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# Responsible AI: A business imperative for telcos

Telcos that use responsible AI frameworks can unlock new revenue streams and spur long-awaited growth.

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**Over the past decade,** the telecom industry has faced one daunting challenge after another. Telcos have endured relentless competitive pressure from fast-moving technology companies that entered their core sectors of communications, connectivity, and data transport. In the hopes of igniting revenue growth, telcos have sought to reinvent themselves. They have created new tech-driven product offerings—from the Internet of Things (IoT) and software as a service (SaaS) to over-the-top (OTT) video streaming. They have also ventured into adjacent industries such as insurance, financial services, and healthcare to offer new B2C and B2B services. Some of those initiatives have been moderately successful. But the truth is that telcos still struggle to compete with nimbler and more highly capitalized tech companies.

AI gives telcos another chance to reinvent themselves. The goal is to become AI-native organizations that embed AI into every aspect of the business to help drive growth and renewal. If telcos act quickly, they can lead the way in deploying both generative AI (gen AI) to improve the customer experience and cut costs and analytical AI to optimize their back-end operations and infrastructure. Many telcos have already begun to implement gen AI, deriving significant cost savings in areas such as marketing, sales, and customer service. McKinsey research shows that gen AI could drive significant EBITDA gains for telcos, with returns on incremental margins increasing three to four percentage points in two years, and as much as eight to ten percentage points in five years.[1]

However, telcos cannot transform themselves into AI-native companies without also focusing acutely on responsible AI (RAI), which is the practice of deploying AI in ways that are ethical, safe, transparent, and compliant with regulations. In the highly regulated telecom industry, RAI frameworks that govern accountability and transparency are critical to gaining consumer trust, protecting sensitive data, and safeguarding against security threats. All this makes RAI more than just an ethical exercise for telcos. It is also a business imperative.

To showcase the importance of RAI, we conducted an analysis of 100 critical AI use cases that telcos could develop. For each use case, we indicated the optimal level of RAI maturity, considering the inherent risks. For example, an advanced level of RAI would reinforce a use case that manages customers' personal information. Our analysis indicates that telcos implementing the most advanced RAI practices could deploy use cases that collectively capture up to $250 billion in value worldwide by 2040, 44 percent of the full industry-wide value created by AI during that period (exhibit).[2]

How exactly can RAI create value? For starters, just like all AI deployments, RAI can significantly improve business processes and streamline technology integrations to reduce costs. Effective RAI can also strengthen brand reputation, with higher customer acquisition and retention often propelling revenue growth. In addition, RAI can help reduce commercial and reputational risks across an organization's full suite of AI tools and applications, ensuring that they perform at the highest levels of accuracy. For example, RAI practices could help ensure a company's customer service chatbot doesn't use biased, incorrect, or sensitive language and that it never recommends a competitor's product or service.

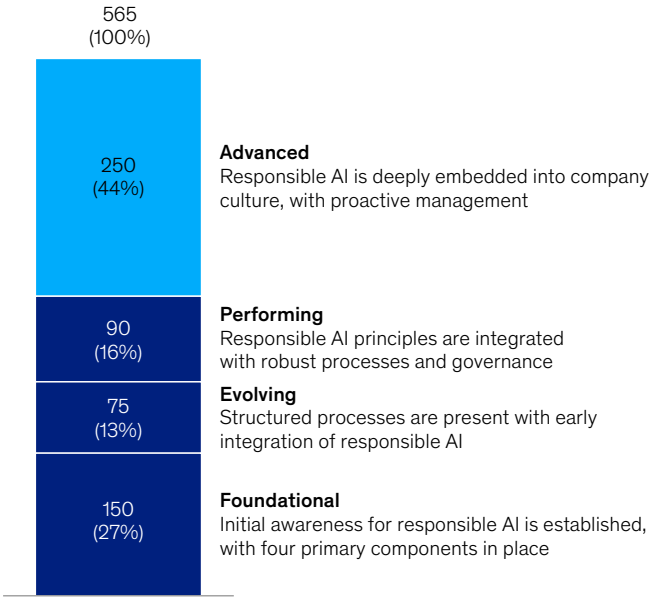
In this article, we outline how telcos can design and implement an RAI framework that could generate significant bottom-line impact. A strong RAI framework includes maturity models that telcos can use to assess their current strengths and weaknesses, as well as best practices to move through foundational, evolving, emerging, and advanced stages of RAI implementation. As they deploy such a framework, telcos will clarify their individual RAI road maps, including how to structure and implement governance, technology, and operating models. RAI frameworks can ensure that a telco's AI deployments remain aligned with revenue and business goals.

