KFUPM BUSINESS SCHOOL
كلية الأعمال
جامعة الملك فهد للبترول والمعادن

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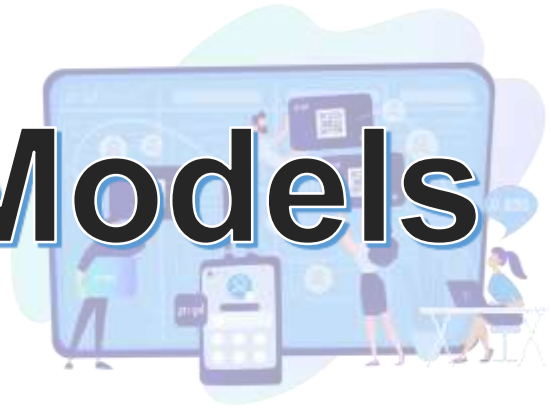
King Fahd University of Petroleum & Minerals

MIS 393

Digital Transformation in Business



Digital Business Models

Objectives

- Define and Explain Business Models.
- Analyze the Role of Technology in Business Model Transformation.
- Describe and Evaluate Key Elements of Transformative Business Models.
- Examine Case Studies of Transformative Business Models.
- Understand the Four Interlocking Elements of a Successful Business Model.
- Explore Emerging Digital Business Models and Future Trends.

What is a Business Model?

- **Definition and Core Concept:**

  - A business model is a comprehensive framework that outlines how a company creates value for customers, captures that value, and generates profits.
  - It includes value propositions, resources, cost structure, revenue streams, and customer interaction channels.

What is a Business Model?

- A successful business model is built on a strong Customer Value Proposition (CVP), which addresses a fundamental need for customers more effectively than alternatives.
  - Digital growth hinges on having a cohesive system where all elements (CVP, profit formula, resources, processes) work seamlessly.
- Technology alone cannot transform industries; instead, a business model linking technology to market needs drives change.
  - There are six transformative features that make business models more adaptable to long-term trends.
- A business model should have a dynamic structure, adapting to technological advancements.
- Digital transformation is reshaping traditional business models and giving rise to new types like freemium, SaaS, and ad-supported models.

Technology as an Enabler of New Business Models

- **Importance of Technology:**
  - By integrating AI, IoT, cloud computing, and data analytics, companies can optimize operations and enhance customer experiences.
  - Technology itself is not the transformation driver but acts as a facilitator that, when combined with a customer-oriented business model, generates meaningful impact.
- **Examples:**

Apple's iPod and iTunes: where the pairing of MP3 technology with a digital distribution platform (iTunes) revolutionized the music industry, creating an entire ecosystem that was convenient and attractive to consumers.

