

Developing Innovation and Creativity for Business Advantage

Week – 2 (Part 1)

Problem solving and Disruptive + Sustainable Innovations

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Recap

- Week 1 (Part 1) – Introduction to DIB
- Week 1 (Part 2) – Innovation, Growth and Competition: Knowledge Economy

This week – we will look at:

- 1) Creativity, Innovation, and Entrepreneurship
- 2) Problem solving and Disruptive + Sustainable Innovations

Creativity

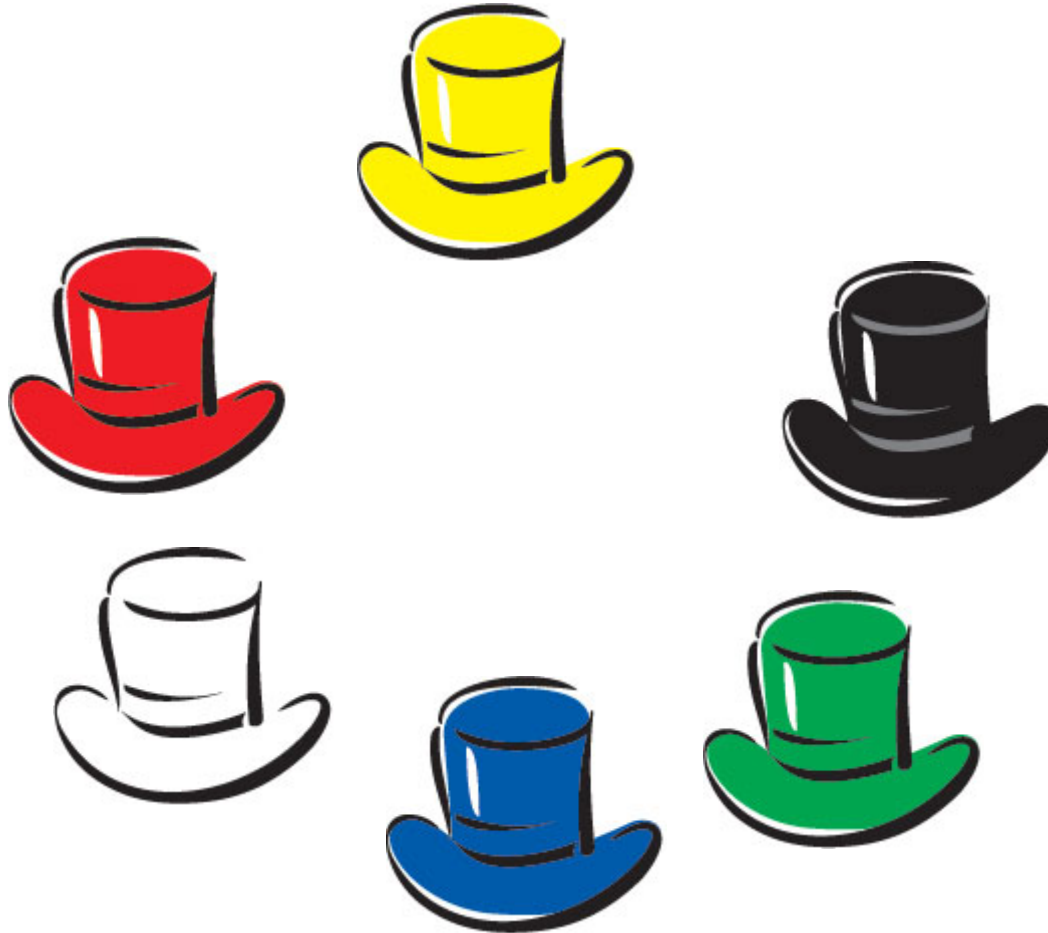
“There is no doubt that creativity is the most important human resource of all. Without creativity there would be no progress, and we would be forever repeating the same patterns”
(Edward de Bono).

