

# WORKING INNOVATION

RFP RESPONSE FOR

DASH CONNECTOR SOFTWARE DEVELOPMENT SERVICES



PREPARED FOR  
DROPBOX

SEP 2023

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## OUR TEAM TODAY



**Robert Vaughan**

Director – Business Development  
San Francisco, USA



**Chuck Eggert**

Chief Revenue Officer  
San Francisco, USA



**Balaji Krishna**

EVP, Digital Engineering  
Seattle, USA



**Seth Schaefer**

Global Delivery Head  
San Jose, USA



**Vikram Anerao**

VP, Digital Engineering & ERP  
Irvine, USA



**Rajneesh Chaganla**

Data Engineering Leader  
Seattle, USA

# Company Overview

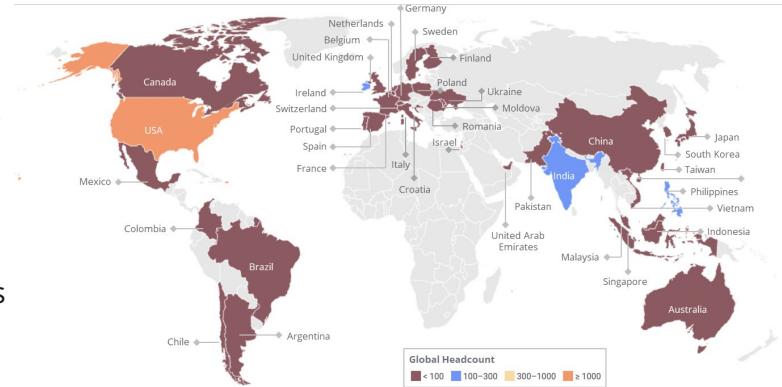

**Founded**

2001


**Headquarters**

San Francisco, CA

**Based in Silicon Valley with global delivery & deployment capabilities,** we empower top fortune-listed clients with our comprehensive suite of IT Managed Services and NextGen Digital Engineering services for modernized technology ecosystem impacting billions of digital users globally.



**34%**

Y-O-Y Growth

**95%**

Repeat Business

**15**

Fortune 500 clients

**8**

New clients added in 2022

**7+**

Years average for Top 5 customers

**2200+**

Global Employees

**50%**

Workforce outside of USA

**40**

Countries with local support coverage

# The Astreya Way – Personalized Partnership



## EXPERIENCE

**20+ years' experience** in enhancing and delivering **Digital Workplace, Infrastructure and E2E Engineering** Solutions and Services



## EXPERTISE

Data and **Automation** driven **CX** enhancement focus with a deep expertise **latest Digital, AI and Workplace Technology Stack**



## COMMITMENT

Executive Commitment to **Automate; Reduce Cost & Increase Efficiency**



## TALENT FOCUS

Talent Development  
Availability of SREs/DevOps engineers and consultants with **<2% Attrition Rate**



## WE LISTEN

We are **Right sized - Nimble, Flexible, Focused & Result Oriented**



Better Customer Experience



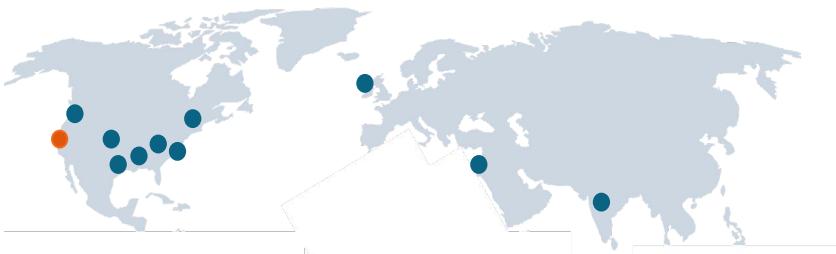
Speed and Agility



Reduction in TCO



# A True Global Service Delivery Partner



- **CorpOps** (supporting since 2014) - Albert Tang
- **Tech Infrastructure** (supporting since 2021) - Anthony Liu
- **Data Center** (supporting since 2021) - Chris Wesley
- **CollabX** (supporting since 2017) - Neil McMahon

