

# Using Systems Driven Leadership to enable an Agile Organization



**Maggie Pfeifer**  
VP of Education



Mission:  
**Changing the world  
through systems that enable everyone  
to think & act smarter, faster & more innovatively.**

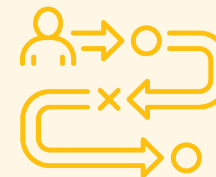


## WE HELP COMPANIES WITH INNOVATION

Fill Your  
**PIPELINE**



Improve Your  
**PROCESS**



Train Your  
**PEOPLE**



# A little History. Starting in 1986

We've been commissioned by some of the world's best companies to create the next new thing - products, services, businesses, brands, systems, you name it.

35+ Years of Experience in a Wide Range of Industries

# A little History. Starting in 1986

15,000 Teams

25,000 Disruptive Ideas

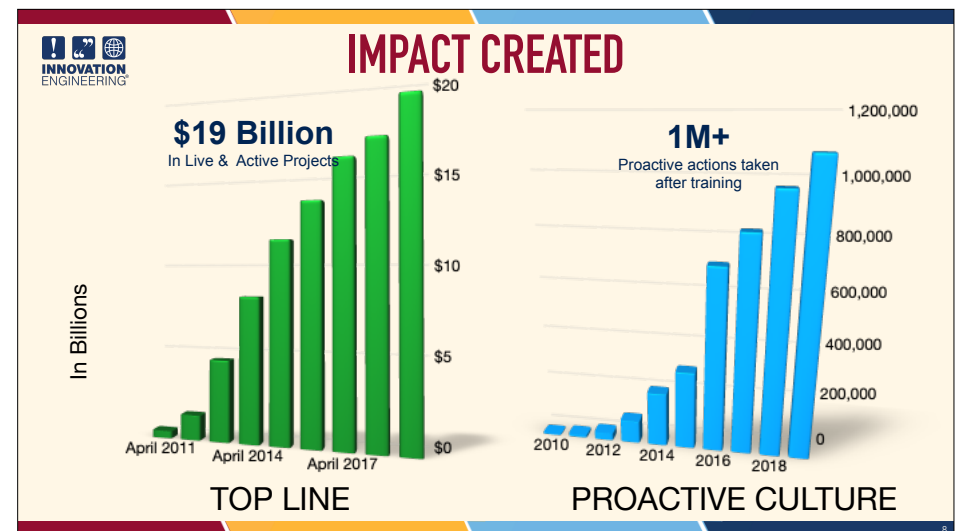
35+ Years of Experience in a Wide Range of Industries

# INNOVATION ENGINEERING® IS BOTH...

a complete innovation business methodology + a comprehensive academic curriculum.

**Freedom within a Framework**

**2006 Pioneered A New Field of Academic Study & Leadership Science**







## Body of Knowledge



### CREATE

1. Meaningful Uniqueness
2. Stimulus & Diversity
3. Exploring Stimulus
4. CREATE Sessions 1.0
5. Unrelated Stimulus
6. Patent Mining
7. Insight Mining
8. Market Mining
9. Advanced Create Methods
10. Future Mining
11. Wisdom Mining
12. Professional Grade CREATE



### COMMUNICATE

13. Blue Card Strategy Activation
14. Yellow Card
15. Concept Improvement
16. Fermi Est. of Concept Numbers
17. Concept Feedback Systems
18. Sales Forecasting
19. Smart Concept Decisions
20. Technology Translation
21. Advanced Benefit & Proof
22. Real World Communications
23. Meaningful Marketing Messages
24. Proactive Selling Pitches



### COMMERCIALIZE

25. PDSA Plan, Do, Study, Act
26. PDSA - Best Practices
27. PDSA - Looks Like Prototype
28. PDSA - Works Like Prototype
29. PDSA - Rapid Research
30. PDSA - Cost & Price Estimating
31. PDSA - Reducing Forecast Variation
32. Business Models
33. Competitive Advantage
34. Organizing for Success
35. Business Opportunity Reco
36. Making the Case for a Go Decision



### SYSTEM Driven LEADERSHIP

37. Appreciation for a System
38. Knowledge about Variation
39. Theory of Knowledge
40. Psychology **VERY High Level**
41. Alignment - Strategy to Ideas
42. Alignment - Across Departments
43. Rapid Research - Implementation
44. Rapid Research - Forensic Mining
45. Collaboration
46. Proprietary Protection
47. Culture Change through Learning
48. Personal Leadership



### Experience

Define/Discover/Develop

## If you want to Lead an Agile Organization...



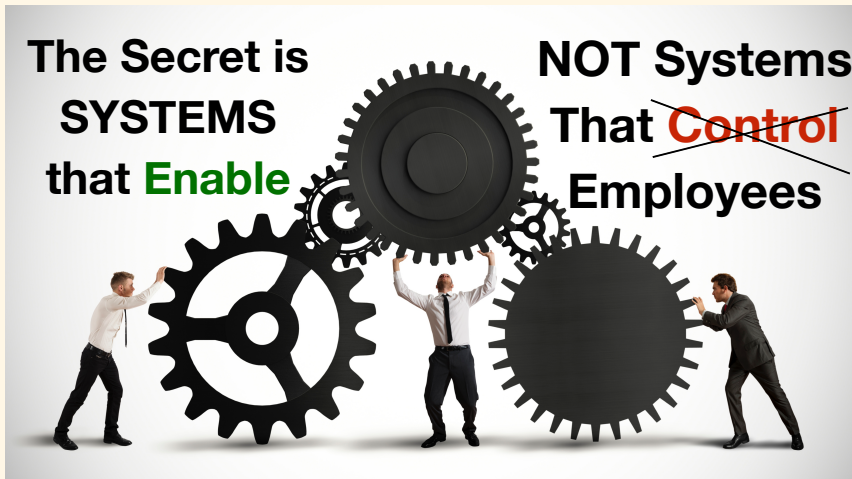
One that

- thrives in an unpredictable and rapidly changing environment,
- is open, inclusive and nonhierarchical,
- evolves continually and embraces uncertainty and ambiguity.

