THE DATA IMPERATIVE

Rewrite your data strategy to capitalise on the digital investments made over the last two years

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Introduction

Today's hyper-connected technology, communication, and media-obsessed culture generates tremendous quantities of data.

Why is this massive volume of data important? Data is enterprises' gateway to understanding customers and catering to them in a world where customisation is the rule, not the exception. What's more, insights from data can help these firms develop new go-to-market strategies, discover new revenue streams and capture market share from competitors. The technology, media and telecommunications (TMT) sector is at the forefront of data creation and therefore has access to a wealth of it.

Yet, availability does not equal realised opportunities. Most TMT firms are not yet taking full advantage of the opportunities from data as only 29 percent have adopted a comprehensive data strategy at scale. At the same time, more than 70 percent of TMT companies believe it is likely that effective and widespread data usage will radically change the business model.

During much of COVID-19, the priority for many organisations was survival. To continue to serve customers, digital transformation efforts needed to accelerate. Because of this, we hypothesised that focusing on digital transformation and data equally simply was not possible for most. Similarly, did TMT organisations have time to think about the vast and rich data assets that they were creating as a result of their accelerated transformations?

To better understand the data landscape in TMT, KPMG in collaboration with HFS Research analysed survey results from more than 300 TMT executives in North America, Europe and Asia Pacific. This research not only revealed challenges and a path forward to adopting a holistic data strategy at scale but also the potential rewards for companies that get it right. We call it the data imperative.

What this study shows is that TMT companies are underutilising their data resources. At the same time, they correlate a potential for outsized financial returns by leveraging data across all value chain activities. To close this gap, TMT companies plan to significantly accelerate data access, management, and analytical activities and functions in the next 2 years. This puts these activities on par with the focus of most other digital transformational programs.

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Key findings
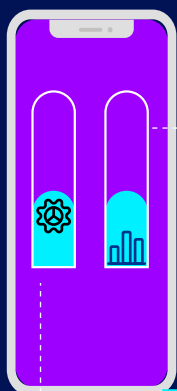
57% do not have a defined, enterprise-level data strategy.

When asked about data usage over the next 12 to 24 months, **73 percent** of organisations agreed that as organisations rushed to survive and thrive, most did not have time to think through the treasure trove of data they were creating for themselves.

Only **32%** fully utilise their customer data.

66% spend between US$10 million and US$100 million on capital and related data investments.

48% said that they believe their organisations' transformation efforts are ahead of data deployment.

Only **11%** have data deployment prioritised ahead of digital transformation efforts and data is leveraged significantly.

75% believe that using enterprise data effectively can radically change their business models.

Fewer than **10%** rate their organisations' level of maturity as world-class for data monetisation, data management and architecture, and data quality and governance.

Methodology: The survey was conducted with 302 C-level and functional executives across North America, Europe and Asia Pacific. Companies surveyed included sub-industries of TMT such as software, hardware, IT services, broadcast and cable media, movie/entertainment, social media, marketing/advertising, publishing, mobile and fixed data, and internet and voice services. Most companies' revenues exceed US$250 million and more than 50 percent of the respondents work for companies with more than US$1 billion in annual revenues.

Companies must prioritise data

During the monumental changes of the last 2 years, few industries have embraced and enabled digital transformation and service delivery more than those of the TMT sector. Many of the transitions to online remote work and education can be credited to TMT. For example, in April 2020, Microsoft Teams reported a new daily record of 2.7 billion meeting minutes in one day, a 200 percent increase from 900 million on March 16.[2]

Microsoft and many other TMT companies have seen 2 years' worth of digital transformation consolidated into a few months. Yet, data often was not factored as part of the digital transformation equation. When asked about data usage over the next 12 to 24 months, 46 percent of TMT enterprises agree strongly that the pandemic derailed progress in data usage by shifting the urgent focus to cloud deployment, the critical underpinning of digital transformation.

Moreover, when asked about data usage over the next 12 to 24 months, 73 percent of respondents agreed that as organisations rushed to survive and thrive, most did not have time to think through the treasure trove of data they were creating for themselves. Underscoring this trend is that more than 80 percent of global TMT companies believe they are underutilising their data volume for competitive advantage due to more pressing business issues related to the pandemic.

2. Spataro, Jared. 2020. How To Make Connections In Remote Meetings — Microsoft 365 Blog. © Microsoft. https://www.microsoft.com/en-us/microsoft-365/blog/2020/04/09/remote-work-trend-report-meetings/

Data is a critical enabler for emerging technology adoption

Solving this data underutilisation problem is mission critical for TMT companies. Many advances in service delivery, personalisation of services and new cost models depend on the effective use of data underpinned by comprehensive, enterprise-wide data strategies. Essential elements, including artificial intelligence (AI), machine learning (ML), effective automation, and smart analytics to better understand and serve customers, are reliant on TMT companies' ability to become data-first organisations.

As we delve into this more, we find that several of these capabilities are absent at many companies. For example, while most have infrastructure plans and programs to connect data across silos and standardise cloud use for data management and access, less than 50 percent have a defined enterprise data strategy. Areas of opportunity include leveraging data as an asset, using data to transform business models, and having a centralised function for data analyses. The foundational elements may be in place yet capturing the full value of data is still on the horizon.
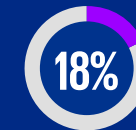
Sample: 302 | Source: HFS Research

What is the current stage of adoption of a comprehensive data strategy in your company?
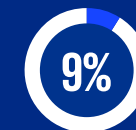

ADOPTION STAGE
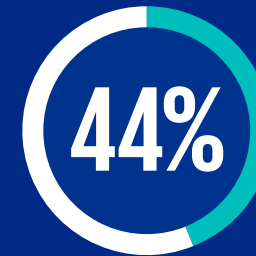
44% Currently implementing in a few areas

29% Implemented at scale across the enterprise or organisation

18% Planning to invest in future

9% Piloting

Most tellingly of the relationship between data and overall digital transformation efforts, only 11 percent have data deployment ahead of transformation efforts and data is leveraged significantly. If data is the new oil – as it has been characterised by many for the last five years – priorities should be reevaluated. Understandably, the pandemic changed most well-laid plans and almost half of survey responses indicated that transformation efforts are ahead of data deployment and data is underutilised.

