GSMA Intelligence

Telco AI:
State of the Market, Q4 2024

Progress and the return-on-investment question

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GSMA Intelligence

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Our team of analysts and experts produce regular thought-leading research reports across a range of industry topics.

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GSMA Intelligence

Capturing AI's true value

Artificial intelligence is reshaping telecoms operations worldwide, offering a mix of opportunities and complex challenges. This report assesses operator progress with harnessing AI's capabilities, incorporates insights from the Global AI Benchmark Survey, and explores AI's transformative impact.

Considering the significant investments in AI, understanding how to effectively measure returns is paramount to ensure sustainable value creation. While financial returns remain a critical metric, they provide a one-sided view. It is essential to include other factors to evaluate and capture AI's true value.

This report therefore highlights the importance of measuring the return on AI investments through a broader approach. This includes factors such as business operations, workforce skills and ethics (including environmental impacts). Measuring AI's impact over the long term requires a dynamic perspective, considering the system-wide changes AI fosters within telecoms organisations and beyond.

For GSMA members and industry leaders, we hope this report offers valuable insights into how to integrate AI with strategic precision, build a culture of innovation and grasp the transformative impact AI holds for the future of telecoms.

Jeanine Vos
Head of SDG Accelerator
G&RA, GSMA

About the series

This is the third in a four-part series on AI strategy in telecoms. This edition examines the current AI transformation in the industry, highlighting progress and key areas for improvement, with strategic insights and actionable takeaways. It also discusses methods to measure the impact of AI transformation.

Telco AI: State of the Market quarterly series: research approach

Market context

- A recap of critical industry developments and implications
- Putting industry progress in context, along with AI and security synergies

Leader profiles

- Case studies of telco AI in action
- Understanding best practice for the sector

Deep dives

- Deep dives into key topics
  - AI data and systems
  - energy efficiency
  - strategy and culture
  - network strategy

In tandem with the report series, GSMA Intelligence has developed an AI benchmark to track AI use and implementation in the telecoms sector.

GSMA Intelligence

01 Executive summary

Summary

01

Commit, align and act

A strategy-driven approach to AI is central for operators, with 65% establishing AI strategies either as standalone initiatives or integrated into overall objectives. There is geographic variation in strategies and approaches, but responsible AI practices are widely prioritised. Nearly a quarter of operators are also developing new governance frameworks, while others leverage existing structures to guide ethical/responsible AI use.

02

Maturing AI adoption

Leading operators in AI have on average adopted AI across 9 out of 13 critical domains (network operations, customer service, generating new revenue streams etc). However, the scope of AI deployment is broad. Nearly half of operators are still in the early stages, exploring use cases or running pilots. AI deployment approaches also vary by maturity; while some operators use off-the-shelf solutions, more than a quarter opt for co-developing AI with partners to better align AI solutions with unique business needs.

03

Growing pains

Operators are investing in infrastructure readiness, building skilled workforces and fostering data-driven cultures to support AI initiatives. However, cybersecurity risks, data privacy, infrastructure limitations and talent shortages remain concerns. While nearly 40% of operators report strong AI talent resources, many still struggle with hiring and retaining skilled professionals, underscoring the need for continuous talent development programmes.

04

Measuring returns

With most operators dedicating 5–15% of their digital budget to AI, investments in AI span a range of categories – LLMs and data systems through to infrastructure upgrades. This reflects the system-wide requirements to effect business transformation, which means the way of measuring success can be complicated. Traditional financial return measures are valid but these cannot be the only component of RoI. Otherwise, much of the impact would not be captured.

05

Holistic measure

A more helpful way to think about RoI with AI is to break it down into individual pillars – financial, business transformation, people & skills and ethics & compliance. These reflect where measurable change is expected in business performance and outcomes as a result of AI investments and implementation. Unlike static quarterly KPIs, AI's benefits unfold dynamically, potentially over a 5–10-year timeframe. To help account for this, the weight of different pillars may change over time depending on an operator's corporate strategy and stage of maturity. RoI becomes a holistic measure to reflect the widespread impact it will have on the operator business.

AI in numbers

65%

Percentage of surveyed operators that have implemented an AI strategy – as a standalone initiative or integrated into broader objectives.

While operators globally have different approaches and strategies for leveraging AI, implementing it responsibly remains the priority for most.

68%

Percentage of operators that consider 'productivity gain' as a primary metric to assess success of AI initiatives.

Productivity gain is measured as a percentage of the time saved compared to the time previously spent. Closely followed by cost savings, these metrics highlight operators' focus on efficiency and cost-effectiveness as they assess AI's tangible impact on operations.

40%

Percentage of operators that rated a 'secure by design' approach as one of the three areas that had the greatest impact in security and telecoms networks over the last three years.

Threat intelligence sharing is viewed as most important now and in the future, followed by improving security culture.

85%

Percentage of operators surveyed that believe distributed denial-of-service (DDoS) attacks are set to become more common.

With the rapid technological transformation and use of AI comes an increased threat of cyberattacks, especially phishing/smishing, ransomware and supply-chain attacks.

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02 Market context

Recent developments: news flow

Operator-led

KT plans for taking AI to the enterprise with Microsoft

Microsoft and KT signed a partnership focused on LLM and SLM development for the South Korean market, alongside a secure public cloud launch and business launch that will take cloud and AI solutions to the enterprise market.

Sep 2024

Softbank and T-Mobile push into AI RAN innovation

In separate announcements, the operators announced new research efforts focused on RAN-AI convergence and the impact of AI on RAN architectures. Both included work with Ericsson, while T-Mobile also engaged Nokia and Nvidia.

