endava

Technology *Acceleration*

Adapting to Thrive in an *Era of Change*

TABLE OF

Contents

Is the *business climate* of today more often focused on hype than results?

In today's world, organisational leaders are inundated with information on pioneers revolutionising business and how companies can't compete without adopting the latest new thing. This framing of a company's operations is overly simplistic and suggests one 'big bang' idea or project can create a market leader; it falls short of the reality for organisations that enjoy enduring growth and profitability.

While it's important to evaluate trends in the mainstream, it's just as critical to adopt ideas that foster prolonged success.

***Technology acceleration*, a practice that leverages smaller projects that focus on optimisation over transformation, emphasise composable architecture and prioritise iterative and flexible engagements, seeks to blend innovative technology with leading methods.**

Organisations applying technology acceleration principles often rely on composability, artificial intelligence (AI), big data, 5G, predictive analytics, microservices and/or digital ecosystems. The concept encompasses both strategic and technological elements, so organisations looking to apply such a framework must adjust their thinking and their software/hardware.

Recent shifts in organisational approaches have been driven by economic uncertainty resulting from the pandemic and related supply chain shortages. Adopting technology acceleration places the customer at the centre of the process and gives organisations control over the level of investment and the project, leading to go-to-market strategies that aren't prohibitive in cost.

In this ever-changing business world, it's clear that technology plays a crucial role in problem-solving and adaptation. With today's uncertainties and the quickly evolving technology landscape, adaptation, innovation and transformation are always on the agenda, as Endava gathered in this report.

EXECUTIVE REPORT

To gain perspective on the adoption of the technology acceleration framework, Endava studied organisational leaders' feelings on the economy, their IT budget for the next year and their prioritisation of new technologies and technology principles.

Endava data shows that business leaders are overwhelmingly optimistic about the economy, which is a departure from the early 2020s. As a result of this confidence, executives forecast larger IT budgets, and with increased technology funding, organisations plan to implement emerging technologies, prioritise innovation and try to gain advantages over their competitors – not merely maintain the status quo. A leader in business services in Norway summarises this sentiment, saying:

> **"The unknowing is now coming to a past. The markets need some time to stabilise, but I think within 1-2 years we will go back into a strong market. Those who dare to invest now will get a good payoff."**

Endava's 2023 Technology Acceleration study analyses how several significant trends and ideas have been, and continue to be, pivotal in driving global businesses, their respective attitudes to innovation, IT spending and several core technologies which will be paramount to companies in the coming months and years.

The following points are several of the most valuable takeaways:

KEY INSIGHTS

1. ***AI, big data and predictive analytics as top priorities:*** Building off trends seen in Endava's Emerging Tech Unpacked report, artificial intelligence, big data and predictive analytics ranked as top priority concepts for organisations included in the study. Over 50% of organisations prioritised AI very highly and just 2% said it wasn't a priority at all. Close to 40% prioritised big data and predictive analytics very highly.

2. ***The importance of 5G:*** Right behind AI, big data and predictive analytics was 5G – many organisations ranked it as a high-priority technology, particularly in telecommunications and mobility.

3. ***Economic sentiment and budget:*** Among the leaders in the Endava study, an overwhelming majority (81%) are optimistic about where the economy is headed. Perhaps because of this, organisations speculate that their IT budget will increase over the next year.

4. ***Innovation over stability:*** With that increased IT budget, over half of respondent organisations plan to invest in innovation rather than operational stability.

5. ***Composable architecture:*** A comparison of the Endava Emerging Tech Unpacked report data with this study reveals that awareness of composable architecture and its application to business may be growing. Previous data showed many organisations lacked a strategy regarding composability and were unfamiliar with it entirely, while data from this study shows that nearly 60% of respondent organisations are prioritising it highly.

6. ***The role of technology partners:*** Technology partners have a large part to play in implementing technology acceleration precepts. Among companies in the study, most want their assumptions challenged by service partners. The median number of technology partners used in the past year was three.

DATA SUMMARY

The data in this study comes from a 2023 survey of over **1,000 organisational leaders and decision-makers**. It includes North American and Western European organisations operating at all sizes and in all industries. The data included in this report was collected in July-August 2023.

WHO SHOULD READ THIS?

This report is designed for business leaders looking for an analysis of where business IT investment is headed and what the key ideas and technologies in the future will be.

KEY TERMS

Technology acceleration: The practice of opting for shorter contract lengths, smaller projects that prioritise optimisation over transformation and iterative and flexible engagements with an emphasis on composable architecture.

Composable architecture: Architecture based around reusable, customisable software building blocks that can be rapidly (re)configured to meet a rapidly evolving situation, allowing for a quick, cost-effective and resilient response that is future-proof and iterative.

Digital optimisation: The process of using digital technology to improve existing operational processes and business models.

Digital transformation: Significant change that includes anything from IT modernisation (for example, cloud computing or automation) to the invention of new digital business models.

Human-centricity: Going beyond customer-centricity, this approach is about recognising each customer as a unique individual with specific needs. It focuses on tailored solutions, clear communication and personal interactions to align with individual behaviours and motivations.

