

Seamless IVR Solutions

Mastering System Conversion & Overcoming Challenges



Client Profile

Industry: Telecommunications

Solution: Contact Center Solutions

Client: Fortune 50 Telecom Provider

Client Relationship History

Since 2007, Kenway has supported clients with its Contact Center Solutions capabilities, including interactive voice response (IVR) customer experience design, development, call center consulting and management.

In 2020, a Fortune 50 telecommunications provider asked Kenway to assist with retiring the legacy IVR experience and platform of a recently purchased company. The project included developing the customer experience on the target IVR software, integrating new application programming interfaces (APIs), and providing the client with overarching project leadership and guidance.

What is an IVR

An IVR is an automated system that allows customers to interact with a company using voice commands and touch-tone inputs.

For example, an IVR can find a caller's billing information from their account number, authenticate that caller with a password, and collect a payment. If the caller has additional questions or needs further help, the IVR will route the caller to the correct agent.

The Problem

In order to retire the legacy IVR, the client needed to move several legacy experiences onto its current IVR platform. This current platform already contained many different applications, some overlapping with legacy systems but some would need to be built.

The Kenway call center consulting team needed to identify the gaps between the two systems and define an approach to remediate those gaps before moving forward with full IVR architecture integration. Additionally, the legacy IVR used data from systems not currently connected to the target IVR solution, requiring the team to integrate the data through onboard new APIs to identify and support callers.



Four Main Migration Hurdles

Data Source Integration

Gathering customer data from the legacy systems and integrating that data into the target IVR architecture.

Customer Experience Design & Development

Upgrades to existing applications to handle legacy customers & Migrating legacy functions to avoid loss of functionality.

Routing Rules Design

Routing rules connect the different applications on the IVR platform to the client's call centers. If these applications are updated, and new data sources are injected, the routing rules must also be updated to integrate the new data.

Documentation & Data Mapping

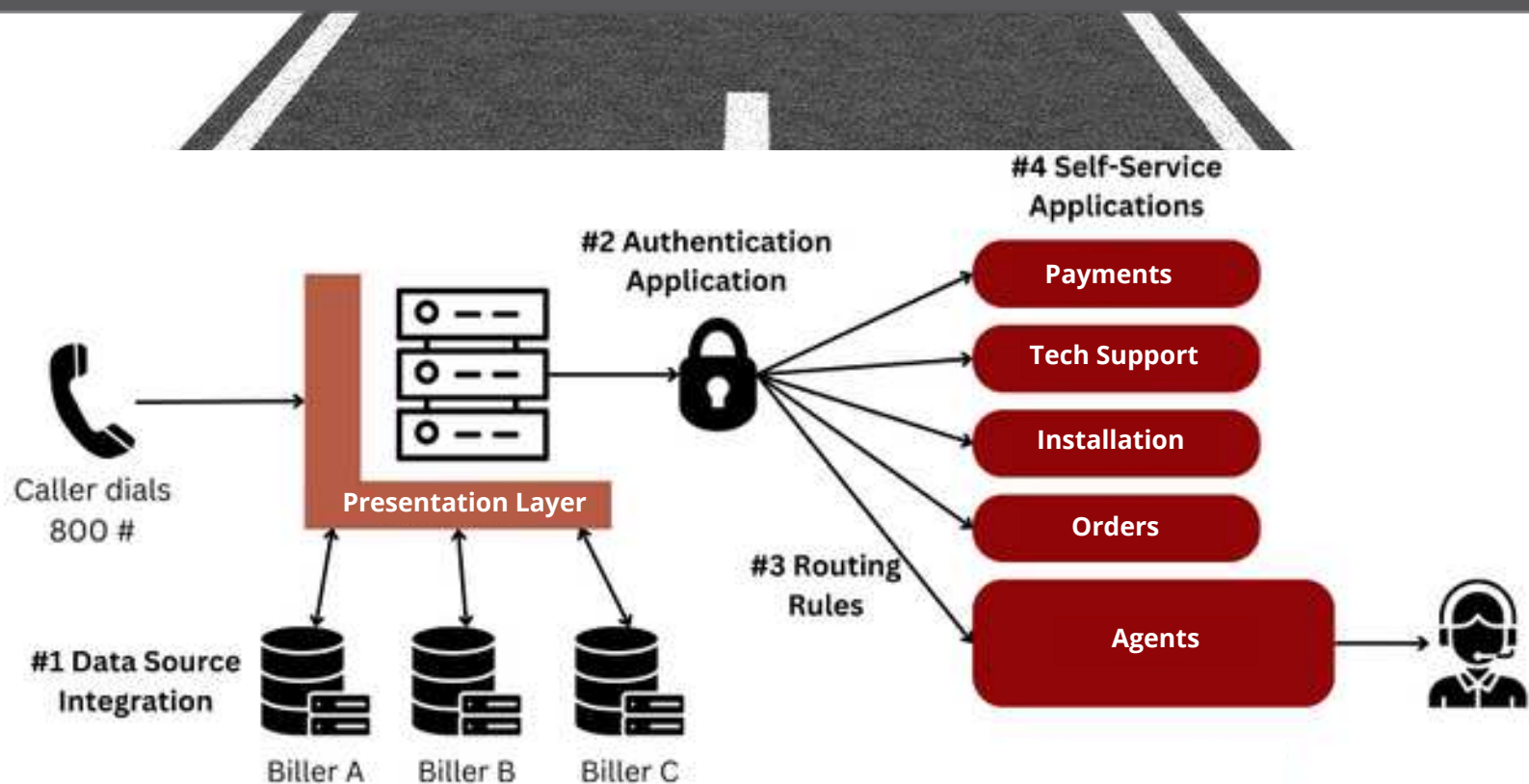
As part of the migration, new APIs were needed to connect legacy back-end systems to the IVR software and the applications. The procedures to build these APIs, the necessary data attributes, mappings, and the business rules were not documented

