Introduction to Lean Six Sigma – Presentation, Training & Workshop

SEPTEMBER 29, 2015

WASHINGTON STATE ENVIRONMENTAL HEALTH ASSOCIATION (WSEHA)
WESTSIDE EDUCATIONAL SEMINAR

TRAINER: MODINAT OGUN, ASQ CSSBB,CMQ/OE, CQIA |LSSBB

Public Health
Centers for Excellence

Tacoma-Pierce County
Health Department
Healthy People in Healthy Communities

SPOKANE REGIONAL HEALTH DISTRICT

Presentation, Training & Workshop Agenda

Activity	Duration
Welcome & Goal for session	2 minutes
Team Norms	5 minutes
Why Should This Matter?	30 minutes
Overview of Quality & Lean Six Sigma	30 minutes
Spaghetti Diagram (hands-on exercise) Lean Concept: 8 Types of Waste	30 minutes
Training/Workshop: Lean Six Sigma (LSS) = Define | Measure | Analyze | Improve | Control | Share (DMAICS) Q&A After each phase	15 minutes break after each hour
Quiz ☺	10 minutes

Goal for this session…

"Introduction to the Lean Six Sigma methodology and how it can be used to develop, adopt and utilize a

mindful, thoughtful, standardized, disciplined approach to resource utilization, processes and systems

management."

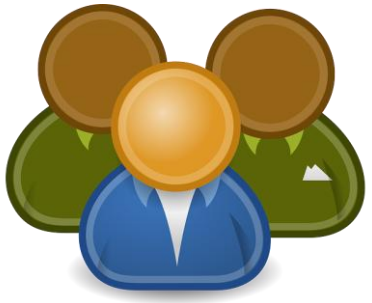
Team Norms

aka team rules of engagement:

- **Open mind**
- **Share**
- **Fully participate**
- **Collaborative mindset**
- **Learn**
- **Have fun ☺**

Why Should This Matter?

<u>RESOURCES</u>: Ever dwindling and having to do more with less!



Time	Funds	People
How do you spend 8-10 hour day? Do you have effective & efficient processes?	Do you have enough funding?	Do you have enough & the right people to do the work?

Why Should This Matter?

Why Should This Matter?

EH Staff: 617.4

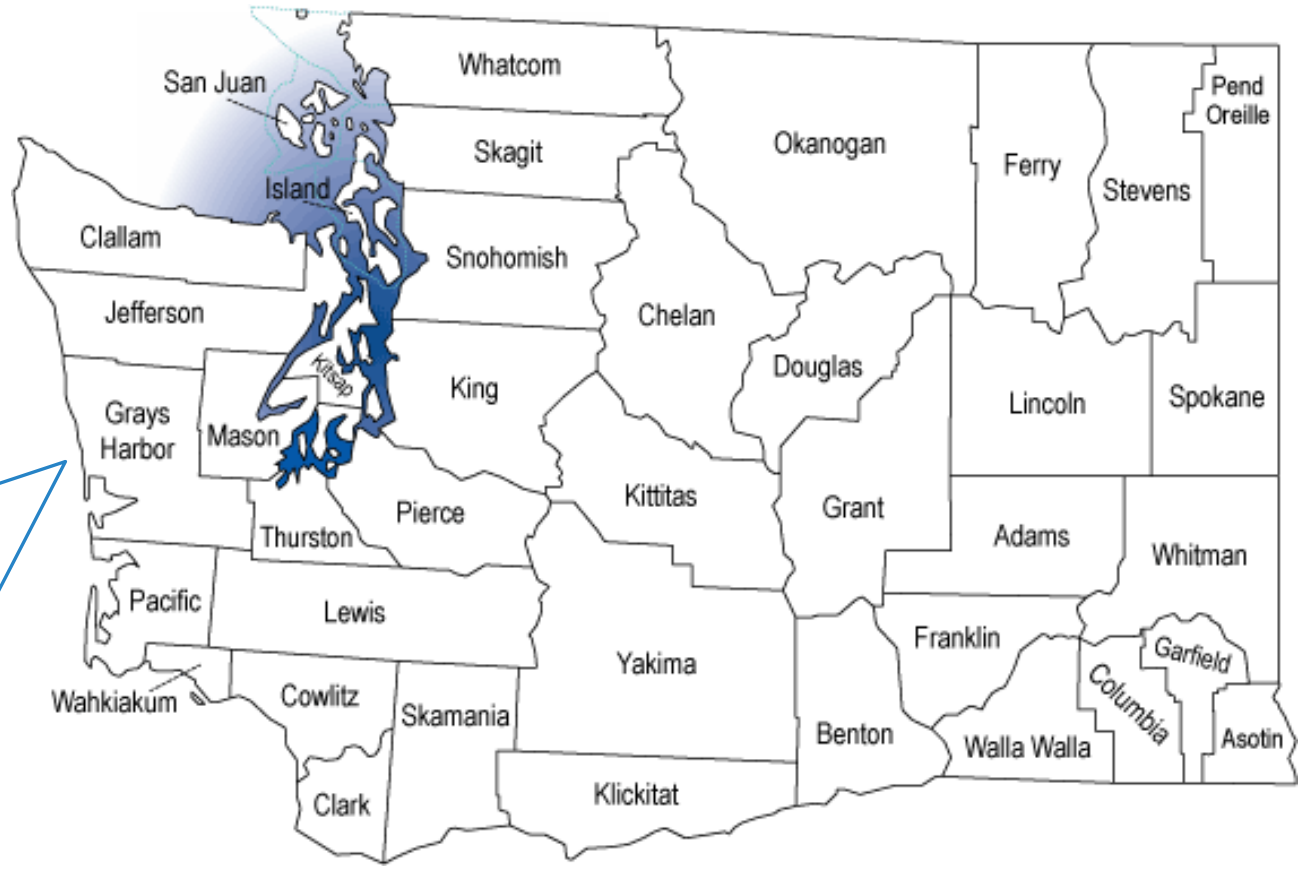
WA State Population (2014 US Census data):