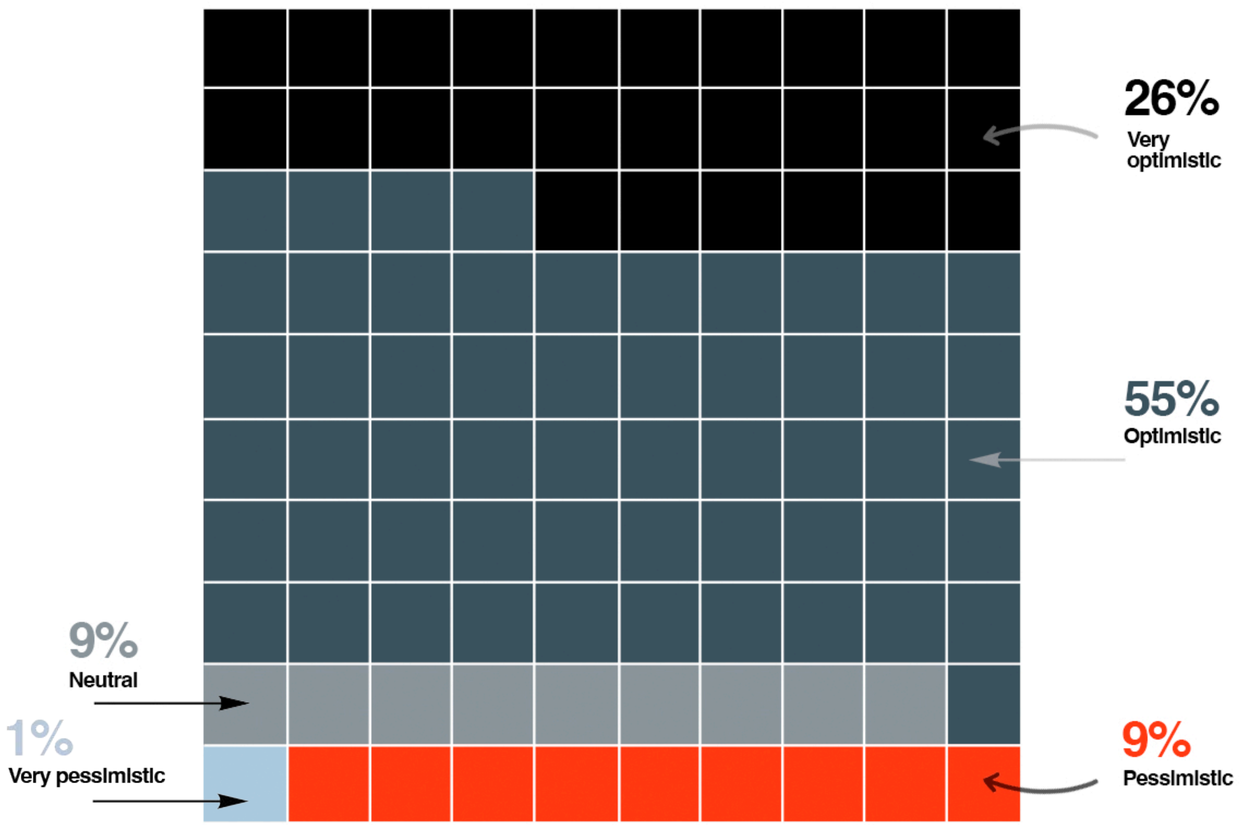
Technology acceleration
trends and impacts on business

MARKET SENTIMENT

The past few years have been rife with challenges for businesses: a pandemic, rising interest rates, supply chain disruptions and geopolitical conflict have sent shockwaves across the global economy. Many organisations have been oscillating between hiring and firing cycles, with some scaling up to meet pandemic-induced demand only to later lay off employees due to economic recession concerns.

In the wake of these challenges, Endava data indicates that relative stability may be on the horizon. Survey results reveal increased optimism across all groups in the study. Among respondent organisations, optimism significantly outweighs pessimism, with over 80% of respondents feeling either optimistic or very optimistic ***(Figure 1)***. This is set against just over 10% who feel pessimistic, and a similar number who feel neutral or uncertain. This optimism has a downstream effect, reflected in IT budgets, which are discussed in the 'IT Project Drivers' section.

Figure 1
Economic sentiment



This optimism can be found in each vertical and geography, and is consistent regardless of respondent role or enterprise size, with very little difference identified between the constituent elements of these analysis groupings. This suggests that the post-COVID recovery has been relatively uniform. However, those surveyed in Europe were slightly less optimistic than those in North America (82% vs. 80%). It is unclear why this slight discrepancy has arisen, but the proximity to the war in Ukraine may account for it. Europe has been more directly affected by the conflict, as shown by energy and food prices.

Some trends observed in the vertical analysis are of note, though.

Whereas 81% of all respondents, regardless of vertical, felt either optimistic or very optimistic, a sizable minority (25%) felt pessimistic in media (vs. 66% feeling optimistic and 22% neutral). This pessimism may be a result of the vast and wide-ranging shifts taking place in the media sector, such as the changes in third-party cookie practices[1], and the slowing growth of streaming services post-COVID.[2] Industries where a higher number of respondent organisations expressed a more favourable view of the future include insurance, finance & banking and telecommunications.

This pervasive optimism illustrated by Endava data may be one of the primary reasons why the OECD predicts the world economy will grow by 2.7% in 2023 and 2.9% in 2024[3], with consumer and business confidence trending upward according to their Composite Leading Indicator (CLI).[4] However, that same OECD report notes that the upturn remains 'fragile'.[5]

[1] **Vlad Gozman, "The Slow Death Of Third-Party Cookies", Forbes, Sep 12 2022**, www.forbes.com/sites/theyec/2022/09/12/the-slow-death-of-third-party-cookies/
[2] **Lucas Shaw, "After Rough Year, Streaming Services Are Off to a Slow Start", Bloomberg, Mar 05 2023**, www.bloomberg.com/news/newsletters/2023-03-05/after-rough-year-streaming-services-are-off-to-a-slow-start
[3] **Clare Lombardelli, "A Long Unwinding Road, OECD Global Outlook", OECD, June 2023**, www.oecd.org/economic-outlook/june-2023/
[4] **OECD, "Composite leading indicator (CLI)"**, OECD Aug 30 2023, doi: 10.1787/4a174487-en
[5] **Lombardelli, "A Long Unwinding Road,** OECD Global Outlook"

TECHNOLOGY VIEWPOINT

With pervasive optimism about the economy and upcoming years, questions immediately arise about what the future of business and technology will look like. The following section examines organisations' sentiments regarding technology and the ideas that will enable their future state. Several interesting conclusions can be posited by examining what survey data indicates about respondent organisations' views of technology.

