

# *Leadership to Make Lean Happen in Hospitals, Labs & Pathology Groups*

Lab Quality Confab 2008



Richard J. Zarbo, MD- Pathology & Laboratory Medicine, Henry Ford Health System, Detroit

# Who are these guys & where they from?





# Henry Ford Health System

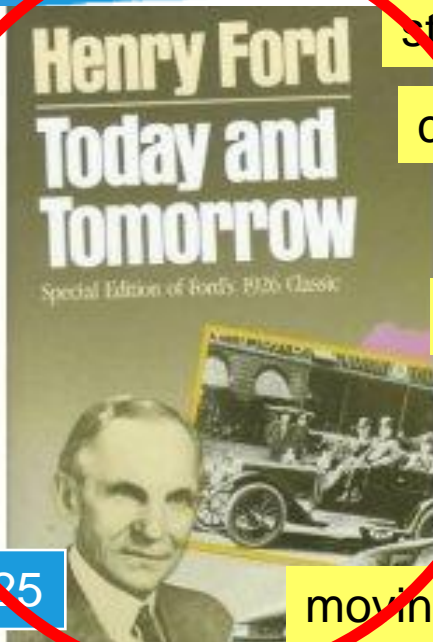


- 22,000 employees
- 7 hospitals, 40 ambulatory cntrs
- Beds: 2,495, Docs:1100 +1500
- 12th largest hospital-based lab
- 35 pathologists & clin. scientists
- 581 technical staff
- Full service on main campus
- Labs in 26 regional medical centers spanning 40 miles
- \$62M research funding, 3<sup>rd</sup> largest NIH \$ in Michigan
- Leap Frog Group- 'Top 41 safest hospitals'
- Thompson Reuters '100 Top Hospitals'- Performance Improvement
- 101 'Best & Brightest Places to Work'
- Crain's Detroit Business- 'Coolest Place to Work'



# Lab Quality Confab 2008





standardization

coordination

waste

cleanliness

timing

cycle time

moving assembly line

1925



just-in-time inventory

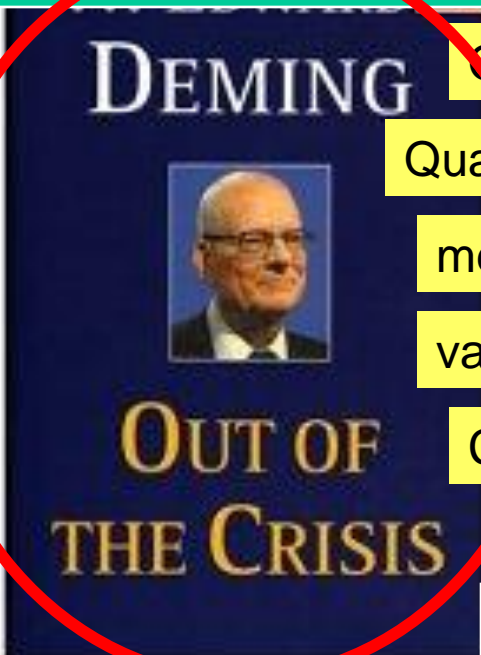
Pull production

one at a time production

empowered workforce



## Foundations of LEAN



Quality focus

Quality control

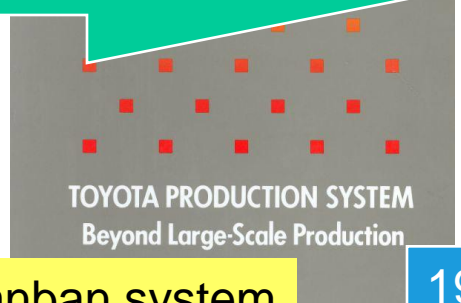
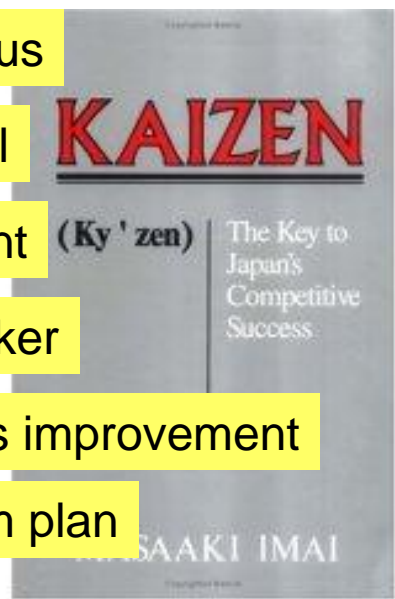
measurement

value of worker

Continuous improvement

Long term plan

1986



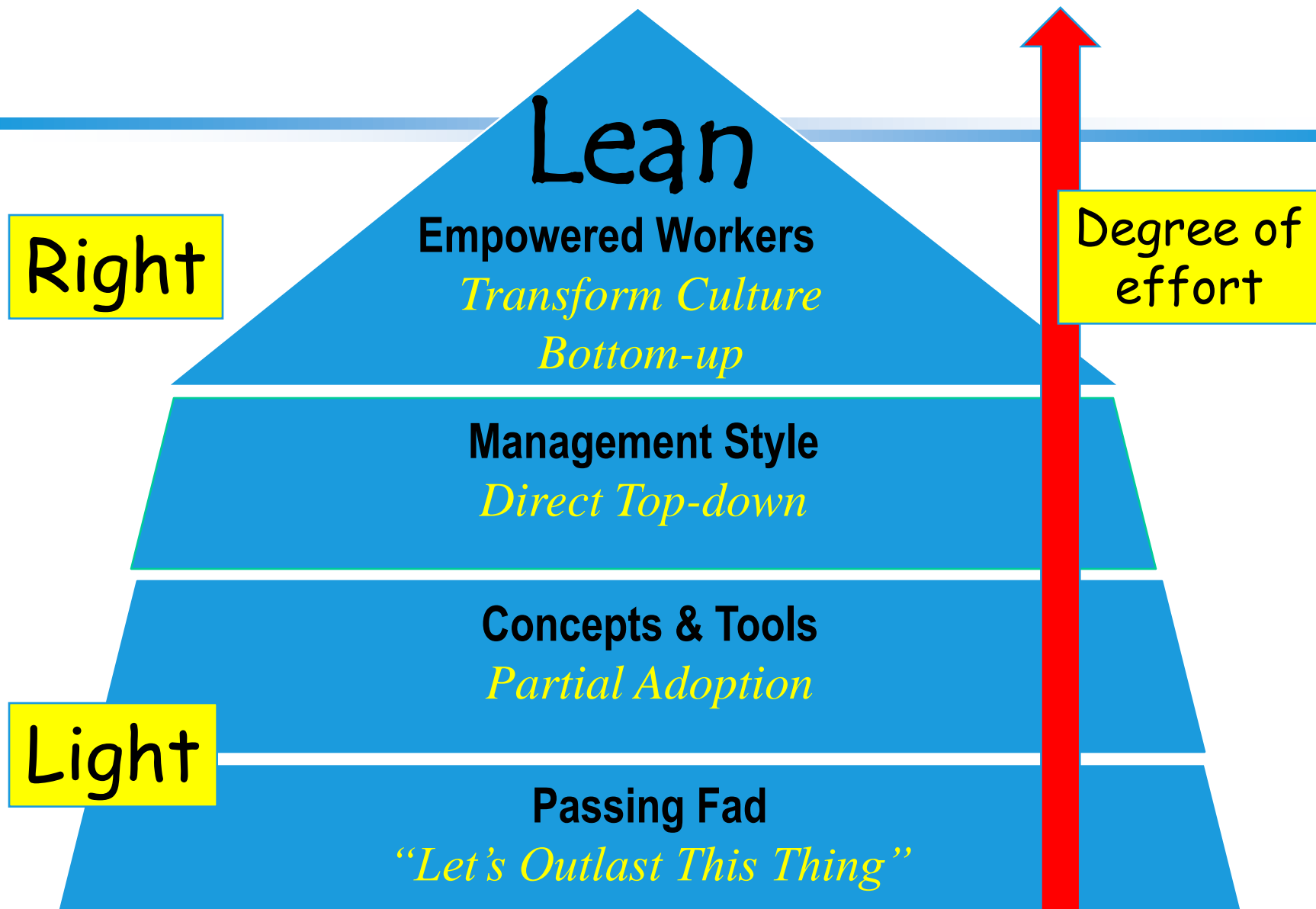
Kanban system

continuous flow

rapid changeover

error proof machines

1978  
1988



# HF Production Re-Design Goals

- Opportunities
  - ▶ Standardized tasks and workstations
  - ▶ Continuous process flow, convert to 'pull'
  - ▶ Workload leveling
  - ▶ Cultural change, fix problems as they occur
  - ▶ Visual controls
  - ▶ New technology
  - ▶ Decision making
    - Scientific basis, careful study, consensus,
    - Autonomous yet integrated work cells
  - ▶ Grow and develop our people
  - ▶ Sustain by continuous learning & improvement

# Creating Culture

## **Transforming to a Quality Culture**

### The Henry Ford Production System

*Richard J Zarbo, MD, DMD, and Rita D'Angelo, MS, ASQ, CQE, SSBB*

American Journal of Clinical Pathology  
2006;126:Suppl S21-S29.

