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Digital Value and The Industry Context

Prioritizing digital investments and measures of success across industries

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How should your digital transformation ambitions be tempered with your industry context? As a companion to “Metrics that matter: The performance indicators best suited to your digital transformation ambitions,” this research illuminates how digital value capture changes across industries.

This research provides insight into digital transformation definitions, spend, capability investments, value measures, and future strategies. It is based on a survey of 1600 global business and technology leaders, director level and above from organizations of all sizes.

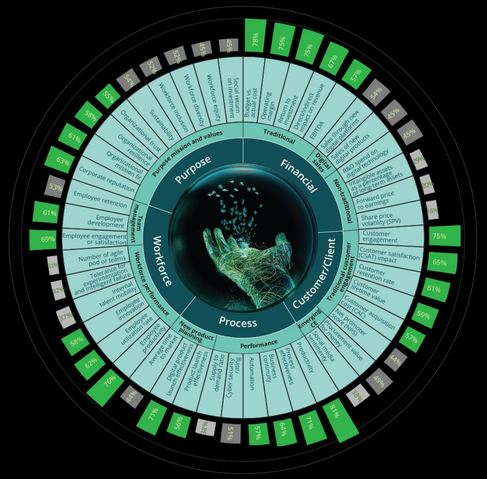
Respondents span six industries:

- Consumer;
- Energy, Resources & Industrials (ER&I);
- Financial Services Institutions (FSI);
- Government & Public Service (GPS);
- Life Sciences & Health Care (LSHC); and
- Technology, Media & Telecommunications (TMT).

Respondents were from 14 countries: United States, Canada, Mexico, United Kingdom, Netherlands, Spain, Germany, France, Ireland, Australia, China, India, Japan, Singapore.

The analysis into top key performance indicators (KPIs) refers to the framework detailed in “Mapping Digital Transformation Value: The Metrics that Matter.”

See: Mapping Digital Transformation Value – The Metrics that Matter



Digital transformations emerge across five levels. One level is not preferred over another but is indicative of an organization's priorities, ambition, and readiness

Digitization

Digitally-enabled business transformation

DIGITAL VISION

Level 0 Incremental digitization

Level 1 Advanced digitization

Level 2 Use digital to enter new markets

Level 3 Use digital to create new products

Level 4 Radical business transformation

Parallel levels

WHAT CHANGES?

Data / Processes

- Same business model
- Same capability
- Same market
- Digitization of some existing internal data and operating processes
- Incremental cost/ operational improvements

Platform

- Same business model
- Same capability
- Same market
- Radical digitization of processes and / or platform
- Revenue generation alongside radical cost / efficiency reduction
- Likely new KPIs needed

Market

- Same business model
- Same capability
- New market or channel
- Similar operating model (eases change)

Product

- Same business model
- New capability which requires radical new product / service offering
- Same market
- Likely new operating model
- needed

Enterprise

- New market, product and / or fundamental change in how business profits
- Likely new operating model and org structure
- Involves radical transformation within your org, industry, and/or the broader marketplace ecosystem

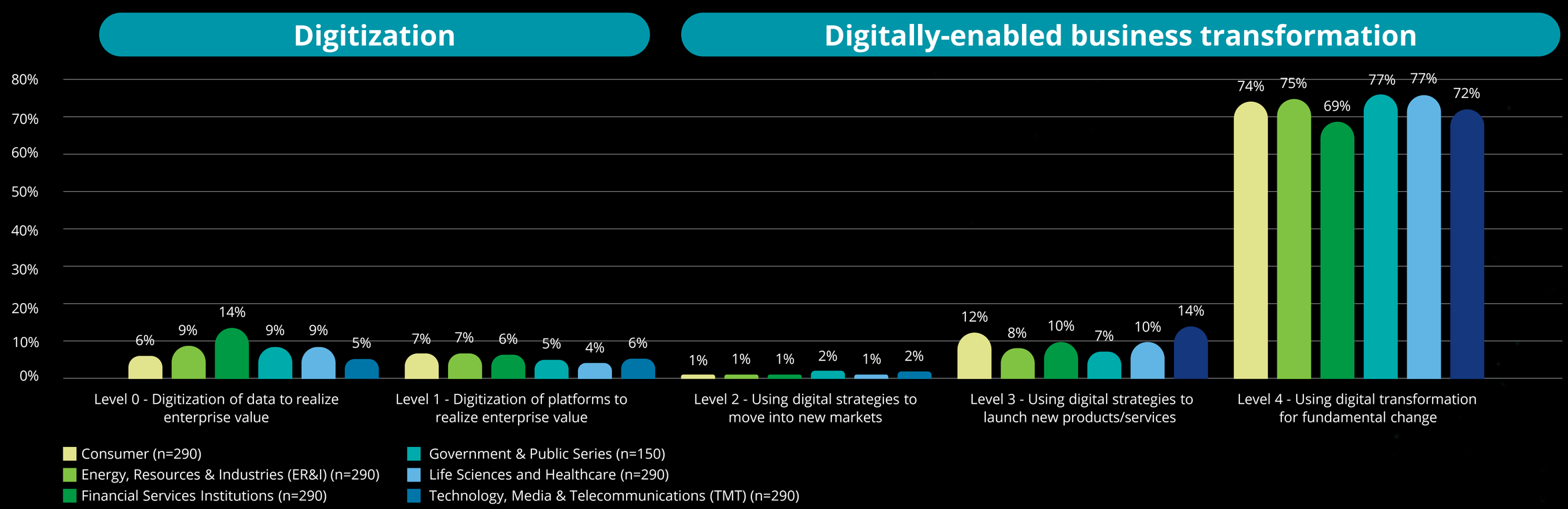
Internal optimization and productivity improvements

External focus on customer value or growth

Internal and External on both

Respondents across all industries largely define digital initiatives as “using digital transformation for fundamental change”

Q: Please indicate which of the following descriptions best summarizes your organization’s definition of digital technology investment.

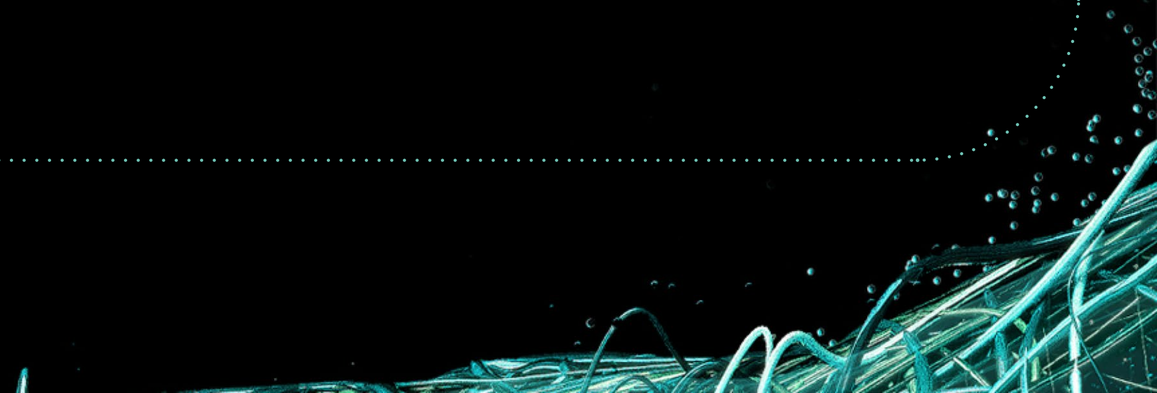


Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

- **LSHC and GPS** respondents are most likely to define digital initiatives as Level 4 (77% compared with 74% overall)
- **FSI** respondents are slightly more likely to include **using digitization of data to realize enterprise value** as digital transformation than other industries / respondents overall
- **TMT** and **Consumer** respondents are slightly more likely to include using digital strategies to launch new products/services as digital transformation than other industries / respondents overall

The survey points to a consensus on what digital transformation is - and isn't. However, the similarities stop there. Digital strategy and value means something different for every organization.

It is up to leadership to determine the organization's digital ambition and change priorities based on their vision and the organizational readiness. This context is significantly influenced by both industry and sector priorities and benchmarks. It all cascades across budgeting priorities, technology investments, and key performance indicators (KPIs).

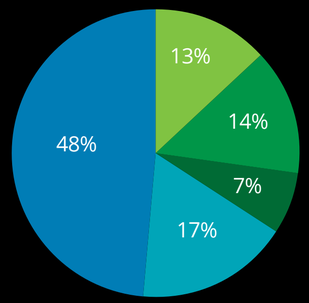


Across the six industries, spend allocation across digital transformation types is largely consistent, save some nuances

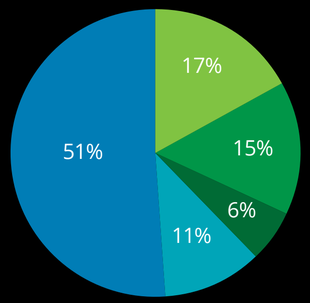
Average Share of Annual Spend across Digital Priorities by Industry (out of 100%)

- Level 0 - Digitization of data to realize enterprise value
- Level 1 - Digitization of platforms to realize enterprise value
- Level 2 - Using digital strategies to move into new markets
- Level 3 - Using digital strategies to launch new products/services
- Level 4 - Using digital transformation for fundamental change

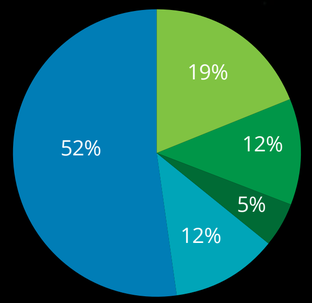
Consumer



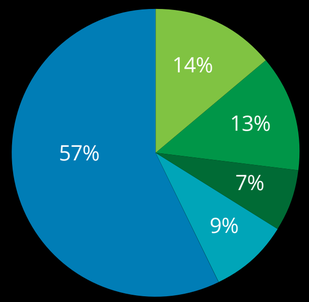
Energy, resources and industrials



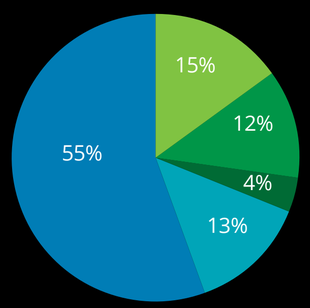
Financial services institutions



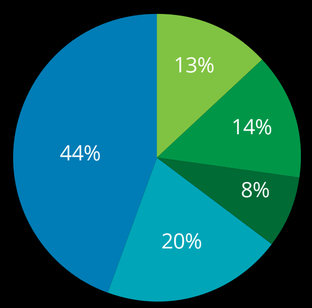
Government and public services



Life sciences and health care



Technology, media and telecommunications



- **FSI** respondents spend a larger share of their digital budgets on digitization of data than other industries
- **GPS** respondents are most likely to allocate budgets toward using digital technologies for fundamental change
- **TMT** respondents spend a larger share of their digital budget on digital platforms and new product development while spending less on fundamental change as compared to other industries

Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

Industries are investing differently in the technology capabilities underpinning digital transformations

Consumer

Higher investments than others in API marketplaces (52% vs 49% overall). Tech capability investments are less focused than other global organizations on federated security (13% vs 21% overall) cloud (68% vs 75% overall), zero trust security (27% vs 34% overall) and identity and access management (58% vs. 65% overall)

Energy, Resources & Industrials

Lead all other industries in Internet of Things (IoT) technologies 77% (with LSHC as the next closest industry 69%) and Quantum computing (19% vs 13% overall). Despite high IoT investments, their investment in edge computing is only average.

Financial Services

Lead all other industries in Mobile (86% vs 74 overall) – by 12 percentage points, Cloud platforms (82% vs 75 overall) – by 7 percentage points, and Broadband and wireless technology (up to 4G) (62% vs 52% overall) – by 10 percentage points. Leader in identity and access management (73% vs 65%) and Edge computing (49% vs 43% overall).

Government and Public Sector

Leader in wireless 5G or higher (28% vs. 22% overall) and cryptography investments (14% vs. 6% overall). Currently investing less than all other industries in data analytics (86% vs. 90% overall), artificial intelligence (55% vs 63% overall) and deep learning (14% vs 21% overall).

Life sciences and health care

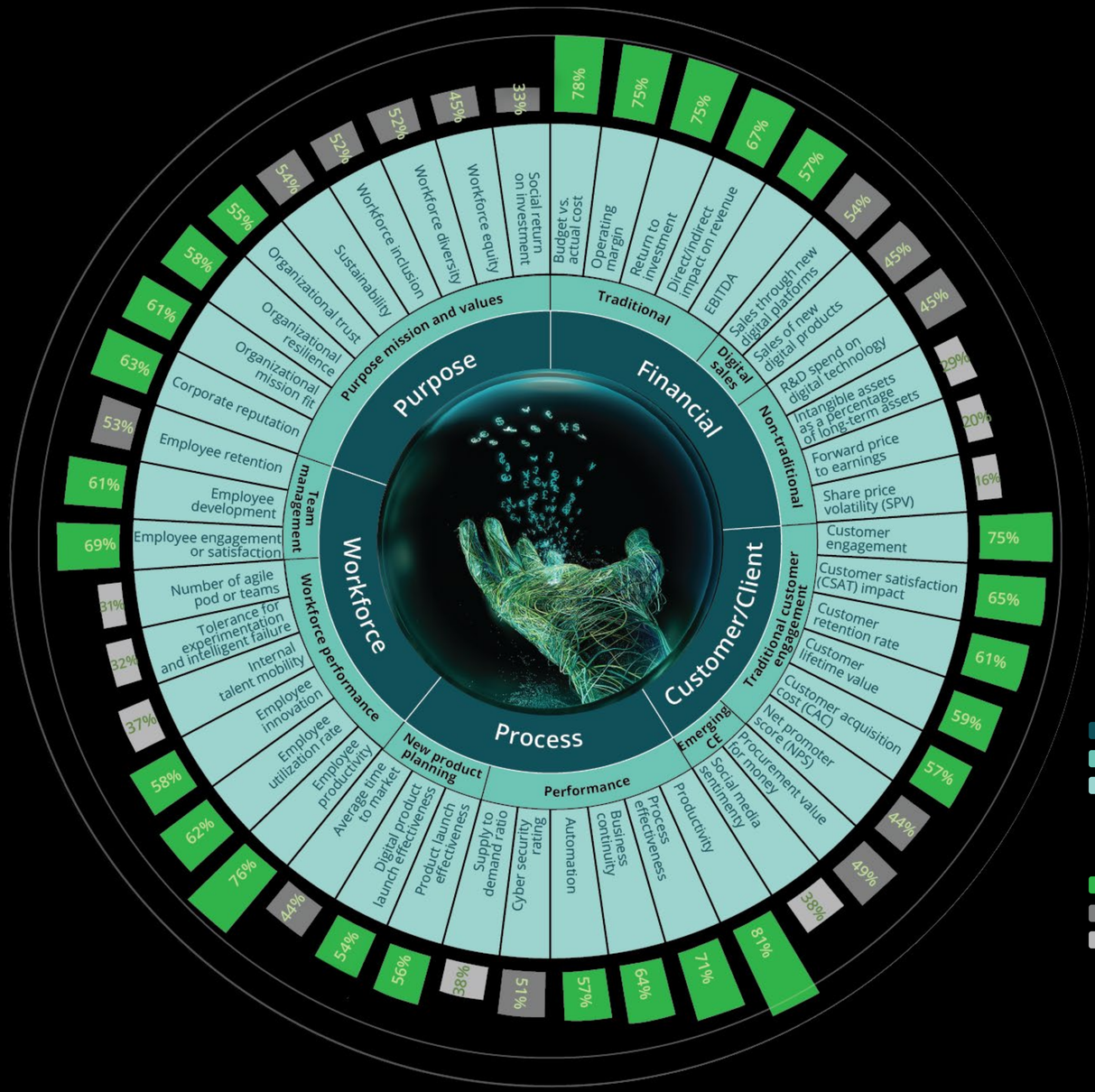
Lead all other industries in investments in data and analytics (93% vs 90% overall) and Augmented, virtual, and immersive reality – though investments are still relatively low (21%). LSHC is a leader in identity and access management (73% vs 65% overall).

Technology, media and telecommunications

Less of a focus than other industries on investments in mobile (62% vs 74% overall). Investment in IoT also is less of a priority currently than for others – 52% vs 64% overall – a 12 percentage point difference. Perhaps as early adopters, further investment isn't needed which may differ across sectors.

Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023. Note: See appendix for definitions.

Digital transformation value arises from a broad set of metrics



Value categories
Value sub-categories
KPIs used to measure digital transformation value

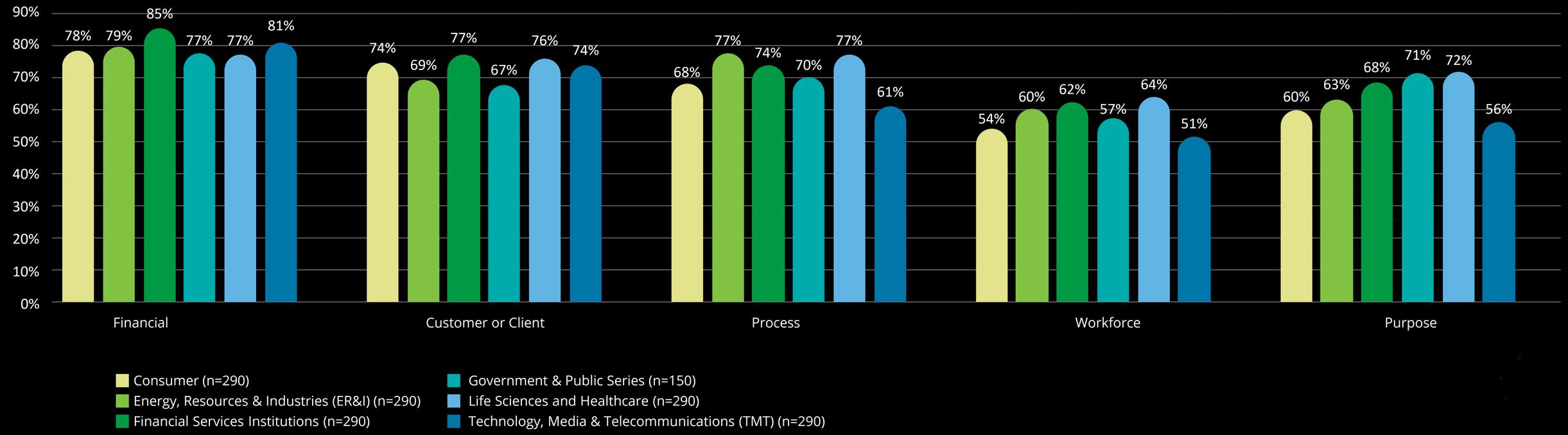
55-100% utilization
40-54% utilization
0-39% utilization

% of 46 value levers and extent which KPIs are frequently / very frequently used to measure digital transformation value based on 1600 global business and technology leaders surveyed in February 2023.

