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Transforming the Built Environment

Qatar Deserves The Best

"The Lean Construction Institute of Qatar
yet again fails to let you down"

We bring you

Lean Safety in Construction

Earn 1.5 CEU

Webinar Facilitator

Mark Rounds, P.E.
Assistant Professor
Milwaukee School of Engineering

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Learning Objectives

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By the end of this session, participants will be able to:

1. Discuss how a Lean Safety Culture can make employees safer, happier, healthier, and more productive.
2. Use the Lean tool "5-Why" to find the true Root Cause Analysis of an accident.
3. Employ Gap Analysis to identify the difference between a safety problem and a safety result.
4. Examine the difference between *fact finding* and *fault finding* and how this difference affects a company's ability to solve root cause problems

Safety Program

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- Think about your Safety Program
  - How would you describe your Safety Culture?
  - Do you have a Safety Slogan? What does it mean?
  - How effective is your Safety Program?

Safety Slogans

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Safety

- *Definition: freedom from the occurrence or risk of injury, danger, or loss*
- Can “SAFETY” be a goal?
- How do you go from Compliance to Desire?

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Beliefs

- Do you believe all your employees show up every day to work safely, be productive, and produce a quality product?

“The truth is that most people want to be successful and will work hard to get there. Good leaders recognize this and collaborate with them, knowing if their people succeed they will as well.” -Lee Ellis

Lean

Improving customer value by eliminating waste

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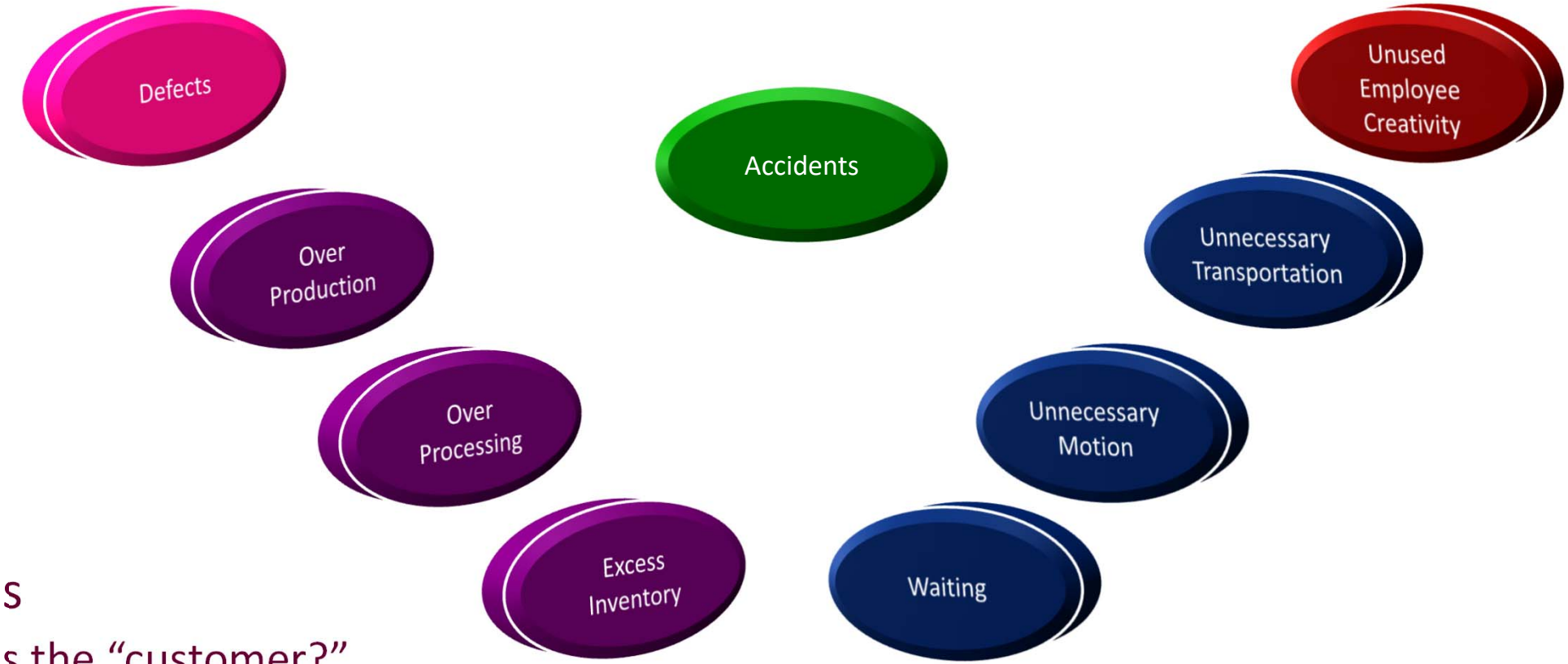
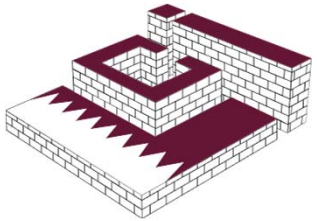


Eight Wastes

- Who is the “customer?”
- Where does “Safety” fit in?