Firstly, **the overwhelming majority (99%+) of those surveyed declared that they understood the future direction of technology**, with nearly 90% declaring that they had a 'clear understanding' of the future direction of technology. This clarity of understanding is repeated across every constituent element of the survey, regardless of location, vertical or company size, suggesting a relatively uniform attitude toward those technologies across those areas.

However, the precise shape of that future varies across verticals and, to a lesser extent, roles. Across the various verticals, significant variation exists regarding which technologies they favour, whereas CTOs universally regarded technologies more favourably than non-CTOs.

In a similar vein, the views of those in small and medium businesses (SMEs) and large enterprises are mostly aligned, with less than 10% variance in their views on technology.

When looking at individual technologies, unsurprisingly, one technology emerges as the undisputed champion – artificial intelligence (AI). Nearly 80% of those surveyed regarded it as either high- or very high-priority technology. Currently, interest in AI is exceptionally high, with generative AIs such as ChatGPT dominating technology discussions globally. A technology manager in banking expressed this, saying:

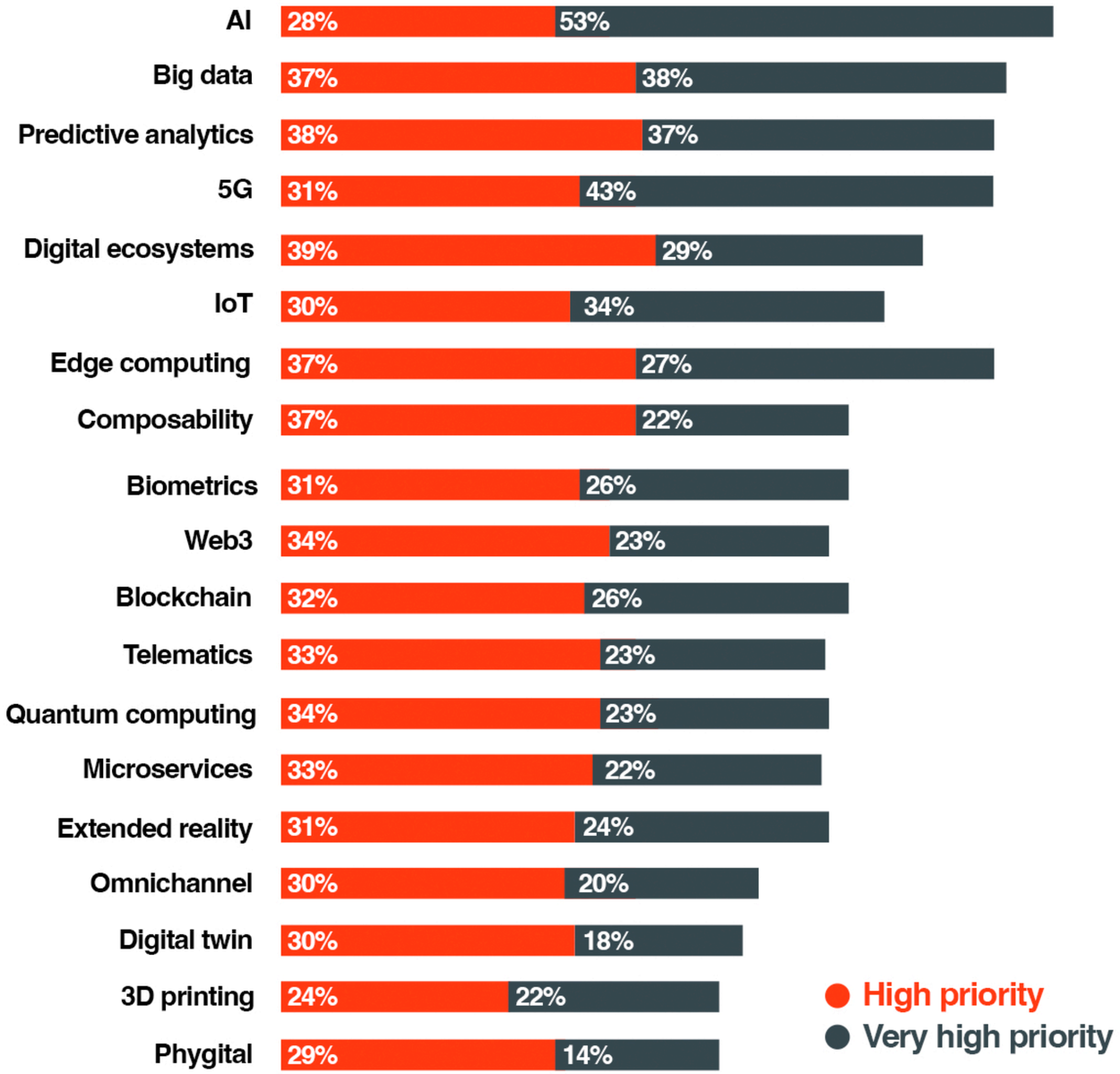
> **AI is becoming more pervasive and will be ubiquitous in the next 5-7 years. Generative AI – like ChatGPT-3/4, Bard, Bing – is disruptive and transformative and is 'The Next Big Thing'. Companies that use and leverage AI, [including] generative AI, will be more competitive and will be future-ready.**
> Technology Manager, Banking, US

Beyond AI, other technologies that were held in similar high regard were big data (75%), predictive analytics (75%), 5G (74%), digital ecosystems (68%), composability (59%) and microservices (55%) (Figure 2).

