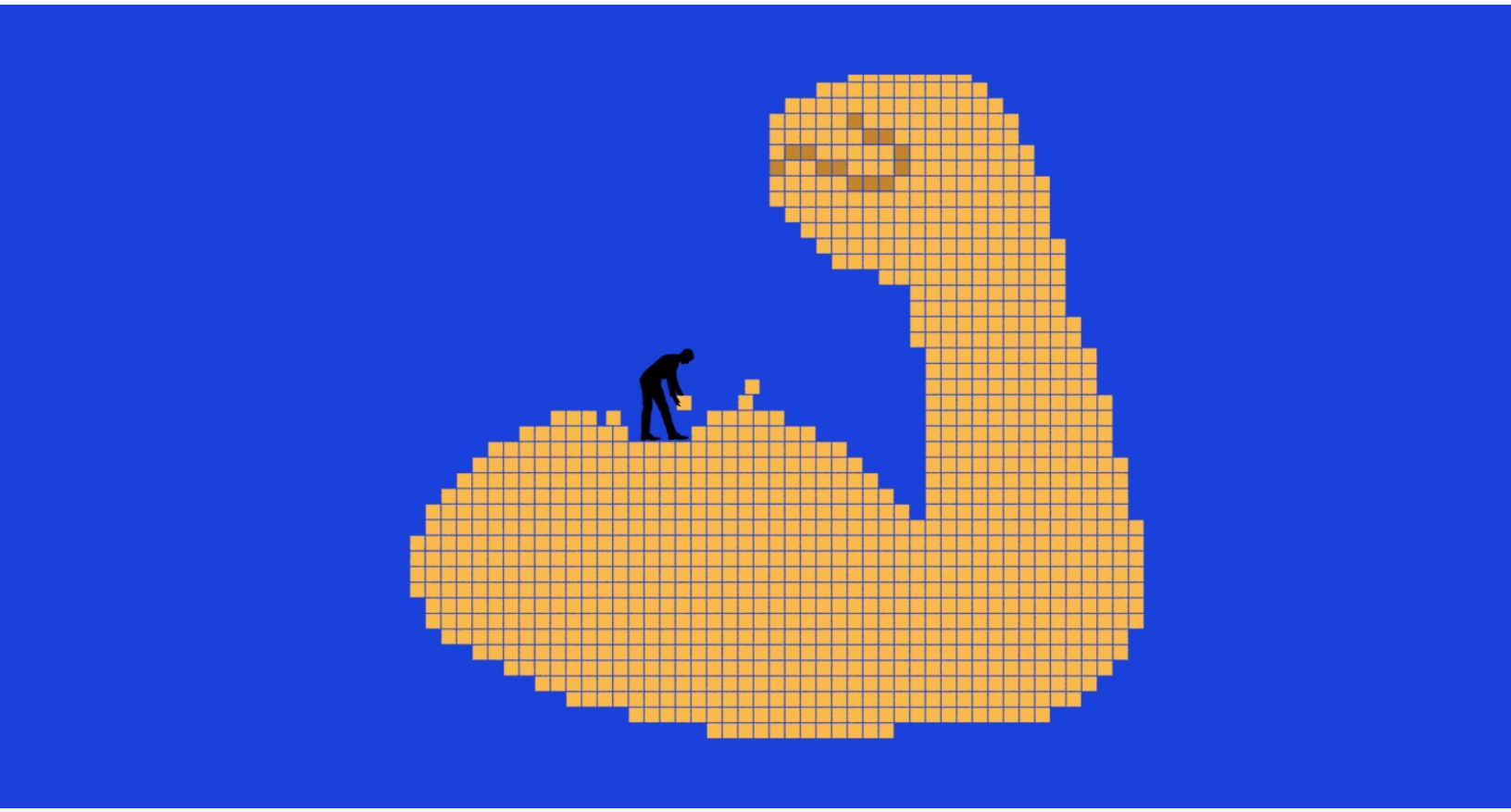
McKinsey Quarterly

Building the AI muscle of your business leaders

The real competitive advantage with AI comes from having business leaders who can bridge business problems with the possibilities technology offers.

by Dana Maor, Eric Lamarre, and Kate Smaje



December 2025

One of the most critical roadblocks to achieving at-scale impact with digital and AI (D&AI) transformations is having a sufficient bench of domain leaders. These are the N-2 and N-3 executives (that is, those two to three levels below the CEO) who lead a domain (either a business line or function) and drive end-to-end transformation with AI (see sidebar, "What is a domain"). AI tools are everywhere, but the skills to apply them to real business problems—improving customer experience while driving down unit costs at scale—are not.

