

ISM

IT Solutions Management for Human Services

an affiliate of the American Public Human Services Association

Applying Lean to Government

The Oregon DHS Experience

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Session Outline

- *Part 1: Setting the context*
- *Part 2: What is Lean?*
- *Part 3: DHS Lean Pilot Project*
- *Part 4: Lean successes in government*
- *Part 5: Challenges of transforming public agencies*

Reflections, comments, questions, ideas

Part 1: Setting the Context

- *Agency Background*
- *Recent Issues*
- *The Burning Platform/Impetus for Change*
- *Why Lean?*

Oregon Department of Human Services



www.oregon.gov/DHS



DHS Reorganization

2001 Legislature

HB 2294 Abolished DHS Divisions

All the duties, functions and powers of the following programs were transferred to the Department of Human Service.

- Adult and Family Services Division
- The State Office for Services to Children and Families
- The Mental Health and Developmental Disability Services Division
- The Vocational Rehabilitation Division, the Health Division
- The Senior and Disabled Services Division
- The Alcohol and Drug Abuse Programs
- The Office of Medical Assistance Programs
- The Office of the Director

2007: Structure in *Divisions*



2007-09 Biennial Budget
\$12 billion TF

DHS MISSION

Assisting people to become
Independent, Healthy and Safe

Recent Issues

- Lack of stability and direction
 - Six Directors within the past 7 years

- New Director in November 2005
 - New message of accountability and transparency

Six DHS Initiatives 2007-09

- Children's Health & Safety
- Community Infrastructure
- Access to Health Care
- Access to Mental Health Care
- Prevention, Preparedness & Health Promotion
- ***DHS Efficiency Improvements***

Burning Platform

- Budget crisis in 2005
 - \$136 million deficit
- Loss of credibility
- Low morale
- Poor financial reports
- Uneven workload
- Stress of overwork
- Brain drain
 - retirements, resignations



Why Lean?

- As a learning approach, Lean
 - Empowers workers to do their own work
 - Uses *“work as learning”*
- It is a research-based approach
 - Uses *“work as discovery”* of new knowledge
- Can be used to align the organization

Used with permission from John Shook

Why Lean?

Lean Thinking is one of the best ways to

- Reduce errors
- Address quality issues
- Increase efficiency
- Eliminate stress
- Do our work every day in a standard way that we created

Used with permission from John Shook

Why Lean?

Lean engages the Talent --staff who do the work

Executive

Primary Leverage

vision and strategy

Points of Leverage

1 to 2%

Management

leadership and direction

5 to 20%

Talent

do the work
improve the work

78 to 94%

Success in Organizational Change

Success demands full engagement of the "Talent"

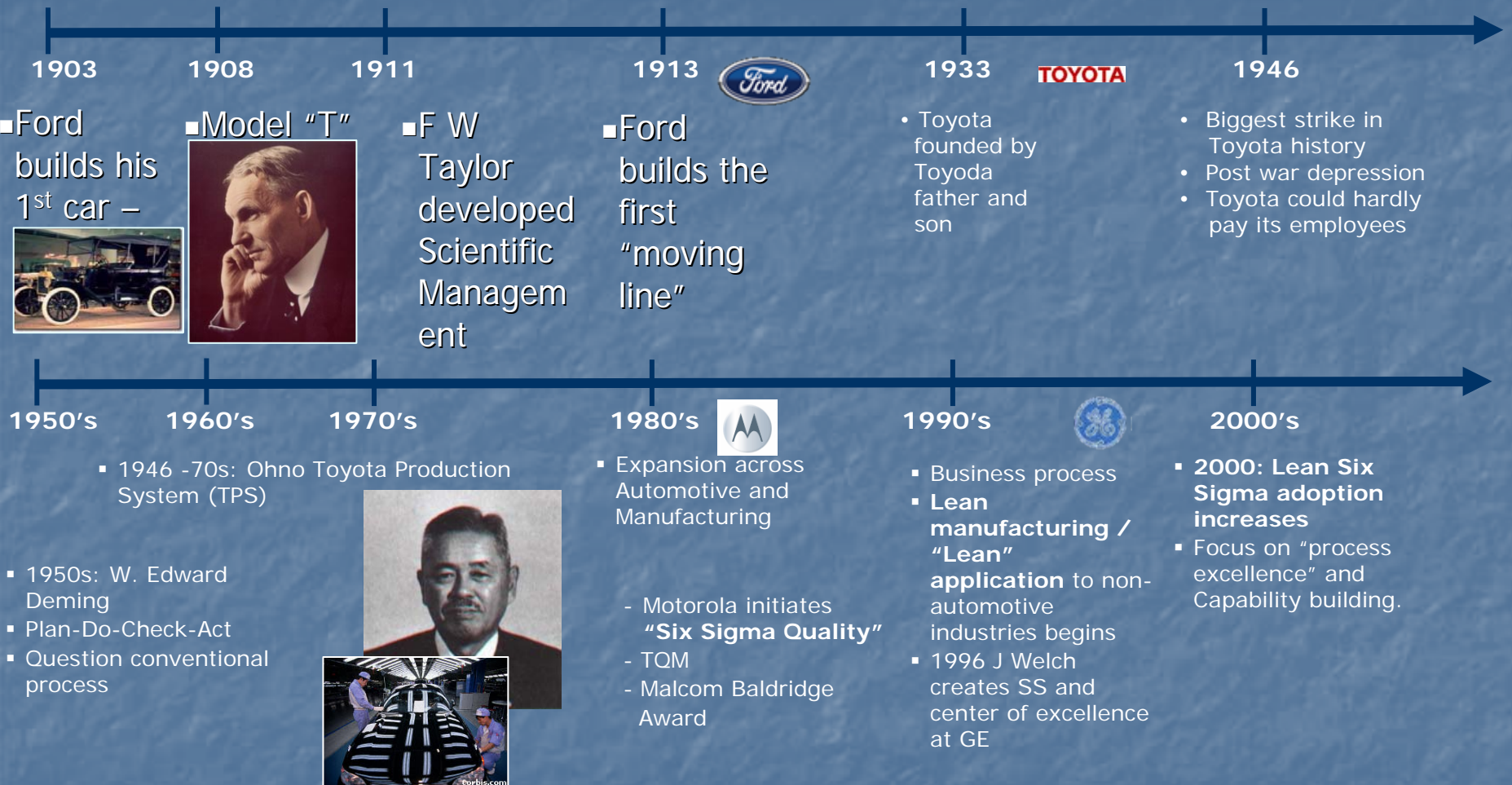


Part 2: What Is Lean?

