

Entrepreneurship 101

The Entrepreneur, The Idea & The Business Model

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Degrees:

MBA, PhD, MSc, and BSc

Publications:

167 scientific papers

43 Patents (27 US Patents; 7 in commercial use)

Accomplishments:

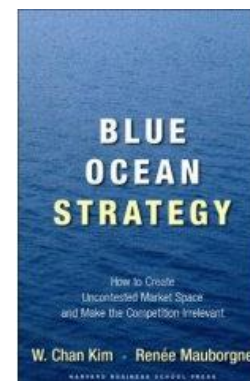
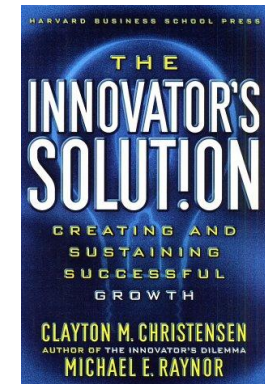
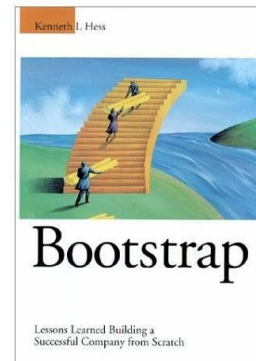
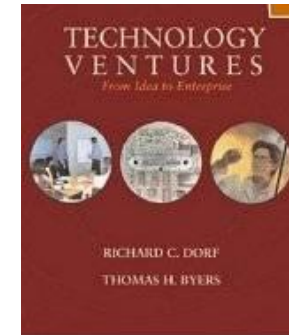
Shaped Xerox Research Centre of Canada as the most creative and innovative organization with more than 950 US patents

Ignited an 'innovation process' creating multi-million dollar businesses

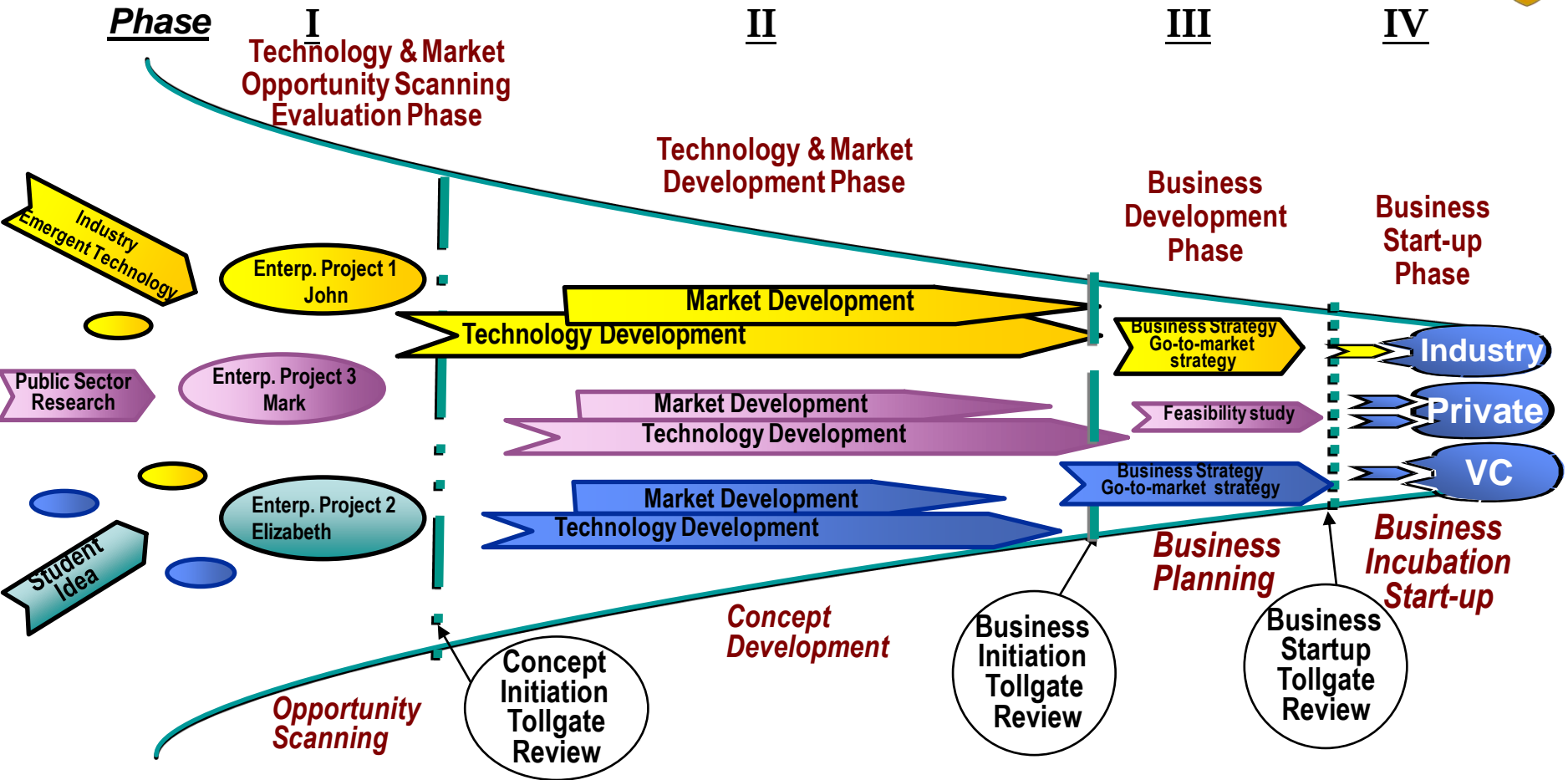
Created an intellectual capital business unit resulting in millions of dollars in licensing revenue

