



# Working Smart

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State of Iowa

# Iowa's Journey Begins - 2003

- ❑ Approached by the Iowa Coalition for Innovation & Growth
  - ❑ *Hot Team* on Business Development Processes
    - ❑ Improve key business development processes that are viewed as barriers to a business's ability to develop and/or grow in Iowa
- ❑ Public-private partnership proposed
- ❑ Facilitator offered to run event



# The Issue

- ❑ Air Quality new source construction permits
  - ❑ Issue ~ 2,000 permits per year
  - ❑ Average lead time: 62 days
  
- ❑ 62 days was one of the fastest permit times in the country so what was the problem?

# Business Process Givens

- ❑ All business processes are invisible
- ❑ All business process typically start with incomplete and/or inaccurate information
- ❑ All business processes are NOT synchronized
- ❑ All business processes have institutionalized & formalized wasteful practices because of the above

# The Solution

## □ KAIZEN

- A highly focused, action oriented event
  - Clear objectives,
  - Measurement focused,
  - Data driven and fact based,
  - Uses creativity before capital
- Two to five days in length
- Empowered team takes action to improve a specific process
- The new process is designed immediately



# The Results

- ❑ Lead time reduced to 12 days
- ❑ Steps cut by 70%
- ❑ Handoffs (permit moving from person to person) cut from 18 to 4
- ❑ 600 permit application backlog eliminated in six months
- ❑ Process became more customer friendly
  - ❑ 800 number installed for questions



# What Did We Learn?

- ❑ We could improve customer service without sacrificing the environment
- ❑ We could sustain the gains and continue to improve: Lead time down to **six** days within six months
- ❑ Change could occur in one week - unheard of speed in government

# WHAT NOW?

- ❑ ICIG Hot Team asks for a commitment
- ❑ DNR agrees to implement Lean
- ❑ Facilitator returns for a “drive by” kaizen
- ❑ 2004: Six DNR events, one at another state agency



# LEADING THE CHARGE

- ❑ 2005 Governor Vilsack asks all agencies to conduct at least one kaizen event
- ❑ ***Office of Lean Enterprise*** established within Department of Management  
July 1, 2006



# MOVING FORWARD

- ❑ 2005: 24 events – multiple agencies
- ❑ 2006: 29 events – more agencies
- ❑ 70+ events to date
  - ❑ Kaizen, Design for Lean Sigma, 5S, Value Stream Mapping.  
Coming soon...Policy Deployment



# What is Lean?

## □ Lean

- Lean is a collection of principles and tools that improve the speed of any process by eliminating waste.
- Waste is most prevalent in information flows
- “Common sense uncommonly applied”
  - Tools include Kaizen, Value Stream Mapping, Design for Lean Sigma and 5S



# Lean Tools

## Value Stream Mapping

- ❑ High-level process map used to identify the flow of both documents and information involved in delivering a desired service, or outcome (a “value stream”) that is valued by customers
- ❑ Helps you see not only waste but the source of the waste

## Kaizen

- ❑ Highly focused, action-oriented, 2- 5 day event
- ❑ Empowered team takes immediate action to improve a specific process
- ❑ New process designed that week
- ❑ Focus on continuous improvement

## Design for Lean Six Sigma

- ❑ Methodology to create a new service, product or process
- ❑ Applicable to any high-value project that needs a significant amount of new design
- ❑ Strong emphasis on capturing and understanding the customer and organization needs

## 5S

- ❑ A process and method for creating and maintaining an organized, clean, high-performance workplace
- ❑ Addresses wasteful practices of any sort



# Typical Waste

- ❑ Defects: Data errors; missing information
- ❑ Over production: Unneeded reports
- ❑ Waiting: Approval cycle
- ❑ Moving items: Report routing
- ❑ Over processing: Obsolete data on shared drives
- ❑ Inventory: Excess material/information
- ❑ Excess motion: Trips to remote printer

# Kaizen Does Not...

- ❑ Affect regulatory stringency
- ❑ Force hasty, inadequate work
- ❑ Cut corners
- ❑ Work against the agency mission
- ❑ Seek to fault staff

# Kaizen Does...

- ❑ Document that many processes are “tribal” – unwritten and undocumented
- ❑ Increase awareness of the function and value of all roles
- ❑ Break down “silos” within and between departments and divisions
- ❑ Challenge the prevailing winds

# What Does It Take?

- ❑ Successful process improvement requires organizational commitment over the long term
  - ❑ You must DRIVE change from the top down
- ❑ Communication
  - ❑ Proactive
  - ❑ Frequent
  - ❑ Consistent
- ❑ External stakeholders at the table

# Leadership

- ❑ Senior management engagement and commitment are the most important factors in long-term success
- ❑ Top-down drive to change the culture to one of continuous improvement

# Overcoming History

- ❑ Every other “flavor-of-the-month” that didn’t meet expectations
  - ❑ TQM
  - ❑ CQI
  - ❑ MBWA
- ❑ Nothing speaks louder than results
- ❑ Don’t feed the CAVE people

# Changing Expectations

- ❑ For staff:
  - ❑ Overcoming the “whip-smart” mindset
  - ❑ Fear of lay-offs, placing blame
  - ❑ Negative impacts on regulatory stringency
  - ❑ No time for a week away from work
  
- ❑ For customers:
  - ❑ Government ≠ Bureaucracy

# Follow-up

- ❑ Critical component
  - ❑ 30, 60 and 90-days
- ❑ Completing the homework for full implementation
- ❑ Sustain the Gains
  - ❑ 6-month and 1-year audits

# Why Try Lean?

- ❑ Eliminate or dramatically reduce **backlogs**
- ❑ Reduce **lead times** by more than 50%
- ❑ Decrease the **complexity** of processes
- ❑ Improve the **quality** of applications and the **consistency** of reviews
- ❑ Allocate more staff time to “**mission critical**” work
- ❑ Improve staff **morale** and process **transparency**





Questions?