## **DropStop (11)**

Locations: Dublin Ireland & Austin TX

## **CorpOps Support (5)**

Locations: San Francisco, Seattle, New York and Dublin Ireland

## **AV MCS Engineering, Events, & Production (8)**

Locations: San Francisco, Seattle, Austin TX, Arizona & Dublin Ireland

## **IT Security Management (1)**

Locations: San Francisco

## **Datacenter Support (2)**

Locations: Hillsboro, OR  
West Virginia

## **Network Engineering & Automation Tooling (4)**

Locations: Columbia, SC & NJ

## **Site Reliability Engineering (3)**

Locations: Madison, Mississippi & Aurora, Colorado + CA

## **Physical Inventory Operations (5)**

Locations: Dublin, Ireland, Maryland,  
San Francisco CA

## **Product Lifecycle Management (1)**

Locations: Dallas, Georgia

## **System Administration (2)**

Locations: Dublin Ireland, USA

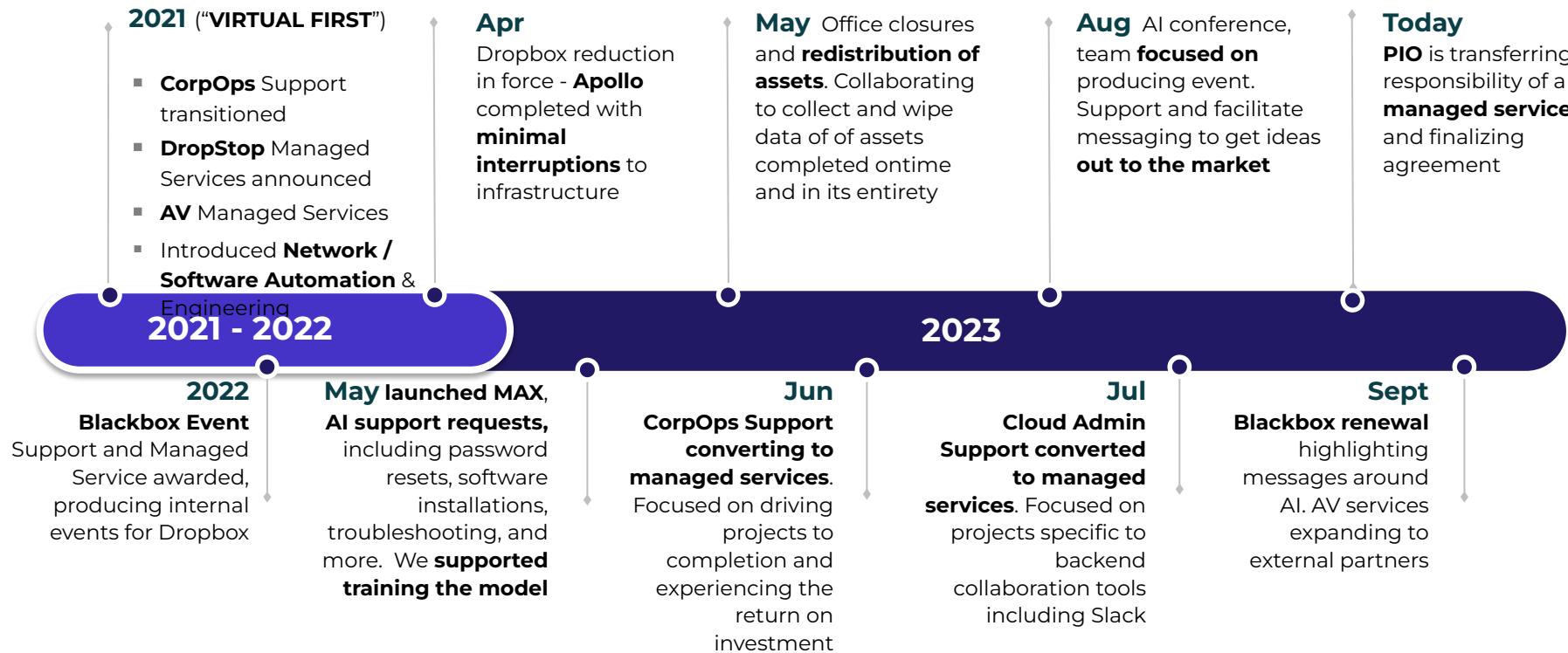
## **Identity Management System Administration (2)**