**BCBSM Foundation 2008 McDevitt Excellence in Research Award  
for Policy Research- the 'Henry Ford Production System'**



# Creating Measurement Tools

## **The Henry Ford Production System** Measures of Process Defects and Waste in Surgical Pathology as a Basis for Quality Improvement Initiatives

*Rita D'Angelo, MS, ASQ, CQE, SSBB, and Richard J Zarbo, MD, DMD*

American Journal of Clinical Pathology  
2007;128:423-429.

# Demonstrating Results

## **The Henry Ford Production System** Effective Reduction of Process Defects and Waste in Surgical Pathology

*Richard J Zarbo, MD, DMD, and Rita D'Angelo, MS, ASQ, CQE, SSBB*

American Journal of Clinical Pathology  
2007;128:1015-1022.

**WASTE**

# Quality Comparison

## Surgical Pathology

*"It is not possible to repeat too often that waste is not something which comes after the fact"*

*-Henry Ford*

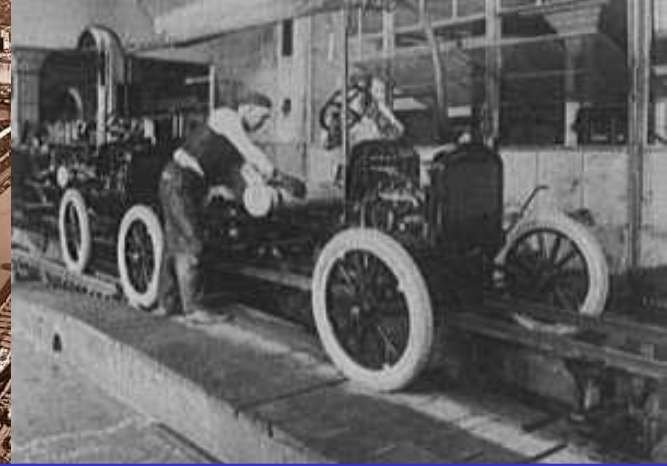
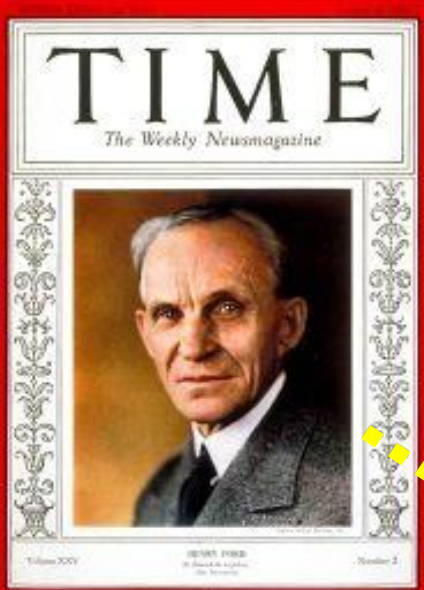
	2006	2007	2008
Total SP Cases	1690	1791	1000
Cases with Defects	472	223	24
Total Defects	494	288	24
	1 of 3	1 of 8	1 of 40
Defective Case Frequency	27.9%	12.5%	2.5%
	50/day	30/day	5/day
	55%		91%

# Toyota in the House of Ford

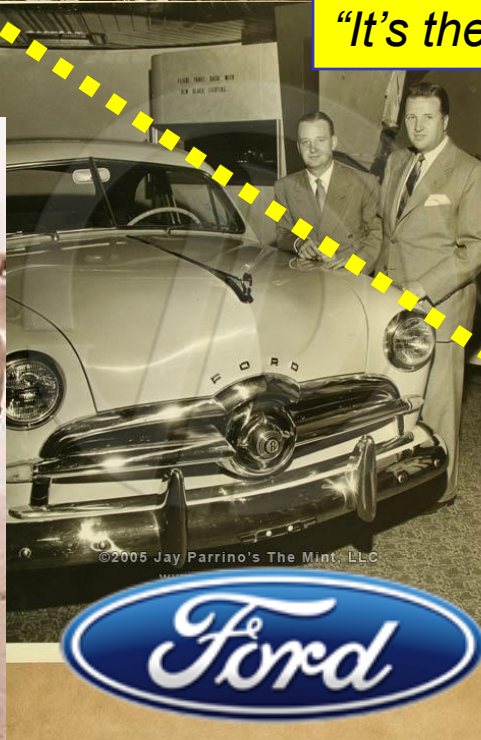


# Creating a Mass Production Culture

Lab Quality Confab 2008



*"It's the work, not the man, that manages"*



# Mass Production

Price of  
Model T  
Touring  
Car



- Continuous Production
- Conveyor belt assembly line
- Division of labor
- Simple repetitive tasks
- Integrated supply chain
- Standardized parts
- Reducing waste

Year	Production	
1903	195	
1903-4	1,513	
1904-5	1,695	
1905-6	1,599	
1906-7	8,759	
1907-8	6,181	
1908-9	10,660	\$950.00
1909-10	19,051	780.00
1910-11	34,979	690.00
1911-12	76,150	600.00
1912-13	181,951	550.00
1913-14	264,972	490.00
1914-15	283,161	440.00
1915-16	534,108	360.00
1916-17	785,433	360.00
1917-18	708,355	450.00
1918—		
Aug. 1, 1919	537,452	525.00
Aug. 1, 1919—		
Dec. 31, 1919	401,982	575.00
1920	1,074,336	440.00
1921	1,013,958	415.00
1922	1,351,333	384.00
1923	2,090,959	295.00
1924	1,993,419	290.00
1925	1,990,995	290.00



# Improving & Sustaining a Culture



Toyoda Automatic  
Loom Works  
1926



## The Passionate Pursuit of Perfection

Toyota Motor Company



Sakichi Toyoda



Kiichiro & Eiji Toyoda



AUTOM TRENDS  
2007 CAR OF THE YEAR



# Why TQM Failed

## The BIG 3

Change is in an organization's culture - its norms, values, and belief systems about how organizations function.

And finally, it is a change in an organization's political system: decision making processes and power bases.

For substantive change to occur, changes in these 3 dimensions must be aligned:

**TQM as a technological change will not be successful unless cultural and political dimensions are attended to as well (Tichey, 1983).**





“Toyota’s success is the result of leadership and employee involvement.

To be functional leaders, senior staff at Toyota must believe, drive, understand, and live the same training philosophy and employee empowerment

that in turn reinforces the culture established by the original company founders.”

Zarbo RJ, D’Angelo R. Transforming to a quality culture: the Henry Ford Production System. *Am J Clin Pathol.* 2006;126(suppl):S21-S29.

# Leadership



What,  
me  
worry?

Back to Deming's 14 Principles  
Shades of TQM done right

**Overcoming people  
challenges**

- Leadership driven
- Create organizational & value structure
- Define roles of middle management and worker
- Worker- value, respect, empower & protect
- Align incentives
- Recognize & reward
- Educate & develop workforce & next leaders

# Leaders Transform Culture

"Culture eats strategy for breakfast & process for lunch"



Culture = How people have been conditioned to behave

***"The only things that evolve by themselves in an organization are disorder, friction, and malperformance."***

*-Peter Drucker*

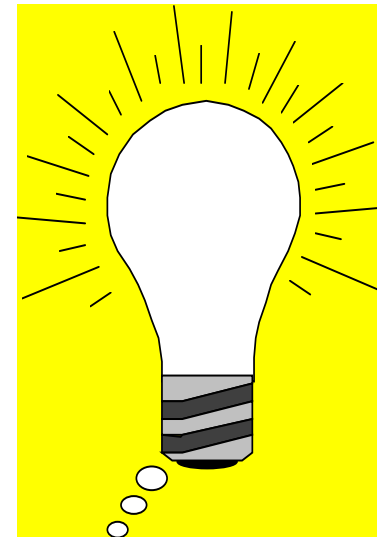
# Beyond TQM (1988) to TPS-Lean

- Improve constantly and forever the system of production
- Put everybody in the company to work to accomplish **the transformation (cultural revolution)**
- The transformation*** is everybody's job."

-W. Edwards Deming

**But how to implement?**

**KEY**



**Culturally transform & sustain worker's approach to work**



# Something New ?

- “-Adopt the new philosophy.
- We are in a new economic age.
- Western management must awaken to the challenge, must learn their responsibilities, and take on **leadership for change.**”

W. Edwards Deming

# Premise

LEAN = MANAGEMENT

MANAGEMENT = LEADERSHIP

ergo

LEAN = LEADERSHIP

OK, I'm a Leader

*"Success is not final, failure is not fatal:  
it is the courage to continue that counts."  
- Winston Churchill*

## ***So how do I implement LEAN ?***



*"Let's just start cutting and see what happens."*

# Culture Change

*"When one finds oneself in a hole of one's own making, it is a good time to examine the quality of the workmanship."  
-John Renmerde*

Shaped by leaders and their actions

- **Messages communicated**
  - mission, vision, structure, strategy, goals
- **Behaviors rewarded & punished**
  - consequences drive human behavior
  - desired behavior drives execution
  - execution drives results



# LEAN Team

“Creativity prospers best under particular conditions, especially where there is a flow of ideas between people who have different sorts of expertise.”