De Bono's creative

1. Generating knowledge and awareness
 - Reading, learning, researching, finding out about the world in general and the area in which you wish to operate
2. Incubation
 - Time for reflection
3. Idea generation
 - Using your own knowledge and creative thinking techniques e.g. brainstorming, to create ideas
4. Evaluation and Implementation
 - Choosing your idea and making it work!

Six Hats Thinking

(De Bono 1985)





White Hat: Information focuses on the data available and what you can learn from it, in particular examining the gaps in the knowledge you have and either trying to fill them or taking account of them.



Red Hat: Feelings looks at problems using intuition, gut reaction, and emotion as well as getting you to think about how others will react emotionally to the issue and how to understand the responses of people who may not follow your reasoning.



Yellow Hat: Benefits . At this stage, you begin to think positively and view all the benefits in an optimistic light, particularly in terms of the value of the decision. It is designed to keep your thinking positive.



Black Hat: Caution. Using 'Black Hat' thinking, you are encouraged to look at all the bad points of the decision both cautiously and defensively to understand why it might not work. This highlights any weak points in a plan and allows you to adjust, eliminate or prepare contingency plans to counteract them.



Green Hat: Creativity. This is where you can develop creative solutions to a problem through a unrestrictive way of thinking. This means very little criticism of ideas and is the point at which a number of creativity tools can be implemented.



Blue Hat: Managing the Thinking. The final hat stands for process control and is generally worn by those chairing meetings. It comes into its own when ideas are drying up or thinking becomes stagnated in which case the 'wearer' may direct things towards 'Green Hat' thinking to generate creativity or 'Black Hat' thinking when a contingency plan is called for

About SIX hats

Which hat would like to wear?

And

Why?

Just your answer!

So What is Creativity?

be anything.... While we often associate the term with artistic endeavour – writing, painting, making music. We can be creative in business life as well.

- “Creativity is... the ability or quality displayed when **solving hitherto unsolved problems**, when developing original and novel solutions to problems others have solved differently, or when developing original and novel... products” (Parkhurst, 1999).

Does this tell us about creativity?

Tell us that:

- Creativity can be about developing new products

BUT

- It can also be about developing new solutions.

Solving Problems

- Solving “Points of Pain”:
 - To Notice Inefficiency, Inconveniences, & Other Forms of “Points of Pain” & Use these to Build New Business Opportunities
and
Solutions

Solutions?

- What do we mean by solutions?
- In this context, it could mean
 - new processes to help us do something better
 - new ways of using existing products
 - new services to supply to new or existing customers etc.
- New ways of thinking about things!

Idea Generation

- Your Task: Generate as many ideas for a new product or service to improve student experience at UWTSD as you can in 5 minutes

What changes would you like to introduce ?

What takes too long ?

What is wasted ?

What is too complicated ?

Where are the bottlenecks ?

In what ways are you inefficient ?

What gives you stress ?

What in your job do you least like doing ?

What would you like to organize better ?

- So... If Creativity is Solving Problems... What Is An Innovation?

Schumpeter's Innovator

- Schumpeter (1934) distinguished inventions from innovations and identified 'Five Types of Innovation'



Disruptive and Sustaining Innovations

- Christensen (1997), identified two types of innovations: *disruptive* innovations and *sustaining* innovations.
- The former, *disruptive* innovations involve a new value proposition by which new markets are created.
 - In such instances, individuals or business organisations seize upon basic inventions and transform them into economic innovations, thereby disequilibrium and altering the existing market structure, then waiting until the process eventually settles down before the next wave of innovation begins.
- In contrast, the latter, *sustaining* innovations are best thought of as improvements to existing products, processes or markets.

