# Lean Leadership for Healthcare
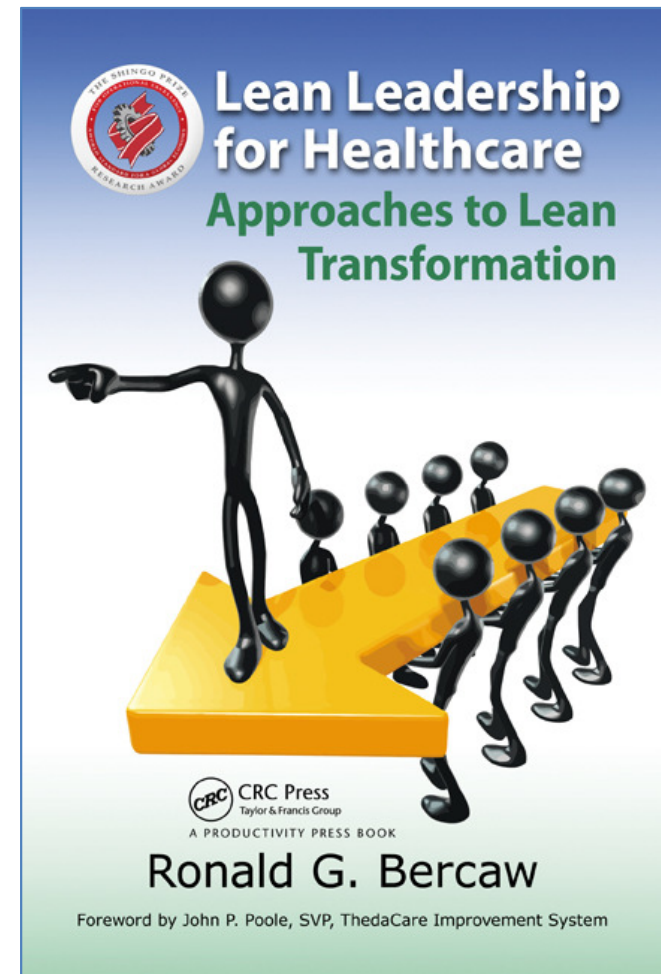
**Ron Bercaw**

**President and Sensei**

**October 10, 2014**

# Putting the subject into context



Taking Improvement from the Assembly Line to Healthcare
The Application of Lean within the Healthcare Industry
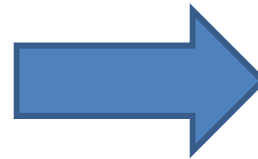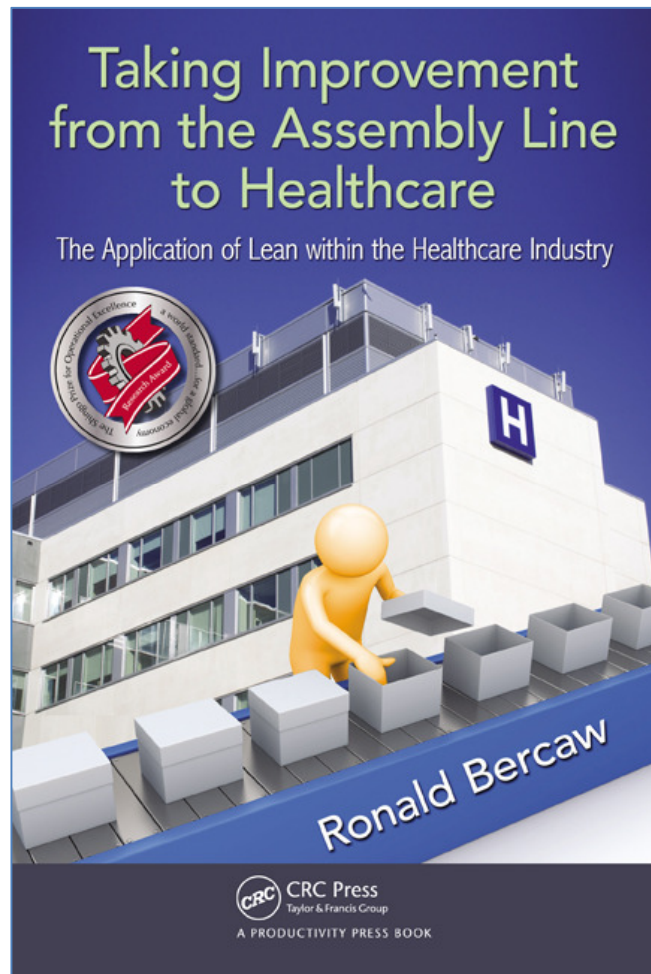Ronald Bercaw
CRC Press
Taylor & Francis Group
A PRODUCTIVITY PRESS BOOK



Lean Leadership for Healthcare
Approaches to Lean Transformation
CRC Press
Taylor & Francis Group
A PRODUCTIVITY PRESS BOOK
Ronald G. Bercaw
Foreword by John P. Poole, SVP, ThedaCare Improvement System

| How to "do" Lean in healthcare | How to "lead" Lean in healthcare |

# Agenda

- Linking Improvement to Corporate Strategy
- The Improvement Roadmap
    - Getting Ready
    - Accelerate Improvement
    - Sustain Improvement
- Leadership Behaviors to Ensure Success
- Mitigating Risk

# I. Linking Improvement to Corporate Strategy

- Why is this Essential?
- Key Steps in Linking Improvement to Strategy
  - Establish the Vision
  - Select True North Measures
  - Establish Improvement Priorities
  - Implement Improvement Priorities
  - Review Process and Results

# The Importance of Linking Improvement to Strategy

It is very difficult to impossible to improve all areas of an organization simultaneously. Begin improvement in the areas that best enable you to meet your key strategic outcome measures.