While the pandemic reshaped many businesses' roadmaps, it is important to remember that digital transformations can be a significant source for new datasets. At a minimum, data and digital transformation should be at the same priority level; in many cases, data should be ahead in the quest to drive true competitive differentiation. If not, companies may risk missing an opportunity to capture data that is meaningful and provides insights for better business decisions. Interestingly, the Asia Pacific region has the highest percentage of companies where data deployment is ahead of transformation efforts and is leveraged significantly. This may be due to greater flexibility in using data to shape the customer journey and patterns of interaction. Also, there is a greater proliferation of digital startups whose services are data-centric and cross multiple sectors.

Surprisingly, when we look at the usage of specific kinds of data, there is a wide difference in data that is fully or significantly utilised for competitive advantage. Fifteen percent (15 percent) fully use master/meta data. Meanwhile, only 32 percent of companies fully utilise customer data. There is opportunity to leverage customer data to develop differentiation in the market, for example, by personalising content, product offers, product development and more.

Which of the following apply to your company in terms of data usage and deployment?

Data usage and deployment description

Data is available in the cloud with extensive access to advanced AI and ML tools

23%

We have a centralised data and/or analytics team for the enterprise

35%

We have a defined enterprise data strategy

43%

We leverage data as an asset (e.g. using data for insights to build new products or services)

44%

We use data to transform and/or expand our business models (e.g. supporting subscription-based businesses)

46%

We connect and share data across functional and operational silos

56%

We have initiatives to monetise data to increase revenue

58%

We have a standardised approach to leveraging the cloud for data management and access

58%

● Percentage of respondents (Yes)

Sample: 302 | Source: HFS Research

Which of the following scenarios best describes your organisation's current situation in terms of the relationship between data and digital transformation efforts?

Relationship between data and digital transformation efforts
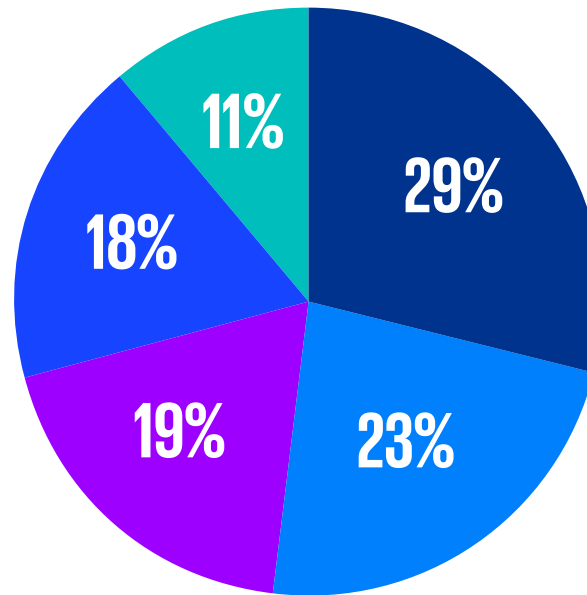
- ● Transformation efforts ahead of data deployment, data underutilised moderately
- ● Transformation efforts and data deployment at the same level
- ● Transformation efforts ahead of data deployment, data underutilised significantly
- ● Data deployment ahead of transformation efforts, data leveraged moderately
- ● Data deployment ahead of transformation efforts, data leveraged significantly

Sample: 302 | Source: HFS Research

An example of an opportunity to leverage the power of data is a reframing of traditional customer experience approaches. Consider the availability and ability to link location, network, social media and customer profile data sets. An opportunity exists for telecommunications companies, for example, to detect customers who are on the verge of changing providers and create intervention scenarios such as discounts, proactive outreach and more. Within the telecommunications industry, there are many similar, potential use cases and they all depend on the effective use of data. Ultimately, data can transform an industry that is in constant pursuit of higher loyalty and reduction of churn rates.

Key takeaway

Many TMT organisations are underutilising their data, and they may benefit from a stronger strategy to use it wisely.
Data strategy prioritisation must be on par with or above digital transformation efforts in terms of scope and effectiveness.

