DataArt

DataArt

Microsoft Expertise

New York USA
London UK
Munich Germany
Zug Switzerland

As a leading digital transformation services provider, DataArt is the partner for progress of companies ready to embrace constant change.

We help you design and engineer data-driven, cloud-native solutions that create immediate and enduring business value.

Fast Facts

DataArt

5,000+
Consultants
& Engineers

1997
Founded in
New York City

40+
Global Locations

20%
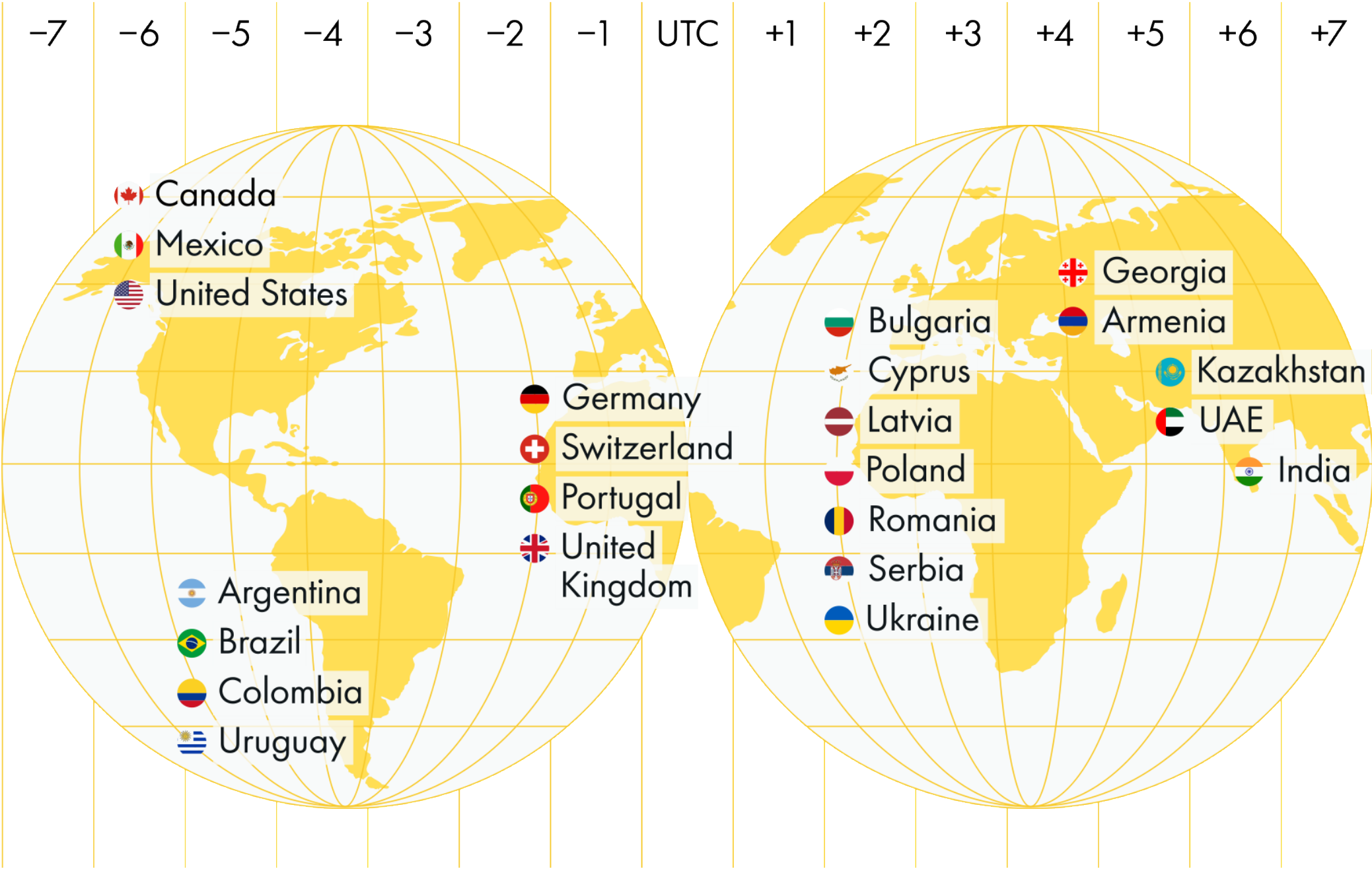5-year CAGR
(2019-2023)

95%
Return Clients

76
NPS Score in 2024

2000
Microsoft Partner
Since 2000

2011
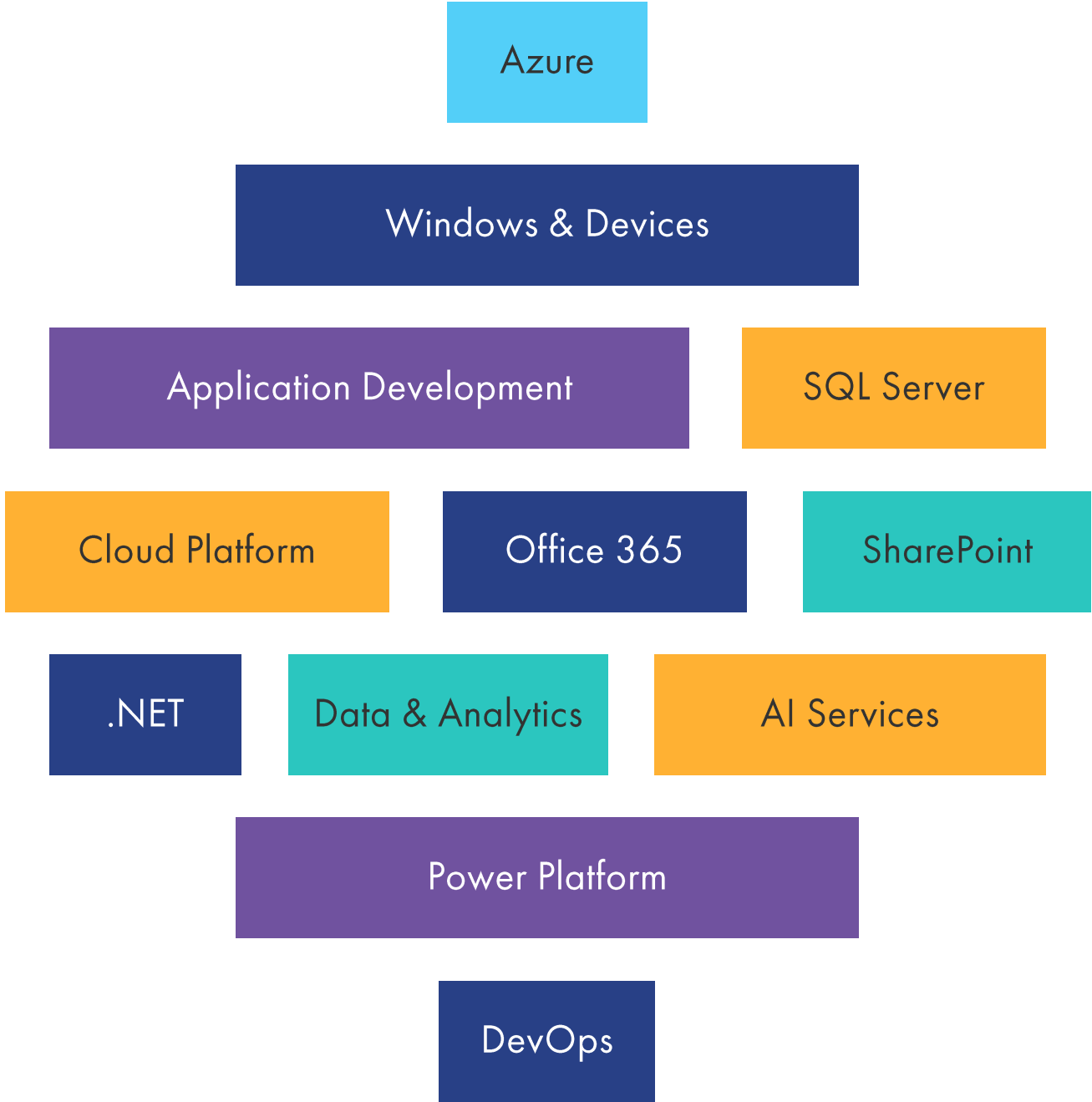Building on Azure
Since 2011

−7	−6	−5	−4	−3	−2	−1	UTC	+1	+2	+3	+4	+5	+6	+7

Canada
Mexico
United States

Germany
Switzerland
Portugal
United Kingdom

Argentina
Brazil
Colombia
Uruguay

Bulgaria
Cyprus
Latvia
Poland
Romania
Serbia
Ukraine

Georgia
Armenia
Kazakhstan
UAE
India

Microsoft **Stack**

DataArt

Most modern enterprises rely on **Microsoft technologies**, from business intelligence and productivity systems, to data management and development tools.

DataArt has extensive experience with Microsoft stack and helps clients **develop, integrate and optimize** Microsoft-based solutions that **drive innovation and growth**.

Microsoft Solutions Partner

Microsoft Azure

Azure

Windows & Devices

Application Development

SQL Server

Cloud Platform

Office 365

SharePoint

.NET

Data & Analytics
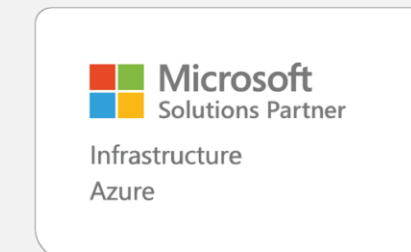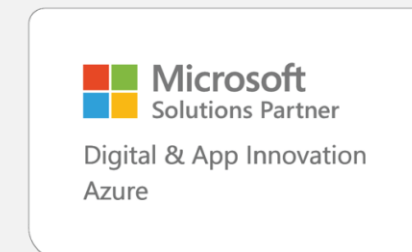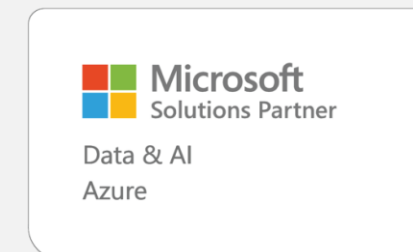
AI Services

Power Platform

DevOps

DataArt & Microsoft

- Over **20 years** of partnership
- Microsoft **Solutions** Partner
- Microsoft **Gold & Silver Partner** in 12 competencies
- **Azure** consulting partner
- Certified Developers, Architects, and DevOps
- Building on Azure **since 2011**
- Strong **cloud** expertise
- North America, UK, EMEA, LATAM, India
- DataArt is **a partner of choice** in various partnership activities (events, external workshops, programs)

Microsoft Solutions Partner

Microsoft Solutions Partner designations identify partners with specific capabilities and experiences in high customer demand solution areas.

