MIT CISR investigates contemporary concerns to help executives meet the challenge of leading dynamic, global, and information-intensive organizations. MIT CISR research scientists and collaborators from around the world produce rigorous academic research using a variety of methods. The relevance of the research is ensured by the active participation of corporate sponsors and patrons from a range of industries; our insights are disseminated through research publications and events.

AI at Work: Transforming the Employee Experience

As work solutions powered by artificial intelligence are increasingly becoming available to employees with limited technical skills, organizations face fundamental questions about how these solutions affect their workforce, their work environments, and work itself. How do organizations embrace technology to stay ahead and outperform their competitors? In this research project we seek to answer this question by examining how organizations design an employee experience that best supports work while simultaneously aligning the organization's needs and desires with those of its workforce.

This study will rely on a series of exploratory qualitative case vignettes.

We will focus on the following research questions:

- How are organizations adjusting employee experience design elements (including physical space and technology) to support work needs across physical, virtual, and hybrid work environments?
- How does the use of AI-driven work solutions affect the employee experience in organizations, particularly in terms of enhancing human skills and fostering a more adaptive and agile work environment?
- How are organizations using employee data to identify and meet the unique work needs of individual employees while maintaining employees' privacy and data agency?

RESEARCH TEAM: Nick van der Meulen (lead, MIT CISR), Dorothy Leidner (Baylor U.), Olgerta Tona (U. of Gothenburg)

SEEKING: We are seeking interviews with leaders who are experimenting with employee-facing AI solutions or those who are transforming their employee experience with the help of new technologies.

Architecting Digital Ecosystems to Grow Value

In 2023, we studied how companies govern digital ecosystems, including when they adopt emerging innovations in Web3-enabled governance. In our interviews, we identified three types of ecosystem governance—single leader, representative, and decentralized—that enable companies to successfully pursue business strategies within ecosystems that align with the design of the ecosystem.

In this year's project, we will build on our findings to understand how companies can best architect or participate in digital ecosystems to grow value, including choosing the best governance approach and architecture for the company's strategic goals and domain.

We plan to conduct a series of interviews (one to three per company) with ecosystem leaders, CIOs, CDOs, lead architects, and others—especially those from companies leading digital ecosystems—and create several case vignettes.

We will focus on the following research questions:

- What are the key architectural capabilities and principles (including governance and platform architecture) demonstrated by successful digital ecosystems?
- How does ecosystem architecture impact ecosystem and company performance in different domains?
- What are successful ecosystem architecture approaches to address social challenges such as sustainability?

RESEARCH TEAM: Ina Sebastian (lead, MIT CISR), Gayan Benedict (Salesforce & MIT CISR), Thomas Haskamp (U. of Potsdam)

SEEKING: We are seeking participation in the research from executives responsible for digital ecosystems. These could be general managers of ecosystem business units or the chief architects for those platforms, but also chief digital officers, chief information officers, and similar.

Boosting the Strategic Impact of Digital Innovation: Essential Practices

In earlier research, we found that companies that realize significant strategic value from digital innovations have redesigned themselves around three learning imperatives:

1. Innovation teams use a test-and-learn approach to build successful digital innovations.
2. Top-level management learn from initiatives to build an innovation portfolio that allocates scarce resources to the set of initiatives that promises to have the greatest strategic impact.
3. Functional experts learn from initiatives to build shared resources that help teams overcome common barriers to scaling innovations.

We will focus on the following research questions:

- How do companies build business commitment to all three learning imperatives?
- How do companies regularly reallocate scarce resources—especially people—to the initiatives that contribute most to their strategic objectives?
- How do companies realize synergies across sets of similar digital innovation initiatives in order to avoid accumulating a new generation of "IT spaghetti" and generate benefits from reuse?

In 2024, we will conduct a survey to identify practices that distinguish top-performing companies. In addition, we will update a case study.