-Ken Robinson

## **LEAN = Team success**

## **Depend on the TEAM**

**Admit you don't have all the answers**

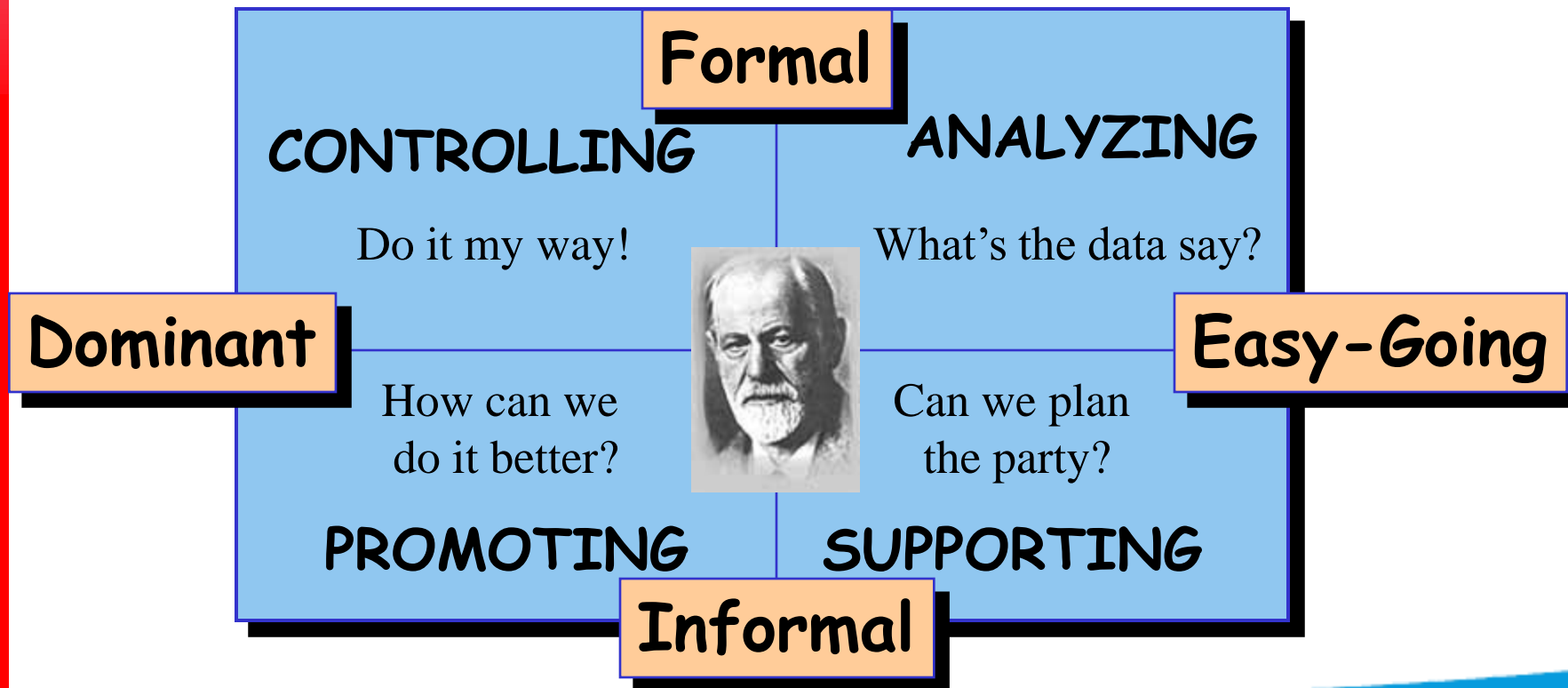
## **Dysfunctional Team?**

**= *LEAN failure***

# People Challenges

Don't take it personally

- Communicating, interactive learning workforce
- Sensitivity to how people work together
  - ▶ Personality types, attitudes, styles, skills, likes



# Functional Teams

*"Bear in mind that the measure of a man is the worth of the things he cares about."*

*-Marcus Aurelius*

Desired behaviors promoted  
by

***LEADERSHIP***

or



# Employees Mirror Leader Behavior

WHAT DO YOU WANT YOUR TEAM TO LOOK LIKE?

YOUR LEADERSHIP TRAITS  
=Team traits

Enthusiastic  
Passionate  
Positive  
Authentic  
Integrity  
Respectful  
Thoughtful  
High energy  
Dependable  
Caring

# Leadership Models

*"You can accomplish anything in life, provided that you do not mind who gets the credit."*

*-Harry S Truman*



## Humanistic

Competent

Humble

Serves others

Collaborates

Builds teams

Shares knowledge

Supports & teaches

Praises & coaches

Sees good in others

Asks what more can I do

Open to new ideas

Apologizes when wrong

Shares stage

## Egocentric

Competent

Self promoting

Self serving

Competes

Builds silos

Sees knowledge as power

Tears down

Finds fault

Suspicious of others

Asks what's in it for me

Own ideas are best

Always right

Craves spotlight

# What People Do & Say

## Driving Desired Behaviors

- **Define those that produce results**
  - Competence based (technical)
  - Values based (interpersonal)
- **Associate consequences**
  - Immediate & Certain (most powerful)
    - Feedback, appreciation, coaching
    - Positive > Negative reinforcers
  - Future
    - Year end performance review, bonus



# Influencing Behavior

## Antecedents

20%

Things that precede and prompt behavior to occur

## Consequences

80%

Things that follow behavior, making it more or less likely to occur

***“We live only in the present, in this fleet-footed moment.  
The rest is lost and behind us, or ahead of us  
and may never be found.”***

*-Marcus Aurelius*

# Fear of Failure

*"Failure is simply the opportunity to begin again, this time more intelligently."  
-Henry Ford*



*"Fill out this tag and attach it to your big toe."*

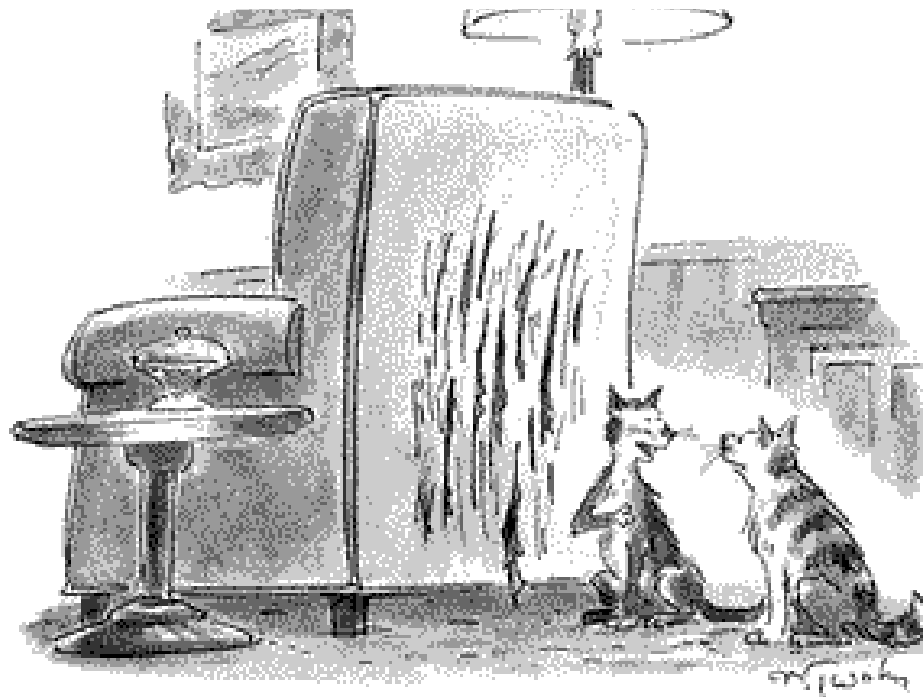
Leaders  
-overcome  
your own  
Members  
-neutralize it

# Steel Yourself

***“It is the fate of kings to do men good and to be hated for it.”***  
***-Antisthenes***

# Leader Priority

*"Never complain about your troubles, they are responsible for more than half your income."*  
-Robert Updegraff



## **Top down MACRO**

- direction
- major projects & goals
- resources

## **Bottom up MICRO**

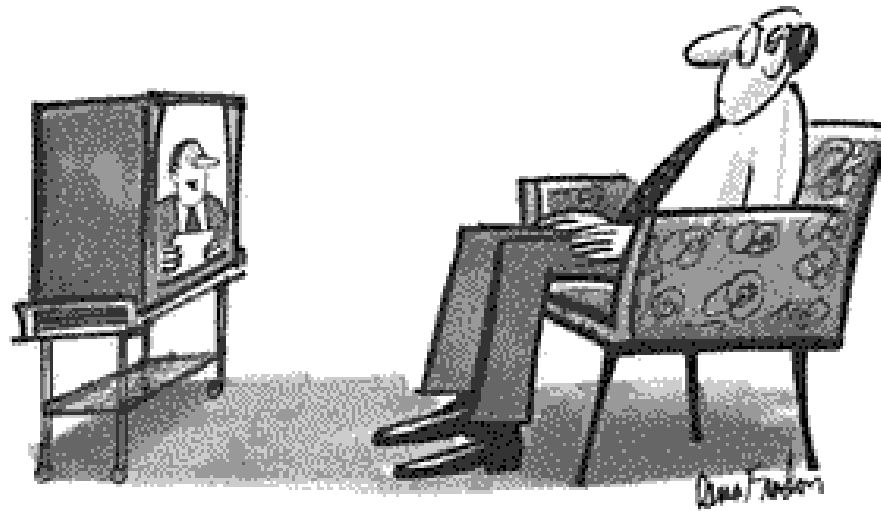
- easy fix wins
- incremental improvements

**"I have a couple of other projects I'm excited about."**

# Set Expectations

*"Today's best, which superseded yesterday's, will be superseded by tomorrow's"*

*-Henry Ford*



Mandatory

-involvement

Set RPI

-pace

-expectations

“Meaningless statistics were up one-point-five per cent this month over last month.”