Sep/Oct 2024

SKT introduces company-wide AI code of conduct

Providing guidance to its staff, the operator released a code of conduct detailing AI governance principles centered on providing safe and trustworthy services, ensuring non-biased AI operation and application of ethical values.

Oct 2024

e& doubles down on autonomous networks and responsible AI

In a broad set of news from Gitex covering 5G, drones, and national security, e& signed an MoU with Ericsson to explore AI's support for network innovation and automation, with a nod to responsible AI deployment.

Oct 2024

Vodafone goes big with Google on cloud and AI

In a 10-year deal worth more than $1 billion, Vodafone extended existing work with Google to offer subscriptions to Google AI services while using Google Cloud's Vertex AI to build AI/ML applications to support product development.

Oct 2024

Ecosystem-led

Dell makes ecosystem play to support distributed AI

Dell's AI for Telecom programnme was launched – a "curated ecosystem" of partners and Dell assets aimed at helping operators deploy AI applications effectively across their networks with servers scaling from core to edge.

Sep 2024

Oracle pushes Malaysia as AI and cloud hub

Representing the 12th APAC "cloud region" for Oracle, the planned $6.5 billion move will bring access to 150+ Oracle infrastructure and software products, including genAI agents and the OCI supercluster billed by Oracle as an AI supercomputer.

Oct 2024

OpenAI lands $6.6 billion investment

The US AI research organisation – and ChatGPT developer – closed a $6.6 billion funding round, days after reports of a plan to restructure into a for-profit company, which would remove limits on returns paid to investors and employees.

Oct 2024

Google AI Opportunities fund targets government training

Google's philanthropic arm announced plans to provide $10 million to the US Center for Federal AI and $5 million to InnovateUS as part of its $75 AI Opportunities Fund. Both groups provide training and education to government workers.

Oct 2024

Qualcomm pushes AI in new device and network chips

In separate announcements, the chip firm launched the Snapdragon 8 Elite ("the world's fastest mobile system on a chip") and Networking Pro A7 Elite (a Wi-Fi 7 platform). On-device and edge AI support feature heavily in both solutions.

Oct 2024

Source: GSMA Intelligence and Mobile World Live, based on company announcements

AI in the news: messages from MWC Las Vegas

GSMA events in October 2024 – M360 APAC held in Seoul and MWC Las Vegas were opportunities for operators and the mobile ecosystem to convene, connect and share industry views. AI factored strongly in the messages from each, adding context and emphasis to the AI news from the industry.

AI for networks; networks for AI	The dynamic of AI in support of network operations versus networks needing to support AI workloads continues to be top of mind. MWC Las Vegas announcements including AI-powered critical communications and solutions for edge AI inferencing reflect this. MWC Las Vegas and the M360 APAC added nuance on two fronts: • APIs. With increased focus on exposing network capabilities, there is a role for AI in supporting developers. • AI-ready networks. Prior to supporting AI for end-users, operator networks need to be ready to handle these workloads, but the investment required is unclear since no networks have been built to support AI natively.
Internal versus external AI	AI deployment RoI could derive from new business efficiencies or new service creation. The latter, driving top-line growth, is a key goal for most operators' AI strategies. Beyond a lack of telco-led B2B AI use cases, MWC Las Vegas has largely fallen short in to provide a concrete image of externally focused telco AI beyond customer care, despite references to "differentiated customer experiences". Probed on the seeming paucity of customer-facing AI use cases that were not focused on care and chatbots, several executives highlighted concerns about AI maturity and telco risk tolerance; issues with internally deployed use cases would be less public and pose less risk.
Verticals and the hunt for AI RoI	While companies (including operators) grapple with the pace of AI innovation, turning that innovation into RoI is key to driving deployment. Repeated often was the reality that operators need to begin their AI journeys if only to build a basic understanding of potential use cases and requirements. MWC Las Vegas keynotes and sessions (including the GSMA Intelligence Telco AI Summit) highlighted diverse use cases for improving operator and enterprise vertical operations and agility. A view into how operators could leverage AI in support of their B2B revenue aspirations was largely lacking, beyond supplying AI-ready connectivity.

AI in the news: implications

As the AI landscape continues to evolve, the sheer volume of new developments and innovations inevitably leads to a diverse (potentially confusing) set of market messages. The landscape for AI in telecoms is no different, but several key themes arise from recent events.

Networks for AI: work in progress	While the use of AI for network optimisation has solid momentum (recently with new AI RAN R&D efforts), developing networks designed to support AI workloads is a relatively new concept. If networks are to be an AI asset, operators will need to think more about their capabilities versus AI demands, as flagged by both Samsung and GSMA Intelligence research suggesting an overly optimistic view of AI-readiness.
Externalised AI: operator as sell-through?	The operator focus on delivering external-facing AI use cases is understandable. So is a reticence around exposing customers to new technology that could lead to reputational damage. Vodafone's work with Google and KT's work with Microsoft highlight a potential strategy where AI monetisation derives from selling the products of AI specialists – ideally bundled with connectivity. This would mirror other service sell-through strategies but would also require the right connectivity assets.
AI innovation: how will operators leverage It?	Fuelled by massive investments, the pace of AI innovation will not slow down soon. Beyond new LLM and SLM development, distributed AI (edge and on-device) and AI agents are gaining increased attention. How will operators make use of these innovations? GSMA Intelligence research suggests a third of operators have widely deployed AI, but that leaves many who are still in a discovery phase and could miss out on the benefits of AI innovation unless they rapidly upskill.
Responsible AI: more than lip service?	The term "responsible AI" appeared in many recent AI launches and commitments, signaling an understanding of the need to put AI governance and ethics front and centre of strategy design. The MWC Las Vegas keynote from Salesforce's Chief Ethical and Humane Use Officer was instructive, centered on agentic AI rather than AI ethics. This served as a reminder that "responsible AI" and "AI ethics" mean different things across diverse organisations. It also highlights the value of tools such as the GSMA's Responsible AI Maturity Roadmap.