Degree of Newness

- Radical Innovation
- Incremental Innovation

Table 1

Incremental improvement versus radical innovation

Characteristics	Incremental improvement	Radical innovation
1. Approach	Collectivism, group efforts, system approach	Rugged individualism, individual ideas and efforts
2. Advantage	Works well in slow-growth areas	Better suited to fast-growth areas
3. Change	Gradual and constant	Abrupt and volatile
4. Effect	Long-term and long-lasting	Short-term but dramatic
5. Effort orientation	People	Technology
6. Evaluation criteria	Process and efforts for better results	Results for profits
7. Involvement	Everybody	Select few "champions"
8. Mode	Maintenance and improvement	Scrap and rebuild
9. Pace	Small steps	Big steps
10. Practical requirement	Requires little investment but great effort to maintain it	Requires large investment but little effort to maintain it
11. Spark	Conventional know-how and state of the art	Technological breakthroughs, new inventions, new theories
12. Time frame	Continuous and non-radical	Intermittent and non-incremental

Source: Based on Imai (1991, p. 24)

Examples of Innovation



- Glass (3500 BC)
- Modern Public Library (1850-1945 depending on country)
- Electronic calculator (1961)
- Mobile phones (1973)
- World Wide Web / Internet (1989)
- Email (1993)

What is A New Innovation?

- What do you define as **new**?
- Can mean different things to different people
- New to the world (10%)
- New to the firms (20%)
- Additions to existing products/process (26%)
- Improvement and revisions to existing products/process (26%)
- Repositioning (with different purposes) (7%)
 - New to the market (geography + segments)
 - New to the season
- Cost reduction (11%)

(See; Booz, Allen & Hamilton, 1982; Griffin, 1997)

Open versus Closed Innovation

Closed Innovation Principles	Open Innovation Principles
Most of the smart people in our field work for us	Not all the smart people work for us, so we must find and tap into the knowledge and expertise of bright individuals outside our company
To profit from R&D, we must discover, develop and ship ourselves	External R&D can create significant value; internal R&D is needed to claim some portion of that value
If we discover it, we will get it to market first	We don't have to originate the research in order to profit from it
If we are the 1st to commercialise we will win	Building a better business model is better than getting to market first
If we create the most and the best ideas in the industry, we will win	If we make the best use of internal and external ideas, we will win
We should control our intellectual property (IP) so that our competitors don't profit from our ideas	We should profit from others' use of our IP, and we should buy others' IP whenever it advances our own business model

