

## ISB CTO

### Week 2: CTO as Strategy Catalyst

#### Video 1: Module Overview

- CTOs play a crucial role in the digital era as strategy catalysts.
- Aspiring CTOs need to acquire knowledge about the digital economy.
- It is vital to understand new digital ecosystems and partnerships.
- Familiarity with competitive moves is necessary for success in the digital landscape.

#### Video 2: Digital Economy

- The digital economy is characterised by the increasing prominence of various technologies, such as cloud computing, social media, and the Internet of Things (IoT).
- Cloud computing plays a vital role in facilitating connectivity and data storage.
- Social media technologies have created opportunities for social commerce.
- Platforms for content, commerce, and connection foster collaboration between companies.
- Social, mobile, analytics, cloud, and IoT technologies are the foundation of the digital economy.
- The digital economy continues to evolve with the introduction of new innovations, such as wearables.

#### Video 3: Drivers of Digital Economy

- Moore's law predicts the doubling of computing capacity every 18 months, leading to exponential growth in computing power.
- Metcalfe's law demonstrates the exponential increase in connections and the value derived from networks.
- The bandwidth law highlights the liberation of data transmission, enabling the seamless transfer of multimedia content.
- These laws serve as drivers of the ongoing digital transformation, enabling the rise of social media, mobile devices, analytics, cloud computing and the Internet of Things.
- AI computing, which is an extension of these laws, indicate that computing power, connections and storage capacity will continue to grow, providing more opportunities in the future.

#### Video 4: Digital Economy: First Wave

- The first wave consisted of foundational technologies: social, mobile, analytics and cloud.
- Social technologies fostered social media engagement and customer communities, influencing purchasing decisions through word-of-mouth.
- Mobile technologies created opportunities for micro-moments, collaboration and omnichannel experiences.
- Analytics empowers businesses to gain insights and optimise marketing strategies.
- The cloud enables agility and customer-centric approaches, leading to product innovation and enhanced customer relationships.

#### Video 5: Digital Economy: Second Wave

- The second wave introduced the Internet of Things (IoT), connecting physical devices and artifacts to the digital realm.
- The second wave enabled people-to-object and object-to-object connections, expanding the possibilities for innovation.

- The second wave enhanced energy efficiency, environmental conservation, and personalised advertising through intelligent interactions.
- The second wave bridged the gap between the physical and digital worlds.

### **Video 6: The New Digital Reality**

- Big data analytics and artificial intelligence enable smarter decision-making and personalised recommendations.
- The social web provides new channels for customer-firm interactions and valuable insights into consumer sentiment.
- Mobile apps and cloud computing redefine the customer interface, offering personalised information and convenient services.
- The Internet of Things connects products, enabling advanced functionalities and improved customer experiences.
- Robotics, drones, and 3D technologies disrupt supply chain operations and redefine order fulfillment.
- Augmented and virtual reality technologies enhance customer interactions and revolutionise product discovery.
- CTOs play a crucial role as strategy and innovation catalysts, bridging technology knowledge with business strategy.

### **Video 7: Competing in the Digital Economy**

- In the digital economy, scale is essential as it enables companies to gain market dominance and valuable customer insights.
- Digital giants compete across multiple industries, lowering barriers to entry and challenging traditional players.
- Speed is crucial for success, with agility and continuous innovation as key drivers.
- Embracing customer feedback, open innovation, and experimentation are vital for staying competitive.
- Traditional companies must shift their mindset and aim for scale, scope, and speed simultaneously to thrive in the digital economy.

### **Video 8: Defining Business Strategy**

- Scale is essential for achieving market dominance and gaining valuable customer insights.
- Digital companies compete across multiple industries by lowering entry barriers.
- Speed is crucial in the digital economy, and agility and innovation are prioritised over perfection.
- Businesses should focus on customer needs and reimagine their strategies accordingly.
- Embracing scale, scope, and speed simultaneously can lead to a stronger competitive position in the digital economy.

### **Video 9: The Rise of Ecosystems**

- To adapt to the new digital reality, businesses need to reimagine themselves around their customers.
- Businesses need to focus on the customer value proposition: who they serve, how they serve them, and what makes them unique.
- Businesses need to differentiate between delivered needs and latent needs.
- Disruption occurs when a company identifies and serves latent needs that incumbents have overlooked or found unprofitable.
- Examples of disruptive companies include Netflix, Amazon, Uber, and Airbnb.
- The new rules of the game in the digital economy create both threats and opportunities for disruption.

- Consumers' preferences are changing, with a shift towards sharing rather than owning, as seen in industries like music and transportation.
- Generational shifts, particularly with digital natives (born after 1997), bring new expectations and behaviours, both as customers and employees.
- It is crucial for firms to recognise blind spots and identify latent needs to stay competitive in the digital economy.

### **Video 10: New Ecosystems**

- Ecosystems are important for digital strategy because they allow organisations to collaborate with other players to create new value propositions.
- There are three key players in today's industries: incumbents, digital giants, and digital entrepreneurs.
- Digital giants have disruptive capabilities due to their financial resources and access to top talent.
- Startups initiated by individuals from digital giants or incumbents can offer innovative solutions for latent customer needs.
- Strategic partnerships with digital giants and tech entrepreneurs are essential for launching experiments and innovations.
- By embracing the concept of ecosystems and strategically partnering with relevant players, organisations can navigate the digital landscape and capitalize on latent needs, driving innovation and growth.

### **Video 11: Module Summary**

- The role of a CTO as a strategy catalyst involves education, understanding and the application of rules for competitive success.
- Forming new ecosystems through strategic partnerships enables knowledge sharing and resource optimisation.
- Emphasise a customer-centric approach by identifying and addressing latent needs to drive innovation and differentiation.
- Leveraging the ecosystem for strategic experiments enables the discovery of new business opportunities aligned with latent needs.
- Collaborating with ecosystem partners allows for the acquisition of new capabilities, fostering growth and adaptation.
- Stay abreast of market changes and evolving customer behaviors to make informed strategic decisions.
- Embrace agility, adaptability and continuous learning as essential qualities in today's competitive landscape.