Microsoft Solutions Partner
Data & AI
Azure

Microsoft Solutions Partner
Digital & App Innovation
Azure

Microsoft Solutions Partner
Infrastructure
Azure

Microsoft Solutions Partner
Security

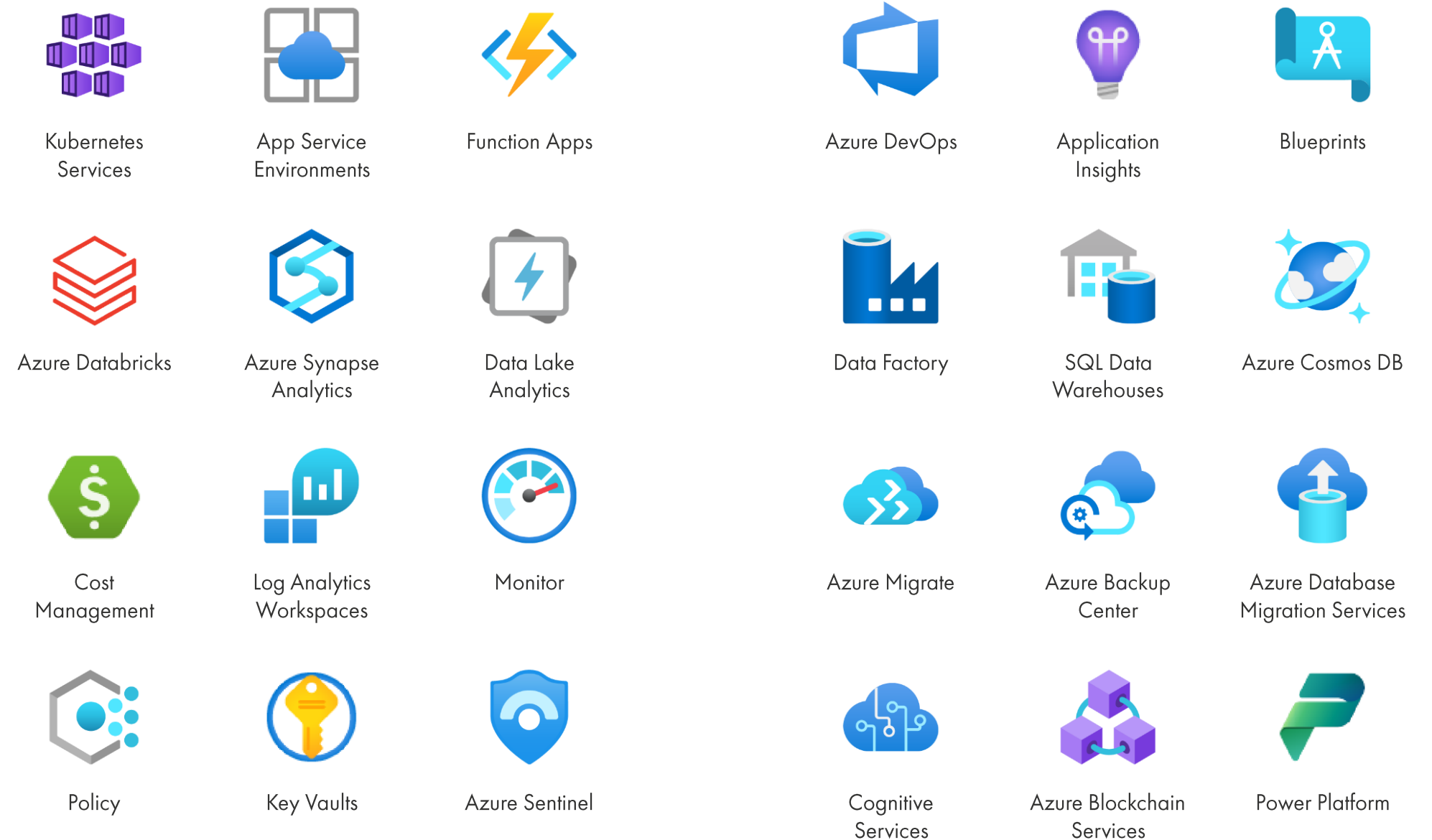# Azure **Services** & **Competencies**

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Azure Services

- Solution Design and Cloud Architecture
- Analytics Platform Design and Implementation
- Azure Migration
- Application Modernization
- Data Management and Data Warehousing
- Optimization of Operations and Security
- Security Testing
- AI and ML
- Cost Optimization

As an Azure Consulting Partner, we have solid experience with Azure services, implemented for multitude of client projects.

Azure Competencies

Kubernetes Services	App Service Environments	Function Apps	Azure DevOps	Application Insights	Blueprints
Azure Databricks	Azure Synapse Analytics	Data Lake Analytics	Data Factory	SQL Data Warehouses	Azure Cosmos DB
Cost Management	Log Analytics Workspaces	Monitor	Azure Migrate	Azure Backup Center	Azure Database Migration Services
Policy	Key Vaults	Azure Sentinel	Cognitive Services	Azure Blockchain Services	Power Platform

DataArt **Offers** on Microsoft **Marketplaces**

DataArt

Cloud Migration	Azure AI and ML Solutioning*
Read More	Read More

Generative AI Solutions Prototyping on Azure*	
Read More	

Microsoft Azure Security	Microsoft Fabric Services
Read More	Read More

Microsoft Teams Copilot Development

Read More

* This mentioned Azure Marketplace offer is co-sell ready and has been technically validated by Microsoft. Technical validation indicates that the service offering meets a high standard of technical expertise.

More co-sell offers are available on Azure marketplace (here) and Microsoft AppSource (here).

Working across industries, DataArt designs and scales Microsoft solutions that drive customer transformation
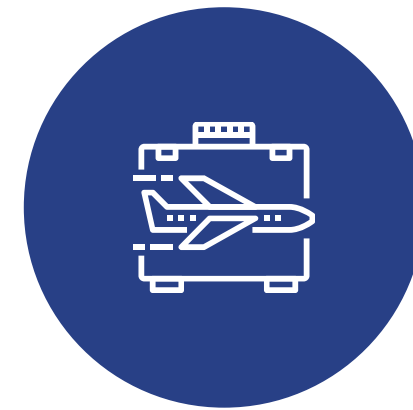
Finance

Insurance

Retail & Distribution

Travel & Hospitality

Healthcare
& Life Sciences

Media
& Entertainment

DataArt's **Offerings** on Microsoft Industry **Solutions** Directory

DataArt

Finance

Risk Management

Differentiated Customer Experience

Modernizing Core Systems & Payments

Retail

Maximize Data Value

Elevate the Shopping Experience

Consumer Goods

Healthcare & Life Sciences

Secure Productivity & Security

Education

Simplified & Secure IT

Energy

Transforming Operations

Manufacturing

Enable Intelligent Factories

Unlock Innovation

CIFC Adopts **Agile** Azure **Platform** for Mission-Critical Credit **Services**

DataArt

Microsoft published <u>a customer success story of CIFC Asset Management LLC</u>, a global corporate and structured credit specialist located in the US and UK.

The technologies and services provided by Azure expanded CIFC projects' capabilities — not only improving performance and scalability but also reducing maintenance overhead and even unlocking new functionalities for the business.

With more modernization projects in the queue, CIFC continues to work with DataArt and take advantage of Azure Managed Services.

" DataArt brought to bear expertise, knowledge, and qualified resources to help us realize the goals of this and other projects.

They also have been our venue into Microsoft.

Adrian Iosifescu
CIFC Chief Technology Officer

Case Studies

Legacy Systems Transformation for Monex Europe

MONEX   **DataArt**

Client

Monex Europe is a leading specialist in commercial foreign exchange. Headquartered in London, the company offers a suite of foreign exchange products designed for corporate clients and high net-worth individuals. A security audit revealed that some of Monex's systems were using SaaS services in Azure that were no longer supported and no longer receiving security updates from Microsoft.

DataArt was able to eliminate the need for classic Azure services by containerizing and deploying legacy applications in Service Fabric, a next-generation platform that makes it easy to package, deploy, and manage scalable and reliable application components. The bundling of Windows Docker (with IIS) with Service Fabric eliminated the need for classic Azure services without any significant investment in system overhauls.

Highlights

- Substantially increased efficiency

- Substantially reduced costs and infrastructure requirements

- Implementation of security best practices

- The ability to flexibly manage load distribution, ensure the security of inter-service communication, and maintain a high degree of fault tolerance with zero system down-time

