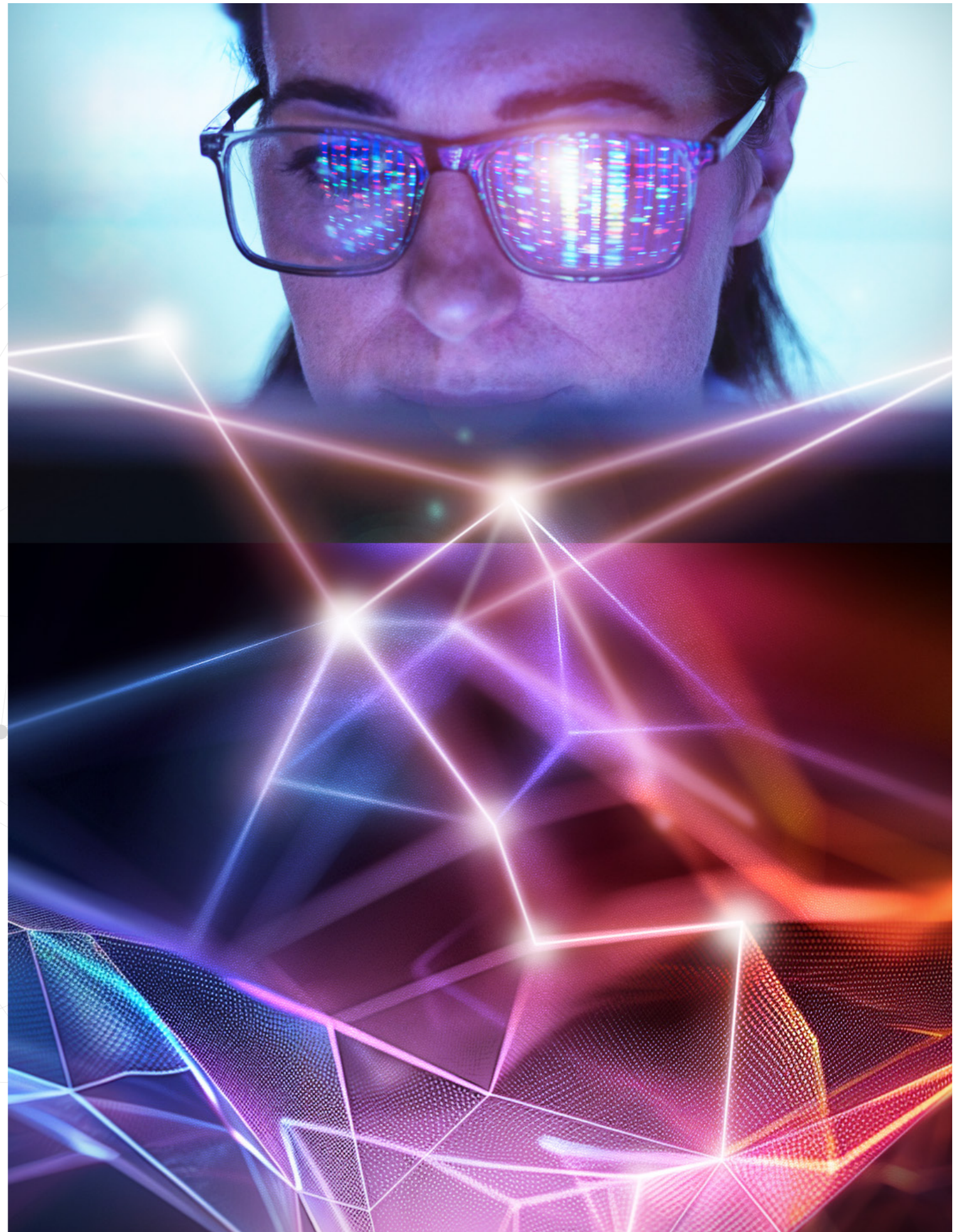


Build your tech and balance your debt

Why balancing—not eliminating—tech debt is
key to reinventing with a modern digital core

 **accenture**



Contents



Page 03—05

Preface

Understanding tech debt in the age of generative AI

About the authors



Page 06—10

Catch-22: Generative AI and technical debt

What is technical debt?

Accenture and GitHub: tackling tech debt in the software development lifecycle



Page 11—22

Three actions for balancing technical debt

Action 1:
Focus on the principal

Action 2:
Create an inventory and trace debt to source

Action 3:
Use the right metrics to measure technical debt



Page 23—28

How to get started on balancing your tech debt

Conclusion

How Accenture can help

Glossary





Preface

Managing technical debt in the age of generative AI

If there is one topic that comes up in most of my conversations with chief information officers (CIOs), it's technical debt. Tech leaders are certainly concerned about tech debt's impact on costs—but they are even more concerned about how it may be holding back their business

Technical debt's impact on tight IT budgets is one thing. The more strategic concern is that tech debt is affecting their ability to create new business and it is sapping their ability to respond to shifting market conditions.

The sense among many tech leaders is that we are riding a surge of tech debt—an impression that is confirmed by the results of our research in our [Reinventing with a Digital Core report](#)¹. In the US alone, tech debt costs \$2.41 trillion

a year and would require \$1.52 trillion to fix, according to [a 2022 report](#)².

What's driving this? A combination of factors. Technology departments are moving to always-on, evergreen IT solutions. As technology is changing so rapidly, tech leaders find they are working to faster response times: issues that they previously would spend months analyzing now demand a response in weeks.





Meanwhile, macro-economic headwinds and geopolitical instability are throwing up new issues for businesses.

AI and generative AI are compounding the challenge. Of course AI is a game-changer: however, our research also shows that along with enterprise applications, it is now the biggest contributor to tech debt³.

Suboptimal integration strategies are partly to blame. On top of this, companies often don't have a security architecture that can handle both people and AI agents working on IT systems.

Or, in some cases, companies have platforms that were built with human interactions in mind and aren't ideal today for many generative AI implementations.

Together, these challenges negatively impact the maturity of a company's digital core. When optimized, a digital core is one of the single biggest drivers of success in a company's efforts to continuously reinvent itself in the age of generative AI. So among the common client questions we try to answer in this report are: "Should I focus on eliminating tech debt entirely? Are there different approaches I should consider? And where do I start?"

Our research shows a degree of tech debt is healthy for the balance sheet as it is an unavoidable cost of innovation and agility. But throwing too much money at tech debt can be counterproductive. We found there is a peak point between spending on tech debt remediation and a company's digital core maturity. Beyond this point, you may be impacting your ability to innovate.