This project is a continuation of MIT CISR's 2023 research project on [Essential Practices to Realize More Value Faster from Digital Innovation.](#)

RESEARCH TEAM: Nils Fonstad (lead, MIT CISR), Martin Mocker (Reutlingen U.), Stephanie Woerner (MIT CISR)

SEEKING: We are seeking participation in the research from executives who have a holistic understanding of their organization's portfolio of digital innovation investments and practices, and also of the extent to which the organization's digital innovation initiatives relate to its strategic objectives.

How Established Companies Leverage External Developer Platforms for Business Value

An external developer platform opens up a company's digital platform via APIs to third-party developers so they can develop their own digital customer offerings. In 2023, we studied what it takes for a leading software company to provide and nurture a successful external developer platform and ecosystem. In this year's project, we seek to understand and document the state of external developer platforms and ecosystems at established companies across industries.

We will focus on the following research questions:

- Compared to software companies, how do external developer platforms help established companies across industries generate business value?
- What are the challenges they face and how do they address them?
- What can traditional companies learn from software companies?

This study will rely on a qualitative research methodology. We will conduct a series of interviews (one to three per company) with CIOs, CDOs, lead architects, and similar from established companies and create case vignettes.

This project is a continuation of MIT CISR's 2023 research project on [What It Takes to Build a Successful External Developer Platform](#).

RESEARCH TEAM: Martin Mocker (lead, Reutlingen U.), Ina Sebastian (MIT CISR)

SEEKING: We are seeking participation in the research from executives responsible for external developer platforms and ecosystems at established companies. These could be general managers of the external developer platform business unit or the chief architects for those platforms, but also chief digital officers, chief information officers, and similar.

Successful Enterprise-Based Platform Businesses

In this research we will ask how an enterprise can create and run a successful platform business. We define a platform business as creating a competitive advantage through a world-class digital service and reusing it internally, externally, or both. Platform businesses scale differently from traditional businesses, as the marginal cost of adding a customer is quite small but the upfront platform development costs are quite large. In conversations and observations with many organizations, we hypothesize there are four important business models for enterprise-based platform businesses.

1. **Double-sided platforms**, such as at Amazon, where both customers and service providers use the platform and the owner acts as an intermediary.
2. **Platform businesses solutions**, such as at UNICEF, mBank, and Arkik, where the organization develops an internal world-class capability and then sells the platform to commercial customers who run it themselves. The sale is often made via an intermediary or a technology business subsidiary.
3. **Platform as a service** (PaaS), such as at ANZ, which sells anti-money laundering as a service to corporate clients. After developing a world-class platform for internal use, the enterprise sells the capability as services, typically on a multitenant basis on premises or in the cloud. The revenue generated helps develop the platform further.
4. **Platform reuse**, such as at DBS and Standard Bank, which have each developed a series of platforms for one area/business unit but are reusing them across the enterprise.

This study will include a series of case vignettes and new analysis of data MIT CISR collected from 721 companies globally in October 2023.

We will focus on the following research questions:

- What are the most important business models for an enterprise-based platform business?
- What are the performance impacts for companies that excel on each platform business model?
- What are the critical capabilities for each of the models?
- How does effective governance and participation vary across the models?

RESEARCH TEAM: Stephanie Woerner (lead, MIT CISR), Peter Weill (MIT CISR), Ina Sebastian (MIT CISR)

SEEKING: We are seeking participation in the research from MIT CISR member organizations to workshop the ideas. Then we will collect data and identify case vignettes.

The IT Function of the Future

The IT function must adapt as the demand for digital services changes. In this study we will explore the new responsibilities of leading IT functions and identify leading practices such as new engagement models with business units, customers, suppliers, and regulators.

We will focus on the following research questions:

- What is the value created for the business units and how is it measured?
- Where are digital capabilities best managed: in the business or IT function, and then at the enterprise- or business-unit level?
- What are the most important decisions to make and the decision rights around those decisions? How are the decisions evaluated?

This study will rely on a series of interviews to understand how IT functions are evolving to service increasingly digital business operations. Interviews will include questions about organizational structure and processes, funding models, and capability building, and how value reporting to business units and the board can better meet expectations.

RESEARCH TEAM: Alan Thorogood (lead, MIT CISR), Stephanie Woerner (MIT CISR)

SEEKING: We are primarily seeking interviews with chief information officers and chief data officers, as well as chiefs of staff who are responding to the evolving demands with innovative approaches.

