

Executive Summary

Reinventing with a Digital Core

Chapter 2: How to mobilize technology and
evolve to a reinvention-ready digital core

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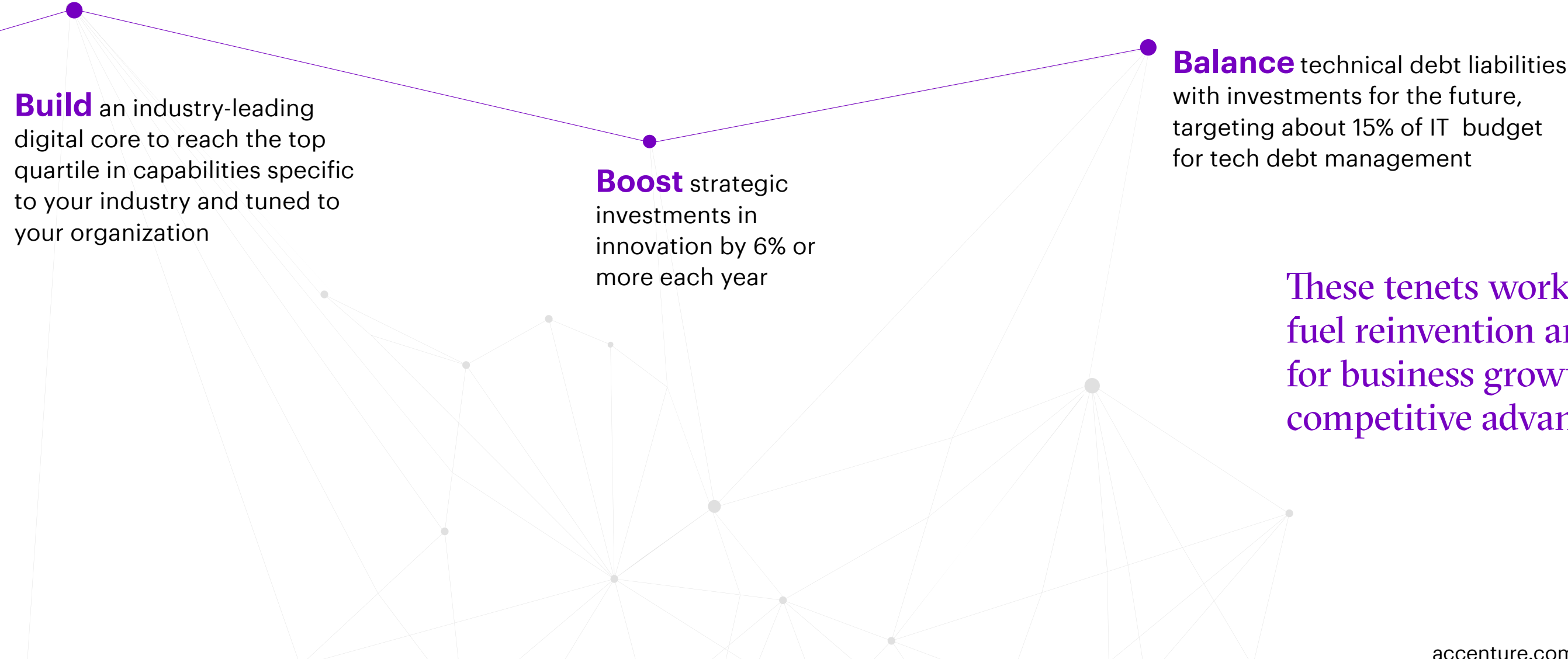


What's changed in how we evolve to new systems?

In our Reinventing with a Digital Core report, the first chapter in a series, we offered a clear look at **what** digital core means in this era of generative AI and **why** it is becoming a prerequisite to drive continuous reinvention in organizations.



From our global survey of 1,500 companies and extensive client experience, we found three tenets that organizations can follow to get the most value, or the 60:40 effect—60% higher revenue growth rate with 40% higher margins than peers.



Build an industry-leading digital core to reach the top quartile in capabilities specific to your industry and tuned to your organization

Boost strategic investments in innovation by 6% or more each year

Balance technical debt liabilities with investments for the future, targeting about 15% of IT budget for tech debt management

These tenets work in sync to fuel reinvention ambitions for business growth and competitive advantage.



In this report, chapter two, we show how organizations can evolve to/build such a digital core to support continuous reinvention and achieve the three tenets in the most flexible, resilient, intelligent yet cost- and resource-efficient ways.