As we shared in [Reinventing with a Digital Core](#), leading companies balance tech debt liabilities with investments for the future, targeting 15% of IT budgets for debt remediation using programmatic and autonomous methods⁴.

That said, tech debt isn't one-size-fits-all. You need to approach it with your specific business value in mind and in the context of your company's priorities and industry. For CIOs and chief technology officers (CTOs), this means deliberately investing in parts of the digital core that are critical to corporate strategy while being proactive, structured and data-driven in how they identify, measure, prioritize and remediate such debt.

Notably, the same technologies that are contributing to tech debt—AI and generative AI—are also powerful tools for managing it.

Drawing on a global survey of 1,500 companies and our extensive industry experience, this report provides a clear look at what tech debt means in this age of generative AI. And we describe three key actions tech leaders are taking to keep their IT estate running smoothly—by proactively balancing their tech debt remediation efforts with investments for the future.

We hope this report will be a valuable guide as you look to strike the balance between managing your tech debt and helping your business to thrive in disruptive times.



Koenraad Schelfaut
Lead—Technology Strategy & Advisory



About the authors



Koenraad Schelfaut

Lead
Technology Strategy & Advisory

Koenraad is a senior managing director and works with C-suite executives to define and execute technology-driven strategies to boost profitability, launch new digital businesses and enable large-scale transformations.



Jason Byrd

Managing Director
Technology Strategy & Advisory

Jason is the capability lead for Tech Value, which is part of Technology Strategy and Advisory. He is a strategic advisor for CIOs and their finance leaders, focusing on topics such as increasing transparency, optimizing IT costs and prioritizing investments using technology.



Sarabdeep Singh

Managing Director
Technology Strategy & Advisory

Sarabdeep is a technology strategy and enterprise architecture leader with deep industry experience in consumer goods and services and financial services. He focuses on helping companies enhance their digital core, application strategy and digital trust.



David Wood

Lead
Technology Consulting

David is a senior managing director and helps leaders align their business goals with emerging technologies and modern engineering and operations practices, spanning cloud, data, AI, infrastructure, architecture, security and platform services.



Prashant P Shukla

Principal Director
Accenture Research

Prashant's thought leadership research focuses on the economics of AI and IT. He is the program lead for Accenture's collaboration with MIT's Initiative on the Digital Economy and the research lead for Accenture's flagship Technology Vision.



Catch-22: Generative AI and technical debt

AI and its implementation is causing tech debt to rise. It doesn't have to be this way



The rapid adoption of generative AI and other new technologies is leading to a surge in new technical debt

Generative AI and AI are now the highest contributors to a company's tech debt along with enterprise applications, our research shows⁵. This trend will likely exacerbate as 52% of organizations plan to allocate more funds toward generative AI heading into 2025, according to our Pulse of Change survey⁶.

The defining feature of generative AI is that it reduces the effort required to generate text, images, videos and code. This results in more lines of code. So, companies must

be proactive and vigilant to ensure they are creating clean, readable, efficient and high-quality code while protecting their code base for the future.

Companies cite generative AI as a contributor to an acceleration in technical debt primarily because of the suboptimal way in which they implement the technology across their existing legacy digital core.

For one, organizations typically lack proper integration and interoperability strategies, which enable access to data and services

across the organization. Their security architecture is often not capable of handling human as well as AI agent considerations. Their platforms are also often built with solely human interaction in mind. This is not ideal for many of the early generative AI implementations that attempt to piggyback on these existing platforms.

Generative AI is leading to a classic catch-22. On the one hand, it is creating new technical debt. On the other hand, when used appropriately, generative AI can help manage tech debt remediation as well as minimize tech debt creation.

“You need to balance AI ambition with risk tolerance and set expectations with leadership: the cost of technical debt to realize first-mover advantage can also be viewed as a positive. It's the cost of innovation. It's the price of having a brand as an innovator. It's the price of accelerating learning and accelerating market impact⁷.”

— Gartner®





The moves leaders are making now

Balancing generative AI needs and costs will be critical in the coming years. Gartner® **predicts**: "By 2028, more than 50% of enterprises that have built their own large language models (LLMs) from scratch will abandon their efforts due to costs, complexity and technical debt⁸."

Gartner® also **forecasts that**: "By 2027, generative AI tools will be used to explain legacy business applications and create appropriate replacements, reducing modernization costs by 70%⁹."

Companies shouldn't aim to reduce technical debt to zero at the expense of their innovation efforts. Rather, they must strive to manage it at appropriate levels for growth.

During the 2019-2023 COVID-19 pandemic, many companies focused on speed to market with new products and solutions while aiming

to be agile amid uncertainty. This created significant tech debt—worsening the long-standing problem. The tech debt burden on enterprises in the US alone is now estimated at **up to \$2.41 trillion**¹⁰.

Current conditions demand a more balanced approach. Companies must try to have "evergreen IT" by using generative AI and other technologies to help manage technical debt and keep the enterprise tech stack up to date.

Our **digital core report** found that leading companies allocate, on average, 15% of the IT budget toward tech debt remediation¹¹. This balances debt reduction while also prioritizing future strategic innovations.

This requires a commitment to continuous updates, upgrades and management of end-user software, hardware and associated services to mitigate the technical debt that resides in these systems.



What is technical debt?

In 1992, at an Object-Oriented Programming, Systems, Languages and Applications conference, Ward Cunningham explained it: “Shipping first-time code is like going into debt. A little debt speeds development so long as it is paid back promptly with refactoring. The danger occurs when the debt is not repaid¹².”

Since then, the term has taken on many different meanings and transcended its original domain—code—to include other parts of an enterprise system such as infrastructure, enterprise architecture and processes that haven’t been adapted to work effectively with modern IT systems and technologies.

In Reinventing with a Digital Core, we defined technical debt as 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 needs¹³. Such debt can be accumulated through a variety of sources and traditionally includes legacy and buggy code, outdated programming languages, a lack of documentation and outdated technologies and infrastructure. Thus, technical debt is context-dependent and exists within multiple domains within a firm (see Table 1).