The Road to a Solution

Upon identifying the hurdles needing to be addressed, our call center consulting team worked with client leadership to build a program roadmap with multiple workstreams based on IVR best practices.

Due to the tight timelines and size of the program, Kenway supported the primary IVR architecture and API integration, managed routing rules design and implementation, and developed both the payments and authentication applications.

Kenway was brought on to ensure data sources were integrated, upgrade the self-service payment application, update routing rules for agents and self-service applications, and create the necessary documentation.



The Solution

Our call center consulting experts applied IVR best practices to design and build a scalable solution that integrated the legacy customer data and systems into a single IVR application for the client.

The team divided the work into two-week sprints using Agile methodology. Minor releases allowed for regular feedback, and allowed the team to work multiple workstreams simultaneously.

Kenway supported the migration with:

-Program Management

-Development

-Agile & Scrum Master Support

-Product Management

-CX Design

Delivery of each of the solutions below covered the complete software delivery lifecycle including requirements, design, development, and testing:

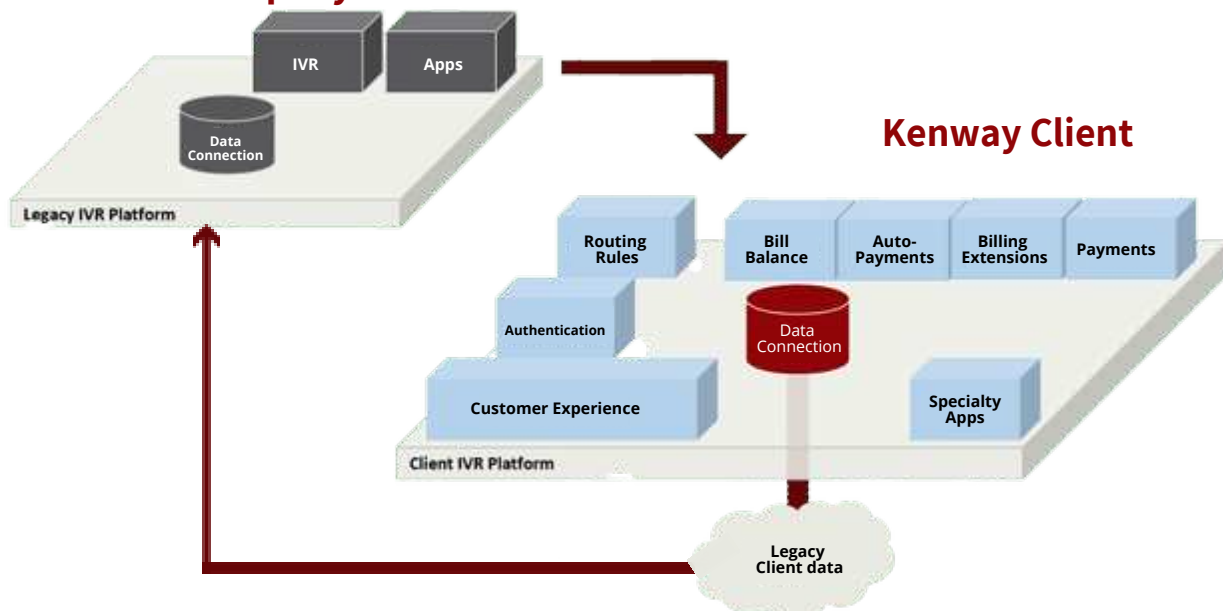
Customer Experience Design: Discovery of the existing functionality, development, testing and documentation of all the requirements to align with the existing IVR

