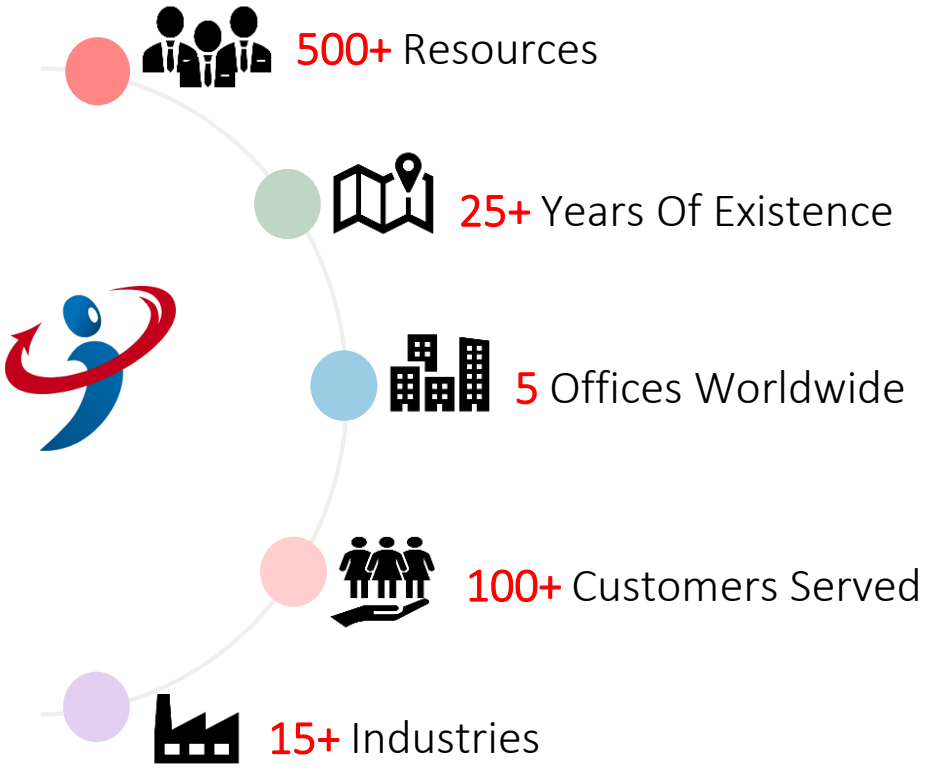
IMPRESSICO

Software Engineering and R&D Lab

DNA of R&D (Research & Development)

ABOUT US



We are a Software Engineering and R&D Lab, specializing in Gen AI and AI/ML-driven Software and Data solutions enabling businesses with intelligent and scalable solutions.

OUR CERTIFICATIONS

OUR CLIENTS


aramark


verizon


Panasonic


edcast
by cornerstone


mrp


PRESIDIO
Future. Built.


NFL


HITACHI
Inspire the Next


EZCORP


YAPSTONE
POWERING PAYMENTS


PRIORITY
TECHNOLOGY HOLDINGS


JOBTARGET
Target Your Dream Job


devotv


CANSTAR


FAN CONTROLLED
FCF
FOOTBALL


GPI
GODFREY PHILLIPS
INDIA LIMITED


TRACER


emerson
ecologics
A Fullscript company


RS
INTEGRATED
SUPPLY


FIT XR


gsk
GlaxoSmithKline


wk


LendKey


LIVE X LIVE


cognosos


GPP


aspirent

OUR FOOTPRINT

PARTNERSHIP/ ENGAGEMENT MODEL

Fixed Price

For projects with well-defined requirements

01

Time & Material

For products & projects with continuously evolving specifications

02

Staff Augmentation

For supplementing your team with scalable, quality resources that you manage

03

Hybrid

Combined team of offshore – nearshore/ onsite resources for continuous delivery and overlap

04

ODC

Cost-effective, seamless extension of your own team

05

Managed Services

When you want to focus on your core business, and leave day to day operations to your partner

06

OUR OFFERINGS

Strategy & Digital Transformation

- Digital Business Transformation
- Technology Modernization
- Product Strategy & Roadmap
- UI/UX Development Service
- Data Analytics Strategy
- Cloud Transformation Strategy