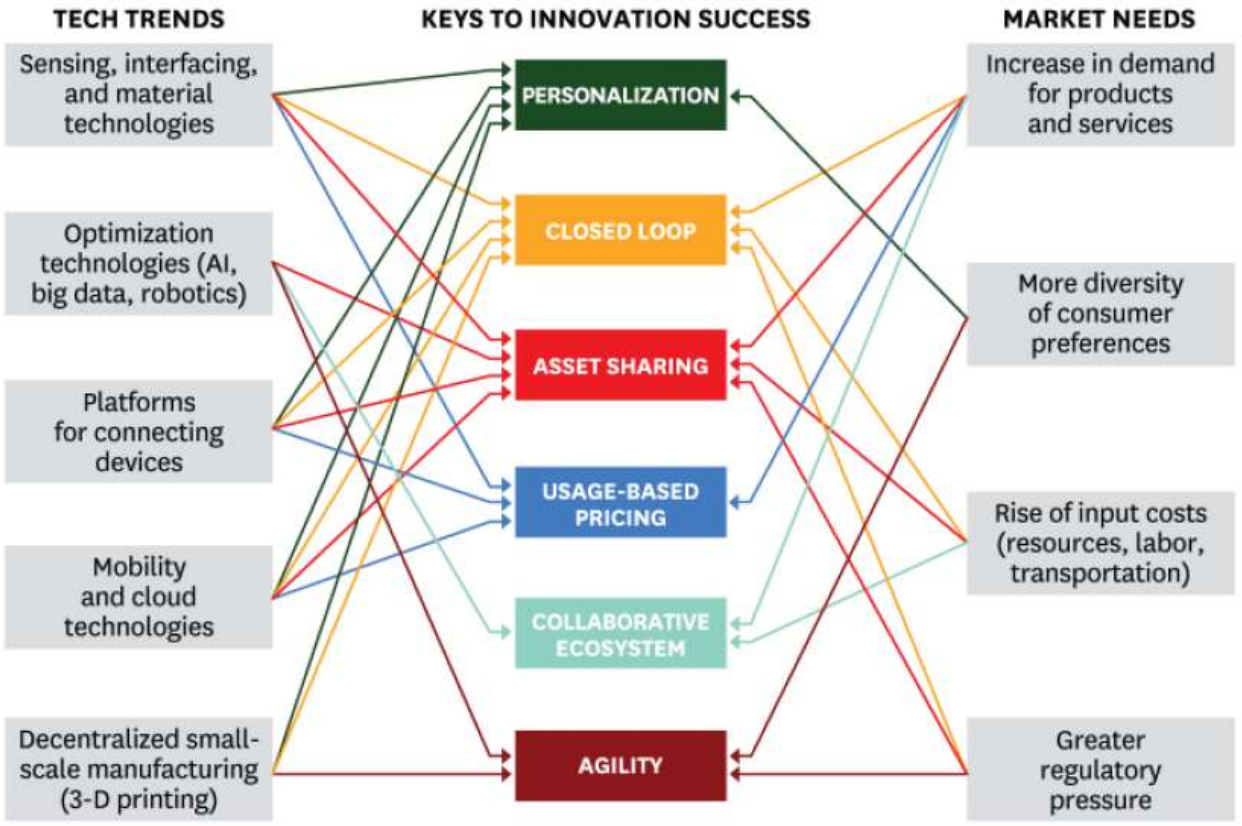
amazon NETFLIX

Companies like **Amazon and Netflix**, which leverage AI to offer highly personalized recommendations, optimize pricing, and improve logistics. Amazon uses predictive analytics to adjust inventory and personalize shopping experiences, setting a benchmark for e-commerce.

The Six Key Elements of Transformative Business Models (Kavadias et al., 2016)

- Business models combining three or more elements have a greater chance to disrupt traditional industries, as demonstrated by companies like Uber and Airbnb, which incorporate multiple features such as asset sharing, usage-based pricing, and agility.

- Each key element on this list is tied to long-term trends in both technology and demand.



The Six Key Elements of Transformative Business Models (Kavadias et al., 2016)

- **Personalized Products/Services**: Creates tailored offerings by leveraging customer data (e.g., Healx's personalized healthcare solutions).
- **Closed-Loop Processes**: Encourages sustainability by recycling or reusing resources, thus lowering environmental impact (e.g., Patagonia's resale program).
- **Asset Sharing**: Allows individuals or businesses to share resources, reducing ownership costs (e.g., Airbnb enables homeowners to rent out spaces).
- **Usage-Based Pricing**: Charges customers only for what they use, increasing affordability and customer satisfaction (e.g., cloud computing platforms like AWS).
- **Collaborative Ecosystem**: Builds partnerships across the value chain, streamlining processes and reducing operational risk.
- **Agility and Adaptation**: Empowers real-time responses to changing demands and trends, creating a competitive advantage (e.g., Netflix's adaptive streaming model).

The Six Key Elements of Transformative Business Models

Case: How Uber Transformed the Taxi Industry?

- **Asset Sharing**: Uber drivers use their own cars, drastically reducing Uber's capital investment needs compared to traditional taxi companies that own fleets.
- **Collaborative Ecosystem**: Drivers and passengers connect via the Uber app, creating a seamless customer experience. The platform uses real-time data to enhance service by directing drivers to high-demand areas.
- **Usage-Based Pricing**: Fares are calculated based on distance and demand, allowing dynamic pricing (i.e., surge pricing). This flexibility benefits customers with a pay-as-you-go model, which is transparent and flexible.
- **Agility and Adaptability**: Uber quickly adjusts to market shifts by using data to analyze patterns and meet customer needs in real time, a feature lacking in traditional taxi services.

