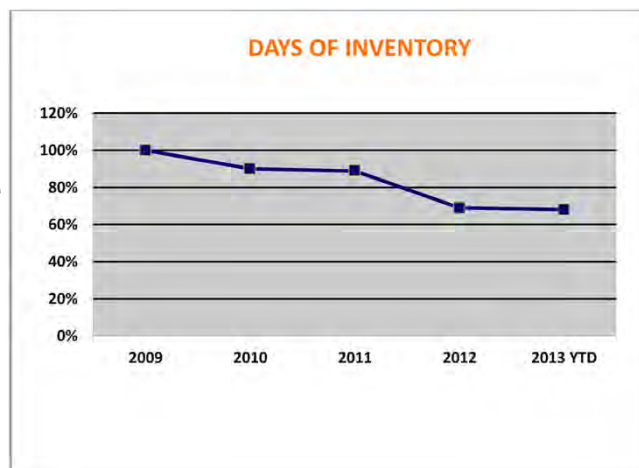
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Key Performance Indicators

- OTP

- Lead Time

↓ • Inventory
32%



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2013 Challenges

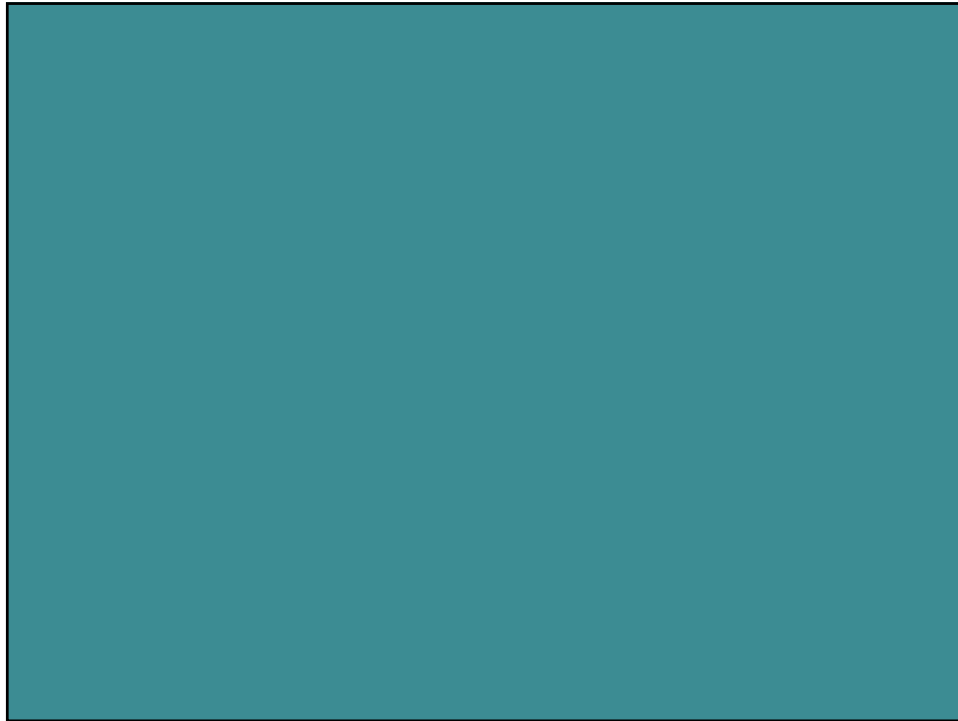
- Changing the Mindset
 - Human Development
- Heijunka
 - Leveling the Workflow
- Focus – Too Many Projects
 - Rapid Problem Solving
- Global Implementation
 - One Deublin

Deublin's TPS Journey . . . continues

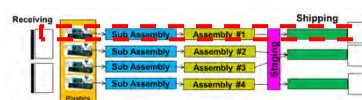
Thanks to TSSC
for
Continued
Partnership

"We Haven't Started Yet!"

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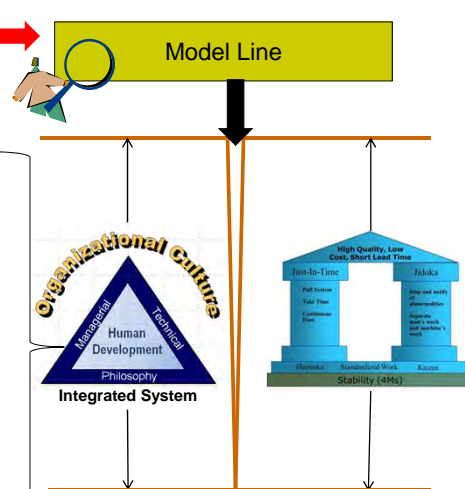


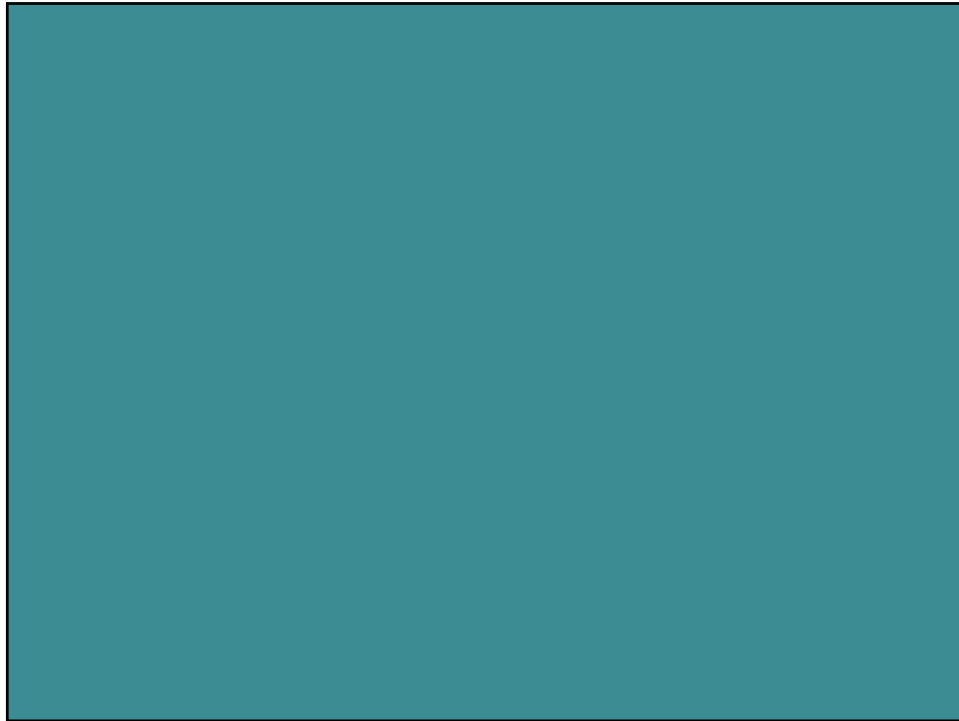
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Lean Transformation
Summit 2013

Focus & Accelerate Your Lean
Efforts By Using Your Transformation
Model to Guide Capability Development.