What's changed in how we evolve to and orchestrate around new systems? The biggest change is generative AI, and its impact on almost every aspect of technology and business. Take coding, where generative AI is enhancing coding accessibility at the unit level, boosting developer productivity by nearly 30% in the first year. Consider AI agents, which are increasingly handling complex tasks, from transcribing post trade settlement activities to providing digital agents for end-to-end customer engagement activities by tapping into the underlying tools, applications and processes.

To benefit from these advancements, organizations must move away from traditional instruction-driven, predefined

systems that change rarely (maybe once in three to five years) to intention-driven systems powered by AI and generative AI—with a cognitive architecture which mimics human-like thinking and learning; always on, always listening and always changing by learning from everything that happens within and around the organization. This allows for dynamic responses and adaptive behavior that traditional systems simply cannot match. These systems are given specific goals by people and work on their own to reach those goals without needing clear instructions from business analysts or programmers. This architecture is built to ensure that the systems continuously learn and improve over time, similar to how an architect refines blueprints to perfect a design.

Some parts of this change are new. There are no common solutions or best practices for many of the new AI-driven applications or architecture. Yet, this moment presents a crucial opportunity for those who are up for reinvention. Blockbuster is a cautionary tale. The video-rental chain waited too long, and Netflix came along. The industry assumed Netflix was just a competitor in the video rental space, but they were preparing to disrupt the entire media landscape. Netflix innovated early and across multiple areas, building its digital core with proprietary technologies such as custom-built CDN (Open Connect), Dynamic Adaptive Streaming, scalable recommendation engines, chaos engineering for resilience and a proprietary API gateway called Zuul. The result: Netflix upended the media industry.



Not every idea needs to be a 'Netflix moment.' Sometimes, it can be as simple as rethinking routine processes of yesterday by applying today's technology in practical ways. For example, a large retail company is testing their procurement process to conduct negotiations with its 100,000-plus suppliers using generative AI powered chatbots. In the pilot phase with 80+ suppliers, the chatbot successfully reached an agreement with more than half of them—well above the original target—with an average negotiation turnaround of about 10 days. The retailer gained almost 2% in savings on the spend negotiated and an extension of payment terms to about a month. In the future, systems built with AI agents will be able to process complex algorithms, manage large data volumes, learn from patterns, predict outcomes and automate decisions.

In the modern era, access to disruptive technologies like cloud computing and AI is no longer the issue—these advancements are available to everyone. What sets the winners apart is how effectively they harness these tools to transform their operations. Winning in such an environment is like competing in Formula 1, where every part of the race car is meticulously designed and fine-tuned for maximum performance. Success will depend on companies' ability to leverage advanced engineering skills to redesign business processes and evolve to/build these sophisticated systems. As more parts of business become digital, the ability to fine-tune and adapt these systems will give businesses a strong competitive advantage. This will allow them to respond quickly and innovate faster than their competitors.

A reinvention-ready digital core is becoming a key differentiator for companies. Based on our analysis and extensive client experience, we found three engineering principles that simplify and supercharge how organizations can evolve to/build this digital core in this age of AI and generative AI to achieve a level of flexibility and new capabilities simply not possible before with traditional approaches—autonomous-driving, AI agents that negotiate terms with suppliers, personalized medicine or predictive / preventive customer care. Leading companies adopt these **ACT** principles—Architect for Intent, Connect the Dots and Thrive with Ecosystems—two times more than others. Following these principles can help organizations **build** or evolve to an industry-leading digital core easily, **boost** innovation budgets with efficiency gains and **balance** technical debt by anchoring to large ecosystems even as they explore leading-edge innovation at speed.



Architect for Intent

Evolve architectures to allow
dynamic adaptation with AI



Principle:

Evolve business and technology architectures to a modern cognitive architecture which mimics human-like thinking and learning—always on, always listening and always learning. Dynamically adapt to changing user engagement, context and data, using AI as the central orchestrator of processes. This allows systems to be flexible to changing business needs, moving away from instruction-driven to intent-driven systems.

Embracing this principle can help companies make their processes and workflows (powered by the underlying platforms) evolve to changes in user intent, environment and data. The goal is to create an architecture that allows business processes to be dynamic based on context, charting unique and new paths to achieve defined objectives. AI serves as the orchestrator and intelligence command center. This is different from traditional architecture, which prioritizes set goals, rules and paths—predefined business processes in workflows—and needs human intervention to make any change.

Fashion retailer Shein and marketplace Temu use this principle to introduce up

to 10,000 new items daily, far outpacing their competitors.¹ How? By using AI to monitor social media trends in real time and employing a lean production model with deep AI integration and orchestration. In other words, the technology is currently available, and some companies are already leveraging it to its potential.

