

Making data AI-ready

Prepare and secure data for
personalisation at scale



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Organisations are adopting artificial intelligence (AI) with expectations of creating better and more personalised customer experience. They also want capabilities that will improve employee engagement and reduce overall operational costs. But realising AI's potential isn't always easy; there are obstacles to overcome.

In its report, **3 Barriers to AI Adoption**, Gartner lists the quality and scope of data as one of those obstacles. Businesses understand that they need large volumes of data for a successful AI initiative. But often, these are big IT projects that require significant investments to collate data into a useable and valuable form.

In addition, as with all data relating to customers and agents, data security is a critical concern. It must be addressed to ensure that data sovereignty, consent to process and retention laws are adhered to no matter what the jurisdiction. Therefore, data security is also critical in the context of value creation with AI.

One: AI and the problem of unusable data

The proliferation of customer engagement channels is flooding businesses with data. That should be a good thing — giving businesses valuable insights into target markets. But when it's collected into siloed and disjointed systems, AI tools can't use the data. It's in data pools that aren't consolidated; it's not actionable in real time; it's not in a shape that's amenable for use in AI. Often referred to as dark data, it lacks a coherent schema across systems. And that leaves you with unknown and untapped data that you can use for compliance but not much else.

60% of respondents report that half or more of their organisation's data is dark.

Splunk Global Research Survey, "The State of Dark Data," 2019 →

Two: The Genesys approach to AI-ready data

Genesys provides AI-based features and tools within our customer engagement platform that don't require your team to have deep AI knowledge. Because we do the heavy lifting, you can focus on finding the right use cases and apply AI to solve real-life problems. You're the driver, not the mechanic. And this journey begins with how we collect data.

Making data ready

The Genesys Cloud™ platform offers easy-to-implement methods for building 360-degree customer views. To do this, we gather event data from your web, digital and back-end systems, complemented by conversational and agent events generated within the platform as customers engage with your business. We then stream this event data through the system from event to action in hundreds of milliseconds — in real time.

Event-driven orchestration at every step of customer engagement

Your business can react in real time to customer-related events from your digital assets and back-end systems and engage via chat, email, SMS, digital content offers, callbacks and more. This is possible using orchestration workflows that a business admin creates around critical events or sets of actions. These workflows incorporate AI elements, including the probability of a customer achieving a desired business outcome.

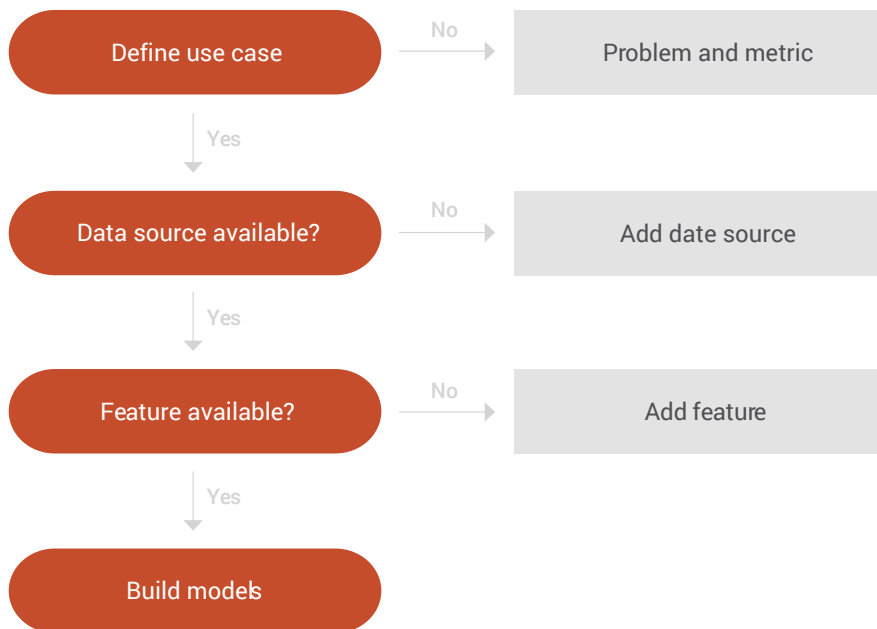
Using low-code or no-code mechanisms, you can extend the platform's data integration to any back-end system that's relevant to the customer experience, including ERP, delivery, billing and eCommerce. And you can build out your ecosystem over time to continually improve engagement. No massive IT project is required.

