

1. Indian Railways Case Study:

Ans:

Passenger Reservation System (PRS):

- Reserved travel by Indian railways is facilitated by the Passenger Reservation System (PRS).
- PRS provides reservation services to nearly 1.5 to 2.2 million passengers a day on over 2500 trains running throughout the country.
- The PRS application CONCERT (Country-wide Network Of Computerized Enhanced Reservation And Ticketing) is the world's largest online reservation application, developed and maintained by CRIS.
- The system currently operates from 5 data centers (Secunderabad, New Delhi, Kolkata, Mumbai, Chennai).
- The server clusters are connected together by a core network that enables universal terminals across country, through which the travelling public can reserve a berth on any train, between any pair of station for any date and class.

Goals:

- Transparent modern technology based reserved ticket booking system
- Analytics and AI based fraud detection.
- Efficient utilization of available assets and services
- Improve ticket distribution efficiency and earnings of Indian railways

Challenges

- Reservation system for world's second largest populous country
- Anywhere to anywhere ticket booking across the country.
- Multiple delivery channels - counters, e-ticketing, etc
- Hassle free reservation services during peak hours

Freight Operations Information System (FOIS):

- FOIS began as an application to track and monitor the movement of wagons, loco motives and unit trains. Now it is a complete management module for freight trains handling the billing and revenue collections as well. It has played a major role in the improved wagon productivity on Indian railway and the objective is to use the information to further improve productivity, customer services and thus meet the needs of a rapidly growing economy.
- It is an on-line system which provides instant information about the movement of consignment to freight customers. Authorized users of this system such as cym, tncc and DY. Chcs and cgss operate through ARC and enquiry terminals. Network of this system is operated through OFC digital channel and terrestrial and VSAT channels leased by BSNL. It is developed through two modules.
- Apart from monitoring the movement of freight trains, the system calculates freight and other charge based on complex rules of business and generates the railway receipt, the bill payable by the shipper. Today electronic collection of freight has reached an astounding figure of rs 100crores (US\$ 20 million) per day. The system has the capability of tracking and tracing consignments and publication of information to the end users. To bring in greater transparency, indian railway have begun automatic allotment of rakes to customers for select commodities based on priority rules, operational restrictions, an commercial agreement. Services are provided to major customers by integrating FOIS with their legacy systems.

2. 3 Levels of Decision Making

Ans:

Strategic decisions:

Strategic decisions are major choices of actions and influence whole or a major part of business enterprise. They contribute directly to the achievement of common goals of the enterprise. They have long-term implications on the business enterprise.

Type of Employees: A board of directors, Executives

Type of Decision: Unstructured

Tactical decisions:

These decisions relate to the implementation of strategic decisions. They are directed towards developing divisional plans, structuring workflows, establishing distribution channels, acquisition of resources such as men, materials and money. These decisions are taken at the middle level of management.

Type of Employees: Executives and Officers

Type of Decision: Semi-structured

Operational decisions:

These decisions relate to day-to-day operations of the enterprise. They have a short-term horizon as they are taken repetitively. These decisions are based on facts regarding the events and do not require much of business judgement. Operational decisions are taken at lower levels of management. As the information is needed for helping the manager to take rational, well-informed decisions, information systems need to focus on the process of managerial decision making.

Type of Employees: Employees or Workers

Type of Decision: Structured

3. Ethical Frameworks

Ans:

- The utilitarian approach states that an ethical action is the one that provides the most good or does the least harm for all affected parties—customers, employees, shareholders, the community, and the physical environment
- The rights approach maintains that an ethical action is the one that best protects and respects the moral rights of the affected parties. Moral rights can include the rights to make one's own choices about what kind of life to lead, to be told the truth, not to be injured, and to enjoy a degree of privacy.
- The fairness approach posits that ethical actions treat all human beings equally, or, if unequally, then fairly, based on some defensible standard.
- The common good approach highlights the interlocking relationships that underlie all societies. It emphasizes the common conditions that are important to the welfare of everyone. These conditions can include a system of laws, effective police and fire departments, healthcare, a public educational system, and even public recreation areas.

- A general framework for ethics:
 - Recognize an ethical issue:
 - Could this decision or situation damage someone or some group?
 - Does this decision involve a choice between a good and a bad alternative?
 - Does this issue involve more than simply legal considerations? If so, then in what way?
 - Get the facts:
 - What are the relevant facts of the situation?
 - Do I have sufficient information to make a decision?
 - Which individuals and/or groups have an important stake in the outcome?
 - Have I consulted all relevant persons and groups?
 - Evaluate alternative actions:
 - Which option will produce the most good and do the least harm? (the utilitarian approach)
 - Which option best respects the rights of all stakeholders? (the rights approach)
 - Which option treats people equally or proportionately? (the fairness approach)
 - Which option best serves the community as a whole, and not just some members? (the common good approach)
 - Make a decision and test it:
 - Considering all the approaches, which option best addresses the situation?
 - Act and reflect on the outcome of your decision:
 - How can I implement my decision with the greatest care and attention to the concerns of all stakeholders?
 - How did my decision turn out, and what did I learn from this specific situation?