7,061,418

Ratio EH Staff to Population: 1 : 11437

WA State size: 71, 362 square miles

Ratio EH Staff to County Size: 1 : 115.6 square miles



Why Should This Matter?

Need for a

- **Mindful,**
- **Thoughtful,**
- **Standardized,**
- **Disciplined,**
- **SME infused approach (versus firefighting) to resource utilization, processes and systems management.**

This is where QUALITY comes in…

Overview of Quality & Lean Six Sigma

All quality improvement methodologies share 4 essential quality principles.

Quality Principles focus on:

1. **Customer Requirements**
2. **Process Performance**
3. **Data / Evidence based decision making**
4. **Continuous & Disciplined approach**

Overview of Quality & Lean Six Sigma (cont)

Quality Principles	Definition
1. **Customer Requirements**	Who is the customer? What do they require? Are we providing it? How do we know?
2. **Process Performance**	Ask how much of the day is spent on: •Fixing something that wasn't done right the first time? •Dealing with a crisis that could have been avoided? •Doing a task that doesn't really add value to the customer, Division or Organization? •Waiting for something so you can do your part? •Dealing with a complaint? **Of all the ways we're doing it, which way is the best way? Is there an even better way?**

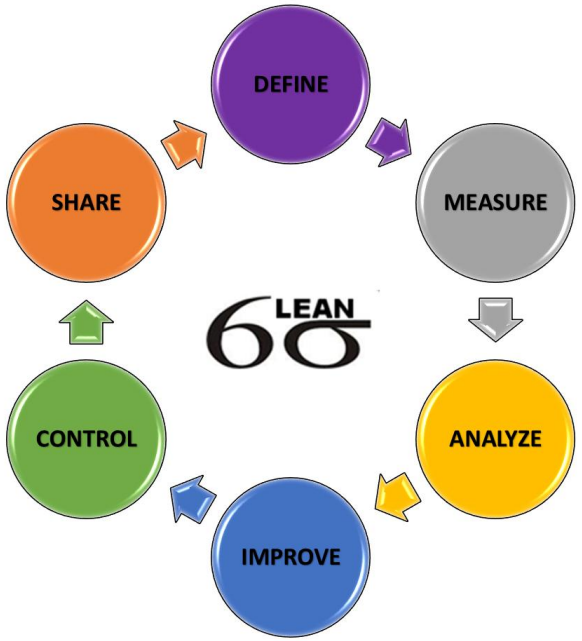
Overview of Quality & Lean Six Sigma (cont)

Quality Principles	Definition
3. **Data / Evidence based decision making**	A Quality Improvement organization will … ▪ Measure processes and outcomes (surveys, performance measures) ▪ Evaluate data on an on-going basis (data analysis) ▪ Make decisions validated by data, not just logic, or worse, gut instinct (utilize the results that are generated from data analysis)
4. **Continuous & Disciplined approach**	Not one and done! Continuously looking for ways to improve processes

The practice of using Quality Principles is amplifying our natural tendency to resolve problems and issues. Problem solving is very inherent in our day to day activities. The adoption of Quality methods provides us the discipline, guidelines, tools to have efficient, effective work processes. Good news… **We are already doing it!!!**

Overview of Quality & Lean Six Sigma (cont)

History of Lean Six Sigma (LSS)



- Lean originated with Henry Ford in 1913, led to invention of Toyota Production System (at Toyota) after World War II
- Six Sigma originated at Motorola in the 1980s
- Lean Six Sigma coined in the early 2000s
- Over the past 30 years, Lean Six Sigma has saved organizations millions in every industry by:
  - Reducing costs
  - Increasing revenue
  - Improving collaboration between teams
  - All leading up to HAPPY CUSTOMERS!