Locations: Austin, TX

## **Knowledge Management (1)**

Locations: Orlando, FL

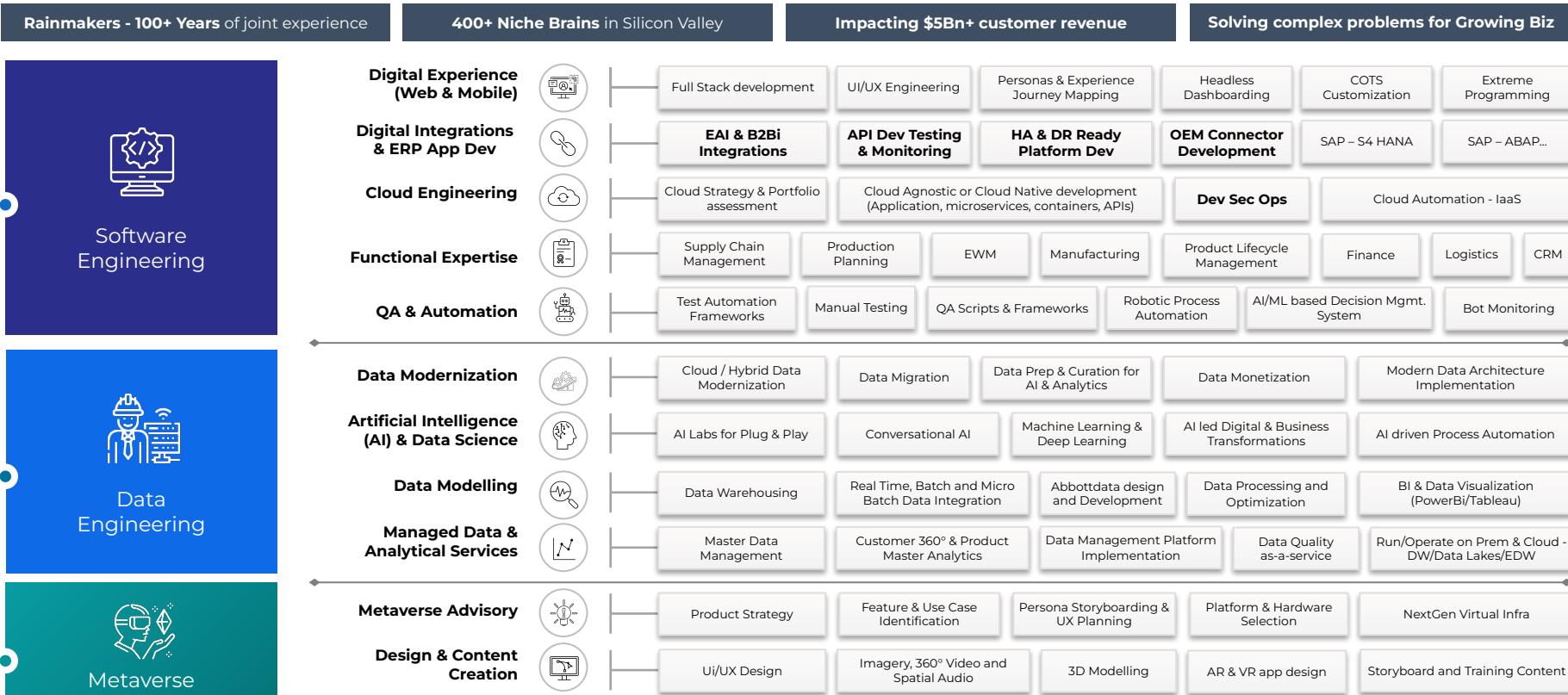
# Our Engagement Timeline



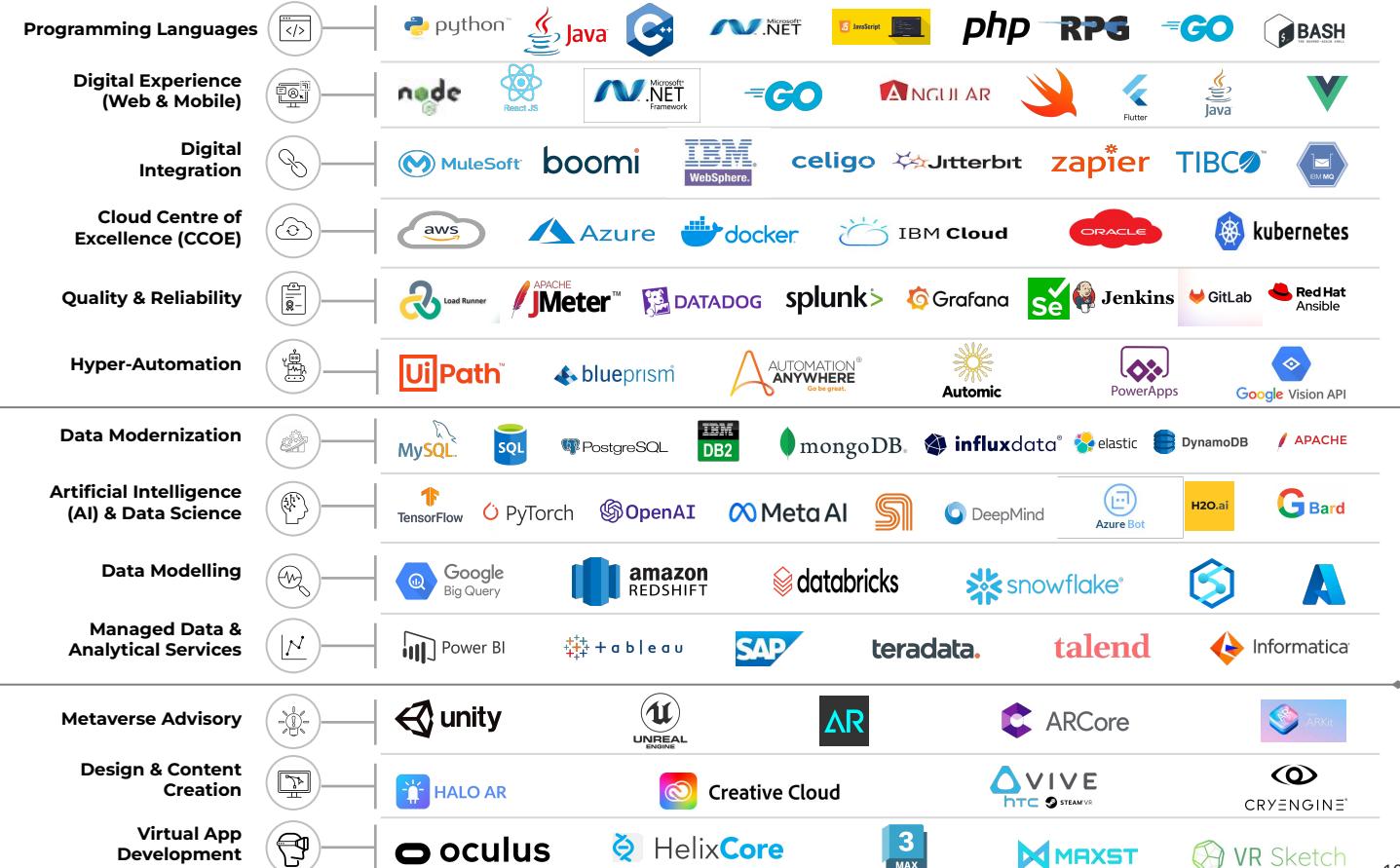
# Our End-to-End Infrastructure and Engineering Services