Source: Deloitte Center for Integrated Research, "Metrics that Matter: The performance indicators best suited to your digital transformation ambitions"

Across industries, there's high confidence in Financial measures but lower confidence in others

Q: Confidence in KPIs Used to Assess Value Gained from Digital Transformation by Performance Category



Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

- **FSI** is **more confident** than average across **all five of the KPI categories** with its highest confidence levels in Financial and Customer KPIs.
- **LSHC** respondents **less confident** than the average for Financial metrics (by 3 percentage points); otherwise, they're above average for all four other KPI measurement categories. And lead in Purpose measures versus respondents overall by 8 percentage points
- **ER&I** respondents are more confident than other industries in **Process** and **Workforce** KPIs (at par with LSHC for process KPIs)
- **GPS** is below average in confidence for every measure except for Purpose. GPS is the second most confident industry related to Purpose measures – 7 percentage points above average
- **TMT** respondents are **less confident in Process, Workforce, and Purpose** measures than other industries.

Each industry assesses digital value differently based on their strategic priorities

Consumer

Product and Ecosystem Value Leaders

Energy, Resources & Industrials

Secure, Connected Tech Investment Leaders

Financial Services

Confident digital value measurers

Government and Public Sector

Horizon-planning and Purpose Value Leaders

Life Sciences & Health Care

Innovative Tech and Measurement Leaders

Technology, Media, and Telecommunications

Ecosystem dependent and beneficiary

Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

Consumer Industry | Product and Ecosystem Value Leaders

How they define and spend on digital initiatives

Consumer respondents across the automotive, consumer products, retail, wholesale & distribution, transportation, hospitality, and services sectors define and prioritize their digital initiatives differently from other industries. These nuances likely vary even more by sector. Our survey shows that Consumer respondents had a more product-focused definition of digital transformation aligned to launching new products and services, are currently more focused on Application Programming Interface (API) marketplace investments than others and less on cloud, and demonstrate an ecosystem maturity (e.g., use of online communities and tracking value brought to customers/distributors/suppliers) – perhaps enabled by earlier investments in cloud for e-commerce, smart-supply chains and more.

How they invest in tech versus others

Outpace others in API investments and are currently investing to a lesser extent than others in cloud, edge and quantum computing.

Mobile **71%**	AR/VR/IR **18%**	Speech and gesture **9%**	UEBA **14%**
Data analytics **89%**	AI/ML **62%**	Deep Learning **22%**	Cloud Platforms **68%**
Cloud Native **60%**	IoT **60%**	Edge Computing **38%**	Quantum Computing **6%**
Broadband/4G **46%**	Wireless/5G+ **24%**	API Marketplaces **52%**	Zero Trust **27%**

Above global average | Below global average | At par with global average

How they measure digital value

Financial | Customer | Process | Workforce | Purpose

Top 5 KPIs for Consumer respondents across 46 KPIs in our survey across five value categories

- **80% ROI**
- **78% Customer engagement**
- **82% Productivity**
- **74% Employee Productivity**
- **57% Corporate Reputation**

See: Measuring Value from Digital Transformation – Metrics that Matter

KPI use among Consumer survey respondents relative to global averages

- **ROI (+5)** and **Sales through new digital platforms (+13)** more a focus
- **Customer** KPIs at par
- **Supply to demand ratio** used more than others
- **Workforce KPI** use lags versus others
- **Purpose** KPIs were below average

Only 54% of Consumer respondents are confident in their Workforce KPIs.

Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

Consumer Industry

Value outlook

Challenges

Legacy systems were the top barrier (+10) that consumer respondents reported standing in the way of their digital transformations overall

When asked about top barriers related to achieving potential digital tech monetization strategies, consumer respondents cited **Tolerance for experimentation and/or failure (28% / +9)** at above average levels

Monetization growth strategies

Online Communities to support digital tech monetization is above average (+3)

Value horizon

Most used **quarterly and annual** value reporting (71% / +4) and were less focused on **long-term measurements**

Customers, distributors, and **suppliers** value tracking is a focus more than others

Actions for competitive advantage

- **Assess cloud's full potential beyond ROI.** Consumer respondents in our survey are investing less in cloud than other industries.
  - Assess whether that is a strategic decision – for example having reached a level of digital maturity, given other technology priorities, based on budget constraints– or an oversight.
- **Recalibrate Purpose and Workforce priorities**
  - Ensure the right **sponsors are aligned to factor purpose and workforce initiatives**
- **Empower your CIO, CTO, Chief Data Officer or equivalent to look beyond ROI for IT capability investments**
  - Help leadership understand what the organization values and how **IT investments advance larger goals**
- **Assess whether current cloud investments are sufficient or require recalibration**
  - **Consider cloud's value** beyond data aggregation and consumption (associated with ROI), including measures like Average time to market

Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

An American multinational fast food corporation's digital ecosystem optimization of a franchise-focused business

Consumer Case Study

The Chief Data Officer at an American multinational fast-food corporation expresses how their organization's focus on digital sales and traditional customer KPIs informs their digital strategy as a growing restaurant brand working with franchise operators.

They explain, *"If you only own a small percentage of the physical assets, you cannot be a cost center, but have to think like a profit center…You have to think long term by asking what a good consumer experience means to the probability of returning, making multiple purchases, and creating lifetime value."*

They stress the importance of using data-powered tools to develop customer personalization strategies and help enhance customer experience, and the company is using that data to enter new waters, including:

1. **Opening new stores based** on meta-data intelligence gleaned from its **omni-channel ordering & marketing platform.** They explain, "*We opened an average of 4,000 net new units in one location last year across the globe. We're using a lot of that data and information coming out of these tools to identify the best opportunity to open a store, what should be its size, product portfolio, and things like that."*

2. **Exploring new AI approaches** to enable customer demand forecasting and predictions. They describe, *"We have something called an 'ideal order' rate (to order raw material) with an accuracy of around 93%. We have executable orders. For example, you can't buy one single unit, you must order an entire case, you can't buy one slice of cheese. How often are we within the "perfect order"?* About 80% of the time the algorithm places the perfect order." The platform can predict the optimal ordering quantity of raw ingredients, recommends specific items to customers that reduce wastage during cooking, and schedules the labor required to meet the predicted demand.

Source: Deloitte Center for Integrated Research Analysis based on the interview of 10 global executives knowledgeable on the topic of technology value in February 2023

ER&I Industry | Secure, Connected Tech Investment Leaders

How they define and spend on digital initiatives

ER&I organizations in the electric utilities, gas utilities, aerospace and defense sectors are highly-regulated. Manufacturing organizations are still recovering from supply chain disruption. Our survey data shows ER&I respondents spend less on digital than other industries overall. Their spend is directed toward the technology capabilities that matter most to them and corresponding KPIs. For example, ER&I respondents outpace other industries in their focus on IoT, Edge and Quantum Computing. They're 12 percentage points above the global average in their focus on sustainability KPIs, while Customer KPIs are less front and center. This stands to reason given the B2B nature of many ER&I organizations. Additionally, ER&I respondents are more focused than others on tracking the value their digital investments bring to competitors across their ecosystems.

How they invest in tech versus others

Outpace others in IoT, Edge and Quantum computing investments.

Mobile **73%**	AR/VR/IR **17%**	Speech and gesture **7%**	UEBA **8%**
Data analytics **91%**	AI/ML **62%**	Deep Learning **17%**	Cloud Platforms **76%**
Cloud Native **56%**	IoT **77%**	Edge Computing **44%**	Quantum Computing **19%**
Broadband/4G **57%**	Wireless/5G+ **20%**	API Marketplaces **46%**	Zero Trust **31%**

Above global average Below global average

How they measure digital value

Financial Customer Process Workforce Purpose

Top 5 KPIs for ER&I respondents across 46 KPIs in our survey across five value categories

- **79% Operating margin**
- **69% Customer engagement**
- **81% Productivity**
- **78% Employee Productivity**
- **66% Sustainability**

See: Measuring Value from Digital Transformation – Metrics that Matter

KPI use among ER&I survey respondents relative to global averages

- **Sales of new digital products** and **Sales through new digital platforms** used less
- **Customer KPIs** used the least of any industry
- **Supply to demand ratio** used more than others
- **Employee development** (+2) used more
- **Sustainability** used more **(+12)** than other industries

Have higher confidence in process KPIs versus other industries

Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

ER&I Industry

Value outlook

Challenges

Lack of clear C-suite ownership (33% / +6) is a top value measurement concern

ER&I respondents reported security is less of a barrier (21% / -6) standing in the way of their digital transformation progress than other industries

Tapping into partner and/or competitor ecosystems (24% / +2) was a top digital tech monetization challenge

Monetization growth strategies

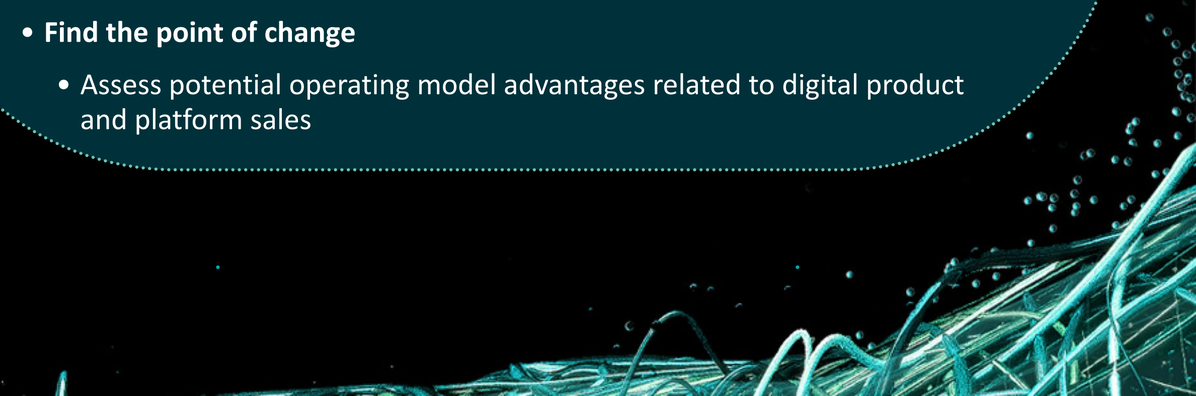
Digital tech monetization is less of a focus than for other industries across 15 potential strategies asked about in our survey

Value horizon

Measure value every 2 years – 3 years (34% / +4) more than others

Actions for competitive advantage

- **Close KPI measurement gaps**
  - Assess value measures appropriate line up with digital ambitions and are as holistic as possible
- **Rethink organizational changes that line up with IT investments**
  - Consider the digital change capabilities – operating model, skills, and more – that will be needed to advance digital ambitions. For example, oil companies that previously went through installing sensors and automating production are now in the second phase of digitizing production. Like in the case of smart factories, they'll need to address the organizational transformation (OT) and Information Technology (IT) transformation divide
  - Charge CIOs and COOs to work together on data and operations integration plans to build new smart-business and data intelligence strategies.
- **Assess secure ecosystem strategies**
  - ER&I respondents cite concerns about disrupting themselves (31%) and effectively tapping into ecosystems (24%) as top barriers to monetization.
- **Find the point of change**
  - Assess potential operating model advantages related to digital product and platform sales



Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

Financial Services Industry | Confident Digital Value Measurers

How they define and spend on digital initiatives

FSI respondents included individuals from the banking & capital markets, insurance, real estate and investment management industries. FSIs surveyed outpace in spending on digital transformation and technology capabilities (e.g., Identity and Access Management (IAM), edge, mobile, cloud and broadband. They possess greater measurement confidence and have fewer measurement barriers. FSI respondents were 5 percentage points more likely than others to define digitation of data as transformative and to spend on it. They lead in digital tech monetization strategies and are more likely to feel their value measurement timelines are appropriate.

How they invest in tech versus others

Tech capability investment leaders** in **Mobile, Broadband and wireless tech, Cloud platforms, Identity and access management (IAM)** and **Edge computing.

Mobile **86%**	AR/VR/IR **7%**	Speech and gesture **10%**	UEBA **14%**
Data analytics **92%**	AI/ML **59%**	Deep Learning **20%**	Cloud Platforms **82%**
Cloud Native **68%**	IoT **65%**	Edge Computing **49%**	Quantum Computing **13%**
Broadband/4G **62%**	Wireless/5G+ **16%**	API Marketplaces **52%**	Zero Trust **36%**

Above global average | Below global average | At par with global average

How they measure digital value

Financial | Customer | Process | Workforce | Purpose

Top 5 KPIs for FSI respondents across 46 KPIs in our survey across five value categories

- **82% Budget vs. actual cost**
- **79% Customer engagement**
- **88% Productivity**
- **81% Employee Productivity**
- **71% Corporate reputation**

See: Measuring Value from Digital Transformation – Metrics that Matter

KPI use among FSI survey respondents relative to global averages

- **Direct and indirect impact on revenue** usage leaders
- **Customer acquisition cost** usage leaders (+11)
- **Process KPI** usage leaders (**Productivity** (+7))
- **Workforce KPI leaders (Employee utilization rate** (+7) and **Internal talent mobility** (+7)
- **Organization mission fit** (+9) and **Corporate reputation** (+8) used more

Purpose KPIs used more than other industries

Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

Financial Services Industry

Value outlook

Challenges

FSI respondents had fewer tech monetization challenges than other industries

Monetization growth strategies

Like global respondents overall, 39% of FSI respondents cite **customer personalization strategies** via new products and services as the most used monetization strategy

Value horizon

Measuring value every 2 years – 3 years was above average (+5)

When asked about how they track digital value across their ecosystem, FSI respondents were more likely than others to track how their own investments create value for **competitors** (47%/+7)

Actions for competitive advantage

- **Be the disruptor.** FSI organizations have three digital value drivers available to them: optimizing value, preserving and protecting value, and creating value.
- Many are focusing on value preservation given the active regulatory environment, banking disruption, and ongoing cyber threats. Cost management is also becoming incredibly important. Technology investments are still supported but need to demonstrate progress and value.
  - In a competitive environment, pulling on all three levers can give leaders the agility and optionality they need to advance digital strategies. Some organizations are further along in that journey then others.
- **A long-term view could complement short-term gains.** Think more long-term about digital investment value –for three-to-five-year value reporting timelines.

Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

A large European Bank focuses on data monetization and bold future technologies to extend value from its digital transformations

Banking Case Study

The Head of Transformation for Corporate & Investment Banking and Retail Banking Technology & Operations at a large European bank, highlights the relationship between digital investments and enterprise value for banks in Spain.

1

Use data personalization to cross-sell and up-sell
He says despite an increase in digital investments by those banks, given a decline in stock prices, banks are pursuing additional revenue streams, providing value-added services that improve customer satisfaction and yield new data with no additional cost.

He provides an example for personal finance services, *"You can offer many different functionalities around the basic products and services such as accounts, cards, and loans.*
And around that, you can create value-added services where you offer the client insights and recommendations and improve customer experience, based on their data. In some cases, you can also link that to cross-selling."

2

Make bold future bets, built on a solid agile operating model that aligns product lead/developer metrics
Assess technologies and use cases that have a low adoption curve in your industry to gain competitive advantage. To help maximize value from technology, organizations could require an agile operating model with a skilled and motivated workforce to support the change.

He adds, *"It's people, managing talent and building digital skills. And new digital profiles, for example, cloud architects, software developers in new programming languages. So, people are very important. Changing the operating model, becoming an Agile and DevOps organization, and having a governance model which focuses on creating value from all this investment, are key areas."*

Source: Deloitte Center for Integrated Research Analysis based on the interview of 10 global executives knowledgeable on the topic of technology value in February 2023

Government and Public Services Industry | Horizon and Purpose Leaders

How they define and spend on digital initiatives

GPS respondents surveyed included individuals formerly in state, local and civil government. They also span defense, security and justice, higher education, and federal health. These GPS respondents are most likely to allocate budgets to advanced digital transformation initiatives. They currently lead other industries in 5G investments and lag in data analytics investments. They have the highest usage of Customer Satisfaction (CSAT), employee development, and workforce diversity KPIs, but have below average confidence in their KPIs – except for purpose. GPS respondents find executive level sponsorship as a barrier to value.

How they invest in tech versus others

Wireless 5G *and* ***cryptography*** *investment leaders, but AI and data investments lag. Belief* ***cryptography*** *investments contribute to enterprise value is high (71% / +15).*

Mobile **75%**	AR/VR/IR **15%**	Speech and gesture **13%**	UEBA **16%**
Data analytics **86%**	AI/ML **55%**	Deep Learning **14%**	Cloud Platforms **75%**
Cloud Native **59%**	IoT **61%**	Edge Computing **47%**	Quantum Computing **15%**
Broadband/4G **53%**	Wireless/5G+ **28%**	API Marketplaces **47%**	Zero Trust **39%**

Above global average Below global average At par with global average

How they measure digital value

Financial Customer Process Workforce Purpose

Top 5 KPIs for GPS respondents across 46 KPIs in our survey across five value categories

- **75% Budget vs. actual cost**
- **71% Customer satisfaction (CSAT)**
- **77% Productivity**
- **76% Employee Productivity**
- **66% Organizational mission fit**

See: Measuring Value from Digital Transformation – Metrics that Matter

KPI use among GPS survey respondents relative to global averages

- Below average confidence in Financial KPIs
- **Customer satisfaction** (CSAT) used more (+6)
- **Cyber security rating** used more (+8)
- **Employee development** (+10) used more
- Most likely to use Purpose measures: **Organizational Trust** (+6), **Workforce diversity** (+8), **Workforce inclusion** (+8)

GPS respondents are above average in their confidence levels related to the nine Purpose KPIs asked about in our survey.

Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

Government and Public Services Industry

Value outlook

Challenges

Lack of a transformation strategy is the #1 value measurement challenge (+10) cited by GPS respondents in our survey

Growth strategies

Data from GPS respondents shows that many organizations are considering new growth and data strategies, including how data can be used to drive meaningful objectives and goals with academic ventures (+16) and “shadow” businesses/solutions (19% /+8) (see Appendix 45)

Value horizon

GPS respondents believe tech value assessment requires a **longer horizon than they measure currently**, especially for:

- **Deep learning** (49% / +11)
- **Edge computing** (34% / +11)
- **API marketplaces** (33% / +10)

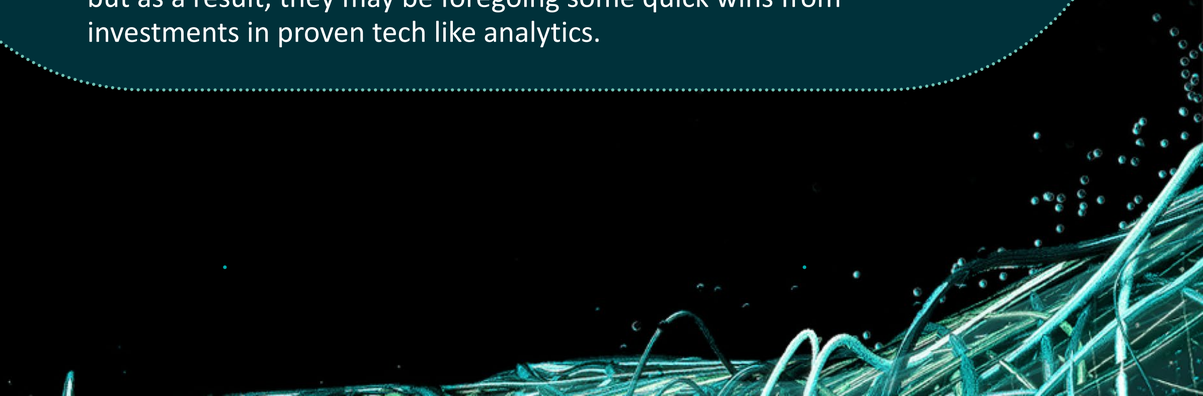
Considering new measures at above average rates:

- **Governance** (50% / +19)
- **Digital Trust** (61% / +12)

Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

Actions for competitive advantage

- **Lead with Mission**
  - Government organizations exist to fulfill the mission. This is reflected in purpose being one of its top KPIs. The focus on the mission can also offer a path to overcoming barriers to transformation: articulating a clear transformation strategy in terms of mission benefit can help accelerate change.
- **Be intentional with data strategies**
  - Think about how to use your data can catalyze academia, commercial organizations, and the entire ecosystem to create value for citizens. That requires being up front about your data strategy and how it can create value –especially given common constraints around high-security and public control of data.
- **Balance long-term planning with urgent investment priorities.**
  - Government respondents excel at planning for longer term value, but as a result, they may be foregoing some quick wins from investments in proven tech like analytics.



Life Sciences and Health Care Industry | Innovative Spend and Measurement Leaders

How they define and spend on digital initiatives

Life sciences and Health care (LSHC) respondents are most likely to embrace the most advanced definition of digital transformation and lead all industries in data analytics and AR/VR/IR. LSHC companies also lead in the use of CSAT, employee retention, and organizational resilience performance indicators. They are below average on adoption of almost all monetization strategies asked about in our survey (except re-leveraging internal data). Further, these global industry strategies, KPI priorities and technology investments show additional variability at the sector level for Life Sciences organizations versus Health Care companies.

How they invest in tech versus others

*They **lead** all other industries in investments in **data and analytics** and **AR/VR/IR (though low).** They lead all industries in the belief **Quantum Computing** investments contribute to enterprise value (79% / +16).*

Mobile **79%**	AR/VR/IR **21%**	Speech and gesture **13%**	UEBA **16%**
Data analytics **93%**	AI/ML **67%**	Deep Learning **21%**	Cloud Platforms **78%**
Cloud Native **65%**	IoT **69%**	Edge Computing **41%**	Quantum **12%**
Broadband/4G **60%**	Wireless/5G+ **21%**	API Marketplaces **43%**	Zero Trust **36%**

Above global average | Below global average | At par with global average

How they measure digital value

Financial | Customer | Process | Workforce | Purpose

Top 5 KPIs for LSHC respondents across 46 KPIs in our survey across five value categories

- **81% Budget vs. actual cost**
- **81% Customer engagement**
- **83% Productivity**
- **80% Employee Productivity**
- **70% Corporate reputation**

See: Measuring Value from Digital Transformation – Metrics that Matter

KPI use among LSHC survey respondents relative to global averages

- Usage leaders for Customer satisfaction KPIs (+6)
- Highest user of **Business continuity** vs others (+10)
- **Prioritize Employee retention more than others (+8)**
- Measure **Organizational resilience** more (66% vs. 58% overall)
- Above average for all **Purpose KPIs**

Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

Global LSHC respondents from our survey are above the average extent of use most of the 46 KPIs asked about in our survey, (see appendix 35-39) except for certain Financial KPIs (appendix 35). Global LSHC respondents have the highest confidence in Purpose KPIs of any industry (appendix 40).

Life Sciences and Health Care Industry

Value outlook

Challenges

40% of LSHC respondents cite “inability to define exact impact metrics” as their top barrier to digital value measurement. Additionally, 37% of LSHC respondents report “legacy systems dependency”

Monetization growth strategies

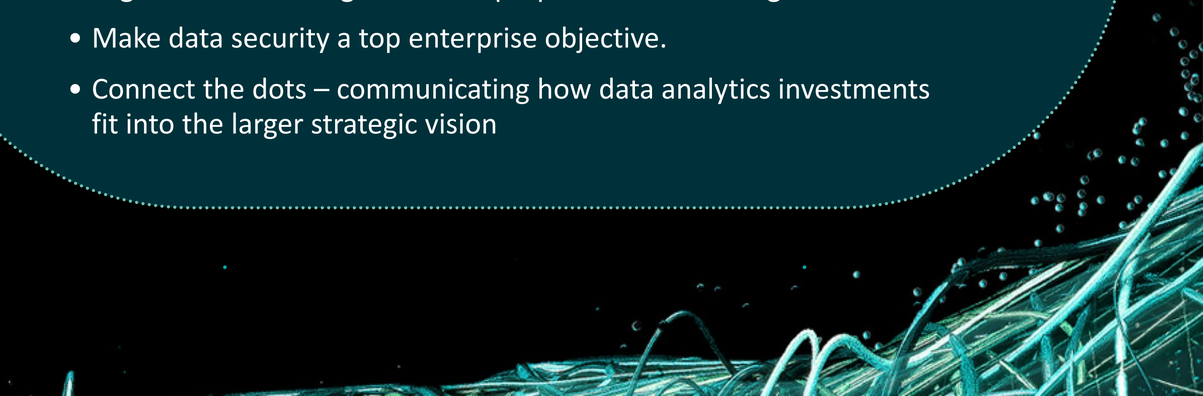
While global respondents show varying levels of interest in adopting monetization strategies, LSHC respondents are less focused than other industries on the 15 **digital tech monetization strategies** asked about in the survey. However, as respondents look to the future, 21% of them say **re-leveraging internal data** is a future monetization strategy they are considering – at +12 percentage-points above the global average

Value horizon

While global respondents are most likely to measure digital value quarterly or annually, global LSHC respondents are more likely than others to consider a **three-year value** time horizon – 22% / +6

Actions for competitive advantage

- LSHC respondents are investing in AI/ML and data analytics at a higher rates than other industries with deep learning investments on part with the global average.
- However, interoperability issues and privacy laws for health data remain top areas of concern and our data reinforces that.
- **Taking advantage of ongoing advancements in data strategies and the potential of Generative AI will require addressing these concerns.**
- **Double down on measuring Purpose KPIs as a point of competitive differentiation.**
  - LSHC respondents are leading other industries in their use of the nine purpose KPIs asked about in our survey. (Appendix 39, for example, mission fit, corporate reputation, digital trust and others)
  - Deloitte’s research shows Health Care organizations have established approaches to address patient quality, safety and other issues directly aligned with their organizational purpose and business goals.
  - Make data security a top enterprise objective.
  - Connect the dots – communicating how data analytics investments fit into the larger strategic vision



Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

Technology, Media and Telecommunications Industry | Ecosystem Dependents and Beneficiaries

How they define and spend on digital initiatives

Technology, Media and Telecommunications respondents spend less compared to others, especially for capabilities like Mobile and IoT. They attribute the highest percentage of their enterprise value to digital transformation and find securing necessary funding to be a greater challenge compared to surveyed companies in other industries. They are more likely to use measures like EBITDA & customer retention rate, and less likely to use process, workforce, and purpose KPIs use and confidence. Their digital tech monetization strategies focus more on selling subscriptions to technology tools/services which goes together with high AI leadership across AI/ML and Deep Learning investments..

How they invest in tech versus others

*Lags in tech capability investment **Mobile** and **IoT**. Belief IoT contributes to enterprise value lags (66% /-8)*

Mobile **62%**	AR/VR/IR **14%**	Speech and gesture **12%**	UEBA **14%**
Data analytics **87%**	AI/ML **72%**	Deep Learning **21%**	Cloud Platforms **69%**
Cloud Native **63%**	IoT **52%**	Edge Computing **37%**	Quantum **15%**
Broadband/4G **34%**	Wireless/5G+ **24%**	API Marketplaces **50%**	Zero Trust **37%**

Above global average | Below global average | At par with global average

How they measure digital value

Financial | Customer | Process | Workforce | Purpose

Top 5 KPIs for TMT respondents across 46 KPIs in our survey across five value categories

- **77% Operating margin**
- **72% Customer engagement**
- **72% Productivity**
- **69% Employee Productivity**
- **55% Organizational resilience**

See: Measuring Value from Digital Transformation – Metrics that Matter

KPI use among TMT survey respondents relative to global averages

- **EBITDA** used more than other (+5)
- **Customer retention rate** is a priority (+8)
- Less likely to use Process and Workforce related indicators, especially **Employee utilization rate** (-11)
- All **Purpose KPIs** below average

Above average for Financial (81%/+1) and Customer (74%/+1) measurement categories. Lags in Process (61%/-10), Workforce (51%/-7), and Purpose (56%/-8) categories

Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

Technology, Media and Telecommunications Industry

Value outlook

Challenges

Regulatory barriers are cited by TMT industry survey respondents as a top challenge to digital tech monetization

Data monetization growth strategies

When asked about 15 potential strategies for digital tech monetization, TMT industry respondents were most focused now on **Selling subscriptions to technology tools and services** (42% /+24). They plan to increase their future focus on **Leveraging industry convergence trends** (12% /+5).

Value horizon

Most TMT follow quarterly/annual value reporting (77% /+10)

New digital tech value measures least likely to be a focus (except investment in frontier tech), and especially organizational purpose/environmental KPIs (31% / -11)

Actions for competitive advantage

- TMT respondents are more likely to attribute 31% or more of their enterprise value to digital transformation than any industry surveyed.
- **Close significant value measurement gaps**
  - Look at process, workforce and purpose KPIs and assign leaders to these value streams to oversee initiatives and track value
  - Becoming a leader on Purpose could be a way to different yourself from other TMT organizations on the fight for talent

Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

Some actions to consider to help find a competitive industry advantage

Assess how you define and spend on digital and calibrate your mindset based on peer trends and competitive differentiation

- **Most mature definition of digital transformation** is held by LSHC and GPS respondents
- **More product-oriented** mindset related to digital **transformation** among Technology, Media and Telecommunications (TMT)

Spend on the strategies and technologies that reinforce your overarching organizational vision

- Spend on **digital transformation** is lead by Financial Services Industry (FSI) and Government and Public Sector (GPS)
- **Spend on digital transformation lags** among ER&I respondents versus others, especially with cloud

Prioritize programs by selecting KPIs based on value measurement benchmarks

- FSI respondents are more likely to use *almost every KPI* category with fewer measurement barriers and greater confidence levels
- Workforce measures are still relatively immature in their use. LSHC/FSI respondents lead

Differentiate from peers by identifying competitive value streams

- **ROI** is a greater priority for consumer organizations, according to survey responses
- **CSAT** is a greater priority for GPS

Set realistic value realization targets grounded by market trends as a baseline

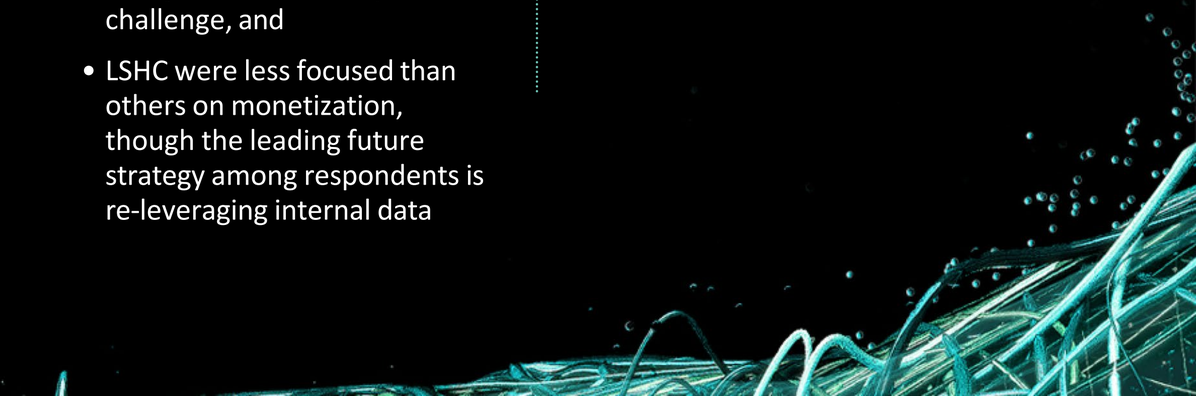
- Survey responses show that TMT attributes 50% of their DT to **enterprise value** while ER&I firms on average attribute a lower % vs others
- 42% of FSI respondents attribute 21-30% of their enterprise value to digital transformation

Select a strategy to monetize digital investments

- TMT leads other respondents in adoption of **digital tech monetization strategies** – with FSI more focused on selling direct access to data and TMT most focused on **selling subscriptions to technology tools and services**.
- Consumer, ER&I and LSHC respondents lagged in their adoption of monetization strategies
  - Consumer respondents found Tolerance for experimentation and/or failure as a top challenge to digital value realization,
  - ER&I cited the **partner ecosystem** as their top challenge, and
  - LSHC were less focused than others on monetization, though the leading future strategy among respondents is re-leveraging internal data

Seek ways to balance short-term and long-term value goals

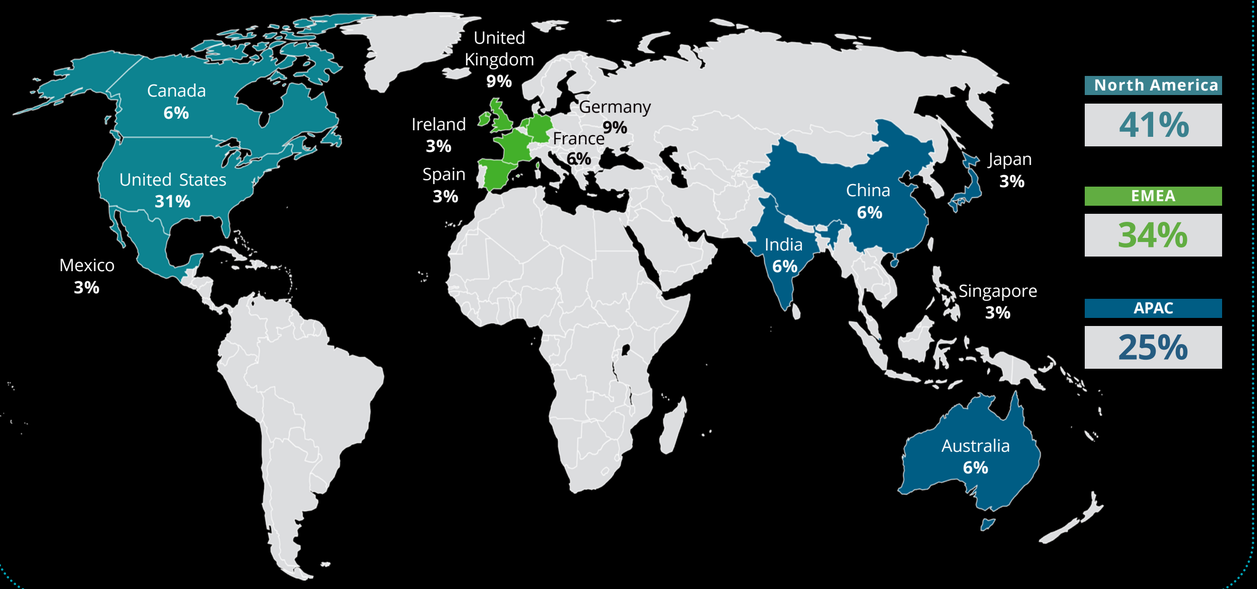
- **Short-term value: C**onsumer respondents are least mature in long-term / horizon thinking with a large majority (71%) of consumer respondents measuring value quarterly or annually (vs. 67% overall)
- **Long-term value:** LSHC respondents are more likely than global respondents overall (and other industries) to have a long-term measurement approach
- **New value measures:** FSI respondents are more likely than others to be thinking of new value measures and to believe current value timelines are adequate



