Apexon

WESTHILL CONNECTS INSURANCE ECOSYSTEM STAKEHOLDERS WITH AWS

Apexon delivered outcome-based results with data analytics

westhill™

Westhill is a US-based technology company providing cutting edge software, tools, and a platform ecosystem to the property & casualty (P&C) insurance industry. By leveraging data and advanced analytics to connect insurance carriers, service providers, and policyholders, the company provides customer choice and removes inefficiencies from the claims process.

Westhill believes that all successful experiences need a foundation grounded in transparency and shared value. These outcome-based principles are woven throughout each facet of its business model.

Westhill partnered with Apexon to build a disruptive, first-to-market, customer-centric solution that brings carriers, contractors, and policyholders to a single platform via mobile and web channels.

PROVIDES CUTTING EDGE SOFTWARE & TOOLS

GROUNDED IN TRANSPARENCY & SHARED VALUE

NEAR 100% CUSTOMER SATISFACTION

Westhill wanted the platform to seamlessly fit into the existing insurance ecosystem and support integration with all other significant products in the market.

Apexon proposed to design and develop a digital solution to bring policy holders, contractors, service providers, insurance companies, and Westhill administrators on a single platform for transparent claims processing. Our solution provides a unified and consistent workflow for claim processing through mobile applications and web portals.

THE CUSTOMER JOURNEY

2016	2017	2018	2019	2020
• Established automation for mobile platform • Enabled CI/CD for mobile platform	• Requirement Analysis • Detailed Solution Architecture & Design • Initial UI design	• Clickable Prototype • WHG Portal, Contractor Portal & App, Homeowner App • NEO - Mobile Automation • Portal Enhancements with dashboards	• Profile Gorilla Integration • Claimsend Integration • HO Mobile App changes • Changes to tickets module	• Dynamic reporting • Payment module, finance role analytics • Bot powered communication channel • Apply machine learning to identify cost of restoration for appliances

THE CHALLENGE

BRINGING VISIBILITY TO THE PROPERTY CLAIMS PROCESS LIFECYCLE

To enhance the relationship and synergy between insurance carriers, service providers, and policyholders, Westhilll required a platform approach that would enable several automated processes to be seamlessly integrated across those three stakeholders. The platform would need to bring transparency to every job executed for policyholders - a complex scenario which might include:

Recommending a highly-rated, accredited and rigorously vetted contractor.

Negotiating pricing with contractors on behalf of the policyholder.

Ability to reallocate resources accordingly, creating additional touchpoints for the carrier.

Handling escalations and feedback logging mechanisms.

Providing a line of sight and monitoring all progress of an ongoing job.

Human intervention to overcome technical limitations of policyholder or contactor.

Providing advanced tracking throughout the process to compile smart data.

FINDING A FULLY FUNCTIONING SOLUTION

⬌ Even though insurance companies have strong claim processing engines and settlement processes, handing all of the above required a scalable platform capable of guiding the process and delivering 100% policyholder satisfaction – building the future claim experience.

⬌ Some of the key design challenges included: identifying scalable and high-performance platforms on which to build recommendation engines, serverless computing services to construct service-oriented architecture, workflow functionality, timely triggering of notification mechanisms, and a fully functioning solution that could scale easily to handle above-market volumes.

KEY REQUIREMENTS

BUSINESS

Business service enablement and automation for carriers, homeowners, contractor, general services:

CARRIER SERVICES

Onboarding new carrier, manage carrier users, claims and generate invoices, etc.

HOMEOWNER

Registration, manage new claims, process claims, capture customer feedback for contractors, etc.

CONTRACTOR

Onboarding new contractor company, verification, manage contractors, manage claims, process claims, generate invoices, etc.

GENERAL SERVICES

Carrier recommendation engine, SLA management, notification, and alerts mechanism, analytics, ticket management, generate recommendations of highly-rated, accredited, and rigorously vetted contractors, etc.

PLATFORM

- Price negotiation with contractors on behalf of policyholders.

- Escalation management and feedback-logging mechanism between carriers, homeowners and service providers.

- Progress monitoring of ongoing home-repair jobs and enable notification service for homeowners.

- Customer data protection including personal identifiable information (PII) at rest and in-flight.

TECHNICAL

- Microservice-based architecture with optimal use of cloud resources and services to boost speed-to-market and shorter deployment SLA of new and dynamic business changes.

- High-reliability cloud solution/resource/services and operational efficiency to minimize disruption and downtimes.

- Performant solutions covering mobile & web integration/database/storage/accessibility/reporting/Logic Processing Engine to handle over several hundreds of claim processing requests, complex claim processing logic and high storage.

- Infrastructure security to protect customer's data, encryption mechanism, data consumption policies and procedures.

THE DIGITAL LIFECYCLE

With this company, Apexon worked across all stages of the digital lifecycle on multiple projects for two separate business units.

