Introduction to Innovation Engineering

September 30, 2015
What **IS** Innovation and…
Why do we need it?
Improvement vs. Innovation

Doing Something Better

Doing Something Different
innovation  noun  
i-nə-ˈvā-shən\ 

: a new idea, device, or method

: the act or process of introducing new ideas, devices, or methods

Full Definition of INNOVATION

1 : the introduction of something new

2 : a new idea, method, or device : NOVELTY
Why Innovate?

When the market changes faster than your organization…

Your organization dies…

75% of S&P 500 Companies Gone in 16 Years
Do we need innovation?

CONFRONT REALITY
WHERE ARE YOU?
Where is your organization on the Business Life Cycle?

Growth
Momentum
Cost Cutting
Decline

With Innovation you restart, reboot the life cycle curve - returning your organization to profitability.
How we define Innovation...

Innovation is

MEANINGFUL

UNIQUENESS
Identifying Meaningful Uniqueness

The Relationship

New & Different Uniqueness

Purchase Intent Meaningfulness

WOW!
SOS
Same old Stuff
WEIRD
If you’re not Unique
you better be cheap
Innovation Engineering is a groundbreaking program that provides a systematic approach to innovation.

The fundamental concepts of the program include tools and methods for creating, communicating, and commercializing meaningfully unique ideas.
Background

Doug Hall, Founder and CEO

INNOVATION ENGINEERING

EUREKA! RANCH®

CITEC Business Solutions

www.CITEC.org
Erick James video
http://youtube.com/watch?v=HyW7VT_92_A
Innovation Engineering “System”

- Rooted in Deming Cycle (PDCA)
- Reliable
- Repeatable
The System Objective

INCREASE Speed and

DECREASE Risk

in Innovation
The Innovation Engineering System

Management System

GOAL: A Continuous Flow of Innovations

Define
Clarity on Raw Concept

Discover
Fail FAST
Fail CHEAP on Key DEATH Threats

Develop
Make it REAL

Deliver
Go to Market

Increasing Speed and Decreasing Risk
Two Levels of Innovations

IE LEAP Innovations
Creating Our Future

IE CORE Innovations
Keeping Us Competitive
Do you want to create CORE or LEAP Innovations? Or do you want to create an Innovative Strategy?

Innovation Engineering supports all 3.

You should have a balance

15% should be LEAP Innovations
85% should be CORE Innovations
Core Innovations

CORE Innovations are incremental improvements. They are typically lower risk & lower reward but faster to market ideas.

CREATE sessions are designed to maximize CORE Innovations.
Leap Innovations

LEAP innovations are the game changers. They are often patentable breakthroughs.

They have a higher risk, higher potential reward and are typically longer to market ideas.

Though only 15% of your innovations should be leap, they tend to create 50% profit growth.

Accelerator Sessions are designed to maximize LEAP Innovations.
Strategy Activation

An Innovative STRATEGY leads your business or brand.

It aligns leadership on a Very Important Opportunity or System.

It motivates employees to action.

Strategy Activation Sessions are designed to create or translate your formal or informal growth strategy into a motivating mission.
Leadership defines the need in a BLUE CARD session.

WHAT we need

And

WHY we need it
VIO and VIP / VIS

Very Important Opportunities for the organization

Very Important Problems and/or Systems we need to address
1. VIS / VIO Name suggestive of the mission
2. Project Narrative: Tell the story of why it is so important that we focus energy on this Blue Card.
3. Mission: “We need ideas for __________ “
4. Exclusions: Ideas we are NOT interested in.
5. Tactical Constraints: Time, resources, investment $, regulations, etc.
6. Exploration areas (stimulus mining)
   1. Wisdom
   2. Patent
   3. Market
   4. Customer insight
   5. Future
   6. Unrelated
Strategic Activation

Yellow Cards

**HOW** to solve

Those close to the work

Define & Discover

Innovative Solutions
Alignment in the Organization

Strategic Mission and Strategic Action
A System for Innovation

CREATE

COMMUNICATE

COMMERCIALIZIZE

Tools
Creating Ideas “Operating System”

Meaningfully Unique ideas

Leverage Diversity

Explore Stimulus

ie. “homework”

Drive out Fear

\[ MU = \frac{S^D}{F} \]
SPARK DECK

Typically 6 – 8 slide presentations that share facts, figures, images, etc. from Mining to “Spark” ideas.

