

Lean: Driving Engagement, Driving Improvement, Driving Success

Tuesday, October 17, 2017
Gary Vansuch and Amber Sander



Welcome

Bienvenue

Aloha

huānyíng guānglín

Benvenuto

Willkommen

Bienvenido

Dobro poľalovat!

Karibu

Welkom

Willkomm

Afio mai

Vælkomin

Tervetuloa

Xush kelibsiz

Wellkumma

Velkomin

Räxim itegez

Üdvözlet

Fáilte romhat isteach!

Yökoso

Bienveniu

Haere mai

Ulihelisdi

Bari galu'st

Witam Was

Sveiki atvykę

Hwangyong hamnida

Laskavo prosymo

Wilkomme

Bonvenon

Binvinutu

sheni mobrdzaneba

Salamat datang

Byen venu

Pryvitañne

Tere tulemast

Salamat datang

Croeso

Bienvenida

Salve

Welkom

Kosh kelinizder

Soo dhowow

Bem-vindo

Karibu

Velkommen

Ongi etorri

dobre došlo

khosh amadiid

Velkommen

Dobrodošli!

ahlan wa sahlan

Hoan nghênh

Wëllkomm

Bine ai venit

Dynnargh dhis

Degemer mat

Mirë se vjen

Walcome

Vitâme të

Welkom

Sohm swaakohm

Vitajte

svāgat

Salamat datang

Vekömö

Välkommen

Hoş geldin

Bien binidu

Woezor

Kalós orísate

Dobrodošli

Laipni lūdzam

shagotom

Xoş gəlmışsiniz!

Dobredojde

Wellkumma

Velkomin

Yökoso

Bienveniu

Haere mai

Ulihelisdi

Bari galu'st

Witam Was

Sveiki atvykę

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Dynnargh dhis

Degemer mat

Mirë se vjen

Walcome

Vitâme të

Welkom

Sohm swaakohm

Vitajte

svāgat

Salamat datang

Our expectations

Cell phones on stun

Focus

Active involvement

The only really dumb question is the one you don't ask



**The ability to
learn is the
most important
quality a leader
can have.**

-- Sheryl Sandberg, COO of Facebook






**This session seek to help answer
this question**

**How do we grow a culture of
engagement and improvement?**



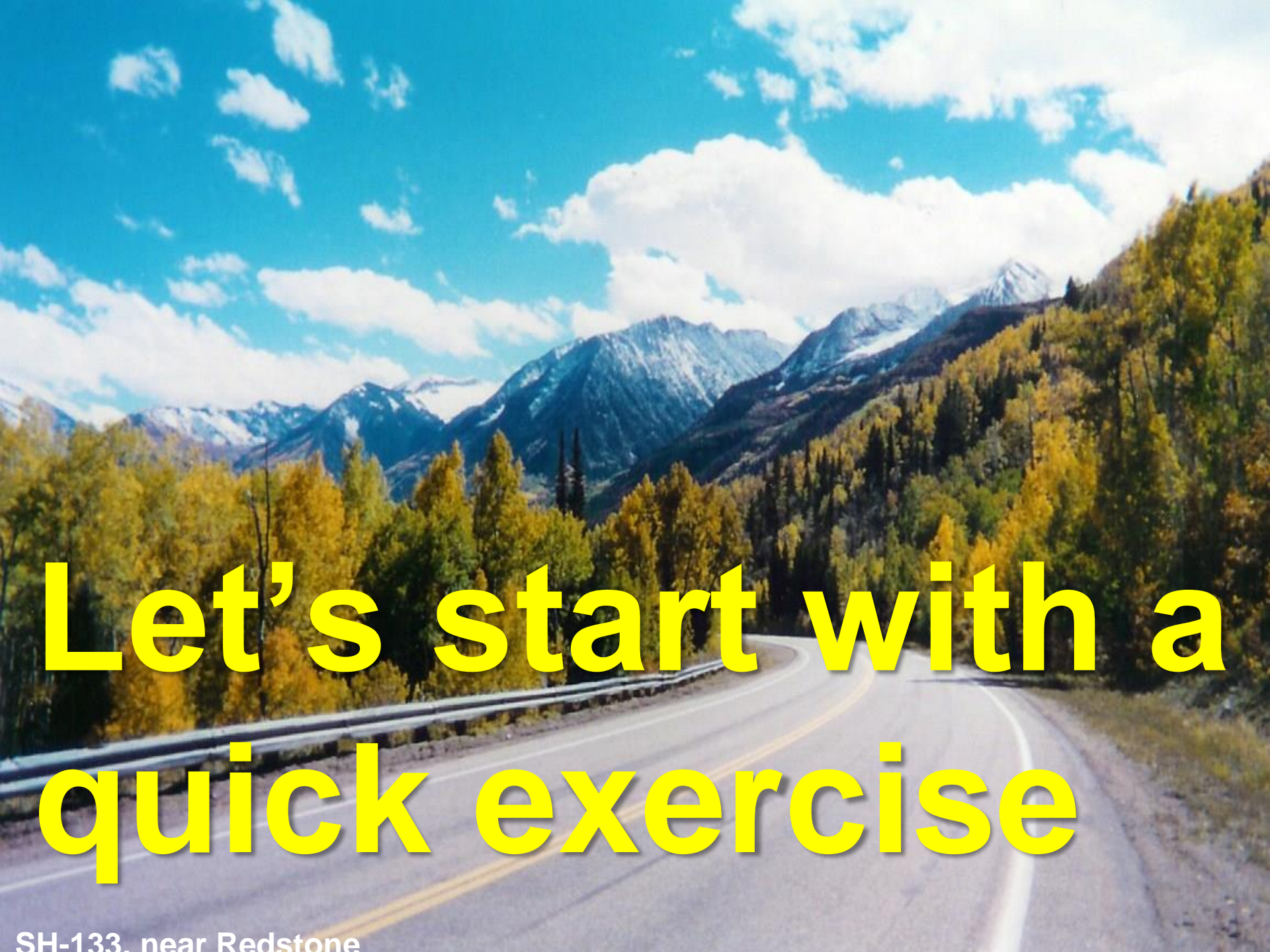
2 sheets in the back – take one of each

 		
Lean: Driving Engagement, Driving Improvement, Driving Success Tuesday, October 17, 2017		
My learning objective(s) for today's session is/are: ... to support this (these) organizational goal(s) at my own DOT:		 <p>The ability to learn is the most important quality a leader can have. - Sheryl Sandberg, Chief Operating Officer, Facebook</p>
My Key Takeaways and My Action Items	What I am going to do with this, and by When	People I need to involve

First things first: safety

Colorado National Monument

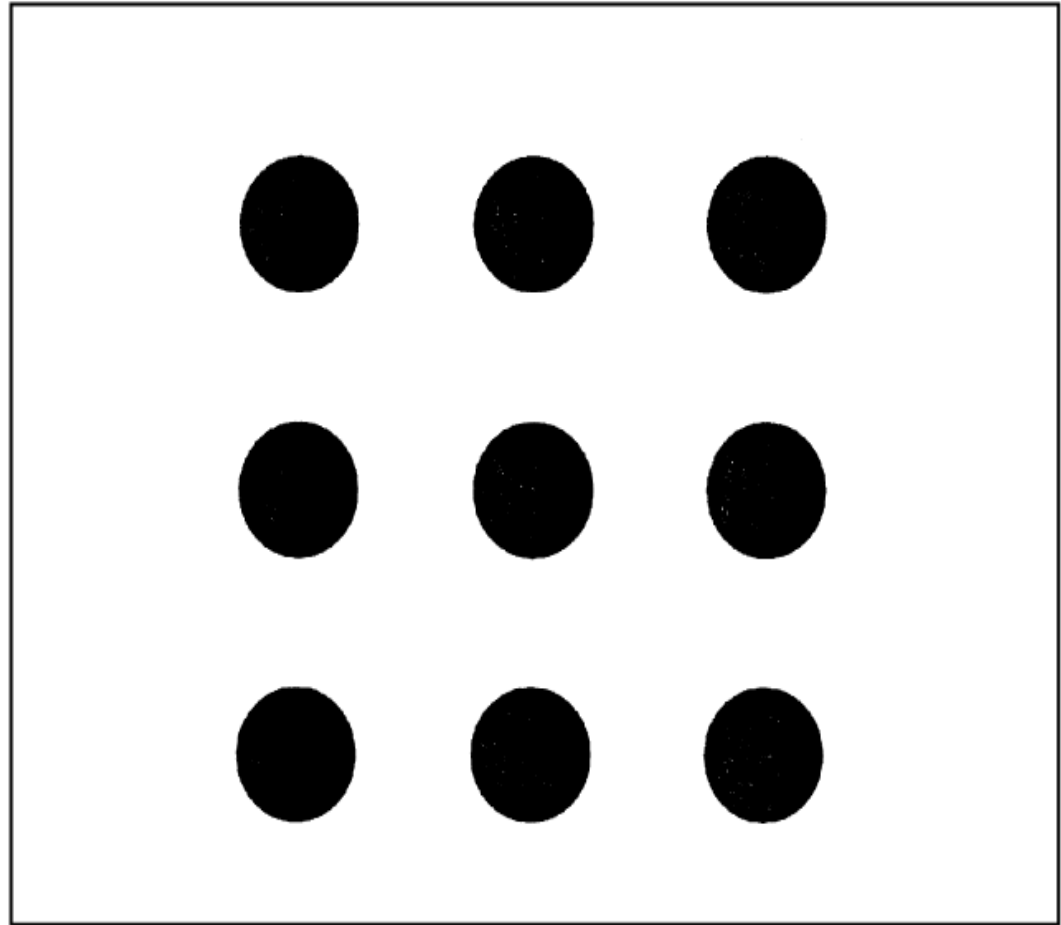




Let's start with a quick exercise

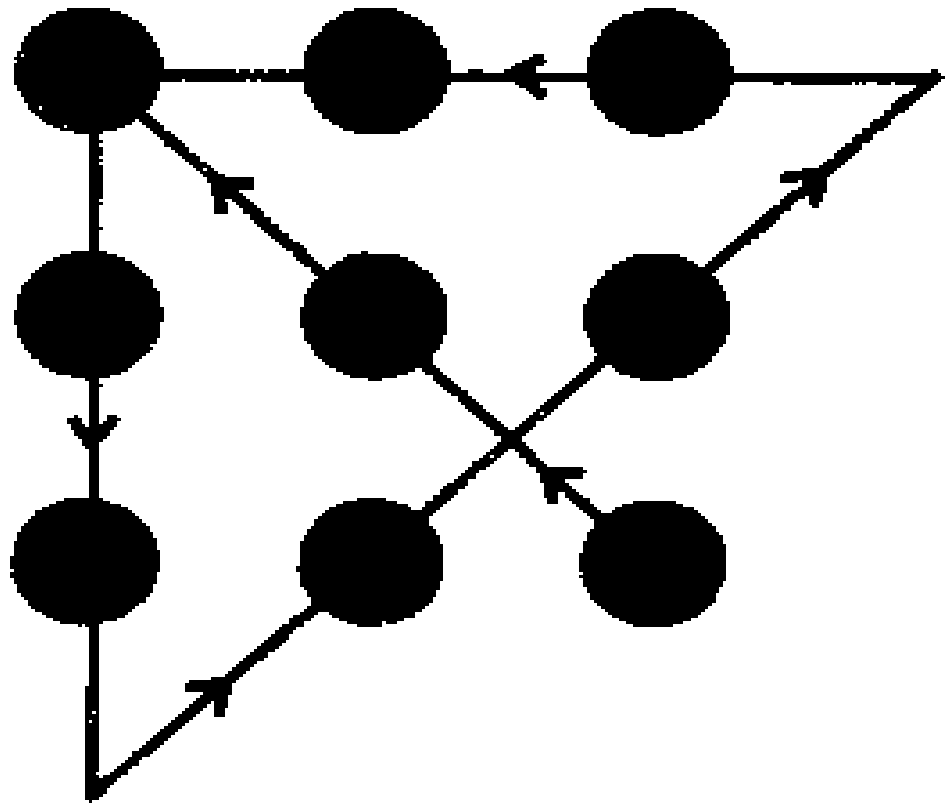
9 dots

Without lifting
pencil/pen from
paper,
**draw no more
than four (4)
straight lines**
that will cross
through all nine
dots



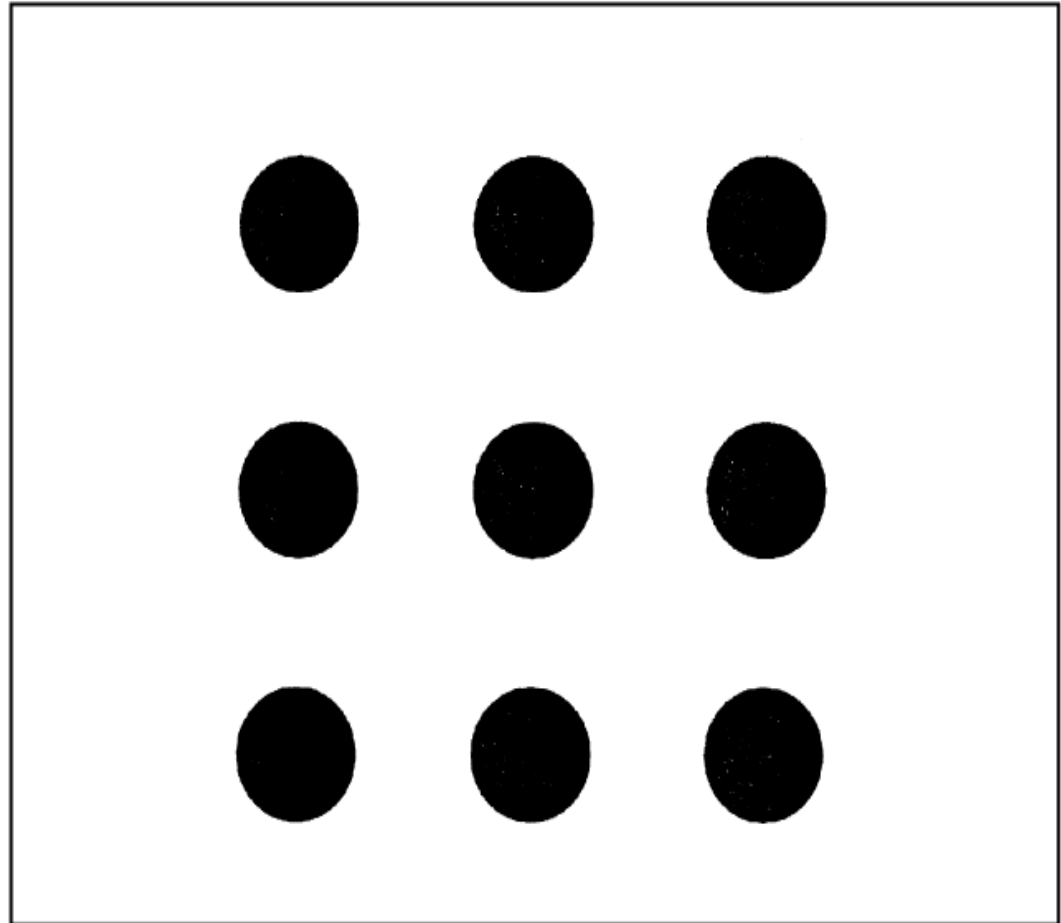
A 4-line solution

Did you think you were NOT supposed to let the pencil go outside an imaginary square drawn around the nine dots?