GO DIGITAL

LAUNCH & EXPERIMENT

Enable digital adoption in a quick and agile manner ▶

Apexon organized workshops with key stakeholders to understand business goals and align key business KPI to success criteria.

Our Agile POD developed solution architecture & UI/UX design during blueprinting phase.

Apexon also created a MVP within 4 weeks to test and validate outcome of our blueprinting phase.

BE DIGITAL

AUTOMATE & ACCELERATE

Build digital infrastructure and foundation for enterprises to scale ▶

Our specially designed multi-skill Execution POD developed a microservices based digital platform with provision to integrate with major insurance products in market.

To provide rich UI, extensible design and static hosting capability we identified Angular & Ionic frameworks to build frontend applications.

It also has a robust backend built using native cloud technologies (AWS) and a rich user interfaces provided by mobile and web applications designed using single page architecture.

EVOLVE DIGITAL

BE INTELLIGENT & AUTONOMOUS

Leverage data engineering to make strategic decisions and get digital right every time

Leveraging Digital Lifecycle Methods for bringing transparency through personalized dashboards and leveraging our data for recommending new age technology innovations like

Build machine learning utility with ability to identify cost of appliances from pictures; Integration of bot powered communication channels like Slack for establishing conversations on common channel between all stake holders involved in particular claim;

We have developed platform to fetch inputs from various data sources such as arial pics from drone, data from market about cost of construction in local region.

AGILE A multi-skilled team consisting of digital strategists, cloud, and data architects

EXECUTION POD A cross-functional team that implements strategies

AMAZON WEB SERVICES (AWS) & APEXON

Westhill needed a cost-effective technology platform capable of rapid analysis, computing, and deployment of new business features to support its business model and growth potential.

To better understand Westhill's specific requirements, Apexon conducted a two-week assessment covering business services to be automated, technical controls required to support business goals, risks and mitigation strategies, and security in the cloud. The additional analysis included cloud vendor evaluation, scalability, security, performance, cost, reliability, operational efficiency, and more. This included analyzing web traffic frequency-pattern-volume, type of services (homeowner, carrier, vendor), and specific security requirements of Westhill (infrastructure, data, and processes

As a result of its assessment, Apexon proposed to build a serverless architecture using AWS Lambda. With over 10+ services, Westhill paid only for the execution time of the Lambda functions. In addition, Lambda enabled developers to choose the programming language, further accelerating the delivery timeline and addressing skill gaps in the delivery team. This pay-only-for-execution time model helped Westhill save on compute cost, and handled peaks and valleys of web traffic very efficiently.

The company was already using AWS Lambda serverless computing for a rules-based recommendation engine and workflow triggering tasks. This trigger-code-when-required approach helped them serve individual policyholders efficiently, capture logs, and trigger workflows using a step function – all of which were seen as a breakthrough in meeting their current design challenges in a cost-effective manner.

Apexon also deployed AWS DynamoDB to store several gigabytes of homeowner insurance data with key-value pair. This provided high durability and large-scale performance with the ability to deliver within a few milliseconds.

Other components of the solution built and deployed on the AWS Platform included:

Rules-based recommendation engine

Workflow mechanism to guide policyholder

Escalation and feedback module

Pricing and negotiation module

Rapid compute process to serve customers quicker

Rapid deployment model to meet mission critical and business critical tasks

KEY SUCCESSES

One of the key success factors in the engagement was the ability to quickly onboard Westhill's system landscape on the AWS cloud, enabling important cost-saving controls and an efficient operational model to support multi-regional growth.

Some of the key tenets of cloud architecture include:

SECURED CLIENT ACCESSIBILITY LAYER

Enabled mobile and web client interaction with the AWS Cloud environment using secured https protocol and authentication mechanism using AWS Cognito service.

SCALABLE SERVICE LAYER

Handled several hundred client API requests with the help of AWS API Gateway while also improving customer engagement ratio and retention rates.

PROTECTED DATABASE LAYER

To store data using flexible schema, structure, and data protection using encryption algorithms while meeting the reporting/ analytical needs of the user community.

MONITORING, LOGGING & NOTIFICATION FUNCTIONALITY

Enabling monitoring to check overall health of the cloud resources, logging for user actions and notification mechanism.