Overview of Quality & Lean Six Sigma (cont)

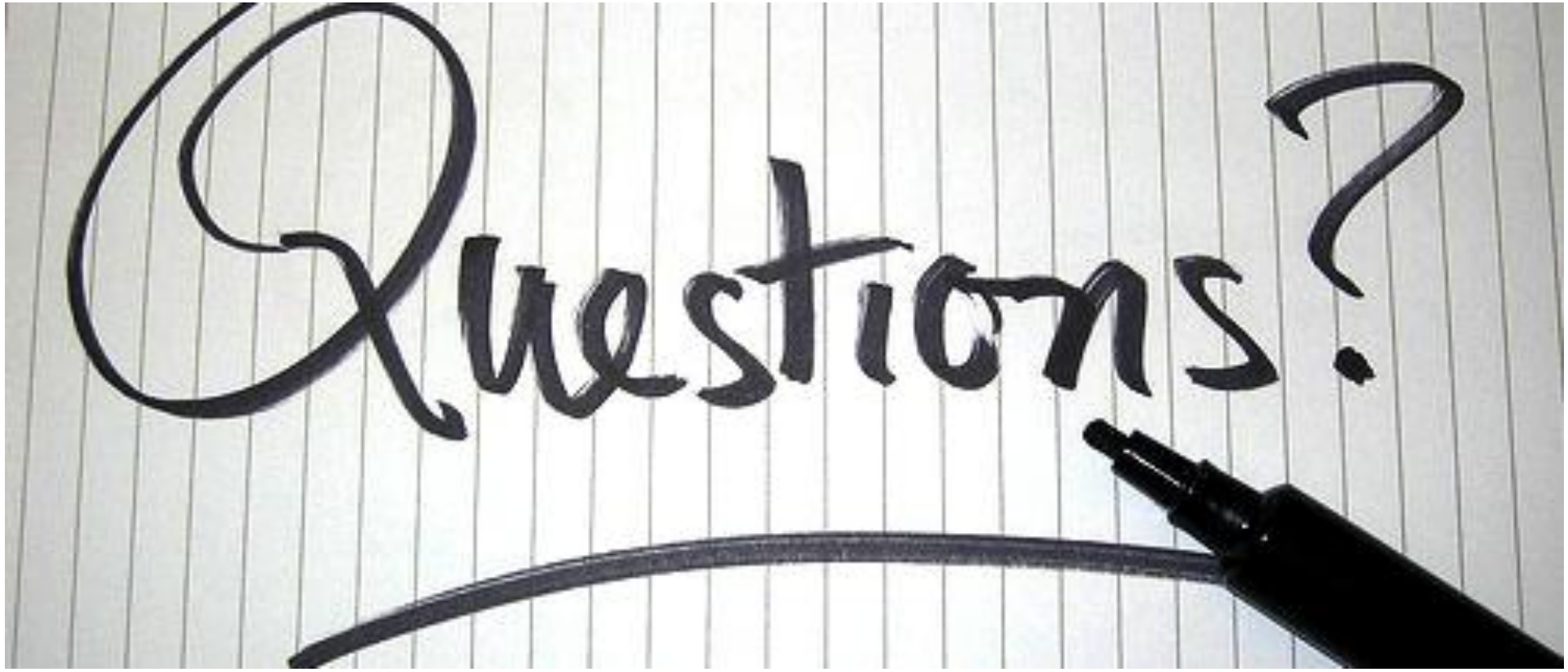
Meaning of Lean Six Sigma

- **Lean** = is the systematic approach to identifying and eliminating waste through continuous improvement.
- **Six Sigma** = the reduction of defects, focus on problem solving, reduction in process variation.
- Combination of the 2 powerful methods results in:
  - Process improvement methodology.
  - Best way to determine root cause of problems, then fix efficiently & effectively.

Overview of Quality & Lean Six Sigma (cont)

BELT/LEVEL	DEFINITION	PROJECT DURATION
Lean Six Sigma Black Belt	Well versed in the Lean Six Sigma Methodology, leads improvement projects, typically in a full-time role. Cross functional projects. D-M-A-I-C	Typical 1 year
Lean Six Sigma Green Belt	Well versed in the Lean Six Sigma Methodology, leads or supports improvement projects, typically as a part-time role. Program level. D-M-A-I-C	Typical 6 months to a year
Lean Six Sigma Yellow Belt	Versed in the basics of the Lean Six Sigma Methodology, supports improvement projects as a part of a team or conducts small projects on a part time basis. D-M-C	Typical 1-3 months
Lean Six Sigma White Belt	Familiar with the basic principles and vocabulary of Lean Six Sigma. A Lean Six Sigma White Belt is typically a person impacted by improvement projects as a stakeholder or who is participating on an improvement project as a team member	

Q & A



Spaghetti Diagram

- What is It?
  - Graphic/Visual representation of the ACTUAL flow of people, information, materials
  - Illustrated on a floor map diagram
  - Finished map looks like “spaghetti”
  - Can be used in Define, Measure, Analyze phase

  - **Purpose**:
    - Expose inefficient process layouts
    - Unnecessary travel distance between process steps
    - Overall process waste

  - Hands-on exercise (call for volunteers)

Lean Concept

- **8 Types of Waste**
  - **WASTE: Activities that consume resources but add no value**
    - **Visible waste e.g. scrap, rework, downtime, excess**
    - **Invisible waste e.g. wait times of people and machines**
- Table follows…

