

Decoding 10 AI Use Cases for Telcos

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Introduction

As the curtains close on another insightful gathering at Davos, the buzz around artificial intelligence (AI) is far from over. Industry leaders are not just talking about the promising potential of AI; they are predicting a transformative year—2024 will be when AI is expected to transcend the realms of experimentation and take on a more tangible, actionable tone. For CEOs and business leaders, the future is for once not entirely uncertain as AI lights a definite but nuanced path to successfully achieving company objectives and driving growth with intelligent automation.

In the race to harness AI, telcos find themselves at a vantage point. With vast reservoirs of customer, network, and other types of data at their fingertips, telcos are uniquely positioned to pioneer the AI revolution, driving innovation that could redefine the industry's slow-moving innovation landscape. The question that looms large, however, is "Where do we begin?"

Prioritizing AI use cases is a complex challenge. The early stages of implementation are crucial — they set the tone for future adoption and can significantly influence internal support and investment. To navigate this pivotal juncture, we engaged with leaders from our client network to identify early lighthouse AI use cases based on the current maturity of their enablers — in the infrastructural and organisational realm, which comprises of the tech stack, computational power, data engineering capabilities, collaboration structure across teams, availability of tech talent and efficiency of experimentation fast-tracks.

These are not just starting points; they're compelling narratives to convince business leaders of the need for new operational structures, culture and talent pipelines, long-term success metrics, and continuous feedback loop-driven investment reallocations.

In our quest to illuminate the AI path forward, we evaluated an initial set of 10 potential AI use cases for telcos, studying them through a three-pronged lens: organizational impact, ease of deployment, and safety and trustworthiness.

- **Organizational Impact:** We assess the direct and indirect economic value, the experiential benefits for stakeholders, the strategic alignment with company priorities, and the overall enhancement of efficiency, engagement, and ecosystem.
- **Ease of Deployment:** Our analysis delves into the availability and quality of data, the seamless integration with existing systems, the technical and business expertise at hand, the infrastructure readiness, and the accessibility and adequacy of documentation and support.

- **Safety and Trustworthiness:** We weigh the risks associated with regulatory compliance, ethical considerations, operational stability, brand reputation, and technological reliability.

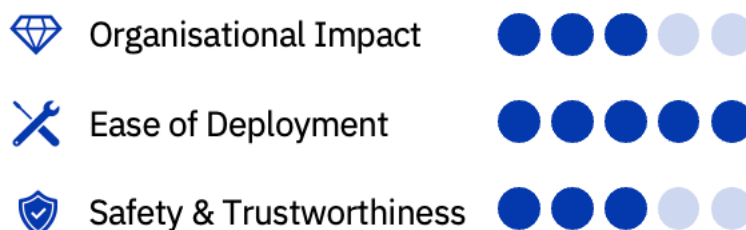
Our findings categorize the 10 use cases into three distinct groups: quick wins, high-impact priorities, and innovation projects. Quick wins are those that can be rapidly developed to showcase immediate business value. High-impact priorities have clear, significant value propositions but may entail a higher degree of complexity in execution. Innovation projects are the game-changers—rich with potential but requiring thorough evaluation and strategic consideration, especially within the nuanced context of existing operations.

In the following sections, we will unveil these 10 AI use cases, providing enterprises with an in-depth view of use cases that can help navigate the AI terrain with confidence and foresight — inciting key business decisions and mobilizing action plans sooner rather than later.

Quick wins

Private ChatGPT

- a. How AI helps?** A relatively quick and easy solution to introduce AI at scale to employees is to create private access to ChatGPT hosted in a secure and controlled environment, usually on a private cloud. This allows employees to be more productive by using LLMs to help in writing, research, ideation, coding etc, without worrying about data being leaked and used by OpenAI in model training. Initiating with a small trial group of employees is recommended. Other tools like Microsoft Copilot can also offer such features with seamless integration with Office applications, recording meetings, synthesizing documents, and uncovering insights from company documents.
- b. What are the benefits?** Employees can potentially see time taken to complete certain tasks reduced by half (drafting, brainstorming) as well as improved work quality with AI. Organisations can further boost accuracy and reduce hallucinations by fine-tuning an AI model with company data to power function-specific use cases simply by building on top of source APIs.
- c. Who has done it?** OCBC, JP Morgan, Walmart
- d. How is it ranked?**



