

The background of the slide is a night photograph of a city skyline, likely Cleveland, Ohio, with the Terminal Tower prominently visible. A large, vibrant pink and purple firework is exploding in the upper right portion of the sky, with many smaller sparks and trails. Other smaller fireworks are visible in the lower right. The city lights are visible in the background, creating a bokeh effect.

# ***Leaning Up State Government: It Can Be Done***

**Bill Demidovich, Jr.**

**LeanOhio**

**Department of Administrative Services**

**June 26, 2013**



# Agenda



- Welcome and Introductions
  - Larry Goldman, MoreSteam.com
- “Leaning Up State Government”
  - Bill Demidovich, LeanOhio
- Questions and Discussion



# MoreSteam.com

- Founded in 2000
- Trained 400,000 Lean Six Sigma professionals
- Served over 2,000 corporate customers (including 50+% of the F500)
- First firm to offer the complete Black Belt curriculum online
- Courses reviewed and approved by ASQ and PMI
- Academic Partnerships with Ohio State University, Cal Poly and George Washington University

## Select Customers:



# Today's Presenter



## **Bill Demidovich, Jr.**

*Improvement Consultant – LeanOhio*

- *Senior deployment lead for the Ohio Department of Administrative Services*
- *Lean Six Sigma Black Belt and Senior Professional in Human Resources*
- *B.S. in Business Administration from The Ohio State University*



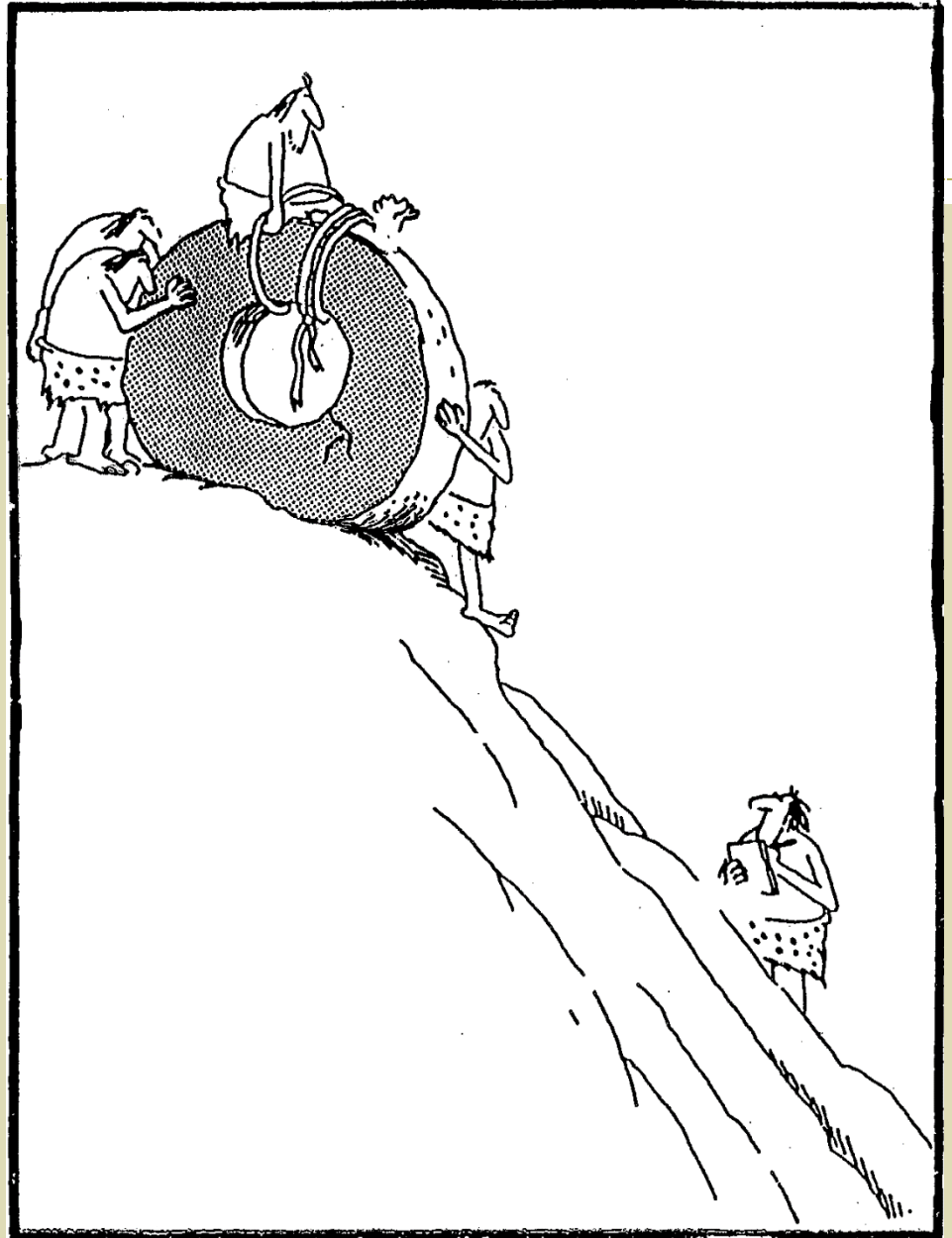
# Agenda



- How to make “Lean Manufacturing” work in the service sector, or even government.
- Lean in Ohio State Government
- Sample of Results
- Lessons Learned Implementing Lean “Manufacturing” to Improve Services
- Next Steps

# First Question

Do we need to  
reinvent the wheel  
to utilize “Lean  
Manufacturing” to  
improve services in  
State Government?



# Manufacturing



**INPUTS** → **PROCESS** → **RESULTS**

- Man
- Machines
- Methods
- Materials
- Environment

Assembly  
Line

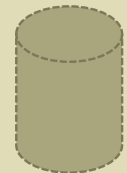
**Bolted to  
Floor**

Rework

Car

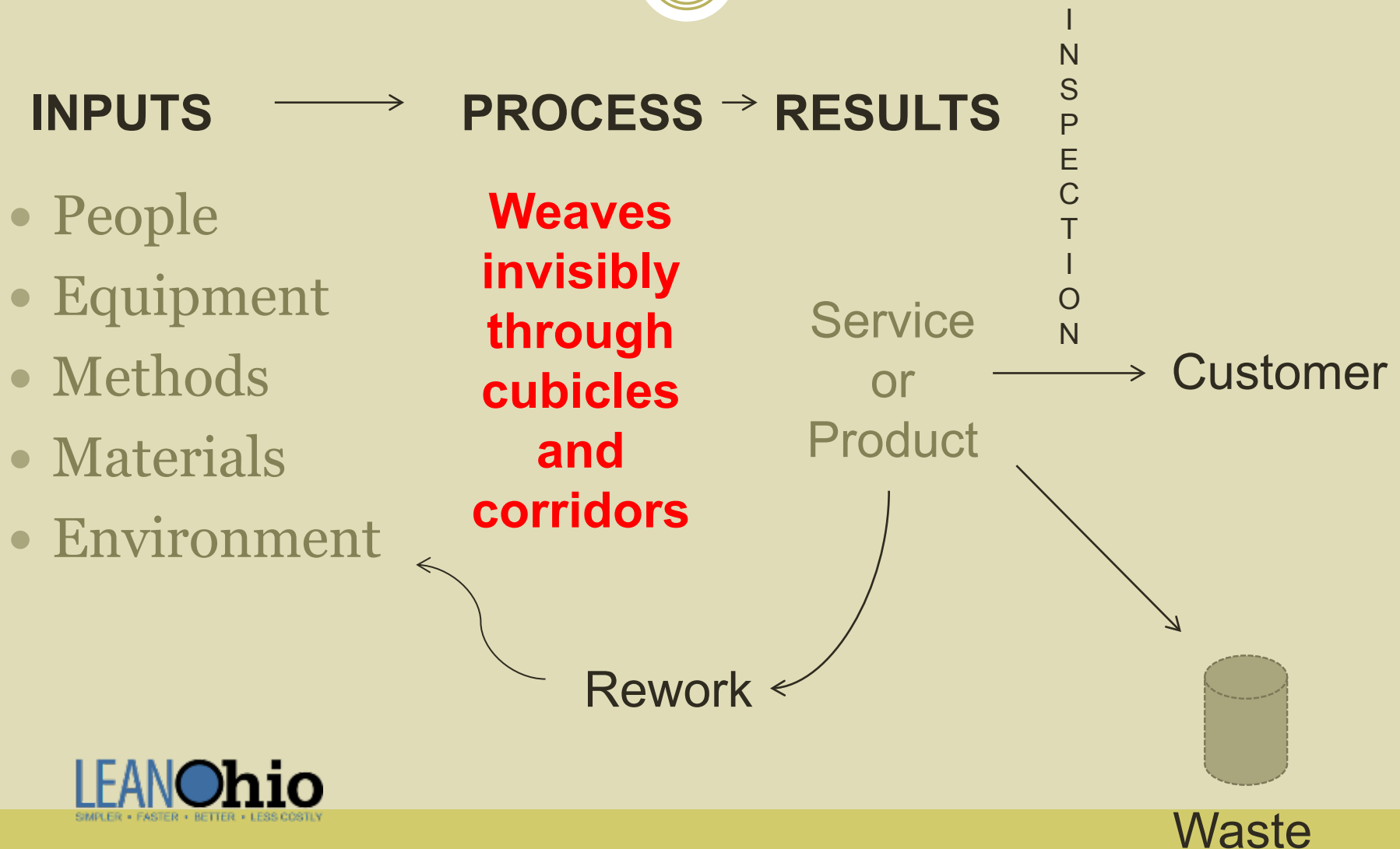
I  
N  
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N

