Subject Notes
Open Elective CS803 (D) Managing Innovation and Entrepreneurship
UNIT-I

Course contents:

Innovation, the basic definition and classification: The relationship of innovation and entrepreneurship, creation of competitive advantage based on innovation. Innovative models, Product, process, organizational and marketing innovation and their role in business development.

Innovation, the basic definition and classification:

Innovation: -
The word innovation is derived from Latin word "Innovare" which means to renew. Innovation is a process by which a domain, a product, or a service is renewed and brought up to date by applying new processes, introducing new techniques, or establishing successful ideas to create new value.

Importance of Innovation: -
If your organization is using innovation on its processes, doing so will save you time, money, or other resources, and give you a competitive advantage over other companies stuck in their systems.

1. Innovation helps companies grow.
2. Innovation keeps organizations relevant.
3. Innovation helps organizations differentiate themselves.

What is the difference between innovation and invention?
In its purest sense, "invention" can be defined as the creation of a product or introduction of a process for the first time. "Innovation," on the other hand, occurs if someone improves on or makes a significant contribution to an existing product, process or service.
Example:-Consider the microprocessor. Someone invented the microprocessor. But by itself, the microprocessor was nothing more than another piece on the circuit board. It's what was done with that piece the hundreds of thousands of products, processes and services that evolved from the invention of the microprocessor that required innovation.

Classification
People are under the false assumption that companies are either innovative or not. Break down innovation into two dimensions: Technology and Market, which gives us the following 4 types of innovation:

1. **Incremental Innovation:-** It utilizes your existing technology and increases value to the customer (features, design changes, etc.) within your existing market.
2. **Disruptive Innovation:-** Disruptive innovation, also known as stealth innovation, involves applying new Technology or processes to your company's current market.
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. Most of the time, the risk involved in architectural innovation is low due to the reliance and reintroduction of proven technology.
4. **Radical Innovation: -**Radical innovation is what most springs to mind when we think of innovation, as it involves the birth of new industries and the application of "revolutionary".