Each team requires time and attention from your leadership, staff and medical staff. Focus on the high leverage areas to maximize your return on your investment.

The effort to change a process with minimal return is the same as the effort to change a process with a large return. Allow your middle/line management and medical leadership to focus on the areas of highest return.

Change takes time. Do not waste precious days, weeks, and months on areas not directly aligned to your strategy.

All staff and medical staff should be able to immediately see the correlation between improvement and attaining your strategy. This gives the team a sense of purpose and shows them how they fit into the big pig picture.
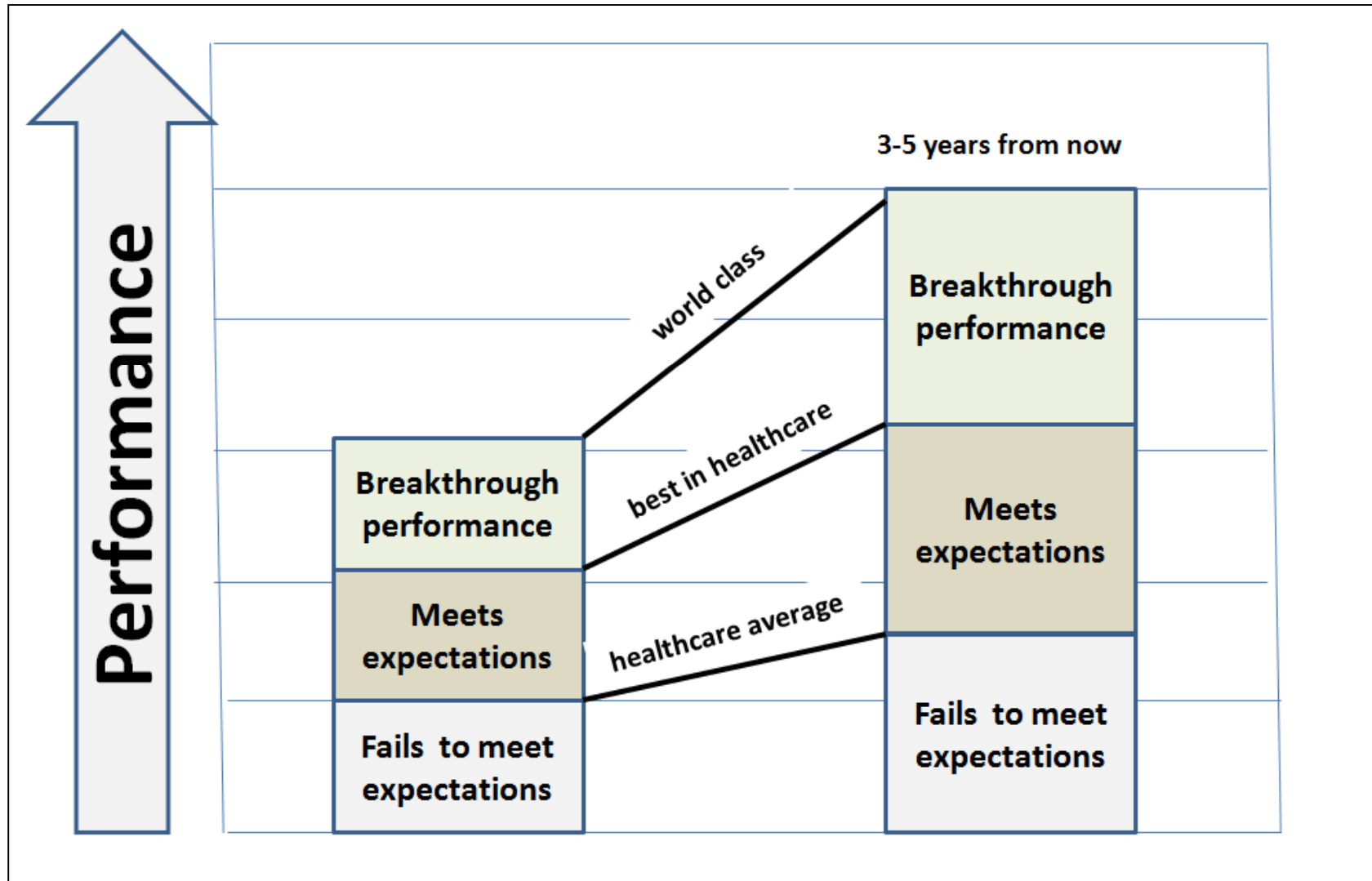
# Step 1: Establish the Vision

Use the voice of the customer to set your organizational vision

- Measure performance as aligned to how your customer measures performance

- Develop and deploy targets that deliver value to your customer

# What Does Your Customer Expect?

# Step 2: Establish True North Measures

| True North Category | True North Measure Definition | True North Measure in Healthcare |
|---|---|---|
| People | Staff Morale or Staff Engagement | Staff and Medical Staff Morale or Engagement |
| Quality | Defects Per Unit of Service or Process Outcomes Related to Meeting the Customer's Requirements | Service Quality – Patient and Family Satisfaction<br>Outcome Quality – Measures of Clinical Outcomes,  and Patient Safety<br>Process Quality – Measures of Defects Per Unit of Service |
| Delivery | Lead Time for Goods and Services From Customer Need Identified to Customer Need Met Expressed in Time (Minutes/Hours/Days) | Measures of Access Including Lead-times for Services and Wait-times Between Services |
| Cost | Hours or $ Consumed Per Unit of Service. Typically a Measure of Productivity | Hours or Dollars Consumed Per Unit of Service |
| Growth | Increases in Revenues or Volumes | Increases in Revenues or Volumes |