Customer



Waste

# Government / Service





# The Key Differences



The main challenges for adapting “Lean Manufacturing” to Government are:

- Processes are not as visible in government
- Measurements, tolerances, specifications, and data are more routinely required in manufacturing

# The Key Differences

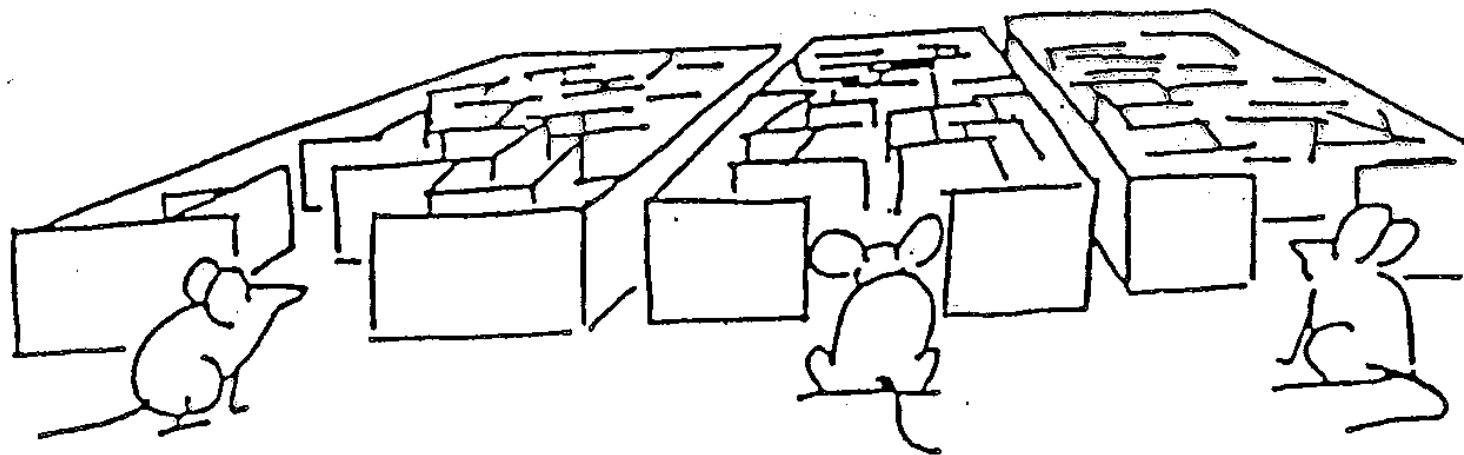


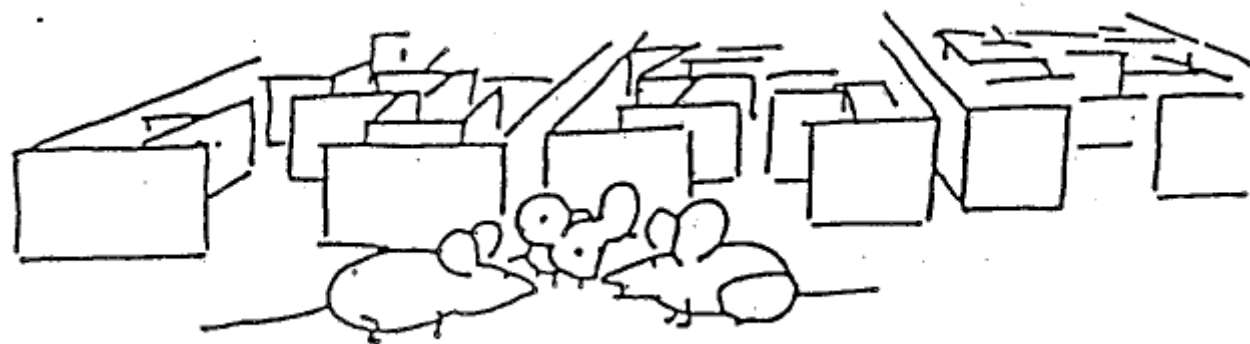
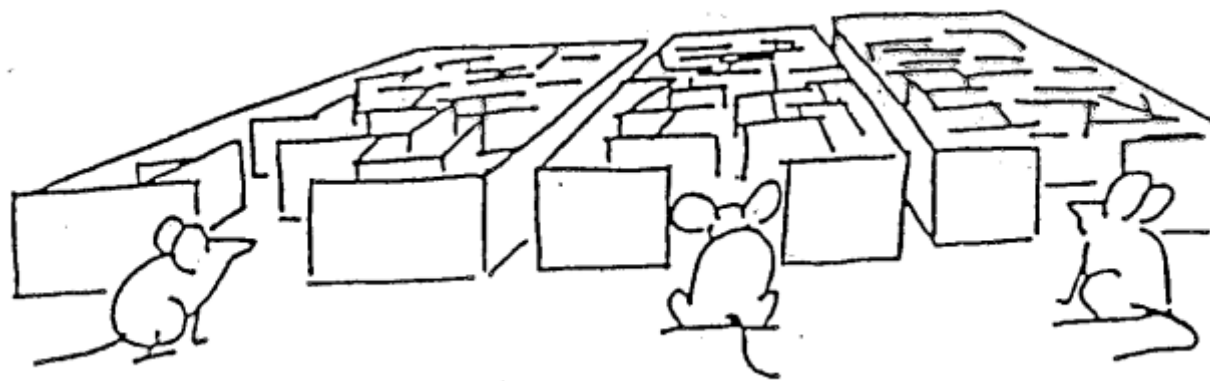
Even the private sector is more likely to apply Lean to the manufacturing processes that occur on the shop room floor than to the hiring, invoice, or other service process that occurs upstairs in cubicles

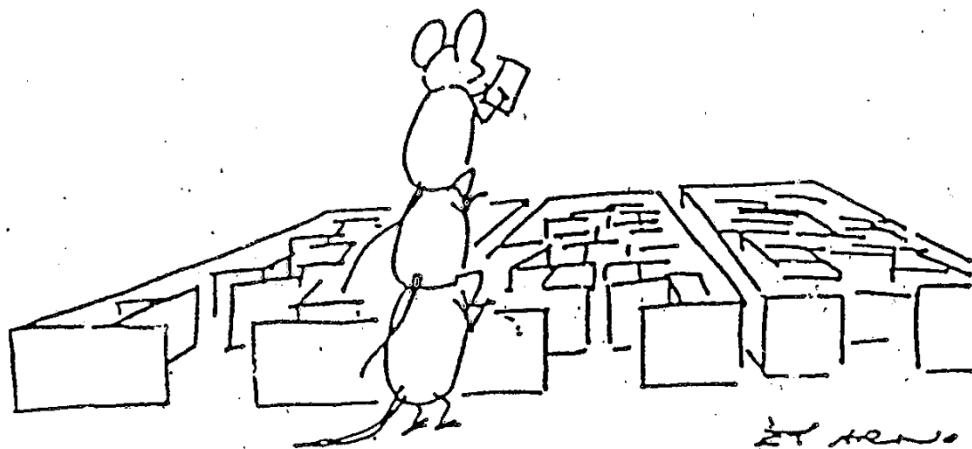
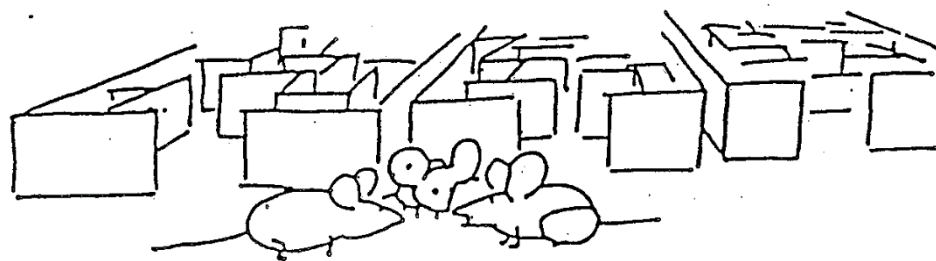
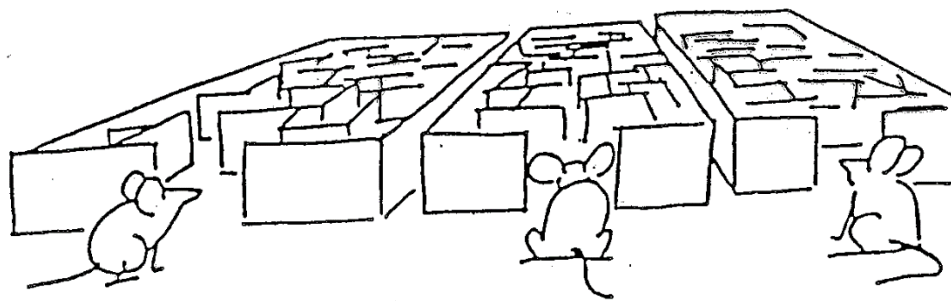
# Kaizen Events



How do you “Lean Up” those invisible Administrative processes in places like HR or finance?