AI amplifies threats

The second report of this series explored how AI can help manage risk but also introduce risk. Here we specifically consider the ways AI can amplify risk, posing threats to network infrastructure, customer data and AI-driven services. To mitigate these risks, operators must stay vigilant and adopt advanced strategies against attacks.

AI-enabled security threats

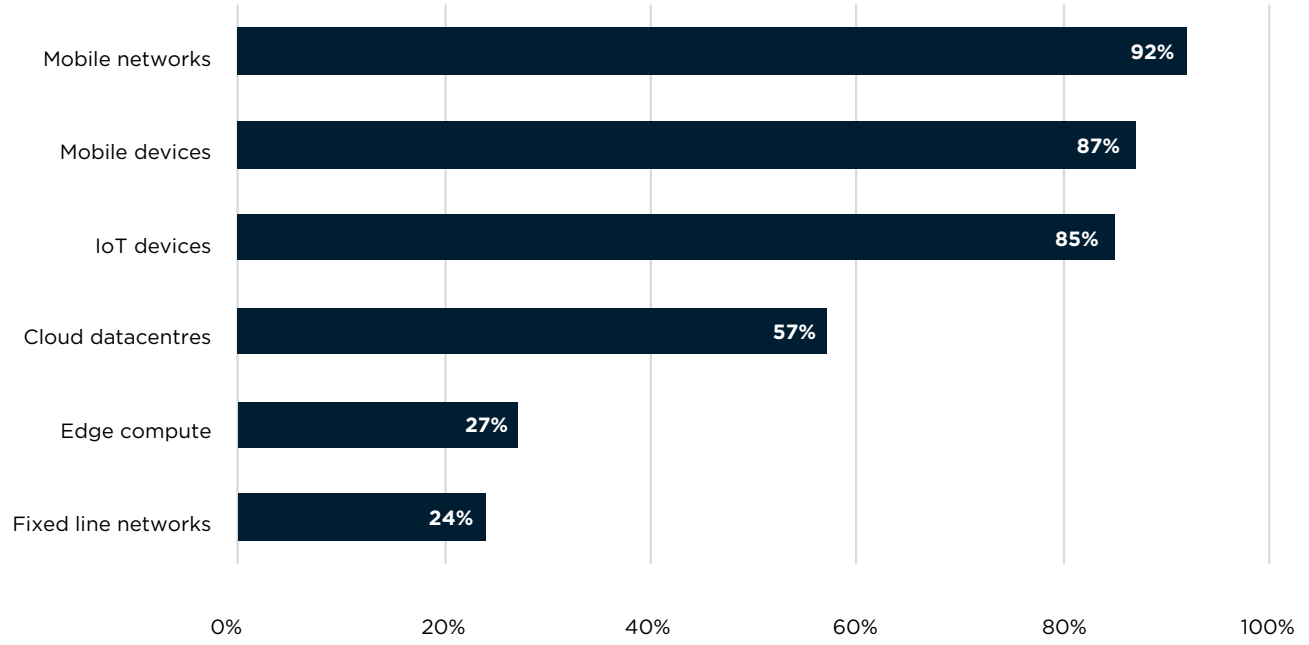
The integration of AI brings unique challenges, creating opportunities for sophisticated cyber threats that go beyond traditional defences. This includes data poisoning – prompt injection attacks where an attacker creates an input designed to make the model behave in an unintended way. Additionally, scams empowered by genAI, identification of new attack types using AI, and synthetic identity fraud such as deepfakes further complicate the cybersecurity landscape.

Risks to infrastructure and reputation

These threats pose significant risks to network infrastructure, systems or data with the intent to steal, damage or disrupt operations. Cybersecurity threats range from simple viruses and phishing attacks to complex intrusions and ransomware targeting critical systems. For mobile operators, cybersecurity threats can jeopardise the integrity of networks, expose sensitive customer data, and cause significant financial and reputational damage. Given the scale and importance of mobile networks, these threats have far-reaching consequences.

Mobile networks and devices face the highest threat level

Considering the current cybersecurity landscape of 2024 in your primary country of operation, how would you rate the overall threat level across the following products and services? Percentage of operators rating high or very high.



Source: GSMA Network Security Strategy Survey 2024

Adapting to the complexity of cybersecurity challenges

Nearly 50% of operators surveyed consider cybersecurity concerns to be the biggest barrier to achieving AI goals.

Complex cybersecurity threat

The landscape for cybersecurity threats to operators is complex and evolving rapidly. New technologies and techniques are continuously being employed by malicious actors. Operators encounter established vectors such as ransomware, malware and distributed denial-of-service (DDoS) attacks, alongside more nuanced tactics such as 'living off the land' and 'lone wolf' attacks.