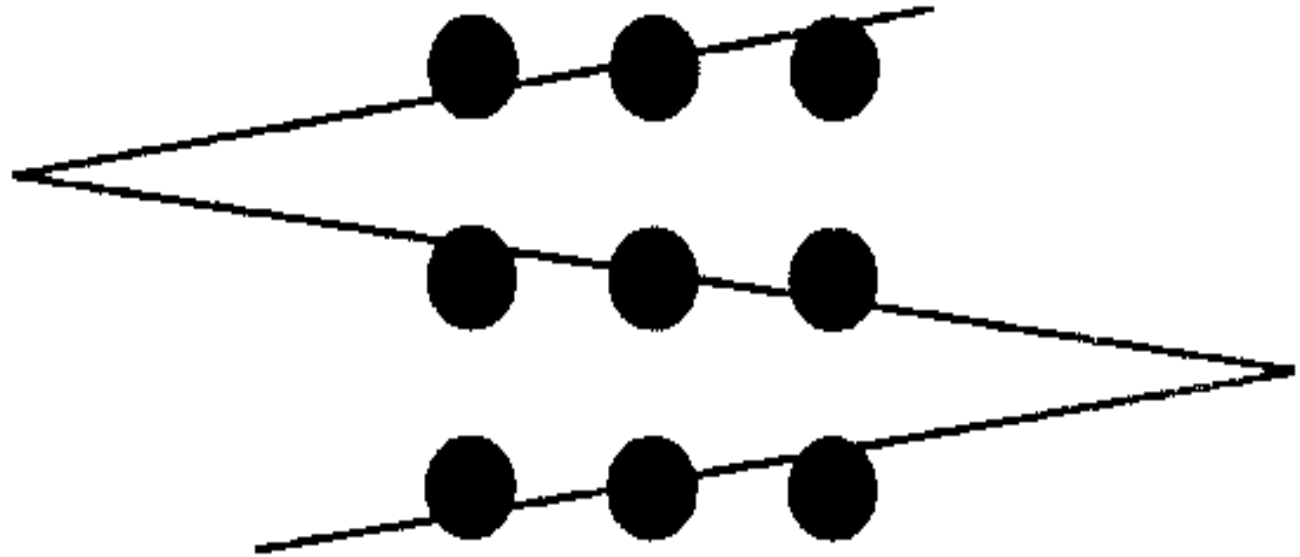
9 dots, again

Again -- Without lifting pencil/pen from paper, **draw no more than three (3) straight lines** that will cross through all nine dots



A 3-line solution

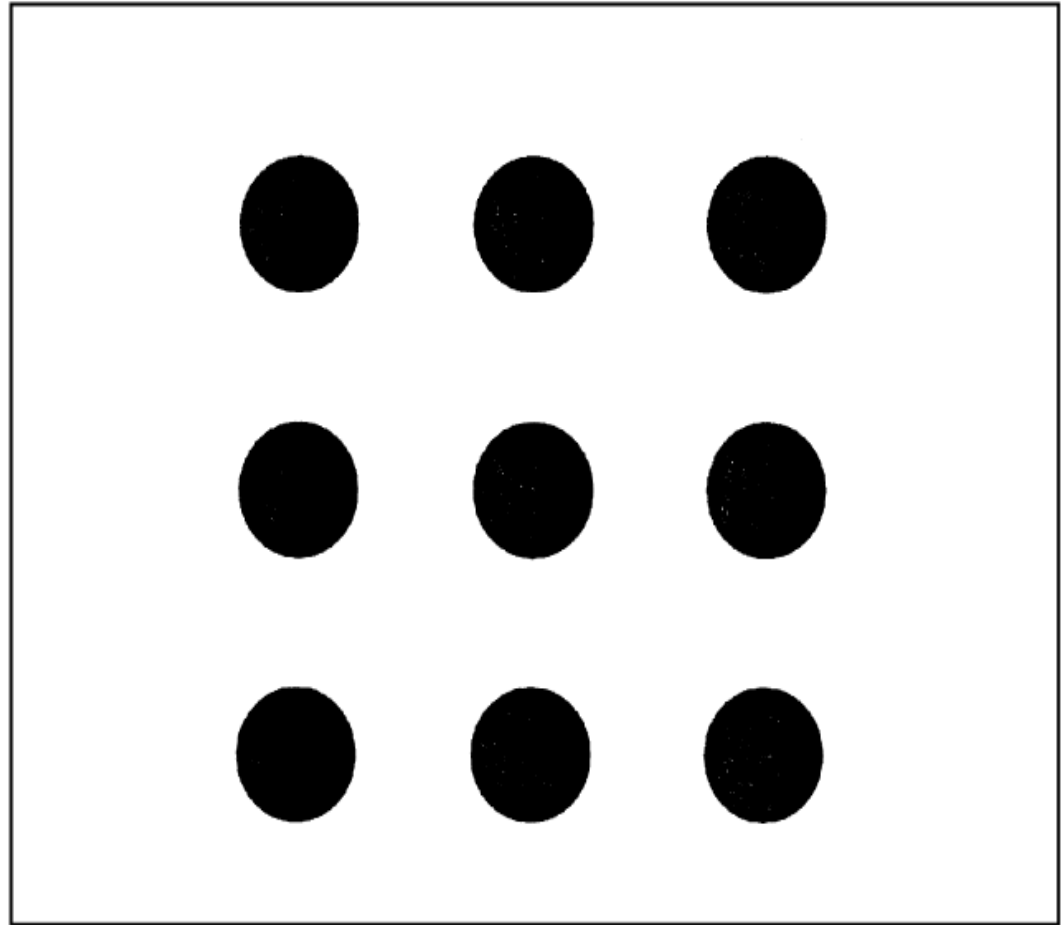
Did you think the lines must pass through the center of the dots?



9 dots, again

BONUS POINTS

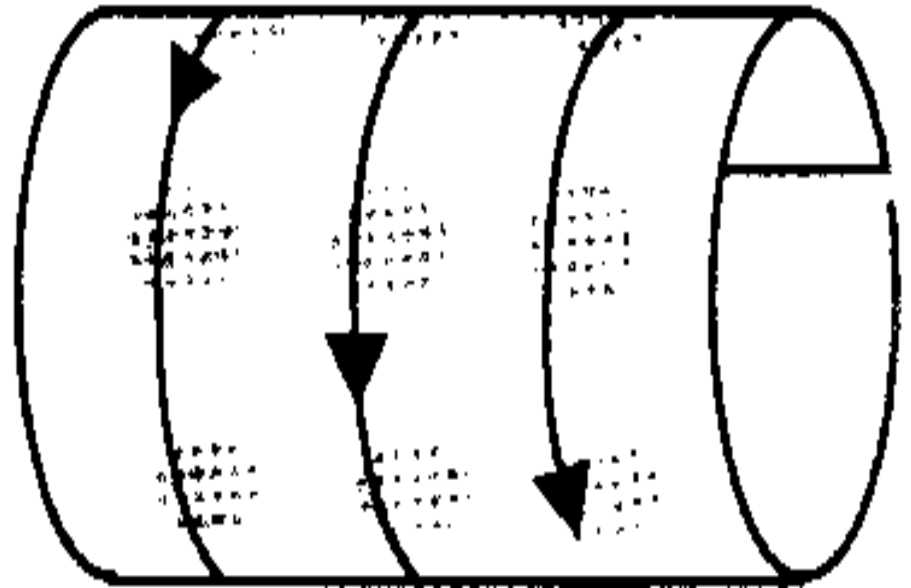
Without lifting pencil/pen from paper, draw **one straight line** that will cross through all nine dots



And Yes, one of the 1-line solutions

A more subtle and more pervasive mental block is the assumption that the problem must be solved within a two-dimensional-plane!

One solution: If you think in **3 dimensions**, you can roll the paper to form a cylinder, and it becomes possible to draw a single straight line that spirals through all nine dots



Thinking outside the box

Some of the
most wonderful
people are the
ones who don't
fit into
boxes.

**The most
dangerous
phrase in the
language is,
*"We've always
done it this
way"*.**

- Admiral Grace Hopper



What was advertised for today: long version

Every organization's greatest assets are the knowledge, experience, and ingenuity of its people. Driving engagement – helping people utilize their knowledge, their experiences, and their ingenuity – is what we have been striving to do at two transportation agencies: Colorado Department of Transportation (CDOT) and the Washington State Department of Transportation (WSDOT). During this session, we will discuss harnessing the powerful and often overlooked abilities of our people to drive improvement – and to drive success. The core principal we employ at CDOT and at WSDOT respect for people: empowering our people and giving them the tools and the knowledge necessary to improve their processes..



Continuous
Improvement

What was advertised for today: short version

Lean is kind of cool, trendy.

And, it can be hard! Really hard.

So, why even try?

And, if I do try / when I do try,
can you please give me some
tips today?



Continuous
Improvement

Learning objectives for this session

Some answers to these issues / skepticism:

1. **Why would state government transportation groups be interested in Lean, anyways?**

I know about Lean, and I know that it helps in a lot of ways, including with efficiency. But come on, most people don't usually use the words "government" and "efficient" in the same sentence!

2. **OK, I am from Missouri, so "Show Me".**

Is it really doing any good for government transportation services, or is it just another "flavor of the month", a "flash in the pan"?

3. So, maybe Lean CAN work in one place in government, someplace special. **But it can't catch-on** all over the place for government transportation services, right?

POR QUE?
VARFOR? MIKS?
BAKIT? なぜ? MIKS?
POURQUOI? WAAROM?
ZALLI? PERCHÉ?
為什麼? WHY? TIEN CAPA?
POR QUE?
WARUM?
ПОЧЕМУ? اذامل?
MIKS? NIÇIN?

**Why is this
topic
important?**

Director Of Office Of Research Integrity Resigns, Calls It Worst Job He's Ever Had

By: DSWright Friday March 14, 2014 9:32 am

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Tweet 12

The Director of the Office of Research Integrity (ORI), David Wright (no relation), has resigned. His resignation letter reads as a comprehensive indictment of the federal bureaucracy which he worked for and called "remarkably dysfunctional" raising questions over the future of American research and innovation.

Wright had the job for 2 years and came to the post well qualified previously being a consultant to ORI as well as a historian of science at Michigan State University in East Lansing. He said one of his goals upon taking the job was to improve training programs. But what he encountered once taking his post frustrated him immensely.

In a letter to Dr. Howard Koh, Assistant Secretary for Health at the Department of Health and Human Services, Wright detailed his frustrations:

“*The rest of my role as ORI Director has been the very worst job I have ever had and it occupies up to 65% of my time. I spent navigating the remaining resources and ves. net ne*



Fmr. ORI Director David Wright

<http://news.firedoglake.com>

March 14, 2014

“ ... Wright explains that the 35 percent of his job that was spent working with science investigators in his department ***“has been one of the great pleasures of my long career. ...”***”

*“ ... The rest of my role as ORI Director has been the **very worst job I have ever had and it occupies up to 65% of my time.** That part of the job is spent navigating the **remarkably dysfunctional bureaucracy** to secure resources and, yes, get permission for ORI to serve the research community. I knew coming into this job about the bureaucratic limitations of the government, but **I had no idea how stifling it would be...**”*

*“ ... What I was able to do in a **day or two** as an academic administrator takes **weeks or months** in the government ... ”*

**Do you know people
in government who
experience this?**

***takes weeks or months
in the government ...”***

***We have a
problem in
public
service***



We in public service CAN do something about that problem!

We MUST do something about that!



***And at CDOT
and WSDOT, we
ARE doing
something about
that!***



***And, so are other
transportation
agencies***





**Lean:
Driving Engagement, Driving
Improvement, Driving Success**

Tuesday, October 17, 2017



My learning objective(s) for today's session is/are:

... to support this (these) organizational goal(s) at my own DOT:

The ability to learn is the most important quality a leader can have.

- Sheryl Sandberg, Chief Operating Officer, Facebook



My Key Takeaways and My Action Items	What I am going to do with this, and by When	People I need to involve
--------------------------------------	--	--------------------------

--	--	--

**We hope you will have
several takeaways
today**

--	--	--



**Lean:
Driving Engagement, Driving
Improvement, Driving Success**

Tuesday, October 17, 2017



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The ability to learn is the most important quality a leader can have.

- Sheryl Sandberg, Chief Operating Officer, Facebook



My Key Takeaways and My Action Items	What I am going to do with this, and by When	People I need to involve
--------------------------------------	--	--------------------------

--	--	--

What are your expectations?

--	--	--



And, of course, the Customer Pledge

View west from Cripple Creek

Thank goodness for great competition!

- **Exhibit Hall B:** Building an Intentional Culture
- **Ballroom A:** *A Lean Approach to Problem-Solving: Facilitation Skills for Team Leaders*
- **Ballroom BC:** All In: How I Learned to Stop Worrying and Love My Own Kaizen
- **Ballroom D:** *Hope Inspired Leadership*
- **Room 315:** *Stories and Tools for Reflecting on and Reducing Failures*
- **Room 317:** Creating Giants of Others: Developing Tomorrow's Leaders from Today's New Hires

What's inside today

1. Lean at the Washington State Department of Transportation
2. Lean at the Colorado Department of Transportation
3. Multinational Transportation Lean Forum
4. Your questions



I See What You Mean

What's inside today

- 1. Lean at the Washington State Department of Transportation
- 2. Lean at the Colorado Department of Transportation
- 3. M... Tr... Fc... Yc...
- 4.



I See What You Mean

WSDOT at a Glance



Adding value to WSDOT employees...our customers... by providing services that enable employees to do their work simpler, faster, and less expensively through the practical use of tools and principles.