API Onboarding: Data Integration, including onboarding of new APIs, exploration, development, testing and data mapping

Routing Rules: IVR Architecture and development of the Routing Rules to ensure accurate mapping to the agent

Specialty applications: Design and management for direct-dialed applications

Purchased Company



Customer Experience Design

Kenway used the existing Customer Experience Design documentation from both organizations to understand the flows of the IVR software and business requirements of the integration. The team documented their understanding, and hosted design, discovery and review sessions with the client to ensure alignment.

When gaps were identified in the current experience, the team worked with the client to design a suitable solution and, if necessary, wrote requirements for future enhancements.

Using the requirements defined, Kenway's Solution Architects and Developers designed and implemented a flow using BPMN in Camunda Modeler, Drools Business Rules Management, and Java for API development.



The developers then used JUnit testing to validate the functionality of each artifact upon creation or modification. Kenway's team of analysts worked closely with the developers to validate the functions in System Test environments and again in the UAT phase, which mirrors production.

This collaborative process allowed Kenway to confirm, for example, that a customer's payment was processed correctly, applied to the customer's balance, and the account was noted that the IVR took the payment.

API Onboarding

Identifying legacy customers is critical for a successful IVR experience and accurate routing. The Kenway team needed to determine the impacted services and document the business rules associated with the APIs to recreate them on the client IVR software.

To integrate these APIs with the IVR architecture, the team worked with the client to obtain API credentials and specifications, including endpoint URLs, usernames, passwords, etc. This information was then used to develop code to send the required parameters to external services that would perform specified actions, such as returning customer data or updating a customer account.

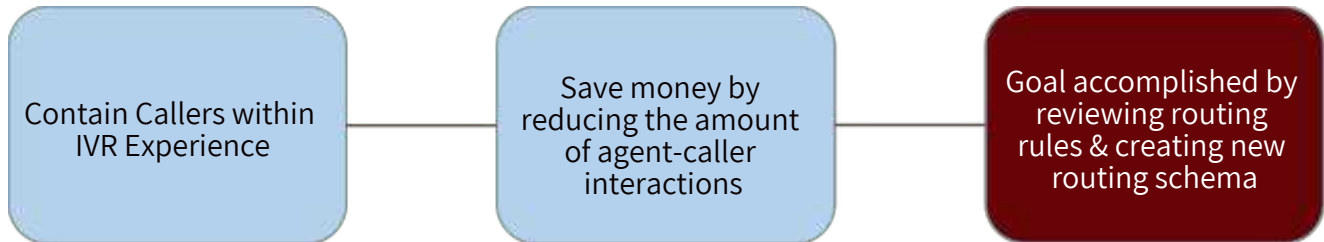
Kenway developed methods to process the response from each external service. Those methods included standard ETL practices to parse any response data as needed, so that all data could be presented in a meaningful way to the IVR framework.



In addition to capturing the necessary data, the team wrote responses for each status code to provide messaging for reporting and troubleshooting. This allows analysts to understand why an API is failing and helps drive improvements in a streamlined fashion. For these development tasks, Kenway created a new Git project that utilized Maven for dependencies and organized code in Java classes.

