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.

Nick van der Meulen:

Hi, I’m Nick van der Meulen, a research scientist with MIT CISR. Today I’m excited to share with you the February 2022 research briefing that I co-authored with John Mooney and Cynthia Beath—

Digital Disruption Without Organizational Upheaval

At MIT CISR, we define digital organizations as those that, in addition to digitizing their operations for greater efficiency, deliver value propositions in the form of profitable digital offerings. As these digital offerings exist at the intersection of a digitally inspired solution and customer desires, their success hinges on a company’s abilities to (1) sense and interpret—or even reinterpret—changing customer needs, (2) recognize the potential of technologies—new and old—to address those needs, and (3) leverage the capabilities of those technologies to develop revenue-generating offerings. Already, companies are developing the first two abilities at scale. A tougher challenge, however, is finding or developing enough talent with the specialized skills (in areas such as artificial intelligence/machine learning, software engineering, and cybersecurity) to realize these offerings. In the past, companies might have resorted to contractors or freelancers to fill such skills gaps, but this isn’t desirable when dealing with digital offerings. That is because digital offerings require constant experimentation and direct learning with the company’s end customers to provide opportunities for competitive differentiation.

Since efforts to upskill and reskill take time, the only remaining option for many companies is to recruit new talent with specialized digital skills. This is already difficult in a tight and highly competitive labor market, but even more so for large, established companies. These companies carry a considerable legacy of systems, data, and processes (which is unappealing to potential candidates); they may not yet be familiar with agile and empowered ways of working that digital talent has grown accustomed to; and they typically lack clear career paths, mentoring, and growth opportunities for those with specialized digital skills.

One way to overcome these challenges and become more attractive to digital talent is to create a new digital entity, either as a unit inside the parent company or as a legally separate organization, that is free from the parent’s legacy, has the decision rights to operate as a startup, and offers competitive salaries and benefits. The digital entity’s appeal to potential new hires lies in its distinction from the parent company and its ability to disrupt the status quo. Yet, if the digital entity is to develop profitable digital offerings at scale and serve as a digital role model for the parent company, then the digital entity and the parent company will also need to be strategically, operationally, and technologically aligned. This research briefing describes how Toyota Motor North America has navigated a need to digitally disrupt itself while maintaining organizational alignment, and how supporting its executives in holding multiple leadership roles concurrently across its digital entity—Toyota Connected—and related Toyota entities has helped to introduce new digital offerings and new ways of working throughout the global Toyota organization.

Multi-Capping at Toyota

Toyota Motor North America (TMNA) is the operating subsidiary that oversees all operations of Toyota Motor Corporation (or TMC) in Canada, Mexico, and the United States. In 2016, Zack Hicks, then chief information officer of TMNA, realized that the increasing volume of telematics-based data being created by Toyota’s vehicles represented an untapped source of value for the company. Employees had ideas for creative applications of this data, but while Hicks’ Information Services unit had developed considerable capabilities around capturing, cleaning, and managing such data, the unit lacked the in-house talent to turn these ideas into actual digital offerings. Therefore, to attract specialized technologists who wouldn’t otherwise be interested in working for TMNA, Hicks established a standalone company that could operate at the speed of a startup, seeded by a USD$5.5 million investment from TMC. The new company, Toyota Connected, aimed to reimagine the future of mobility by leveraging data and new technologies to deliver seamless contextual services to customers.

To help him lead Toyota Connected, Hicks selected a team of experienced Toyota executives whose institutional knowledge could ensure that new digital platforms and offerings would connect back to TMNA and deliver on Toyota’s purpose. Hicks became the president and chief executive officer of Toyota Connected, while continuing to serve as the CIO of TMNA. Toyota refers to this practice of executives assuming multiple concurrent leadership roles throughout the company as multi-capping. When multi-capping, a Toyota employee takes on an additional job title and extra responsibilities without changing their original employment relationship, pay, and benefits. Multi-capping provides a variety of benefits both for the company and those who take on additional roles.