# Commitment

*"Mere lip service or lukewarm support from top management is the 'kiss of death' for any such program."*

*-Armand Feigenbaum*



*"Really, I'm fine. It was just a fleeting sense of purpose—I'm sure it will pass."*

Unwavering  
Enthusiastic  
Supportive  
Empowering  
Delegating  
Developing

No place for  
micromanagement



# Lead by Example

“No job too small”

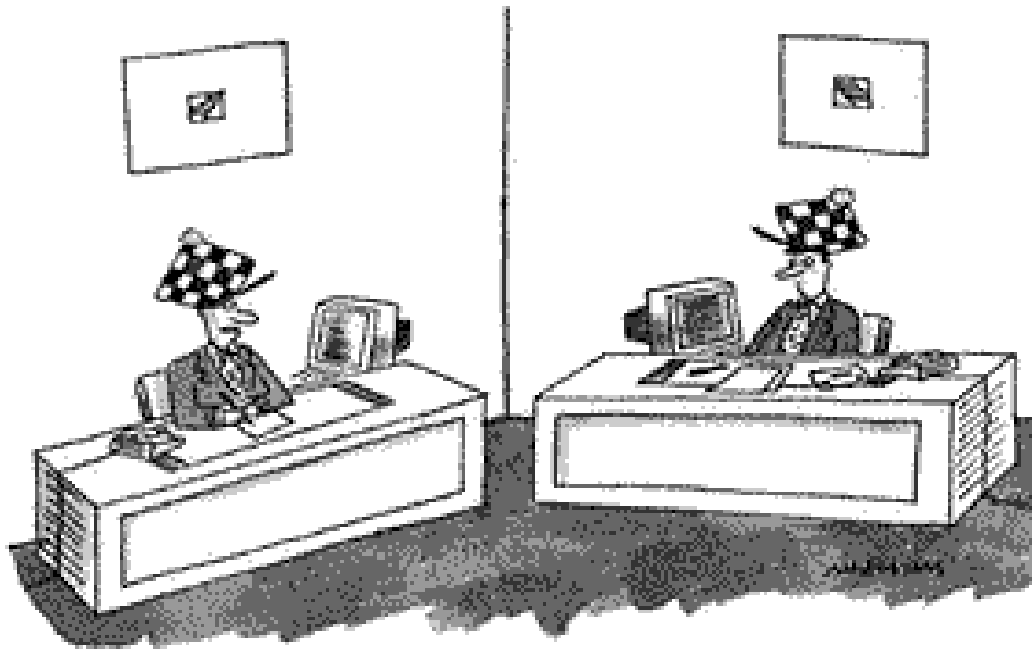


Saturday 5S Day, April 2, 2007



# Structure

*"If you want anything done ask a busy person.  
The more you do is the more you can do."  
-Lucille Ball.*



Mission  
Vision  
Values  
Principles  
Org. chart

**"I don't know how it started, either.  
All I know is that's it's part of our corporate culture."**

# HFPS Guiding Principles

**Vision**  
Vision

We will be “best in class”, striving for zero defects

**Mission**  
Mission

Continually perfect processes & patient safety

**Values**  
Values

Our people, partners & patients are most important-  
Treated w/ respect, understanding, & cooperation

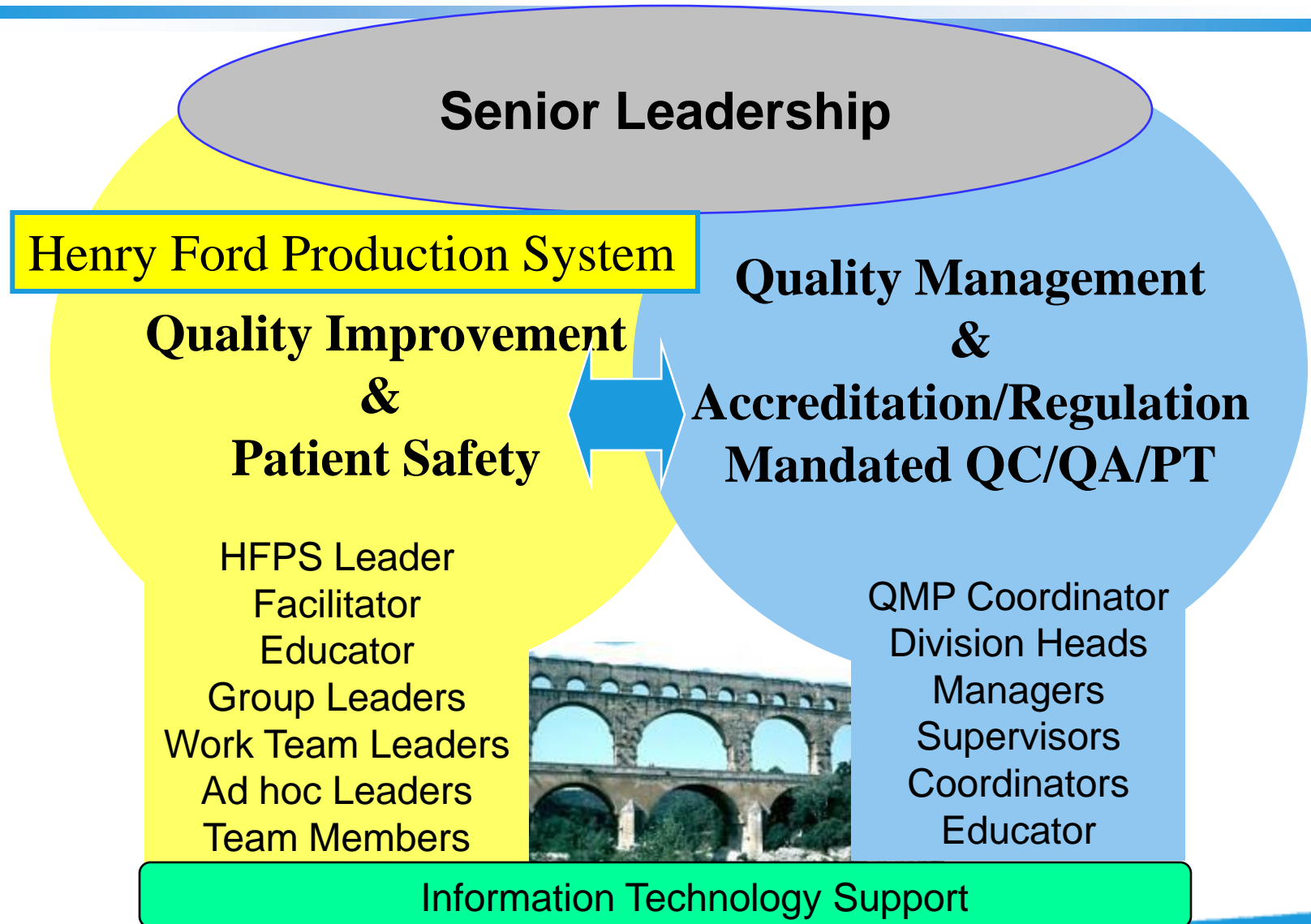
**Strategy**  
Strategy

Adapt & innovate Lean & TPS principles to  
HFHS Pathology & Laboratory Medicine

**Cultural Change**  
Cultural Change

Empowered workers, continuously learning,  
making scientifically based improvements that  
standardize process & eliminate waste,  
moving daily & continuously toward the ‘ideal’