Lean Office



Russell Burgess, Lean Administrator

- Lean Six Sigma Master Black Belt
- 8 Years of Lean Experience
- 21 Years in the Air Force



Amber Sander, Lean Manager

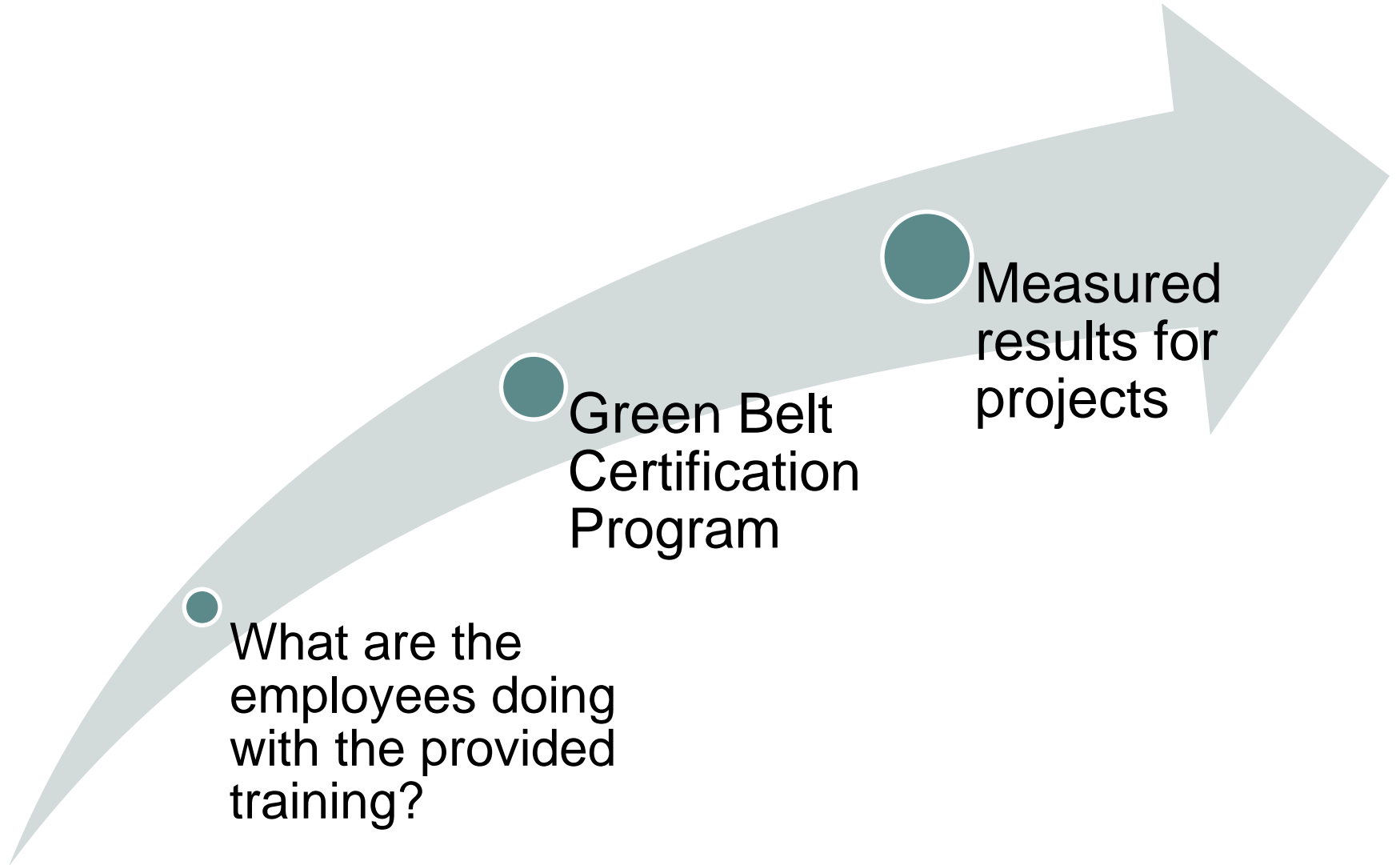
- Lean Six Sigma Black Belt
- 16 Years at Alaska Airlines
- 5 Years at Alaska Airlines Lean Six Sigma Project Office



Sam Wilson, Lean Manager

- Lean Six Sigma Black Belt
- 6 Years at Washington's Lottery
- Small Business Owner for 6 years

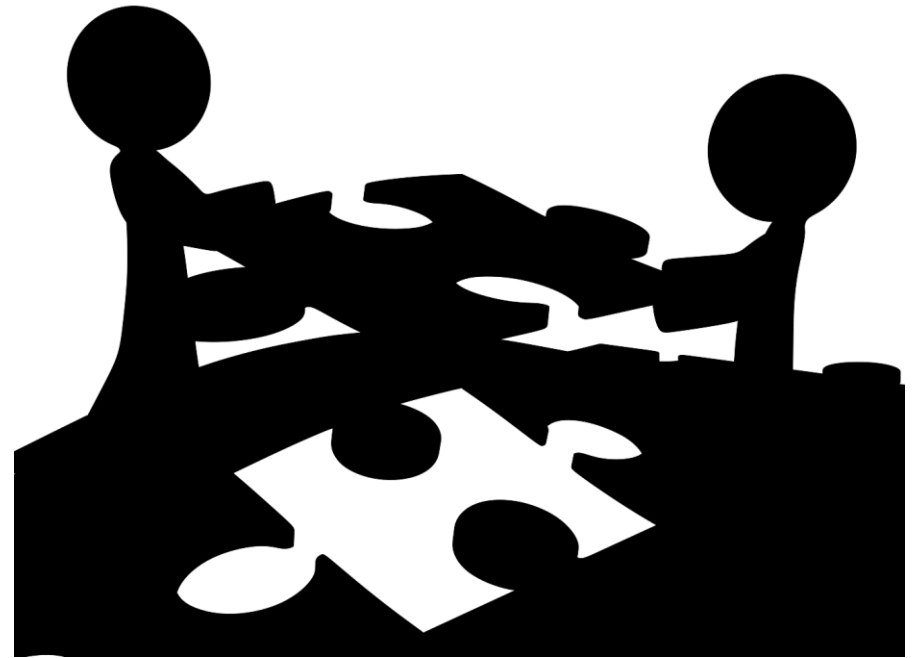
WSDOT Lean Journey



What is Lean at WSDOT?



- Systematic Problem Solving
- Elimination of wastes
- Customers define value
- People-first philosophy



Types of Waste

8 Types of Waste



WOODMITE

8 WASTES CHECK SHEET



WAITING

Waiting for information, equipment, materials, parts or people.
Examples: Waiting for approvals; Waiting for equipment; Waiting for large batches



OVERPRODUCTION

Making more of something - making it earlier or faster - than it's needed
Examples: Extra copies of reports; Redundant storage (hard and soft); "Reply All" on emails



OVER PROCESSING

Any steps that do not add value in the eyes of the customer
Examples: Extra formatting, extra fields; Extra features, excess detail; Extra report information



DEFECTS

Information, products and services that are incomplete or inaccurate
Examples: Inaccurate applications; Broken parts; Missed deadlines



MOTION

Any movement by people that is not of value to the customer
Examples: Repetitive key strokes; Walking between equipment; Switching applications



INVENTORY

Accumulation of parts, information, applications, etc. beyond what is required by the customer
Examples: Stockpiling supplies; Information piling up for data entry; Keeping data longer than necessary



TRANSPORTATION

Unnecessary movement of materials, information or equipment
Examples: Hand-offs between functions; Multiple reviews; Sending, resending emails



EMPLOYEE CREATIVITY; NON-UTILIZED TALENT

Not properly utilizing people's experience, skills, knowledge or creativity
Examples: Employees unable to make decisions; Employees not fully trained; Skilled employees doing unskilled tasks

Solution: Stop printing "Leads"

...saves Todd 41 hours per year + 2 reams of paper.



One sample year!

WOODMITE Extermination Form Date: 8/8/17

Employee Name: TODD W JONES Division/Dept: NWR Area 3

DESCRIBE THE PROBLEM: Having to print out located and hand deliver hard copies to my leads in my crew room.

IDENTIFY/QUANTIFY WASTE:

Wasting
Over-production
1) Over-processing Printing hard copies - Every morning plus sometimes day
Defects
2) Motor Going back & forth between printer + desk - 6 to 8 feet
Inventory
3) Transportation Me walking hard copies over to crew room 2605ft.
4) Employee Utilization I have other parts of job that I can be doing.

POSSIBLE ROOT CAUSES:
See added sheet

POSSIBLE SOLUTIONS:
See added sheet

We agree to work on this problem. Owner: TJWJ Sponsor: SAM WELSON

ACTION TAKEN I send locate link via email to appropriate Lead in the morning. That Lead then opens the link with email on IPAD saves to 'iBooks' to be seen (used in field) without wifi connection.

IDENTIFY/QUANTIFY RESULTS
Spend ave. 10-15 mins. per work day - printing and hand delivering of locates.
12 mins per day average = about 41 Hours of my work time saved each year. Printing of 4 locates Avg. per year mean two reams of Paper 800+ sheets per year avg.

Added additional action

WOODMITE Extermination Form

Date: 09/16/2017

Employee Name: Michael Varney Division/Dept: Everett Mitigation

DESCRIBE THE PROBLEM: Every year we plant thousands of potted plants. We had to carry them from the trailer to the planting areas. We could only carry 4-6 plants at a time by hand. We would pinch them together with our fingers on the pots. Our hands and arms hurt all the time doing it this way.

IDENTIFY / QUANTIFY WASTE:

Waiting Planters are waiting for pots

Over-production

Over-processing

Defects crumpling 2-3 pots per hand.

Motion

Inventory

Transportation Making through rough terrain with 4 to 6 pots

Employee Utilization Takes more people to move large amounts of potted plants.

POSSIBLE ROOT CAUSES:

Too many trips for ~~plants~~ only a few plants and less breaks to rest the hands and fingers.

POSSIBLE SOLUTIONS:

Find a way to transport plants from the trailers to planting area safer and with less hand and finger motion. wheel barrow, basket, by hand + do nothing.

We agree to work on this problem. Owner: Varney Sponsor: TODD JONES

ACTION TAKEN

I rec'd fitted plastic totes w/ backpack frames so that we could transport more plants at one time and be safe on hills and trails. 8 to 10 plants per tote.

IDENTIFY / QUANTIFY RESULTS (See attached)

My solution worked great. We can now move more plants at one time on our backs with out the hand and arm pain. We can now transport the plants in about half the time. Less waiting for planters. Hands + arms are free - Save an LTI claim.

Solution: DIY backpacks for plants

...saves 5,000 hours per year.



Versus



Solution: Glove on pesticide sprayer



...saves 420 hours per year plus increases safety.



WOODMITE Extermination Form

Date: 8/9/17

Employee Name: Jim Lovell Division/Dept: NWR AREA 3 mitigation

DESCRIBE THE PROBLEM: Backpack herbicide sprayers while in transit in back of box truck leak from the spray wand. Causes herbicide liquid + blue dye spilling in truck.

IDENTIFY / QUANTIFY WASTE:

Waiting

Over-production

Over processing

Defects - Leaking herbicide (Safety + Environmental concerns)

Motion

Inventory - Extra buckets needed to store chemical + to clean sprayers

Transportation

Employee Utilization - Waste time + possible exposure to chemicals while cleaning spill.

POSSIBLE ROOT CAUSES:

During transport to job site motion of truck causes excess herbicide in tube (wand) to leak out.

POSSIBLE SOLUTIONS:

Empty + clean tank during each movement. 'Cap' off tip of wand. About 20 mins of time to pour chemical + clean per tank x 2 a day on average.

We agree to work on this problem. Owner: Jim Lovell Sponsor: TWJ

ACTION TAKEN

Since used + transported multiple times a day not practical to empty + clean. 'Cap' off tip of wand by using used rubber glove that the sprayer employee was wearing.

IDENTIFY / QUANTIFY RESULTS

Good use of resources - use used rubber glove have not had spilled product in many months.

40 mins per day @ 2 days per week = 70 hours per person per year saved.

70 hours x potential of 6 sprayers = 420 HRS.

What's inside today

- 1. Lean at the Washington State Department of Transportation
- 2. Lean at the Colorado Department of Transportation
- 3. Multinational Transportation Lean



I See What You Mean

A (very) little bit about us



WHAT is CDOT

Maintain and Keep Transportation Safe

- 23,000 lane-miles of Interstate and State highway system
- 3,400 bridges
- routine maintenance
- bridge repair and resurfacing
- snow removal
- safety improvements
- FLOOD RESPONSE!



Get More Out of the System

- traveler information
- ramp metering
- signal synchronization
- express toll lanes on I-25



Distribute Funding to Local Governments

- aviation
- federal funds to Metropolitan Planning Organizations
- grants to local governments
- transit



WHO is CDOT



START

WITH WHY

Simon Sinek

www.startwithwhy.com

TED TALK

People don't buy WHAT you do, they buy WHY you do it.

DO BUSINESS with people who believe what you believe

IT LINKS DIRECTLY to how our BRAIN works

Few People or ORGANISATIONS know WHY they do what they do.

INSPIRED leaders and organisations communicate from the INSIDE OUT

LAW of DIFFUSION of INNOVATION



We KNOW How we do it

I BELIEVE

We KNOW WHAT we do...

MARTIN LUTHER KING

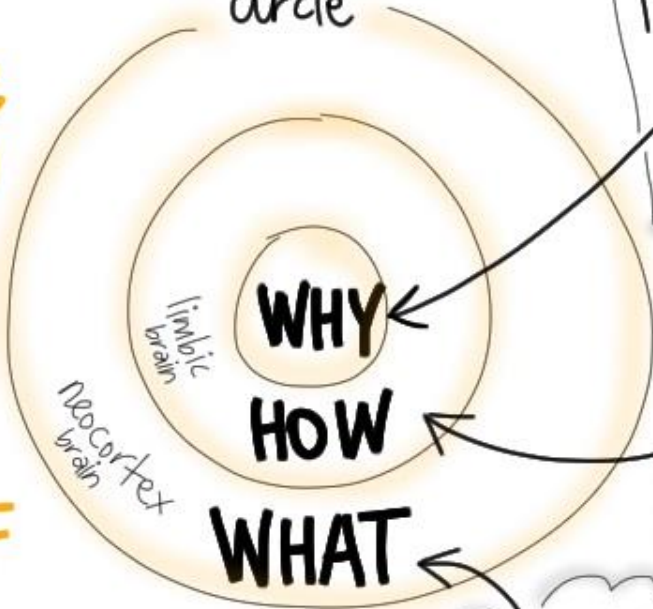
by www.lynnecazaly.com

All the great leaders and organisations communicate the same way...

It's the WORLD'S simplest idea



The GOLDEN circle



YOUR PURPOSE (not PROFIT)

YOUR CAUSE

YOUR BELIEF

Why should anyone care?

START

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Simon Sinek

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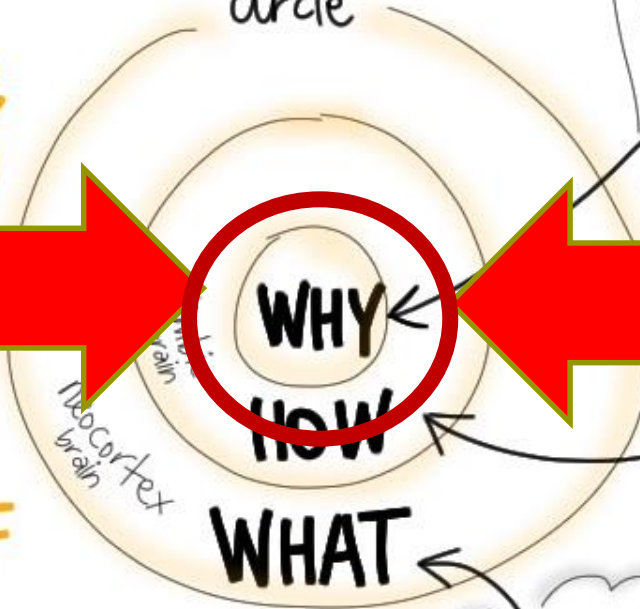
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MARTIN LUTHER KING

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We KNOW How we do it

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YOUR PURPOSE (not PROFIT)

YOUR BELIEF

Why should anyone care?

“Making government more effective, efficient and elegant means listening to our state employees and learning from them how we can do better.”