Lean Concepts

WASTE	DEFINITION	EXAMPLES
Overproduction	Generating more information and products than needed	Creating reports no one reads Unnecessary meetings
Transportation	Movement of products and information that does not add value	Retrieving or storing files Carrying documents to and from shared equipment Moving parts or assemblies to multiple staging areas before installing
Motion	Movement of people that does not add value	Searching for files Clearing away files on the desk Gathering information Looking for tools, parts, and equipment to perform a job

WASTE	DEFINITION	EXAMPLES
Waiting	Idle time created when material, information, people or equipment is not ready	Waiting for approvals Waiting for the system to come back up Waiting for inspection Waiting for paint or seal to dry Copy machine A handed-off file to come back
Over processing	Doing more than what the customer requires	Creating reports Removing packaging from parts Breaking down and reassembling equipment Use of inappropriate software
Inventory	More information and/or material on hand than the end-user needs right now	Files waiting to be worked on Open projects Just-in-case inventory anticipated E-mails waiting to be read Unused records in the database
Defects/Rework	Work that contains errors, rework, mistakes or lacks something necessary	Missing information Product carried to the next work station due to late parts Lost records
Under-utilization of staff	Losing time, ideas, skills, improvements, and learning opportunities by not engaging or listening to your employees	Professional staff doing administrative work Busy work Not using staff to their fullest potential

Training – Workshop Overview

Lean Six Sigma (LSS) = data-driven improvement cycle used for improving, optimizing and stabilizing business processes and designs. Core tool used to drive Lean Six Sigma projects.

- **D**efine
- **M**easure
- **A**nalyze
- **I**mprove
- **C**ontrol
- **S**hare

= **D-M-A-I-C-S**

Training – Workshop Overview

Lean Six Sigma Definition Chart		
Define	**D**	The purpose is to define the problem, improvement activity, opportunity for improvement, project goals, customer (internal & external) requirements.
Measure	**M**	The heart of what makes Lean Six Sigma work. Observe the process. Gather data. Map the process in depth.
Analyze	**A**	Make sense of the information and data collected. Use data to confirm source of delays, waste, poor quality, look for patterns.
Improve	**I**	Make recommendations for changes in a process that eliminate defects, waste, costs. Tests, simulations, process mapping
Control	**C**	Ensure that improvements to the process are sustained. Documentation, Training of personnel, put measures in place to prevent regressing
Share	**S**	Inform all stakeholders via email, meetings, newsletter, website , celebrate, share lessons learned

Define phase

- **Definition**: the problem, improvement activity, opportunity for improvement, the project goals, and customer (internal and external) requirements.

- **Tools**:
  - Project Definition document (aka Project Charter document) - handout
  - Process Mapping – examples, hands-on exercise

Define phase

- **Definition**: the problem, improvement activity, opportunity for improvement, the project goals, and customer (internal and external) requirements.

- **Tools**:
  - Project Definition document (aka Project Charter document) - handout
  - Process Mapping – examples, hands-on exercise

Measure phase

- **Definition**: process performance. The heart of what makes Lean Six Sigma work. Observe the process. Gather data. Map the process in depth.

- **Tools**:

  Hands On Workshop: Spaghetti Diagrams (flipchart exercise)

  - Graphical tool used to show physical flow of work or material

Process Mapping

- What is It?
  - Graphic/Visual representation of the ACTUAL flow of people, information, materials
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  - Can be used in Define, Measure, Analyze phase

  - **Purpose**:
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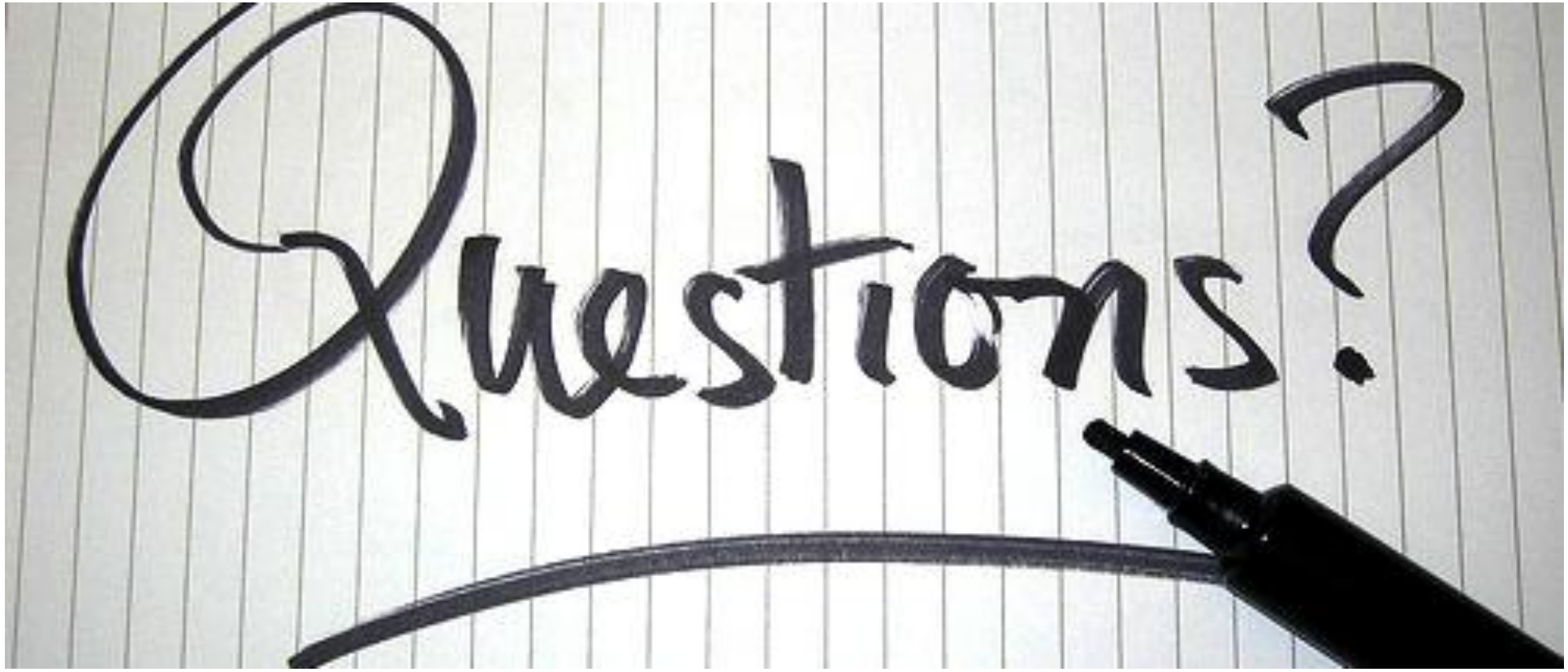
Q & A



