

# Innovation 101: How to Create and Advance Ideas

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North Carolina State University  
Industry Expansion Solutions  
Campus Box 7902  
Raleigh, NC 27695-7902

Kevin Grayson, MSEE, MBA  
704-751-9661  
Kevin\_Grayson@ncsu.edu

# Agenda

- **Why Innovate? What is Innovation?**
- **A Process for Innovation**
- **Three key factors for Innovation**
- **Q & A**

# Why INNOVATION?

## How We Define Innovation



**Creativity**

*Different*



**Invention**

*Technical  
Creativity*



**Innovation is**

**MEANINGFUL &  
UNIQUE**

# Why INNOVATION?

**Innovation** mean

**something is:**

**MEANINGFUL**

**& UNIQUE**

# Why INNOVATION?

**MEANINGFUL** = Customer Values it

**UNIQUE** = Different (better) than other  
options

# Why INNOVATION?

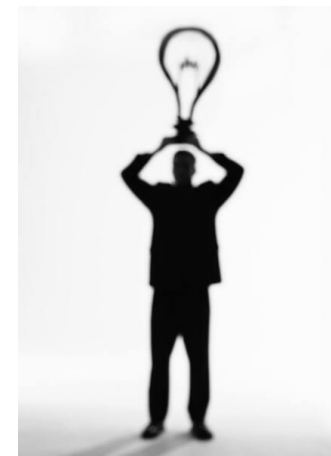
*Meaningfully*

If you're not  Unique

**you better be cheap**

# Many Place to Innovate

- **New Products**
- Services
- Marketing
- Process
- Business Models
- Business Practices



# Process Examples

## Innovation



## More Recent Innovation



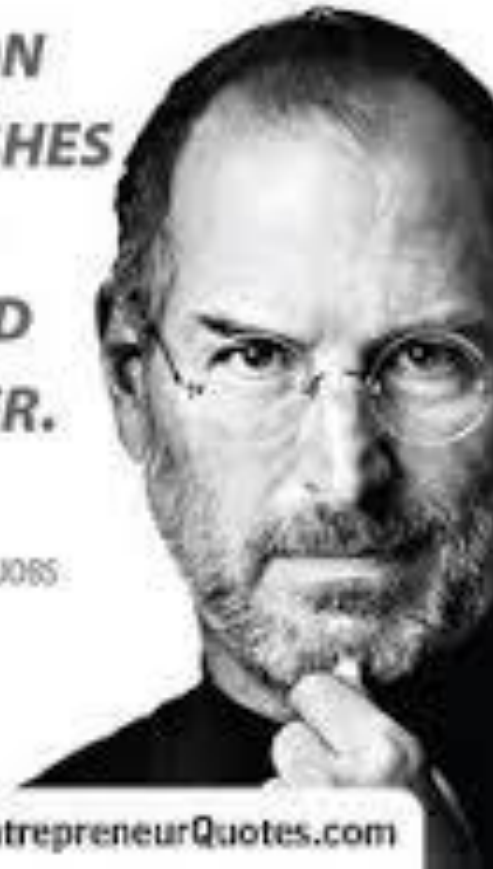
Meaningfully Unique

# Why Innovate?

The Positive

*INNOVATION  
DISTINGUISHES  
BETWEEN A  
LEADER AND  
A FOLLOWER.*

- STEVE JOBS -



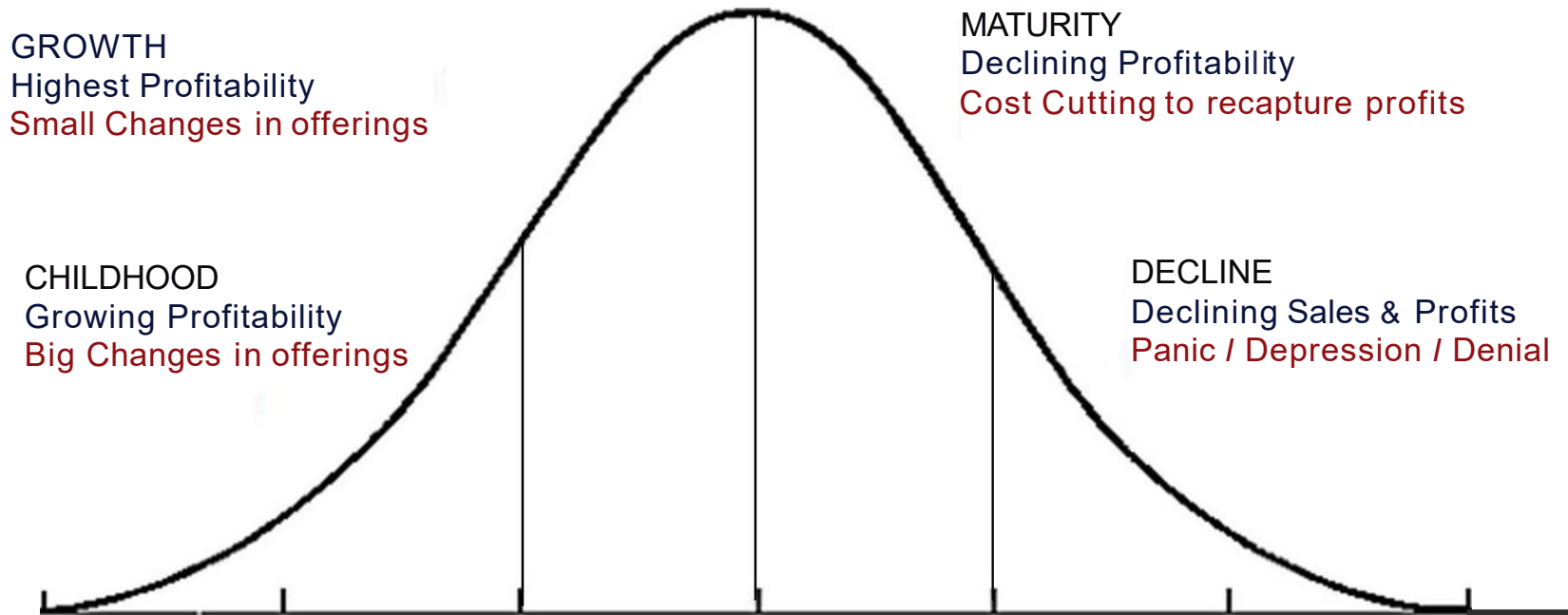
[www.FamousEntrepreneurQuotes.com](http://www.FamousEntrepreneurQuotes.com)