[1] "How generative AI could revitalize profitability for telcos," McKinsey, February 21, 2024.
[2] Ibid.

Exhibit

## By 2040, telcos that use advanced responsible AI practices could capture up to $250 billion in value worldwide.

**Estimated value of AI potential for telco industry by 2040, by maturity level,[1]** $ billion




[1]Figures are midpoint of the estimated range of impact. References to AI include analytical AI (advanced analytics, deep learning, traditional machine learning) and generative AI. Estimated value from "The economic potential of generative AI: the next productivity frontier," McKinsey, June 14, 2023.

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## Industry-standard RAI frameworks are rare

Telcos can benefit from RAI in multiple ways: better business outcomes, competitive advantage, sustainable growth, increased customer trust, enhanced operational efficiency, stronger talent attraction, and, of course, financial gains. Forward-thinking telcos recognize that robust RAI governance serves as a set of "good brakes" that enable them to "drive faster" to harness the full potential of AI while mitigating risks.

Based on our interviews with senior leaders at telcos worldwide, few are currently at the advanced stage of RAI deployment, with a majority still at the foundational or evolving stages. One of the biggest roadblocks to telcos deploying RAI is the lack of industry standards. Telcos want to deploy RAI, but there is no single agreed-upon framework to aid them in their journeys. Thus, instead of proactively adopting RAI, telcos are reactionary, adding piecemeal governance standards as new regulatory requirements emerge. This approach helps telcos avoid legal and financial repercussions but does not result in the type of cohesive and strategic RAI deployments necessary to fuel innovation.

Many governments have proposed or passed legislation to ensure that AI deployments are fair, transparent, accountable, and secure (Table 1). International organizations have proposed global policies for RAI, but none of these policies have been adopted on a wide scale (Table 2). And none of these regulations or policies are specific to the telecom industry.

Table 1

## Major governments around the world have enacted or proposed legislation to help regulate the safe and transparent use of AI.

Updated Sept 2024, nonexhaustive

| Country/Region | Name | Description |
|---|---|---|
| United States of America | Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence (in effect) | Drives safe, secure, and trustworthy development of AI through guiding principles and a unified approach to governance, with a focus on protecting American citizens and advancing American leadership abroad |
| European Union | EU Artificial Intelligence Act (in effect) | Addresses ethical questions and implementation challenges in various sectors (eg, education, energy, finance, and healthcare), with a focus on data quality, transparency, human oversight, and accountability |
| Canada | Artificial Intelligence and Data Act (proposed) | Would help ensure that AI systems deployed in Canada are safe and nondiscriminatory and would hold businesses accountable for how they develop and use these technologies |
| Japan | Act on the Protection of Personal Information (in effect) | Establishes rules and regulations regarding the collection, use, and handling of personal information by businesses and government agencies |
| China | Measures for the Management of Generative Artificial Intelligence Services (proposed) | Would make companies that provide generative AI (gen AI) services to the public responsible for their outputs and would require the data that is used to train their algorithms meet strict requirements |
| Australia | Australian Framework for Generative Artificial Intelligence in Schools (in effect) | Guides the responsible and ethical use of gen AI tools in ways that benefit students, schools, and society; led by the Australian Human Rights Commission |