# Processes tend to be invisible



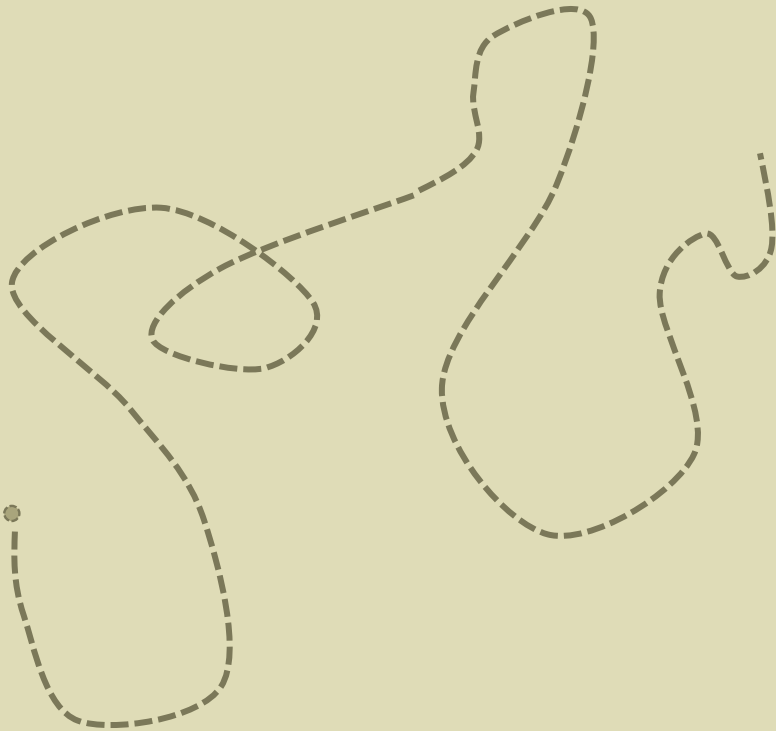
Point A: **REQUEST**



# Processes tend to be invisible



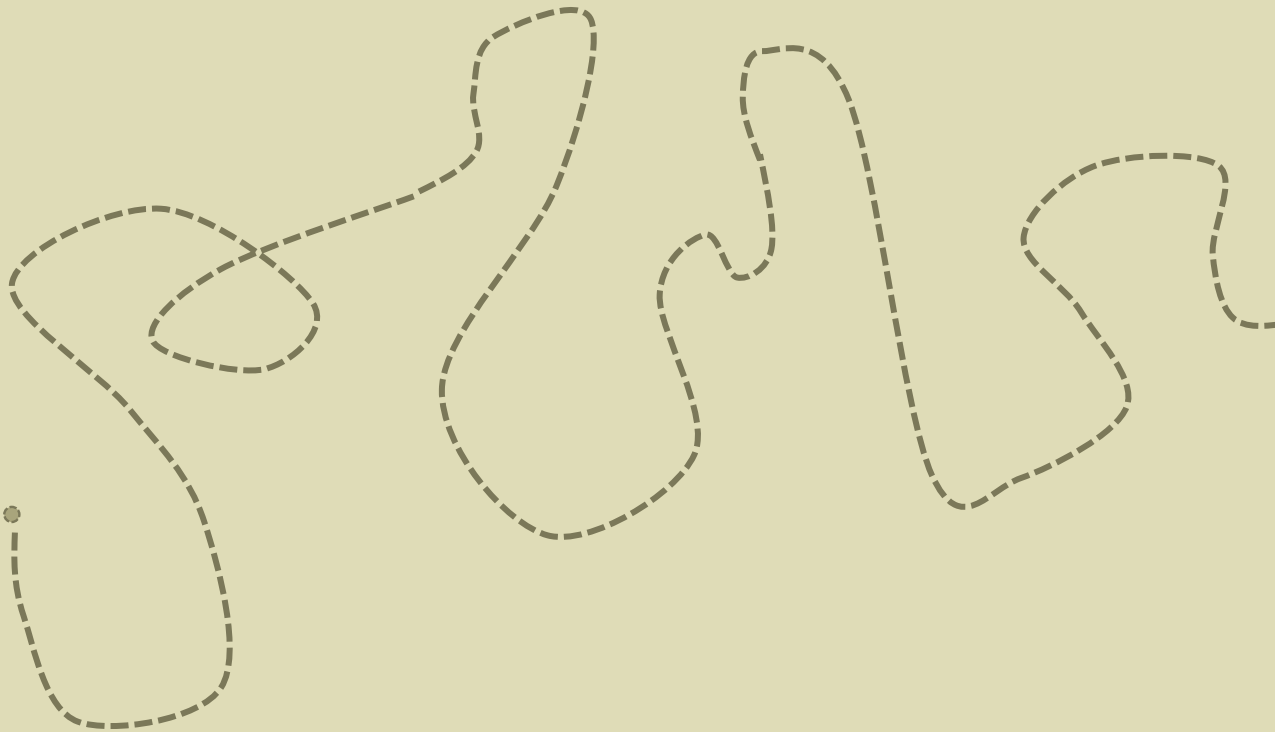
Point A: **REQUEST**



# Processes tend to be invisible



Point A: **REQUEST**



# Processes tend to be invisible

Point A: **REQUEST**



Point B: **RESOLUTION**

# Processes tend to be invisible

Point A: **REQUEST**



Point B: **RESOLUTION**

# In Manufacturing or Government, Whatever your results ...



- Lead time
- Cycle time
- Errors
- Costs
- Customer satisfaction or frustration

...your process is **PERFECTLY** designed to achieve those results



# What result is this process perfectly designed to achieve?



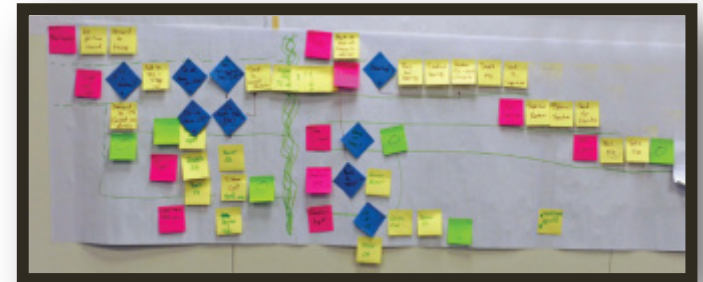
# Fix processes, not blame



Current State = 143 steps, 4 entry points

Future State = 96 steps, 1 entry point

Lead time reduced from 32 months to as few as 7 - 20 days



# Taxation/Tax Appeals



- Four entry points reduced to 1
- 18,000 backlog reduced to less than 2000 of the most complex
- Lead time from as much as two years to just a few days for common appeals
- \$529,200 reduced in cost avoidance
- Cost to process simple returns reduced from \$105 to \$7

# Ohio Department of Transportation



## REAL ESTATE RECORDS RETENTION PROCESS







# More Out of the Box Results



- 82% fewer steps in process
- Lead time reduced as much as 40%
- 353 boxes backlog eliminated
- 700,000 sheets of paper touches eliminated





# Ohio Department of Public Safety

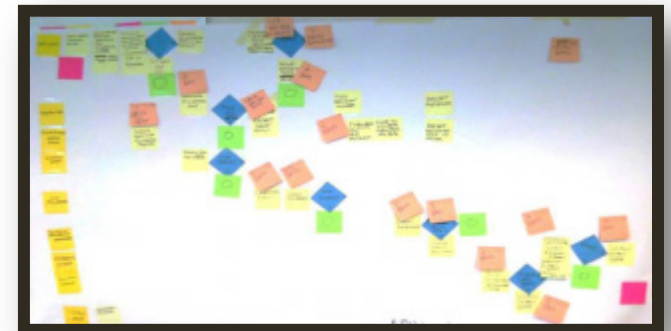
## HIGHWAY PATROL TROOPER RECRUITMENT PROCESS



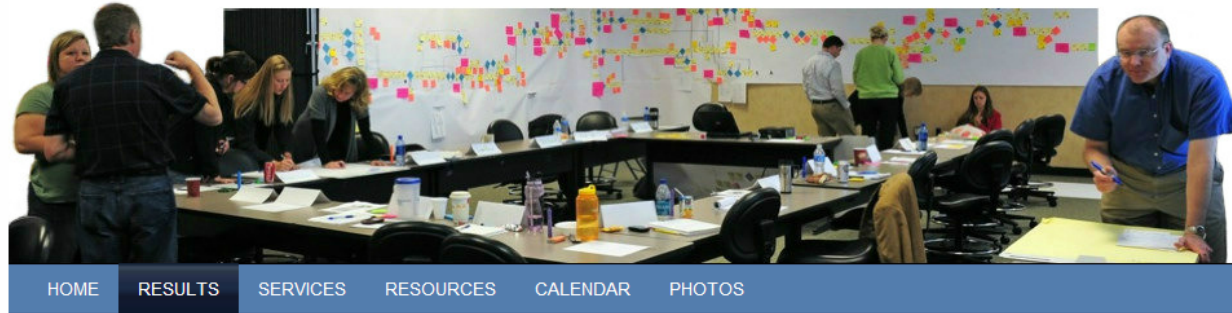
Current State = 235 steps, 28 decisions,  
76 handoffs, 50 delays

