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How to Integrate Cloud, Data, and AI Technologies — and Make Your Company More Adaptable

Companies that invested in this "digital core" saw more growth and higher returns. *by Paul R. Daugherty, H. James Wilson, Karthik Narain, and Prashant Shukla*

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We've entered an era of radical disruption, where waves of new technologies make continuous reinvention the default business strategy. Generative AI is only the latest innovation of many more to come that organizations will need to accommodate at pace and scale, or risk falling behind their competitors. That means companies must

create a "digital core" that integrates cloud, data, and AI technologies to build an interconnected foundation for the enterprise that balances growth and reinvention, instead of focusing merely on cost.

According to our recent Accenture research on more than 1,500 large, global companies across industries, those that built a reinvention-ready digital core achieved what we call the "60:40 effect." Compared to a sample baseline, these leaders experienced a 60% acceleration in their revenue growth rate (from 7.1% to 11.1% on average) while increasing profitability by 40% (from 14.2 to 19.4 percentage points on average).

Those are big numbers. They've been building for a while — especially since it became clear that leading companies would use AI to augment human capabilities, not replace them — a trend we first identified six years ago in our book *Human + Machine*. We found that leading companies succeeded with AI by adopting five crucial principles having to do with mindset, experimentation, leadership, digital technology, and skills, which together yielded the acronym MELDS. It was intended as a mnemonic for realizing the most value at the nexus of human/machine interaction.

In updating our research for a new edition of our book to be published in September, we found that the digital core has vastly expanded in importance, driven by the pandemic and the explosion of generative AI. No matter your industry, the strategic shift toward continuous reinvention is fueling an urgent need for a digital core that amplifies machines, humans, and the interaction of the two in significant new ways.

How to Build an Industry-Leading Digital Core

A strong, flexible digital core functions as a powerful engine of growth. It's your means of supporting the current business drive toward

efficiency and effectiveness, while remaining flexible enough to respond to the organization's new needs and quickly adopt and scale the latest technology innovations.

Take generative AI for example. Our analyses show that over the next three years, companies with industry-leading digital cores will reinvent twice as many functions with gen AI compared to others, and are expecting to create twice as much value.

Building a digital core tailored to your business requires using the right mix of cloud practices for agility and innovation; data and AI for differentiation; and applications and platforms to accelerate growth, next-generation experiences, and optimized operations — with security by design at every level.

Many companies have the building blocks. But without proper integration and activation of these components, you do not have a reinvention-ready digital core. In fact, sometimes the IT stack is a deterrent to reinvention. By contrast, a seamless digital core, developed for both machines and humans, positions an organization to rapidly seize new opportunities to unlock greater value.

Our research of 1,500 companies globally shows that businesses can achieve reinvention readiness through three distinct tenets for building a strong digital core:

1. Lead with value.

Your tech capability determines the limit of attainable business value. The more brittle your digital core, the lower your ability to leverage new waves of technology and support reinvention. Look at your technology objectively to understand the state of your digital core — and the investments you must make to modernize it and enable AI.

Start with a business case that considers AI costs, benefits, and readiness to scale to value. In doing so, shift the focus from siloed use cases and tasks to prioritizing business capabilities across your value chain. Understand the potential to develop end-to-end capabilities powered by AI, reimagined processes, and new ways of working.

Consider banking multinational Standard Chartered, which set itself the goal of becoming "fit for growth" in February 2024. The bank wants to enhance shareholder return and revitalize the stock. This corporate strategy is underpinned substantially by the transformation of their technology. This begins with a value-led approach to technology adoption. The bank is focused on carefully maintaining their legacy systems while making incremental changes. To that end, not only are the bulk of its applications cloud-based, but the bank plans to reduce the total number of applications. It expects a savings of $1.5 billion over the next five years under the fit for growth program.

Furthermore, even as the modernization of parts of its tech stack continues, Standard Chartered is venturing out with new innovative digital offerings and business models such as BaaS (Banking as a Service) through Audax, a digital banking technology solutions provider. Standard Chartered built MOX and Trust Bank (new cloud banks with a core tech stack enabling composable API integration). Using AI and machine learning, it has automated processes to improve efficiency, enhance customer experience, reduce biases, and ensure self-healing IT automation in its systems. Additionally, it has made significant investments in cybersecurity to protect its systems and customer data.

2. Boost strategic investments in innovation by 6% or more each year. Leading companies continually increase the proportion of their IT budgets dedicated to strategic innovation as opposed to operations and maintenance. Specifically, our analysis finds that they should increase

the proportion of their IT budgets dedicated to strategic innovation, such as generative AI, by at least 6% year-over-year by reducing run costs and applying those savings to innovation. Companies can use these freed-up funds to redesign business processes, launch new products and services, and enter new markets.

In some cases, this will mean automating some processes but, as we argued in the first edition of *Human + Machine*, many of the most productive investments will go toward augmenting the power of people. Generative AI has automated and augmented human work since shortly after its appearance. AI assistants are now maturing into autonomous agents that can act on our behalf, dramatically amplifying what people can achieve. Along with humans to guide and oversee them, these advancements will allow agent ecosystems to complete tasks in both the physical and digital worlds, generating immense value for every enterprise.

Other emerging technologies promise further opportunities for powerful human-machine collaboration. For instance, spatial computing fuses digital and physical realities, enabling people to immerse themselves in digital worlds with a physical sense of space, or layer content on top of their physical surroundings. In science-based industries, AI-driven research platforms — like those that helped produce Covid vaccines in record time — will relieve scientists of tedious hit-or-miss testing tasks and free them to develop revolutionary scientific breakthroughs.

3. Balance technical debt liabilities with investments for the future. Technical debt is the cost, in terms of money and effort, required for a company to keep its IT systems up to date and capable of meeting business needs. Debt can be accumulated through a variety of sources — legacy and buggy code, outdated programming languages, a lack of documentation, and outdated technologies and infrastructure.

Individually and together, these compromise system performance and require remediation to reduce their compounding effects.

In addition to these classical types of technical debt, other debt is incurred through the adoption of new technologies. For example, companies have been incurring AI-specific technical debt since the rise of machine learning methods in early 2010. Our research discovered that AI is a top contributor to tech debt, second only to applications.

To rapidly scale generative AI capabilities, you must also invest in tech debt remediation activities to counter the potential downsides of inadequate scaling efforts. Failure to address these issues now may result in short-term benefits, followed by a collapse of performance resulting from a weak foundation.

The tech debt burden on U.S. enterprises alone is estimated to exceed $1.5 trillion. Companies must actively control this debt to manageable levels. Our analysis found that leading companies allocate, on average, 15% of the IT budget toward tech debt remediation — a sweet spot that balances debt reduction with investments in the future.

Taken together, these steps will enable a company to rapidly adopt new technologies and benefit from first-mover and fast-follower advantages. Today, only a small number of leading companies (3%) have achieved the 60:40 effect — a 60% acceleration in revenue growth along with a 40% increase in profitability. Powered by flexible, reinvention-ready digital cores, they are well-prepared to adopt the next new wave of technology quickly and effectively, optimizing tasks, augmenting human capabilities, and opening up new avenues for growth. In the process, they will create an entirely new language for reinvention, impacting every part of every business and every job from CEO to frontline worker.

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