Adding Kaizens to your Kanban

A Visual Facilitation Approach to Create Prioritized Project Pipelines

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ASQ World Conference – Session M12

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Learning Objectives

In this session you will:

1. Leverage a "Faster and Better" visual facilitation approach to Identify opportunities for improvements

2. Learn the difference between Kaizen types

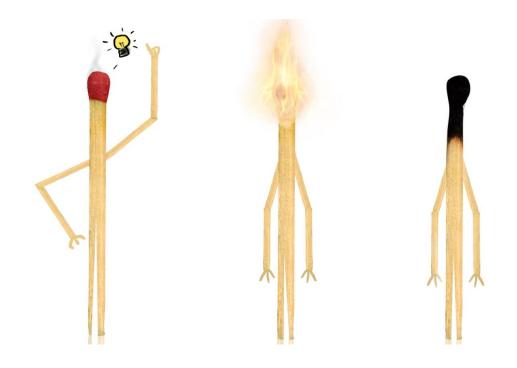3. Discover how a Kanban can be used to prioritize projects

What Do You Do Every day?

Would you like to impact an entire organizations?

Why Do Project Based Programs Fail?

1. Poor Project Selection

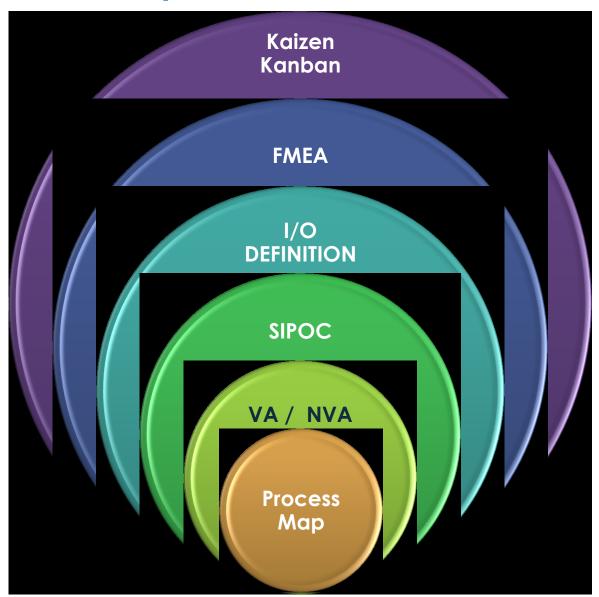2. Lack of Facilitation Skills

3. Failure to Sustain

Faster and Better Visual Facilitation

- Complements existing quality initiatives

- Combines various existing toolboxes

- Leverages the experience of all participants

- Compiles and prioritizes improvement opportunities

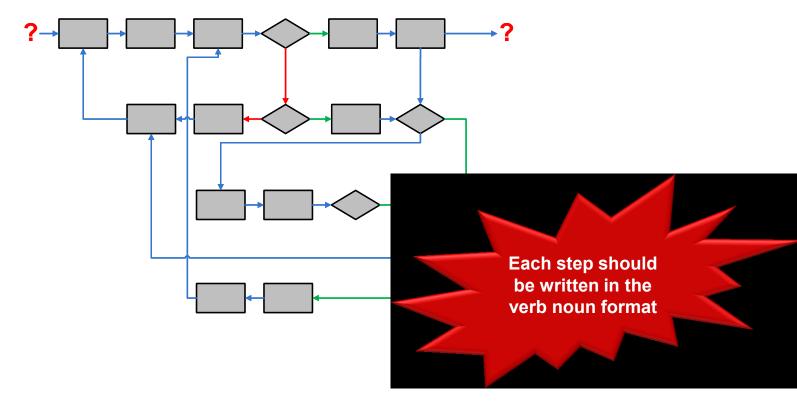- Links improvement initiatives to key business objectives

Our roadmap

Kaizen
Kanban

FMEA

I/O
DEFINITION

SIPOC

VA / NVA

Process
Map

What is a Process Map?

