

# Lecture 4: Market Adoption & Technology Diffusion

**CS6215 / IT 6215**

## **MANAGEMENT OF TECHNOLOGY AND INNOVATION (MTI)**



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# **MARKET ADOPTION & TECHNOLOGY DIFFUSSION**

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- Illustrate how the diffusion of innovation theory influences consumer adoption of products and services
- Identify and discuss the technical, financial and organizational obstacles that have to be overcome to bring an invention to the market;
- Explain innovation and diffusion as ongoing processes with a range of factors affecting success at each stage

- **Illustrate how the diffusion of innovation theory influences consumer adoption of products and services**



# Diffusion of Innovation Theory

- The Diffusion of Innovation Theory, developed by sociologist Everett Rogers, describes the process by which new ideas, products, or services spread within a population.
- It highlights the factors that influence adoption and categorizes adopters based on their readiness to embrace innovation.

# Key Concepts of the Diffusion of Innovation Theory

## **Diffusion Channels:**

Innovations spread through communication channels, such as:

Interpersonal Communication: Word of mouth, social networks.

Mass Media: Advertisements, social media, and news.

# Factors Influencing Adoption:

Several factors affect whether and how quickly an innovation is adopted:

- **Relative Advantage:** The degree to which the innovation is perceived as better than existing solutions.
- **Compatibility:** How consistent the innovation is with existing values, needs, and experiences.
- **Complexity:** The perceived difficulty of understanding and using the innovation.
- **Trialability:** The extent to which the innovation can be tested on a limited basis.
- **Observability:** The visibility of the innovation's benefits to others.

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# Adoption Process:

The decision-making process through which an individual or organization decides to accept or reject an innovation. It involves five stages:

- i. **Knowledge:** Awareness of the innovation's existence.
- ii. **Persuasion:** Developing an attitude toward the innovation.
- iii. **Decision:** Choosing to adopt or reject the innovation.
- iv. **Implementation:** Putting the innovation into use.
- v. **Confirmation:** Evaluating the decision and continuing or discontinuing its use



# Challenges in Adoption

1. **Resistance to Change:** Fear of the unknown or satisfaction with current solutions.
2. **Cost:** High cost of the product can hinder how people can afford the product or innovation and high market initial investment can hinder adoption.
3. **Access:** Limited availability of innovations in certain regions or demographics.
4. **Misinformation:** Misunderstanding the innovation's benefits or risks.

By understanding the Diffusion of Innovation Theory, businesses, educators, policymakers, and innovators can better strategize to encourage the successful adoption of their innovations.

- Identify and discuss the technical, financial and organizational obstacles that have to be overcome to bring an invention to the market;

## Technical Obstacles:

- **Research and Development (R&D):** Developing the invention and ensuring it meets the required specifications and standards.
- **Prototyping:** Creating a working prototype to test and refine the invention.
- **Testing and Validation:** Ensuring the invention meets all necessary safety and performance standards.

## Financial Obstacles:

- **Funding:** Securing the necessary funding to develop and bring the invention to market. Lack of funding can lead to many project not to continue.
- **Cost Management:** Managing the costs associated with R&D, prototyping, testing, and commercialization.

# Organizational Obstacles:

- **Team Building:** Assembling a team with the necessary skills and expertise to develop and commercialize the invention.
- **Regulatory Compliance:** Ensuring the invention complies with all relevant regulations and standards.
- **Marketing and Sales:** Developing a marketing and sales strategy to promote and sell the invention.

Overall, bringing an invention to the market requires overcoming a range of technical, financial, and organizational obstacles. By addressing these challenges, inventors can successfully bring their inventions to market and realize their potential.



- Explain innovation and diffusion as ongoing processes with a range of factors affecting success at each stage

## Concept...

- Innovation and diffusion are two key processes in the field of technology and product development.

**Innovation** refers to the process of creating and introducing a new product, service, or idea to the market. Diffusion, on the other hand, refers to the process of spreading and adopting an innovation within a population or market.

- Both innovation and diffusion are ongoing processes that involve a range of factors that can affect their success at each stage. Some of these factors include:

# Factor affecting innovation and diffusion in ongoing processes

- 1. Technological factors:** These include the availability of resources, the level of technological knowledge and expertise, and the ability to develop and produce the innovation.
- 2. Market factors:** These include the size and demographics of the target market, the level of competition, and the demand for the innovation.
- 3. Social factors:** These include the cultural and social norms of the target market, the level of trust and acceptance of the innovation, and the influence of opinion leaders and social networks.
- 4. Economic factors:** These include the cost of development and production, the potential for profitability, and the availability of funding and investment.



**THANK YOU**  
for your  
**ATTENTION!**