- *Lean: What is it and how it works*
- *Overview: Some Lean tools and approaches*
- *Examples: Successful Lean implementations*

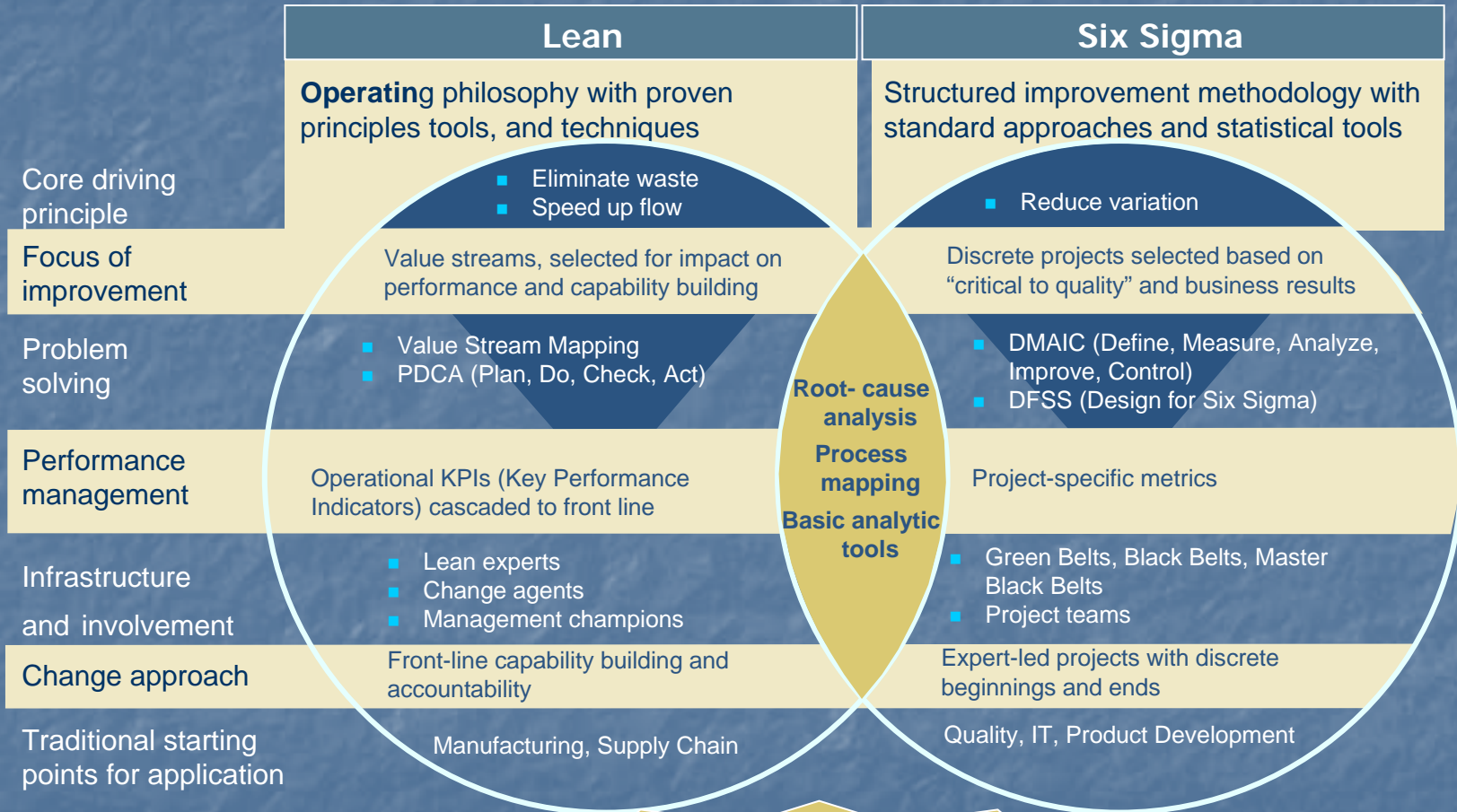
History of Continuous Improvement

Lean and Six Sigma



Six Sigma and Lean combine the best practices of over 50 years of process improvement.

Lean and Six Sigma Complementary Methods



Great organizations use best of both:
Toyota, GE, Honeywell, Alcoa, Iowa

What Is Lean?

The relentless pursuit of **waste** reduction

- A leadership approach
- A management philosophy
- A set of tools
 - That as a complete system reduces waste



Non-value added activities and assets

Some Definitions

Value-Adding Activity

An activity that changes the shape or form of the process output to meet customer requirements