# Example – True North Measures

| True North Category | Strategic Direction | True North Measure |
|---|---|---|
| People | Create a Working Environment that Inspires our Staff and Medical Staff | Have 100% of our Staff and Medical Staff Engaged in Verifiable Improvement by the End of Fiscal Year 2015. |
| Quality | • Eliminate Un-necessary Mortality And Morbidity<br>• Provide Patient/Family Centered Care | • Reduce Hospital Acquired Infections by 80% by December 2014<br>• Improve Patient Satisfaction Scores by 15% by December 2014 |
| Delivery | Reduce Needless Patient Waiting | Reduce Wait Times for our Five Major Service Lines by 50% by June 2014. |
| Cost | Become a Benchmark, Low Cost Service Provider | Operate in the 98th Percentile as a Low Cost Service Provider in all Five of our Major Service Lines by the End of the Fiscal Year in 2015. |
| Growth | Increase Access to all of our Service Lines | Grow Each Service Line in Visits/Cases by 10% per Year Ending December 31, 2015 |

# Step 3: Select Improvement Priorities

## Use a Pugh Analysis to determine the areas of key leverage

| True North Criteria | Weight | A Ranking | B Ranking | C Ranking | D Ranking |
|---|---|---|---|---|---|
| Quality | 20 | 5/100 | 8/160 | 1/20 | 4/80 |
| Delivery | 45 | 5/225 | 8/360 | 1/45 | 3/135 |
| Cost | 35 | 6/210 | 2/70 | 10/350 | 1/35 |
| Growth | 10 | 7/70 | 0/0 | 1/10 | 2/20 |
| | 100 | 605 | 590 | 425 | 270 |

In this example, we can see that A has more leverage against the outcomes than does the project D

# Step 4: Implement Improvement Priorities

# Use a Value Stream Approach to Select Discrete Improvements



**From a current state**
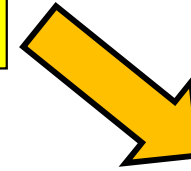
**To an improved state**

| | Month 1 | Month 2 | Month 3 | Month 4 | Month 5 |
|---|---|---|---|---|---|
| **Quick Wins** | ■ | ■ | | ■ | |
| **Projects** | ■ ➝ | | ■ ➝ | | |
| **Kaizen Events** | ■ ■ | ■ | ■ ■ | ■ | ■ |

**With Prioritized Action Plans**
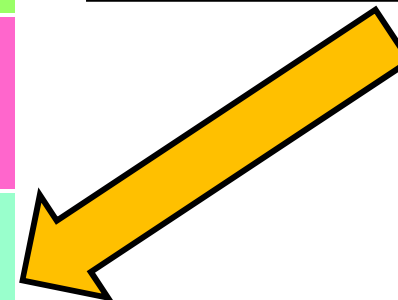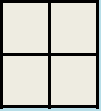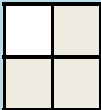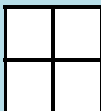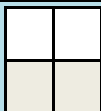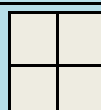
# Step 5: Review Process and Results

**Perform a Monthly Review**

| Agenda Item | Percentage of Agenda Time |
|---|---|
| Review Budget Performance | 10% |
| Review Implementation Actions, Results, and Countermeasures | 65% |
| New Product/ Service/Construction/ Development | 10% |
| People / Organizational Issues | 10% |
| Other | 5% |

# Countermeasures

| Countermeasures Sheet | | |
|---|---|---|
| **Objective** | | |
| **Date of Review** | | |



Pareto Chart of Late Arrivals by Reported Cause

**Problem Statement:**

| Countermeasures | Who | When |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

# Complete an Annual Review

| Deployment Objective | Review / Assessment |
|---|---|
| Objective 1 | |
| Objective 2 | |
| Objective 3 | |
| Objective 4 | |
| Objective 5 | |
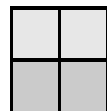
= **Objective met**
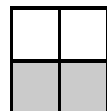
= **Objective  not  met, but performance improved**
   (shade in relative performance)
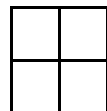
= **Performance was worse than baseline**

