

People: The Heart of Lean



"There are two major distinctive features of these [Toyota Production and Kanban] systems.

One of these is 'just-in-time production', an especially important factor in an assembly industry such as automotive manufacturing....

Second...is the 'respect-for-human' system where the workers are allowed to display in full their capabilities through active participation in running and improving their own workshops"

Y. Sugimori, et al, Toyota



"The soft stuff is the hard stuff."

Chris Cool - Northrop Grumman



Learning Objectives

At the end of this module, you should be able to:

- Explain why people are the key to improving productivity
- Realize that effective communication, shared goals and knowledge, and mutual respect lead to improved organizational performance
- Participate as a member of a team to achieve a positive outcome





What are the most important things that contribute to your job satisfaction?

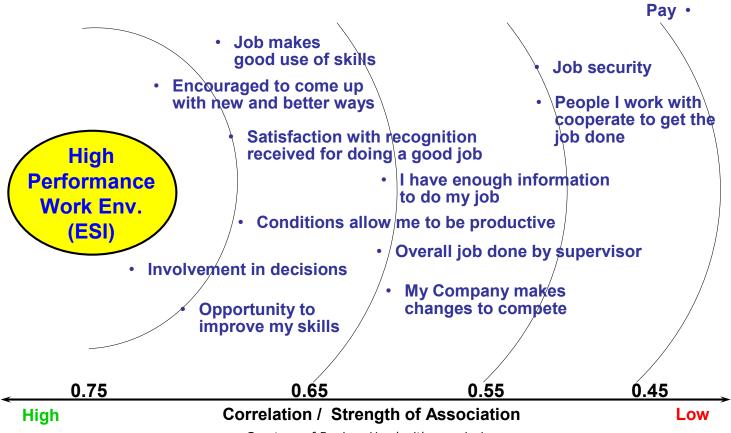


Please contribute ideas, then we will vote on them



Drivers of Employee Satisfaction

2003 Employee Satisfaction Index Key Driver Analysis



Courtesy of Boeing. Used with permission.



Theories of Worker Productivity

"Theory X"



Workers don't like to work.

They must be made to work

Elton Mayo's Human Relations Management (c 1920)



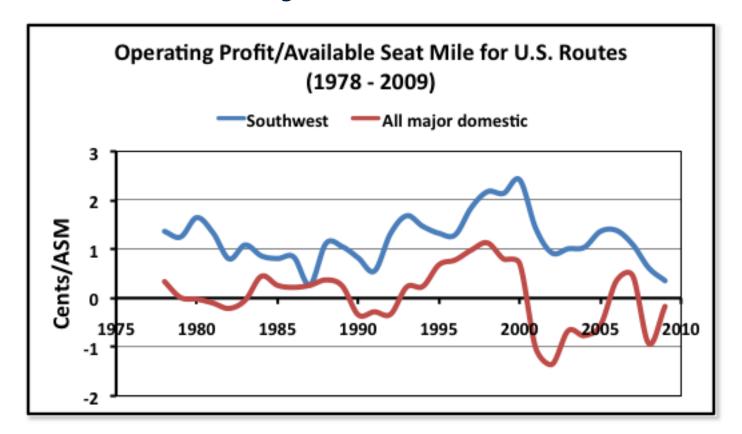
A happy worker is a productive worker



Dick Kleine at John Deere (c 2000) ✓ A productive worker is a happy worker



Southwest Performance vs. Major U.S. Domestic Airlines



Southwest has made an operating profit every year for over thirty years!



Southwest Airlines...

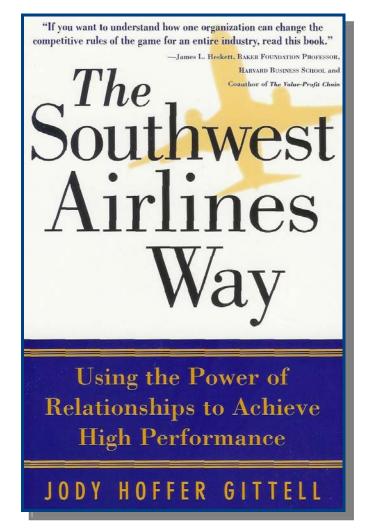


Courtesy of Southwest Airlines. Used with permission.

- Has had only one fatality in 35 years of operation an overrun on a snowy runway at Midway on Dec 8, 2005
- Until the purchase of AirTran, flew only Boeing 737s
 - Simplifies training, maintenance, logistics
- Has never had a layoff of employees to reduce costs, including after 9/11
- Is the most highly unionized major U.S. airline
- Has a point-to-point, not hub-and-spoke, route structure
- Consistently offers some of the lowest fares available
- Is a favorite of both investors and employees
 What makes Southwest so successful?