Non-Value Adding Activity= WASTE

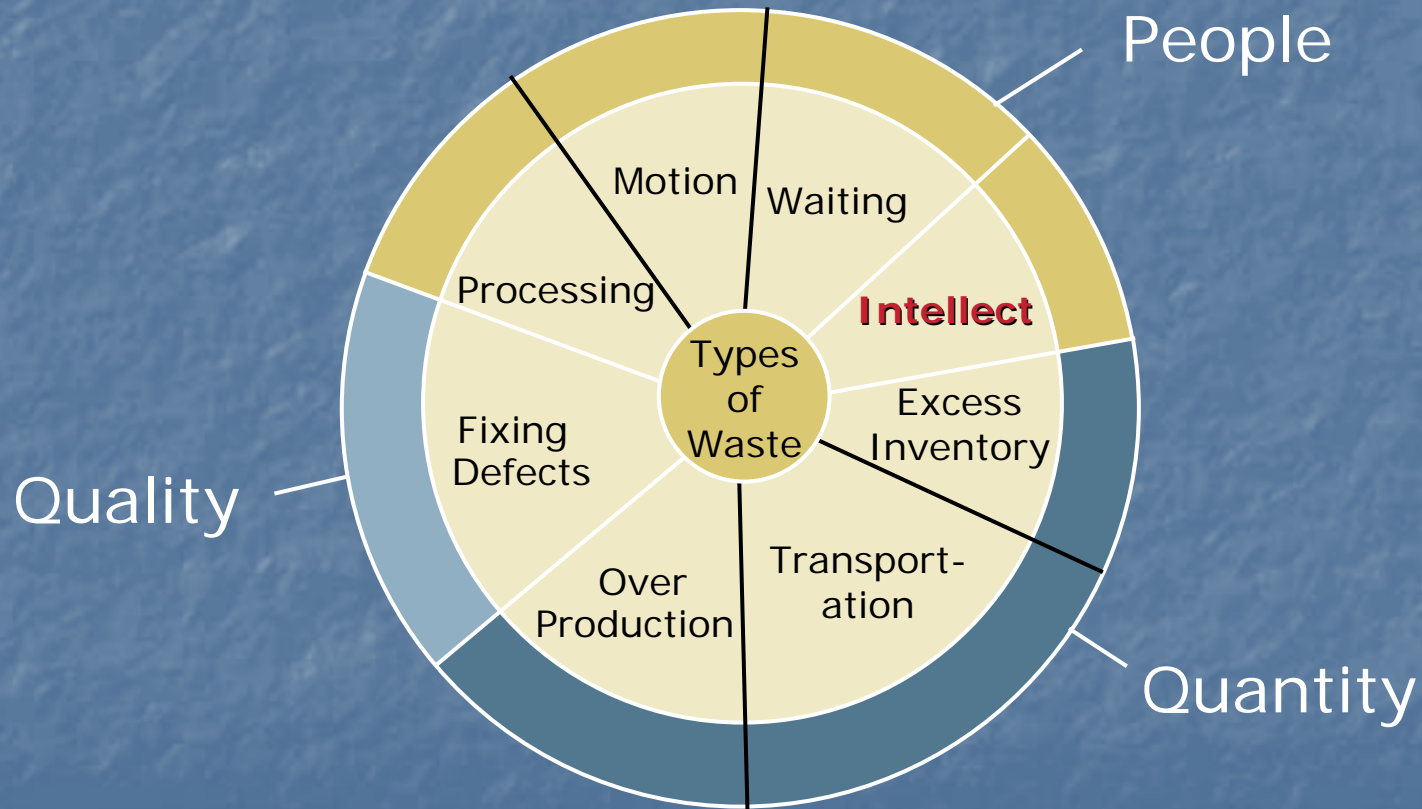
An activity that takes time, resources or space but does not change the form of the process output; is not of value to the customer

Sustaining (Non-Value Adding, but necessary)

- Required by law, regulation or contract
- Required for health, safety, environmental and/or ethical reasons

Categories of Waste

Since Ohno's original 7 Surface Wastes were developed in 1946, Lean thinkers have identified a critical 8th waste: Not using people's **Intellect**



Taiichi Ohno: Architect of the Toyota Production System

Lean is *Low Tech*

- Focus Fervently on the Elimination of All Waste
- Focus on Processes that Produce Products and Services Through Direct Employee Actions
- Maximize Yields on Existing Processes and Systems Before Buying Solutions
- *Optimize Manual, Low-tech Systems Before Automating*
- Comprehensively Understand Processes Before Making Changes (No Tampering)
- Continually Pursue Improvement -- Kaizen

Low tech encourages the involvement of all

What Lean Is Not

Lean does not = Mean!

Or downsizing or outsourcing

Lean does mean

- Eliminating waste to optimize value creation
- Rethinking our entire business

Used with permission from John Shook

Common Misunderstandings

- Eliminates jobs False

The ultimate goal of Lean is to improve the organization so that we can operate more effectively and efficiently

- Forces people to work harder False

One of the goals of Lean system is to make the work safer and “sustainable” and without fatigue

- Tries to speed up all the work False

The focus of Lean is to eliminate Waste. Production is paced by the customer’s demand

- Works for manufacturing or operations only False

It can eliminate waste in the entire delivery system of products and services

Implementation Tools

- Rapid process improvement events
- 5S
- Value stream & process maps
- RACI chart
- Handoff chart
- Lean Daily Management System
 - Primary visual display
 - Metrics
 - 20 Keys
 - Daily ten minute huddle
 - Action Sheets
 - Weekly one hour process improvement meeting
 - Coaching

Rapid Process Improvement

- Structured team workshop

Also known as

Kaizen Event

Accelerated

Change Process

Kaizen Blitz

- Careful designed and highly facilitated
- Focuses on achieving rapid operational improvements in a specific work area or business process

Effectively engages the individuals who are responsible for delivering value in that process

5S Principle

A place for everything and everything in its place, clean and ready for use – making work easier!

Sort

Clear out all unnecessary items

Straighten

Keep it clean, visible and safe

Sanitize

Organize – A place for everything and everything in its place

Standardize

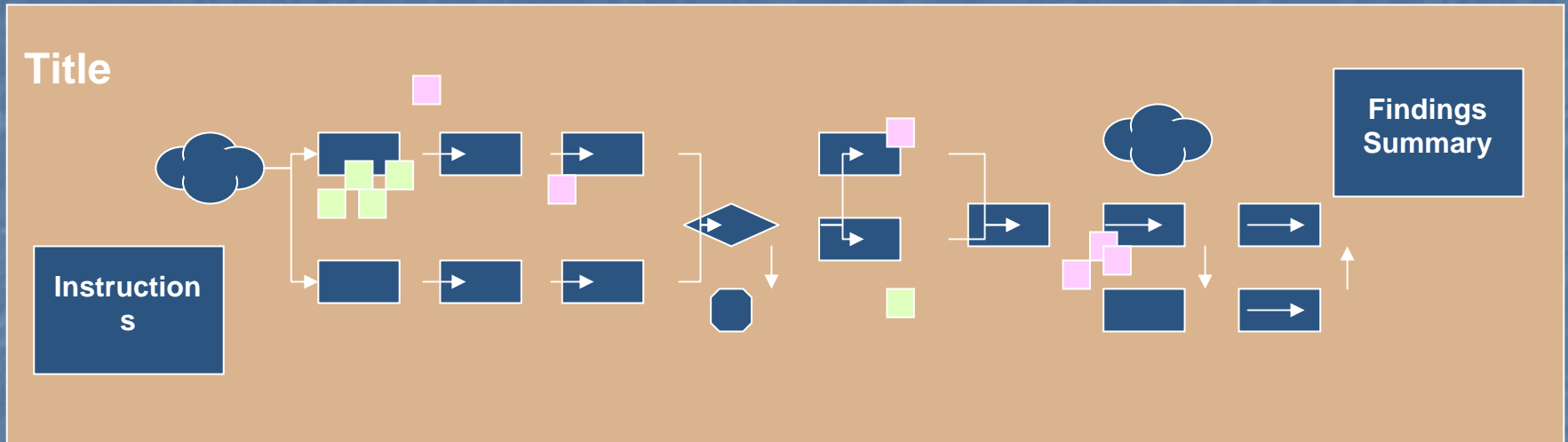
Establish standards for Sorting, Shining and Simplifying

