

Session 1 - Overview of Technology Commercialization

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- Associate Director Venture Development – IIE at UTD
- UTD Faculty since 2005, graduate and undergraduate courses in entrepreneurship
- 26 years Venture Development experience
- Perspective: Entrepreneur, Venture Capitalist, and Venture Developer-- Institutional start-ups
- Founded, Funded, Nurtured or Managed 25 early stage companies
- Managed new venture development for University of Michigan, and Baylor College of Medicine (BCM Technologies)—10 yrs.
- Industry Experience Includes: Healthcare, Biotechnology, Medical Devices /Instrumentation, Financial Services, Oil and Gas
- Advisor to Aqua-Synergy, BioSig ID, BioHealth Advance, North Texas Enterprise Center and several small companies including UTD spin-offs

Foundations: Commercialization & Entrepreneurship

- Invention vs. Innovation
- Opportunity/Innovation Assessment
- Essentials of the Commercialization Process
- The Entrepreneur's Profile: Self Test
- Avoiding Early Mistakes
- Essential Components of a Successful Venture

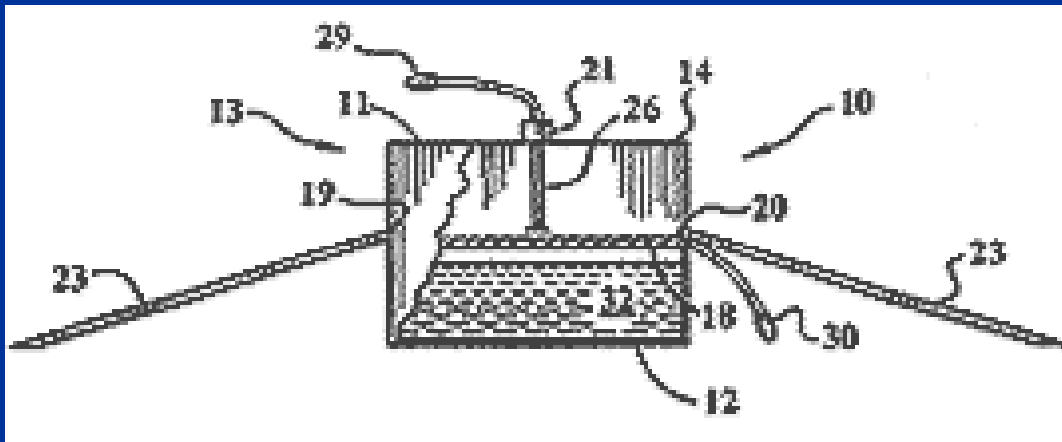
“Entrepreneurship is the last refuge of the trouble-making individual.”

--Natalie Clifford Barney

Invention vs. Commercial Innovation

What is an Invention?

- *A patentable invention: A novel and useful product / apparatus, machine, process, or composition of matter...*



Innovation vs. Invention

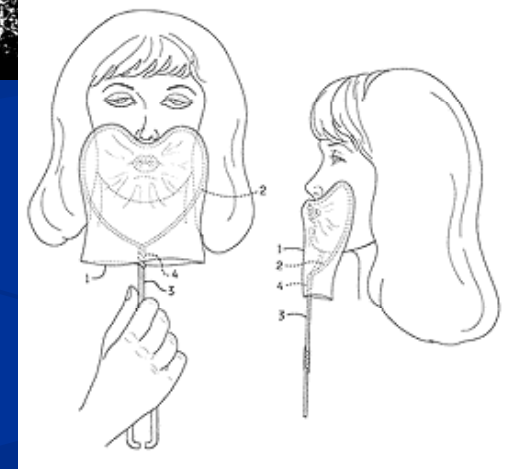
What is Innovation?

- *Innovation is the process of converting new ideas or inventions into new products and services that improve efficiency, effectiveness or quality of life.*
- *Innovation is the viable and practical application of a meaningful, new concept or invention.*

“Innovation” Assessment

Perception:

- Significant solution to a significant problem?
 - Who says so? (Who needs to say so?)
- ...Technology searching for a problem? (Technology push vs. Market pull)
- Compelling commercial opportunity? (Uniqueness, sustainable advantage market need, business model, fundability, etc.)



