MIT CISR Research Projects 2018

Digital Business Models

What Is a Modular Producer and Why Should My Company Care?

Recent MIT CISR research has identified four business models for the digital economy. One of these models, Modular Producer, is the provider of products and services (like payments) that work with any ecosystem. But for Modular Producers to succeed, they have to be able to plug and play in all ecosystems; their competitive advantage rests on being open, secure, and technology agnostic. Our research questions include:

- What are the different types of Modular Producer?
- How profitable are Modular Producers?
- What does it take to be a successful Modular Producer?
- Are Modular Producers concentrated in certain domains?
- How do Modular Producers coordinate with Ecosystem Drivers?

Team: Peter Weill, Stephanie Woerner, Ina Sebastian

Coordinating an Ecosystem to Maximize Your Value

Big old companies increasingly participate in digital ecosystems, and many seek to establish themselves as ecosystem drivers. The MIT CISR 2017 Ecosystem Driver Survey showed that effectively developing partnerships to enable product and service variety, bringing together services from different industries, and selling competitor products are significant predictors of ecosystem market share and of the market share and revenue growth of ecosystem participants. The 2018 ecosystem research will examine how companies effectively develop partnerships by coordinating relationships in order to maximize the value of participating in an ecosystem.

Research questions include:

- What are different types of ecosystems and effective roles for ecosystem drivers?
- What are effective mechanisms for coordinating an ecosystem?
- How do ecosystem drivers and ecosystem participants design effective coordination practices across different types of ecosystems?

Team: Ina Sebastian, Peter Weill, Stephanie Woerner, Kate Moloney

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Creating Competitive Products and Services with Analytics

Data wrapping occurs when companies *use analytics to increase the value proposition of a product or service*. In 2017, we learned that data wrapping creates value for customers when analytics help solve problems that are meaningful to customers. This requires that companies know what customer problems are—and be positioned to influence change. In 2018, we intend to investigate how data wrapping *creates value for companies*. We will examine value from two perspectives: financial impact and competitive advantage. The research findings will help us understand how data wrapping influences the strategy and profit formula of products and services so that companies can better navigate digital opportunities associated with offerings.

Team: Barb Wixom (lead), Ronny Schüritz

How to Make Analytics Your Business

In a digital economy, data—and the information it produces—is one of a company's most important assets. Increasingly, companies are monetizing their data asset and creating new revenue streams by selling information in the form of data, insights, or action. In 2018, we intend to investigate companies that effectively make money from information and how they build and protect value over time. We want to understand: how information businesses:

- Recognize and take advantage of new business opportunities
- Manage the profit formulas and strategies for their offerings
- Protect value and competitive advantage over time
- Build and engage in ecosystems

Team: Barb Wixom (lead), Ronny Schüritz

Digital Business Practices

Managing Organizational Explosions During Digital Transformation

In last year's research, we identified four major organizational "explosions" that occur on each digital transformation pathway: (1) changing decision rights, (2) cultivating a platform mindset, (3) developing new ways of working, and (4) reorganizing the enterprise. In this year's research, we will examine how enterprises manage these explosions, and whether there are pathway-specific differences in the responses. Other research questions include:

- What are the necessary conditions for success on each pathway, evaluated through several different lenses (e.g., progress, radicalness)?
- How are companies measuring progress along their transformation?
- What is value gained by increasing operational excellence and improving customer experience?
- How do firms manage multiple transformation pathways?
- What are the roles of key enterprise leaders (e.g., CIO, CMO, CEO, COO, CHRO) on each pathway?

Team: Peter Weill, Stephanie Woerner, Nick van der Meulen

Creating a Digital Innovation Toolkit

"Digital" and "innovation" are two sides of the same coin. A digital innovation is the result of marrying the capabilities of digital technologies with a business opportunity, such as to innovate a process or an employee experience, a product or service, or a new business model. Achieving the desired outcome is incredibly difficult. In their quest to be innovative, managers too often focus their attention on the "technical" aspects of a technology and lose sight of its fundamental capabilities in relation to data and information. Focusing on customer solutions, this project will develop essential tools to frame in terms of data both the problem and potential solutions to facilitate the digital innovation process. Questions include:

- Related to customer needs: How are firms developing an understanding of the experiences and life events of customers and expressing that in information terms? How do they identify, map, and track customer life events and how they evolve?
- Related to new technologies: How are firms making sense of the capabilities and limitations of new technologies in terms of information?

Team: Joe Peppard, Nils Fonstad

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Investing in the Digital Workplace for Agile@Scale

Many organizations are thinking about ways to leverage Agile methodology beyond the IT unit to drive more project innovation and speed across the organization—i.e., Agile@Scale. As this new way of working spreads beyond IT, there are significant challenges in designing the workplace to deliver an employee experience that adds value. In this project we will build on our earlier research on Digital Workplace, Employee Experience, and Talent Management to gain insights into how organizations are meeting these challenges to add business value. Research questions include:

- What Agile principles and practices do organizations focus on to build Agile@Scale?
- How do Agile principles and practices impact the design of the Employee Experience and the Digital Workplace?
- How does the management of Digital Talent change in the context of organization-wide Agile?

Team: Kristine Dery, Nick van der Meulen

Becoming Digitally Savvy

Overwhelmingly, most companies we talk to say the most difficult challenge to being successful in the digital world is managing the cultural change to become digitally savvy. Our previous research has looked at the business model, operational, and customer-facing issues that companies address in a transformation. This research is about understanding what it takes to become digitally savvy. Research questions include:

- What does it mean to be digitally savvy?
- What capabilities, behaviors, skills, etc. are essential to becoming digitally savvy? How do you measure digital savviness?
- Does being digitally savvy pay off?

Team: Stephanie Woerner, Peter Weill

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Digital Leadership

Designed for Digital: How Established Companies Are Reinventing Themselves

In this project, we will follow up on the organizational changes of six to eight companies that participated in earlier stages of our research. We will report on outcomes of earlier initiatives, summarize learnings, and describe new organizational structures, roles, and management practices. From these mini-cases we expect to clarify the journey that established companies are taking to transform for the digital economy. We will also explore important applications of digital technologies, such as cognitive computing, to learn how leading-edge companies drive value from new, powerful technologies. Research questions we'll explore include:

- How do companies move from introducing new digital capabilities to creating digital offerings that generate new revenues and profits?
- What organizational changes have been instrumental in building digital offerings?
- How do companies that started their digital transformations within IT engage the rest of the business in the transformation?

Team: Jeanne Ross, Cynthia Beath, Kate Moloney

Digital Imperatives for Boards of Directors

In previous research we found that Boards of Directors are critically important in their company's digital transformation, yet may not have the necessary skills. In this study, we plan to create and test an assessment of Board digital savviness, using a combination of publicly available data and machine learning processes. Questions this study will address include:

- What are the characteristics of a digitally savvy Boards?
- How digitally savvy are Boards of US-listed companies today, by industry and size?
- Does the digital savviness of the Board correlate with financial performance?

Team: Peter Weill, Stephanie Woerner, Tom Apel, Jenny Banner, Peter Hinssen

Mapping the Future IT Unit

No organization can hope to thrive with an IT unit that is designed, led, and managed based on principles and practices from a previous era. The IT unit must change and evolve to reflect changing conditions and new requirements. Leadership teams must navigate to decide how best to determine investments in information, systems and technology and manage any transformation that may be required. Research questions include:

- Is our long-established understanding of the IT unit still appropriate? (Or is the notion of an IT unit an obsolete concept today?)
- What will the future IT unit look like? How best to "organize for IT" to ensure that IT's potential is harnessed?

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