Genesys Engage On-Premises Use Cases

Genesys Predictive Routing for Customer Service (BO06) for Genesys Engage on premises

10/27/2025

> **Important**
> The capabilities described in this use case are under shipping control. Contact your Genesys representative for additional details.

Place CX and agent efficiency at the center of your routing decisions using AI to match each customer interaction with the best agent

What's the challenge?

Today’s contact centers generate large volumes of data and have outgrown legacy skill and queue-based routing for matching customers and agents. It is almost impossible to optimize for metrics such as First Call Resolution (FCR) or Average Handling Time (AHT) because thousands of if-then rules have to be built and managed.

What's the solution?

Genesys Predictive Routing works in real-time, using AI to analyze 100s of data points to discover patterns to match customers to the best agents. With Genesys Predictive Routing, contact centers can improve customer experiences, grow revenue, improve efficiency, and optimize for important KPIs.

Link to video

Contents

Use Case Overview

Story and Business Context

Companies want to improve their business Key Performance Indicators (KPI), capitalize on innovation in Artificial Intelligence and drive business decisions with the abundance of data and context available. Predictive Routing uses machine learning to support optimization of Customer Service KPIs.

Customer Service KPIs are metrics measuring a customer experience or efficiency outcome of an interaction, as opposed to Sales KPIs that measure the sales outcome of an interaction. Service KPIs can be of two types:

- Customer experience outcome such as Net Promotor Score (NPS), Customer Satisfaction (CSAT), First Contact Resolution (FCR), and Customer Effort Score (CES)
- Operational efficiency metrics such as Handle Time (AHT), transfers, hold count, hold time, cases open/closed, and back-office tasks opened

This use case illustrates an improvement in First Contact Resolution (FCR), captured from Genesys Info Mart or from 3rd-party surveys (for inbound voice interactions, for example). The use case also illustrates service-related KPIs, where the data for the KPIs is available in Info Mart or another available data source.

Predictive Routing also applies to Sales & Marketing KPIs. See Genesys Predictive Routing for Sales (SL06) for Genesys Engage on-premises

Traditional routing matches customers to agents through skills-based or queue-based logic. The goal is to maintain a service level, rather than to improve a KPI. Predictive Routing differs from traditional routing in that it uses machine learning to detect patterns in historical data from Genesys Info Mart and other third-party data sources. The predictive algorithm then uses these sources to build a model that predicts the business outcome of a customer's interaction when handled by an employee.

The predictive model works to improve KPIs by ranking agents according to their predicted impact on the business outcome. It then assigns the interaction to the highest ranked available agent. A/B testing measures the real-world impact of Predictive Routing on the target KPI by comparing Predictive Routing performance against the existing routing strategy.

Use Case Benefits*

The following benefits are based on benchmark information captured from Genesys customers and may vary based on industry, lines of business or Genesys product line:

Use Case Benefits	Explanation
Improved Customer Experience	Reduce misroutes or repeated transactions to improve customer satisfaction by targeting the

Use Case Benefits	Explanation
	best agents to resolve different types of calls.
Improved First Contact Resolution	Improve First Contact Resolution by routing the interaction to the most proficient Agent available to handle it.
Reduced Employee Attrition	Improve Employee Experience by routing work to the Agent that they are more efficient or “good” at more often.
Reduced Handle Time	Reduce transfers and conferences by routing interactions to the best qualified agent and reduce average handle time by having more efficient workers take each interaction.

Summary

Organizations seeking to improve the level of customer service offered to their customers realize significant benefits from Predictive Routing. Machine learning models configured to optimize metrics such as First Call Resolution are at the core of the solution.

A customer calls the contact center, and Predictive Routing uses the data captured about the customer, their journey, and the current interaction to rank all available agents according to their predicted probability of resolving the call. Configuration options manage and balance the Service Level (speed to answer) with connecting to the most suitable agent. The result is a reduction in repeat contacts and improved FCR.

The outcome data feeds back into the machine learning model to inform future predictions. Impacts on KPIs and the performance of the machine learning models are available via real-time reports.

