



SUCCESS STORY MANUFACTURING

GLOBAL AUTOMOTIVE TECHNOLOGY PROVIDER ACCELERATES DIGITAL TRANSFORMATION

Apexon enhances organizational agility and collaboration.



This global supplier of technology and services offers end-to-end engineering, IT, and business solutions to the automotive manufacturing industry.

As a part of its digital transformation journey, the company, has initiated numerous automation and computer vision projects designed to enhance process efficiencies in multiple areas of its business, including HR, Finance, and Operations. The company needed a large-scale migration from its legacy data management systems to new collaborative cloud storage, emails, and reporting models to support these efforts.

Apexon assisted the client's digital journey for over seven years and is still working as a strategic engineering partner. While the overall journey brought many changes to the organization, the individual components Apexon worked on helped the client overcome specific challenges and produced significant tangible results.



Global supplier of technology & services to automotive manufacturers



20,000+ employees across the globe



Over \$1 billion in annual revenues

THE CUSTOMER JOURNEY

2010-2015-2016-2019
SharePoint Migration

Five versions from multiple regions across the globe merged into one window for a single moment of truth

2018

Computer Vision

Over 240 resources were deployed to manage 25+ processes and 7 types of computer visions

2019

Intelligent Automation

Internal ad-doc work requirements are delegated to bots that reduce human efforts and enhance accuracy

2021

Architecture Design & Reporting

Our high-performance architects sped up reporting by designing architecture and developing highly accurate company-wide dynamic reports

2022

MS Mail Migration

Our high-performance engineers support customers executing migrations via the FastTrack Migration Hub from on-premises to the cloud with 24x7x365 support services

2022

Embedded Systems

Co-developing Firmware services with the client, from the driver layer to the application layer, to manage devices and certifications

THE RESULTS

KEY OUTCOMES



MORE EFFECTIVE PROJECT COLLABORATION ACROSS THE ORGANIZATION



INCREASED BUSINESS AGILITY & EFFICIENCY



ACCELERATED DEVELOPMENT CYCLE TIME USING AUTOMATION



FASTER, MORE EFFECTIVE EMPLOYEE ONBOARDING



IMPROVED FINANCIAL REPORTING

TRANSFORMATION ENABLED WITH MANAGED SERVICES FROM DEVELOPMENT TO SUPPORT

Apexon has worked with the client on five different digital initiatives. The challenges and solutions for each initiative are outlined below:

SHAREPOINT MIGRATION

Traditional storage models lack filtering and collaboration capabilities, which is why the client company leverages Microsoft SharePoint. Its easy-to-use functionality and robust server architecture made it a good fit for the organization. This enabled effective collaboration between its global workforce of 20,000+ to deliver innovative solutions to its customers worldwide.



THE CHALLENGE

COMPLEXITY & VERSION SPRAWL

SharePoint can be found in companies of all sizes. The platform is used differently from company to company, and its extreme adaptability means that it can deliver a web-based experience in almost any environment. This flexibility was both a benefit and a challenge for this global company. To enable collaboration across its 20,000+ employee organization, this company ran 700+ SharePoint farms globally, with multiple versions (2010, 2013, 2016, 2019, Online) in different regions, time zones, and business functions. This complexity impeded collaboration.

Separate development teams worked on different versions of SharePoint, and 24/7 global support was required to cater to the needs of each region. Last but by no means least, the act of migrating the various versions for its distributed workforce added another layer of complexity to the overall process – a scenario that required specific expertise for not only each SharePoint version but also ownership for each defined business function.

THE SOLUTION

SHAREPOINT CONSOLIDATION ENABLES STREAMLINED DELIVERY & SUPPORT

Apexon's team of digital experts was asked to look at the overall picture and propose a solution that met two core objectives:



Aggregate the skills required to navigate SharePoint's complexity successfully



Provide a model for continuous delivery and support of SharePoint within the organization

This required establishing different teams for Migration, Upgrades, and Developments while consolidating the available versions of the platform into one coherent whole. For this project, it was decided that SharePoint 2019 was the optimal path. This version had been designed to work both on-premises and in the cloud, with end users getting unified access to a host of next generation server features and functionality.

Additionally, Apexon's experts suggested adding new technologies and features, including Power Apps and Power Automate. To support the client's 700+ SharePoint farms globally, Apexon deployed remote monitoring of farm health using Powershell scripts, AppDynamics, and NETIQ. Apexon also introduced a 24/7 global support model.

By leveraging its digital expertise and taking a managed services approach for the client, Apexon was instrumental in helping the organization streamline its global operations and increasing its agility and efficiency using SharePoint. The consolidated version of SharePoint 2019 brought several key business outcomes:



The consolidation of five versions of SharePoint into one – 2019



High availability and server farm load balancing



Increased employee collaboration and technical innovation



Streamlined global support covering all regions, time zones, business units, end users, and services. A single support window was established for change control and deployment



The ability to quickly ramp up internal teams for new projects



Focused migration and development teams to support multiple versions of SharePoint – migrated to a single version



Reduced SharePoint FTE requirements with Apexon Managed Monitoring services

COMPUTER VISION FOR AUTOMOBILES

Apexon has been managing Computer Vision for automobile solutions for clients since 2017. It started with textured labeling and 25 resources and has since expanded to endpoint security, with 240 resources by 2022.