# Why INNOVATION?



The Negative

# Savransky Business Cycle

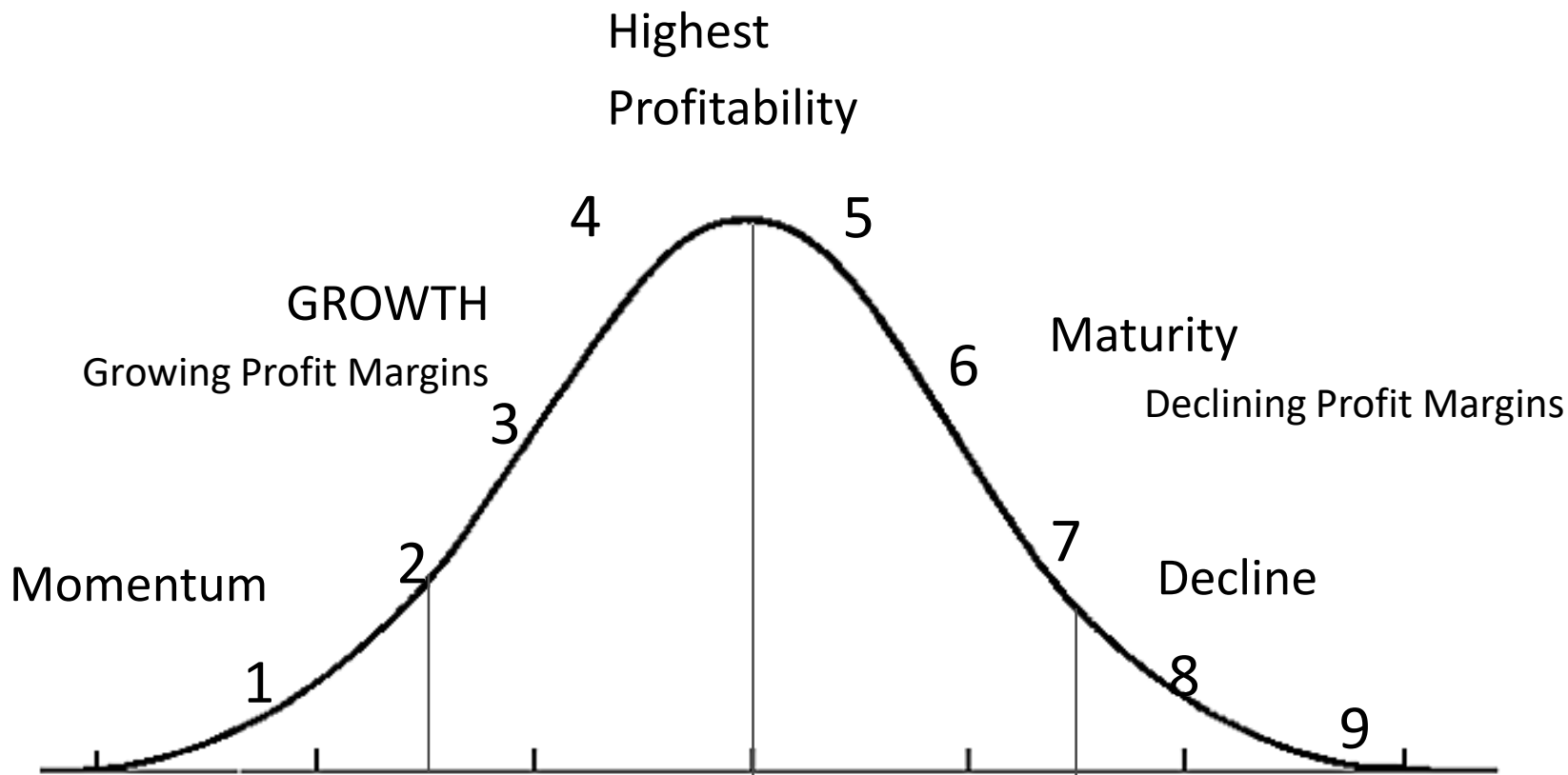


## Business Life Cycle

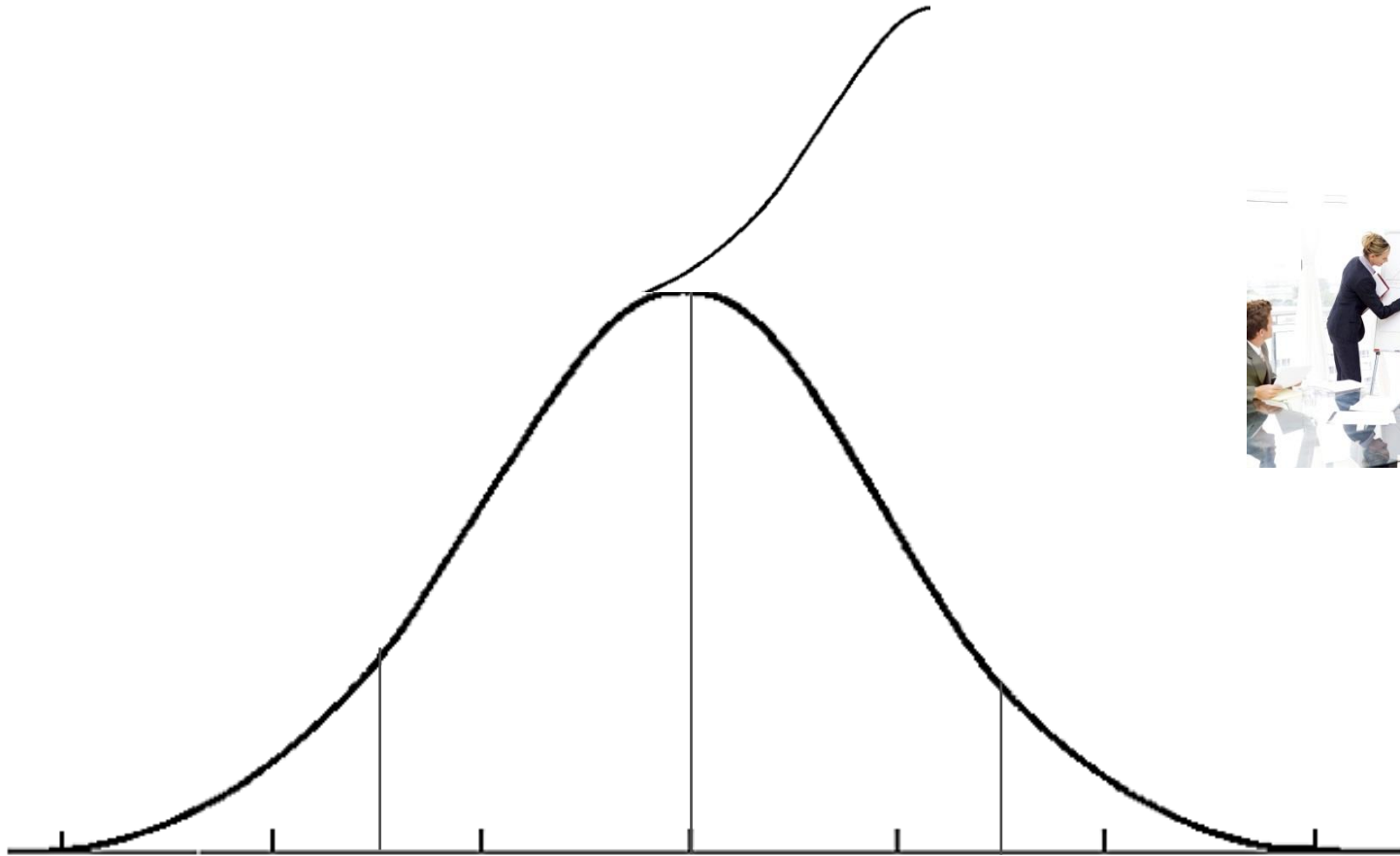
# Why INNOVATION?

## CONFRONT REALITY

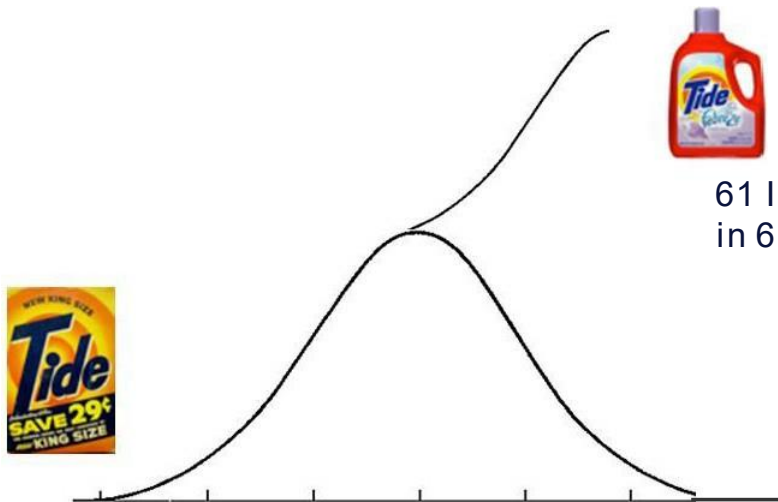
*Where is your organization on the Business Life Cycle?*



