

DEPARTMENT OF INFORMATION TECHNOLOGY
23PM6106 – Digital Transformation of Business and Services
UNIT I- INTRODUCTION
(100% THEORY)

PART-B

7. A traditional retail company is losing customers to e-commerce competitors and plans to adopt business process transformation, digitalized products/services, and digital customer engagement tools.

Based on the case:

- a) Identify the major challenges faced by the company.**
- b) How can business process transformation be applied to overcome these challenges?**
- c) How can product and service digitalization improve customer satisfaction?**
- d) How can digital technologies enhance customer engagement and experience?**

To remain competitive in an increasingly digital marketplace, traditional retailers must evolve from a purely physical presence to a "Phygital" model—blending the physical and digital worlds.

Here is a detailed analysis based on the case study:

a) Key Challenges Faced by the Traditional Retailer



Fig 7.a) Challenges in retail operations

Traditional retail models are currently struggling against the structural advantages of e-commerce giants.

Information Asymmetry: Customers often have more information (price comparisons, reviews) on their phones than the sales associates have in-store, leading to "showrooming" where customers browse in-store but buy online.

Inventory Inefficiency: Without real-time tracking, retailers suffer from either overstocking (leading to markdowns) or stockouts (leading to lost sales).

High Fixed Costs: Maintaining physical storefronts involves high rent and labor costs, which are difficult to sustain when footfall decreases.

Lack of Data-Driven Insights: Unlike e-commerce platforms that track every click, traditional retailers often lack data on customer behavior inside the store, making it hard to optimize layouts or promotions.

b) Applying Business Process Transformation

Business Process Transformation (BPT) involves rethinking end-to-end workflows to remove bottlenecks and increase agility.

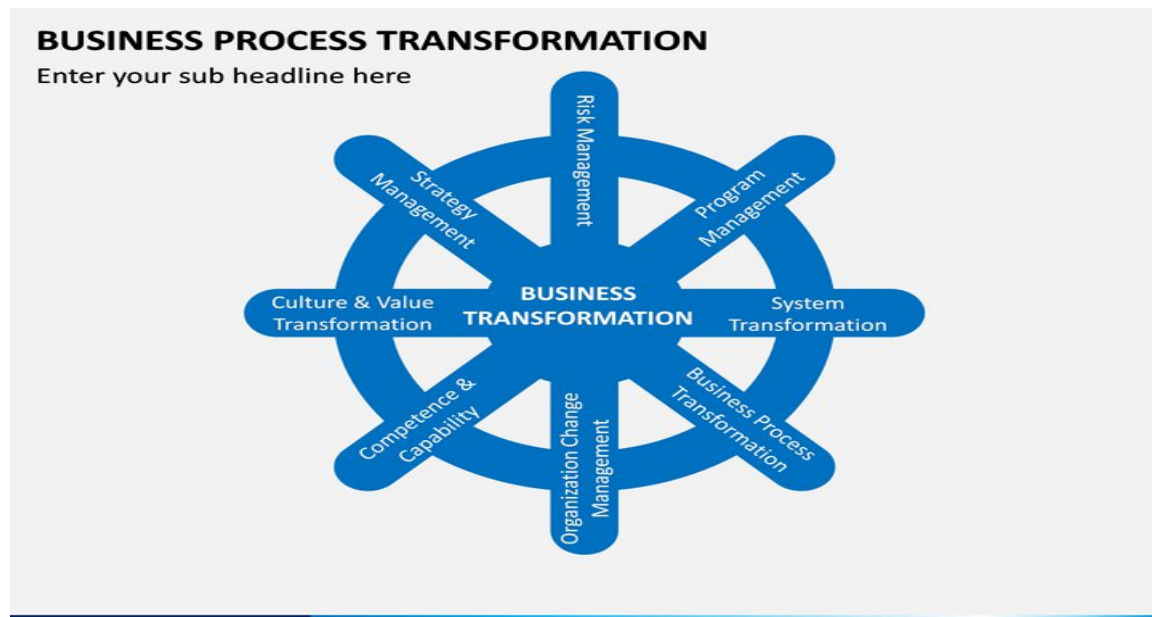


Fig 7.b) Business Process Transformation

Agile Supply Chain: Transforming the procurement process from "push-based" (stocking what you think will sell) to "pull-based" (using real-time sales data to trigger restocking).

