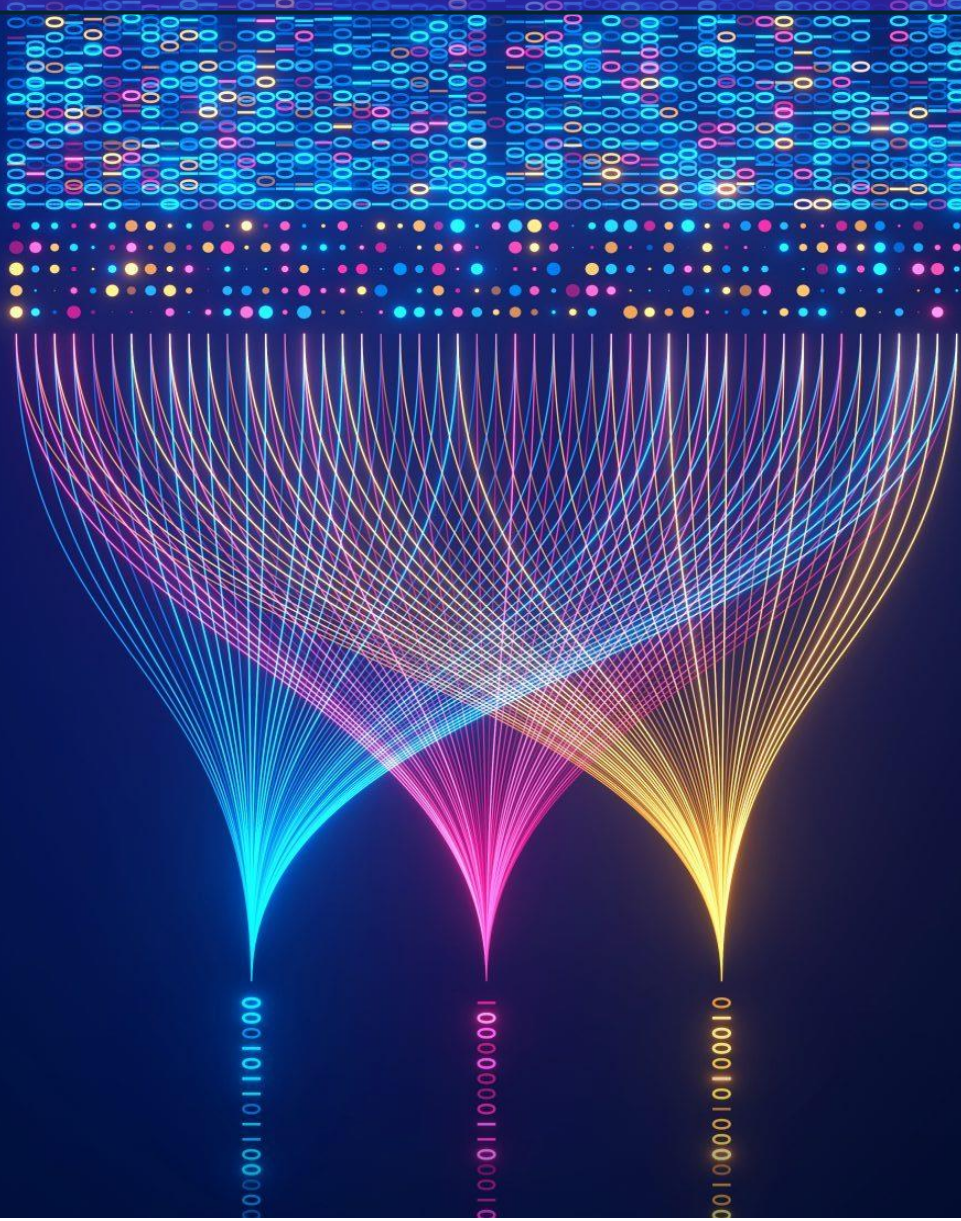


ALLWYN

MODERNIZATION OF CUSTOMER SERVICE OPERATIONS



Summary

Legacy reservation management systems used by customer service agents have been in operation for more than two decades. While they remain functional, the technology is often outdated and approaching end-of-life. Designed as a text-based interface within a basic operating system framework, these systems require agents to memorize numerous codes and commands to complete common tasks. This complexity often leads to longer training and onboarding periods, reduced operational efficiency, and lower employee satisfaction — all of which negatively affect retention and overall business performance.