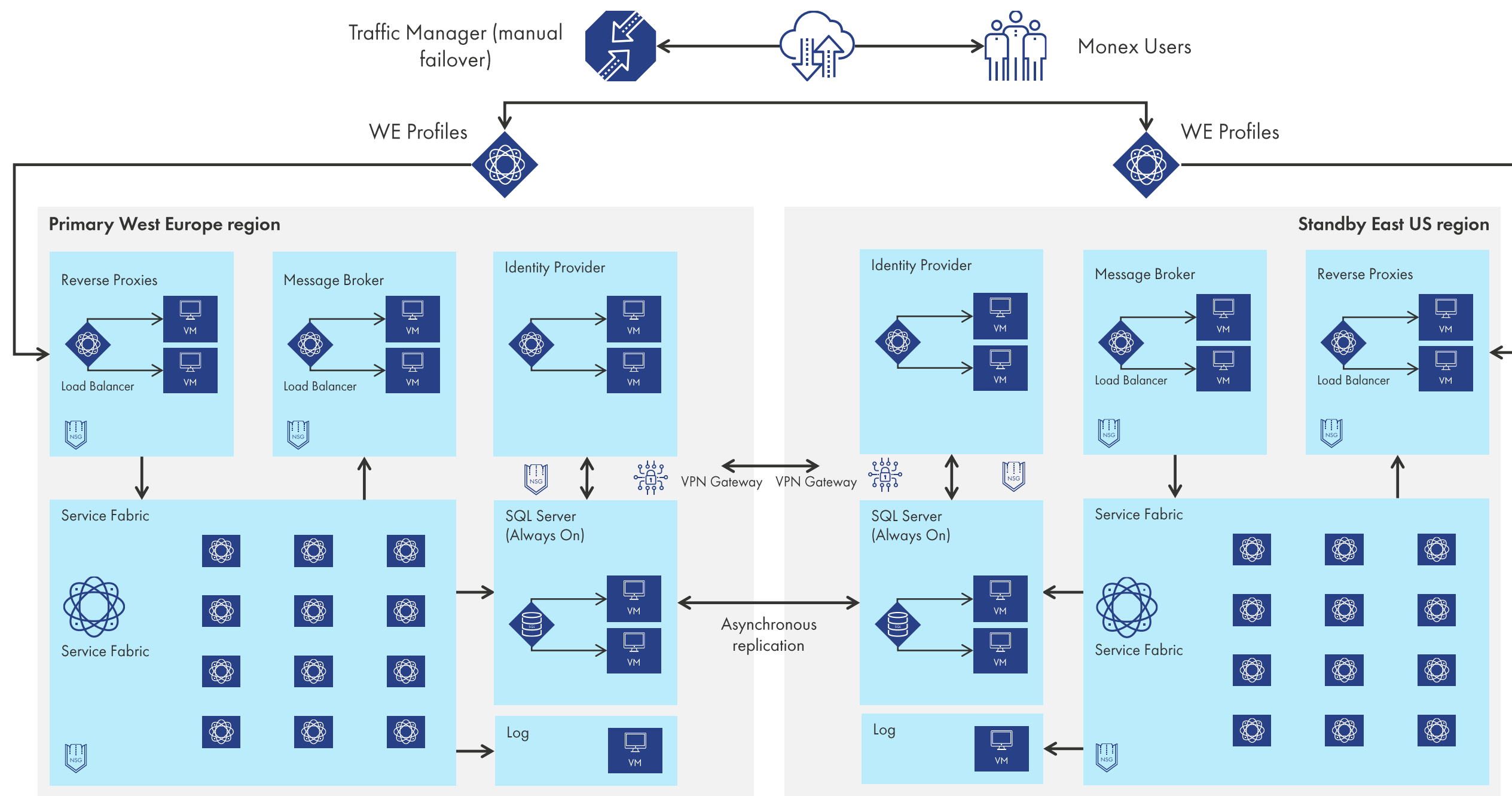- Added flexibility in system health monitoring and diagnostics

"

DataArt is an invaluable strategic partner for Monex Europe. We trust DataArt to deliver all of our business systems developments and to ensure reliable, secure delivery of our IT based products and services internally and to our clients. We also rely on DataArt for their industry knowledge, advice and support at all times.

Shelton Fray
Director & Co-founder
Monex Europe

Global Car Service for **Corporate** Clients

GroundScope   **DataArt**

Client

Travel & Hospitality Industry

GroundScope is a leading U.K.-based service that provides business cars to clients around the world.

The company lets traveling employees manage their journey by providing access to a network of fully vetted ground transport providers.

Challenge

GroundScope wanted a more reliable and secure car booking platform, as well as a new mobile app.

The legacy system was also difficult to integrate with modern software and external APIs, so the client asked to build a more efficient and extensible system to reduce operational costs.

In addition to this, the new system should be secure and compliant with various industry regulations.

"

We're very pleased to have DataArt as a partner. Their combination of travel industry experience with technical expertise helped us achieve our goals faster and run our business much more efficiently.

The new system allows us to manage and operate the business more cost-effectively and provide a faster response time to all customer booking requests.

John McCallion
CEO, GroundScope

Global Car Service for Corporate Clients

GroundScope **DataArt**

Business Benefits

- The new solution, which uses Azure as the cloud platform, has reduced operating costs by 80%, simplified new release deployments and improved fault tolerance.

- Azure dashboards and flexible monitoring reports provide all necessary information to control system availability and health.

- The platform makes journey arrangements easy and stress-free for clients. Moreover, a faster onboarding process has already brought on several new high-profile clients.

Solution

- DataArt helped modernize the system by moving from a legacy infrastructure to a cloud solution.

- There was a choice of multiple cloud providers and Azure was the best option due to high level of compliance out of the box, e.g., HIPAA.

- Azure was chosen due to native support for .NET services.

- Containers and AppServices were used to optimize resource utilization and provide quick disaster recovery mechanism.

- Azure Bastion service was used to secure the infrastructure access.

- Building new platform using Azure cloud has reduced the operating costs on infrastructure by 80%.

Azure **Well-Architected Review** for GroundScope

GroundScope   DataArt

Client

GroundScope is a leading UK-based service that provides business cars to clients around the world.

The company lets traveling employees manage their journey by providing access to a fully vetted ground transport provider network.

Challenge

The car booking platform, which runs on Azure cloud platform, was experiencing performance issues with its current system.

Therefore, the working team decided to conduct an Azure Well-Architected Review (WAR) to identify the root cause of the issues and improve the overall performance and status of the system.

"
The conducted Well-Architected Review (WAR) used a relatively small amount of our resources. At the end of the process, we were provided with a detailed review and some excellent insights into enhancements we could make to improve the performance of the system, many of which were very easy to implement.

Before WAR, we found ourselves improving the performance just by purchasing extra processing power from Azure. The WAR has enabled us to tackle any issue in a much more planned, structured, and cost-effective way.

Russell Jackson
CFO, GroundScope

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Azure **Well-Architected** **Review** for GroundScope

GroundScope   **DataArt**

Solution

The Azure Well-Architected Review (WAR) provides an opportunity to review the current state of the project against Microsoft's best practices and identify areas for improvement.

Thus, the working team received the WAR report containing recommendations to improve the system based on the cloud architecture pillars: security, operational excellence, performance efficiency, reliability, and cost optimization.

Business Benefits

The working team implemented most of the recommendations provided in the WAR analysis report, as a result of which the system's stability has been greatly improved.

This advancement has enabled our client to use the system freely and without the risk of any downtime, resulting in a better experience for the client and a more reliable service for the business.

Highlights

- Increased stability of the system
- Improved protection against data loss
- Decreased operational costs
- Simplified rotation of secrets (DB passwords, keys, etc.)
- Reduced build time and increased time-to-market metric
- Increased back-end scalability
- Reduced configuration drift

Technology

- Microsoft Stack
- Azure Cloud Services
- RabbitMQ
- Seq

Web Portal **Solutions** for Streamlining **Healthcare Processes**

Client

Anthony Nolan is a UK-based charity that works in the areas of blood cancer and blood disorders, and hematopoietic stem cell transplantation.

It makes lifesaving connections between patients in need and strangers ready to donate their stem cells.

Challenge

To streamline their workflow and improve the efficiency of the internal staff, the client recognized the need to replace the outdated desktop system with modern web portals.

Additionally, the client needed to create a new solution for its external users - staff of the hospitals they work with- to digitize communications with them.

Solution

DataArt enhanced the client's two existing web portals solutions, **Anthony Nolan Search and Anthony Nolan Labs**, both accessible through the Anthony Nolan Active Directory. These portals were used for the client's internal staff and were hosted on the Azure cloud. The first solution, Anthony Nolan Search, allows users to manage patient data, request and track international and internal donor searches, and request and track additional tests.

And the second system, Anthony Nolan Labs, allows users to track samples and investigations performed for donors and patients. DataArt also developed the **AN Connect** external system for Anthony Nolan, which was created from scratch and is accessible to external users via the B2C Active Directory. This portal allows users to manage the patient journey - from registration to receiving a transplant. Like the other solutions, this new system was also built on the Azure cloud platform.

Additionally, DataArt provided technological support to enhance integration with the European Marrow Donor Information System (EMDIS), a network of bone marrow donor registries that includes Anthony Nolan as a member. These enhancements provided the ability to search for compatible donors worldwide, request tests for the donors, and reserve the donors for the patient.

Web Portal **Solutions** for Streamlining **Healthcare Processes**

ANTHONY NOLAN

DataArt
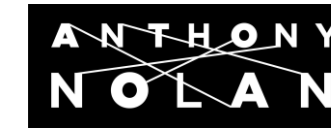
Business Benefits

The developed internal platforms have made the work of the staff easier, resulting in increased productivity. Many tasks that previously took a significant amount of time can now be completed in just a few minutes.

Also, the development of the external portal has strengthened relationships with external partners since the partner hospitals were also involved in the evaluation and requirements-gathering processes of the systems development.

And thanks to this portal, the communication between the company and its partner hospitals is expected to become easier and more streamlined, leading to even stronger partnerships.