- By addressing customer desires for convenience, cost-effectiveness, and real-time access, Uber disrupted the traditional taxi model, creating a global presence and setting a standard for future on-demand services.

The Six Key Elements of Transformative Business Models

Case: Healx's Model of Personalized Healthcare

- Healx is a healthcare company leveraging AI and big data to match treatments with patients who have rare diseases, focusing on personalized medicine.
  - **Personalization**: Uses patient-specific data to identify drug treatments, addressing the unique needs of rare disease patients.
  - **Collaborative Ecosystem**: partners with pharmaceutical companies, medical researchers, and healthcare providers to gain access to data and foster knowledge sharing.
  - **Agility and Adaptation**: Employs machine learning algorithms to continuously update and improve treatment matching in real time, which is crucial in rare disease treatment where time and precision are critical.
- Healx's model creates a pathway for affordable and effective healthcare solutions, enabling it to provide individualized treatment recommendations. The model illustrates how a business in the healthcare industry can bridge the gap between big data, collaboration, and customer-centric service.

https://www.youtube.com/watch?v=8VuLZdqxOOo

Digital Growth & Interlocking Elements of Business Models (Johnson, 2018)

Four interlocking elements that, taken together, create and deliver value to both companies and its customers:

- **Customer Value Proposition (CVP)**: Solves a core customer problem and differentiates the company from competitors. For instance, Domino's CVP includes fast, convenient food delivery with user-friendly online ordering.
- **Profit Formula**: Defines how a company captures value, including aspects like pricing, margins, and revenue streams.
- **Key Resources**: Assets essential for delivering the CVP, such as people, technology, and intellectual property.
- **Key Processes**: Repeatable processes ensuring efficient, scalable delivery, including logistics, customer service, and quality control.

- **Case Example:**
  - Domino's Pizza: Transitioned to a digital-first model, improving CVP with online ordering, mobile apps, and loyalty programs. This shift increased customer engagement and significantly boosted revenue.
  - Demonstrates how focusing on CVP with a supporting profit formula, resources, and processes can lead to sustained business growth.

Impact of Digital Transformation on Traditional Business Models (Marr, 2020)

Sectoral Changes Driven by Digital Transformation:

- **Retail**: Traditional brick-and-mortar stores (e.g., Walmart) have integrated e-commerce to create an omnichannel experience. Amazon's use of AI-driven recommendations and predictive analytics in inventory management has set the standard.
- **Manufacturing**: Technologies like IoT and robotics (Industry 4.0) have automated manufacturing processes, enabling predictive maintenance and reducing waste.
- **Service-Based Businesses**: Transition to subscription models and Software-as-a-Service (SaaS) (e.g., Microsoft 365) to build recurring revenue streams.

Challenges with Digital Transformation:

- Privacy and data security concerns, increased costs of technology integration, and the need for a skilled workforce to operate new systems.
- Regulatory and compliance requirements, especially for handling personal data and maintaining ethical practices in data usage.

Emerging Business Models and Future Trends

New Digital Business Models:

- **Freemium**: Offers basic services for free with paid premium features, expanding reach and driving user conversion (e.g., LinkedIn, Spotify).
- **Ad-Supported**: Monetizes user engagement through advertising, with personalized ads supported by data insights (e.g., YouTube's ad-supported videos).
- **Crowdfunding**: Communities fund innovative products they believe in, building loyalty early on (e.g., Kickstarter).

Future Trends and Challenges:

- As digital transformation accelerates, new business models will continue to emerge, necessitating adaptation and innovation from companies.
- Challenges: Maintaining data privacy, complying with regulatory requirements, addressing ethical issues in AI and automation, and managing cybersecurity risks.

Key Insight:

- Success in the future will require a balance between leveraging technology for growth and adhering to ethical standards and regulatory demands.