Each step should be written in the verb noun format

A process map is a visual representation of the steps required to complete a task

7 Ways
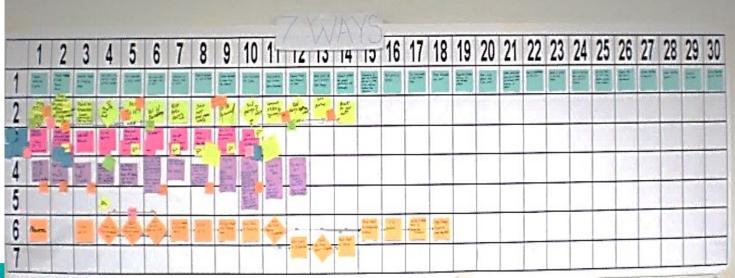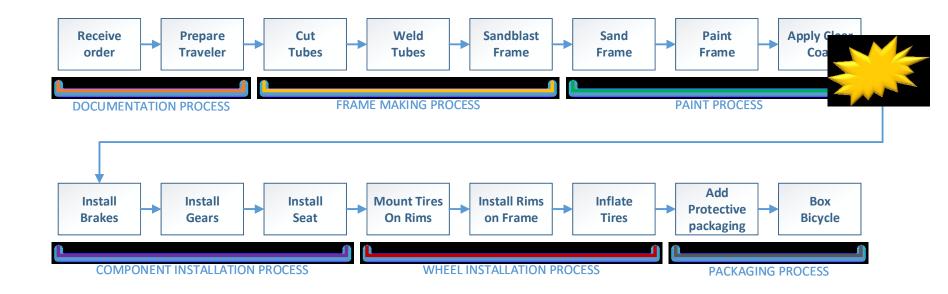
Applying the 7 Ways to Process Mapping

Receive order	Prepare Traveler	Cut Tubes	Weld Tubes	Sandblast Frame	Sand Frame	Paint Frame	Apply Clear Coat

DOCUMENTATION PROCESS   **FRAME MAKING PROCESS**   **PAINT PROCESS**

Install Brakes	Install Gears	Install Seat	Mount Tires On Rims	Install Rims on Frame	Inflate Tires	Add Protective packaging	Box Bicycle

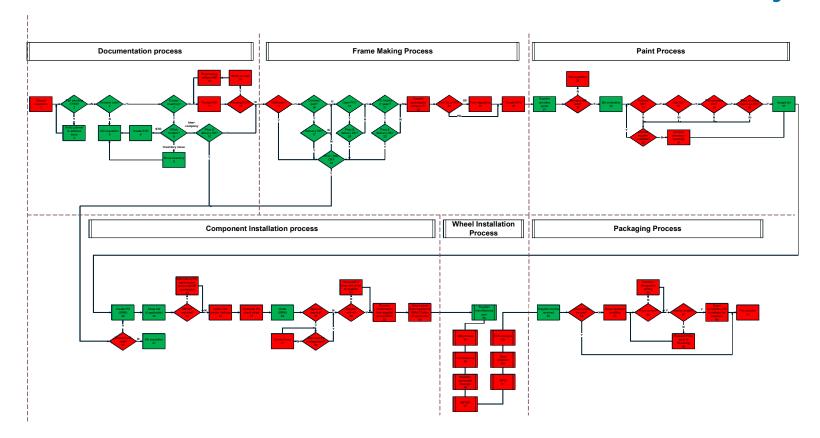**COMPONENT INSTALLATION PROCESS**   **WHEEL INSTALLATION PROCESS**   **PACKAGING PROCESS**

A Process Map provides the medium to display **O**pportunities **F**or **I**mprovement (OFI)

Process Map Exercise

Value Added / Non Value Added Analysis
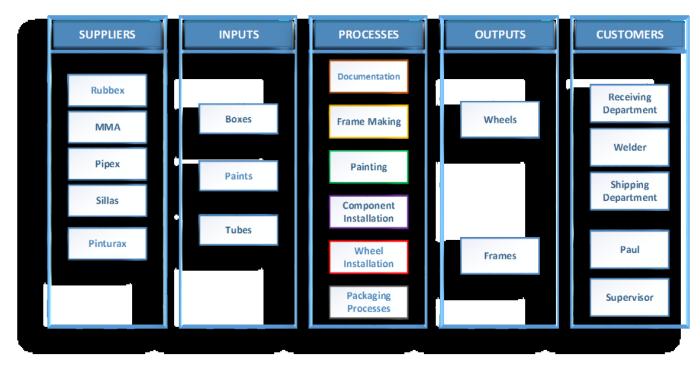

🟢 **Value Adding Step (VA)**

🔴 **Non-value Adding Step (NVA)**
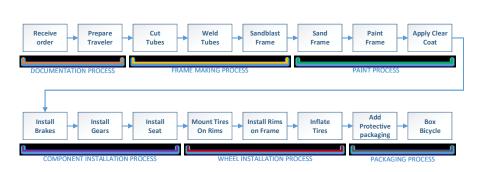
Value Added / Non Value Added Exercise
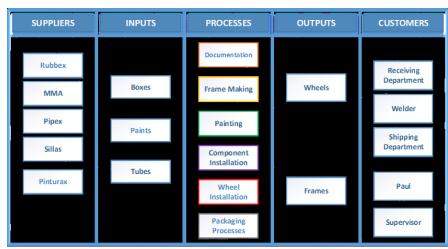
Traditional SIPOC Diagram