Table 1: Causes of technical debt

The roots of technical debt vary across the IT landscape

Code	Enterprise architecture	Data	Talent and ways of working
Legacy software	Outdated application stack	Data silos	Skills gap
—	—	—	—
Buggy code	Outdated infrastructure	Lack of documentation	Inadequate training
—	—	—	—
Outdated programming languages	Monolithic systems	Security vulnerability	Overspecialization
—	—	—	—
—	Incompatible elements	AI model drift	Outsourcing dependence
—	—	—	—
—	Complex IT portfolio	—	Poor code-review culture
—	—	—	—
—	Cybersecurity vulnerabilities introduced by users	—	Manual data entry
—	—	—	—
—	—	—	Rigid release cycles

Source: Accenture



Case study

Accenture and GitHub: tackling tech debt in software development with generative AI

Accenture's collaborative work with Microsoft GitHub shows [generative AI's role in managing tech debt](#) in the software development lifecycle¹⁴.

Accenture has a vast technical footprint with more than 100,000 developers. A group of them are now using GitHub Copilot to quickly understand and refactor existing code, write new code with a high degree of quality and speed, translate code between programming languages and automate activities such as pulling requests and writing user tests.

GitHub Copilot helps developers to complete higher-quality work in a shorter timeframe, which alleviates the burden of tech debt. By helping developers to maintain focus

and stay in the flow, Copilot also avoids sacrificing quality for speed.

At Accenture, we saw an 84% increase in successful builds using GitHub Copilot. Developers accepted around 30% of Copilot's suggestions. And 90% of developers reported that they committed code suggested by GitHub Copilot. Analysis also showed high usage rates with accepted code—for example, developers retained 88% of GitHub Copilot-generated characters in their editor.

It also helped boost developers' experience. Some 90% of developers said they were more fulfilled with their job when using GitHub Copilot and 95% said they enjoyed coding more with Copilot's help.



Three actions for balancing technical debt

Technical debt is a problem as old as technology. Companies have long discussed ways to deal with it, yet concrete solutions remain elusive



The harsh truth is, there always will be technical debt

Our **digital core research** found that on average, executives expected to spend around 7 percentage points more of their IT budget on remediating technical debt from 2023 onwards, than in previous years. For example, leaders told us that on average they were moving from spending 17% of their IT budget on remediating technical debt between 2020 and 2022 to 24% in 2023¹³.

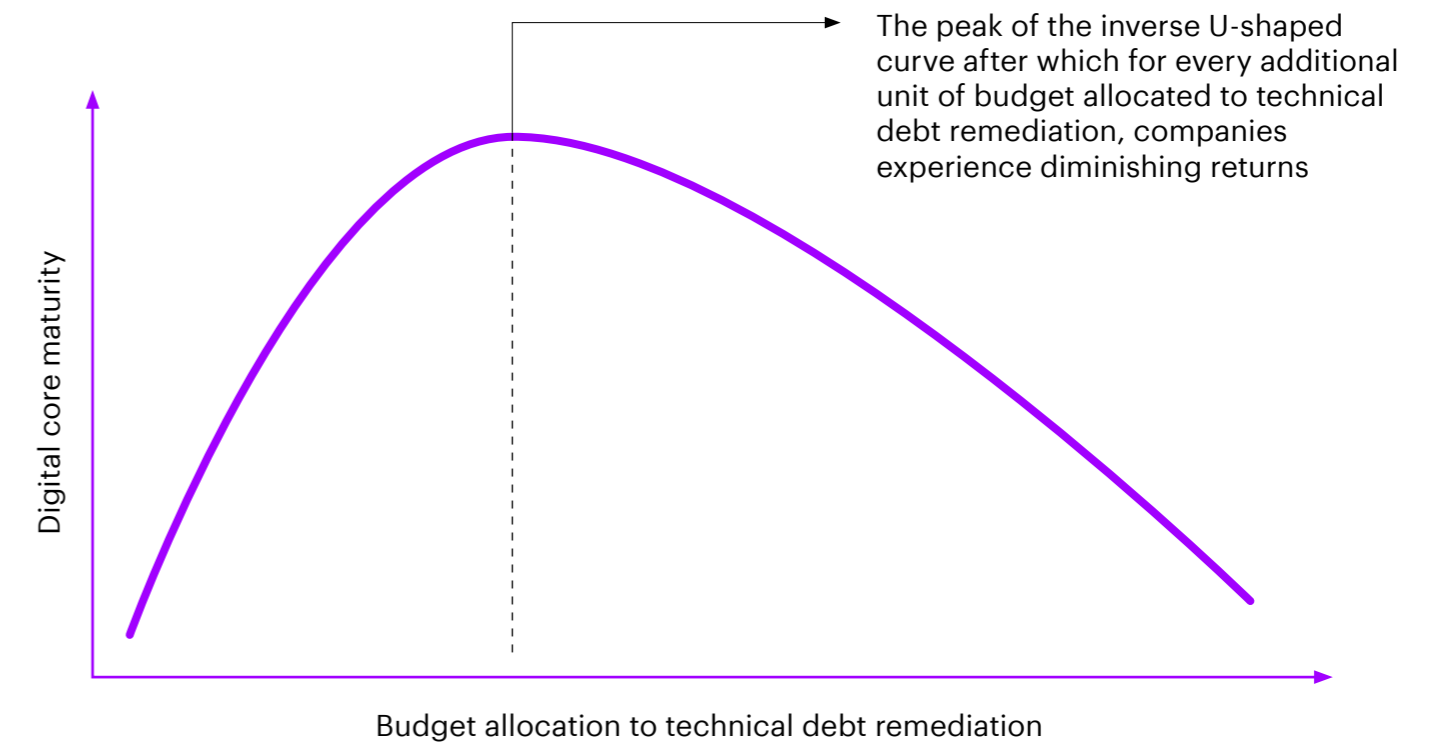
This suggests that C-suite executives believe the relationship between technology and subsequent technical debt is essentially linear, i.e., if technology budgets are increased, tech debt budgets can simply increase to balance it out.

However, our digital core research found there is an inverse U-shaped relationship between digital core maturity and technical debt remediation (see Figure 1). Simply put, increasing the budget allocated to technical debt remediation only improves a company's digital core maturity to a certain point. Beyond this peak, it indicates that a company is over-indexing investments in technical debt and not building their digital core capability effectively and efficiently.

Therefore, IT leaders need to be aware that after a peak point, additional spending on tech debt remediation delivers diminishing returns. As mentioned earlier, we recommend striking a balance between technical debt liabilities with investments for the future, targeting 15% of IT budgets—which is at the peak of the inverse U-shaped curve.

Figure 1: The surprising link between digital core maturity and technical debt

There is an inverse U-shaped curve between budget allocation to technical debt remediation and digital core maturity



Source: Accenture



Managing tech debt in the age of generative AI

Here are three concrete actions to effectively balance tech debt. Companies who take these actions will have better insight into whether generative AI is a net-positive factor from a tech debt perspective, and they can develop remediation strategies accordingly.