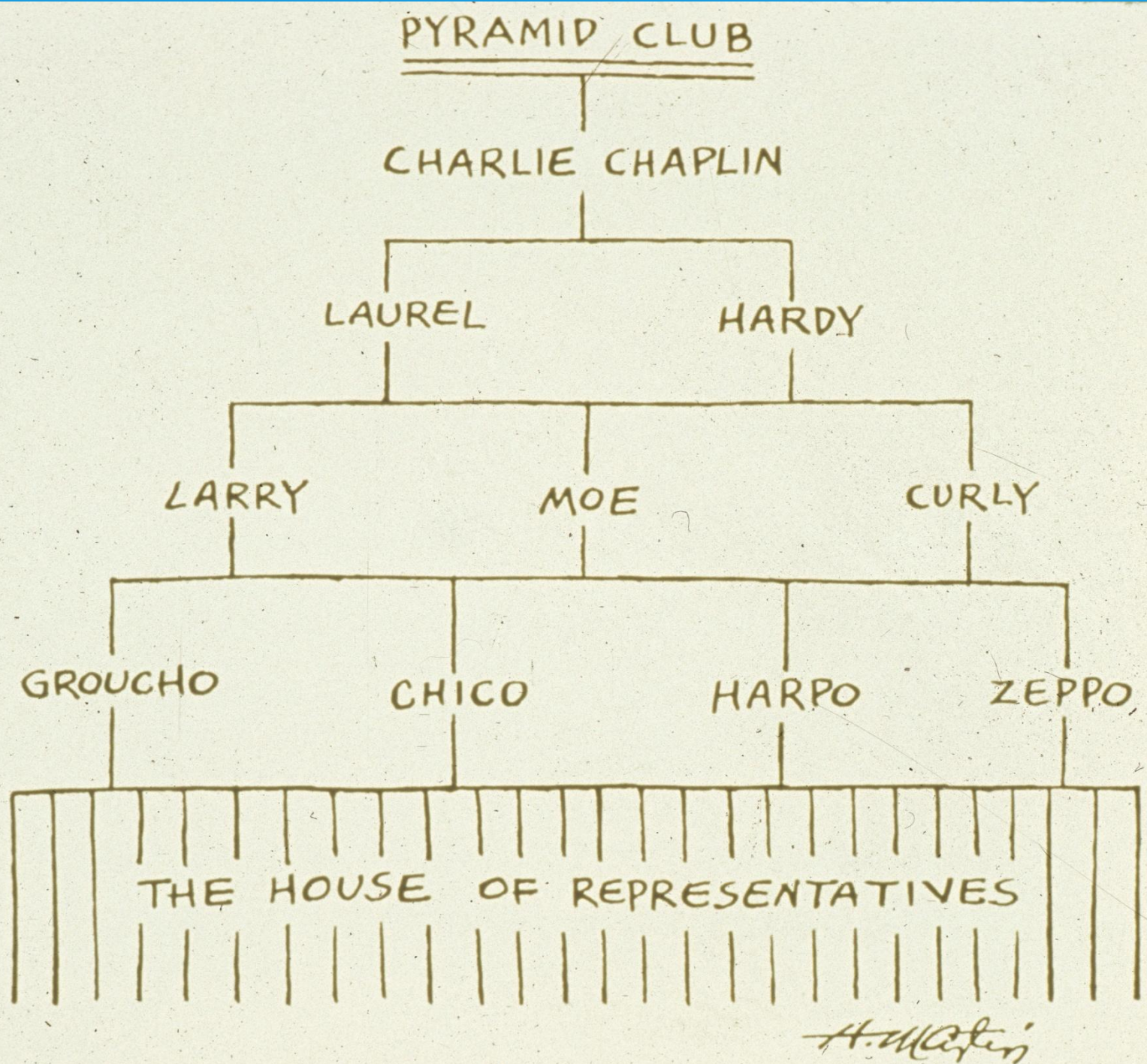
# Organizational Structure



# 2008 LEAN Leadership Framework

***“Our invariable reply to ‘It can’t be done’ is, ‘Go do it’.”***  
***-Henry Ford***



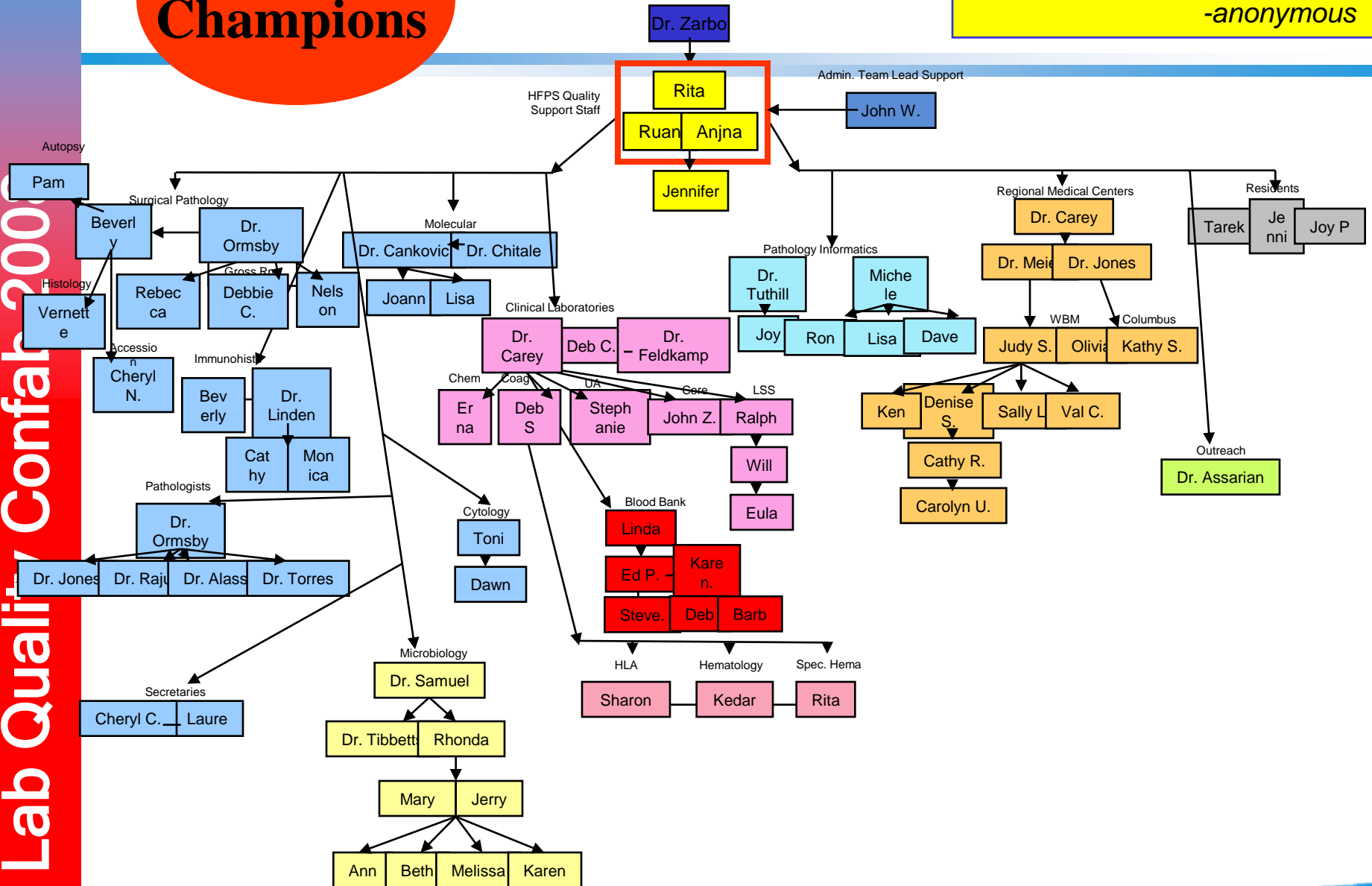




# 82 Champions

## HFPS ORG CHART LEAN Team Leaders & Champions

*"Systems do not produce quality, people do."*  
-anonymous



# RELY ON & SUPPORT

The passionate and the converts



# PUSH the REST

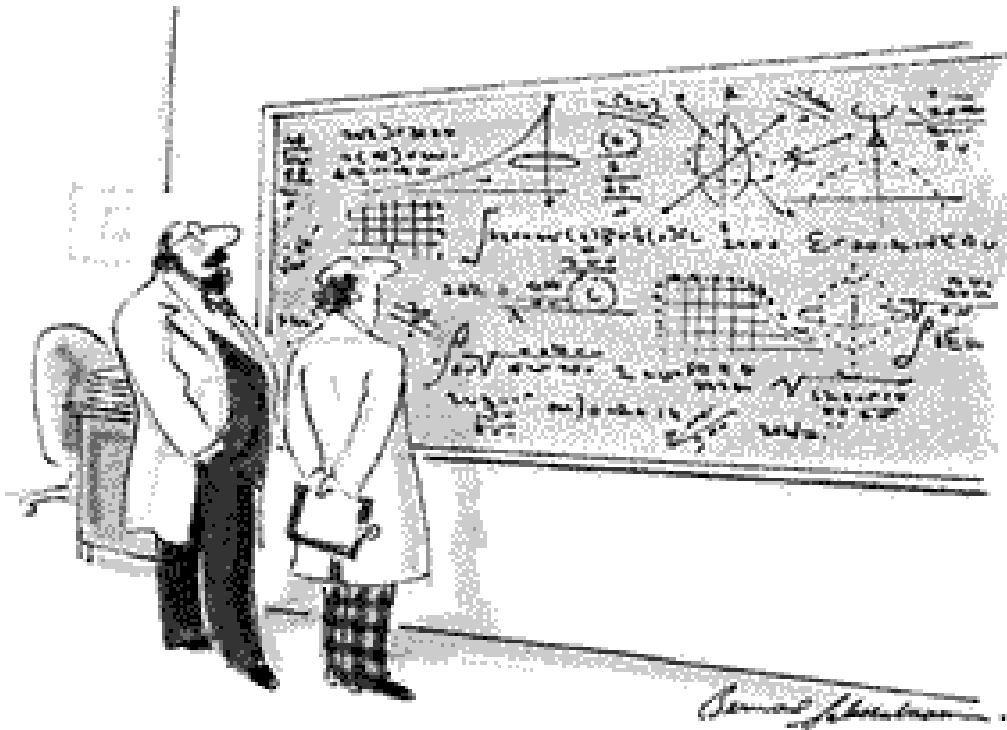
Sept 3, 2008

- As appointed leaders and professional staff in Clinical Pathology disciplines, I expect you to be in attendance at all CP Share the Gain meetings. You are all on your Lean education journey, you have much more to integrate as you learn to lead as LEAN managers and you most definitely need to support, recognize and reward your staff for giving their discretionary time in their LEAN projects.
- Your LEAN facilitators and bench staff work very hard to present this material professionally. You are their leaders in name. Be there. “Shadow of a Leader” means more than you know if you wish to be effective as we continue to change the culture of the worker.