THE CHALLENGE

OVERWHELMING WORKLOAD & GAPS IN COMPUTER VISION EXPERTISE

The client was on the path to creating a technological revolution with an autonomous system supporting self-driving cars. To develop intelligence in the vehicle, a video labeling system was needed to create awareness of the surroundings and self-determination of responses. However, launching a self-driving car takes a lot of development efforts and resources. A dedicated and experienced team was needed to build this intelligence to set up computer vision and manage video labeling. A team must label various objects to train their application to ensure safe autonomous driving. The company was pressed with a short timeline in which the resources were to be hired, and video labeling was to be done while maintaining the highest quality.

THE SOLUTION

AUTOMATED COMPUTER VISION

Apexon created and managed multiple types of video labels using computer vision on videos that included



Bounding boxes to outline images of pedestrians, vehicles, lights, signs, and plates



Polyline annotation to detect lanes and road markings



Semantic segmentation of image pixels to separate objects from each other



Near-range camera system to provide visibility of surroundings, including pedestrians and traffic lights



LiDAR labeling to identify 3D cuboidal objects for interactivity

With Apexon taking over the operational tasks of computer vision, the client saw important productivity gains:



Over 250 million labels delivered since 2015



25+ sub-processes mapped with more than 99% accuracy on label quality



240 Apexon resources deployed with 190+ FTE involved in projects, creating big savings in time and effort for the client

INTELLIGENT AUTOMATION

The company's new employee onboarding process was highly manual, time-consuming, and error-prone when assigning them to connected communities. Apexon simplified the process with bots that automated the categorization and assignment of new joiners to respective work communities.



THE CHALLENGE

SLOW EMPLOYEE ONBOARDING THAT HAMPERED PRODUCTIVITY

New employee onboarding is tricky, especially when the changes happen continually vs. in fixed batches. Putting together a workforce to assign new joiners to the right communities to create connected teams was an exercise diligently followed by the client. However, manual assignments invited errors in detailing and categorizing. The process was also very time-consuming.

THE SOLUTION

INTELLIGENT AUTOMATION WITH SMART BOTS

Apexon developed a bot to oversee internal tools and reduce inefficiencies in categorization, notifications, measurement and reporting. Ad-hoc requirements like adding new members to communities, closing old notifications, and highlighting performance issues with different tools and systems were managed by bots.

When Apexon trained a bot to take over the exercise, the manual work was almost eliminated. The bot could quickly pick the information about the employee and assign one to the right community in much less time. Some specific results included:



Reduced processing time for assigning employees to respective work communities



Eliminated 90% of required human efforts by taking care of notifications, performance measurement, and error identification



95% data accuracy with the identification and reporting of interface errors and systems issues



Performance measurement of web-based tools to ensure that internal resources did not face data processing challenges in managing projects



30% cost savings through proactive identification of errors

DATA ARCHITECTURE DEVELOPMENT FOR REPORTING

The client needed a comprehensive view of the finances with data pulled from multiple applications to help company directors assess organizational performance with the least effort. Apexon designed the database architecture, User Interface, program, and documentation with assured quality and high accuracy. As a part of the digital transformation, the client needed to migrate from its traditional mail service to MS fast while ensuring accuracy and security.



THE CHALLENGE

DISPARATE REPORTING/ANALYTICS

The client needed to create a report using data from multiple applications to provide a companywide view of finance with high data accuracy and quality documentation.

THE SOLUTION

DATA ARCHITECTURE TO ENABLE SINGLE VIEW & COMPANY-WIDE OVERSIGHT

Apexon engineers helped the client re-design reporting architecture and developed companywide financial reports for decision-makers. The report pulled data from multiple applications to present a comprehensive and interactive report for company-wide oversight. To ensure a high level of accuracy, pre-UAT and UAT (User Acceptance Testing) were conducted with multiple validations.

Apexon Architects supported the client in the design of architecture and reports that helped the finance department through:



Comprehensive and highly accurate company-wide financial reports designed well in advance of client expectations



Multiple acceptance tests before and after the creation of the company-wide report with major stakeholders to ensure validity and accuracy

MS MAIL MIGRATION

MS Mail also had to be migrated for the business.



THE CHALLENGE

LIMITED TIME & RESOURCES TO HANDLE MASS MIGRATION

THE SOLUTION

HIGHLY PROFESSIONAL & EFFICIENT MS MAIL MIGRATION

Apexon assigned 20 resources working on 3 windows to support Exchange, Google Mail, Box, Dropbox, Google Drive, and File Share migration. This team provides transactional support for migration-related issues/questions the customer may have during the complete lifecycle of their data migration project. Apexon provides customer case management for migration-impacting issues, monitors the health of the migration platform and events, and drives proactive resolution of issues.

The team has consistently delivered high throughput in migration with high security and confidentiality maintained.

Apexon Engineers have been managing MS Mail Migration for the client since 2022.

Within a month, the client saw several significant improvements:



An average of 65K+ mail migrations managed monthly



Over 400 cases being resolved every month



Via Chat support, helped over 200 users in two months

NEXT STEPS

DEVELOPING NEW SOLUTIONS

Apexon develops Embedded Solutions from scratch, including hardware and firmware. Currently, we are developing a Certificate Management system to discover, analyze, monitor, and manage all digital certificates deployed by the Certificate Authority and provide secure communication. Besides Embedded Security modules, our team is also working on Board Bring Ups, Bootloaders, Communication modules, secure DFU and OTA, and Device drivers for Bare metal systems/ Linuxbased systems. The company now relies on Apexon as its co-engineering partner to provide technical expertise and manage its development operations. Our lab is an advanced development facility to help our clients build new capabilities. We design architectural solutions to support the development of new products that are highly scalable and create opportunities for the client to enter new markets in the embedded systems arena.



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