Source: Fairly AI

Table 2

## International organizations have proposed global policies for responsible AI, though none have been adopted on a wide scale.

| Initiatives | | Description | Outcomes |
|---|---|---|---|
| OECD | Recommendation of the Council on Artificial Intelligence (OECD, 2019) | First set of intergovernmental policy guidelines on AI | Adopted by 42 countries, supported by EU<br>Influential in international policy setting, though not legally binding |
| GPAI | Global Partnership on Artificial Intelligence (GPAI, 2020) | A multistakeholder initiative designed to bridge the gap between theory and practice in AI | Supports cutting-edge research and applied activities focusing on AI-related priorities<br>Publishes various reports and recommendations on responsible AI |
| UNESCO | Recommendation on the Ethics of Artificial Intelligence (UNESCO, 2021) | Draft agreement defining common values and principles to help ensure the healthy development of AI | Adopted by all 193 UNESCO member states |
| WHO | Ethics and governance of artificial intelligence for health (WHO, 2021) | Identifies ethical challenges and risks associated with the use of AI in healthcare | Includes six consensus principles to help ensure that AI benefits the public across all countries<br>Provides a set of governance recommendations |

Source: Organizations' websites; press search

While telecom industry associations are making progress on defining RAI standards, there are still barriers to achieving near-term success:

— *Limited leadership from central organizations.* Telecom industry associations and standard-setting bodies can show more leadership in advancing RAI practices. While some organizations actively promote RAI, few have developed comprehensive frameworks or provided clear guidance to their members. This gap hinders telcos from adopting best practices and achieving consistent standards of AI responsibility.

— *Limited availability of RAI industry benchmarks.* The absence of RAI benchmarks in the telecom industry creates a significant challenge for telcos. Benchmarks serve as reference points that allow companies to evaluate their performance relative to industry standards and identify areas for improvement. Without these benchmarks, telcos lack metrics to gauge their progress in implementing RAI. This gap complicates efforts to foster transparency, as key stakeholders—including regulators, consumers, and partners—have no clear standards against which to measure a telco's AI initiatives.

## RAI frameworks for telcos have four characteristics

Despite a lack of clear standards for their industry, telcos have a strong desire to implement RAI. In our interviews , the majority of leaders expressed interest in creating and deploying RAI frameworks tailored not just to the telecom industry but to their individual businesses. Most hoped to begin their RAI journey with maturity models that assess where they stand and define the specific steps needed to become advanced users of RAI. Telcos see maturity models as a level-setting exercise to inform their strategic plans. They want to deploy easy-to-use modeling tools to score their levels of RAI readiness and translate these findings into executive-level summaries with calls to action. Unfortunately, few of the leaders we interviewed said they currently use RAI maturity models, mostly because of the tools' limited availability. Telecom industry groups are working to define RAI maturity models specific to telcos, but it is still early days. For example, the Global System for Mobile Communications Association (GSMA) only recently created a tool for telcos to measure their RAI maturity.

What specific characteristics should an RAI framework for telcos include? Based on our interviews, a strong RAI framework for the telecom industry might encompass four key characteristics:

1. *Industry-specific maturity models.* These tools help telcos assess their RAI readiness and define specific benchmarks for each level. The models consider telcos' unique goals and challenges with AI in light of a highly competitive market, interconnected networks, and extensive exposure to consumer data.

2. *Clear RAI guidelines.* These building blocks offer a comprehensive overview of the various elements that comprise an RAI strategy, including governance, risk management, data quality, and ethical guidelines.

3. *Best practices.* These practical strategies show telcos how to implement RAI effectively, including proven practices that advanced telcos have already successfully adopted and measured.

4. *Progress metrics.* These measurement guidelines outline practical steps telcos can follow to improve their RAI capabilities and progress through each stage of maturity: foundational, evolving, performing, and advanced.

