



Republic of the Philippines
SORSOOGON STATE UNIVERSITY – BULAN CAMPUS
College of Information and Communication Technology Department

Technopreneurship

Module 2 – Innovation and Idea Generation

DESCRIPTION

Technopreneurship is a course that integrates technology, innovation, and entrepreneurship to develop sustainable business ventures. It covers idea generation, business modeling, financial planning, and intellectual property, culminating in the creation of a business plan and an elevator pitch. The course fosters entrepreneurial skills and ethical practices, preparing students to transform innovative ideas into impactful tech-driven enterprises.

Module for BSIT2-3 & BSIT2-4

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INNOVATION AND IDEA GENERATION

Learning Objectives:

At the end of this lesson, the students are expected to:

- Explain the definition of innovation;
- Identify the types of innovation; and
- Distinguish the principles of innovation

What is Innovation?

If we hear the word "Innovation" we usually come up with different definitions and points of view about it. Innovation is something that involves developing, creating new concepts and new ideas that will be useful for the target customers.

Joerg Gemuenden defines Innovation as a process, involving multiple activities, performed by multiple actors from one or several organizations, during which new combinations of means and ends, which are new for a creating and adopting unit, are developed or produced, implemented and transferred to old and new.

Barack Obama quoted in Business Week's "In" that Innovation is the creation of something that improves the way we live our lives. That is the reason why innovation is changing the lives of the people extremely fast and the pacing of the development in technology.

Types of Innovation

There are numerous types of innovation, but let us breakdown it into two dimensions, the Technology and Market that come up with four (4) types of innovation.

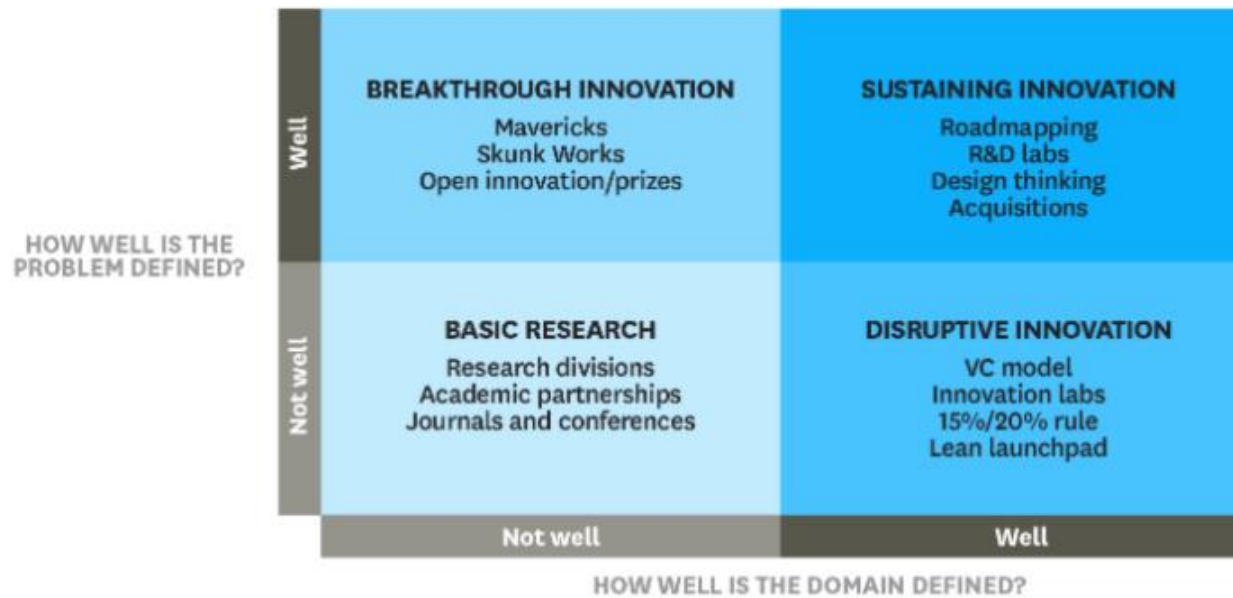


Figure 1: Types of Innovation

Sustaining Innovation

Sustaining innovation also known as routine innovation. happens on an incremental basis, is often a response to customer and market demands or improvements in technology. The company obtained feedback from the customers about the product and services rendered to improve and provide greater value to the customers. Most companies that used the sustaining innovation has been successful in building their businesses and continue improving their offerings to their customers and they have the awareness of the market needs. Examples of this companies are Apple, Intel and Amazon.