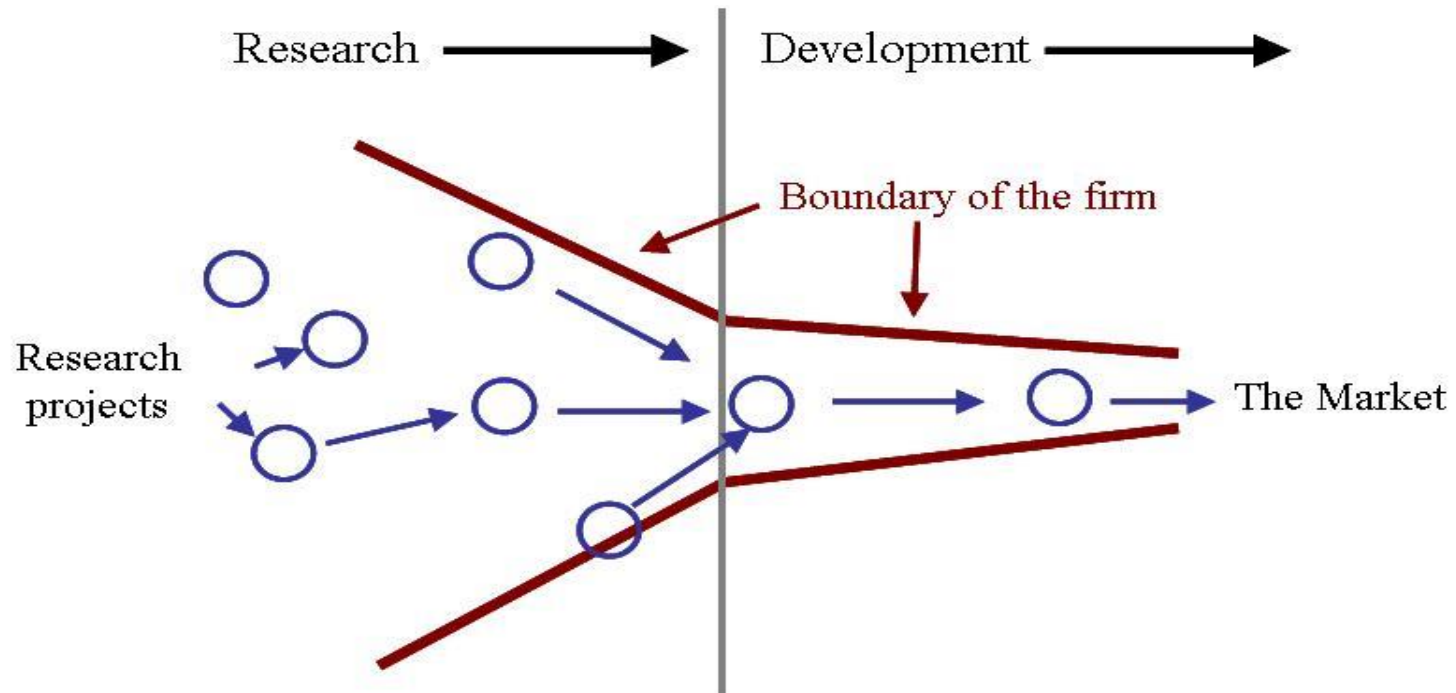
Open versus Closed Innovation

Under the concept of innovation that prevailed during most of the 20th century, companies attained competitive advantage by funding large research laboratories that developed technologies that formed the basis of new products that commanded high profit margins that then could be ploughed back into research.

The closed innovation paradigm has eroded due to the following factors:

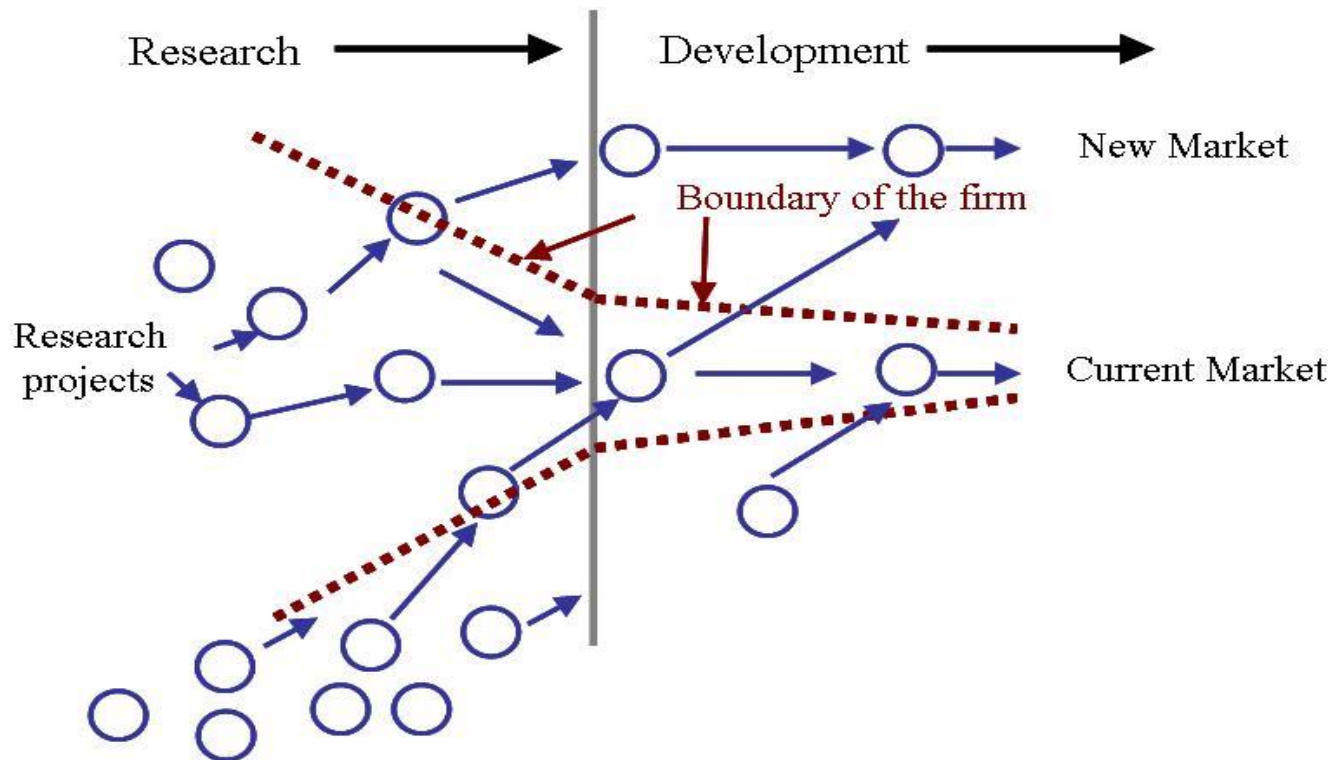
- Increased mobility of skilled workers
- Expansion of venture capital
- External options for unused technologies
- Increased availability of highly-capable outsourcing partners