Not all companies are created equal:
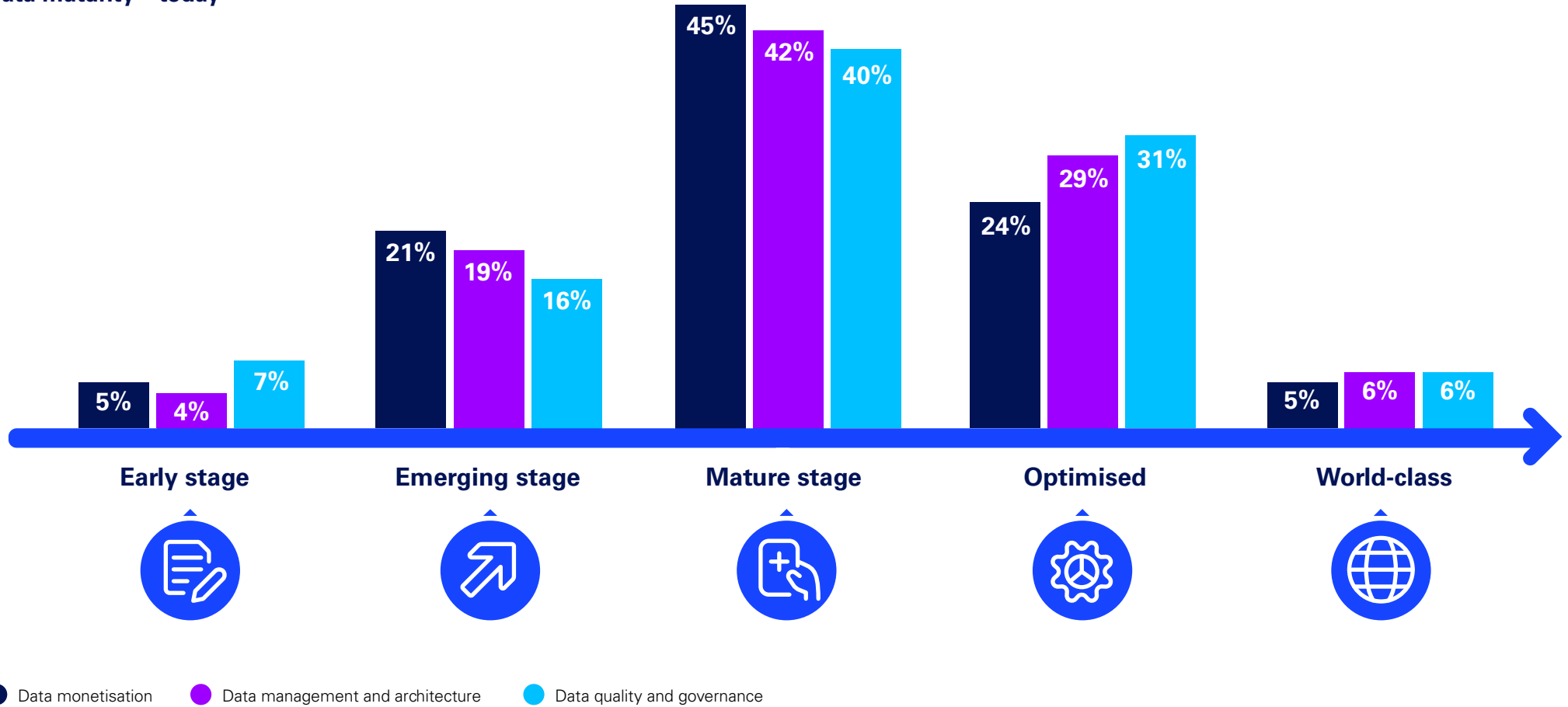
Maturity outlook for data usage

More than 40 percent of companies reported being optimised or world class across key capability categories such as data security, governance, compliance and master data management.

Importantly, approximately 25 percent of companies consider their organisations to have world-class data architecture and development for data security. Given the mission critical role that data plays in cybersecurity, companies should not be satisfied with being less than world-class.

How do you rate your organisation's level of data maturity today?

Data maturity – today

	Early stage	Emerging stage	Mature stage	Optimised	World-class
Data monetisation	5%	21%	45%	24%	5%
Data management and architecture	4%	19%	42%	29%	6%
Data quality and governance	7%	16%	40%	31%	6%

● Data monetisation   ● Data management and architecture   ● Data quality and governance

Sample: 252 | Source: HFS Research

We asked companies which areas of data architecture and deployment are major challenges in achieving more effective enterprise data use for transformation activities. The following responses stand out.

— Forty-one percent (41 percent) report the ability to use and analyse structured, semi-structured and unstructured data. Forty-five percent (45 percent) of technology companies face this challenge, followed by 40 percent in the media segment and 37 percent in the telecommunications segment.

— Thirty-nine percent (39 percent) report that distributed access to different data sources (i.e. internal functional data, internal enterprise-wide and external data) is a challenge. More media companies face this challenge (45 percent) than technology (41 percent) and telecommunications companies (32 percent).

— Thirty-seven percent (37 percent) of respondents say that data modernisation is a challenge.

All three of these capability areas — using and analysing unstructured data, distributed data access and data modernisation — serve as the foundation for next-generation data architecture and deployment at scale.

Fewer than 10 percent of the companies we surveyed have a world-class data strategy for data monetisation, data management and architecture, and data quality and governance. We expect this situation to improve.

At least 30 percent of the companies expect to have a world-class data strategy, for the above mentioned aspects, in the next 2 years. Roughly 45 percent of TMT companies are at a mature stage for leveraging data for monetisation. Within 2 years, 51 percent of companies expect to achieve optimal maturity.