# ALTERNATIVE - Use Innovation to **RESTART** Your Organization



# Reboot and Restart



61 Innovations  
in 61 Years

## Bottom Line

Innovation is why Tide still makes a premium profit margin selling an old product "detergent" even in Wai-Mart!



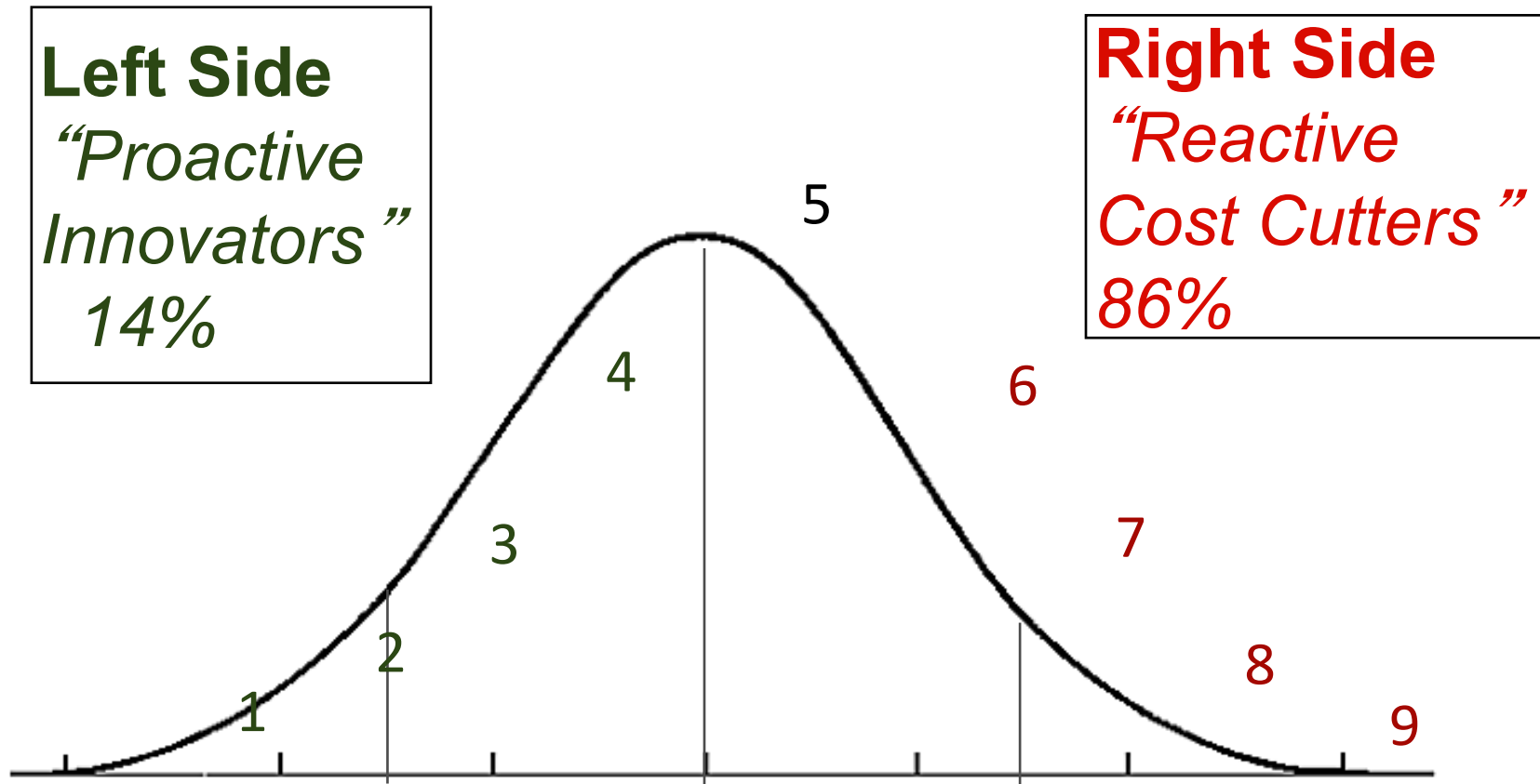
Every Year  
They update or  
discontinue the  
#1 MP3 player