**Future State = 34 steps, 8 decisions,  
11 handoffs, 15 delays**

**Lead time reduced from a range of  
191 days to more than a year, down  
to 61 days**



# Communicating Results & Cost Savings



HOME RESULTS SERVICES RESOURCES CALENDAR PHOTOS

**LEANOhio** *Making state government in Ohio simpler, faster, better, and less costly.*

Search... [Search](#)

## Major LeanOhio Events 2011-2013

Below is a summary chart of major Lean events in Ohio state government

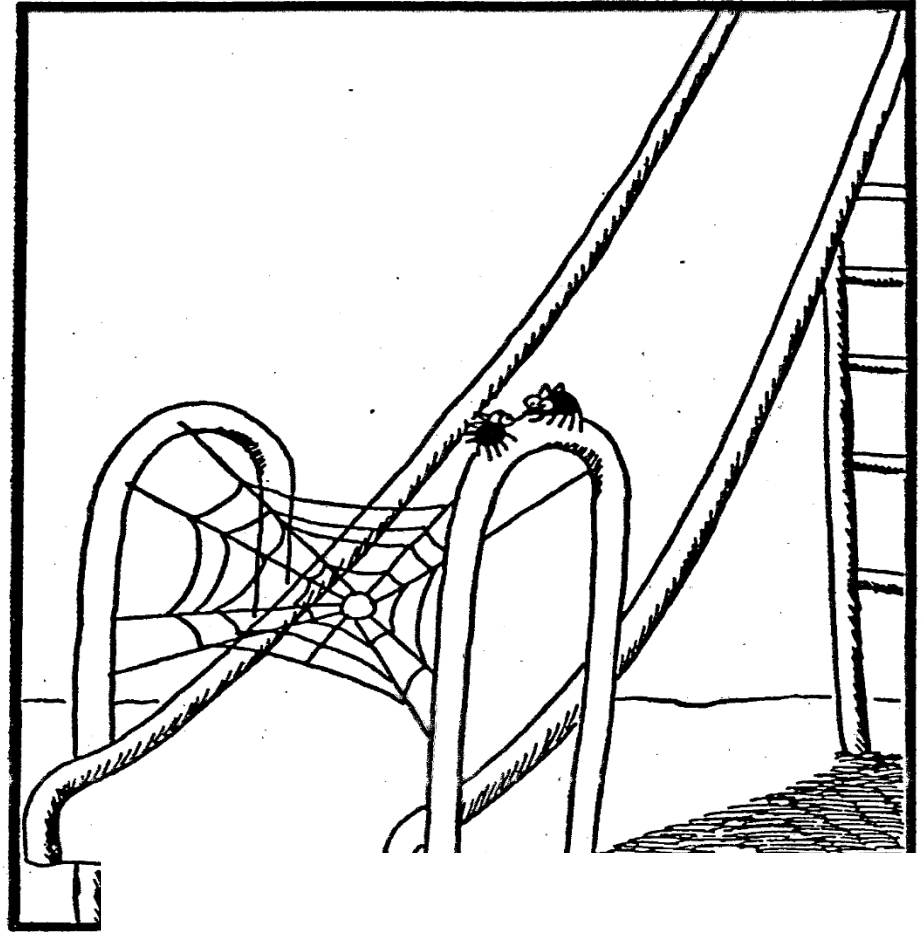
[Click here for links to detailed information sorted by date](#) • [Click here for links sorted by agency](#)

## LEANOhio Events and Results

	Department:	Changes to Process:	Metrics:	As a Result:
41	Ohio Department of Mental Health  Streamline process for Health Home Certification and information exchange  May 20-24, 2013  Kaizen Event	<ul style="list-style-type: none"><li>• Reduced steps from 191 to 43 (77% reduction)</li><li>• Reduced decision points from 18 to 2 (89% reduction)</li><li>• Eliminated all 54 points of waste</li></ul>	<ul style="list-style-type: none"><li>• Process time reduced from 120-213 days to a projected 13-36 days (83% improvement)</li><li>• Annual staff hours made available for other work valued at \$52,000</li><li>• Processing costs of Business Associate Agreements cut in half</li></ul>	Ohio mental health clients will now have better access to Health Home services, which integrate physical and behavioral health care
40	<a href="#">Department of Administrative Services, General Services Division, State Printing</a>	<ul style="list-style-type: none"><li>• Process steps reduced from 307 to 35 (88% improvement)</li><li>• Decision points reduced</li></ul>	<ul style="list-style-type: none"><li>• Copy Center saves 225 hours per month</li><li>• \$2.8 million in cost avoidance per year</li></ul>	Customer agencies will receive a more accurate and timely bill for their printing jobs

# Leaning Up Invisible Processes

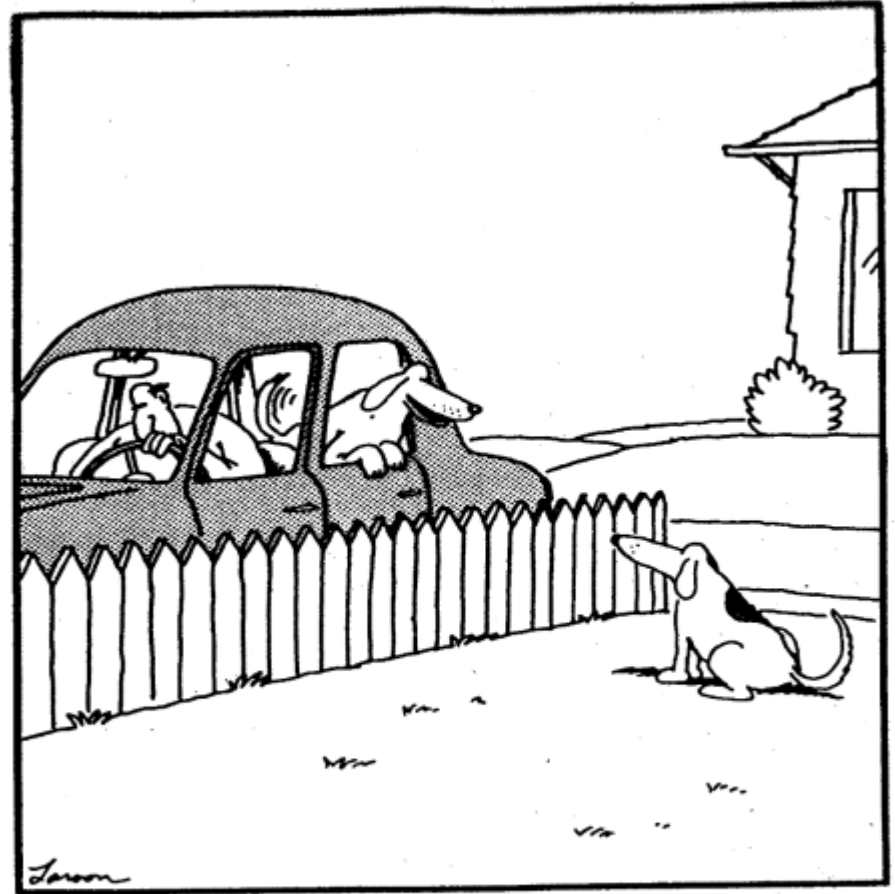
No Kaizen event is held without first developing a meaningful yet appropriately sized scope to ensure success



“If we pull this off we’ll eat like kings!”

# Leaning Up Invisible Processes

Each Kaizen event has a detailed charter that provides operational definitions and clearly defines the purpose and goals so everyone is on the same page.