The top threats to mobile networks

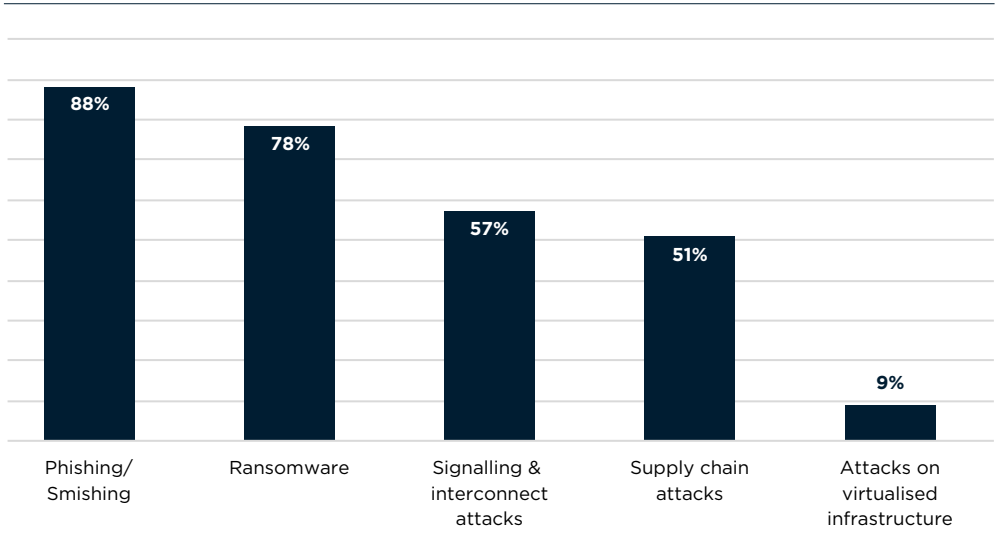
Among these threats, phishing/smishing ranks highest, with 88% of operators identifying it as the primary concern.

Security of AI services is still developing

As cyberattacks can inflict severe damage (including reputational harm and financial/customer loss), it is crucial for operators to understand, monitor and counter the evolving threats. The security of AI and machine learning (ML) services is still developing and depends on implementing a set of security activities: secure by design, secure development, secure deployment, and secure operation and maintenance.

Top five major threats in the cybersecurity landscape

Considering the 2024 cybersecurity threat landscape, rank the top five major threats impacting mobile networks in your primary country of operation. Percentage of operators rating as top three



Source: GSMA Network Security Strategy Survey 2024

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03 Leader profiles: telco AI in action

AI in action: KT

KT announced its transformation into an AICT (AI and ICT) company in 2024, emphasising AI integration throughout its operations. This strategic shift includes internal AI-driven innovations. It is now increasingly recognised as an essential partner in supporting customers' digital transformation based on AI.

AI journey

2017: KT's AI journey began with the launch of GiGA Genie. Using this conversational interface, customers can control IPTV, search for information and engage in conversations. GiGA Genie has secured more than 4 million subscribers. KT has also established an AI tech centre to manage skills.

2022: KT developed its own LLM, called mi:dm, which has been applied to internal business innovation and services, such as KT's Social Robot and AI Customer Center (AICC).

2024: KT became an AICT company to create new business value, innovate in sustainable operation and strengthen competitiveness. KT is currently seeing significant internal innovation with AI, focusing on cost reduction, operational efficiency and the development of new services.

Key barriers have included limited employee expertise in AI technology and existing network infrastructure not designed to support AI applications, slowing innovation. Additionally, fragmented legacy system modules needed to be restructured into a unified protocol for seamless AI integration and faster workflows.

Strategic partnership with Microsoft

- **Tailored solution:** KT and Microsoft will share their technologies and expertise in all areas of the full AI stack. The full stack consists of the service, model, platform, infrastructure, data, governance and talent.
- **Cloud services:** KT cloud services will be provided with the Microsoft model as the Korean Secure Public Cloud service. KT will also maintain its existing services provided to the public and financial sectors.
- **More than just data:** KT will develop with Microsoft a model based on the language, culture and values of South Korea.
- **People and skills:** KT and Microsoft plan to operate various training programmes such as AI/Cloud Practical Training and the Microsoft Frontier Group Program.

With this strategic partnership, KT's own LLM, mi:dm, will be pivoted to an industry-specific lightweight model (SLM). As an AI offering with diverse capabilities, it can be customised and provided as a corporate service using a multi-model approach, such as ChatGPT-4o and Phi.

AI in action: KT (continued)

Investments and impact

Investments: KT is making significant investments in AI, aiming to generate KRW1 trillion ($773 million) from AI-based services by 2025 and pledging $5.4 billion for its AI business by 2027.

- **People and skills readiness:** KT has emphasised workforce development with the AI Tech Center, focusing on recruiting AI developers and training internal teams. The Aible School – a commercialised AI training programme for B2B and B2G clients – demonstrates its efforts in advancing AI expertise. In addition, it plans to expand the scope of Microsoft training programmes to domestic universities and research institutions to improve technical skills and know-how.
- **R&D capabilities with Microsoft:** KT will enhance its AI R&D capabilities focused on advancing AI transformation by collaborating with Microsoft on joint initiatives. The organisations will collaborate through the KT Innovation Center and Microsoft Research Center, exchanging expertise and global AI/cloud service references.

Impact: KT evaluates AI transformation according to various metrics such as productivity improvement, cost reduction and sales increase once AI has been applied.

- Productivity improvement is an important metric measuring the amount of time and resources required to process the task after AI adoption.
- It is also important to evaluate efficiency, based on the extent innovations can be implemented in the company. KT considers how many departments the proposed AI innovation affects internally.
- If a new service is discovered, KT evaluates how commercial the service is.

10%

The AICC handles 15% of calls to KT's call centre and has reduced response times for the remaining calls by 10%.

