

Executing Effective Process Improvement in Your Organization

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Today

- Welcome – introduction to me
- Process Improvement Basics
 - Model for improvement
 - Process Improvement Tools
- Broad Process Improvement techniques

Hi!

- MPH from Ohio State University
- Work for OhioHealth Group, Clinically Integrated Network
- Certified Yoga instructor
- Ran first marathon this month!
- Other interests including reading and traveling
- Loves improvement!
- Certified Improvement Coach through IHI

What is IHI?

- **Institute for Healthcare Improvement**
- **Vision:** Everyone has the best care and health possible.
- **Mission:** Improve health and health care worldwide.
- “Although the problems are big and daunting, we resolve to approach them with optimism grounded in rigorous science, hard work, and a relentless drive for results.”

Purpose

To utilize the model of improvement as a framework as we will explore the 3 questions:

- What do you want to accomplish?
- How will you know change is an improvement?
- What changes will you make?

Through each of these steps we will talk about the *processes behind the question* and *some tools* that can be utilized to enact process improvement with a specific project.

Upon engaging in this session, participants will be armed with tools and an outline to be able to think through a project or process that they would like to improve whether it be personal or professional.

More broadly, the presentation will discuss how *large scale process improvement* can help affect change across an organization with the use of tools such as visual management and huddles.

Model for Improvement

- Methodology from Deming (quality guru)
- What do you want to accomplish?
- How will you know change is an improvement?
- What changes will you make?

What do you want to accomplish?

Aim statement

- Describes what is to be improved how much by when and for whom in terms of the work process
- Must have subject matter experts
- Best if done as a team
- Achieve consensus and state aim early
- Use voice of customer
- No “Lone ranger” aims

Questions to ask to get at an effective aim

- Is the problem or opportunity clearly stated?
- What do they plan to improve?
- Why is it important to improve?
- How much do they plan to improve?
- By when do they plan to achieve this improvement?
- For whom will it happen?
- Is it clear what the scope is?

Tools to Refine/clarify

- Block diagram
- Force field analysis

Block diagram

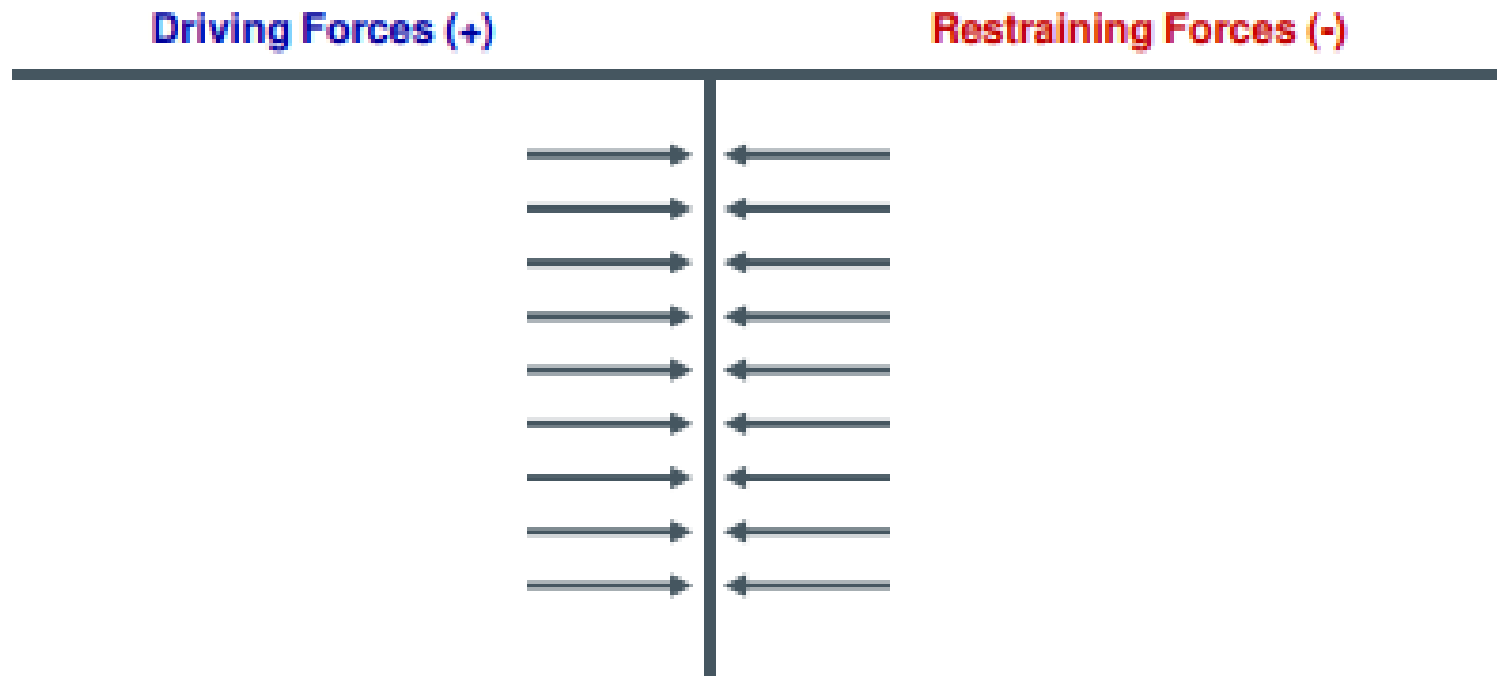
Simplest form of system / process description