Lean Safety



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- It is a **Culture** not a set of tools
  - Lean is a culture of *continuous improvement* that is focused on increasing the value for the customer and developing employees to resolve process issues
  - Lean emphasizes *Respect for People*

- It is a **Mind Set** not a program

- Based in the desire to be a **World Class Safety Organization**

  "World class organizations do not tolerate preventable accidents."

  -Secretary of Defense Donald Rumsfeld

Accident

Is This a Problem?

Accident

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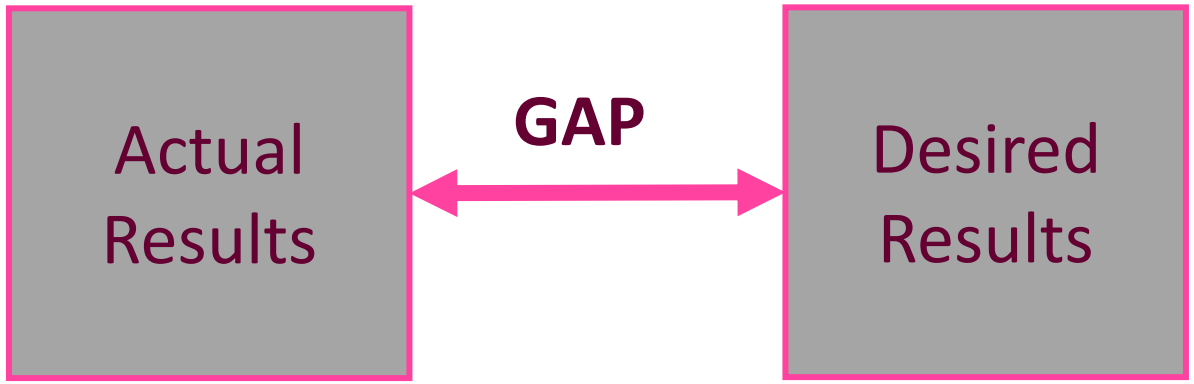

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Definition:

An undesirable event that usually results in harm, injury, damage or loss

Process to Find the Problem (Reflection)

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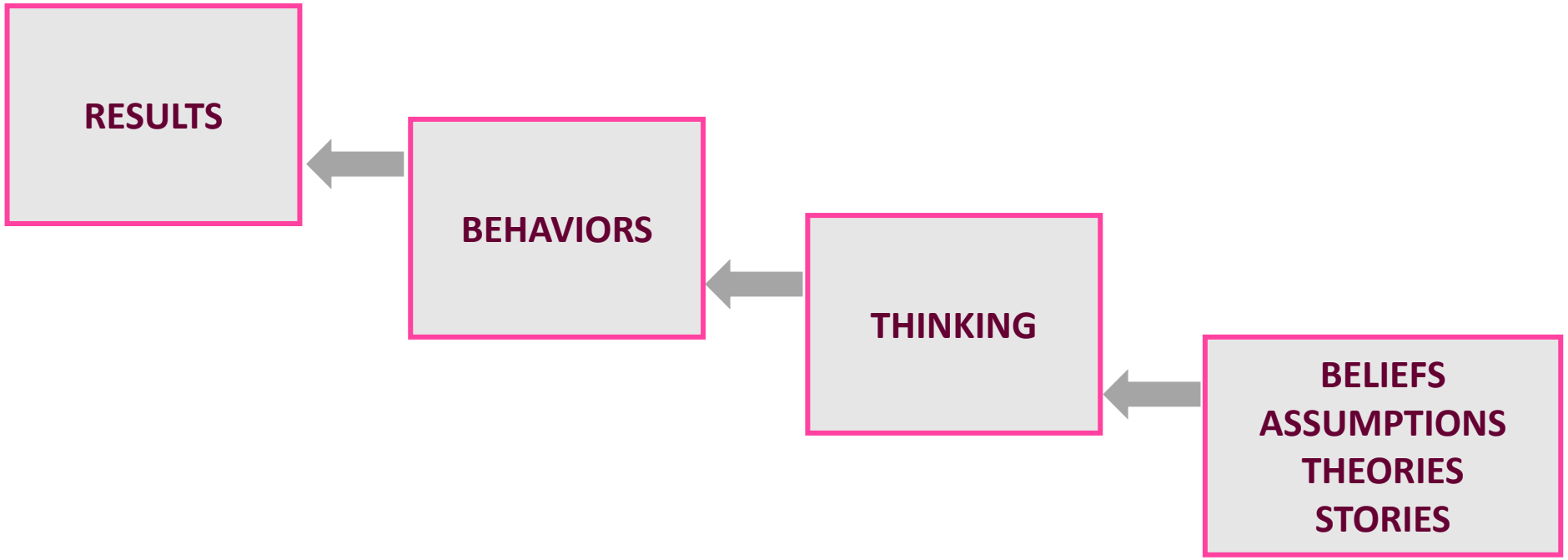
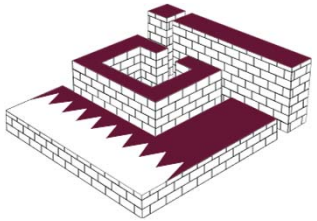


