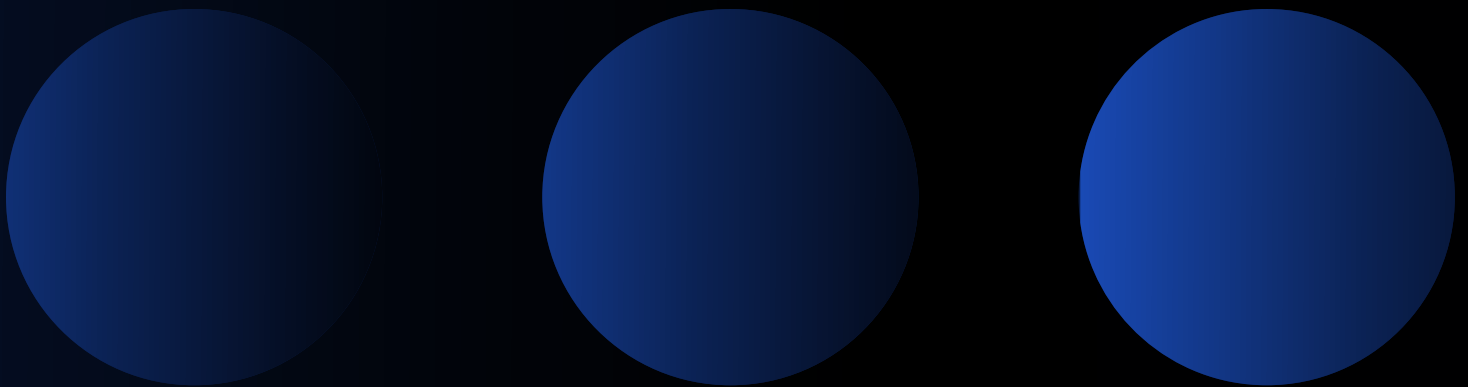


Scaling AI Value in Telecom for CIO's

# From AI Experimentation to Enterprise Value

How Telcos Can Prioritize, Scale, and Monetize AI-Native  
Workflows With Lessons from Circles and OpenAI



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# Architectural and Data Requirements for AI at Scale

Our previous white paper, [The AI Readiness Gap in Telecom](#), established that AI readiness provides the foundation for moving beyond experimentation. But when AI starts being used in real business workflows, telcos need to look at what is required to support it at scale. This includes having the right architecture, access to the data the workflow needs, and making sure the right governance is in place.

That means CIOs must look beyond individual AI tools or models to understand what an AI-enabled workflow actually needs to do its job. A high-value workflow may need to retrieve information from multiple systems, interpret it, make decisions, and trigger actions across different business processes. In telecom, that could mean connecting customer information with billing, subscriptions, network services, or account management. The more systems and processes a workflow touches, the more important it becomes to determine what the AI can access, what it can do, and where controls need to sit.

Circles' work with OpenAI illustrates this approach. Its AI Concierge uses the OpenAI API platform alongside Circles' CareX architecture to handle complex, end-to-end customer-service tasks. An orchestration agent can access the customer information needed to understand a request and route it to specialist agents covering areas such as billing, subscriptions, network management, and account services.

This architecture can improve cost-to-serve and operational efficiency. But as the workflow connects to more systems, CIOs need to decide what information it can access and what actions it can take. This means limiting access to the systems and customer information each task needs, and implementing protections for sensitive data and human review where necessary.



## Governance, Scalability, and Strategic Investments

Other controls can determine how a workflow behaves as it expands. Rate limits can restrict the volume of actions an AI system can take, while phased rollouts allow teams to expand deployment gradually and monitor performance. Meanwhile, rollback mechanisms let teams return to an earlier state if an implementation doesn't perform as expected. These controls can also affect whether a workflow is ready to scale. For instance, a workflow might offer clear benefits for customer service or operational efficiency but still need better data access, system integrations, or governance before it can roll out more widely.

The same principle applies to architecture. Capabilities developed for one workflow may create a foundation for others. For example, CareX already supports workflows across billing, subscriptions, network management, and account services, showing how an architecture designed to support one customer-service use case can extend across multiple processes.

CIOs should also consider whether an investment will support a single workflow or provide capabilities that can be used across other AI workflows in the business. The aim is to put the right architecture and controls in place, so useful workflows can deliver value and extend across the business.

CIOs therefore need to look at what each AI workflow needs to work within the existing architecture and governance setup. While some workflows may be ready to scale with the systems and controls already in place, others may need investment in data, integration or controls first. Some may also require bigger changes to the way systems or teams work together. Looking at these requirements alongside the value each workflow could deliver paints a much clearer picture of what the opportunities are, and where to invest first.