Use the customer data the platform gathers to make your bots smarter. That means agents won't have to ask the customer the same question twice. If a conversation lands on an agent's desktop, we provide that agent with a summary of the customer's recent interactions with all areas of your business.

Agents can resolve issues more efficiently and with less frustration for the customer. This is true whether it's for authentication or relaying details of the customer intent. By making the most of your web and conversational events, Genesys lets you quickly gain an understanding of the insights gleaned from the data and put them to use immediately.

Genesys Feature Store aggregates and transforms data across products

The data streamed into the Genesys Cloud platform is transformed into AI-ready features in the Genesys Feature Store, a central catalogue of aggregate data pulled from hundreds or thousands of interactions across customer engagement systems. The Feature Store is a cornerstone of the platform that allows reuse and sharing of curated data features across products.



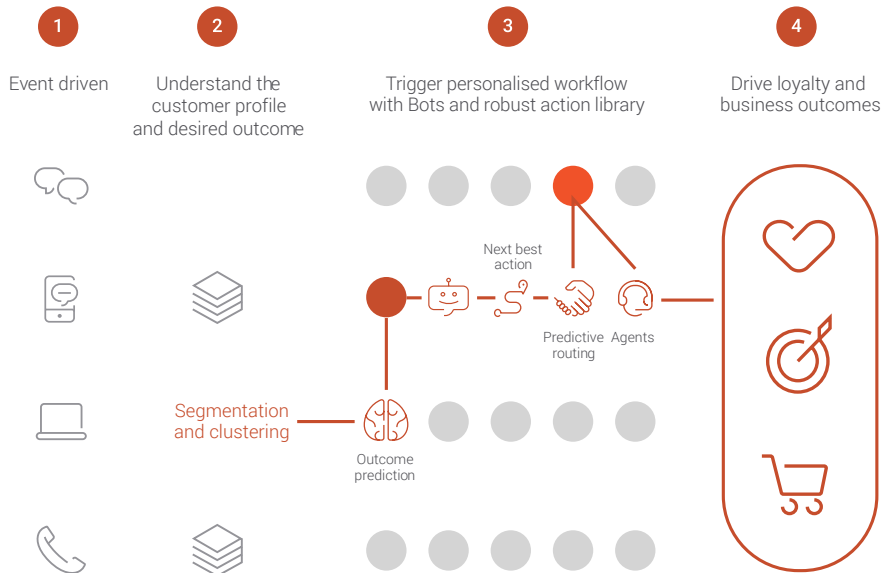
When experimenting with data to improve AI models, data scientists handle only anonymised data – further reducing scope for data breaches.

This approach enables automated development of quality machine learning models at scale in a repeatable and automated way. It enables the AI product to scale so that you don't need an army of data scientists to benefit from it.

Services built on well-defined, real-time data

We also build services on top of our event-driven platform. For example, Outcome Scoring determines that you need to take action while Next Best Action determines which action to take. And, as with any open platform, you can connect to native and third-party bots to fit your specific needs.

The platform enables us to bring it all together



Innovations in the Genesys Cloud platform transform contact centres into AI-powered experience centres.

These services, along with the models created with the data in the Feature Store, make it easy for Genesys to implement a range of AI applications, such as predictive routing and predictive engagement. Because the data is in a common form, we can use the output from predictive engagement and predictive routing tools to drive workforce engagement management solutions.

Let's see how these work together to drive better employee and customer engagement.

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Three: Genesys Cloud drives engagement

Genesys Cloud gives you a customer engagement platform that's designed to serve as a single repository for all data. Within the platform, data from one application feeds services and capabilities – even when applications are purchased individually. The applications and workflows built on top of the data extend, complement and reinforce each other so that all applications are smarter.

Genesys AI orchestrates the entire customer experience across the engagement.

- Take action, such as triggering pre-emptive outbound engagement, based on business processes.
- Use webhooks to integrate your customer engagement platform to third-party systems.
- Take custom events from back-end systems and send out webhooks to update those systems or trigger engagement with a particular third party.
- Use our suite of out-of-the-box integrations with marketing automation and CRM systems.

