Learn the **TOOLS** and acquire the **CONFIDENCE** to Create, Communicate & Commercialize Meaningfully Unique Ideas

THANK YOU

Bob Kennedy

Today's Presentation is not Adult, Mature or Unbiased

I'm a **ZEALOT** for MAINE!

Who is Doug Hall?

Entrepreneur
Age 12

9 Products in 12 Months
16% of the time
10% of the cost
10% of staffing

**Chemical Engineer**
3 Rounds Financing

Who is Doug Hall?

**Chemical Engineer**
3 Rounds Financing
What is Innovation?

Creativity Different
Invention Technical Creativity
Innovation Creativity or Invention with Meaningful Value

Eureka! Purpose: To Lead, Teach and Research the Creation, Communication & Commercialization of Meaningfully Unique Ideas.

Cincinnati USA
Charlottetown Canada
Glasgow Scotland

500+ SME'S

Innovation is MEANINGFUL UNIQUENESS
“Meaningful Uniqueness” means

Customers are willing to pay more money for your offering....

Your Product offering
Your Service offering
Your Non-Profit services/cause

Why is Innovation or MEANINGFUL UNIQUENESS Important?

Meaningfully Unique Means Greater Survival

Meaningfully Unique Drives Marketing Effectiveness

Meaningfully Unique Drives Valuation

Self Reported Company Strategy

n=738 - Georgia
Meaningfully Unique Drives Word of Mouth

Meaningfully Unique Keeps Companies in Business

Over 80% Close Because “It’s not worth the effort”

Only 1 in 7 small businesses close leaving debt

Innovation drives 80% of GDP Growth

Robert Solow
Nobel Prize Winner

Bottom Line

If you’re not **Meaningfully Unique** you better be Cheap

USA Owned - USA Patents

Foreign Owned - USA Patents

prices DECLINE - 25% with each doubling of experience

Over Time

Microprocessors LCDs Brokerages Wireless Services VCRs

Airlines Crushed Stone Mobile Serves Home Depot Online Retailers

Cable Boxes Cars USA Bottles Plastics Color TVs

In 2008 For the First Time More USA Patents Were Owned Outside of the USA
Immigrants living in the USA invent about 1/3 of all patentable inventions.

For those who say they can't
THINK ABOUT: A business that sells flour, water, yeast & salt...

Percent of college students rating very important:
- To develop a meaningful philosophy of life
- To be well off financially

TOP 3 things employers seek from graduates:
- Effective communications
- Thinking & reasoning skills
- Ability to apply to real world

Why teach?
Why the Name?

Chemistry
“The science of dealing with the composition and properties of substances.”

Chemical Engineering
“The practical application of science to commerce or industry”

Why the Name?

Innovation searched 5X more often than Creativity or Entrepreneurship

3% of Students want to be Entrepreneurs

100% of Students Need to Be Able To
Create, Communicate & Commercialize

Why the Name?

Companies Pay More for “Engineers”

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum Engineering</td>
<td>$86,220</td>
</tr>
<tr>
<td>Chemical Engineering</td>
<td>$65,142</td>
</tr>
<tr>
<td>Mining &amp; Mineral Engineering (incl. geological)</td>
<td>$64,552</td>
</tr>
<tr>
<td>Computer Science</td>
<td>$61,205</td>
</tr>
<tr>
<td>Computer Engineering</td>
<td>$60,879</td>
</tr>
<tr>
<td>Electrical/Electronics &amp; Communications Engineering</td>
<td>$59,074</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>$58,392</td>
</tr>
<tr>
<td>Industrial/Manufacturing Engineering</td>
<td>$57,794</td>
</tr>
<tr>
<td>Aerospace/Aeronautical/Astronautical Engineering</td>
<td>$57,231</td>
</tr>
<tr>
<td>Information Sciences &amp; Systems</td>
<td>$54,038</td>
</tr>
</tbody>
</table>

Source: Winter 2010 Salary Survey, National Association of Colleges and Employers. Data represent offers to bachelor’s degree candidates where 10 or more offers were reported.

Companies Pay More for “Engineers”

Why the Name?