**WORKING FOR WORLD CLASS  
GOVERNMENT**

**Office of Lean Enterprise  
<http://lean.iowa.gov>**

**PATHWAYS**



**EXCELLENCE**



# Business Process Kaizen

**Lean Transformation:  
A Time-Based Strategy**

# Kaizen Breakthrough Methodology

- Is focused on lead-time and variation reduction
- Is measurement focused
- Is data driven, and fact based
- Provides a baseline for future kaizen
- Drives cultural change

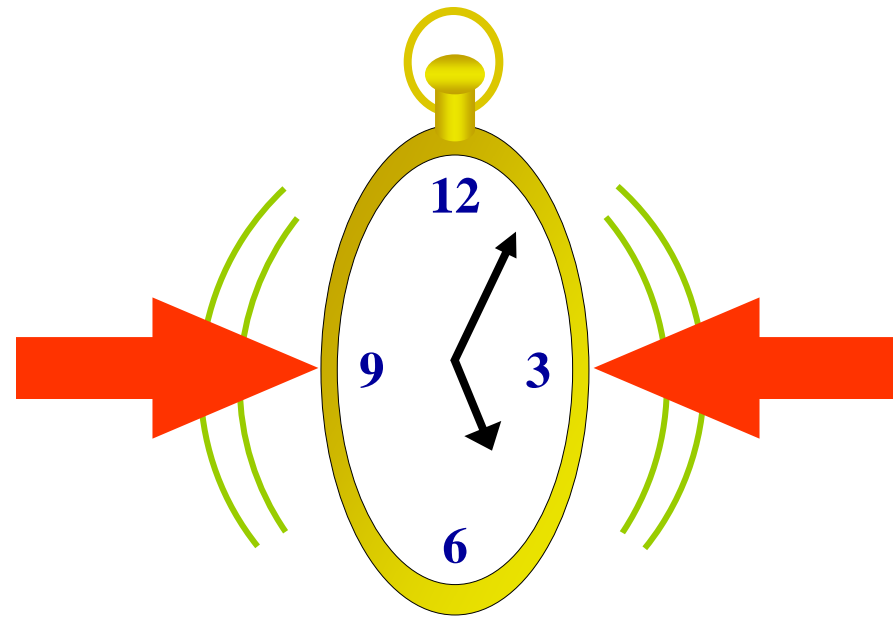
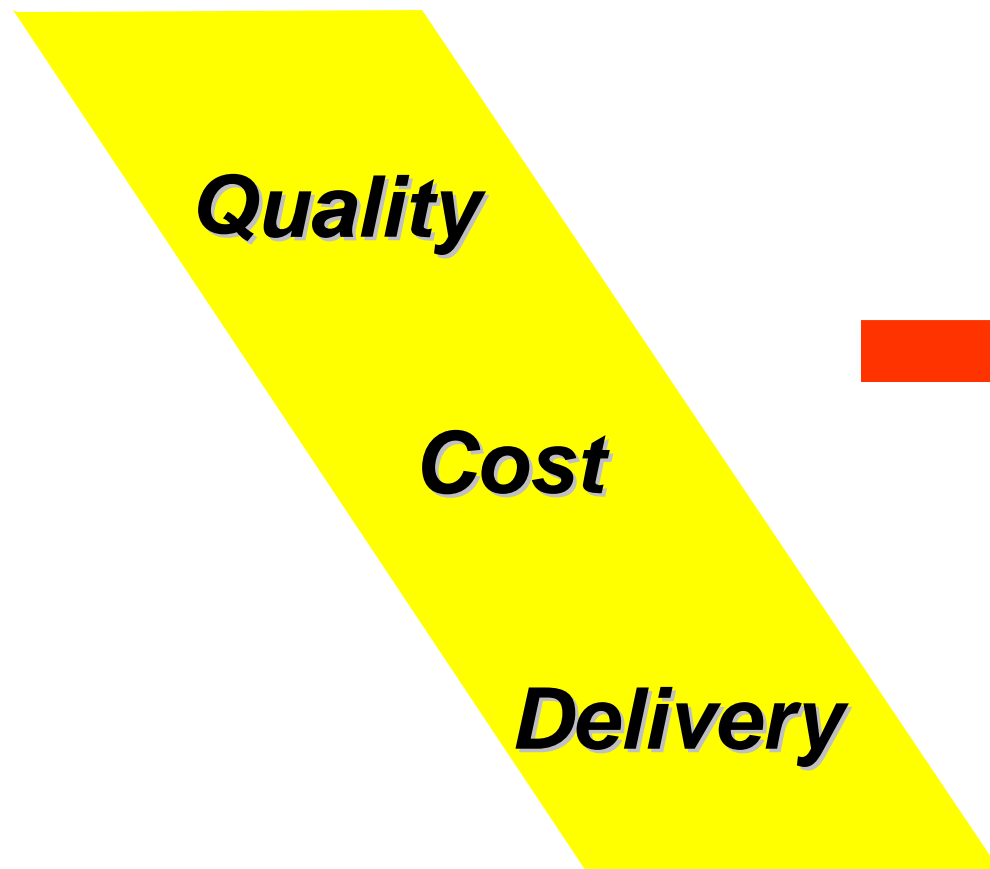
# Core Principles

- Senior Management Leadership
- Bias for Action — “Just Do It”
- Creativity Before Capital
- Transformation to Time-Based Strategy