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Highlights

- Automated search for matching donors for patients with blood cancer

- Automated laboratory analysis of samples

- Secured platform

- Digitized communication between Anthony Nolan and its partner hospitals

- Faster and more efficient communication

- Subsequent increase in efficiency of the internal staff

Technology

- ASP .NET Core

- Azure App Services

- Azure Functions

- Azure SQL Server

- Azure Storage

- Azure Service Bus

- Azure Active Directory

- Azure Active Directory B2C

- Azure Logic Apps

- React + Redux

- Azure DevOps

- Terraform

- NUnit + Selenium for auto tests

- Puppeteer for FE end-to-end tests

Anthony Nolan **Labs**

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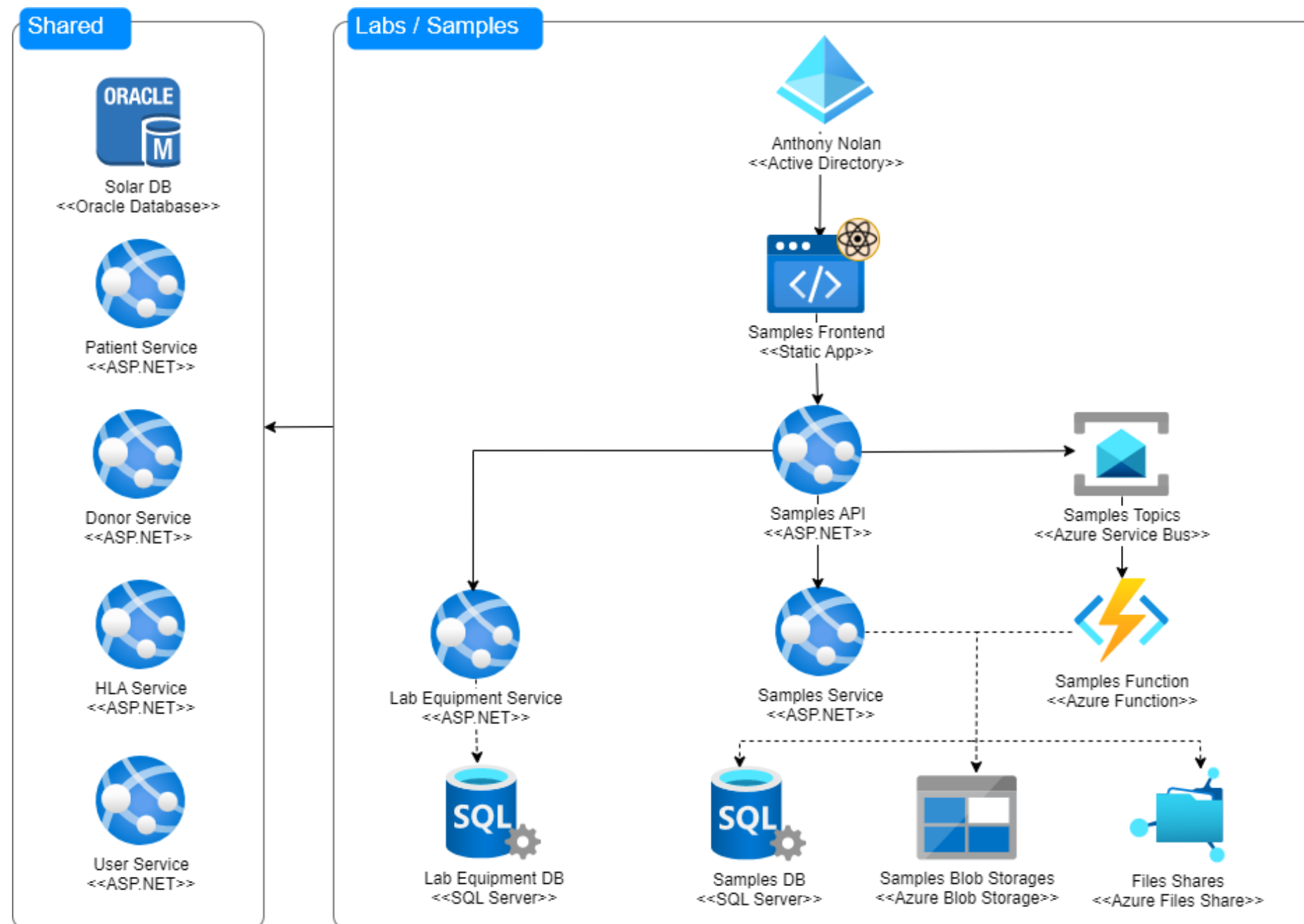
Anthony Nolan **Labs System**

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Anthony Nolan **Search** & **Integration** with EMDIS

Shared
- Solar DB <<Oracle Database>>
- Patient Service <<ASP.NET>>
- Donor Service <<ASP.NET>>
- HLA Service <<ASP.NET>>
- User Service <<ASP.NET>>
- Matching Algorithm Service <<ASP.NET>>

Search
- Anthony Nolan <<Active Directory>>
- Search Frontend <<Static App>>
- Search API <<ASP.NET>>
- Search Service <<ASP.NET>>
- Search Function <<Azure Function>>
- Search International Function <<Azure Function>>
- Search DB <<SQL Server>>

EMDIS
- EMDIS Communication System Server
- EMDIS Service <<ASP.NET>>
- EMDIS DB <<SQL Server>>
- EMDIS Function <<Azure Function>>
- EMDIS Inbound Function <<Azure Function>>
- EMDIS Outbound Function <<Azure Function>>
- International Communications Service <<ASP.NET>>
- International Communications Topics <<Azure Service Bus>>

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Anthony Nolan **AN Connect**
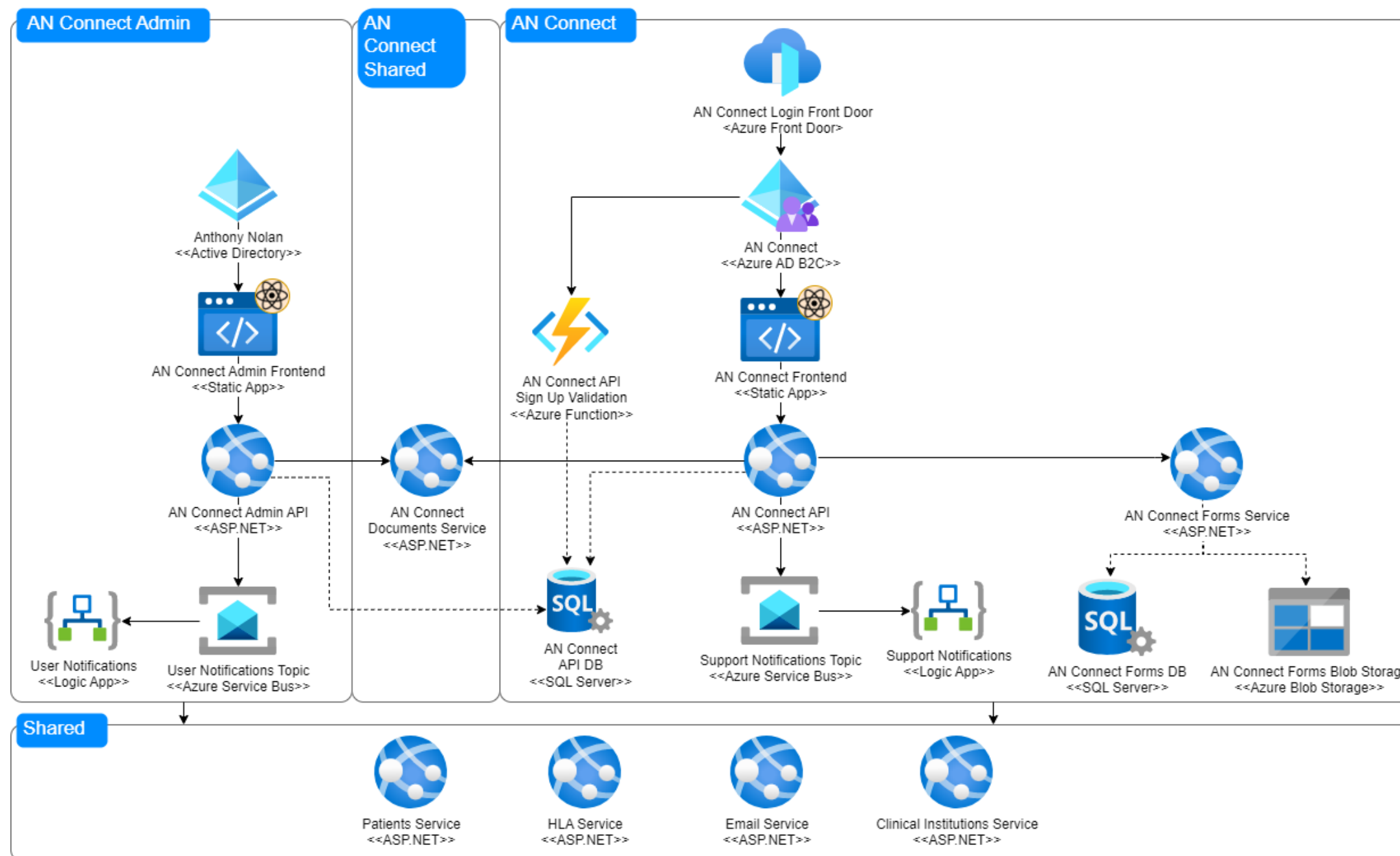
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Azure **Hybrid Infrastructure** for PSI

PSI **DataArt**

Client

PSI CRO, headquartered in Switzerland, is a full-service global Contract Research Organization specializing in delivering clinical projects across multiple therapeutic areas.

Challenge

To enhance the technology infrastructure and streamline PSI operations, the company required an internal network in the cloud with the ability to access on-premises services.

The main challenges leading to this request included:

- The geographical distribution of project teams requiring a unified solution to foster efficient collaboration;

- The necessity to enhance the responsiveness of business applications;

- Cost optimization for the company's Data/AI/ML infrastructure, as traditional on-premises data centers often incur high costs;

- The need for integration between existing applications to ensure a smooth and uninterrupted data flow across the entire organization.

Thus, these factors led the DataArt experts to integrate Azure cloud-based resources with the existing on-premises infrastructure, creating a hybrid infrastructure model for the client. This solution allowed the client to harness the advantages of Azure Cloud while leveraging their on-premises resources.

> " Thus, these factors led the DataArt experts to integrate Azure cloud-based resources with the existing on-premises infrastructure, creating a hybrid infrastructure model for the client. This solution allowed the client to harness the advantages of Azure Cloud while leveraging their on-premises resources.

Kirill Soldatov
Head Process Improvement, PSI

Azure **Hybrid Infrastructure** for PSI

Solution

Several services were provided by DataArt in this project's scope, including:

1. **Developing DevOps practice inside PSI from scratch:** The client had no prior experience in Azure cloud, so DataArt's team developed and implemented the entire DevOps methodology from scratch. The existing on-premises infrastructure was extended to the cloud, enabling the client to leverage the benefits of Azure cloud computing while still utilizing their on-premises resources.

2. **Establishing Azure cloud governance:** As part of Azure cloud governance, the team defined guidelines and standards for accessing the cloud, established naming conventions, determined artifact storage practices, implemented cloud governance policies, and more.

3. **Fixing PSI hybrid network implementation (on-prem + Azure cloud) and improving security**: The issues or inefficiencies in the existing network setup that combines on-premises infrastructure with Azure have been resolved. The focus was on enhancing network performance, connectivity, and overall security.

4. **Usage of DNS services in the network setup:** Since all resources were deployed without external access, Azure DNS Forwarder has been set up for seamless integration between the local customer network and Azure cloud network.

5. **Deployment with Azure Kubernetes Service (AKS):** DataArt's solution utilized AKS and intelligent scaling based on a queue system. This approach accelerated computations while optimizing the total cost of infrastructure ownership.