10

The Secret is  
**SYSTEMS**  
that **Enable**

**NOT Systems**  
That ~~Control~~  
**Employees**

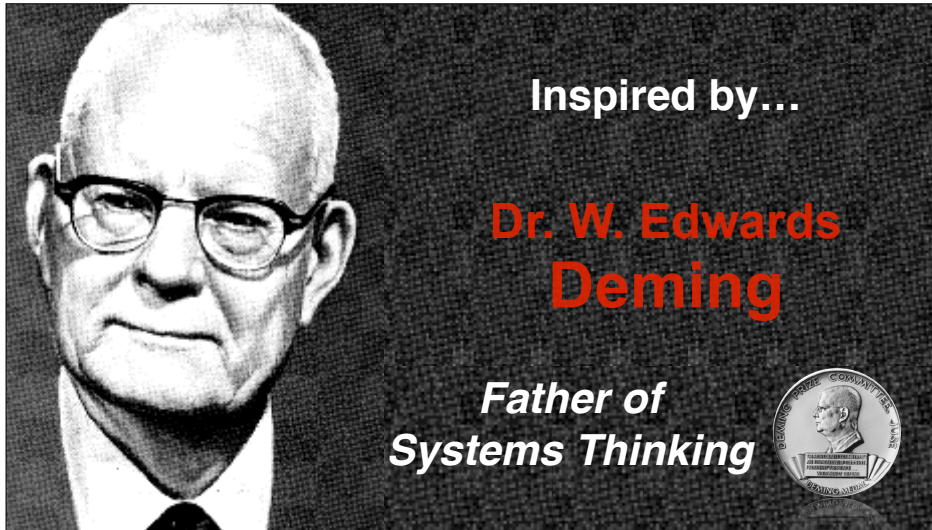


11

Ordinary People + Systems that Enable = Extraordinary Results

Extraordinary People + Systems that Control = Ordinary Results

12



94% of failures are due to the **SYSTEM**  
6% are due to the **WORKER\***

\* Assuming the worker is willing to learn

14

## Systems Thinking Fundamentals

**Stop the BLAME Game...**  
Focus on SYSTEM  
NOT the People



**Before You Can  
Reinvent or Architect  
New and Agile  
Systems...**

15

McKinsey Quarterly

# Leading with inner agility

March 29, 2018 | Article

McKinsey & Company

*It is no easy task, but developing an “inner agility” is essential in releasing our potential to lead an agile transformation.*

## Developing Your Inner Agility

There are three fundamental reactive-to-creative mind-set shifts we have found critical to foster the culture at the heart of agile organizations:

1. *From scarcity to abundance: fostering value creation.*
2. *From authority to partnership: fostering collaboration.*
3. *From certainty to discovery: fostering innovation.*

<https://www.mckinsey.com>

**INNOVATION ENGINEERING**

*It can be very HARD for some people...  
It requires that you are open to learning...  
It requires that you are willing to say...*

$$MU = \frac{S^D}{F}$$


1. I Don't Know
2. I Need Help
3. I Fail A Lot

$$MU = \frac{S^D}{F}$$

2. Diversity of thinking

Meaningfully Unique Ideas =  $\frac{1. \text{ Explore Stimulus}}{3. \text{ Drive Out Fear}}$

# 1. Explore Stimulus


$$MU = \frac{S^D}{F}$$

## Value of Stimulus

Stimulus Feeds The Brain

Stimulus Available	# of practical ideas invented
Low Stimulus	22
Medium Stimulus	38
High Stimulus	47

## Traditional Model

~~draining~~  
Individual Brainstorming

Before



After



**Suck Method**  
Uses Your Brain Like A  
**LIBRARY**

At Their Most Basic  
**IDEAS**  
are Feats of Association



## Exploring Stimulus is basically...

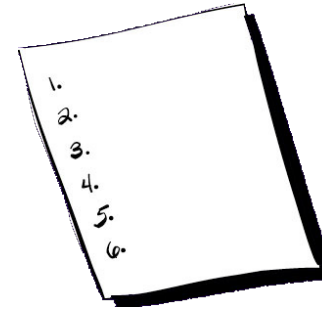


Filling  
Your  
BRAIN

So You Have More  
“Stuff” to Make  
Connections With



## Where To Go On Vacation?



## Where To Go On Vacation?



**BEST  
VACATIONS**  
USNews  
2018-19



**Best Weekend Road Trips in Ohio**  
February 24, 2017



**NYC'S BEST  
INSTAGRAM SPOTS**



These 5 Spots in the U.S. Were Made to Be Photographed



**10 Most Family-Friendly Cities  
in Europe**

## Two Types of Stimulus

*Ideas for a new type of candy*

### RELATED



*Lots of ideas,  
but closer in*

### UNRELATED



*Fewer ideas, but  
really UNIQUE*

## 2. Leverage Diversity


$$MU = \frac{S^D}{F}$$

## Diversifying Thinking

Diversity multiplies the impact of stimulus.

Diversity of Thinking	# of practical ideas invented
Low Diversity	19
Medium Diversity	30
High Diversity	46