Traditional and Generative AI: Scaling with Ethical, Compliant, and Beneficial Outcomes

Since 2019, MIT CISR's data research team has investigated how organizations scale AI in the pursuit of becoming AI-fueled. We have discovered that scaling AI requires advanced data monetization capabilities, an AI explanation capability, and a rethinking of scale to realize deployment success, model recontextualization, and industrialized operations. This year we will investigate how organizations are navigating distinct traditional AI and generative AI needs so that scaling AI can produce ethical, compliant, and lucrative outcomes. Also, we hope to understand emergent roles that organizations need for scaling AI, and we will continue to explore knowledge management implications.

This study will primarily rely on interviews conducted with the MIT CISR Data Research Advisory Board regarding the current state of scaling AI in CISR organizations. The research team also will draw on insights generated from the MIT CISR 2018 Data Monetization Survey, as well as from case studies and vignettes, in particular a 2024 case study about Cemex's AI journey.

Research questions we will pursue include:

- How are acceptable data use and AI explanation requirements different for traditional AI and generative AI? Why is this the case?
- What new roles are required for scaling AI?
- How can knowledge associated with AI models contribute to an organization's competitiveness and firm performance?

This project is a continuation of MIT CISR's 2023 research project on [Competing on Knowledge: The Next Challenge for Scaling AI](#).

RESEARCH TEAM: Barbara Wixom (lead, MIT CISR), Ida Someh (U. of Queensland), Robert Gregory (U. of Miami)

SEEKING: We are seeking participation from executives at MIT CISR member organizations with familiarity of their organization's AI scaling journey.

What It Takes to Create Lucrative Data Products

Today, organizations that are effective at data monetization create lucrative data products enabled by data assets that are easily reused and recombined. This requires that the organizations selectively liquify data assets, purposefully invest in data monetization capability practices, develop data-driven cultures, and establish a product management mindset regarding data. In this study, we will investigate the current state of data monetization, which we will identify by replicating the MIT CISR 2018 Data Monetization Survey; and we will explore how organizations develop and execute effective data product strategies.

This study will primarily rely on a survey of several hundred executives who have an understanding of their organization's data monetization investments and outcomes. We will also conduct at least one case study or vignette on an organization that has learned how to create lucrative data products.

Research questions we will pursue include:

- How do organizations generate top financial returns from data monetization? How do data monetization returns contribute to overall firm financial performance?
- How do data liquidity, data monetization capabilities, data-driven culture, and product management practices influence data monetization effectiveness?

This project is a continuation of MIT CISR's 2023 research project on [Monetizing Data with Dynamism](#).

RESEARCH TEAM: Barbara Wixom (lead, MIT CISR), Nick van der Meulen (MIT CISR), Cynthia Beath (U. of Texas at Austin), Gabe Piccoli (Louisiana State U.), Joaquin Rodriguez (Grenoble), Ja-Nae Duane (Brown U.), Robert Gregory (U. of Miami)

SEEKING: We are seeking participation in the research from executives with an understanding of their organization's data monetization investments and outcomes.

What's Next: Becoming a Real-Time Business

In this research we ask what's next after digital transformation. The answer, we believe, is becoming a real-time business (RTB). RTBs are organizations based on a foundation of real-time data that rely on transparent and automated decision-making and seamless digital customer and employee journeys, while managing and reduce operating costs and risks. In a world of increased volatility, organizations able to operate more in real time outperformed their peers on both margin and growth, with better customer experience and greater organizational efficiency.

This study will rely on extending the analysis of data collected from 259 companies globally by Insight Partners. In addition, we will complete four case vignettes in different industries.

We will focus on the following research questions:

- What is a real-time business?
- What is the performance premium for being a real-time business?
- What are the critical capabilities of a real-time business?
- How can we measure real-time business?

RESEARCH TEAM: Peter Weill (lead, MIT CISR), Stephanie Woerner (MIT CISR), Elizabeth van den Berg (Insight Partners)

SEEKING: We are not seeking participation in the research at this time.