Bell Labs Consulting

Generative AI for provisioning

Enable up to 50% faster time to market of new services

Quick take

Generative AI tops the list in telco transformation plans with many telcos reporting AI charters and strategies that incorporate this technology. Bell Labs Consulting has published a whitepaper entitled Generative AI implications for telco operations trying to look beyond the hype and provide a pragmatic approach to leverage its promise in transforming telco operations. This document is a quick dive into the service provisioning function that focuses on the benefits of leveraging generative AI in the provisioning process.

Introduction

Service provisioning is a complex process orchestrating several systems and network resources for a seamless delivery of ordered services. Telcos have constantly invested in these processes, as they have a direct impact on customer experience, time to market, and operational efficiency.

Generative AI for service provisioning

When introducing new services, innovation combined with time to market determines whether a telco is perceived as an innovative first mover or as a smart follower. Faster time to market and efficient introduction of new services can be achieved by using generative AI in the process of design, development, testing and deployment.

Generative AI large language models (LLMs) contain algorithms that can be trained using existing services and documentation to effectively learn the provisioning process and mimic or emulate the process whereby a new service is introduced. This can reduce the overall time to market of new services by approximately 50% with a commensurate efficiency gain.

When introducing LLMs into the process, human supervision steps should be considered to address current LLM limitations like forgetfulness (maintaining longer memory context) and hallucinations.

Intent-based provisioning

Generative AI can support the journey to zero-touch intent-based service provisioning through a seamless use of intent APIs, dynamic workflows, and prompt engineering. To this extent:

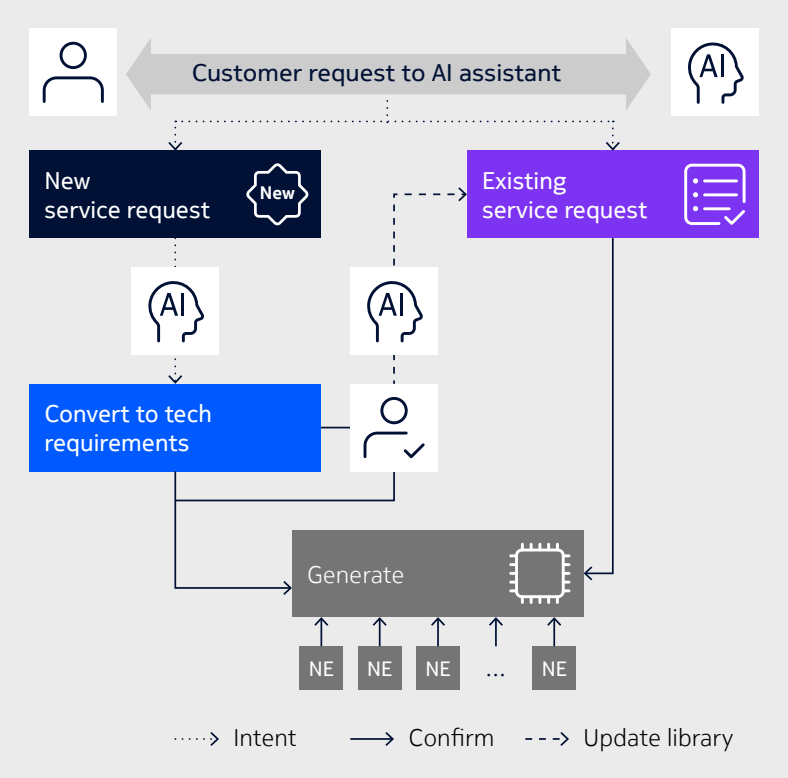
- A generative-AI-enabled assistant can be used to understand customer requirements through prompt engineered conversations
- In case of a new service, the customer requirements can be converted to a technical catalogue using LLMs
- Experts can review and validate the output before giving the go-ahead for workflows to provision the needed resources, and (as needed) recommend LLMs to update the service catalogue library
- For existing services, the intents can be processed to orchestrate and provision the needed resources without human supervision.

The benefits for telcos include:

- Launching new services with shorter time to market
- Providing flexibility to meet dynamic customer needs by allowing customers to curate their requirements
- Enabling the path to zero-touch intent-based provisioning.

In the journey towards generative AI, it is critical to ensure the quality of training data and instruction prompts, which are critical factors in ensuring the quality of outputs generated.

Figure 1. The use of generative AI in the service provisioning pipeline

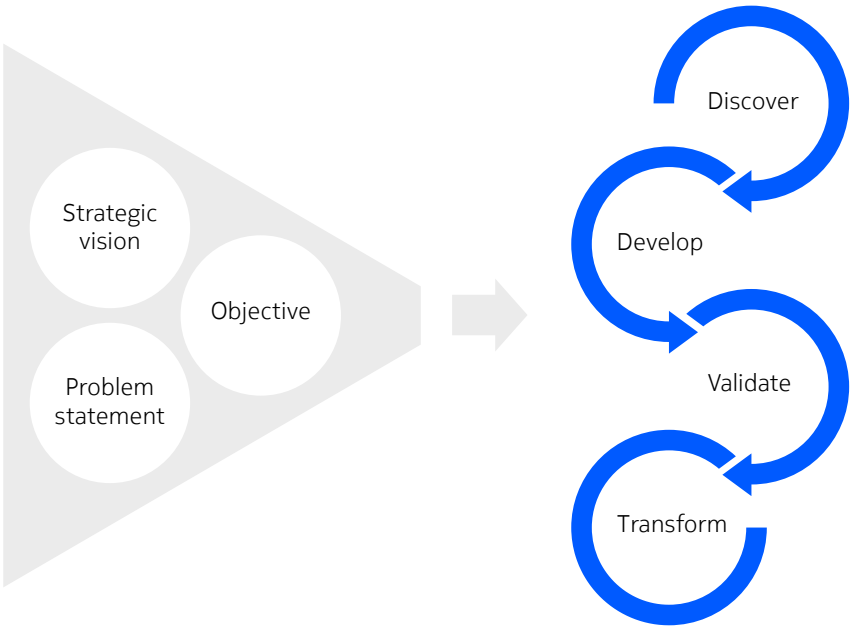


The Bell Labs Consulting PoC approach

Leveraging strong technology expertise and techno-economic modelling capabilities in both telecom and IT, Bell Labs Consulting has been helping telcos and enterprises challenge the status quo and unlock unseen value with AI. We recommend the use of a proof of concept (PoC) methodology encompassing the following phases:

1. **Discover** - Baseline problem, discover, define hypothesis and probable solutions
2. **Develop** - Develop solutions using various available AI models
3. **Validate** - Test and validate the solution to prove the hypothesis including business case
4. **Transform** – Based on validated result, pragmatic scaleup, and transformation.

Figure 2. The BLC four-step PoC methodology



If you are looking to see how generative AI could play a vital role in your transformation, you can find further information by contacting us at info.query@bell-labs-consulting.com

Learn about Bell Labs Consulting at https://www.bell-labs.com/consulting/

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