Key Texts

- Kawasaki, **The Art of Start:** The Time-Tested, Battle-Hardened Guide for Anyone Starting Anything , *Portfolio 2004*
- Dorf and Byers, **The Technology Venture:** From idea to Enterprise, *The McGraw Hill Company 2005*
- Hess, **Bootstrap:** Lessons Learned Building a Successful Company from Scratch, *S-Curve Press October 2001*
- Christensen and Raynor, **The Innovator's Solution:** Creating and Sustaining Successful Growth *Harvard Business School Publishing Corp., 2003.*
- Kim and Mauborgne, **Blue Ocean Strategy:** How to Create Uncontested Market Space and Make the Competition Irrelevant, *Harvard Business School Publishing Corp., 2005*



New Venture Creation Process

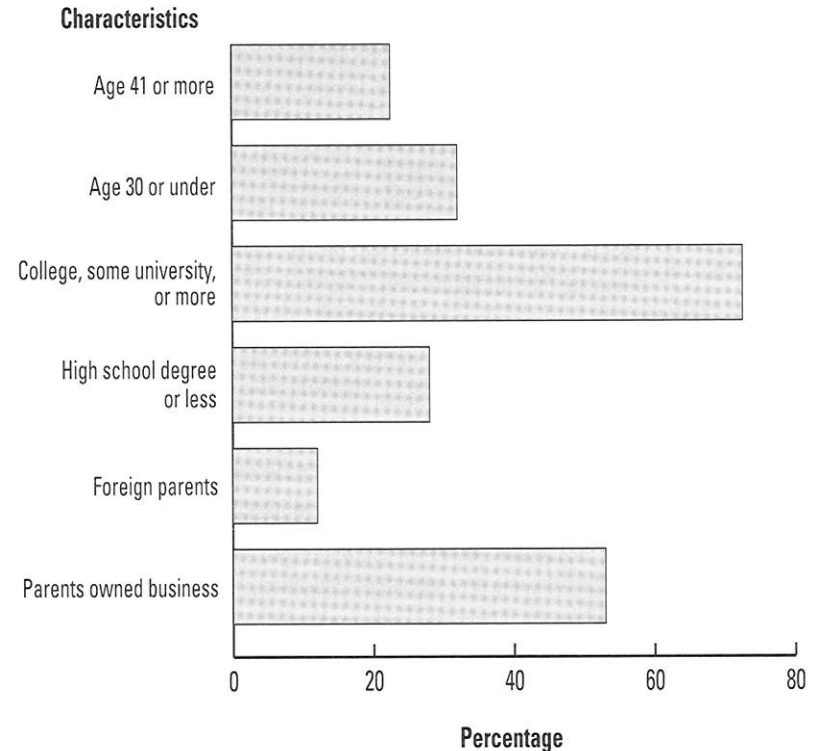


....Promoting Commercial Success of Science & Engineering Innovation in Canada

The Making of an Entrepreneur

- An entrepreneur is defined as an individual who sees an **opportunity** that others do not and marshals the **resources** to exploit it.
- An entrepreneur is some one who introduces a new product or a process; identifies new market or a resource of supply or creates a new type of organization.
- An entrepreneur raise the necessary capital, creates the new venture and assumes the control and risk of operation

Characteristics of Entrepreneurs



- **53% of the self-employed were under the age of 35**
- **In 2000 1 in 5 employed men owned & operated their own business, compared to 1 in 8 employed women.**

Source: Business Development Bank of Canada Survey, 1997

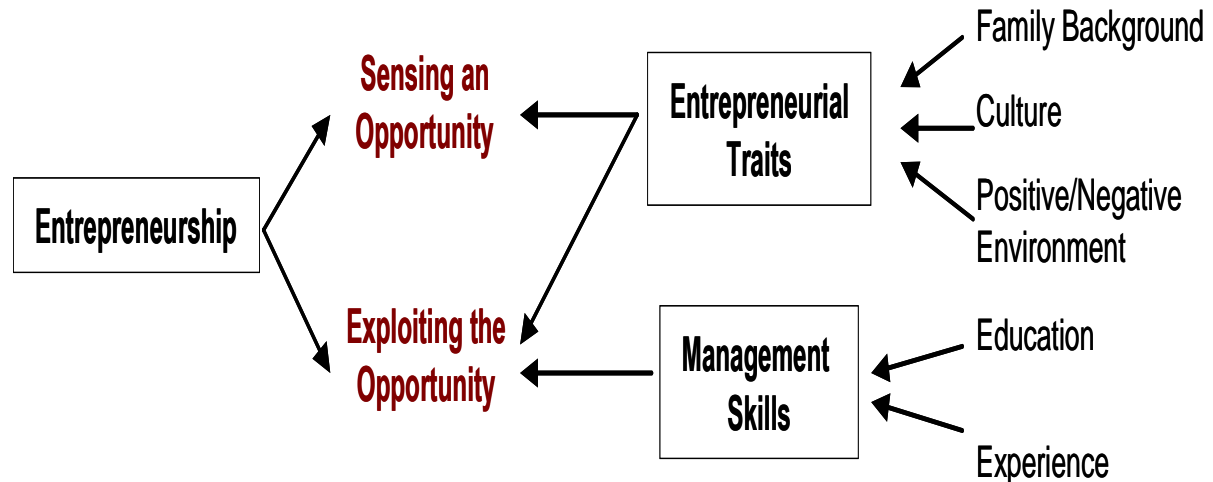
Personality characteristics of successful entrepreneur

The Traits Approach

1. High Need for Achievement
 2. Risk Taking Propensity
 3. Tolerance for Ambiguity
 4. Innovativeness
 5. Intuition
 6. High Need for Independence & Autonomy
 7. Internal Locus of Control
 8. Low Need for Conformity
- **Strong verbal & numerical skills**
 - **Selling skills**
 - **Problem-solving abilities**
 - **Strategic planning**
 - **Perseverance**