Product Engineering & Custom Development

- Product Development Services
- Enterprise Web Development
- Enterprise Mobile Development
- Micro Services integrating
- Quality Engineering Services
- Application Support Services

Customer Experience & Marketing Technology

- Journey Science
- Creative Design
- Content Architecture
- Personalization
- Campaign Management
- Conversing Rate optimization

Analytics, Data Science & Business Intelligence

- Analytics & Insights
- Data Science
- Machine Learning
- Intelligent Search
- Recommendation Engine
- Predictions & optimizations

Enterprise Platforms & Systems Integration

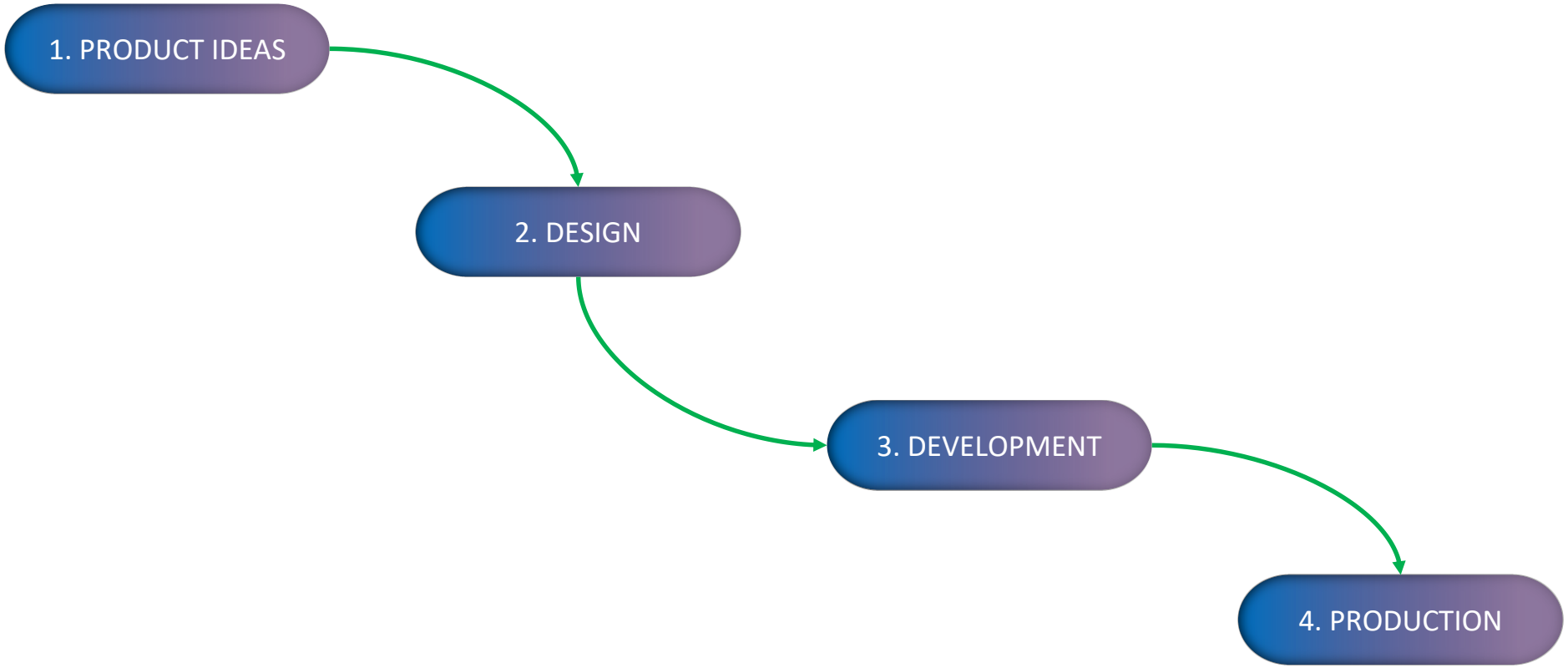
- Platform Selecting Services (CMS,
- E-Commerce)
- Content Management Systems
- E-Commerce
- Marketplace Commerce
- Learning Management Systems