It’s about an ENGINEERING MINDSET

Disciplined - Results Oriented

Why the Name?

To Help You Sell Yourself

“I see you majored in Art History and have a Minor in Innovation Engineering - what does that mean?”

Why the Name?

“It means I know how to Create, Communicate and Commercialize meaningfully unique ideas in the field of Art History...my final project...”
1. The MINOR
   - INV 180 Create
   - INV 282 Communicate
   - INV 392 Commercialize
   - INV 401 Experience

2. Graduate Student Certificate

3. Leadership Institute (For Profit, Non Profit & Economic Development)

Erich Engelhart - President of the Math Club

Erich: “What is the difference between U Maine and RIT?”

“At Maine our speciality is MAKING IT REAL - you learn how to APPLY what you’ve learned”

“From Forest Bioproducts Institute to Composites to the ultimate REALITY CHECK INNOVATION ENGINEERING we teach you how to make your learning REAL”

Erich: “You’re right, I’ve not seen anything even close to Innovation Engineering. It’s the big difference. It’s why I’ll probably be going to Maine”

IMAGINE

Every Student - Every Week

Thinking & Taking Action on Innovative Ideas

What makes Innovation Engineering Meaningfully Unique?

“A SYSTEM APPROACH Drives Meaningful Uniqueness

“94% of failures are due to the SYSTEM
6% are due to the worker”
“Where the art of Innovation becomes a reliable science.”

Innovation Success Factors
Discovered by REVERSE ENGINEERING
what separates winners from losers

4,000+ ideas were studied
Over 2,000 Academic Journal Articles Reviewed

Process Success Factors
Discovered by Quality Control Charting of

6,000+ Innovation Teams

Innovation Control Chart

REAL IDEAS for REAL COMPANIES

CREATE COMMUNICATE COMMERCIALIZATE
Explore Stimulus

- Uniqueness Mining
- Customer Mining
- Technology Mining

<table>
<thead>
<tr>
<th>Stimulus Available</th>
<th># of practical ideas invented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Stimulus</td>
<td>22</td>
</tr>
<tr>
<td>Medium Stimulus</td>
<td>38</td>
</tr>
<tr>
<td>High Stimulus</td>
<td>47</td>
</tr>
</tbody>
</table>

Traditional Model

Before

After

Suck Method
Uses Your Brain Like A LIBRARY

Where To Go On Vacation?

COMPUTER

Stimuli sets off a CHAIN Reaction!!!
“Did customers ask for the electric light? No. They never asked for it, the producer produced it. No one asked for a car, nor a telephone. No one asked for a copy machine or a fax machine.

Innovation does not come from the customers. Innovation comes from the producer, from people who are responsible for themselves and have only themselves to satisfy.”

Dr. W. Edwards Deming

“Did customers ask for the electric light? No. They never asked for it, the producer produced it. No one asked for a car, nor a telephone. No one asked for a copy machine or a fax machine.

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Dr. W. Edwards Deming

Henry Ford

“If I had asked people what they wanted, they’d have said faster horses.”

Companies Are of Two Mindsets

**“Reactive” Mindset**
- We are more customer focused than our competition.
- We measure customer satisfaction systematically and frequently.
- We believe our business exists primarily to serve our customers.

**“Proactive” Mindset**
- We help customers anticipate developments in their markets.
- We innovate at the risk of making our own products obsolete.
- We continuously try to discover additional needs of our customers of which they are unaware.

Deep analysis of 120 Businesses

A FUTURE FOCUS was 10 times more predictive of success than a “Voice of the Customer” approach.