Highlights

- Stable and secure hybrid network with Azure

- Faster and more precise calculations

- Cost efficiency for the scalable Data/AI/ML infrastructure

- Unified network for geographically distributed users

- Seamless data transfer and workload migration between environments

Technologies & Tools

- Azure K8s service, KEDA scaling, Queues , Azure DevOps, Azure SQL, Private networking, WAN, Azure Hubs, Azure Route Tables in Hub, Azure Synapse, PowerBI, VM, Web Apps, Data Lake, VM Set, CI/CD, C# , Private Endpoints, Firewall ,NSG, AVD services

Portfolio Analytics Platform:
System Modernization

DataArt

Client

The client is an alternative credit specialist that serves institutional investors globally. The company did a lift-and-shift migration to Azure to retire aging and underutilized datacenters. This step gave it the scale and agility needed to run massive transaction processing services, but to really take advantage of the cloud technology, the client needed to leverage Azure-native capabilities.

With a strategic goal to build cloud-native architectures, the company partnered with the enterprise software experts at DataArt.

Challenge

Shifted workloads must be optimized to take full advantage of the performance, scale, and cost benefits that cloud hosting provides. The client partnered with DataArt to refactor monolithic application architectures using modern microservices and containers.

Solution

The DataArt team moved the client's critical solution to agile microservices hosted in Azure Kubernetes Service (AKS) to address performance and scalability issues.

Using the Spring Framework, engineers created a flexible architecture for the microservices based on Spring Boot.

Microservices run in containers, giving engineers the flexibility to build and run containers on any development machine using their tools of choice.

To simplify system maintenance and optimize the application, the team switched to Azure SQL Managed Instance, a fully managed and always up-to-date SQL instance in the cloud. Azure SQL Managed Instance delivers the performance needed to store the cash-flow models used by the demanding calculation engine.
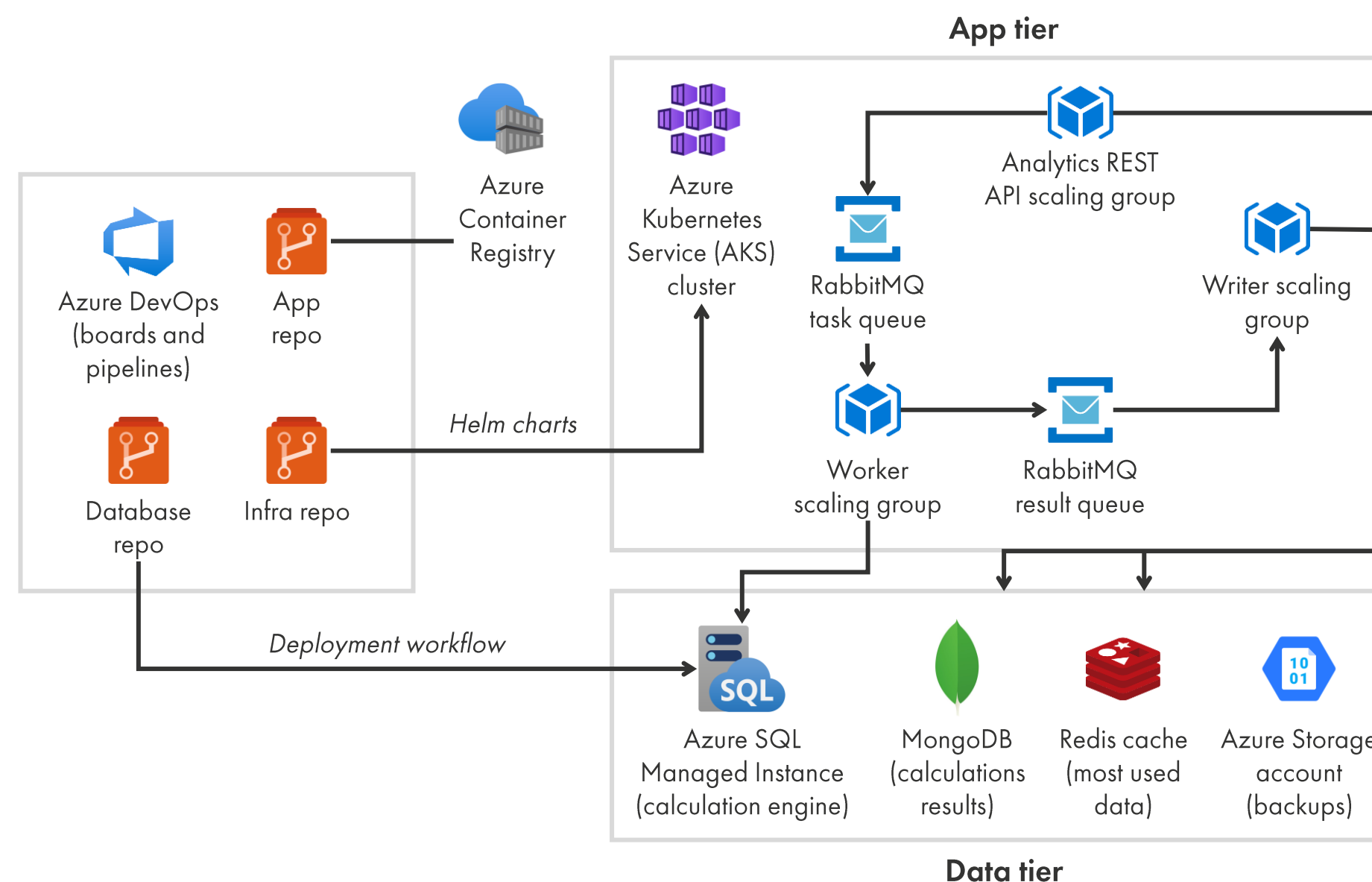
An automated, end-to-end Azure DevOps pipeline was deployed to streamline future development, enhancing efficiency and reducing manual processes.

Portfolio Analytics Platform:
System Modernization

DataArt

Business Benefits

- A modern technology stack on Azure Kubernetes Service (AKS) addresses the need to store, process, and analyze terabytes of financial data, advancing the firm toward cloud-native architectures.

- Analyses that used to run overnight now run in near real-time, enabling intelligent business decisions.

- End-to-end Azure DevOps automation streamlines project delivery, enhancing collaboration and reducing time-to-market.

- Cost savings are realized as a result of AKS's ability to provision resources as needed, allowing the client to pay only for the VMs and related storage and networking resources actually used.

- Maintenance overhead is reduced, allowing the business to enhance operational efficiency and focus on strategic initiatives.

App tier

Azure Container Registry

Azure Kubernetes Service (AKS) cluster

Azure DevOps (boards and pipelines)

App repo

Database repo

Infra repo

Helm charts

RabbitMQ task queue

Analytics REST API scaling group

Writer scaling group

Worker scaling group

RabbitMQ result queue

Deployment workflow

Azure SQL Managed Instance (calculation engine)

MongoDB (calculations results)

Redis cache (most used data)

Azure Storage account (backups)

Data tier

Smart Lift-n-Shift from AWS to Azure

DataArt

Client

The client is a US based company that makes web-based clothes stores plugin. The plugin is used for further communication with end users and is platform agnostic. DataArt has been developing an application for the client for three years and has established great relationships and trust.

The client has been using AWS services, when Microsoft initiated an engagement and provided good discount to use Azure services. DataArt team performed lift-n-shift migration for the client from scratch, moving and adopting all his applications and services to Azure. During Migration, majority of systems were modernized and best practices were implemented.

Summary

Smart Lift-n-Shift was performed by DataArt from scratch without any POC or MVP etc. It took a month to perform end-to-end flow from planning till finish of the move.

Business value

The client received a huge costs optimization using Microsoft proposition. In addition, a modernization of client systems was performed, making value stream even better using latest Microsoft Azure Services.

Technologies & Approaches

- AKS K8s orchestration is used in Azure instead of simple Docker containers in AWS

- Azure DevOps (10 pipelines) is used as CI/CD process instead of Jenkins in AWS

- Azure Functions are used instead of AWS Lambda functions

- Other Azure-native services used are Azure Service Bus, Blobs and more

Calculation **Optimization**

DataArt

Optimizing Calculations for a Large Insurance Company

The Client

Our client is a leading insurance firm specializing in pension insurance, claims processing, and asset management.
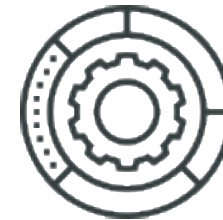
Challenge

The client's insurance calculation process was manual and time-consuming, needing a more efficient and integrated approach to data management. The shift to Azure cloud technologies helped improve their system using the existing data.
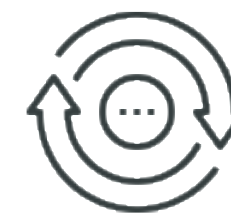
Business Benefits

Reduced manual input with **process automation**

Streamlined **data management & reference systems**

Enhanced system **scalability & reliability** with managed virtual resources.

Accelerated calculation times from 3 days to under **20 minutes.**

Solution

- Developed a centralized and automated system by using MS .NET stack and Azure Cloud services.

- Implemented a user-friendly interface for operations by using SPA frameworks. Ongoing optimization of backend services by our team.

- Security oversight is a collaborative effort with the client, with a strong focus on security and data protection during development and architectural decisions.

- Improved operational efficiency with the integration of existing data.

- Added scalability and parallelization to boost operational power.

Migration to Microsoft Azure with on-Site Big Query **Data Ingestion**

DataArt

Client

The client is a technology solutions provider that specializes in providing end-to-end solutions to corporate clients in the areas of Data and AI, Modern Workplace, Business Applications, Cybersecurity, and Digital Strategy.

Challenge

The client needed the migration of two containerized full-stack and mission-critical monitoring and data visualization tools from Google Cloud services to Microsoft Azure.

The client's front ends were implemented in React, while their back ends were written in Python and Javascript. Data was sourced via IoT input from on-site machinery ingested into Google Big Query. While the front end and back end had to be migrated, data would continue to be collated in Big Query, so a secure connection would have to be established as well.

Solution

Keeping in line with the client's existing practices, their destination infrastructure had to be built from code using Terraform before the two applications in question could be migrated.

The team leveraged the features offered specifically by the paid-for Terraform Enterprise web interface, using it to manage multiple environments and infrastructure deployments by several engineers. AzureRM and AzureAD were used as Terraform providers to describe resources. At the same time, popular Terraform modules (virtual network and key vault, among others) were leveraged to standardize the implementation and achieve brevity. The aim was to create a clean, pared-back infrastructure to ensure the scalability and maintainability of the applications.