Key takeaway

TMT companies face challenges working with both structured and unstructured data, distributed access to different data sources and data modernisation as they aspire to develop the right applications for their commercial purpose. We believe that data and digital maturity will increase to optimised and world-class levels in the next 2 years, moving in lockstep up the maturity ladder. We predict that leading organisations will achieve this yet it will require focus and investment.
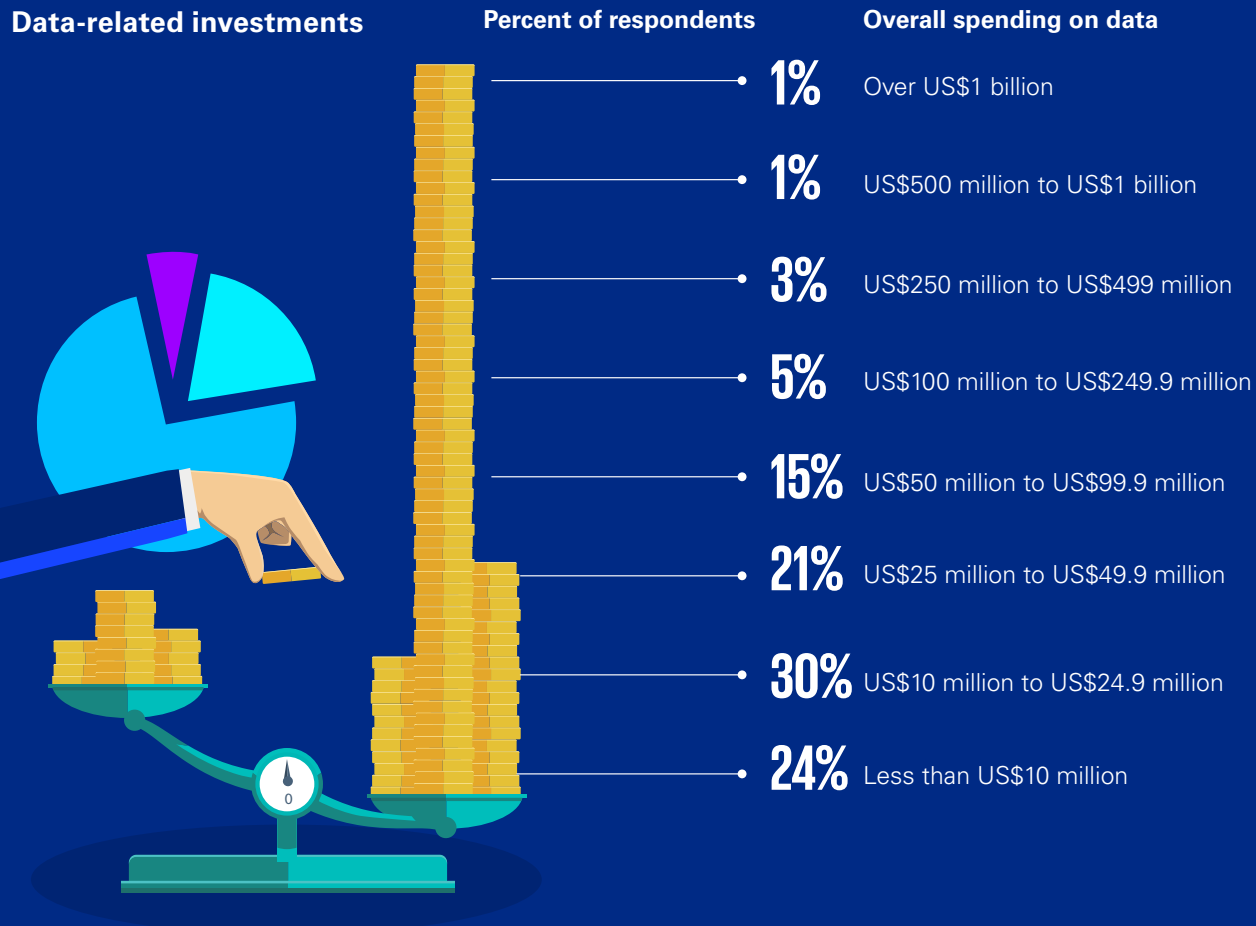
Reconsider data investments to become

(and remain) competitive

Despite the underutilisation of data and dearth of strategy around it, TMT executives feel that data investment is on the right track. More than half of companies think their current spending on data is significantly (12 percent) or moderately (43 percent) above long-term requirements. For 39 percent, spending is about right, and for 6 percent, it is too low. Given that data efforts and initiatives are still behind digital transformation, the issue may not be that companies aren't spending enough on data initiatives, but that they don't have the right focus on investment priorities and governance on data imperatives.

Most companies (66 percent) spend between US$10 million and US$100 million on data capital and expenses, with an overall average of US$63 million. However, there is a wide range in spending depending on company size.

Which of the following best represents your organisation's combined overall spending (capital and expenses) on data in 2021?

Data-related investments

Percent of respondents

Overall spending on data

1% Over US$1 billion

1% US$500 million to US$1 billion

3% US$250 million to US$499 million

5% US$100 million to US$249.9 million

15% US$50 million to US$99.9 million

21% US$25 million to US$49.9 million

30% US$10 million to US$24.9 million

24% Less than US$10 million

Close to 70 percent of the companies in our survey plan to increase spending on data-related activities in 2022. Roughly 9 percent of the companies plan to increase their data-related spending by more than 10 percent.