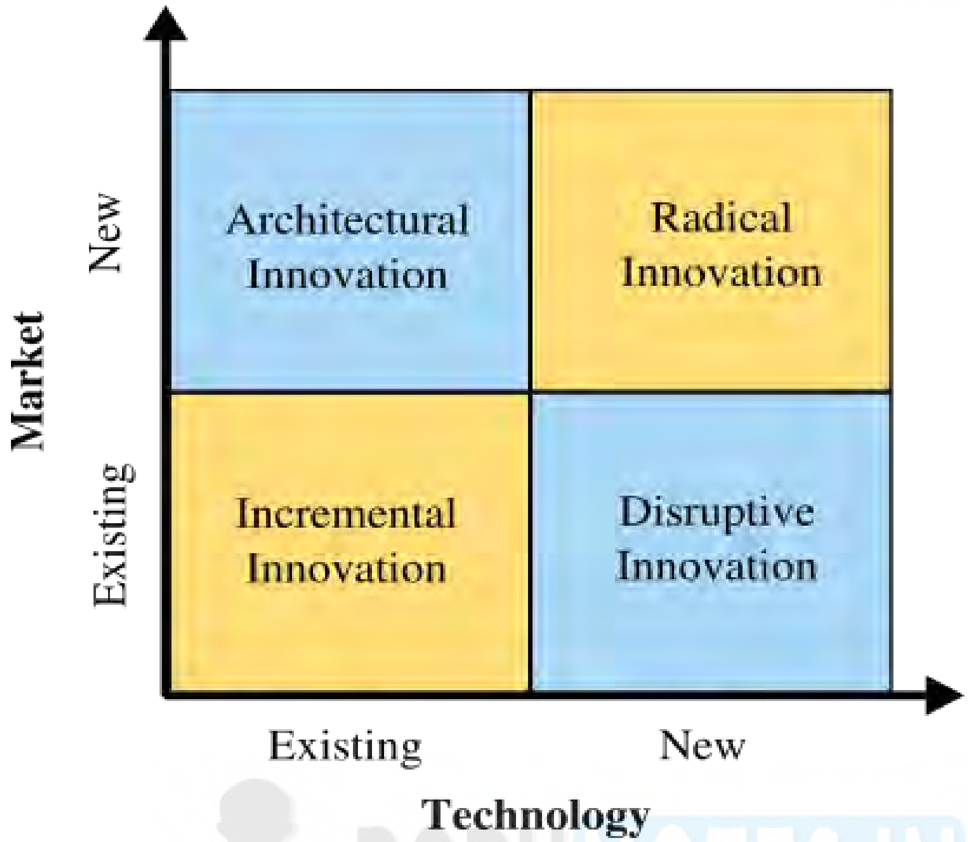

Figure 1.1: Classification of Innovation

Diffusion of Innovation Theory:-

Diffusion of Innovation **(DOI)** Theory, developed by E.M. Rogers in 1962, is one of the oldest social science theories. It originated in communication to explain how, over time, an idea or product gains momentum and diffuses through a specific population or social system. Adoption means that a person does something differently than what they had previously. The key to adoption is that the person must perceive the idea, behavior, or product as new or innovative. It is through this that diffusion is possible.

There are five established adopter categories, and while the majority of the general population tends to fall in the middle categories, it is still necessary to understand the characteristics of the target population. When promoting an innovation, there are different strategies used to appeal to the different adopter categories.

1. **Innovators** - These are people who want to be the first to try the innovation. They are venturesome and interested in new ideas. These people are very willing to take risks, and are often the first to develop new ideas. Very little, if anything, needs to be done to appeal to this population.

2. **Early Adopters** - These are people who represent opinion leaders. They enjoy leadership roles, and embrace change opportunities. They are already aware of the need to change and so are very comfortable adopting new ideas. Strategies to appeal to this population include how-to manuals and information sheets on implementation. They do not need information to convince them to change.

3. **Early Majority** - These people are rarely leaders, but they do adopt new ideas before the average person. That said, they typically need to see evidence that the innovation works before they are willing to adopt it. Strategies to appeal to this population include success stories and evidence of the innovation's effectiveness.

4. **Late Majority** - These people are skeptical of change, and will only adopt an innovation after it has been tried by the majority. Strategies to appeal to this population include information on how many other people have tried the innovation and have adopted it successfully.

5. **Laggards** - These people are bound by tradition and very conservative. They are very skeptical of change and are the hardest group to bring on board. Strategies to appeal to this population include statistics, fear appeals, and pressure from people in the other adopter groups.