01

Focus on the principal

Categorize your tech debt to identify and prioritize the principal amount. This will prevent interest accruing that will lead to more liabilities and hamper new opportunities.

02

Trace your debt to source

Create a tech debt inventory to track your debt and use our value-based framework to prioritize what needs to be urgently remediated.

03

Use the right metrics

You can't manage what you can't measure. For example, at the software code level, companies should use tech debt density, which is measured as cost per line of code. It's a better reflection of your code's health—much like GDP per capita is a better indicator of a country's development than GDP alone.



Action 01

Focus on the principal

Companies must be aware of technical debt costs in four categories: principal, interest, liabilities and opportunity cost. They should remediate starting from the principal.

Principal: The cost of updating outmoded technology.

Interest: Incremental costs associated with working around outmoded technology.

Liabilities: Additional issues that occur because of the outmoded technology.

Opportunity cost: New opportunities a company cannot realize due to outmoded technology.

Much of the current discourse on technical debt uses these distinct categories of technical debt interchangeably and often combines them. This is a hurdle in remediation. IT leaders should focus on the principal. If they effectively manage technical debt at the source or principal level, just like financial debt, it will accrue little or no interest and minimize any liabilities or opportunity costs.

Think about this in the context of cloud and security, for example. One of the major benefits of cloud as it relates to technical debt is that you can transfer some responsibility for handling technical debt—such as patching—to the cloud provider who can do it more consistently and more efficiently.

Categorizing technical debt in this clear way will also help CIOs and CTOs make better investment decisions—prioritizing effort and

expenditure while allocating resources toward remediating technical debt and exploring new business opportunities.

Let's take code as the exemplar domain where technical debt exists. Just as all matter is made up of atoms, all applications deployed by companies are made up of lines of code. And it is these lines of code, which, if not well-written, debugged, improved or maintained, can lead to a proliferation of technical debt. It's crucial to identify what tech debt exists in your company and trace it to the source.

Figure 2 describes each category of technical debt at the code level, along with an example. We recommend companies expand this exercise to include all domains where they believe technical debt exists in their organization, and then focus on the principal.

Figure 2:
Categories of technical debt
and examples at the code level

Technical debt can be categorized as principal, interest, liability and opportunity cost to manage it, much like financial debt

Principal
 ↓
Interest
 ↓
Liabilities
 ↓
Opportunity cost

Description	Example
<p>Structural quality problems in production code</p> <p>The cost of remediating problems in the production code to bring affected assets into compliance</p> <p>The continuous effort and incremental, extra costs required (as a result of the unfixed principal) to maintain the code, across processes, interfaces, staff and more</p> <p>Additional costs that occur as a result of downstream issues caused by poor code</p> <p>New opportunities that are not realized due to code inadequacies</p>	<p>An e-commerce company rushes a product to market to take advantage of a short-term opportunity</p> <p>The code is written using a legacy framework and library. This limits the developers' options and flexibility</p> <p>The team spends a lot of resources on quick fixes and maintenance as the product ramps up in scale</p> <p>Performance issues start to pile up. Customers get a poor experience and competitors start to launch more feature-rich offerings. Security issues remain a major concern</p> <p>The company is unable to innovate with the product and build on its initial momentum</p>

Source: Accenture



Focus on the principal

CTT—Correios de Portugal

One example that highlights the benefits of focusing on principal technical debt is at CTT—Correios de Portugal, the national postal service of Portugal. This 500+-year-old Portuguese postal services company has always tried to match the pace of change and reinvent to remain a trusted provider for its customers.

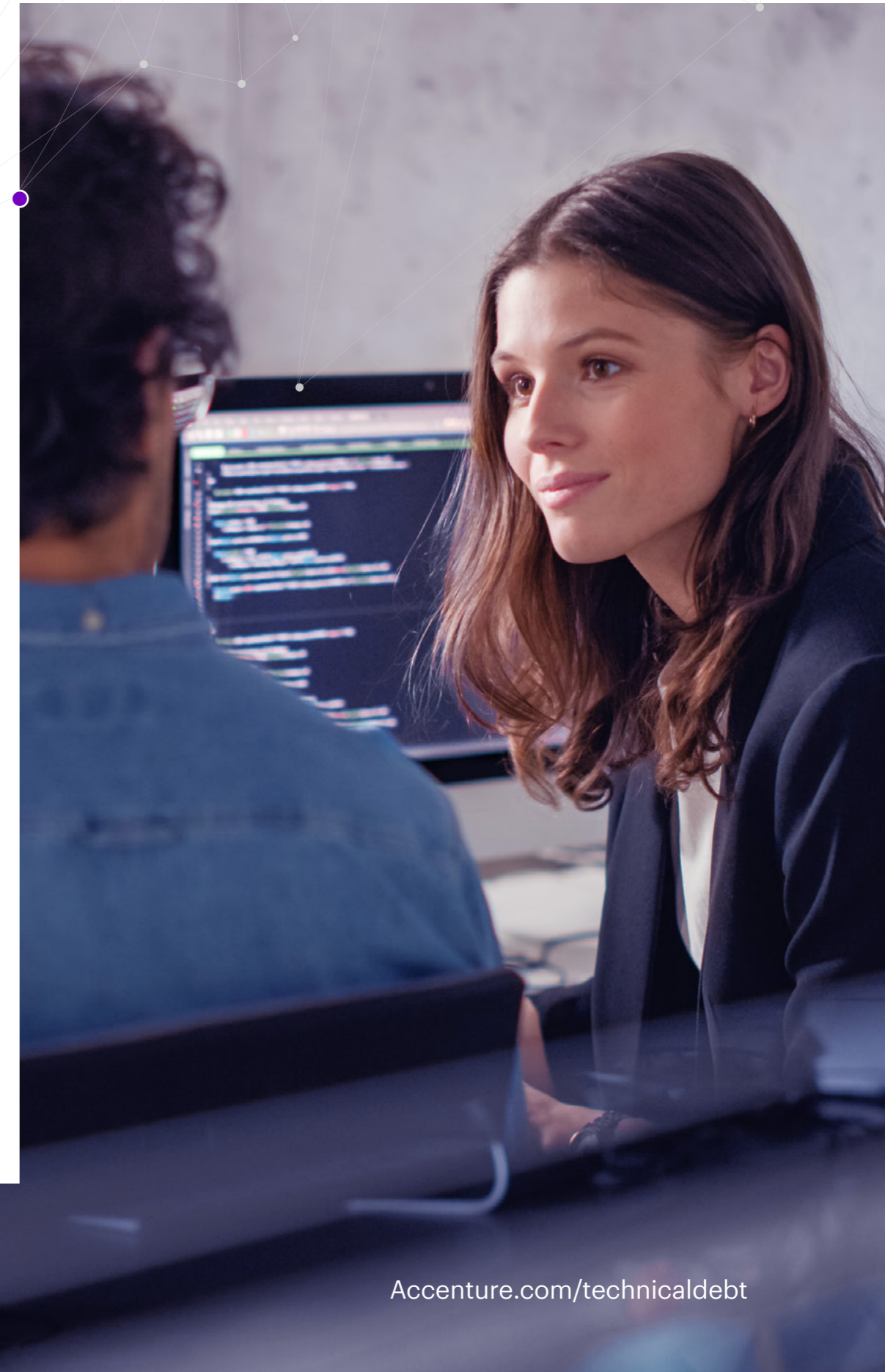
However, years of growth had saddled the company with a costly patchwork of on-premises digital systems that were a challenge to manage and an obstacle to the development and deployment of new services.