1,000

KT is expanding its AI workforce, with a goal to recruit and train 1,000 specialists in a year across all levels, from entry-level employees to executives.

AI in action: Telstra

Telstra has a comprehensive strategy aimed at transforming the company into a data-driven and AI-fuelled organisation. It is a key part of the operator's T25 strategy, its beyond-T25 emerging strategy and digital leadership ambitions. Telstra ensures that AI initiatives align with its corporate strategy and goals.

The AI journey

Telstra's AI strategy focuses on modernising the data ecosystem, enhancing AI capabilities and embedding AI throughout the organisation. Key objectives include improving customer experience, boosting operational efficiency, ensuring responsible AI development, accelerating strategic progress, and generating revenue through AI-enabled products and services. Progress highlights include the following:

- **Enhanced business processes:** It has improved more than 70% of key business processes and is on track to complete the goal by the end of FY 2025.
- **AI solutions:** It has developed and implemented in-house genAI tools, One Sentence Summary and Ask Telstra, to assist employees in gathering information and supporting customers. Leveraging Microsoft Azure OpenAI capabilities, these tools can support customers more effectively, enhancing customer interactions, agent experience and operational efficiency. Additionally, AI algorithms are used for network optimisation and to improve energy efficiency.
- **Laying the foundations:** Telstra's approach focuses on radical simplification and modernisation of its data ecosystem, consolidating platforms and phasing out legacy systems by December 2025 to support the rapid scaling of AI solutions.
- **Data and AI Academy:** Telstra's academy aims to build a culture of data and AI fluency across the company, offering tailored learning experiences to equip employees with skills for data-driven decision-making and responsible use of emerging AI technologies.

Key challenges include resistance to change, maintaining data quality with robust controls and governance, finding and retaining skilled talent, and ensuring ethical and regulatory compliance.

Telstra's AI transformation plan

- Whole-of-business strategy, with AI as a strategic priority with leadership support
- Rethinking data and technology ecosystem to modernise and simplify
- AI-ready workforce with upskilling
- Responsible and ethical AI development
- Scaling of AI solutions
- Continuous improvement and innovation

Technologies used: GenAI solutions, AI-driven tools, and decision intelligence with in-house AI and rules-based automated systems

AI in action: Telstra (continued)

Investments and impact

Investments: Telstra is investing in six dynamic phases and creating a dedicated group for developing AI capabilities. It has set up roles to incubate emerging AI technologies, invested in AI infrastructure and collaborated with partners such as Microsoft, AWS and Accenture to drive innovation. Telstra has also launched its Data and AI Academy to reskill its workforce.

Impact: The AI value framework is designed to accelerate the path to value by streamlining opportunity prioritisation, unlocking the full potential of AI capabilities, and preventing duplicate investments. It involves six dynamic phases, each marked with exit criteria before advancing to the next stage. These phases include:

- identifying business opportunities
- translating solutions into proofs of concept
- productionising the solutions, operationalising them, and running and operating the models.

The framework emphasises speed, scalability, consistent value calculation, safeguarding deployed models and building AI models that guarantee optimal capital investment and business value.

Responsible AI: The operator prioritises using AI responsibly, driven by a Responsible AI Policy, which includes education, advisory and risk management controls. It has established a Data and AI Centre of Expertise to implement AI ethics principles. It has also worked with the Australian government on AI Ethics Principles.

90%

90% of employees using in-house AI solutions (One Sentence and Ask Telstra) during trials in 2023 saved time and increased effectiveness, resulting in 20% less follow-up contact.

Looking ahead, Telstra is dedicating resources to exploring, benchmarking and experimenting with emerging AI technologies. Its joint venture with Quantium enhances Telstra's AI and data science capabilities, integrating advanced solutions across sectors such as supply chain, mining, energy and agriculture.

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04 Deep dive: AI benchmark

Think first, act second

Most operators are strategy driven

For most operators, a strategy-driven approach has emerged as critical. Some 65% of surveyed operators have an AI strategy – either as a standalone approach or integrated into overall objectives. However, around 25% of operators continue with ad hoc approaches, and about 10% lack an AI strategy entirely. Industry progress varies, with many operators transitioning from the initial exploration phase to integrating AI into core operations.

Leadership plays a crucial role in the transition

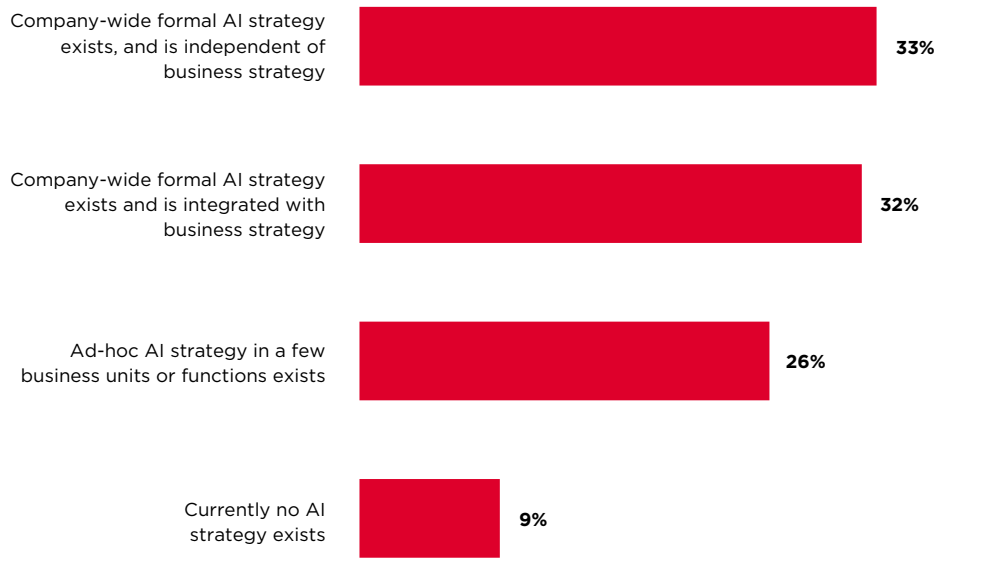
Over half of operators agree or mostly agree to their leaders actively sponsoring AI initiatives, and supporting AI-related management efforts. Some 78% of operators with a formal AI strategy also agree (completely or mostly) that their leadership is supportive of change management and areas of related concerns.