## Bottom Line

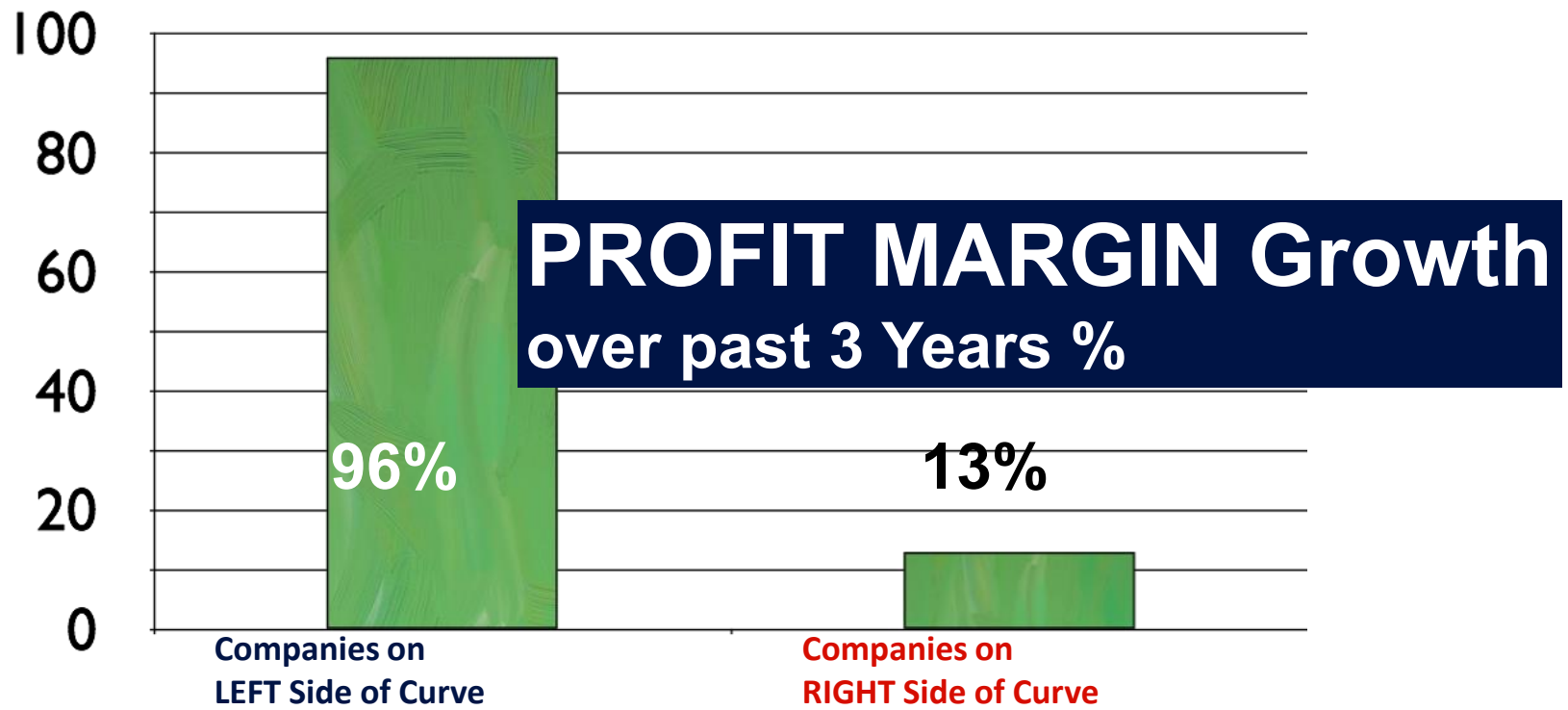
Innovation is why Apple makes a premium profit margin in consumer electronics one of the most price driven marketplaces on earth.

# Time to Confront Reality

## Research Findings



Source: NIST MEP Network survey of 7000 companies



## NIST/MEP Network

*Partnering for Manufacturing Innovation and Growth*

# Problems with VOC

*"If I had asked people what they wanted, they'd have said faster horses."*



Henry Ford



**"When customers come through the door with a project we are good at creating a solution for them and getting the project. And we make good margins on those projects. But the problem is – I cannot control how fast the customers come through my door. I've got to create my own products to survive"** CEO, Charlotte area manufacturing company.

# Key Question

**WHY ARE COMPANIES NOT  
USING INNOVATION AS A  
GROWTH STRATEGY ?**

## Problem #1 :

It can take a LONG TIME to see results.