CTT worked with [Avanade](#), a joint venture between Accenture and Microsoft, to build and enhance its digital core capabilities¹⁶. This began with a cloud-first strategy to consolidate and modernize workloads, add flexibility and innovation capabilities, and cut costs in the process.

With workloads in the cloud, CTT reduced its technical debt, enabled a more efficient allocation of resources and got the flexibility to reduce and increase capacity as needed. Overall initial cost savings from the migration were estimated at 15%.

“A bonus of the cloud is that the more you optimize your workloads, the more you stand to gain. With [Microsoft] Azure, we’ve positioned ourselves to reap the rewards of the cloud rather than paying more interest on technical debt. It’s a huge advantage,” according to Rui Pedro Saraiva, Chief Information Officer, CTT—Correios de Portugal.

Furthermore, the company now has a “single pane of glass” view across part of CTT’s Azure and on-premises environment. This is unifying its management and operations with key Azure services to build and operate highly automated, resilient and scalable applications without compromising central security, governance and control.





Action 02

Create an inventory and trace your debt to the source

A clear understanding of the principal can help companies better manage and remediate their tech debt.

A technical debt inventory will help them trace the debt to its precise source in the system. This inventory can then be used to prepare a business case highlighting their technology debt across all domains—such as code, infrastructure and data—and the potential value companies can get by dealing with it.

Disciplines and tools such as Technology Business Management, FinOps, lean portfolio management and/or a transformation office can be used in combination to identify, track and measure technical debt across a company's IT landscape. Accenture uses these industry-wide approaches as part of solutions that focus on striking the balance between controlling IT costs, managing tech debt and helping **business reinvention**.

By creating an inventory and tracing technical debt to specific parts of their enterprise systems, IT leaders can first estimate the potential value unlocked from remediation. Then they can systematically

prioritize and sequence their technical debt remediation efforts, based on their business value estimates, technical risk and feasibility.

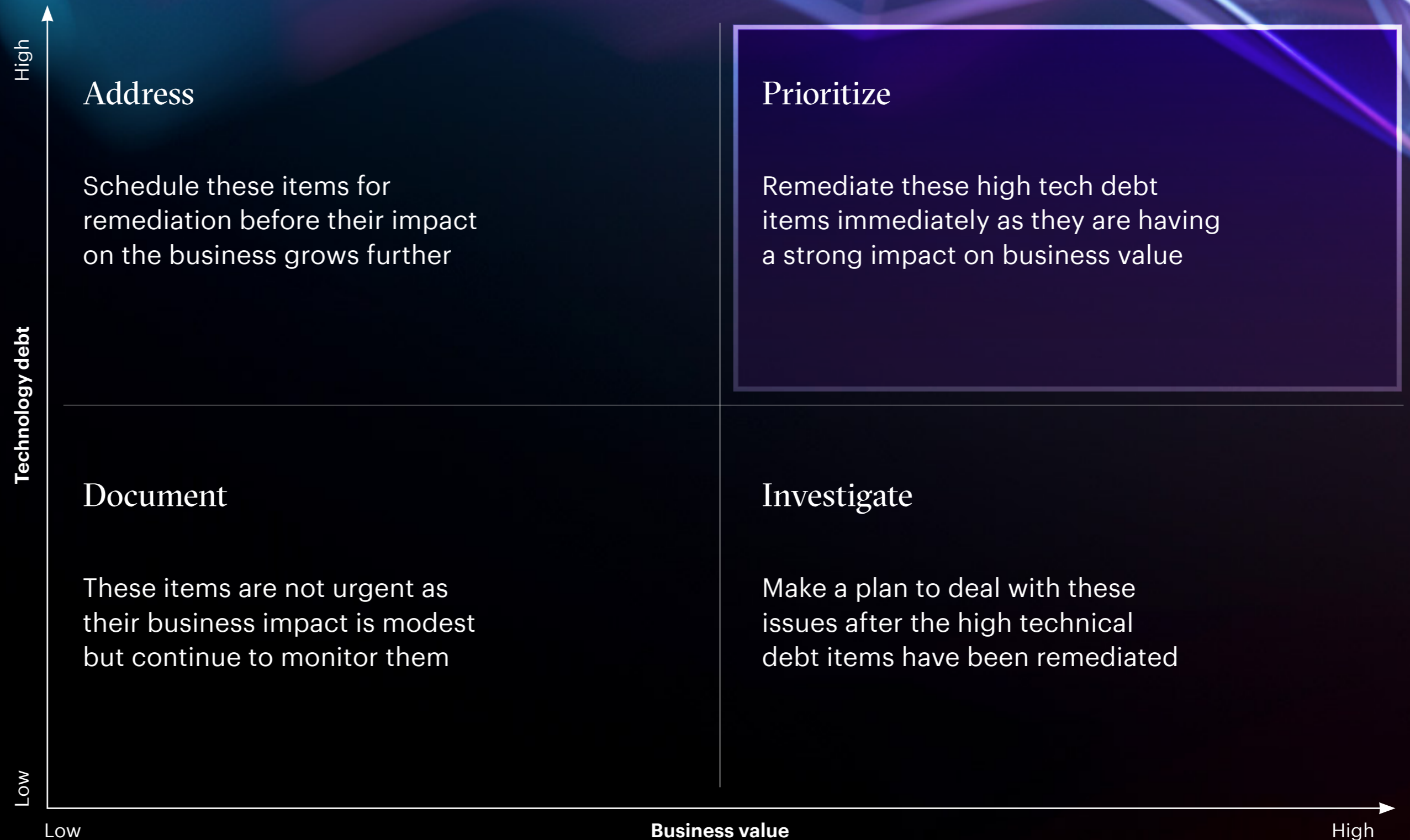
A prioritization framework such as the PAID value one is particularly effective (see Figures 3 and 4).