# Improvement Cycle - Linking Strategy to Improvement
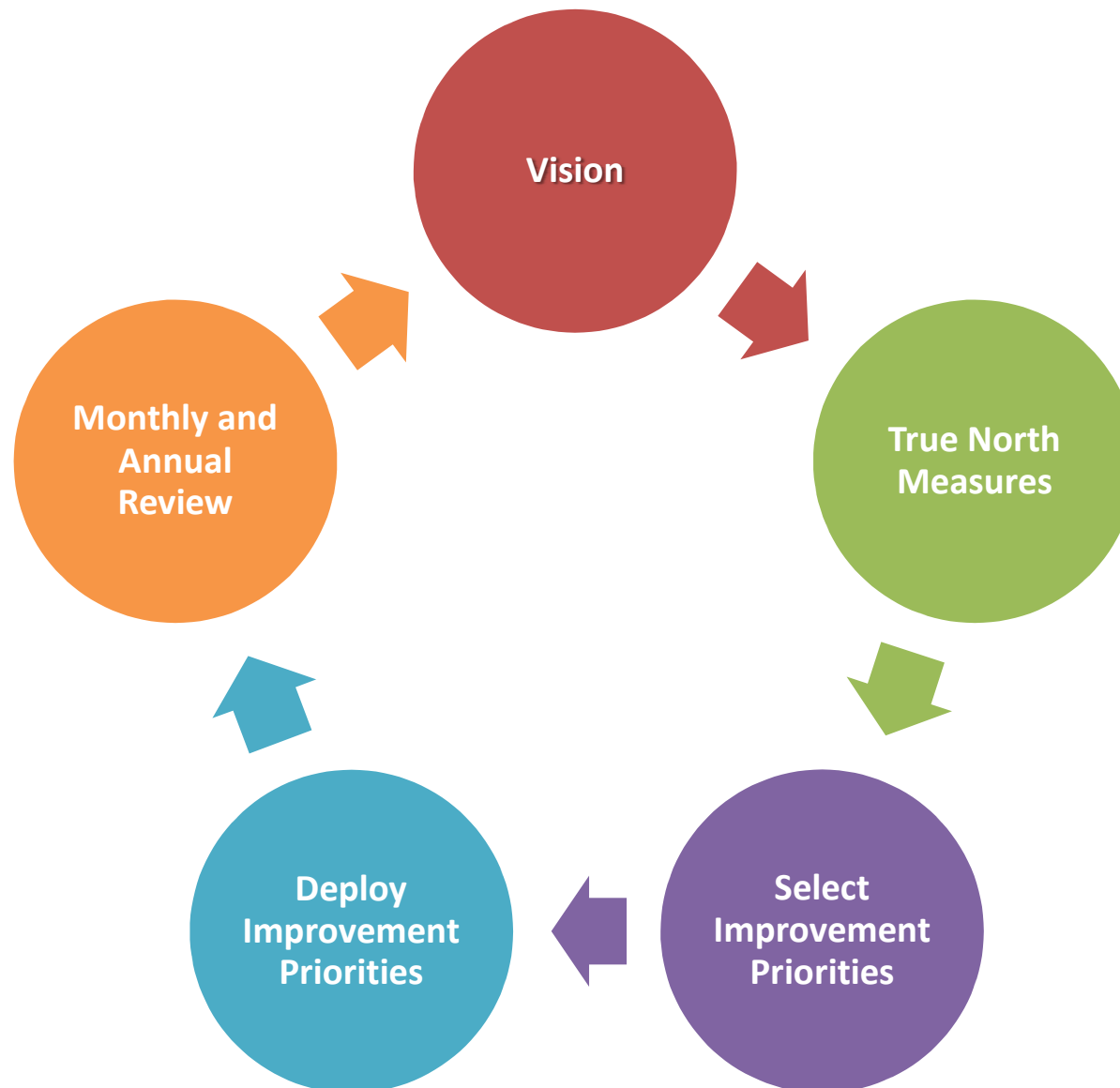
# II. Improvement Roadmap



- Getting Ready – Prepare to transform your organization. Build the Infrastructure.

- Accelerate Improvement – Improve, sustain, and spread.

- Sustaining Improvement – Make improvement the new culture.

**Phase 1**
**Prepare to Transform-** building the Infrastructure

**Phase 2**
**Accelerate-** improve sustain, and spread

**Phase 3**
**Sustain-** make improvement the "new" culture
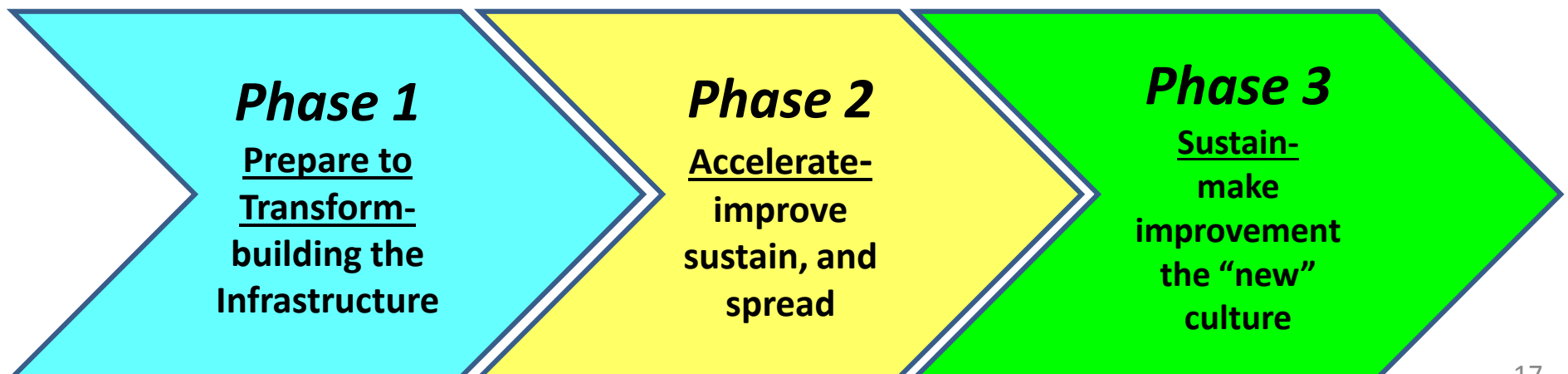
# Key Steps in Getting Ready Phase

1. Select your change agent

2. Get informed

3. Get help

4. Establish a steering committee

5. Train your internal experts

6. Develop and deploy a communication strategy

# Key Steps in The Acceleration Phase

1. Establish Value Stream Governance and Set Up Your Value Stream Performance System
2. Utilize A3 Thinking to Realize Improvement
3. Sustain Improvement and Manage Visually
4. Capture the Savings
5. Spread Lean Thinking Across the Organization
6. Support Your Change with Ongoing Training and Coaching

# Value Stream Governance

| Activity | Lead | Length |
|---|---|---|
| **Review Value Stream True North Measures** | **Administrative and Physician Leaders** | **5 minutes** |
| **Review open A3's (no more than 3)**<br>• **Measures**<br>• **Follow Up Plans**<br>• **Issues To Be Resolved** | **Process Owners** | **10 minutes each (30 minutes total)** |
| **Review Preparation for next A3** | **Internal Lean Expert** | **15 minutes** |
| **Other business** | **All** | **10 minutes** |
| | **Total** | **60 minutes** |