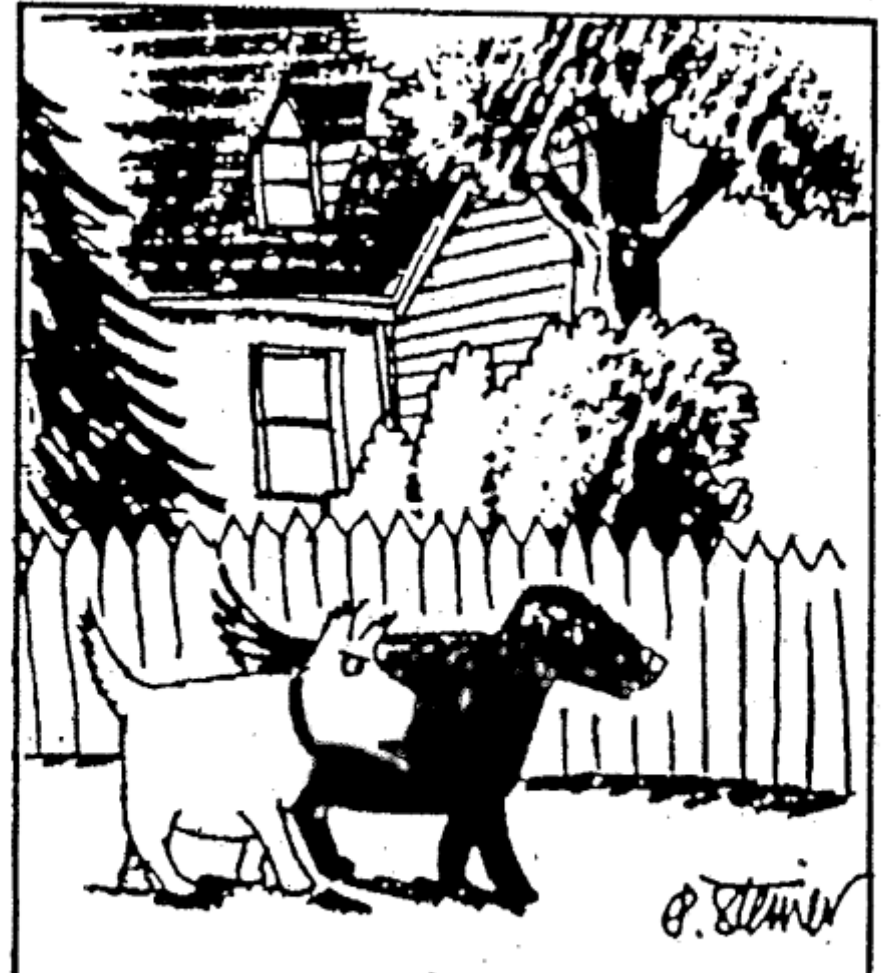


**“Ha ha ha Biff. Guess What?  
After we go to the drugstore and  
post office, I’m going to the vet’s  
to get tutored.”**



# Leaning Up Invisible Processes

The people who do the work (and therefore know the work best) from ALL parts of process are involved in making the improvements

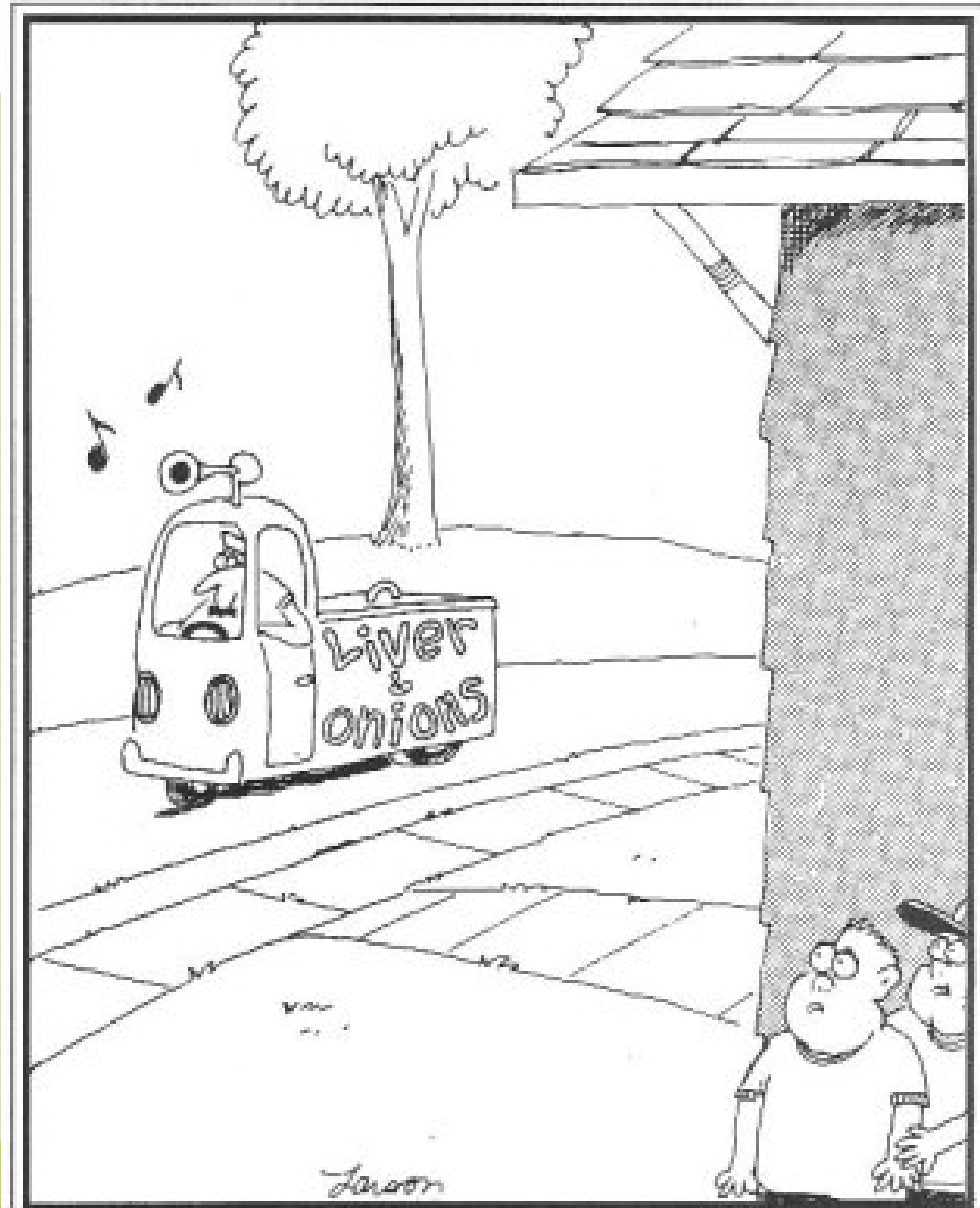


**“It’s always ‘Sit,’ ‘Stay,’ ‘Heel’ – Never ‘Think,’ ‘Innovate,’ ‘Be Yourself.’”**



# Leaning Up Invisible Processes

Customers are part of the improvement team so their needs are more accurately identified



# Leaning Up Invisible Processes

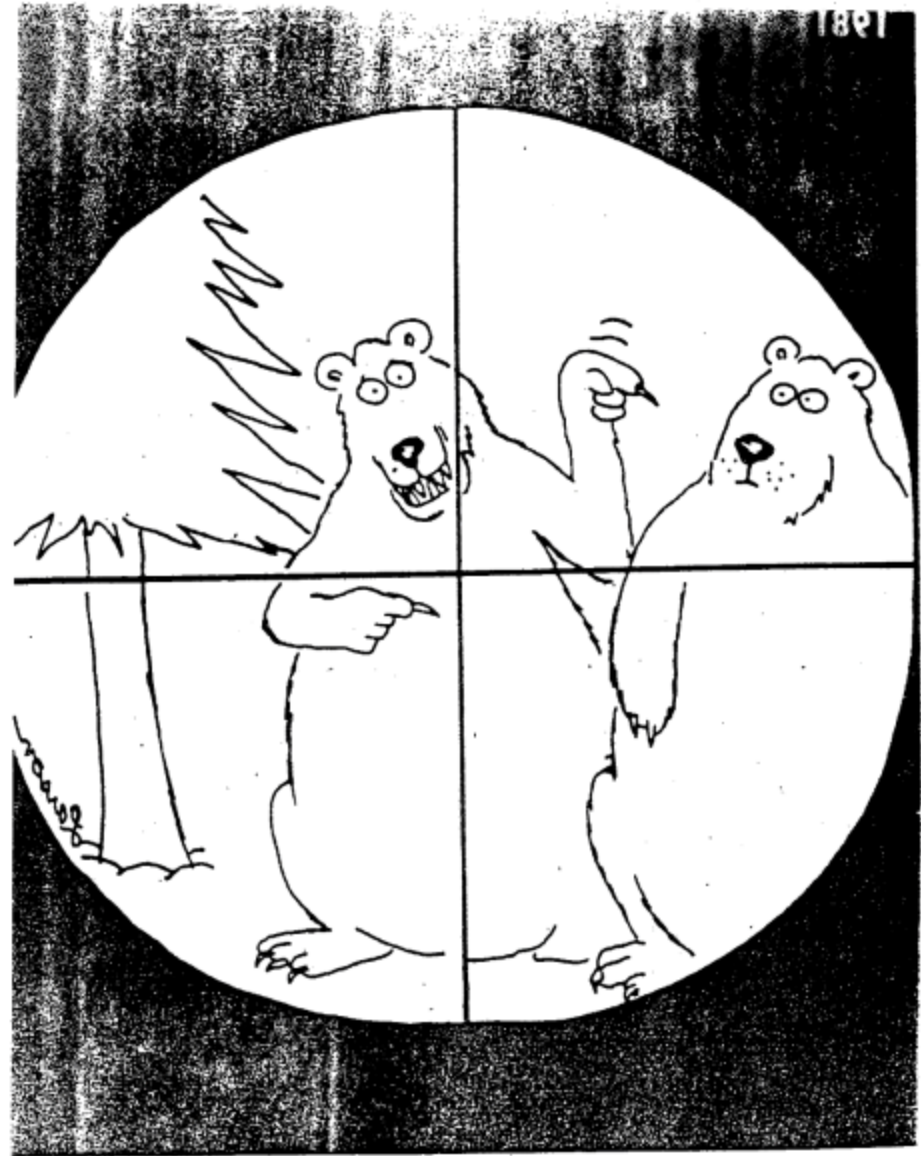
The team is taught the science of flow, sequencing and pull systems so they can design their own processes to work more efficiently



**“I’ve got it too, Omar. A strange feeling like we’ve just been going around in circles.”**

# Leaning Up Invisible Processes

The process creates a blameless environment to help overcome defensiveness and resistance to change.