A methodology used to capture and display: **S**uppliers, **I**nputs, **P**rocess, **O**utputs and **C**ustomers associated with each step in a process.
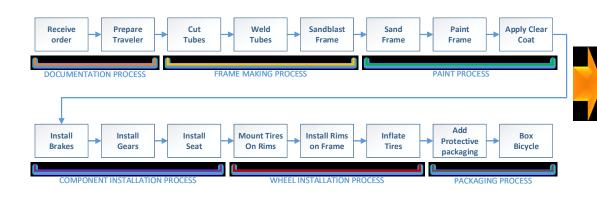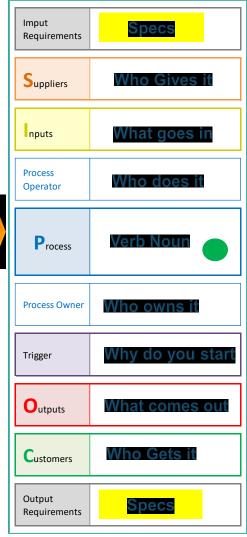
Traditional SIPOC

Traditional SIPOCs don't clearly show all linkages
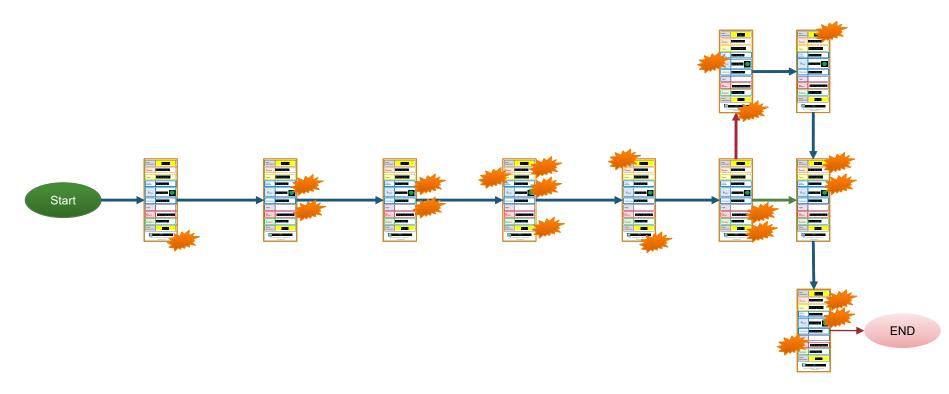
Enhanced SIPOC Box (ESB)