# Monitor Value Stream Performance System



**Future State Map**
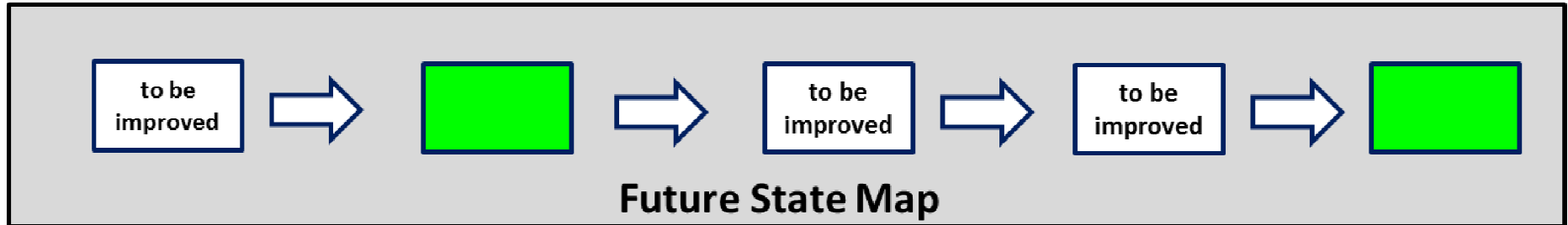
**Value Stream Trended Measures**
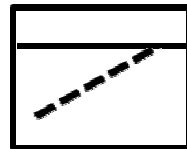
| | | | | |
|---|---|---|---|---|
| Human Development | Quality / Safety | Service Quality | Access / Lead-Time | Cost / Productivity |

| What | Who | When |
|---|---|---|
| | | |
| | | |
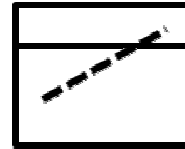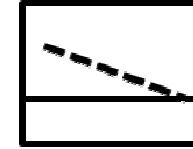
**Improvement Plan**

**A3's in Queue**
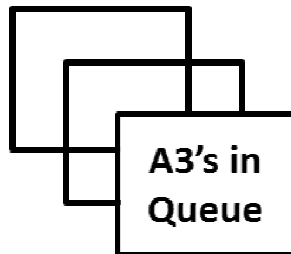
**Open A3 #1**

**Open A3 #2**

**Open A3 #3**

**Completed A3's**
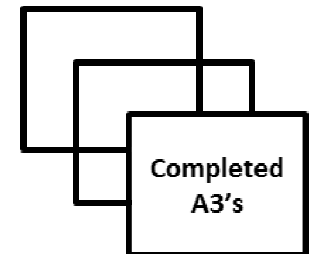
# Utilize A3 Thinking – Get Results

| Metric | Before | Goal | to Date | % Change |
|---|---|---|---|---|
| **Morale/Staff Engagement-** *Implemented Ideas* | 0 | 300 | 127 | undefined |
| **Safety & Quality-** *Left Without Being Seen* | 1.7% | .2% | .2% | 88% |
| **Patient Experience-** *Likelihood to Recommend* | 61.1% | 70% | 69% | 11% |
| **Patient Experience –** *Time in the Waiting Room* | 10 minutes | 0 minutes | 4 minutes | 60% |
| **Patient Experience-** *Usage of Hallway Beds* | 452 encounters | N/A | 134 encounters | 70% |
| **Financial Stewardship-** *Cost per unit of service* | $170.17 | $159.62 | $156.00 | 6% |
| **Actual Financial Impact** | | | | $759,374 |
| **Forecasted Annualized Financial Impact** | | | | $1,462,854 |

# Sustain and Manage Visually

Key Actions for Visual Management

- Implement 5S
- *After Creating Standard Work*….
  - Implement Process Control
    - Hour By Hour
    - Patient By Patient
  - Implement Managing for Daily Improvement
  - Audit Standard Work and Improvement Systems
- Support Changes with Leader Standard Work
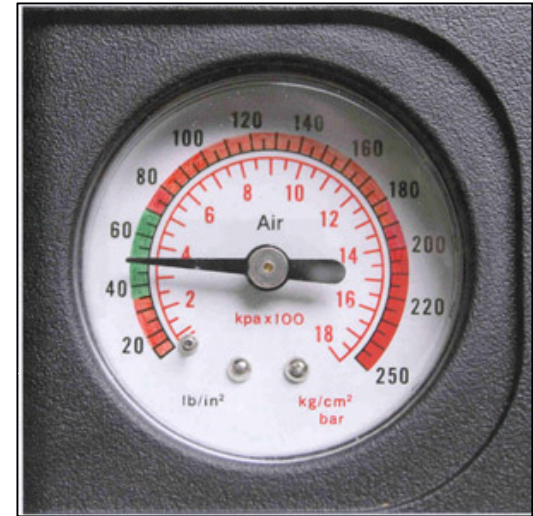
# 5S



Before

After

# Process Control – Part 1

## Hour by Hour

| X-Ray Process Control Board | | | Date: 6/4/2013 |
|---|---|---|---|
| **Hour** | **Plan** | **Actual** | **Comments** |
| 0700-0800 | 3 | 3 | no issues |
| 0800-0900 | 3 | 2 | outpatient failed to show |
| 0900-1000 | 3 | 3 | no issues |
| 1000-1100 | 3 | 1 | couldn't find O/P req, and isolation clean held up room |
| 1100-1200 | 3 | | |
| 1200-1300 | 3 | | |
| 1300-1400 | 3 | | |
| 1400-1500 | 3 | | |

## Patient by Patient

| Discharge Planning Performance | | | | | |
|---|---|---|---|---|---|
| **TLOS** | **EDD** | **Actual Date of D/C** | **Variance from TLOS** | **Variance from EDD** | **Comments** |
| 4 | 5 | 7 | 3 | 2 | Receiving facility would not accept pt |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