This work will form the basis of a roadmap to identify the timeline, milestones, potential benefits and return on investment. Companies should identify the early-stage cost reductions the program can realize. This can create a “flywheel” effect so that any savings can help fund further modernization. It should also help in gaining buy-in from the full executive team to the benefits of the initiative.



Figure 3:
A PAID value framework

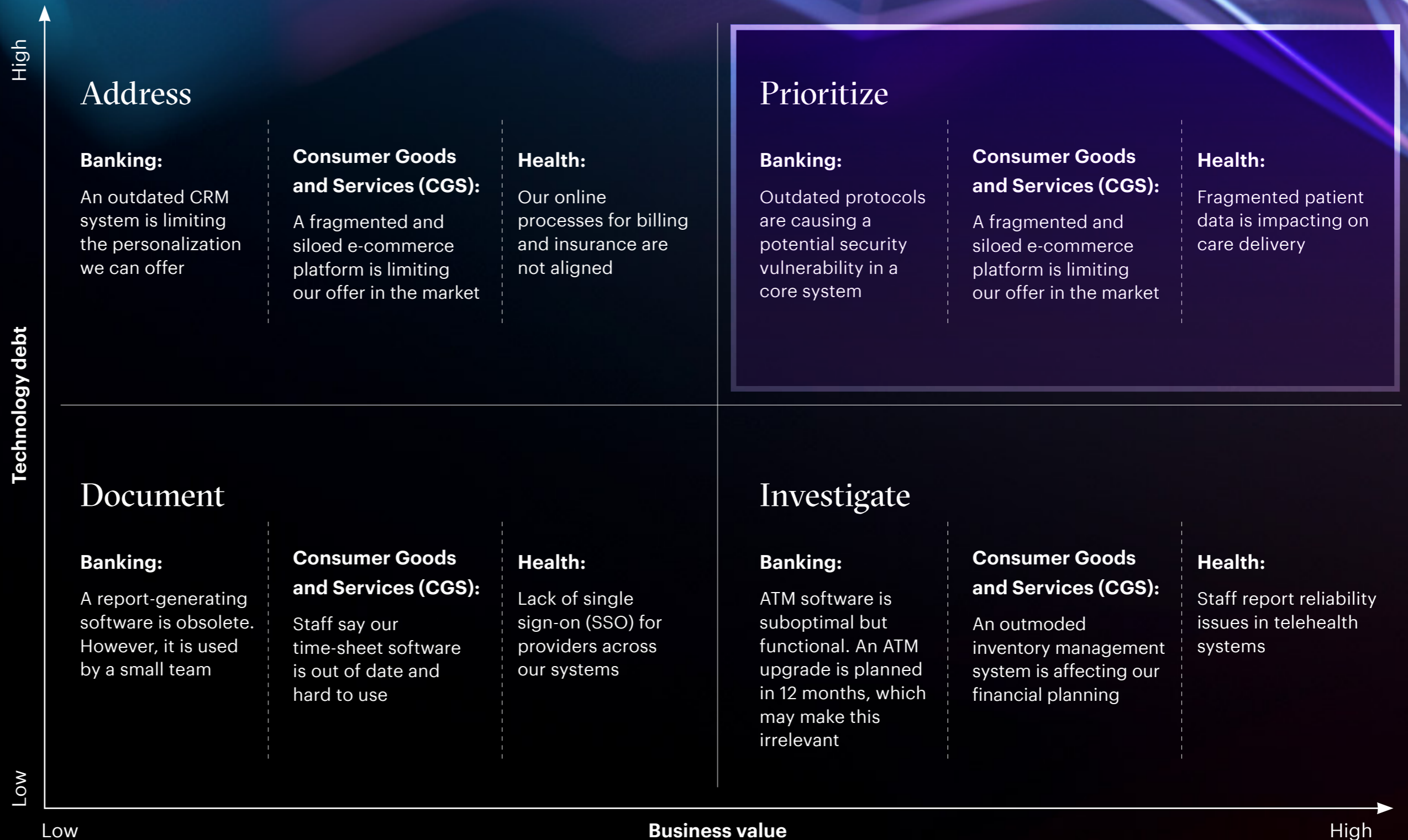
Prioritize your technical debt-remediation efforts based on their business value



Source: Accenture

Figure 4: How tech debt shows up in industries

Tech debt challenges will vary in terms of urgency depending on their industry. Here are some typical examples of client tech debt challenges from a selection of industries



Source: Accenture



Client story

Mondelēz International: Enhancing its digital core

Accenture is working with Mondelēz International, a world leader in snacking with well-known brands like Oreo, Belvita and Cadbury. Its goal is to drive growth by further reinventing how it satisfies customers through the adoption of new technologies such as generative AI.

The solution is an ambitious **reinvention of its digital core**¹⁷. To prepare for this, Mondelēz also needed help with its tech debt challenges. It was grappling with a highly fragmented IT landscape that included more than 1,000 applications. This complexity not only inflated operational expenses but also led to architectural inefficiencies, which were being compounded by rising global economic pressures.

Together, we began with a thorough assessment of each application, evaluating their technical health, functional adequacy and financial health. We then focused on developing a target state and performing financial modeling for both the interim and the planned final states. Now Mondelēz and Accenture are working through the delivery of the work into 2025 while focusing on various factors such as benefits, dependencies, impacts and risks.

The work to-date has led to a significant reduction in total cost of ownership and tech debt, with savings across infrastructure, license and application management services. The project aims to make additional, substantial savings while helping Mondelēz to enhance its digital core.



Action 03

Use the right metrics to measure your technical debt

You can't manage what you don't measure. In a [technical debt paper we published with MIT Sloan Management Review in 2018](#), we recommended digital decoupling and modularity: at the code, infrastructure and data level¹⁸.

Modularity inevitably means more complexity, which increases thanks to the ever-increasing speed of technological development. There will always be technology that companies need to update across their tech stack. And the increasingly modular nature of the tech stack means it's even more important that this growth can be accurately measured and monitored.