Responsible AI is a necessity

Responsible AI practices allow operators to maximise value while benefiting customers and partners. Around a quarter of operators surveyed are developing formal AI governance frameworks, while nearly three quarters already have governance structures in place, with some form of governing staff or dedicated team overseeing AI initiatives and working towards clearly defined goals.

Independent and integrated AI strategies among operators

Which of the following statements best describes the status of AI strategy at your company?



Source: GSMA Intelligence Operators in Focus: AI Adoption Survey 2024

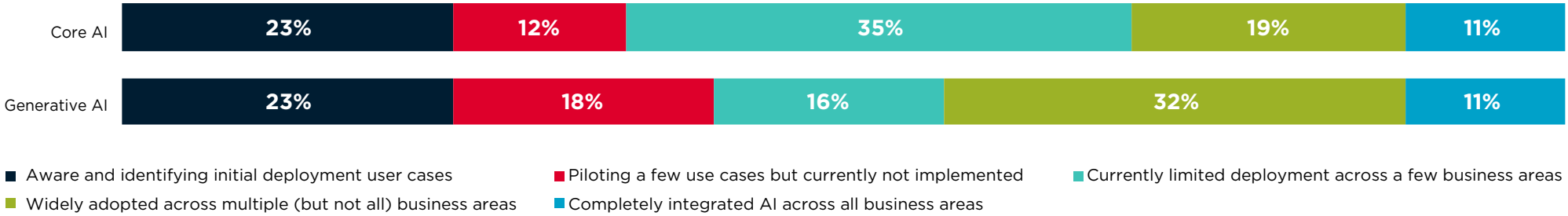
Gradual adoption curve

Most operators are in early-stage deployment

Operators are leveraging both core AI and generative AI (genAI) to varying extents. Core AI has improved operational efficiency and expanded beyond specialised teams to broader use, with 30% deploying it across business areas. Over 40% of operators are widely deploying genAI across business areas. However, a significant proportion of operators (35% for core AI, 41% for genAI) remain in early stages of AI deployment, either identifying potential use cases or in pilots.

State of AI deployment

Which of the following statements best describes the current state of AI deployment at your company?



Source: GSMA Intelligence

Network and customer services are the cornerstone

Some 60% of operators surveyed agree (fully or mostly) that they have a solid approach to identifying and prioritising AI use cases that maximise business impact while managing potential risks. Leading operators have on average deployed AI in 9 of 13 possible domains, with primary use cases in network optimisation, customer experiences and discovering new revenue streams. Improving employee productivity and operational efficiency follow, ranking closely behind the top priorities.

Varied AI adoption approach

Operators adopting AI range from early experimenters to advanced practitioners. Early experimenters typically rely on off-the-shelf third-party AI solutions to improve operational efficiency, while advanced practitioners scale AI across the entire organisation, focusing on high-impact, customer-facing use cases. Among surveyed operators, nearly a quarter frequently deploy off-the-shelf products, with or without customisation. Nearly 30% choose to co-develop AI solutions with partners to align AI with their unique needs. Notably, 22% create custom applications in-house and the remaining outsource development.

Investing in people, skills and infrastructure

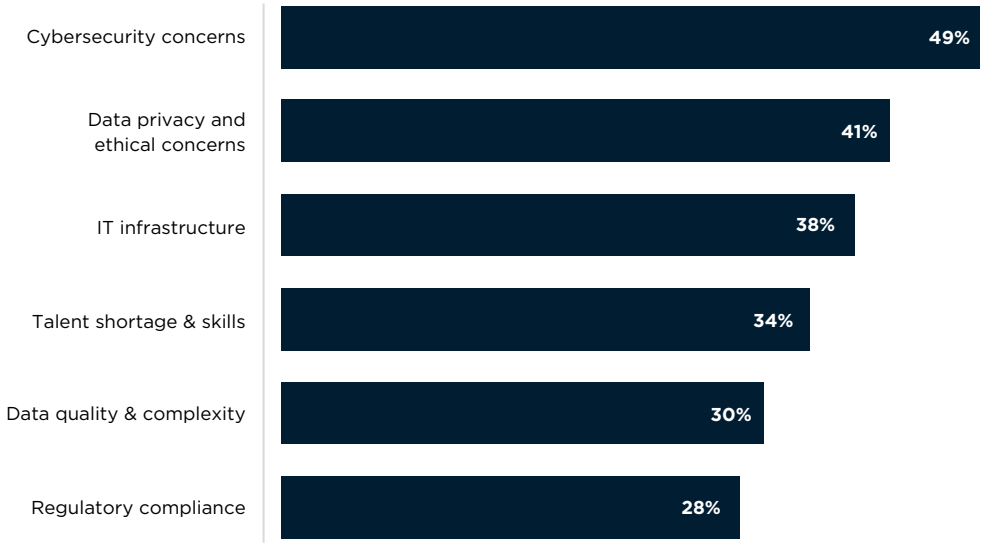
Overcoming growing pains

For successful AI transformation, operators recognise the need for a skilled workforce and a data-driven culture. Prerequisites include responsible adoption and valuing people and their skills. Nearly half of operators surveyed cite cybersecurity as the top barrier, followed by data privacy, infrastructure challenges and talent gaps. As well as the top six shown in the chart, other barriers include low technology and ecosystem maturity, budget constraints, unclear RoI, and a lack of executive mandate and support. To tackle some of the challenges, operators are implementing robust data governance, targeted training and partnerships with technology providers.