## Problem #2 :

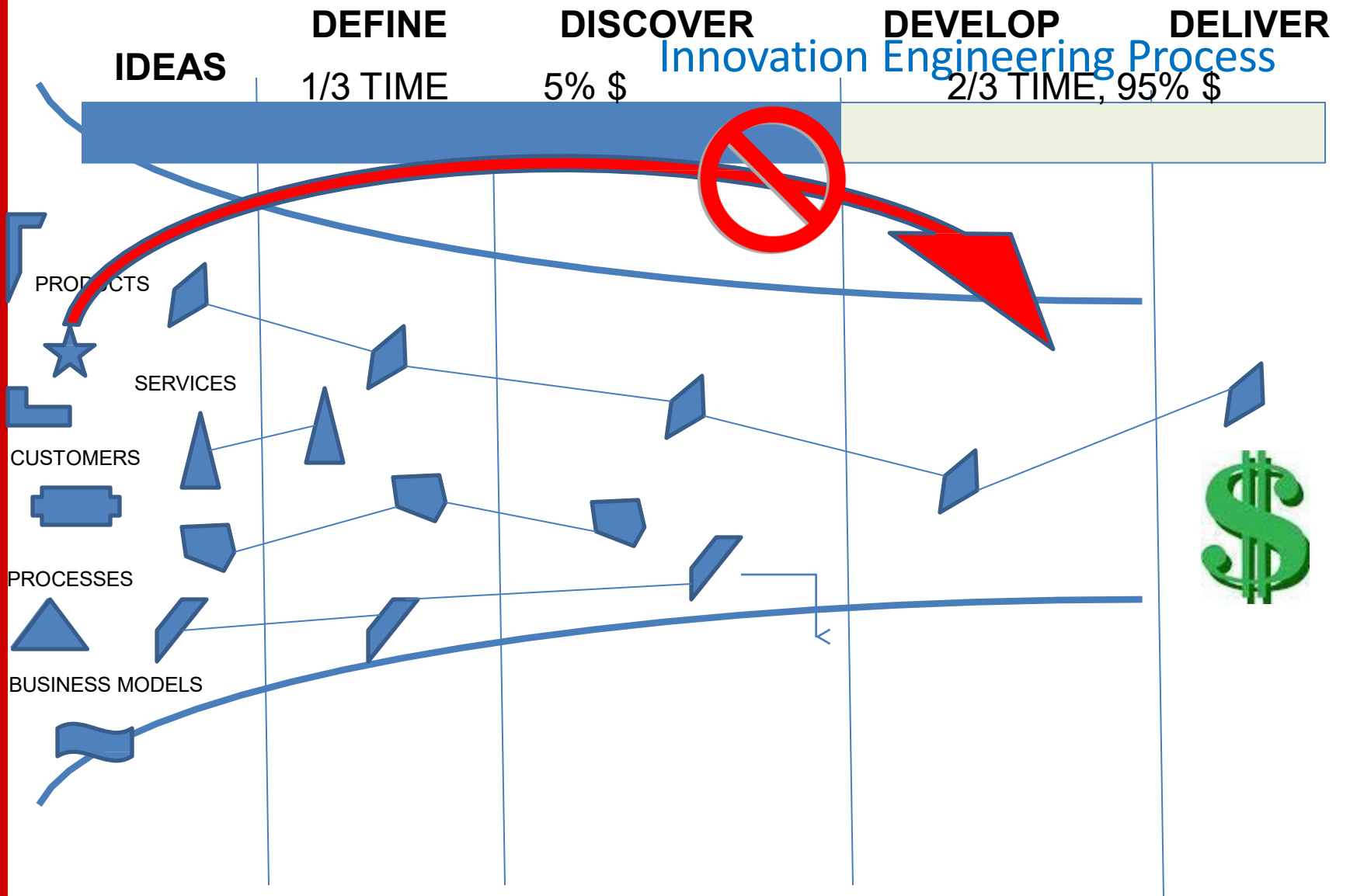
It can be very RISKY.

# Innovation Academy – a **SYSTEMS APPROACH**

- **Roles (Champion, Process Coach, etc)**
- **Systematic Process with Tools**
- **Training – Basic, Intermediate, Advanced,**
- **Coaching & mentoring**
- **Goals & measured results**
- **Software – collect & organize our ideas**