To reach this level of adaptability, industry leaders must adopt an AI-first mindset. They must view agent-driven AI systems as tools to fundamentally reinvent how they operate their business, and not just retrofit them into existing processes. This requires a rethink of business models, digital product development and customer

engagement, leading to new processes, services and products built from the ground up. Technology, business processes and the people involved are equally important for this transformation. The approach, however, has shifted. Businesses once solved the process first, then put in place technologies and trained people afterward. Today, all three—technology, business processes, and how people interact with them—must change together at the same time, constantly changing and driven by personalized data.

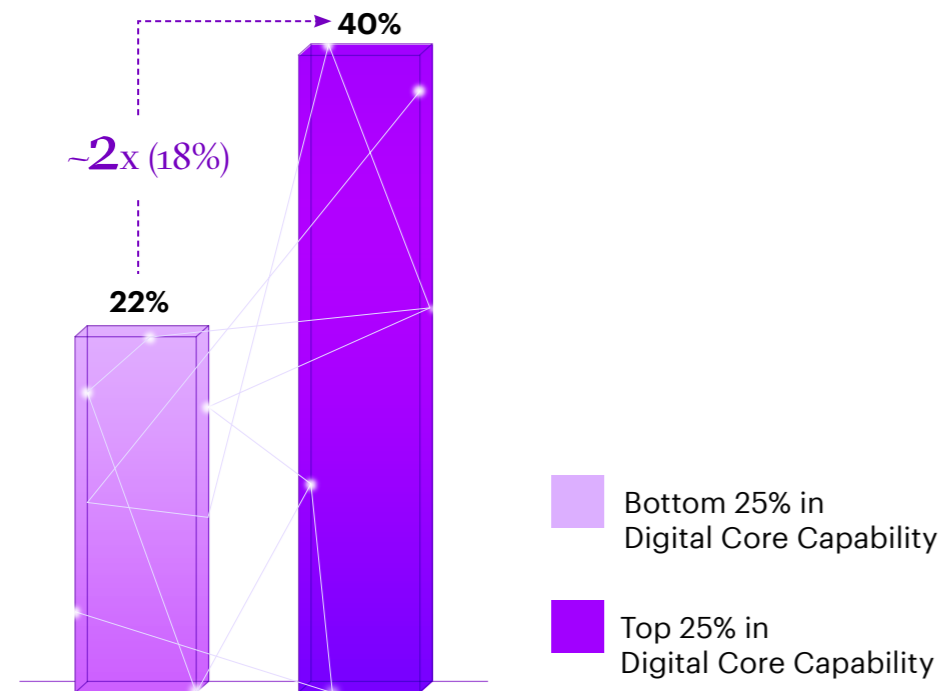
In practical terms, this means evolving to an architecture with built-in intelligence and context, where AI agents can reason, plan and work alongside humans to dynamically

execute tasks. Using Large Language Models (LLMs), the system interprets human intentions and adapts based on experience, integrating organizational knowledge for better decision-making. Apart from technology, it also needs leadership commitment to adopt AI-first approaches like AIOps, serverless computing and API-driven access, while ensuring that communication, security and integration are adapted to support the system's agility and efficiency. Top quartile companies in our Digital Core Index are 2X more likely to apply cognitive elements like event data, telemetry and predictive analytics to make automation smarter (Figure 1).



Figure 1: Automating tasks and processes

Leading companies with mature capabilities reimagine automation across tasks and processes 2X more than their peers.



We continually automate tasks/processes and move from manual efforts to autonomous optimization via events, telemetry, and predictive analytics (e.g., auto-scaling)

Source: Digital Core survey (Nov 2023): N= 1,500; percentages represent respondents who selected the response "1-Completely"

Companies are boldly adopting this approach, transforming their business models and launching new revenue-generating products. Take Fortune. The media company reinvented their Fortune 500 and Global 500 lists into a SaaS product powered by gen AI with a custom trained LLM.

The result: It unlocks decades of financial data by enabling users to ask plain English questions and get unique data visualizations leveraging Fortune data. Users can ask questions or use the LLM's power directly on the list to create data visualization about companies. They can see how their rankings have changed over time or compare them within their industry.

Action items: For CIOs and CEOs, the message is clear: To stay competitive, you must lead the charge in adopting AI-first, intent-driven architectures by integrating AI into core processes. Some companies are already making progress on this journey, while others risk falling behind if competitors advance their capabilities and gain market share first. Focus on real-time insights and automating decisions while aligning technology and teams to drive faster innovation. Companies like Shein and Fortune demonstrate that this approach leads to growth and efficiency. Now is the time to make AI central to your business strategy.