- Identify major "chunks" (major blocks of activity)
- Write them in the order they occur
- If there are more than 8 blocks, it might be too complex and/or too detailed – simplify or redefine boundaries
- In improvement work, it is best to narrow project boundaries to focus on a manageable slice, typically 2-4 blocks



Exercise: Force Field Analysis

Project Aim: _____



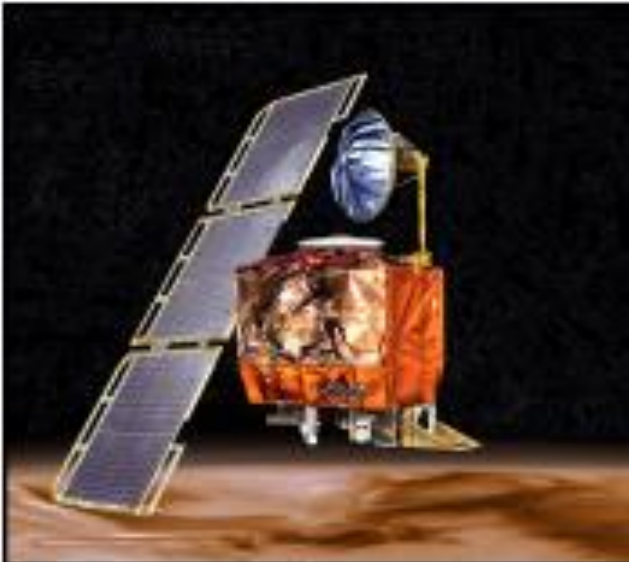
Actions to reduce the restraining forces:

-
-



How will I know if change is an improvement?

- **Measurement!**
- Types of Measures
 - Process vs Outcome
- Operational Definitions
- Run Charts (don't have enough time to cover today but if you're interested- I am happy to discuss with you)



September 23, 1999 An expensive operational definition problem!

NASA lost a **\$125 million** Mars orbiter because one engineering team used metric units (newton-seconds) to guide the spacecraft while the builder (Lockheed Martin) used pounds-second to calibrate the maneuvering operations of the craft.



Information failed to transfer between the *Mars Climate Orbiter* spacecraft team at Lockheed Martin in Colorado and the mission navigation team in California. The confusion caused the orbiter to encounter Mars on a trajectory that brought it too close to the planet, causing it to pass through the upper atmosphere and disintegrate.

The Three Faces of Measurement

characteristic	Improvement	Accountability	Research
The aim of ...	Improvement of care	Comparison, choice, reassurance, spur for change	New knowledge
Bias	Accept consistent bias	Measure and adjust to reduce bias	Design to eliminate bias
Sample Size	"Just enough" data, small sequential samples	Obtain 100% of available, relevant data	"Just in case" data
Flexibility of Hypothesis	Hypothesis flexible, changes as learning takes place	No hypothesis	Fixed hypothesis
Testing Strategy	Sequential tests	No tests	One large test
Determining if a Change is an Improvement	Run charts or Shewhart control charts	No change focus	Hypothesis, statistical tests (t-test, F-test, chi square), p-values
Confidentiality of the Data	Data used only by those involved with improvement	Data available for public consumption and review	Research subjects' identities protected



What changes will you make?