Beliefs affect Results



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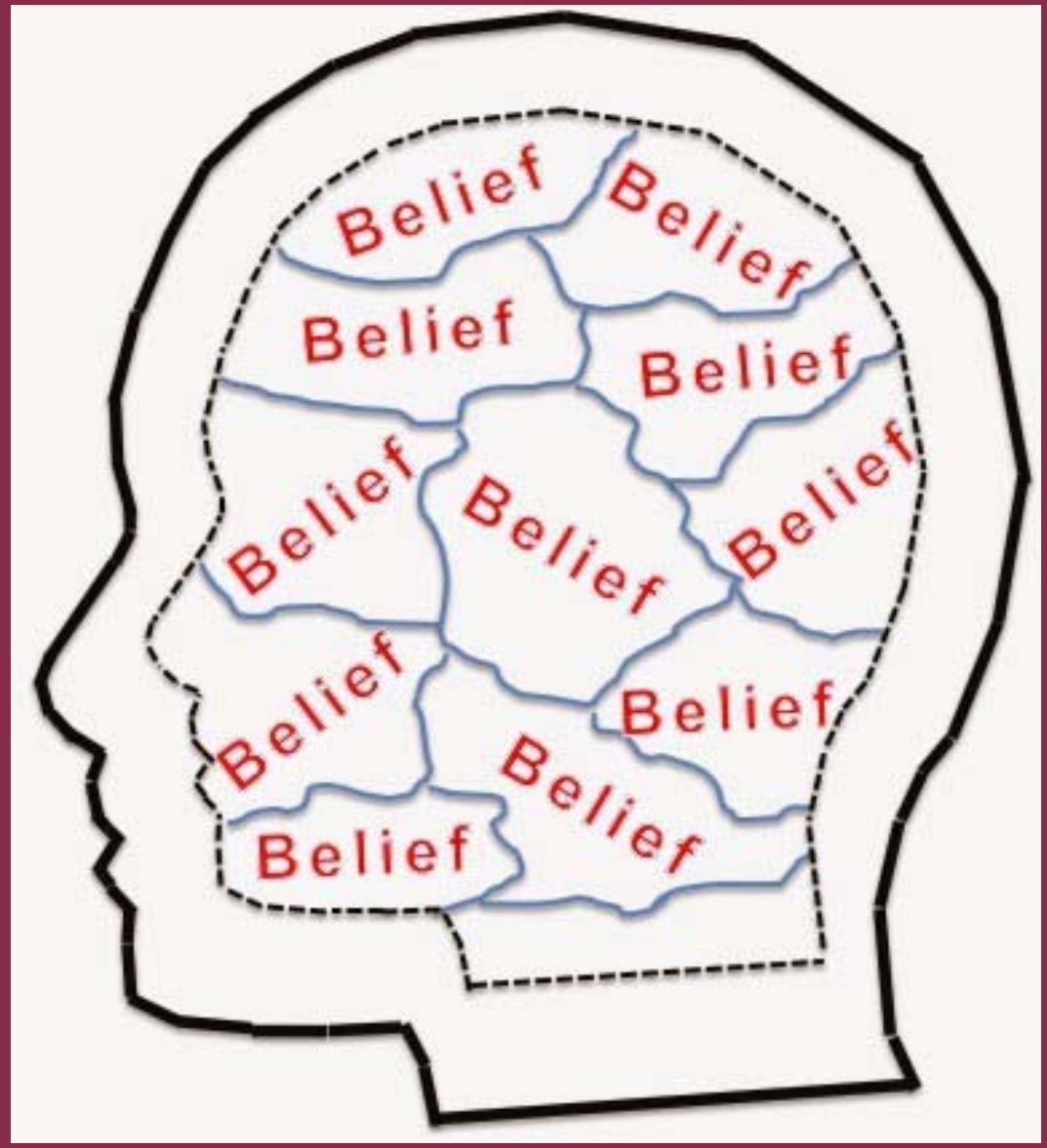
Results	Behaviors	Thinking	Beliefs
• Fall from the top step of a step ladder	• Stands on the top step of a step ladder and reaches	• I only need to reach one item and then I'm done • The right ladder is back in the trailer – It will take too long to bring it here • I want to improve production, so I don't have time to go back and get the right ladder	• I have stood on the top of a step ladder before and not been hurt • The "warning" on the top step is for clumsy people – I am not clumsy • I am expected to get the job done • Getting the job done justifies taking a safety shortcut