# The Innovation Management Pipeline

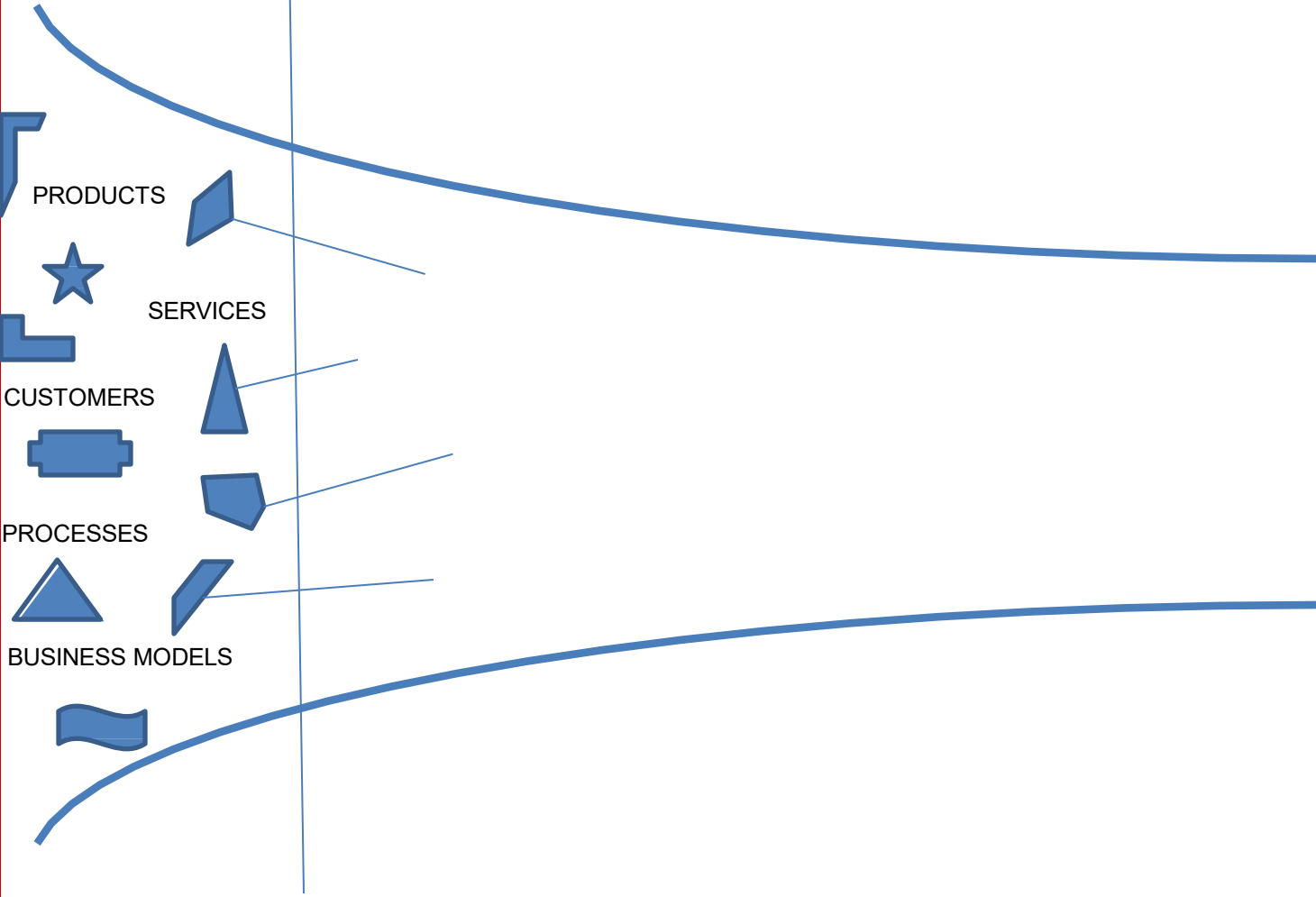
CREATE



# Create Tools

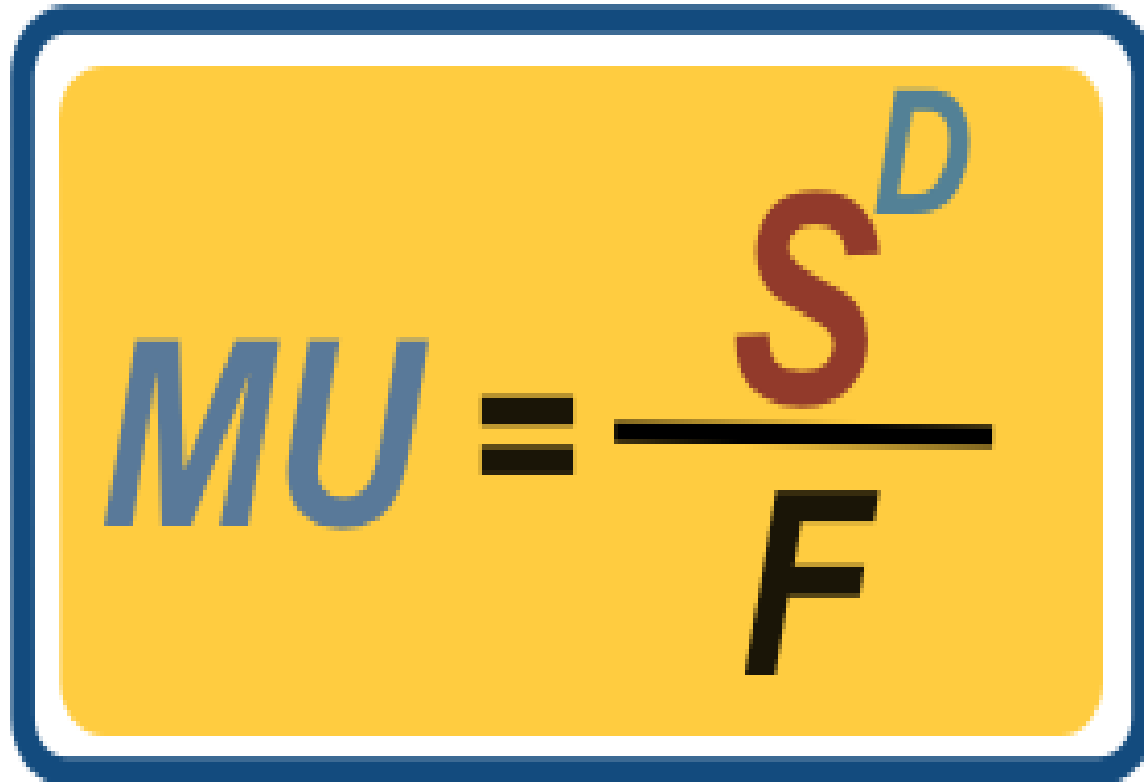
# Begin the Process With Ideas

IDEAS



CREATE

# Math Time


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

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

Leverage  
Diversity

$$\text{Meaningfully Unique Ideas!} = \frac{\text{Explore Stimulus}}{\text{Drive out Fear}}$$