# What Is Lean Transformation?

- Focusing on lead-time reduction to improve responsiveness
- Achieving simultaneous improvements in quality, cost, and delivery
- Leveraging improvements for growth in revenue base, economic market share, and competitive advantage
- Building a continuous improvement culture to sustain the gains
- Deploying Kaizen Breakthrough Methodology for rapid transformation

# Strategic Issues For Processes and Delivery of Services



# Principles of Lean Thinking

- Precisely define value from the customer's perspective
- Identify the value stream for each process
- Allow value to flow without interruptions
- Let the customer pull value from the process
- Continuously pursue perfection

## Steps to Implementing Business Transformation

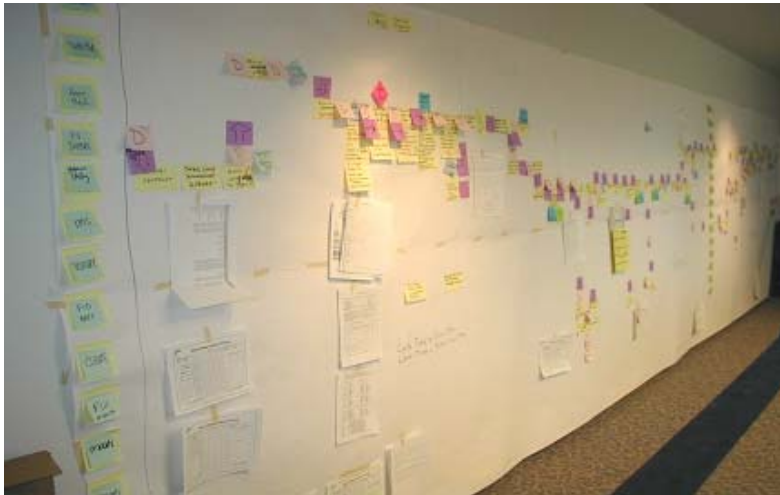
- Create a business process map to identify areas of opportunity

# What is a Business Process Map?

*A tool used to:*

- Display the current process and information flow from the customer request through the delivery of the service to the customer
- Identify opportunities and establish project priority
- Identify and set the vision for the future state Business Process Map.

# Process Flow Map



# Steps to Implementing Business Transformation

- Create a business process map to identify areas of opportunity
- **Identify value adding and non-value adding activities and set new performance targets**

# Value-Add vs. Non-Value-Add

## **Value-Adding Activities...**

...transform materials and information into products & services which the customer wants.

## **Non-Value-Adding Activities...**

...consume resources, but don't directly contribute to the product or service.

# Categories of Waste

- Production of **Defects**
- **Overproduction** ahead of demand
- Unnecessary **Transport** of materials
- **Waiting** for the next process step
- **Inventories** (Excess material/information)
- Unnecessary **Movement** by employees
- over **Processing** due to poor tools and product design

*Lead time reduction is achieved by identifying and eliminating waste.*

# Steps to Implementing Business Transformation

- Create a business process map to identify areas of opportunity
- Identify value adding and non-value adding activities and set new performance targets
- **Create process flow**

# Steps to Implementing Business Transformation

- Create a business process map to identify areas of opportunity
- Identify value adding and non-value adding activities and set new performance targets
- Create process flow
- **Reduce variation and improve quality**

# Process Must Be Repetitive

- Customer must always get the same answer no matter who they ask
- Customer must get the same answers no matter what time of the day, or day of the week they ask
- Customer must always get on-time, complete, and accurate information

# Reduce Variation

- Sources and causes of variation make standard business processes appear to be random, non-standard work
  - Missing information
  - Wrong work sequence
  - Non-standard training processes
  - Non-standard decision aids

# Assuring First-Time Quality Means...

- Build to system with appropriate information
- Build poke-yoke (mistake-proofing) devices for common problems
- Never passing a defect on to the next process;
  - Detecting abnormalities
  - Responding immediately
  - Eliminating root causes
- Establishing clear decision rules

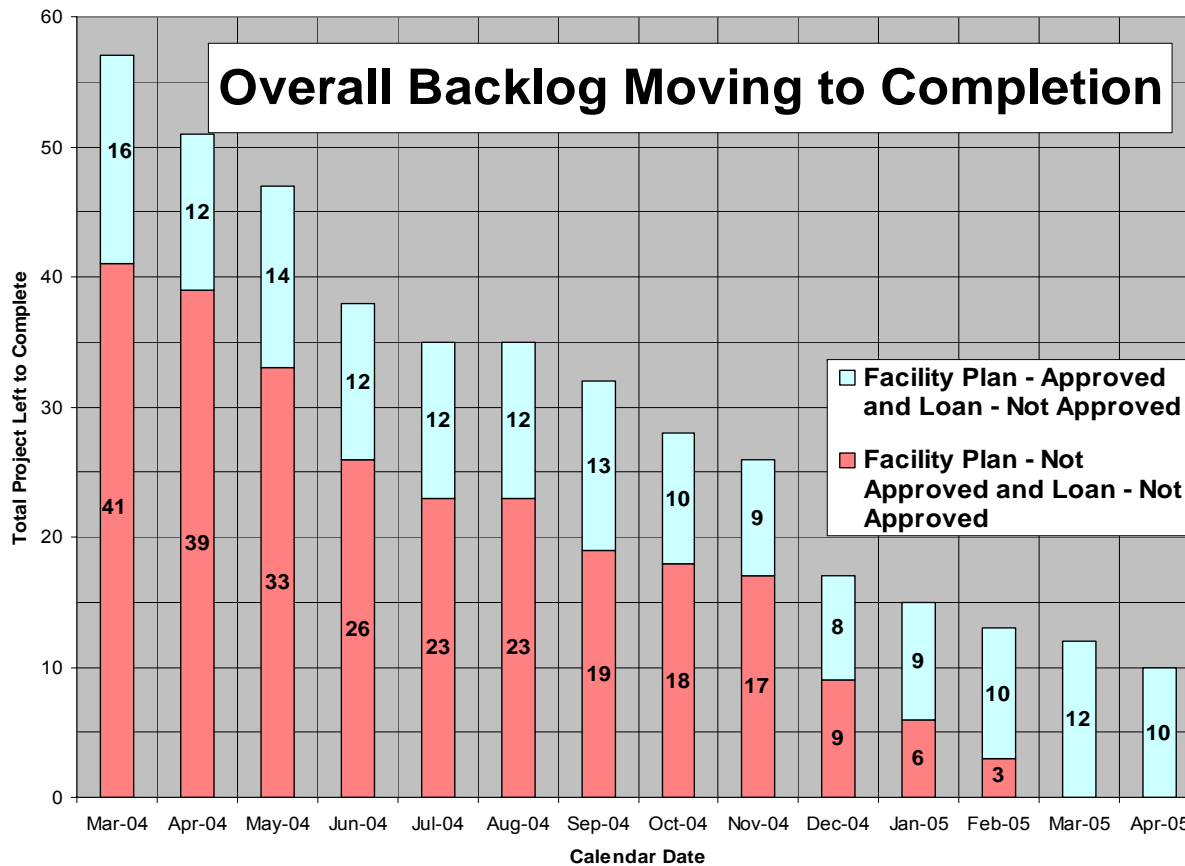
# Steps to Implementing Business Transformation