Connect the Dots

Connect systems of record
and insights with platforms



Principle:

Seamlessly connect systems of record (transaction platforms) and systems of insights (analytical platforms) to enable real-time analytics for hyper-personalized actions to drive business outcomes including revenue and customer engagement. Maintain a continuous flow of data between these platforms to drive ongoing optimization, self-reflection and better decision-making.

This principle aims to integrate transaction and analytics systems so that changes in transactions are instantly converted to analytics, and insights from analytics can be applied to transaction systems in real-time by AI building context of their environment.

To accomplish this, begin by integrating and rationalizing all packaged and custom enterprise applications into higher-order transactional platforms with clear purposes, well-defined interfaces and open APIs.

Once transactional platforms are in place, connect them to analytics using real-time data pipelines, with data lakes and AI platforms in between.

Create a repository, like an index, for integrating structured and unstructured data from the enterprise, external sources, customer insights and codified domain expertise to enable accurate, responsive and context-aware decisions in real-time. Use technologies such as vector databases to optimize indexing and searching of multi-modal content.

Add a layer of semantics to this brain to make it an enterprise cognitive brain. This layer will help both people and AI understand and interact with the data based on what they want to do. The goal is to create interconnected systems where data flows seamlessly across the organization, regardless of the functions or applications, to support enterprise-wide systems such as Salesforce Einstein for CRM, Joule for SAP operations and Microsoft Copilot. This requires real-time data publishing and subscribing mechanisms, technologies such as knowledge graphs, a data mesh architecture and AI systems that generate actionable insights and feed them back into

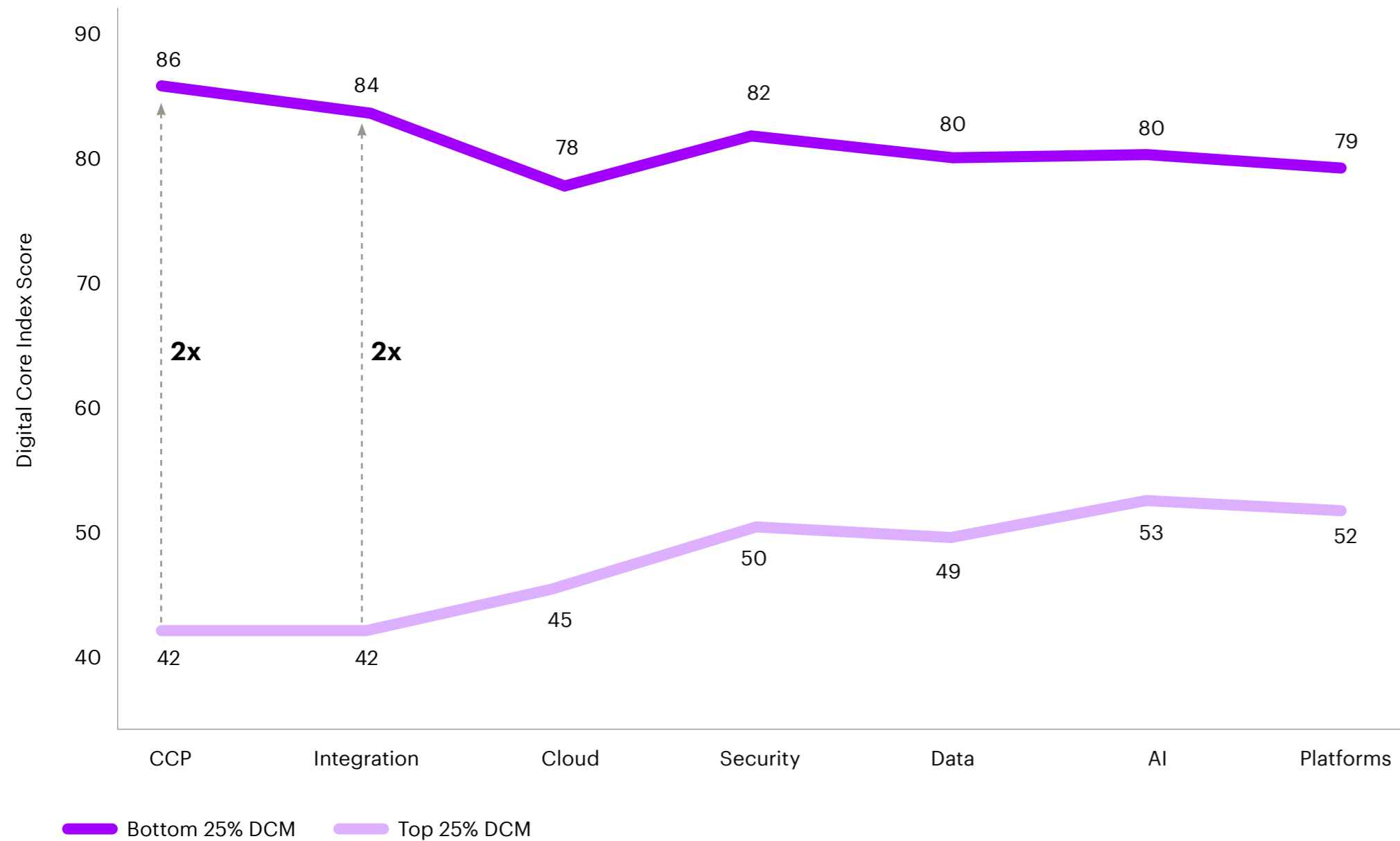
operational systems. Doing this continuously creates self-reflection mechanisms. AI agents learn to answer questions better the first time. They also start exhibiting self-awareness and adaptability, recognizing and correcting for past mistakes with feedback.

