Management of Innovations
UNIT 1
**Topic Covered:** Concept of innovation, historic retrospective, typology of innovations, innovation process, macroeconomic view of innovation, approaches of innovation, innovation sources, i.e. science and R & D, technology transfer, push and pull approaches, process used to explore innovation along the technology, market and strategy dimensions as the innovation moves from idea to market.

**Introduction**

Innovation is essential for business survival in highly competitive markets where it is increasingly difficult to differentiate products and services. Innovation is important for the following reasons:-

- It allows businesses to expand their customer’s base by refreshing the market with new and improved products.
- It is a key component of competitive advantages and help companies STAY ahead of competitor before competitor (rivals) innovation take market share.

**Meaning**

Innovation is the entire process by which an organization generates creative new technological ideas and converts them into novel, useful and viable commercial products, services and business practices for economic gain.

According to Kanter, “Innovation is the generation, acceptance and implementation of new ideas, processes, products or services”.

- The act of introducing something new.
- The successful exploitation of new ideas.

**Essential ingredients of innovation:**

- Something new

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Better than what exists
Economically viable
Widespread appeal

Development of Innovation concept and Models to its historic retrospective (development):

1. Pre 1920:-
   - First theory of innovation is sociology; innovation is seen as social change (change in grammar, language religion, law, arts etc.)
   - First classification of technical changes.
   - First appearance of innovation as social experiment concept in sociology.

2. In 1920:-
   - First linear models of invention – limitation sequences in sociology.
   - Theoretical classification of technologies in economics.
   - First work on innovation in public institutions.

3. In 2000:-
   - Further development of financial innovation concept.
   - Further development of eco-innovation concept.
   - Development of technological innovation system.
   - Development of open innovation concept.
   - Emerging of the collaborative innovation network concept in the framework of open innovation concept.
Further development of methodology for the international and national research and development statistics and STI (Science, Technology and Innovation) policy measurement.

Retrospective:

- It was invaluable to understanding our successes, failure and our path forward.
- The retrospective agenda was engaging and eye-opening without it, we would have been flying blind.
- The retrospective to help your team move forward and drive value and its growth.

Typology of innovation

It is remarkable how many people are under the false assumption that companies are either innovative or not. Innovation into two dimensions: Technology and Market, which gives us the following 4 types of innovation:
1. **Incremental Innovation**: Incremental Innovation is the most common form of innovation. It utilizes your existing technology and increases value to the customer (features, design changes, etc.) within your existing market. Almost all companies engage in incremental innovation in one form or another. Ex: Add new features (dove).

2. **Disruptive innovation**: It also known as stealth innovation involves applying new technology or processes to your company’s current market. This newer technology is often more expensive, has fewer features, is harder to use. Ex: Apple iPhone. It was the result of a technological movement that was years in making.

3. **Architectural Innovation**: Architectural innovation is simply taking the lessons, skills and overall technology and applying them within a different market. This innovation is amazing at increasing new customers as long as the new market is receptive.

4. **Radical innovation**: Radical innovation is what we think of mostly when considering innovation. It gives birth to new industries (or swallows existing ones) and involves creating revolutionary technology. Ex: airplane.

**Innovation Process**

1. Identify the goal or problem to be solved
2. Analysis
3. Development and Design
4. Conversion
5. Commercialisation
6. Others

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1. **Identifying the goals or problems to be solved**: The first step is to clarify what your business innovation goals are and why you want, or need to engage in this kind of innovation.

2. **Analysis**: Second step consists of some real-world discovery of the current situation, customers' needs, challenges, etc.

3. **Development and design**: Based on the information and thoughts gained during analysis, it is advisable to develop an ideas portfolio that includes ways you could innovate to meet these goals and problems.

4. **Conversion**: The next requirement is to translate the ideas into practical innovation products that could be targeted towards the identified marketplace. The aim here is not to fully launch the innovative products but to test your ideas within a limited scope to determine whether customers like the innovation, accept it, and are willing to pay.

5. **Commercialization**: The final step is where you take tested innovation and develop them to full-scale operations. They will require access to production facilities, routes to market logistics, etc.

6. **Others**:
   - Recognizing or scanning the environment.
   - Aligning overall strategy and proposal innovation.
   - Acquiring technology from outside.
   - Selecting the most suitable environment.
   - Learning lesson for improvement.
   - Developing the organization.

**Macroeconomics view of innovation/Approaches of innovation**: Innovator divides into 4 streams:
1. Low innovators: - These can into put in the work to developing a place in the market, but they
don’t go very far in peer group comparison. They are limited in the extent to which they learn
from others companies in their own industries.

2. Medium Innovators: - These make the effort and they are well versed in the rivals innovators.
They don’t look at innovative companies in other countries.

3. Good innovators: - These are committed to their own innovation process, they constantly
innovators across all industries.

4. Top innovators: - They do their innovation homework they keep tabs on what is going on in the
rest of the industries but they put as much height on innovation across all industries.

Economist Robert Solow says:-

a. Technology: - A driver of economics growth:- Robert showed that technological change rather
than capital accumulation was the main driver of long run growth. This is the path of the growth
that cannot be explained by identifiable factors such as capital accumulation.

b. Innovation spurs growth: - Innovation to produce new varieties of product or high quality
products was modeled as an active business decision of firms. Innovation driver’s long run
growth. Acc. To Robert macroeconomics cannot be pursued without taking account of finance.

c. Team is above individual:- The modest run assuming economist is a firm believer in team work
and never flinch in giving credit to others.

Assumptions of Innovation

1. Innovation as it is currently practiced is good enough.

2. Innovation is for executives:- This assume that executives are primarily responsible for the
strategy and direction a company takes they must own innovation initiative as well as truth.

3. Innovation is for practitioners:- While seed of innovation ideas often resides with the marketers,
designers, researchers and engineers that develop the products for a company to be successful
practitioners must work with executives.

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4. Innovation planning is an oxymoron:- Product development often involve documents detailing between requirements, specification and objective outlining the scope, measures and criteria of success.

**Barriers of innovation**

There are many barriers of innovations:-

1. **Structural Barriers:-**
   
   a. Stratification:- It has been described in term of distribution of rewards throughout an organization.
   
   b. Formalization:- Degree to which an organization emphasizes following rules and procedures in the role performance of its members.
   
   c. Centralization:- There is some contradictory research result centralization. It may be negative related to ideas, proposals and positive related to adaption.
   
   d. Specialization:- Degree of occupational variability that exist within an organization.

2. **Social/ Political Barriers:-** These barriers pertain mostly to norms and power related influences with organization. Eg:- Rock the Boat.

3. **Procedural:** It refers to policies, procedures and regulations that often that inhibit innovation. Eg:- short term planning.

4. **Resources Barrier:** It applies to such things as people, time, money, supplies and information.
5. **Individual Barriers**: These barriers reside within individual organization member but also may soon. Eg: fear of risk

6. **Others**:
   - fear
   - lack of leadership
   - short term thinking
   - lack of collaboration
   - no time
   - lack of focus
   - lots of ideas no delivery to market
   - no clear process
   - lack of emergency

**Innovation Sources**

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<th>Organisational Structure</th>
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<td>Science, research and development</td>
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<td>Long tenure in management</td>
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<td>Technology transfer</td>
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<td>Slack resources</td>
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<td>Push and pull approach</td>
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<td>Inter unit communication</td>
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<tr>
<td>Others</td>
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Prepared by: Ms. Shweta (Assistant Professor, BBA)
1. **Organizational structure**: organic structure positively influences innovation. As there is lower vertical differentiation, formalization, centralization, organic organization facilities the flexibility, adaptation and cross fertilization.

2. **Long tenure in management**: Managerial tenure apparently provides legitimacy and knowledge of how to accomplish a task and obtain desired outcomes.