Organizational Competency



"In this book I argue that Southwest's most powerful organizational competency... is its ability to build and sustain high performance relationships ... characterized by shared goals, shared knowledge, and mutual respect. Although these relationships appear simple, appearances are deceptive." (Emphasis added)

Courtesy of McGraw-Hill. Used with permission.



Relational Coordination

- Shared Goals aligns employees to prioritize organizational success over "just doing my job"
 - SWA: Safety, Satisfied Customers, On-time Departure
- Shared Knowledge enables visibility of the overall work process, and the linkages between different jobs
 - SWA: Functional groups help each other; Pilots help flight attendants, gate agents help baggage handlers,...
- Mutual Respect reduces barriers between employees and employee groups
 - SWA: No one employee group is more important than another

Supported by effective communication





Communication

Colleen Barrett, SWA President

Courtesy of Southwest Airlines.
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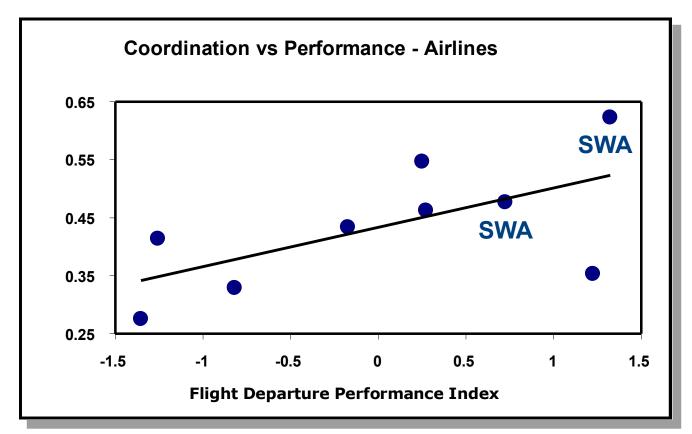
From The Southwest Airlines Way

- "With frequent, timely communication, Southwest employees could respond quickly to changing circumstances in a coordinated way."
- "...Southwest employees communicate about the problem itself, rather than assigning blame when difficulties occur."

Open and honest communication is a hallmark of lean thinking organizations



Coordination Correlates with Performance For Airlines



"The performance effects of relational coordination are large and statistically significant. This means you can be confident of achieving improved performance results if you can increase relational coordination."

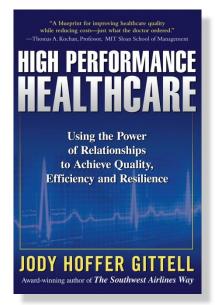


Relational Coordination Applies to Other Work Settings

- Work setting characteristics where relational coordination applies
 - Task interdependence handoffs may require feedback and iterations
 - Uncertainty adjustment of plans and updating
 - Time constraints time buffers not feasible
- Example work settings where relational coordination applies
 - Healthcare
 - Product development
 - Can you think of others?

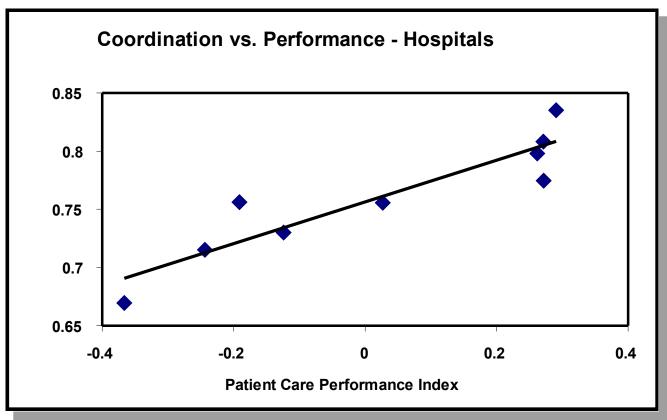


Coordination Correlates with Performance For Hospitals



Courtesy of McGraw-Hill. Used with permission.

Joint Surgery Case Studies at 9 Hospitals



"Relational coordination among care providers enables shorter hospital stays, higher levels of patient-perceived quality of care, and improved clinical outcomes."

SWA Organizational Practices Supporting Relational Coordination

Lead with credibility and caring

Invest in frontline leadership

Hire and train for relational competence

Use conflicts to build relationships

Bridge the work/family divide

Create boundary spanners

Measure performance broadly

Keep jobs flexible at the boundaries

Make unions your partners

Build relationships with suppliers

Practices



Quality Performance

Customer complaints

Lost baggage

Late arrivals

Efficiency Performance

Turnaround Time

Staff Time Per Passenger

Relational Coordination

Outcomes

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Outcomes of Relational Coordination

The SWA Study shows that increased Relational Coordination leads to:

- Higher reliability
 - Better on time performance
 - Fewer lost bags
- Greater customer satisfaction
 - Fewer complaints
- Shorter turn around time
 - Greater aircraft and gate productivity
 - Most passengers served per employee