Predictive engagement uses AI and machine learning to drive personalised experiences

Connect with your customers at precisely the right time, with the right information.

Data and insights derived by Genesys Predictive Engagement about what a customer was doing on the web can be used to inform chat or voicebot workflows. It can seed the bot with customer intents and slots, thereby significantly reducing the friction of the bot engagement.

The data also flows to agents, giving them a full view of the customer with the context of the call, including milestones of their journey to this point and a summary of their intent. In just seconds, agents can consume these insights and get to the heart of the customer's problem immediately, thereby reducing handle time. It's less stressful for agents and a better experience for your customer.

Offering a personalised experience shows customers empathy; and those feelings of empathy build trust and drive customer loyalty. Having real-time personalised data throughout every step of the engagement is critical to understanding and influencing the experience.

With Genesys Cloud, you can see that a customer on the web or mobile app is the same customer who just escalated to a call. Genesys orchestrates the right mix of digital, self-service and human interactions. We create a personalised workflow with bots, present them with content and guide them to the outcome that you define. In fact, event-driven orchestration is fundamental to everything we do.

Even if a customer isn't active, you can proactively engage to show them that you know them and understand their needs before you meet them – and before they even indicate there's a problem. For example, if a customer is exceeding data plan limits with their mobile, you can set up a trigger to proactively contact them and offer a different plan to better suit their specific needs.

“By 2022, 50% of large organisations will have failed to unify engagement channels, resulting in the continuation of a disjointed and siloed customer experience that lacks context.”

Gartner: The Future of the Customer Engagement Centre, July 2019

Predictive routing connects customers to the right agent at the right time

Part of orchestrating great personalised customer experiences means being able to route your customers to a live agent at the appropriate time. By leveraging customer data, insights obtained during the session and AI features available in the Feature Store, predictive routing uses machine learning models to connect the customer with the best available resource.

This AI-driven approach to routing improves business outcomes – resolving a query the first time, closing that important sale, or cross-selling an additional product or service. Those outcomes drive increased revenue, improved customer satisfaction, operational savings and overall improvement in the lifetime value of a customer.

Predictive routing is a key element in simplifying and improving existing routing configurations. And with our push-the-button functionality, it's easy to deploy predictive routing and see fast business results.

Effectively managing customer journeys requires an understanding of important touchpoints and intelligently predicting how customers will engage all along the journey. You'll also use AI-powered automation to proactively trigger engagement – whether it's with chat or another channel.

Conversational AI creates human-like conversations

Integrating conversational AI with the Genesys Cloud platform allows you to create scalable, personalised customer experiences – without having to build logic manually. Conversational AI uses natural language processing to analyse data to make better-informed decisions. In addition, you can streamline operational processes and customer engagement – and consistently grow revenue streams.

Four. The Genesys approach to AI security

Not only does Genesys collect and manage data in an extremely useable way for AI initiatives, we also take a world-class security stance to protect it.

When experimenting with data to improve AI models, data scientists handle only anonymised data – further reducing scope for data breaches.

Validation for Genesys Cloud

Genesys Cloud products and services meet the rigorous standards and compliance needs of our customers, including how we handle sensitive business data. We demonstrate this commitment through independent third-party audits and [numerous industry certifications](#).

Genesys adheres to multiple regional and industry-specific regulatory compliance standards – and it all starts with our own infrastructure.