- Colorado Governor John Hickenlooper



“That is **why we initiated the **Lean program** in almost every state agency, where employee teams are now actively identifying waste and inefficiency to create savings.”**



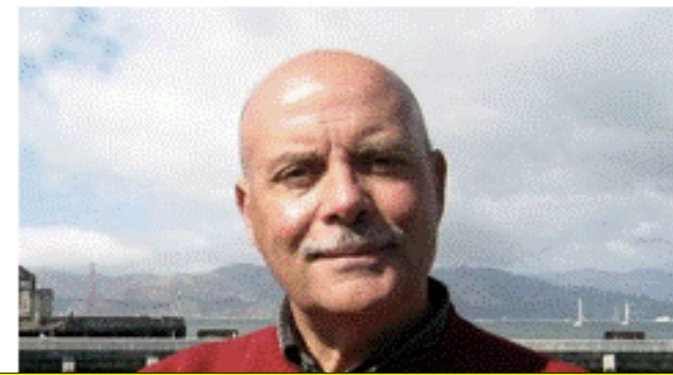
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By: DSWright Friday March 14, 2014 9:32 am

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Tweet 12

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Wright had the job for 2 years and came to the post well qualified previously being a consultant to ORI as well as a historian of science at Michigan State University in East



2014

To tackle bureaucracy, too, so we keep good people

The rest of my role as ORI Director has been the very worst job I have ever had and it occupies up to 65% of my time. That part of the job is spent navigating the remaining resources and ves net ne

Fmr. ORI Director David Wright

<http://news.firedoglake.com>

Mar

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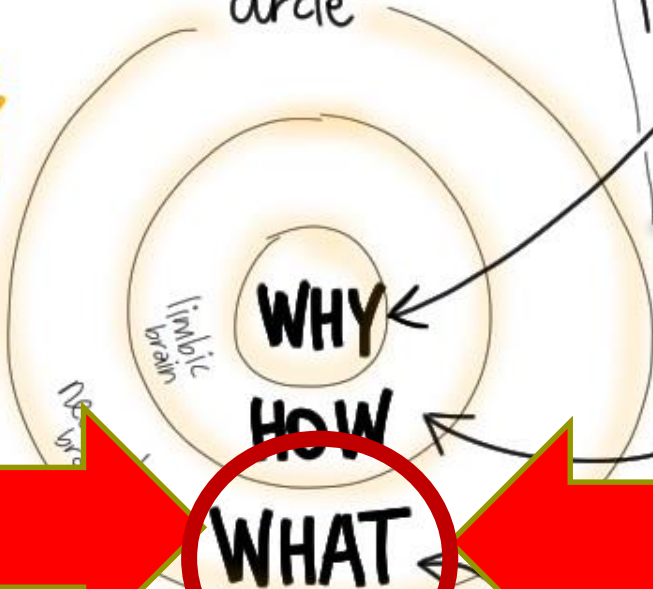
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The GOLDEN circle



All the great leaders and organisations communicate the same way...

It's the WORLD'S simplest idea

YOUR PURPOSE (not PROFIT)

YOUR CAUSE YOUR

Why should anyone CARE?

We KNOW WHAT we do...

MARTIN LUTHER KING

Believe

by www.lynnecazaly.com

So, What is Lean at CDOT?



Lean involves **Respect for people** and **continuous improvement**

Specifically, **the people** who work within the system being improved (and, people like customers!)

Continuous improvement:
Challenge and improve everything.

Everyone, every day, improving every process and every product, to benefit every customer

**1. Global (cross-functional)
Improvement**

2. Lean Everyday Ideas

**3. Change management: the
people side of change**

**1. Global (cross-functional)
Improvement**

2. Lean Everyday Ideas

**3. Change management: the
people side of change**



**“All
improvement
happens
project by
project, and in
no other way.”**

– Joe Juran

Access Permits Process Improvement

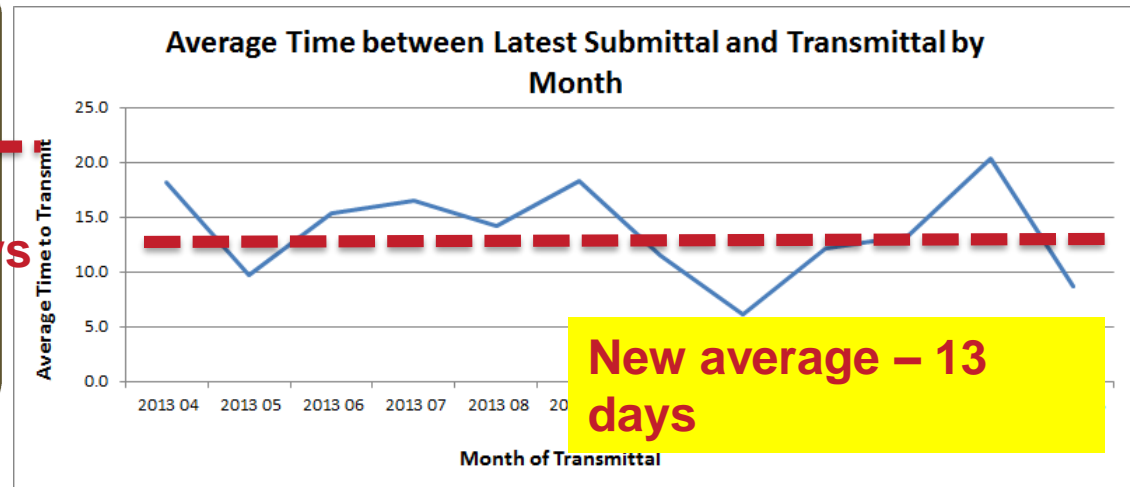
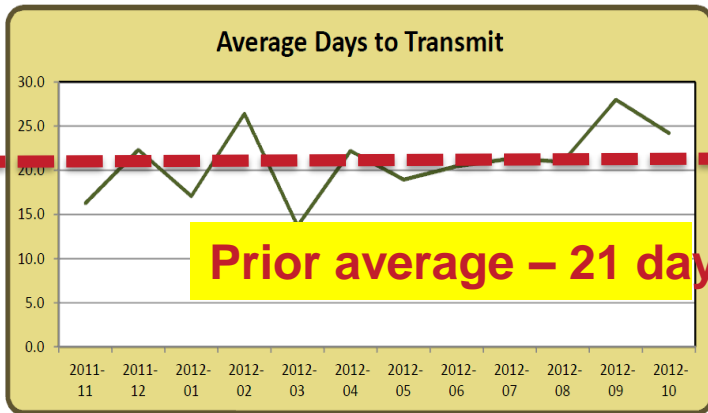


- 1. Reducing total permit cycle time and decreasing variability of on-time delivery**
- 2. Improving visibility and customer communications**
- 3. Establishing tracking of customer satisfaction and a plan to improve this measure over time**



Faster Permitting: Access Permits Process Improvement Project

Sustained reduction (38% average) in time to issue access permits (from submittal of application until applicant has permit).



Oversize / Overweight (OS/OW) Permits process improvement project

- **60% fewer errors**
- **32% faster**

Also a Finalist for the International Team Excellence Awards!!

We Improved This! We Reduced Turnaround Time and the Error Rate for Issuing OS/OW Permits

In 2012, we streamlined how we issue Oversize / Overweight (OS/OW) Permits to truck drivers. We reduced the number of steps in the process from 25 to 11. Doing this reduced the turnaround time by over 30% and also reduced the error rate by 60%!

Since 2012, we have kept the error rate low and the turnaround time fast. And, we continue to make additional improvement: in 2014, we will launch a new OS/OW system that will make the process even easier for our customers!

And, in May 2013, our Team was recognized as a Finalist for the International Team Excellence Award!



Using a QR code reader, scan this with your smartphone for more information



The Improvement Team: Kevin Mindenhall, Tanya Davis, Dan Wells, Craig Smith, David Johnson, Phillip Anderle, Jack Stieber, Mac Hasan

Lean program in almost every state agency, where employee teams are now actively identifying inefficiency to create savings." - Governor John Hickenlooper, 2012 State of the State address

Oversize / Overweight (OS/OW) Permits process improvement project

ASQ Case Study online



ASQ is a global community of people passionate about quality, who use the tools, their ideas and expertise to make our world work better. ASQ: The Global Voice of Quality.

Knowledge Center

Membership

Certification

Training

Books & Standards

Conferences & Events

Knowledge Center

Lean Project Helps Colorado DOT Provide Disaster Response Following Historical Flood

by Adam Wise

★★★★★

(0) Member
Reviews



Construction crews begin cleanup on Hwy US 38 in Colorado following the September 2013 floods.

When flood waters ravaged portions of Colorado in September 2013 – killing crops, inundating homes, and bucking many miles of roadways – countless federal, state, and municipal government workers sprang into action helping citizens. The disaster damaged 200 lane miles of the state's highway system and damaged 100 bridges. While the Colorado Department of Transportation (CDOT) expected to have its highway system repaired and recovered by winter, the recovery could have taken much longer had it not been for the performance of one Lean improvement project team.

CASE STUDY AT A GLANCE . . .

Lean Project Helps Colorado DOT Provide Disaster Response Following Historical Flood



-The Colorado Department of Transportation oversize and overweight truck permit writing team initiated a Lean improvement project in May 2012 to quicken response times and remove unnecessary steps for truck drivers.

-By May 2013, the permit team not only streamlined processes, but also reduced its major error rate from 8 percent to 2.4 percent.

Grants reimbursement improvement project

The grant reimbursement process was streamlined to **eliminate 26 low-value-add steps**; this reduces the reimbursement process time to approximately 10 business days (from the previous 45-plus days)



**1. Global (cross-functional)
Improvement**

2. Lean Everyday Ideas

**3. Change management: the
people side of change**

Improvement by Front-line people

“It can be very difficult for managers to accept the fact that front-line ideas offer four times more improvement potential than their own. But it is true.”



Hydraulic Fluid Holding Box



**An
improvement
for this issue:**

When I take hydraulic fluid hoses off of our equipment, what do I do so that I am not “wearing” the hydraulic fluid?



Hydraulic Fluid Holding Box



**And, how
can we stop
spilling this
hydraulic
fluid into the
environment
????**



Hydraulic Fluid Holding Box



Featured Everyday Idea for October 2013

Over 340 replications to date!



Still
“replicating”:
we have about
1,000 pieces
of equipment
which could
benefit

New Toolkit Makes Guardrail Repair Faster, Easier, Safer

Featured Everyday Idea for November 2013



Figuring Out Safer Delineation Repairs

.....
“Our employees used pipe wrenches or whatever other devices they had. Sometimes the tools would slip. I thought we could do something safer.”

New tool replicated 66 times so far

- **Safer**: less opportunity for tool to slip
- **Faster**: 5 minute job now takes less than 1 minute
- **Less costly**: Reduction in replacement of delineators, saving approximately \$19,000 annually



Wing cart allows faster, safer removal and installation

Safer and faster: From 4 staff-hours to 5 staff-minutes



Cable guardrail spreader tool improves efficiency and safety

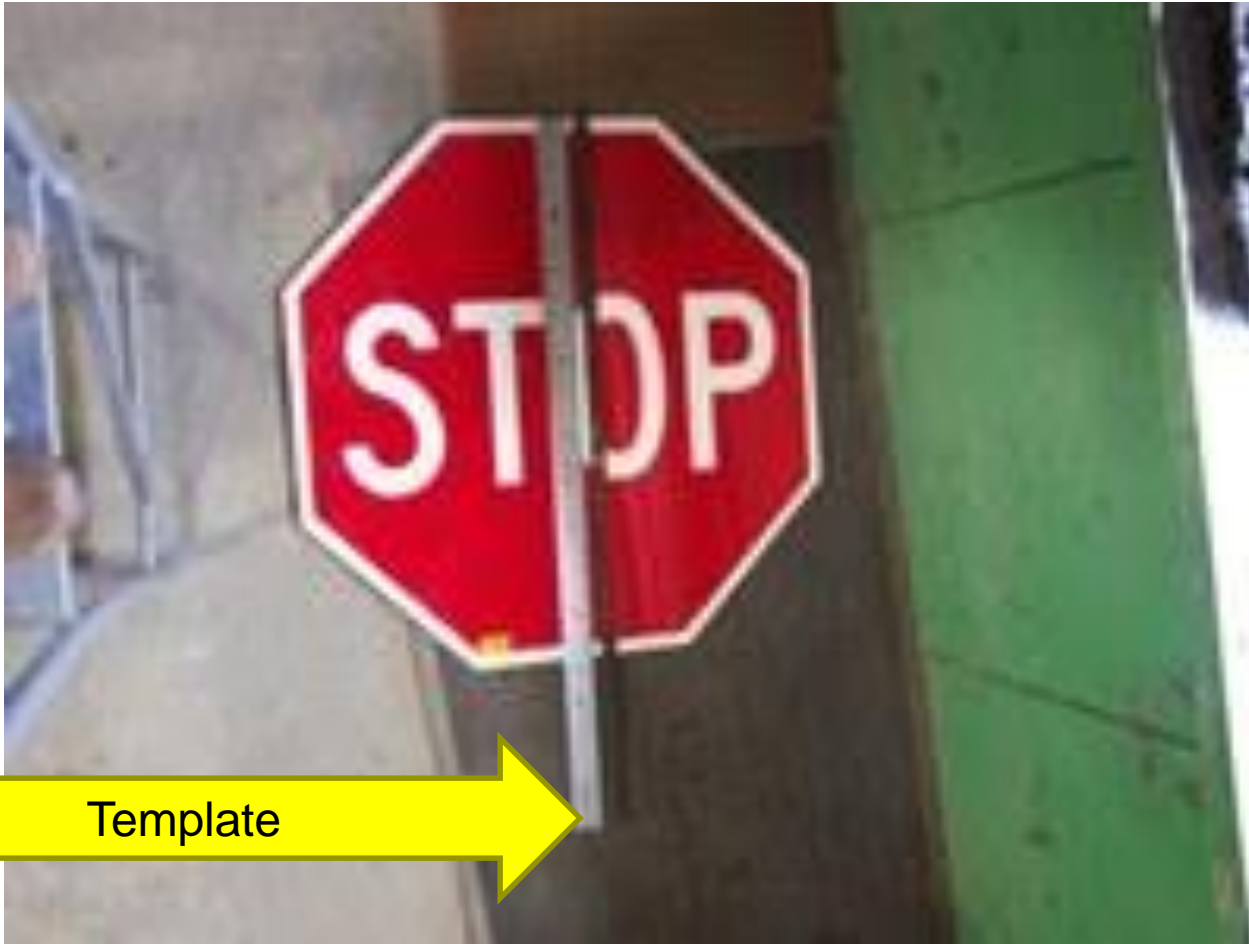
“This is a much better way to do cable rail post repairs,” Heidenreich, a seven-year CDOT employee, said. **“It reduces the physical force required to separate the cables,** and it keeps them firmly in place while work is being done.”



Bill Heidenreich



Template **improves efficiency, quality** when marking and drilling holes to install signs



Simplification of data entry for Project Managers saves equivalent of about \$400,000 annually

- It often took many hours for a project manager to input data -- as much as **eight full hours** each month for a single project – due to double data entry requirements
- This improvement has slashed that to less than **30 minutes per month.**

Improvement Of The Month

Poz-Loc Wedge Puller



Dean
Decker



Caleb
Wilson



Brad Elrod
TMI



Danny
Stithem
TMI



Reason for the improvement:

Wedges that lock Poz-Loc road signs in place would rust or freeze which made it difficult or impossible to remove using a slide hammer.

The Innovation:

The Poz-Loc Wedge Puller uses a hydraulic press to remove the wedge.