Sustain

Seek out further improvements



Brown Paper Fair



- Display of a process with key characteristics of process steps
- Informal working document with process strengths and weaknesses
- Those who touch or are affected by the process are invited to add comments
- Low tech, high touch

Process Mapping in Progress

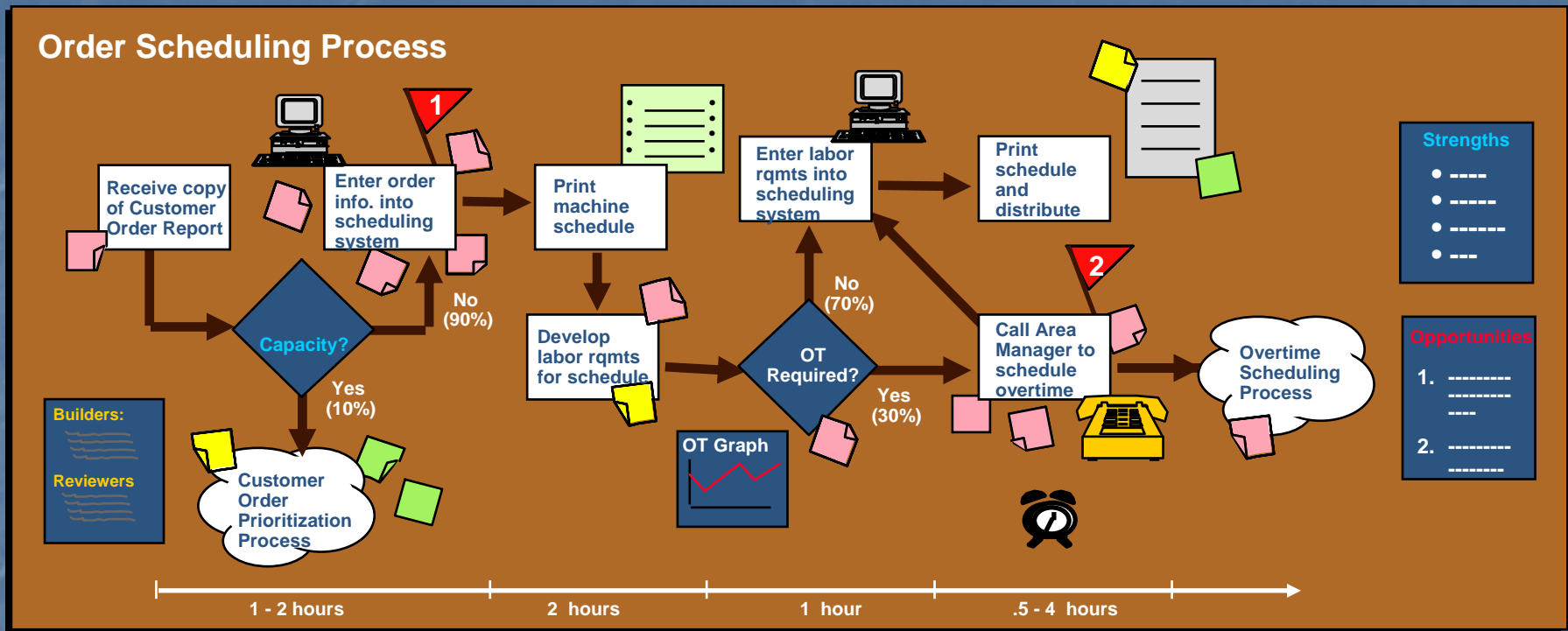
Made by
people

High touch

Low tech



Sample Map



- Describes a process as it works today - *Current State*
- Shows the “big picture”
- Identifies strengths and opportunities
- Captures complexity and disconnects of operational issues
- Identifies outside areas involved in process

Sample RACI Chart

R= Responsibility
C=Consult

A= Accountability
I= Inform

		Participant Names						
Decisions or Activities		R		A		C		I
		A	R		C	I	C	
		I		C	I		R	A
		C			R		A	
		R	I		A	C		
			A	I		R		C
				A	C	R		I

Lean Daily Management System

(LDMS)[®]

Each *natural work team* maintains

1. A daily work team start-up meeting (huddle)
2. A work team primary visual display
3. A Kaizen Action Sheet improvement system
4. 20 Keys[®] of Excellence charting and improvement planning
5. Short interval coaching
6. A weekly problem solving/process improvement meeting of one hour

A *natural work team* is no more than nine people working in close proximity for most of the time, and has a 'process' or 'functional' connection pulling them together.



Why Lean Daily Management System

Improving Day-to-Day Work Group Effectiveness

- Facilitating communications and collaboration within work groups
- Increasing the productivity, quality, and efficiency of established operating processes
- Promoting continuous improvement
- Focusing on metrics

Managing Large Changes More Effectively

- Facilitating focused cross-functional involvement
- Increasing the accuracy, timeliness, efficiency
- Managing projects
- Coordinating change efforts for driving process improvements, implementing new processes

Daily Huddle

Communication and Action



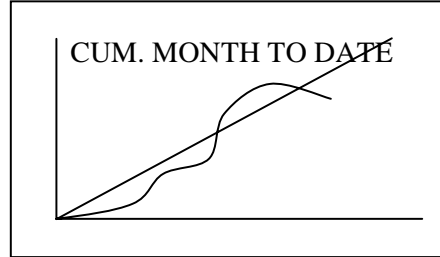
Primary Visual Display Example

ATTENDANCE

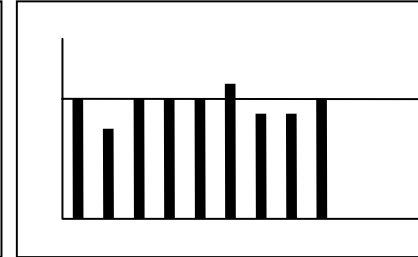
Employee Name	DATE									
	3/5	3/6	3/7	3/8	3/9	3/10	3/11	3/12	3/13	3/14
Ahmjad	●	●	● ^{PD}	●	●	○	○	●	○	○
Bob	●	●	●	●	●	○	○	○	○	○
Carmen	●	●	●	●	●	○	○	○	○	○
Han	○ ^V	○ ^V	●	●	○	○	○	○	○	○ ^{PD}
Sally	●	●	●	● ^{PD}	○	○	○	○	○	○
Tyrone	●	●	●	●	○	○	○	○	○	○