With this approach, companies can evolve to/build a smart, responsive foundation that turns raw data into insights and acts on them immediately. Our research shows that superior integration and end-to-end visibility are the top contributors to digital core capabilities. Top-quartile companies excelling 2X more in these areas than bottom-quartile peers (Figure 2).



Figure 2: Connect the dots

Top quartile companies score 2X as high in terms of integration and end-to-end visibility (CCP) capabilities.



Key technologies and standards used include APIs both for internal and external data and event-driven architectures to enable real-time insights and action. Use modular components for scalability and flexibility and unify data models to make these applications function as a cohesive system. This is different from traditional system integration, which creates a time lag for intelligence to get back to transactional systems and effect change.

Action items: Many companies have distinct CIO and Chief Data Officer (CDO) roles. Both CIOs and CDOs need to work together to connect AI-driven analytics with business systems, make operations easier and reduce manual processes. CEOs should align business strategies with these changes, ensuring AI optimizes key operations.

Source: Digital Core survey (Nov 2023): N= 1,500; percentages represent respondents who selected the response "1-Completely"



Thrive with Ecosystems

Plug-and-play next-generation technologies and countless innovations via major partners, at speed



Principle:

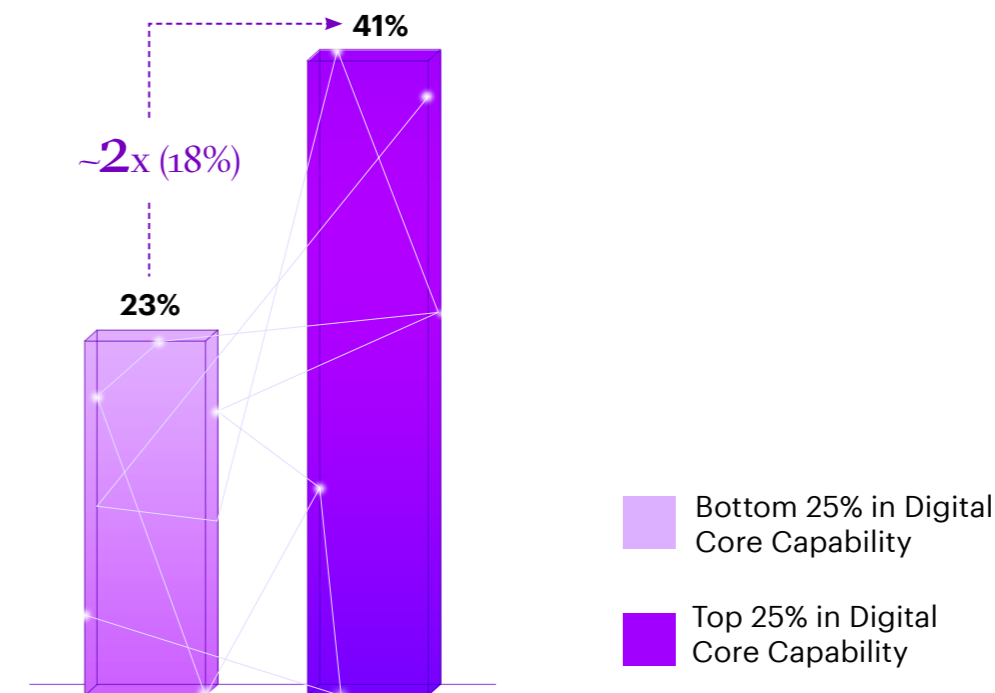
Create differentiation in products and processes by deploying leading-edge innovations faster from both startups and bigger players via larger ecosystems. Benefit from the security, reliability and integration provided by these large anchor partners.