The Benefit:

- Works on posts in all conditions
- **Eliminates risk of injury** from using the slide hammer
- Durable design
- \$52 to replicate

Read more at: <http://bit.ly/2yJoBQ6>



Improvement of the Month: October 2017



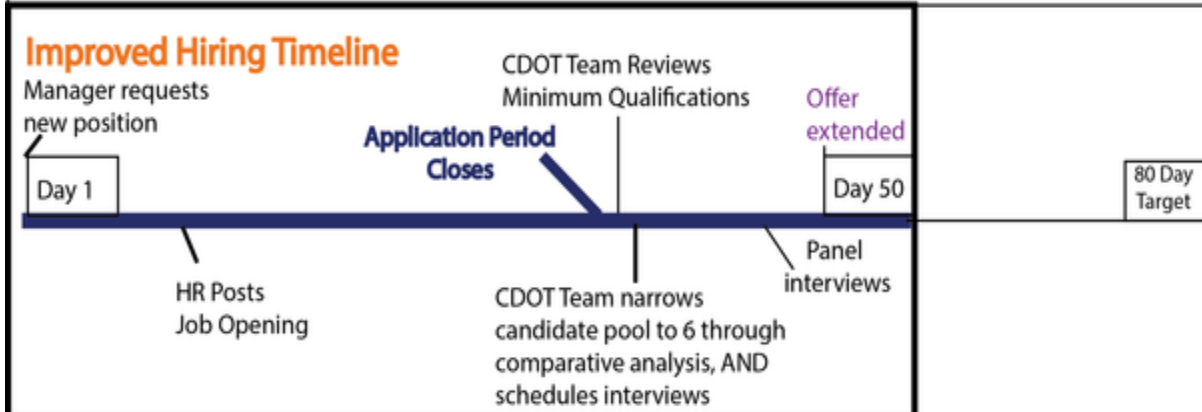
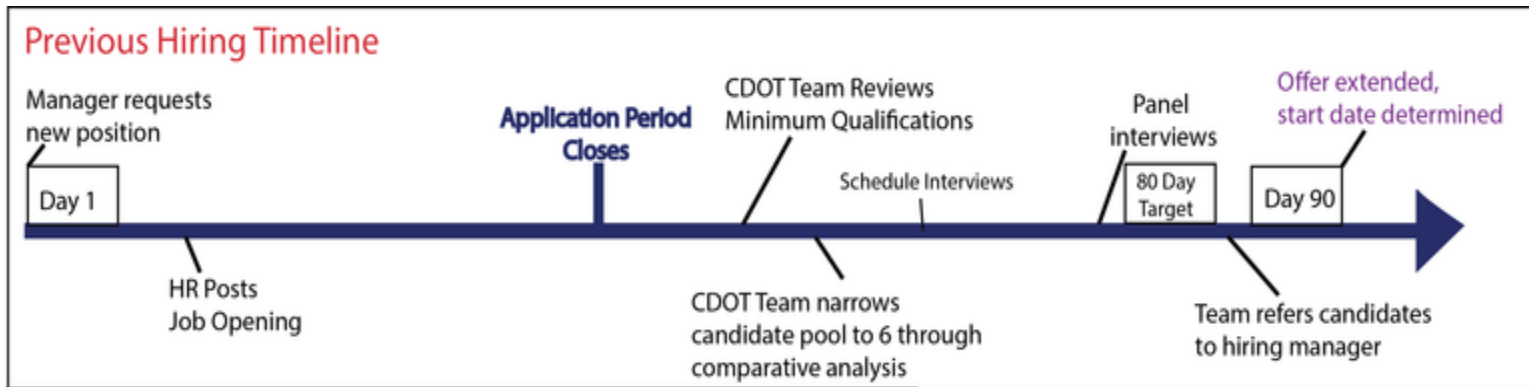
COLORADO
Department of Transportation
Office of Process Improvement



Improvement of the Month: Working with Customers to Reduce Time-to-Hire



Working with R1 customers, reduced time-to-hire for Region 1 Maintenance - from 90 days to 50 days: **40% improvement!**



Jacob Finger

Improvement Of The Month

On-Boarding Orientation



Catie Weber, Admin Assistant



Jeff Tatkenhorst, Deputy Superintendent

Reason for the improvement:

Orientation binders were bulky and out of date.

The Innovation:

Catie used Power Point to convert presentation materials and reduced them to the minimum required by the state to bring on new employees.

The Benefit:

- **Saves \$10,000+/year** in labor and supplies
- More effective orientation
- New employees get more time training with their supervisor

Read more here: <http://bit.ly/2v2NOE0>

Improvement of the Month: Bhatt Chat August



COLORADO
Department of Transportation
Office of Process Improvement



Many more online at LeanIdeas.CoDOT.gov

The screenshot shows a web browser window displaying the CDOT website. The address bar shows the URL: www.coloradodot.info/business/process-improvement/everyday-lean-innovations-ideas. The page header includes the CDOT logo with the tagline "Taking care to get you there" and navigation links for Site Map, Accessibility, and Contact. A search bar and a sign-up for email alerts are also present. The main navigation menu includes links for HOME, TRAVEL CENTER, NEWS, BUSINESS CENTER, PROGRAMS, PROJECTS, ABOUT CDOT, and LIBRARY. The breadcrumb trail reads: home : business center : process improvement : **everyday lean innovations & ideas**. The main content area is titled "Everyday Lean Innovations & Ideas" and contains two paragraphs of text. The first paragraph describes the CDOT vision for Lean and mentions "Lean Case Studies". The second paragraph discusses smaller-scale improvements. Below the text are two sub-sections: "Putting our Innovation to Work" and "References for Everyday Ideas", which lists 12 numbered items. A sidebar on the right contains "Contact Information" for Gary Vansuch at 303-757-9017.

www.coloradodot.info/business/process-improvement/everyday-lean-innovations-ideas

cess, place your bookmarks here on the bookmarks bar. [Import bookmarks now...](#)

COLORADO DOT
DEPARTMENT OF TRANSPORTATION
Taking care to get you there

Site Map Accessibility Contact

Search Site search

SIGN UP FOR EMAIL AND WIRELESS ALERTS

HOME TRAVEL CENTER NEWS BUSINESS CENTER PROGRAMS PROJECTS ABOUT CDOT LIBRARY

home : business center : process improvement : **everyday lean innovations & ideas**

BOOKMARK

Everyday Lean Innovations & Ideas

At CDOT, the Vision for Lean is: “Everyone, Every Day, Improving Every Process and Every Product, To Benefit Every Customer”. Some of these improvement efforts are larger, cross-functional process improvements projects; the “Lean Case Studies” on this website summarize some of these larger efforts. Many other improvements are more localized, where teams of people are improving the processes within their own functions and workgroups; some examples of those are provided on the “Local Lean” page on this website.

Additionally, CDOT encourages all employees to identify opportunities to make smaller- scale improvements that are within their control. These are innovations and ideas where an employee identifies a problem or opportunity, develops an innovative way of doing something better, does testing and implements the solution. These improvements are the embodiment of the continuous incremental improvement that defines Lean: “Everyone, Every Day, Improving Every Process and Every Product, To Benefit Every Customer”. Some examples of this are listed below.

[Putting our Innovation to Work](#)

[References for Everyday Ideas](#)

1. [Highway Sign Cover Innovation](#)
2. [Figuring Out Safer Delineation Repairs](#)
3. [Hydraulic Fluid Holding Box](#)
4. [Wing Cart Allows Faster, Safer Removal and Installation](#)
5. [Improved Drain Assembly Eliminates Deicer Spills](#)
6. [Innovation for Removing Wing Towers Makes Job Safer, Improves Efficiency](#)
7. [Innovative Shouldering Attachment Improves Efficiency, Quality for Grading Operations](#)
8. [Improved Air Lift Exhaust Line Reduces Noise, Improves Personnel Safety](#)
9. [Salt Brine Deicer Innovation Saves \\$394,030, Protects Environment](#)
10. [Tire Chain Storage Innovation Reduces Costs, Makes Installation Easier](#)
11. [Innovation for Highway Debris Removal Improves Safety and Efficiency](#)
12. [Water Spray Unit Makes Delineation Washing Easier, More Effective](#)

Contact Information

For more information on CDOT's process improvement initiatives contact:

Gary Vansuch
303-757-9017

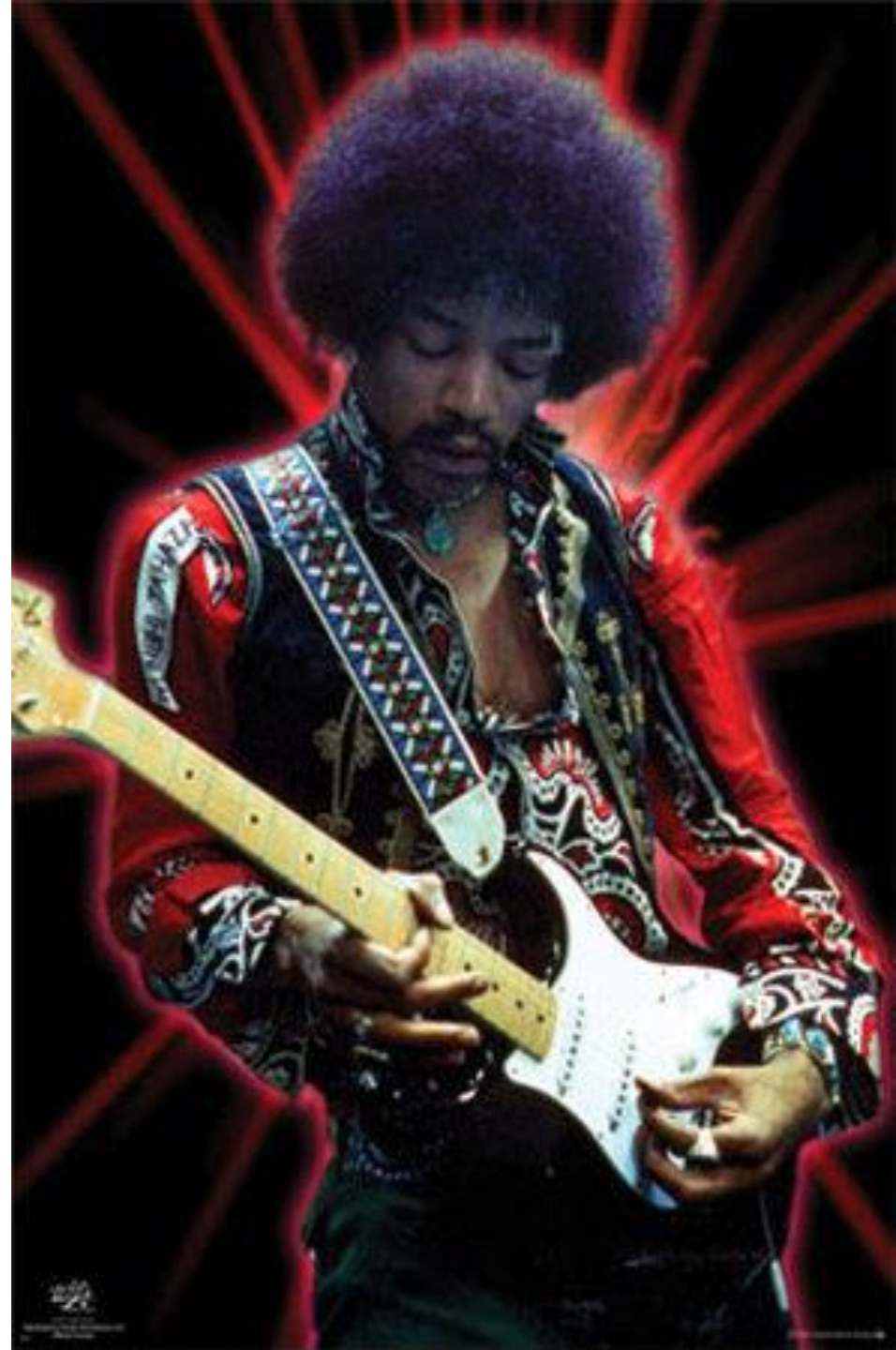
1. Global (cross-functional)
Improvement

2. Lean Everyday Ideas

**3. Change management: the
people side of change**

**“In order to
change the
world, you
have to get
your head
together first.”**

– Jimi Hendrix



Helping all Team CDOTers be successful with each and every change



The “technical side” – The application of knowledge, skills, tools and techniques to project activities to meet an improvement project’s requirements, including Lean Projects



“The change” itself– Improving performance by moving from a current state to a future state and changing how work is done



The “people side” – The process, tools and techniques to manage the people side of change to achieve the required business outcome

Awareness

Desire

Knowledge

Ability

Reinforcement[®]

The Five Building Blocks for Successful Change



More tomorrow!

Wednesday @ 1:45, Room 317

Change Management: Helping Our People Be Successful With Each and Every Change

**Carl
Greer**



**Washington State
Department of Transportation**



COLORADO

Department of Transportation

**Gary
Vansuch**

**Scott
McAllister**

Prosci[®]

A Winning Combination

**Global (cross-functional)
Improvement**

Lean Everyday Ideas

**Change management: the
people side of change**

A Bright Idea in American Government

CDOT Lean Process Improvement Program Recognized as 2015 Harvard Ash Center Bright Idea in Government

February 18, 2015 - DENVER – The Ash Center for Democratic Governance and Innovation at the John F. Kennedy School of Government, Harvard University, recognized today the Colorado Department of Transportation’s Lean Process Improvement Initiative as a part of the 2015 Bright Ideas program.



Bright Ideas is an initiative that recognizes creative and promising government programs and partnerships. The initiative is offered through the Innovations in Government Program, a program of the Ash Center for Democratic Governance and Innovation at Harvard Kennedy School.

What's inside today

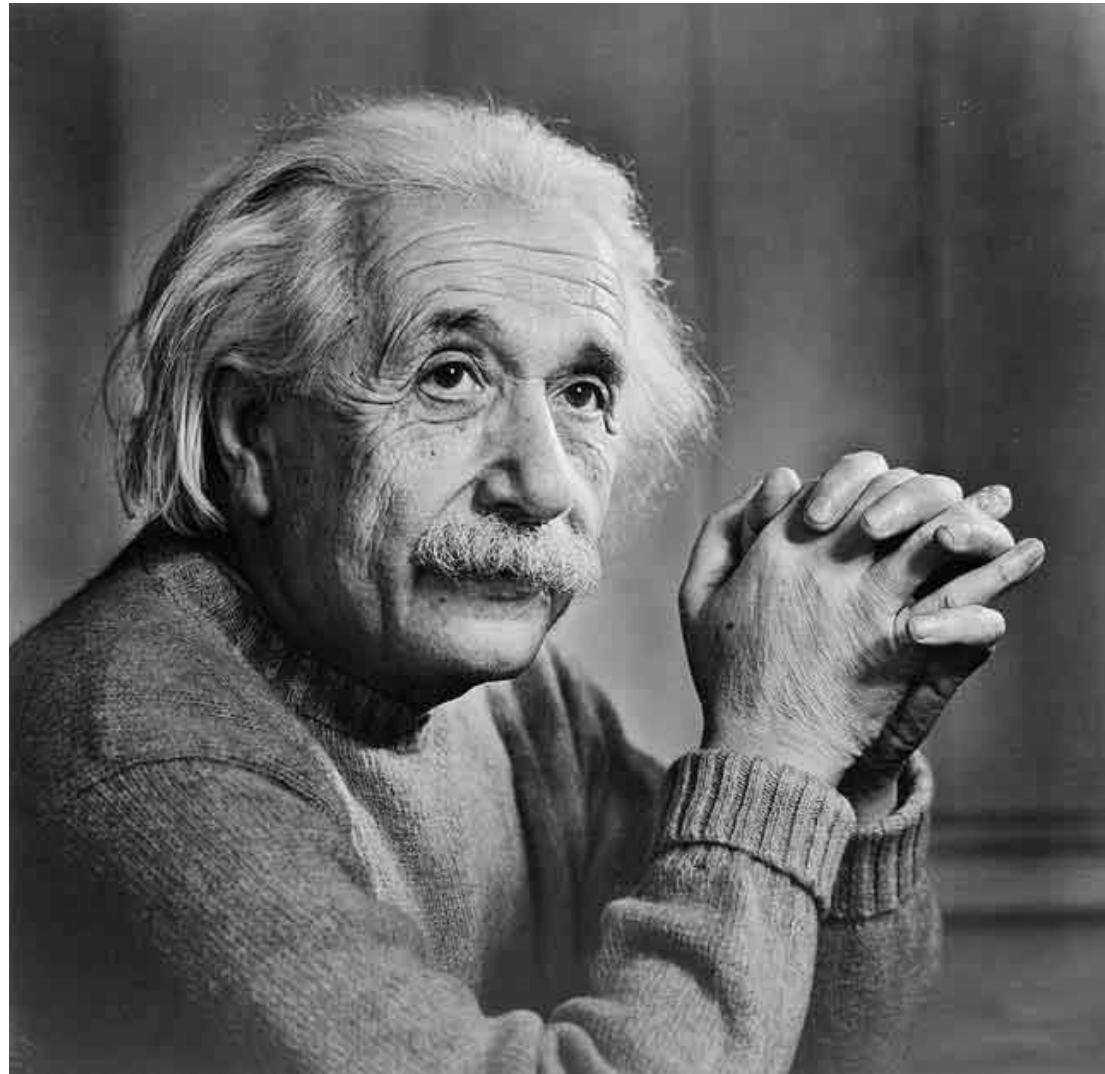
1. Lean at the Washington State Department of Transportation
2. Lean at the Colorado Department of Transportation
3. **Multinational Transportation Lean Forum**
4. **Your questions**



I See What You Mean

“The significant problems we face cannot be solved at the same level of thinking we were at when we created them.”