Relational Coordination Impact on Healthcare

44% in Relational **Coordination**

Shared Goals Shared Knowledge Mutual Respect

Communication

Frequent

Timely

Accurate

Problem Solving

Efficiency Performance

Quality

Performance

53% in Patient

Satisfaction

18% in Freedom

from Pain

14% in Mobility

-68% in Length of Stay

17% in Job **Satisfaction**

100% **Improvement** in 12 Work **Practices**

Joint Surgery **Case Studies** at 9

Ref: Gittell, High Performance Healthcare

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The Power of Workforce Productivity

Workforce productivity benefits

- Revenue generated from satisfied customers
- Revenue generated from utilized capital assets
- Reduced costs from low employee turnover
- Reduced costs from not having employees idle
- Happy, satisfied employees



Active Learning Exercise - A Class Debate!

Objective

 With a team under a time constraint, articulate a clear and concise message

AND observe

- How differing viewpoints affect teamwork
- The process used for group decisionmaking
- How the completion of the task depends upon personal feelings and process



Team Debate

"The early bird may get the worm, but it's the second mouse that gets the cheese." Jeremy Paxman*

- The bird's proposition
 - Early adopters of lean thinking gain the greatest competitive advantage
- The mouse's proposition
 - Second followers of lean thinking gain the greatest competitive advantage
- Which is it? The class will decide!



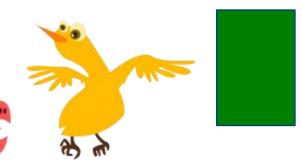




Individual Voting

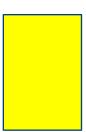
"The early bird may get the worm, but it's the second mouse that gets the cheese." Jeremy Paxman*

Early adopters of lean thinking gain the greatest competitive advantage



Second followers of lean thinking gain the greatest competitive advantage





Vote your choice with a colored card



Team Experience

- Dilemma of personal vs. team views
 - Adapting, compromising
 - Personal feelings, attitudes and perceptions of others
 - Wording of the statements
- Process used for your group to decide, discuss and present

Satisfaction with the team outcome



*Tasks*What people do

ProcessesHow people do it

People are the Heart of the Enterprise and Lean



People



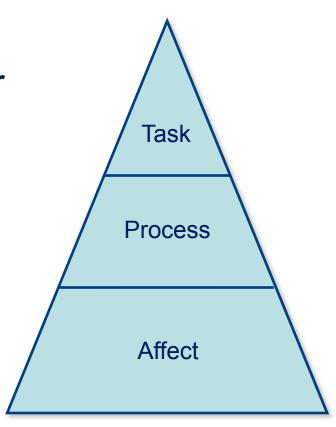
Organizational Structures
What enables people

Culture



SLean Academy Three Elements of Collaboration

- Task What is being done together
 - Conceptualizing, problem solving, implementing
- **Process How the task will be** accomplished
 - Division and scheduling work, coordination, managing time and meetings, draft and revisions
- **Affect Feelings about the work** based upon:
 - **Prior** experiences, culture, biases
 - **Current** experience



Affect and Process support task



Collaboration in Teams

Benefits

- More ideas and new ideas
- Multiple areas of expertise
- Shared workload
- Stronger problem solving
- Improves design work



Photo by Hugh McManus

Challenges

- Different goals and values
- Not being skilled or practiced in it
- Defensive about work (ego)
- Preconceived notions
- Different work styles
 - "lone wolf"
 - "I'll do it"
 - "me, mine"
- Previous unsuccessful collaboration

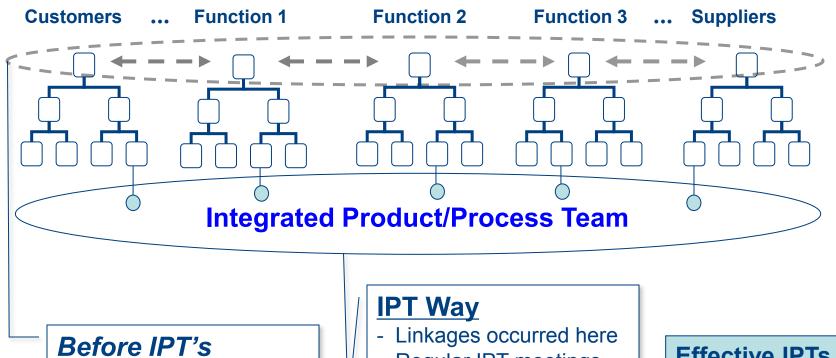


How to Meet the Challenges of Collaboration

- Elaborate key ideas in writing and verbally
- Consider alternate ideas/solutions
 - Don't jump to consensus prematurely
- Pay careful attention to process
- Voice disagreements constructively, directly, and explicitly
- Give positive feedback directly and explicitly