3. **Slack Resources**: Having an abundance of resources allows an organization to afford the purchase innovation, bear the cost of instituting innovation and absorb failure.

4. **Inter unit communication**: Innovative organization are high user of committees, task forces, cross-functional teams that facilitate interaction across departmental lines.

5. **Other sources**:
   a. **Customers**:
      - Retailers
      - Food service organization
   b. **Suppliers**:
      - Manufacturers contract
      - Mega suppliers
      - Internal and external suppliers
   c. **Employees**:
      - R &D innovation team
      - Marketing plant employees
   d. **Consumer and Community**:
      - Dedicated online community
      - Consumer panels

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• All users and buyers

e. Strategic partners:-

• Advertising and research agencies
• Universities and research control
• Innovation companies

6. Research and Development: - Matheson identified nine factor in their book “The smart organization creating value through strategic research and development”, in which best practices can be found for research and development departments. There are nine areas are:-

• Decision basis
• Technology strategy
• Portfolio management
• Project strategy
• Proper organization and process
• Relationship with internal customers
• Relationship with external customers
• R &D culture and values
• Improving decision quality.

7. Technology transfer: - Technology transfer covers not only the technology transfer from academia to industry. It is a broad field that ranges from internal corporate technology transfer to international technology transfer.

Technology transfer can be defined as the process of sharing of an acquiring, providing, licensing skills, knowledge technologies, intellectual property, technology development...
personnel’s or entire teams, wide range of users who can then further develop and explore the technology into new products, process application material or services.

- The way of technological transfer depends on the involved parties and the reasons behind technology transfer.
- The transfer of a new ideas or methods for solving a problem from one group or individual to another consulting group to client.
- It is an important part of six sigma and others best practices deployment approaches.

Objectives of technology transfer:-

- Identifying and analyzing targeted user requirement.
- Selecting and analyzing innovative content to meet these requirements and analyzing to the feasibilities of transfer.
- Integrating or certifying it in European, national, regional, local or sectoral training system and practices.

Who can Benefits:-

- Institutions or organizations providing learning opportunities in the field covered by the sectoral programmed.
- Association and representations of those involved in vocational education and training including ‘trainees’, parents and teachers association.
- Enterprises, social partners and other representatives of working life including chamber of commerce other trade organization and sectoral organizations.
- Bodies providing guidance, counseling and information services relating to any aspects of lifelong learning.
- Research centers and bodies concerned with lifelong learning issues.
- Non-profit organizations, voluntary bodies.

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• Process used to explore innovation along the technology and strategy dimension as the innovation moves from idea to market.

8. **Push or Pull Approach:** There are two basic innovation type:

![Diagram showing Type of innovation: Technology Push Approach/strategy and Market Pull Approach/strategy]

**A. Technology Push approach:** While in **Push strategy**, the idea is to push. The company’s product onto customers by making them aware of it, at the point of purchase.

  **Definition:** When research and development or a technology breakthrough drives the launch of a new product. Ex: Samsung galaxy with touch screen technology in 2012.

  - It focuses on technical issues and problems.
  - Trigger a search for scientific and technical knowledge both within the firm and from external knowledge sources.
  - Develop an initiative, technical solution to offer in the market place.

**B. Market pull approach:** **Pull strategy**, relies on the notion, “to get the customers come to you”.

  **Definition:** When market demand for a solution to a problem or need in the market place trigger the development of a new product. Ex: Digital cameras and photos editing software.

  - External market needs are recognized that trigger a search for scientific and technical knowledge.
  - Analyzed by the firm for potential solution.

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• Leads to an innovative offering in the market place.

**Difference between push and pull strategy:**

<table>
<thead>
<tr>
<th>BASIS FOR COMPARISON</th>
<th>PUSH STRATEGY</th>
<th>PULL STRATEGY</th>
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<tbody>
<tr>
<td>Meaning</td>
<td>Push strategy is a strategy that involves direction of marketing efforts to channel partners.</td>
<td>Pull strategy is a strategy that involves promotion of marketing efforts to the final consumer.</td>
</tr>
<tr>
<td>What is it?</td>
<td>A strategy in which third party stocks company's product.</td>
<td>A strategy in which customers demand company's product from sellers.</td>
</tr>
<tr>
<td>Objective</td>
<td>To make customer aware of the product or brand.</td>
<td>To encourage customer to seek the product or brand.</td>
</tr>
<tr>
<td>Uses</td>
<td>Sales force, Trade promotion, money etc.</td>
<td>Advertising, Promotion and other forms of communication.</td>
</tr>
<tr>
<td>Emphasis on</td>
<td>Resource Allocation</td>
<td>Responsiveness</td>
</tr>
<tr>
<td>Suitability</td>
<td>When the brand loyalty is low.</td>
<td>When the brand loyalty is high.</td>
</tr>
<tr>
<td>Lead Time</td>
<td>Long</td>
<td>Short</td>
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**Processes used to explore innovations along the technology (Technology process):**

There are two ideas about the origin of technological innovations. One argues that the technological push comes from the scientific research and development sectors, with no commercial purpose and the other (Market Pull), more accepted today, affirms that it’s market...
needs that instigate companies to develop new technologies that satisfy the demands of consumers and businesses.

The 8 stages of the technological innovation process:

1. **Basic research:** Basic research is that phase of the technological innovation process that only occurs in large companies, usually in the pharmaceutical, energy and information technology sectors, which keeps research and development departments continuously abreast of the state of the art technologies that most impact their organizations.

2. **Applied research:** When it detects some specific market needs that may represent an opportunity to develop a sustainable competitive advantage for the business, the company searches among the technologies that dominate the way to solve this problem. At this point, you can integrate existing technologies creatively and innovatively or really develop something totally new.

3. **Development:** When reaching a solution to the market need, it’s time to develop the product, service or process that will be marketed or employed. For this, a prototype is developed that must be tested, preferably with the help of the public that will use it. Two interesting approaches to this stage of the technological innovation process can be used:
   - Design thinking, which takes into account how people interact with innovative products and services
   - Scrum, which promotes small iterations, incremental advances in the prototype and the rest of the innovation process, always based on the needs of those who will use it.

4. **Engineering:** With the prototype set, you have to turn it into a scalable product or service that can be mass-produced or meet the specific needs of an industry. Materials, suppliers, appropriate forms of storage and transportation are searched, such as connecting parts and benefiting inputs, defining which professionals will need to be hired and trained, among other measures.

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5. **Manufacture:** - This is one of the most important aspects of the technological innovation process. It is time to define the best way to deliver the solution created to the final customer, with efficiency and quality.

6. **Marketing:** - With the product or service ready to be released, it’s time to do concept tests, market research and market testing to see if any adjustments are still required depending on how their acceptance and distribution is taking place in test markets.

7. **Promotion:** - Once the market tests are done, the product or service is launched nationally or globally, depending on the markets the company serves. To launch the products and services rapidly to achieve results as soon as possible.

8. **Continuous improvement:** - Once launched, both the product or service and the process flows used to produce and deliver them to end customers are constantly measured and analyzed, with the aim of looking for ways to improve them even more, adding even more perceived value to the final customers.

**Market and strategy dimensions as the innovation move from idea to market (Strategy Dimensions):**

The two views of the business model for the idea and the business strategy of the enterprise combine to give five important dimensions that an innovator can use to think through and conceptualize the idea.

1. **Competitive advantage:** The unique selling proposition for the idea is the key differentiating factor. It should provide a unique competitive position for the enterprise in the market place for the idea.

2. **Business alignment:** It is essential for the innovator to relate the idea to the current and future business directions of the enterprise. The differentiating factors of the idea should be conceptualized around the key strategic focus of the enterprise and its goals.
3. **Customers**: Knowing the customers for an idea is very important to conceptualize it based on the wants and needs of the customer. For e.g. Blackberry has a clear view on its target customer segment – business executives.