## Diversity Means People Who Think DIFFERENTLY than You



Mindset



Backgrounds  
& Skills



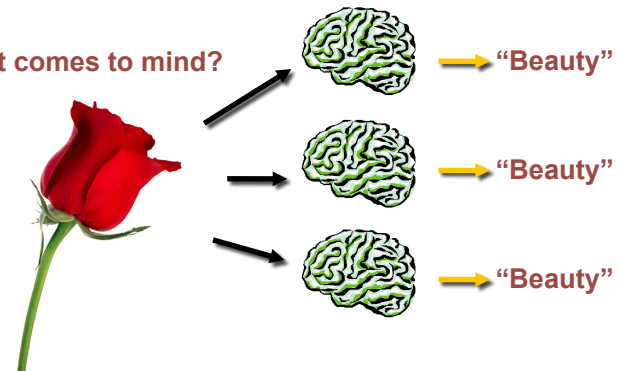
Culture



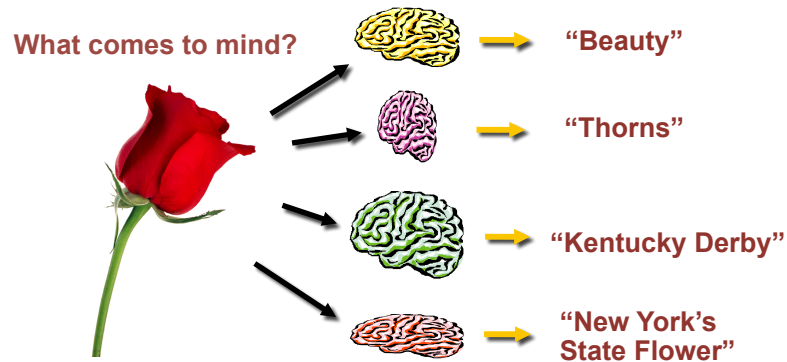
Maybe Even Who  
You Disagree With

## No Diversity of Thought

What comes to mind?



## Diversity Multiplies Impact of Stimulus



# Let’s Practice

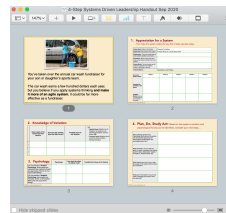
## LOGISTICS



Camera ON for group work and reporting



Activity Powerpoint  
Download from chat



## LOGISTICS



Assign  
**Reporter**

- ☒ Take Notes
- ☒ Report Results if called on



Assign  
**Group Leader**

- ☒ Lead the exercise



Assign  
**Time Keeper**

- ☒ Meet your Deadline

## Slide 2

### Activity 1: Create Ideas

With your group, use the prompts below as stimulus to invent ideas for Meaningfully Unique playgrounds or playground equipment.

When free associating, it is important to write down whatever comes to mind when you see the stimulus with NO attempt to connect it to the challenge. That comes in the second step.

## Slide 2

### Activity 1: Create Ideas

Stimulus	Free Associate "What comes to mind when you hear..."	Raw ideas for a new type of playground/equipment
UNRELATED: Frog	<i>green, lily pad, flies, slime, tadpole, Kermit, tongue, ribbit</i>	

## Slide 2

### Activity 1: Create Ideas

Stimulus	Free Associate "What comes to mind when you hear..."	Raw ideas for a new type of playground/equipment
UNRELATED: Frog	<i>green, lily pad, flies, slime, tadpole, Kermit, tongue, ribbit</i>	<i>A playground with lots of trampolines like lily pads for kids to hop from one to the other</i>

## Slide 2

### Activity 1: Create Ideas

Stimulus	Free Associate "What comes to mind when you hear..."	Raw ideas for a new type of playground/equipment
UNRELATED: Frog	<i>green, lily pad, flies, slime, tadpole, Kermit, tongue, ribbit</i>	<i>A playground with lots of trampolines like lily pads for kids to hop from one to the other Slime covered slides</i>



## Slide 2

### Activity 1: Create Ideas

Stimulus	Free Associate "What comes to mind when you hear..."	Raw ideas for a new type of playground/equipment
UNRELATED: Frog	green, lily pad, flies, slime, tadpole, Kermit, tongue, ribbit	A playground with lots of trampolines like lily pads for kids to hop from one to the other Slime covered slides Monkey bars that make noises when you reach each bar

## Slide 1

7:00

### Activity 1: Leveraging Stimulus & Diversity

**Activity 1: Stimulus & Diversity**

With your group, use the prompts below as stimulus to invent ideas for Meaningfully Unique playgrounds or playground equipment.

When free associating, it is important to write down whatever comes to mind when you see the stimulus with NO attempt to connect it to the challenge. That comes in the second step.

Stimulus	Free Associate "What comes to mind"	Raw ideas for a new type of playground/ equipment
UNRELATED: Frog	green, lily pad, flies, slime, tadpole, Kermit, tongue, ribbit	A playground with lots of trampolines like lily pads for kids to hop from one to the other Monkey bars that make noises when you reach each bar Slime covered slides
UNRELATED: Rock and Roll		
RELATED: When it comes to playgrounds, coordination is a greater source of fun than height for children. International Journal of Injury Control & Safety Promotion.		
RELATED: Exercise and play time directly impacts a child's self esteem. The more the better. Ekeland, Heian and Hagan (2005)		

© 2010, Innovation Engineering, LLC

## LOGISTICS



Reporter  
Reports



Ridiculous  
Amounts of  
Visual  
Enthusiasm



## 6 Stimulus Mining Categories



## 6 Stimulus Mining Categories



## 6 Stimulus Mining Categories



$$MU = \frac{S^D}{F}$$

Drive Out Fear

Meaningfully  
UNIQUE Ideas...

Require **CHANGE**

Change Causes

**CHAOS**



Spark **FEAR**

The Secret to Reducing Fear

is to Make the

**Unknown Known**



## Build Courage

By Making the Unknown Known...

1. **Communicate Your Idea with Clarity**
2. Reduce uncertainty with Plan-Do-Study-Act Cycles



You will need help to make it grow

**You need others to understand  
your idea as you do.**

# The Yellow Card is a communication framework that increases your odds of success.

[illegible]

The diagram illustrates the Yellow Card innovation framework. On the left is a yellow card template with the following text:

**Yellow Card®**  
INNOVATION ENGINEERING  
A framework for clearly communicating innovations. Start from the front or back side of card. Fill in all that you can.

**Innovation Name:** \_\_\_\_\_  
Write the name of the benefit this innovation delivers.

**NEWS HEADLINE:** It's a common - what makes your innovation **BEYOND THE ORDINARY**?  
The first ... the only ...

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**CUSTOMER / STAKEHOLDERS:** Write in the Customer who benefits most from the innovation? Or your innovation, who are the Stakeholders who will be most affected?