Technical debt is not necessarily a bad thing—so don't fear the debt. Instead, it's essential to focus on the right metrics for what your business wants to achieve. If your tech debt remediation budget is increasing and your innovation and the business value you are delivering is outpacing it, it's not a cause for alarm—rather, it's a positive sign of the success of your strategic efforts.

For example, returning to the code level, our research suggests that companies should focus on technical debt density when assessing their technical debt to help focus remediation efforts on priorities. Technical debt density is the tech debt that shows up in a system or application per line of code

(LOC). It is measured in units of cost per LOC. Much as GDP per capita is a better indicator of a country's development than overall GDP, technical debt density should give a more accurate measure of code health.

Let's consider a fictitious company modernizing its home-grown platform. As it transforms or adopts technology at a larger scale, more software is deployed, more applications are deployed and the number of lines of code increases exponentially. A few years previously, its technical debt was US\$500,000. Now it is US\$750,000.

While this shows the company's technical debt has grown, it has adopted and deployed more technology during this period. Its LOC has doubled from 100,000 to 200,000. Now, when the company measures its technical debt density, it finds it has reduced over the period from \$5/LOC to \$3.75/LOC. This means it has remediated its technical debt efficiently and effectively.



Action 03

Tech debt density: a better signal of remediation efforts

Accenture established a center of excellence (CoE) using technology from [software intelligence company CAST](#) in 2014. This CoE works with companies using CAST technology across a number of client challenges, such as application modernization, continuous improvement, open source safety and helping organizations on their journey to the cloud. In the past 10 years, this CoE has analyzed 9,000 applications and served 700 clients globally.

One of the CoE's key capabilities is helping companies to better manage their technical debt as part of a continuous improvement program. An analysis of tech debt remediation programs between 2020 and 2024 shows that the CoE has helped reduce technical debt density (technical debt per lines of code) by 16% on average per application.

A continuous improvement program typically involves structural quality assessments at the code level and application benchmarking, so that companies can compare themselves to their industry peers. Green code assessments can also be done to help organizations lower their energy consumption.

The outputs of these assessments help companies to reduce rework efforts by identifying inefficient coding practices. The combined effect of these efforts is typically a decrease in critical violations with improvements in overall code quality, performance, reliability and sustainability.

Using cross-industry data from CAST, we analysed the overall market picture of technical debt at the code level, focusing on

application development and maintenance. Our research found that between 2018 and 2023, technical debt density in all areas fell by 38% on average, even though lines of code went up by 134%. This indicates companies are more effectively managing their technical debt today.

However, this does not mean they can take a back seat in their technical debt management journey. Instead they need to be proactive in the age of generative AI. As stated earlier, 41% of executives rate AI as the [top contributor to technical debt](#)¹⁹.

As generative AI's adoption continues to scale, companies need to actively manage their technical debt to prevent it from ballooning.



How to get started on balancing your tech debt

Based on our digital core research and our extensive experience working with clients, here are key actions organizations can take to best manage their technical debt for each part of the digital core as they adopt generative AI at scale.

Source: Accenture



<h3>Digital Platforms</h3> <p>Align horizontal generative AI use cases and budgets (e.g., those that focus on productivity across functions) with broader platform and application investments</p>	
<p>Data: Create trusted, standardized, quality data management and pipeline strategies beyond traditional structured data sources (e.g., understand lineage, create linkages across cloud/non-cloud environments)</p>	<p>AI: Focus on enterprise-wide, end-user adoption of an AI-framework and an AI-enabled digital core, across lines of business, engineering and operations</p>
<p>Cloud First Infrastructure: Adopt cloud-native practices holistically (e.g., pervasive automation, infrastructure as code, immutable infrastructure mindset) as the primary means of working and architecting systems</p>	<p>Security: Update enterprise-wide identity access management practices proactively and programmatically to accommodate human and machine access needs and enhance data and model security for future generative AI use cases</p>
<p>Continuum Control Plane: Invest in a single IT operations and engineering pane. Consolidate siloed functions for consistency across a hybrid, multi-cloud estate</p>	<p>Composable Integration: Rethink API strategies to streamline the current application landscape and support considerations specific to future gen AI model interactions (e.g., scale, performance, access)</p>

Conclusion

With generative AI and emerging technologies, companies today need to reckon with technical debt in a nuanced way. They must invest in these technologies for growth and future innovations and use them to contain technical debt at appropriate levels. It's no easy feat, but following the three actions we've outlined—focusing on the principal, taking an inventory and tracing the technical debt, and using the right metrics—will create a robust foundation to build on.

How Accenture can help

Today, technology drives strategy. Yet many organizations face significant challenges in fully harnessing technology to stay competitive and deliver value.

We collaborate with companies to shape, architect and realize exceptional value from their technology. Our teams of technology strategists, enterprise architects and transformation advisers work at the intersection of technology, strategy, and industry.

Contact us to learn more

We help companies with each stage of their tech reinvention journeys

03

Design an enterprise architecture that allows your business to soar

Our enterprise architects help businesses to make the most of digital core technologies and techniques to improve their business continuity and reduce risk. With our clients, we are reinventing every aspect of IT using generative AI.

01

Build a growth strategy that's driven by tech

We help companies to expand into new markets, develop new customer capabilities and create new products and services. We collaborate on how they can use technology to boost competitiveness, performance and innovation.

04

Build an operating model that's as innovative as your team

Companies need flexibility to respond to changing market conditions. We work with them to design and implement intelligent operating models that are built for business agility, resiliency and growth.

02

Get out of tech debt and into tech value

We work with organizations to help them manage their technical debt and focus tech spending on the activities that will power their growth. Our approach gives management teams a shared understanding of how technology can deliver more value.

05

Have a clear vision for your tech transformation

Our transformation office team work with companies to help them prioritize what they want to achieve, set the success criteria, and establish the governance and integration processes needed to deliver value.



Glossary

Agile software: An approach to software development that emphasizes flexibility, iterative progress and collaboration between cross-functional teams.

Cloud first: A strategy that prioritizes the use of cloud computing services and resources over traditional on-premises infrastructure when implementing new IT projects or upgrades.

Digital core: The critical technological capability that can create and empower an organization's reinvention ambitions. It enables companies to accelerate ahead of competition and achieve their ambitions using the right mix of cloud practices for agility and innovation; data and AI for differentiation; applications and platforms to accelerate growth, next generation experiences and optimized operations—with security by design at every level.