4. **Execution**: Execution is the complementing capabilities that are required to develop the idea into a successful innovation and for taking it to the market.

5. **Business value**: Business value refers to the mechanism that will bring value to the business in pursuing the idea. It covers how revenues will be generated, what is the market size, how is it shared with the partners.

**Conclusion**: Innovators who have a good understanding of the two perspectives – business model and business strategy will gain immensely in discovering unique positions for their ideas. At times, the original idea contributor may not have all the required skill sets to conceptualize the idea. It is very important in such situations to co-create their idea with other experts. A team of innovators with diverse skill sets in technology and business aspects will help in conceptualizing the idea. Also, in organizations that promote collaboration, enthusiasts and innovation community leaders should be on the lookout for good ideas and help the innovators to conceptualize their ideas.

The dimensions defined in the framework will be very useful to conceptualize new product ideas and evolve them. The innovator needs to continuously be in the lookout for strengthening the dimensions while evolving the idea. The key to success is to take the idea forward by working on the dimensions that are strong. The dimensions can be further elaborated with questions that help innovators to conceptualize their idea.
UNIT - 2
Topic Covered:- Application of innovation:-Organizational aspects of innovation, soft methods and techniques of innovation management, creative approaches, systemic and analytical methods and techniques of innovation management, Economic aspects of innovation encompassing source of innovation financing.

Organizational aspect of innovation

Innovation is a process that increases your capacity to thrive in challenging times. Organizations are often challenged to find new ways of creating and capturing value to compete with new entrants and disruptive technologies. Focusing on the former our finding shed new light on the existence of four key organizational issues:-

• Organizational conflicts for scarce resources
• Cognitive limitations in terms of a persistent dominant logic
• Design of organizational structure
• Sourcing and development of new capabilities

Meaning:-

Innovation: - It is simply the process of creating and implementing a new ideas or idea.

There are three innovations:-

a) Process innovation: - It is achieved through the creation of a new mean of producing selling or distributing an existing product or service. Example online banking.

b) Technical innovation: - It is simply the creation of a new product or service. Ex:-new line of auto mobiles.

c) Administrative innovation :- It is creating of a new organization design which better support the creation production and delivery of service or product ex :- virtual team

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Organization :- Involve all of the employees in the process of identification (identifying)and solving problems. This enable the organization to continuously experiment, improve and increases its capacity to deliver its customers new and improved products and services.

Organizational aspects of innovation: - A learning organization through continuous innovation and change creates sustainable competitive advantages in its industry.

Characteristics of learning organization: - The five building blocks of an organization:-

a) Shared leadership: - All employees share at least some leadership responsibilities. Everyone is encouraged to find way to improve products and services and to experiment with new methods to better serve the organization.

b) Culture:- The learning organization encourages this empowered employee to identify and experiment with new method and approaches. Empowerment provides a way to integrates tasks and allows the employees to buy into an organizational goal.

c) Strategy :-The aspect address have three key issues :-

- Customer focus: - It reflects a clear understanding of how important customers are to success.
- Long term perspectives: - The process of learning and change simply taken time.
- Internal alignment: - The business strategy drives the design of all systems.

d) Organizational design: - The learning organization emphasis the use of team and strategy alliances.

- Team: - Team member take responsibility of aspects such as training, purchase safety and scheduling.
- Strategic alliances: - Suppliers, competitors and customers collaborate.

e) Uses of information: - This is the lifeblood of learning organization. There are three main aspects involving the use of the information in a learning organization.
• Extensive scanning
• Measurement oriented
• Shared problem and solutions.

Elements of organizational innovation:-

• Identify purpose
• Achievable dreams
• Build loyalty
• Set standards
• Inspire enthusiasm
• Encourage commitment
• Value and culture
• Unique strength
• Core values

Soft method of innovation management

1. The focus is on improvements, which aim to distinguish a company from its competitors or to consolidate its presence in the market.

2. It is also seen as a range of tools, techniques, and methodologies that help companies to adapt to circumstances and meet market challenges.

3. Soft methods are tools, which can help you transform a new idea into a commercial success.

Features:-

1. Phase of innovation cycle concerned.

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2. Existence of readily accessible information describing best practice.

3. Whether designed to address a specific topic or a general concern.

4. Whether copyrighted or patented.

5. Degree of diffusion and generalization in its applicability.

6. Ability to take advantage or to be compatible with the internet.

7. Ability to cope with co-operation and team work.

8. Direct impact on the competitiveness.

9. Degree of development and availability.

Advantages:-

1. Promote HRM as strategic area within the business.

2. Increase efficiency using more advanced information technologies.

3. Accelerate and shorten the time-to-market in innovation projects.


5. Integrate science, technology, and market in fluent systems.

6. Strengthen the Knowledge management within a firm.

7. Encourage entrepreneurial initiative.

8. Promote co-operation and team work.
Soft method and technique of innovation management:-

1) Knowledge management techniques:- Knowledge management is the process whose main objective is to generate collect and exploit the knowledge inside the organization is a continuous and systematic manners.
a. Knowledge audit: - It is the process of evaluate and auditing of innovation capacity gives an insight into the current knowledge base in an enterprise.

b. Knowledge mapping: - It gives the preview of the sources, flow limitations in the process of knowledge transfer and exchange inside the organization.

c. Document management: - It is the source of knowledge and innovation whether we talk about manuals, reports, methodologies or other forms of documents.

d. IPR management (Intellectual property and results): - It is the ground of general corporate strategy. It includes protection of products corporate intellectual property and results derived from an organization innovation activities.

2) Market intelligence techniques: - It refer to detailed competition research and analysis which enables the enterprises to collect fitter, analyze and distribute relevant reliable and timely information on competition.
a) Technology watch: - Some technological advance appears on the market in order to identify potential innovation that can influence enterprise.

b) Patent analysis: - It enables assessment of results competitiveness before the enterprise undergoes an expensive research and development, applying the patent etc.

c) Customer relationship: - Management is about recognizing establishing and improving the relationship with users in order to build their loyalty and trust.

d) Business Intelligence: - Integrate all method for collecting, filtering analyzing and distributing the information needed for business.

3) Cooperative and networking techniques: - Knowledge based economy require team work for people from different department and organization.

   Cooperative and networking techniques

   Team building

   Groupware technologies

   Supply chain management

a) Team building: - Which improve the corporate culture inside the organization by fostering the collective obligation among members and encourage their active participation in the decision making process.

b) Groupware technologies: - As a kind of corporate software relying on three principles communications collaboration and coordination.

c) Supply chain management: - It deals with suppliers sub contractors and users through active and controlled system that integrates the whole chain into one entity.

4) Human resource Management Techniques: - Human resource management is extremely significance aspects of business.

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a) **Online recruitment:** - Internet, whether it is simple advertising of vacancies or establishing the complete system for career development.

b) **Tele working techniques:** - Which combines telecommunication and computer technologies where employees can work from remote location from home etc.

c) **E-learning:** - It consists of training organized through the network, facilitating in this way interaction, personalized learning with large saving in time and money.

5) **Interface management techniques:** - Design making process is based on information coming from different department within the organization (marketing and research and development).

   a) **Concurrent engineering:** - It is a systematic approach to an integrated concurrent development of products and accompanying processes including production and support system.

   b) **R&D marketing:** - Interface as a form of interconnects between development and marketing department is of great importance for the organization business. It depends on the facts if the creation product is based on technology research or a specific market requirement.