Apple company which founded by Steve Jobs, Steve Wozniak and Ronald Wayne continue improving, innovating and upgrading their products to gain customer satisfaction and maintain customer's trust and loyalty throughout the years.

On the other hand, Intel Corporation is an American multinational corporation and technology company headquartered in Santa Clara, California, in the Silicon Valley. Currently, Intel's innovation in cloud computing, data center, Internet of Things, and PC solutions is powering the smart and connected digital world we live in.

Amazon, is probably one of the biggest e-commerce worldwide. They intend to sell books before but now, they are selling more than hundreds of

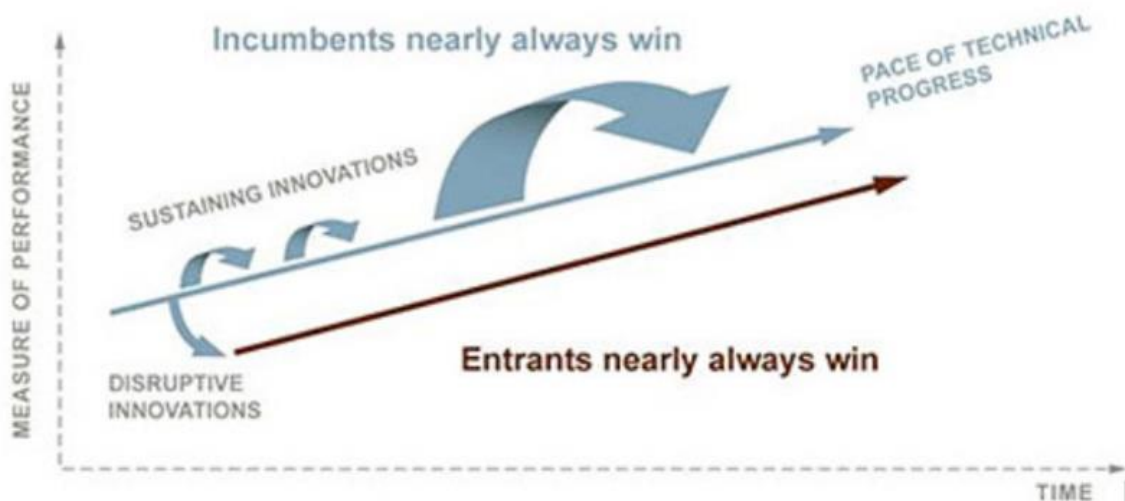
products globally where they continue to improve their products and services in order for their customers to be satisfied and pleased.

Disruptive Innovation

Clayton Christensen popularized the idea of disruptive innovation in the book "The Innovator's Solution," which was a follow up to his "The Innovators Dilemma" published in 1997. Christensen posited that there were two types of technologies that businesses dealt with. Sustainable technologies were those that allowed a business to incrementally improve its operations on a predictable timeframe. These technologies and the way they were incorporated into the business were primarily designed to allow companies to remain competitive, or at least maintain a status quo.

For disruptive innovation, most companies did not pay too much attention on the smaller business because they are most likely focus on how they will improve their products and services. A classic example of the disruptive innovation is the boost of cellular phones or mobile phones that competed with the fixed line telephony. When the mobile phones hit the market, people decided to buy it for their own purpose because it is more convenient to use anywhere. Massive innovations of mobile phones indicated that there is an increase in the needs of the consumers and the market that made the fixed line telephony lost in the competition.

Figure 2 shows the measure of performance in a disruptive innovation. It illustrates that new entrants have the big opportunity in achieving progress that the incumbents who spent a lot of their time and attention in adapting the sustaining innovation.



Breakthrough Innovation

Breakthrough innovation according to Idea scale is defined as an innovation from inside a company that pushes something to the next level. It is innovation that opens the company to new markets or changes the way customers interact with the market or the industry.

In this century, the innovation of products is one time over the other because of competition and the demands in the market which is very fast. One great example of a breakthrough innovation is the Apple iPhone, that generated various units of mobile phones. It all started on January 29, 2007 when they first released the iPhone.



Figure 3: The Evolution of iPhone

Basic Research

This type of innovation begins with the discovery of some new phenomenon. Basic Research is a key-driver to innovation as it provides information about a certain problem and derive with possible solutions. "Basic research" has many different meanings and definitions, and alternative terms like "strategic", "fundamental", "curiosity-driven", "researcher-controlled" and "autonomous" only contribute to making the issue more confusing. The research and development (R&D) statistics use an intentional definition where basic research refers to activities that have "no practical application in mind" [Gulbrandsen].