These technologies form the backbone of digital acceleration by providing the inputs that help inform the direction of technology acceleration (such as big data and predictive analytics) and the means by which it can be carried out through composable architecture and/or microservices.

The following sections will analyse some of the trends contributing and relating to technology acceleration, including further analysis on how various portions of the study audience regard the technologies/concepts differently.

Figure 2. **Organisational priorities**



AI

As noted above, AI represents the highest-priority technology of all those surveyed. This is more pronounced when one looks at the various constituent groups within the survey.

Within each vertical, over 60% of those surveyed regarded it as either high- or very high-priority technology. However, within specific verticals, the proportion was greater. In mobility, retail & consumer goods, telecommunications and finance & banking, more than 80% of respondents considered AI a high-priority technology. The promise of AI is not limited to any vertical, though the potential use cases may be more apparent in the verticals listed above.

AI, in particular generative AI, can provide organisations with more straightforward means to control their technology estates when used in conjunction with composable architecture and microservices[6], accelerating their technological journeys by reducing complexity.

> **AI amplifies the potential of composable architectures. The true value emerges when AI transitions from a data-centric model to one that emphasises end-user interaction and holistic business workflows. Honing in on the entire business workflow uncovers numerous optimisation opportunities, enriching engagement points across the breadth of the business process. This leads to smarter, interactive solutions and allows for iterative enhancements at every stage.**
>
> Mike Krolnik, Global SVP, Data Architecture, Endava

Big data

Big data is fundamental for supplying the learning data that informs AI behaviour and the insights that predictive analytics offer.

Big data was considered a high-priority technology for around 60% (or more) of survey respondents in all verticals, excluding media, where fewer than 50% of responders believed it was a high-priority technology. This latter point is ameliorated somewhat by 40.6% of respondents labelling it as somewhat of a priority.

This is surprising, given the wide array of potential big data use cases across media, whether improving personalisation engines for streaming services or improving advertising targeting. Though, as noted above, this viewpoint could be ascribed to the decline in third-party data availability for advertisers in the wake of legislative and technological changes.[7]

> **Big data plays a pivotal role in technology acceleration by providing a wealth of information for analysis, prediction and decision-making. With big data, organisations can find patterns, trends and correlations that guide them in developing new insights, creating new technologies, enhancing existing ones and streamlining operations. This in turn speeds up technology development and deployment, hence fostering tech acceleration.**
>
> Radu Orghidan, Principal Data Scientist, Endava

[6] **Rachel Curry, "How Generative A.I. and low-code are speeding up innovation", CNBC, May 19 2023,** www.cnbc.com/2023/05/19/generative-ai-and-low-code-are-speeding-up-innovation.html
[7] **Vlad Gozman, "The Slow Death Of Third-Party Cookies"**

Predictive analytics

In most verticals, a large majority regard predictive analytics as a priority technology moving forward, with no group recording a sizable opinion to the inverse.

Predictive analytics allow for better decision-making, countering much of the uncertainty that has been pervasive in the previous couple of years. We believe this is one of the principal reasons it is so highly regarded by so many of those surveyed.

Predictive analytics allow customers to move far faster and with far more confidence than ever before by providing insights that can inform the future of their technological journey.

> **Predictive analytics empowers organisations to process large volumes of data, identify patterns and make accurate predictions about future events or outcomes. This enables them to enhance their customer experience, detect fraudulent activities, drive innovation, make informed decisions and implement new business models. Together, these capabilities form a powerful combination that accelerates technology adoption.**
>
> Adriana Calomfirescu, Group Head of Data Delivery, Endava

5G

5G was considered a high-priority technology for 74% of those surveyed. 5G has been a technology that, for some time, struggled to take off. This survey's findings suggest that interest in 5G is growing again, aligning with a growing consensus of analysts that 5G will be a major element of society in the years to come, with it acting as the backbone of everything from smart cities to connected factories and automotive, alongside immersive customer experiences.[8]

This is likely why, in both mobility and telecommunications, 85% of respondents consider 5G a high-priority technology. In addition, when looking across each vertical, it was one of only two technologies where more than 60% of those surveyed in each vertical regarded it as high or very high priority. This universal acclaim was only observed in one other technology: AI.

In media, 25% of those surveyed regarded it as low or no priority. This is possibly due to the immaturity of the use cases within media.

> **5G is a critical element of technology acceleration, providing high bandwidth and low latency to break barriers that previously constrained data-heavy and real-time applications. This is most evident in areas requiring wide coverage, such as IoT applications, or in high-density scenarios which can leverage private 5G, such as industrial automation.**
>
> Peter Read, Group Head of Infrastructure, Endava

[8] **Sean Michael Kerner & Kevin Ferguson, "5 predictions about 5G adoption in 2023 and beyond", TechTarget, Apr 19 2023,** www.techtarget.com/whatis/feature/5-Predictions-about-5G-Adoption-in-2021-and-Beyond

Digital ecosystems

Digital ecosystems provide the backbone of future and ever-evolving IT infrastructure and are a fundamental building block of technology acceleration. They allow for a more unified business and technology strategy, facilitating smoother and faster technology optimisation.

As such, it is not surprising to see that it was viewed as a high priority by 68% of those surveyed, and a high priority for most verticals (bar media). A case in point is insurance, where over 83% of those surveyed indicated that it was either high- or very high-priority technology. The sector has embraced the potential of digital ecosystems with the rise of insurtech and the pivotal role they play in the insurance ecosystem.[9]

> **Digital ecosystems provide a multitude of technology platforms and components, data and networks of people and knowledge. Platforms and components contribute to composable architectures, data to information and knowledge to reusable information assets. The combination of these key elements enables technology acceleration.**
>
> Lorand Gabos-Szoverdi, Global SVP Delivery Acceleration, Endava

Composability

Composability is regarded as high or very high priority by nearly 60% of those surveyed. While outshone by AI and big data, one cannot overstate its importance concerning rapid software configurations to meet evolving situations. As such, it is vital to technology acceleration.