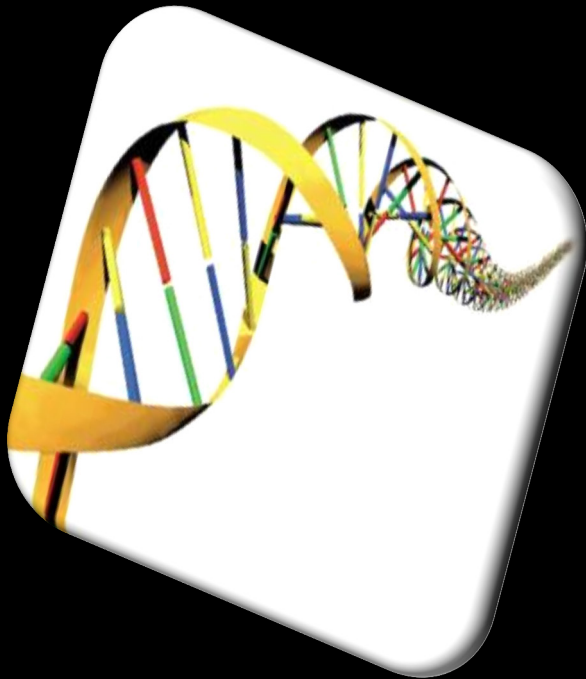
# Leaning Up Invisible Processes

Implementation of the new process begins immediately so momentum is not lost.



**“Again? Why is it that the revolution always gets this far and then everyone just chickens out?”**

# Ohio Bureau of Criminal Investigation



- FB & DNA Process Study
- Kaizen Event Report Out
- April 11-15, 2011

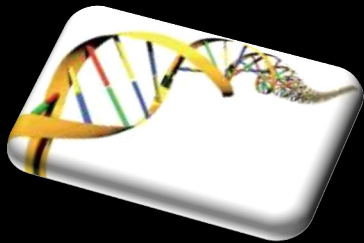


# The TAQ Masters



# Background

The Ohio Bureau of Criminal Investigation processes more than 7,000 DNA cases each year. Most cases are received and/or processed beginning with Forensic Biology and then DNA at three primary laboratories, 1) London, 2) Richfield and 3) Bowling Green. The process is utilized by most law enforcement agencies throughout the state and the results of BCI testing impact the viability of related case prosecution.



## Stakeholders

Victims/Victims Family  
Law enforcement agencies  
Courts  
Attorneys  
Accused offenders  
Ohio Attorney General



# Scope of Event

The process begins when agencies bring evidence to BCI and ends when the final report is issued or the forensic scientist testifies.

## **Overarching Themes:**

The purpose of this event is to reduce processing time and improve customer satisfaction while maintaining high quality.



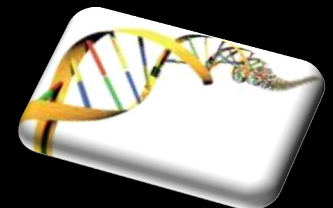
# Out of Scope

Areas that will not change as a result of the Kaizen event are:

- **No one loses their job because of the Kaizen event, but duties may be modified.**
- **Need for additional staff is not dependent on improvement process**
- **Need for additional monies is not dependent on improvement of process**
- **No legislative changes or changes related to collective bargaining.**
- **No IT solutions until it is determined that an IT solution is needed.**

# Goal

- Satisfy Customers (Law Enforcement and Prosecuting attorneys) by achieving an average report time of 35 days from submission with no loss of accuracy.



# Baseline Data

DNA Lab Statistics				
	Days Until Assigned	% Assigned	Total Days at BCI	% Assigned
One Day	122	39%	1	0%
2-7 Days	10	3%	1	0%
8-14 Days	8	3%	1	0%
15-30 Days	19	6%	8	3%
31-60 Days	65	21%	46	14%
>60 Days	92	29%	262	82%

The average processing time for DNA cases was 126 days. 50% were not assigned to a scientist for 30 days or longer

# Current-State Process Map



187 steps

52 handoffs

43 decisions

# The original processes had:

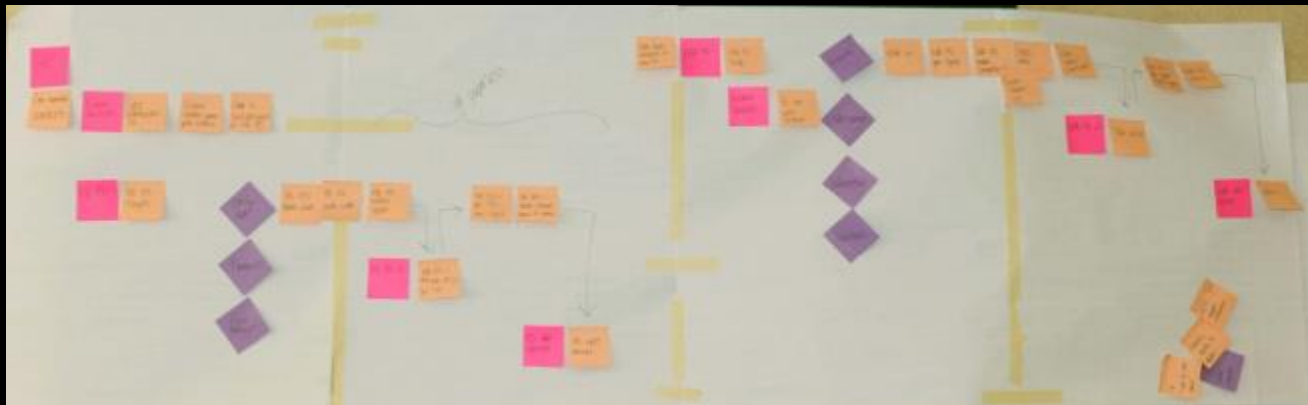
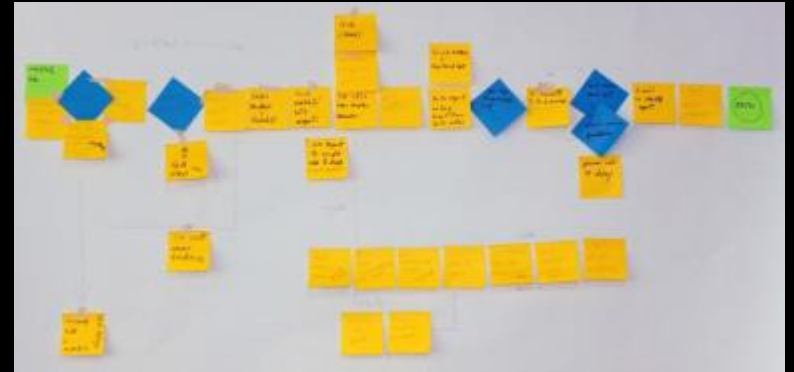
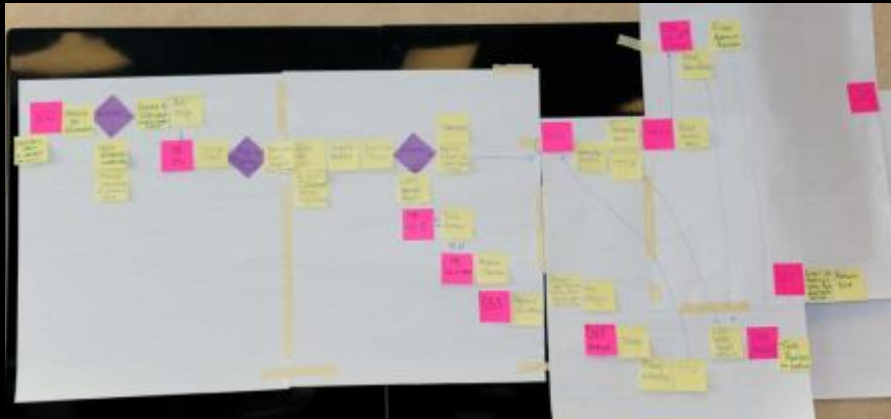
- Too many steps
- Too many handoffs
- Caused too much process lead time
- Too many duties for the forensic scientist that could be done by others
- Lot of delays
- Lot of redundancies