Basic research is often described as research without any clear goals, or science to satisfy the curiosity of a lone scientist without anyone else even realizing that it exists. But this totally misses the mark, says Søren-Peter Olesen, the director of the Danish National Research Foundation Centre for Cardiac Arrhythmia at the University of Copenhagen. The goal of basic research is "to collect information about how nature and people are put together. It's not important that this knowledge can be used for anything concrete, the most important thing is that we improve our understanding," he says [Hoffman, 2017].

In relation to the definitions of Basic Research, we can say that it is a process of conducting a study about a specific problem and finding out solutions that will benefit companies and industries in lieu with innovation. Basic research in innovation is practically a basis that will improve a product or a service that will gratify the consumers.

PRINCIPLES FOR SUSTAINABLE INNOVATION

As an investor, you have to be knowledgeable about the principles for a sustainable innovation. According to the principles in the classic book "Robert's Rules of Innovation: A 10-Step Program for Corporate Survival," by Robert F. Brands. He introduced the different principles that could help startup investors.

1. **Inspire.** In innovation, there should be a leader who can inspire others. They need to possess positive attitude, vision and ability to communicate so that people will be able to acquire what they should emphasize in innovating products or services.
2. **No risk, no innovation.** Most technopreneurs are risk taker because they are innovating new products or services which they have no assurance if it will survive in the market. Every business experience failure because Failure is the best teacher in order to succeed in the endeavor they embark on.
3. **New product process.** Innovation starts with a vision; an innovator should understand what they intend to develop for the benefit of their consumers and undergo with a structured process which includes idea generation, evaluation, prototyping, customer feedback and success metrics.
4. **Ownership.** The business leader has all the ownership on the new products and innovation in such a way that he/she generates the ideas and develop the appropriate business model.
5. **Value Creation.** Once there's an innovation, those new products should have a value and will be served as a solution to real customer problems.
6. **Accountability.** It is a standard that the team members and leaders have the full responsibility and obligations in the innovations. They have the

commitment to manufacture quality products and services and distribution.

7. **Training and Coaching.** Proper hiring and staffing of the people in the organization is a must to make sure that they are cautious of their responsibility and right mindset to perceive the future innovations. Continuous coaching is necessarily to maintain the attitude and spirit.
8. **Idea Management.** In building products and rendering quality services, the organization should value the presence of the customers and sales members in order to have a brainstorming of what will be the best for the company.
9. **Observe and Measure.** It is a need to track the results if it is already an ideal ROI (Return on Investment). That is how the company will measure their profitability whenever they released new products to sustain the needs of the company as well.
10. **Net Result and Reward.** If the company achieve their ROL, incentives for their employees is one way of motivation. There are several ways to motivate people aside from financial aspect such as recognition for a job well done.

IDEA PRESENTATIONS

Presentation is a big challenge to everyone because we never know if the audience will listen to you and if they are interested about your topic. That is why in every presentation, the presenter must be fully prepared and knows what is the topic thoroughly. There are various creative presentation ideas that can be helpful to those who are presenting a proposal to a prospective client, presenting the output of your work and presenting to potential investor with a goal to inspire the audience.

Here are the Ten (10) Incredible Presentation Ideas that will inspire your audience authored by Annie Pilon to Small Business Trends.

1. **Storytelling Presentation** - If you are presenting, make sure that it is not only about the facts of your product or services but rather you can tell a story where they will be interested to listen and focus too.
2. **Musical Presentation** - It will be more inspired to try to set some captivating tune that will help your presentation to stand out and in order to be remembered by prospective clients.
3. **Video Presentation** - It is desirable to make presentations that will have both visuals and audio content to make it as a video. It is more appealing to the audience or clients as they can envision what your products or services.

4. **Photo-Only Presentation** - If you will use the Photo-only presentation this is to make your audience or clients prone from reading slides word-for-word. The photos or images must be related to what you are presenting.
5. **Immersive Presentation** - Most conferences, seminars and start-ups usually use the immersive presentation where they encourage their audience to get involve on discussions, games and open forum. Giving them a part to play on the presentation and providing them with new initiative for the business.
6. **Question Presentation** - It is preferably advisable to ask questions to your audience in order for you to know if they are interested and make them involved in your presentation and you can have an idea if they understand your products or services to be offered.
7. **Demonstrative Presentation** - if you are selling a specific product, the demonstrative presentation is the best way to promote. Some clients would like to see and touch the product for actual demonstration and they can even try using the product themselves.
8. **Humorous Presentation** - A speaker with a great humor will make the presentation livelier because the audience will become active in the discussion. However, the speaker should be careful of using jokes to some clients to avoid misunderstanding.
9. **Animated Presentation** - The animated presentation is a one way of demonstrating the product instead of using a video. You can film the product in a 3D style where the audience or your client can visualize the entire interface of the product.
10. **Props Presentation** - This is not a techy presentation that you need computers because you will use visual aids to make a creative presentation.