Results

Azure proved to be a mature and feature-rich ecosystem that offered the client all the necessary capabilities for their applications. As a result, the client has benefited from the versatility and relative simplicity of using cloud services like Microsoft Azure to streamline their IT processes.

Analytics Platform for Guest Experience **System**

DataArt

Client

The client is a leading hospitality technology solutions company that offers SaaS platform to major hotel groups. The platform offers end-to-end solutions and support, transforming guest experience and improving operational efficiency, leading to higher market share and profit margins.

Solution

DataArt designed and implemented Data and Analytics components of the platform. Engagement began with POC focused on de-risking core technology decisions, comparing several implementation options (Data Lake + SAAS + DW, Azure Data Warehouse, Traditional Data Warehouse) and validating core requirements fit:
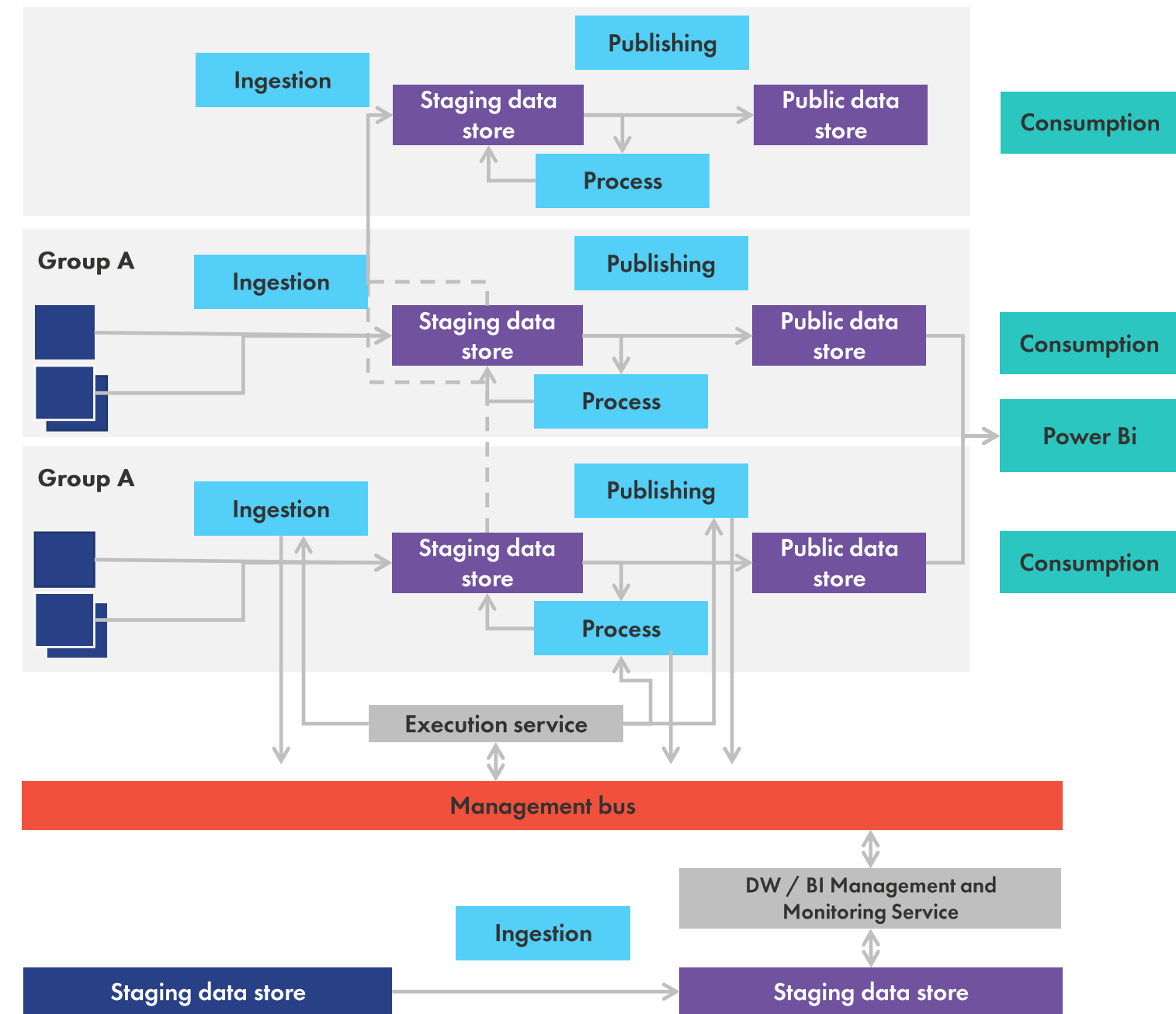
- Multi-tenancy at database level
- End-to-end integration data flow
- Authentication in Power BI
- Infrastructure cost optimization

Several month later, data and analytics platform based on proposed architecture was successfully implemented.

Technology

Azure, Elastic Database Pool, Functions App, Data Lake and Blob Storage, Power BI Embedded

Recommendation Systems
for Contract Research

DataArt

About the Client

Leading Contract Research Organization hired DataArt to create a model to accelerate patient recruitment.

The main challenge for our client was the complicated patient recruitment process for clinical trials, oftentimes leading to research being delayed, or even abandoned because where there is an insufficient number of participants, accurate conclusions cannot be drawn, and even promising therapies can appear to underperform.

By merging sophisticated algorithms with an automated process, DataArt solved the once-difficult, costly and time-consuming problem of distributing patient quotas over hospitals and countries, as well as making sure to avoid extra expenses.

The solution is built on the Azure platform. The primary tech problem was that the modelling consumes a lot of CPU resources to satisfy performance criteria.

Using all Azure flexibility, we were able to implement cost-efficient infrastructure, with a custom pre-heat strategy and easy scaling.

Highlights

- Taken into account the given eligibility criteria, our model selects different geomixes with the optimal number of hospitals and patients planned for that country which considerably accelerates the recruitment process

- Selects the most efficient and optimal combination considering that all hospitals should finish the patient recruitment at the same time

- Finds cost-efficient solutions

- Continually adapting and optimizing model, with a focus on randomization

- Instead of single scenario, our solution also provides different scenarios with different level of confidences

Technology

Python, CP-SAT library, Pandas, Scikit-learn, LightGBM, Azure

Fraud Detection System

DataArt

About the Client

A client that provides customers with a suite of payment processing services needed to replace the existing 3rd party fraud detection system with a next-gen in-house solution. DataArt developed a bespoke anti-fraud system that efficiently combines both rule-based and AI/ML approaches.

Highlights

- The real-time system ranks all suspicious transactions automatically and brings the most outstanding ones to the top of the list.
- The following AI/ML models are utilized to increase the accuracy of the results:
  - Supervised – based on already known fraud results for the historical data.
  - Unsupervised – anomaly detection approach to address the unknown cases of fraud potentially missed by the previous system.
  - Time series – predict the characteristics of the next transaction based on a historical data
- The original approach detects outliers based on custom fields importance provided by the administrator.
- The system operates with tens of thousands of data per day and enables dynamic generation of the transaction limits.

Technology

- Python (pandas, NumPy, scikit-learn, Flutter, SQLAlchemy)
- Docker
- Azure
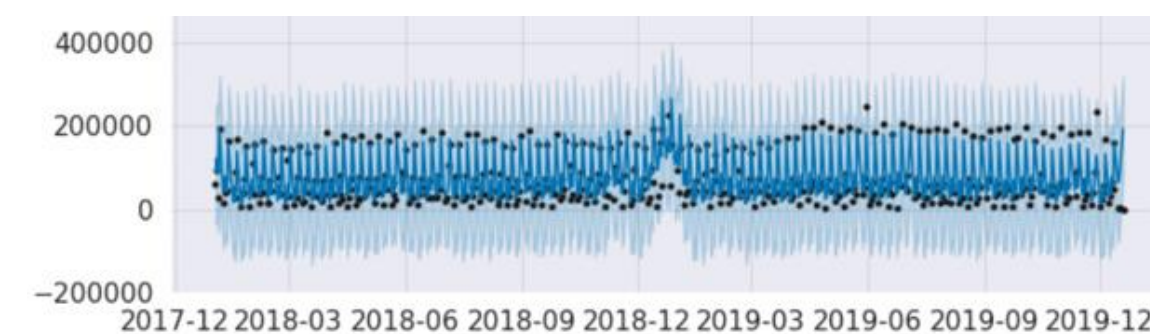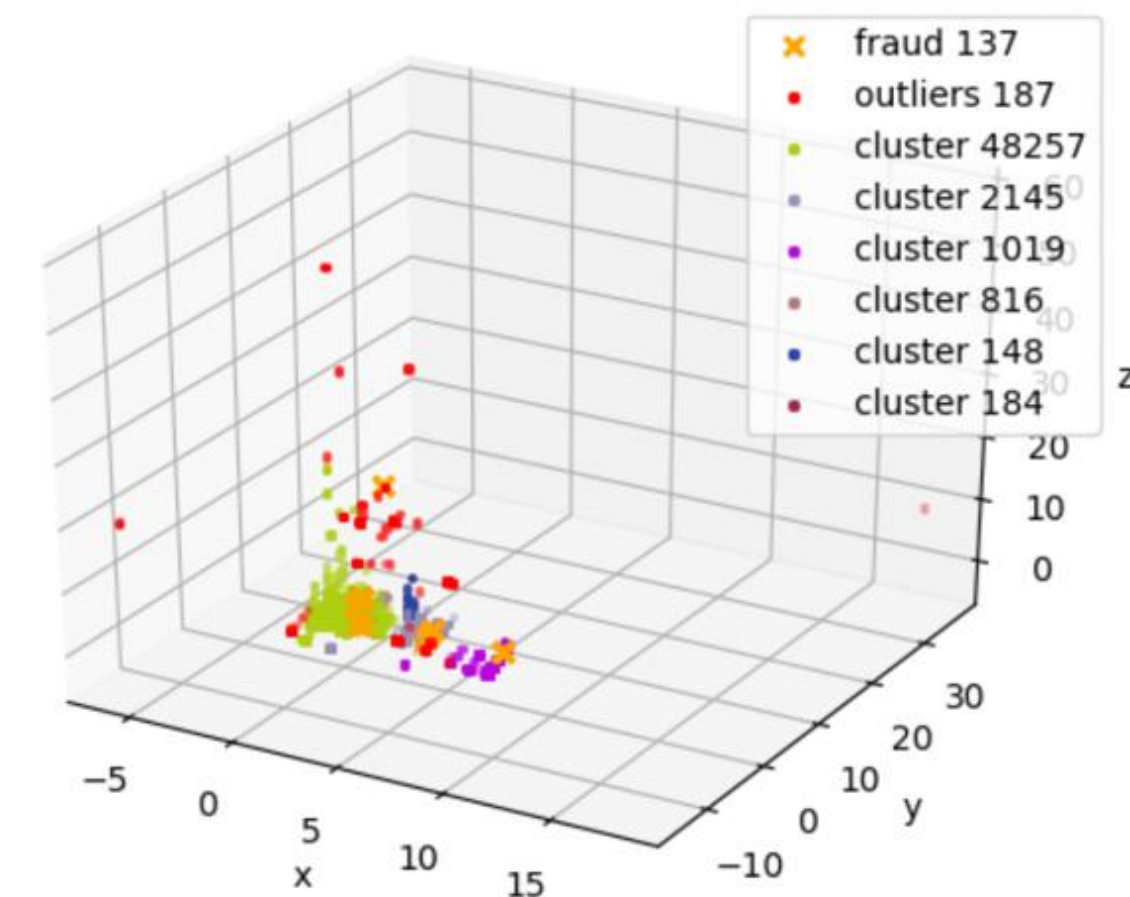
Revenue Maximization for Insurance **Aggregator**