Automated Inventory Management: Implementing RFID (Radio Frequency Identification) tags to track items instantly from the warehouse to the shelf, reducing manual audit time and errors.

Unified Commerce: Integrating the POS (Point of Sale) system with the online webstore so that a customer can buy online and return in-store seamlessly.

c) Improving Satisfaction through Product & Service Digitalization

Digitalization adds value to the physical product, making the purchase more "useful" and "interactive" for the consumer.

Extended Product Value: Digitalizing the service aspect by providing QR-coded video tutorials, digital warranties, and "smart" manuals accessible via a smartphone.

Mass Customization: Allowing customers to use in-store digital kiosks to "build" or customize their products (e.g., choosing colors or features not available on the shelf) which are then shipped to their home.

Frictionless Checkout: Digitalizing the payment service through "Scan & Go" technologies or mobile wallets, eliminating the biggest pain point in retail: the checkout line.

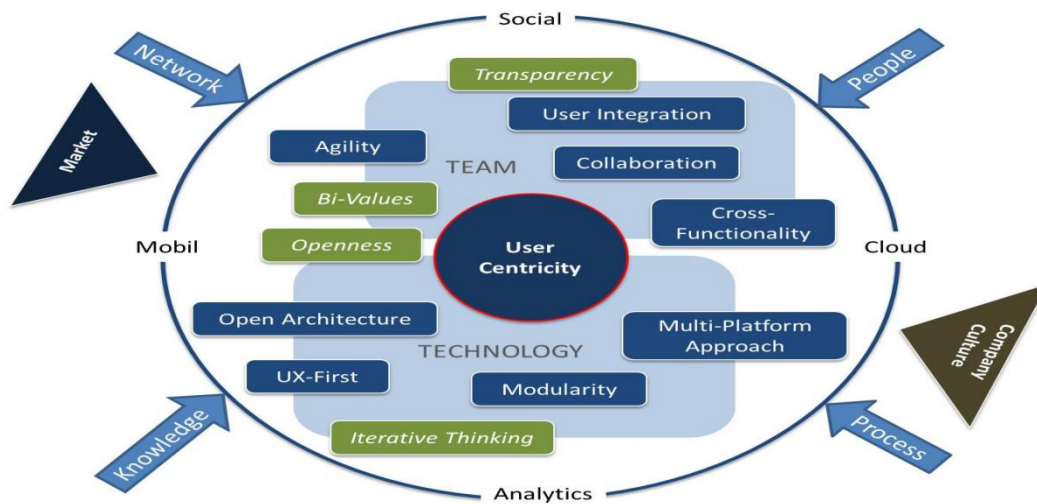


Fig 7.c) Product and Service Digitalization

d) Enhancing Engagement and Experience

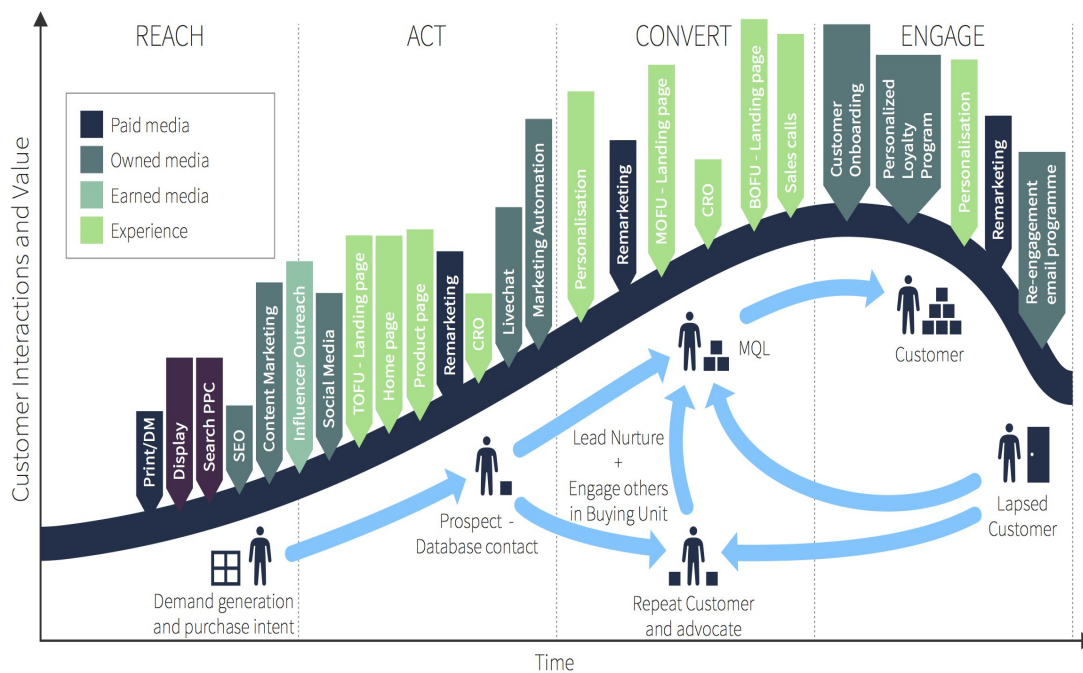


Fig.7(d). Digital Customer Engagement

Digital technologies allow a retailer to stay "top-of-mind" even when the customer is not physically in the store.

Omni-channel Personalization: Using AI to analyze a customer's past purchases to send personalized "Ready for you" style notifications when they are near a physical store (geofencing).

Augmented Reality (AR) Experiences: Enabling customers to visualize how a product (like a sofa or a pair of glasses) looks in their personal environment through the store's app.

Community and Loyalty Platforms: Moving beyond points-based systems to digital communities where customers can share photos, earn badges, and receive early access to new digital product launches.

8. A public sector bank is losing customers to fintech firms due to legacy IT systems. The bank plans to adopt cloud computing, blockchain, and AI-based services.

Based on the case:

- a) Analyze the impact of digital disruption on traditional banking.**