However, its importance varies across the verticals, with only telecommunications and finance & banking verticals having more than 60% of respondents regarding it as a high- or very high-priority technology approach. This suggests that although it is built upon best practices from decades of IT experience, awareness of composability is still growing.

> **Composable application architectures avoid the traditional problems of tightly integrated software applications. They allow organisations to deploy changes rapidly, reconfigure their applications to support organisational evolution and achieve technology flexibility and scalability.**
>
> Eoin Woods, Chief Engineer, Endava

[9] **Michael Jackowski, "Building Together: An Ecosystem Approach To to Innovating In Insurance" Forbes, Jun 02 2023,**
https://www.forbes.com/sites/forbestechcouncil/2023/06/02/building-together-an-ecosystem-approach-to-innovating-in-insurance/?sh=20ef88667898

Microservices

Microservices, like digital ecosystems and composability, are core implementation elements of technology acceleration, facilitating rapid deployment in line with customer priorities.

A wide variance exists in its priority within various verticals, in a similar vein to composability, suggesting that its awareness and utility vary across verticals. In insurance, nearly 80% of those surveyed regarded it as a high- or very high-priority technology, reflecting that vertical's attitude toward digital ecosystems. No other vertical came close to this, with the next highest being telecommunications, at 60%.

> **Microservices enable the rapid pace of change required by organisations today, allowing faster time to market, the scalability required for a successful organisation and the ability to evolve different parts of their software estate at different rates to meet the unpredictable demands of their competitive environment.**
>
> Eoin Woods, Chief Engineer, Endava

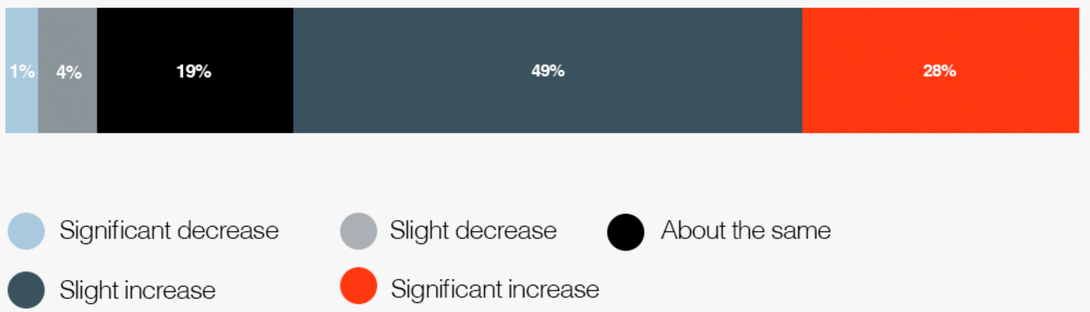
Implementing technology acceleration principles

IT PROJECT DRIVERS, GOALS AND PRIORITIES

As discussed previously, many organisations are optimistic about the current business climate. Many of the staffing challenges, supply chain shortages and recessionary concerns of the last few years have begun to trend in a slightly more positive direction. Keeping with this hopeful outlook, roughly **75% of the organisations Endava surveyed forecast a yearly IT budget increase**, compared to just 5% who predict a decrease *(Figure 3)*.

Figure 3

IT budget change from previous year



More dollars for technology mean that companies can hire additional staff, explore new markets and make strategic investments. When making such IT investments, organisations must balance pursuing operational stability with innovation that will set them apart from their competitors. **Using technology acceleration principles, businesses can prioritise innovation**, as they have already embedded operational stability into the core of their systems and processes.

Among Endava respondent organisations, 31% consider innovation far more important than operational stability and another 25% prioritise it slightly *(Figure 4)*. 29% consider them equally important, and just 15% prioritise operational stability.

