Speaker 1: Welcome to the MIT CISR Research Briefing series. The center for information systems research is based at the Sloan School of Management at MIT. We study digital transformation.

Stephanie Woerner: Hi, I’m Stephanie Woerner, a research scientist with MIT CISR. Today I’m pleased to share with you the August 2022 research briefing that I co-authored with Peter Reynolds, Michael Harte, and Peter Weill—

Replatforming: Securing Board and Top Management Team Buy-In

Enterprises today often replatform as part of their efforts to become Future Ready because the state of their existing systems, data, and processes hinders the organization’s ability to compete in the digital economy. Replatforming, when an enterprise transitions legacy applications to cloud platforms and digitizes its “crown jewels” (the components and capabilities it is best known for), enables the enterprise to fulfill its current business needs, innovate, and adapt to future needs.

Replatforming is itself challenging enough, but to get buy-in and investment you must convincingly explain the plan to the board and top management team. This necessary prerequisite for success presents two challenges. The first challenge is to define what a future-ready platform is, and how that is different from what the enterprise has now. The second is to lay out the approach to replatforming you propose the enterprise should take. This includes articulating what would be replaced (and what wouldn’t) and how it would be integrated into the existing environment (if it would be), as well as the customer impact, expected costs, changes, and risks to be managed along the way.

Effectively explaining replatforming helps secure needed funds, sets realistic expectations about the business value to be created and metrics to assess it, and surfaces risks. Most importantly, an effective explanation of replatforming clearly depicts the roles of the board, top management team, and technology and other teams in achieving successful results. A poor explanation is a contributing factor to replatforming failure. A clear explanation will illuminate the business model choices that the replatforming will support and outline the governance needed to increase the likelihood of success.

In this briefing we first define a future-ready platform and guiding principles for building one, based on MIT CISR research and the CIO experience of two co-authors. We then share lessons on how to describe what a future-ready platform is and propose a way to explain replatforming to boards and the top management team. Effectively explaining replatforming is a skill that technology leaders, and eventually all leaders, must develop.

Building Future-Ready Platforms

A platform is an integrated set of digitized processes and the technologies, service modules, compliance controls, and data needed to produce a specific business outcome—for example, taking an order, establishing a mortgage, or supporting an omnichannel experience. At some enterprises, a platform is anchored in purchased software such as an enterprise resource planning system or a customer relationship management system. Enterprises can develop parts of a platform in the cloud, or for a fee can acquire or use systems or components offered by other enterprises in the cloud. Platform processes are designed and implemented such that people can be removed from steps that are better performed by machines; ideally the machines would perform the process end-to-end, with people moved to higher-value activities. Great platforms capture the essence of your enterprise’s strategy, digitize your crown jewels, and plug and play both with other platforms inside the company and the platforms and services of partners.

We propose that a future-ready platform conceptually has six layers the enterprise can adapt: one, customers; two, channels; three, processes and experience; four, shared data; five, product integration; and six, infrastructure. Customers connect to your enterprise through a set of channels. Processes and experiences, with compliance and APIs built in, access shared data. Product integration—leveraging APIs, applications, and products, again with compliance built in—sits atop infrastructure.

In our discussions with executives and drawing from our co-authors’ CIO experience, the following principles emerged as a guide to the development of a new future-ready platform:

One, delight customers through ecosystem integrations.

Two, reduce channel complexity with compliance built in—from the start.

Three, create a shared data layer for internal and partner use—based on clear access control and data sovereignty requirements.

Four, leverage Platform as a Service (PaaS).

Five, develop plug-and-play core services—accessible via application programming interfaces (APIs); this enables modularity.

Six, embed compliance into business processes, products, and APIs—again from the start, rather than as an afterthought or an add-on.

Seven, host platforms in the cloud for flexibility—whether on premises or with external partners.

Future-ready platforms are used internally across the enterprise and externally within digital ecosystems. To ensure they are strongly connected to business outcomes, future-ready platforms typically have business performance metrics built in—for example, measuring the percentage of customers that complete an online purchase process, and for those who don’t complete it, where they dropped off.