DataArt

About the Client

The client is an InsurTech providing auto insurance quotes side-by-side comparison for its clients.

The primary goal of the project was to increase the revenue by offering the appropriate content to different visitors of the website.

DataArt developed a decision-making ML pipeline that uses various models to predict revenue for different sets of content and select the one with the highest potential revenue for a new website visitor.

Highlights

- 5 models combined into 3 approaches to predict the revenue

- Revenue threshold approach for controlling the percentage of Ads Only cases

- Best model training period based on data trends

- Prediction Service for using models in Production

- Designing the approach to verify models in Production (A/B Testing)

- Estimated revenue increase up to 10%

Technology

Azure, Python, Flask, Docker, CatBoost, ML open-source libraries
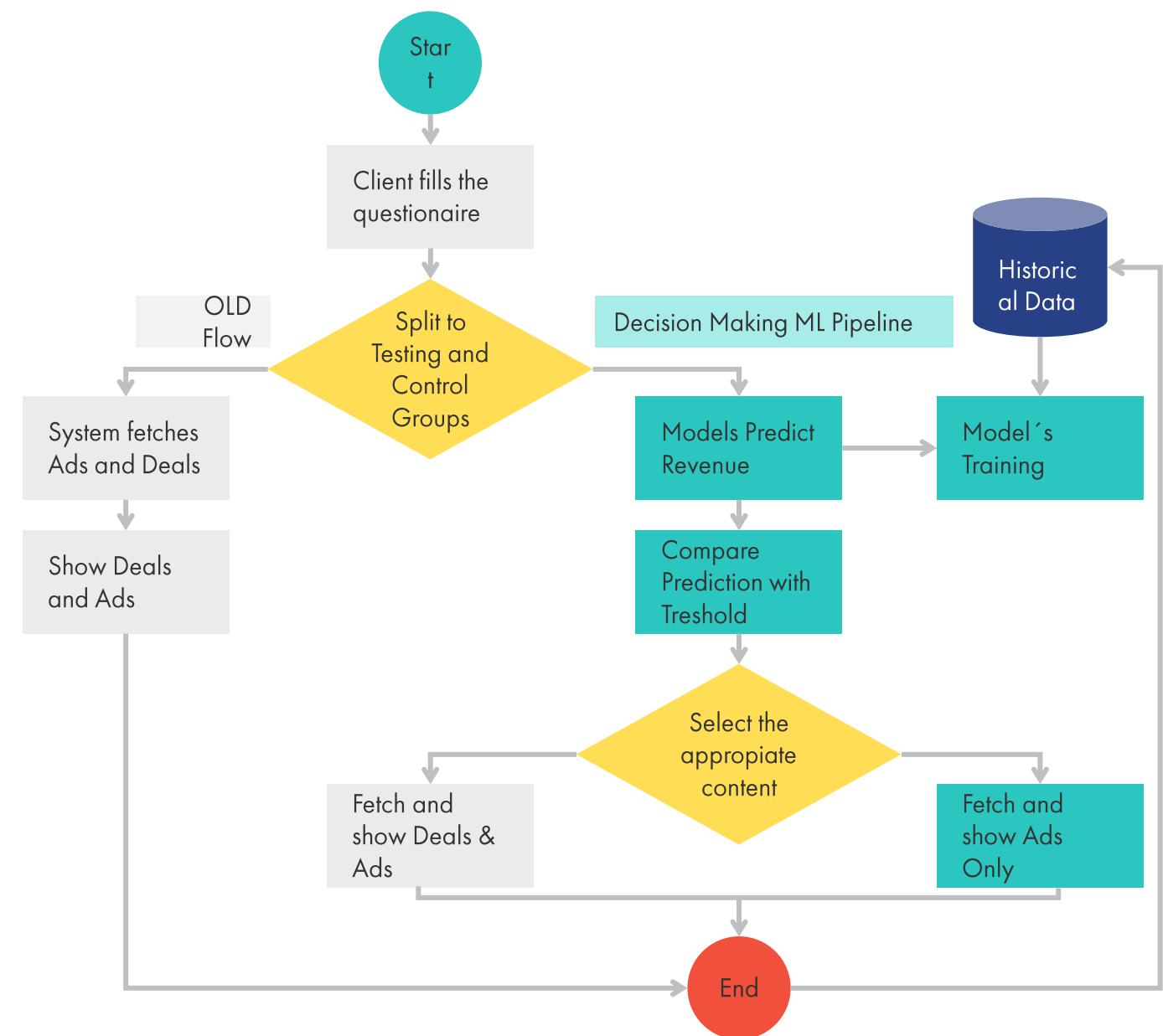
Innovative Fashion Customer **Engagement**
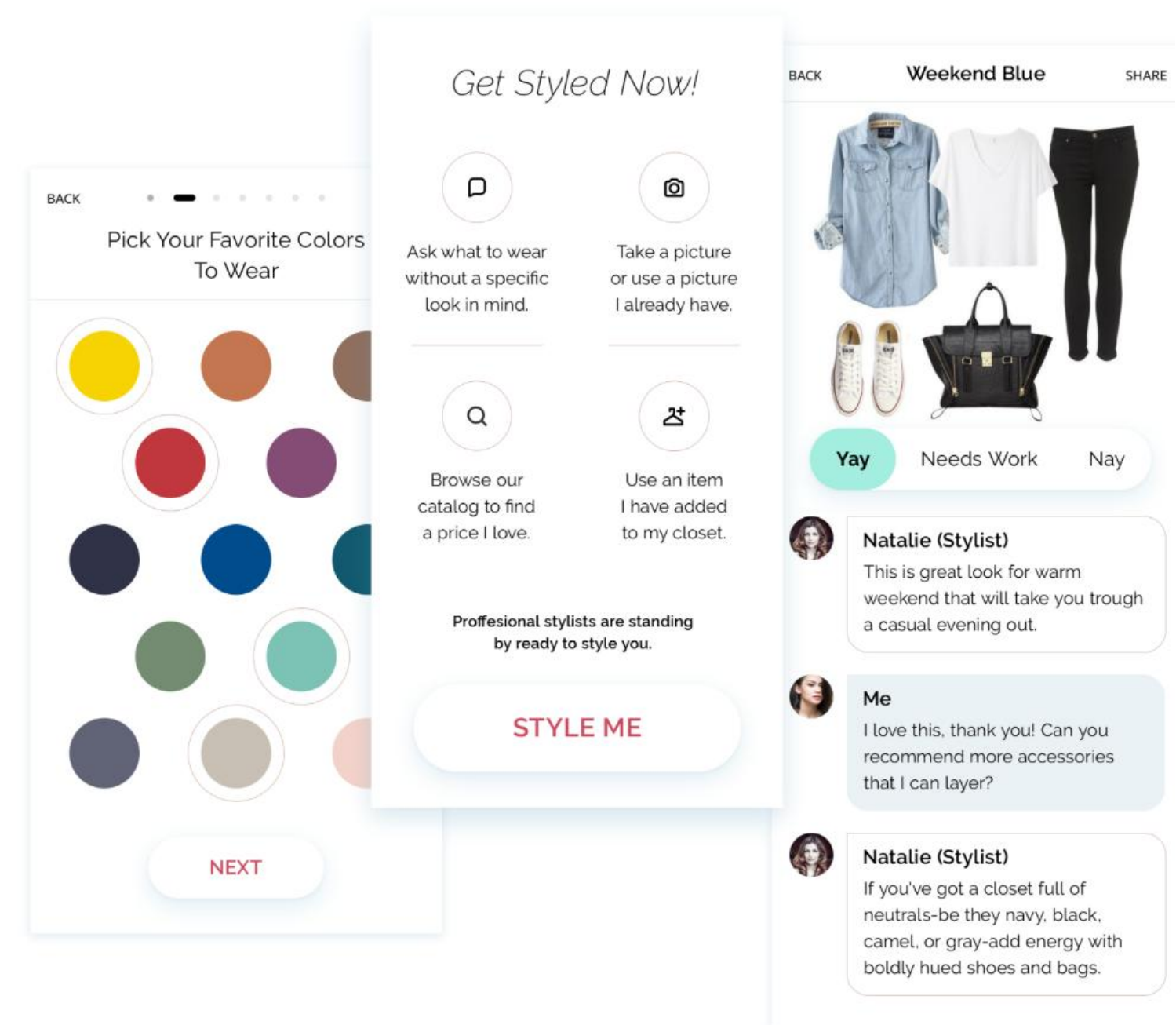
DataArt

About the Client

DataArt developed a suite of applications that is focused on 2 directions: fashion and home workplace set up.

Fashion set allows continuous communication between brands, retailers and customers. The innovative business logic behind the direct-to-consumer service is transformed into a SaaS business product to enable brands and their affiliates to deliver strong results with curated, personalized customer engagement.