Business Requirement Document Assistant

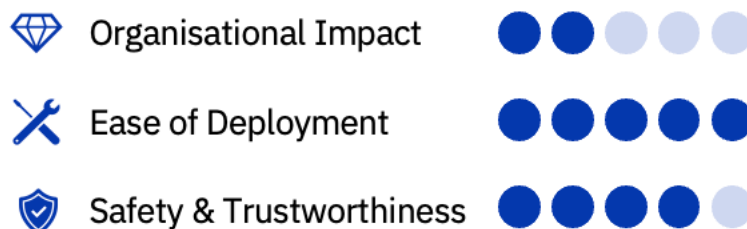
- a. How AI helps?** Another easy use case that AI can assist is to create a detailed and comprehensive document that outlines the requirements for a project or product. With customizable templates, employees can easily document stakeholder needs, functional requirements, and

technical specifications and automate the entire research and writing process for a time-consuming task. Employees can also be prompted on potential improvements to fine-tune the drafts and add in personalised details such as concepts, resource requirements and other parameters to automatically create a good-quality BRD quickly. Images and other supporting materials can be seamlessly incorporated based on the AI's natural understanding of the project or product.

b. What are the benefits? Employees can save time on creating BRDs and reduce the effort needed to start and refine the writing. This significantly reduces the time it takes for a project to get from conceptualization to approval and implementation. The AI can also automatically translate business requirements written in local languages and other forms (i.e. emails, conversations) into a comprehensive document, speeding up project implementation and freeing up employee time to focus on value-creation tasks.

c. Who has done it? Belkins, Verblío

d. How is it ranked?

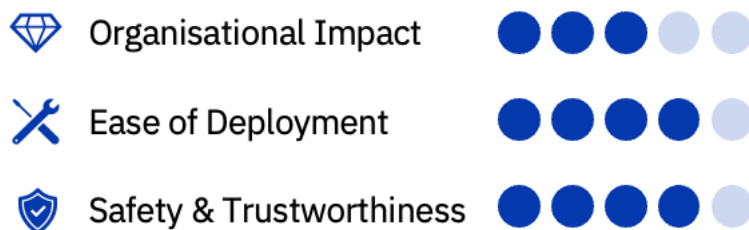


Personalised HR Chatbot

a. How AI helps? When a new or existing employee from any function wants to learn more about the company leave policy, reimbursement practices or health benefits, they can simply type in the request into a seamless chat interface, asking the question in natural language in any language and they will get a summarized answer, rather than return the entire document. Integrated NLP and AI capabilities into internal-facing employee chatbots can enable more personalised responses based on an understanding of the employee background, role, and

position to answer employee-related queries with natural-sounding tone and human-like replies in local language, giving comprehensive answers and linking the relevant source documents, support materials, transactional systems in an all-in-one experiential portal. The chatbot can also be used to automate other administrative tasks such as logging in a company expense, requesting leaves, leaving a rating for the people manager, using just natural language instructions. The external hiring process for potential candidates can be automated as HR-focused AI chatbots can be programmed to turn a simple request like scheduling interviews, creating new job descriptions, and crafting offer letters.

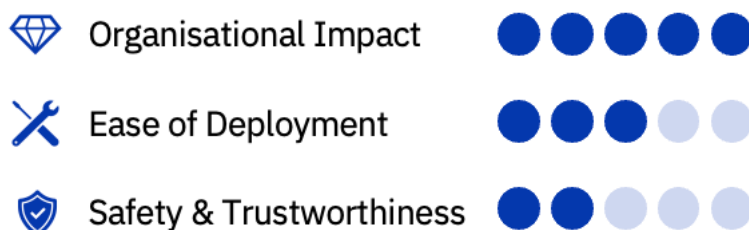
- b. What are the benefits?** Employees, especially those who just joined the company need not go through piles of documents and onboarding videos just to find out if they can work from home the next week due to some family emergencies. Employee and candidate experiences across multiple domains and enterprise systems can be orchestrated with intuitive chat features with an understanding of business rules and security preferences, creating an easy employee support tool that makes work easier. HR teams are also more efficient as they do not spend time answering simple queries or attending to ad-hoc systems requests.
- c. Who has done it?** McDonald's, Aditya Birla Fashion and Retail, iFood, Proximus, KPMG
- d. How is it ranked?**