This principle accelerates adoption of next-generation technologies at speed. It uses big ecosystem partners as main platforms to reduce risks like security concerns and technical debt. Traditionally, enterprises have been hesitant to adopt early-stage innovations, especially from startups or open-source solutions. They are worried about security, long-term viability and how these solutions would integrate with their IT infrastructure. Earlier, traditional companies would wait for innovations to become more commercially stable before adopting them while digital natives and disruptors would adapt early-stage innovations to create competitive differentiation. With larger ecosystem partners like Amazon Web

Services (AWS), Microsoft Azure, Google Cloud Platform (GCP), SAP, Salesforce, Oracle and Workday now providing access to early-stage innovations through marketplaces and partnerships, businesses no longer need to wait. Take OpenAI. Its early adoption and success with ChatGPT in large enterprises is partly due to its integration with the Azure platform. Similarly, Veeva, a pharmaceutical CRM solution, has found success by building its solutions on the Force.com platform from Salesforce. Our research finds that top quartile companies in our Digital Core Index are 2X more likely to access next-generation technologies early via large ecosystems (Figure 3).

Figure 3: Thrive with Ecosystems

Companies with higher digital core capabilities prefer to choose vendor ecosystems over standalone solutions to avoid silos and ensure smooth connections.



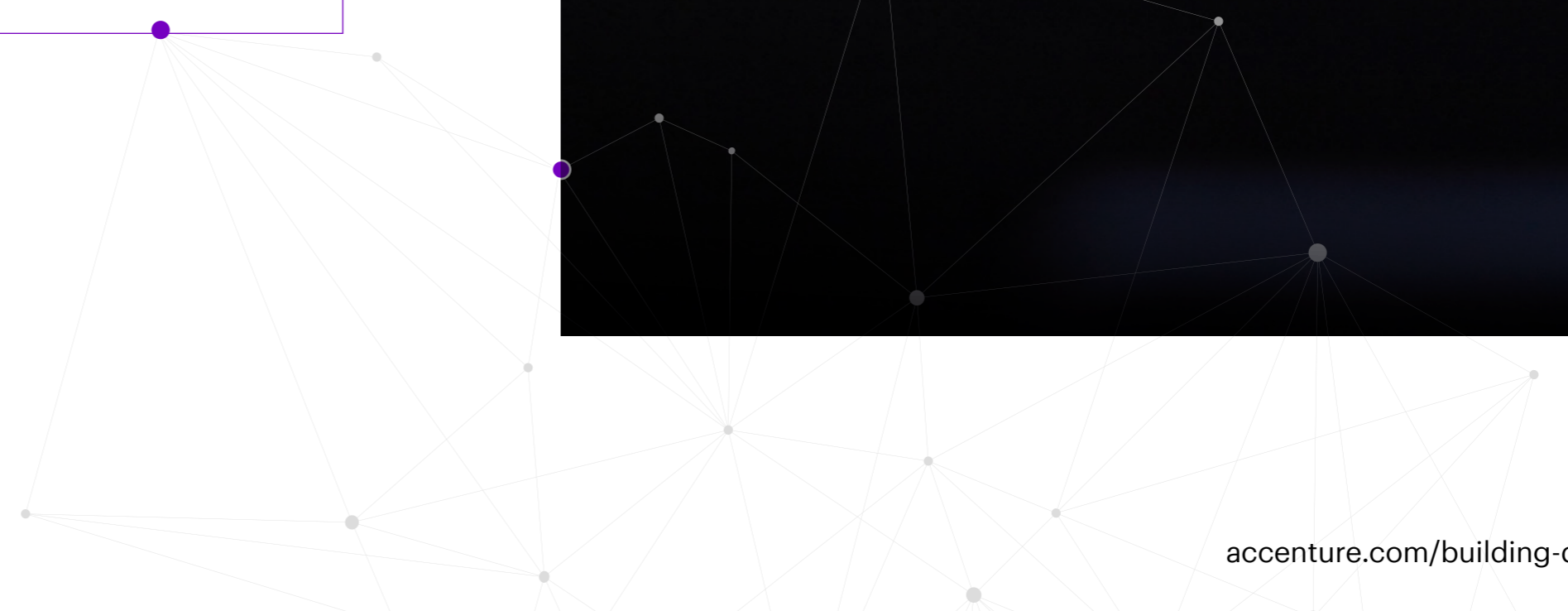
We choose vendor ecosystems over best-of-breed solutions and avoid home-grown code by configuring business needs on standard platforms (e.g., AWS cloud services)