\_\_\_\_\_

\_\_\_\_\_

**Customer PROBLEM:** Write Customer / Stakeholder PROBLEM that this idea solves?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Benefit PROMISE:** Make a SPECIFIC or customer PROMISE to the Customer / Stakeholders to **SOLVE** the problem listed above.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Write the innovation's name and **PROBLEM** you define this problem is on the **BACK** of CARD.

A large blue arrow points from the card to the right, where three dark blue boxes are stacked vertically, each containing white text:

- Customer/Stakeholder & their **PROBLEM**
- Benefit **PROMISE**
- Product/Service & **PROOF**

## Customer/Stakeholder & their PROBLEM

## Product/Service & PROOF

# Meaningfully Unique Solutions

## Solve Customer or Stakeholder Problems



# Solve Customer or Stakeholder Problems

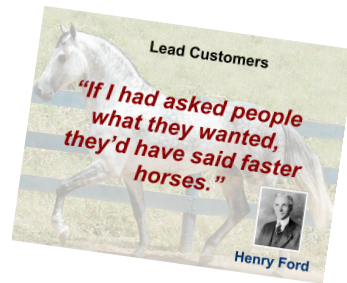




# BEWARE

There are Problems that customers are AWARE of...

AND problems that customers can't describe because they can't imagine a solution.



The Benefit **PROMISE**  
speaks directly to the  
Customer & Their Problem

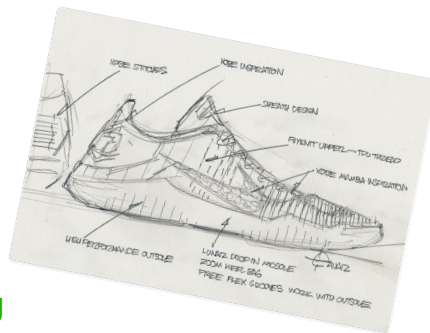
Problem ← **PROMISE**

Features are not Benefit Promises

Features are the

- Facts
- Figures
- Technology
- and Details

That make up your offering



Benefit Promises

are "What's In it for the Customer"

What they will

**Receive, Enjoy, Experience**

In exchange for their

**Time, Trouble, Trust and Money**

Benefit PROMISES are  
**WHY should I care?**  
**I = the customer**

*“Our offering will make you  
Smarter...  
Faster...  
Healthier...”*

The Product/Service PROOF  
is **HOW** you will deliver  
on your **PROMISE**



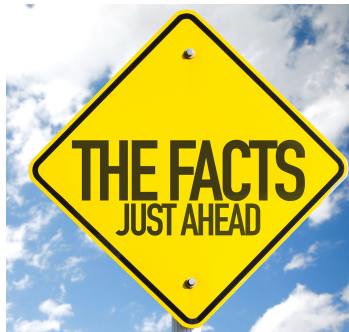
It answers the question

*“Why should I believe you?”*

Problem ← **PROMISE** ← **PROOF**

The Product/Service PROOF

Here's how it works...



Benefit  
PROMISE



gets customers  
excited

Product/Service  
PROOF



closes  
the sale

BUT... What if I don't know...

How to make the idea REAL (Proof)...

If the Customer has the Problem...

What to Promise the Customer

Does that mean I can't  
write a Yellow Card?

**NO, It  
Doesn't**

It does mean you need a

**HYPOTHESIS**

Of Your

Problem, Promise or Proof

# Let's Practice

Slide 2

7:00

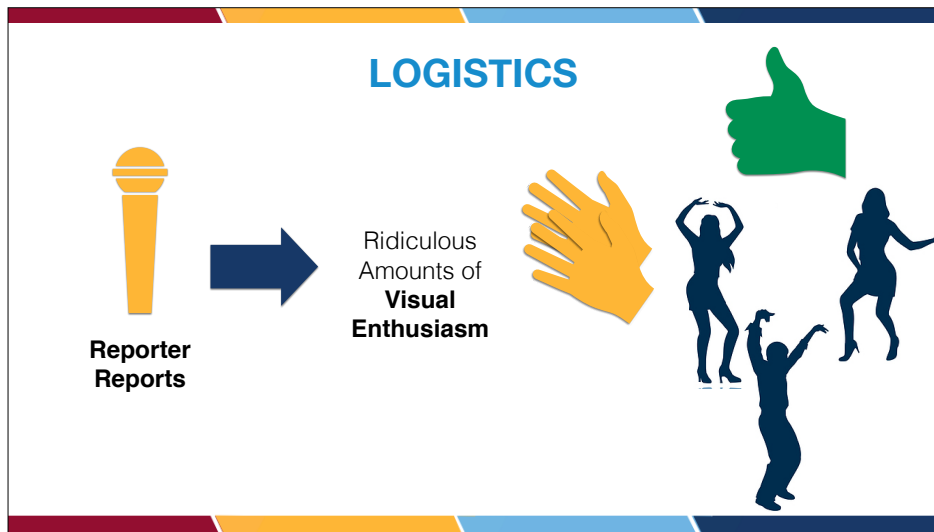
## Activity 2: Communicate Ideas

**Activity 2: Communicating Ideas**

Writing a concept is about telling the complete story of your idea with clarity. All of the parts must hang together. If you are unsure about a part of your idea, write a hypothesis for what it could be. With your group, make up the missing parts of the concepts below to communicate a full idea.

Customer	Problem: WHAT problem does this idea address?	Promise: WHAT is your specific or numeric promise to SOLVE the problem?	Proof: HOW is it that you can deliver on this Promise? What are you proposing to do differently?
Senior Citizens who want to canoe	It can be hard to get in and out of a canoe		
	It's easy to forget how much and how frequently to water all of your house plants.		Smart Soak is a new technology that time-releases water based on the type of plant and the condition of its roots.
Your team / coworkers.		I promise more productive meetings, we'll accomplish 50% more in the same time!	