Having these domain owners is probably the single most critical role any business needs for its AI transformations. The CEO has to lead the transformation overall, and the C-suite needs to align on priorities and enterprise capabilities to enable AI. But it's the domain leader who has the operational responsibility for translating the visions and plans into real change and real value.

What is a domain?

A domain is an end-to-end business process (or a value stream if you are from the school of lean management). Domains are large enough to deliver meaningful impact once improved but small enough to be transformed without undue dependencies on other parts of the business. Each domain typically requires five to 15 interrelated use cases or solutions to be implemented to capture the real transformational value. Digital and AI transformations scale by essentially adding new domains or deepening impact in existing ones.

That focus on the domain is particularly critical because most, if not all, companies we have studied derive the majority of their benefits from a few deeply transformed domains.

So, while it's important to build up the tech-savvy skills of everyone in the business, we will focus this article on the domain owner. The most effective domain owners can speak to customer needs, strategy, organizational design, and operational performance—the traditional executive muscle. But they also have built up a "second muscle": being tech savvy enough to develop an AI-enabled transformation road map, understand modern software delivery, and appreciate the health of their data estate, technology platforms, and engineering talent.

We are, however, far from having enough domain leaders today. Our analysis of LinkedIn profiles of senior leaders in Fortune 500 companies indicated that just 17 percent of their skill set is technical by nature, and only 5 percent of their careers included holding a technical role.[1] That's not surprising. Historically, tech-capable leaders tended to build a career in IT.

[1]The analysis covered 3,348 C-suite leaders and 903,565 senior leaders in 492 global companies in the Fortune 500. Tech education: STEM fields such as mathematics, engineering, et cetera; tech skills, as a percentage of all skills mentioned in each profile (for example, data science, DevOps, cybersecurity, et cetera); tenure in tech roles: the percentage of career spent in roles such as vice president of engineering, chief digital officer, et cetera.

Despite the shortage of domain owners with strong AI muscles, a model for what it takes to be an effective domain owner—and how to build the corresponding tech muscles—is emerging.

What skills define domain owners?

Meet Adam Boyd. He's a senior executive at Citizens Bank. A few years ago, he led a business line called home equity lending, which lets customers borrow money using the equity in their home as collateral. Adam had a vision to reinvent the customer experience with technology. His vision was to provide homeowners with preapproved lines of credit, a much-streamlined application process, and automated back-office operations so customers could receive their money in just a few days, compared with the industry standard time of as much as 35 or more days.

Bringing this vision to reality required Adam to work side by side with the bank's technology, credit, risk, compliance, strategy, and finance leaders to develop a road map of use cases that would deliver this new offering. Key elements included 1) using data and AI to automate the analysis of customers' credit backgrounds to pre-underwrite offers, 2) creating personalized digital marketing campaigns, 3) streamlining the digital application to just a few clicks, and 4) implementing process automation to reduce back-office cycle time.

The bank's leadership was excited about his plan and provided him with four cross-functional development teams. Leading tech delivery teams was new for Adam. He had to learn agile software development and the different roles on an agile team. He also learned about the bank's data architecture and overall technology stack to build this new offering. Adam didn't just oversee these teams; he stayed closely involved to help overcome roadblocks, redirect development efforts when needed, and ensure, through iterative testing, that the technology being built would meet customer needs.

Finally, Adam owned the change management end to end—resolving channel conflicts, resequencing operations workflows, and upskilling colleagues across contact centers and branches. This required collaborating closely with senior colleagues in distribution, marketing, risk management, technology, and operations.