Example:

- Consider one social network, Pinterest. Pinterest is a small business with only about 20 employees. It is primarily a technology company that provides infrastructure and software that enable users to “pin” things they like. Realizing that many users would likely try to “pin” pictures or ideas that were not their own,
- Pinterest pre-empted the problem by incorporating into their user agreement a clause specifying that users could pin only pictures or ideas that they created themselves.
- Many Pinterest users do not adhere to the terms of the user agreement. Rather, they pin ideas that are not theirs. What happens in these cases? The simple answer is that the company will revoke access if it catches users downloading copyrighted third-party material.

4. Potters model for Competitiveness

Ans:

1. The threat of entry of new competitors. The threat that new competitors will enter your market is high when entry is easy and low when there are significant barriers to entry

- An entry barrier is a product or service feature that customers have learned to expect from organizations in a certain industry. A competing organization must offer this feature in order to survive in the marketplace
- For most firms, the Web increases the threat that new competitors will enter the market because it sharply reduces traditional barriers to entry, such as the need for a sales force or a physical storefront.
- In addition, the geographical reach of the Web enables distant competitors to compete more directly with an existing firm.
- In some cases, the Web increases barriers to entry

2. The bargaining power of suppliers. Supplier power is high when buyers have few choices from whom to buy and low when buyers have many choices. Therefore, organizations would rather have more potential suppliers so that they will be in a stronger position to negotiate price, quality, and delivery terms.

- The Internet's impact on suppliers is mixed. On the one hand, it enables buyers to find alternative suppliers and to compare prices more easily, thereby reducing the supplier's bargaining power.

3. The bargaining power of customers (buyers). Buyer power is high when buyers have many choices from whom to buy and low when buyers have few choices.

- In contrast, loyalty programs reduce buyer power. As their name suggests, loyalty programs reward customers based on the amount of business they conduct with a particular organization.

4. The threat of substitute products or services. If there are many alternatives to an organization's products or services, then the threat of substitutes is high. If there are few alternatives, then the threat is low. Today, new technologies create substitute products very rapidly.

- Even when there are many substitutes for their products, however, companies can create a competitive advantage by increasing switching costs. Switching costs are the costs, in money and time, imposed by a decision to buy elsewhere.

5. The rivalry among existing firms in the industry. The threat from rivalry is high when there is intense competition among many firms in an industry. The threat is low when the competition is among fewer firms and is not as intense.

- In the past, proprietary information systems—systems that belong exclusively to a single organization—have provided strategic advantage to firms in highly competitive industries.
- In simple terms, when I see my competitor's new system online, I will rapidly match its features to remain competitive. The result is fewer differences among competitors, which leads to more intense competition in an industry.
- Consumers will no longer need brokers to give them information that they can obtain themselves, virtually for free.

5. Types of Business Pressures:

Ans:

The business environment is the combination of social, legal, economic, physical, and political factors in which businesses conduct their operations. Significant changes in any of these factors are likely to create business pressures on organizations

1. **Market Pressures.** Market pressures are generated by the global economy, intense competition, the changing nature of the workforce, and powerful customers.
 - a. **Globalization.** Globalization is the integration and interdependence of economic, social, cultural, and ecological facets of life, made possible by rapid advances in information technology.
 - b. **The Changing Nature of the Workforce.** The workforce, particularly in developed countries, is becoming more diversified. Increasing numbers of women, single parents, minorities, and persons with disabilities are now employed in all types of positions.
 - c. **Powerful Customers.** Consumer sophistication and expectations increase as customers become more knowledgeable about the products and services they acquire.
2. **Technology Pressures.** The second category of business pressures consists of those pressures related to technology. Two major technology-related pressures are technological innovation and information overload.
 - a. **Technological Innovation and Obsolescence:** Few and improved technologies rapidly create or support substitutes for products, alternative service options, and superb quality. As a result, today's state-of-the-art products may be obsolete tomorrow. For example, how fast are new versions of your smartphone being released? How quickly are electronic versions of books, magazines, and newspapers replacing traditional hard copy versions? These changes force businesses to keep up with consumer demands.
 - b. **Information Overload.** The amount of information available on the Internet doubles approximately every year, and much of it is free. The Internet and other telecommunications networks are bringing a flood of information to managers. To make decisions effectively and efficiently, managers must be able to access, navigate, and utilize these vast stores of data, information, and knowledge.
3. **Societal/Political/Legal Pressures.** The third category of business pressures includes social responsibility, government regulation/deregulation, spending for social programs, spending to protect against terrorism, and ethics.
 - a. **Social Responsibility.** Social issues that affect businesses and individuals range from the state of the physical environment to company and individual philanthropy, to education. One critical social problem is the state of the physical environment. A growing such IT initiative, is called green IT. IT is instrumental in organizational efforts to "go green" in three areas.
 - b. **Social problems all over the world may be addressed through corporate and individual philanthropy**
 - c. **In some cases, questions arise as to what percentage of contributions actually goes to the intended causes and recipients and what percentage goes to the charity's overhead. Another problem that concerns contributors is that they often exert little influence over the selection of projects their contributions will support. The Internet can help address these concerns and facilitate generosity and connection.**