- b) Examine the limitations of legacy IT systems in enabling digital innovation.**
- c) Analyze how IT delivery and transformation can help the bank compete with fintech firms.**
- d) Evaluate the role of AI and blockchain in improving operational efficiency and customer trust.**

a) Impact of digital disruption on traditional banking

Digital disruption has significantly transformed the banking sector, especially due to the rapid rise of fintech firms.



Fig 8 a). Digital Disruption

- **Customer expectations have changed:** Customers now demand 24/7 services, instant payments, personalized offers, and seamless mobile experiences, which fintech firms provide efficiently.
- **Increased competition:** Fintech companies offer faster, cheaper, and user-friendly alternatives such as digital wallets, peer-to-peer lending, and robo-advisory services.
- **Disintermediation:** Traditional banks are losing their role as sole financial intermediaries, as fintech platforms connect customers directly with financial services.
- **Pressure on revenue models:** Fee-based income and transaction margins of public sector banks are declining due to low-cost digital services.
- **Innovation gap:** Banks with slower adoption of digital technologies struggle to keep pace with agile fintech firms.

Thus, digital disruption challenges traditional banks to modernize operations and adopt new technologies to remain competitive.

b) Limitations of legacy IT systems in enabling digital innovation

Legacy IT systems act as major barriers to digital transformation in public sector banks.

Rigid architecture: Monolithic systems are difficult to modify or integrate with modern digital platforms and APIs.

High maintenance cost: A large portion of IT budgets is spent on maintaining outdated systems rather than innovation.

Poor scalability: Legacy systems cannot efficiently handle increasing transaction volumes or real-time data processing.

Slow time-to-market: Launching new digital products or services takes longer due to complex system dependencies.

Security vulnerabilities: Older systems are more prone to cyber threats and lack advanced security mechanisms.

These limitations prevent banks from delivering innovative, customer-centric, and technology-driven services.