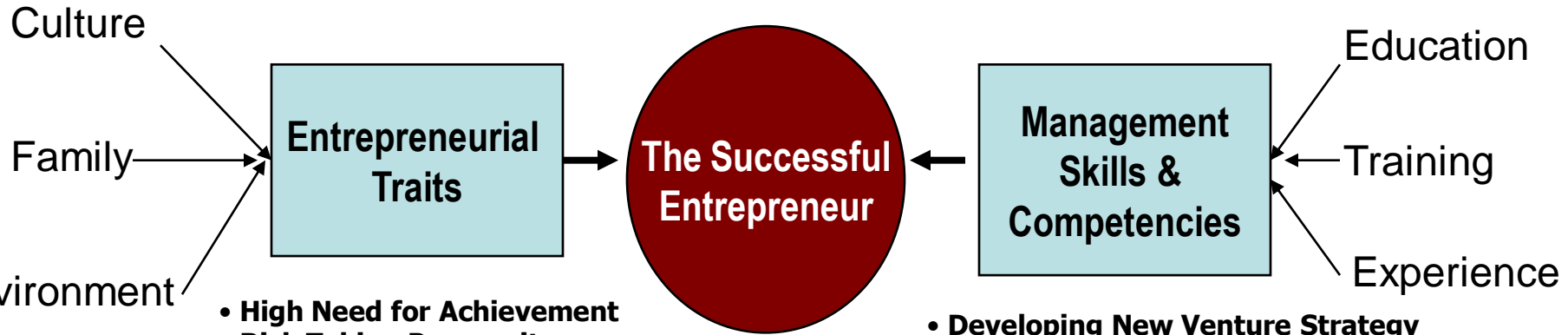
The Contingency Approach

- Entrepreneurship is a phenomenon which involve two critical elements – **sensing & exploiting** an opportunity
- The ability to **sense** an opportunity is the result of **entrepreneurial traits**
- The ability to **exploit** the opportunity is the result of the entrepreneur **management skills**



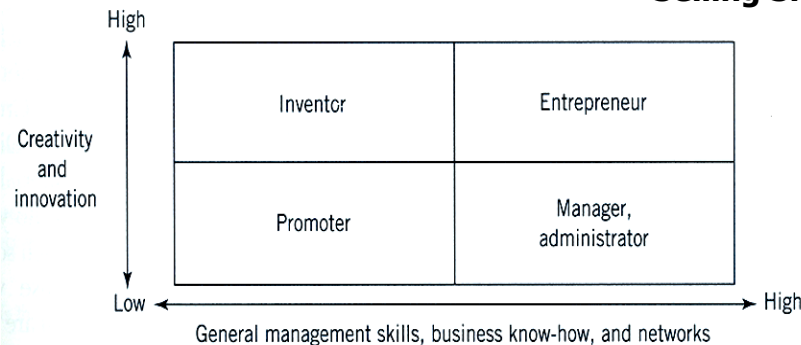
Source: Bakr Ibrahim, W.Ellis, *Entrepreneurship & Small Business Management*, Kendall/Hunt Publishing Company. 4th edition 2002

The Successful Entrepreneur



- **High Need for Achievement**
- **Risk Taking Propensity**
- **Tolerance for Ambiguity**
- **Innovativeness**
- **Intuition**
- **High Need for Independence & Autonomy**
- **Internal Locus of Control**
- **Low Need for Conformity**

- **Developing New Venture Strategy**
- **Strategic Planning**
- **Delegation**
- **Networking**
- **Effective Management of Functional Areas**
- **Financial Management Skills**
 - **Management of cash flow**
 - **Inventory mgt & control**
- **Marketing Skills**
- **Selling Skills**