Integrated Product/Process Teams



Traditional networksGrapevine-type

Linkages occurred here

Coordination meetings

Grapevine-type communication

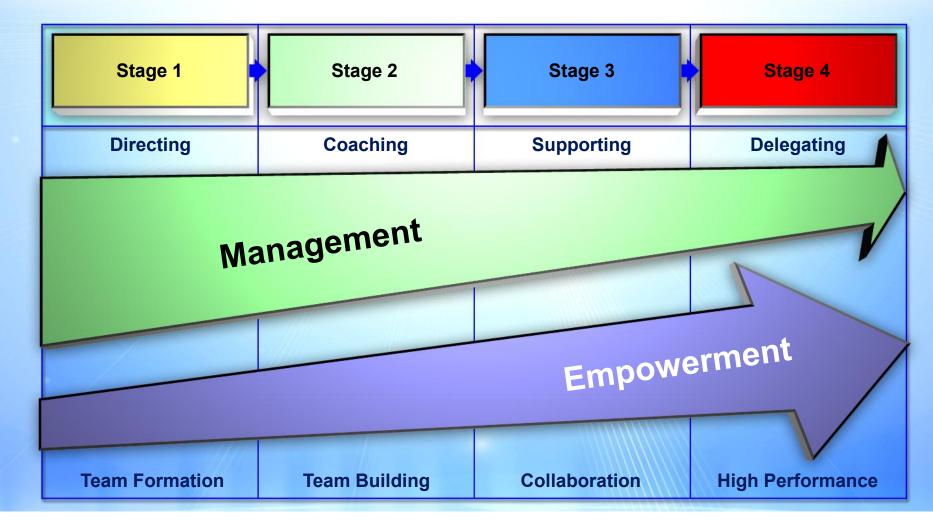
- Regular IPT meetings
- Defined members & leaders
- Every member keeps functional leadership informed

Effective IPTs require good teamwork and leadership

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Integrated Product/Process Teams



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Lean Teams

- Mutual respect for all people & jobs
- Encourage contribution by all team members
- Different opinions are valued
- Open, honest communication & feedback
- Aligned goals
- Continuous improvement of individuals and the team
- Synergy and cooperation







What is the most important thing you learned from this module?

Write a short answer on a 3 x 5 card



Reading List

Cutcher-Gershenfeld, J., et. al., *Knowledge Driven Work,* Oxford University Press, New York, 1998

Fischer, R. and Urey, W., *Getting to Yes: Negotiating Agreement Without Giving In*, 2nd Ed, Penguin Books, New York, 1991

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Acknowledgements

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Team Behaviors by Stage

Team Behaviors

Stage 1 Formation

- Team members skeptical of one another
- Little or no commitment or trust
- Getting to know one another
- Communication is quarded
- Hesitant participation by members
- Struggle to make consensus decisions

Stage 2 Team Building

- Team members begin to express themselves openly
- Only ideas and opinions of a few team members are known
- Conflict is evident but remains unsolved; complaining is the norm
- Learn to ask for help from one another
- Struggle to not blame one another for mistakes
- Team members begin taking on more responsibility

Stage 3 Collaboration

- Team members openly give and seek feedback
- Differences of opinion are valued and worked within the team
- Team members trust one another
- Conflict is resolved within the group
- Team has a sense of cohesiveness
- Team members attempt to achieve harmony through cooperation

Stage 4 High Performance

- Mutual respect and equal participation by all members
- Team interested in individual and team development
- Team values differences of opinion, perspectives and conflict
- Team has a high synergy level
- Team has a comfortable working atmosphere
- Knows what needs to be done and able to do it

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Leadership Behaviors by Stage

Leadership Behaviors

Stage 1 Formation

- Help to build trust
- Inspire, motivate, encourage team concepts
- Model good listening
- Provide information
- Be patient
- Provide clear direction

Stage 2 Team Building

- Model open and honest communication
- Help team learn from mistakes and not place blame
- Encourage team to directly communicate with other teams
- Make sure training takes place
- Revisit team goals to make sure they are meaningful
- Help team deal with frustration

Stage 3 Collaboration

- Pull back from day to day tasks
- Allow team to take on more and more of the "old" management role
- Act as a resource, "technical expert on call" for the team
- Delegate decisions
- Continue to provide business information
- Coach/counsel teams

Stage 4 High Performance

- Provides
 resources for team
 coordination
 between shifts,
 support groups,
 etc.
- Partner with team
- Allow more autonomy
- Share in longrange/ strategic planning
- Rewards and recognizes exemplary performance

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MIT OpenCourseWare http://ocw.mit.edu

16.660J / ESD.62J / 16.853 Introduction to Lean Six Sigma Methods IAP 2012

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