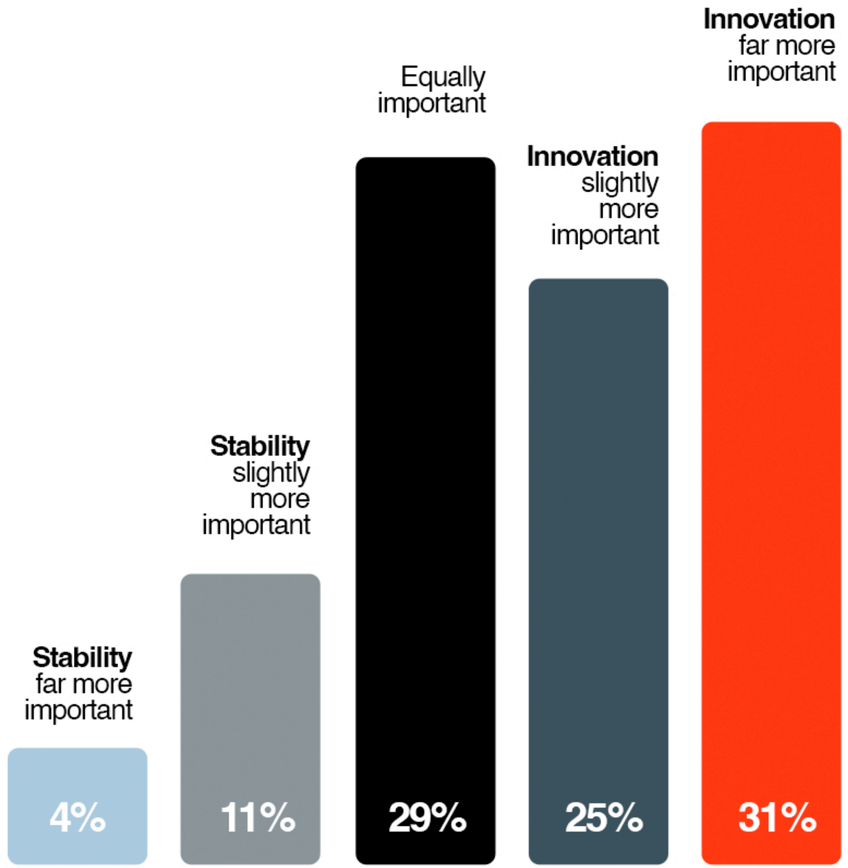


Figure 4

Prioritisation of operational stability and innovation

Innovation's precedence over operational stability is consistent across all sizes of companies, though SMEs are more likely than their mid-market and enterprise counterparts to prioritise both equally. According to the study, organisations in the middle market are the most likely to prioritise innovation, likely because they lack the market share and influence of larger organisations but have more resources to dedicate to innovation than smaller ones.

Just as organisations weigh operational stability against innovation, they also must choose whether to make small, incremental changes to what they already have in place or pursue changes that alter and possibly upend their current processes and systems. Endava data shows that over the past year, 54% of organisations have made transformational change that significantly affects their existing processes and technology *(Figure 5)* versus 46% that have chosen to optimise their existing technology instead of transforming it.

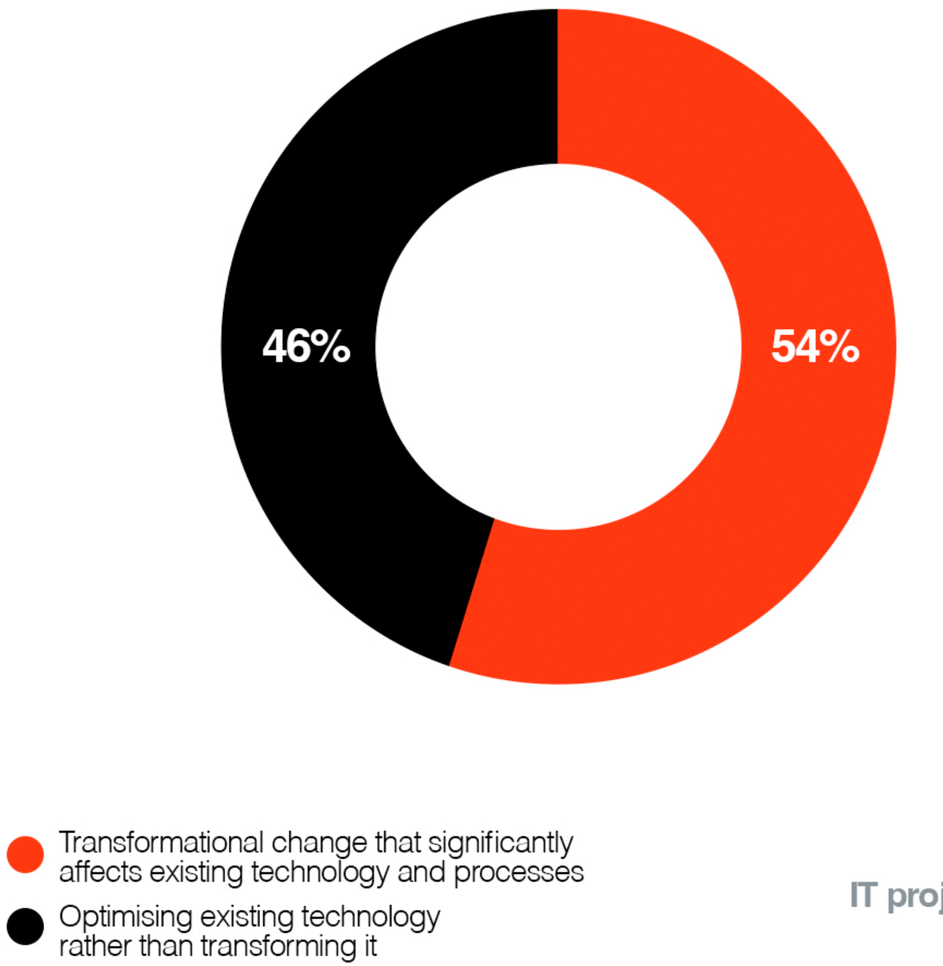


Figure 5

IT project goals

An organisation's project goals depend on the current state of their IT systems; if a company has dated infrastructure and processes, optimising what's in place could be more trouble than it's worth. Trying to update and alter archaic systems may create diminishing returns and delay inevitable, necessary replacements. A few problems in this scenario include software that is no longer supported by the developer, expensive employee training and opportunity cost of dedicating resources to maintenance rather than other value-add tasks. There may be problems pursuing transformational modifications as well; frequent change means that employees have little time to familiarise themselves with new systems and processes, and new technology may be unproven, overhyped or expensive to implement.

TECHNOLOGY PARTNERS

> **Partnerships bring a unique value proposition to the table. Rather than working in parallel, we bring our collaborative skills together to take innovation up a notch. A collective, transparent approach that leverages technology as an accelerator, with people as the true value-add.**
>
> Lewis Brown, Head of Alliances, Endava

While some organisations rely entirely on in-house resources for technology acceleration, many hire IT consultants and outsourcers. Such companies provide services such as product strategy, hands-on development and implementation support. Most organisations in the study worked with external technology partners in the last year and many opted for more than one, with a median number of three among respondent organisations.