Larger enterprises often have multiple platforms. For example, DBS Bank, which reorganized around platforms as part of its digital transformation, had thirty-three platforms in 2019, each either aligned to business drivers, providing enterprise support, shared across the bank, or playing a role in enabling the overall operations of the bank. An enterprise’s business models determine the size and number of platforms and what platform capabilities the enterprise needs, with the platforms typically built or rebuilt in stages. Different business models require distinct platform capabilities, so the more business models an enterprise has, the more platforms it typically needs.

We have found that successful replatforming governance is achieved by a joint effort between business and IT leaders. DBS governs its platforms using the two-in-a-box management approach in which business and technology leads hold joint accountability for a platform’s health and success. Other options include quarterly value reviews—as pursued at BBVA—and joint incentives. The choice of effort should suit your enterprise’s culture.

Making a Clear Case for Replatforming

The July 2020 MIT CISR research briefing described four distinct approaches to enterprise replatforming we identified in our research and indicated for each approach the percentage of enterprises where it was dominant. Each approach carries distinct risks and benefits.

The API layer approach, pursued by 35 percent of enterprises, requires building front-end interfaces for both internal and external use via APIs. Existing systems and data must be connectable to APIs. Enterprises can typically implement an API layer quickly without disturbing existing systems; however, the existing systems are often complex and fragmented, and costs to run them can remain high.

The partial replacement approach, used by 26 percent of enterprises, entails replacing systems that are hindering transformation or to advance processes. A partial replacement addresses one problem but can produce significant integration challenges and restrict future flexibility and data access. Product silos may get entrenched.

The migration approach, followed by 24 percent of enterprises, involves moving the entire enterprise to a new future-ready platform. Transitioning customers and products to the new platform can be complex. The benefits of this approach include opening up opportunities for many types of innovation.

The core replacement approach, employed by 15 percent of enterprises, replaces only legacy back-end transaction systems. This entails a massive multiyear effort that requires clarity of vision, strong technical skills, and significant funding and persistence. A core replacement typically results in increased efficiency and faster transactions.

In explaining replatforming to leadership teams, it’s key to be clear about which systems are (and are not) being replaced and to describe explicitly the integration and customer migration challenges to be undertaken. The prerequisite for success is building a common language.

Several of the authors of this briefing have witnessed painful, ineffective attempts to explain replatforming. In the most common scenario, the description of replatforming quickly becomes too technical for the audience. As terms such as virtual agents, natural language processing or NLP, and data mesh are bandied about, the audience gets lost in the detail and can’t grasp the big picture. The result is weakened confidence in the project and its team, and the project is denied full funding. In a contrasting scenario, the description of the replatforming initiative is so high-level and generic that each listener in the audience imagines what will be delivered—and that image typically encompasses way more than what was actually proposed. The resulting mismatch of inflated expectations and limited delivery leads to frustration, recriminations, and worse.

We have observed that when explaining replatforming to a senior executive audience it is important to consistently reiterate the description of a future-ready platform, supported with clear diagrams of the platform’s six layers. Clarifying the business metrics replatforming would achieve, the business models the effort would target, and the governance approach needed to support the effort helps make a replatforming proposal actionable, demonstrates who will bear accountability, and allows early successes to be recognized.

Getting Leadership on the Same Page

As the scope and complexity of replatforming efforts are formidable, it is necessary to have the conviction and commitment of leadership to keep the effort on track. Chris Perretta, an independent board director and former CIO of GE Capital, State Street, and MUFG Americas described the challenges and key lesson of these efforts, saying:

Diversion of resources, extended timeframes, the seemingly inexhaustible interdependencies, heightened execution risks, and organizational disruption are just a few of the execution challenges. Transparent and integrated governance is essential. But the exact path replatforming takes will likely change over time. What cannot change is a clear-eyed view of the precise outcomes that replatforming will deliver from an operational and strategic standpoint.

Replatforming is as much about deciding how you want to do business as the technological solutions needed. And most importantly, replatforming is about building enduring assets that are nurtured, reused, and jointly governed by business and technology leaders, and that measure results.

Speaker 1: Thanks for listening to this reading of MIT CISR research, and thanks to the sponsors and patrons who support our work. Get free access to more research on our website at cisr.mit.edu.