Rainmakers - 100+ Years of joint experience		200+ Niche Brains in Silicon Valley		Impacting \$5Bn+ customer revenue		Solving for Future of IT Infrastructure	
<p><b>NextGen Engineering Services</b></p>	<b>Software Engineering</b>	Full Stack Engineering	Digital Integration	Cloud Engineering	DevSecOps	Quality & Reliability Engineering	Hyper Automation
	<b>Data Engineering</b>	Data Modernization	AI & Data Science	Data Engineering	Data Management & Integration	BI & Advanced Analytics	
	<b>Metaverse</b>	Metaverse Advisory	Design & Content Creation	Persona Storyboarding & UX Planning	3D Modelling		
<p><b>Digital Workplace &amp; Infrastructure Services</b></p>	<b>Service Desk</b>	Network Services	Personal Computing Devices	ITSM	Access Management		
	<b>Audio Visual</b>	Integration	Maintenance & Break-Fix	Event Support	Help Desk		
	<b>IT Logistics</b>	Material & Allocation Planning	Procurement	Logistics & Fulfillment	PLM	Warehouse Management	Inventory Management
	<b>Data Center &amp; Networking</b>	Topology Plan & Design Engineering	Deployment & Provisioning	Monitoring & Operations	Server and Cache Management	Wireless, Backbone & Edge	R&D Lab Builds & Management

# Next Gen Engineering Services Overview



# Comprehensive Expertise in Latest Technology Stack



# Our Integration and Application Development Service offerings

**Mission Statement :** “Help organisations to innovate, change & scale faster by making it easy to connect applications, data and devices across all the business domains”

## SERVICE OFFERINGS



### EAI & B2Bi

- Enterprise Application Integrations
- Business To Business Integrations (EDI/EDIFACT)
- All Architecture Patterns
- Managed File Transfers



### Customized Solutions

- Small scale platforms
- Large scale platforms
- Hybrid platforms
- Layered Architectures
- Custom Connectors



### Transaction Visibility & Monitoring-Alerting

- Ready dashboards & custom dashboards
- Self-Service for Biz teams
- Pro-active & Reactive monitoring & alerting for Operations & Biz teams



### HA & DR Readiness

- Flex Architecture methodology
- Designs to overcome any Disaster Scenario
- Designs to ensure Max Uptime



### Security & Compliance

- Secured Platforms to process any data
- Encryptions for both - in flight & at rest data
- SOX Compliant platforms & related consulting



### iCOE Formation & Strategic Roadmaps

- Platforms & Services Maturity model
- Strategic Roadmap for iCOE programs
- Enterprise-wide Adoption Strategy with Guardrails



200+

DIGITAL ENGINEERS



20+

IMPLEMENTATIONS



8+

INTEGRATION  
PLATFORMS /  
TOOLS



300+

INTEGRATION  
INTERFACES  
DELIVERED

## Features & Realized Benefits

- Quicker development cycles with substantial cost savings
- Quicker connectivity with connectors means shorter time to market launch
- Efficient business process management with lesser downtimes for applications
- KPI Monitoring for business transactions
- Scalability of the platforms can support any amount of load with guaranteed delivery

## Technology Experience

### Cloud Integration Platforms



### Traditional Integration Platforms



### Messaging & Event based Platforms



# Complete List of Integration Services Offerings

## Services/Benefits of Integrations

**Low Code Cloud based integration development platform for Data Transformation**

**Quick Connectivity to any application**

**Messaging Channel/Routing (Pub Sub)**

**Loosely Coupled Channel (Asynchronous)**

**Data Persistence**

**Business Transaction Visibility**

**Monitoring & Alerting**

**Highly Available Platform with Flexibility feature**

**DR (Disaster Recovery) Ready Platform**

**Large files/data processing**

**External Trading partners/B2Bi services**

**Security Services**

**\*Quality Control & Testing Services**

## What it means to IT

*Widget based development style enables developers with smaller development cycle*

*200+ Out of the box Boomi Application & Technology Connectors can quickly connect with any application*

*Multiple apps subscribe to same message published by one publisher without the need for publisher to deal with each subscriber*

*Decoupling of the business process reduces Outages for multiple Applications*

*Ability to store data and reprocess as and when needed*

*Self Service Dashboards for business stakeholders & operations teams to monitor business processes and payloads*

*Platform components and critical business transactions are monitored with automated alerts*

*Flex architecture platform scales up & down to accommodate huge volumes*

*Ability to handle any disaster scenario through continuous data sync to standby infra-platforms in other region of AWS*

*Platform is capable of handling large files using MFT framework and huge data processing with thread mgmt*

*Platform uses IBM VAN to register Rivian's vendors/suppliers for exchanging EDI business artifacts*

*Data encryption, encryption at rest, API Security*

*Unit testing for Boomi/Integration code and test automation features for biz use case testing*

## Benefits to Biz Teams/Business Driver

*Lesser development effort with substantial cost savings & shorter time to market for any solution*