# The team brainstormed more than 70 improvement ideas

Garbage in=Garbage out  
Only take complete cases  
No non-sex cases at less than F3 level  
Edit sub. Policy (limit rushes)  
Establish better criteria for submission of evidence to reduce non-essential work  
Require synopsis & standards on submission  
Incomplete is unacceptable  
Tighten up compliance with evidence protocol – must have svs std & synopsis  
Cases ready to be worked on submission  
Require checklist to be completed prior to case acceptance  
Incentives for status communication for Detectives & Court  
Stop cases at the door if they don't have everything they need  
Train LEA better  
Tell L.E. & Pros. What is required  
OHLEG Training & use  
Give Detectives /Inv. OHLEG access to reports  
No memos.. OHLEG  
Give BCI staff “read” access to OHLEG  
Electronic access to court dockets & OHLEG  
Mideo access on other computers  
Stop attaching CV to each report - stop mailing reports  
Automated note taking  
Purchase & install barcode system for sample tracking  
Dictation software for staff  
LIMS generate report from report input info  
LIMS that works  
LIMS creates reports FB/DNA little FS interaction wizards

Better LIMS – report writing – tracking sample types  
IT support to include program for robots  
Faster computers  
Make more of process electronic  
Paperless process  
Go paperless  
Better data mining tools to track trends and sample types  
Take better advantage of OA3s  
Have someone else order  
Evidence transfer to a minimum  
More support with admin functions (Purchasing ordering)  
Reassign non-technical tasks to OA3s  
Liz have dedicated OA3  
OA3 to order supplies (2)  
Delegate some responsibilities to OA3  
Decrease amount of case transfer  
Don't transfer cases/evidence  
Less shipping around of case files  
Minimize transfer between labs  
Eliminate or reduce Fed Exing  
Less movement of case pockets- only absolutely necessary transfers  
Organize DNA vault for incoming evidence  
Property room person to move evidence  
Place in DNA vault (no transporting from vault to vault)  
Good scanners for case files  
Better define interpretation guidelines (i.e.: inconclusive)  
Bar code readers for DNA sample tubes  
Use colored folders to identify case typed priority  
Assign additional counties to L&R – from BG area

# Clean Sheet Redesign



# Common Ground

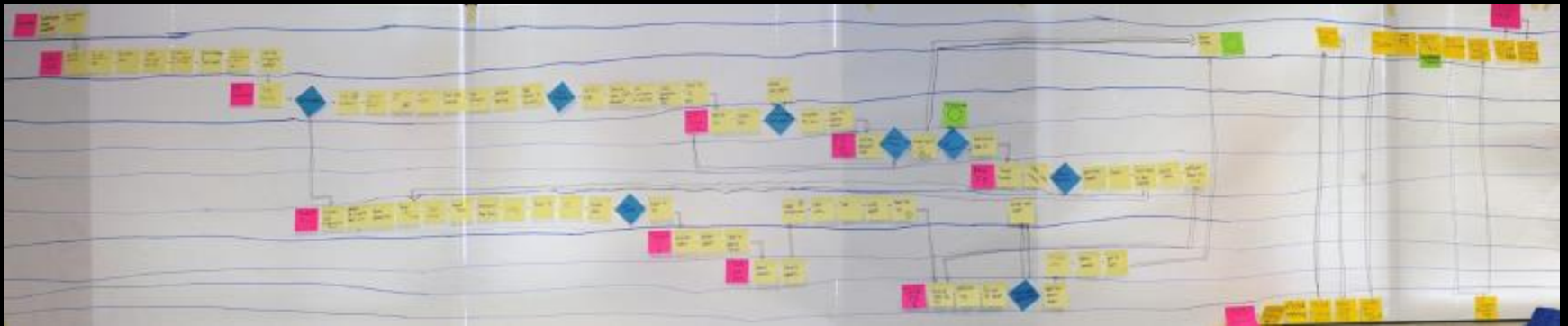


## Common Ground

- Auto-Assign
  - Submission Policy Enforced
  - No more mailing
  - QC Tech Responsibilities
  - OAS's move evidence
  - Bar coded Tubes
  - Tablets For Notes
  - Triage in analysts Hands
- 
- Automated Flow Path.
  - Paperless
  - ID X - use it.
  - LIMS enhancement
  - Simple cases bypass FBI reporting
  - Visual Prioritization
  - CODIS - Forensic check by analyst - rest Admin OAS.  
(Gina)
  -



# The New, Improved Process



84 steps

26 handoffs

8 decisions

# Old Process



# New Process



# The Results

Measure	Before	Projected After	Difference
Number of Processes	3	1	66% reduction
Steps	187	84	103 less steps -55%
Decisions	43	8	81% fewer
Handoffs	52	26	50% fewer
Forensic Biology Processing Time	50 days	14 days	36 fewer days 72% reduction
DNA Processing Time	126 days	21 days	105 fewer days 83% reduction
Overall Processing Time	117 days	35 days	82 fewer days 70% reduction

# More Results

- Reduced information-gathering steps
- Created a process that can be explained to the customers
- Reduced job frustration; revitalized job satisfaction
- Buy-in from all levels of staff

# Projected Cost Savings

**Laboratory-wide savings :**

**Paperless Reports:**

**Paper Savings: \$28,000 annually**

**Postage Savings: \$12,000**

**OA3 time spent mailing: \$17,000**

**Projected Annual Savings of \$57,000**

# Staffing Plan

**2012 Budget includes money to hire 8 DNA Forensic Scientists (\$500,000/year)**

**Post Kaizen staffing plan:**

**4 DNA Forensic Scientists**

**3 Laboratory QC/QA Analysts**

**3 FT & 2 PT dedicated OA3s to the DNA Biology Unit**

**BUDGET NEUTRAL**

## Key Issues

## Major Improvements

Each lab had a separate process

Standardized processes

Forensic samples came in incomplete

Created a new checklist and educational process to ensure more complete submissions.

Scientists doing too many other duties

Moving duties to more appropriate staff . Hiring and using office assistants.

Future hiring of technicians to free up scientists to do more DNA work

Lead time too long

Reduced steps, implementing paperless process,

Purchasing procedures were burdensome & caused delays

Credit card, blanket POs, pre-approved standard lab supplies vendor

Employees took too long to get help

Dedicated IT staff at BCI



# Implementation Plan

- Submission Expectation action items
- Training plan
- Communication plan
- IT action items
- HR action items
- Fiscal action items
- Data collection



# Action Plans

## Fiscal Action Plan

What	Who	When
P-cards x2	Jennifer B. (memo to COO)	4-22
List of most common vendors for <ul style="list-style-type: none"> <li>- Blanket POs</li> <li>- "Preapproved" Std Lab Supply Vendors</li> </ul>	Levi	4-22
Timing for Maintenance Contracts	Mike Jennifer B.	
Performance audit of local PCs <ul style="list-style-type: none"> <li>- Help Ticket with PCs</li> </ul>	Lynn and Lewis (Liz)	4-22
Ensure IT is aware of all DNA IT projects needed	Mike, Lewis, Liz Lynn	4-22

## HR Action Plan

What	Who	When
Potential intern Candidates fr. OSU	Erica	Mon, Apr 18
Create specs/P.D. for tech position	Erica + BCI managers	June 18 (8 wks)
Study <sup>tech</sup> tasks that can be reassigned to OA3	Erica	Mon, May 2 (2 wks)
OA3 - Designated per Lab. - Mike		
Study IT support staff for BCI - Mike		

# Submission Form

HEADER

(susp, vic case #  
dates agency  
offense)

BARCODE

★

Charged ☐ yes ☐ no

Trial Date ☐ yes ☐ no

Grand Jury ☐ yes ☐ no

In Custody ☐ yes ☐ no

Other comments:

Agency Item	description	Where?	Purpose/Why?
1	comforter	victim's bed	suspects semen
2	pants	victim's pants	suspect's semen
3	underwear	suspects underwear	victim DNA
4	knife	found @ scene	susp - handle vic - blade
5	swabs/ - standard	victim	for comparison (auto populate)
6	standard	suspect	for comparison (auto populate)

(Submitted by)

(Investigator)  
Brief Synopsis: ★



# Come Monday...



- Purchasing
- DNA can be stored upstairs (London)
- Help desk
- Eliminate simple biology blood reports

# Benefits

- Less paper products
- Reduced postage costs
- Less waiting time
- Less frustration for employees
- Streamlined process
- Process is a product of the employees
- Reduces the opportunity for human error
- Fewer incomplete submissions
- More standardized workflow between labs
- Better use of scientists' time



# Not there yet, but...



- **Since January 2011**
  - More than 140 Lean improvement efforts including 37 week-long Kaizen events.
  - In Fiscal Year 2012 the ROI was 42:1
  - Kaizen event teams on average eliminated 56% of the process steps they identified, meaning thousands of handoffs, loopbacks, decisions, and unnecessary red tape was eliminated.
  - More than 90 Lean Six Sigma Black and Green Belts graduated.
  - Over \$30 million in cost savings / cost avoidance
  - Transformative: Teams average a 51% reduction in process lead time
  - Millions of hours citizens and businesses must wait on government has been eliminated.