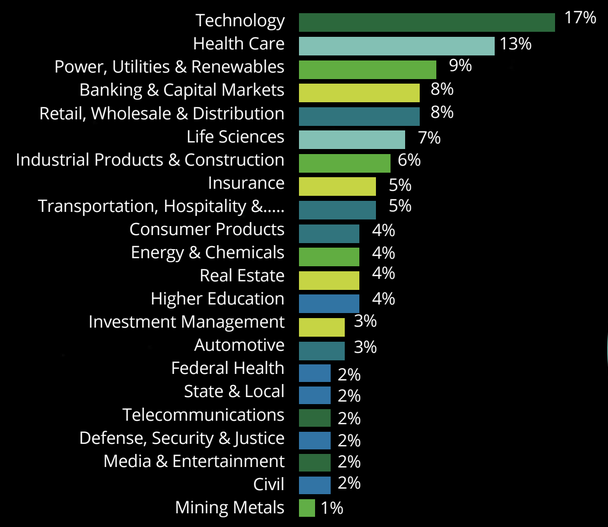
Survey demographics

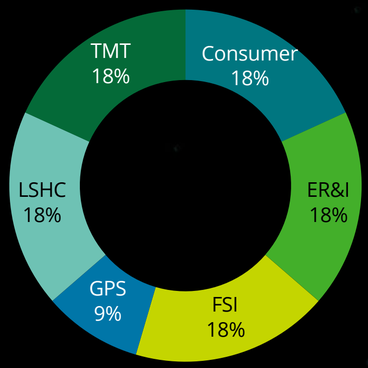
Fielded in February 2023

Geography

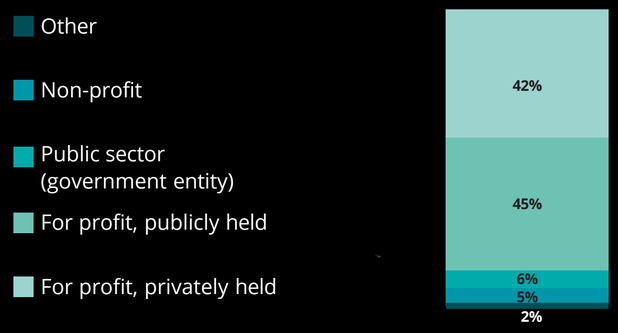


Sector and industry



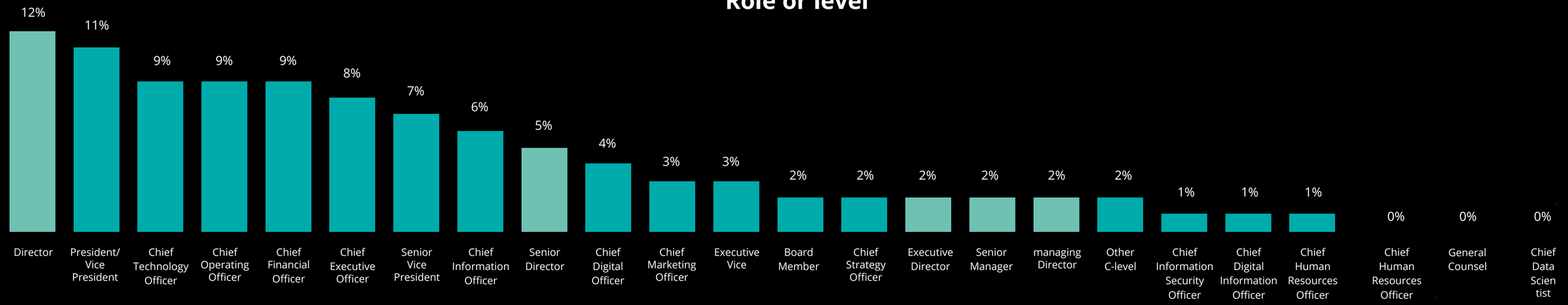


Ownership structure

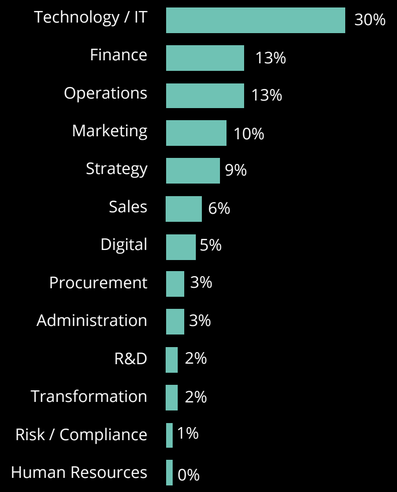


Annual revenue

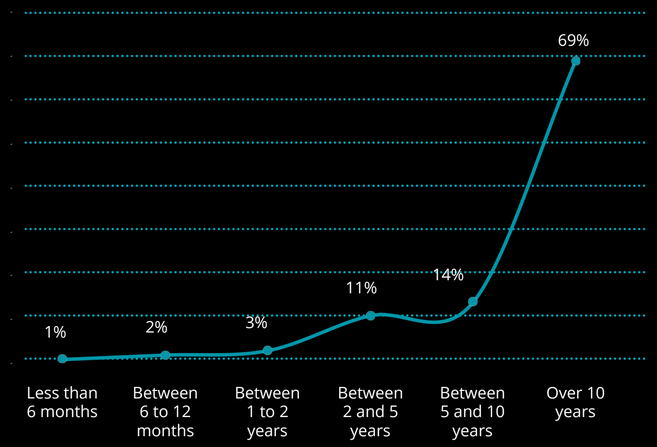
Role or level



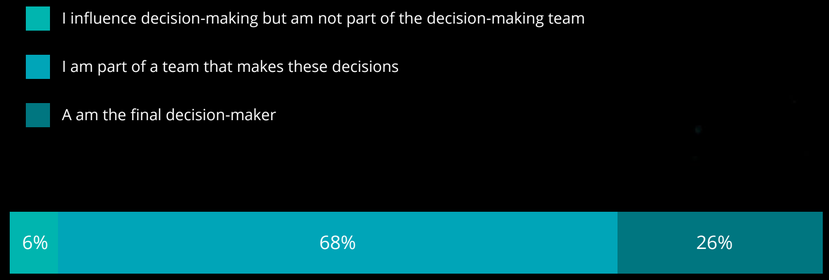
Job function



Industry experience (years)

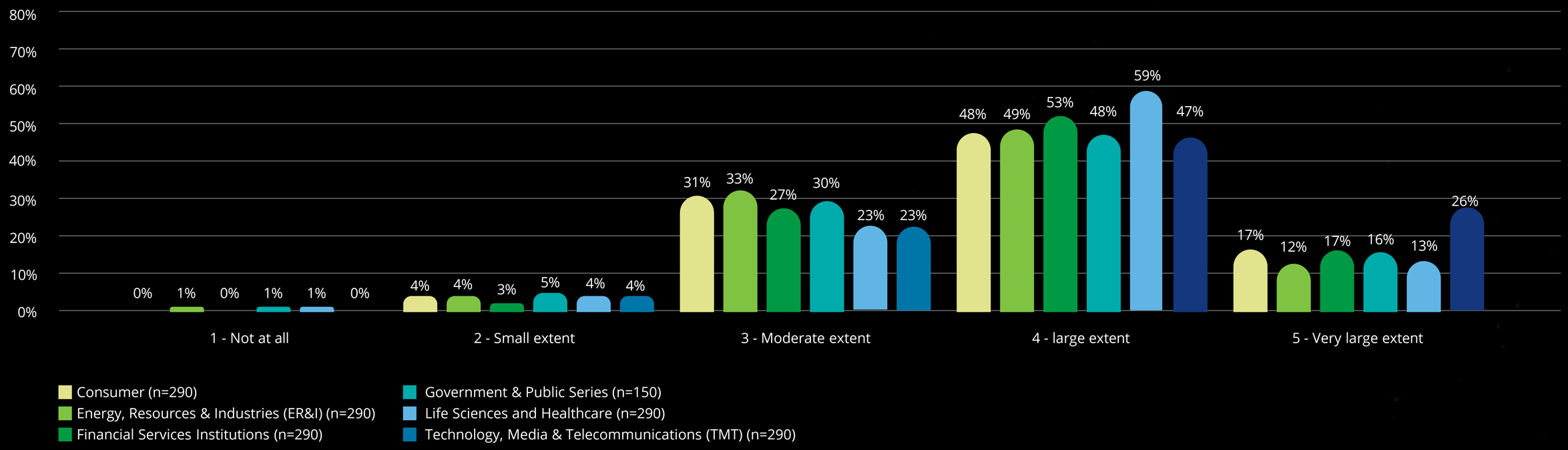


Involvement in digital transformation decision-making



Digital Transformation and Value

Q: Extent of Agreement with Statement: "Digital transformation is the single most important investment now and into the future that organizations can make to drive enterprise value."

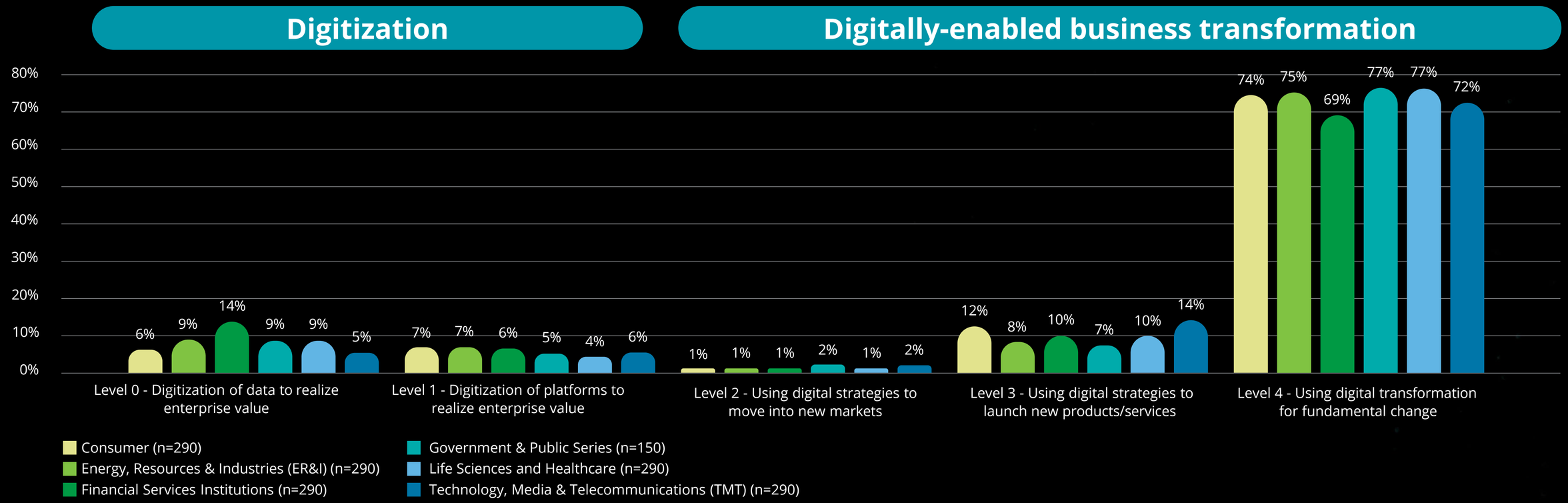


Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

- **ER&I** and **GPS** respondents are slightly less likely to agree with this statement than others – though more than half still to a large/very large extent agree

Digital Transformation Definitions

Q: Please indicate which of the following descriptions best summarizes your organization's definition of digital technology investment.



Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

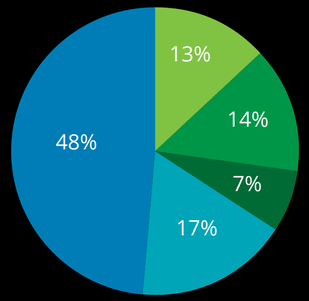
- **LSHC** and **GPS** respondents are most likely to define digital initiatives as Level 4 (77% compared with 74% overall)
- **FSI** respondents are slightly more likely to include **using digitization of data to realize enterprise** value as digital transformation than other industries / respondents overall
- **TMT** and **Consumer** respondents are slightly more likely to include **using digital strategies to launch new products/services** as digital transformation than other industries / respondents overall

Digital Transformation Budget Allocations

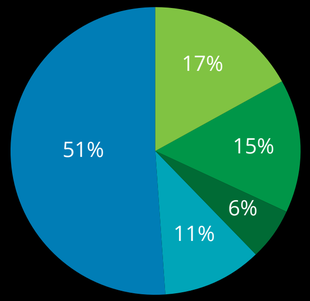
Average Share of Annual Spend across Digital Priorities by Industry (out of 100%)

- Level 0 - Digitization of data to realize enterprise value
- Level 1 - Digitization of platforms to realize enterprise value
- Level 2 - Using digital strategies to move into new markets
- Level 3 - Using digital strategies to launch new products/services
- Level 4 - Using digital transformation for fundamental change

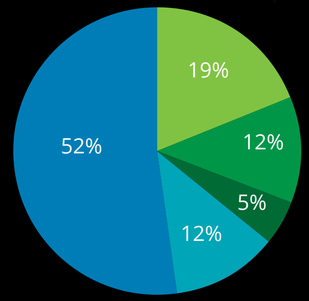
Consumer



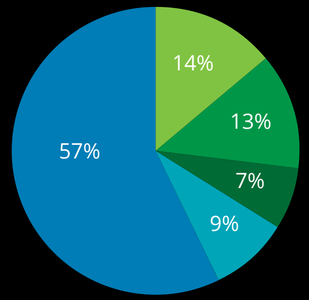
Energy, resources and industrials



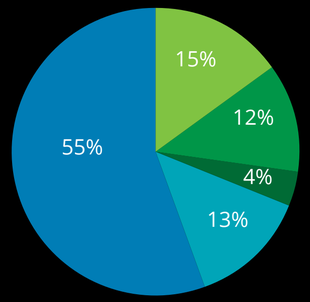
Financial services institutions



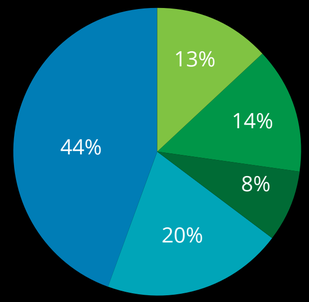
Government and public services



Life sciences and health care



Technology, media and telecommunications

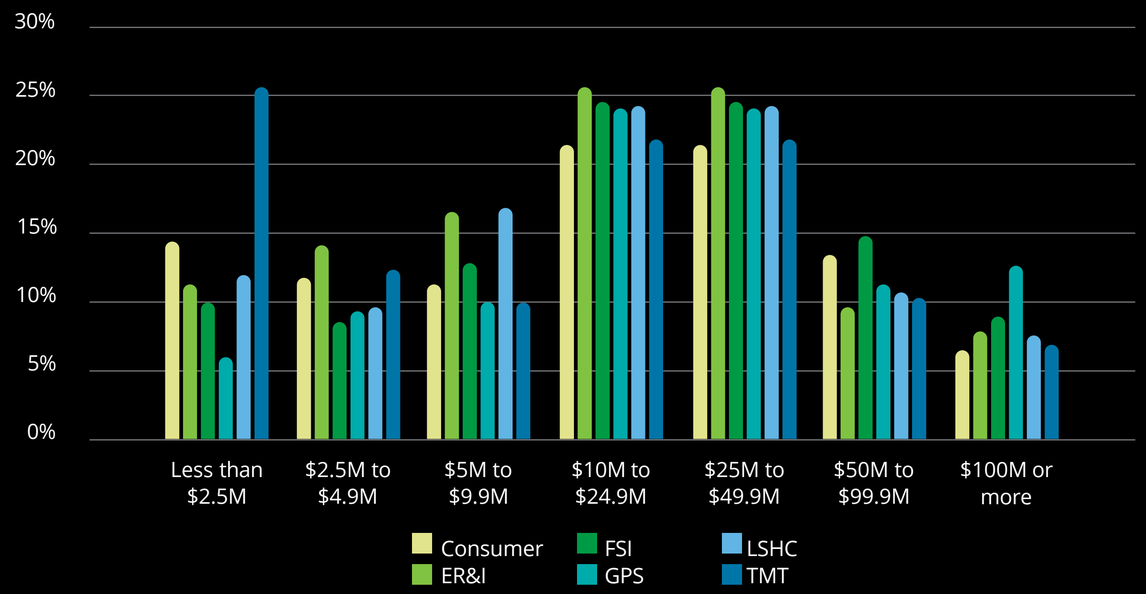


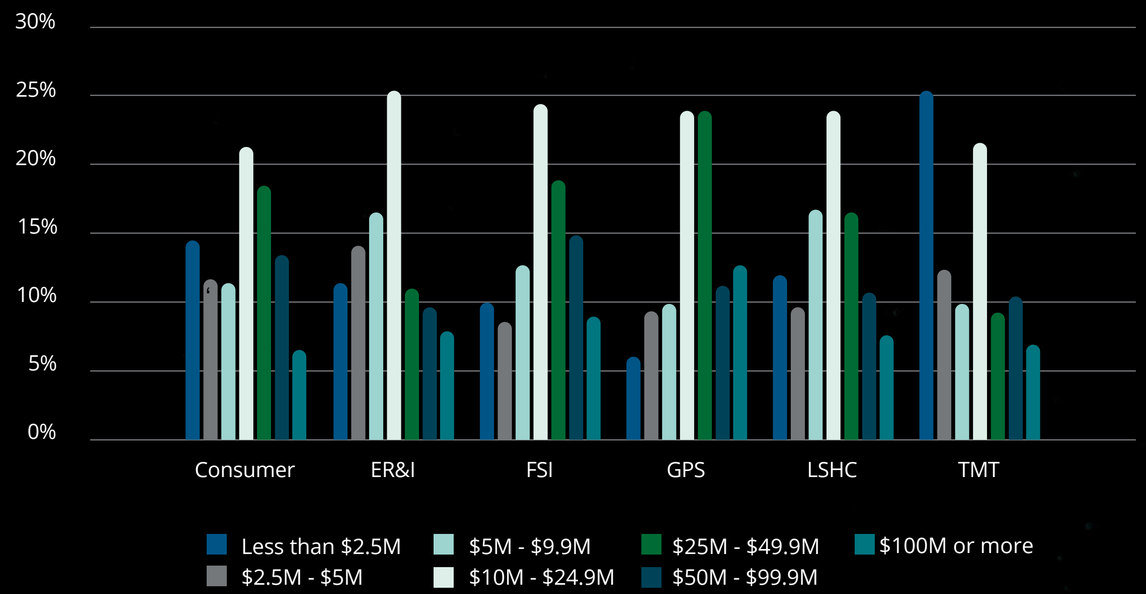
- **FSI** respondents spend a larger share of their digital budgets on digitization of data than other industries
- **GPS** respondents are most likely to allocate budgets toward using digital technologies for fundamental change
- **TMT** respondents spend a larger share of their digital budget on digital platforms and new product development while spending less on fundamental change as compared to other industries

Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

Digital Transformation Spend by Industry

Approximate Total Annual Spend on Digital Transformation & Digitization Initiatives





Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

- **$10-$24.9M is the top spend category regardless of industry**
- **TMT industry and ER&I** respondents on average are spending less than other industries and respondents overall and are **small spenders (less than equal to $9.9M).** In this category, TMT is **11 percentage points** above respondents overall and ER&I is **5 percentage points** above respondents overall
- **Consumer** respondents are more likely to be **medium spenders ($10M - $49.9M).**
- **FSI and GPS** respondents are **spending more**. They **outpace** other industries in the **large spender category ($50M+) by 4 percentage points**, though the greatest percent of GPS industry respondents are spending $100M or more **(13% vs 8% overall)**
- **LSHC respondents** benchmark like the cross-industry average, with most LSHC respondents (24% out of 100% n=290) **spending $10M - $24.9M** (on the lower end of medium spenders).

Digital Transformation Technology Investments

Current Investments in Technology Capabilities Driving Digital Transformation

- Consumer respondents invest more than others in API marketplace capabilities (52% vs 49% overall). They are below average in cloud investments (68% vs 75% overall), zero trust security (27% vs 34% overall), and identity and access management (58% vs. 65% overall).
- ER&I respondents lead all other industries in their investment in IoT technologies 77% (with LSHC as the next closest industry 69%) and Quantum computing (19% vs 13% overall). Despite high IoT investments, their investment in edge computing is only average. ER&I lags all other industries in investing in cloud native application capabilities (56% vs. 62% overall).
- FSI is outpacing overall in technology capability investments in Mobile technologies (86% vs 74 overall) – by 12 percentage points, Cloud platforms (82% vs 75 overall) – by 7 percentage points, and Broadband and wireless tech (up to 4G) (62% vs 52% overall) – by 10 percentage points. FSI is one of the leading investors in identity and access management (73% vs 65%) and in Edge computing (49% vs 43% overall).
- The GPS industry is the leader in investments in wireless 5G or higher and cryptography (28% vs. 22% overall). However, GPS lags all other industries in investments in data analytics capabilities (86% vs. 90% overall), AI (55% vs 63% overall) and deep learning (14% vs 21% overall).
- LSHC lead all other industries in investments in data and analytics (93% vs 90% overall) and Augmented, virtual, and immersive reality– though investments are still relatively low (21%). LSHC is one of the leading investors in identity and access management (73% vs 65% overall).
- TMT lags all other industries in investment in Mobile (62% vs 74% overall) perhaps as early adopters further investment isn't needed. Investment in IoT also lags others - 52% vs 64% overall – a 12 percentage point difference.