What Do You Believe?

- Employees come to work to be **Productive** and **Safe**
- **People** are the key to your company success
- **ALL** jobsite accidents are preventable
- Language has a powerful impact



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Accident Investigation

- Incidents , Near Misses & Accidents are **Opportunities to Learn**!
- Root Cause Analysis
  - Utilize 5-Why
- Behavior is *NOT* a root cause
  - It is the **Process** not the Person
  - **Fact** finding not fault finding
- Key Question:
  - “What happened in our **Process** that caused the accident to occur?”

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Example

SKYTRACK ROLLOVER

Building a Lean Safety Culture

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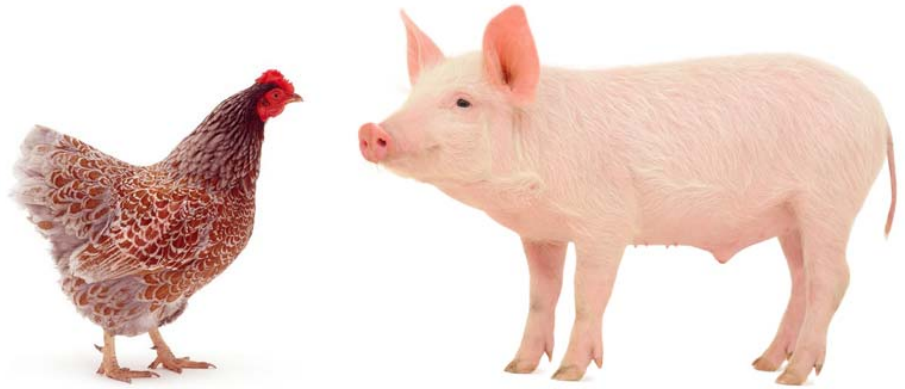
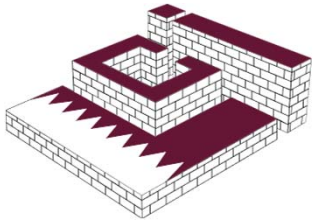
- Start with **Trust**
  - Engaging employees requires **Trust**
  - Earn Trust by giving **Trust**
- See employees as **People**



- Change from focus on employees as a **Cost** to focus on **Engaging People** as a **Resource**
- Management must be **Engaged** and **Committed,** not just participate

Building a Lean Safety Culture



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- Impacting People
  - Never take *Safety Risks*
  - Plan for quality, safety, and productivity
  - Never put productivity or customer needs ahead of *Working Safely*
  - Stop and Think before taking *Non-Standard Actions*
  - Guard against Complacency when completing *Routine Tasks*
  - The Words we use are *Important*
  - **Caring about employee safety is 24-7**

People don't care how much you know about Safety until they know how much you care about their Safety

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Lean Toolbox

P – D – C – A

- **PLAN**
  - Objectives – Expectations – Metrics
  - Get input from the front-line workers
- **DO**
  - Implement the Plan
- **CHECK**
  - Study actual results – Look for deviation
- **ACT**
  - Adjust and reset the plan if results vary from expected