© 2020 Innovation Engineering, LLC



## Build Courage

### By Making the Unknown Known...

1. Communicate Your Idea with Clarity
2. Reduce uncertainty with Plan-Do-Study-Act Cycles

The slide features a photograph of a young boy in a blue shirt, red cape, and red mask, standing with hands on hips. To the right of the list is a small yellow document icon and a circular diagram with four arrows forming a loop, labeled "PLAN" (red), "DO" (yellow), "STUDY" (green), and "ACT" (blue).

You may not realize it...

But you already know how to reduce risk with new ideas...

The slide contains a small yellow document icon on the left side, next to the text.

The slide features a photograph of a young girl riding a bicycle with a man standing behind her. To the right of the photo is a circular diagram with four arrows forming a loop, labeled "PLAN" (red), "DO" (yellow), "STUDY" (green), and "ACT" (blue). The diagram is surrounded by text describing the steps of the cycle.

Set goal to ride

Tried a way to Ride

Learned From This

Adapted your approach and tried again

It's how you learned to ride a bike.

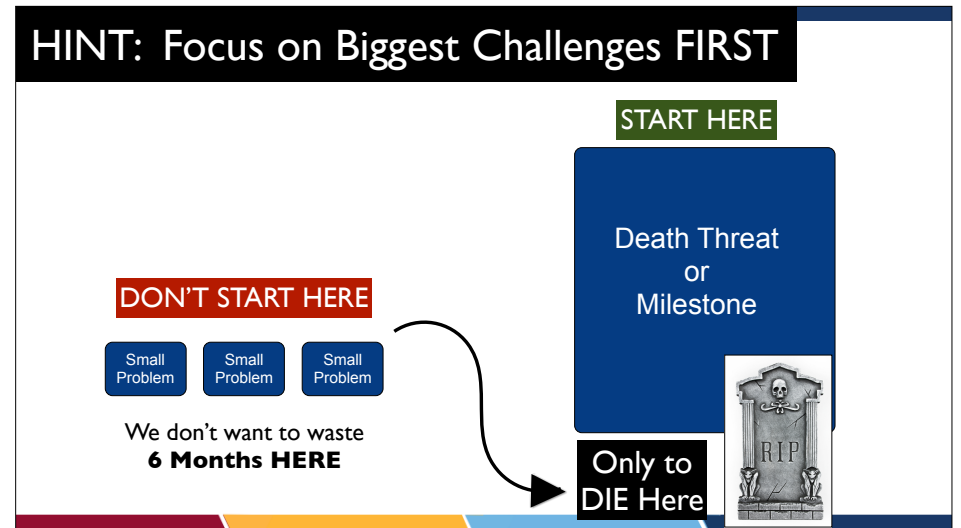
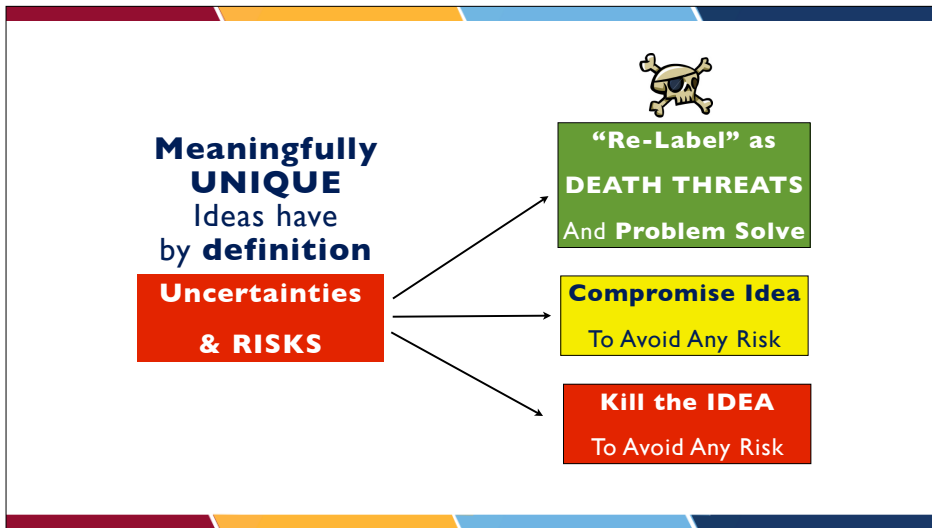




## Respect the Emotional Nature of Fear

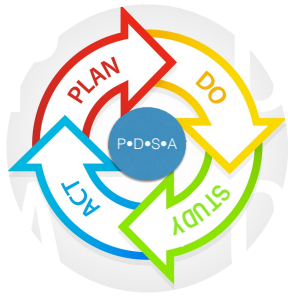
“Re-Label” Risks & Uncertainties with Equally **Emotionally** Charged Wording

<b>Fear</b>	→	<b>Death Threat</b>
<b>“No”</b>	→	<b>Death Threat</b>
Can't Make it	→	<b>Death Threat</b>
Can't Afford It	→	<b>Death Threat</b>
Can't Sell It	→	<b>Death Threat</b>



## The Way to Resolve Death Threats

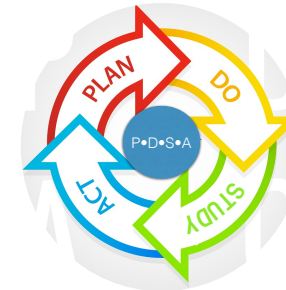
is to use the Deming Cycle/Scientific Method



We call this development system

### **Fail Fast, Fail Cheap**

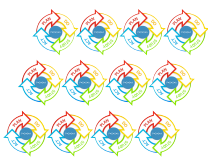
The purpose of the system is to dissolve risks with small steps



**Again & Again & Again**  
**Till Achieve, Pivot or Decide Not to Repeat**

**Again & Again & Again**  
**Till Achieve, Pivot or Decide Not to Repeat**

1 Cycle a Month  
= 12 in a Year



4 Cycles a Month  
48 in a Year



5 Cycles a Week  
= 260 in a Year



# Let's Practice

## Slide 3

7:00

### Activity 3: Fail Fast, Fail Cheap

**Activity 3: Fail Fast, Fail Cheap**

With your group, identify ways to learn more and reduce uncertainty about the Death Threats for the ideas below in a way that's FAST and CHEAP. We provided a Death Threat for the first idea. Your group will need to identify a Death Threat for the second idea.