Process Map enhanced with ESBs

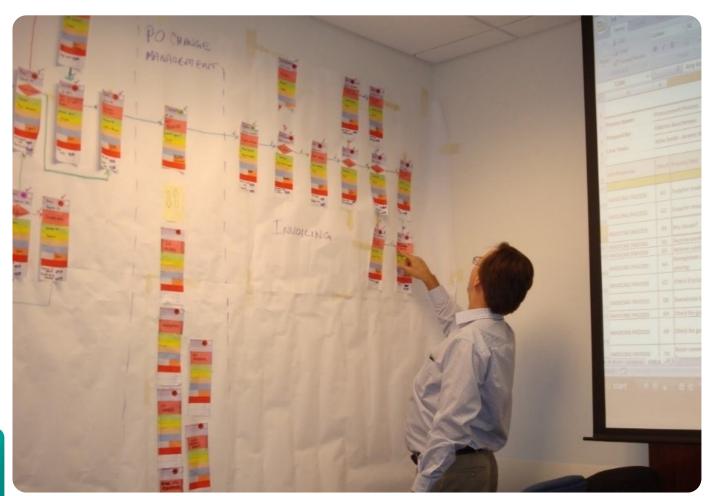# Enhanced SIPOC Example

Enhanced SIPOC Exercise
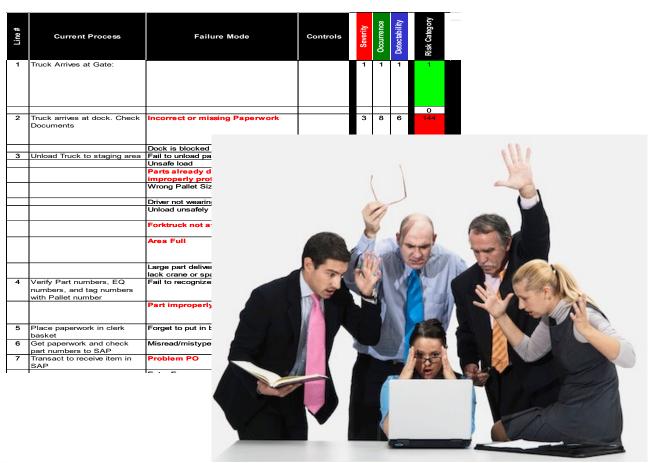
Failure Mode and Effect Analysis (FMEA)

Failure Mode and Effect Analysis (FMEA) is a proactive tool used to assess, manage, and reduce risk associated with the failure or potential failure of products, processes, services, and other systems before they occur.
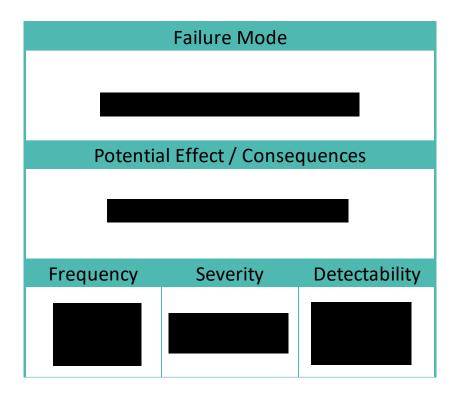
Traditional approach to FMEA
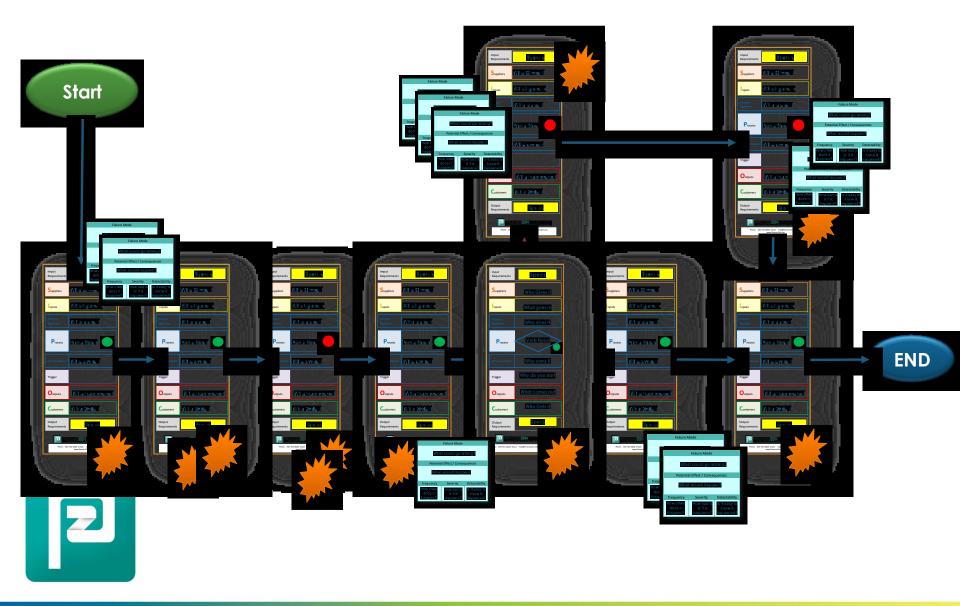
FMEA sessions can be time consuming and frustrating

Failure Box (F-Box)

Failure Mode
████████████████████
Potential Effect / Consequences
████████████████

Frequency	Severity	Detectability
████████	██████	████████

Process Map enhanced with F-Boxes

Risk Priority Number Calculation

Potential Failure Mode and Effect Analysis (Process FMEA) & VA/NVA Analysis

Process Name: Bicycle Assembly   **Department:** Mountain Bikes   **FMEA #:** FMEA 2010 - 002

Prepared By: Julia Tran   **Process Owner:** Leandro Garve   **FMEA Date:** May 18 2016

Core Team: Mike - Jessica - Harris - Cammy - Jorge - Donald - Pedro - Naila - Conrad - Kiera - Michelle