High Impact Priorities

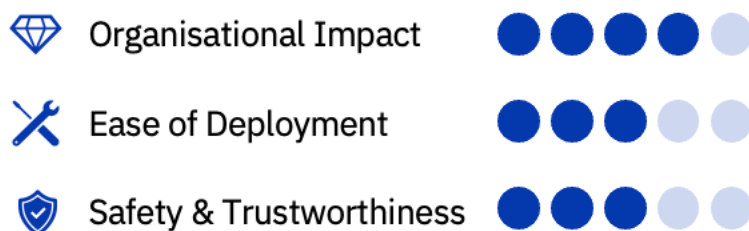
Personalised Roaming Care Assistant

- a. **How AI helps?** When an existing subscriber lands in a different country, AI features like natural language content generation integrated with existing roaming messaging services should send personalized proactive notifications during the Bon Voyage stage. This notification or messages can include welcome messages, recommendations on best mobile packages for the new country in partnership with local providers, suggesting the nearest touchpoint/channel to contact if the customer needs in-depth assistance as well as other lifestyle-related promotions including tourist spots, popular food places, what is the best method to travel, etc. This version of a “smart, international roaming care agent” can recommend to-do’s if the user runs out of roaming data or faces a connection issue.
- b. **What are the benefits?** This virtual agent will handle everything a subscriber needs for convenient and comfortable travel, increasing digital engagement on the feature as well as keeping the brand top of mind with customers. It will also enable greater end-to-end experience for roaming subscribers, from foreign country arrival, roaming product selection roaming product activation, outbound usage experience, reload and customer support. This can also enable upselling opportunities by monetizing lifestyle partnerships and other digital services, increasing roaming revenue and customer engagement.
- c. **Who has done it?** Vodafone, SK Telecom
- d. **How is it ranked?**



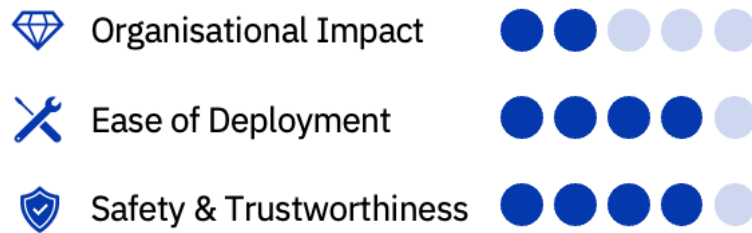
Intelligent Service Agent Assistant

- a. How AI helps?** Besides handling resolutions of simple customer queries through self-service IVRs, AI-enabled service platforms can help call centre agents easily retrieve information about a customer on the line, perform real-time sentiment analysis using speech recognition and instantly create a proper script that can be used to solve the customer issue with relevant information that is linked to product or policy data. The AI can also prompt agents to make personalized recommendations based on insights into the customer's preferences, website behaviour, previous conversations, and more. AI can also help transcribe and summarize customer calls, uncovering insights that are hidden and use them as learning materials to improve agent skills.
- b. What are the benefits?** Customer service agents have access to relevant knowledge bases quicker, handling more complex queries more effectively and relaying accurate information to customers in real-time. Agents also get better insights into customers, be it their previous calls or emotions during the conversation to provide a better conversation by adapting their tone or approach to be more empathetic, offer different solutions resulting in a better experience for customers and potentially create a marvellous moment to build loyalty. Summarized insights from calls can be used to refine and train agents on best practices and enhance overall call centre performance.
- c. Who has done it?** Bouygues Telecom, AIA, Vodafone, Bell, Airtel, Singtel, Verizon
- d. How is it ranked?**



Autonomous Work Agents

- a. **How AI helps?** AI can create workflows that don't just function automatically but learn and improve without human intervention. Put together, autonomous agents — partially made up of LLMs — can automate email writing, analyse, and score high vs low priority leads, conduct more effective A/B tests at scale etc. While RPA replaces manual and repetitive work with automation, autonomous work agents introduce more cognitive capabilities capable of redesigning and automating entire workflows. Autonomous agents go beyond “if-then” preset rules and have more expansive applications as they can understand natural language instructions, then breakdown tasks into step-by-step execution plans, iteratively query LLMs through API calls, monitor output and learn to “tell” different enterprise tools and platforms what to do. Organisations can customise workflows involved in running marketing campaigns, designing product MVPs, conduct R&D user tests and even user research. Over time, these agents will also be capable of learning from tasks and making informed decisions to achieve a specific goal — mirroring the exponential enhancements that autonomous robots are producing in non-knowledge work environments such as warehouses and sorting centres.
- b. **What are the benefits?** Automation alone is enough to turn an otherwise seven-hour manual task into a five-minute one. But intelligent automation can also collect new data, learn from it, and handle complex decision-making, expediting processes exponentially, which allows employees to prioritize higher-value tasks while reducing the likelihood of errors.
- c. **Who has done it?** Salesforce, Zapier

d. How is it ranked?