Use Case Definition

Business Flow

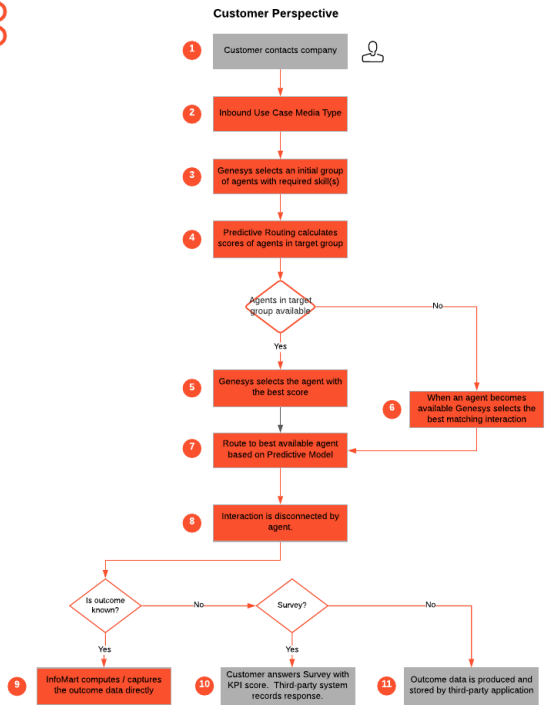
This business flow shows the use case from the perspective of the customer and agent.

Business and Distribution Logic

Business Logic

Routing Step 1

- Using a supported channel and media type, the customer creates an interaction. As the interaction is handled and traced through your environment, data is captured that enables you to determine the outcome for the metric you want to optimize.



Business Flow Description

1. The customer contacts the company using the inbound voice channel. This inbound interaction can be the result of a proactive rule on a web or mobile application.
2. One of the Inbound use cases for the corresponding media type handles the interaction and captures interaction context data. The exact data captured depends on the interaction and engagement type.
3. Based on the interaction context, Genesys selects an initial group of agents with the required skill(s) as possible routing targets to handle the interaction.
4. Predictive Routing calculates the scores of the agents in the target group using a machine learning model that takes into account the agents' historic performance on similar interactions.
5. When there are multiple agents available, Genesys attempts to route the interaction to the available agent with a highest score.
6. If there is an interaction surplus and an agent becomes ready, Genesys selects an interaction from the queue taking into account the priority of each waiting interaction, the score the agent has for each interaction, and the time the interactions were queued.
7. If no agents are available within the configured timeout, the routing strategy expands the potential target pool of agents by reducing the skill requirements and then repeats the target agent selection using Predictive Routing.
8. After dealing with the customer call, the agent disconnects the interaction.
9. The outcome is mapped to Genesys Info Mart attribute (for example, a disposition code or custom key-value pair).
10. Optional: The customer is offered a survey. The answer to the survey is stored in a third-party system.
11. Optional: Outcome data, such as case management closure, is produced and stored by a third-party application.

- Prerequisite: This use case requires inbound call routing.

Routing Step 2

- The interaction use case identifies the customer's primary intention (Service Type) and sets the initial target skill expression.

Routing Step 3

- This step queues the interaction and is designed to cover both agent surplus and customer surplus scenarios. When either one or multiple agents are available (agent surplus scenario), the flow immediately proceeds. Otherwise, Genesys queues the interaction until an agent is available (customer surplus scenario).

Routing Step 4

- The predictor information along with necessary call information (Customer Profile, Interaction, Agent Profile) passes to Predictive Routing as a scoring request once one or more agents are available. The relevant machine learning model processes the request, resulting in a score for each available agent for that interaction. This process handles both customer surplus and agent surplus scenarios.

Routing Step 5

- The customer-to-agent matching provides the interaction score for each of the agents to the routing engine to identify the agents that can deliver the highest benefit to the target KPI. In an agent surplus scenario, the model compares the score of the highest ranked agent to the configured minimum score threshold. If the score is below the threshold, then the interaction is held until a higher-ranked agent becomes available or the threshold is reduced.
- In a customer surplus scenario, where multiple interactions are waiting when an agent becomes available, the agent’s scores for each waiting interaction are compared with the minimum score threshold. If the agent score exceeds the threshold for at least one interaction, the system proceeds to route the highest scoring interaction. If not, then the agent remains unassigned until a lower-scored interaction becomes available or the threshold is reduced.

Routing Step 6

- The minimum score threshold is reduced over time according to the preconfigured fallback strategy.
- The checks in Routing Step 5 repeat regularly until an agent-interaction matchup meets the threshold requirements.
    - Normal target expansion, such as relaxing skill level as configured within the underlying distribution strategy, occurs.
    - The continual reprioritization of the interaction also occurs, as do any treatments and the standard queued customer experience.

Routing Step 7

- The system delivers the interaction, handling any ring on no answer and exception situations as defined in the underlying use case.
- The customer and the agent connect.

Routing Step 8

- The interaction ends when the customer or agent disconnects the call.

Routing Step 9

- The agent workspace or a server-side process captures the interaction outcome. Genesys APIs invoke, either automatically or after an agent action, to map the outcome to a Genesys interaction attribute, which can be custom attached data or a disposition code.
- Genesys Info Mart captures this attribute in the Info Mart interaction record.