Source: Digital Core survey (Nov 2023): N= 1,500; percentages represent respondents who selected the response "1-Completely"



In fact, enterprises are increasingly adopting a fluid approach across multiple large ecosystems to integrate a broader array of vendors and technologies. This cross-ecosystem agility is becoming an important ingredient to tap into the endless innovation available from start-ups, open-source projects. The cloud continuum—where hybrid and multi-cloud models have become the norm—offers valuable guidance in navigating this complexity. The Continuum Control Plane, functioning as the command center of the cloud continuum, helps identify gaps in architecture that must be addressed for seamless integration across multiple ecosystems. This approach makes it easier to connect and reduces technical debt by giving some responsibility to ecosystem providers. These providers manage security, compatibility, system updates, and support.

Action items: CIOs and CEOs/CSOs must work as equal partners in selecting and leveraging major ecosystems to integrate next-generation technologies. This collaboration ensures that ecosystem choices align with both technical and business priorities. By adopting a cross-ecosystem approach, they can access innovations from startups and established players, minimizing risks and technical debt. Companies like OpenAI and Veeva demonstrate how strategic ecosystem use drives faster innovation.



How can companies get started?

Managing the complexities of business operations while undergoing a digital transformation isn't easy. On top of that, evolving your digital core to a reinvention-ready state seems like a tall order. However, with the right approach, it doesn't have to be overwhelming.

The steps to becoming reinvention-ready can be designed to closely map your modernization efforts. All it needs are a few strategic moves, at the right time and right place within your existing tech stack. And the outcome could be the magic 60:40 effect.

But first, you need to think through your approach: What critical systems do you need to grow and thrive in a world increasingly designed for humans as well as machines? Processes and functions that are dynamic and bring differentiation to your business are the ideal candidates for an intent-based architecture. The key is being specific,

pinpointing actions that can achieve targeted outcomes, such as knowing the environmental factors and the supporting data that influence specific processes. Use generative AI to streamline and compress these processes, rearchitect the systems that support these processes to move from traditional architecture to an AI-agentic architecture, employ agile methodologies and optimize finances with Cloud FinOps. Leverage ecosystem tools and solutions to jumpstart the transformation of these systems. Also, balance technical debt, an inevitable side-effect of innovation.

Being prepared for reinvention is crucial in an AI-first future. Both your architecture and mindset need to adapt accordingly. Begin now, make timely strategic decisions, and continuously seek opportunities to reinvent. This approach will significantly benefit your company, ensuring long-term success and flexibility in a fast-evolving market.



About the research

Quantitative Executives Survey

The survey of 1,500 global C-Level IT executives was completed in November 2023. The aim was to collect data on:

1. State of their tech stack and maturity of key components of the digital core: digital platforms, data and AI backbone, and digital foundation (cloud-first infrastructure, continuum control plane, security, and composable integration).
2. Business landscape, including business structure and transformation; reinvention strategy; and business functions transformation.
3. Financial and operational performance via multiple measures.

The graphics below summarize the survey firmographics:

1,500 executives global

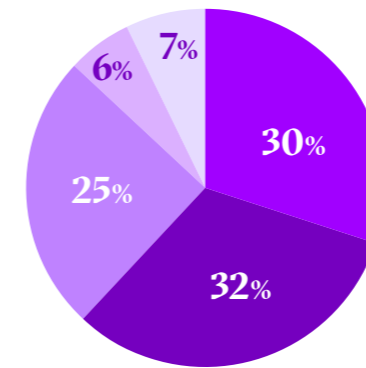
52% completed tech transformation

19 industries

C-Level only

Company Size

- Less than \$5Bn
- \$5Bn – \$9.9Bn
- \$10Bn – \$29.9Bn
- \$30Bn – \$49.9Bn
- More than \$50Bn



19 Industries

Financial Services

- Banking (83)
- Capital Markets (45)
- Insurance (86)

Communications, Media & Technology

- Media & Communications (80)
- High Tech (82)
- Software & Platforms (86)