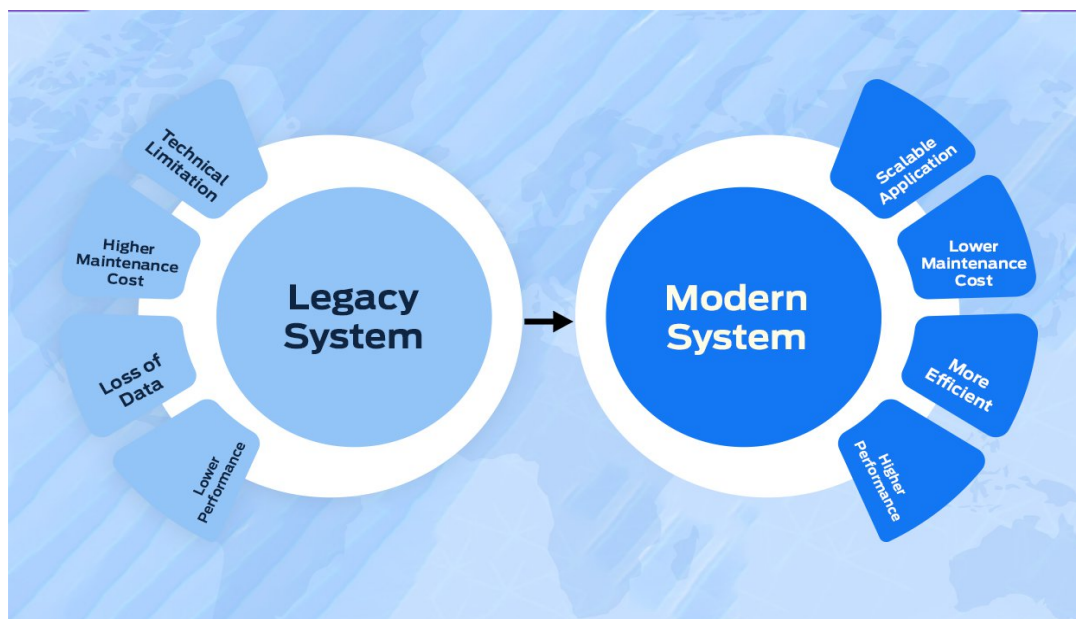


Fig 8 b) Legacy system Vs Modern system

c) Role of IT delivery and transformation in competing with fintech firms

Effective IT delivery and transformation enable banks to modernize and compete with fintech players.

- Cloud computing adoption allows scalable infrastructure, reduced operational costs, and faster deployment of services.
- Agile and DevOps practices improve speed, flexibility, and continuous innovation.
- API-based architecture enables seamless integration with fintech partners and third-party services.
- Data-driven decision making improves risk management, fraud detection, and personalized offerings.
- Process automation enhances efficiency, reduces errors, and shortens service turnaround time.

Through IT transformation, banks can achieve operational agility, faster innovation, and improved customer experience comparable to fintech firms.