– Dr. Albert Einstein



One way to help us change our thinking: Communities of Practice



Communities of Practice

Communities of practice are groups of people who share a concern or a passion for something they do, and learn how to do it better as they interact regularly.



Communities of Practice

- A community of practice is not merely a club of friends or a network of connections between people.
- It has an identity, defined by a shared “domain of interest” (concern, passion, issue, etc.)
- Membership therefore implies a commitment to the domain.



“Great things in business are never done by one person; they are done by a team of people.” – Steve Jobs

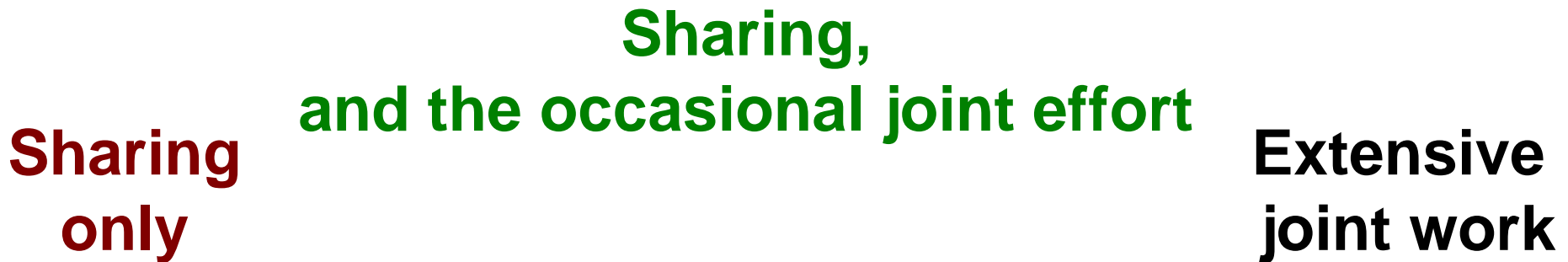


Transportation Lean Forum: What it is

- Many governmental organizations which operate highway and transportation systems are utilizing Lean.
- To help promote Lean and provide support to each other, some of these organizations formed the “Forum for Lean Process Improvement in Governmental Highways / Transportation organizations” in June 2012.
- This group is also referred to as the **Transportation Lean Forum** (TLF).

Building and Implementing a Community of Practice

Spectrum of “types” of Communities of Practice: level of commitment



Building and Implementing a Community of Practice

Spectrum of “types” of Communities of Practice: level of commitment

Transportation Lean
Forum started here



Sharing,
and the occasional joint effort

Sharing
only

Extensive
joint work

**“Never doubt
that a small
group of
thoughtful
people can
change the
world.
Indeed, it is the
only thing that
ever has.”**

– Margaret Mead

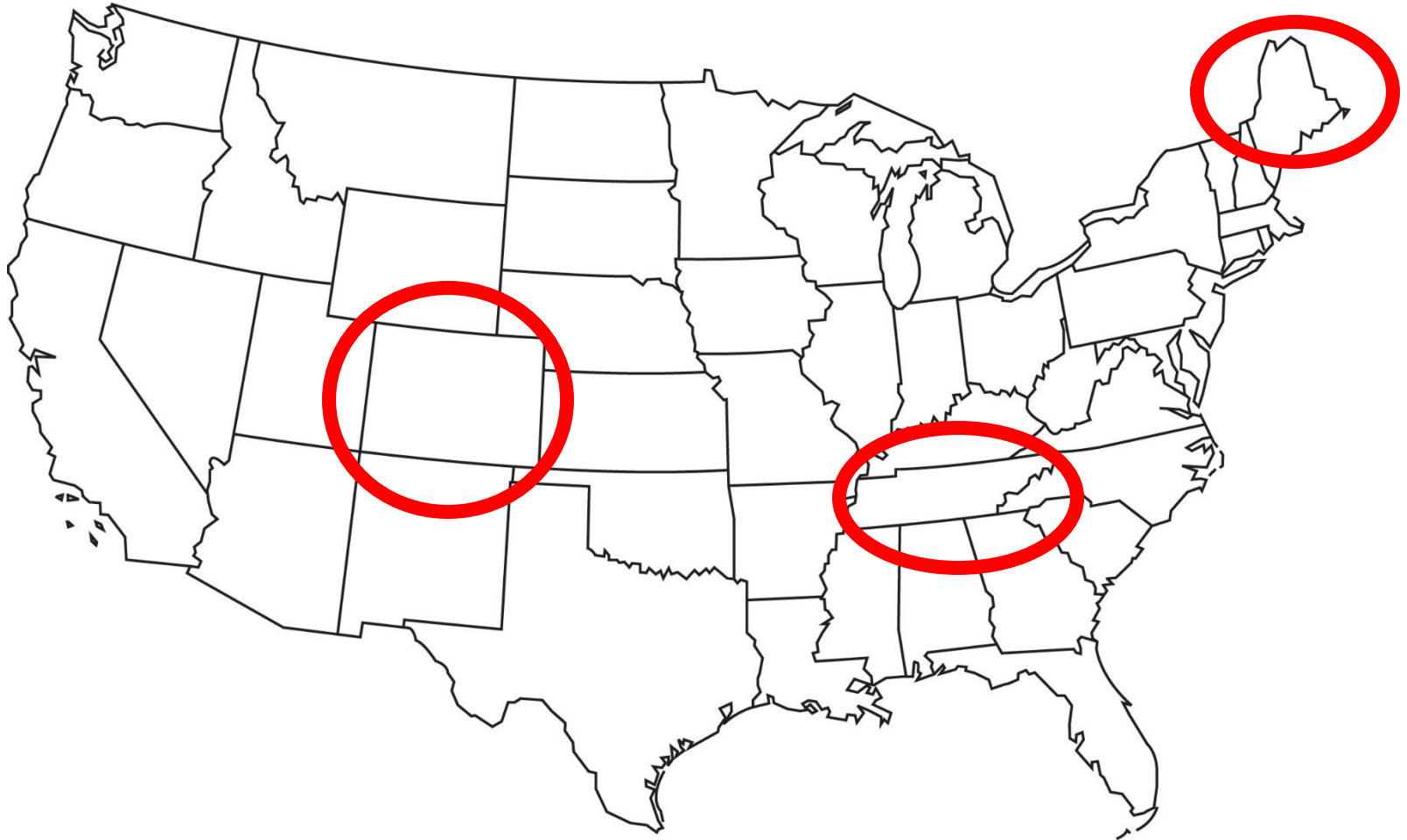


Transportation Lean Forum ... Origins



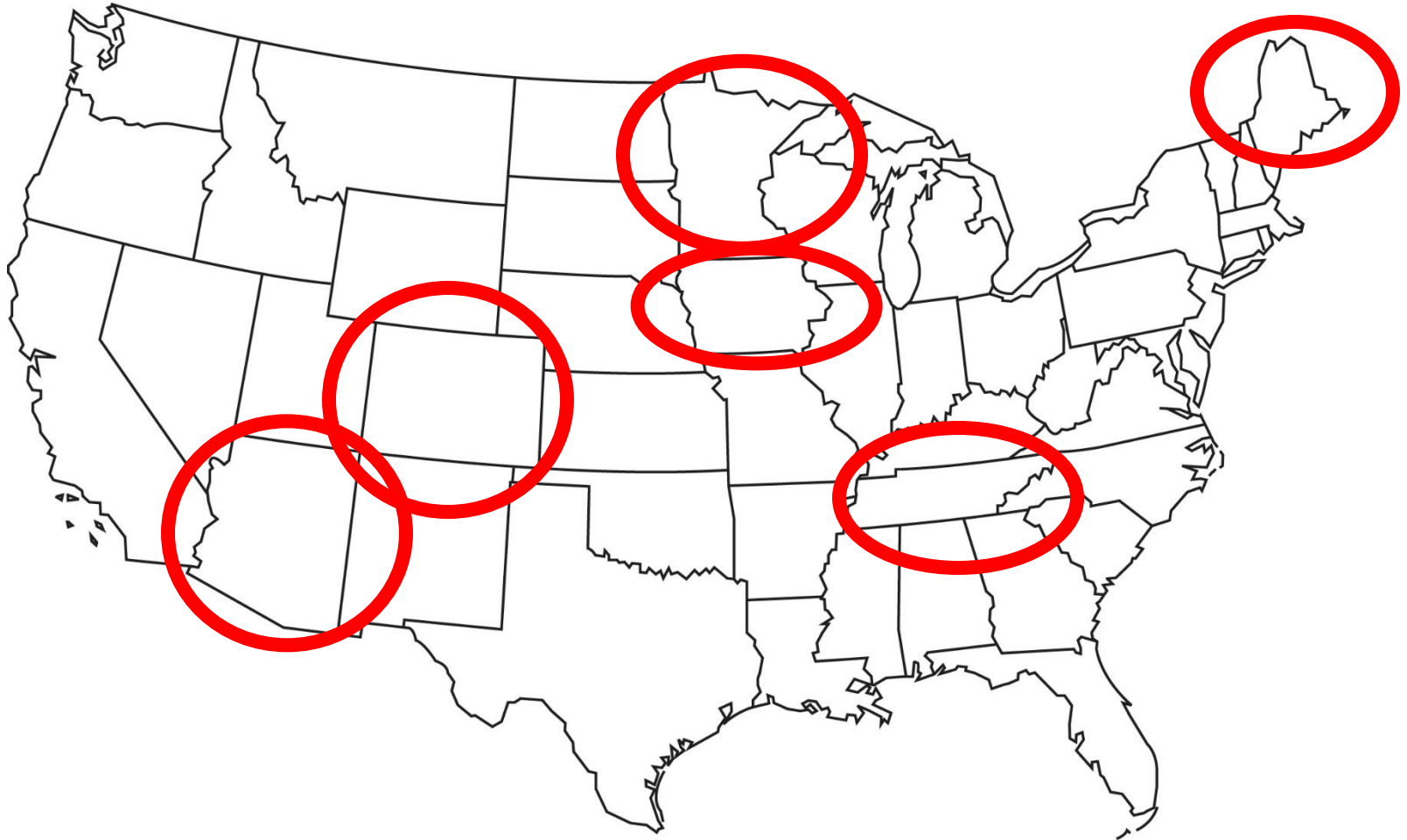
... early 2012

Transportation Lean Forum ...



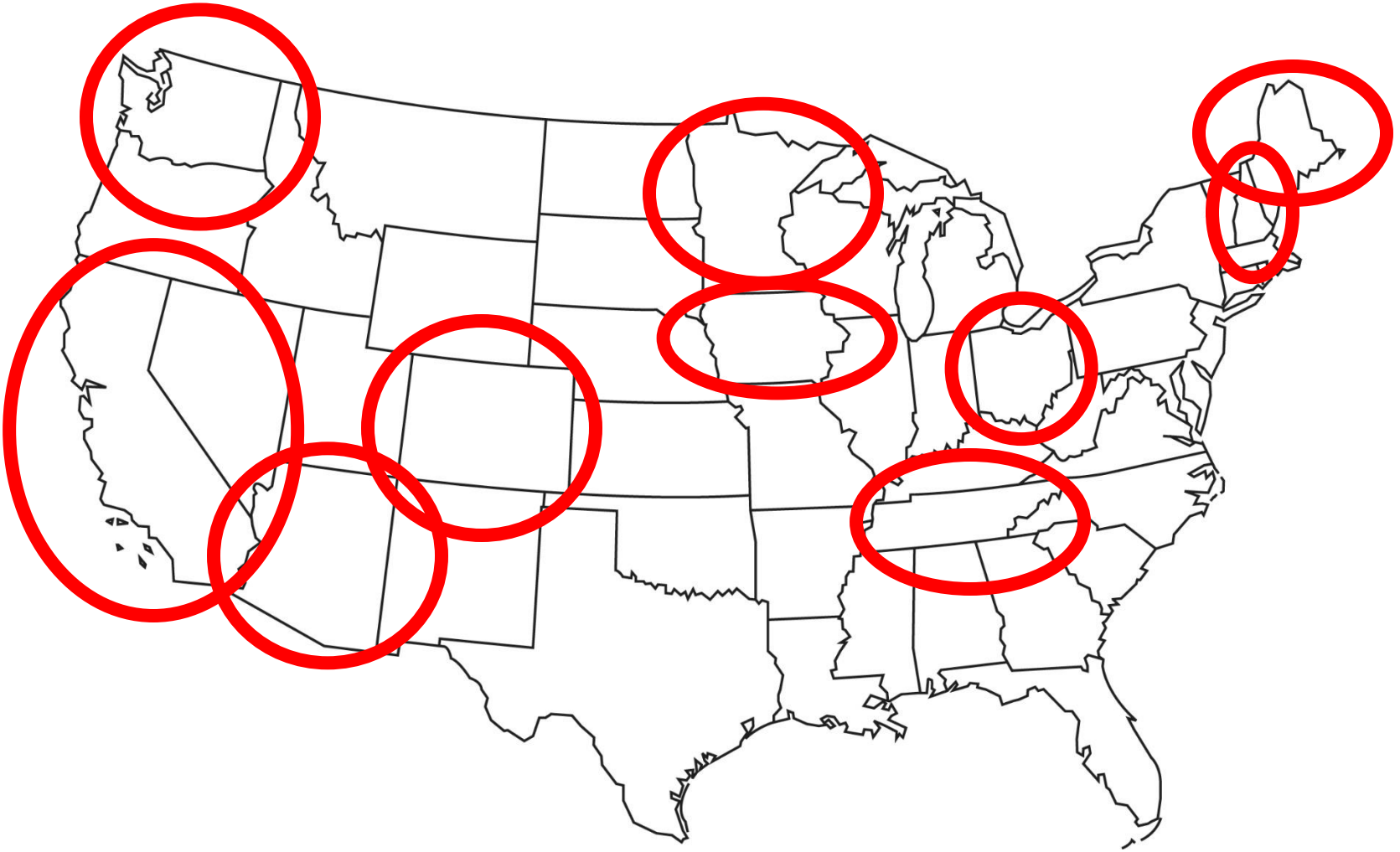
... the start, in June 2012

Transportation Lean Forum ...