Do you have the Ultimate Compelling Opportunity?

“SVC seeks proven management team with proven, superior, unique, proprietary, disruptive, high profit, market-accepted product or service with superlative economic potential, & substantial, sustainable, competitive advantage with high barrier to entry, that addresses sizeable market with significant, unmet need that follows a stellar, proven business model and will generate a rapid & large ROI...with low risk.”

Essentials of Technology Commercialization

- Innovation discovered or identified
- Opportunity definition/assessment—sanity check
- Protection of IP, avoid pitfalls (e.g., preemptive publication)
- Products and applications (beyond research)
 - Alternatives, “low hanging fruit”
- Gap funding plan? (More is better)
 - Proof of principle, reduction of risk, enhancement
 - Prototype, working model

Essentials of Commercialization --Continued

- Commercialization plan, self-assessment:
 - Research, license, partner, start-up
- If start-up: strategy, business plan, management, funding, resources, etc.
- Positioning / marketing of innovation or entity for industry / investors
- Transfer: partnering, licensing, and/or start-up
- Design, development, production, mktg., sales

Entrepreneur Profile: How do They Think and Act?

“Entrepreneurs are simply those who understand that there is little difference between obstacle and opportunity and are able to turn both to their advantage.”

- Nicollo Machiavelli

Entrepreneur Profile: How do They Think and Act?

"The entrepreneur always searches for change, responds to it and exploits it as an opportunity."

-Peter F. Drucker

[This search happens whether on the front end of an opportunity search (e.g., trying to find a problem to solve) or in the middle of a problem looking for a solution.]

Entrepreneur Profile: Self Test

Top Four Traits?

- P _____
- P _____
- A _____
- and...
- S _____

Entrepreneur Profile: Self Test

(Other traits: with a disclaimer)

- Entrepreneurial mindset (...views things differently)
- Desire to be independent, to control one's destiny
- Highly energetic, optimistic, confident
- Intuitive, creative, analytical, adaptable, flexible
- Driven by more than money

Entrepreneur Profile: Self Test -Continued

- Ambitious (can you work 80 hrs per week?)
- Willing to sacrifice (can you pay yourself last?)
- Ability to deal with ambiguity, stress, crises, business failure
- Ability to take calculated risk

Mistakes Made in Starting an Entrepreneurial Venture

- Absence of concrete strategy or goals
- Insufficient market (e.g., product searching for customers)
- Lean ROI
- Absence of relevant management experience
- Too early for investors (high risk stage)
- Ignorance—lack of knowledge of industry, business, investors, obstacles and risks (market, customers, finance, management, development, competition, etc.)
- Hubris—failure to acknowledge obstacles, risks

Mistakes Made in Starting an Entrepreneurial Venture

- Lone Wolf Syndrome: absence of mentors and advisors
 - (“I can do this myself”)
- Inexperience with or aversion to “selling”.
- Refusal to accept personal limitations (refusal to augment)
- Overly optimistic about...what?
- Unprofessional or incomplete business plan
- Greed: unwillingness to share with and motivate potential stakeholders

Programmed Serendipity: Assembling Essential Components

C * P * U * M * A * S * T * E * R =

Higher Potential for a Successful Venture

- **C = CORE (Entrepreneur, Innovation, Enterprise, Passion)**
- **P = PERSUASIVE PLAN & PRESENTATION**
- **U = UNKNOWN FACTORS**

- **M = MONEY**
- **A = AGGRESSIVE ACTION**
- **S = SPONSORS (AND CONNECTORS)**
- **T = TEAM—TECHNOLOGISTS, BUSINESS MGRS., MENTORS**
- **E = ENVIRONMENT**
- **R = RESOURCES**

“Few...during their lifetime, come anywhere near exhausting the resources dwelling within them. There are deep wells of strength that are never used.”

--Admiral Richard Byrd

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