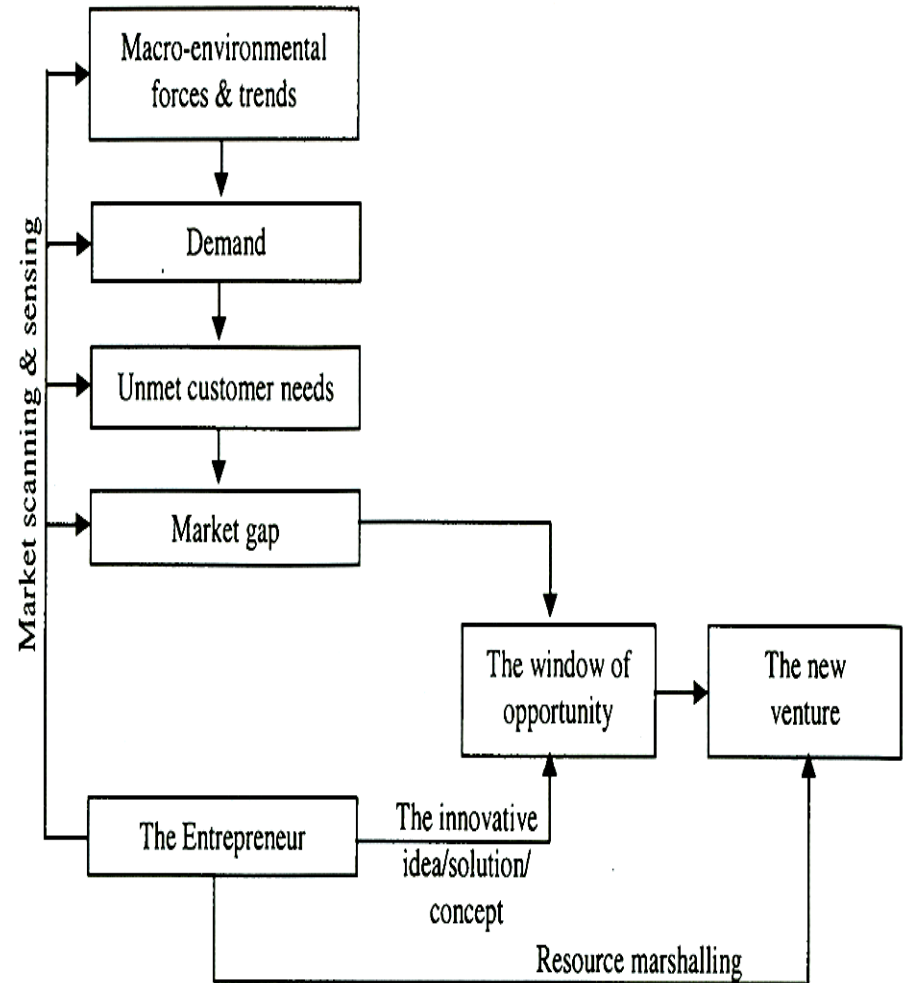


The Entrepreneurial Process

- **Sensing**, evaluating and **exploiting** the opportunity are the most critical elements of the entrepreneurial process.
- Entrepreneurs are the driving force behind this process.
- Generally, they scan the environment looking for **market gaps** created by unmet customer needs.

THE MARKET GAP

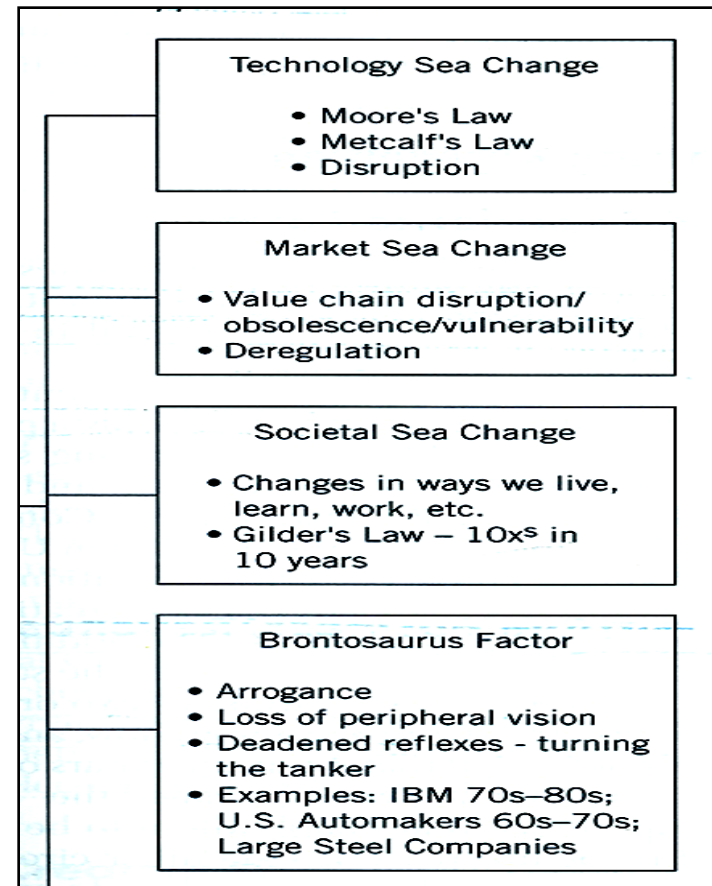
- **Market gaps occur as a result of changes in the environment.**
- **Environmental forces such as technological, social, economic and political trends have a profound impact on the demand for products and services.**
- **Successful entrepreneurs thrive in this changing and uncertain environment.**



Source: Ibrahim & Ellis, *Entrepreneurship & Small Business Management*, Kendall/Hunt Publishing Company chapter 6

Drivers of Opportunities

- The ability to anticipate changes in the market environment are so critical. An entrepreneur with credibility, creativity and decisiveness can seize an opportunity while others study it.
- Application of **new technology** to traditional businesses that had changed little in decades – e.g. applying the latest IT to traditional business that relied on crude, manual methods to track inventory and find parts for customers
- Technology & regulatory changes have profoundly altered and will continue to alter the way we conceive of opportunities – e.g. cable TV and internet as sales and distribution channel.
- Major discontinuities due to technical innovation will change the way people live or work.