Idea	Death Threat	What could we DO to learn more?	What else could we DO to learn more?
A new kind of umbrella that has an off-center shaft so that you are in the direct center. Designed to keep you 4x drier.	Can we actually deliver on the promise of 4x drier?		
A teacher has an idea for her students to chew bubble gum while they study and then again when they take a test. By using scent to induce memory & improve recall, she believes it will increase test scores.	You identify...		

© 2020, Innovation Engineering, LLC

## System Driven Leadership

Grounded in Deming System of Profound Knowledge (SoPK)

### 1. Appreciation for a System

Make it Visible

### 2. Knowledge about Variation

Identify High Variation Leverage Points

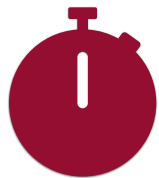
### 3. Psychology

Identify What Motivates Your Team

### 4. Theory of Knowledge (PDSA)

Learning Cycles to Improve the System

82



**5 minute**  
Coffee  
Break

## System Driven Leadership

Grounded in Deming System of Profound Knowledge (SoPK)

### 1. Appreciation for a System

Make it Visible

### 2. Knowledge about Variation

Identify High Variation Leverage Points

### 3. Psychology

Identify What Motivates Your Team

### 4. Theory of Knowledge (PDSA)

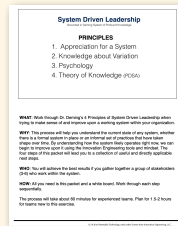
Learning Cycles to Improve the System

84

After today's Systems Thinking Overview, you'll walk away with...



Mindset



Tool

## Definition of a SYSTEM

"A **SYSTEM** is two or more parts that work together to accomplish a **SHARED AIM**"

Dr. W. Edwards Deming



## Systems encompass the "Connective" Work Processes



System results  
are the  
product of  
interactions.



Optimizing the parts does not necessarily make a better whole.  
You need to think through the interactions of the parts.

## Systems ALWAYS Exist

- Employees will not stay in chaos.
- If you don't create the system it will come to life by itself.
- Systems don't change themselves

89

## System Driven Leadership

Grounded in Deming System of Profound Knowledge (SoPK)

### 1. Appreciation for a System

Make it Visible

### 2. Knowledge about Variation

Identify High Variation Leverage Points

### 3. Psychology

Identify What is Motivating/Demotivating Your Team

### 4. Theory of Knowledge (PDSA)

Learning Cycles to Improve the System

90

## 1. Appreciation for a System

Make it Visible

DEFINE

**System Name:** Name of the System  
**System Aim:** The purpose of the system  
**Stakeholders:** Those with vested interest in the system's operations and results  
**Boundaries:** Where it starts and stops and/or what it doesn't include if that is not obvious  
**System Metric:** The one number we will measure to determine how well the system is delivering on the Aim  
**Enabling Metrics:** The other measurable things that help us predict the overall System Metric.

DRAW

LINEAR Phases

As simple as possible "Big Stuff"

1. Phase Name	2. Phase Name	3. Phase Name	4. Phase Name	5. Phase Name
• Activity 1 • Activity 2 • Activity 3 • Activity 4	• Activity 1 • Activity 2 • Activity 3	• Activity 1 • Activity 2 • Activity 3 • Activity 4	• Activity 1 • Activity 2	• Activity 1 • Activity 2 • Activity 3 • Activity 4
Enabling Metrics • Metric 1 • Metric 2	Enabling Metrics • Metric	Enabling Metrics • Metric 1 • Metric 2	Enabling Metrics • Metric 1 • Metric 2	Enabling Metrics • Metric

91

## 1. Appreciation for a System

Make it Visible



System Driven Leadership  
starts with the  
**AIM of the system**

What is the purpose of the system?

92

Leading agile transformation:  
The new capabilities leaders  
need to build 21st-century  
organizations

McKinsey  
& Company

### Find the north star

... a clear, shared, and compelling purpose—a north star—for your organization / system.

Rather than the traditional executive-team exercise, in agile organizations, leaders must learn to sense and draw out the organization's purpose in conversation with people across the enterprise.

<https://www.mckinsey.com/>

93

## 1. Appreciation for a System

Make it Visible



then

### Stakeholders

"Those with vested interest in system operations and results?"

94

## 1. Appreciation for a System

Make it Visible



then

### System Boundaries

*Where the system starts and ends...  
What the system does not include....*

95

## 1. Appreciation for a System

Make it Visible



then

### System Metric

There can be only one metric  
otherwise the system pulls apart

96



## 1. Appreciation for a System

Make it Visible

### Enabling Metrics

These are factors that statistical analysis has shown enable THE METRIC

Enabler 1

Enabler 2

Enabler 3

Impact **The Metric**

Independent Variables

Dependent Variable

97

## 1. Appreciation for a System

Make it Visible

DEFINE

System Name: Name of the System

System Aim: The purpose of the system

Stakeholders: Those with vested interest in the system's operations and results

Boundaries: Where it starts and stops and/or what it doesn't include if that is not obvious

System Metric: The one number we will measure to determine how well the system is delivering on the Aim

Enabling Metrics: The other measurable things that help us predict the overall System Metric.