**PROACTIVE** Product Innovation vs. **REACTIVE** Product Innovation
The Bottom Line Result

- "Proactive" Mindset
- More Optimistic About the Future
- Higher Respect for Senior Leaders
- More Successful with Innovation
- More Courage and Less Fear
- Rate As Better Place to Work

Companies
LEAD (Proactive) vs. FOLLOW (Reactive)

<table>
<thead>
<tr>
<th>Deadly Reactive</th>
<th>Highly Reactive</th>
<th>Somewhat Reactive</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:1 Lead vs. Follow</td>
<td>15% Proactive</td>
<td>85% Reactive</td>
</tr>
</tbody>
</table>

Diversity of Thinking

- Low Diversity: 19
- Medium Diversity: 30
- High Diversity: 46

What is a rose?
- "Beauty"
- "Vitamin C Tea"
- "Rose Water"
- "Tango"

Clones Create Clones

Diversity Multiplies Stimuli

- "Beauty"
- "Vitamin C Tea"
- "Rose Water"
- "Tango"

Leveraging Diversity is not for WIMPS!
Innovation Engineering is About

Whole Brain®

It’s Cross Training For Your Brain

Diversification of Thinking

Whole Brain
Stimulus Processing
Diversify Thinking Using Every Validated Innovation Method

4 core thinking styles.

Miranda - Level Headed Lawyer
Carrie - Big Picture Insights
Samantha - Strong Interpersonal Skills
Charlotte - Conservative Rules Follower

Diversification of Thinking

Genrich Altshuller
TRIZ
Idea Engineering
Focus Focus

Doug Hall
Industrial Strength
Out of the Box
Inventing

Edward de Bono
Linus Creativity
Classic Creativity

George Prince
Lateral Thinking (Po)
Synectics (Analogy)
Stimulating Subconscious

Alex Osborn
Osborn Brainstorming
Play (Kitchen Chemistry)
Forced Association

Andy VanGundy
Check Lists
Matrix Mixing
Frame of Reference

Whole Brain® Model
Central Mode
Integrated Mode
Normalized Mode
Conventional Mode

Edward de Bono
Lateral Thinking (Po)
Synectics (Analogy)
Stimulating Subconscious

Alex Osborn
Osborn Brainstorming
Play (Kitchen Chemistry)
Forced Association
Benefits are Relative to a Specific Customer

EXAMPLE

Overt Benefit Difference

You TRIPLE the effectiveness of your marketing efforts by OVERTLY communicating your customer benefit

<table>
<thead>
<tr>
<th>Probability of Success</th>
<th>Low Overt Benefit</th>
<th>Medium Overt Benefit</th>
<th>High Overt Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13%</td>
<td>26%</td>
<td>38%</td>
</tr>
</tbody>
</table>

COURSE OVERVIEW

Communications

1. Dramatic Difference
2. Overt Benefit difference
3. Real Reason to Believe difference

CREATE
COMMUNICATE
COMMERCIALIZE

Benefits are

WHY should I care?
I = the customer

“Our product will make you Smarter...
Faster...
Healthier...”

WHY should I care?

WHY should I care?

WHY should I care?

WHY should I care?
**Target Audience =**
Those who compete
In BBQ Competitions

**NEW Target Audience**
Those who don’t compete

**WARNING**
This Electric Cooker is ILLEGAL in Competitions
It gives the user an UNFAIR ADVANTAGE as the even heating makes it too easy to Make Perfect BBQ Every Time

**I’m a Repeat Customer!**

**CREATE**
**COMMUNICATE**
**COMMERCIALIZIE**

**Meaningfully UNIQUE Ideas Feel Dangerous**

“An idea that is not dangerous is unworthy of being called an idea at all.”

Oscar Wilde
Meaningfully UNIQUE Ideas Require Change

Change Causes CHAOS

Meaningfully UNIQUE Ideas Spark FEAR

FEAR causes SHUT Down

Fear Level
- High Fear: 31
- Medium Fear: 34
- Low Fear: 42

Meaningfully UNIQUE Ideas = Spark FEAR

“94% of failures are due to the SYSTEM
6% are due to the worker”

SOLUTION

Make the Unknown Known
Use the Deming Cycle/Scientific Method

1. Plan
2. Do
3. Study
4. Act

Fail FAST Fail CHEAP
Dissolve Risks with Small Steps
**Old World**

“Proper & Mature”