Innovation Projects

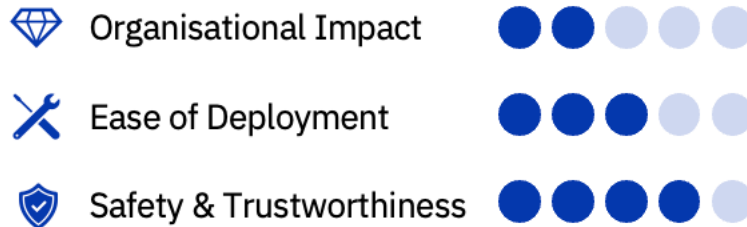
Personalised Learning & Development Coach

a. How AI helps? High-growth employees can easily type in a simple prompt of their current job and intended skills to learn and get a customised learning program with directions to appropriate learning courses and personalised skill modules based on prior experience and expected outcomes. This coach would access resources from external micro-credential platforms, send proactive reminders, create flexible timelines to complete the relevant modules, brainstorm ideas and help think creatively, compile learning and reading materials from 3rd party platforms and perform pop quizzes to test your knowledge. Employees who feel stuck in their careers can also simply ask the AI coach to think through questions like “What type of job should I seek? What are the types of roles within my company? How do I think about them?” and “What classes would I take?” as opposed to waiting for the company to organise and set up reskilling programs. Other use cases include quick training sessions, situation technical training simulations and booking of training courses.

b. What are the benefits? All employees have a personalised professional development and learning coach to help them learn new skills needed to succeed in their current and future careers. They can perform much better in their current roles and identify what new roles can suit them in the company. Organisations can improve workforce readiness as well as improve job satisfaction and growth needs of each employee, leading to higher productivity and reduced turnover, saving on hiring and training costs.

c. **Who has done it?** Meta, Starbucks, Volvo, Unilever

d. **How is it ranked?**

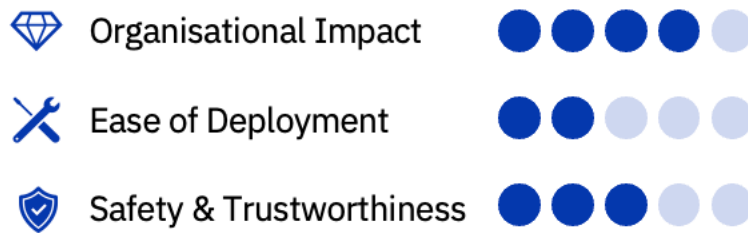


Intelligent Knowledge Network

a. **How AI helps?** Employees could save hours of searching for the knowledge or people required to complete their everyday tasks by getting a single source of data from different functions such as strategy, finance, regulatory, HR, commercial, legal, and procurement which can be accessed and queried through natural language prompts and conversational query. AI-infused knowledge management will optimise this knowledge search experience by synthesizing insights from traditional documents and enable knowledge sharing by delivering transparent, straightforward answers, complemented by links to original documents. This relieves the stress of finding the right people and answers. This intelligent network of information can also enable users to uncover nuances in the data through local language and dissect the data to discover new insights to support smarter decision-making.

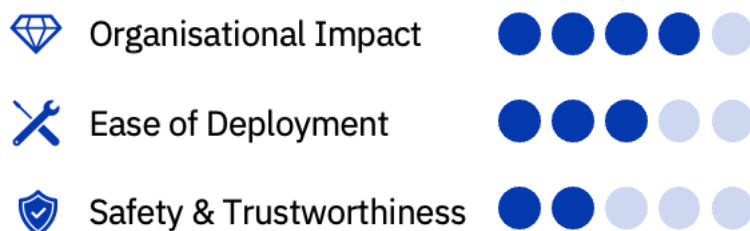
b. **What are the benefits?** Employees no longer need to sift through the organisation's internal knowledge base to find the required information but rather get access and share knowledge in a simple Q&A format. The capabilities will also require organisations to structure their data into useful formats, enabling the development of knowledge graph technologies and other advanced knowledge management platforms.

c. **Who has done it?** China Telecom, HSBC

d. How is it ranked?**In-app Virtual Assistant**

- a. **How AI helps?** Customers using the mobile app can easily discover products and get recommendations from various services (e-commerce, lifestyle) that are personalised to what they are currently doing or want to achieve. Users can ask questions about products or even their lifestyle and effectively be routed to find the most relevant products or get proactive prompts on the next best action. AI capabilities will act as personal assistants to help users accomplish certain tasks such as listening to music, playing videos, sending text messages, navigating to certain destinations or conducting other simple transactions, via natural language requests. The AI will access a range of digital services and match personal preferences using its understanding of customer profiles and conversational context in multi-turn dialogues that feel as natural as speaking to a friend.
- b. **What are the benefits?** Customers can access digital services that they didn't know were available and easily get things done via a chat interface. They are also recommended the best products and services based on learning their profile and are more likely to find the right products to purchase, increasing their propensity to purchase. Customers also get assistance round the clock and receive immediate responses with faster resolution, increasing engagement and reducing the burden of customer service and reliance on menu-based chatbots.
- c. **Who has done it?** SK Telecom, Instacart, Expedia, Sephora, Bank of America, Orange