DRAW

LINEAR Phases

As simple as possible "Big Stuff"

1. Phase Name

- Activity 1
- Activity 2
- Activity 3
- Activity 4

Enabling Metrics

- Metric 1
- Metric 2

2. Phase Name

- Activity 1
- Activity 2
- Activity 3

Enabling Metrics

- Metric

3. Phase Name

- Activity 1
- Activity 2
- Activity 3
- Activity 4

Enabling Metrics

- Metric 1
- Metric 2

4. Phase Name

- Activity 1
- Activity 2

Enabling Metrics

- Metric 1
- Metric 2

5. Phase Name

- Activity 1
- Activity 2
- Activity 3
- Activity 4

Enabling Metrics

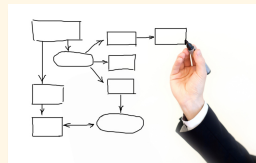
- Metric

98

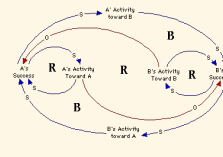
## There are Many Options for Making Your System Visible



Post It Notes



Flow Charts



You Can Add Complexity

- Feedback Loops
- Balancing Loops
- Reinforcing Loops
- Shifting the Burden
- Limits to Success
- Growing Action
- Escalation
- Drifting Goals

But to start, we recommend keeping it as simple as possible - "Big Stuff"

99

# Let's Do It



You've taken over the annual car wash fundraiser for your son or daughter's sports team.

The car wash earns a few hundred dollars each year, but you believe if you apply systems thinking **and make it more of an agile system**, it could be far more effective as a fundraiser.

101

## LOGISTICS



Assign  
**Reporter**

- ☒ Share Screen and Document the work in real time

Stays the Same



Assign  
**Group Leader**

- ☒ Lead the exercise



Assign  
**Time Keeper**

- ☒ Meet your Deadline

## Slide 6 -

Fill in the green outlined boxes as a team for the Car Wash Fundraiser



**1. Appreciation for a System: Make it Visible**

**System Name:** Name of the System  
Carwash Fundraiser

**System Aim:** The purpose of the system  
To Raise Money for a Youth Sports Team

**Stakeholders:** Those with vested interest in the system's operations and results

**Boundaries:** Where it starts and stops and/or what it doesn't include if that is not obvious.

**System Metric:** The one number we will measure to determine how well the system is delivering on the Aim.

**Enabling Metrics:**

See below in each Phase.

Give each phase a name.	Phase 1:	Phase 2:	Phase 3:	Phase 4:	Phase 5:
<b>Describe the activities in the phase.</b>					
<b>Enabling Metrics:</b> List one or more things we can measure in this phase.					

© 2020 Innovation Engineering, LLC

## System Driven Leadership

Grounded in Deming System of Profound Knowledge (SoPK)

### 1. Appreciation for a System

Make it Visible

### 2. Knowledge about Variation

Identify High Variation Leverage Points

### 3. Psychology

Identify What is Motivating/Demotivating Your Team

### 4. Theory of Knowledge (PDSA)

Learning Cycles to Improve the System

104

## 2. Knowledge about Variation

Identify High Variation Leverage Points

### Variation in a System Can Create A Chain Reaction



- Project Failure
- Errors
- Mistakes
- Legal Liability
- Wasted Resources
- Lost Money

105

## 2. Knowledge about Variation

Identify High Variation Leverage Points

### Deming Explanation

Life is variation.

There will always be variation between people.

There will always be variation in output.

There will always be variation in services and products.

106

## 2. Knowledge about Variation

Identify High Variation Leverage Points

### Two Types of System Variation

#### Common Cause

- Errors of the system
- Errors that the worker can't impact
- **94% of the problems**

#### Special Cause

- Errors caused by mistakes
- Not doing Job
- **6% of the problems**

107

## 2. Knowledge about Variation

Identify High Variation Leverage Points

### Sources of Human System Variation

- No system documentation
- No training or tools to do job
  - *"What, Why, How" should I do job*

108

## 2. Knowledge about Variation

Identify High Variation Leverage Points

### How to Reduce **HUMAN Variance**

- Education
- Documentation - What, Why, How
- Common Calibration Standards
- Error Proof with Intelligent Systems

## How to Identify Common Cause Problems

Look for  
**"Reliable" Problems**  
...Not One Time EVENTS

## How to Identify Common Cause Problems

Look for  
**Compensating**  
Behaviors

## How to Identify Common Cause Problems

Look for  
**Never Ending Blame**  
of workers or bosses...

## How to Identify Common Cause Problems

### Look for Improvements that Don't Sustain

no matter how much time, energy  
or money is invested.

## Leadership Mistake #1

Treating **Common Cause** as **Special Cause** Variance

Search for the GUILTY PARTY

Waste of Energy - it's in the system



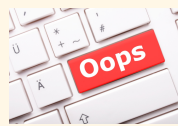
114

## Leadership Mistake #2

Treating **Special Cause** as **Common Cause** Variance

Tampering with the system

Waste of Energy - needless rules



115

### Common Cause

### Special Cause

Action  
**Change System**

**YES** - Will Help  
Systemic Improvement

**NO** - Wasted Energy  
Needless Rules

Action  
**Find Guilty Party  
and Stop Them**

**NO** - Tampering  
It's out of their control

**YES** - Will Help  
Explain & Educate

116

## 2. Knowledge about Variation

Identify High Variation Leverage Points

SYSTEM	The AIM of this System	What part of the System has a lot of Variation?	How does this Variation affect the AIM?	Possible Cause for the Variation	Possible Cause Reason for the Variation
Full Service Restaurant	For customers to have a satisfying dining experience	Length of time from order placed to meal served	Variation in wait times can result in unsatisfied customers leading to complaints and/or fewer customers served in a night.	Because the kitchen stove only allows 2 orders to be prepared at a time - it was sized for smaller restaurants	Because sometimes waiters forget to enter your order into the system due to chatting with friends

Common Cause

Special Cause

117

## System Driven Leadership

Grounded in Deming System of Profound Knowledge (SoPK)

### 1. Appreciation for a System

Make it Visible

### 2. Knowledge about Variation

Identify High Variation Leverage Points

### 3. Psychology

Identify What is Motivating/Demotivating Your Team

### 4. Theory of Knowledge (PDSA)

Learning Cycles to Improve the System

118



There are two types  
of human system forces

+ **POSTIVE** Forces    - **NEGATIVE** Forces

THINK what are the "root causes"?

119



There are two types  
of human system forces

+ **POSTIVE** Forces

What ignites acceleration & cooperation?