Routing Rules

The team then conducted additional analysis and testing for APIs connected to remitting and clearing payments in the legacy treasury system, ensuring that customer accounts were updated appropriately.



Routing also involves moving between applications on the platform to enable a self-service experience.

Not all callers are eligible for self-service, so Kenway worked with the client to identify the personas ineligible for the flows, identified the corrected data from the API to segment the callers, and built screening and routing rules to ensure the right callers got in and were appropriately routed to an agent.

Specialty Applications

Kenway's current state analysis identified IVR functions unrelated to the primary customer experience. The call center consulting team worked with the client's Solution Architects to design individual, specialized applications to support these functions so that callers could directly dial these specialized flows for support.

Each flow came with unique data requirements, specific prompting, and unique routing. The applications also required the migration of nearly 4,000 toll-free numbers. Kenway managed this migration to ensure that as the new experiences were ready for production, the team could incrementally throttle up the volume from the legacy flow to the new flow to ensure proper handling.

Cross Functional Support & Program Management

Across the program, the call center consulting team created a data mapping spreadsheet to be used enterprise-wide for all other APIs, and transitioned documentation about how the APIs the team created work.

The team supported each work stream with multiple skills, including business analysis, documenting and reviewing requirements, supporting the development teams, and performing User Acceptance Testing (UAT). Additionally, Kenway hosted a "scrum of scrums" and provided overall program leadership and architectural support.



Challenges

Availability of Documentation

It is difficult to avoid challenges in programs of this size that involve important customer functions, platform migrations, and systems integration. Documentation was a consistent pain point, as information about the legacy IVR architecture and design was outdated and limited if it existed at all.

It was critical to understand what the new source data represented and how to translate it to the existing business rules and new APIs. Authenticating connections to the legacy APIs proved difficult due to incomplete current state documentation.

Legacy IVR

Documentation was not only lacking for APIs but was also lacking in terms of information about the legacy IVR solution's applications and routing. Leveraging existing documentation, technical skills, and subject matter expertise on user requirements is a common challenge with systems integration.

Testing Data

Kenway encountered challenges with obtaining compliant testing data. There were difficulties in pulling accounts to test all variations for all payment scenarios.

The client did not have a robust Test Data Management system, making this a heavy-lifting effort. Test data procurement depended on external resources, and turnaround times for test data requests depended on their availability.



When documentation failed to provide answers to questions, **Kenway overcame the challenge by performing its own data discovery or investigation of source code line-by-line.** In some cases, Kenway facilitated conversations between disparate groups until a resolution could be reached. In one such case, Kenway engaged the client's security team to uncover internal firewall requirements for onboarding new APIs to overcome persistent authentication issues.

What We Delivered

Kenway's call center consulting team successfully delivered a fully functional and integrated customer experience enabling the legacy system to be retired, on time and within budget, that matched or exceeded the levels of the legacy IVR architecture. The team integrated all APIs and systems onto one platform and ensured incoming and outgoing calls were handled correctly. As part of this systems integration, the client also realized the following benefits:

Consistent Branding

Removing the legacy IVR allowed the client to use a consistent voice, tone, and phrasing throughout the different IVR experiences.

Enhanced Reporting

By integrating the experiences, all data flowed through the client's target IVR and reporting infrastructure.

Unified Customer Experience

The new experience was cohesive from a branding perspective since callers who dialed the legacy IVR no longer heard different prompts than if they called the target IVR.

Streamlined Change Process

Eliminating the legacy vendor IVR removed an entire change control process, and simplified project intake.

Enhanced Routing Rules

Linking new with existing APIs provided a more robust view of callers & allowed the client to introduce more granularity to its routing rules.

Reduced Cost

The client removed a sizeable recurring management cost by eliminating the legacy vendor IVR.

With the applications up and running, calls routing correctly, and all toll-free numbers migrated, the client ended its contract with the legacy vendor on time **saving them millions of dollars annually**.

After Kenway's transition, the client could maintain and manage all existing functionality and customer data without outside vendor support.

If you're ready to take the next step in optimizing your IVR architecture or IVR software, connect with us to discuss how our call center consulting experts can help your company achieve seamless IVR migration.



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