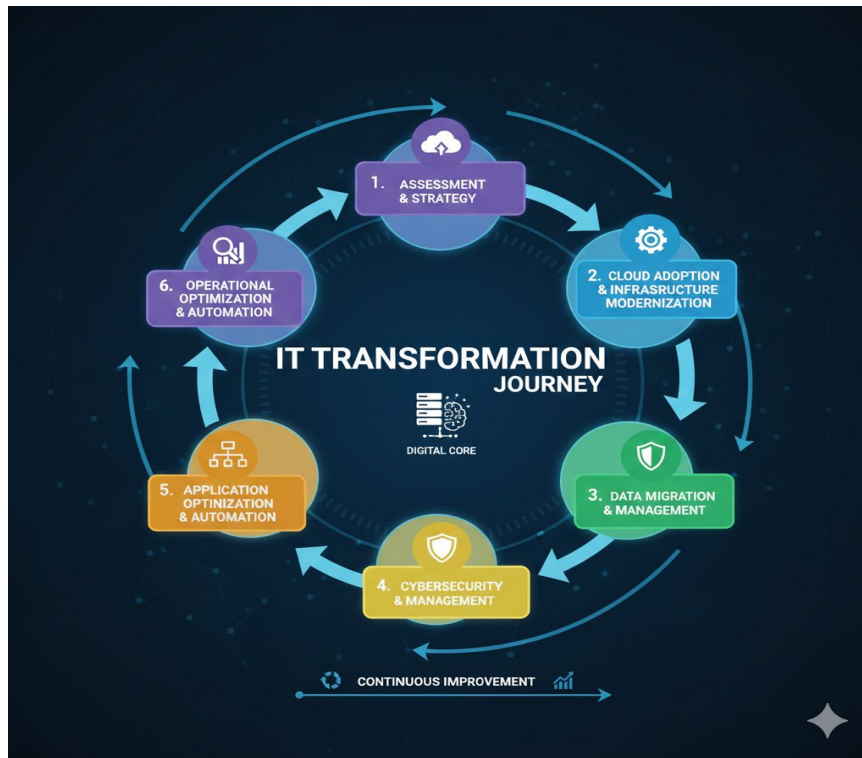


Fig 8 c) IT Transformation

d) Role of AI and blockchain in improving operational efficiency and customer trust
Role of Artificial Intelligence (AI)

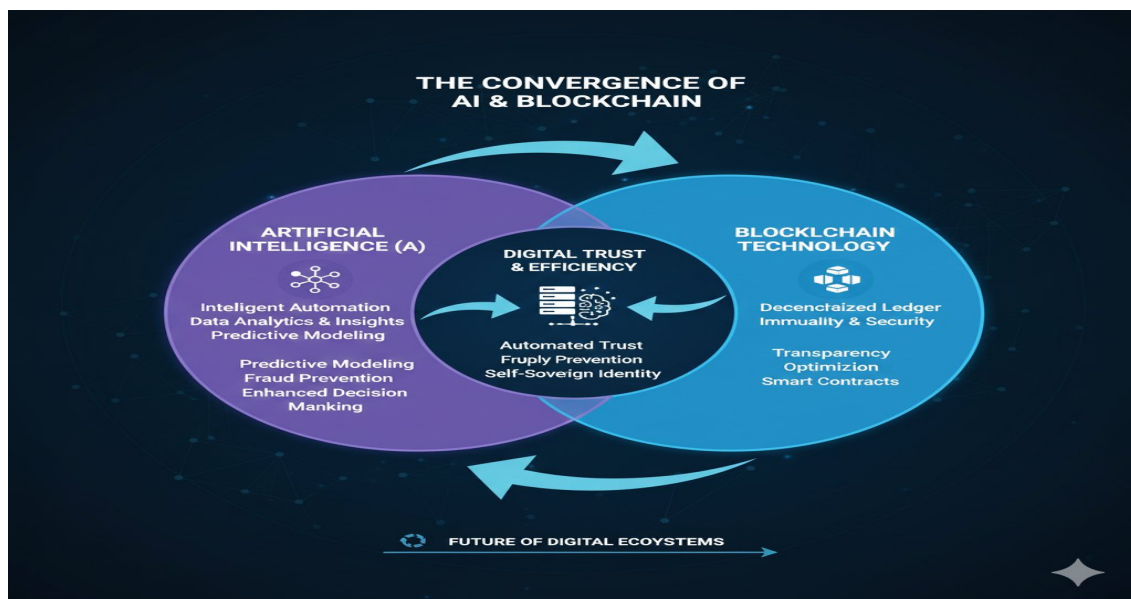


Fig 8 d) The Convergence of AI & Blockchain

- Chatbots and virtual assistants provide instant customer support and reduce service costs.
- AI-based credit scoring improves loan approval accuracy and reduces risk.
- Fraud detection systems analyze transaction patterns in real time to prevent financial fraud.
- Personalized services enhance customer satisfaction and engagement.

Role of Blockchain

Secure and transparent transactions increase customer trust.

- ✓ Immutable records reduce fraud and ensure data integrity.
- ✓ Faster settlements improve operational efficiency in payments and inter-bank transactions.
- ✓ Smart contracts automate processes like KYC and loan disbursement.

Together, AI and blockchain enhance efficiency, security, transparency, and trust—key factors for customer retention in digital banking.