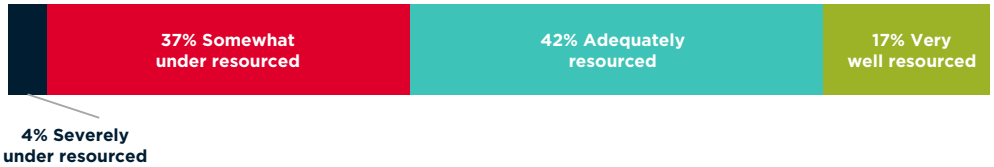
Talent hiring and retention are not easy

Skills shortages and development are among the top concerns for operators, many of whom may lack the scale and resources to run effective training programmes. While around 40% feel under-resourced in AI talent, nearly 60% report having adequate or strong resourcing, reflecting disparity among operators. Asia Pacific and Europe lead in talent strength according to the survey. Retaining AI talent is a significant challenge for more than half of operators, with many indicating that retaining is "somewhat difficult". In fact, fewer than a quarter find it manageable to recruit and retain AI talent. This mixed landscape underscores the need for targeted investment in AI skills building and retention.

Top AI adoption barriers



Managing in-house AI skills



Source: GSMA Intelligence

Dedicated AI budgets allow strategic integration

Investments and regional priorities

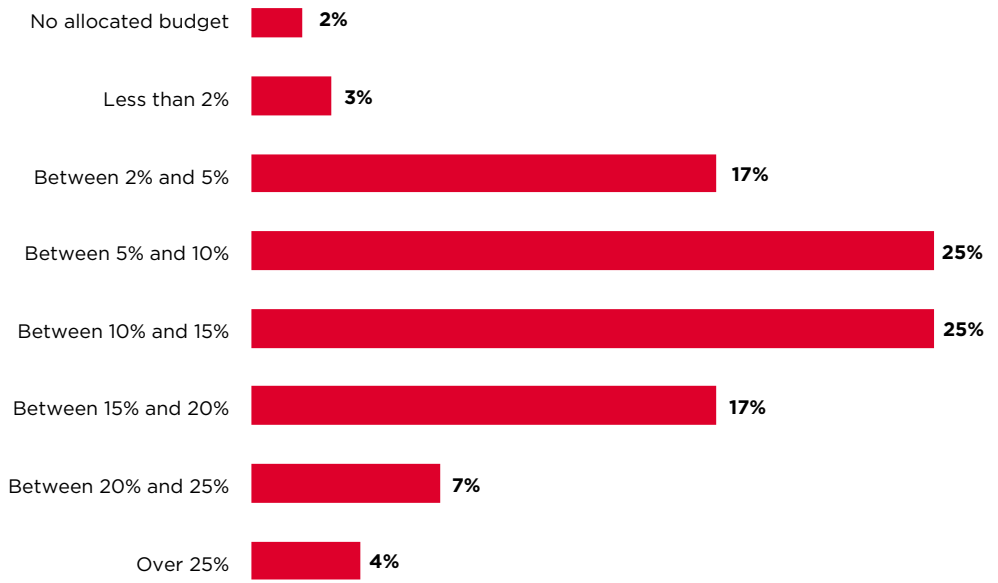
Operators are increasingly channelling resources into AI-focused initiatives. This includes creating specialised AI teams, allocating dedicated budgets for AI tools and infrastructure, and forming partnerships. Additionally, operators are developing robust infrastructure – from cloud platforms to data management systems – to facilitate seamless AI integration. However, investment levels and priorities vary by region, with North America and Europe leading in deployment. In Asia-Pacific, operators allocate an average of 13% of their digital budgets to AI – the highest percentage globally.

AI budget allocation

Operators allocating budgets to AI are likely positioning themselves to better manage the challenges of digital transformation, skill gaps and evolving customer needs. Nearly half of operators surveyed allocate 5–15% of their total digital budget to AI, while 22% allocate less than 5%, underscoring diverse levels of commitment to AI-led innovation. On average, it is about equal to how other industries have allocated their genAI budget, according to a McKinsey survey.* Operators with annual revenue between $5 billion and $10 billion are spending most (on average 15% of their digital budget) on AI initiatives, while smaller operators (revenue less than $500 million) are spending least, at 9% on AI activities.

Most operators allocate 5–15% of their digital budget to AI

Which of the following is a best estimate of your company's current-year AI budget (total spend on all AI initiatives). Percentage of total digital budget



Source: GSMA Intelligence Operators in Focus: AI Adoption Survey 2024

*The state of AI in early 2024: Gen AI adoption spikes and starts to generate value, McKinsey, 2024

05 Deep dive: how to think about RoI?

If AI improves everything, how can we measure that?

A long list

Operators have many goals for AI transformation. While better financial results and cost control are certainly part of this, the list covers anything from better decision making to customer experience to sustainability improvements.