● Present
 ○ Excused Absence/Late
 ● Unexcused Absence
 ^{PD} Personal Day
 ^V Planned Vacation

UNITS AGAINST PLAN



UNITS BY DAY



Top Customers

- A-1 Co. 18%
- B-2, Inc. 12%
- BFG, Ltd. 9%
- Bob, Inc. 8%
- Carol Co. 8%
- Ted, Inc. 7%
- Alice, Ltd. 6%

SKILL VERSATILITY

Employee Name	Process Or Task									
	A	B	C	D	E	F	G	H	J	K
Ahmjad	○	○	●	●	⊕	■	●	●	⊕	○
Bob	⊕	○	○	○	⊕	⊕	⊕	⊕	⊕	■
Carmen	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
Han	●	⊕	⊕	⊕	⊕	⊕	○	○	○	⊕
Sally	⊕	●	⊕	⊕	⊕	●	⊕	○	○	⊕
Tyrone	⊕	■	●	⊕	⊕	⊕	■	●	■	○

○ Primary Task
 ● Completely Cross Trained

QUALITY ISSUES YESTERDAY

- Loose connectors (board A-2) 5
- Cracks in RB-43 solder joint 4
- Scratch on faceplate 2
- Washer missing on A-2 1
- Missing screw (back of case) 1

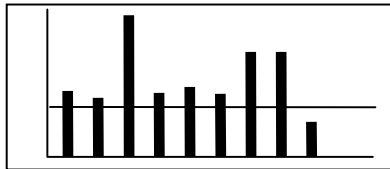
Metrics (mo. To date)

- Work/(Work+ Muda) 68%
- % Machine up time. 76
- % Absenteeism. 4
- % of plan output 98
- % Completed on time 99
- WIP (% of output) 0.5
- Cycle time (min) 4.5
- % operator PM done 100

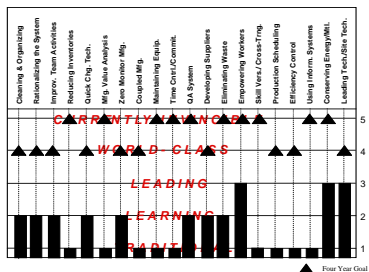
Metrics (mo. To date)

- Sales (000) 3,345
- Sales to plan (%) 102
- Cost of Labor Hour \$34.12
- Inventory Turns year 45.1
- % shipped on time 98.8
- Cycle time (min) 453.4
- Machine up time (%) 69.2
- % Customer retention 85.2
- Stock price 33 up 2 1/2

SAFETY AUDITS



20 KEYS



KAIZEN ACTION SHEETS

BLANK

SUBMITTED

WORKING

RESOLVED

KAIZEN "TO DO" LIST		Date:	5/8/96	Page:	of
Manage Or Team Leader Bob Johnson		Area Or Process Name WPC 407 Line		Person Doing This Sheet Bill Lareau	
Item #	Problem	Corrective Action	Person Responsible	Date Due	Percent Complete
1	Overall Layout	Install U-shaped layout	J. Monta	5/9	100%
2	Hard to grasp bases from bin	Install gravity feed bin	L. Nell	5/9	100%
3	Off center fixture	Center fixture	B. Johnson	5/9	100%
4	Hard to grasp parts from bin	Install gravity feed bin w/ change location	L. Tolstoi	5/9	100%
5	Hard to grasp parts from bin	Install gravity feed bin w/ change location	L. Nell	5/9	100%
6	Foot arrangement locating/reaching	Install workpiece organization	B. Johnson	5/9	100%
7	Reaching to stack cartons	Rearrange to eliminate repetitive motions	J. Monta	5/9	100%

Primary Visual Display Example



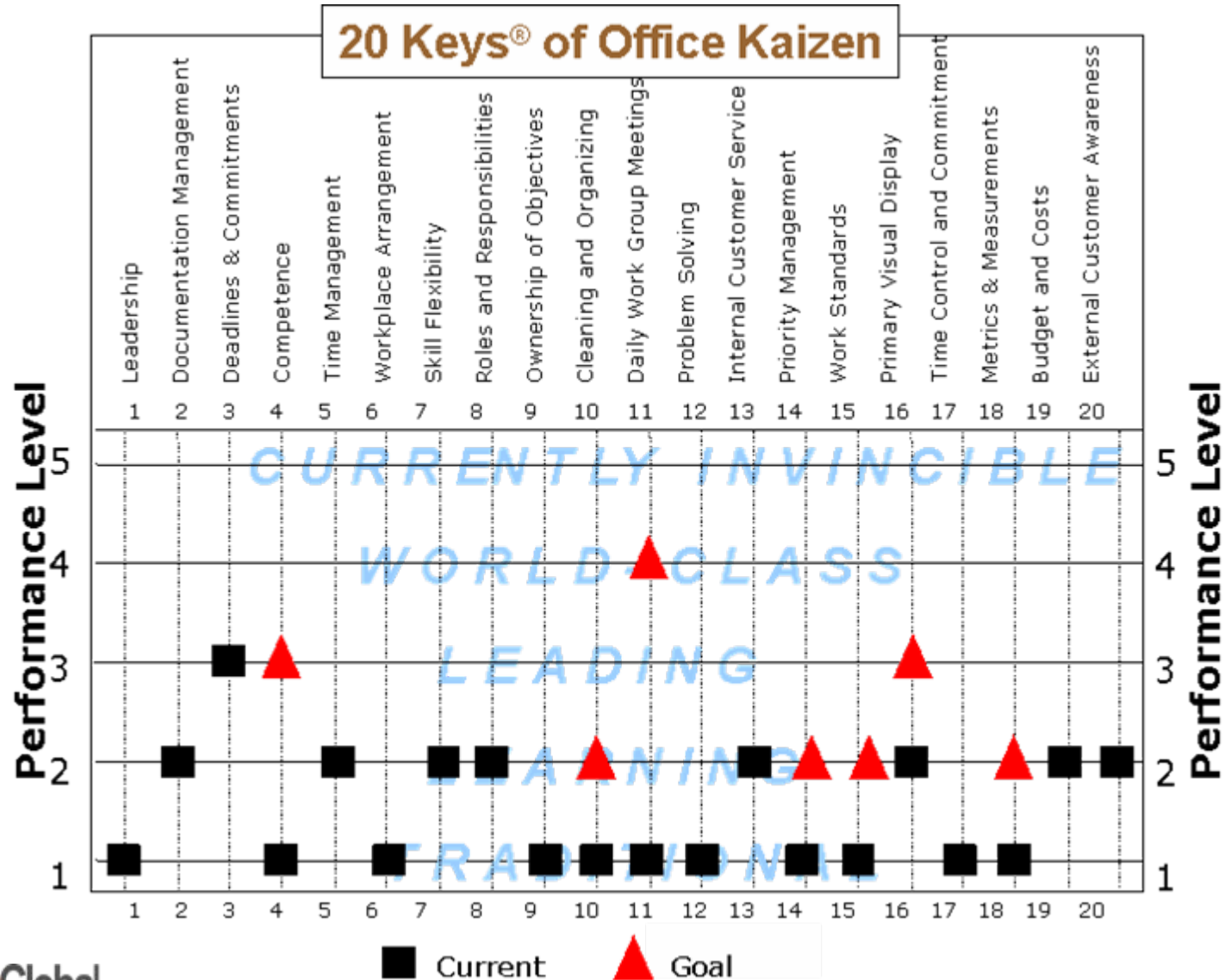
What are the 20 Keys[®]?