# Where Should Telcos Pursue AI Value First?

As AI investment accelerates, telecom leaders face an increasingly complex portfolio of opportunities spanning customer experience, network operations, product innovation, and revenue growth. The challenge is determining which opportunities will deliver meaningful, measurable business impact, rather than prioritizing technologies or individual use cases in isolation.

**A business–outcome–led approach provides a more disciplined foundation for investment decisions. To figure out where to pursue value first, telco executives must start with their desired outcome, such as:**



## **Cost-to-serve**

Reducing the cost of serving customers, for example through automation.



## **Customer retention**

Reducing churn by identifying customers at risk of leaving and taking targeted action.



## **Product velocity**

Developing, testing, and launching new products and services faster.



## **Operational efficiency**

Improving internal processes so they are faster, simpler, or less resource-intensive.



## **Revenue growth**

Finding new ways to increase sales and generate additional revenue.



## **ARPU growth**

Increasing the average revenue generated by each customer through more relevant products, services, or offers.

Starting with the intended business outcome shifts the priority from technological capabilities to financial and operational impact. It helps organizations prioritize end-to-end workflows that can drive widespread improvements, rather than using resources to complete a single AI task that solves a narrow problem. Organizations can further avoid scope creep by addressing technology, data, integration, or governance only where they affect the workflow's ability to scale.

Circles' work with OpenAI provides examples of how AI can be applied to different value pools across the telecom business:



### CareX

Demonstrates the potential of AI-driven customer-service automation, achieving a reported 65% autonomous resolution rate across supported workflows. By resolving eligible customer requests without human intervention, the solution creates opportunities to reduce cost-to-serve, improve service availability, and allow customer-service teams to focus on more complex interactions.



### Xplore IQ

Supports customer retention and ARPU growth through personalized recommendations, with a reported 22% increase in ARPU and 9% reduction in churn in Singapore.



### Codex

Supports development efficiency and product velocity, with Circles reporting a 29% increase in development efficiency across design, coding assistance, and unit testing.

“Circles is using OpenAI to transform the customer experience by improving network diagnosis and billing triage... reducing churn by 9% and driving product growth.”

**Denise Dresser**

*Former CRO, OpenAI*

Understanding what business outcome each AI capability is designed to improve and how the impact can be measured gives telcos a much clearer basis for deciding which AI workflows to prioritize.

# Which AI-Enabled Workflows Deserve Priority?

Telcos have more AI opportunities than they can pursue at once. Leaders need a clear way to identify which ones to prioritize. The framework below helps telcos compare potential AI-enabled workflows across five dimensions:

| Dimension              | What to consider                                                                                                                                                                                              |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Business value      | <ul style="list-style-type: none"><li>• What business outcome could the workflow improve?</li><li>• How significant is the opportunity?</li><li>• Which metric would show whether it is successful?</li></ul> |
| 2. Execution readiness | <ul style="list-style-type: none"><li>• What systems, data, processes, operating structures, and governance are needed?</li><li>• What is already in place, and what is missing?</li></ul>                    |
| 3. Time to impact      | <ul style="list-style-type: none"><li>• How quickly could the workflow begin delivering meaningful results?</li><li>• Is there a realistic near-term path to value?</li></ul>                                 |
| 4. Risk                | <ul style="list-style-type: none"><li>• What operational, customer, regulatory, privacy, financial, or execution risks need to be considered?</li></ul>                                                       |
| 5. Reusability         | <ul style="list-style-type: none"><li>• Could the capabilities developed for this workflow also support other opportunities, functions, or workflows?</li></ul>                                               |

The AI Value Sequencing Matrix provides a structured approach for comparing potential AI investments across business impact, execution readiness, time to value, risk, and reusability.

Assess each workflow against a defined business baseline, expected financial or operational improvement, implementation requirements, and measurable success criteria. This helps leaders distinguish opportunities that can generate near-term value, those requiring targeted enabling investments, and longer-term transformation initiatives.

CareX illustrates how an AI workflow can be assessed across all five dimensions:

- 1 Business value is demonstrated by a 65% autonomous resolution rate across supported customer-service workflows.
- 2 Execution readiness is supported by an orchestration agent that can access the customer information needed to understand a request and route it to specialist agents for billing, subscriptions, network management, or account services.
- 3 Time to impact is demonstrated by an early deployment that reached 55% autonomous resolution within its first week.
- 4 Phased rollouts, scoped access to customer information, and human escalation manage operational and customer risks.
- 5 Reusability is demonstrated by using the same architecture across billing, subscriptions, network management, and account services, showing its potential to support multiple customer-service workflows.