> **"Each [partner] is for a different aspect of our overall digital transformation strategy, and usually each have a unique focus or technology."**
>
> Retail CTO, UK

> **"Outsourcing enables my company to count on more flexible solutions. The IT outsourcing companies can adapt more quickly to internal needs and respond to problems as soon as possible. The less time you take to deal with the problem, the less the damage will be."**
>
> Banking Manager, US

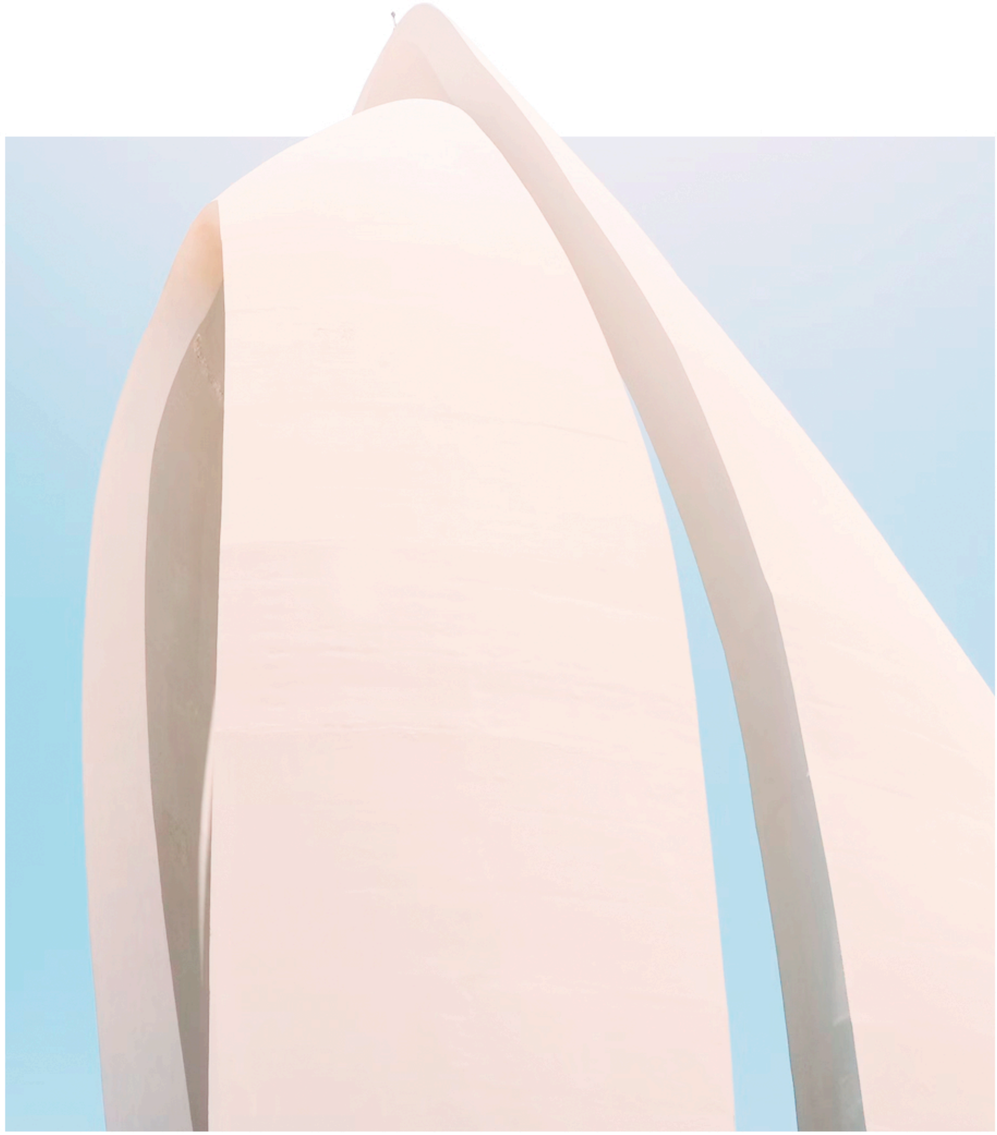
Reasons for multiple technology partners

Organisations cited a variety of reasons for using multiple consultancies and technology partners. Some said that using more than one reduced risk; others said that their partners offered complementary services or had different specialities, as was the case for the COO of an architecture/engineering/construction (AEC) firm, who stated:

> **"Each [partner] was recommended by a partner we were already working with, as they were considered the best for the task that we were looking for."**
>
> AEC COO, US

Some drivers were size-related. Several large organisations indicated that mergers and acquisitions or wide geographic footprints influenced their number of partners, while small organisations leveraged outsourcing to avoid fully building out a formal IT department. A COO at another AEC firm said:

> **"One of the primary reasons my organisations opt for outsourcing IT services is cost savings. Outsourcing can often be more cost-effective than hiring and maintaining an in-house IT team."**
>
> AEC COO, UK

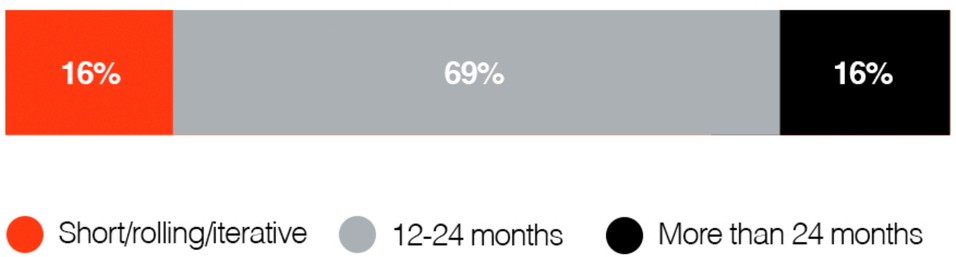


Partner engagement length preferences

When engaging external technology partners, most organisations put firms on contracts of two years or less *(Figure 6)*, though data shows that they would prefer even shorter contracts more in line with a technology acceleration approach, as evidenced by the nearly 70% of respondent organisations that stated that they prefer engagements that were short in length, but easily extendable as opposed to longer ones.