Half of TMT companies spend equal amounts on data access and management versus analytics activities. For the remaining 50 percent of companies, there is a slight overweighting of spending on analytics activities. This implies, to some extent, the importance of analytical investments versus infrastructure investments.
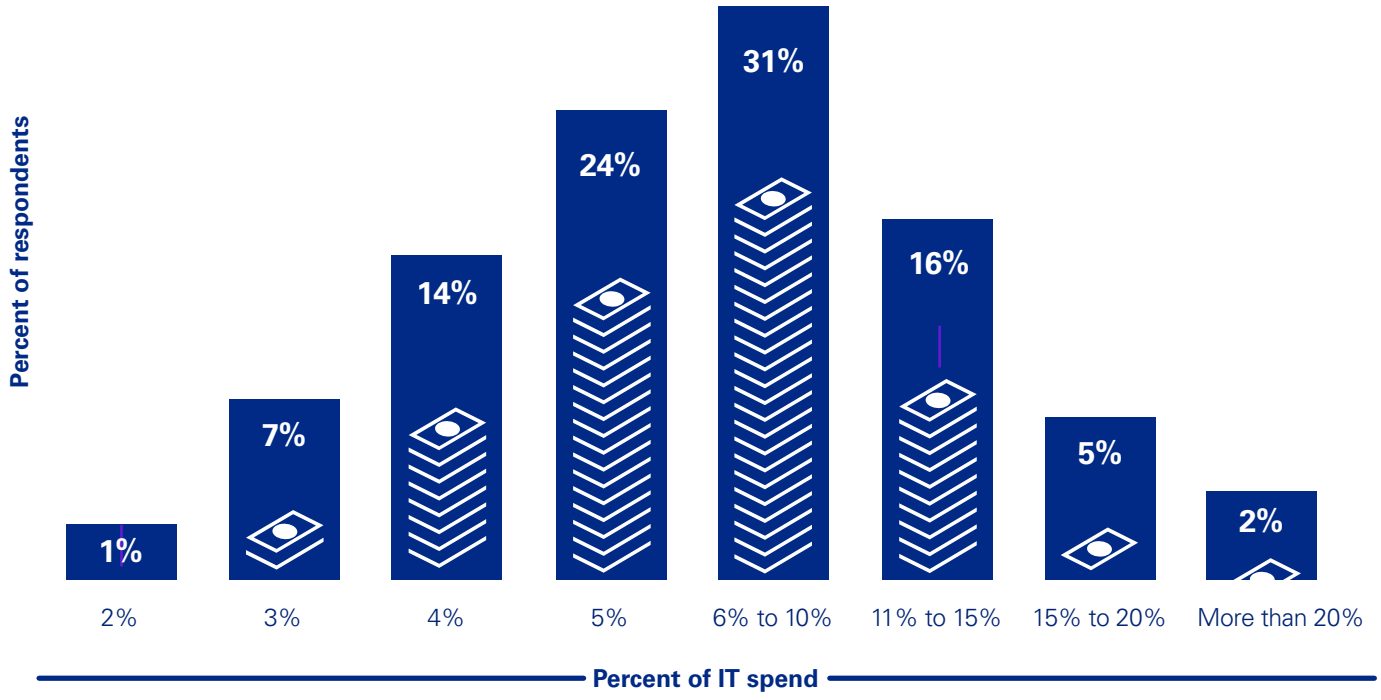
An alternative way to examine the magnitude of data spending is to calculate data spending as a percentage of overall IT spending.

Indeed, these investments seem to pay off, with companies in the higher range of spending driving **more revenue growth** than companies in lower ranges.

Sample: 302 | Source: HFS Research
Percentages may not sum to 100 percent due to rounding.

What percent of overall IT spending is for data-related activities including data access, insights, analytics, etc?

Percent of respondents

Percent of IT spend	
2%	1%
3%	7%
4%	14%
5%	24%
6% to 10%	31%
11% to 15%	16%
15% to 20%	5%
More than 20%	2%

Sample: 302 | Source: HFS Research

Key takeaway

Lack of investment in data infrastructure and applications is not the issue holding back the utilisation and overall benefit of data itself. Companies should address focus, prioritisation and governance of investments.

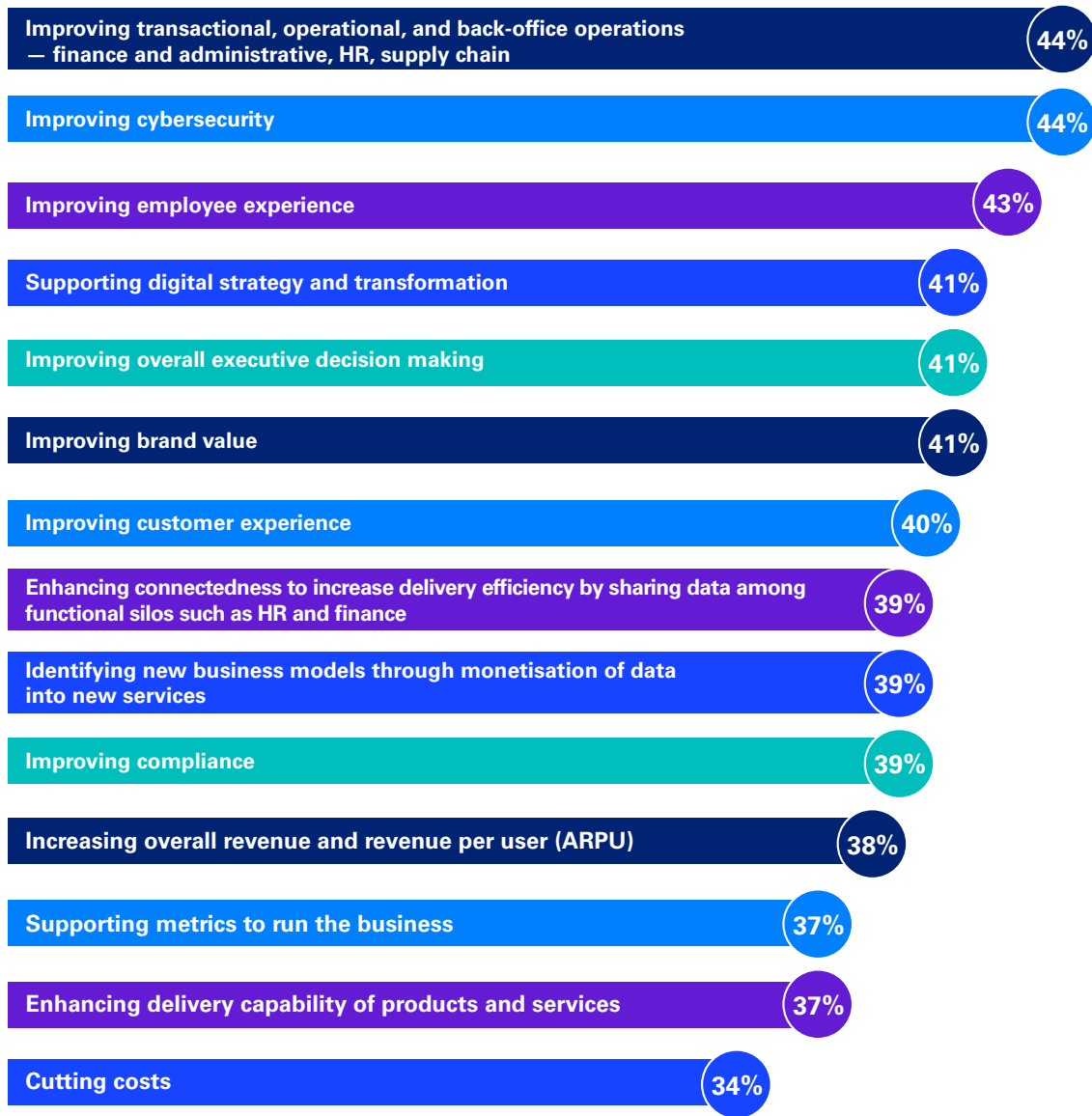# Capture incremental value by leveraging data in strategic initiatives