# Support Leaders

*"Intelligence doesn't enable you to succeed.  
Being smart does- being able to integrate  
intelligence with common sense."*

*-unknown*



**"Oh, if only it were so simple."**

Education  
Coordination  
Expectations  
Accountability  
Resources  
Development  
Recognition

# HFPS Team Leads

## Ford F-150 Factory Tour



Team Leader bonding  
essential for:

- culture adoption
- project identity
- longevity
- collaboration across divisions
- success



# Involvement of Senior Leadership

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The basis of managing  
'LEAN' management





# Absent Leadership

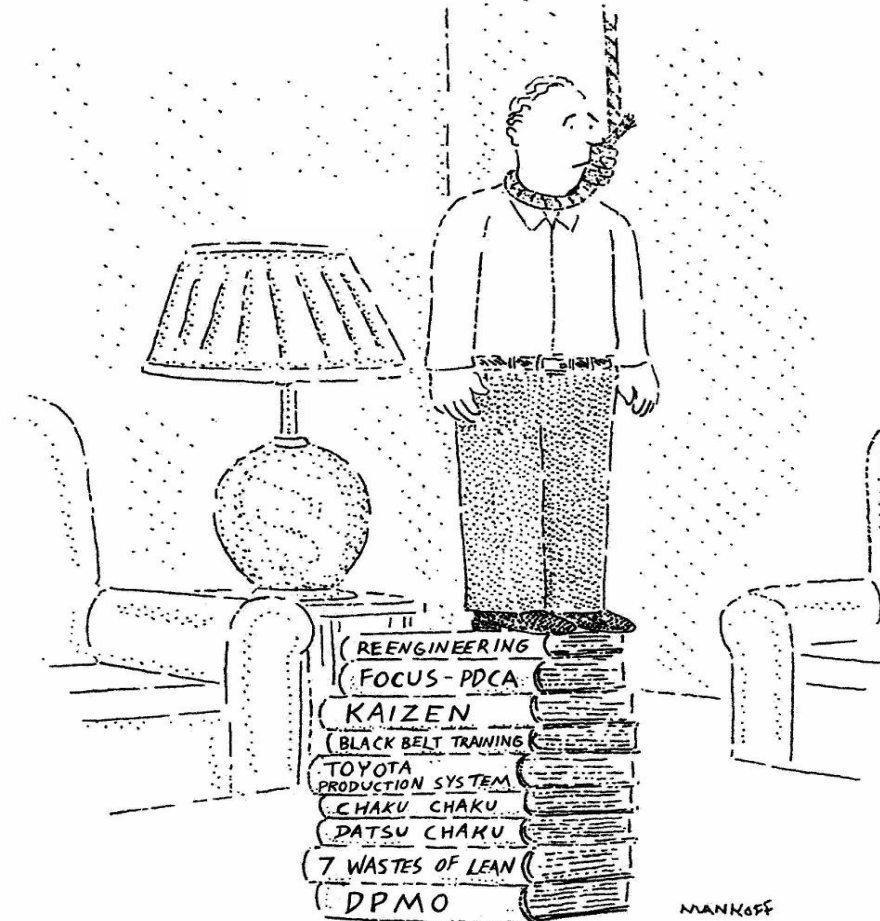
= Project Failure

Risk of failure from the start if...

- Top down driven actions & goals only
- No project support
- No buy-in from division heads, supervisors
- Persistent micro-management style
- No worker protection from resistant micro-managers
- No employee assurance of job security
- Persistence of **Blame** environment
- No worker power to change current condition

# Pathologist Involvement

*"Always take your job seriously, not yourself."  
-anonymous*



**“But I hafta signout now, not another quality project!”**



# Support Workers

*"One's own workers ought to be one's own best customers"*  
-Henry Ford



**“Never, ever, think outside the box.”**

Charge with change  
Encourage  
Protect from leader  
Accountability  
Recognition

# Worker Empowerment

*"Solve it. Solve it quickly,  
solve it right or wrong."  
-Edgar Schein*



**‘Let Go’**  
Leader message  
Culture change  
Inverted pyramid  
Cultivate engagement  
Repeat message  
Encourage  
Showcase efforts

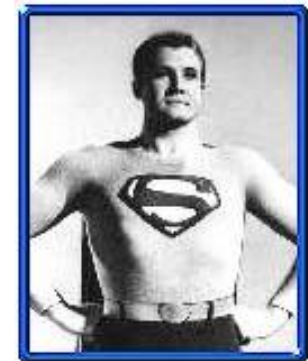
**“The suggestions are supposed to go in the box.”**

# Empowerment



## EMPLOYEE

- “Has knowledge, skills, *authority & desire* to decide and act within prescribed limits.
- Takes *responsibility* for the consequences of the actions and for *contribution* to the success of the enterprise.”



Juran JM, Godfrey AB: Juran's Quality Handbook, 1999

# The Engaged Worker

## Transform approach to work

- ▶ Not just showing up for work, but arriving to do the work better

**Culture**

**Empowered workers who see their daily work in the context of-**

**Continually learning**

**Constantly communicating**

**Making effective process improvements**

**Designed and tested by scientific method**

***"Our system of management is not a system at all; it consists of planning the methods of doing the work as well as the work."***

**-Henry Ford**



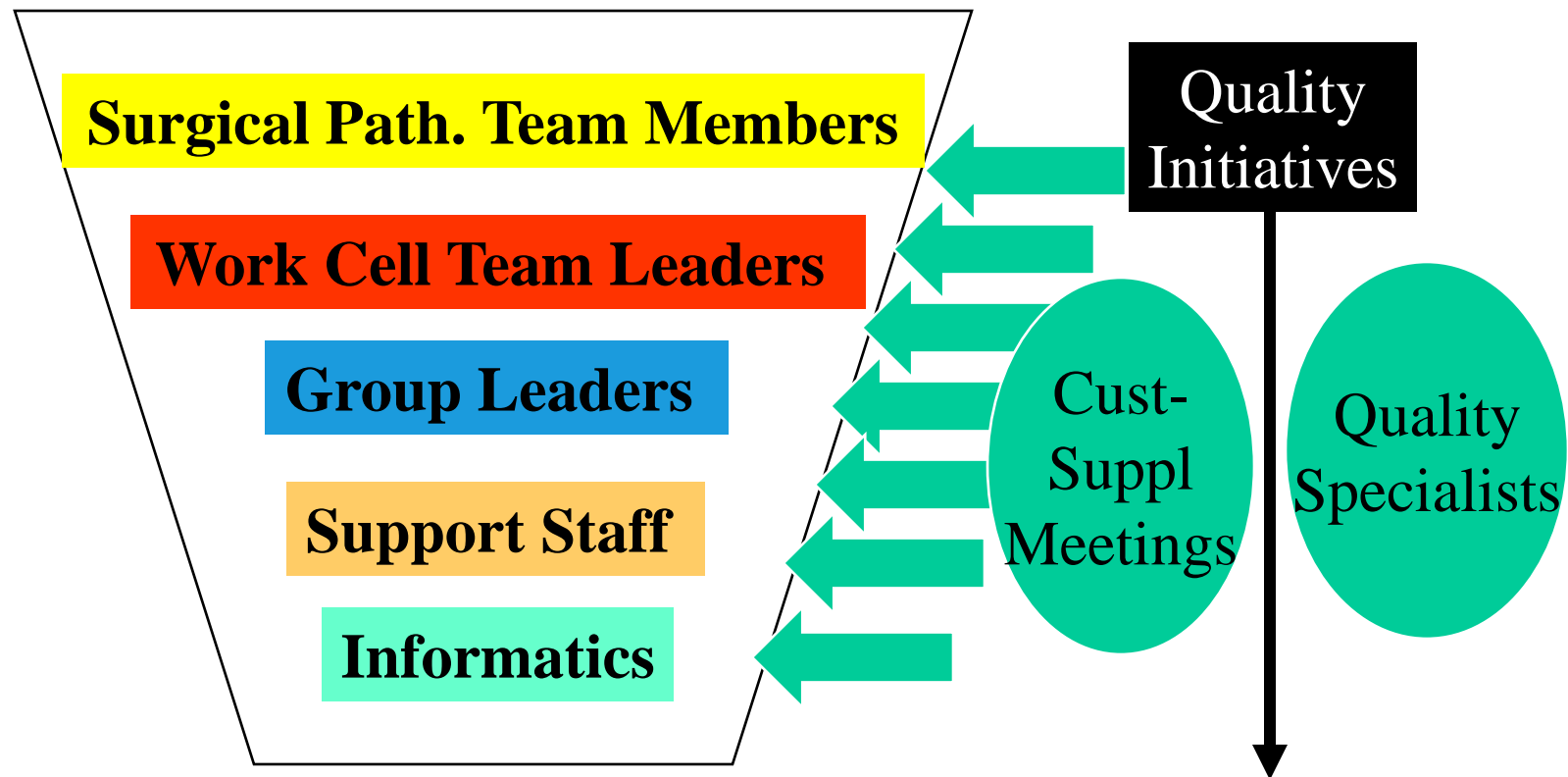
# Internal Memo Among PAs

12.30.2007

- Empowered workers & continuous workflow
  - ▶ **“A rotational duty schedule will be obsolete. The philosophy on the day shift will be "all hands on deck".** Team members must show self initiative and move to the source of the work. This means we will need to evenly distribute large specimens among the three remaining day team members.