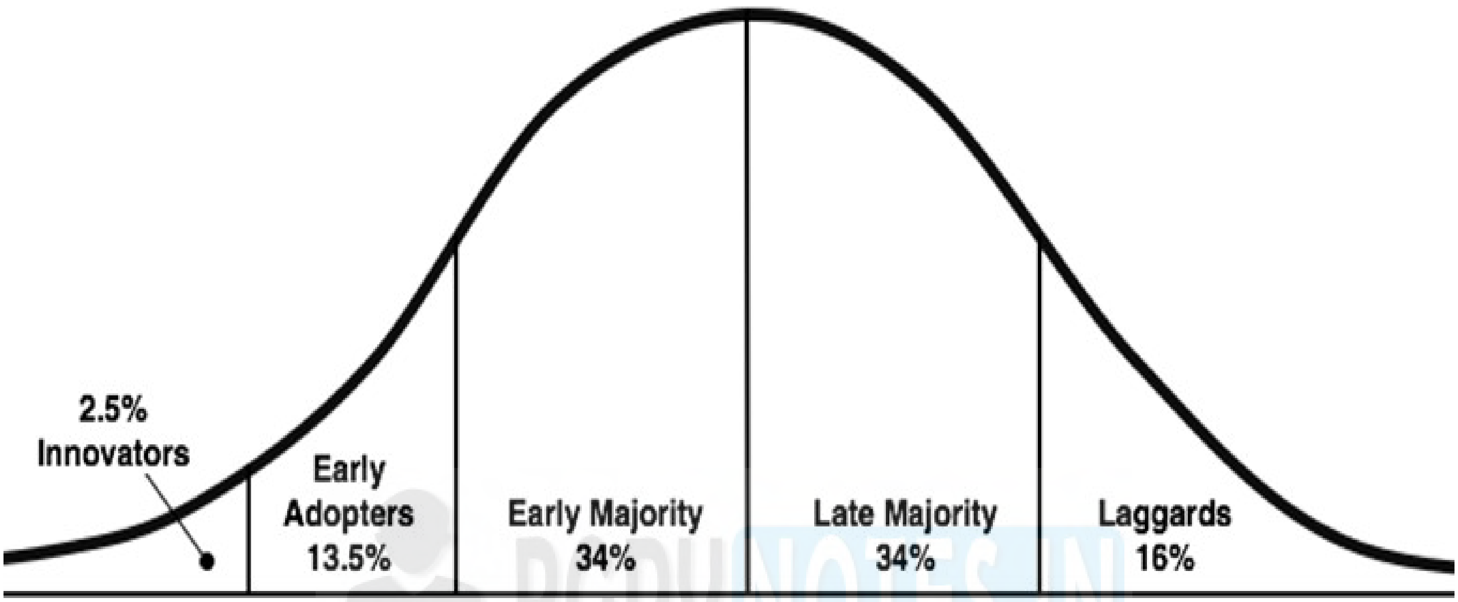

Figure 1.2: Diffusion of Innovation

Why do some companies fail with innovation?

When it comes to innovation, people tend to get over whelmed by the process of generating great ideas and do not focus enough on their realization. What they often forget is that ideas are only one small part of business innovation.

The key element of innovation is the way you implement it in your organization. You need to focus on putting your ideas into:

- Practical processes.
- Creating products.
- Services customer needs.

Companies have to be open to new opportunities and be ready to drop the rules sometimes. This also applies to the funding of innovative ideas. Annual funding cycles rarely match up with the real needs.

IKEA Successful innovation case study:-

IKEA is a Swedish company that designs and sells ready-to-assemble furniture and home accessories. It is known for its modern architectural designs, as well as its attention to continuous product development, operational details, and cost control.
It operates more than 350 stores in around 50 countries which makes it the world's largest furniture retailer. In the 2014 fiscal year, the company generated a global revenue which exceeded 31 billion USD.

IKEA is undoubtedly one of the world leaders in business innovation. It carries innovation deep within its philosophy, constantly looking for ways to improve or come up with new service propositions. The interest in its customer buying habits helps this company constantly improve its levels of innovation.

IKEA excels in 3 basic aspects of innovation:-

1. **Communication:-** IKEA communicates widely about its innovation strategy, both with employees and customers. It innovates with its core strength in mind – offering something appealing to everyone at a low price, while maintaining good quality. It saves on costs through transportation and assembly with its flat packaging.
2. **Openness to new ideas and approaches to innovation**:- IKEA partners virtually everyone in developing its innovation strategy – from top management to internal innovation experts. This is how it manages to apply innovation in everything it does, not only in product development. In fact, IKEA is very popular for its innovative ways of promotion and marketing. Popup advertising, popup lounge, storage balconies, and a moving showroom are only some of the many innovations by IKEA.
3. **Innovation management: -** IKEA has a well-defined organizational and governance structure to manage innovation. Although innovation exists within every pore of the organization, the founder Ingvar Kamp ad drives the entire innovation culture. All the changes related to innovation come directly from the top management. Furthermore, IKEA has operative key performance indicators that measure the innovation achievements and mile stones. It has a well-established value system to support innovation.

Types of Innovation: There are different types of innovation. Organizing innovation into types makes it is easier to understand how you can use multiple types of innovation simultaneously.

1. Innovations in Rapid Prototyping:-

Rapid prototyping is a cost-effective way to show a basic end product while reducing your risk on innovation projects. It's the process of quickly mocking up key components of a system or physical part and validating it with users, customers, and stakeholders helping to bring the final product to market faster. Rapid Prototyping and innovation go hand in hand and can really give a business the edge from its competitors.

For those involved in product development and engineering, rapid prototyping technology can offer an excellent deliverable for various applications. Prototyping can be used for concept generation, ergonomic testing, test fitting, functional testing, and even small-batch production.

2. Agile Innovation:-

Agile and scalable innovation is about starting small and trusting quickly, and then moving on to scaling up, if there is potential growth. Innovation and creativity are important to our operations, which is why we prioritize these aspects and give them space. During the final stage, as a end to the creative days, the business idea is presented and evaluated from a business perspective.

3. The Innovation Ecosystem:-

An innovation ecosystem is the evolving set of actors, activities, and artifacts, and the institutions and relations, including complementary and substitute relations that are important for the innovative performance of an actor or a population of actors.

Each plays a significant role in creating value in the larger ecosystem by transforming new ideas into reality through access and financial investment.

Innovation ecosystems create an active flow of information and resources for ideas to transform into reality. Through these ecosystems, we are building a process by which more innovators and entrepreneurs can develop and launch solutions to solve real-world problems, faster. This process creates expertise in new areas, helps to diversify the economy, and allows businesses to meet their customers where they are. Additionally, an innovation ecosystem provides the means to create economic stability and resource sharing.