6) **Creativity Development Techniques:** - Development of creativity is the key element in the innovation process. It refers to creation of new ideas or combination of existing one in order to innovation improves the everyday problem solving.

   a) **Lateral thinking:** - It implies non-traditional methods which is logical thinking are dismissed as inadequate. These non conventional techniques increase the creativity and produce alternative solution.
b) TRIZ (Theory of inventive problem solving):- It is creative approach based on existing solution and available information for solving new problem.

7) Process improvement techniques:- The process of improvement allow the breakdown of tasks to the set of measures and step in order to find the most efficient way to exceed the expectation and predefined requirements of the process.

a) Workflow management: - It is the process of auto nation of organization internal activities and task which lead to simpler process and procedure.

b) TQM (Total Quality Management):- In this process where all activities and process values are improved to the highest possible level.

8) Innovative project management techniques: - There is substantial tendency today that all innovation should be realized through projects, regardless of the area they are in on the size and structure of the organization.

a) Pre-project management phase: - It refers to the selection and assessment of the project idea and the very beginning of the process realization.

b) Development project management phase: - It refers to the integration of the different capacity and resources.

9) Design management techniques: - The design of new product goes beyond simple optimization of design and development process.

a) Computer aided design: - Use powerful computer tool for advance product design.

b) Value Analysis: - It is systematic review of products existing design with the aim to test and analyze those specific features and functions define by the users.

10) Business creation technique:- For development of enterprise business environment with a country is crucial has direct impact to the enterprise internationalization process.
Creative Approaches:-

Creative= Knowledge+ imagination+ evaluation

Creativity is defined as the production of new and useful ideas concerning products, services, processes and procedures by individuals or small groups of persons working together. Creativity in entrepreneurship include being independent and spontaneous and processing a problem solving attitude.

Components of creativity:-

1) **Intrinsic motivation**: - It refers to motivation that comes from inside an individual rather than from any external or outside rewards such as money or grades. Intrinsic motivation facilitates creativity and academic performance whereas extrinsic motivation hinders creativity but has no effect on academic performance.

2) **Skills in task**: - A developed talent or ability writing skills required in solving it.

3) **Skill in creativity thinking**: - It refer to ability to form new combination of ideas to fulfill a need or to get original or otherwise appropriate result by the criteria of the domain in question.

   • To hold as an opinion, believe and suppose.
   • To anticipate or expect.
   • To make a mental discovery.

Features of creativity:-

• Creativity is not the product but the process.

• It involves both conscious and sub-conscious thinking.

• Creativity thinking can be stimulated at individual as well as group level.

• Creativity thinking can be both systematic and unsystematic.

• It is about thinking something new and whenever this new idea is implemented it brings change.

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• It is not a one-time, creativity is somewhat regular activities.

• It requires high degree of awareness.

• It involves pattern breaking.

• It involves seeking answer to questions or problems.

**Role of creativity in organizational growth:-**

1) Generation of ideas for new technologies

2) Generation of ideas for improvement in product/service design like:-
   - For more value addition
   - For simplification
   - For adding more features
   - For standardization
   - Increase product life cycle
   - Improve product reliability.

3) Generation of ideas for improvement in process design like:-
   - For smooth flow of materials
   - Reduce wastage
   - Improve quality
   - Improve efficiency
   - Improve safety

4) Generation of ideas for improvement in machines, tools etc.

5) Generation of ideas for converting process waste into useful product.

6) Generation of idea for improvement in productive capacity.

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7) Improvement in human resources.

8) Finding new users.

9) New marketing strategy

10) Tapping new market/market segments.

11) Solving problem.

12) Tapping business opportunities.

**Creative People:-**

1) Awareness

2) Drive of motivation

3) Flexibility

4) Originality

5) Abstract summary formulation

**Creative Process:-** Many theories models to explain creative process:-

1) **Creative process as incubation:-** Incubation is a temporary break from creative problem solving that can result in sight. Incubation aid creative problem solving as it enables “forgetting” for misleading clues.

2) **Creative cognition approach:-** Creativity take place in two phases:- a generative phase, where as individual constructs mental representation called pre-inventive structure and as exploratory phase where those structure are used to come up with creative ideas.

3) **Creative process as convergent and divergent thinking:-** Convergent thinking aiming for single correct solution to a problem, whereas divergent thinking involves creative generation of multiple answer to set problem. Through convergent and divergent thinking creativity if facilitated.

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4) **Conceptual blending**: Creativity arises as a result of the intersection of two quite different frames of references. This creativity is facilitated through their conceptual blending.

**5 steps in the creative process model:**

1) **Preparation**: During the preparation step of the creative process model, an individual becomes curious after encountering a problem. For example, a marketing professional may prepare for a marketing campaign by conducting market research and formulating different advertisement ideas.

2) **Incubation**: While the individual begins to process her ideas, he begins to synthesize them using his imagination and begins to construct a creation.

3) **Illumination**: As ideas begin to mature, the individual has an epiphany regarding how to piece her thoughts together in a manner that makes sense. The moment of illumination can happen unexpectedly. For example, an individual with the task of putting together an office party may have an idea for a theme while driving home from work.

4) **Evaluation**: After a solution reveals itself in an epiphany, the individual then evaluates whether the insight is worth the pursuit. He may make changes to his solution so it is clearer. He may consult with peers or supervisors regarding his insights during this step before pursuing it further. If he works with clients, he may seek a client’s input and approval before moving on to the next step.

5) **Implementation**: The implementation of an idea or solution in the creative process model is when an individual begins the process of transforming her thoughts into a final product. For example, during this step, a painter may begin outlining shapes on a canvas with charcoal before applying oil paints to the medium.
Systematic method and technique of innovation management:

Our diverse five layers innovation tool kit provides a full offering to answer all your innovation needs, allowing you entire organization to innovate in what you do:

1) Thinking tool: - It helps you break mental fixedness and arrive at innovative solution and strategies in a reliable and repeatable way. At the heart of SIT method is one crucial idea that inventive solution share common pattern lead to the development of five thinking tools that forms its core. There are many thinking tools:
   - Task unification
   - Qualitative change
   - Attribute value mapping
   - Fusion
   - Attribute dependency.

2) Principles: - It allows you to apply the tools with precision, ensuring that everyone time is used efficiently and those ideas are implementable and impactful. This tool can only work if they are used properly and in order for this to happen these tool are accompanied by several principles which allow you to use the tool optimally benefits.

3) Expert facilitation: - Expert facilitation of diverse multifunctional team makes optimal use of everyone perspectives, competencies and field of expertise to explore new direction and then develop and implement them.

4) Project management: - It provides guidelines and techniques that help ensure that innovation is properly managed, just like any other business process in your organization. This level leads you in the direction of smooth implementation process for the newly developed ideas. The ability to come up with new idea is crucial for the process of innovation.

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5) Organizational innovation: Innovation projects are important and no single innovation can deliver lasting advantages in order to grow organically a company must encourage innovation & creative thinking systematically & continuously.

**Analytical techniques of innovation Management:**

An analytical technique (analytical method) is a procedure or a method for the analysis of some problem, status or a fact. Analytical techniques are usually time limited and task limited. They are used once to solve a specific issue.

Basic most widely used analytical method is:-

- BCG matrix
- Brain storming
- Bench marking
- GAP analysis
- Mind Map
- SWOT Analysis
  - Organizations are complex system and therefore their needs are satisfied using different system analysis method and enterprise architecture description method is:-
    - EA (Enterprise Architecture)
    - Job analysis
    - Job description
    - Job specification
    - Re-engineering
    - Social network analysis
A. BCG Matrix (Boston consultancy group matrix):

BCG Matrix most developed by Boston consultancy group is the long term strategy planning to help a business considered growth opportunities by reversing its portfolio of products to decide where to invest discontinue or developed products.

1. Star: - They have high growth market with high market share. They can be the market leaders through required ongoing investment to sustain. They generate more rate of investment than other product strategies.