20 KEYS – The Original

1. Cleaning
2. Organizing
3. Team Activities
4. Metrics
5. Process Controls
6. Continuous Process Improvement
7. Roles And Responsibilities
8. Work Leveling
9. Work Standards
10. Visual Systems
11. Time Control & Commitment
12. Pre-Shift Meetings
13. Eliminating Waste
14. Empowering Workers
15. Skill Versatility
16. Production Scheduling
17. Equipment Maintenance
18. Quality Assurance
19. Management Of Objectives
20. Quick Changeovers

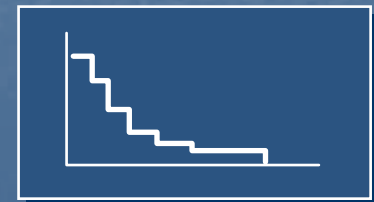
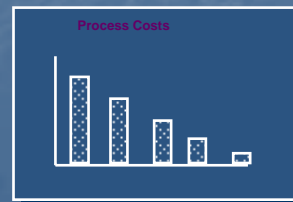
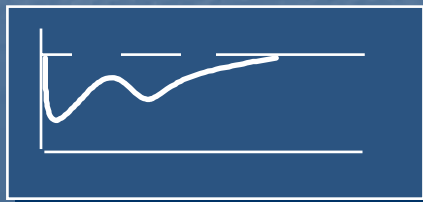
- Initially developed over 30 years ago by Iwao Kobayashi, then expanded by Kaufman Global
- **20 Keys, 5 levels of each**
- Get Level 1 (20 points) automatically
- **A method for assessing overall world-class progress**
- Encourages areas/functions/teams to be more self-directed
- Provides everybody with the same set of measurements
- Helps work groups and areas decide what/when to use tools

The 20 Keys[®] of Office Kaizen



Performance Measures

- *What is the right thing to measure?*
 - Measures that can be influenced by the team
 - Set targets that can be achieved
- *Set the target goals to strive for*
 - What is the Industry Best ? Benchmarking
 -and the date(s), by which it should be achieved
 - Continually adjust targets as they are achieved
- *Make measures visible.*



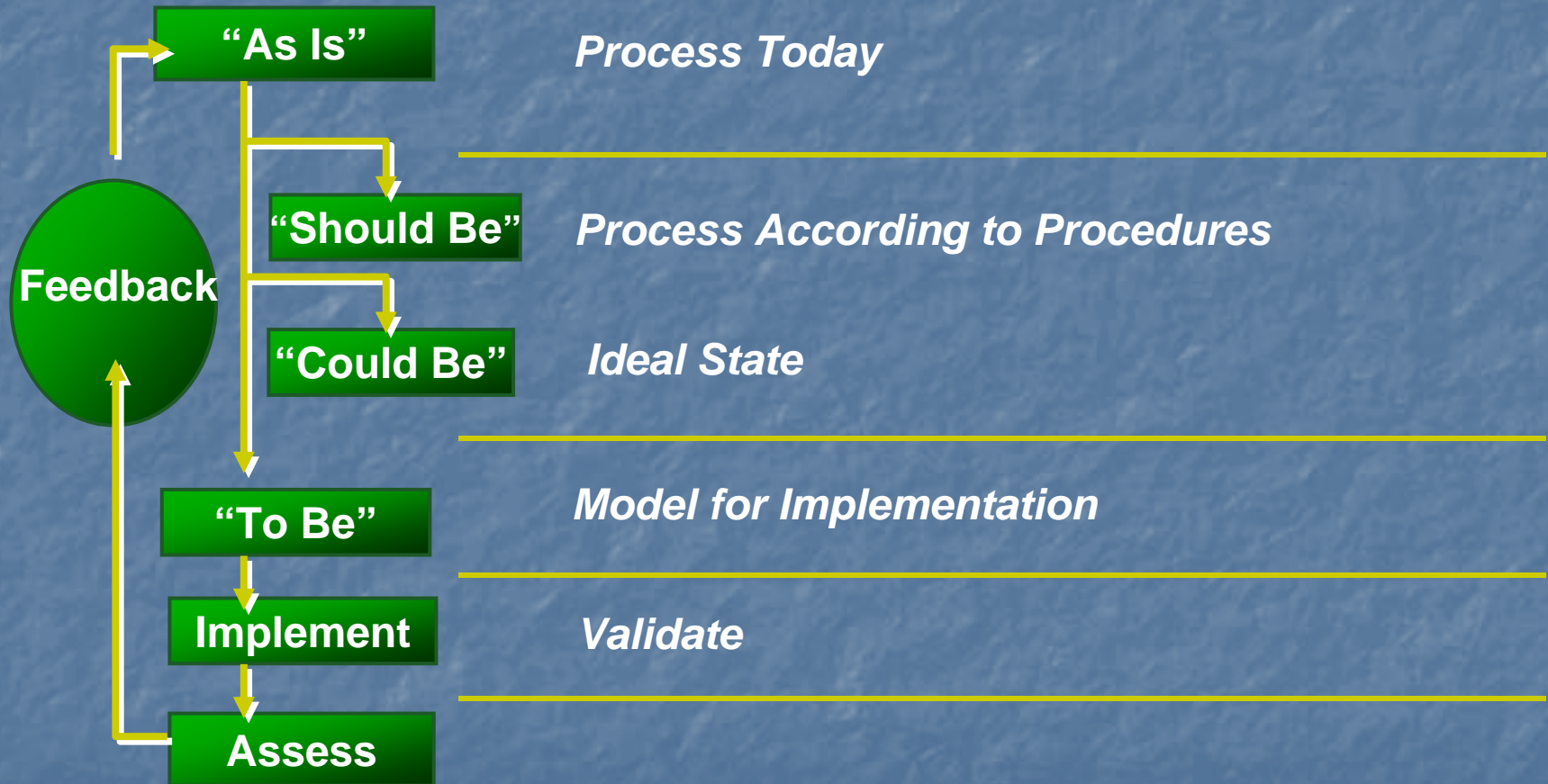
Part 3: DHS Lean Pilot for Finance

- *Methodology and approach*
- *SOW*
- *Deliverables*
- *Applying Lean to DHS Finance*