This program wasn't always smooth sailing. Hard cross-functional trade-offs were often required from the C-suite, such as reallocating marketing spend to digital channels and revisiting credit policies. Two years later, however, Adam and his colleagues delivered a breakthrough customer experience that far outpaced the industry, and they achieved lower selling and servicing costs.

Adam's story is rare but not unique. Take Neesha Hathi, the head of Wealth & Advice Solutions at Schwab. She was not a technologist by training but learned the ropes through a series of

earlier roles prior to her current position, including running a software subsidiary and being chief digital officer. She became formidable at transforming customer journeys and operations processes with technology. Or take Menno Van der Winden, who, when he was head of Quality and Product Development at Tata Steel, built his muscle in applying advanced analytics and AI to improve product quality and productivity in one of the largest steel plants in the world—driving step-change improvements in quality and production throughput.

These leaders exemplify the key skills that AI- and tech-capable business leaders develop—what we are calling the "second muscle." When business leaders master this craft, they have the ability to do the following:

— *Reimagine their domain and create a transformative vision with the customer at the center.* They understand customer pain points and unmet needs. They know the major sources of waste in their operations. They use creativity and pattern recognition to reimagine the business with AI—not just automate an existing workflow.

— *Develop AI-enabled transformation road maps.* They know how to work with domain experts and functional specialists to reimagine end-to-end processes through AI and technology. They turn those inputs into a comprehensive road map of sequenced use cases with clear KPIs tied to outcomes. They don't delegate this job to IT or lower down the line in their organizations. They own it because it's mission critical.

— *Oversee tech delivery.* While they are not deep technology experts, these leaders have sufficient tech depth to oversee development, help their teams prioritize work, solve problems to overcome roadblocks, and effectively challenge their thinking. They work quickly and iteratively to build scalable solutions that delight customers. And they take advantage of having cross-functional teams under their leadership to drive development effectiveness and speed.

— *Lead end-to-end change management.* Tech-capable business leaders don't delegate the responsibility for implementing their AI solutions. They own their adoption and scaling. They are accountable not just for developing solutions but also for ensuring that these solutions deliver value. Because they have the best overall view of the end-to-end process being transformed, they are best placed to design and orchestrate a well-integrated change management effort.

The business leaders who develop this second muscle hold the key to your future with AI. That's why the big (maybe the biggest) question for any CEO or board member to answer is: How many Adams, Neeshas, and Mennos does your company have?

How do you build a second muscle and become a domain owner?

Building your AI-savvy quotient is an ongoing job; don't expect a tech boot camp and the occasional meeting with start-ups to be sufficient. Building this second muscle—and keeping it from atrophying—takes intent, discipline, and long-term focus.

Learn like it's your mission

Many companies have sophisticated training programs, but at the end of the day, domain leaders understand that they need to own their learning journeys. We call them "fearless learners," and they are driven by curiosity and a passion to broaden and deepen their knowledge.

Citizen Bank's Boyd spends six to ten hours a week discussing and learning about tech-related matters. This comes in many forms: protecting time to read about the latest developments, exchanging views with technology leaders at his bank, meeting tech vendors and consultants, attending sprint reviews, going to conferences, visiting other financial institutions that have done novel things, meeting with fintech start-ups, taking online courses, et cetera.

Schwab's Hathi described how important it is to actively look for opportunities to deepen your learning. For example, as a board member of a health company, she is a member of the National Association of Corporate Directors (NACD). When she was considering continuing education course options, she decided to deepen her knowledge of cyber and took a 30-hour course on cybersecurity risk.

Fixate on value and reimagine what it takes to get it

AI pretenders chase a quick proof of concept to check a box on their performance review. "Using tech" leads their thinking. Van der Winden never starts with technology. Instead, he starts by asking what the biggest problems are, and then he figures out if a technological approach might solve them. "I'm not a data scientist," he said. "What I've learned is to identify the attractive problems worth solving."

That essentially means domain owners go after business problems that are worth getting out of bed for. Our rule of thumb is that the potential value of a transformational effort should generate 20 percent of incremental value. Domain owners are particularly open to new ways of doing things in search of that value. They go beyond improving processes to reinventing journeys and breaking orthodoxies.