2. Cash cow: - They have no growth market with high market share. They are mature in establishment products. Milk these products as much as possible with killing the cow. They do not required high investment these products from the basic of the companies.

3. Question mark: - Question can become star or dogs to become the star it is the necessary to invest in advertising, incremental innovation etc. a lot of investment is required to get it return.

4. Dogs: - The kind of products which helped low market growth and low market share. These productions withdrawn from the market.
B. **Brainstorming:** - It is a group creativity technique that is used to generate more ideas on the topic. It is used in many fields from problem solving to generating highly creative ideas. It is used in management, marketing, and scientific activities. The goal is to develop as many ideas as possible in the shortest possible time to solve a predefined problem.

**Principle of brainstorming:**

Prepared by: Ms. Shweta (Assistant Professor, BBA)
• Postpone judgment: - All ideas are good acceptance and written down criticism can rate until later.

• Focus on quantity: - The strife together as many ideas as possible every ideas is welcome.

• Free wheel: - To jump from one idea to next and think out alone.

Types:-
There are two type of brainstorming:-

1. **Traditional brainstorming:** - The normal views of brainstorming are there a group of people sit in a room and shout out ideas as they occur to them. They are total to lose their in habitations and that no idea will be judge so that people are free to shout out any ideas at all without feeling uncomfortable.

2. **Advanced brainstorming:** - the model we propose in an extensions of the traditional brainstorming scenario and make the whole process easier and more effective advanced brainstorming builds on the current method of brainstorming to produce more original ideas in a more efficient way.

C. **Benchmarking:** - It is a continuous systematic process of measuring one output and work process against the toughest competitor of those recognized best in the industry.

**Benefits:**

• Help organization understand strength and weakness.

• Help better satisfy the customer need by establishing new standard and goals.

• Motivate employees to reach new standards and to keen on new development.

• Allow organization to realize what level of performance is really possible by looking at others.

• Help organizations improve their competitive advantage.

• It is the cost effective and time efficient ways of establishing a pool of innovative ideas.

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Approaches to benchmarking:-

1. **Process benchmarking**: - This is all about better understanding your processes comparing performance against internal and external benchmark and finding way to optimize and improve your processes. The idea is that by understanding how top performers complete a process you can find way to make your own process is more efficient faster and more effective.

2. **Strategic benchmarking**: - This compare strategic business approaches and business models in order to strengthen your own strategic planning and determine your strategic priorities. The idea is to understand what strategy underpins successful companies and then compare the strategic with on to identify way you can be more competitive.

3. **Performance benchmarking**: - This involves collecting information on how well you are doing in terms of outcomes and comparing these outcomes internal or external. This can also referred to functional performance benchmarking.

**Benchmarking process**

Prepared by:- Ms. Shweta (Assistant Professor, BBA)
1. **Planning:** - It is imperative that the organization identify the activity that need to be benchmarked prior to engaging in benchmarking. Since benchmarking can be applied to any business process or function a range of research techniques may be required. These include informal conversation with the customer, employees or suppliers. These are also including exploratory research technique. The benchmarking organizations can be a single entity or a collective group of organizations which operate at optimal efficiency. If search these organizations operate a similar environment.

2. **Analysis:** - One sufficient data is collected the proper analyses of such information are of foremost important. Data analysis, data presentation, result projections classification the performance gaps the processes and identifying the root cause that lead to the creation of such gap are then required to be carried out.

3. **Integration:** - Where it becomes mandatory to walk the talk for success. This usually means that far reaching change need to be made so that the performance gap between the target and actual is narrow and eliminated.

4. **Action:** - A formal action plan that promotes change is to formulate keeping the culture of the organizations in mind so that is resistance change is minimized. There are generic steps of action plan:
   - specific task
   - sequence task
   - determine resources need
   - establishment asked schedule
   - assigned responsibility for each
   - describe expected result
   - specific method for monitoring result
5. **Recalibration:** - The next step is to repeat the benchmarking process the process must be used continuously to pursue engaging new ideas.

**Disadvantages:** -

- What is best for someone else may not suit you.
- Poorly define benchmarks may lead to wasted effort and meaningless results.
- Incorrect comparison

**D. Gap analysis:** - Gap analysis can be understood as a strategic tool used for analyzing the gap between the target and anticipated result by assessing the external of the task and the way in which the gap might be bridged. It involves making comparison of the present performance level of the entity or business unit with that of standard established previously. [It analyses the gap between the current capability of a company and its future development].

**Type of GAP:**

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<thead>
<tr>
<th>Type</th>
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<tbody>
<tr>
<td><strong>Performance Gap</strong></td>
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<tr>
<td>Improvement Gap</td>
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<tr>
<td>Expansion Gap</td>
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<tr>
<td>Diversification Gap</td>
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<tr>
<th>Type</th>
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<tbody>
<tr>
<td><strong>Product/Market Gap</strong></td>
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<tr>
<td>Product line Gap</td>
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<table>
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<tr>
<th>Type</th>
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<tbody>
<tr>
<td><strong>Profit Gap</strong></td>
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<tr>
<td>Distribution Gap</td>
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<tr>
<td>Usage Gap</td>
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<tr>
<td>Competitive Gap</td>
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<th>Type</th>
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<tbody>
<tr>
<td><strong>Manpower Gap</strong></td>
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</table>

1. **Performance gap:** - The difference between expected performance and actual performance.
2. **Product or market gap**: The gap between budgeted sales and actual sales is termed as product or market gap.

3. **Profit gap**: The variance between a targeted and actual profit of a company.

4. **Manpower gap**: When there is a lag between required number and quantity of work force and actual strength in the organization; it is known as a manpower gap.

**E. SWOT:-**

A technique that enables a group or individual to move from everyday problem in traditional strategy to a prospective now SWOT analysis framework is a very important and useful tool to use in marketing management and other business application.

- **Strength**: An internal resource for a capability is helpful to achieve the desired goals.
- **Weakness**: An internal attribute or barrier to achieve desired goals.
- **Opportunity**: An external condition that could provide a competitive advantage.
- **Threat**: An external condition which could damage the scope for attaining objective.
F. Mind map: - A mind map is a visual form of note making that can be done either individually or as part of a group. At its heart is a central image or idea.

Uses of mind map:-

- planning
- brainstorming
- group thinking
- documenting
- note taking
- resources

Other techniques

- Job analysis: - Job analysis a process to identify and determine in detail the particular job duties and requirement and the relative important of these duties for a given job.

- Job description: - It is documents that describe the general task or other related duties and responsibilities of a position. It may specify the functionary to whom the positions report specification such as qualification or skills needed by the person in the job and salary range.

- Job specification: - It is the settlement the essential components of a job class including a summary of the work to be performed primary duties and responsibilities and the minimum qualification and requirement necessary to perform the essential functions of the job.

Economic aspects of innovation encompassing sources of innovation financing:-

Innovation economy is a growing economic theory that emphasizes entrepreneurship and innovation. Innovation economy is based on two fundamental that the central goal of economic policy should be to spur higher productivity through greatest innovation and that market relying
on input resources. Economic growth in the innovation economy is the end product of knowledge, technological spills over’s and external it is between collaborative firm and system of innovation that create. There are two sources of financing:-

- Internal source of finance
- External source of finance

1. **Internal source of financing innovation**: - Internal source of finance are critical for firms innovation activities. Sources as described as money and capital provided by family and friends to start a business as well as entrepreneur orders personal financial resources can be important resources for innovative entrepreneur fee. Large firm with multiple divisions can find their innovative investment in one division. The separation of ownership and control can also lead firm to display short terminus behavior. This is a concern in particular for companies that are listed in the stock market and have a diversify share holder base.

Moreover the competitive environment can impact how many internal resources are available for the innovation. Firms use a variety of strategies to sustain their markup using intellectual property first advantage.