Business Innovation System

Expensive & Slow

1. Plan
2. Study
2. Study
2. Study
2. Study

**New World**

Fail FAST - Fail CHEAP

Dissolve Risks with Small Steps

1. Plan
2. Study
2. Study
2. Study
2. Study

**Most Important GET STARTED**

A Body In Motion Stays in Motion

**Big Difference**

Well Planned Experiment
Roulette Wheel Gambling

**Instead of a Silo Relay Race**

**Key Principle**

Simultaneous Engineering

Profit Formula

Marketing Promise
Product/Service Reality

Innovation is about “Whack-a-Mole”
Richard Branson’s 5 Favorite Words
“Screw it, Let’s Do It!”
His Next 3 Favorite Words…
“Protect the Downside”

The Key Words are
Fail FAST Fail CHEAP

Fail FAST Fail CHEAP
Dissolve Risks with Small Steps

It’s Nearly IMPOSSIBLE To Get Adults To Embrace

"Fail FAST Fail CHEAP” Methods
Dissolve Risks with Small Steps

Sales Forecasts
- Best Guess
- Worst Case & Best Case
Fermi Estimate the Unknown
- R&D Time and Cost
- Your Cost, Customer Cost & Net Profit

Research Mining
- Academic Journals
- Trade Associations
- Government Resources

Technology Mining
- Inventions for Purchase/Licensing
- Entrepreneurial Start-Ups
- Patents

Open Innovation
- Experiment & Experience
- Ask for Help

Ask an Expert
- Scientists, Inventors
- Lead Users / Industry Veterans

Innovation Supply Chain
- Your Suppliers & Industry Suppliers
- Strategic Customers / Buyers

Competitive / Customer Scouting

Technology Scouting

5X More Effective

OPEN INNOVATION Success Stories


Best Place To Mine for Stimulus

OPEN INNOVATION Success Stories

OPEN INNOVATION is the Future

% of P&G ideas from outside the company

2001 2006 2008

30
40
50

Companies speak

Technology & Patents

Products & Profits

The PROBLEM

Inventors speak

www.USAInnovation.org

www.MainInnovationMarketplace.org

Fourt-Woodlock
“Decomposition” Sales Forecast

AS = FDM x TR x FPR + FDM x TR x RR x RPR x NRP

AS = Annual Sales
FDM = Final Decision Makers
TR = Trial Rate (Persuasion x Awareness x Distribution)
FPR = First Purchase Revenue
RR = Repeat Rate
RPR = Repeat Purchase Revenue
NRP = Number of Repeat Purchases

Probability Distribution

For Each Value
**Project Decisions Driven By Data**

**Report Assumptions and Inventor(s) Commentary**

<table>
<thead>
<tr>
<th>Assumption</th>
<th>Estimate</th>
<th>Confidence</th>
<th>Inventor(s) Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Possible Final Purchasers</td>
<td>100,000</td>
<td>40%</td>
<td>based on what Cookshack estimates is the number of pizza places and caterers</td>
</tr>
<tr>
<td>Revenue per First Purchase</td>
<td>$19,700.00</td>
<td>70%</td>
<td>First time purchasers have historically purchased one unit however the opportunity to market to larger distributors could develop first-time purchases of multiple carts.</td>
</tr>
<tr>
<td>% that will Repeat</td>
<td>10%</td>
<td>20%</td>
<td>our market has been the chef or food service employee that has tired of 80 hour weeks in traditional restaurant setting. As of now, those entrepreneurs have needed one</td>
</tr>
<tr>
<td>Number of Annual Repeats</td>
<td>1</td>
<td>50%</td>
<td>No independent operator has yet purchased multiple units, though many have become very successful and considering expanding their market and territories by operating multiple units</td>
</tr>
<tr>
<td>Revenue per Repeat Purchase</td>
<td>$34,000.00</td>
<td>50%</td>
<td>A distributor that purchases multiple units would provide for repeat revenue on a going-forward basis. Restaurant chains/large regional caterers could profit from multiple units</td>
</tr>
<tr>
<td>Reseller (Trade) Margin</td>
<td>N.A.</td>
<td>N.A.</td>
<td></td>
</tr>
<tr>
<td>Producer Profit (EBITD)</td>
<td>15%</td>
<td>60%</td>
<td>Based on average Mobile food service and metal manufacturing from the Almanac of Business and Industrial Financial Ratios</td>
</tr>
</tbody>
</table>

**Innovation Status**

- **Development Status**: 5 of 5
- **Shipping & Selling**: Product is fully patented.
- **Cost to First Sale (remaining)**: < $10k (90%)
- **Time to First Sale (remaining)**: < 6 months (90%)
- **Confidence in Concept Claims made in description**: 90%
- **Proprietary Protection Status**: 5 of 5

- **Granted Patent Claims**: The patent covers all components of the custom-built cart and self-contained oven including all solid-fuel/coal-fired ovens placed on a mobile platform.