Closed Innovation



(Chesbrough, 2003)

Open Innovation



(Chesbrough, 2003)

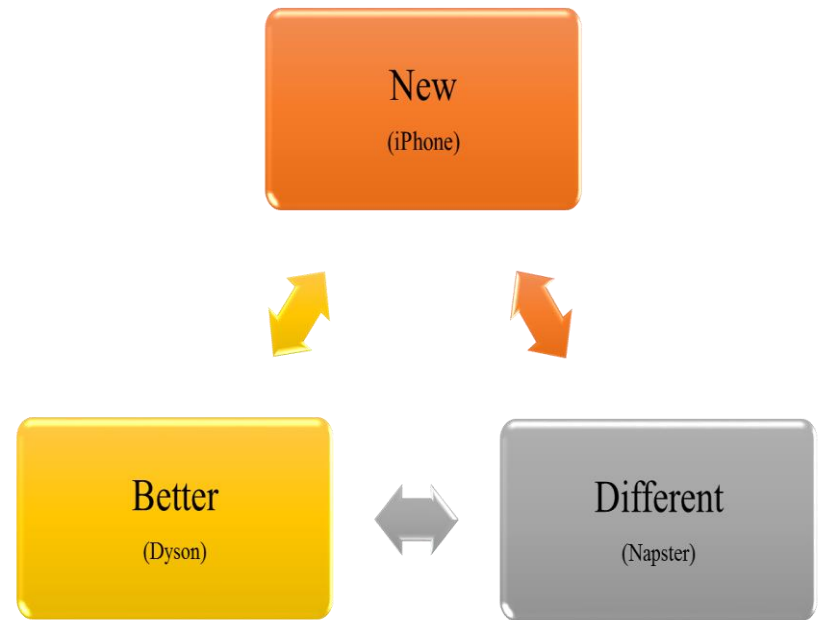
Opposing Views...

- We can therefore see that there is a difference between the commonly held definitions of “Creativity and Opportunity” and the definitions used in a business context.
- We may think that creativity is related to artistic or cerebral activity and opportunity is a matter of chance.
- Business management theory suggests that in a commercial context, creativity can be learned or developed and that it need not relate to complete novelty; opportunity can be created or developed.

What's an Opportunity?

“An opportunity has the qualities of being attractive, desirable and timely and is anchored in a product or service which creates value for buyer or end user”

- A new or improved product
- A new service
- A new means of production
- A new way of distributing the product or service
- An improved service
- New combinations
- Or a hybrid of the above