We are seeing the latest iteration of the importance of this mindset with AI agents. Companies finding success with agents don't focus on individual use cases or simply automate existing processes; they are reimagining end-to-end workflows to take advantage of agent capabilities.

This mindset is grounded in a firm understanding of what AI can do, and it cannot be delegated. As Hathi put it: "Many business leaders who are less tech savvy will simply say they don't

understand tech and turn technology challenges—or opportunities—over to IT to solve." The result of this impulse to delegate is often constrained thinking and marginal improvements rather than using tech to unlock substantial new value.

Understand the operational levers to get value from tech

It's never *just* tech when it comes to extracting value *from* tech. Domain leaders understand that ensuring technology delivers on its potential requires integrating systems—both technical and organizational. This systems-level thinking is essential to successfully rewiring the business.

Boyd captured this idea when describing the value equation of D&AI transformation as resting on three legs: people, data, and technology. "The real power of technology is working with the right people to build systems that take customer inputs, marry them with better models, and deliver better customer experience," he says.

Van der Winden voiced a similar belief that developing technology solutions depended on much more than the technology itself. He understood, for example, the need for leadership commitment from the business side of the house as well as how important it was to have good data in place. "I would only commit to a solution if there were a business case and a senior owner from the business attached to it, and if the data was available and of reasonable quality."

The intense, cross-functional nature of a D&AI transformation requires a much greater level of collaboration across the organization. That means domain owners routinely need to engage and work with leaders across various functions, whether that's bringing risk expertise early into the solution development or working with frontline teams to ensure solutions are adopted.

On a technical level, this systems view is often reflected in an ability to understand enterprise architectures, in the same way many senior leaders understand capital or talent architectures. That's because decisions around enterprise architecture are crucial to driving scale, building up resiliency, and enabling the kind of cross-functional capabilities that support the end-to-end workflows that are needed to get value from AI.

Get your hands dirty

There is no substitute for learning on the job when it comes to building up your AI muscle. Clearly, business leaders need to rely on skilled technologists and engineers to solve problems. But that doesn't mean simply delegating the work to them. Tech-savvy leaders get into the weeds with teams to develop solutions.

Hathi emphasized that developing this tech savviness requires leaders to get past a conceptual understanding of tech and grasp it at a practical level. "It strengthens your instincts so you can quickly tell if a technology program or issue is big or small, complex or straightforward."

Having that practical understanding helps to overcome an issue that bedevils many executives: difficulty calibrating or judging the progress of tech programs. Many will struggle to understand if a tech project is going well or not because they don't understand the practical details that can determine the success of a technology solution.

Hathi didn't have a traditional tech background, so she invested time in working with teams. "I participated in the design workshops, really digging into the issues and figuring them out," she says. She worked with engineers, data scientists, tech leads, and product experts to understand what they were doing. "When I then spoke with the board, I could speak with confidence and credibility ... about how certain investments would help our teams build the products and services we needed, for example."

Develop a nose for tech talent

Talent has always mattered. But few leaders understand how mission critical that is when it comes to tech talent, where a top engineer or architect can generate ten times more value than their peers. In our *Rewired* work, we've observed that successful leaders spend *most* of their time on people questions, from recruiting to operating models that allow people to thrive in their work.

This includes spending time with product owners, data engineers, data scientists, solution architects, and AI specialists to appreciate what differentiates the best of them. Can they explain the solution architecture and the reasons for the choices made? Can they anticipate vulnerabilities? Can they describe how data will flow?

Bringing this to life means investing significant time in the unglamorous work of creating incentives (bonuses and performance KPIs) that encourage AI-first behaviors, understanding which skills are needed to build priority solutions, developing tailored learning journeys, and creating new compensation models.

Van der Winden highlighted the importance of training in particular. As he formed new teams to work on new opportunities, he depended on finding top engineers and then training them up to use advanced analytics and work with cross-functional teams. "For every use case with a new team, we brought in a few people from my group who had done it before to work with the new people," he says. "This was critical to build on the skills we were developing and expanding the footprint of people who could do the work." His team ended up training more than 500 engineers.