# Process Control  - Part 2
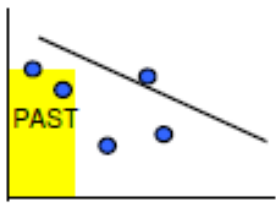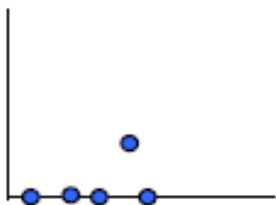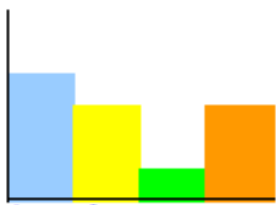

Frequency Chart — blank grid with y-axis labeled "Frequency" (values 1 to 28) and x-axis labeled "reason for variance"

# Process Control - Part 3

| Action Plans | | | | |
|---|---|---|---|---|
| *Issue* | *Countermeasure* | *Who* | *When* | *Status* |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

# Managing for Daily Improvement



**DEPARTMENT OR GROUP**

|  | M | Q | D | C |
|---|---|---|---|---|
| MONTHLY | PAST | | | |
| DAILY | | | | |
| PARETO | type of occurance | type of occurance | type of occurance | type of occurance |
| CORRECTIVE ACTION | P   R.C.   R   Date<br><br>xxx   xxx   xxx   xxxx<br><br>xxx   x   xxxx   xxxx | | | |

# Task Audits (Kamishibai)
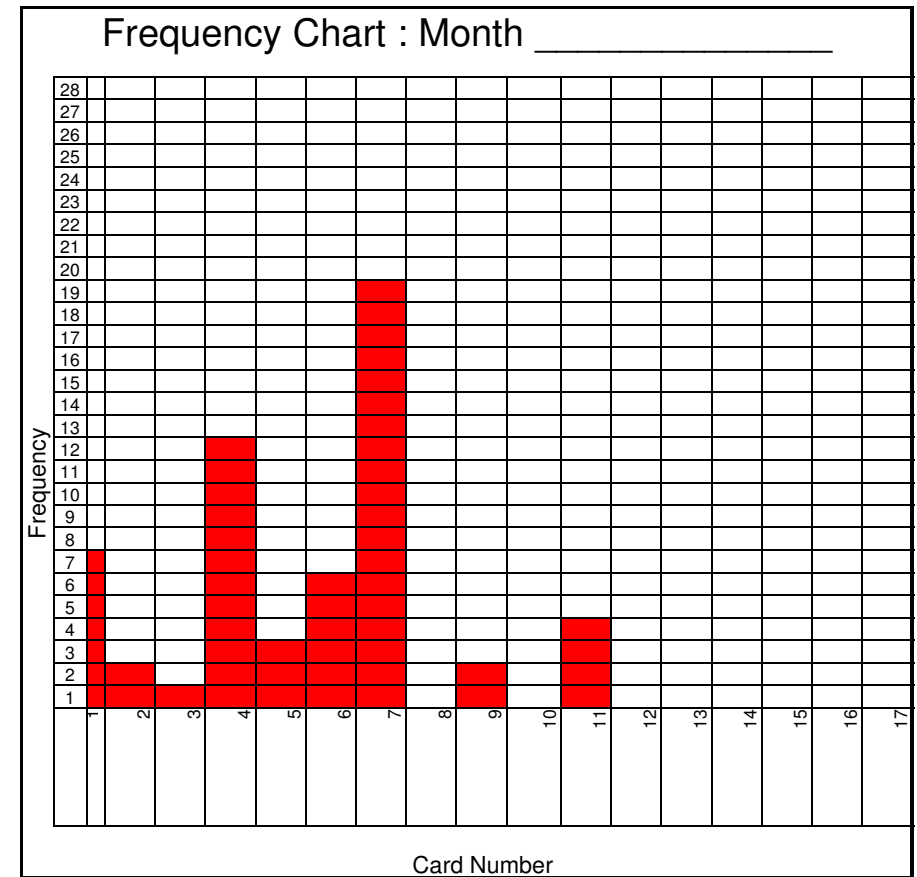
# K- Card Template

| Card: # | Card: # |
|---|---|
| **Process Audit Card**<br><br>**Area:** _____ | **Process Audit Card**<br><br>**Area:** _____ |
| Please check for all of following:<br><br>•<br><br>Pass Criteria: | Please check for all of following:<br><br>•<br><br>Fail Criteria:<br><br><br><br>Corrective Action: |

**BREAKTHROUGH HORIZONS** LTD

Standard Work

To Do

Improvements Activities

Flow interrupters, Daily notes and observations

Requests for follow-up

Changes

Discussions

The form columns contain:

| Daily: Start of day | Notes/ If not completed reason & any actions taken |
| --- | --- |
| Follow-up for any supervisors off: call-ins, shift change coordination | |
| Daily check-in with each supervisor (~ 5 minutes) | |
| Attend one supervisor's start-up meeting | |
| Review yesterdays production-tracking documents | |

**Daily**
- Update schedule/weekly assignment log
- Check in with compounding pharmacist - Gary
- SES report review/follow-up
- Daily review of "next action" items (~ 5 minutes)
- Check for schedule trade slips

**Many times daily**
- Spot-check standardized work in each supervisors area
- Review visuals-stat IVR TAT
- Review visuals-IV production board
- Review visuals-delivery runs
- Review visuals-pharmacist order entry
- Spot-check documentation
- Check & respond to e-mail
- Check & respond to voice-mail
- Train/coach staff as opportunites arrise/prn

**Weekly (note next time due)**

**Monday**
- 06:30 Weekly night supervisor meeting - Angie/Lynn
- 7:30 Weekly satellite supervisor meeting - Tony
- 14:30 Weekly evening supervisor meeting - Adam/Todd
- Review Bioburden data/send to Doris