A workflow can have high business value but still require further work before it is ready to scale. Likewise, ease of implementation alone should not make a low-impact workflow a priority.

|                         | Scale now                                                                                 | Enable next                                                                                           | Transform for                                                                                                                        |
|-------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Workflow                | Proven AI workflows that can expand using capabilities already in place                   | High-value workflows that need specific barriers removed before they can scale                        | Cross-functional opportunities that require broader changes to systems, processes, or operating models                               |
| Value opportunity       | Extend demonstrated business value while monitoring performance and risk at greater scale | Unlock additional value by addressing gaps in data, integration, governance, processes, or technology | Create new value through intelligent, connected operations across multiple functions                                                 |
| What this can look like | Expand proven automation across more interactions, users, or use cases                    | Strengthen integrations, data access, and controls to prepare the next workflow for expansion         | Use AI agents to orchestrate workflows across customer engagement, billing, provisioning, network operations, and product management |

# What Can Scale Now, and What Needs More Work?

The Sequencing Matrix above identifies which workflows deserve attention. The Three-Horizon Model in this section organizes opportunities by how ready they are to deliver results. In this case, it separates AI workflows that are ready to scale, workflows that need further work, and longer-term opportunities that require broader changes. This gives leaders a way to decide where to invest now, and what to plan for later.

Leaders can turn this prioritization into an investment sequence, linking each investment to the specific AI workflow it is intended to enable rather than a broader modernization project.

## Scale now

### Horizon 1

These high-priority workflows score well across the Sequencing Matrix and can move forward using capabilities already in place. A workflow belongs in this horizon when it has demonstrated business value, the needed capabilities are already in place, and the risks can be managed. At this stage, the aim is to expand the workflow and measure whether it continues to deliver the expected business outcome as its scope increases.

CareX is already used across billing, subscriptions, network management, and account services, with 65% of supported customer-service interactions resolved without human intervention. Circles also used a phased rollout, which allowed the workflow to expand while monitoring performance and risk.

## Enable next

### Horizon 2

Some high-value workflows are not yet ready to scale because of specific constraints, such as gaps in data, integration, governance, processes, or technology. The priority is to address these barriers so the workflow can scale.

Expanding an AI customer-service workflow may require stronger integration with customer systems or additional controls for handling personal information. These investments can help remove barriers to implementing the workflow. For example, if CareX expanded to handle additional customer-service workflows, it would need to assess the specific data, integrations, and controls required before expanding.

# Transform for

## Horizon 3

Some opportunities extend beyond a single function or existing process. They may require multiple systems to work together, new operating models, or more advanced agentic workflows. These belong in Horizon 3 when the potential business value justifies the larger transformation required.

Horizon 3 represents the opportunity to move beyond function-specific automation towards intelligent, cross-functional telecom operations. In an AI-native operating environment, AI agents could orchestrate complex workflows across customer engagement, billing, service provisioning, network operations, and product management, enabling more personalized and proactive customer experiences.

Circles' planned expansion of CareX into real-time voice support illustrates one potential direction for this transformation. The initiative targets 95% autonomous resolution across text and voice, subject to successful development and deployment.

The broader opportunity is to connect AI capabilities across the telecom operating environment, enabling operators to improve efficiency, accelerate innovation, and explore new digital business models.



**The key question leaders must ask is:**

What would the transformation enable, and does the resulting business value justify the investment?

# What Does Prioritization Look Like in Practice?

The Sequencing Matrix becomes most useful when it helps leaders compare competing investments. Each assessment should reflect the operator’s existing capabilities, available evidence, and the specific work required to deliver an outcome. McKinsey’s Scaling the AI-native telco (2025)<sup>1</sup> recommends prioritizing related workflows within a business domain and reusing proven AI capabilities across initiatives to help operators build on earlier investments, reduce duplication, and accelerate deployment.