Mega – Entrepreneurs Who Started in Their 20s

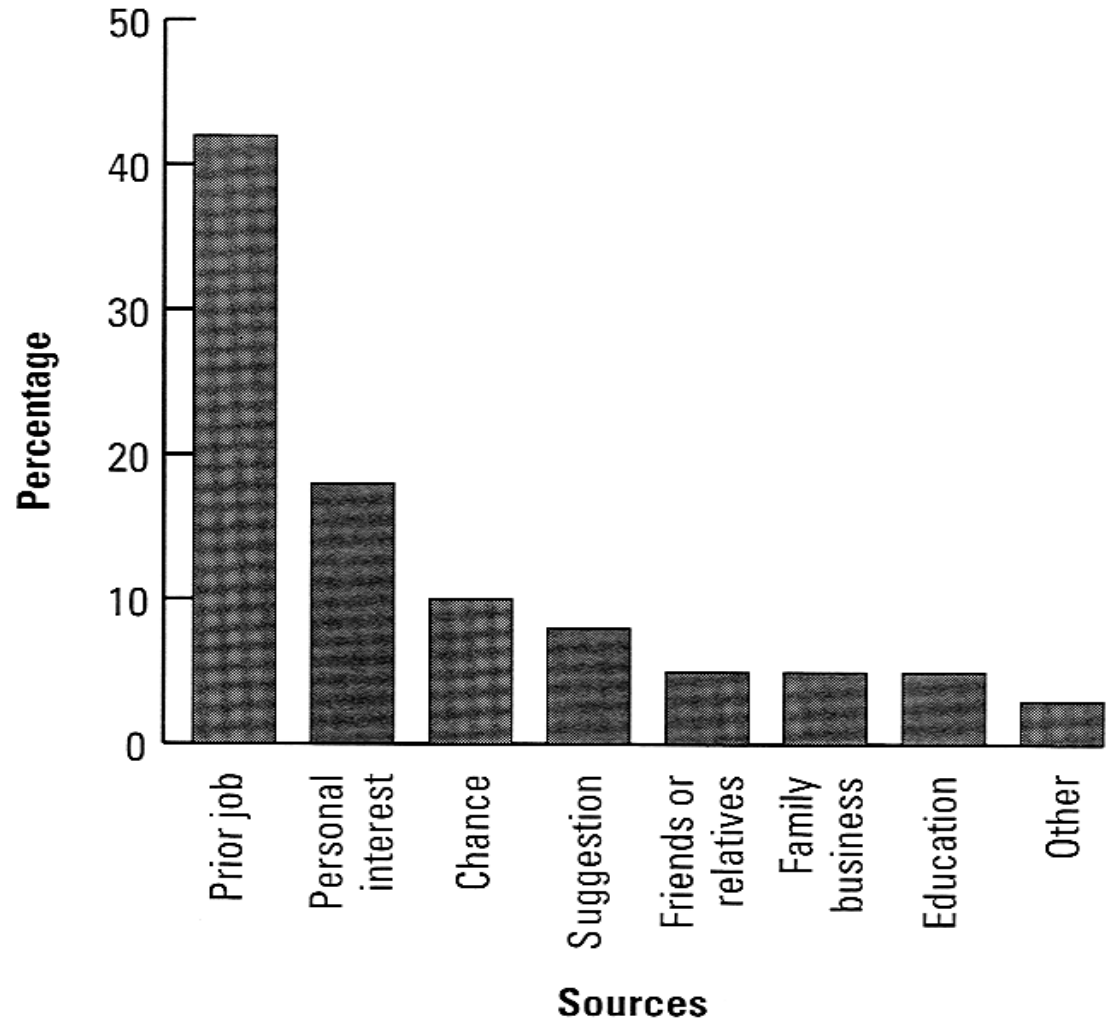
- Microsoft - **Bill Gates & Paul Allen**
- Apple Computer - **Steve Jobs & Steve Wozniak**
- Dell Computer - **Michael Dell**
- Federal Express – **Fred Smith**
- Oracle – **Larry Ellison**
- Amazon.com – **Jeff Bezos**
- e-Bay – **Pierre Omydiar**
- Nike – **Phil Knight**
- Yahoo – **David Filo & Jerry Yang**
- Cisco – **Len Bosack, Sandra Lerner & Kirk Lougheed**
- Google.com – **Larry Page & Sergey Brin**

Common Sources of Ideas

Sources of Ideas for New Businesses

Entrepreneurs have essentially three ways to enter a market establishing a new business:

1. Offer a totally new product
2. Offer an existing product to a different market or industry
3. Offer a product or service similar to those already existing in the market place.