**Concept Score & Diagnostics**

<table>
<thead>
<tr>
<th>Percentile Group</th>
<th>Overt Benefit</th>
<th>Reason to Believe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottom 40%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle 40%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top 20%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**STEP #1**

Gather a Critical Mass Cluster of State of Maine Innovation Needs, Wishes & Inventions

**The IDEA**

**www.MaineInnovationMarketplace.org**

**Gather Maine Company Innovations to Purchase/License**

- University - Researchers
- Citizen Inventors
- Entrepreneurs

**Open Call to Maine Inventors Innovation OFFERINGS**

- Innovation to provide R&D or Manufacturing Help...
- Innovations to Distribute...
- Innovations to Invest in...
**IMAGINE The Potential**

1,500
NEEDS & WISHES

500
Innovation
OFFERINGS

---

**STEP #2**

Where Business & Government Leaders
Learn the TOOLS & Gain the CONFIDENCE to LEAD
the Creation, Communication & Commercialization
of MEANINGFULLY UNIQUE ideas.

---

Researched, Developed & Presented by

---

**STEP 3: Continuing COACHING Help**

Drive Out Fear!

TO THRIVE
WE MUST

and Innovation Engineering Summer Interns

---

**GROWTH in Confidence in LEADING the**
Creation, Communication, and Commercialization
of Meaningfully Unique Ideas

(Among Small/Mid Sized Business Owners/Leaders)
Quick Test Of YOUR FEAR & Courage To Take Action

THE ONLY WAY TO FIND THE EDGE IS BY STEPPING OVER IT

An Edge I Stepped Over...

Hundreds of pressure ridges and open water leads.

I took off my skis to get ready to cross ahead of the dogs.

“Rubber Ice” was looking soft… so I moved to the right.

SPLASH!

So, Doug, What went through your mind?
69 Year Old Corky Peterson
MY HERO

After My Swim In the Arctic Ocean

After Skiing for an hour…. working to retain heat.

Prototyping Reduced Fear
Training Trip -- Ely, MN
“Fail Fast & Fall Cheap”

The Secret to Success?
“Emotional Right Brain Answer”

Jim Kouzes

• 30 Second Guru
• Top Expert on Leadership
- 175 PhD’s and Research Projects

The Secret is LOVE
“The key to success in business is LOVE.
Love your customers
Love your people
Love your product - your service
Love leading!”

Passion Can Be FAKED
LOVE Cannot
1,500 Business School Students
1,245 Plan to Earn $ Then Pursue Dream
255 Plan to Pursue Dream Immediately

20 YEARS Later
Checked for Millionaires

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<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>1,245</td>
<td>1</td>
</tr>
<tr>
<td>255</td>
<td>100</td>
</tr>
</tbody>
</table>

I Bring You
Good News

Leads the World!

Learn the TOOLS and acquire the CONFIDENCE to Create, Communicate & Commercialize Meaningfully Unique Ideas

Why?
Too often today companies are really struggling. They have been beaten up and have no courage left. This program puts courage back into companies and gives them a kick-start again.

I really liked learning how to put HOPE back into people.

I'm Optimistic
“As long as I have known the world I have observed that Wrong is always growing more Wrong, and that Right, however opposed, comes Right at last.”

and on taking responsibility....
“Up sluggard, and waste not life; in the grave will be sleeping enough.”

Ben Franklin

St. Thomas
Springbrook PEI

THANK YOU

Learn the TOOLS and acquire the CONFIDENCE to
Create, Communicate & Commercialize
Meaningfully Unique Ideas