Get comfortable with ambiguity and 'stage gate' your efforts

This is one of the hardest things for senior business leaders who are assessed on "making their numbers." If you break out of incrementalism and truly reimagine how your business could run differently, this will imply a certain level of ambiguity on the path forward. AI capable business leaders master the art of stage gating their efforts, achieving some economic benefits with every tranche of investment, and constantly pivoting their efforts as they encounter roadblocks.

Understanding technology in itself shouldn't be the goal of business executives; understanding how to work with technology to create value is. This may seem daunting at first, but it's very doable, as Boyd underscores: "My learning curve was very steep, but after six months, I started feeling more confident in my effectiveness to lead a tech-intensive business transformation."

What should the C suite do to develop more AI capable domain owners?

Of all the AI upskilling programs you could imagine launching, none will be more strategic and impactful in our view than developing tech capable domain owners (as well as the C-suite). "You can't hire a domain owner," Van der Winden emphasizes. "The person in that role has to know the company and have domain expertise. You need to find them and upskill them." There are roughly 15 to 30 core business processes or customer journeys in most large companies (or divisions of conglomerates), each with a business leader and a team surrounding that leader that has the right mix of functional capabilities. That means you'll need about 75 to 150 leaders among your N-2 and N-3 population.

Consider taking these three practical actions to create this bench of domain talent:

1. *Put the right people and incentives in place*. Start by clarifying which core business processes and journeys have the most potential to be transformed by AI and ask yourself if you have the right current leaders in place. More specifically, do they have the leadership traits outlined earlier? It's common to change up to 20 to 30 percent of your current leaders. If you don't make explicit changes, you will continue fighting the gravitational pull of the legacy organization and the resistance it can create.

   Vikram Sinha, the CEO of Indosat Ooredoo Hutchison, an Indonesian telecommunications provider, asserted that effective change was "10 percent tools, 20 percent platform, 70 percent people." As part of a commitment to transform the business into an AI-native telco, Sinha has championed an at-scale AI-capability-building effort, with quarterly executive-suite AI immersion programs and an AI leadership initiative for the top 100 executives, focused on learning both AI and leading in the age of AI.

2. *Launch a strategic upskilling program*. While product management is an important aspect ofthe new skill set, the job of AI-capable domain leaders is broader and more complex. That's because domain owners own an end-to-end business process with hundreds or thousands of people in business operations and customer service. Their new skills must also cover the world of process reengineering, AI models, data management, engineering talent, and change management. Your upskilling program should reflect this.

   While traditional coursework helps build a foundation in these different disciplines, hands-on practice with real business problems is necessary to build the muscle. This can be done by 1) working side by side with a consulting partner, 2) adopting a two-in-a-box leadership model where a tech lead partners with the senior business leader, and 3) conducting a real-life capstone project as part of an AI master class.

3. *Fix the operating model to enable business-led delivery*. No amount of investment in upskilling will overcome an ineffective operating model. Specifically, engineering talent needs to be embedded in teams that work under the leadership of domain owners. The funding model must shift to what is known as "persistent funding," where a spend envelope is allocated to a road map (versus individual projects), giving leaders redeployment flexibility. Finally, performance management and incentives must be aligned with the KPI improvements targeted by the transformation road map.

When you have built a bench of AI-capable domain owners, your company has a real competitive advantage. That's because these leaders are hard to replicate. They combine deep domain expertise specific to your business and the technology, data, and AI know-how that makes them formidable business transformers.

Dana Maor is a senior partner in McKinsey's UK, Ireland, and Israel offices; **Eric Lamarre** is a special adviser to McKinsey and senior partner emeritus in the Boston office; and **Kate Smaje** is the global leader of technology and AI and a senior partner in the London office.

The authors wish to thank Andrea Pedroni, Charlotte Seiler, Federica Rossi, and Simon Gallot Lavallée for their contributions to this article.

This article was edited by Barr Seitz, an editorial director in the New York office.