Analyze phase

- **Definition**: the problem, improvement activity, opportunity for improvement, the project goals, and customer (internal and external) requirements.

- **Tools**:
  - 5 Whys – hands-on exercise
  - Root Cause Analysis

Analyze phase

STEP 1

Problem/Issue:

My car will not start

STEP 2

WHY? Because the battery is dead

WHY? The alternator is not functioning

WHY? The alternator belt is broken

WHY? Useful service life of belt exceeded

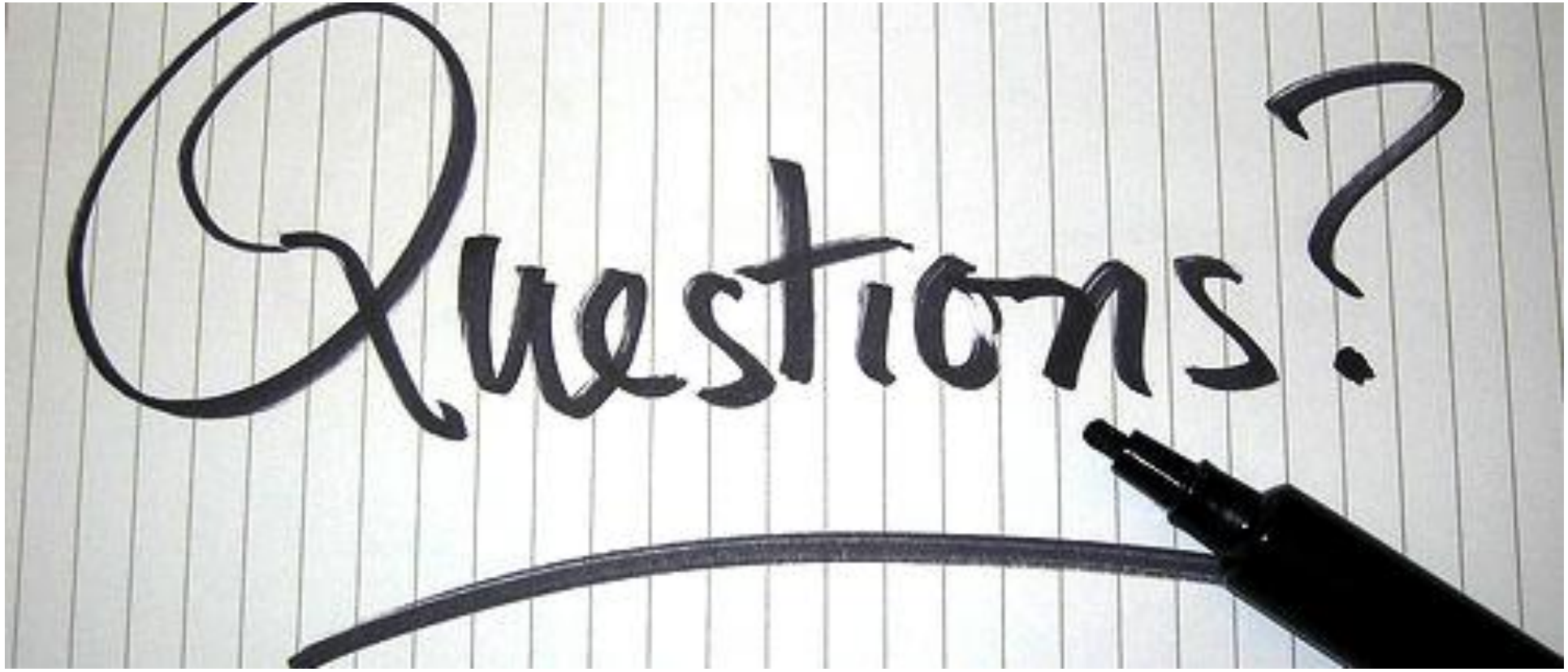
ROOT CAUSE → **WHY?** Belt was never inspected/serviced