- Create a business process map to identify areas of opportunity
- Identify value adding and non-value adding activities and set new performance targets
- Create process flow
- Reduce variation and improve quality
- **Intense focus on daily performance management and visual control**

# Visual Management: Monitoring Backlogs

Iowa Department of Natural Resources

## Wastewater Construction – CWSRF



# Lean Culture

- Continuous improvement focus
- Bias for action
- Creativity before capital
- Total employee / stakeholder involvement

# Management Team Must

- Establish a clear vision of continuous improvement
- Communicate, communicate .....

  - Vision
  - Implementation Plan
  - Passion and commitment

- “Walk the Talk”
  - Active participation – know the principles
  - Constant reinforcement – daily, weekly, monthly



# Business Process Kaizen

**Kaizen Breakthrough  
Methodology**

# Kaizen Breakthrough Methodology Principles

- Clear objectives
- Team process
- Tight focus on time
- Quick & simple
- Necessary resources immediately available
- Immediate results (new process functioning by end of week)
- 5S “mindset”, use the steps to support the event activities

# Pre-work

## *Define*

### **Obtain Current Data**

- Provide information for the sponsor and guidance team members to evaluate scope and objectives
- Provide information and data as a starting point for the team

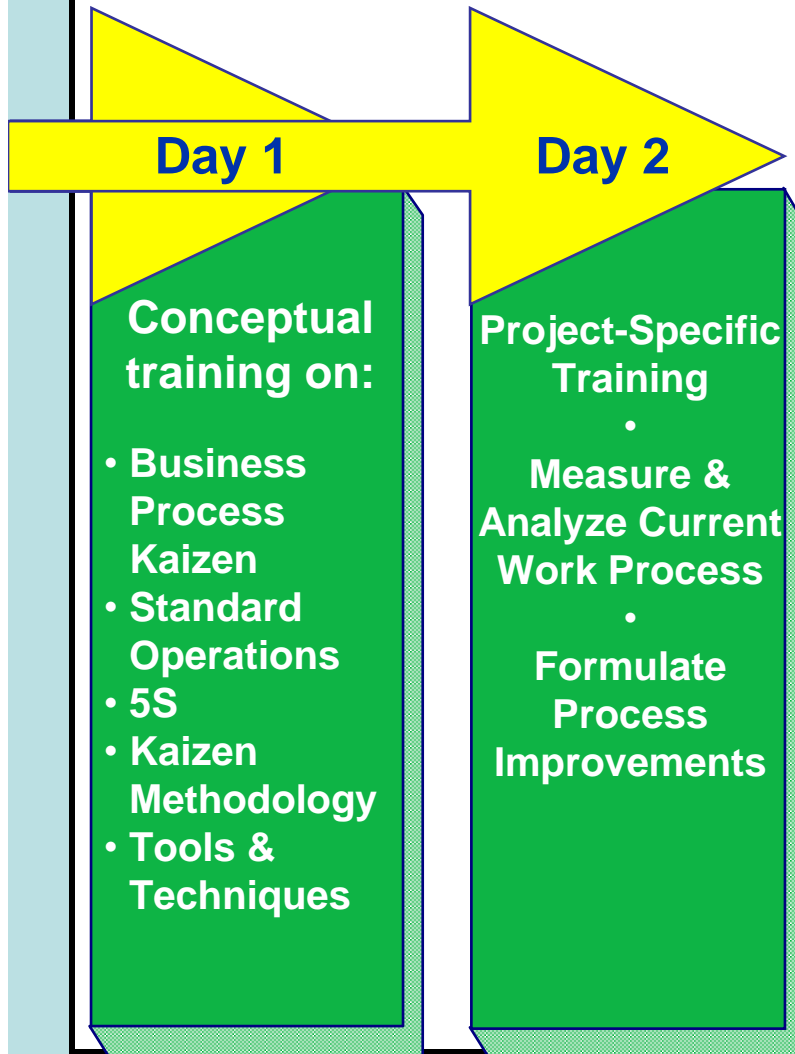
# Kaizen Breakthrough Methodology

**Day 1**

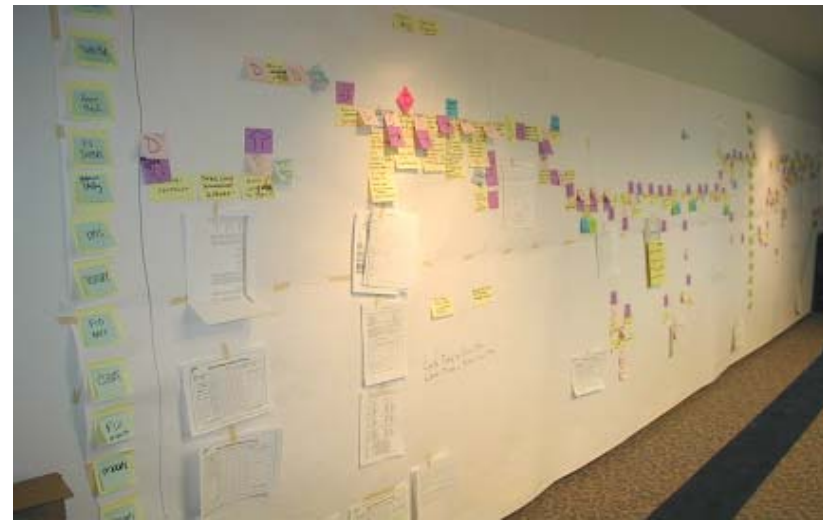
**Conceptual training on:**

- Business Process Kaizen
- Standard Operations
- 5S
- Kaizen Methodology
- Tools & Techniques

# Kaizen Breakthrough Methodology



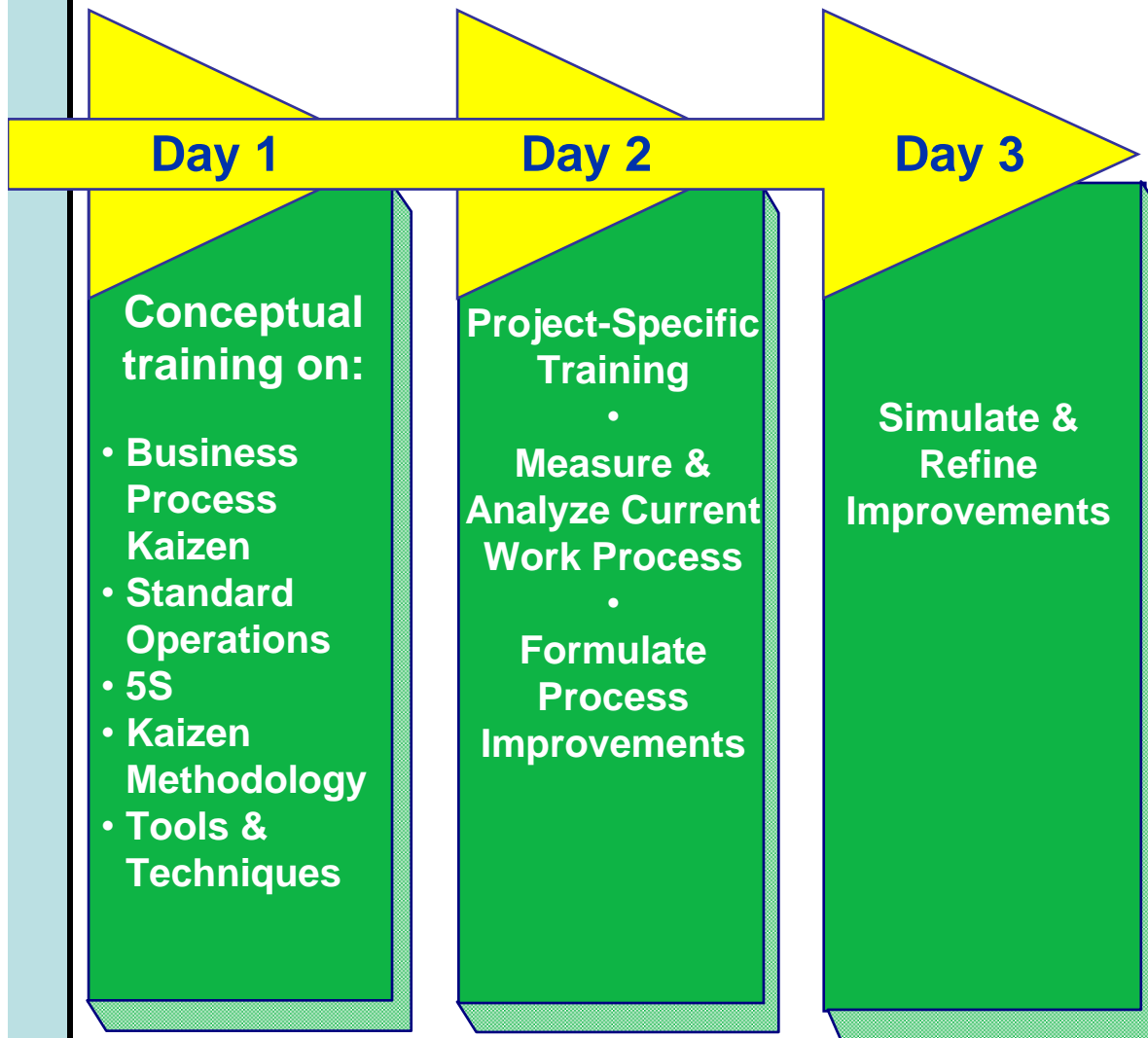
# Make the Process Visible



# 80/20 Rule

20% of the activities in a process cause 80% of the delay.

# Kaizen Breakthrough Methodology



# Five Why?s

- Why?
- Why?
- Why?
- Why?
- Why?