6. Managing Information System in a modern organization is a difficult task, why?

Ans:

Information systems facilitate communication and coordination among different functional areas, and allow easy exchange of, and access to, data across processes. Specifically, ISs play a vital role in three areas:

Executing the process

- An IS helps organizations execute processes efficiently and effectively.
- ISs are typically embedded into the processes, and they play a critical role in executing the processes.
- For example, In the procurement process, the IS generates the purchase requisitions and then informs the purchasing department that action on these requisitions is needed.

Capturing and storing process data

- ISs capture and store data, commonly referred to as process data or transaction data.
- Some of these data are generated and automatically captured by the IS.
- Other data are generated outside the IS and must be entered into it.
- For example, when a customer order is received by mail or over the phone, the person taking the order must enter data such as the customer's name, what the customer ordered, and how much he or she ordered. Significantly, when a customer order is received via the firm's Web site, then all customer details are captured by the IS.

Monitoring process performance

- A third contribution of IS is to help monitor the state of the various business processes. That is, the IS indicates how well a process is executing. The IS performs this role by evaluating information about a process.
- This information can be created either at the instance level (i.e., a specific task or activity) or at the process level (i.e., the process as a whole).
- For example, a company might be interested in the status of a particular customer order.
 - Where is the order within the fulfilment process?
 - Was the complete order shipped? If so, when? If not, then when can we expect it to be shipped?

7. FAIS case study.

Ans:

- Functional areas of organisations are defined according to the type and nature of work that is involved in a department. The main functional areas of each and every organisation are listed below:
- Human Resource: Human resource management is one of the most important yet often underestimated aspects in the organizational operation. It basically is the operating system of the whole organization that makes sure that it run smoothly, coordination and cooperation takes place regularly and finally makes sure that everyone within the organization is satisfied with the working conditions. Superficially, it is supposed to do day to day tasks like recruitment, training payroll processing etc. but actually the scope for HRM is much more than that. Especially in the highly competitive markets of today, they can play a pivotal role in building a highly performing and competitive firm by nurturing and enhancing the skills of the employees and ensuring cooperation. This is a functional area where various personnel who administer and handle the drug are interviewed and selected.
- Financial Area: This functional area analyses various financial aspects of the employees and keeps track of the accounts receivable and payables. The financial advisors must plan in advance regarding the future financial objectives of the company. In order to achieve the desire profits. The finance department need to maintain the financial records in order to show these accounts while paying the tax. And another key function of finance department is to calculate the salary and payroll system which is the main function of finance department. Accounts are maintained for different vendors for which internal auditors and accountants are employed.
- Marketing and Sales: In this competitive world the organisation cannot survive without marketing the products. Organisation is investing a huge amount of money in order to market the products through different channels like television, radio and other medias. So that people came to know about the products and will buy the company's products. Nowadays the competition is really high; the companies are forced to give discounts and other promotional activities like holidays and gifts to push their sales. To conclude with, marketing is also a key part in achieving company's objectives.
- Production: Production is one of the main functional areas of a business organisation. All the products of a business organisation are developing under this functional area. The staffs under this functional area should enquire all the products should develop at the right time and the products have good quality. The organisation should buy good quality raw materials. These raw materials will be stored near to production area. Nowadays most of the productions are automatically with the help of robots and other machines. The operator need to check only the production line is correct or not. Production is also involves preparing items for despatch. The items should packed cleanly and very attractively. In this stage, the bar code system can be incorporated which should specify its batch number, product code/name, packing, lot number, date of manufacture, chemical combination, type of med's, route of administration, dosage....etc
- Customer Service: Customer service is the one of the most important functional area of organisation. This includes functions like answering the client's enquiries about the product and services, provide well information about the customer's need, solving client's problems, Provide service after sales which include replace, repair etc, dealing with the problems of customer, analysis the problems of customer and store these problems etc.

8. Enterprise Resource Platform (ERP)

Ans:

- Enterprise Resource Planning is software that integrates all departments and functions across a business into a single system while still serving each department's specific needs. It is designed to help businesses make smarter decisions, serve their customers better, and work more efficiently overall by automating processes and workflows.
- ERP software is important because it can facilitate the following:
 - Increase effective communication between departments
 - Allow employees to access information they need from anywhere
 - Streamline processes across various department
 - Provide a bird's eye view of a business' overall operations
 - Better manage a company's finances
- ERP can be beneficial from a marketing standpoint because it helps you
 - see how your business is doing as a whole
 - reveal areas of opportunity where improvements can be made.
 - provides valuable data and analytics that will help you understand your customers better
 - will give you insight that you can use to tailor your marketing strategy
 - It also makes it easier to communicate effectively with your customers and provide better customer service.