Analyze phase

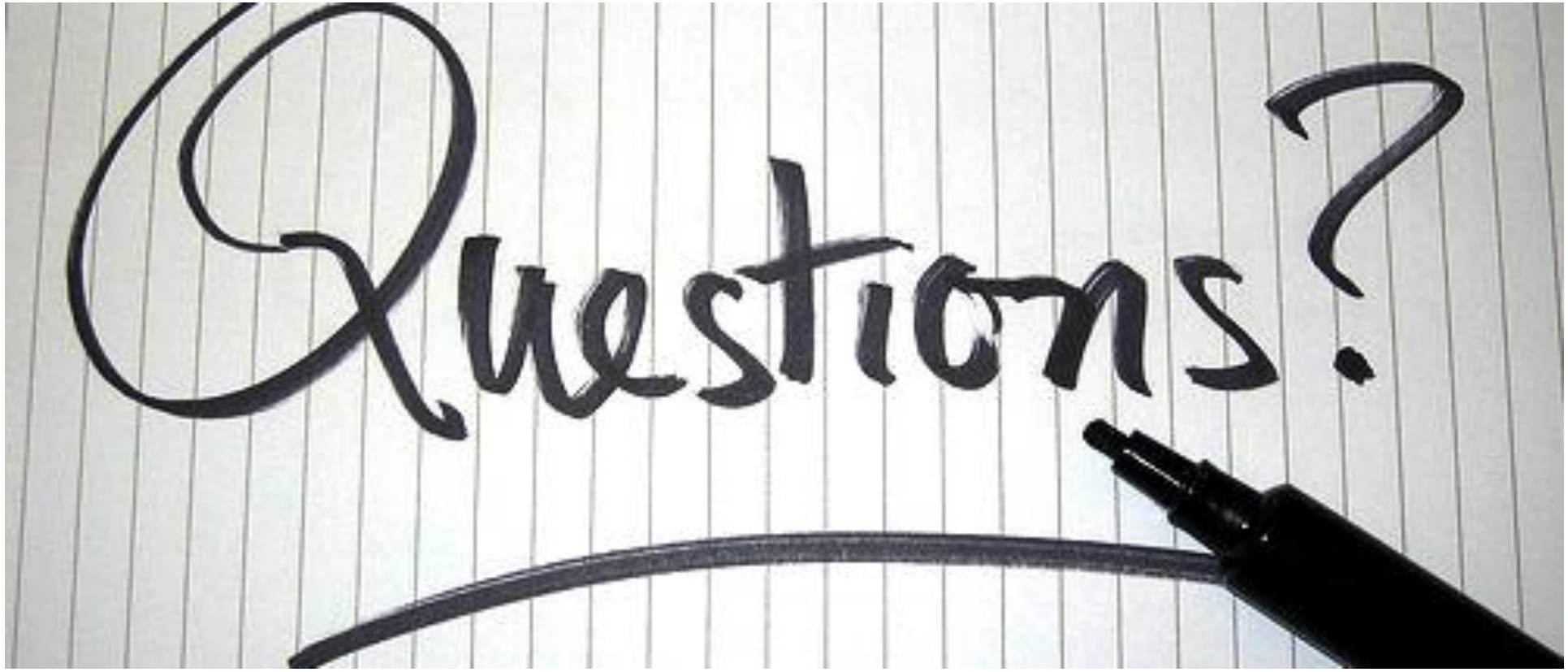
- **You Tube video:** http://www.youtube.com/watch?v=P6iLULz_wOg

- **Tools**: 5 Whys – hands-on exercise (flipchart paper)