# Inverted Pyramid

*"Your success will be affected  
by the quality and quantity of  
new ideas you suggest."  
-Brian Tracy*



# Teamwork

But it's ALL about them

*"The day you become a leader,  
It becomes about them."*

*-Jack Welch*



*Now empower them!*



# Education

*"Everyone is ignorant,  
Only on different subjects."  
-Will Rogers*



## Didactic & Refresher Training (8 hours)

- Leaders
- Teams

## Experience

- Customer-Supplier  
meetings  
(weekly 20 min)

## Share

- Credo card
- “Share the Gain”  
Monthly Show & Tell
- All shifts

**“We just hadn’t been flapping hard enough.”**

# Henry Ford Production System

## Credo card

Steps of Quality	Motto	Employee Promise	Credo
  Doing the <b>RIGHT</b> thing, the <b>RIGHT</b> way, at the <b>RIGHT</b> time  "Our invariable reply to 'It can't be done' is, 'Go do it'." <small>—Henry Ford</small>	Continually striving for  <b>Zero Defects</b>  to be the <b>"Best In Class"</b> <b>Laboratory</b> in the World.	Together we will strive for  <b>Perfection</b>  by applying principles of mutual respect, integrity, understanding, cooperation and effective Communication.	I am  <b>Empowered</b>  To work with my colleagues to make changes, based on HFPS principles, to make things right for ourselves, our clinician customers and our patients.

# Create Environment

*"The old way was to guess. We cannot afford to guess. We cannot afford to leave any process to human judgment."*

*-H. Ford*



*"All in favor of getting a real conference table instead of holding up this four-by-eight-foot sheet of plywood with our knees?"*

- Mandatory training
- Develop modules
- Limit to 60 min. each
- Schedule bench breaks & coverage
- Engage the group
- Train on all shifts (include weekends)
- Teach scientific method
- Integrate Lean tools

# Meetings

*"The bitterness of poor quality lingers long after the sweetness of meeting schedules is forgotten"*

*-Kathleen Byle*



## **Weekly**

- Division Leaders
- Division Teams

## **Ad hoc**

- Customer-Supplier

## **Monthly**

- All Division Teams
- AP / CP

**"No, Thursday's out.  
How about never—is never good for you?"**



# Blame-free

*"I prefer the wicked rather than the foolish.  
The wicked sometimes rest."*

*-Alexandre Dumas*



Communicate  
Set Example  
Neutralize

**“On the internet, nobody knows you’re a dog.”**

# Resistance

*"It is not easy to get away from tradition. That is why all our new operations are always directed by men who have had no previous knowledge of the subject and therefore have not had a chance to get on really familiar terms with the impossible."*  
-Henry Ford



**“Human Resources”**

Active  
Passive

Change Fit  
-Leaders  
-Members

Incentives

Coach  
-Up or Out  
-EAP

# Mid-Management Obstacles

= Project Failure

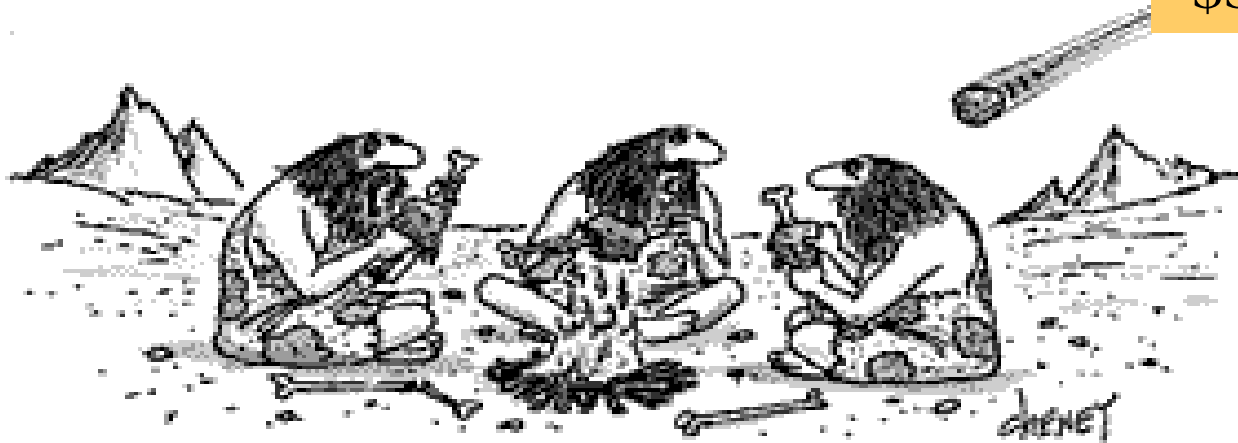
- The Micro-manager
  - ▶ They don't buy-in
  - ▶ Plan is restricted to their view
  - ▶ Failure to delegate, & involve workers
  - ▶ Belittle workers' ideas behind your back
- Result in unwilling team members
- Lack of sanctions, continue

# Align Incentives

*"Opportunity is missed by most people because it comes dressed in overalls and looks like work."*

*-Thomas Edison*

- Accountability
- Performance evaluations
- \$ \$ incentives



*"You've got mail."*

*"You've got mail."*

# Inducements & Rewards

*"Well done is better  
than well said."  
-Benjamin Franklin*



*"I try to keep my coffee buzz going  
till the Martini buzz kicks in."*

## Workers

- Time off bench
- Full employment
- Food
- Public recognition
- Bonus \$\$

# Empowered Teams - Recognition & Reward

Pizza

## Spotlight Team of Month



Cheryl Neuman, Maria Gainer, Barbara Dionisi, Connie Shepard and Cassandra Parham

### Successful Process Improvements March-May 2006

- 5 s in the Gross Room
- Accession Leveling
- Standardization of Outside
- Printer at scanner
- Cross Training to cover frozen room
- Protocol Standardization
- Standardization of specimen holding buckets
- Standardization of flags in CoPath
- Standardization Flag Reporting
- Specimen flag training
- Standardize placenta template
- Standardization and redesign of rehab missing information labeling
- Participation of MIS ID project
- New container labeler in Gross Room
- Standardization and revision of lab tags
- Standardized work procedures
- Standardization of scanning tags
- Standardization of requisition form process

## Target Cards



**Standardization Meetings**  
**On discretionary time**





# Your Best Asset

*"Always take your job  
seriously, not yourself."  
-anonymous*

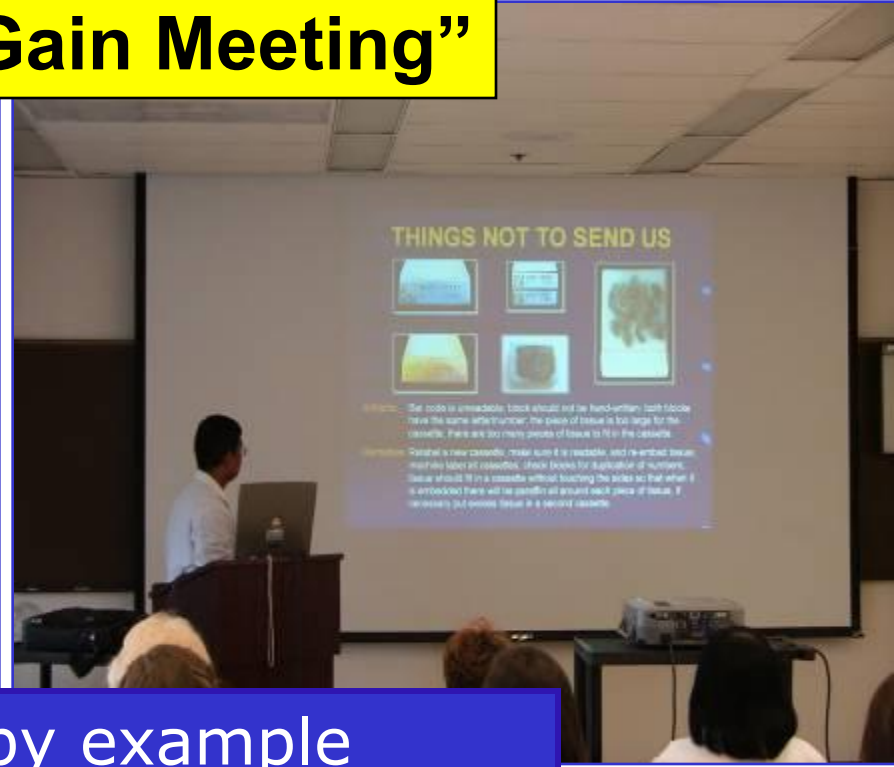
## Developing People



*"The Henry Ford Production provides the fertile ground for  
self growth and breeds our next generation of leaders."*