Almost received Darwin Award









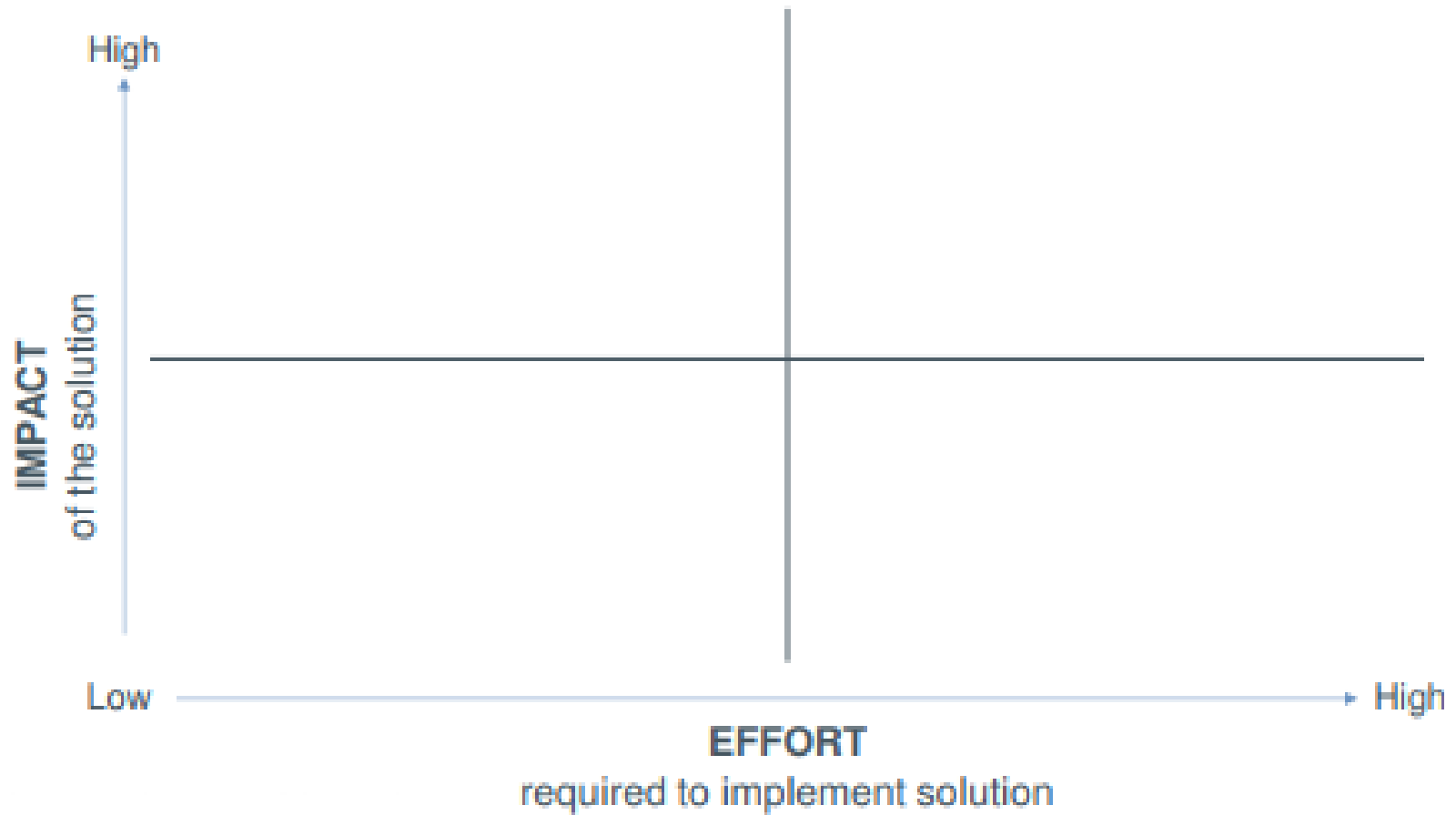


- **All this to say : More is not better!**
- And I challenge you to think about Processes and Problems you would like to solve in ways that do not add more (time, resources, training)
- All improvement requires change but not all change leads to improvement
- Change that requires human behavior to change, hard to develop

5 Whys

- Important to get at the root cause of the problem
- Ask why 5 times to get to root cause – simple but effective
- Write down the problem
- Ask why the problem happens – write the answer
- If the answer is not the root cause then ask again and repeat until the answer is the root cause

Impact-effort matrix



Large Scale Process Improvement with Teams

- Visual Management
- Huddles



VISUAL MANAGEMENT ROOM



<http://agilesummit.harrisburgu.edu/AgileSummit2016/lib/pdf/2016-Shingo-Conference.pdf>