Methodology and Approach

- Competitive procurement process
- Statement of Work carefully drafted with input from citizen, a retired industry professional in Lean
- Two tasks and eight deliverables
 - Task one: Analysis
 - Task two: Process Improvement
- Contractors could bid on either, or both, tasks

The Standard Lean Process



Eight Deliverables of the SOW

Task One: Analysis

1. Project plan
2. Baselineing
3. Benchmarking
4. Vision of DHS Lean Finance

Eight Deliverables of the SOW

Task Two: Continuous Improvement

5. Lean training
6. Rapid process improvement events
7. Path forward for Lean DHS Finance
8. Final report: Path forward for Lean DHS

Current State Process Map



Future State Map



Getting Results

Revenue Application Process- Other Funds

Process Measure	Current State	Future State	Improvement
Number of Tasks	10	1	90%
Number of Handoffs	10	0	100%
Process Time	135 min.	15 min.	89%
First pass Yield	5%	100%	95 pts.

Getting MORE Results

Revenue Application Process- Federal Funds

Process Measure	Current State	Future State	Improvement
Number of Tasks	29	25	14%
Number of Handoffs	14	13	7
Process Time	165 min.	125 min.	24%
First pass Yield	4%	93%	89 pts.

Potential Increased Revenue

RPI Results

- Currently 60% collected \$540K/Mo
- Goal to improve to over 80%
- 20% increase in collections

**Increase in collections of \$180K/Mo
x 12 months =**

**\$2,160,000 per year
increase in Revenue**

***Part 4: Lean Successes in
Government***

State of Iowa

Lean Implementation Results

Department of Human Services

- Interstate Compact for the placement of children
 - Delays reduced 78%; decisions reduced 83%; loop-backs 99%

Department of Public Safety

- Peace Officer Applications
 - Delays reduced 60%; steps reduced 41%; hand-offs reduced 52%

Iowa Veterans Home

- Medical Appointments
 - Delays reduced 79%; steps reduced 66%
- Maintenance Work Orders
 - Steps reduced by 62%; hand-offs reduced by 58%

Iowa Workforce Development

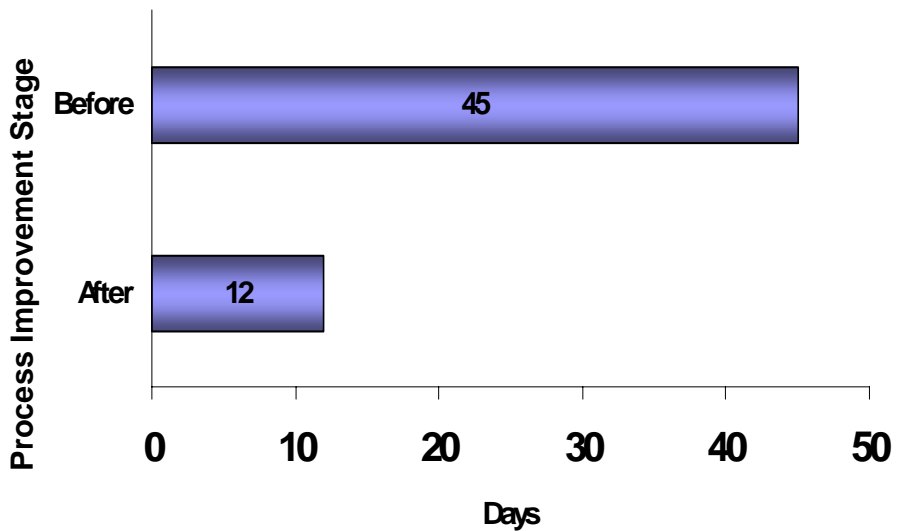
- Workers Compensation Document Handling
 - Steps reduced 30%; delays reduced 21%;
- OSHA Pre-Inspection
 - Steps reduced 58%; rework loops reduced by 66%

http://www.dom.state.ia.us/planning_performance/lean/index.html

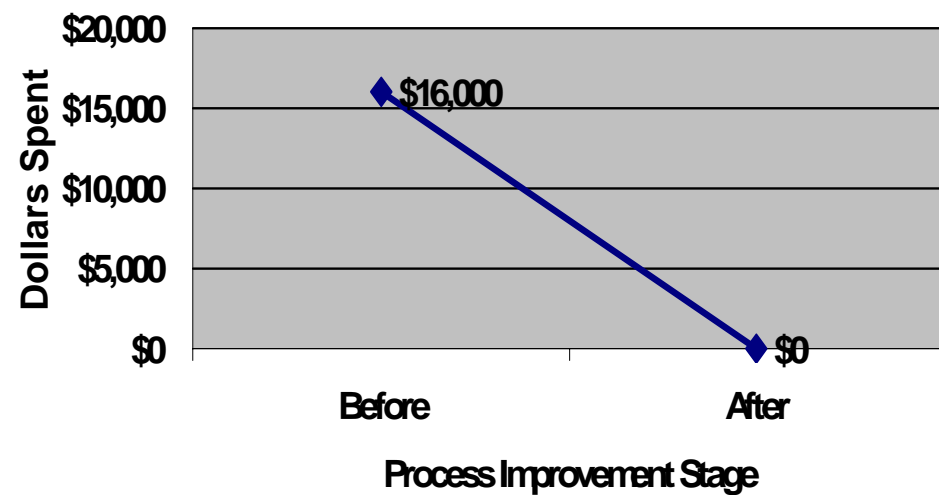
Iowa has conducted over 50 Lean Process Improvement events in 16 different agencies

Food Stamp Application Processing Oregon DHS

Cycle Time to Process Food Stamp Applications



Overtime Dollars Spent on Processing Food Stamp Applications



More RPI Results: Oregon DHS

- Reduction in processing time 62%
- Reduction of sorts 86%
- Reduction of errors 70%
- Reduction of duplicative steps 60%
- Reduction of travel time 47%
- Reduction of handoffs 56%