Q & A



Q & A



Share phase

Tacoma-Pierce County Health Department
Healthy People in Healthy Communities

The Latest

Sept. 17, 2015 **Volume 8, Issue 19**

In This Issue

Department Calendar

Sept. 24	xMT
Oct. 3	Heart Walk

Editor

Edie Jeffers

Message from the Director

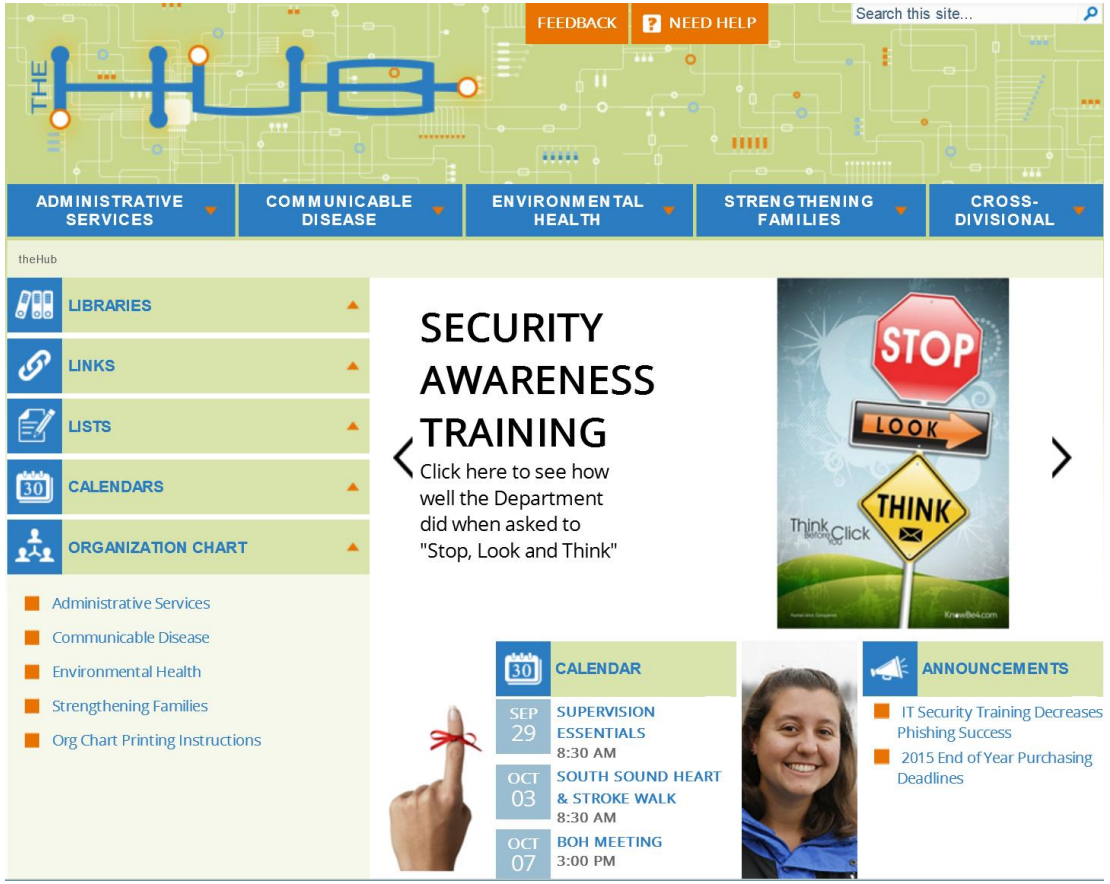
The Health Department and its partners are helping transform how Pierce County residents will experience health care in coming years. In February 2014, we convened the Pierce County Health Innovation Partnership to develop innovative ways to improve our community's health and prepare our county's health system for coming changes.

The Affordable Care Act expanded insurance coverage and sketched out changes to health care delivery, priorities and payment. In Washington, the State Health Care Innovation Plan (Healthier Washington) includes three core strategies for change:

1. Moving from a fee-for-service to a health outcomes-based system that rewards quality over quantity. Providers will have to improve health behaviors, prevent and not just treat illness, and engage patients in their own care.
2. Integrating physical and behavioral health, and addressing social and economic needs such as housing, food, education and employment.
3. Building healthier communities through regional collaboratives called Accountable Communities of Health (ACH).

As you heard at the All Staff meeting earlier today, the Health Department is leading Pierce County ACH efforts. Our staff is focused on broadening the partners involved: social services, housing, transportation, education, business, labor, faith, health care providers and community members.

Stay tuned for updates as we move forward. In the meantime, check the



Final Thoughts

Personal Motto: “Quality is Why, What, Where, Who and How You Do!”

What does this mean?	
When	Always have a “Quality” mindset
What	How are you utilizing your resources?
Who	Who is your customer? Internal, External, All Stakeholders, Voice of Customer
How	Utilize a mindful, thoughtful, disciplined, standardized approach
Why	Ask WHY are we doing this? Why this way? Is there another way? Share & Learn!

Collaboration & Cooperation – all hands on deck – problems solving involves collaboration: cool video to help that illustrates this… https://www.youtube.com/watch?v=lNaI8j0f7qY

TEST YOUR KNOWLEDGE Click

Statement: Waste = Activities that consume resources but add no value!

True or False?

TEST YOUR KNOWLEDGE Click

What is Lean?

What is Six Sigma?