### Industry-specific maturity models for assessment and goal setting

An effective RAI framework should include an easy-to-use maturity-modeling tool to help telcos fully understand their baseline AI readiness and identify opportunities for growth and improvement. Maturity models help telcos capture their full AI potential at every stage of deployment.

Operators just starting on their RAI journey can use maturity models to establish and measure essential foundational requirements. These include adopting core RAI principles, defining key roles and responsibilities, and setting up initial governance structures. Foundational requirements also include establishing a code of ethics for AI, appointing a chief AI officer, and creating an AI governance board. Companies in this foundational stage of RAI adoption are mostly looking to enhance specific aspects of their operations, such as improving operational efficiency or automating routine tasks like customer service.

On the other end of the spectrum are companies in the advanced stage of RAI deployment. These telcos use AI to create high-impact, customer-facing use cases and integrate AI deeply into their strategic decision-making processes. Examples include using AI to create personalized customer experiences, to analyze vast amounts of data for strategic insights, or to spur innovation in product development. Thus, maturity models should integrate benchmarks and best practices for advanced users, including sophisticated risk management frameworks, comprehensive governance models, and continuous monitoring and improvement processes. For companies at the advanced stage, maturity models may also include AI auditing processes to ensure transparency and accountability.

**Clear RAI guidelines to define overall strategy**

An effective RAI framework outlines every step of a telco's AI strategy and long-term road map. It includes definitions for governance, risk management, data quality, and ethics, with strategic and operational best practices to advance these policies at each stage of RAI maturity. The following are the essential components of an RAI framework.

***Strategy.*** This defines the vision and principles for RAI governance in alignment with the organization's values and strategic goals. Here is what a robust strategy should include:

- *Vision.* A clear articulation of what RAI means for the organization and how it aligns with the company's broader mission
- *Principles.* Foundational ethical guidelines that steer AI development and deployment, ensuring fairness, transparency, accountability, and inclusivity
- *Alignment.* Guidelines to ensure that the RAI strategy is consistent with the organization's strategic objectives
- *Regulations.* Rules to ensure adherence to local and international standards to mitigate compliance risks

***Enablers.*** These activate well-defined best practices that are integral to a comprehensive RAI road map. Key features include the following:

- *Tools.* An inventory of the responsible AI tools the organization will use for model validation, bias detection, and interpretability to ensure ethical AI development
- *Training.* A plan for continuous education and training to help employees understand AI's ethical implications and technical aspects
- *Change management.* A structured approach the organization will use to transition individuals, teams, and organizations toward RAI practices
- *Communication.* Clear, cascading communication channels to ensure that everyone in the organization is aligned with the RAI strategy and principles

***Operating model.*** This helps ensure that the right talent, governance structures, team composition, and processes are in place to allow companies to implement RAI across all business activities. Critical elements include the following:

— *Talent.* The recruitment and development of professionals with the necessary skills in AI, ethics, and governance

— *Governance.* Robust governance structures that define roles, responsibilities, and decision-making processes related to RAI

— *Team structure.* Formation of cross-functional teams that include data scientists, ethicists, legal experts, and business leaders

— *Processes.* Implementation of standardized RAI development, deployment, and monitoring procedures to ensure consistency and accountability

— *Culture.* The creation of a culture of ethical awareness and responsibility regarding AI, which encourages employees to speak up about potential issues

***Risk.*** This emphasizes the importance of proactively monitoring and mitigating risks associated with AI and involves the following:

— *Measurement.* Development of metrics and KPIs to evaluate the performance and risks of AI systems

— *Monitoring.* Continuous observation of AI models for signs of bias, errors, or other issues through techniques such as risk management and third-party solution auditing

— *Reviews.* Implementation of rigorous review-and-challenge processes such as "red teaming" (simulating attacks to identify vulnerabilities) and "war gaming" (stress testing models under hypothetical scenarios)

— *Reporting.* Regular documentation and communication to stakeholders to ensure transparency and to facilitate informed AI decision making

## Best practices to deploy RAI in the telecom sector

An RAI framework for the telecom industry should provide specific best practices for each of the four key components described above. These best practices can help telcos apply general principles of RAI in a manner that acknowledges the industry's unique challenges and opportunities, such as using AI for network optimization or customer churn prediction. A comprehensive RAI framework provides best practices for each maturity level—foundational, evolving, performing, and advanced—creating a road map that helps telcos advance from one level to the next.