- Monthly HFPS Group Meetings
  - Share successes/failures
  - Spark enthusiasm
  - Set continuous expectation
  - Develop staff

## “Share the Gain Meeting”



Teaching by example

# Measures of Success

- Productivity
- Defects
- Cost of production
- Process stability
- Employee morale & satisfaction ✓
- Customer satisfaction
- Competency pass rate
- Resistance level

# Employee Satisfaction

## #1 DRIVER

Quality of the relationship  
between employee and 'boss'



# Pathologist Opinion Survey

## Surgical Pathologists

■ August 2008

■ Ranking for VERY SATISFIED (5) and SATISFIED (4); 100% response rate (15)

100%	Where I work we are continually improving the quality of our services
100%	Where I work, day to day decisions demonstrate that quality & improvement are top priorities
100%	As employees, we are encouraged to participate in making decisions that affect our work
100%	When employees have good ideas, management makes use of them
100%	My job makes good use of my skills and abilities
100%	Employees are encouraged to be innovative, to develop new & better ways of doing things
100%	Senior management demonstrates that employees are important to the success of Henry Ford Health System
93%	Management shows by their actions that patient safety is a top priority
93%	I'm satisfied with the recognition I get for the work I do
93%	There is a strong emphasis on customer service in HFHS
93%	The people I work with cooperate to get the job done
87%	How do you rate your overall physical environment
73%	Customer problems get corrected quickly

# Employee Satisfaction

Technical Staff  
Surgical Pathology

>15% = significant

- Henry Ford Health System Employee Surveys
- Percent FAVORABLE by Surgical Pathology workers

2003

2006

- 64% 94% There is a strong emphasis on customer service
- 71% 94% Customer problems get corrected quickly
- 56% 91% Where I work, we are continually improving the quality of our products & services
- 79% 91% My job makes good use of my skills and abilities
- 65% 91% The people I work with cooperate to get the job done
- -- 87% Management shows by their actions that patient safety is a top priority
- 47% 84% Where I work, day to day decisions demonstrate that quality & improvement are top priorities
- 27% 75% How do you rate your overall physical environment





# Customer Satisfaction

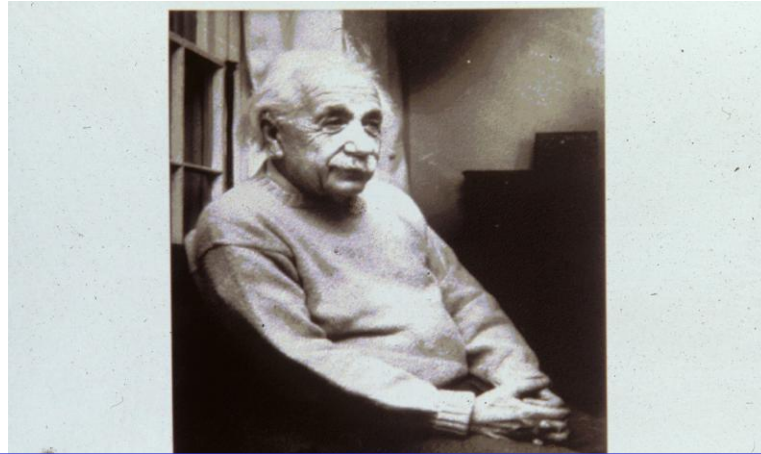


## ■ Anatomic Pathology Clinician Customer Satisfaction Surveys

2005	2007	% change	
86%	88%		Overall Satisfaction
92%	94%	2%	Tumor Board presentations
91%	88%	-3%	Teaching conferences and courses
90%	92%	2%	Quality of professional interaction
89%	89%	--	Diagnostic accuracy
89%	90%	1%	Pathologists responsiveness to problems
89%	92%	3%	Pathologists accessibility for frozen sections
87%	89%	2%	Courtesy of secretarial/technical staff
84%	88%	4%	Communication of relevant information
81%	88%	7%	Notification of significant abnormal results
81%	86%	5%	Clarity & format of paper & electronic reports
78%	85%	7%	Timeliness of reporting

5 Excellent  
4 Good  
3 Average  
2 Below average  
1 Poor

# Now go on, try it!



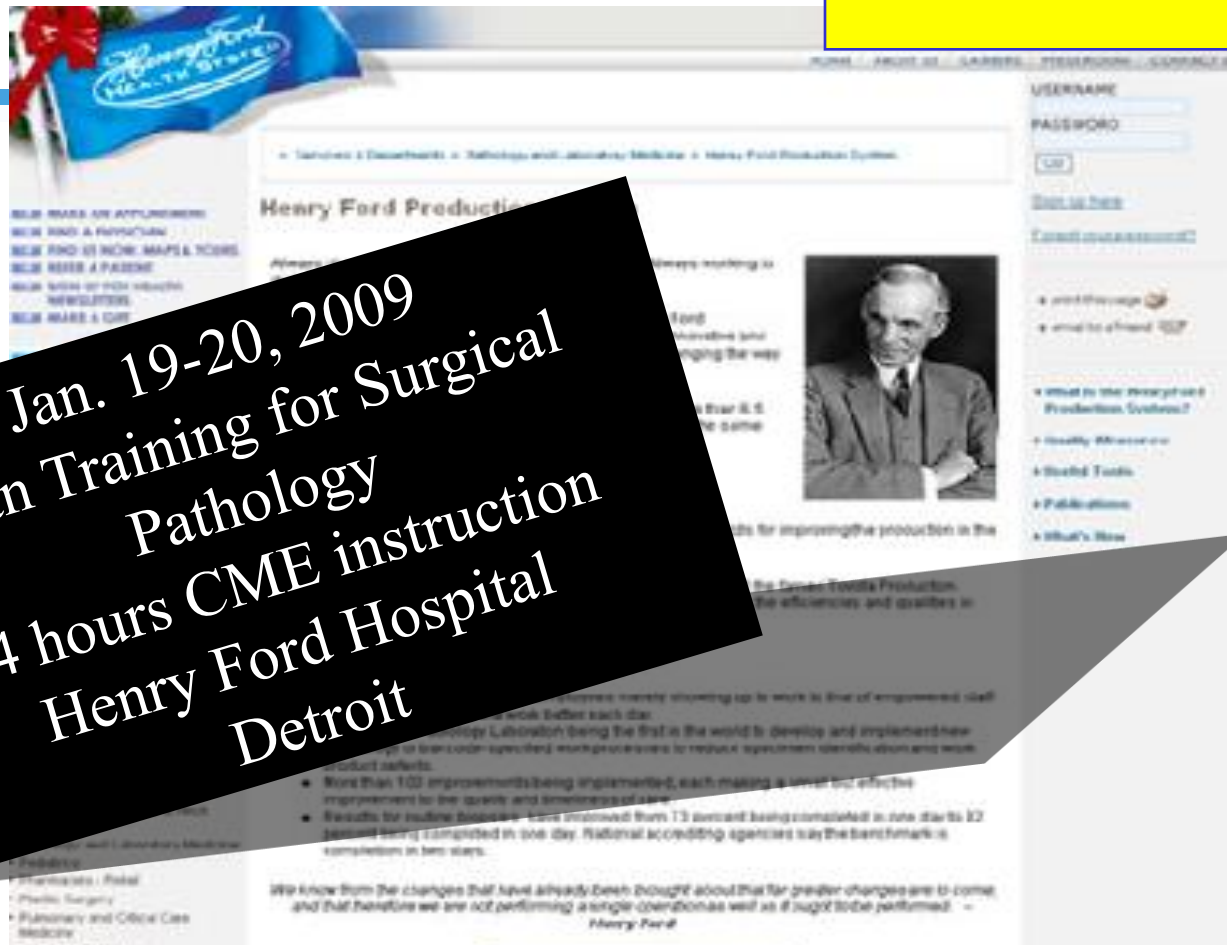
***“Anyone who has never made a mistake  
has never tried anything new.”  
-Albert Einstein***

# HFPS WEB PAGE

*"You cant build a reputation on what you're going to do"*

*-Henry Ford*

Jan. 19-20, 2009  
Lean Training for Surgical  
Pathology  
14 hours CME instruction  
Henry Ford Hospital  
Detroit



<http://www.henryford.com/pathology>

<http://www.henryford.com/HFProductionSystem>

End