Realizing Ambitions by Taking Ownership

At Toyota, the best and often recommended way for employees to pursue novel approaches, solutions, and offerings is to take ownership for realizing their ambitions. Multi-capping provides an official mechanism to do so safely, without the risk of losing one’s established role in the company. For example, when Steve Basra and Daniel Hall, respectively chief operating officer and chief UX designer at Toyota Connected, when they realized that improving the customer experience of North American customers would require changes to vehicles’ head units (traditionally the exclusive domain of TMC’s automotive engineers in Japan), they took it upon themselves to develop a prototype for an alternative. In 2017, after securing TMC’s permission to further develop their prototype design as an official replacement for the head unit in North American Toyota and Lexus vehicles, Basra and Hall launched a new division within TMNA to focus on head unit development and to commercialize other digital offerings developed by Toyota Connected. Basra multi-capped as the group vice president of this new division—named Connected Technologies—while retaining his role and responsibilities as COO of Toyota Connected.

Improving Alignment by Expanding Decision Rights

Unlike the two-in-a-box management approach (in which executives share decision rights to bring multiple viewpoints and skill sets to a single role), multi-capping serves to expand an executive’s decision rights to encompass additional roles. When these roles involve other entities, it can improve the strategic and operational alignment between the entities.

Zack Hicks, now president and chief executive offier of Toyota Connected North America, and executive vice president and chief digital officer at Toyota Motor North America, told us, “Many companies create these Silicon Valley innovation offices, but even if they develop something meaningful, they generally have a hard time hooking it back into the mothership. I think multi-capping is what allowed us to succeed in that area. It gave us the ability to still move fast and innovate, with the knowledge that what we did was going to fit within our business models and product lineup.”

Alignment is important for Toyota, especially given the stakeholder dynamics: TMNA is the legal owner of the vehicle data that Toyota Connected aggregates and processes on its cloud platforms; Toyota Connected develops digital offerings based on the vehicle data (although TMNA will occasionally fund this development); and Connected Technologies ultimately manages and sells the digital offerings to TMNA’s end customers. In the end, each of these three entities needs to show a profit. By officially representing the interests of the distinct entities, multi-capped executives are not only informed of but can advocate for each entity’s interests. They thus serve as crucial lynchpins involved in realizing mutually beneficial results—particularly when negotiating internal pricing, ownership of intellectual property, or resource allocation.

Nurturing Talent by Sharing Best Practices

Multi-capping also provides opportunities for talent development through company-wide learning. In contrast to job rotations (in which employees switch roles over time), multi-capping helps talented employees expand their skill sets by applying them more broadly. For instance, Hicks multi-capped (rather than transferred) talent from Toyota Connected to create dedicated agile and user experience support teams within TMNA. These individuals used their expertise and Toyota-specific experience to assist project teams from corporate IT and Connected Technologies, thereby creating success stories and winning over skeptics to transform TMNA into an agile and customer-focused company. Occasionally, successful practices are even spread beyond TMNA, with executives such as Daniel Hall multi-capping to bring Toyota Connected’s user experience design and engineering approach to TMC for global adoption.

Scaling Platforms by Creating Local Support

As a standalone company supported by multi-capped leadership, Toyota Connected attracts top-tier digital talent interested in working at a small company with global reach. From its start in 2016 to late 2021, the company grew from 40 to 175 full-time employees and developed several digital platforms that form the basis for most of Toyota’s digital offerings. The global Mobility Services Platform, for instance, enables regional Toyota operating subsidiaries to create their own car- and ride-sharing solutions, as well as telematics-based insurance offerings. To help regional subsidiaries leverage these global platforms and tap into a global talent marketplace, Hicks and Basra opened new Toyota Connected offices in Europe and India. Multi-capping enhanced global alignment: Hicks multi-capped as chairman of Toyota Connected Europe, and Basra multi-capped as a board member of both entities. Like its North American counterpart, Toyota Connected Europe is an independent company; its chief executive officer multi-capped to also serve as the vice president of Connected Technologies at Toyota Motor Europe. This approach supports local adoption of Toyota Connected’s digital platforms by helping overcome “not invented here” bias. As a result, regional entities can leverage the global platform to create digital offerings that are tailored to the unique needs of their local customers.

Decision Rights for Organizational Ambidexterity

Toyota Connected’s specialized talent is enabling the company to develop radically new digital platforms, offerings, and ways of working that are paving the way for Toyota’s transition from car manufacturer to mobility company. But it is the overlap of Toyota Connected’s leadership with other Toyota entities that is ensuring the company can pursue these efforts efficiently and in a way that the rest of the company can adopt globally. Through multi-capping, Toyota has shown that digital disruption does not have to cause organizational upheaval. Nor does rapid innovation have to come at the cost of operational efficiency, provided that executives make themselves—and their teams—accountable for both.

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.