The second path is a set of features for the enterprises that facilitates the delivery and replacement of work equipment directly to the employee's place. It allows to achieve improved productivity and increased employee satisfaction.

Highlights

- Azure Kubernetes Services hosts API services and background workloads

- Azure Application Gateway handles TLS termination, ingress load balancing and web application firewall rulesets

- Azure CDN backed worldwide static content and landing site delivery

- Azure Devops is used for service deployment and IaC configuration routines

Gesture Recognition for Innovation **Strategy**

DataArt

About the Client

The leading organization in the FMCG market hired DataArt to help with product innovation strategy. Our experts were tasked to develop a model for gesture recognition and build winning product concepts to gain a competitive advantage.

Highlights

- Lightweight solution based on convolutional neural networks.

- Siamese networks for gesture recognition. The Siamese architecture allows both pre-defined gesture classification and recognition of user-defined gestures.

- High accuracy even in a complex environment.

- Optimized solution that runs directly in PWA on Mobile Devices.

Technology

Keras, Tensorflow, Azure DevOps, GitLab
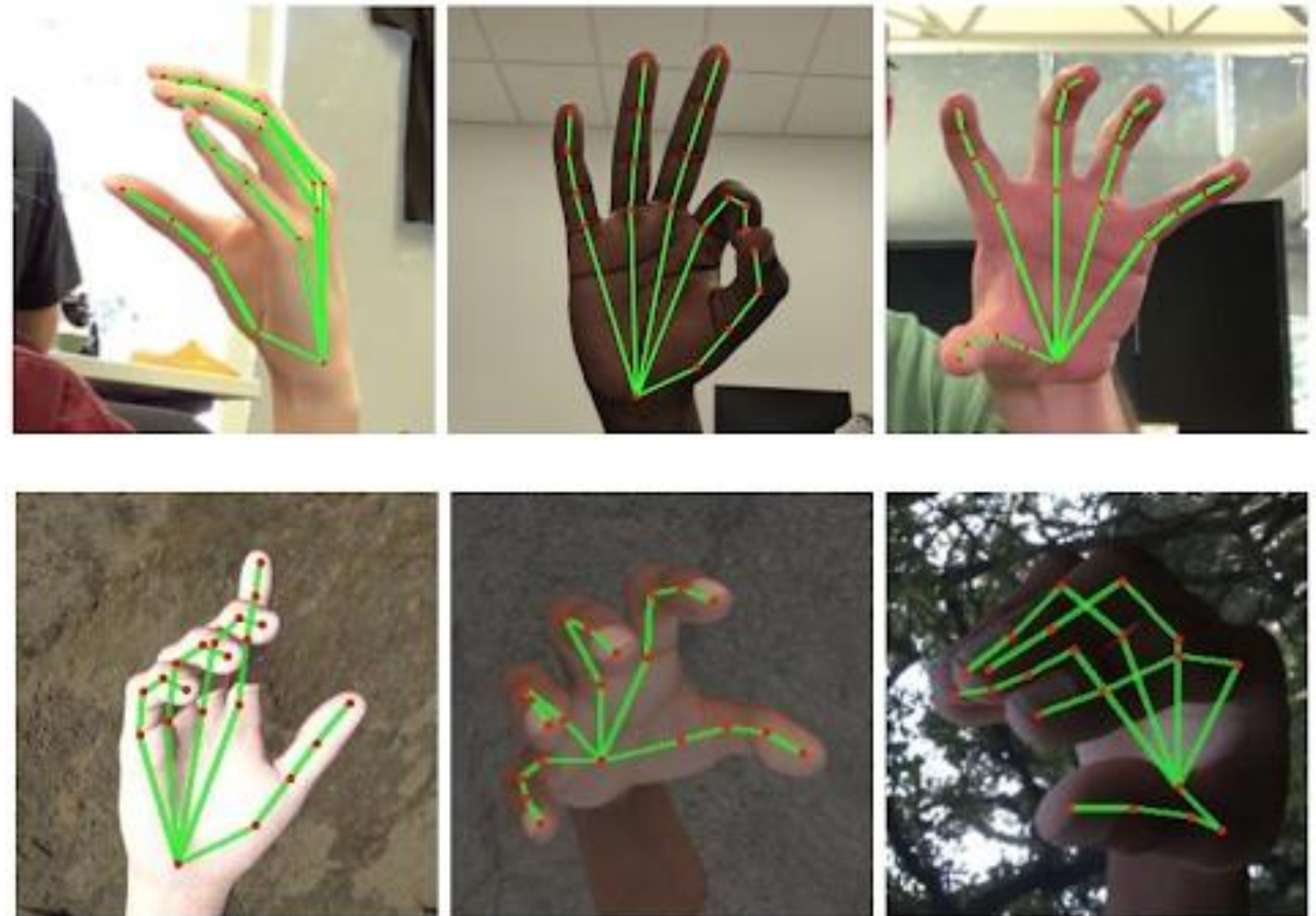
Boost Travel Agents

DataArt

Email Processing Automation for Streamlined Booking Management

The Client

One of the largest travel retailers and corporate travel managers organizations, which manages a massive swirl of daily booking emails. Manual email processing is time-consuming and risks human error, leading to longer response times, missed booking opportunities, and impacted customer satisfaction and loyalty.
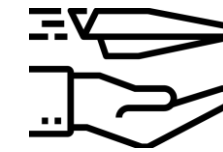
Solution

DataArt was hired to create a solution to automate and enrich travel agents' email processing with Generative AI.
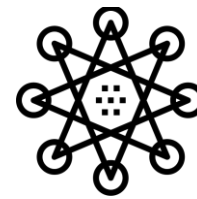
Salesforce UI
& agent flow integration
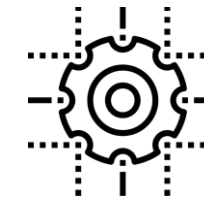
Priority Score calculation to increase agents' time to respond

~500k monthly emails handled with **Azure OpenAI Services**

Key Advantages

- Email intent recognition and key booking data extraction

- English and Spanish language support

- Complex booking structure and informal email handling

- Booking Priority Score calculation based on urgency and extracted data

- Automated follow-up email generation to confirm received data and request missing data

- Automated email processing leading to enhanced productivity and workload management for the client team.

Maximize Potential with Generative **AI**

DataArt

Improving Data Quality
by Automating the Mapping System

The Client

The client was seeking to enrich their hotel data quality to avoid unreliable information, failed deliveries, billing errors, or inadequate support aiming for better decision-making processes.
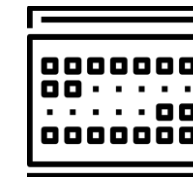
Solution

DataArt was hired to automatize time-consuming manual data-collecting, matching, and validation efforts to eliminate the risk of human error and build a credible golden record dataset.
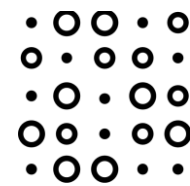
Advanced solution seamlessly integrated with Azure OpenAI Service

Boosted photo-matching accuracy

Automated hotel matching and validation

Key Advantages

- Improved operational efficiency through an automated hotel recommendation system

- Better customer experience with personalized offerings based on user data

- Enhanced pattern, trend, and correlation analysis for informed pricing and marketing strategies

- ChatGPT amplified Salesforce System

Creative **Endeavors** Made **Easier**

DataArt

Automated DIY Project Support with Buy-me-Bot

The Client

A German-based consulting company which offers strategic, IT, organizational, and management solutions to its extensive clientele network in automotive, retail, insurance, and healthcare sectors.

Challenge and Solution

The client wanted to enhance their sales opportunities with a generative AI PoC to spawn new leads in their customer base. DataArt was approached to create a ChatGPT-powered bot for delivering do-it-yourself projects. The solution is an interactive agent which addresses ChatGPT to compile a list of essential materials and a step-by-step DIY manual. The bot provides users with three price-ranked bundles of required items and the links to order them on eBay. There is also a download option to save project details for further use.
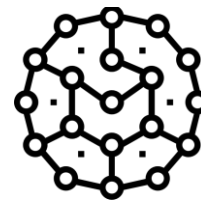
Azure-Hosted
Generative AI model

Compatibility
with major e-commerce platforms
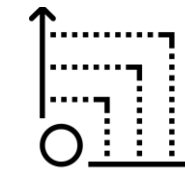
Elevated **user experience**

Key Advantages

- Cloud-native Azure-hosted AI model built with Streamlit
- Reinforced with Azure Open AI Services and ChatGPT 3.5
- Compatible with major e-commerce platforms (eBay, Amazon, etc.) via API
- Fully secure and compliant
- Provides enhanced experience for DIY enthusiasts
- Unveils co-marketing opportunities and pledges boost in sales

Intelligent **Automation**

DataArt

Helpdesk L1 ChatBot

DataArt internal helpdesk Level 1 team is overloaded with queries that are usually trivial to solve. Employees ask questions that are usually answered in corporate wiki documents and FAQs, which are typically scattered and not easily discoverable, especially for newcomers. Some cases still require special treatment by the appropriate department (HR, IT helpdesk, practice DMs, etc.) via the JIRA ticket tracking system.

Solution

To streamline the support process, DataArt introduced an internal corporate tool that seamlessly integrates with the corporate Jira and Confluence systems. Leveraging advanced technology, Confluence documents were indexed using a powerful vector search engine. This allowed for the efficient retrieval of relevant information, regardless of the language used, thanks to the implementation of multilingual embeddings.

ChatGPT-based engine answers most popular questions out of the box.

Jira and Confluence integrations automate ticket creation, pre-filling employee information, and reducing manual effort.

Key Advantages

- 60-70% of L1 requests are handled by the chatbot.

- Confluence-hosted corporate information is easily discoverable via MS Teams.

- Helpdesk workload is handled by a substantially smaller team.

- The integration of Azure OpenAI services with Confluence creates a centralized knowledge repository.

Success Stories

DataArt

Nasdaq · Ocado TECHNOLOGY · Annex BRANDS. · MAERSK · Doddle · bematech

Hotel Tonight · oneworld · HIVE · PADDYPOWER betfair · MONEX · theParkingSpot

spirent Promise. Assured. · Regus · thinkeco · BNP PARIBAS · artnet · Skyscanner

Apax PARTNERS · booker · charles river · Send Word Now EVERY MESSAGE COUNTS · TINKOFF

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