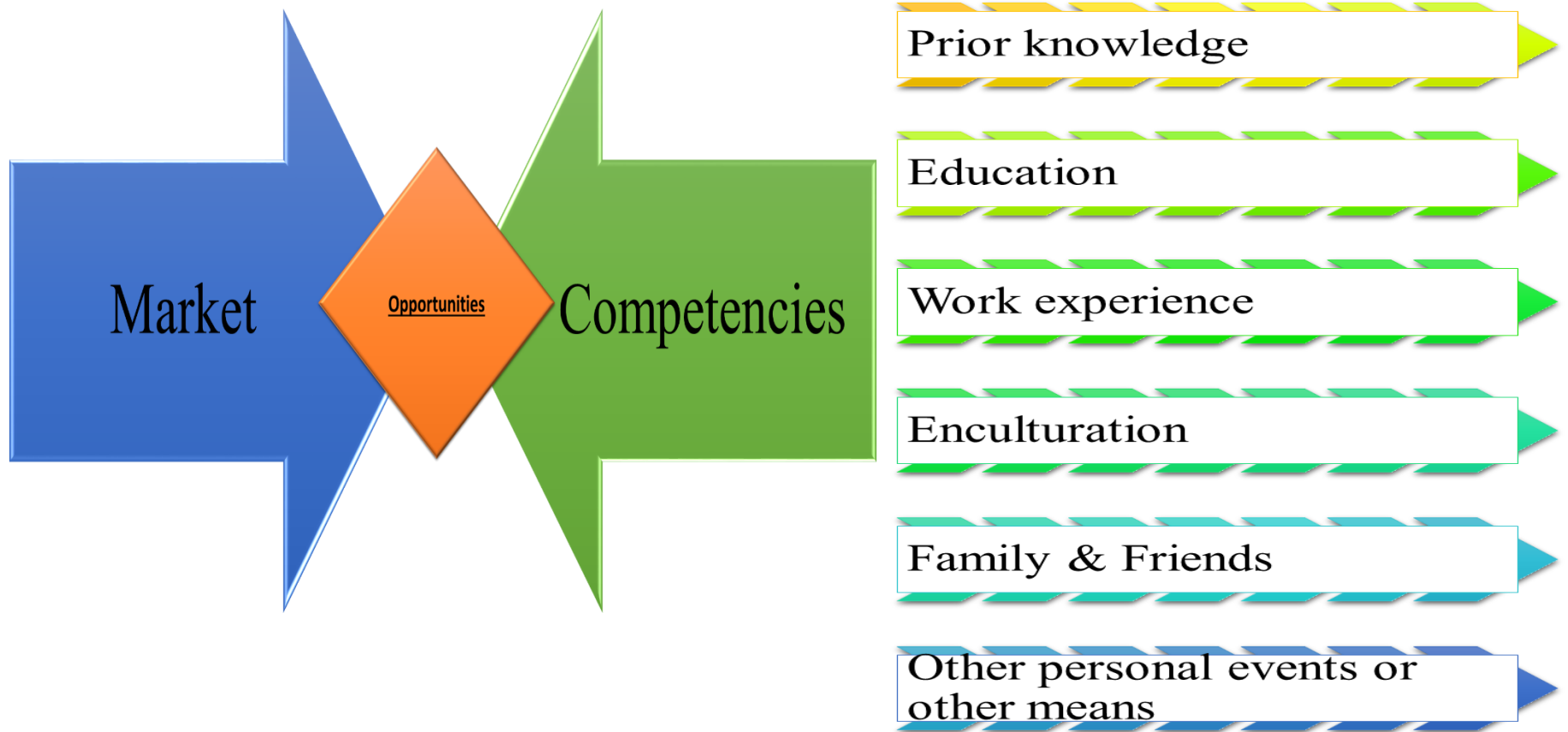
Recognising an Opportunity

- Opportunities are not like raindrops – they do not fall at our feet.
- Well, not usually! From time to time something might just happen which allows an entrepreneur to move forward.
- However, if we wait for an opportunity to turn up, we will probably never succeed.
- As creative business people we seek or develop opportunities.

So...