# Value of Stimulus

## Stimulus Feeds The Brain

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**Stimulus Available**

**# of practical ideas**

**Low Stimulus**



**Medium Stimulus**

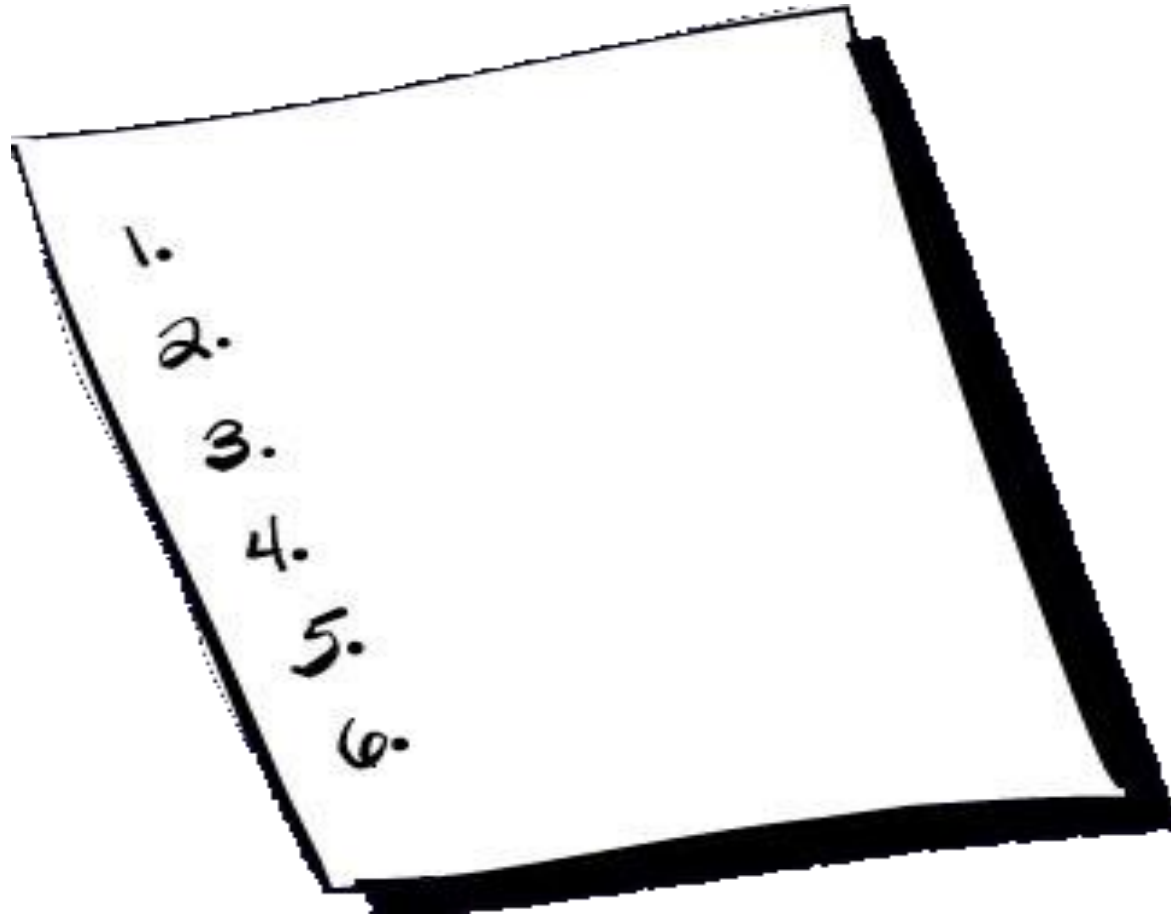


**High Stimulus**



# Exercise #1: Where to Go on Vacation ?

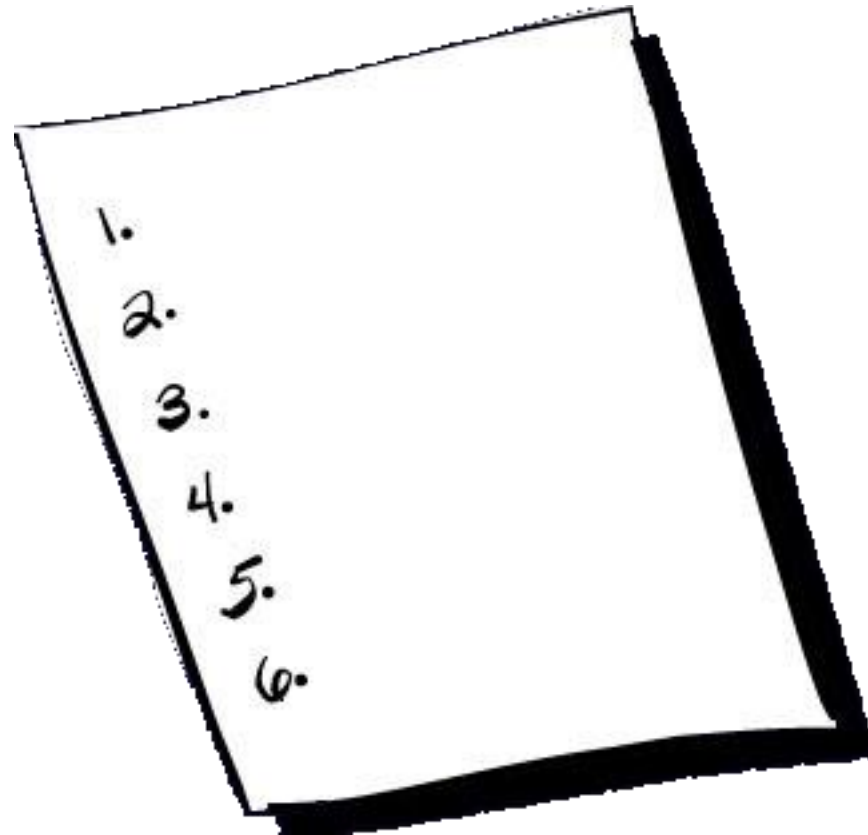
## POLL Question



# Where to Go on Vacation?

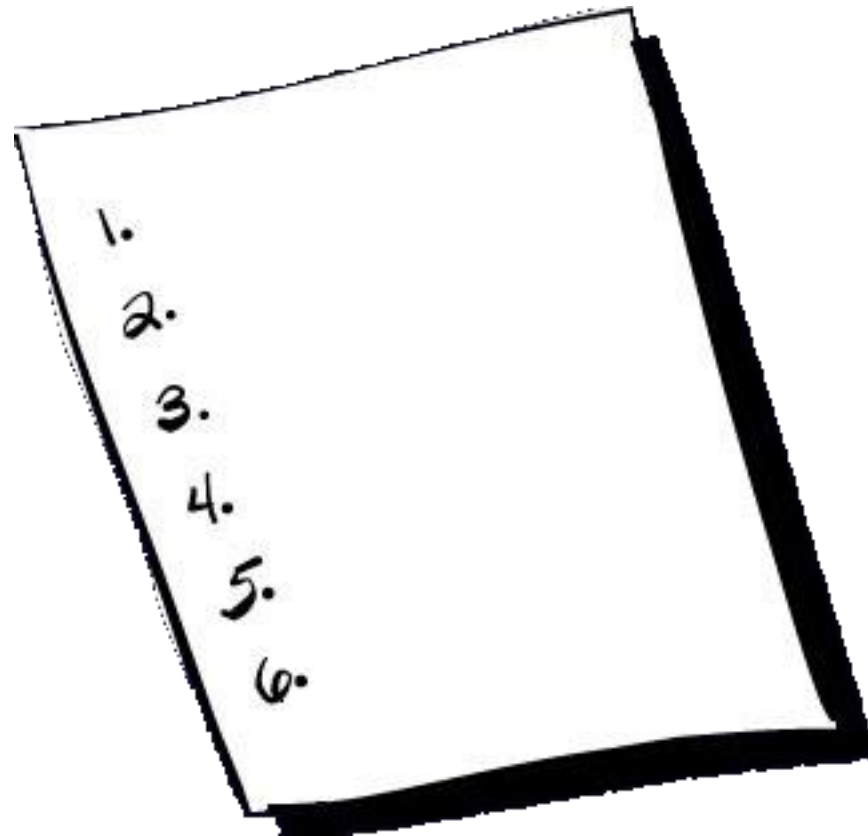


# Exercise #2: Where to Go on Vacation ?



# Exercise #2: Where to Go on Vacation ?

## POLL QUESTION



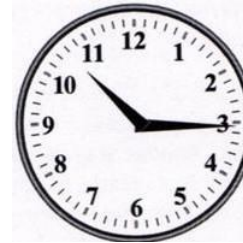
**At Their Most Basic,  
IDEAS  
are Feats of Association**

**Stimulus sparks that  
association**

# Types of Stimulus



**Related Stimulus**  
**"FREE Association"**



**Unrelated Stimulus**  
**"FORCED Association"**

# Now, Back to the Equation

$$\text{Meaningfully Unique Ideas} = \frac{\text{Explore Stimulus} \times \text{Leverage Diversity}}{\text{Drive out Fear}}$$

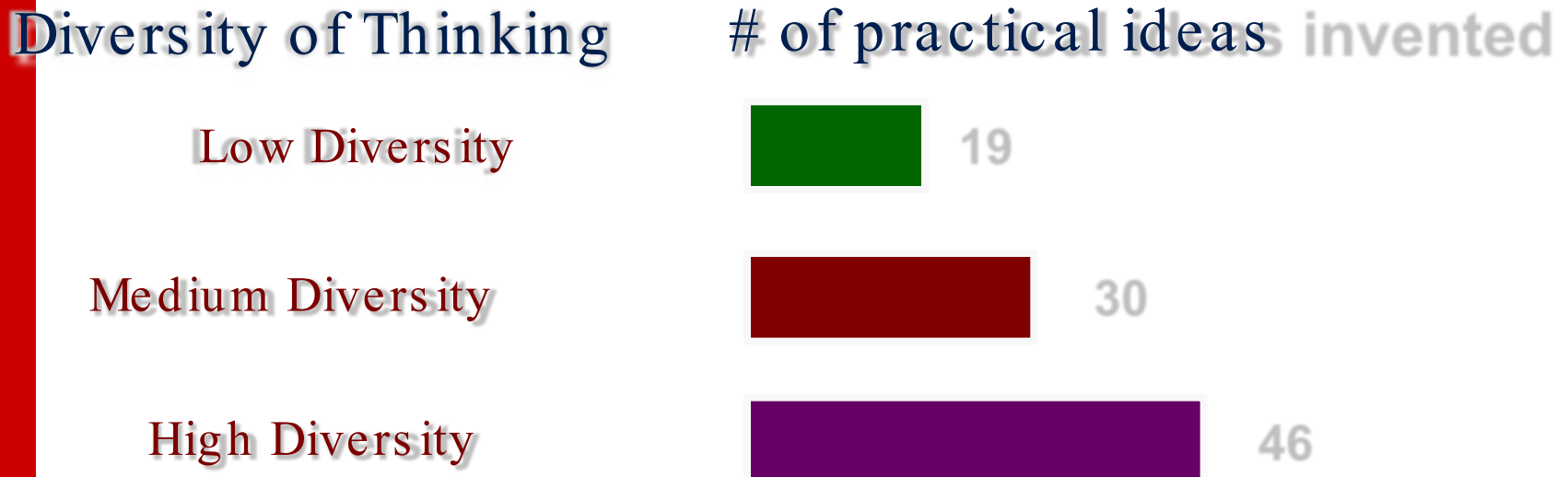
$$MU = \frac{S^D}{F}$$

# Leverage Diversity

Diversity Powers the Impact Stimulus .

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

**TODAY:** Diverse Brains in the room



# Diversity

## Diversity Is Your

- Frame of reference
- Point of view



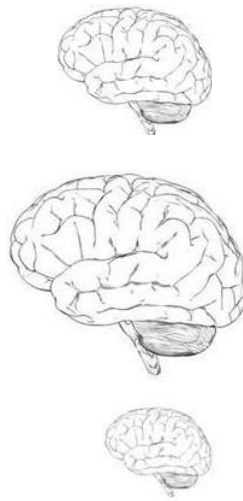
## And Is Influenced By Your

- Life Experiences
- Functional Job Area
- Optimism/Pessimism
- Personal Thinking Style
- Education
- Company Tenure

THE MORE DIVERSITY YOU HAVE, THE BETTER IDEAS YOU HAVE