TEST YOUR KNOWLEDGE Click

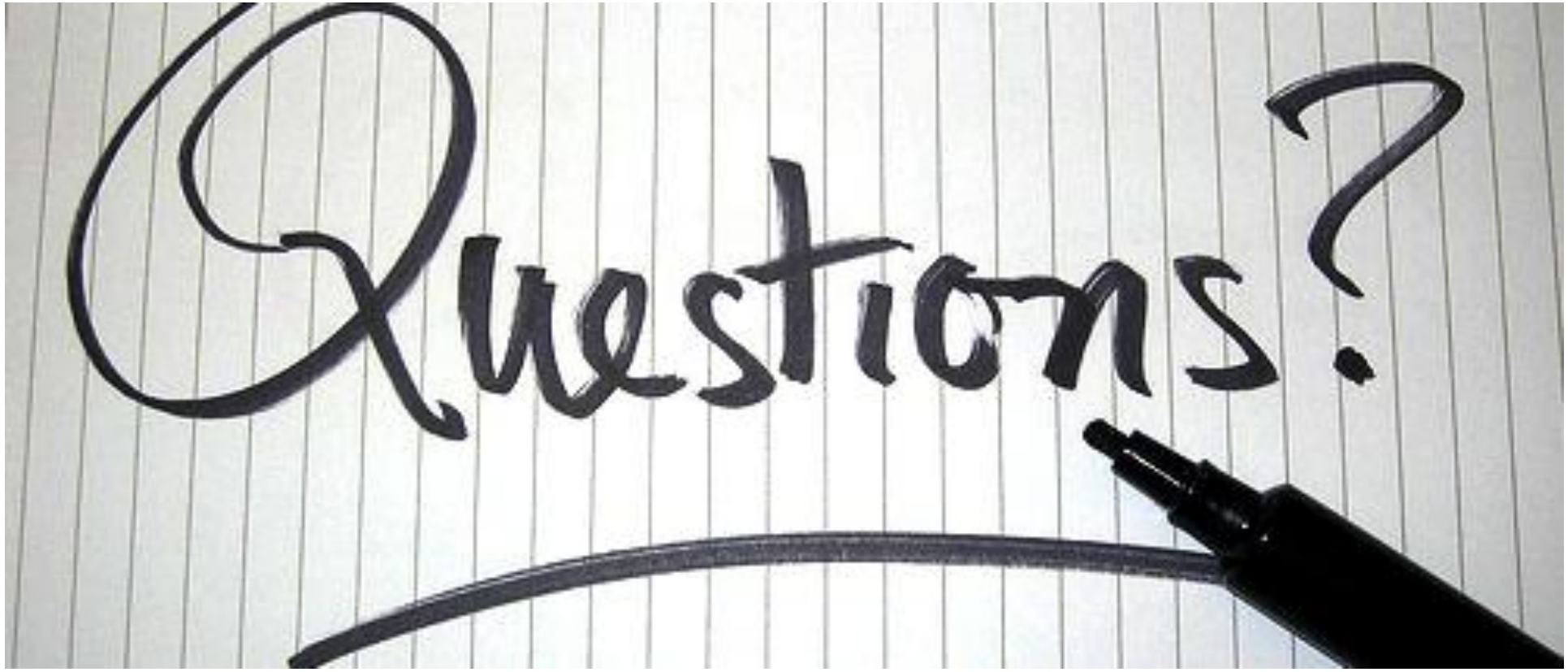
Lean Six Sigma is a…

a) Mindset for solving problems
b) Method for solving problems
c) Toolkit for solving problems
d) All of the above

TEST YOUR KNOWLEDGE Click

Name the 8 Types of Waste ☺

Q & A



Bio

Trainer: Modinat Ogun - Quality Management Geek , dedicated to the pursuit of excellence with 22 years of project management experience. *Motto: "Quality is Why, What, Where, Who and How You Do!"*

Specialties: Quality, Operations & Performance Management | Process Improvement | Stakeholder Management | Lean Six Sigma Mentor, Coach, Trainer | Change Agent (Prosci) | Cross-functional Project Management | Client Care

Industries: Public Health | Specialty Pharmacy | Computer Manufacturing | Multimedia Development (IT) | Film & Theatre | Client Care-Customer Fulfillment

Qualifications: ASQ Certified Black Belt, Certified Manager of Quality/Organizational Excellence, Certified Quality Improvement Associate | Lean Six Sigma Black Belt

Professional affiliations: American Society for Quality (ASQ), Project Management Institute (PMI), Process Excellence Network (PEX)

Brief

- The Washington State Environmental Health Association (a non-profit professional organization composed of local governmental public health staff).
- Attempting to put on training dedicated to the LEAN principles as well as streamlining processes and creating efficiencies.
- The Association had been working with the State Auditor's Office to provide this training, but we have been notified that their staff will not be able to participate.
- The training is currently scheduled for September 29th in Tacoma.
- I am reaching out today to see if there is a chance that you would be available, on such short notice, to offer the LEAN training.

Resources

Lean Six Sigma Trainer Contact:

Modinat Ogun, ASQ CSSBB, CMQ|OE, CQIA, LSSBB

Quality Management Consultant

253-344-3655

PHCE Contact:

Cindan Gizzi, MPH

Community Assessment Manager

253-798-7695

Public Health Centers for Excellence

- CSSBB Primer, Quality Council of Indiana, 2012
- Bialek, R., Duffy, G.L., Moran, J.W., (2009). The Public Health Quality Improvement Handbook. ASQ Quality Press
- iSixSigma: Six Sigma Resources for Six Sigma Quality - Web site: www.isixsigma.com
- Kubiak, T., & Benbow, D. (2009). The certified six sigma black belt handbook (2nd ed.). Milwaukee, Wis.: ASQ Quality Press.
- Public Health Performance Management Centers for Excellence Web site: www.doh.wa.gov/PHIP/perfmgtcenters
- Certified Quality Manager Handbook
- ASQ – www.asq.org
- Wikipedia - http://www.wikipedia.org/
- Moresteam: https://www.moresteam.com/new-to-lean-six-sigma.cfm
- SixSigma Training: www.sixsigmatraining.org