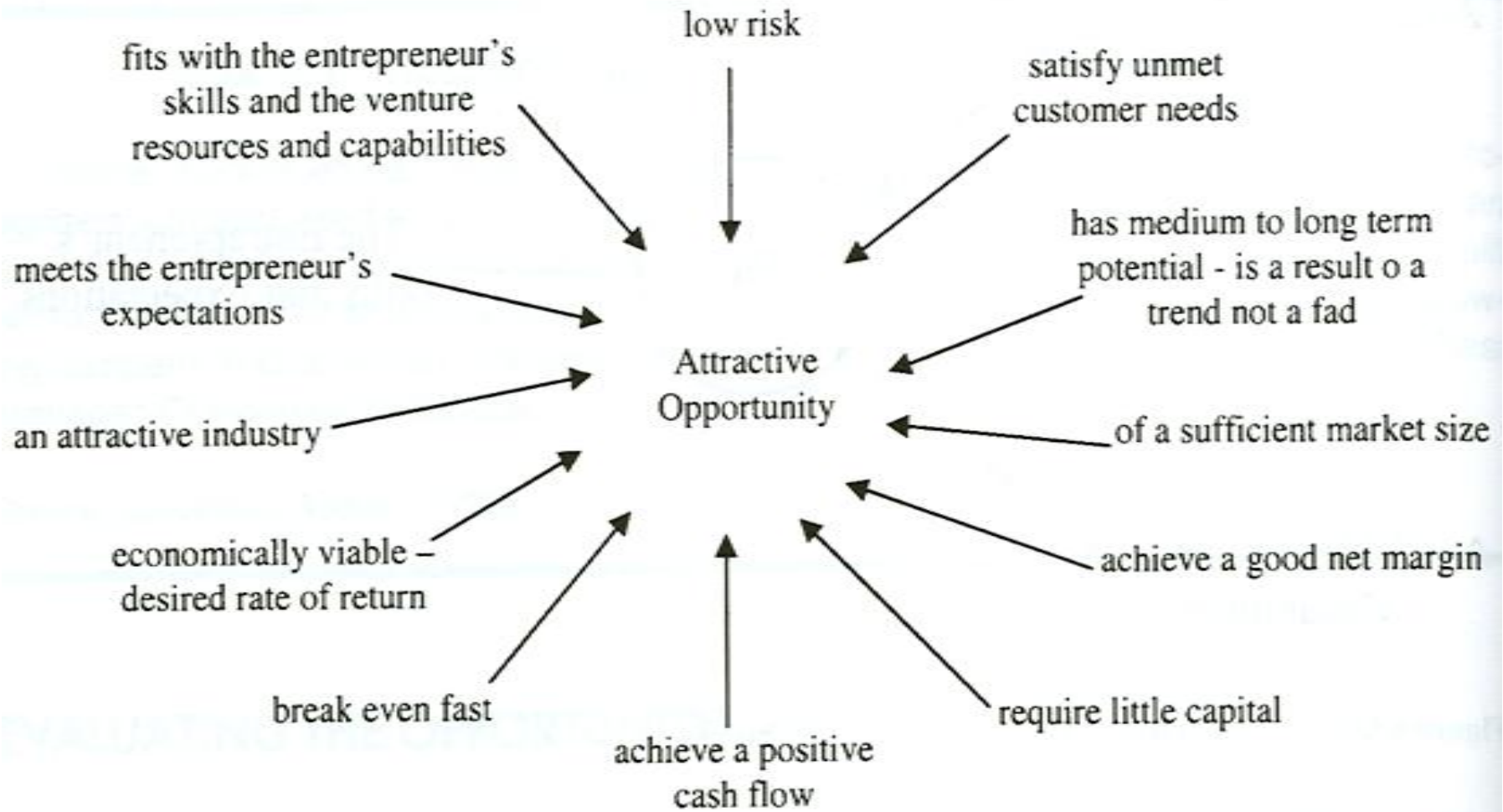


Business Ideas

- What's the difference between a good idea and a business idea?

<p><u>Technology Push</u></p> <ul style="list-style-type: none"> • Driven by invention <ul style="list-style-type: none"> • Market doesn't know they need it • Technology needs to be demonstrated • Commercial viability needs TBD • Difficult to get into market • Long term proposition • Big win, big multiplier 	<p><u>Market Pull</u></p> <ul style="list-style-type: none"> • Obvious gap in market which people deliberately seek to fill <ul style="list-style-type: none"> • Easy to market • Customers are waiting for the product 		
<p><u>Unfilled need</u></p> <ul style="list-style-type: none"> • Changes in market open up opportunities • Typical sources <ul style="list-style-type: none"> • Regulatory controls • Customer preference • Changes in working practices • Technical innovation • Price pressures • Quality failure • Crisis and disaster 		Marketing	Timescale
	Technology push	Difficult to market	Long
	Unfilled need	Easier to market	Medium
	Market pull	Customers are waiting	Quick

Elements of an Attractive Opportunity



Source: Ibrahim & Ellis, *Entrepreneurship & Small Business Management*, Kendall/Hunt Publishing Company chapter 6

EVALUATING THE OPPORTUNITY

- Evaluating an opportunity is the corner stone of a successful venture.
- The fundamental question: is the opportunity attractive enough and thus worth pursuing? and is the degree of risk involved in exploiting an opportunity manageable?

Market Test:

- The opportunity must address customer needs, present or future.
- The opportunity should have potential in the medium and long term.
- The opportunity must be of a sufficient size to make the venture economically viable (good measure of risk).

The Test of Fit

- No matter how good the opportunity is, it must fit with the entrepreneur's skills.
- The opportunity must also fit with the available resources and capabilities including financial resources, technical, R&D, marketing and management capabilities.

The Economic Test

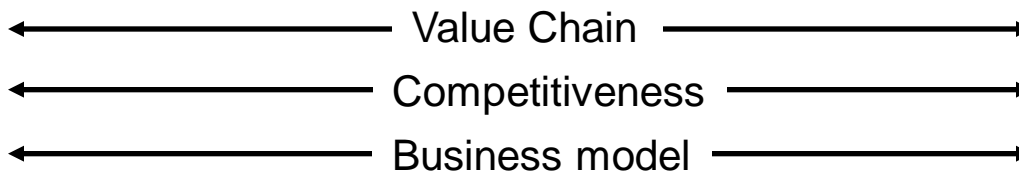
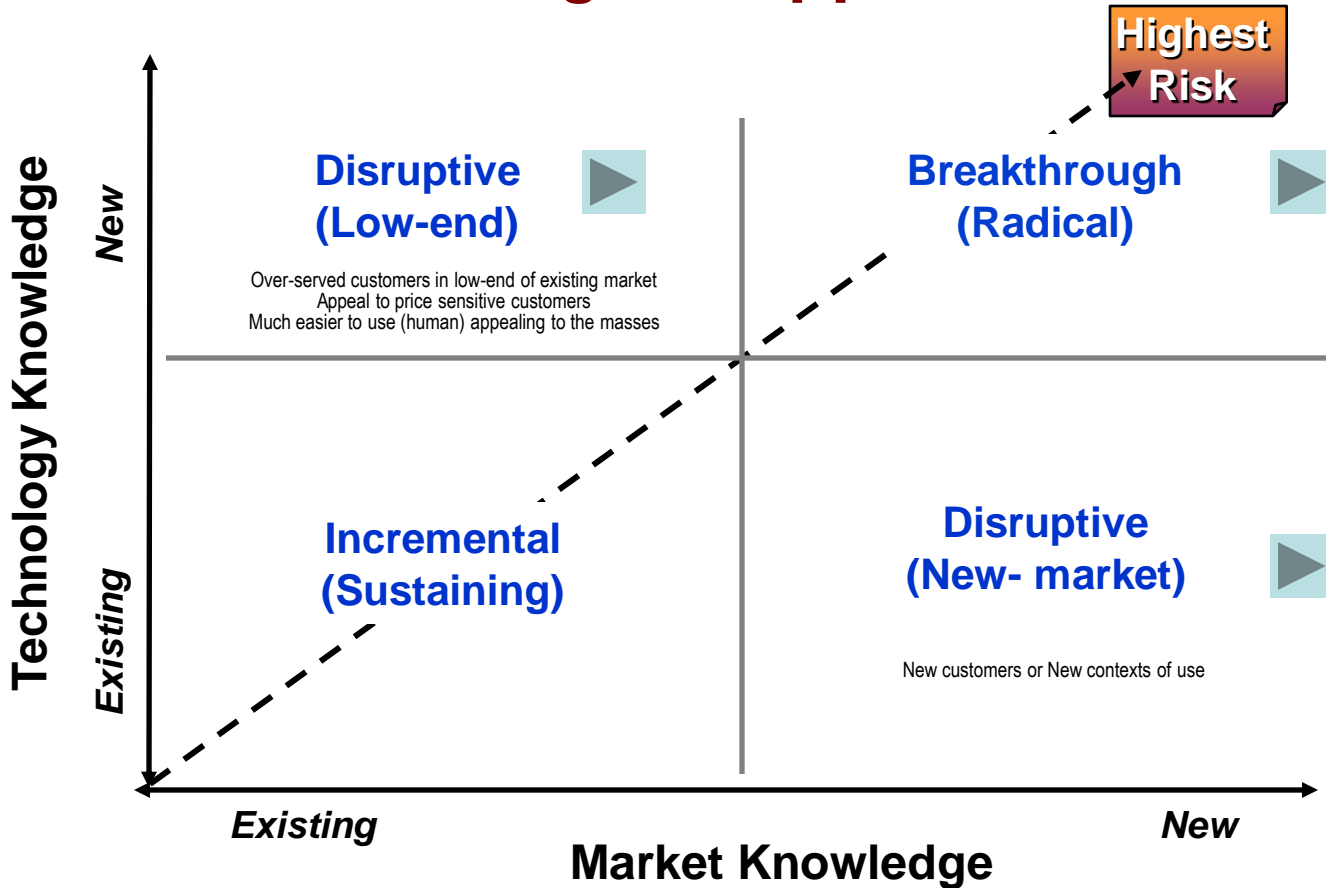
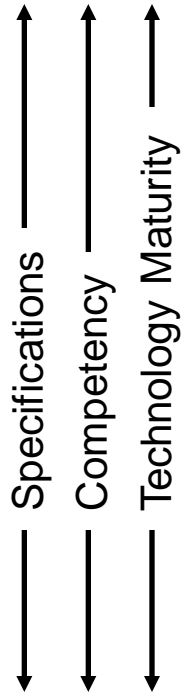
- Generally a good opportunity must be economically viable and allow the entrepreneur to achieve the desired rate of return.
- In general, the combination of low entry barriers and a relatively high industry growth rate create attractive and low risk opportunities to entrepreneurs.