d. **How is it ranked?**



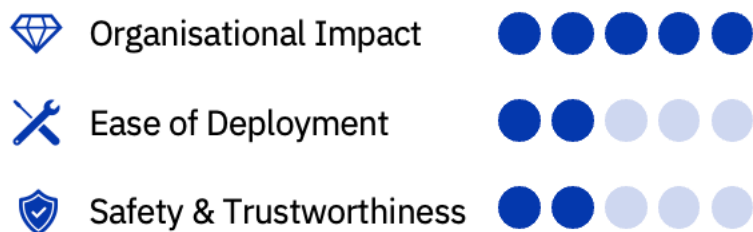
Self-healing, Self-optimizing AI Network

- a. **How AI helps?** AI can meaningfully contribute to various areas of a telco network. For site planning, AI can be used to prioritize site-level capacity investments based on granular data, such as customer-level network experience scores. Organisations can develop an AI-based customer network experience “score” to inform network deployment decisions. The AI engine uses granular network-level information for every line (e.g., signal strength, throughput) with an ML model to create the score tailored to each customer’s individual network experience and expectations. Use the score, which is directly correlated with impact metrics such as customer churn or network care tickets, to monitor network performance trending, and to identify opportunities to refine its buildout plan. In the running and operating phases, AI can prioritize the dispatching of emergency crews based on potential revenue loss or impact on customer experience. AI can also enable a zero-touch, self-healing network, which automatically detects and fixes faults—for example, auto-switching customers from one carrier frequency to another because the former was expected to become clogged.
- b. **What are the benefits?** Optimise network investments with better capacity utilization and impact on customer-perceived experience. As AI systems are exposed to new data and new types of network issues, they can improve their decision-making capabilities and become more effective at identifying and resolving issues, reducing network downtime, and improving the reliability of critical infrastructure. Another advantage of AI in developing self-healing networks is its

ability to operate in real time. AI systems can make decisions and act in real-time, which can be crucial in a fast-moving network environment, reducing degrading impact on CX metrics and allowing for more effective resolution strategies.

c. Who has done it? BT, Spark NZ, Airtel

d. How is it ranked?



Appendix

Use Case Prioritization Criteria

- Organisation Impact
 - Direct & indirect economic value (incl. revenue gains, cost savings, increase in productivity)
 - Experiential benefits (business processes and stakeholder experience)
 - Strategic fit/alignment to company priorities (in line with industry trends)
 - Efficiency, engagement, and ecosystem improvement (twimbit 3Es – internal and external stakeholders)
- Ease of deployment (impacting time and cost)
 - Data availability & quality (data lifecycle management)
 - Interoperability/Integration with existing systems (reusability of use cases)
 - Technical and business expertise needs (domain knowledge, machine learning understanding, need for training/hiring)
 - Infrastructure requirement (hardware & software like cloud computing, AI development & training, deployment & execution)
 - Documentation & support accessibility and adequacy (solution design from internal and external resources)
 - Scalability (with minimal operational process disruptions)
- Safety and Trustworthiness
 - Regulatory compliance (linked to high-exposure business areas)
 - Ethical considerations (need for new governance in place)
 - Operational risk (performance issues, system failure, integration breakdown)
 - Reputational risk (brand impact, public perception)
 - Technological risk (vendor lock-in, tech maturity, cybersecurity)

Scoring Methodology

Each main criterion in our framework is evaluated using a scoring scale from 1 to 5, where 1 signifies a very low organisation impact or ease of deployment, and 5 signifies a very high organisation impact or ease of deployment. To calculate the overall score for each criterion, we use an average approach, where each sub-dimension (i.e., direct & indirect economic impact or regulatory compliance) is assigned a rating of low, medium, or high. The threshold is slightly skewed towards the lower range as the scoring of each sub-dimension will be accounted for in the final score (e.g., each sub-dimension is given a low rating).

Note that the scoring range and threshold will be inversed for the last criterion (Safety and Trustworthiness), whereby a low rating is more favourable.

These ratings are determined based on a thorough analysis of the use case's potential benefits and challenges, informed by both primary and secondary research. The final score for each criterion is the sum of the weighted ratings of its sub-dimensions, providing a nuanced and precise evaluation of the use case.



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