120





## There are two types of human system forces

### - **NEGATIVE Forces**

What causes frustration and non-cooperation

121



## There are two basic motivational approaches

### **Extrinsic Motivation**

- Bribes of all Kinds
- Competition
- Transactional Task

### **Intrinsic Motivation**

- Internal Satisfaction
- Meaningfulness
- Mission & Purpose

122



## **Extrinsic Motivation**

Driven By Financial Incentives

Management by Fear and Intimidation

Trains People to Respond to "Rewards"

123



## **Intrinsic Motivation**

Enables Pride of Work

Encourages Teamwork  
*Working with others to achieve common goals*

Management by Meaning & Mission

124

# + PSYCHOLOGY

"Intrinsic Motivation" Comes from

## Being WILLING

- Requires understanding
- WHY Very Important
- WHAT is Narrative
- HOW My Work Matters

## Being ABLE

- Requires having EDUCATION
- Requires having RESOURCES
- Requires having PROPER TOOLS
- Requires having RELIABLE SYSTEMS

125

# Let's Do It

## Slide 7 -

Fill in the green outlined boxes as a team for the Car Wash Fundraiser



**2. Knowledge of Variation:**

Name 2 parts of the System that have variation.	How does this variation affect the AIM (if at all)?	Possible Cause of this Variation	Is it • SPECIAL Cause Variation due to mistakes, not doing jobs, not following procedures, external factors, OR • COMMON Cause Variation due to training, documentation, etc.

**3. Psychology:**

List one example of Positive Psychology, where people are cooperating well, feeling motivated cause of the feeling?	Psychology	How does this affect the AIM (if at all)?	Possible Root Cause of the Feeling

List one example of Negative Psychology, where people are frustrated, fearful, or demotivated. What is the root cause of the feeling?

© 2005 Innovation Engineering, LLC

## System Driven Leadership

Grounded in Deming System of Profound Knowledge (SoPK)

### 1. Appreciation for a System

Make it Visible

### 2. Knowledge about Variation

Identify High Variation Leverage Points

### 3. Psychology

Identify What is Motivating/Demotivating Your Team

### 4. Theory of Knowledge (PDSA)

Learning Cycles to Improve the System

128

## 4. Theory of Knowledge (PDSA)

### Identify Areas With Greatest LEVERAGE

- What areas could be changed to create greatest improvement in Metric?



129

## 4. Theory of Knowledge (PDSA)

- You may be able to IDENTIFY biggest opportunity areas for improvement.
- You may have QUESTIONS and need to know more.
- You may have IDEAS you can try.
- You may have to REDESIGN the system or a part of the system.

130

### 4. Plan, Do, Study Act: Based on the system's variation and psychological forces you've identified, consider your next steps...

After analyzing Variance and Psychology, which parts of the system offer the greatest opportunity for improving the System Metric and accomplishing our Aim?

What information, if any, could we gather to better understand the existing system? (Data, Stakeholder Insights / Perceptions, Historical Data, etc)

What Idea(s) came up, if any, to help the people in the system better achieve the overall Aim?

What part of the system, if any, do we need to redesign but we aren't sure how quite yet?


132

## Connecting the Dots

- You may have QUESTIONS and need to know more.
- You may have IDEAS you can try.
- You may have to REDESIGN the system or a part of the system.



Explore Stimulus



Clarity of Ideas



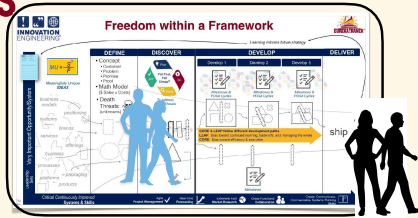
Set a Direction



Mission = We need ideas for...

132

# Certifications



## Innovation Engineering Black Belt Certification Level: Expert

Learn the complete set of advanced skills needed to run high-risk, high-reward innovation projects, lead innovation across an enterprise and set up and sustains systems that support a culture of innovation.

You'll get the guidance and feedback of a Certified Innovation Engineering Black Belt.  
**113 Courses + Applications**



## Innovation Engineering Blue Belt Certification Level: Beginner

Learn the fundamentals of thinking innovatively and apply it to real projects, with grading and feedback from a Certified Innovation Engineering Black Belt Coach.  
**33 Courses + Applications**

133

# BONUS Stuff!

## FULL AUDIO BOOK

[eureka ranch.com/de-audio-request/](http://eureka ranch.com/de-audio-request/)



## RECOMMENDED COURSE

[eureka ranch.com/fundamentals-course/](http://eureka ranch.com/fundamentals-course/)



Promo Code: CincyUSA

What's the Cincinnati Chamber BONUS?

When you register for the course with Eureka!, use promo code: **CincyUSA** to get an Innovation Restart Kit



## LEARN ABOUT FREE FUNDING

[eureka ranch.com](http://eureka ranch.com)

Ohio TechCredo

will cover 2/3 of the tuition for the course

Subscribe to Our Newsletter

Full Name \*

Email \*

Please verify your request \*

☐ I'm not a robot

HCAPITAL

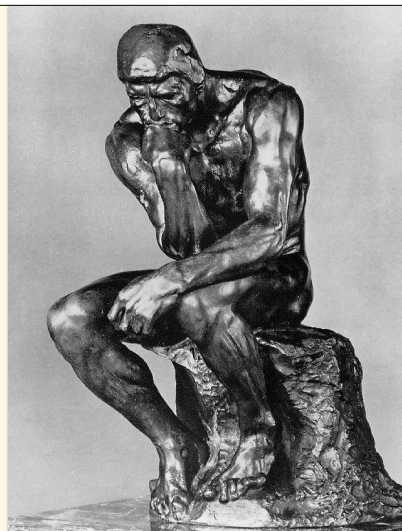
Power 2016

We will alert you when the next round opens

© 2015. Trademarks, and patents owned by Eureka! Ventures, Inc. All rights reserved.

# THINK

What did you learn?



**INNOVATION  
ENGINEERING®**

## System Driven Innovation

How to Enable Innovation  
By Everyone, Everywhere, Every Day  
With Increased Speed & Decreased Risk

136