- Do Ideas = Opportunities?
- Do Problems = Opportunities?
- Reality - An Idea is Only an Opportunity when It:
 - Adds Value to Consumer
 - It Solves a Problem
 - It Can Make Some Money (Communicate Some Value to Other Stakeholders)
 - It is a Good “Fit” with the Entrepreneurial Team
- Timmons & Spinelli (2007)

Factors Influencing the Creation/Discovery of Opportunities



Drucker's Opportunity Scan

- 1.The unexpected - can we react to change?
- 2.Incongruity – can we cope with the difference between what we thought would happen and what actually happened? This could create an opportunity.
- 3.Inadequacy in underlying processes – can exiting processes and procedures be improved?
- 4.Changes in our industry or our market – can we respond positively?

- External

- 1.Changes in demographics – age, income, health, etc.
- 2.Changes in perception, mood, meaning - can we react to changes in fashion, culture, attitudes.
- 3.New knowledge – science and industry affect our products and processes.

Creative Invention Vs Innovative Opportunity

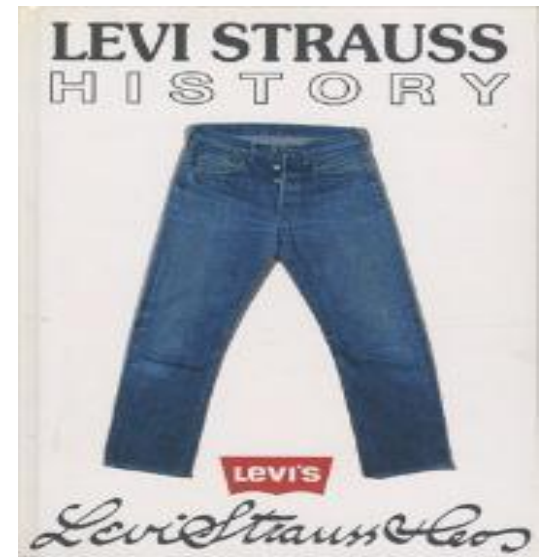
STRUGGLER	 INNOVATOR
STAGNATOR	COPIER

Creativity and Commerce

think of creativity in terms of ways of thinking which support commercial opportunities, whether in developing new processes, services or products.

Example: Rise of Levi's

- Problem:
 - Working Clothes for Mining Workers do Not Last
- Solution:
 - First Pair of Jeans



Ideas Start With Solving Problems

- Remember... Ideas Start With Solving Problems
- Any Problems are Big Opportunities.
- No Problems, No Solutions, & No Reasons for Firms to Exist.
- No One Pays You to Solve a Non-exist Problem (*Vinod Khosla, Sun Microsystems*)

Solving Problems”