Lean Toolbox

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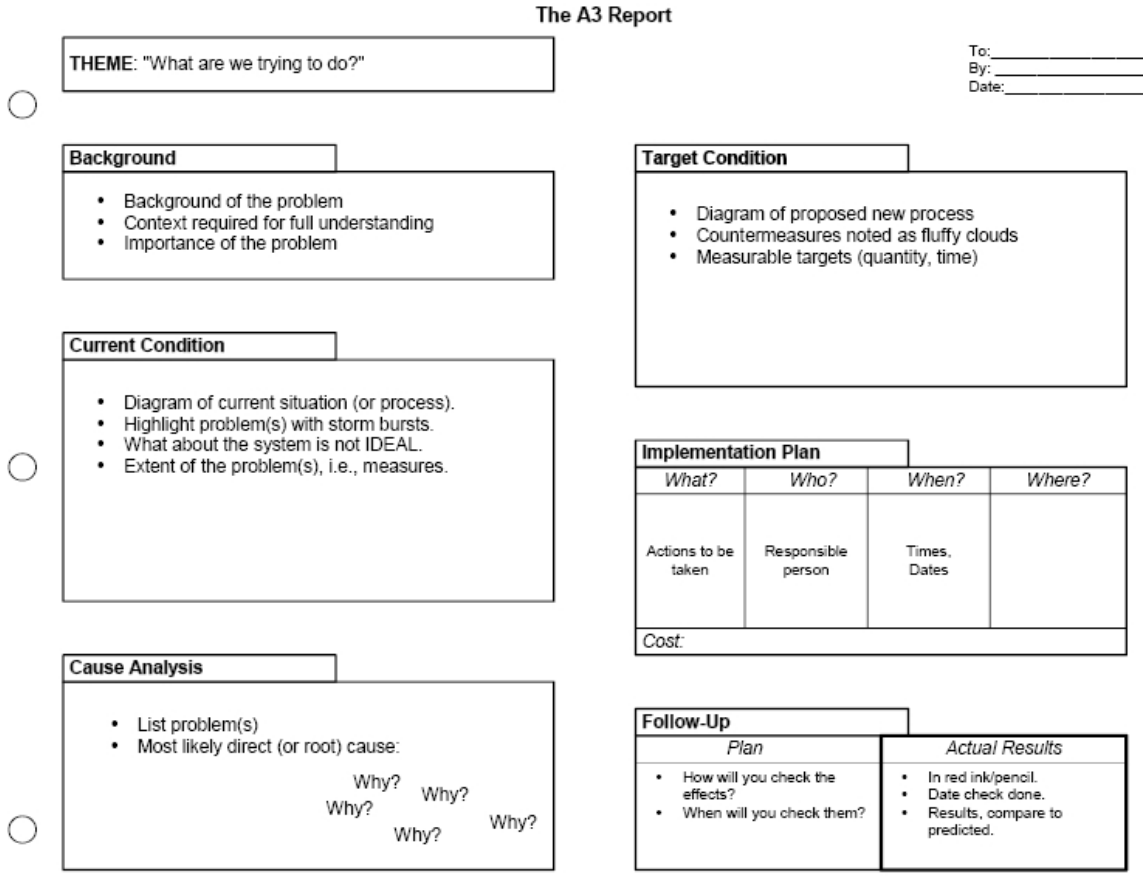
A3

- Define the Problem
- Describe the Current State
- Discover the Root Cause (5-Whys)
- Discuss the Solution (PLAN)
- Implement the Solution (DO)
- Assess the Results (CHECK)
- Adjust as needed (ACT)



The A3 Report

THEME: "What are we trying to do?"

To:_____
By:_____
Date:_____

Background

- Background of the problem
- Context required for full understanding
- Importance of the problem

Target Condition

- Diagram of proposed new process
- Countermeasures noted as fluffy clouds
- Measurable targets (quantity, time)

Current Condition

- Diagram of current situation (or process).
- Highlight problem(s) with storm bursts.
- What about the system is not IDEAL.
- Extent of the problem(s), i.e., measures.

Implementation Plan

What?	*Who?*	*When?*	*Where?*
Actions to be taken	Responsible person	Times, Dates	
Cost:			

Cause Analysis

- List problem(s)
- Most likely direct (or root) cause:

Why? Why? Why? Why? Why?

Follow-Up

Plan	*Actual Results*
• How will you check the effects? • When will you check them?	• In red ink/pencil. • Date check done. • Results, compare to predicted.