**Tuesday**
- Status of open positions
- 14:00 Weekly group supervisor meeting

**Wednesday**
- Review "Waiting For" items, including status of delegated tasks

**Thursday**
- Review status of on-going projects
- 09:00 Weekly technician supervisor meeting - Sue

**Friday**
- Post weekly pharmacist assignments
- Sign onto to Mohsaic, back up files to external hard drive

**Saturday/Sunday**

**Every 2 Weeks (per pay period)**
- Review tardy & absence reports

**Monthly (note next time due)**
- RPH schedule (next under construction dates 9/17-9/23; for 10/7-11/3; post 9/24)
- IV Waste
- Warfarin (5th of month)
- Review "Incubate" items
- 5s current desk files

**Daily: End of day**
- 5s desk area
- Review calendar for next day (~ 5 minutes)
- Prepare next day's checklist (~ 5 minutes)
- Check in with evening supervisor/staff before leave

Wkly tactical: visuals, VS metrics, status open positions, progress new staff training, reward/recog of staff, staff performance issues emp sat scores, deadlines (evals, Midyear); clocking; ED meds removed

**Tasks/ Meetings:**

**Projects:**

**"Flow Interrupters" & other Daily Notes/ Observations:**

**Requests for follow-up:**

**Updates/Changes to Standard Work Checklist Suggested:**

**Manger/Supervisor Weekly Review/Discussion:**

Definition of Standard Work: "the best we know how to do things for now"

# Putting It Together

Start here

Create Process Standard Work → Kamishibai → Process Control → Managing for Daily Improvement → 5S → Leader Standard Work → Actual Conditions → Create Process Standard Work

**Managing Visually**

# Capture the Savings

**Hard $**            **Future Revenue**            **Cost Avoidance**            **Soft Savings**



**Who Keeps Score?**

# Spread Lean Thinking

| Spread Approach | Advantages | Considerations |
|---|---|---|
| *Introducing Additional Value Streams* | • Buy-in from the start as current conditions, future conditions and action plans are generated<br>• Engages many more team members in improvement<br>• New innovation with each opportunity<br>• Tailored improvement plans for each value stream | • May be more resource intensive than replication approach<br>• Can take longer than a replication approach<br>• Requires more infrastructure (skilled facilitators) within your organization |
| *Replication of tools, process and artifacts* | • Leverages tested solutions<br>• Training key points are defined<br>• Solutions are based on lean principles<br>• More rapid approach<br>• Design resources are not consumed | • Usually we are replicating a product and not the thinking<br>• Less buy-in to someone else's solutions<br>• Limits new ideas and innovation<br>• Difficult in "not invented here" environments<br>• Project management resources are needed to manage the change |

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# Key Steps in Sustaining Phase

- Capacity Building

- Improve Leadership Processes

- "Lean out" all the areas you wouldn't normally think about

**Improvement / Change is embedded into the corporate culture**

# Capacity Building

| Staff and Medical Staff Affected | Skills Required |
|---|---|
| Everyone (Including Physicians) | • 7 Wastes<br>• 5 Principles of Improvement<br>• A3 Thinking<br>• Common Tools to See and Eliminate Waste<br>• 5S |
| Line/Middle Management and Physician Leadership | Everything Above Plus:<br>• Managing for Daily Improvement<br>• Basic Project Management Skills<br>• Problem Solving Skills<br>• Value Stream Management |
| Middle Management and Senior Leadership | Everything Above Plus:<br>• Strategy Deployment |

A Lean organization is community of scientists constantly experimenting to eliminate waste

# Lean Leadership Processes

- **Strategic Planning**

- **Strategy Deployment**

- **Improvement Governance**

- **Committee Management**



X-Matrix



VOC



A3

# Sustaining Improvement Phase

| Department | Core Process |
|---|---|
| Organizational Development | • Capacity Building for Clinical and Administrative Staff, Management, and Physicians |
| Information Technology | • Help Desk Services<br>• IT Design, Development And Deployment |
| Finance | • Accounts Receivable Management<br>• Accounts Payable<br>• Payroll<br>• Budgeting<br>• Month End Close |
| Human Resources | • Recruiting / On-boarding / Orientation<br>• Job Descriptions and Competencies<br>• Promotion Criteria<br>• Occupational Health Services<br>• Lean Management Development |
| Materials | • Developing a Lean Supply Chain |
| Operations or Marketing or Facilities | • New Process or New Service Development<br>• Construction / Development Services<br>• Project Management |
| Quality | • Root Cause Analysis<br>• Development of Pathways / Order Sets<br>• Accreditation |
| Medical Leadership | • Physician Credentialing<br>• Physician Lead Quality Improvement |
| All | • Taking Lean Improvement Beyond Your Four Walls to Suppliers, Customers, and Partners |

Places we wouldn't think "lean" applies

# IV. Leadership Behaviors to Ensure Success

| Leadership Behavior | Why Necessary |
|---|---|
| **Participate Full Time on a 3 Day Value Stream Analysis and a 4 Day Kaizen Event** | • **Demonstrates Commitment to the Approach**<br>• **This is the Best Way to Learn the Tools**<br>• **This is the Best Way to Learn How the Kaizen Experience Changes the Culture While Compressing the Timeline for Results** |
| **Learn the tools** | • **Everyone in the Organization Needs the Ability to Not to Think Lean, But to Actually Use the Tools to See and Eliminate Waste** |
| **Walk the Value Streams**<br>• **Perform Gemba walks** | • **Changes the Role of the Leader from "Manager" to Coach**<br>• **Best Lean Approach to Develop Subordinates**<br>• **Gives Leadership Visibility in "Gemba" to Show Importance to Staff and Medical Staff**<br>• **Gemba is the Source of All Facts. Going there Eliminates Jumping to Conclusions and Problem Solving in the Conference Room** |
| **Commit the Appropriate Resources to be Successful** | • **Shows Commitment to Continuous Process Improvement**<br>• **Reprioritizes Less Important Activity, Allowing Management Wiggle Room for Process Improvement Activities** |