IDEA SELECTION

An innovative leader will encounter challenges in selecting the best ideas among the list of different innovative process. What are the criteria of choosing the best ideas? What will be the purpose of those ideas? There are usually different methods that can be used in the process of selecting ideas. The steps introduced by Michael Putz for Lead innovation management consists of the following:

Step 1-Rough Selection

In the first step, the chaff has to be separated from the wheat, i. e. the ideas without potential have to be selected quickly. For this purpose, an "ABC analysis" can be used, where ideas are divided into three classes:

- A-ideas, those that are absolutely necessary for further processing.
- B-Ideas are those where you disagree about good or bad and are uncertain.
- C-ideas that have no value and are to be rejected.

The A-ideas are definitely going into the next round, the B-ideas are discussed and it is decided together per idea whether the idea will be adopted. C ideas are no longer considered.

Step 2-Fine Selection

In the next step, the sifted ideas are further selected. The method of "dots gluing" has proven its worth. Each participant receives five sticky points and can distribute them to their own favorites. If you count the points together you get a ranking.

If there are less than ten ideas, the "rating" method can also be used. Each participant gives each idea between 0 and 5 points. The points are also added up and you get a ranking and a priority.

Step 3- Detailed Analysis

In the detailed analysis, ideas are qualitatively analyzed and evaluated on the basis of criteria. For product ideas, for example, these are;

- customer benefit
- differentiation potential and competitive factor
- technical and economic feasibility.

In this process step, additional information is collected on the ideas, which is then analyzed and concretized in detail. A CANVAS, such as that of Osterwalder, can be used as a method for new business models. On the basis of the findings from the analyses, a decision is made as to whether the idea will be pursued further or not.

CUSTOMER NEEDS

One of the top priorities in business is to meet the demands and needs of the customer. An innovative leader undergoes thorough research and identify the

specific requirements or needs of the customer to produce a useful product. Figure 4 illustrates the top 5 myths about customer needs.



Figure 4: Top 5 Myths about Customer Needs

MARKET RESEARCH AND VALIDATION

An innovative leader should conduct a market research and validation to justify the needs of the customers. Quality measurement that demands the data gathered during surveys, interviews and market research.

What about Market validation? Market validation is the process of determining whether your product is of interest to a given target market. Market validation involves a series of customer interviews with people in your target market, and it almost always takes place before you've made significant investment in your product/concept [Semick, 2016].

THE DECISION-MAKING PROCESS

Decision making is an enormous task because the success of the business relies on its process to come up with a great solution. Various methods, models and processes can be considered to make a decision. Figure 8 shows the five (5) step process that an innovative leader can use.