***Get to the root cause***

# Impact / Difficulty Rating

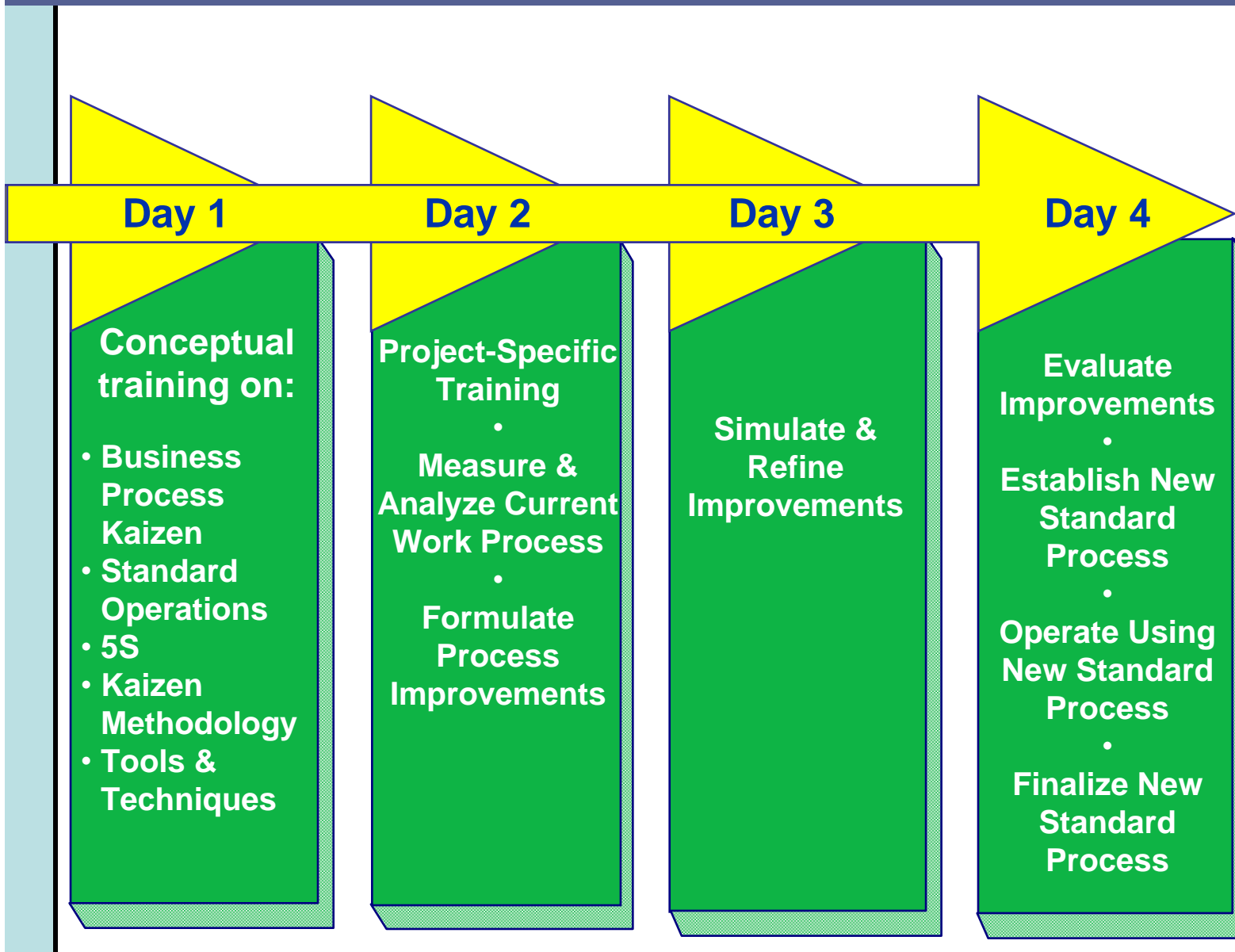
## ***Used To:***

- Capture waste information and potential solutions
- Rate / rank the solutions in regards to resolution of the issues and ease of implementation