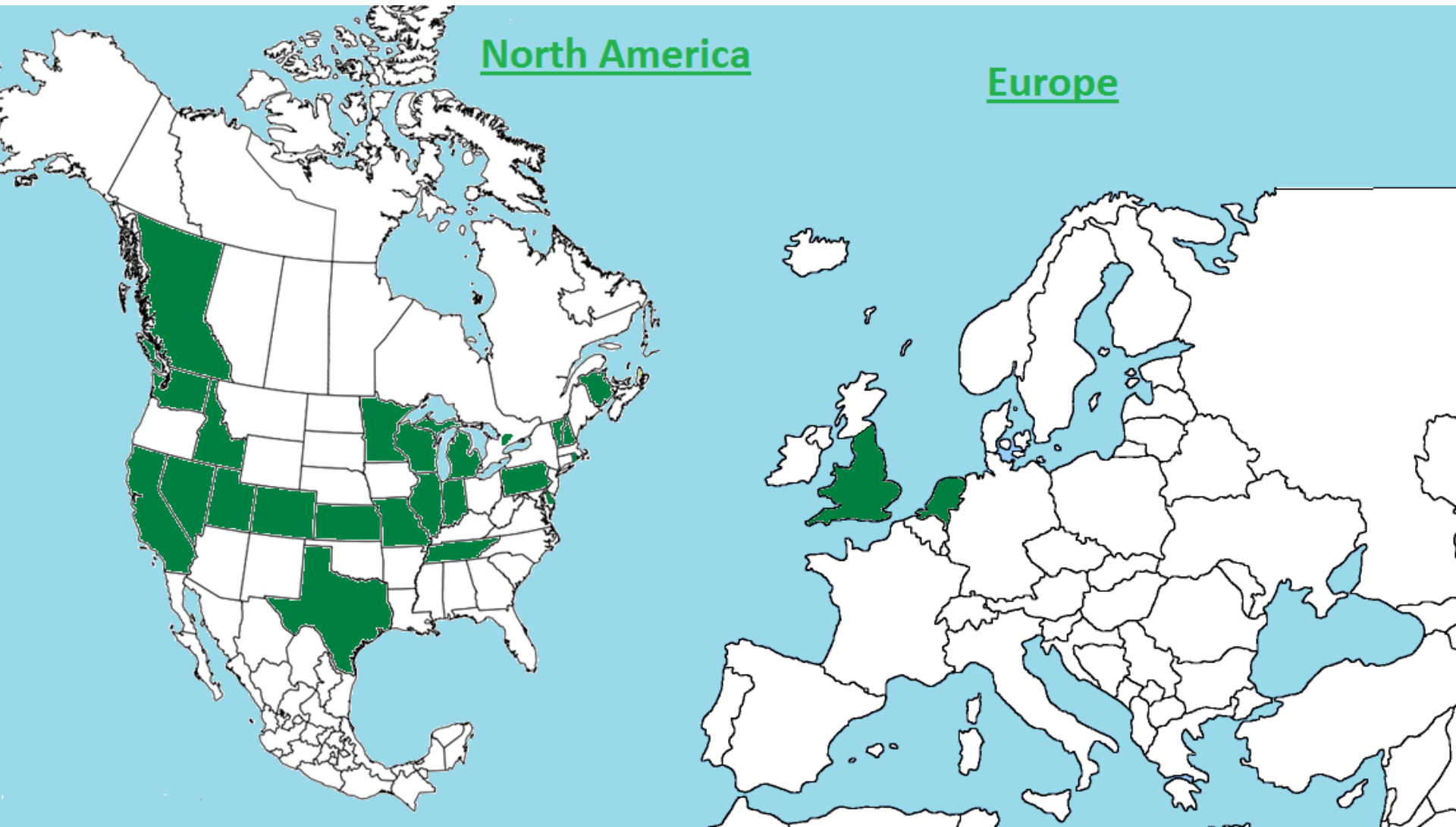
... September 2012

Transportation Lean Forum ...



... December 2012

Transportation Lean Forum ...



... participants on October 18, 2016 teleconference

Transportation Lean Forum ... every-other-month teleconferences

- 1 INTRODUCTIONS AND ROLL CALL** Where are we all located?
- 2 John Baranzelli** Office of Rapid Results - State of Illinois - Central Management Services
- 3 Jason Hallett, Dawn Vincent-Dixon, & Greg Bryden**
Lean Six Sigma tools & principles used during their org. realignment - New Brunswick Department of Transportation and Infrastructure
- 4 Molly Bly & Chavirat Burapadecha** Lean Interchange - Colorado Department of Transportation - Office of Process Improvement
- 5 AASHTO** SCOPM Organizational Excellence Task Force
- 6 OPEN FORUM** What's on your mind?
- 7 CLOSE OUT**

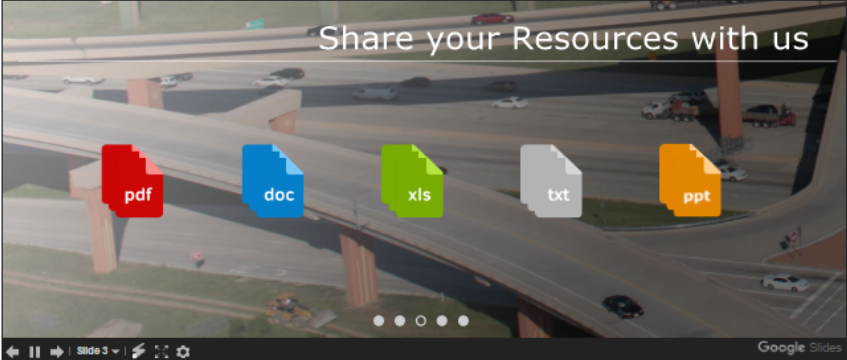
AGENDA
Oct 18, 2016

Between meetings: “The Lean Interchange”

Search this site






HOME ANNOUNCEMENTS RESOURCES DISCUSSION MEMBERS TOOLKIT

WELCOME TO THE LEAN INTERCHANGE NETWORK



Do you have resources and announcements to share? Please email Gary.Vansuch@state.co.us for permission.

RECENT HIGHLIGHTS

ANNOUNCEMENTS	RESOURCES
 <p>Ebook: The Definitive Guide to the Leadership Behaviors that Create a Culture of Continuous Improvement "Have fun with continuous improvement!" Toyota's Pascal Dennis describes the 'Kaizen Spirit' as having a cheerful or playful tone. You're doing serious work and serious improvements, but having ... Posted Sep 22, 2016, 10:24 AM by Michael Shull - CDOT</p>	<ul style="list-style-type: none">Definitive Guide to the Leadership Behaviors_that_Create a Culture of Continuous_Improvement - Lean.pdf 4179k - Sep 22, 2016, 10:46 AM by Michael Shull - CDOT (v2)Lean Six Sigma Resources-LDP.pdf 1534k - Sep 19, 2016, 10:11 AM by Lori Richter (v2)SIFOC diagram.pptx 58k - Sep 19, 2016, 10:08 AM by Lori Richter (v2)Lean_CP_Handout on teams.pdf 639k - Sep 19, 2016, 10:06 AM by Lori Richter (v2)09.7.2016 TLF PowerPoint September 2016.pptx 32826k - Sep 13, 2016, 1:05 PM by Michael Shull - CDOT (v2)Lean_Strategy_Document_2015-2020.pdf 2447k - Jul 22, 2016, 8:56 AM by Chavirat Burapadecha - CDOT (v2)LCI NW 30 06 16.pptx 30160k - Jul 11, 2016, 8:14 AM by Greg Mooney (v2)2016_07_06 TLF (convert-video-online.com).mp4 0k - Jul 8, 2016, 11:00 AM by Chavirat Burapadecha - CDOT (v2)Video for Forum of Lean Interchange Meeting on July 6,2016 2016_07_06 TLF.mp4 0k - Jul 8, 2016, 10:59 AM by Chavirat Burapadecha - CDOT (v2)Video for Forum of Lean Interchange Meeting on July 6,2016 a3-plan.jpg 88k - Sep 7, 2016, 10:05 AM by Chavirat Burapadecha - CDOT (v2)A3 plan for Toolkit <p>Showing 10 files from page RESOURCES.</p>
 <p>Launch of the Wisconsin Lean Government Program website The Lean Government Program is pleased to announce that its new website is live. Attached is a factsheet about the site. We have worked hard to align our site with ... Posted Sep 19, 2016, 10:00 AM by Lori Richter</p>	
 <p>2016 Wisconsin Lean Government Conference Join the Community of Excellence in Madison, Wisconsin at the sixth annual Lean Government Conference hosted by the Wisconsin Center for Performance Excellence. Discover lean methods and practices that lead ... Posted Sep 19, 2016, 9:48 AM by Lori Richter</p>	
 <p>25 Years Later, What Happened to 'Reinventing Government'? September's <i>Governing</i> magazine has an article titled "The Reinventors" that gives a historical overview of the "Reinventing Government" and "Lean" movements in State government. Find the article at the ... Posted Sep 9, 2016, 1:21 PM by Molly Bly - CDOT</p>	
 <p>Update your member landing page in Lean Interchange website We need your action! Please update your member landing page in Lean Interchange website. Click on the link below: TLF Member's Information Posted Sep 9, 2016, 1:34 PM by Molly Bly - CDOT</p>	

Showing posts 1 - 6 of 26. View more »

MEMBERS

PAGE 1 OF 2

SLIDE 1 OF 2

NOTES

updates from workgroups on their progress

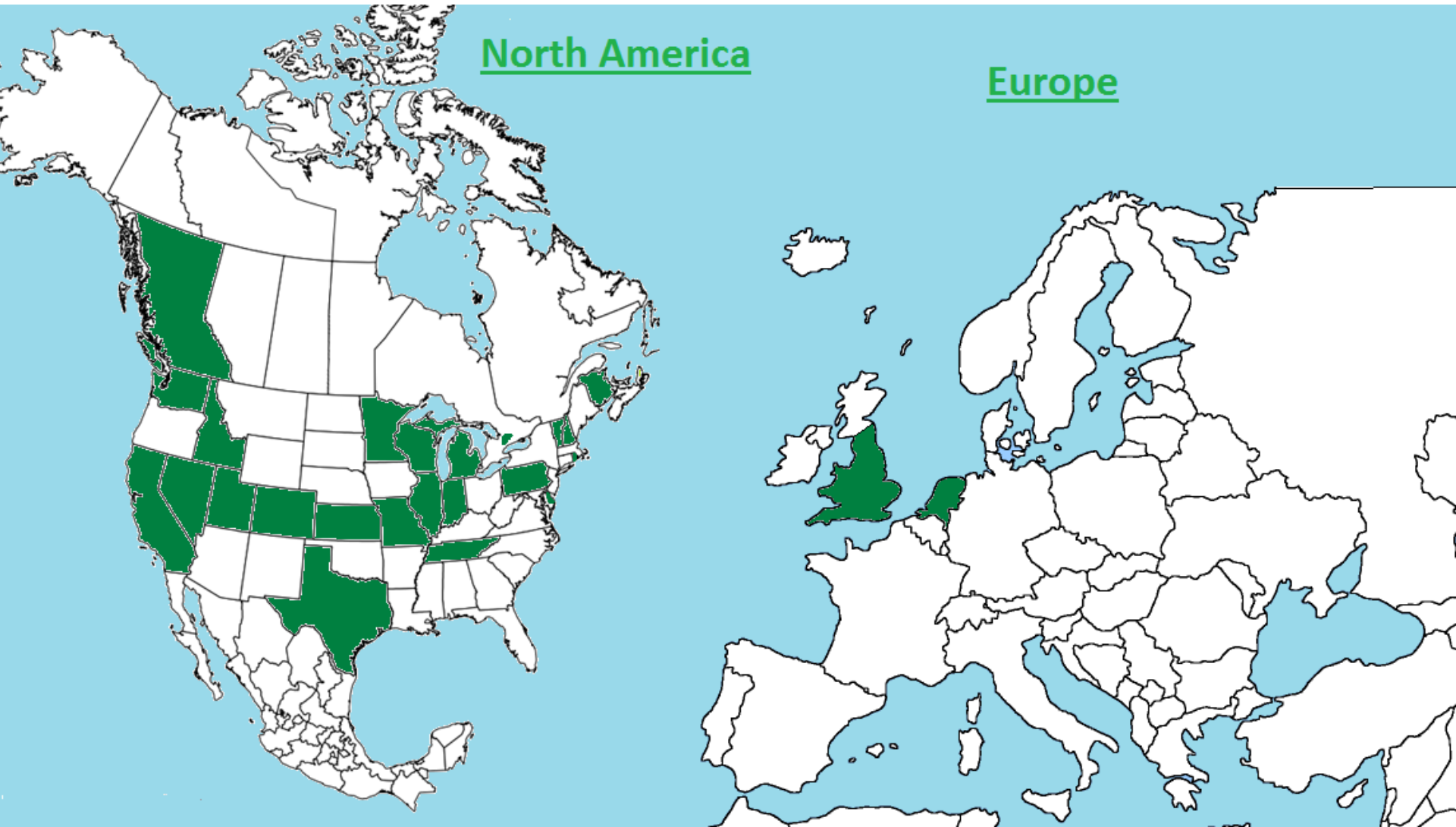
Building and Implementing a Community of Practice

Spectrum of “types” of Communities of Practice: level of commitment

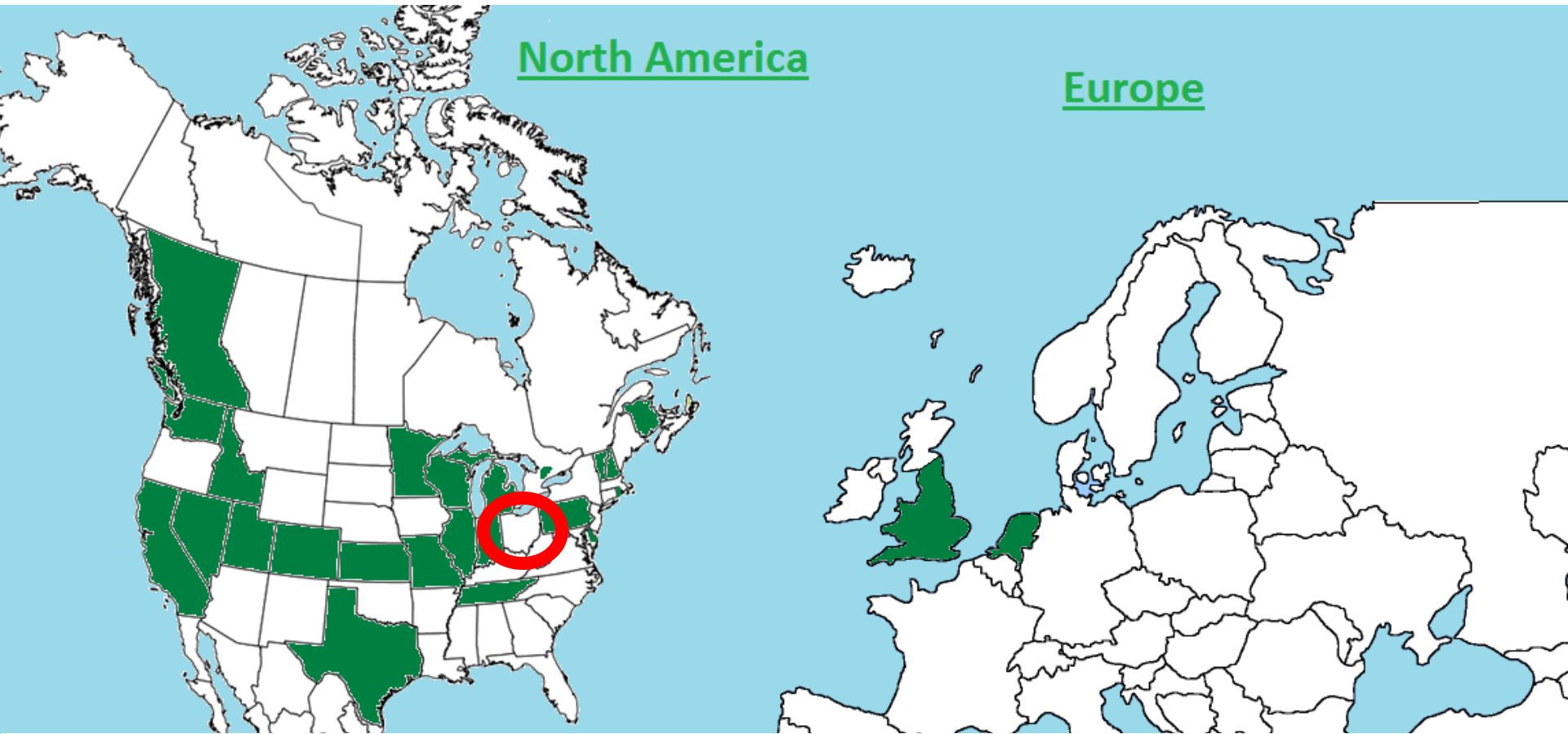
Transportation Lean
Forum started here



Transportation Lean Forum successes



Transportation Lean Forum successes



Borrowing of Lean “Project Selection Toolkit”

LEANOhio

PROJECT STARTER KIT

With this quick-take assessment, you can pinpoint opportunities for putting your Lean know-how to work.