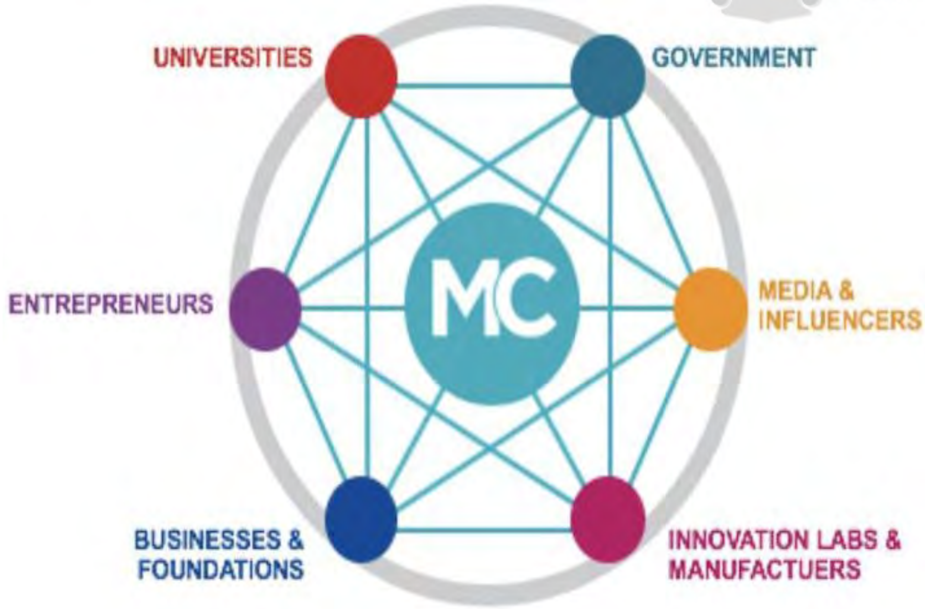

Figure 1.3: Ecosystem Innovation

4. Digital Transformation Innovation:- Digital transformation is not a single project, it involves the entire organization, focused on innovation, the customer and the user experience. In order for companies and organizations to retain their competitive edge, a high innovation speed is now required. Within digital innovation, there is great potential with many possibilities. This means that IT, which up until recently was a support function, has now become the very core of operations.
Connecting operations with technology is becoming more and more important and digital innovation often leads to the creation of entirely new business models that affect the entire operations.
Digital transformation is larger than a single digitalization project and affects the entire company. By using digital technologies, the groundwork is laid for new business processes and customer experiences that meet the changing business needs and market requirements.
This is a strategic, customer-driven change that affects all parts and departments within the company. Often, an all-encompassing organizations change is required in connection with the implementation, which begins and ends with the customer's user experience.

Levels of Innovation:-There are three ascending tiers of innovation that you can pursue. We use this tool mainly for innovation goal setting with clients.

1. **Incremental innovation - playing the existing game:-** This term refers to innovation which aims at helping the company stay competitive within existing categories, primarily using existing capabilities and exploiting existing business models. Typically, this level involves replacing old products with new ones, introducing line extensions, making improvements to current products or services, bringing some newness to the market in order to stay in the game. The output of this type of innovation brings some improvements to the category. On this level, the focus is on exploring your current knowledge and assets using your current advantages and business system.
   An example of incremental innovation would be Apple's continuous updates of its iPhone.

2. **Breakout innovation - leading the game:-** These are innovations by which companies break out from the crowd, taking the lead within an existing category. These types of innovation often require some degree of internal change within the organization. A business is a system, and for breakout innovations to happen, the system might have to be redesigned.
   Example Nike's Fly knit technology that made shoes feel like wearing socks on top of a sole. The Fly knit broughtlightershoesthatprovidebettercomfortandperformancewhilereducingshoewastebyupto 80% compared to traditional footwear manufacturing. To make it happen, Nike had to rethink its whole manufacturing line and rethink many of its structures, capabilities and processes.
3. **Breakthrough innovation - changing the game:-** Breakthrough innovations are innovations that create a significant change in the market, often making old solutions and categories obsolete over the short or long term. Breakthrough innovations require new business models and whole new ways to serve customer needs. Example Tesla has pioneered self-driving, electrically powered cars that threaten existing technologies. Uber threatens the taxi industry with its business model