OUR APPROACH

In the deployment, Apexon followed AWS best practices and well-architected design guidelines by using the following AWS cloud resources:

COST
AWS Lambda-based services as opposed to Dedicated EC2 instance and clusters

OPERATIONAL EFFICIENCY
AWS Lambda serverless architecture

PERFORMANCE
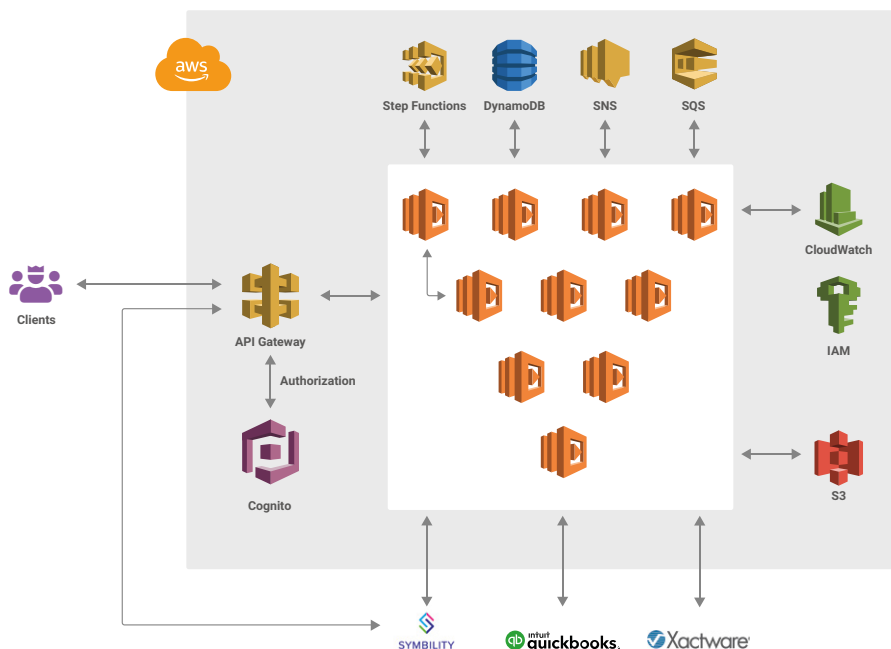AWS DynamoDB, Lambda, S3 storage

SCALABILITY
AWS DynamoDB to store and process large size insurance dataset

RELIABILITY
AWS Lambda serverless architecture

WESTHILL NOW USES AWS FOR HIGH-PERFORMANCE COMPUTING, WORKFLOW MANAGEMENT, AND RISK ANALYSIS OF CUSTOMER DATA TO CREATE TEST AND DEVELOPMENT ENVIRONMENTS FOR THEIR COMMERCIAL APPLICATION

aws

SERVICES USED

Amazon API Gateway

Amazon Cognito

Amazon Lambda

Amazon DynamoDB

Amazon SNS, S3

Amazon CloudWatch & IAM

APEXON ALSO DEPLOYED SEVERAL 3RD PARTY APPLICATIONS IN SUPPORT OF THE ENGAGEMENT, INCLUDING:

SYMBILITY

intuit quickbooks.

Xactware®

An application used by insurance carriers and other professionals to create/edit/submit insurance claims. These claim transactions were then pushed to the Westhill AWS platform for processing and reporting.

A financial application used primarily to generate invoices, and process payments and settlement.

This application is used by insurance carriers and other professional businesses to send requests for estimates and services to adjusters, contractors, and service providers.

A PROCESS OF CONTINUOUS IMPROVEMENT

The Westhill engagement created several key learning opportunities for Apexon on AWS:

Enable cloud resources in appropriate environments on an on-demand basis; e.g, services such as SNS and SQS can only be turned on in the QA and production environment since these services are not heavily used outside of development, Sandbox and other environments. This can offer important costs saving in the long run.

Use of Lambda serverless architecture instead of EC2 created significant cost savings. Understanding business requirements, functions, and overall frequency of web traffic is important to ideate and optimize the solution for compute resources and related services. Westhill had a specific ask to design a solution to save cost when there is no web traffic or pay only when traffic is served. In this scenario, running and maintaining dedicated or reserved large EC2 instances would have created unnecessary expenses.

Performing TCO cost assessment at the beginning of the project is a critical step to help management decide on budget allocation, cost optimization strategies, and to promote cloud resources as needed in a smarter fashion.

RESULTS

KEY OUTCOMES

Westhill gained significant business and technical advantages as a result of the deployment.

NEAR 100% CUSTOMER SATISFACTION

Via fast deployment of new business models; process transparency.

100% BUSINESS CONTINUITY

Assuring higher service levels and reducing operational costs.

SHIFT FROM CAPEX TO OPEN MODEL

Enabling faster delivery of new, market-driven business features.

Apexon

Apexon is a pure-play digital engineering services firm focused on helping companies accelerate their digital initiatives from strategy and planning through execution. We leverage deep technical expertise, Agile methodologies and data-driven intelligence to modernize systems of engagement and simplify human/tech interaction.

We deliver custom solutions that meet customers' technology needs wherever they are in their digital lifecycle. Backed by Goldman Sachs and Everstone Capital, Apexon works with both large enterprises and emerging innovators — putting digital to work to enable new products and business models, engage with customers in new ways, and create sustainable competitive differentiation.

info@apexon.com

www.apexon.com

FEELING SOCIAL?