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Q & A

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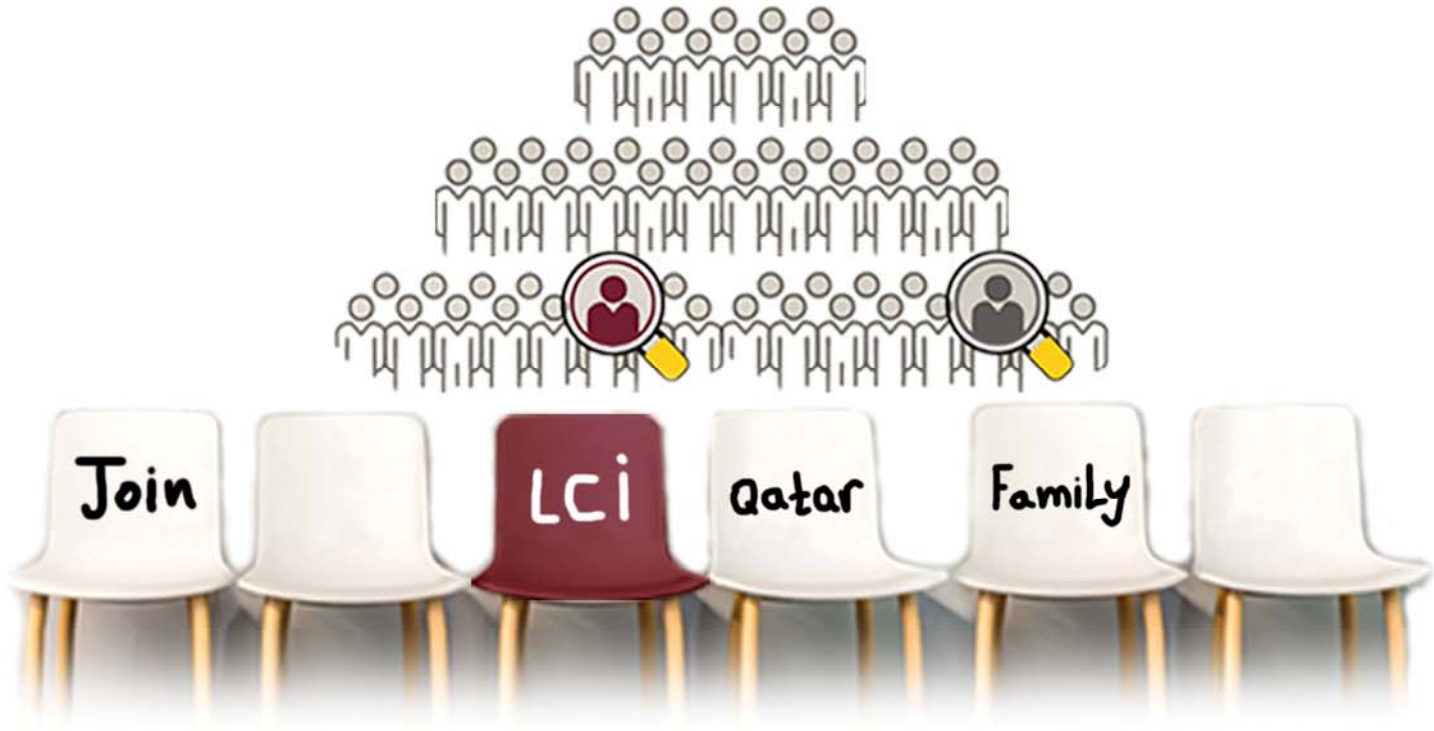
المعهـد القطـري للتصميم والتشييد الفعّال

تغييـر بيـئة تصمـيـم وتشيـيـد المشـاريـع



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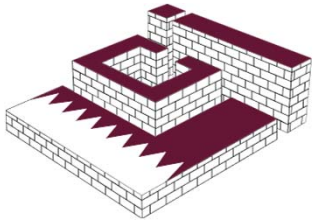

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Upcoming Events

AGC of America
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IMPROVING THE PROJECT DELIVERY PROCESS

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Program Facilitator

EARN 35 CEUs

Dr. Tariq Abdelhamid CM-Lean, PMP
Chief Lean Enterprise Officer
Michigan State University

Date	Unit	Time
Jan 23	1 x 2	8:00 AM - 5:00 PM
Jan 24	3 x 4	
Jan 25	5	
Jan 26	6	
Jan 27	7	

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EDUCATION PROGRAM

CM-LEAN
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Venue Hilton DOHA

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