Sub-Processes	Step #	Process Step	Potential Failure Mode(s)	Potential Effect(s) of Failure	Frequency	Severity	Detectability	RPN
Frame making Process	3	Cut Tubes	Tubes too long	Rework and delay	3	2	1	6
Frame making Process	5	Cut Tubes	Tubes cut at wrong angle	Scrap	5	4	5	100
Frame making Process	4	Cut Tubes	Tubes cut too short	Scrap	3	6	1	18
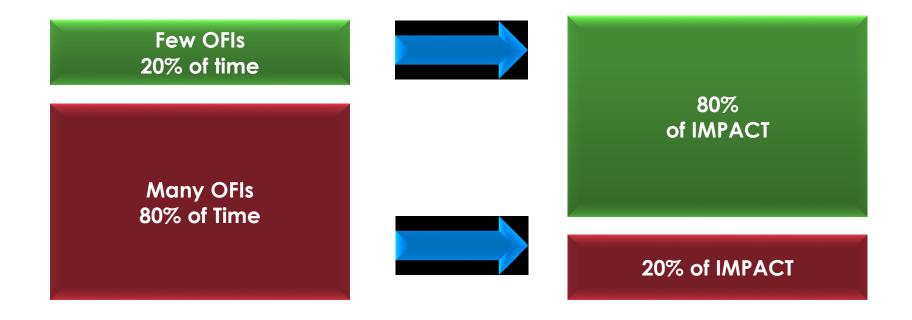
**Risk Priority Number =
Frequency x Severity x Detectability**

Failure Mode and Effect Analysis Exercise

80 / 20

Few OFIs 20% of time	→	**80% of IMPACT**
Many OFIs 80% of Time	→	**20% of IMPACT**

Sort the FMEA by RPN and focus on top 20% of Failure Modes

Write Problem Statements for Selected OFIs

- **Who** is affected by the issue OR who discovered the issue/trend?

- **What** is the problem

- **When** did it occur (date, time, etc.)?

- **Where** the problem took place (room, location, etc.)

- **Extent or magnitude** of the situation?
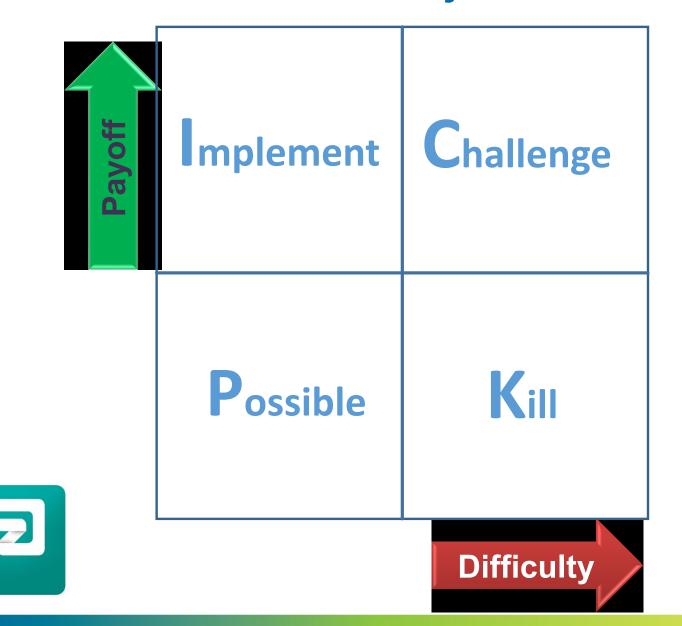
Compile Problem statements

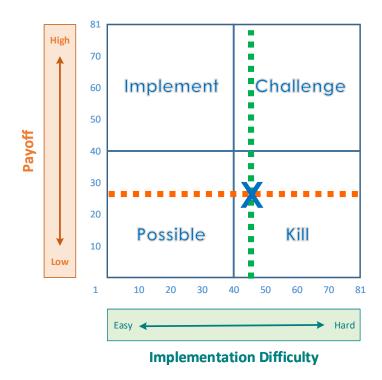| Failure Mode	Potential Cause(s)	Current Process controls	Problem Statements	Potential Project Idea

Determine which Projects to Pursue

Enhanced PICK Chart

IMPLEMENTATION Difficulty
= Time x Resource type
= X coordinate

Duration	Score
Short	1
Medium	(5)
Long	9

Ressource Type	Score
Individual	1
Localize team	5
Cross functional team	(9)

BENEFIT
= Delay x Impact Magnitude
= Y Coordinate

Delay	Score
Long Term	1
Mid Term	(5)
Short Term	9

Impact magnitude	Score
Localized	1
Department Wide	(5)
Plant Wide	9

Payoff — High / Low

| | Implement | Challenge |
| | Possible | Kill |

Implementation Difficulty — Easy ↔ Hard

What is a Kaizen?