2. **External source of financing innovation**: - External source of finance are critical for firms innovation as firm typically lack internal sources. Example retained earnings and profit for financing their innovative projects.

- **Debt financing**: - Which refer to opportunities for firm to secure public and private carry to start and develop their business (loan from bank and public institutions). Most important common tool for access to finance.

- **Stock market financing**: - Which refer to raising capital by issuing sharing as common stock in stock market can also be used to obtain financing.

- **Business angel**: - Wealthy individual investors typically with business experience who act as a source of equity and provides startup capital to smaller firm in exchange of either convertible debt or equity.

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- **Venture capital:** - Venture Capital fund can be defined as pool of capital which is managed professionally and is invested in private venture using preferred stock or similar instruments.

- **Other type of finance:** - Such subsidies and grand from government and international organizations can also be critical given important innovative business limited access to financial market.

<table>
<thead>
<tr>
<th>Economic thoughts</th>
<th>focus</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Neoclassical</td>
<td>Market price signals in using scare resources.</td>
<td>Protective factors accumulations (capital and labor).</td>
</tr>
<tr>
<td>2. Innovation</td>
<td>Innovative capacity to create more effective process product business models.</td>
<td>Knowledge technologies (research and development patents).</td>
</tr>
</tbody>
</table>
UNIT 3

Prepared by: Ms. Shweta (Assistant Professor, BBA)
Topic Covered:- Marketing innovation products:- Strategic consideration on innovations, innovation platforms that incorporate new product development, process innovation, service innovation, service design innovation, multiple product options, portfolios and standards.

Marketing innovation product

Marketing

It is the process of communicating the value of a product or service to the customer. It includes the coordination of four elements called 4 P’s of marketing.

- product
- price
- promotion
- place

Innovation

The term innovation refers to a new way of doing something. Innovation is viewed as anything you that solve need by offering a significant advantage example:- more features, more convenient, easier to use, low cost etc. In order to generate more profit and revenue forms of various customers new products or services of find new users for older product and services.

Marketing Innovation

A new marketing method involving significant changes in product design of packaging, product placement, product promotion or pricing.

Example: - Amazon was the first establishment online bookseller. Shortly thereafter companies like barnes and noble started selling book online as well.
Process Innovation:-

Process

A process is combination of facilities, skills and technology that are used to produce products or provide services. A process consists of:-

- A set of task
- A flow of material and information that connects these task.
- Storage of material and information.

<table>
<thead>
<tr>
<th>Input</th>
<th>Production Process</th>
<th>Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property</td>
<td>Conversion</td>
<td>Salable goods and services</td>
</tr>
<tr>
<td>Machinery</td>
<td>Knowledge gathering and presentation</td>
<td>Valuable Information</td>
</tr>
<tr>
<td>Labor</td>
<td></td>
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<tr>
<td>Raw materials</td>
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<td></td>
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<tr>
<td>Consumables</td>
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</table>

Process Innovation

Process innovation means the implementation of a new all significantly improved production or delivery methods (including significant change in techniques, equipment or software). Process innovation combine adopting a process view of business function with the application of new ideas and technology. It does depend on the transfer of knowledge and information. A product or good is any tangible offering that might satisfy the need as aspiration of the customers.
Needs for process innovation

- For improving productivity
- Increase employee job satisfaction.
- Deliver enhance product or service value to the customer.
- For controlling and reducing work in process inventories.
- For reducing processing time and costs.
- Improve quality of output.
- Gaining competitive edge.

Focus

- Process innovations build an adaptive business process management system.
- Manufacturing companies.
- Service companies.

Steps in process innovation

- Proper planning.
- Creating a multi functional team of technical production and maintenance department.

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• Selecting a small group of operators and workers seeking their participation in process innovation through communication, counseling training and rewards etc.

• Pilot run of the new process.

• Observations and improvements.

• Large scale training of entire workforce.

• Commercial use of new process.

Innovation strategy

There are 8 strategy of innovation:-

1. Automation:-
   • more web information
   • improve IVR services
   • increase self services
   • reduce excess of files

2. Geographic:-
   • multiple site on campus
   • coordination with other departments

3. Process sequence:-
   • parallel processing
   • virtual linkage
   • Simultaneously entry and review.

4. Tracking:-
   • Transaction volume.

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• Document management
• Priority processing.
• Transactions type.

5. **Integration**:-
   • Coordination of activities.
   • Policy and process alignment
   • Scheduling and planning

6. **Information**:-
   • Process cycle times.
   • Peak processing
   • Customer profiles.

7. **Analysis**:-
   • Management information
   • Scheduling, staffing and process design.

8. **Knowledge**:-
   • Knowledge management
   • standard operating procedure
   • Regulation and statutory changes.

**Strategic consideration on innovation**

1. Innovation can be a novelty.
2. It can be a strategic change.

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3. It can be a competitive advantage.

- putting it all together
- Is the firm performing the right activities
- Does the strategic take advantage of present and future change
- Will be strategy profitable

**Four assessment areas are:-**

- Cost of the firm will bear of implementing the strategy.
- Benefit to the firm from a strategic perspective as well as financial.
- Strategic fit: - Firm have capabilities and competencies as well as the guiding path they follow.
- Difficulty of implementation: - Some ideas are just too difficult to create or take too long to make happen.

**Strategy consideration invention and innovation**

**The case of natural resources:-**

Strategy considerations may include a resource important country to invent as a substitute earlier than it intends to put it to use. There are also important to strategy considerations may include resources important country to invent a substitute earlier than it intend to put it to use. There are also circumstances in which it would wish to delay and inventions date even if it could obtain it and an earlier date at no extra cost.

**Innovation platform that incorporate new product development**

1. **Idea generation**: - It is a continuous systematic search for new product opportunities. It involves delineating source of new ideas and method for generating them.

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2. **Product screening**: - After the firm identify potential product, it must screen them. In product screening, poor, unsuitable or otherwise unattractive idea are weeded out from further actions.

3. **Concept testing**: - Concept testing present the consumer with the proposed product and measure attitude and intention at this early stage of development.

It is a quick and inexpensive way of measuring consumer enthusiasm. It ask potential consumer to react to a picture, written statement or oral description of a product.

4. **Business and financial analysis**: - Business and financial analysis for the retaining product concept is much more detailed than product screening. There are many factor consideration in business analysis:-

- Demand projections
- Cost projections
- Competitions
- Required investments
- Profitability

5. **Product development**: - Product development converts a product idea into a physical form and identify a basic market strategy. It involve product concept of constructions, packaging, branding, product positioning and usage testing.

6. **Test marketing**: - It involve placing a product for sales in one or more selected areas and observing it actual performance under the proposed marketing plan. The purpose evaluates the product and pretest marketing effort in a real setting prior to a full scale introduction.

7. **Commercialization**: - After testing is completed the firm is ready to introduce the product to its full target market. This is commercialization and corresponds to the introductory stage of the product life cycle.

**Service innovation**

The first concept of service innovation was discussed in miles 1923 and has been developed in the past two decades. Service innovation is a broad term that has to do with making change in the
direction organization and even the product line of a business in order to anticipate demand and keep the company in the forefront of an industry, sometimes referred to as anticipatory innovation. Service innovation is used to refer to many things:

a. **Innovation in service**: - In service products new or improve service products (commodities or public services). Often this is contrasted with technological innovation through service product can have technological element.

b. **Innovation in service processes**: - New or improved way of designing and producing services. This may include innovation in service delivery System through often his will be regarded as a service product innovation.

c. **Innovation in service form organization industries**: - Organizational innovation as well as service product and process innovation. Management of innovation process with in service organization.

**Feature of service innovation**

1. **Focus creative energy is or specific job and outcome opportunities**: Creating a well defined customer needs statement prevent marketers from wasting time innovating features of a service that customers do not care about.