# What's Next?



- “Lean Routines”
- Kaizen Academy
- Lean Liaison in every Agency
- Regulatory Reform
- Social / Professional Network
- State and Local Government partnership

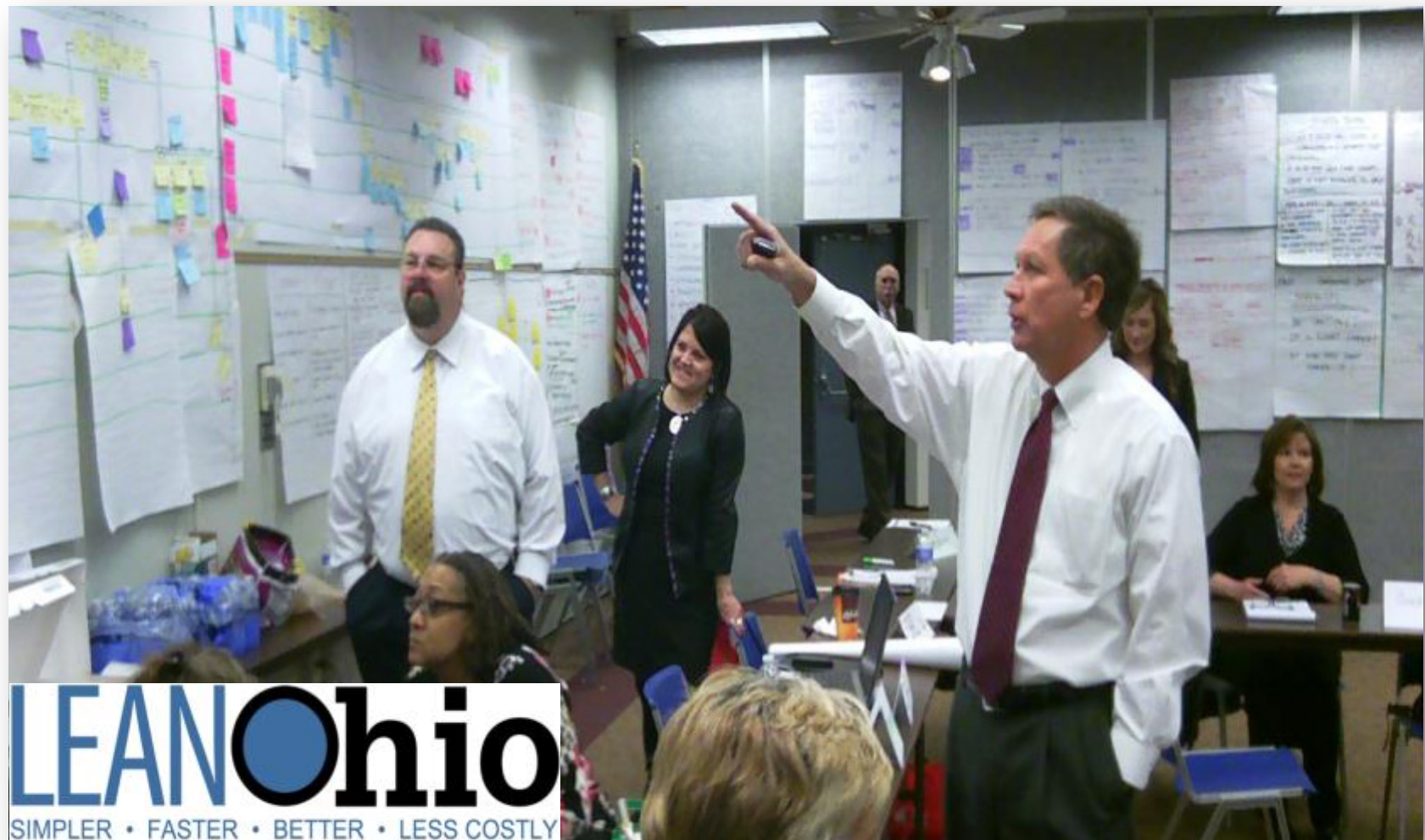


# Top Reasons Kaizen Events Work

Management is  
totally committed  
to implementing  
the new process

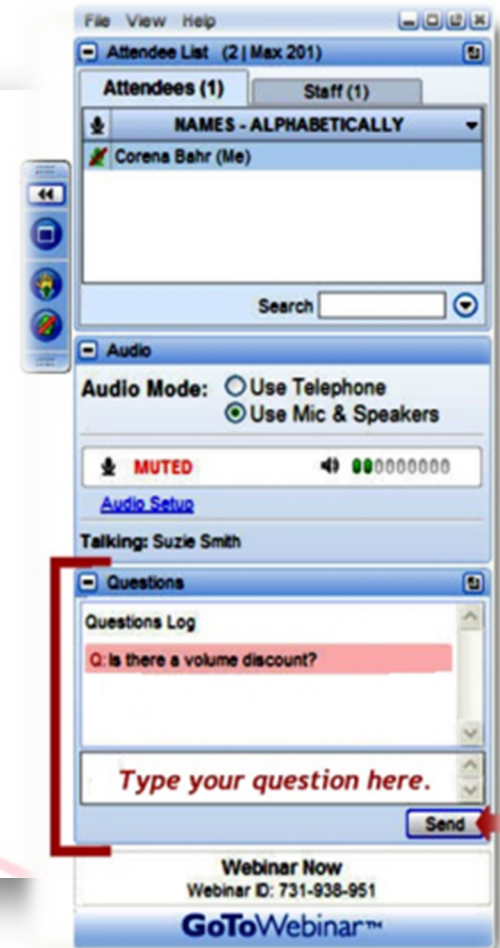
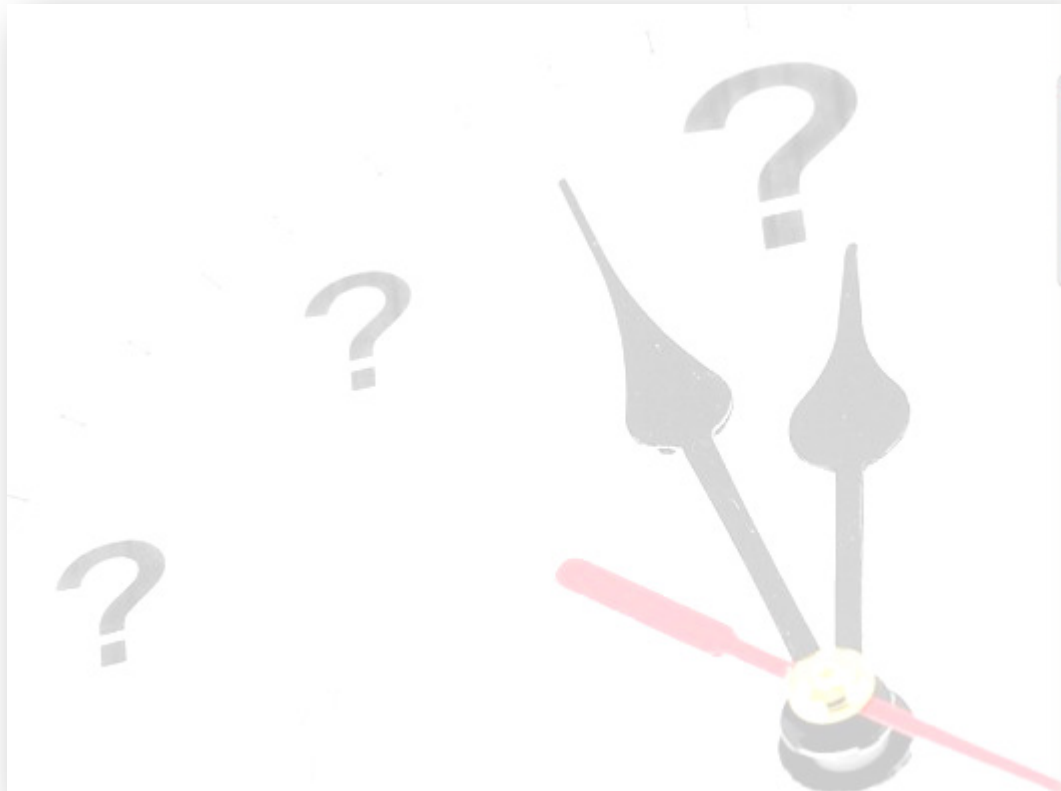
“Men, I want you to  
fight vigorously and  
then run. And as I  
am a little bit lame,  
I’m going to start  
running now.”

– General George Stedman  
U.S. Army (Civil War



Additional information can be found at [LEAN.Ohio.gov](http://LEAN.Ohio.gov)

# Thank You for Joining Us



# Learning Lean

**MoreSteam supports individuals and organizations interested in Lean training with these courses and products::**



- An 18-hour 100% online Lean Methods Accelerator course:  
<https://www.moresteam.com/lean-six-sigma/lean-methods.cfm>



- Advanced Lean training as part of the Master Black Belt Development Program jointly offered with The Ohio State University:  
<https://www.moresteam.com/lean-six-sigma/master-black-belt.cfm>



- A Lean back-office project simulation for classroom training of basic Lean concepts:  
<https://www.moresteam.com/simulations/sigmabrew-inbox.cfm>

# *Resource Links and Contacts*

***Questions? Comments? We'd love to hear from you.***

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***Watch for upcoming programs throughout the year!***

***Archived presentations and other materials:***  
<http://www.moresteam.com/presentations/>