Even companies in the early stages of effective data strategy appear to understand the impact of their efforts. When we asked about the effects of data usage (i.e. enhanced business insights or financial forecasting and modeling) on strategic imperatives, more than a third of companies reported high impacts on initiatives such as scope of products and services, improving cybersecurity and others. Many appear to have placed a premium on data for improving customer and employee experience, enhancing cybersecurity and improving transactional operations. About 45 percent of technology companies and 44 percent of telecommunications companies believe that effective data use has a high impact on improving customer experience. Meanwhile, 31 percent of media companies share this belief. Interestingly, more media companies (47 percent) believe that employee experience will improve through effective use of data compared to telecommunications (41 percent) and technology companies (40 percent).

Between the challenges of remote working and the increase in security threats, cybersecurity is one of the top initiatives for most enterprises. For cybersecurity, technology companies lead with 49 percent of them believing that data will have a high impact on their efforts. This belief was shared by 45 percent of the telecommunications and 38 percent of the media segments. For improving transactional, operational and back-office operations, 48 percent of media companies believe that effective data will have a high impact, while telecommunications (42 percent) and technology (41 percent) segments concur, but slightly less so. Surprisingly, for TMT as a whole, use of data associated with generic cost-cutting had the lowest number of respondents who indicated a perceived high impact. Finally, when we analysed customer-focused activities, not surprisingly, TMT companies reported placing greater value on leveraging data for increasing their conversion rate through personalisation and improving upsell and cross-sell activities. These are some activities that can ultimately drive revenue growth underpinned by data monetisation.

What is the impact of effective data usage?

(Percent of respondents who indicated effective data usage would have high impact in the following areas)

Improving transactional, operational, and back-office operations — finance and administrative, HR, supply chain	**44%**
Improving cybersecurity	**44%**
Improving employee experience	**43%**
Supporting digital strategy and transformation	**41%**
Improving overall executive decision making	**41%**
Improving brand value	**41%**
Improving customer experience	**40%**
Enhancing connectedness to increase delivery efficiency by sharing data among functional silos such as HR and finance	**39%**
Identifying new business models through monetisation of data into new services	**39%**
Improving compliance	**39%**
Increasing overall revenue and revenue per user (ARPU)	**38%**
Supporting metrics to run the business	**37%**
Enhancing delivery capability of products and services	**37%**
Cutting costs	**34%**

Sample: 302 | Source: HFS Research

Key takeaway

TMT companies value the data generated that impacts the customer experience, employee experience, transactional operations and cybersecurity. Increasing the conversion rate through personalisation, improving selling activities, and customer retention are the key customer-focused activities that can leverage the generated data.

Derive outsized returns from effective data investment

More than half of TMT companies expect a 4 percent or greater increase in performance effectiveness in customer service, cybersecurity, talent management and back-office activities when they increase investments in data by 25 percent.

Even an increase in performance of this magnitude can provide many benefits.

— The back office can gain process efficiency.

— Customer service can develop a better understanding of customers and an ability to personalise experiences.

— IT operations can know and defend against risks before they can harm the business.

Indeed, 39 percent of companies strongly agree that over the next 12 to 24 months, data investments have the highest returns of any other technology-related investments.

More than 70 percent of TMT companies believe it is highly likely (4 or 5 on a 5-point scale) that effective and widespread data usage can radically change the business model and enterprise connectedness will greatly improve operational efficiency.

What is the likelihood that the following results will happen due to effective and widespread data usage in the enterprise?

**(Percent of respondents who indicated likely or very likely)**

75% Effective enterprise data use can radically change the business model (e.g. move from product sales model to a subscription model)
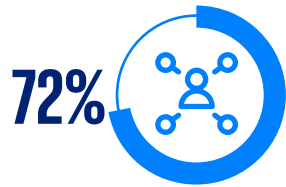
72% Enterprise connectedness linking the front, middle and back offices will greatly improve operational efficiency through the use of and access to enterprise data
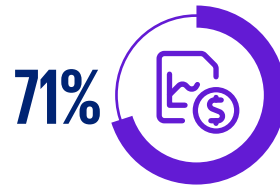
71% Overall revenue increases with greater integrated use of customer profiles and usage data
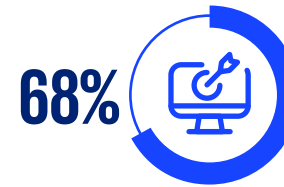
68% Operational dysfunction due to functional silos can be diminished through greater access to data across the entire enterprise
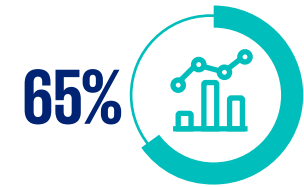
65% ROI on capital projects can increase with better use and analysis of financial data, including historical returns

Outcome

Sample: 302 | Source: HFS Research

Which of the following KPIs are most important for your organisation when measuring the impact of data?