Routing Step 10

- Optionally, the customer receives a survey.
- If the customer completes the survey, the system collects and stores the outcome through a 3rd-party application.

Routing Step 11

- Optionally, a third-party application produces and stores the outcome data.

Distribution Logic

The inbound use case provides details of the distribution of an interaction to an agent. Refer to the flow above to understand how Predictive Routing influences the distribution logic.

User Interface & Reporting

Agent UI

Target agents can review Attached Data/Case Data when an interaction routes to their Agent Workspace.

Reporting

Real-time Reporting

Predictive Routing does not include real-time reports. Operational reports are available in the Predictive Routing UI.

Operational reports include:

- KPI Outcome
- Feature Coverage
- Model Accuracy

Historical Reporting

The historical reports available through GCXI are the following:

- Predictive Routing Operational Report - tracks Predictive Routing operational statistics.
- Predictive Routing A/B Testing Report - tracks A/B testing results for Predictive Routing models and predictors.
- Predictive Routing Agent Occupancy Report - tracks Agent Occupancy while Predictive Routing is being used to optimize routing.
- Predictive Routing Daily Queue Statistics Report - tracks KPIs for each Queue while Predictive Routing is being used to optimize routing.
- Predictive Routing Detail Report - interaction-level detail data about Predictive Routing use and its impact on KPIs.

*A/B reports can be developed from any standard or custom Info Mart data. If the outcomes data is NOT integrated with Info Mart, the creation of A/B reports must be evaluated as a separate effort.

Customer-facing Considerations

Interdependencies

All required, alternate, and optional use cases are listed here, as well as any exceptions.

All of the following required:	At least one of the following required:	Optional	Exceptions
None	**Inbound** • Genesys Call Routing (CE01) • Genesys Personalized Routing (CE02)	**Digital** • Genesys Email Routing (CE16) • Genesys Chat Routing (CE18) • Genesys Social Media Routing (CE19) **Workforce Engagement** • Genesys Performance Management (EE14)	**Digital** • Genesys Co-browse (CE27) **Inbound** • Genesys Callback (CE03) **Outbound** • Genesys Outbound Dialer (CE11) • Genesys SMS & Email Notifications (CE12) **Self-Service and Automation**

All of the following required:	At least one of the following required:	Optional	Exceptions
			• Genesys Customer Authentication (CE07) • Genesys Voice Payment (CE08) • Genesys IVR Personalization (CE09) • Genesys Multimodal IVR (CE10) • Genesys Knowledge Management (CE28) • Genesys Chatbots (CE31) • Genesys Voicebots (CE41)

General Assumptions

- Requires Product Management approval.
- Predictive Routing solution is offered to on-premises customers in a hybrid architecture that incorporates core functionality served from the components deployed in your own environment.
- Predictive Routing is offered as a managed service by Genesys Professional Services, who deal with all aspects of machine-learning model creation and maintenance. A Professional Services package is mandatory for implementation and support of Predictive Routing.
- The standard deployment materials address Inbound voice interactions based on Genesys Info Mart data only.
- Integration of additional data sources, whether Genesys or 3rd-party, requires a dedicated assessment and implementation by Genesys Professional Services.
- Customer must have implemented a use case for one or more channels and have deployed Genesys Info Mart reporting. These use cases populate the data used to build predictors and models, which direct how interactions are routed. Note that the capture and analysis of FCR KPIs is not part of Genesys Info Mart out-of-box statistics and is developed during model creation.

Note the exceptions where Predictive Routing cannot be integrated listed in the interdependencies section:

- Self-Service use cases
- Outbound preview and agent reservation used for Predictive and Progressive outbound

Customer Responsibilities

- Customer has already optimized traditional routing strategies and processes and wants to achieve further improvements.
- Customer has all compatible versions of URS, IRD, Genesys Info Mart, GCXI, and Pulse; or upgrades have been scoped in to the project plan.
- Customer has the necessary systems and processes in place to track results and measure impact over the life of the model.
- Customer identification is available and stored in Genesys Info Mart.

Related Documentation

Data Loader

Enables you to upload data, including dataset configuration and upload scheduling.

- Deploy Data Loader
- Configure Data Loader to upload data
- Configure Data Loader for Feature Engineering
- Set up data for import

Routing and Reporting integrations

The URS Strategy Subroutines component integrates with your existing Genesys Routing environment. Genesys Reporting produces reports based on KVPs that capture Predictive Routing interaction handling and outcomes.

- Deploy the URS Strategy Subroutines
- Integrate with Genesys Reporting

Model performance

The GPR web application is the user interface that provides reports on feature coverage and model accuracy.

- Monitor trends and performance

Document Version

- Version **v 2.2.1** last updated **October 28, 2025**