Types of Innovation

- A popular perception is that innovation is born out of flash of genius.
- Innovation arises more often from a deliberate and voluntary effort by the entrepreneur to satisfy customer needs and wants
 - *Peter Drucker*
- Innovation involves three broad categories: breakthrough, incremental and disruptive Innovation:
 - **Breakthrough Innovation** - This is a radical change leading to a completely new product, service or a process. Usually requires large R&D, takes a long time and leads to an all-or-nothing outcome.
 - **Incremental Innovation** - This type of innovation involves the improvement and enhancement of an existing product, service or process. Typically, the entrepreneur uses past experience or a proven process and applies it to new opportunities.
 - **Disruptive Innovation** – This type of innovation involves either technology based low-end disruption to an existing market or application of existing technology to a new customer setting.

Types of Innovation

Market & Technological Opportunities



Sources of Innovation

- **Sources of innovation may include incubators, prior work experience, R&D activities, customer needs and feedback surveys, and competitors' analysis.**
- **Incubators** - *Universities, research institutes, or other entrepreneurs may provide the mentorship and the positive environment necessary for idea generation and innovation.*
 - Frederick Terman mentored many entrepreneurs in Stanford Research Park. He encouraged Hewlett and Packard to start their own company.
- **Prior Work Experience** - *Most entrepreneurs generate their ideas while working for someone else in the same industry.*
 - Ken Olson, founder of Digital Equipment Corporation (DEC), worked at IBM before he decided to start his own business.
- **Research and Development**- *The entrepreneur's research efforts contribute significantly to the development of the new ideas be it a new product, a process or a service concept.*
 - Andy Grove, Bob Noyce and Gordon Moore, founders of Intel, conducted their own research in solid state electronics which led to the development of micro-processors.


Product, Service and Process Innovation

- **Product innovation** - involves developing a new product with known or unknown needs or enhancing and refining existing products:
 - Land's instant camera; Braun's electric razor; Cowpland's WordPerfect; Carlson's plain paper copier; Job's personal computer;
- **Service Innovation** - the small business service sector has been growing at a phenomenal rate in the last decade as a result of the technological revolution in the telecommunication and the computer industries:
 - Fred Smith, founder of FedEx, introduced the concept of overnight delivery,
 - Tom Monaghan, founder of Domino's Pizza, introduced 30-minute delivery guarantee,
 - Sam Walton, founder of Wal-Mart, introduced the discounting concept to the retail business.
- **Process Innovation** - introducing a new process or enhancing an existing one to cut cost & improve quality and efficiency. It might include new management or marketing approach.
 - Henry Ford introduction of the concept of assembly line
 - Michael Dell founder of Dell direct sale of PC
 - Wal-Mart distribution centers & inventory management
 - Schwab's on-line trading

Entrepreneurial Product Development Process

The motivation to innovate is often to satisfy customer needs and wants

The Product Development Stages:

- 
- **The Idea Generation stage.** The entrepreneur may have a new idea or tinker in his or her garage with a problem in search of a solution. The idea becomes an obsession driving to a solution.
 - **The Development & Incubation stage.** In this stage the entrepreneur tries to gather information, conduct tests and then design a crude model to see if the idea is workable and worth pursuing. Construct a prototype and test, and may conduct focus group sessions to get customer & experts' feedback and ensure that the product satisfies customer needs. The feedback is essential to refine the product & identify its unique features.
 - **The Incubation stage** At this stage the entrepreneur has solved most of the technical problems, designed and refined the idea/concept and constructed a prototype. At this stage the product is market tested.
 - **The Commercialization stage** This stage involves producing the product on a limited or large scale, deciding on the appropriate promotion and venture strategies and developing the appropriate structure and management process