PROJECT SELECTION ASSESSMENT

INSTRUCTIONS: Read each item, then check a box on the 1-to-5 scale to show how often this occurs in your workplace:
1 = never 2 = rarely 3 = sometimes 4 = often 5 = very often

- ! Have a well-defined scope as you respond to each assessment item. Avoid trying to evaluate the agency as a whole.
- Rather, focus on the work area or office or section that you manage, and maintain this same scope throughout the assessment. If you don't manage a given office or section, narrow your scope to your immediate work area.

1 In my work area, we spend too much time looking for the items we need to do our jobs: files, materials, equipment, and so on. If the physical work area was better organized, we'd be more productive and less frustrated.

 1 2 3 4 5

2 When we get inputs from customers or from other sources (from paper forms or online web forms, for example), we often find that the incoming information is incomplete or inaccurate. We have to circle back to people to get the information we need. If we received complete information from them the *first* time around, we'd be a lot more efficient.

 1 2 3 4 5

3 We find ourselves wondering what our customers are thinking. *Are we meeting their needs and expectations? Are they happy with our work? Are there things we can do to increase their satisfaction?* If we had answers to these questions, we could serve our customers better.

 1 2 3 4 5

4 My co-workers and I don't really know whether our day-to-day work is having a positive impact. We can't tell for sure whether it's meeting customer expectations, helping the agency achieve larger goals, or contributing in some other way. If we had a set of meaningful measures that were easy to see and understand, we'd have a better sense of how our work makes a difference.

 1 2 3 4 5

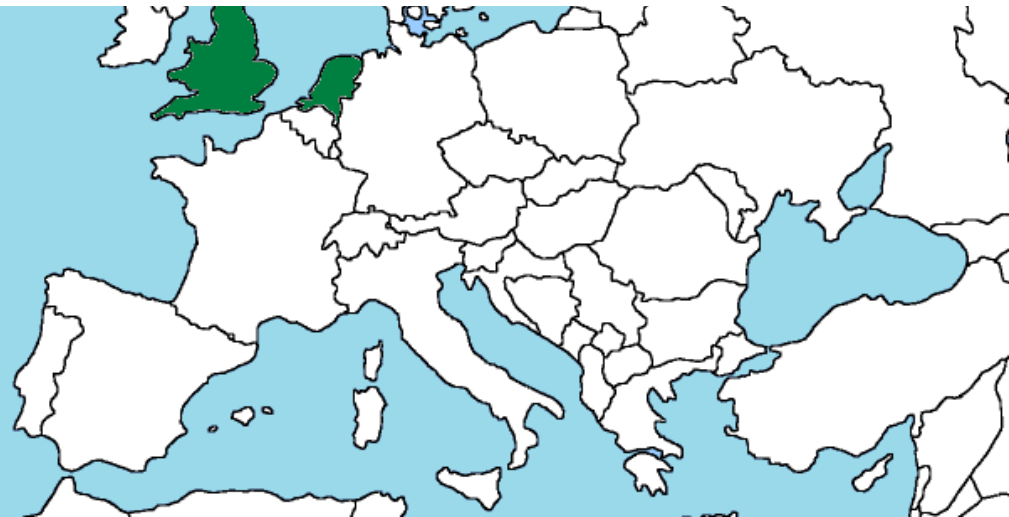
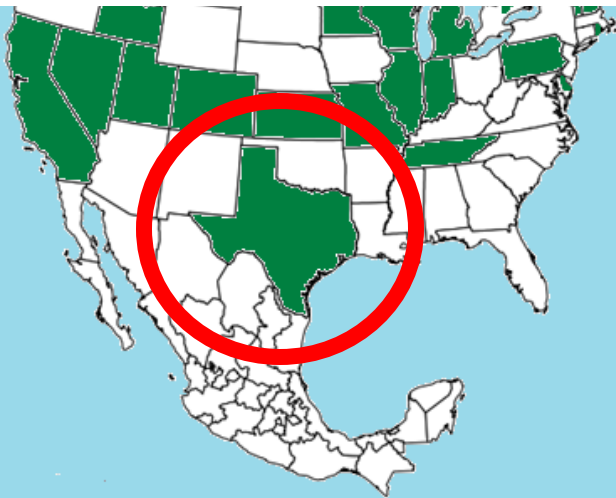
5 I work with good people, but it sometimes seems like one person doesn't know what the other person is doing, even though we all work in the same work process. If we had a better sense of what each person does and how we all fit together as one system, we'd be more productive and probably even happier.

 1 2 3 4 5

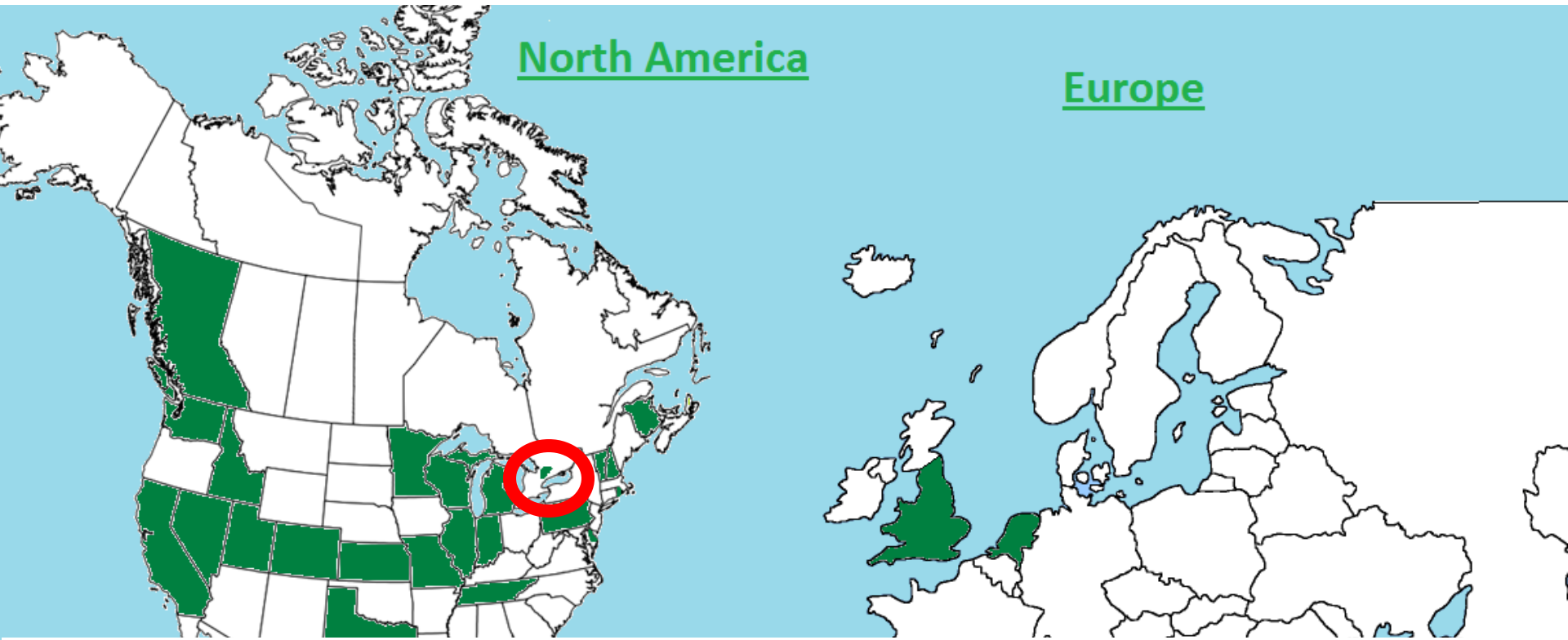
Transportation Lean Forum successes

North America

*“... Can't thank you enough for sending ...
been a great resource as I work through
the content to get a flavor of the body of
work. ...”*

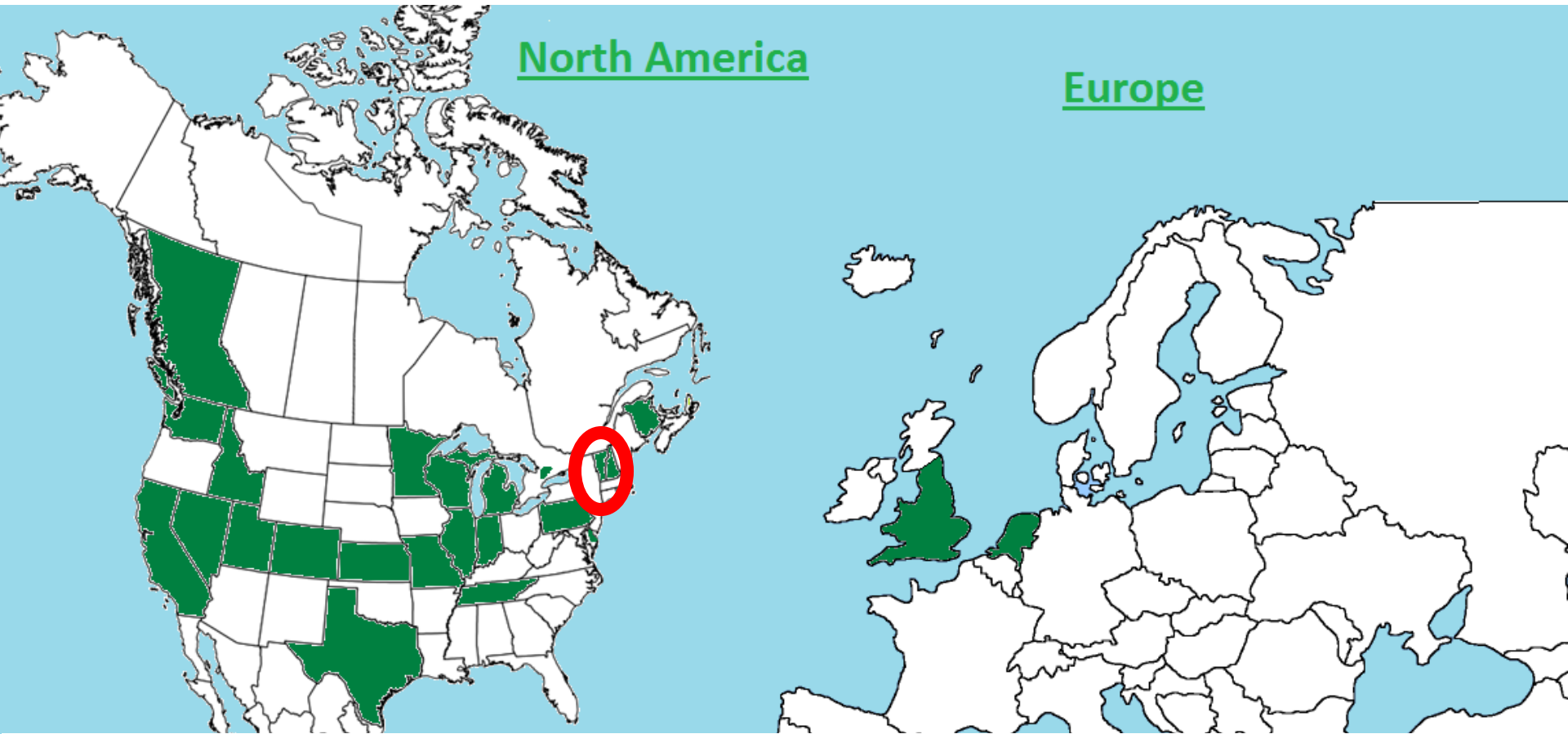


Transportation Lean Forum successes



“ ... the Transportation Lean Forum continues to grow – and we are thrilled to be a part of that. ... ”

Transportation Lean Forum successes

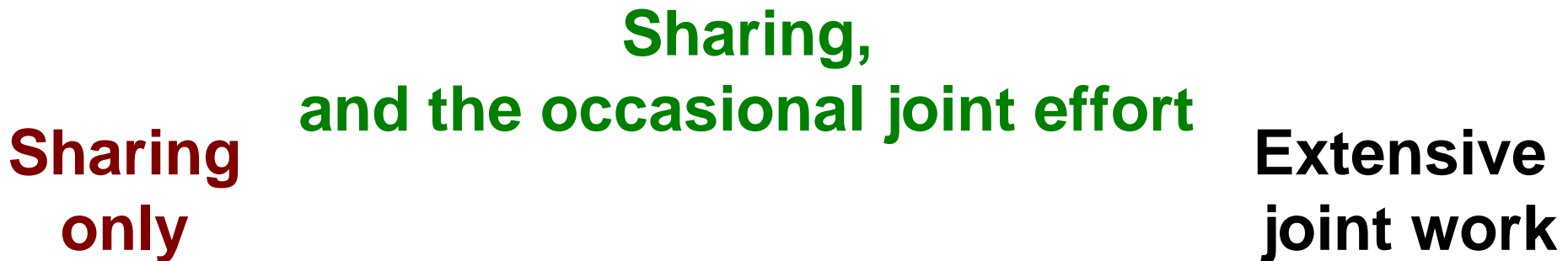


Benchmarking about Change Agent Network, February 2016

Building and Implementing a Community of Practice

Spectrum of “types” of Communities of Practice: level of commitment

**Transportation Lean
Forum evolving to here**





**“I use not
only all of
the brains
that I have,
but all that I
can borrow.**

– President Woodrow Wilson

What we covered

1. Lean at the Washington State Department of Transportation
2. Lean at the Colorado Department of Transportation
3. Multinational Transportation Lean Forum
4. Your questions



I See What You Mean

***“A good plan,
violently
executed
now, is better
than a perfect
plan executed
next week.”***

– General George Patton





Lean: Driving Engagement, Driving Improvement, Driving Success

Tuesday, October 17, 2017



My learning objective(s) for today's session is/are:

... to support this (these) organizational goal(s) at my own DOT:

The ability to learn is the most important quality a leader can have.

- Sheryl Sandberg, Chief Operating Officer, Facebook



My Key Takeaways and My Action Items	What I am going to do with this, and by When	People I need to involve

What's on your list to do?

Thank you!

The background of the slide is a dynamic, blurred image of a road or track curving into the distance. The scene is captured with a long exposure, creating light trails from vehicles, which appear as streaks of orange, yellow, and white. The overall color palette is dominated by cool blues and purples, with the warm light trails providing a strong contrast. The text 'Thank you!' is centered in the upper half of the image in a large, white, bold, sans-serif font.