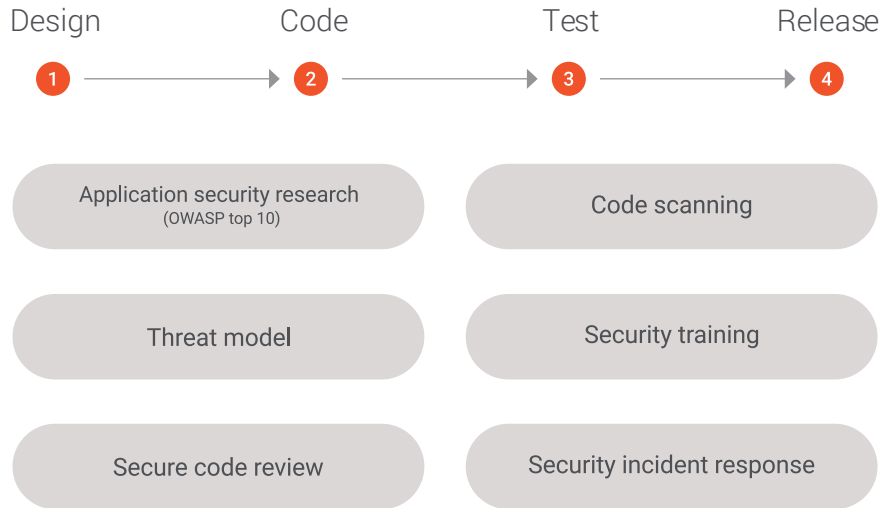
Security built from the ground up

At Genesys, security begins long before technology hits the contact centre. We build it into our solutions and deliver them via the Genesys Cloud public API, with best-in-class security mechanisms that are built from the ground up.

With security as a full partner to development, we continually test and review code using commercial and in-house automated and manual toolsets. We also perform dynamic code analysis and third-party vulnerability assessments. These processes and tools ensure that appropriate fixes are in place to maintain a high security posture. In addition, Genesys engages an independent third-party company to perform penetration testing for an objective assessment of the cloud service on an annual basis.

We [continuously re-certify and re-register](#) our products and services – and comply with laws and regulations like US Health Insurance Portability and Accountability Act (HIPAA). And we apply these controls to every application and feature through mature security integration in the Software Development Life Cycle (SDLC). We also follow strict change management practices.

Application security and secure SDLC



We use a wide variety of security tools, processes and industry best practices throughout the development cycle.

Authentication and authorisation

Multi-factor authentication logs and monitors all user activities. We also periodically review privileged user access. These role-based access controls ensure that only users with the proper authority and legitimate business requirements access your data.

Anonymisation of data used for service improvement

We anonymise any data we use for service improvements. This means that data scientists who are experimenting with data to improve AI models only handle anonymised data, which further reduces scope for data breaches. In addition, access is controlled and audited as if it was production data.

DDoS attack protection

Genesys Cloud uses AWS Shield, a managed Distributed Denial of Service (DDoS), and we follow AWS best practices for DDoS protection. In addition, Genesys Cloud consumes many resilient services, including load balancers. It operates with the AWS Security Group and Virtual Private Clouds with granular security groups to control ingress points and limit the attack surface.

For more details on Genesys AI security, please visit the [About security and compliance](#) page.

Whether you're a customer or just curious, you can view operational status for all our regional systems. View live updates and get proactive notifications at [Genesys Cloud System Status](#). →

Schema enforcement for data traversing the API

Genesys created a GDPR API that lets you implement your customer requests to exercise their data rights. With this API, cloud users can establish a mechanism to easily access and manage private data at the request of customers.

Genesys data centres in nine global regions

With data centres recently added in Canada, Korea and the UK, we've continued to expand [Genesys Cloud regional availability](#). These regions enable you to meet compliance and data sovereignty requirements by keeping data located in its country of origin. All of our data centre facilities are managed in compliance with the most rigorous industry security measures to keep data safe.

Internal service threat monitoring by default

A malicious insider threat to an organisation is generally defined as someone who has authorised access to an organisation's systems and intentionally misuses that access to violate the confidentiality of important information. We've [built in safeguards](#) that protect access to the content repository and the data stored there. And the repository has its own auditing and tracking system.

Data encryption in transit and at rest by default

Genesys encrypts call and screen recordings at the highest level of security. This includes the use of key-based, object-level encryption and server-side encryption. We include default policies and controls, but you manage key and recording retention policies to suit your business needs. For example, some contact centres protect recordings and transcripts from deletion for legal purposes or other reasons.

Continuous monitoring of architecture – all day, every day

Genesys continuously monitors its architecture and controls from a security perspective. Our team of security and compliance experts use a comprehensive set of tools, processes and industry best practices. Because most security processes are built into our base image, these controls can't be selectively disabled. We also provide audit mechanisms across events, including user access, commands and administration.

Five: Trust and transparency

Trust is earned; it drives our commitment to ethics in how we protect our customers' data. We've spent years refining and testing our development philosophy and cloud-based architecture. That means you get a Genesys Cloud customer experience platform that's battle-tested and validated. Choose a secure, trustworthy solution for your cloud-based contact centre that exceeds modern security standards.