*Quicker connectivity means shorter time to market for any solution*

*Common business artifacts (Canonical) can be utilized for multiple applications with minimal changes*

*Efficient business process mgmt with lesser downtimes for business applications*

*Guaranteed delivery of business artifacts*

*Quicker resolution time for critical business transaction failures with domain specific KPI monitoring*

*Proactive monitoring and alerting ensures continuous availability of platform & continuity for business*

*Business continuity with timely processing of data for business*

*Business continuity without data/transaction loss for business*

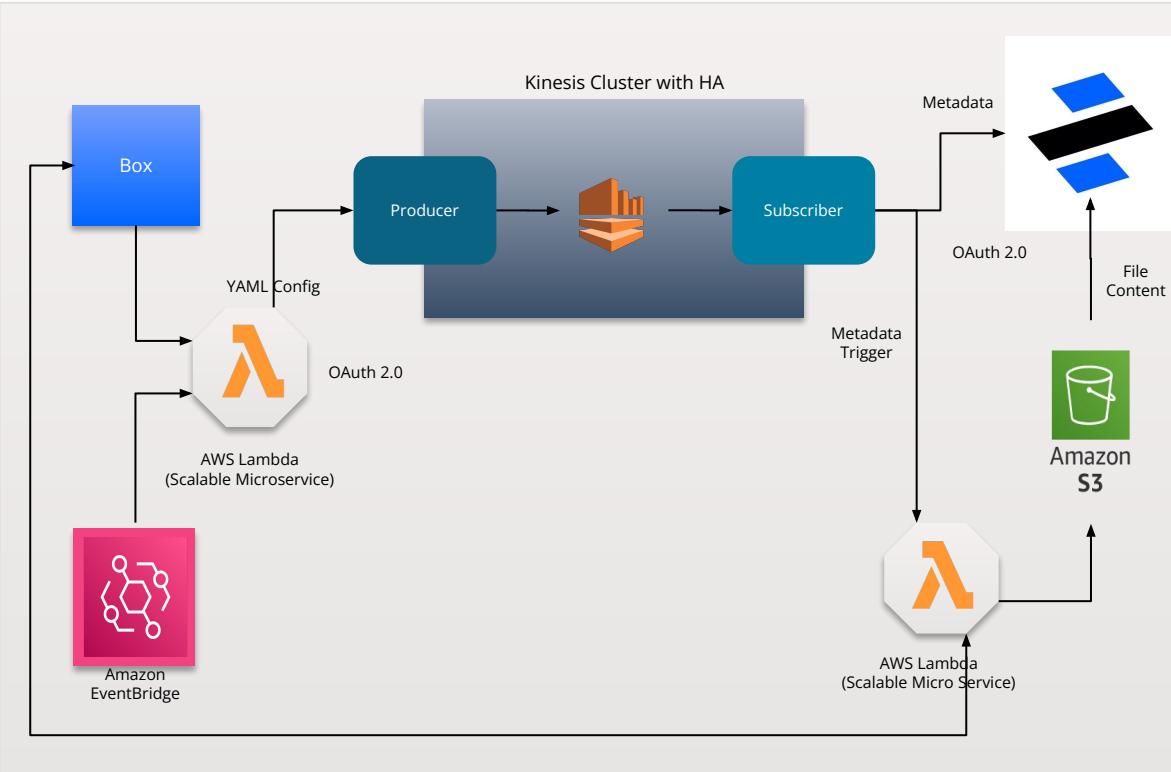
*Data of any size and format can be processed and transferred from one app to another*

*Supply Chain and Logistics business is run by this functionality of EIH*

*Secured platform for business, it will be SOX Certified*

*Lower code quality issues and related changes, improving biz process continuity*

# Dash Connector Pilot – Solution Architecture



## SOLUTION HIGHLIGHTS

- Pilot Hosted in AWS
- Kinesis used for Metadata Triggers
- Lambda 1 used for –
  - Polling for incoming files at Dropbox Folder at specific intervals
  - Extracting the Metadata of the files
  - Sending Metadata to Kafka topics
- Lambda 2 –
  - Gets triggered with incoming Metadata in Kafka topic
  - Based on the the Metadata of the file, it fetches the files and moves its content to S3 bucket
- Same Metadata could be sent to Dash
- From Dash UI, end users can do the search for files