This whitepaper presents our approach to modernization of Call Center applications using the Appian low code platform. The overarching goal is to elevate agent efficiency by leveraging the Appian low code platform to develop a modern web application capable of translating complex business and data rules into a simple and intuitive interface experience, while maintaining strict adherence to payment card industry data security standards.

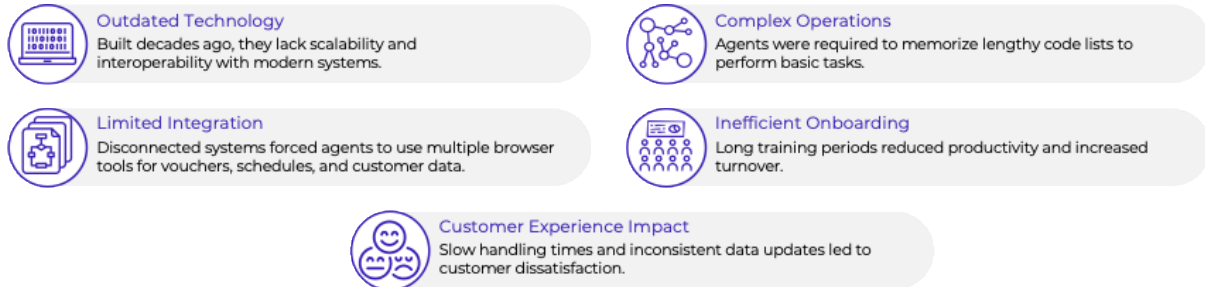
Introduction

- A modern, web-based solution to replace legacy applications with a more intuitive interface and powerful functionality.
- Enable contact center agents to perform customer service tasks such in real-time and more efficiently.
- Integrate with internal customer ecosystem through and Enterprise Service Bus allowing agents to seamlessly support customers from a single system.
- Ensure security and PCI-DSS compliance.

By leveraging Appian's low-code environment, Allwyn rapidly built, tested, and deployed a modular architecture that streamlines operations while setting the foundation for future automation and AI-driven decision support.

Problem Statement

Legacy platforms present several critical challenges:



Our Solution

Our solution is designed as a modern, low-code web application that replaces the legacy platform and unifies all contact center functions under one secure interface.

Core Capabilities

- Built on Appian Low-Code Platform for rapid configuration and iterative design.
- Real-time data integration with customer's core systems via an Enterprise Service Bus (MuleSoft or AWS).
- AWS-hosted infrastructure for scalability and reliability.
- Compliance with PCI-DSS, OAuth 2.0, SAML SSO, and TLS 1.3 standards.
- A centralized admin portal for role-based access, configuration, and support tools.

Key Features

Agent Experience

- Unified dashboard to perform tasks such as creating and modifying travel reservations.
- Support for One-way, Round-trip, Multi-ride, and Auto Train trips.
- Passenger profiles for Adults, Children, Seniors, Unaccompanied Minors, Military, and passengers with disabilities.

- Real-time ticket availability and seat/accommodation maps.
- Digital support for eCoupons, eVouchers, and AGR redemptions.