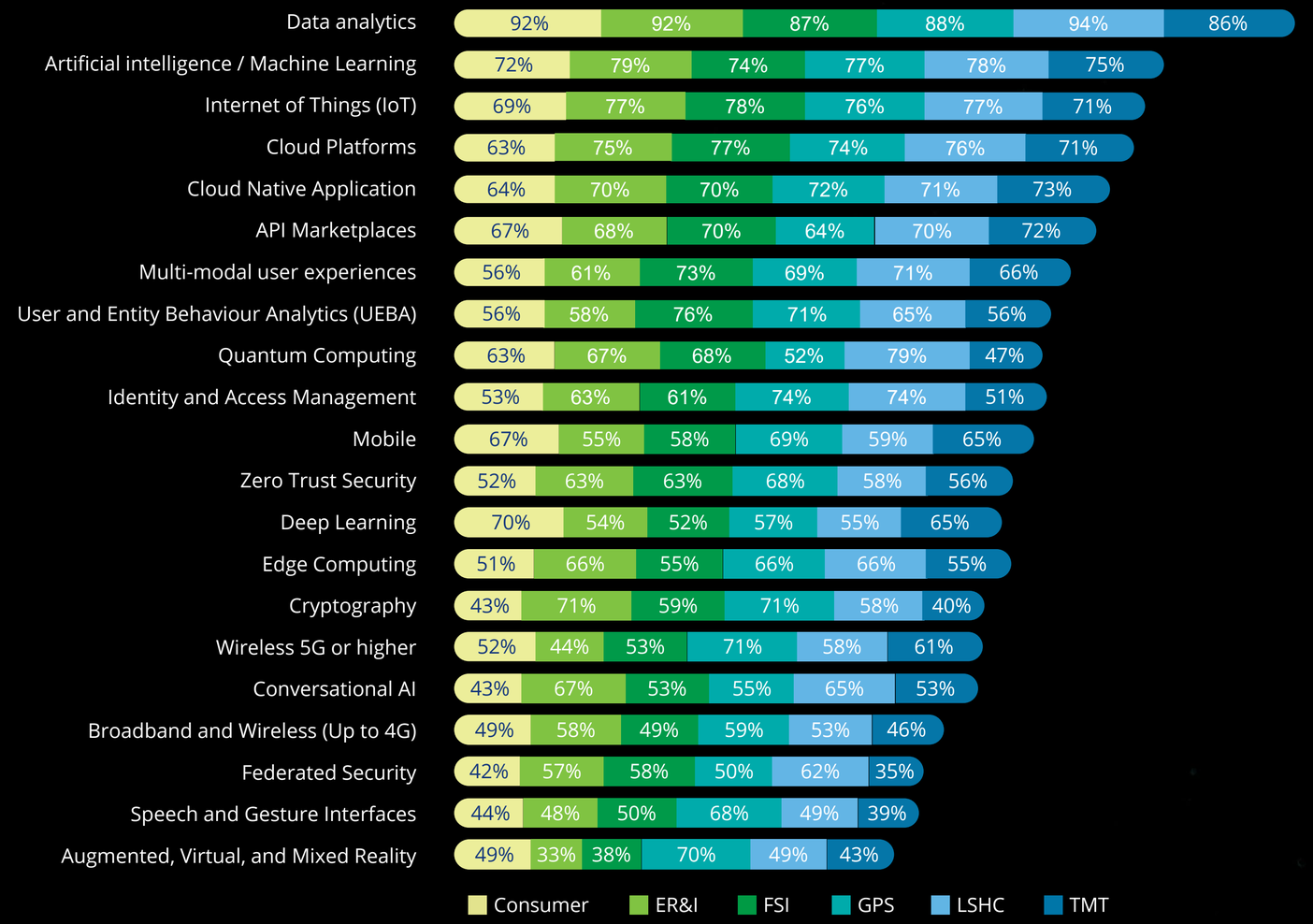
Technology	Total	Consumer	ER&I	FSI	GPS	LSHC	TMT
Data analytics	**90%**	-1%	1%	2%	-4%	3%	-3%
Cloud platforms	**75%**	-6%	1%	7%	1%	3%	-5%
Mobile	**74%**	-3%	-1%	12%	1%	4%	-12%
Artificial intelligence, machine learning, and deep learning	**70%**	-1%	-3%	-3%	-10%	4%	7%
Identity and access management	**65%**	-7%	-5%	8%	-1%	8%	-3%
Internet of things (IoT)	**64%**	-4%	13%	1%	-4%	4%	-12%
Cloud native application	**62%**	-2%	-7%	6%	-3%	3%	1%
Broadband and wireless (up to 4G)	**52%**	-6%	5%	10%	1%	8%	-17%
API marketplaces	**49%**	4%	-3%	4%	-2%	-5%	2%
Edge computing	**43%**	-5%	2%	7%	5%	-1%	-5%
Zero trust security	**34%**	-7%	-3%	2%	6%	2%	3%
Conversational AI	**34%**	1%	-7%	-1%	0%	1%	5%
Wireless 5G or higher	**22%**	2%	-2%	-6%	6%	0%	3%
Federated security	**21%**	-8%	0%	5%	2%	2%	0%
Multi-modal user experience	**18%**	3%	-2%	-4%	-1%	2%	2%
Augmented, virtual, and immersive reality (e.g., the metaverse)	**16%**	3%	1%	-8%	0%	5%	-1%
User and entity behavior analytics (UEBA)	**14%**	1%	-5%	1%	2%	2%	1%
Quantum computing	**13%**	-7%	6%	0%	2%	-1%	2%
Speech and gesture interfaces	**10%**	-2%	-3%	-1%	2%	2%	2%
Cryptography	**6%**	-2%	-2%	-1%	8%	-2%	2%

Note: % in the heatmap refers to percentage points, i.e., difference with the global average
Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

Digital Transformation Value Gained by Technology

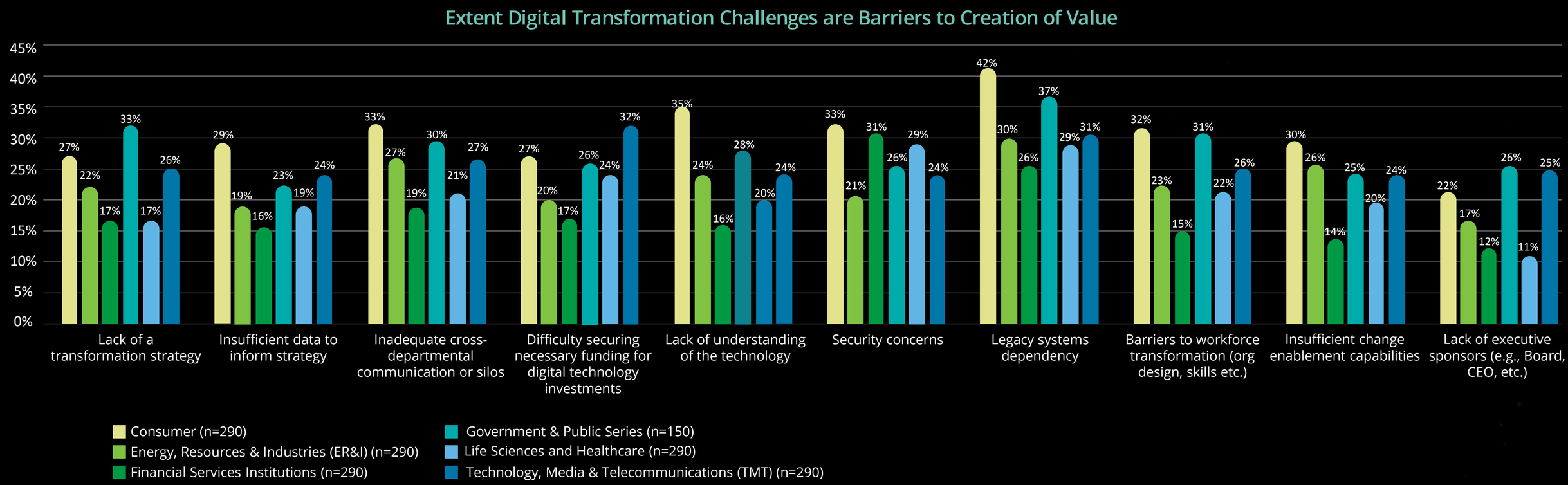
Extent of Belief That Current Investments in Digital Technology Capabilities Generate Enterprise Value

- Consumer leads all other industries in belief that deep learning investments lead to enterprise value (70% vs 60% overall) and lags all others in the belief that cloud platforms (63% vs. 73% overall), conversational AI (43% vs. 55% overall) and multi-modal user experiences (56% vs. 65% overall) do.
- ER&I is above average by 15 percentage points in the belief that cryptography investments contribute to enterprise value. ER&I slightly exceeds other industries in belief that AI investments lead to enterprise value (79% vs. 76% overall). Only 44% of ER&I industry respondents believe Wireless 5G or higher investments contribute to enterprise value – 12 percentage points below average.
- FSI exceeds other industries in belief that user and entity behavior analytics investments lead to enterprise value (76% vs. 64% overall), and IoT (78% vs 74% overall) and multi-modal user experience (73% vs. 65% overall).
- GPS is seeing greater value from Identity and access management investments than others (74% vs. 62% overall) [except LSHC which is at the same level]. GPS is above average by 15 percentage points in the belief that cryptography investments contribute to enterprise value.
- LSHC lead all industries in the belief that Quantum Computing investments contribute to enterprise value (79% vs. 63% overall).
- TMT lags all other industries in belief IoT investments contribute to enterprise value (66% vs. 74% overall) as well as Federated Security (36% to 51% overall) and Quantum computing (47% vs 63% overall).



Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023
Percentages are based on responses from only those respondents who are investing in each capability. Total is not out of 1,600.

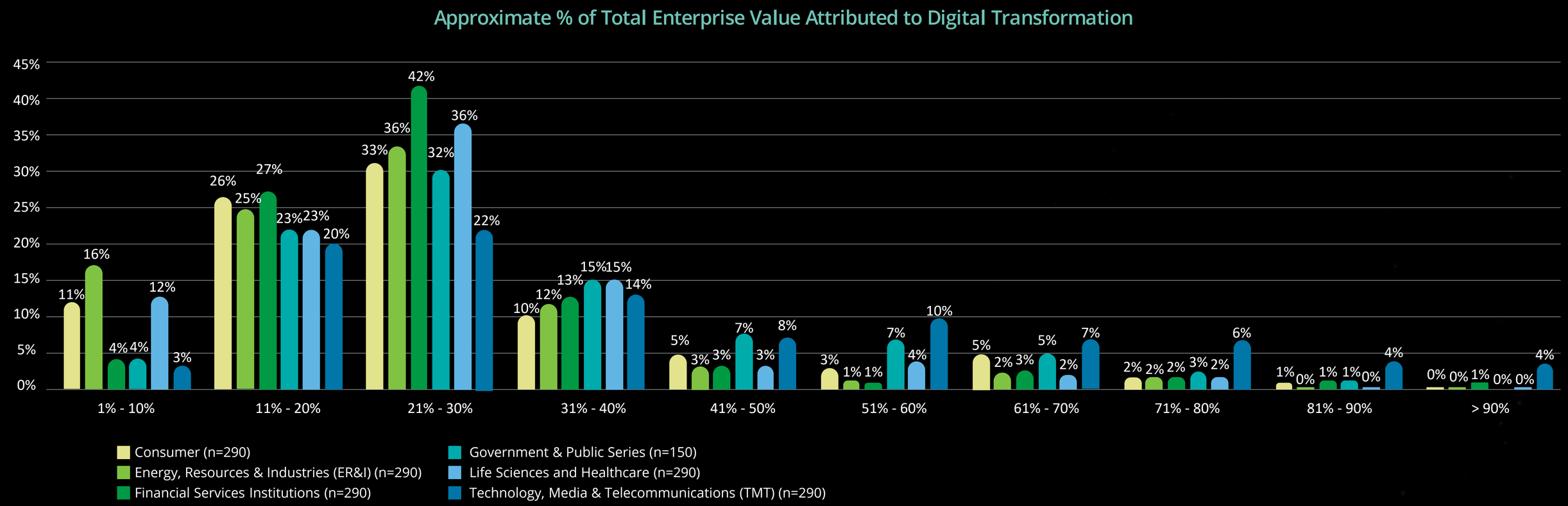
Digital Transformation Barriers



Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

- **Consumer** respondents are much more concerned than overall average about Legacy systems (+10 percentage points) and Lack of understanding of tech (+11 percentage points).
- **ER&I** respondents find security to be less of a barrier to digital transformation than overall average by 6 percentage points.
- **FSI** is more likely than other industries to have **Security Concerns** as a barrier to value, which is the #1 challenge for FSI, over Legacy systems which is the number #1 challenge overall.
- **GPS** had a **Lack of a transformation strategy** as its #1 challenge (at a higher intensity than others) with **Lack of executive sponsors** its #2 challenge to value.
- **LSHC** was generally less impacted by these challenges than other industries.
- **TMT** industry's #1 challenge to value was **Difficulty securing necessary funding for digital technology investments (32% vs 24% for respondents overall).**

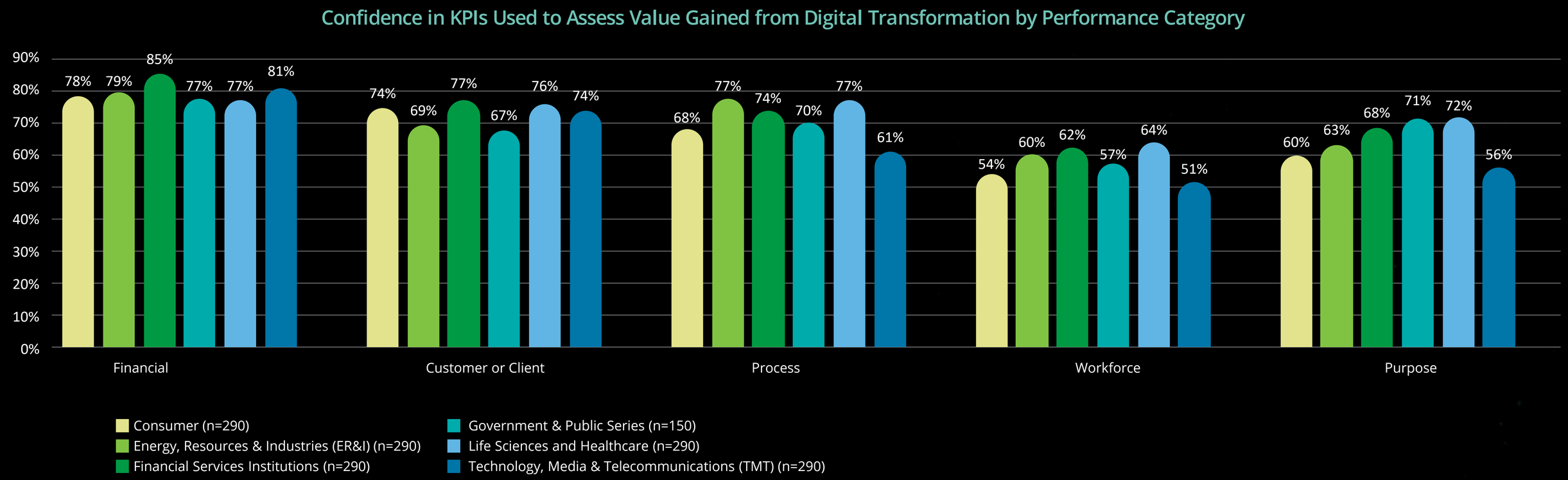
Digital Transformation Value Gained by Industry



Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

- **TMT** respondents lead all others with **more than a half (52%) saying that 31-100% of their total enterprise value comes from digital transformation.**
- **FSI** respondents are also value leaders **42% attributing 21-30%** of their enterprise value to digital transformation (vs. 34% overall), a difference of +8 percentage points versus global overall
- **LSHC, Consumer** and **GPS** respondents **are on par with** respondents **overall.**
- **ER&I respondents** attribute lower % of their enterprise value to digital transformation than others.

Confidence in Digital Transformation Measures

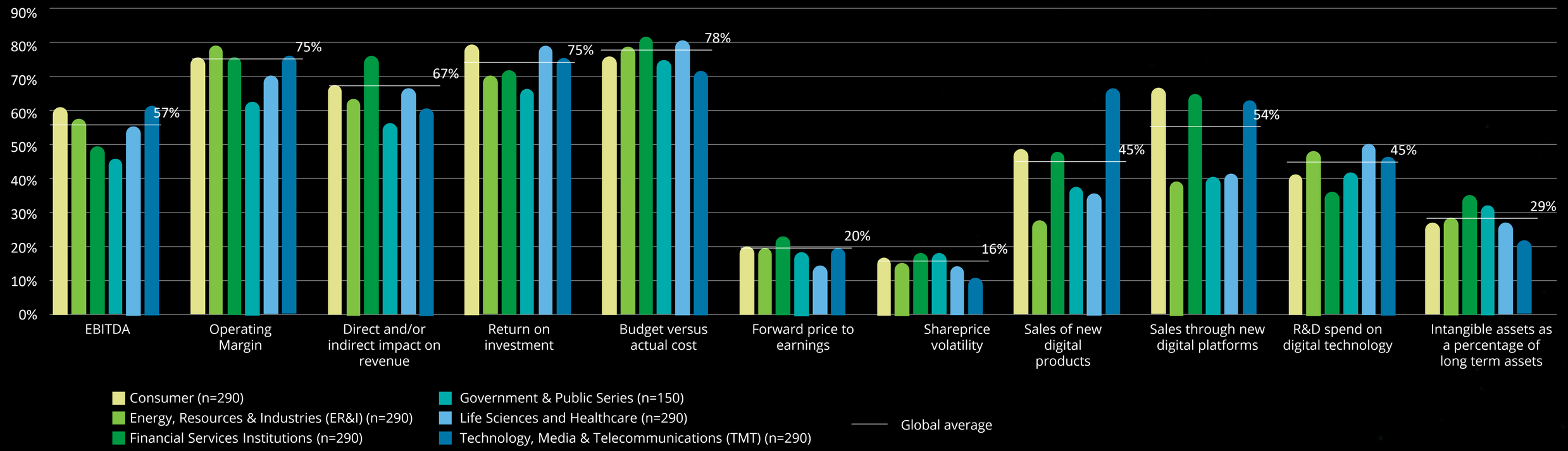


Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

- **FSI** is **more confident** than average across **all five of the KPI categories** with its highest confidence levels in Financial and Customer KPIs.
- **LSHC** respondents **less confident** than the average for Financial metrics (by 3 percentage points); otherwise, they're above average for all four other KPI measurement categories. And lead in Purpose measures versus respondents overall by 8 percentage points
- **ER&I** respondents are more confident than other industries in **Process** and **Workforce** KPIs (at par with LSHC for process KPIs)
- **GPS** is below average in confidence for every measure except for Purpose. GPS is the second most confident industry related to Purpose measures – 7 percentage points above average
- **TMT** respondents are **less confident in Process, Workforce, and Purpose** measures than other industries.