2. **Identify where key problem lie in satisfied high opportunity jobs and outcomes**: Looking at all of the factor that determine the outcome (system employees, inputs, suppliers, partners and so forth) can help marketer determine why the job or outcome is not being satisfied.

3. **Systematically considered a diverse set of new service idea to satisfy the opportunities**: Drawing ideas from a diverse group of creative people will help ensure that ideas come from a variety of perspective.

4. **Build a detailed concept with service, strategy and deliver in mind**: A service blueprint identify the services, shows how it is delivered identify of customer contact and spell out the role of customer and providers. It can identify potential fail points.

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Approaches of service innovation

There are four approaches to service innovation:-

a. Core service innovation: - Core service innovation is the discovery of ways to help the customer get a core job done better with new or improved services. The focus is on improving the outcomes for customers of a core job.

b. News service innovation: - New service innovation is the discovery of new or related jobs that a current or new service which can help the customer get done.

c. Service delivery innovation: - It is the discovery of ways to improve how the benefit of a service are obtained. The focus here is an improving how a service deliver to customer by identify the outcome customer used to judge success.

d. Supplementary service innovation: - Many opportunities for innovations maybe uncovered by examining the job related to product ownership and usage of supplementary services. The focus here is on specific task in the job chain that defines a product is consumed.

Benefits:-

• True service innovation depends on shifting the focus away from the service solution and back to the customer.

• It demands that companies expand their horizon beyond existing service and service capability, focus lightly on the job customers are trying to get done.

• It helps in defining or determining the customer value.

• The key to delivering core service most efficiently or to developing new service is to recognized that service are means by which customer achieve a customer job.

Service design innovation

Service design + innovation
**Service design:** Begins with a choice of service strategy which determine the nature and focus of the service and the target market. Service design involves:

- The physical resources needed.
- The goods that are purchased or consumed by the customers.
- Explicit services.
- Implicit services.

**Key issue in service design:**

- Degree of variations in service requirement.
- Degree of customer contact and involvement.

**Innovation**

An innovation is viewed as anything new that solves need by offering a significant advantage. Example: - more feature, more convenient, easier to use, low cost etc.

**Service design innovation:**

Innovation and design were focused mainly on products. Today in an economy driven by information technology and intangible goods, the service is the product. Being able to create useful and desirable service become the fundamental skills for companies and organization in order to innovate.

The values of service design lie in the development of innovation solution. That did not exist before or in making already existing service significantly better in term of desirability and efficiency. Service design creates value because it consists of designing what people need and desire.

It involve:

- Useful
- desirable
- valuable

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findable
Efficient.

**Service design process:-**

- **Synopsis:** - Summary of the concept of the service.
- **Context:** - (time, space, technological component, regulatory context)
- **Target:** - Customer of the service and the reason why they would buy it.
- **Resources:** - Required (HR technologies, organizations, partners, financial resources).
- **Service system:** - Way in which resources are combined (key activities, key partners and stakeholders).
Tools of service design innovation:-

- customer journey mapping
- personas
- prototyping
- blueprint
- storyboards

Benefit on merits of service design innovation:-

- Understanding of the customer and the customer experience an ability to retain the customer perspective in the delivery of complex service.

- Richard organizational understanding of customer issue and opportunity through the use of design tools such as visualization, customer journey, mapping and scenario making.

- The capability of prototype, test, learn with customers to improve the design and develop more efficient solution in the long run.

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Multi product option

The multiple choice display type lets customers select a particular value from a set, such as a color from a range of colors or a material from a range of materials. Generally, this option is used to help a shopper select a particular variation of a product.
Benefit of product branding

- It creates multiple brand entities which is uniquely positioned and directed at a particular segment.
- A new product is not likely to send negative feedback and associate the brand with the burden of failure.
- A company following multi branding is better positioned to venture into unrelated product categories.
- Obtaining greater shelf space and learning title for competitive products.
- Saturating a market by filling all price and quality gap.
- Organizations who use a multiple brand strategy acquire greater market share then they could with fewer brands.

Drawback of product branding

- Creating individual brand is a costly exercise.
- The new brands do not exploit strength of a company or its existing brands.

Product concept

A product is anything that can be offered to a market for attention, acquisition use or consumption that might satisfy a want or need.
6 level of meaning

- Attributes: - good engineering, quality, performance.
- Benefits: - feeling of safety, saving etc.
- Values: - the producer value example prestige.
- Culture: - the producer culture - creativity or efficiency.
- Personality: - Projection of personality example fun or austere.
- Users: - can suggest the type of consumer who buy it.

Portfolio and standards

Portfolio is the art and science of making decisions about investment mix policy, matching investments to objectives, assets allocation for individuals and institutions and balancing risk against performance. There are many benefits:

- Higher return on project investment
- Lower organizational risk
- Balance project portfolio work load.
- Increase project throughput.
- Shorter project cycle times.

Standard

Prepared by: Ms. Shweta (Assistant Professor, BBA)
Standards should be based on the consolidated result of science, technology and experience and aimed at the promotion of optimum community benefits.

**Portfolio and standard**

A renewable portfolio and standards is a regulations that require the increased production of energy from renewable energy sources such as wind, solar, biomass and geothermal.

Integration strategy and execution via portfolio management:-

- Uncertainty and raising level of complexity make it impossible for companies to precisely determine the future.
- Continuous integration of strategy development and refinement with execution to delivery tangible results.
- Allocation of scarce resources and capital across a range of initiative to maximize value while reducing risk for the entire company.

**Strategic portfolio management**

1. **Periodic evaluation and privatization of entire innovation portfolio**: The innovation portfolio is periodically assessed by means of strategic, financial and risk related criteria. In most cases scoring methods are used for this assessment.

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2. **Strategic and priority based resources allocation**: - As the prioritization of the portfolio is supposed to show impact, resources are required to be allocated accordingly. Portfolio prioritization and resources management should be fully aligned.

3. **Release and exist of innovation initiative**:- The selection of new strategically aligned initiatives has to be carried out with due diligence particularly in the turbulent times or in face of crises this is often not the case known as doing thing for the sake of doing things.

**Innovation and standard development**

- European commission paper:- Towards an increasing contribution from standardization to innovating in Europe.

- Can be a tool to determinate new knowledge innovation and technology.

**Role of standard**: - discriminating technology
Unit 4
Topic covered:- Evaluation of innovation:- Effectiveness evaluation, integration of risks, factor influencing economic effectiveness, post implementation analysis of innovation projects, intellectual property of innovation, legal aspects of innovations.

Effective evaluation of innovation

Measuring the extent to which target are being met and detecting the factors that facilitate their realization. It was involve establishing cause effect relationship about the extent to which a particular policy or a set of policies or produces the desired outcome also called summative evaluation.

7 principle of evaluation

- We lead with purpose
- Evaluation is learning process
- Evaluation is an explicit it’s and key part of strategy development.
- We strategically choose what to evaluate
- Which choose method that maximizes region without compromising relevance
- We share our finding with appropriate audience.
- We use the data

Fast idea evaluation techniques:-

<table>
<thead>
<tr>
<th>Techniques</th>
<th>Time Required</th>
<th>When to use</th>
</tr>
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<tbody>
<tr>
<td>1. 80/20 principles</td>
<td>Second</td>
<td>Quick effectiveness/evaluation</td>
</tr>
<tr>
<td>2. Compliance</td>
<td>Minutes</td>
<td>Quick filtering of new strategy</td>
</tr>
</tbody>
</table>

Prepared by:- Ms. Shweta (Assistant Professor, BBA)
### Guiding Principles

<table>
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<tr>
<th>Step</th>
<th>Description</th>
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<tr>
<td>3.</td>
<td><strong>Evaluation of weighted criteria</strong></td>
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<tr>
<td></td>
<td>Dozens of minutes Through filtering of innovation proposal.</td>
</tr>
<tr>
<td>4.</td>
<td><strong>Perceptual positions</strong></td>
</tr>
<tr>
<td></td>
<td>Hours Through evaluation of a proposed new course of action.</td>
</tr>
</tbody>
</table>

### Integration of Risk

The potential for the integration of technology processes information, departments or organizations to have negative business impacts. Example:-

- Poorly designed data integration between two technologies lead to data problems that disrupt critical operational process.
- Two firms of similar size merge and face serious clashes of organizational culture resulting in declining employee engagement and productivity.
- Project to integrate order to billing process at a telecom company runs over budget due to underestimated complexity.