What follows are sample best practices telcos could adopt at the foundational level of RAI deployment, though a full framework would provide a greater number of best practices and tailor them more specifically to an individual telco's situation:

— Strategy:

- *Vision.* Write a high-level statement articulating the organization's commitment to RAI that is aligned with the broader mission and serves as a guiding light for all AI activities.
- *Principles.* Define early ethical principles that provide a clear framework for RAI, touching on fairness, transparency, accountability, and inclusivity.
- *Alignment.* Develop a road map to incorporate AI principles into the organization's overall business goals.
- *Regulations.* Conduct initial research to understand the regulatory requirements at both the national and international levels.

— Enablers:

- *Tools.* Find and adopt a first set of RAI tools to help with model validation, bias detection, and interpretability.
- *Training.* Conduct an initial training program to educate employees about AI's ethical implications to build awareness of RAI practices across the organization.
- *Change management.* Start basic processes to help the organization adapt to RAI, such as creating a simple road map to describe the transition process.
- *Communication.* Choose channels—for example, a newsletter, blog, website, or social media platform—to disseminate information to employees and external stakeholders about the company's RAI principles.

— Operating model:

- *Talent.* Create a plan to obtain the necessary talent to deploy RAI, including required new hires and plans for upskilling existing employees.
- *Governance.* Set up an initial governance structure that defines roles and responsibilities for key stakeholders and outlines basic procedures.
- *Team structure.* Take a high-level inventory of existing employees—including data scientists, developers, IT staff, legal experts, product managers, and business leaders—who could potentially join a cross-functional team to support RAI initiatives.
- *Processes.* Research standardized procedures for AI development, deployment, and monitoring, and introduce an initial set of unified procedures.
- *Culture.* Create an initial internal communications campaign to introduce the concept of RAI.

— Risk:

- *Measurement.* Develop basic metrics and KPIs to evaluate the performance of early RAI systems and set up initial measurement frameworks.
- *Monitoring.* Establish basic processes to continually observe AI models to detect signs of bias, errors, or other issues.
- *Review.* Create initial review-and-challenge processes, including plans for red teaming and war gaming.
- *Reporting.* Set up reporting mechanisms to document and communicate RAI findings, including basic reports to keep stakeholders informed about the state of AI initiatives.

## Progress metrics to evolve from a foundational to an advanced maturity level

An effective RAI framework should offer a structured pathway for telcos to improve their RAI maturity over time. At each maturity level, the framework should include specific progress metrics a telco needs to meet to advance to the next level.

For example, at the foundational level, one progress metric might be: "Share the company's RAI vision with all employees through an internal communications campaign and test their knowledge of the program through a feedback mechanism." At the evolving method, a metric might be: "Finish a multipart risk training program for the RAI cross-functional team." And at the performing level, a metric might be: "Develop and launch an RAI innovation lab to foster continuous improvement and experimentation."

Each telco will have different goals for RAI deployment, so their progress metrics will differ based on the unique objectives defined in their initial road maps.

Telcos with structured RAI practices are not just leaders from an ethical standpoint; they also stand to generate billions of dollars in additional value. Investing in RAI may position today's beleaguered telcos for a competitive edge in the next decade, providing a new avenue for them to compete alongside technology companies. By prioritizing RAI, telecom operators can capture the full potential of AI for their businesses and build trust with customers, leading to new innovations and new revenues. Emphasizing RAI can also help telecom companies attract and retain the best talent, fostering a culture of continuous improvement. Put simply, implementing AI responsibly makes good business sense.

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