# Connector Mock Code / Demo

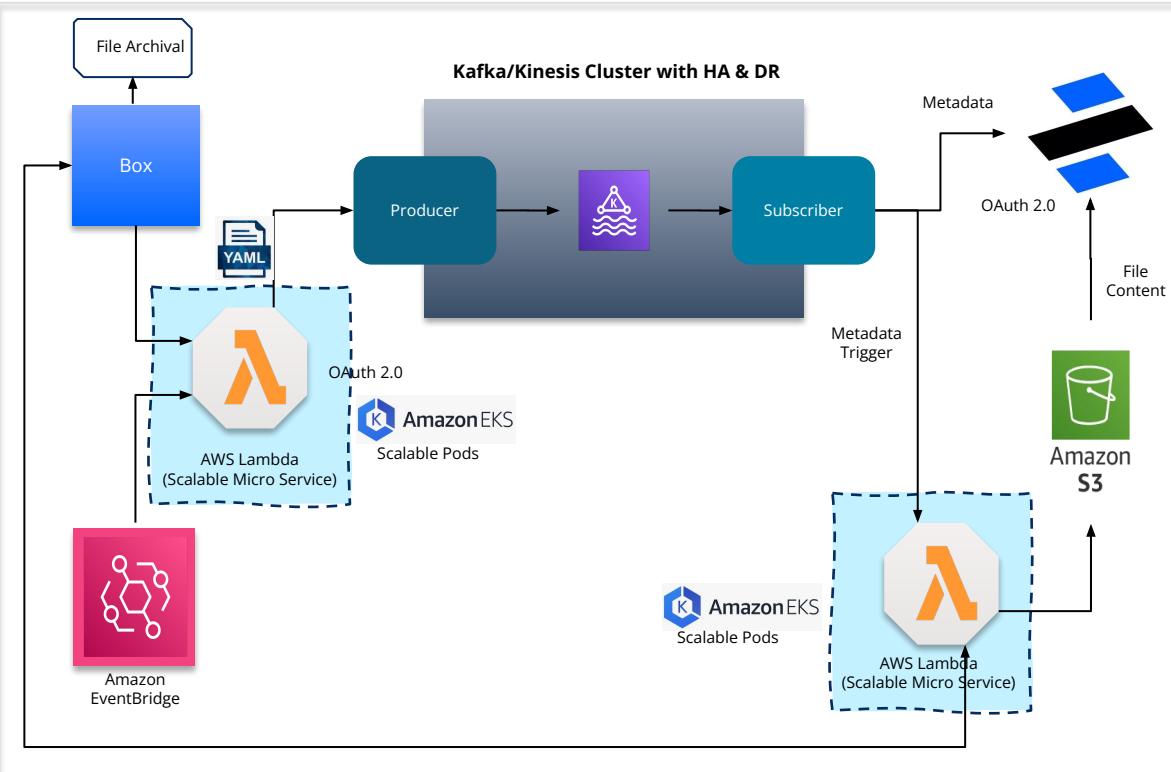


The screenshot shows a code editor interface with the following details:

- Repository: Box-Dash
- Branch: master
- File: get\_data.go
- Code tab selected
- Blame: 161 lines (131 loc) · 3.79 KB
- Code 55% faster with [link]

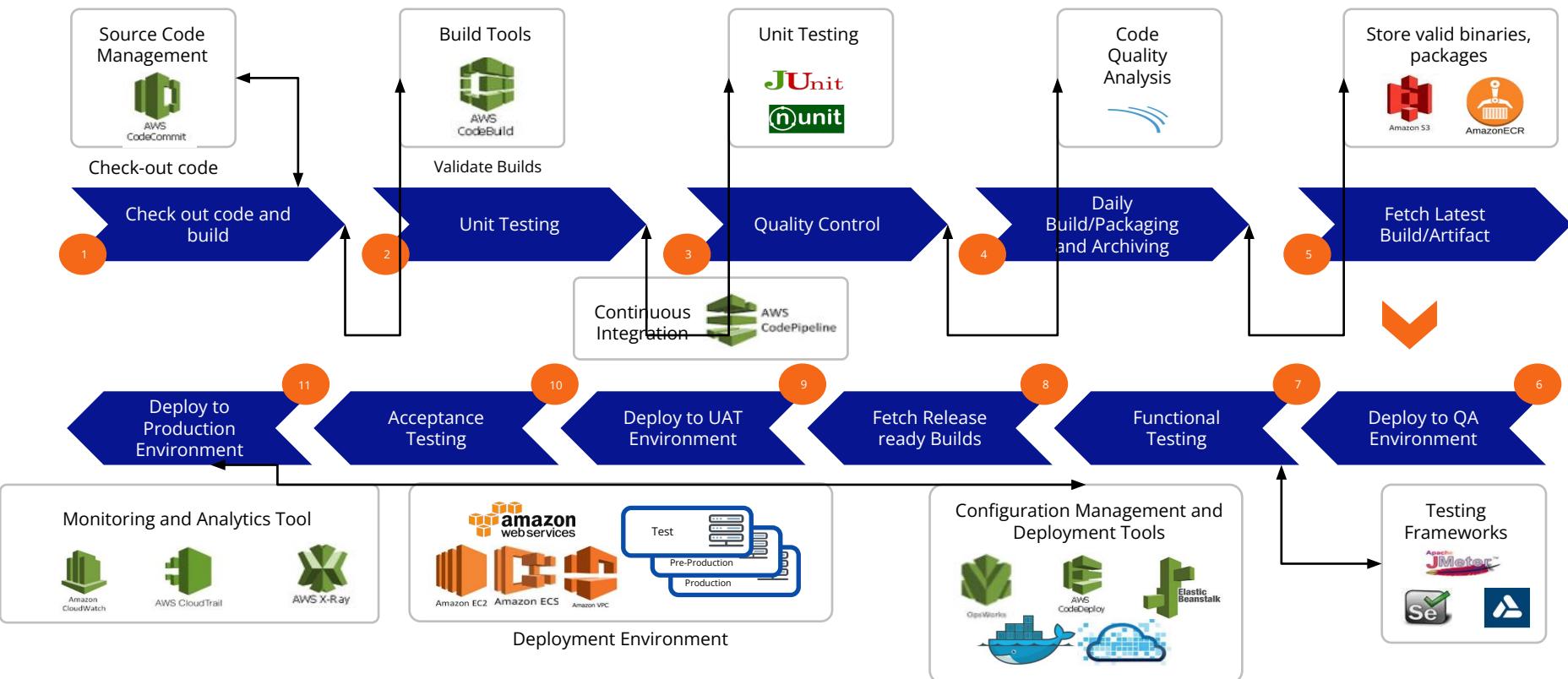
```
3 import (
4     "fmt"
5     "net/http"
6     "io/ioutil"
7     "strings"
8     "encoding/json"
9     "os"
10    "log"
11    "github.com/joho/godotenv"
12 )
13
14 // Define a struct to represent the JSON data
15 type BoxResponse struct {
16     TotalCount int `json:"total_count"`
17     Entries     []struct {
18         Type      string `json:"type"`
19         ID        string `json:"id"`
20         Etag      string `json:"etag"`
21         Name      string `json:"name"`
22         DownloadURL string `json:"download_url"`
23         ContentCreatedAt string `json:"content_created_at"`
24         OwnedBy   struct {
25             Type  string `json:"type"`
26             ID    string `json:"id"`
27             Name  string `json:"name"`
28             Login string `json:"login"`
29         } `json:"owned_by"`
30     } `json:"entries"`
}
```