Figure 6

Consulting contract length over the past year

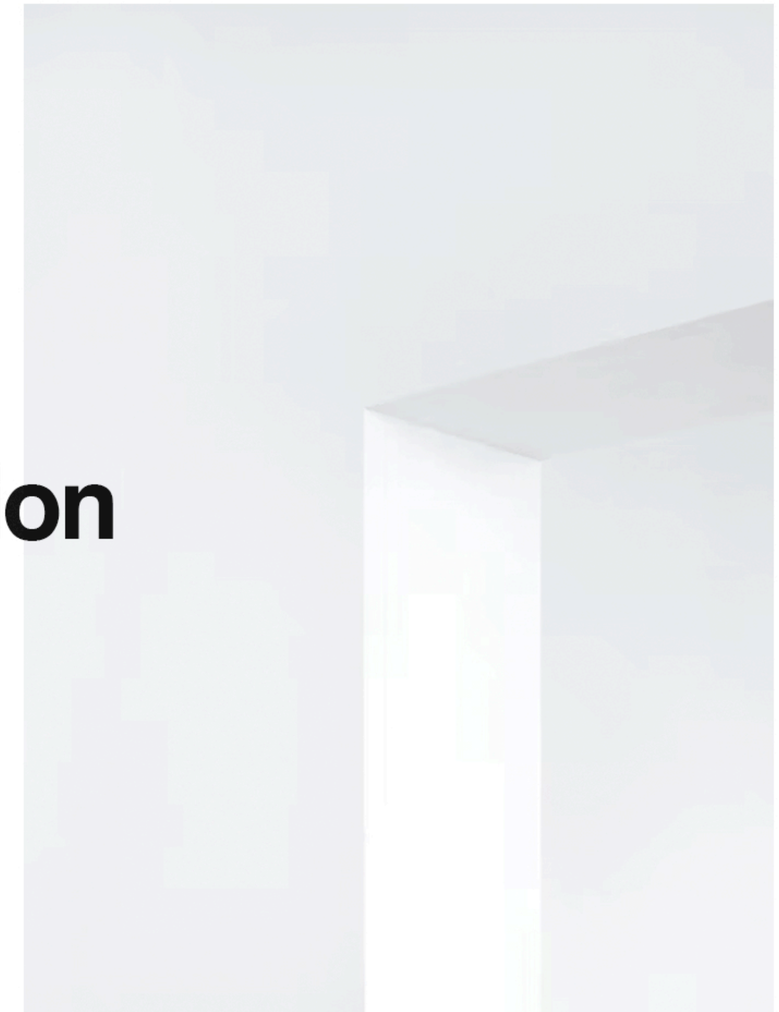


While one approach doesn't work for every organisation, the best practice for engaging new technology partners is to start slowly with a short contract to see how both companies work together. This method builds rapport and familiarity between the consulting partners and the individual customer at the heart of the engagement. It enables a better understanding of their unique needs and allows for a more tailored approach. This human-centric approach helps them develop a plan of action, whether it's to bring in other partners, put another quick engagement into place or roll out a project requiring a longer timeline.

> **"We have a long-standing relationship with one IT services provider, and there is trust in that relationship. He recommends short-term contracts with other specialists if needed to expand or problem-solve."**
>
> Mid-Level Manager, Non-Profit, US

This relationship, and the trust that it engenders, is vital for IT engagements. Our engagement model embraces that enterprises comprise numerous individuals with needs and preferences. Especially now, we believe this is vital due to the rise of and improvements in artificial intelligence and automation. New technologies, while wondrous, can make it easy to forget.

Conclusion



Today's world is in a state of flux. The pace of technological change and innovation is faster than any other period in human history. Technology like AI has fundamentally upended the paradigm and such rapid technological advancements are matched with a world facing some of the most significant challenges since the Cold War.

These changes have created a risky environment to commit extensive resources toward a long-running project that may be obsolete by its fruition. But businesses can't ignore the emergence of game-changing technologies, as they can play a crucial role in problem-solving and adaptation, allowing them to better serve their customers and thrive.

Endava believes a prudent approach favours iterative change via flexible engagements, with a preference for optimisation over transformation to achieve the innovations that help businesses adapt and ultimately thrive. In short: **technology acceleration**.

Though technology acceleration is only part of the equation. The increasing complexity found in the technological landscape precludes a one-size-fits-all implementation mentality. Think about how different the deployment of conversational AI might look at a regional German retailer versus a transnational American bank or an Australian insurance provider.

Even looking beyond the regional and vertical differences, it is too easy to generalise and forget that companies have unique cultures and are comprised of diverse individuals. Each has specific needs, behaviours and motivations, requiring an approach that works for them. This human-centric approach is vital in any technology deployment or consulting engagement and lies at the heart of our customer interactions.

How we can help

Our goal is to help customers embrace, navigate and implement new technologies to make their operations, products and services the best that they can be.

By leveraging next generation technologies, our agile, multi-disciplinary teams provide a combination of product and technology strategies, intelligent experiences and world-class engineering. We collaborate with our clients, seamlessly integrating with their teams, and help them become digital, experience-driven businesses by assisting them in their journey from idea generation to development and deployment of products, platforms and solutions.

To learn more about how we can help, contact us below.

Contact us

Authors

OLIVER JACKSON
Research Analyst

Oliver is a Research Analyst with over eight years of market intelligence experience across the ICT sector. He leads Endava's Market Intelligence unit.

MAJOR BOTTOMS JR
Senior Research Analyst

Major is a Senior Analyst with over six years of consulting experience. He leads projects combining industry knowledge and research to develop and inform business strategies.