Six: AI-ready data powers the customer experience

Most businesses today have huge volumes of data they can use for AI. But transformation isn't possible when that data lives in silos; it needs to be ready for use with AI – and it must be secure.

It's more important than ever to build your business on a flexible, AI-powered digital platform that puts customer engagement on top – and enables you to extend it in the future with new AI tools.

Summary

In this paper, we've described how the Genesys Cloud platform does the heavy lifting of data transformation, so you gain a faster understanding of the insights that data reveals. Our holistic approach to collecting, managing and orchestrating data enables you leverage it throughout your organisation – and keep it safe. The result enables you to deliver a truly personalised Experience as a Service™.

Biographies



Joe Smyth

Senior Vice President of R&D, AI Group Lead

Joe is a 29-year veteran of the unified communications and contact centre industry. After working for Apple, Nortel and Cisco, Joe was the co-founder and CTO of Altocloud. Based in Galway, Ireland, this AI and journey analytics startup was acquired by Genesys in 2018. Under Joe's leadership, the AI group is responsible for all aspects of the Genesys AI R&D strategy across predictive engagement, bots and AI routing. He holds a range of patents in the areas of VoIP, unified communications and machine learning.



Elcenora Martinez

Global Vice President, AI Product Management

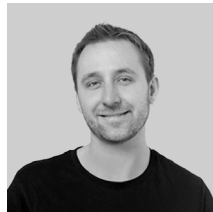
Elcenora is charged with building and delivering a customer experience platform that customers use for proactive and personalised services to their users. An analytics and technology executive at Genesys, Elcenora was previously with IBM where she held various product management leadership roles across smart data discovery, social media analytics, and data and AI. Prior to that, she spent 15 years in the hospitality industry, where she led an information management platform for Host Hotels & Resorts. She is originally from the Honduras and holds a bachelor's degree in finance from The College of William & Mary in Virginia.



Eric Cohen

Head, Genesys Cloud Security & Compliance

Eric Cohen leads development, implementation and monitoring for security and compliance of the Genesys Cloud platform. He and his team ensure that by design, these are addressed throughout the software development lifecycle, and that products stay up-to-date in responding to and preventing security threats. He also works directly with the Chief Privacy Officer to assess applicable laws and regulations, and he recommends and implements privacy controls to meet those various worldwide standards. He completed a career in the U. S. Navy Submarine Force, as well as several years of civilian government service. He holds a bachelor's degree from Ashford University.



Maciej Dabrowski

Chief Data Scientist, Genesys

Maciej has been building large-scale data analytics and AI products in both research and the industry for over 10 years. As Chief Data Scientist at Genesys, he is responsible for the machine learning platform that uses Apache Spark to train hundreds of predictive models and apply them in real-time to millions of events a day. He is the founder of the Galway Data Meetup and has received a number of awards for his work. Maciej was shortlisted as one of the four finalists of the DatSci 2016 competition in the Data Scientist of the Year category.



David Farrell

Director, Product Management - AI Group

David leads product management for Genesys Predictive Routing within the AI group at Genesys. His responsibilities include focusing on using organisations' data to build AI models that improve customer experiences and simplify call centre operations. Previously, David held software product management positions at IBM Watson Health and Accenture.



Seamus Hayes

Director, Development - AI Group

Seamus leads the development of the Genesys Predictive Routing application and associated AI platform services. He joined Genesys in May 2019, bringing 20 years of contact centre industry experience to his role. Prior to Genesys, Seamus led global R&D teams at Avaya, delivering enterprise software solutions and customised solutions for strategic customers.



Jarrod Sexton

Director, Principal Security Architect

Jarrod is a Director and Principal Security Architect for Genesys Cloud. He focuses on security architecture, solutions development, and monitoring and visibility of the platform. Previously, he was a security engineer and penetration tester at multiple companies, both large and small.

ABOUT GENESYS

Every year, Genesys® delivers more than 70 billion remarkable customer experiences for organisations in over 100 countries. Through the power of the cloud and AI, our technology connects every customer moment across marketing, sales and service on any channel, while also improving employee experiences. Genesys pioneered Experience as a ServiceSM so organisations of any size can provide true personalisation at scale, interact with empathy, and foster customer trust and loyalty. This is enabled by Genesys CloudTSM, an all-in-one solution and the world's leading public cloud contact centre platform, designed for rapid innovation, scalability and flexibility.

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