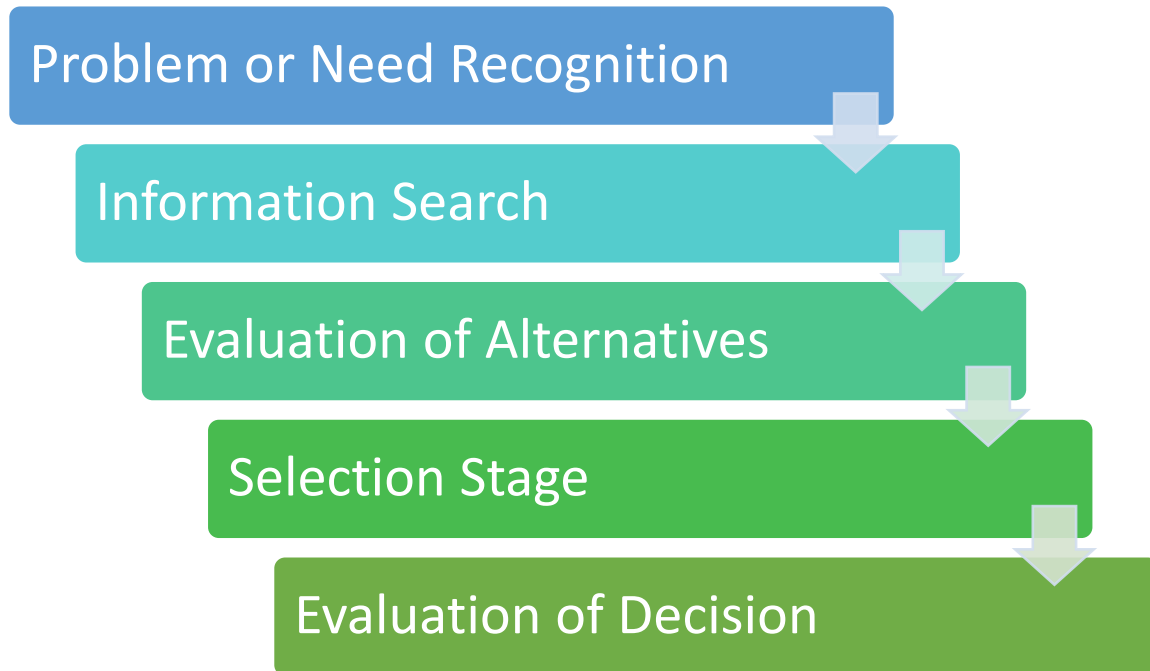


Figure 5: Five Steps of Decision-making Process

Problem or Need Recognition

As an innovative leader you must identify the different problems or need recognition of the consumer. The needs of the consumers are the basis or foundation of creating or producing a new product or services in the market. By assessing the needs of the consumer, an innovative leader can generate excellent ideas for innovation.

Information Search

When the problem occurs, there should have a solution. And to develop a solution an innovative leader should be resourceful. in such a way that he or she can think of bright ideas. Information search of products and services that will satisfy the needs and wants of the consumer.

Evaluation of Alternatives

In determining the needs and wants of the consumer, the innovative leader should provide different choices of products. Customers will begin to seek out the best deal as they will compare the details of the product, read many reviews if the product is poor or excellent and probably compare prices of which is more affordable.

Selection Stage

After a thorough research and evaluation of the alternatives, an innovative leader should select the best ideas that will be used in the decision-making. They may have had prior experience with this exact decision or maybe they succumbed to advertising about the new product or service and they want to give it a try [Flekel, 2013].

Evaluation of Decision

The goal for every marketer is not for a one-time customer. but a repeating lifetime customer. One bad experience of buyer's remorse and your branding perception could be tarnished forever [Flekel, 2013]. This process depends on the evaluation of the various assessment done for decision-making. Whatever the company decided is considered the best idea.

GROUP ACTIVITY

Collaborate with entrepreneur students to create a presentation showcasing the products they have developed. As IT students, your role is to enhance the presentation by incorporating technology-driven solutions, visuals, and engaging content. Choose one of the 10 Incredible Presentation Ideas and use it to structure your presentation effectively. Ensure that your presentation captures the audience's attention and highlights the product's innovation and market potential.

Rubric

Criteria	Excellent (10 pts)	Good (8 pts)	Satisfactory (6 pts)	Needs Improvement (4 pts)	No Effort (0 pts)
Collaboration & Teamwork	Worked effectively with entrepreneur students, actively contributed to the project, and demonstrated strong teamwork.	Worked well with entrepreneur students, with minor collaboration issues.	Some collaboration issues, but still contributed to the project.	Limited collaboration, minimal contribution to the project.	No collaboration or contribution.
Presentation Structure & Organization	Followed the chosen presentation idea creatively and logically; well-structured and engaging.	Followed the chosen presentation idea with minor gaps in flow and clarity.	Some structure, but transitions and organization need improvement.	Weak structure, disorganized flow, and missing key parts.	No clear structure; the presentation lacks direction.
Technology Integration & Visual Appeal	Effectively incorporated technology-driven solutions, high-quality visuals, and interactive elements.	Used technology and visuals effectively but with minor flaws.	Some visuals and technology used but not fully optimized.	Minimal use of technology and visuals; presentation lacks engagement.	No use of technology or visuals; presentation is plain.
Content & Product Innovation	Clearly presented product features, benefits, and market potential in an engaging manner.	Product details were well-explained but lacked some depth.	Basic explanation of product, with limited innovation focus.	Unclear or incomplete explanation of the product's innovation.	No product details or innovation presented.
Audience Engagement & Delivery	Captivated the audience with confident delivery, strong voice, and clear visuals.	Engaged the audience well, with minor delivery issues.	Some engagement but lacked confidence or energy.	Weak delivery; little audience interaction.	No engagement; presentation was unclear and unorganized.

Grading Scale:

- 45 – 50 = Outstanding
- 40 – 44 = Very Good
- 35 – 39 = Satisfactory
- 30 – 34 = Needs Improvement
- Below 30 = Unsatisfactory