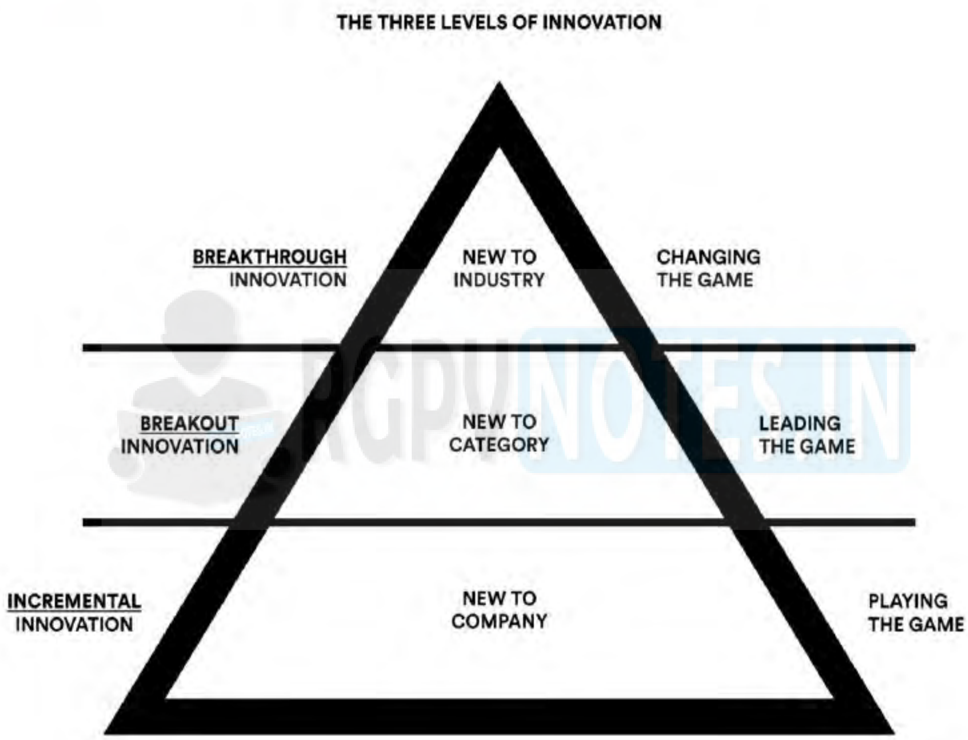

Figure 1.4: Levels of Innovation

Innovation Risk:-

Innovation risk occurs when multiple actors in the ecosystem attempt to innovate, which leads to the possibility that a new innovation developed by one company is ready at a different time than a dependent second innovation developed by another firm.

For example: - It can be disastrous for a computer hardware company to release a new product that is dependent upon new software if the company developing that software does not make it available on time.

Adoption chain risk also occurs when multiple firms in the value chain are simultaneously developing new products and services.

For example:- If one firm, releases a product that must be serviced by a different company before that other company is prepared to offer that service, the product release can fail

Entrepreneurship:-

Entrepreneurship is the ability and readiness to develop, organize and run a business enterprise, along with any of its uncertainties in order to make a profit. The most prominent example of entrepreneurship is the starting of new businesses.

The entrepreneur is defined as someone who has the ability and desire to establish, administer and succeed in a startup venture along with risk entitled to it, to make profits.

The relationship of innovation and entrepreneurship:-

The concepts of innovation and entrepreneurship are undeniably interrelated:

Innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or a different service. It is capable of being presented as a discipline, capable of being learned, capable of being practiced. Entrepreneurs need to search purposefully for the sources of innovation, the changes and their symptoms that indicate opportunities for successful innovation.

The connection of Entrepreneurship and innovation comprises of independent and corporate efforts in assembling and deploying resources in capturing the value in innovative ideas. These innovative ideas may be present for new products, services and processes. The closer the connection, it indicates the stronger indication of integration between the two towards the prosperity of the region. Those investing heavily in innovation have discovered that the entrepreneurship as the primary mechanism for the fusion of innovation into practicable domain.