Tangibles versus intangibles

While most of the goals can have a metric implemented to track success (for example, NPS for customer experience), several do not show up on the P&L and are intangible.

A new way

There is no obvious thread that pulls it all together from an AI perspective, which underlines why a new way of measuring RoI may help.

What operators prioritise from their AI investments

What are the key goals of implementing AI initiatives at your company?

	US & Canada	Asia Pacific	Europe	Middle East and Africa
Create AI-driven new revenue streams	19%	15%	13%	19%
Improve customer experience	19%	14%	16%	14%
Improve employee productivity and creativity	14%	14%	13%	8%
Improve decision making	14%	9%	11%	0%
Enhance existing products & services	14%	7%	10%	8%
Improve network planning and operations	10%	15%	9%	28%
Reduce operating expenses	5%	11%	9%	11%
Improve regulatory compliance	5%	6%	8%	6%
Improve sustainability	0%	8%	10%	6%

Source: GSMA Intelligence Operators in Focus: AI Adoption Survey 2024

Returns on AI are not just financial

Breaking it down

A more helpful way to think about RoI with AI is to break it down into components (see chart). These reflect where one would expect to see measurable change in business performance and outcomes as a result of AI investments and implementation.

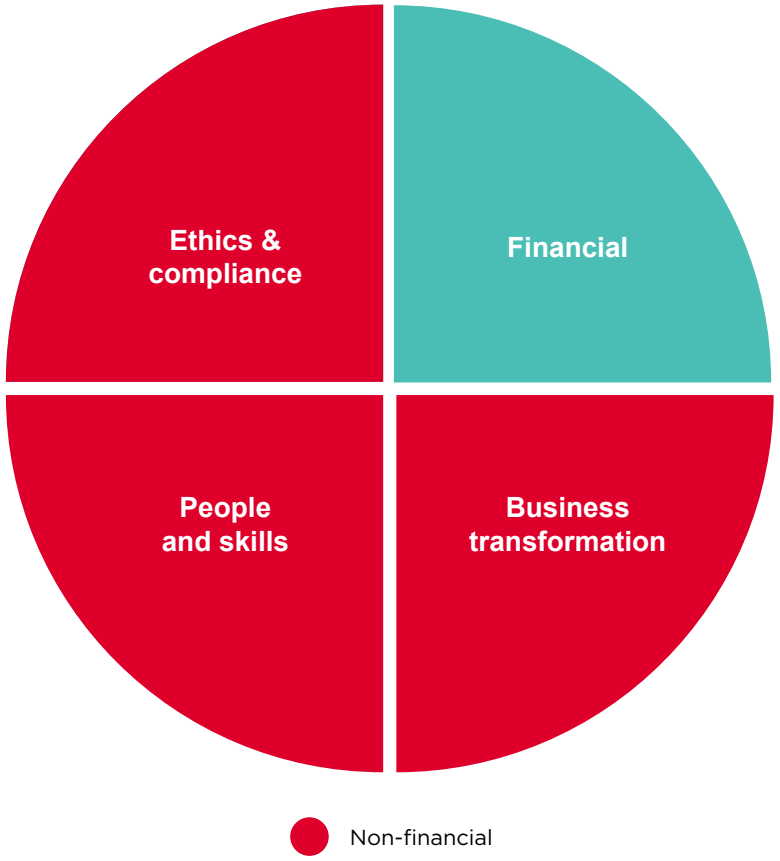
Financials still have value?

The financial pillar is the most traditional and probably easiest to understand as it deals with established metrics. RoI on AI investments can and should be measured in this way.

System-wide approach

If financials were the only component of RoI, much of the impact would not be captured. How do you capture the impact of having, for example, data ingestion systems or automated risk management tools enabled by AI? What about the workforce transformation? These may not show up on the P&L but they collectively add up to broader organisational transformation in the business.

AI RoI: financial and non-financial



Source: GSMA Intelligence

Roadtesting in 2025

We are not attempting to calculate an actual RoI from AI investments yet. The purpose here is to provide a useful framework for how to approach measuring it. This framework will be further developed, with an updated version to be published in 2025.

The approach is bottom-up. Financial and non-financial components each have a set of metrics that, once weighted, add up to a total score that can be indexed up to 100. This would allow operators and other companies to evaluate financial returns (e.g. income relative to investment, payback periods) alongside non-financial indicators that paint a holistic measure of how much transformation has taken place.

Implications

- **Metrics.** A set of metrics should be assigned to each pillar. We will be releasing a more detailed list of proposed metrics in a forthcoming report. However, this is meant as a guide, with each company likely to add its own mix of metrics to suit its own business.
- **Interpretations.** While reported results in public disclosure for investors are, of course, fundamental, the systems approach means there is also value in using the other pillars to check whether progress is as expected and to help guide where tweaks or actions to the plan may be needed.

Potential AI measurement framework (high level)

	Financial	Non-financial		
		Business transformation	**People and skills**	**Ethics and compliance**
Metrics (sample list)	Investment cost	AI deployment (network and product level)	AI talent base as % of total headcount	AI governance in place
	Revenues attached to AI-driven services	Productivity	AI training frequency	Risk management model implementation
	Others TBC	Others TBC	Others TBC	Others TBC
Scores	TBC	TBC	TBC	TBC
Weights	W_F	W_{BT}	W_{PS}	W_{EC}
Overall value	TBC	TBC	TBC	TBC

Note: Weights are not assigned, with Wx denoting what would be a weight assigned to a given component (e.g. W_{BT} being for business transformation)
Source: GSMA Intelligence