Benefits \$3.1 million

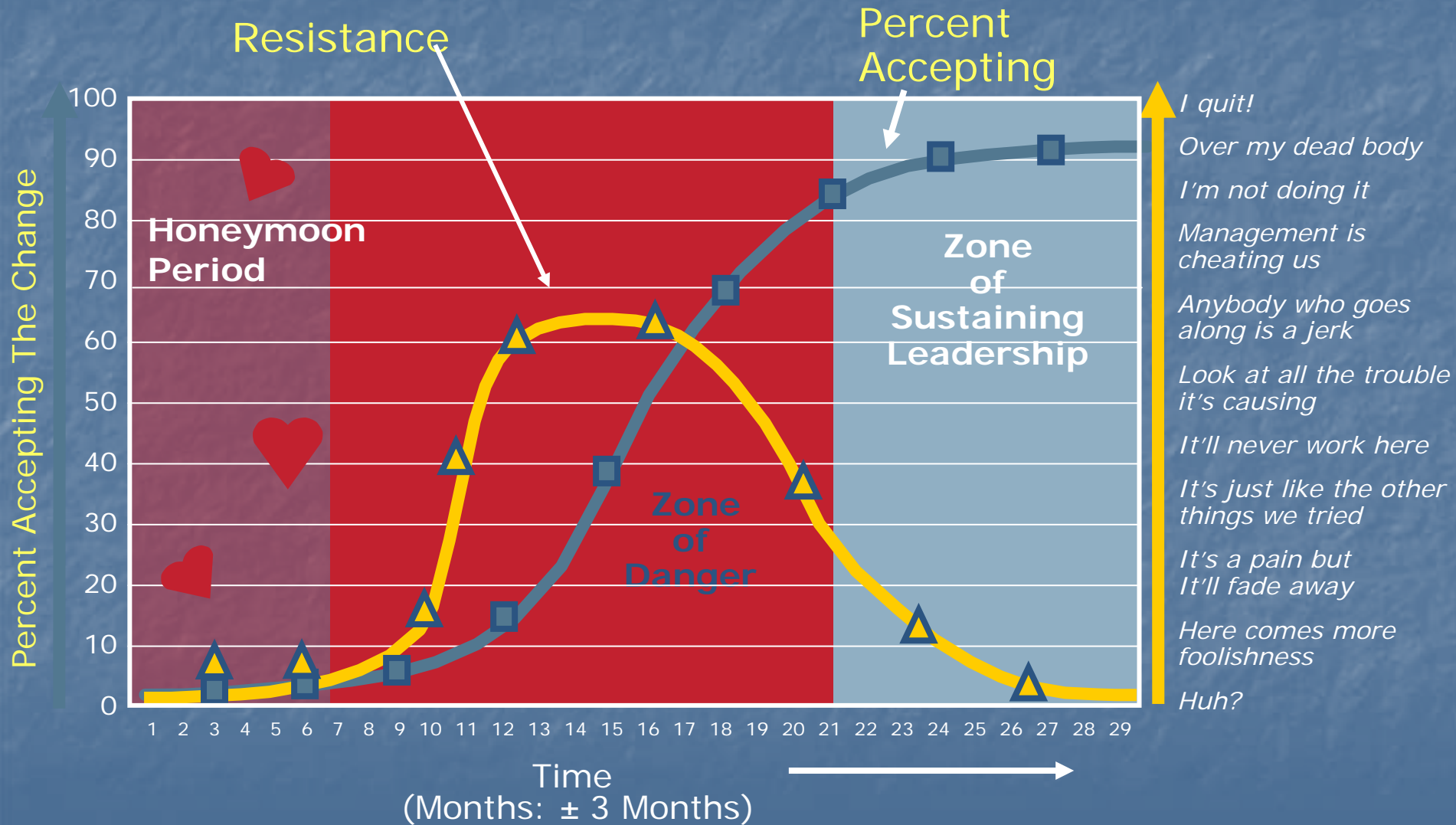
Why Lean in Government IT?

- **Application Development and Maintenance (ADM) account for about half of the average IT budget**
- **Applying Lean to ADM can increase productivity by 20 to 40 percent while improving the quality and speed of execution**
- **Lean/Six Sigma is being implemented by the GE IT Department to streamline/automate work and to eliminate defects/errors**
- **GE estimates benefits from Lean/Six Sigma to be close to \$10B**
- **Fujitsu reduced service desk calls by 40% in 18 months**

Part 5: Challenges in Transforming Public Organizations

- *Differences between public and private agencies*
- *Concerns about layoffs*
- *Flavor of the day*
- *Tracking/verifying savings/efficiencies*
- *Base-lining and benchmarking*
- *Sustaining the improvements*

Typical Pattern of Resistance to Change



Why Transformations Fail

Not Establishing a Sufficient Sense of Urgency

Not Creating a Powerful Enough Leadership Coalition

Not Creating a Vision

Under-communicating by a Factor of 10

Not Removing Obstacles To the Vision

Not Systematically Planning and Creating Short-term Wins

Declaring Victory Too Soon

Not Anchoring Changes in the Culture

“Why Transformation Efforts Fail”
John P. Kotter, [Harvard Business Review](#)

Lean Leadership Elements

Focus

Structure

Resource Allocation

Integration

Involvement

Discipline

Ownership

Critical to Lean Success

Success demands full engagement of the "Talent"



We Don't Know What Workers Want

	<u>Worker Ranking</u>	<u>Mgt./Support Ranking</u>
1. Feelings of accomplishment	1	8
2. Personal recognition	2	13
3. Good leadership by supervisors	3	12
4. Proper direction and training	4	11
5. Knowledge of what is expected	5	14
6. Fair and tactful discipline	6	7
7. Feeling involved	7	10
8. Participatory management	8	5
9. Good pay	9	1
10. Promotional opportunities	10	3
11. Good working conditions	11	4
12. Job security	12	2
13. Company loyalty to workers	13	6
14. Fringe benefits	14	15
15. Help with personal problems	15	9

Reflections
Comments
Questions
Ideas

Lean Playground on the Charles

- Ball Toss Game
 - What the Customer Wants
 - Brown Paper Fair
- The ISM Conference Program Booklet

Options for Collaboration

- **Monday Session 1:15-2:30**
Innovations in Software Development
- **Oregon Benchmark Partnership**
Share, learn & inspire

Connect

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