改善

kai
"change"

zen
"good"

Team event to quickly break apart & rebuild
a process to function better

Kaizen Types

| Point Kaizen	Mini Kaizen	Kaizen Blitz	Flow Kaizen	Supply Chain Kaizen
Individual Workstation	**Work cell or Line**	**Complex Local Issue**	**Dock to Dock Value Stream**	**Multiple Companies**
• **Waste** • **Tool location** • **Ergonomics** • **Poke Yoke**	• **Workflow** • **Cell Layout** • **Line balancing** • **5S**	• **Team forms for the specific purpose of the event**	• **Cross Functional Teams** • **Process Issues** • **System Issues** • **Organizational Issues**	• **Part-time representatives from participating companies**
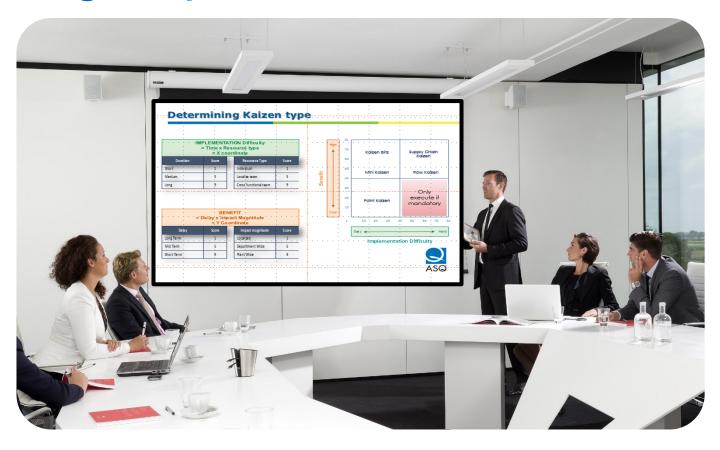
Kaizen Types and PICK chart

Leverage Sponsors and Stakeholders

Sponsors and stakeholders recommend path forward

What is a Traditional Kanban?

Kanbans signal to workers
what to build next or what parts to retrieve

Kaizen Kanban Cards

What is a Kaizen Kanban?

| POINT Kaizen | MINI Kaizen | Kaizen BLITZ | FLOW Kaizen | SUPPLY CHAIN Kaizen |

Kaizen Kanbans are communication boards
to display prioritized project pipelines

Characteristics of Kaizen Kanbans?

- Visual communication tools

- Based on traditional Kanbans principles

- Visible to all levels of employees within the organization

- Used by improvement teams to coordinate project selection and execution based on complexity and return on investment

Kaizen Kanban Exercise

Poll Question # 1:

Do you think a Kaizen Kanban could help your organization focus on the right projects?

Poll 1 - …

Poll Question # 2:

How many kaizen Kanbans should be used in a company at any time?

Poll 2 - ...

Poll Question # 3:

How often should a company update the kaizen Kanban?

Poll 3 - : [...](#)

Learning Objectives Recap

In this session we:

1. Leveraged a "Faster and Better" visual facilitation approach to Identify opportunities for improvements

2. Learned the difference between Kaizen types

3. Discovered how a Kanban can be used to prioritize projects

Questions   Comments   Keepers   Suggestions

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"It all really helps"

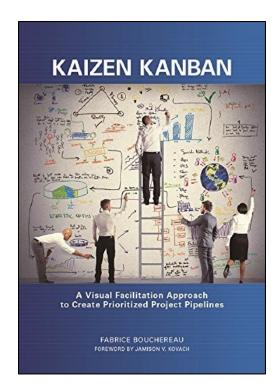Fabrice Bouchereau, PE, PMP, SSBB

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To learn more…

About **Fabrice Bouchereau**:
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- Phone: 305.761.6600
- Find his book, "***Kaizen Kanban, A Visual Facilitation Approach To Create Prioritized Project Pipelines***" in the ASQ Bookstore at www.asq.org/quality-press/

About the topic:
- Search ASQ's Knowledge Center @ www.asq.org/knowledge-center/

Now that you have a spark…

…go start a fire with your team