Consider a hypothetical operator that has validated an AI billing-support workflow, but still has fragmented customer-engagement data and limited coordination between network operations and customer care. Its assessment might look as follows:

| Dimension           | Billing-query resolution                                                                                | Personalized retention offers                                                                 | Proactive service recovery                                                                        |
|---------------------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Business value      | Reduce cost per resolved inquiry and repeat contacts.                                                   | Improve customer retention and contribution margin.                                           | Shorten service disruptions and reduce related complaints.                                        |
| Execution readiness | A validated deployment, reliable billing access, and established escalation paths are already in place. | Usage data, complaints, offer eligibility, and campaign execution still need to be connected. | Network, customer-care, and field-service systems need coordinated processes and decision rights. |
| Time to impact      | Near-term expansion within the proven scope.                                                            | Results depend on completing targeted data and integration work.                              | A longer implementation and validation cycle across functions.                                    |
| Risk                | Incorrect explanations, unauthorized account changes, or unresolved inquiries.                          | Results depend on completing targeted data and integration work.                              | A longer implementation and validation cycle across functions.                                    |
| Reusability         | Identity checks, account access, and case histories can support other service workflows.                | Results depend on completing targeted data and integration work.                              | A longer implementation and validation cycle across functions.                                    |

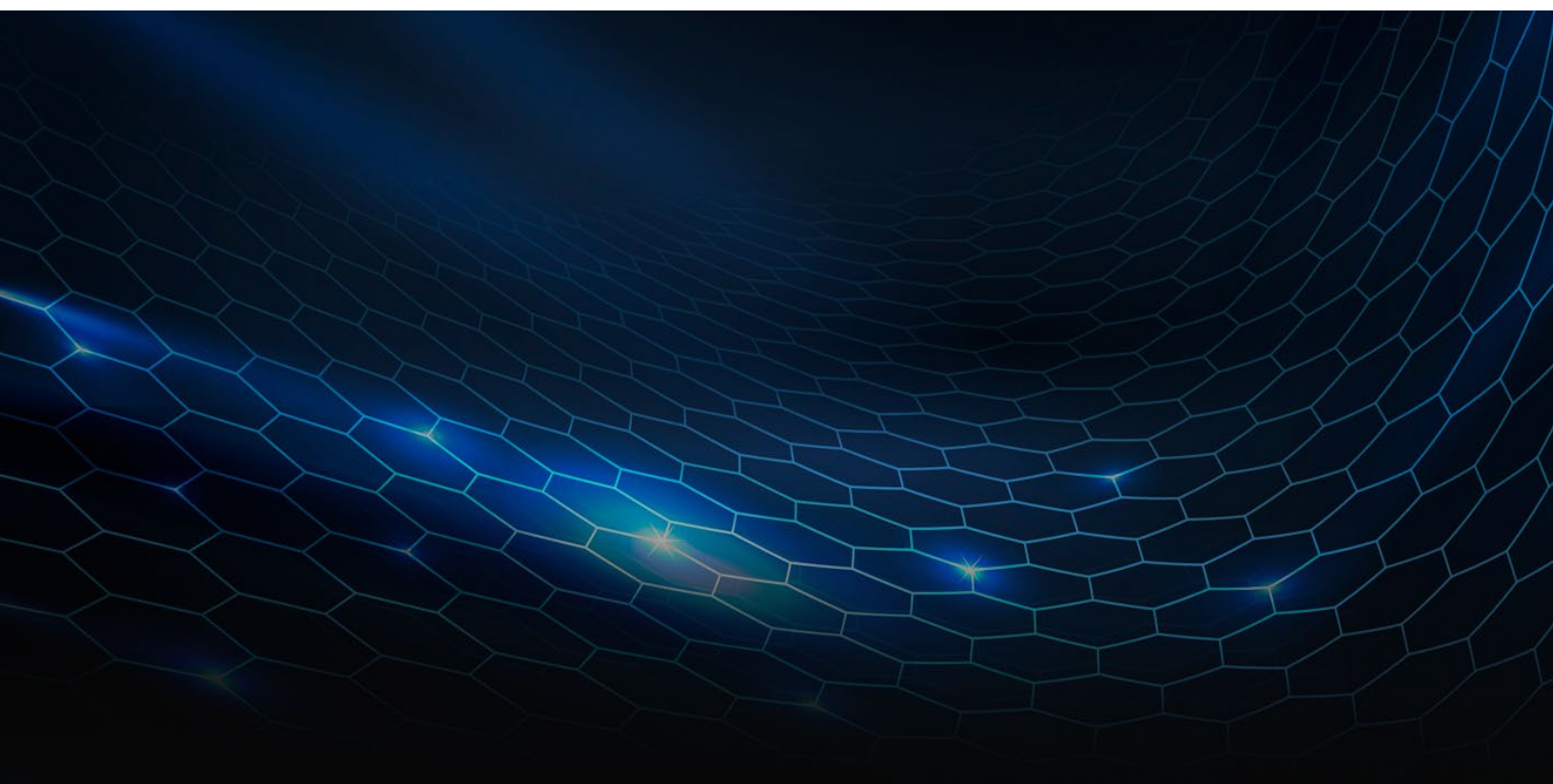
Horizon 1: Scale now

Horizon 2: Enable next

Horizon 3: Transform for

The operator would first expand the validated billing workflow within its approved scope and invest in the data and integration work to support personalized retention offers. It would then test proactive service recovery in a controlled environment before expanding it more widely.

