

9.7: Information-Systems Users – Types of Users

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Besides the people who work to create, administer, and manage information systems, one more significant group of people: the users of information systems. This group represents a considerable percentage of the people involved. If the user cannot successfully learn and use an information system, the system is doomed to failure.

One tool used to understand how users will adopt a new technology comes from a 1962 study by Everett Rogers. Have a listen to this short video (3:33 min) that explains the Diffusion of Innovation theory.



In his book, Diffusion of Innovation, Rogers explains how new ideas and technology spread via communication channels over time. Innovations are initially perceived as uncertain and even risky. To overcome this uncertainty, most people seek out others like themselves who have already adopted the new idea or technology. Thus, the diffusion process consists of successive groups of consumers adopting new technology(shown in blue in the graph below); the adoption rate will start slowly and then dramatically increase once adoption reaches a certain point - its market share(yellow curve) reaches saturation level and becomes self-sustaining.

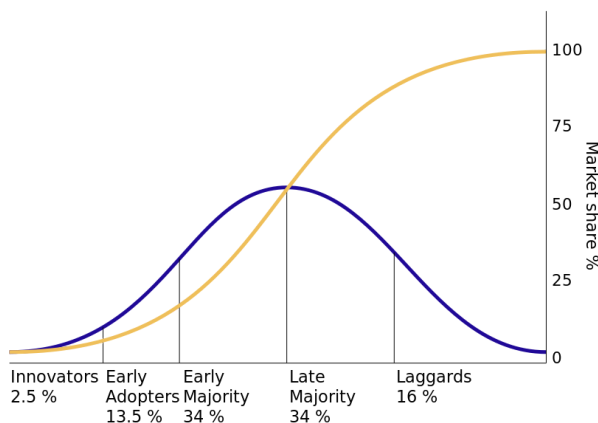


Figure 9.4: [Technology adoption user types](#) Image by [Rogers Everett](#), licensed under [Public domain, via Wikimedia Commons](#)

Rogers identified five (sections of the blue curve) specific types of technology adopters:

- **Innovators:** Innovators are the first individuals to adopt new technology. Innovators are willing to take risks, are the youngest in age, have the highest social class, have great financial liquidity, are very social, and have the closest contact with scientific sources and interaction with other innovators. Risk tolerance has them adopting technologies that may ultimately fail. Financial resources help absorb these failures (Rogers 1962 5th ed, p. 282).
- **Early adopters:** The early adopters adopt an innovation after a technology has been introduced and proven. These individuals have the highest degree of opinion leadership among the other adopter categories, which means that they can influence the largest majority's opinions. They are typically younger in age, have higher social status, more financial liquidity, more advanced education, and are more socially aware than later adopters. These people are more discrete in adoption choices than innovators and realize the judicious choice of adoption will help them maintain a central communication position (Rogers 1962 5th ed, p. 283).
- **Early majority:** Individuals in this category adopt an innovation after a varying degree of time. This time of adoption is significantly longer than the innovators and early adopters. This group tends to be slower in the adoption process, has above average social status, has contact with early adopters, and seldom holds opinion leadership positions in a system (Rogers 1962 5th ed, p. 283).
- **Late majority:** The late majority will adopt an innovation after the average member of the society. These individuals approach an innovation with a high degree of skepticism, have below-average social status, very little financial liquidity, contact others in the late majority and the early majority, and show very little opinion leadership.
- **Laggards:** Individuals in this category are the last to adopt an innovation. Unlike those in the previous categories, individuals in this category show no opinion leadership. These individuals typically have an aversion to change agents and tend to be advanced in age. Laggards typically tend to be focused on “traditions,” are likely to have the lowest social status and the lowest financial liquidity, be the oldest of all other adopters, and be only in contact with family and close friends.

Organizations should apply this model when managing change, identifying innovators and early adopters first when rolling out new systems, then leveraging their experience for others. Change management techniques can facilitate this process.

Sidebar: Real life Example of Diffusion of Innovation Theory

Adoption of new technology within a college district is a great example of diffusion theory. The technology coordinators attend a conference to learn about the potential benefits of the new technology and its features in enhancing student engagement and understanding. They conduct research and consult with experts and explore case studies of other colleges (innovators) that have successfully implemented this technology. They conduct a pilot program with select faculty (early adopters) who then conduct demonstrations and workshops for faculty through which teaching methods and curriculum compatibility are evaluated. Factors such as ease of integration, cost, potential impact on student achievement are considered. The college invests in the new technology and faculty (large majority) start incorporating this new technology into their curriculum. Student actively engage and faculty receive support and guidance from the early adopters and technology coordinators. After several semesters of using this new technology, data shows improvement in student motivation, participation and understanding. The positive outcomes reinforce the decision to continue using this new technology and their success stories are shared with other colleges and districts thus diffusing this technology to the broader education communities.

Knowledge of the diffusion theory and the five types of technology users help provide additional insight into how to implement new information systems within an organization. For example, when rolling out a new system, IT may want to identify the innovators and early adopters within the organization and work with them first, then leverage their adoption to drive the implementation. The adoption model developed by Rogers provides valuable perspective into how users accept new information systems. Understanding these adoption patterns can inform strategies for change management and user involvement.

This process of diffusion of new ideas and technology can usually take months or years. But there are exceptions: the use of the internet in the 1990s and mobile devices in recent years to communicate, interact socially, access news and entertainment have spread more rapidly than possibly any other innovation in humankind's history.

9.7.2: Perspectives from Non-IT Departments

While IT professionals manage technology systems, other departments in an organization have important perspectives that should be incorporated. Groups like Sales, Marketing, Finance, and Operations are focused on business objectives and interacting with customers and partners. Their input on information systems requirements is crucial to ensure the technology solutions support the business goals. IT should foster partnerships across departments. Inputs from groups like Marketing and Operations will identify innovators and early adopters who can pilot and endorse new systems to support wider organizational adoption per Rogers' model.

9.7.3: References

Rogers, E. M. (1962). *Diffusion of innovations*. New York: Free Press

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