Best New Product Development Practices

Driving new-product projects to market successfully

- *Success in new product development depends on the tactics that project teams employ to drive new product from the idea stage through to launch.*
- *A handful of tasks emerge as pivotal to NPD performance*
For instance:
 - *Delivering a **differentiated, superior product** is one practice that strongly separates the Best and Worst Performers,*
 - *Market information, up-front homework, stable product definition, and voice-of-customer research are found to be all strongly discriminators between the Best and Worst Performers.*
- *How well NPD projects are **executed** proved to be pivotal to performance.*

Entrepreneur must face up to a number of vital questions

- Are you targeting real needs?
 - The benefits to be delivered to the customer - the value proposition-clearly defined;
 - Detailed market study/research, on Voice-of-customer.
- Can you expect significant and timely benefits?
 - The target market defined and is significant
- Are the costs and risks commensurate with the benefits?
 - Value assessment
- How do you compare with competitors?
 - The positioning strategy defined
- Should you conduct own R&D or buy/license the technology?
 - Idea generation
 - The product's features, requirements and specifications defined
- Etc.

Breakthrough Innovation

Chester Carlson's First Image - 1938



First Xerographic printer - 1948

**Chester Carlson
(Inventor)**



**John Dessauer
(Engineer)**

**Joe Wilson
(Marketer)**



**First Convenient Office Copier (914) - 1959
Commercial Success**



Disruptive Innovation Creating New Markets

Technology **Market / Industry** **Expansion Market**



914

Xerography

1959 First automatic plain paper copier – 914
Creating office Copying & printing Industry

\$53B
Office Copying, Printing, & Faxing

Color Copying & Printing



9700

Digital Information

1977 First xerographic laser printer – 9700
Creating Transaction Printing Industry

\$7B
Electronic Printing

Digital Color Copying & Printing



DocuTech

Communications

1990 First Digital Publishing Systems – DocuTech
Creating Digital Publishing Industry

\$5B
On-Demand Publishing

On-Demand Color Publishing



Document Processing and Management Technologies

\$14B
Office (IT) Services

GLOBAL SERVICES

CONSULTING • IMAGING • CONTENT MANAGEMENT • OUTSOURCING

Innovation transformed Xerox from “Copier” to the “Document” Company



PARC Created Many Disruptive Innovations

Research Motivation: Enabled a larger population of people to do things in a more convenient setting that historically could only be done by specialists in expensive, centralized settings.

- '70's
- Desktop workstation (star/6085)
 - Page Description Language (PDL)
 - LAN (Ethernet)
 - WYSIWYG Editors (Bravo/work)
 - Window oriented UI



- '80's
- UbiComp/Unistroke
 - Thermal inkjet (300spi)
 - Fibre optic switching
 - Multifunction device concept
 - Image capable Networks



- '90's
- LiveBoard
 - a-Si HR Flat Panel display
 - 3D Info Visualization



- '00's
- Digital Property Right
 - Hyperbolic tree
 - Place Ware
 - Electric Paper



Web Navigation



Web Conferencing



Value Proposition- Background

Value proposition is a clear statement of the tangible results a customer gets from using your products or services. The more specific your value proposition is, the better.

- Most people and companies have *weak value propositions*. Often they're simply a description of the offering's features or capabilities filled with self-aggrandizing puffery.
- Here are a few examples of weak value propositions:
 - It's the most technologically advanced and robust system on the market.
 - We improve communication and morale.
 - We offer training classes in a wide variety of areas.
 - My product was rated the best-in-class by leading authorities.
- *Strong value propositions* deliver tangible results like:
 - Increased revenues
 - Faster time to market
 - Decreased costs
 - Improved operational efficiency
 - Increased market share
 - Decreased employee turnover
 - Improved customer retention levels

How to enhance your value proposition

1. Brainstorm with Your Colleagues

Review what you say to customers to try to get their attention. If you're not talking tangible results, keep asking each other, "So what?"

- So what if it's an efficient system?
- So what if we have a replicable process?
- So what if it's high quality?
- By asking this question over and over again, you'll get much closer to the real value you bring to customers.

2. Talk to Your Customers

Existing or potential customers are your best resource to find out what value you bring.

- Most people are scared to ask their customers about this. Not only will it change your value proposition, but it also might change your offerings.

**Don't let another day go by with a weak value proposition.
A strong VP literally opens the doors of major corporations for
you, while a weak one keeps you on the outside.**

The Value Proposition

What is Value Proposition?

Value proposition is a description of the customer problem, the solution that addresses the problem, and the value of this solution from the customer's perspective.

Three elements to a value proposition:

1. Problem
2. Solution
3. Payoff

An effective value proposition must be:

- *Specific to your audience*
- *Extremely easy to understand*
- *Concise*
- *Irrefutable*

Exercise: If you had just ten words with which to describe why people should buy your company's products or service, what would you say?

The Value Proposition

1. Problem

- A problem statement must describe a specific pain that a customer experiences. Ideally it is linked to a loss of time and/or money.
- The customer must agree about the problem. Ideally, the customer tells you their problem.
- Examples: Lost productivity, lost sales, lost profits, unnecessary expenditures of physical or human resources.

2. Solution

- It must show how the customer pain/problem is addressed, directly.
- It must be attainable for the customer. If the cost of adoption for your solution is too high, your customers will not buy it. Ideally, it should fit seamlessly into their work structure. If not, then the payoff will have to be very high.
- Your solution can be a new or existing technology, a service or a process.

3. Payoff

- It must show the benefit of having the problem solved.
- It must be quantifiable and tangible.
- It must relate directly back to the problem and show how the lost time and/or money is recovered.
- Examples: Increased productivity, increased sales, increased profits, improved use of physical or human resources.