Resources

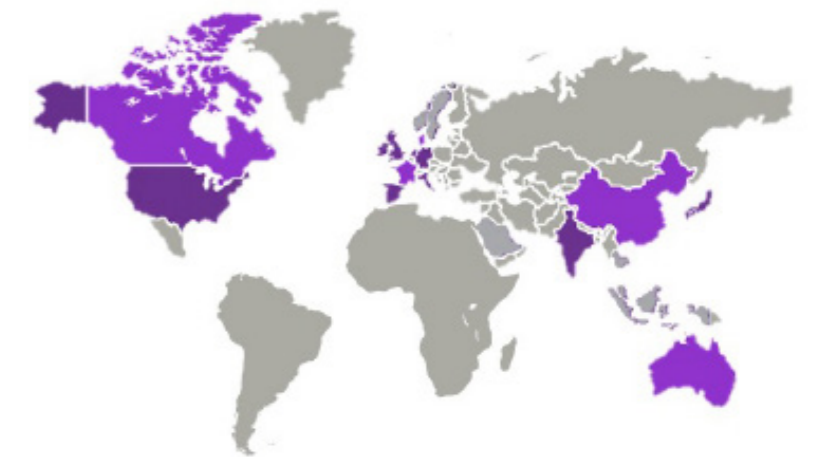
- Utilities (83)
- Energy (Oil & Gas included) (83)
- Chemicals (84)
- Natural Resources (81)

Health & Public Service

- Healthcare (78)
- Public Services (40)

Products

- Retail (115)
- Consumer goods & services (113)
- Airline, Travel, Transport (80)
- Aerospace & Defense (41)
- Industrial Equipment (80)
- Life Sciences & Pharmaceuticals (79)
- Automotive (81)



10 Countries

- | | |
|----------------|----------------------|
| Australia (50) | India (80) |
| Canada (70) | Italy (50) |
| China (80) | Japan (100) |
| Germany (130) | United Kingdom (130) |
| France (90) | United States (720) |





Digital Core Index

We built a composite indicator (an index) to measure the strength of a company's digital core capability based on 39 assessment questions. We applied a two-step aggregation process corresponding to the digital core component definitions and normalized the overall score on a 0-100 scale, where 0 means lack of digital core strength across the components and 100 means maximal strength across all components.

As a next step, we created three groups of companies based on overall Digital Core Index score distribution. The top group corresponds to the top quartile of the Digital Core Index, the bottom group to the bottom quartile of the index. The mid group is the rest of the index. Next, we analyzed characteristics of the groups.

The 60:40 effect estimation

We estimated the 60:40 effect by combining the survey data (including Digital Core Index) input and financial performance metrics of companies in our survey sample. Leveraging econometric modelling, we estimated the relation between:

1. Companies' revenue growth (CAGR 2020-2023; 3 year-end readings)
2. Companies EBITDA margin (Average 2021-2023; 3 year-end readings)
3. The three tenets needed to achieve a reinvention-ready digital core:
 - Build industry leading digital core
 - Boost investments in strategic innovation
 - Balance growing technical debt.

As the top-rated companies constitute only a small percent of analyzed sample (-3%), we tested the relation with the use of continuous variable (with scoring across the sample). The model controls for companies' size, HQ country, industry and selected operational characteristics.

Our research showed that companies that apply the three tenets of a reinvention-ready digital core experience a 60-40 effect.

During the period of 2020-2023, the estimated CAGR revenue growth rate (3 year-end growth reading: 2020-21, 2021-22, 2022-23) of companies with reinvention-ready digital core (i.e., that adhered to all three tenets) was 11.1%. For the companies that did not satisfy any of the three tenets, it was 7.1%. The outperformance in revenue growth rate = $(11.1\% - 7.1\%) / 7.1\% \times 100\% = 56.34\%$ rounded to 60%.

Similarly, during that same period (2021-2023; again 3 year-end readings), the estimated average profitability (measured with EBITDA margin) of companies with a reinvention-ready digital core was 19.4%. For companies that did not follow any of the three tenets, it was 14.2%. The outperformance in profitability = $(19.4\% - 14.2\%) / 14.2\% \times 100\% = 36.62\%$ rounded to 40%.



Logistic regressions

We also analyzed the relation between satisfying the three tenets needed for a reinvention-ready digital core with probability that:

- Company's enterprise systems enable them to identify and mitigate risks (cyber, regulatory, Responsible AI, etc.) across multiple technologies, applications, and ecosystem partners
- Company's existing IT estate helped diversification into other geographies and industries
- Company's existing IT estate enabled their non-IT employees to create their own customized solutions using low code/no code tools

For these analyses we leveraged logistic regression approach controlling for companies' size, HQ country and industry.

Interviews and Case Studies

We triangulated our findings from the large-scale primary data from the survey with qualitative research, specifically 20 in-depth interviews (10 Business executives and 10 IT) and 26 case studies. Overall, we collected 46 case studies through secondary research and interviews, focusing on issues organizations are facing with respect to the rapidly evolving business environment as well as technology landscape.

To analyze the qualitative data, we used Accenture research gen AI tools to identify significant patterns in maturity of various components of the digital core.

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