Characteristics of Innovation and Entrepreneurship:-

1. **Durability:**
   Innovation: Innovation can have a short durability.
   Entrepreneurship: Entrepreneurship has a long durability which adds and improves the value.
2. **Risk Taking**:
   Innovation: In innovation, there is no major risk involved.
   Entrepreneurship: Risk-taking cannot be avoided. Risk taking is a key factor in entrepreneurship.
3. **Interest:**
   Innovation: Innovators lose interest after idea stage**.**
   Entrepreneurship: Entrepreneurs fail, rethink and work hard to make the venture more successful.
4. **Skills:**
   Innovation: Innovators have a passion for inquiry, experiment with creative thinking.
   Entrepreneurship: Entrepreneurs need skills like planning, leading, managing, and decision making.
5. **Cause:**
   Innovation: Innovation is the outcome of a new thinking**.**
   Entrepreneurship: Entrepreneurship is the process of making the innovation to a business opportunity.

Entrepreneurship Development Process:-

This entrepreneur development process helps new firms or ventures get better in achieving their goals, improve business and the nation's economy. Another essential factor of this process is to improve the capacity to manage, develop, and build a business enterprise keeping in mind the risks related to it.

In simple words, the entrepreneurship development process is about supporting entrepreneurs to advance their skills with the help of training and coaching classes. It encourages them to make better judgments and take a sensible decision for all business activities.

Process of Entrepreneurship Development:-

The below-mentioned steps will illustrate how to build an effective entrepreneurship development program for an entrepreneur to organize and launch the new ventures.

- **Discover –** Any new process begins with fresh ideas and objectives, wherein the entrepreneur recognizes and analyzes business possibilities. The analyzing of opportunities is a risky task, and an entrepreneur looks out for inputs from other persons, including channel partners, employees, technical people, consumers, etc. to reach an ideal business opportunity.
- **Evaluation –** The evaluation of an opportunity can be done by asking several questions to oneself. For instance, questions like whether it is worth taking a chance and investing in the idea, will it attract the consumer, what are the competitive advantages and the risk linked with it are asked. A reasonable and sensible entrepreneur will also analyze his skills and whether it matches his entrepreneurial objectives or not.
- **Developing a plan –** After the identification of an opportunity, an entrepreneur has to build a complete business plan. It is the most important step for new business as it sets a standard and the assessment criteria and sees if a company is working towards the set goals.
- **Resources –** The next step in the process of entrepreneurial development is resourcing. Here, the entrepreneur recognizes the source of finance and from where the human resource can be managed. In this step, the entrepreneur also tries to find investors for his new business.
- **Managing the company –** After the hiring process and funds are raised now it's time to start the operation to accomplish the desired goals. All the entrepreneur will decide on the management structure that will be assigned to resolve the operational problems whenever it occurs.
- **Harvesting –** The last step in this process is harvesting, where an entrepreneur determines the future growth and development of the business. Here, real-time development is compared with the projected growth, and then the business security or the extension is initiated accordingly.

Innovative Models:-

An Innovation model provides a detailed framework to identify, advance, and implement ideas. Thus, focusing on adopting methods to create the needed value

There are majorly 4 types:

1. Product Innovation
2. Process Innovation
3. Organizational Innovation
4. Marketing Innovation

1. Product Innovation:-

Product innovation is defined as: the development of new products, changes in design of established products, or use of new materials or components in the manufacture of established products.
Example is the first electric vehicles introduced in the car's market were also an innovation, and new batteries with longer ranges that keep coming out.

2. Process Innovation:-

A process innovation is the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software.

One of the most famous and groundbreaking examples of process innovation is Henry Ford's invention of the world's first moving assembly line. This process changes not only simplified vehicle assembly but shortened the time necessary to produce a single vehicle from 12 hours to 90 minutes.

3. Organizational Innovation:-

Implementation of a new organizational method in the firm's business practices, in the organization of its workplace or in its external relations, to improve the use of knowledge, workflows efficiency or quality of goods or services.
If your organization is using innovation on its processes, it's because doing so will save you time, money, or other resources, and give you a competitive advantage over other companies stuck in their systems
Example is McDonalds who has created its own test kitchens and so-called "noodle teams" in which employees at all levels of the hierarchy develop new ideas and try them out. The hierarchies are flat. Anyone can contact anyone, discuss new ideas with anyone.

4. Marketing Innovation:-

A marketing innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing.
A marketing innovation is the implementation of a new marketing method (marketing idea or strategy) that differs significantly from the previous marketing method used by the enterprise and that has not been previously used by the enterprise.
Twitter interaction of Nike with customer is a great example of positive company-customer interaction. If you scroll through the tweets and replies, you'll see that it's super quick to respond to people and always respectful and helpful.

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