Cost reduction	Profit	Cost to service	Revenue generated	Market share	Resolution rates	ROI	Revenue per customer	New customer acquisition	Cost to acquire customers	Net promoter score (NPS)
40%	38%	34%	33%	33%	32%	31%	27%	19%	10%	2%
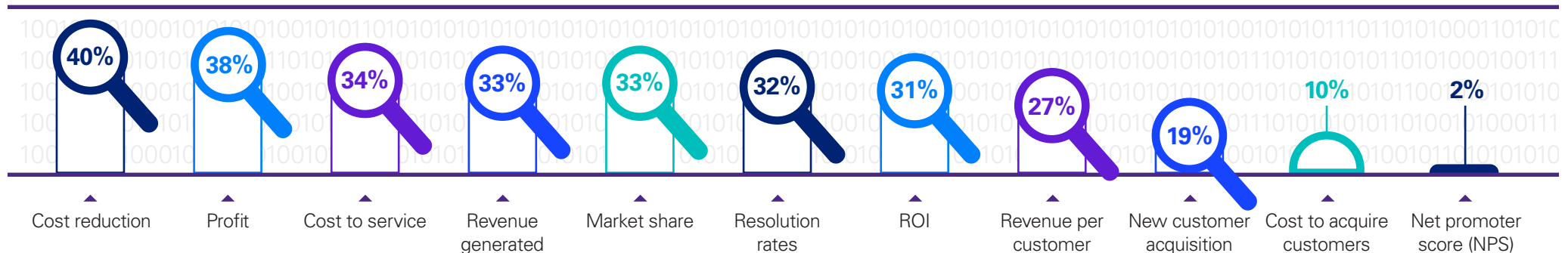
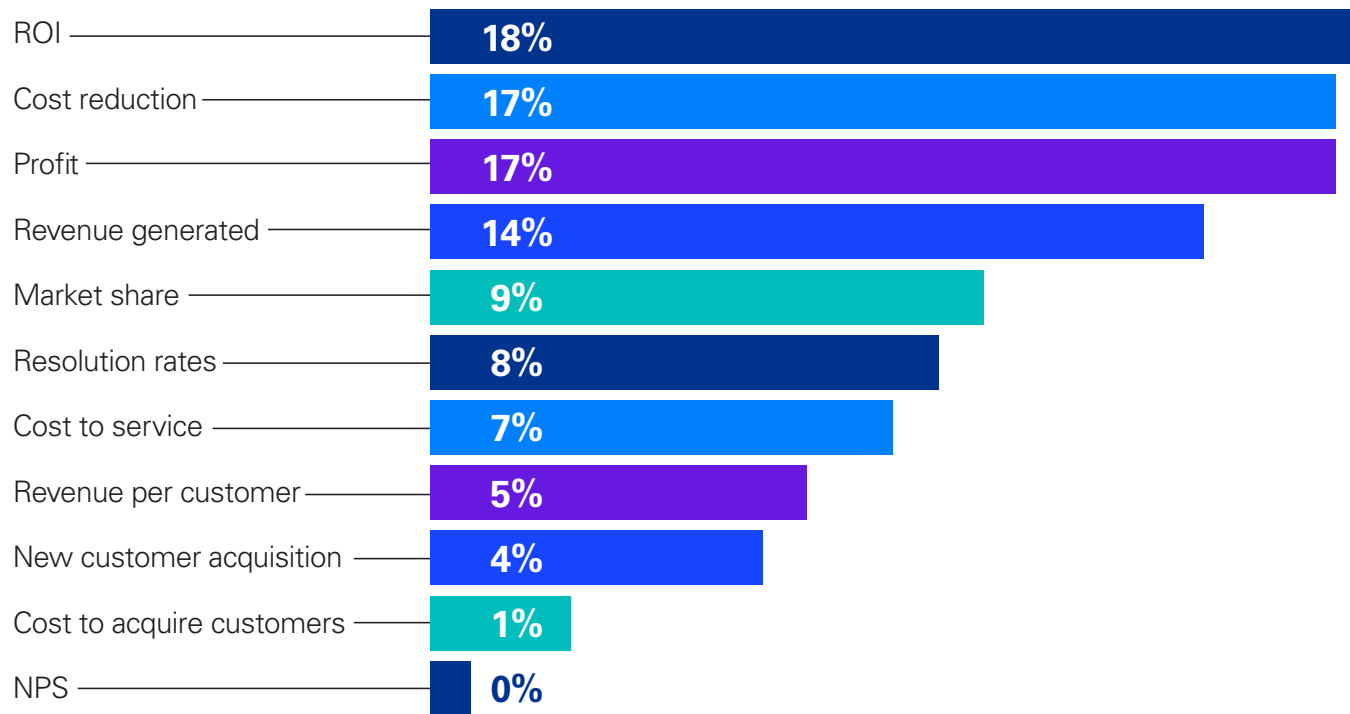Sample: 302 | Source: HFS Research

This underscores the potentially transformative nature of effective data management and usage on both a company's business model and overall operational effectiveness.

ROI, cost reduction, profit, and revenue generated are the top-ranked KPIs that TMT companies plan to improve over the next 2 years through effective data usage. Eighteen percent (18 percent) of TMT companies expect to improve their ROIs and 17 percent noted that they plan to improve cost reduction in the next 2 years, while the response is 17 percent for profit and 14 percent for revenue generation.

