Making the Leap

Cleveland Justis
Institute for Innovation & Entrepreneurship
UC Davis Graduate School of Management
Today

– Introductions & Overview
– Innovation: What is it and Why do we Care?
– What is the Leap?
– Marshmallows and the Leap
– Managing Risk During the Leap
– Success Stories
– Networking
Some (brief) Introductions...

Us

You

- Name

- How people in this room can help you
what is innovation?
"[In Wallace's shop] I saw for the first time everything in practical operation. It was all before me. I saw the thing had not gone so far but that I had a chance. I saw that what had been done had never been made practically useful. The intense light had not been subdivided so that it could be brought into private houses."

— Thomas Edison
Innovation

Creativity + Commitment + Entrepreneurship
Innovation

Creativity + Commitment + Entrepreneurship

creating a novel, valuable idea...
determining whether and how to make it real...
turning it into something real...

This is the leap
three lessons for innovation
Innovation is about connecting, not inventing.
“I invented nothing new. I simply assembled into a car the discoveries of other men behind whom were centuries of work. . . . Had I worked fifty or ten or even five years before, I would have failed. So it is with every new thing. Progress happens when all the factors that make for it are ready, and then it is inevitable. To teach that a comparatively few men are responsible for the greatest forward steps of mankind is the worst sort of nonsense.” — Henry Ford
The network *is* the innovation.
“build a better mousetrap, and the world will beat a path to your door.”

— Ralph Waldo Emerson
4,400
40
2
Telegraph Technology + suppliers

Generator Companies

Competing Light Mfrs

Regulators

JP Morgan & other venture investors

Franchisees

Local Investors
ideas are nothing without action.
What is the leap?
Lifecycle of a university spinout

Funding

- Research Grants
- Friends, Family, & Founders ($5-$50k)
- Angel Investors ($50-$500k)
- Early Stage Venture Capital ($500k-$2M+)
- Venture Capital ($2M-$50M)
- Private Equity, Project Financing ($2M-$50M)
- IPO, Merger, or Acquisition ($2M-$50M)

Stage of Venture Development

- Basic Research
- Applied Research
- Development Grants (e.g. SBIR)
- Proof of Concept
- Working Prototypes
- Engineering Prototypes
- Production
- Product Introduction

Net Cash Flow

# of New Ventures

Gen1: first 3-9 mos.
Gen2: (startup)
Gen3: (transition)
Gen4: (business)
Lifecycle of a new venture

1. **Gen1 (first 3+9 mos)**
   - manage for uncertainty and commitment

2. **Gen2 (startup)**
   - manage for market, product, & process development

3. **Gen3 (transition)**
   - manage for growth

4. **Gen4 (business)**
Let’s Get Real!
The Challenge

20 sticks of spaghetti + one yard tape + one yard string + one marshmallow
In groups of 4-5 people, and using just the available materials:
Build the tallest freestanding structure you can with the available materials
The entire marshmallow must be on top
Use as much or as little of the kit
Break up the spaghetti, string or tape
You have 18 minutes to build (and test and rebuild) your structure.

Materials:
Spaghetti
1 yard of tape
1 yard of string
1 marshmallow
your wits
luck
Rules

1. The tallest freestanding structure when the judges measure is the winner; you may not hold or stabilize your structure after the time limit.

2. If the rest of the group will say it’s cheating, it probably is; If the rest of the class will wish they thought of it, you’re on the right track.
Insert Countdown Clock Here
Results:
Typical Progress
Who Consistently Performs Poorly?
Recent Business School Graduates
Who Consistently Performs Well?
Recent Kindergarten School Graduates
Why?
Business Students

0
Orient
Plan
Build
Ta-Da!

18 Minutes
Lesson Two: Diverse Skills Matter
Specialized Skills + Facilitation Skills = Success
Innovation is risky
3,000 raw ideas
100 exploratory projects
10 well-developed projects
2 product launches
1 successful product

How do you know an idea is worth pursuing?
<table>
<thead>
<tr>
<th>The inventor’s curse</th>
<th>type I errors: Investing time and energy in a bad idea that looked good at first glance</th>
<th>everyone’s a genius</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>idea looks good</strong></td>
<td><strong>duh</strong></td>
<td><strong>type II errors:</strong> Rejecting a good idea because it looked bad at first glance</td>
</tr>
<tr>
<td>idea looks bad</td>
<td>idea is bad</td>
<td>idea is good</td>
</tr>
</tbody>
</table>

**the MBA’s curse**
Innovation is risky, but...
Not all risk is created equal.
Moving forward means reducing your uncertainty.
An idea’s worth = f(uncertainty, outcome)
The Challenge

think

do
Thinking about thinking and doing...

uncertainty
Thinking
Doing
Thinking
Doing
Thinking

current worth

value

development of the idea (or time)
A new venture is a series of experiments
Managing the Generative Cycle

Identify and resolve the critical uncertainties quickly and cheaply.

$5, $50, $500, $5,000...
The prime objective (@ the start)

The objective is to maximize, per resources committed (time, energy, and money), the amount of uncertainty reduced.
What are the uncertainties?

TECHNOLOGY

MARKET

BUSINESS

YOUR BUSINESS MODEL
The slide deck is your first $5 experiment
The major uncertainties that, if resolved, will make the idea worth pursuing.

What you need to deliver the deliverables, and what you will do next.
Setting early stage deliverables

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>$5</th>
<th>$50</th>
<th>$500</th>
<th>$5,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gen1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>first 3+9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mos.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Setting early stage deliverables

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>$5</th>
<th>$50</th>
<th>$500</th>
<th>$5,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gen1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gen1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gen1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gen1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gen2 (startup)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gen2 (startup)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gen2 (startup)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gen2 (startup)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gen2 (startup)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gen2 (startup)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Gen1 first 3+9 mos.*
ideas into
The pedagogical flow
Innovation

Creativity

creating a novel, valuable idea...

Entrepreneurship

turning that idea into something real...
Innovation

Creativity+ Entrepreneurship
Case Study: Revolution Foods
Entrepreneurship] does not essentially consist in either inventing anything or otherwise creating the conditions which the enterprise exploits. It consists in getting things done.

— Joseph Schumpeter