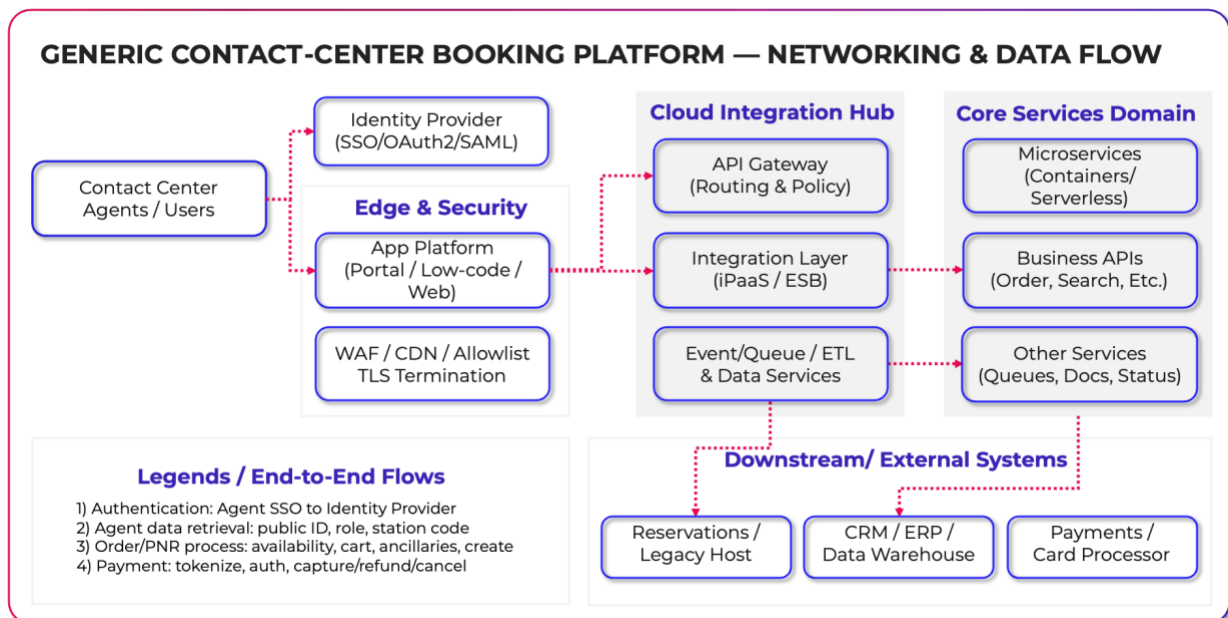
Operational Efficiency

- Search reservations by name, card number, or confirmation number.
- Built-in pricing, priority offload, and multi-segment management.
- Configurable admin tools for login management, feedback submission, and bug reporting.
- Real-time communication integration via microservices.

Technical Architecture

The architecture bridges multiple secure environments while ensuring seamless interoperability.

- Application Layer: Appian Low-Code Platform for web-based, mobile-ready UI.
- Integration Layer: MuleSoft and AWS APIs for real-time data exchange.
- Data Layer: AWS Cloud/VPC for secure data hosting.
- Security Layer: OAuth 2.0, SAML SSO, TLS 1.3 for authentication and encryption.
- Traffic Control: Akamai for trusted IP management.
- Scalability: AWS Fargate Containers for microservice execution.



Authentication & Data Flow:

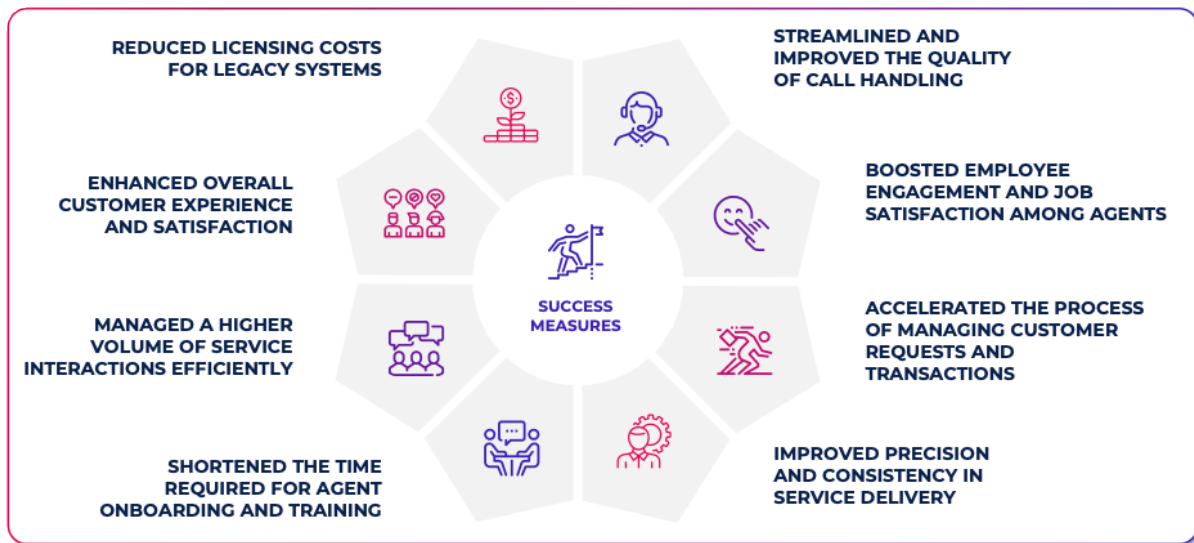
- Agents authenticate via SAML SSO.
- Appian retrieves agent metadata through microservices APIs.
- Reservation data flows through Akamai, MuleSoft, AWS PCI VPC.
- Sensitive data is tokenized via Mulesoft CDE.