# Impact / Difficulty Matrix



# Kaizen Breakthrough Methodology

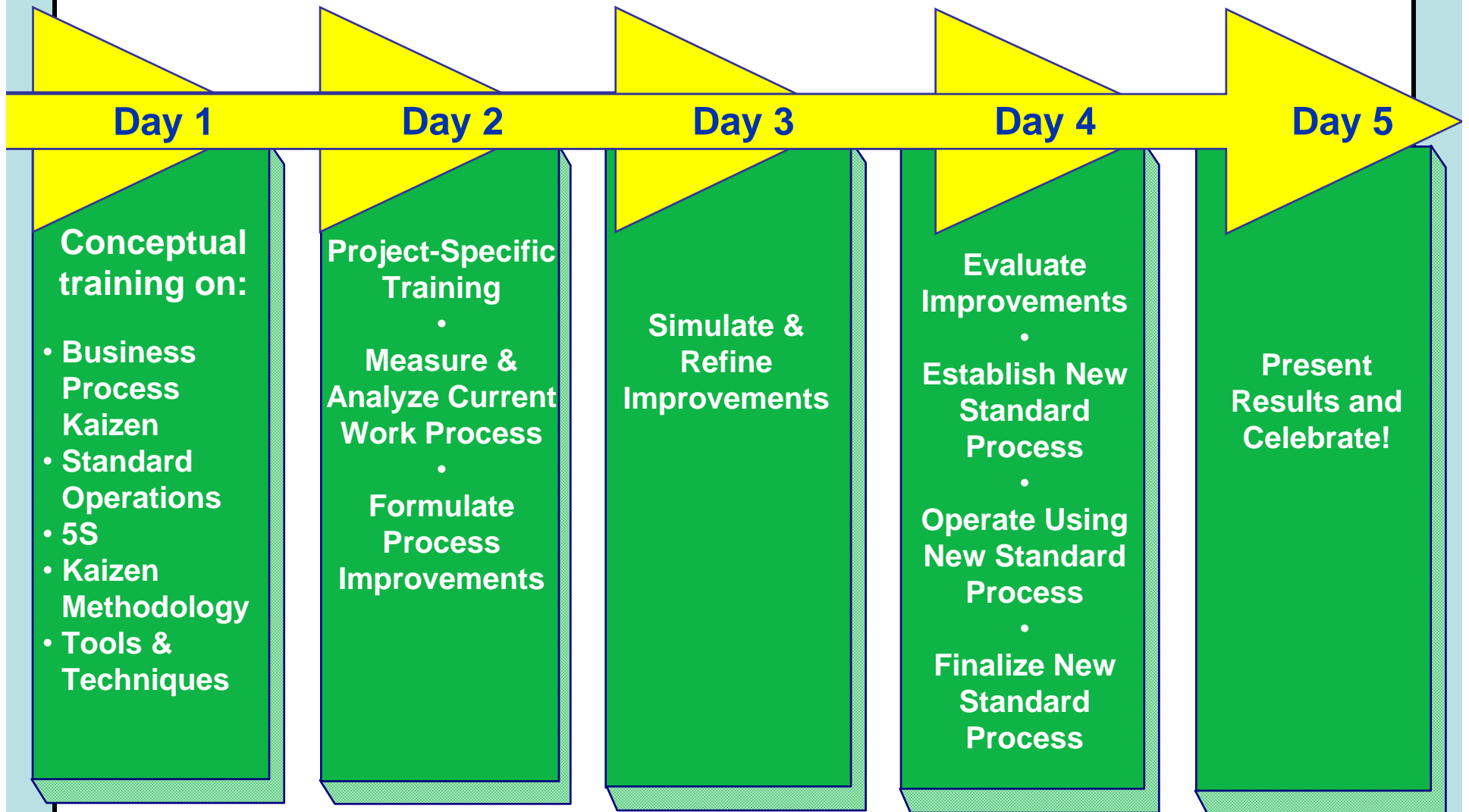


# Develop Visual Management Charts

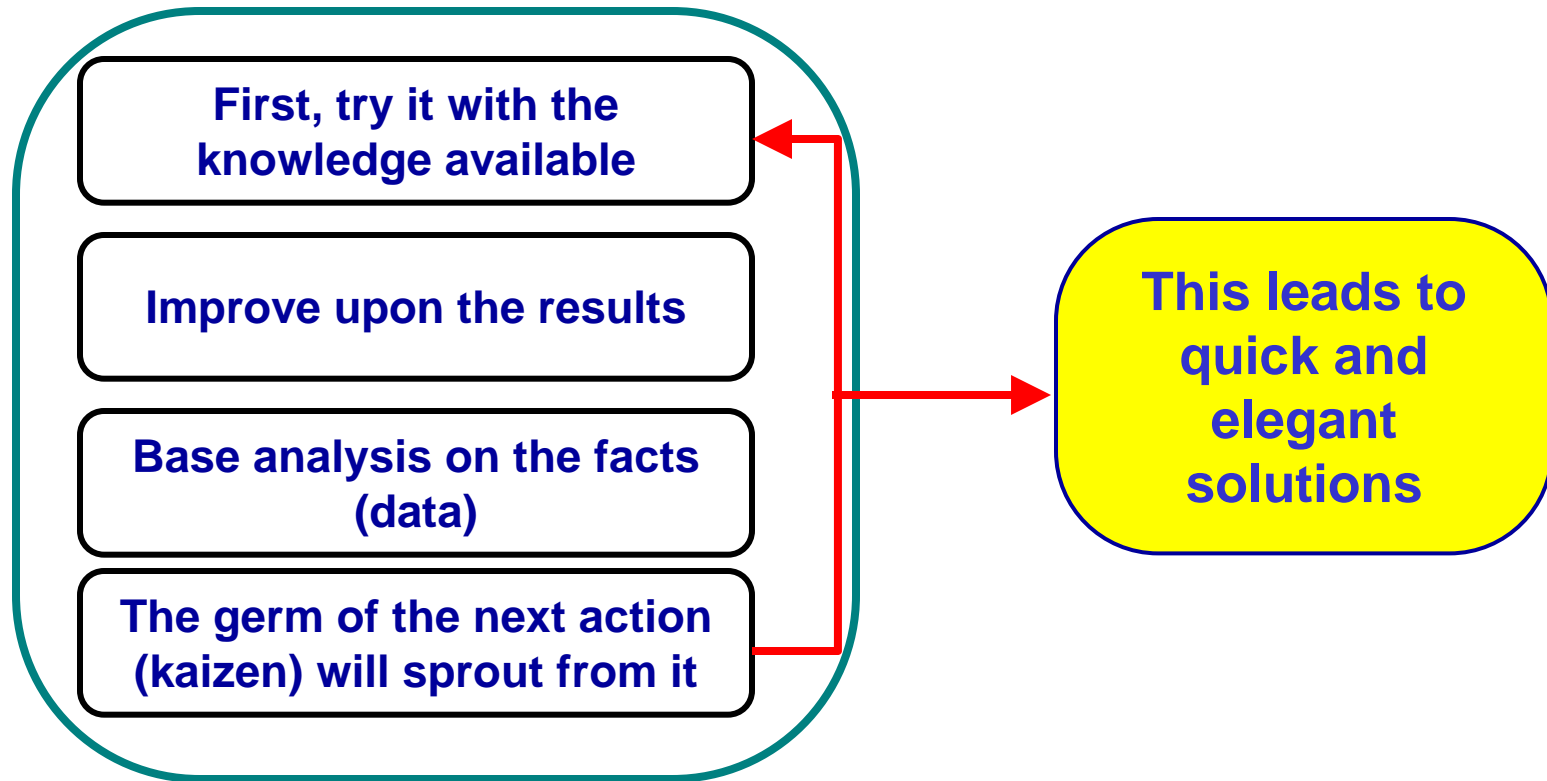
## *Response to Demand*

Hour	Actual Input	Actual Output	Target Output	Cum. Backlog	Comments
8-9	30	25	30	5	Training new staff
9-10	30	31	30	4	
10-11	30	28	30	6	Computer down time
11-12	50	28	30	28	Rework – incomplete info.
12:30-1:30	50	32	30	46	
1:30-2:30	40	29	30	57	Printer paper out
2:30-3:30	30	30	30	57	
3:30-4:30	20	30	30	47	

# Kaizen Breakthrough Methodology

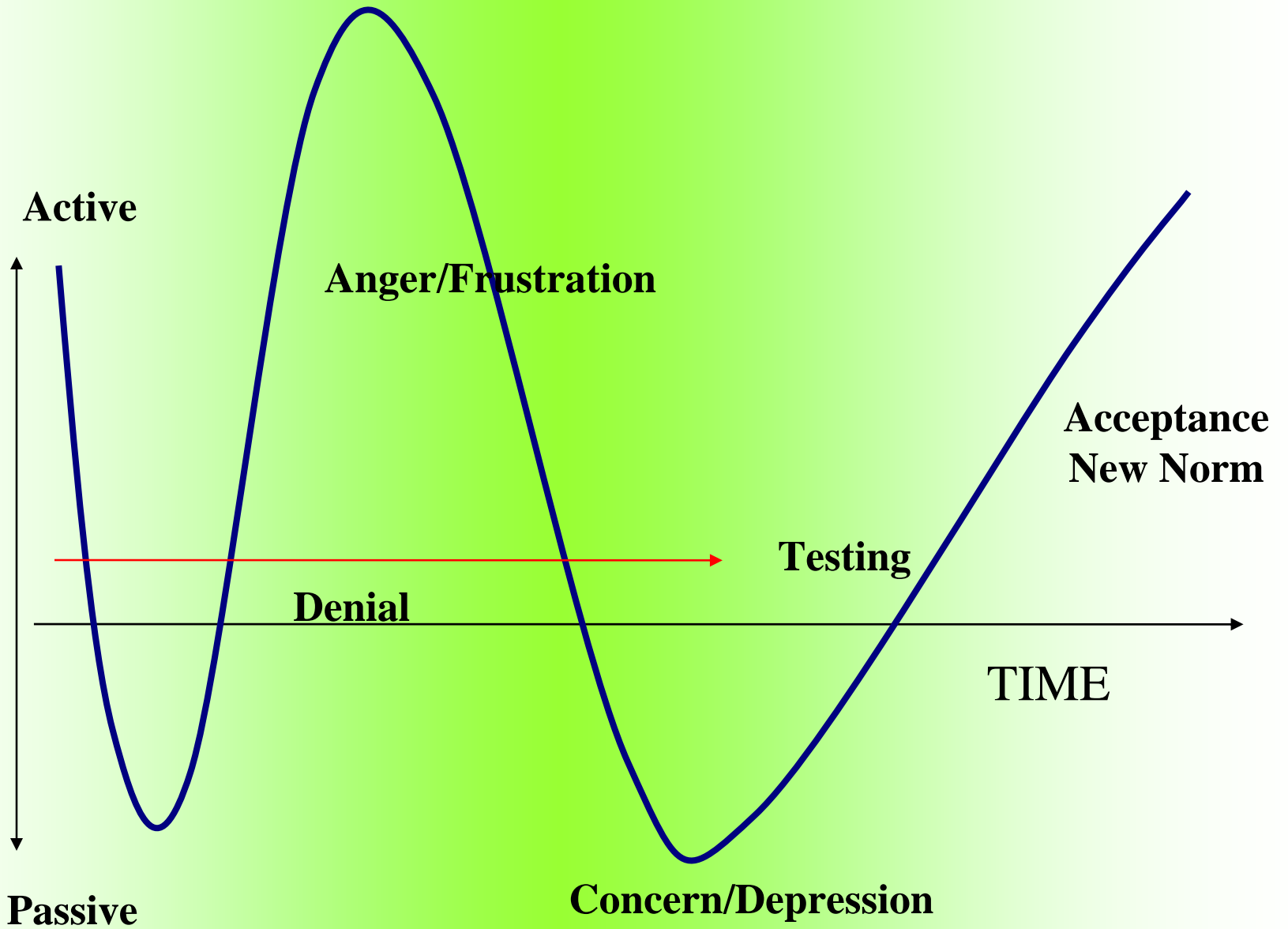


# "Quick and simple is better than slow and elegant"



***Take no action and nothing will happen  
(not seeing is not knowing)***

**EMOTIONAL RESPONSE**



# INTELLIGENT CHANGE

- Team members go through this change cycle during the week-long kaizen
- Culture shift is larger and longer than a single event
- Don't assume you know where any individual is in the change cycle

# Summary

- Kaizen activity is tied to overall operational improvement
- Execution of Kaizen activity requires significant planning and preparation
- Developing continuous improvement culture is a long-term process
- Sustaining Kaizen gains requires daily leadership throughout the organization

“Where there is no standard, there can  
be no Kaizen.”

– Taiichi Ohno