### Risk Treatment

- Avoid
- Reduce
- Transfer
- Accepted

### Related Concept

- Integration
- Project risk

*Prepared by:- Ms. Shweta (Assistant Professor, BBA)*
Integration of risk

- Companies have to integrate customer into the innovation process to improve overall innovation capability and reduced discontinue innovation market risk.
- Customer integration into NPD (new product development) process help to identify customer need better and also manager the risk better.
- Once customer needs are identified, information dissemination across the functional disciplines becomes a very important task for the organization.
- Discontinue innovation pose more risk because they involve more uncertainty.

Opportunity for integration

1. Operational risk management:-
   - underlining strategic risk
   - stakeholder often disparate
   - process often localized
   - the silos start here

2. Possible solution:- look for opportunities to standardized process. Example project contract management framework.
   - Analyze sources of risk to identify, common shared risk diverse efficient resources allocation from treatment.
   - Leverage operational improvement initiatives example innovation and quality formed.

Risk evaluation of customer integration in new product development under uncertainty

We evaluate risk of customer integration in new product development. The approach integrator set theory and group AHP together. It can manipulate subjectivity and vagueness without meet

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prior information. The rough method can discern the change of decision makes preference. The rough method can flexible reflect risk propensities of decision maker.

**Factor influence economic effectiveness of innovation**

There are two key factors available in the market: - provider and recipients.

- **Provider**
  - Internal (Effectiveness measures)
  - External (cultural constraints)

- **Recipient**
  - Internal
  - External

**Factor influence economic effectiveness**

There are many factor influence economic effectiveness:-

- Enhance product value
- Enhance product utilities
- reduced price
- reduced production cost
- Enhance demand and choice
- overcome competition

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• Enhance economic growth

• Other economic factor:-
  ✓ inflation
  ✓ depression
  ✓ unemployment
  ✓ poverty
  ✓ illiteracy

• legal factor:-
  ✓ administrative law
  ✓ criminal law
  ✓ industrial law
  ✓ contract law

• Culture factor: - institutions that affect society basic value, perceptions.

• Political factor: - laws, government agencies, pressure group etc.

• Timing: - innovation is most likely to succeed during the time of prosperity then time of economic depression.

**Post implementation analysis of innovation project**

**Post implementation review (PIR):-**

The key to a successful PIR is to recognize that the time spent on the project is just a small part of an ongoing timeline. For people and organization that will be working on similar project in the future, it make sense to learn as many lessons as possible, so that mistakes are not repeated in future project. And for organization benefiting from the project, it make sense to ensure that all
desired benefit are have been realized and to understand what additional benefit can be achieved.

**When to review:-**

- When the member of the project team remember the most.
- shortly after the project has been delivered
- When most of the problems have been ironed out.

**Tips to conduct PIR**

- **Ask for openness:** - Emphasize the importance of being open and honest in your assessment and make sure that people are not in any way punished for being open.
- **Be objective:**- Design describe what has happened in objective terms and then focus on improvement.
- **Document success:**- Document practices and procedure that lead to project success and make recommendations for applying them to similar future projects.
- **Look with hindsight:**- Pay attention to the unknown that may have increased implementation risk. Develop a way of looking out for these in future project.
- **Future focus:**- The purpose is to focus on the future not to assign blame for what happened in the past. This is not the time to focus on any one person or team.
- **Looks at both positive and negative:**- identify positive as well as negative lesson.

**Gap analysis**

- Review the project charter to evaluate how closely the project results match the original objective.
- Review the expected deliverable and ensure either that these have been delivered to an acceptable level of quality or that an acceptable substitute is in place.
- If there are any gaps, how can those are closed.

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**Project goals**

- Is deliverable functional as expected.
- Are error rate low enough and is at fit for purpose
- It is functioning well in a way that will just to future operating demand
- Are user adequate trained, skilled and supported
- routine activities are needed to support the project success
- End result compare with original project plan in term of quality, schedule and budget.

**Stakeholder**

- where the end user met
- is the project sponsor satisfied
- what are the effect on the client or end-user
- how can dissatisfaction be addressed

**Project cost and benefit**

- Final cost
- Cost to operate the solution
- Cost to support the solution
- Compare cost with the benefits

**Report finding and suggestion**

- what have you learnt from the review
- do you need corrective activity to get benefit you want
- what lesson have you learnt that need to be carried forward to future projects
How to review

1. **Define the scope of the review beforehand**: clarify your objective for the review and make your intentions clear this will better ensure that people share their experience of openly and honestly.

2. **Review key document**: Help project planning process as well as the actual benefit to the project.

3. **Considered using independent reviewer**: Some people recommend using only independent people in the review.

4. Use appropriate the data collection

5. Deliver appropriate report

6. Present recommendation

**Intellectual property of innovation**

IP refer to unique value adding creations of the human intellect that result from human ingenuity, creativity and inventiveness. It has enabled that grant of property like right over such new knowledge and creative expressions of mankind which has made it possible to harmless the commercial value of the output of human inventiveness and creativity. The different type of IP rights include trade secret, utility models, patents, trademarks, geographical indications, industrial design, layout design of integrated circuits, copyrights etc.

**Tool of IPR**

- copyright
- patent and
- trademark
- industrial design
- geographical indications

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1. **Copyright**:- copyright refer to the legal right of the owner of intellectual property. In similar term copyright is a right to copy. This means that the original creator of product and anyone they give authorization to are the only ones with the exclusive right to reduce the works. Example:-
   - Coca-Cola recipe
   - KFC coating
   Protecting can be indefinite it kept secret

2. **Patent**: - (A right to protecting and invention) a patent is a Monopoly right to prevent others from using and inventions. As I said earlier it was negative right which means that it prevents other from exploiting the invention.

3. **Trademarks**: - It is also called written TM. It is a type of intellectual property consisting of a recognizable sign, design or expressions which identify product or service of a particular source from those of other, although trademark used to identify services are usually called service marks. It can protect things like words, color, slogans, holograms hard to protect the descriptive or generic required to be successful need to show have become distinctive through use shown by sales, marketing survey etc. Renewable is every 10 years example Coca-Cola logo

4. **Industrial design**:- Industrial design is concerned with all the human aspects of machine made products and their relationship to people and the environment. The designer is responsible for these products and their impact on society and nature. Industrial designs deals with the consumer products as well as the industrial product. Registered look of the products of part of the product but not the function or ideas.

5. **Geographical indication**: - A geographical indication is a sign used to product that have a specific geographical origin and posse’s quality or a reputation that are due to that origin. In order to function as a GI, a sign must identify a product as originated is a given place. example
   - India- basmati rice
   - Portugal - port wine

*Prepared by:- Ms. Shweta (Assistant Professor, BBA)*
Switzerland- cheese

**Legal aspects of innovation:** (Law of intellectual property)

Stop other using what you have created brand, product or process without permission

- Exclusively can demand highest sales price
- Generate income by licensing.
- Attractive to investor
- Possible to arrange for IP valuation and borrowing against IP right.
Thank you