Digital Transformation Value | Financial Measures

Financial-related Performance Indicators Used to Assess Value Gained From Digital Transformation

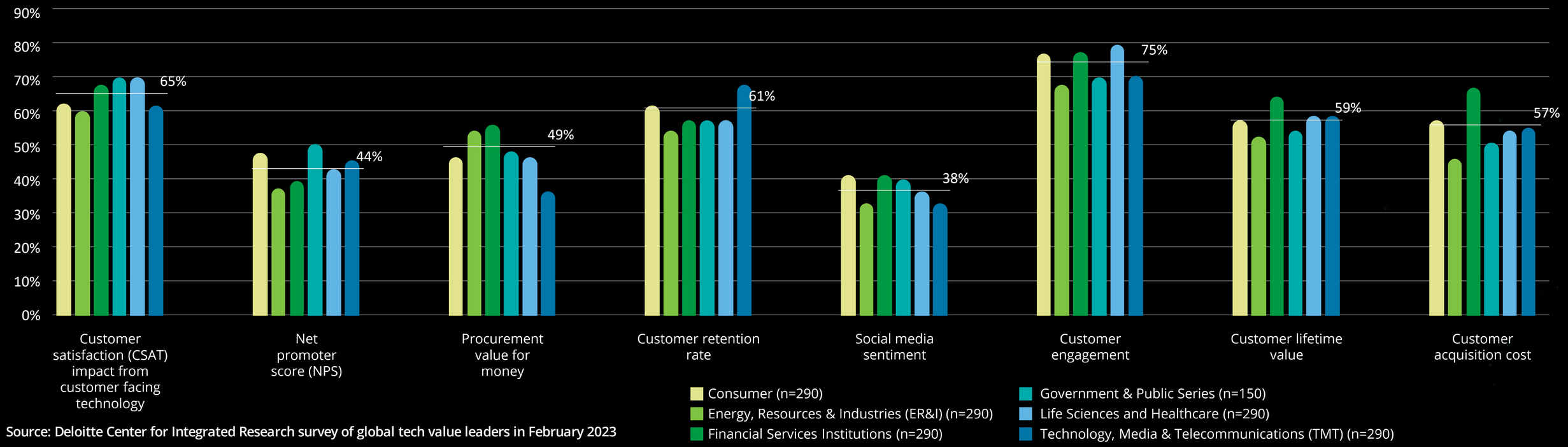


Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

- **TMT** is more likely than others to use **EBITDA** as a financial performance indicator (62% vs 57% overall).
- **FSI** leads all others in its use of **direct and indirect impact on revenue** as a financial performance indicator (77% vs 67% overall) by 10 percentage points.
- **Consumer** respondents are most focused on **ROI** of all industries (80% vs. 75% overall).
- **ER&I** respondents are less likely to use **Sales of new digital products (-16 percentage points less likely than global respondents) / Sales through new digital platforms (-14 percentage points less likely than global respondents)** as a financial performance indicator.

Digital Transformation Value | Customer/Client Measures

Customer/Client-related Performance Indicators Used to Assess Value Gained From Digital Transformation

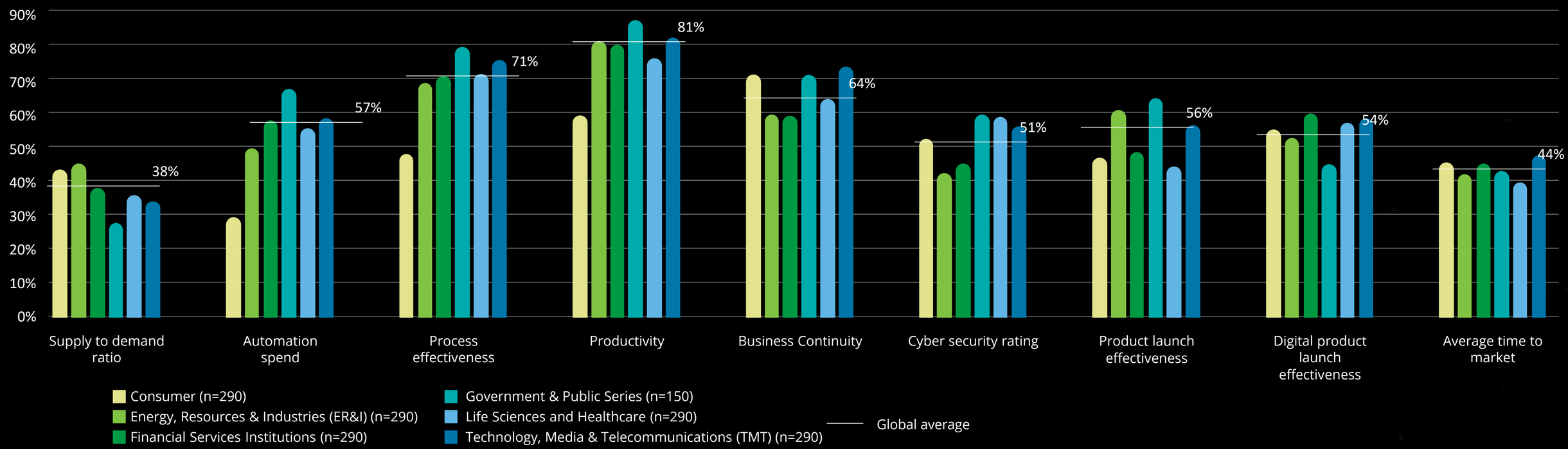


Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

- LSHC and GPS industry lead in their use of **Customer satisfaction** (CSAT) as the top performance indicator (71% vs. 65% overall)
- FSI industry is more likely than others to use **Customer acquisition cost** (CAC) as a customer/client-related performance indicator (68% vs. 57% overall) – 11 percentage points above avg
- ER&I is least likely of all industries to be using Customer/Client-Related Performance Indicators with a range of 33% - 69% across all indicators vs. 38% - 75% overall. The ER&I industry's most important customer/client-related indicator is **Customer engagement (69% / -6 percentage points versus the global average).** ER&I is only above average for **Procurement value for money** (+6 percentage points)v (55% vs. 49% overall).
- TMT respondents are more likely than others to focus on **Customer retention rate** (69% vs. 61% overall).

Digital Transformation Value | Process Measures

Process-related Performance Indicators Used to Assess Value Gained From Digital Transformation

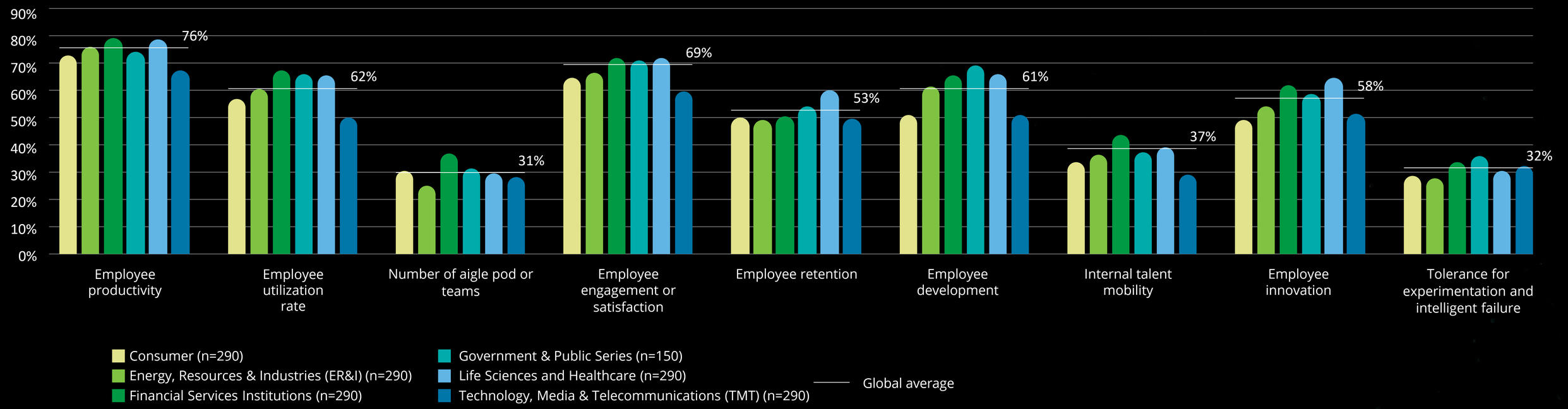


Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

- **FSI** respondents are more likely to use Process-related indicators than other industries, especially: **Productivity** (88% vs. 81% overall), **Process effectiveness** (80% vs. 71% overall), **Business Continuity** (72% vs. 64% overall), and **Cyber security rating** (60% vs. 51% overall)
- **ER&I** and **Consumer** respondents are more likely to use **Supply to demand ratio** than other industries (46% and 44% respectively vs. 38% overall)
- **TMT** respondents are less likely than other industries to use Process related indicators – last in most cases and below the benchmark of respondents overall for all indicators except **digital product launch effectiveness** (59% vs. 54% overall and **average time to market** (48% vs. 44% overall) where TMT leads as #1
- **GPS** respondents are more likely than respondents overall to use **Cyber security rating** as a key Process-Indicator (59% vs. 51% overall); second only to FSI and 8 percentage points above average

Digital Transformation Value | Workforce Measures

Workforce-related Performance Indicators Used to Assess Value Gained From Digital Transformation

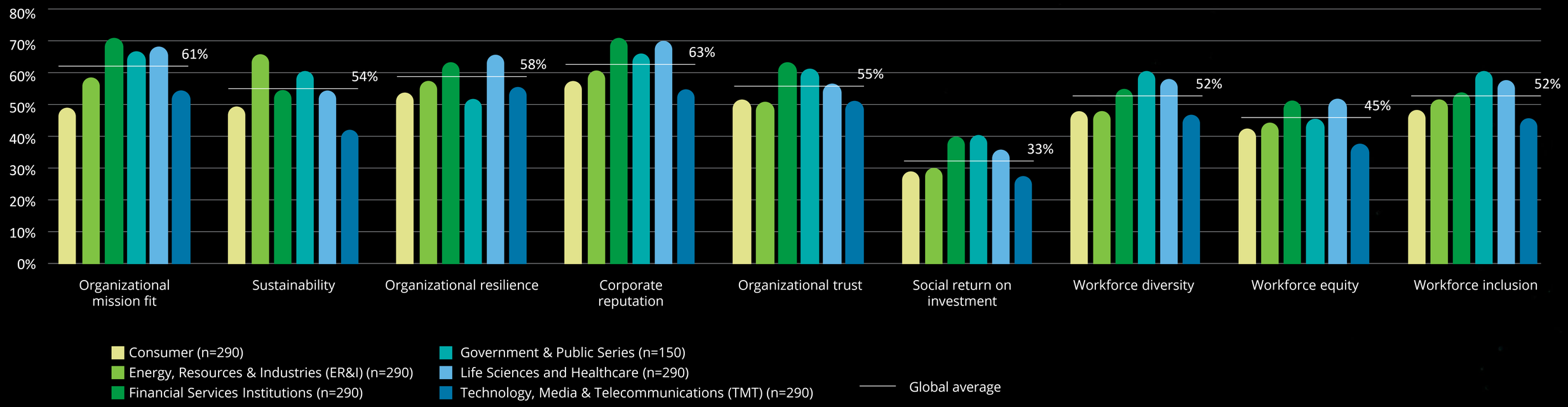


Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

- **LSHC** respondents lead others in their focus on **Employee retention** (61% vs. 53% overall) – 8 percentage points above average
- **FSI** respondents are more likely to use **Employee utilization rate** (69% vs. 62% overall) and **Internal talent mobility** (44% vs. 37% overall) than others.
- **TMT** respondents are less likely to use workforce-related performance indicators than other industries / overall. They're much less likely than others to use **Employee utilization rate (by -11 percentage points), Employee development by -9 percentage points, and Employee engagement and satisfaction by -8 percentage points**
- **Consumer** respondents lag others in their use of all workforce-related performance indicators, benchmarking below respondents overall for all Indicators.
- **ER&I** is below average for using **Number of agile or pod teams** as a KPI by 5 percentage points.
- **GPS** leads vs. others in its use of **Employee development** (71% vs. 61% overall) and **Tolerance for experimentation and intelligent failure** (37% vs. 32% overall).

Digital Transformation Value | Purpose Measures

Purpose-related Performance Indicators Used to Assess Value Gained From Digital Transformation

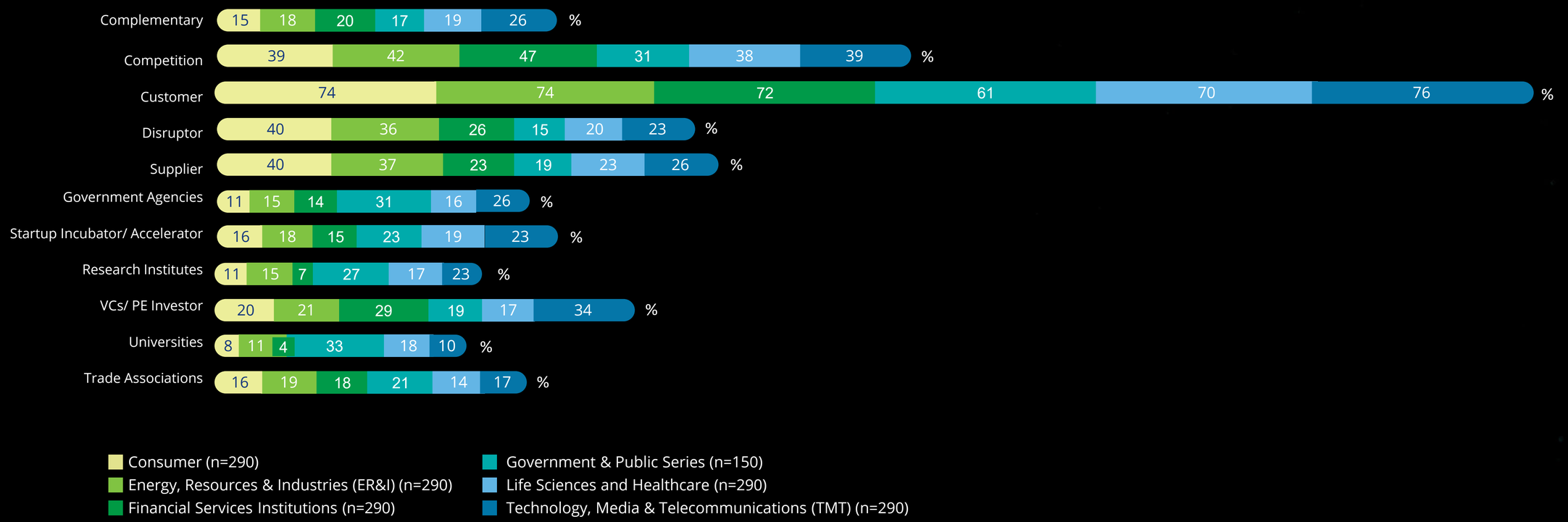


Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

- **FSI** is more likely than all other industries to use **Organizational mission fit** (70% vs. 61% overall), **Corporate reputation** (71% vs. 63% overall), **Organizational trust** (63% vs 55%) and **Workforce equity** (51% vs. 45% overall)
- **LSHC** is more likely than any other industry to use **Organizational resilience** (66% vs. 58% overall) and is **above average for all measures except Sustainability** (at par with average).
- **GPS** is most likely to use **Social return on investment** (40% vs. 33% overall), **Workforce diversity** (60% vs. 52% overall) and **Workforce inclusion** (60% vs. 52% overall)
- **ER&I** is more likely than any other industry to use **Sustainability** (66% vs. 54%) KPIs but is **below average for every other Purpose measure**.
- **Consumer** and **TMT** respondents are **below average for every Purpose KPI.**

Value Measures and the Surrounding Ecosystem

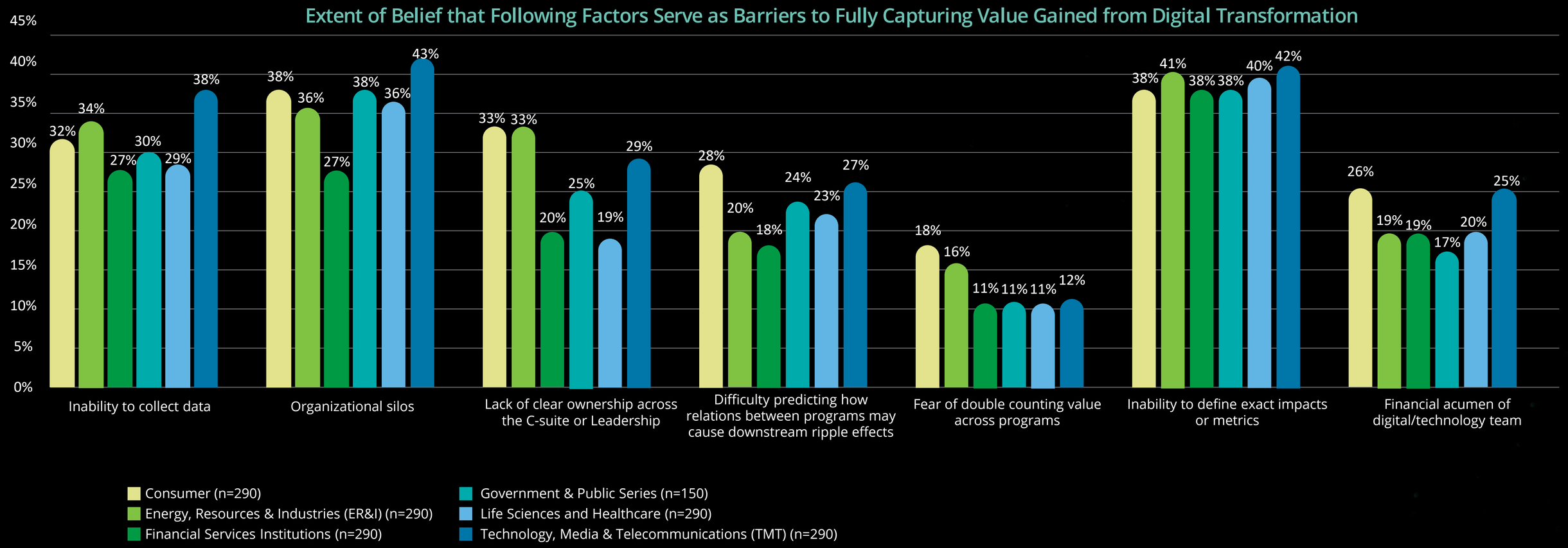
Extent organizations' leaders are tracking how digital tech investments create value for others in ecosystem



Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

- **Consumer** respondents better understand value created for their Customers distributors and suppliers than any other industry, closely followed by ER&I
- **FSI** respondents are more likely than others to track how their digital tech investments create value for competitors (+7 percentage points with 47% tracking this to a large/very large extent)