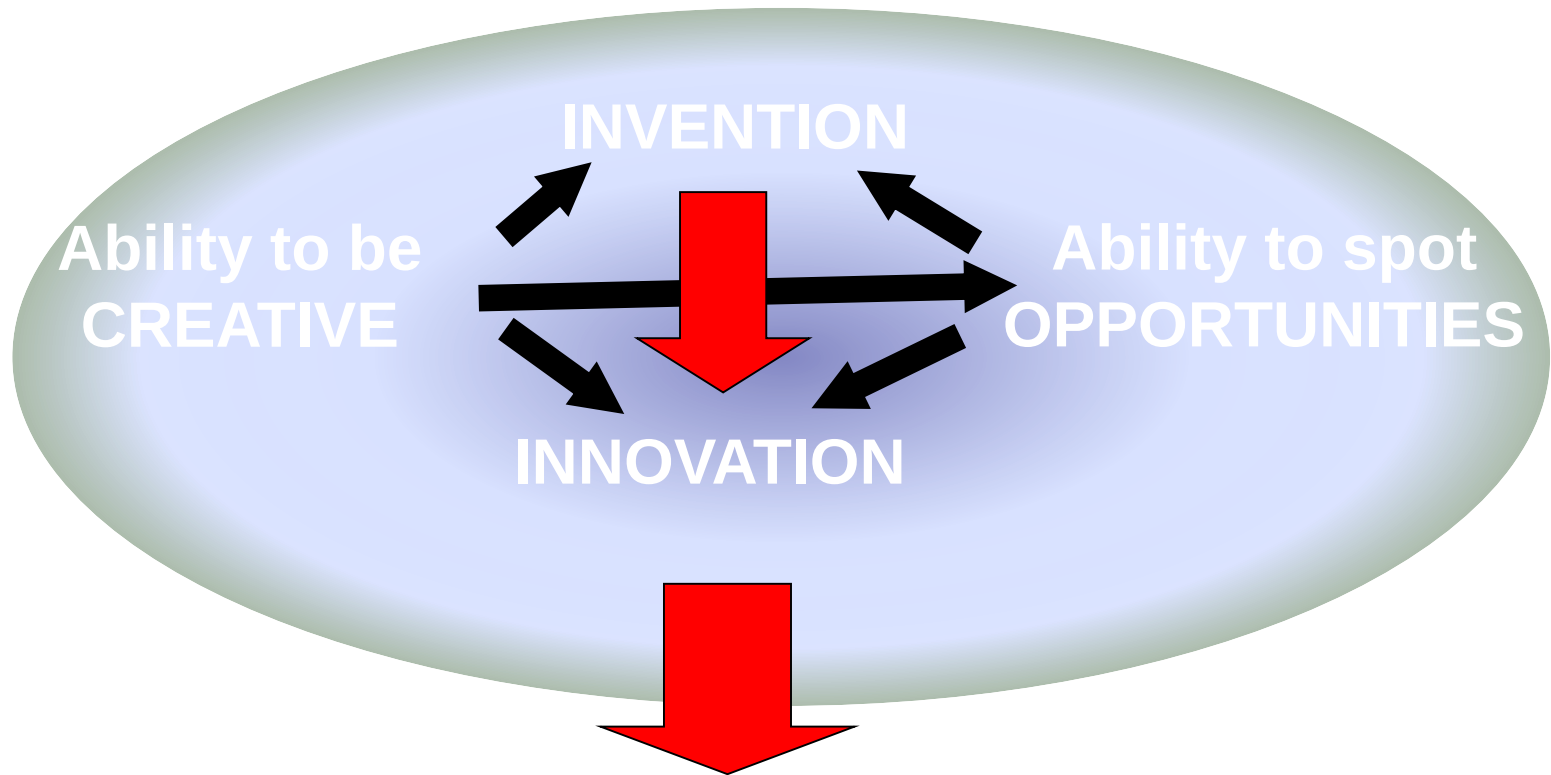
with this use of the word “problem”...

- The normal use of this word might suggest that there is something wrong
- In a business context, we might use the word simply to represent something which makes the customer’s activities less efficient/enjoyable/simple
- So, a “problem” might be something quite trivial, everyday or simple – however, by providing a cost effective solution, we please our customer and make money
- Examples
 - Velcro – a simple alternative to the shoelace.
 - A keyring that beeps – you can find your keys anywhere in the room
 - Goretex – water resistant jackets.

Attributes of Creative Thinking

- Flexibility – willing to look at an issue from many angles, not set in our ways.
- Originality – attempts to find non-typical responses to problems.
- Non-judgemental – not rejecting a potential solution without giving it appropriate consideration

Creativity, Invention, Opportunity & Entrepreneurship



Creating Creativity

- They approach a problem systematically

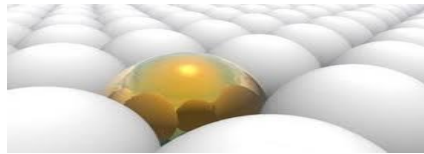


Stages in Creative Thought

- Preparation



- Incubation



- Insight



- Evaluation



- Elaboration



Preparing the idea

Incubation of the key skills and resources required

The gathering of insight from the market research

Evaluation of the consumer feedback

And the elaboration of the idea in order to ensure successful development

What Stops Business Creativity?

prevent or slow the development of new ideas:

- Fear – change is always frightening.
- Risk – am I risking my established business?
- Convention – we've always done it this way.
- Self-doubt – if it's that good, surely somebody else would have made it by now?
- Fear of failure

Readings

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