# Potential Improvements and New Features



- Running Lambda in a container in cluster of Kubernetes, to scale the execution with Pods multiplying in case of Volume
- Dropbox folders can grow, and we can use the same connector code to scale up to any number of folders to pick the files by making the solution YAML config based
- Making Kafka/Kinesis run in HA mode
- Improved Error handling with monitoring & alerting
- Archival of the files to Archive Dir once they are picked up and moved to S3 bucket (if needed)

# DevOps Pipeline & Toolchain - AWS



# Geo Information System Application Development

## Business Problem

- **Manage global telecom infrastructure and assets** for expanding dark fiber networks in North America.
- **Lack of accurate asset and geospatial data** to create comprehensive asset databases and detailed maps for network planning and maintenance.
- **Long lead times** to plan, design and build physical infrastructure.

## Implemented Solution

- **Full stack development of web application** using React.js front end with PostgreSQL database for a high-performance application.
- **AI based Geospatial data integration and analysis** to provide real-time visualization of geo features and fibre route plan recommendations
- **Cloud based CI/CD platform** for development environment with testing framework and tooling to support iterative builds.
- **VR modelling of physical infrastructure** allowing remote teams to design, construct, and support equipment huts to exact specifications.

## Delivered Benefits

- **Minimum viable product** in production within six months
- **Open source development** to increase portability and reduce cost
- **Increased data quality** for route, circuit and network asset management
- **Higher user satisfaction** with advanced front end technology to visualize and plan global network infrastructure



**CLIENT**

**MOST POPULAR SOCIAL NETWORKING PLATFORM IN THE WORLD**

**TECHNOLOGY**

 React	 PostgreSQL	 aws
 GraphQL	 GO	 LLAMA 2

# Semantic Model for Content Management System

## Business Problem

Client had been gathering data for their global health programs from various sources in different forms since 2000. Handling and processing large datasets in multiple formats from different applications has been a challenge due to **poor data quality** and **unavailability of real time insights**

## Implemented Solution

- Built robust workflow based **semantic model** for data indexing and categorization for enterprise content and real-time uploads
- Utilized **OpenAI** for **image segmentation** which in turn adopts foundation models for NLPs
- Utilized capability for users to select objects for segmentation interactively, employing bounding boxes, key points, grids or text prompts
- To speed-up the process for file comparisons and validations, implemented RPA automations and eliminated manual interventions
- **Integrated** multiple AI based use cases with **enterprise portals**, enterprise search and client social media accounts
- Cut down considerable amount of effort in **time and cost** for **content processing and categorization.**

## Delivered Benefits

- Users are able to generate content interactively based on specific themes
- Minimized the processing times by automating the content sharing and integration processes.
- **Metrics dashboards** provide deep insights based on the Image and file processing



## TECHNOLOGY



# Collaboration Tools Integration

## Business Problem

With many scattered and redundant collaboration tools available to employees at the fast-moving technology company there was no seamless employee experience for collaborating between technology and product groups. Additionally frequent acquisitions caused the environment to be further disjointed for newly added team members.

## Implemented Solution

The Astreya team assembled a team of digital engineers to administer tools, develop backend integration and automate business processes to support a seamless employee experience using collaboration tools.

- Customized access provisioning workflows to securely administer users on all collaboration tools.
- Deployed **Slack bots** to handle employee requests for system access, hardware accessories, and other onboarding needs.
- Automated migration flows to merge collaboration platforms and user accounts with newly acquired organizations.

## Delivered Benefits

- Reduced **average time to resolve** service requests for collaboration tools by **60%**
- Increased efficiency for onboarding newly acquired organizations by shortening the process from months to weeks.
- Improved employee experience by providing a one stop shop for access provisioning.