Security and PCI Compliance

The platform was architected to meet PCI-DSS and industry security standards.

- Dedicated Amazon VPC with private API gateways.
- Tokenization of sensitive cardholder data through MuleSoft CDE.
- TLS 1.2/1.3 encryption for all communication.
- Appian attestation confirming PCI-DSS compliance.

Success Measures



The Road Ahead

The future of modern Customer Care Centre is defined not only by the adoption of new technologies but also by an AI-powered service model. This AI model enables 24/7 omni-channel engagement, empowers agents through intelligent tools, and delivers measurable improvements in customer satisfaction, agent performance, and operational efficiency.

These AI features are enabled by Generative AI and LLM-based orchestration that transforms customer care centres with intelligent virtual assistants, generative AI-enabled knowledge and email management, real-time skill-based agent routing, and workforce optimization.

Here is an overview of the high-level AI features for the call centres:

AI Feature	AI Capabilities
Intelligent Virtual Assistants	AI Virtual Agents, NLP & Conversational AI, multilingual omnichannel, profile integration, autonomous support
Knowledge Base Platform (GenAI)	Dynamic knowledge surfacing, content creation via GenAI, proactive suggestions, consistent updates
Email Management (GenAI)	AI-driven email routing and drafting, intent detection, profile-based personalization, workflow automation
AI Skill-Based Routing	Skill-based routing, performance-aware agent matching, dynamic load balancing, GenAI readiness

Conclusion

In conclusion, the project successfully modernized an outdated legacy system into a streamlined, intuitive, and integrated digital workspace that significantly enhanced operational efficiency and user experience. By leveraging a low-code development platform, the team delivered a scalable, secure, and adaptable solution that simplified complex processes, reduced training time, and improved overall productivity. Through close collaboration between technical teams and business stakeholders, the project achieved rapid prototyping, iterative enhancements, and seamless integration with existing enterprise systems. The resulting platform not only optimized day-to-day operations but also established a sustainable foundation for future growth, innovation, and digital transformation.

For more information on how Allwyn can support your organization's digital transformation efforts, please contact us at info@allwyncorp.com.

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Allwyn Corporation (www.allwyncorp.com) is a forward thinking, innovative software solutions company, headquartered in the Metropolitan Washington DC area. Allwyn was founded in 2003 with a mission to help organizations address complex technology challenges by providing industry-leading tools, technologies, seasoned professionals, and proven methodologies. We are proud to be certified for ISO 9001 (Quality), ISO 27001 (Security), and ISO 20000 (Service Delivery).

With a global team of ~150 professionals, Allwyn delivers high-quality services to a wide range of clients in the public and private sector.

Allwyn has been providing leading-edge IT professional services to various government agencies through the GSA MAS Schedule. We are also on the FAA eFAST, GSA OASIS+, and GSA STARS III contract vehicles.

Allwyn has experience with implementing Artificial Intelligence and Machine Learning solutions and Modernizing Applications using Low Code Technologies. Our relationships with AWS, Appian, ServiceNow, Microsoft, Databricks, Informatica, Salesforce, etc. strengthen our ability to support our customers in their Digital Transformation journey. We are already supporting several of our customers in the public as well as commercial sector with their cloud adoption strategies and Artificial Intelligence and Machine Learning implementations. For additional information on Allwyn's full range of services, please visit our website at www.allwyncorp.com.

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