CREATE TOOLS
Yellow Cards

A tool for capturing and communicating meaningfully unique ideas.

• What is **IT**?
• Who does it serve?
• What does it solve?
• Why you should believe me
Yellow Card for Capturing Ideas

Concept Card
For Product, Service, or System Innovations
Start from the front or back side of card, filling in all that you can.

Innovation Name: ____________________________________________

Suggestive of the Benefit

NEWSHEADLINE: Explain your idea in 1 sentence. The first...

__________________________________________________________

__________________________________________________________

The Customer & their PROBLEM Clearly describe WHO is the Customer for your
Innovation and WHAT is their Problem (complaint, frustration, wish)

__________________________________________________________

__________________________________________________________

Customer Benefit PROMISE Make a Meaningfully Unique Benefit Promise to
address the problem. Answer the question, “Why should I care?”

__________________________________________________________

__________________________________________________________

More details on the BACK of CARD...

Product, Service, System and PROOF
Provide a description of one or more of the following

1) What is your innovation and how does it work?

2) What meaningful difference makes the promise possible?

3) Provide reasons to believe that this innovation will actually work as promised.

__________________________________________________________

__________________________________________________________

__________________________________________________________

Strategic Purpose: If addresses a... check one

- Very important Problem (Woeasome/Trivial)
- Very Important Opportunity (Strengths/Opportunities)
- New Customers, Markets or Systems

Focus Area check the one primary area...

- Established Customers, Markets, or Systems

PASSION This project is important to me and to my organization because...

__________________________________________________________

__________________________________________________________

Rough Estimate of Customer Cost ___________________ for ___________________

This is a great value when you consider...

__________________________________________________________

__________________________________________________________

Inventor’s Autograph: ______________________________________
Telling the Story

Communication of Meaningfully Unique Innovations

Customer & their PROBLEM

Meaningfully Unique  Benefit PROMISE

Meaningfully Unique  Product/Service & PROOF
Confronting Fear

Examining the unknowns through

• “Doing the numbers”
  • How large is the opportunity?
  • Can we make money?

• Addressing “Death Threats”
  • What would derail the project?
Addressing DEATH THREATS

“What can we learn this week (or today) to move the project ahead?”
Time Bound Decisions

- What did we learn?
- Did we address the situation?
- Do we move forward?
- **GO or NO GO in 8 – 12 weeks**
Can this work for OUR organization?
• Strategic Activation Session with Leadership

• BLUE CARD Creation
• ½ day IE Workshop

• Interactive CREATE Session

• 38 Ideas in 4 hours
• Engaged with Sheltered Workshops in Wyoming

• 8 BLUE CARDS

• 120 YELLOW CARD Ideas
Operating System Structure & Processes

A. Blue Card

B. Yellow Cards

C. Phases (aka Stages & Gates)

D. Check List Process
   (Lists customized for how the culture manages
   CORE & LEAP - Death Threats & Milestones)

E. Work Process for Tasks

A strategic “theory” on what is very important for our organization’s short & long term success. Also known as the “Commander’s Intent.”

Tactical “theories” of how we might accomplish the Commander’s Intent (new or improved products, services or systems). Their only reason for existence is to deliver on the Blue Card.

Our phases for increasing investment in Yellow Cards.

CHECK LISTS are our standardized “game plans” for WHAT (standards), WHY (reasons), and HOW (methods) Yellow Cards become reality. The aim of the check list process is to create alignment between leadership, employees & departments.

This is the process for how it all comes together when we are doing the work. It’s an iterative system that guides the work on the Yellow Cards by integrating the Commander’s Intent (Blue Card), with the organization’s “game plan” for change (check lists).
Get Started!
Questions & Answers

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