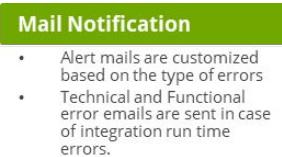
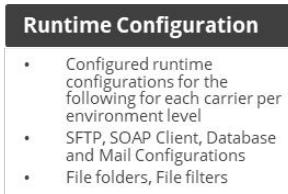
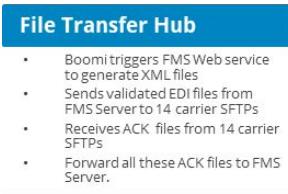
# Healthcare Connector Development using Boomi

## Business Problem

Client provides quality health insurance plans through multiple carriers due to which the data flows between internal applications and external carriers. Customer needed an easily configurable and reliable mode of communicating with the carriers using secure SFTP

## Implemented Solution

- Boomi is implemented as a total EDI Integration and File transfer hub.
- It triggers FMS web service to generate XML files; sends validated EDI files from FMS Server to carrier SFTPs; Receives ACK files from carrier SFTP and forward them to FMS server



### Error Handling

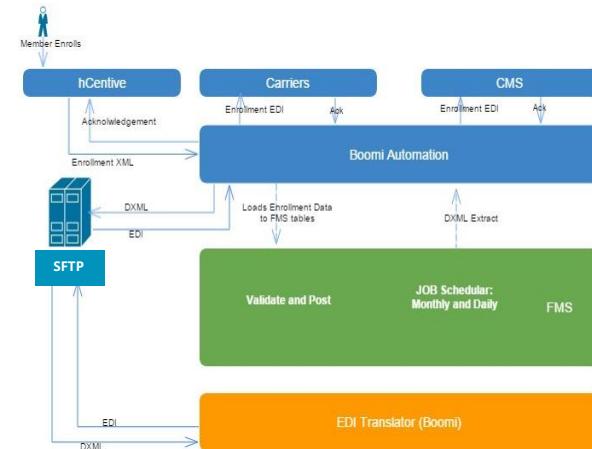
- Implemented advanced error handling and logging
- Identified and captured all the possible errors that can be returned from the integrated applications
- Defined custom error messages.

### Scheduling

- Integration processes are scheduled to run daily and monthly.
- Automated the file processing through scheduling

## Delivered Benefits

- Delivered the entire solution through Global Delivery model with over 60% cost savings
- Reduced human errors by 80% with implementation of Connector



**CLIENT**  
**US BASED HEALTH CARE INSURANCE PROVIDER**

## TECHNOLOGY



THANK YOU

# LET'S GROW TOGETHER

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## HEAD OFFICE

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## FOR QUERIES @

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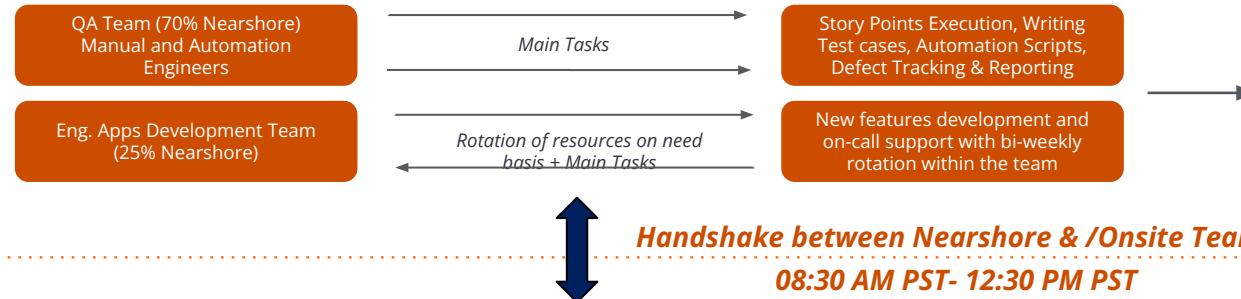
# Eng Apps Development & QA Global Delivery Execution Model

Nearshore Shift

PST 4:30 AM to  
12:30 PM

## Client and Astreya Steering Committee (Engagement Reviews & Performance Measurement)

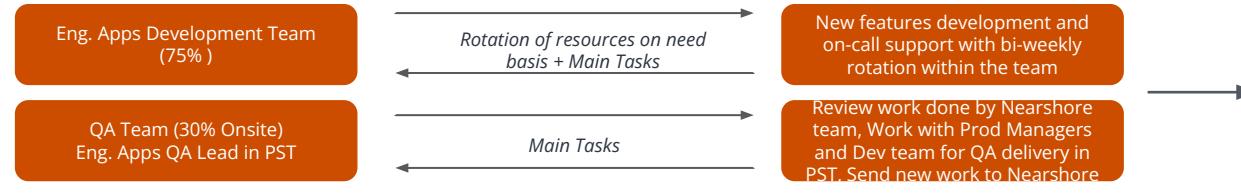
DEV &amp; QA Nearshore Team – 4:30 AM to 12:30 PM PST

***Handshake between Nearshore & /Onsite Teams******08:30 AM PST- 12:30 PM PST***

PST Shift

PST 8 : 30 AM to  
5 PM

DEV &amp; QA Onsite/ and Nearshore Team – 8:30 AM to 05 PM PST



Software Development

Quality Assurance

CoE (Best Practices &amp; Guidance)

- █ Astreya Team
- █ Roles available in Shift