Evergreen IT: An approach to IT management that focuses on continuous updates and improvements to keep systems current, secure and aligned with business needs.

FinOps: An operational framework and cultural practice which maximizes the business value of cloud, enables timely data-driven decision making and creates financial accountability through collaboration between engineering, finance and business teams.

Green code assessment: An evaluation of software code to determine its energy efficiency and environmental impact, with the goal of reducing its carbon footprint.

Lean portfolio management: An approach to managing an application portfolio that applies lean principles to improve flow, reduce waste and align investments with strategic goals.

Single-management pane: A single interface for administering multiple public and private cloud environments across a hybrid cloud landscape.

Technical debt: 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.

Technical debt density: The technical debt that shows up in a system or application per line of code (LOC). It is measured in units of cost per LOC.

Technology Business Management: A discipline that improves business outcomes by giving organizations a consistent way to translate technology costs into business value.

Transformation office: A dedicated team or department responsible for overseeing and coordinating large-scale organizational change initiatives.



References

1. Accenture (2024), [Reinventing with a Digital Core](#)
2. Mims, C. (2024, March 9) The Invisible \$1.52 Trillion Problem: Clunky Old Software. Wall Street Journal. Retrieved from <https://www.wsj.com/tech/personal-tech/the-invisible-1-52-trillion-problem-clunky-old-software-f5cbba27>
3. Accenture (2024), [Reinventing with a Digital Core](#)
4. Ibid
5. Ibid
6. Accenture (October 2024), Pulse of Change Quarterly C-Suite Survey [data set, n=2,800]
7. Gartner Webinar, "The Gartner Predictions for 2024: Data & Analytics", 31 January 2024, <https://webinar.gartner.com/564576/agenda/session/1273063?login=ML>
8. Gartner Conference Updates, Gartner Data & Analytics Summit 2024 London: Day 1 Highlights, Top Data and Analytics Predictions, 2024, 13 May 2024, <https://www.gartner.com/en/newsroom/press-releases/2024-05-13-gartner-data-and-analytics-summit-london-2024-day-1-highlights>
9. Gartner Article, "Gartner's Top Strategic Predictions for 2024 and Beyond", By Ava McCartney, 4 December 2023. <https://www.gartner.com/en/articles/gartner-s-top-strategic-predictions-for-2024-and-beyond>
GARTNER is a registered trademark and service mark of Gartner, Inc. and/or its affiliates in the U.S. and internationally and is used herein with permission. All rights reserved.
10. Mims, C. (2024, March 9) The Invisible \$1.52 Trillion Problem: Clunky Old Software. Wall Street Journal. Retrieved from <https://www.wsj.com/tech/personal-tech/the-invisible-1-52-trillion-problem-clunky-old-software-f5cbba27>
11. Accenture (2024), [Reinventing with a Digital Core](#)
12. Letouzey, J. and Whelan, D. (28 February, 2016). Introduction to the Technical Debt Concept. Agile Alliance. Retrieved from <https://www.agilealliance.org/introduction-to-the-technical-debt-concept/>
13. Accenture (2024), [Reinventing with a Digital Core](#)
14. GitHub and Accenture (2024), [Quantifying GitHub Copilot's impact in the enterprise with Accenture](#)
15. Accenture (2024), Digital Core Survey [data set, n=1,500]
16. Microsoft (2023), CTT-Correios de Portugal Migrates to Azure to Reduce Costs and Increase Flexibility. Retrieved from <https://customers.microsoft.com/en-in/story/1642276491962030158-correios-de-portugal-travel-and-transportation-azure>
17. Accenture (2024), Reinventing snacking: Snacking made right through a data-driven, consumer-centric vision. Retrieved from <https://www.accenture.com/us-en/case-studies/consumer-goods-services/mondelez-data-ai-transformation>
18. Burden, Adam, Van der Ouderaa, Edwin, Venkataraman, Ramnath, Nyström, Tomas, and Shukla, Prashant (June 19, 2018). Technical Debt Might Be Hindering Your Digital Transformation. Retrieved from <https://sloanreview.mit.edu/article/technical-debt-might-be-hindering-your-digital-transformation/>
19. Accenture (2024), [Reinventing with a Digital Core](#)

Acknowledgements

Marketing & Communications team

Laurence Mackin
Mark Klinge

Research team

Gargi Chakrabarty
Katarzyna Furdzik
Krish Jhaveri

The authors are grateful for the support and valuable expertise from Mahesh Venkatarama, Harikrishnan Srinivasan, Kristine Steinman, Reema Gaurav and the CAST Research and Appmarq teams.



About Accenture

Accenture is a leading global professional services company that helps the world's leading organizations build their digital core, optimize their operations, accelerate revenue growth and enhance services—creating tangible value at speed and scale. We are a talent- and innovation-led company with 774,000 people serving clients in more than 120 countries. Technology is at the core of change today, and we are one of the world's leaders in helping drive that change, with strong ecosystem relationships. We combine our strength in technology and leadership in cloud, data and AI with unmatched industry experience, functional expertise and global delivery capability. Our broad range of services, solutions and assets across Strategy & Consulting, Technology, Operations, Industry X and Song, together with our culture of shared success and commitment to creating 360° value, enable us to help our clients reinvent and build trusted, lasting relationships. We measure our success by the 360° value we create for our clients, each other, our shareholders, partners and communities.

Visit us at www.accenture.com

About Accenture Research

Accenture Research creates thought leadership about the most pressing business issues organizations face. Combining innovative research techniques, such as data-science-led analysis, with a deep understanding of industry and technology, our team of 300 researchers in 20 countries publish hundreds of reports, articles and points of view every year. Our thought-provoking research developed with world leading organizations helps our clients embrace change, create value and deliver on the power of technology and human ingenuity. For more information, visit Accenture Research on www.accenture.com/research.

Disclaimer: The material in this document reflects information available at the point in time at which this document was prepared as indicated by the date in the document properties, however the global situation is rapidly evolving and the position may change. This content is provided for general information purposes only, does not take into account the reader's specific circumstances, and is not intended to be used in place of consultation with our professional advisors. Accenture disclaims, to the fullest extent permitted by applicable law, any and all liability for the accuracy and completeness of the information in this document and for any acts or omissions made based on such information. Accenture does not provide legal, regulatory, audit, or tax advice. Readers are responsible for obtaining such advice from their own legal counsel or other licensed professionals. This document refers to marks owned by third parties. All such third-party marks are the property of their respective owners. No sponsorship, endorsement or approval of this content by the owners of such marks is intended, expressed or implied.