These placements are illustrative and depend on the operator's starting conditions. An operator with mature network automation could prioritize differently. Leaders should record the evidence and dependencies behind each assessment, then update priorities as readiness and results change. Unresolved risks should remain explicit conditions for expansion, even where the potential business value is high.



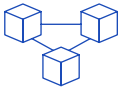
# What Needs to Change in the Operating Model?

Scaling AI also requires changes to how work is owned and managed. As Brynjolfsson, Rock, and Syverson explain in *The Productivity J-Curve* (2021)<sup>2</sup>, new technologies such as AI depend on complementary investments to realize their productivity benefits. For telcos, this means developing employee skills, clarifying responsibilities, and adapting operational processes as they introduce and scale the technology.



## **Assign an accountable business owner.**

Give one owner responsibility for the business outcome and authority to coordinate across departments. For customer service, this means overseeing resolution quality, customer experience, and cost-to-serve together.



## **Maintain a team beyond launch.**

Define responsibilities for maintaining integrations, updating rules, investigating failures, and prioritizing improvements. McKinsey similarly emphasizes clarifying human and AI roles throughout the workflow.<sup>3</sup>



## **Set clear decision boundaries.**

Specify what AI can complete independently, what requires approval, and who handles exceptions. A billing explanation might be automated, while a disputed credit requires human review.<sup>4</sup>



## **Embed training and feedback.**

Train employees to recognize failures and escalate effectively. Regularly review repeat contacts, incorrect resolutions, and employee feedback, then incorporate findings into workflow improvements.

These arrangements connect everyday operations with the evidence needed to scale, redesign, or stop.



# How Should Leaders Decide Whether to Scale, Redesign, or Stop?

When launching a prioritized workflow, leaders need clear measures and decision points to determine whether it is delivering as expected and whether they should invest further. Each workflow should have a clear business owner responsible for its performance and for decisions about its future.

Before expanding, leaders should agree on the desired outcome and define how they will measure success. This should include both business results, such as cost-to-serve, ARPU, churn, or development efficiency, and operational measures, such as resolution rates, escalations, errors, customer complaints, or data incidents.

Leaders should measure both how well a workflow operates and whether it is delivering the intended business outcome. For CareX, the 65% autonomous resolution rate provides an operational measure of performance. Another example is Xplore IQ, where Circles reports a 22% increase in ARPU and a 9% reduction in churn in Singapore.

Together, these measures provide a fuller picture of whether an AI workflow is creating value and whether it is ready to expand. These measures can form three decision gates:

- **Scale** when the workflow is delivering its intended business outcome, operational performance remains within acceptable limits, and risks are controlled.
- **Redesign** when the workflow shows potential but falls short of its business target or encounters execution problems that can be addressed.
- **Stop** when the workflow is not creating sufficient value, risks cannot be managed, or there is no credible path to improvement.

Evidence determines what happens next and prevents successful deployment from becoming the end goal.

# Turn AI Readiness Into Measurable Enterprise Value

AI readiness provides the foundation for adoption, but scaling AI requires the right technology, data, and operating environment. Enterprise value depends on the business results AI delivers and the ability to measure them. Circles helps telecom operators apply AI across customer experience, operations, and revenue through an AI-native platform built to support multiple workflows.

**Advance your AI transformation. Connect with our global leadership team or your regional lead to discuss your strategic priorities and opportunities to create measurable business value.**

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<sup>1</sup>McKinsey & Company. (2025, February 27). Scaling the AI-native telco. <https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/scaling-the-ai-native-telco>

<sup>2</sup>Brynjolfsson, E., Rock, D., & Syverson, C. (2021). The productivity J-curve: How intangibles complement general purpose technologies. *American Economic Journal: Macroeconomics*, 13(1), 333–372. <https://doi.org/10.1257/mac.20180386>

<sup>3</sup>McKinsey & Company. (2026, February 26). Telcos' AI inflection point: What leaders do to capture value. <https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/telcos-ai-inflection-point-what-leaders-do-to-capture-value>

<sup>4</sup>National Institute of Standards and Technology. (2023). Artificial Intelligence Risk Management Framework (AI RMF 1.0) (NIST AI 100–1). U.S. Department of Commerce. <https://doi.org/10.6028/NIST.AI.100-1>