Digital Transformation Measurement Challenges



Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

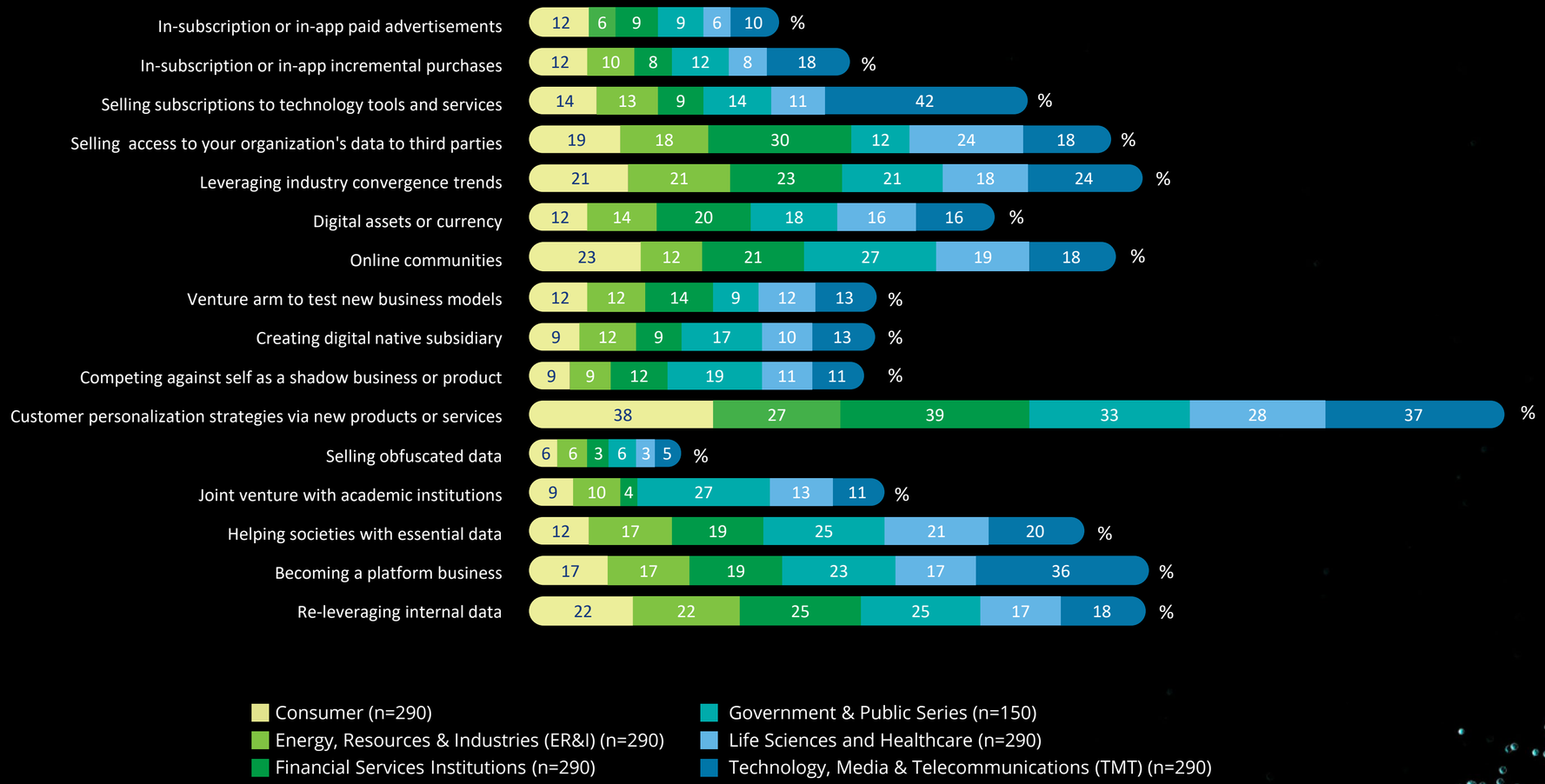
- **TMT** and **Consumer** respondents see almost all factors to be more challenging than others.
- **ER&I** is more concerned than other industries [except Consumer which is at the same level] about **Lack of clear ownership across the C-suite or Leadership.**
- **FSI** is **less concerned than other industries** about all the barriers.

Digital Tech Monetization Strategies

Extent organization currently uses the following approaches to monetize digital transformation. We define monetization as creating new revenue streams with responses indicative of those using the approach to a large/very large extent

While **customer personalization strategies** via new products and services is the most used monetization strategy across industries, there are some notable differences:

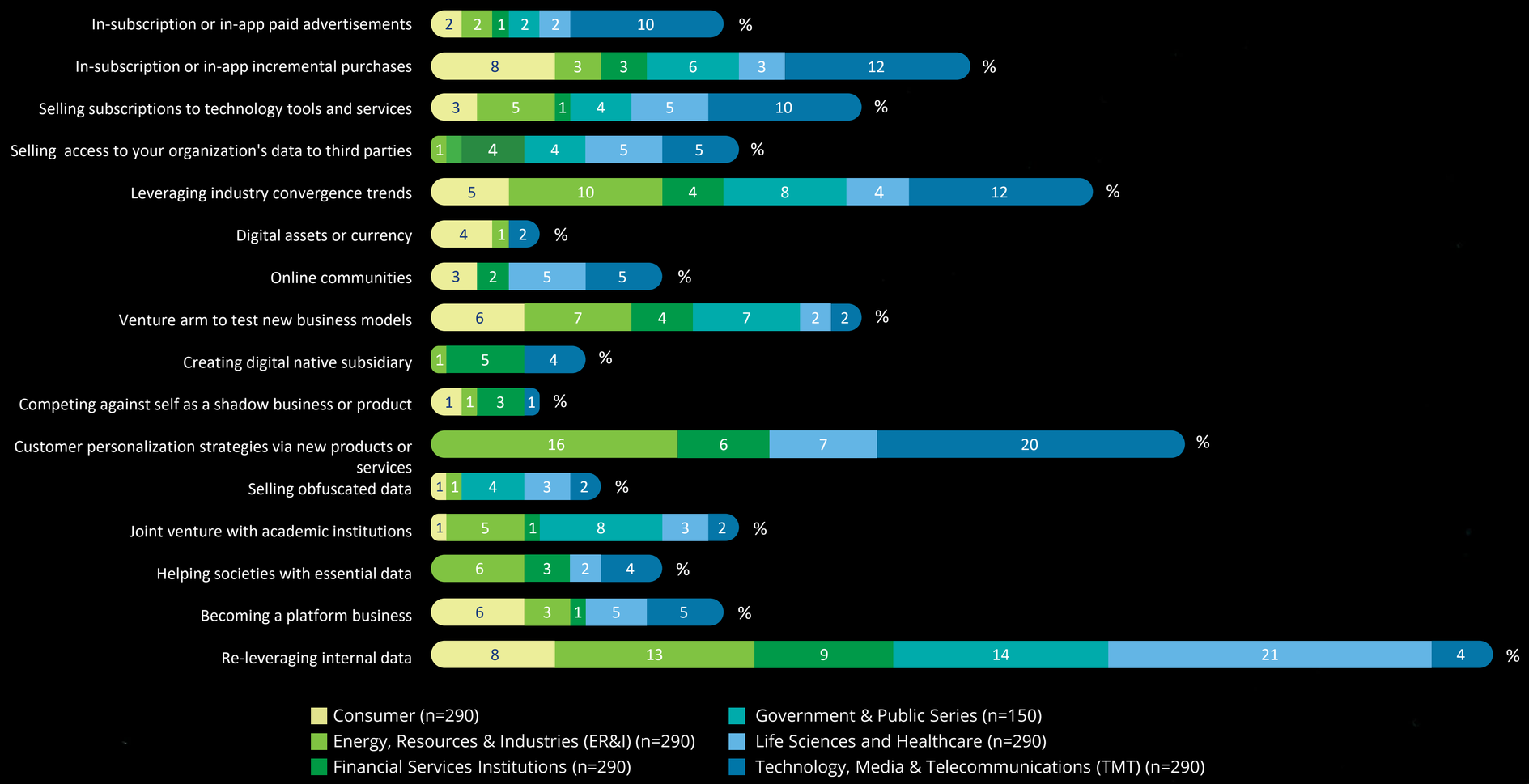
- **TMT's** #1 monetization focus is **Selling subscriptions to technology tools and services** (42% vs. 18% overall) – a 24 percentage point difference
- **FSI** is more likely than other industries to have **Selling direct access to your data** to third parties as a monetization strategy (30% vs. 21% overall): +9 percentage points
- **Consumer** industry respondents are slightly above average in their use of **Online Communities** and **In-subscription or in-app paid advertisements** to support monetization strategies – by 3 percentage points
- **GPS** respondents are more likely to create **Joint ventures with academic institutions** than other industries (27% to 11% overall) or a **Competing shadow business / product** (19% vs. 11% overall)
- **LSHC** and **ER&I** are below average in adoption of most monetization strategies



Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

Future Digital Tech Monetization Strategies – Introduction

Extent Organizations are Using Varied Approaches to Monetizing Digital Transformation



Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

Future Digital Tech Monetization Strategies – Detailed View

Extent Organizations' Leaders are Considering Using Following Approaches to Monetizing Digital Transformation in the Future

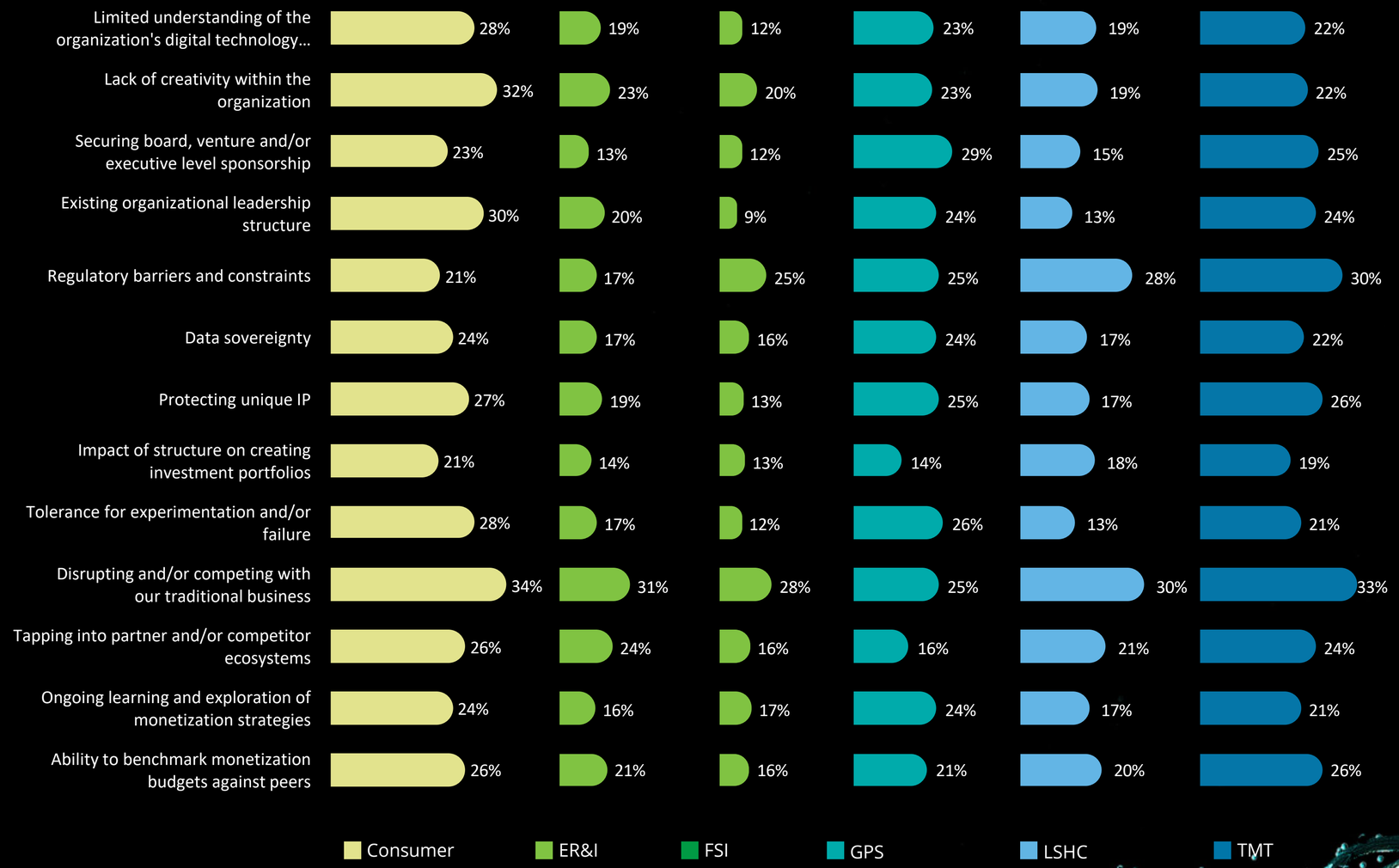
- While **Customer** personalization strategies are the number one focus from a cross-industry perspective (10%), it is not a future focus area at all for Consumer or GPS respondents (both 0%).
- Apart from customer personalization, **TMT** industry respondents are more focused than others on **In-subscription or in-app paid advertisements** (10% vs 3% overall). There is a 7-percentage-point difference versus others. TMT respondents also are increasing their focus on selling subscriptions to tech tools / services (+6), In-subscription or in-app incremental purchases (+6) and Leveraging industry convergence trends (+5)
- **LSHC** respondents are 12 percentage points above other industries (21% vs. 9% overall) in focus on re-leveraging internal data
- **GPS** is 5 percentage points above others in a focus on **Joint venture with academic institutions** (8% vs. 3% overall)

Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

Digital Tech Monetization Challenges

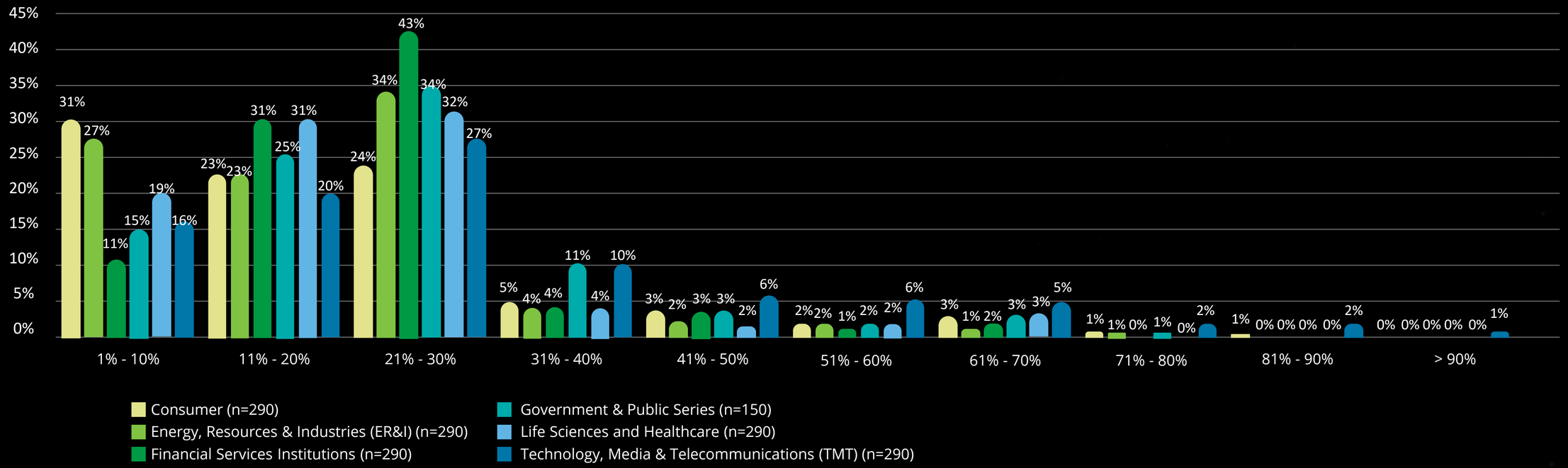
- **Consumer** industry respondents found every barrier to be more challenging than organization than the average (except for Regulatory barriers), and especially **Existing organizational leadership structure** which 30% found to be challenging/very challenging (vs. 20% overall) – a 10 percentage point difference
- **ER&I** industry respondents put **Tapping into partner and/or competitor ecosystems** as their top challenge at 2 percentage points above the average; while they were below average related to most other challenges
- **FSI** industry respondents generally saw the lowest levels of challenges across response choices of any industry with several responses 2-11 percentage points below the average
- **GPS** respondents saw more challenges related to **Securing board, venture and/or executive level sponsorship** – which was its #1 challenge and 10 percentage points above the average
- **TMT** respondents said that they were to a large extent seeing challenges/frequently challenged by every issue at 2-6 percentage points higher than average for every issue (except lack of creativity within the organization). TMT's top challenge was Regulatory barriers and constraints.
- **LSHC** respondents generally saw fewer challenges than other industries [second to FSI].

Extent of Challenges Presented by Following Factors to Monetizing Digital Technology



Budget Allocated to Digital Tech Monetization Strategies

Approximate % of Current Digital Transformation Budgets Allocated to Digital Technology Monetization Strategies

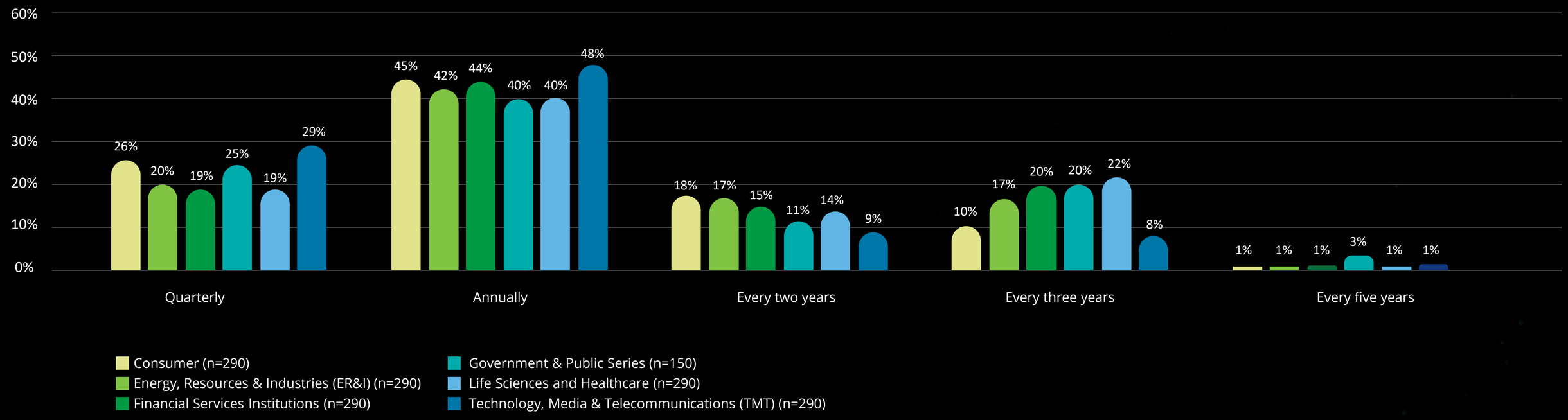


Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

- **Consumer** respondents are spending less on digital monetization strategies than other industries, with more respondents spending only 1-10% of their digital budgets on this strategy than in any other industry (31% vs. 20% overall – an 11-percentage point difference)
- **ER&I** respondents are also slightly underspending compared with others with 27% spending between 1%-10% (vs. 20% on average in this category).
- **GPS** respondents were spending more than other respondents overall, and a larger percentage of that budget on digital transformation monetization strategies too: 2 percentage points above the average for 21-30% of their digital budget and 5 percentage points above the average for 31-40% of their digital budget.
- **TMT** industry respondents spend most overall. 32% of TMT respondents are spending >30% of their digital budget on monetization vs. 17% overall (15 percentage pts difference)
- **FSI** industry respondents are also spending more with 43% spending between 21-30% (11 percentage points above respondents overall)
- **LSHC** respondents are relatively on par with the average.