Which KPIs does your organisation plan to improve over the next 24 months through the effective use of data?

(Percent of respondents who ranked the attribute as top priority)

KPI improvement due to effective data use

KPI	Percent
ROI	18%
Cost reduction	17%
Profit	17%
Revenue generated	14%
Market share	9%
Resolution rates	8%
Cost to service	7%
Revenue per customer	5%
New customer acquisition	4%
Cost to acquire customers	1%
NPS	0%

Sample: 302 | Source: HFS Research

Understand and quantify how data optimisation can impact your organisation

More than 80 percent of TMT companies surveyed agree that effective data usage will enable an aligned and empowered workforce in the next 12 to 24 months. A similar number agree that data investments will yield the highest returns of any other technology-related investments over the next 12 to 24 months.

The majority also agree that cloud access will unlock the power of data. Indeed, it seems that cloud may be the repository of all critical financial and operational data in the next 2 years and that innovative data use will help in delivering products and services digitally.

Importantly, roughly two-thirds approach cloud as a catalyst to data innovation and are designing solutions, including applications as microservices (a collection of small, decoupled component services).

These trends point to the fact that the data landscape in TMT will continue to evolve quickly in the next 24 months, and by then it may look nothing like it does today. The effective and transformative use of data to support customer-facing and internal operations has been an undisturbed giant within TMT during the last 2 to 3 years.

Key takeaway

Overall, we expect effective data usage to enable an aligned and empowered workforce that can accelerate the digital transformation journey. Cloud will act as a catalyst in this journey through data-focused applications. At the same time, companies may want to consider that challenges of legacy data application compatibility and linkage may be significant.

The bottom line:

TMT companies must start treating data strategy as a foundational enterprise capability

In taking the steps to effective data usage in TMT, we identify five high-impact initiatives.

1. **Treat data like an asset and its use as a competitive differentiator:**
   TMT companies are still at the early stages of transformative data use, but they are moving quickly to change this mindset. As the fog from the pandemic lifts, hybrid and work-from-home workforces are balancing out, and organisations have the perspective to step back and look at their data strategy through a more holistic lens. Recognising data strategy as a foundational enterprise capability for success is driving this shift.

2. **Target at least 10 percent of overall revenue from the monetisation of data through new products and services.**

3. **Rethink the steps to achieve a cloud-based data architecture leveraging hyperscalers globally:**
   This is the path to supercharge data access and accessibility across the ecosystem.

4. **Use data in addition to process and others as the foundation of a connected enterprise within TMT:**
   Expanding connectedness beyond the four walls of a TMT enterprise to encompass a larger ecosystem will only be accomplished through the effective use of customer, operational, compliance and security data.

5. **Drive transformation through the use of data with a focus on customer centricity**:
   Democratise the data – data sources both for today and the future focusing on both breadth and depth.

How KPMG can help

KPMG Ignite

is our innovative patented AI platform that brings together machine learning, deep learning and computer vision/language document ingestion. We apply these capabilities to structured and unstructured data, voice and images to enable you to achieve real value from your data and AI investments in a flexible, easy-to-use and secure environment.

KPMG Connected Enterprise

helps you harness technology to build a connected enterprise. That's an enterprise where your front, middle and back offices are aligned. An enterprise where you're more connected with your customers, employees and business partners. An enterprise that enables you to respond quickly to market signals and pivot to seize opportunities as they arise.

KPMG Powered Enterprise

is a solution for rapid business modernisation. We've combined our experience gained from working across thousands of functional transformations with our knowledge of the latest cloud technologies. The result is a formula for driving sustainable change, rising performance and lasting value – delivering your business objectives with a high level of certainty.

ABOUT HFS RESEARCH

HFS

HFS Research's mission is to provide visionary insight into the major innovations impacting business operations including: automation, AI, blockchain, Internet of Things, digital business models and smart analytics.

We're more than an analyst firm – we are architects of global business operations, defining the Digital OneOffice and hyperconnected future-state, and wholly dedicated to helping both our clients and the wider community realise long-term value through business, process and technological transformation. We accomplish this through a unique Research 2.0 approach that values the collaboration between consumers, advisors, and business process and technology providers.

Our research is grounded in primary data from both discussions and over 5,000 surveys conducted across the Global 2000.

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Alex Holt is the global head of TMT for KPMG and is based in Silicon Valley. A highly accomplished executive with over 20 years' international experience, Alex joined KPMG in the UK as the chief operating officer, taking up the leadership of the UK TMT sector in 2015. Alex relocated to the US in 2018 as the global account executive for several leading technology companies based in Silicon Valley. In 2020, he took on greater responsibility running the multibillion-dollar global TMT practice, leading thousands of KPMG professionals who serve clients across the TMT sector with a wide range of advisory, tax and audit services.

HFS Research

Don Ryan is Chief Strategy Officer and joined HFS Research in August 2020. As Chief Strategy Officer, he directs all custom/advisory, customer service, and business development activities for HFS. Before joining HFS, Don was Director for global research and thought leadership for business and outsourcing services, digital technology, and AI deployment at KPMG LLC. Don brings a broad background in forecasting technology trends, quantifying the market impact of brand experience/customer loyalty and analysing the changing nature of business operating models. Don's insights gained through research and analytical roles at TNS, META Group, Current Analysis and FEDEX along with his education at The Wharton School help HFS clients identify new directions and opportunities. Don's research focuses on leading large research-based advisory engagements and coverage of technology, media and telecom vertical as well as enterprise application platforms and ecosystems.

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