# Diversity Powers Stimulus

What is a rose?



- +

"Beauty"

- +

"Tango"



"Vitamin C  
Tea"

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

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

$$\text{Meaningfully Unique Ideas!} = \frac{\text{Explore Stimulus} \begin{matrix} \text{Leverage} \\ \text{Diversity} \end{matrix}}{\text{Drive out Fear}}$$

# New Ideas Mean Change

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



**That Means Fear!**

# How To Overcome Fear ??

**Confront Fear By Identifying**

**DEATH THREATS**

**Remove Death Threats =**

**Remove FEAR and build CONFIDENCE**

# Review & Summary

**Innovation = MU**

**Innovation = more profits**

**Business Life Cycle Curve & why it matters**

**Process for Innovation = IDDDD**

**3 factors that influence Innovation**



Smart Manufacturing Adoption to Realize Transformative Energy Reductions for North Carolina



**Through a federal grant from the Department of Energy, we can provide financial assistance for small-to-medium sized manufacturers to offset some of the expenses of non-equipment costs to adopt and integrate relevant SMART technology.**

Contact: [smarternc\\_info@ncsu.edu](mailto:smarternc_info@ncsu.edu)

More Info: <https://ies.ncsu.edu/smarternc/>

Link to  
apply:



[ncstateies.com/sncapp](https://ncstateies.com/sncapp)

# **THANK YOU!**

**Kevin Grayson**  
**Business Growth & Innovation**  
**Industry Expansion Solutions**

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