Value Horizons for Digital Transformation

Timelines Organizations Use to Assess Value Gained from Digital Transformation



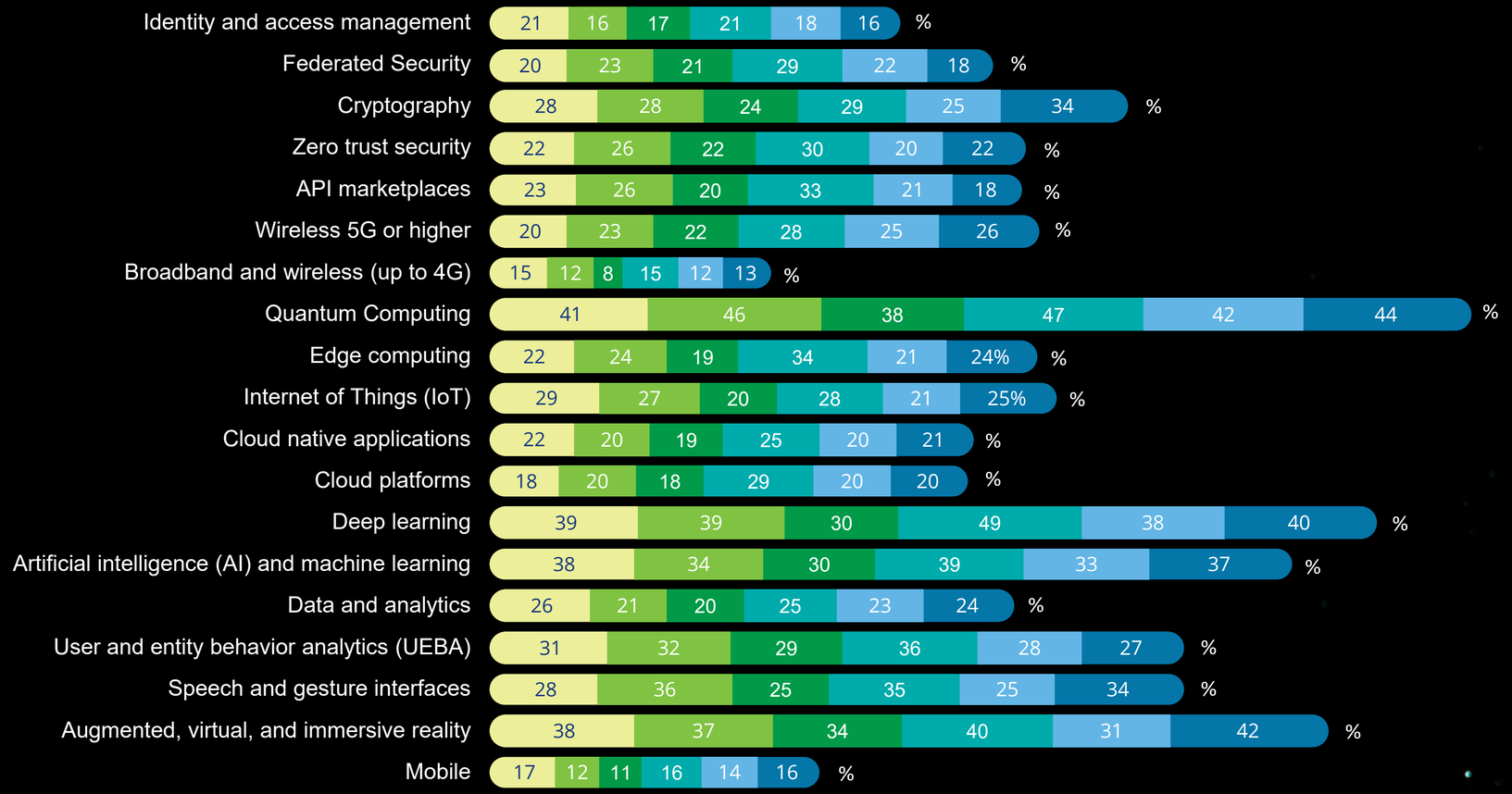
Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

- **Consumer** and **TMT** respondents are least mature in long-term / horizon thinking with 71% of Consumer and 77% of TMT respondents measuring value quarterly or annually (vs 67% overall)
- **TMT** industry respondents are more likely than others by 10 percentage points to be on quarterly / annual value measurement cycles
- **ER&I** respondents are only slightly above the average for measuring value every 2 years – 3 years (+4 percentage points)
- **FSI** respondents do a little better than **ER&I** for measuring value every 2 years – 3 years (+5 percentage points)

Value Horizons for Digital Transformation by Technology

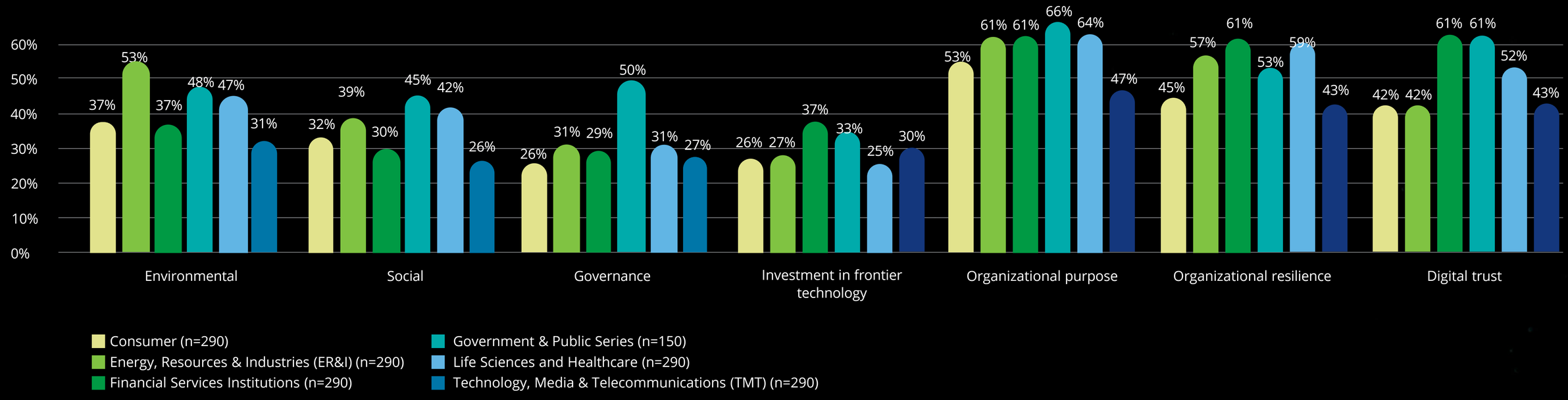
Extent of Belief That Listed Investments in Digital Transformation Require Longer Time Horizons

- **FSI** respondents are less likely than respondents overall to believe that investments in digital transformation require longer time horizons to show value. This is especially pronounced for deep learning (8 percentage points less than overall)
- **GPS** respondents are more likely than respondents overall to a large/very large extent believe that investments in digital transformation require longer time horizons to show value across every technology, especially Deep learning and Quantum computing (by 11 percentage points vs average), API marketplaces (by 10 percentage points), and cloud platforms (by 9 percentage points)



New Value Measures on the Horizon

Extent Organizations' Leaders are Thinking About Creating New Digital Technology Value Measures Related to Following Strategies



Source: Deloitte Center for Integrated Research survey of global tech value leaders in February 2023

- TMT leaders are less likely than every other industry and organizational leaders overall to be thinking about creating new digital tech value measures for Environmental, Social, Organizational purpose and Organizational resilience categories. They are 11 percentage points below the average on thinking about creating new organizational Purpose and Environmental strategy measures
- LSHC and GPS respondents are above average in respondents thinking through new measures for almost every category (except LSHC for investment in frontier technologies). LSHC is especially ahead on thinking through new Social measure (+7 percentage points) and GPS in Governance (+19 percentage points) and Digital Trust (+12 percentage points)
- FSI respondents lead alongside GPS on respondents thinking about creating new digital trust value measures (at 61%; +12 percentage points above the 49% average)
- Consumer respondents are below respondents overall for every measure.

Definition (1/6)

API marketplaces	A user-friendly public hub where API providers can publish APIs for developers and partners to consume.
Artificial intelligence (AI) and machine learning	A type of AI, machine learning refers to the use and development of computer systems able to learn and adapt without explicit instructions / programming.
Augmented, virtual, and immersive reality (e.g., the metaverse)	The metaverse is a virtual-reality space in which users can interact with a computer-generated environment and other users.
Automation spend	Total annual spend on new automation technology.
Average time to market	Time to market is defined as the length of time from the conception of a product until it is released to the market.
Becoming a platform business	Transforming an organization's business model to create value by including analytics, data management tools, cloud services, intelligent technologies, machine learning, IoT, etc.
Broadband and wireless (up to 4G)	Broadband is open connectivity in which a high-speed internet connection is always available. Wireless Wi-Fi is wireless connectivity that uses radio waves to provide an internet connection.
Budget vs. actual cost	Calculated as the expected expenses versus what the investor is willing to spend on the project.
Business continuity	Measures the extent to which the organization has established risk management practices and procedures that aim to prevent mission-critical services and enable it to recover quickly from disruptions, caused by external events such as natural disasters, or cyberattacks.
Cloud platforms	A third-party platform that moves an organization's on-premises data center offsite, where data infrastructure is managed entirely by the third-party partner.
Cloud native application	A type of computer software that natively utilizes services and infrastructure from cloud computing providers.
Digital product launch effectiveness	Calculated as the ratio of the number of new digital product successes to the total number of new products successes.
Competing against self as a shadow business or product	Chasing your own unrealized potential, by seeking meaningful objectives/goals to compete over, so that, you thrive to accomplish what your ideal self would.
Conversational AI	A tool that uses machine learning to comunicate with customers based on prior speech or text information.
Corporate reputation	Calculated as a quotient that is based on the grading of a set of attributes of corporate reputation by external experts.
Creating digital native subsidiary	Development of web-only retail verticals within traditional organizations.
Cryptography	An information security technique in which data and communications are coded such that only intended parties may understand and process it.

Definition (2/6)

Customer acquisition cost (CAC)	Measures the amount of money a company spends to get a new customer.
Customer engagement	Measured as the ratio of positive survey responses of customers regarding their engagement with your business to total survey responses about their engagement.
Customer lifetime value	Calculated by multiplying your customers' average purchase value, average purchase frequency, and average customer lifespan.
Customer personalization strategies via new products or services	Having a rigorous process that allows for 1) gathering insights about your customers with respect to developing new products or services, and then 2) validating those insights.
Customer retention rate	Calculated as the percentage of existing customers who remain customers after a given period.
Customer satisfaction (CSAT) impact from customer-facing technology	Measures how happy or satisfied your customers are with a service, product, or support interaction you have provided.
Cyber security rating	Calculated by outside experts using independent scoring and ratings of an organizations IT security.
Data analytics	The management of data for all uses (operational and analytical) and the analysis of data to drive business processes and improve business outcomes through more effective decision making and enhanced customer experiences.
Deep learning	A type of machine learning designed to imitate human learning through use of artificial neural networks in which multiple layers of processing are used to extract progressively higher-level features from data.
Digital assets or currency	Use of digital assets / cryptocurrencies for investment, operational, or transactional purposes.
Digital product launch effectiveness	Calculated as the ratio of the number of new digital product successes to the total number of new products successes.
Digital trust	Confidence in an organization's ability to protect consumer data, enact effective cybersecurity, offer trustworthy AI-powered products and services, and provide transparency around AI and data usage.
Direct and/or indirect impact on revenue	Direct or indirect costs that impact product pricing.
EBITDA	An alternative measure of profitability to net income that is calculated as earnings before interest, taxes, depreciation, and amortization.

Definition (3/6)

Edge computing	A strategy for computing on location where data is collected or used, allows IoT data to be gathered and processed at the edge, rather than sending the data back to a datacenter or cloud.
Employee development	Calculated as the number of employees who have received training on an entirely new set of skills to prepare them to take on a different role within the company.
Employee engagement or satisfaction	Calculated as the level of enthusiasm and dedication workers feel toward their job as reflected in survey ratings.
Employee innovation	Ratio of number of new ideas and solutions to workplace challenges or problems suggested by employees to the total number of employees in the organization's workforce.
Employee productivity	Calculated as total employee output divided by total number of hours worked.
Employee retention	Calculated as the number of people who leave their job in a certain period, either voluntarily or involuntarily.
Employee utilization rate	Calculated as total employees' billable hours divided by total number of available hours.
Environmental, social and governance (ESG)	A framework that helps stakeholders analyze and understand how an organization manages risks and opportunities, ranging from environmental practices, such as the company's carbon footprint and commitment to sustainability, to social practices, such as the company's workplace culture and commitment to diversity and inclusion, to its governance practices, as reflected in the structures and control processes that make the company more accountable and transparent to investors.
Federated security	An arrangement for managing identities and access to resources that span companies or security domains.
Forward price to earnings (FPE)	Calculated as the ratio of a current stock's price over its "predicted" earnings per share.
Helping societies with essential data	Providing access to organizational data for the purpose of generating social and economic benefits within communities.
Identity and access management	A framework of policies and technologies to ensure that the right users have the appropriate access to technology resources.
In-subscription or in-app incremental purchases	Sale of additional content / services / subscriptions within a mobile application.
In-subscription or in-app paid advertisements	Sale of ad space on consumer-facing platforms or applications.

Definition (4/6)

Intangible assets as a percentage of long-term assets	Assets representing investment in new ideas as a percentage of total long-term assets.
Internal talent mobility	Calculated as the percentage of your organization's workforce promoted or transferred to a different department.
Internet of things (IoT)	The network of physical objects—"things"—that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the internet.
Investment in frontier technologies (e.g., Web 3, Quantum, etc.)	Dedicated spend on breakthrough technology that is expected to reshape the way people communicate, innovate, and create and conduct business, and to provide urgently needed solutions to global challenges like climate change and food insecurity.
Joint venture with academic institutions	Collaborating with one or more academic institution to develop a single enterprise or a project for profit, sharing the risks associated with its development.
Leveraging industry convergence trends	Using knowledge gleaned from internal data to enter new markets or industries that are increasingly connected to our business.
Mobile	Technology that consists of any portable two-way computing device and the communication networks that connect them.
Multi-modal user experience	Designs that use multiple modalities across interfaces to aid human to computer and human to computer interactions.
Net promoter score (NPS)	Measures the loyalty of customers to a company and is calculated as % promoters - % detractors.
Number of agile pod or teams	Calculated as the number of sufficient and cross-functional teams working collaboratively to deliver a defined product requirement in multiple sprints.
Online communities	Digital forums that allow people with common interests to exchange ideas and information.
Operating margin	Measures how much profit a company makes on a dollar of sales after paying for variable costs of production, such as wages and raw materials, but before paying interest or tax.
Organizational mission fit	Calculated as the extent to which the value gained is aligned with the organization's mission.
Organizational purpose	The fundamental reason why the work the organization's employees do is meaningful and important for creating positive effects on local and global society.

Definition (5/6)

Organizational resilience	Calculated as a score that is based on a 3-dimensional set of items (i.e., capacity to recover from unfavorable conditions, capacity to take actions rapidly, and cohesion among employees in organizations when faced with unfavorable situations).
Organizational trust	Measures the extent to which employees are confident in the actions of your company.
Process effectiveness	Calculated as the ratio of expected results for a process and your actual results.
Procurement value of money	Measures the utility a customer derives from every amount of money spent on purchasing your product or service.
Product launch Effectiveness	Calculated as the ratio of the number of new product successes to the total number of new products launched through digital channels in the last few years.
Productivity	Calculated as the ratio of how much you have produced to the time it takes to produce that deliverable.
Quantum computing	A type of computation whose operations can harness the phenomena of quantum mechanics, such as superposition, interference, and entanglement.
R&D spend on digital technology	Percentage of annual R&D spend allocated toward digital technology investments.
Repurposing internal data	Using existing internal data generated for one purpose to add value to other product lines or uses beyond its origin.
Return on investment	Calculated as the monetary value initial cost of the investment from its final value, then dividing this new number by the cost of the investment, and finally, multiplying it by 100.
Sales of new digital products	Calculated as the ratio of new digital products to total new product sales.
Sales through new digital platforms	Calculated as the ratio of new digital platforms to total digital platform sales.
Selling direct access to your data to third parties	Direct data monetization involves selling direct access to your existing organizational data to third parties.
Selling obfuscated data	Development of new revenue stream through the sale of existing organizational data that has been anonymized through removal of personally identifiable information to other parties.

Definition (6/6)

Selling subscriptions to technology tools and services	A recurring revenue model in which customers pay for technology tools and services at a set cadence (e.g., weekly, monthly, annually).
Share price volatility (SPV)	Calculated as the dispersion or variance of market prices, on an annualized basis
Social media sentiment	Measures how much people talk about your brand on social media.
Social return on Investment	Calculated as Estimated Social Impact Value minus the Initial Investment Amount (IIA) / (IIA * 100%).
Speech and gesture interfaces	Technology in which user speech (e.g., Virtual assistants) or gestures (e.g., “pinching” to zoom out) are used to operate an interface.
Supply to demand ratio	Calculated as average inventory on hand divided by average monthly demand.
Sustainability	Measures the impact of digital transformation on the economy, the environment and social equity (ESG).
Tolerance for experimentation and intelligent failure	Measured as employee perceptions of organizational tolerance for failure to achieve radical organizational innovation, as reflected in compensation and reward systems, managerial support for risk taking and psychological safety.
User and entity behavior analytics (UEBA)	A type of cyber security process that takes note of the normal conduct of users in order to detect any anomalous behavior or instances when there are deviations from these “normal” patterns.
Venture arm to test new business models	The practice of where corporate entities test new, innovative solutions before making significant investments or commitments.
Wireless 5G or higher	New-generation wireless technology which enables a network designed to connect virtually all devices to yield better connection speeds, lower latency, better reliability, and improved user experiences.
Workforce diversity	Calculated as the ratio of the number of employees from minority groups (related to race, ethnic backgrounds, or sexual preferences) to the total number of employees in an organization.
Workforce equity	Measured as the extent to which employees feel they are being fairly compensated for the job they perform.
Workforce inclusion	Measured as the extent to which employees feel a sense of belonging, inclusion and psychological safety within an organization.
Zero trust security	A strategic approach to cybersecurity that secures an organization by eliminating implicit trust and continuously validating every stage of a digital interaction.

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