**Transformation occurs when leadership thinks, acts, and behaves differently**

# Leadership Behaviors to Ensure Success (con't)

| Leadership Behavior | Why Necessary |
|---|---|
| **Hold Individuals and Teams Accountable (Staff, Management, and Physicians)**<br>• **Address Antibodies** | • **Shows Respect For People**<br>• **Ensures Standard Work is Followed. Implementing and Following Standard Work is the Way Organizations Improve and Sustain.**<br>• **Ensures Consistency in How Staff and Medical Staff are Treated**<br>• **Makes Visible Those Who Choose Not to Participate in Process Improvement Activity**<br>• **Separates Personality Based Actions and Process Based Actions** |
| **Redeployment versus Unemployment** | • **Shows Respect for People**<br>• **Demonstrates that Team Members Will Not Lose Their Job as a Result of Participating in Process Improvement Activities** |
| **Demand and Monitor Results** | • **Aligns with the Lean Pillar of Continuous Improvement**<br>• **Shows Respect for People by Stretching their Capabilities**<br>• **Helps Develop Management and Staff by Staying Involved with the Process and Results** |
| **Believe** | • **Greatness is Available to Everyone, but comes faster to those who expect it** |

# V. Mitigating Risk

1. Allowing too much complacency
2. Failing to create a powerful coalition
3. Underestimating the power of vision
4. Under-communicating the vision by a factor of 10
5. Permitting obstacles to block the new vision
6. Failing to create short term wins
7. Declaring victory too soon
8. Neglecting to anchor the changes firmly in the new corporate culture
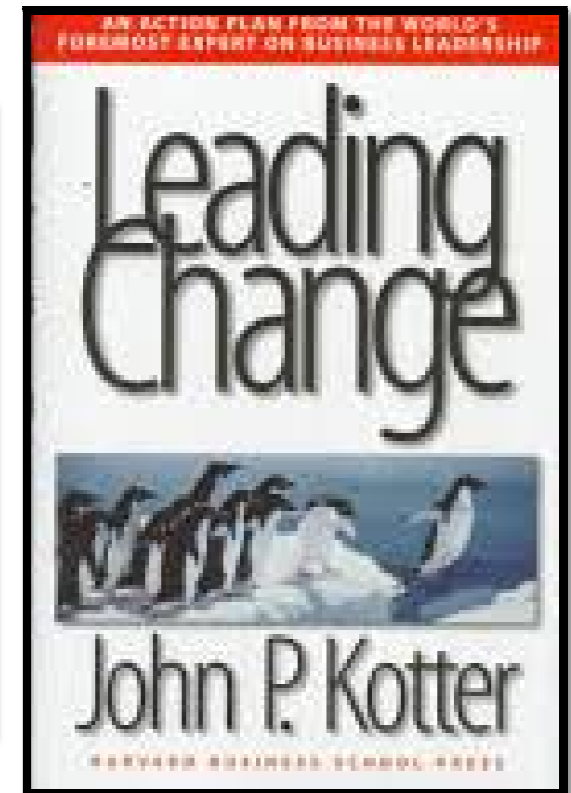
**8 Common Errors to Organizational Change Efforts**

# Avoid Common Mistakes

| Organizational Mistake | Lean Transformation Roadmap Risk Mitigation Activities |
|---|---|
| Allowing Too Much Complacency | • Establishing True North Measures with Double Digit Improvement<br>• Visual Management<br>• Managing for Daily Improvement<br>• Kaizen Rapid Cycle Improvement<br>• A3 Thinking |
| Failing To Create A Powerful Coalition | • Enterprise Transformation Steering Committee<br>• Value Stream Steering Committee |
| Underestimating The Power Of Vision | • Deploying Hoshin Kanri<br>• Communication Strategy<br>• Value Stream Analysis |
| Under-communicating The Vision By A Factor Of 10 | • Communication Strategy<br>• Measurement Capture<br>• Physician Engagement Strategy<br>• Kaizen Report Outs<br>• Lean Capacity Building |

# Avoid Common Mistakes

| Organizational Mistake | Lean Transformation Roadmap Risk Mitigation Activities |
|---|---|
| Permitting Obstacles to Block The New Vision | • Executive Sponsor<br>• Enterprise Transformation Steering Committee<br>• Value Stream Steering Committee<br>• Daily Team Leader Meetings During Kaizen Events<br>• Leadership Standard Work<br>• Visual Management<br>• Managing for Daily Improvement<br>• Enterprise Wide Engagement<br>• Gemba Walks |
| Failing to Create Short Term Wins | • Value Stream Rapid Improvement Plans with Quick Wins<br>• Kaizen Rapid Cycle Improvement<br>• A3 Thinking<br>• Managing for Daily Improvement<br>• Measurement Capture |
| Declaring Victory Too Soon | • True North Measures<br>• Deep Versus Wide Pace of Change<br>• Visual Management<br>• Managing for Daily Improvement<br>• Value Stream Mapping and Analysis |
| Neglecting to Anchor the Changes Firmly in the New Corporate Culture | • Chapter 5, "Make Organizational Improvement the New Culture" Addresses How to Prevent this Common Error. |

# Why do organizations take the risk?

Benchmarks for World Class

- **1 - 2%** per month productivity improvement
- **2 - 4%** per month improvement in inventory turns
- **25 - 50%** year over year reduction in cost of quality
- **99% +** fill rate to true customer demand
- Lead-time in **hours/days** versus weeks and months

**...Because they are pursuing these results**

# Agenda / Learning Objectives

✓ Linking Improvement to Corporate Strategy

✓ The Improvement Roadmap

    ✓ Getting Ready

    ✓ Accelerate Improvement

    ✓ Sustain Improvement

✓ Leadership Behaviors to Ensure Success

✓ Mitigating Risk