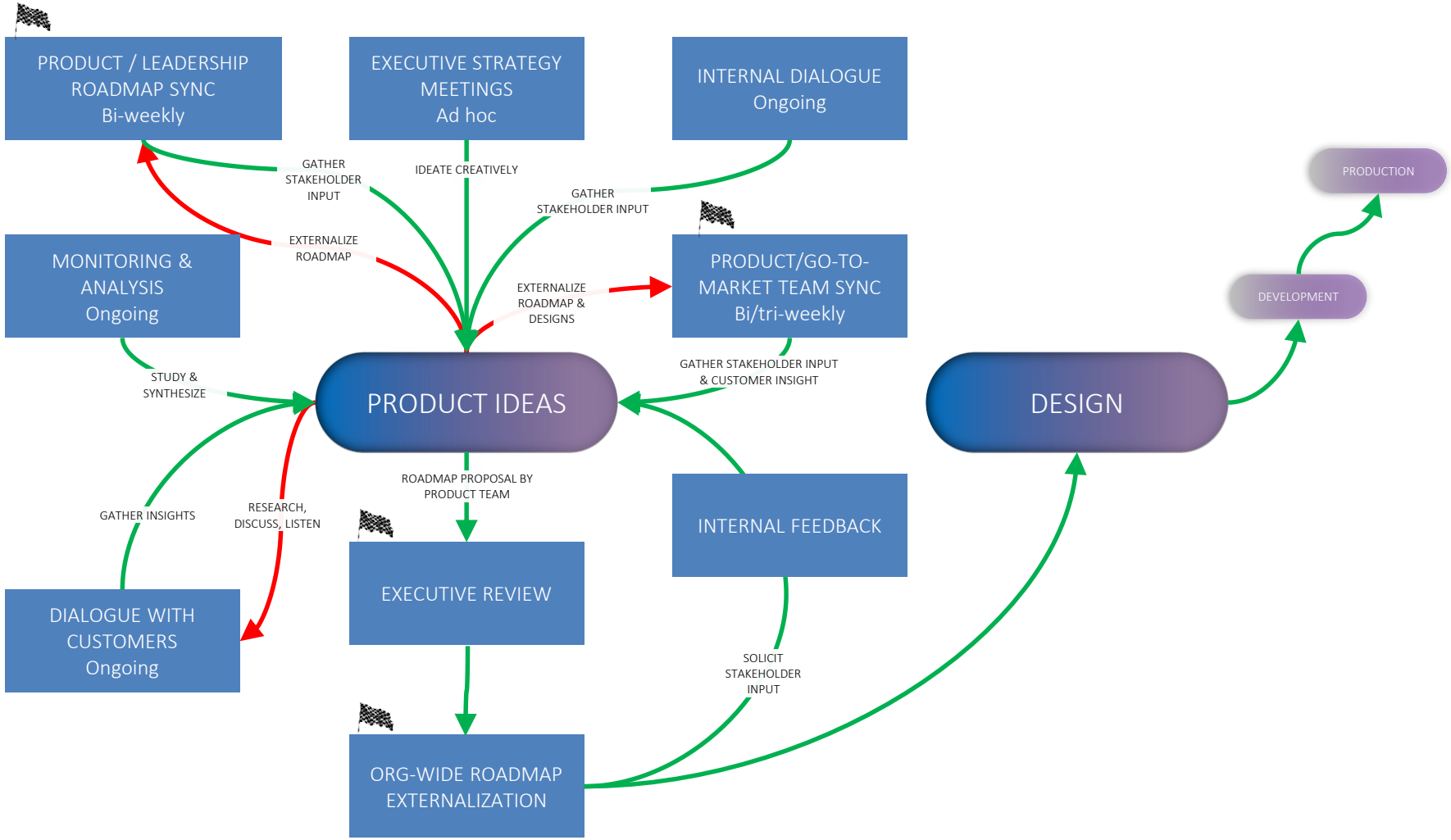
Cloud, DevSecOps & Data Governance

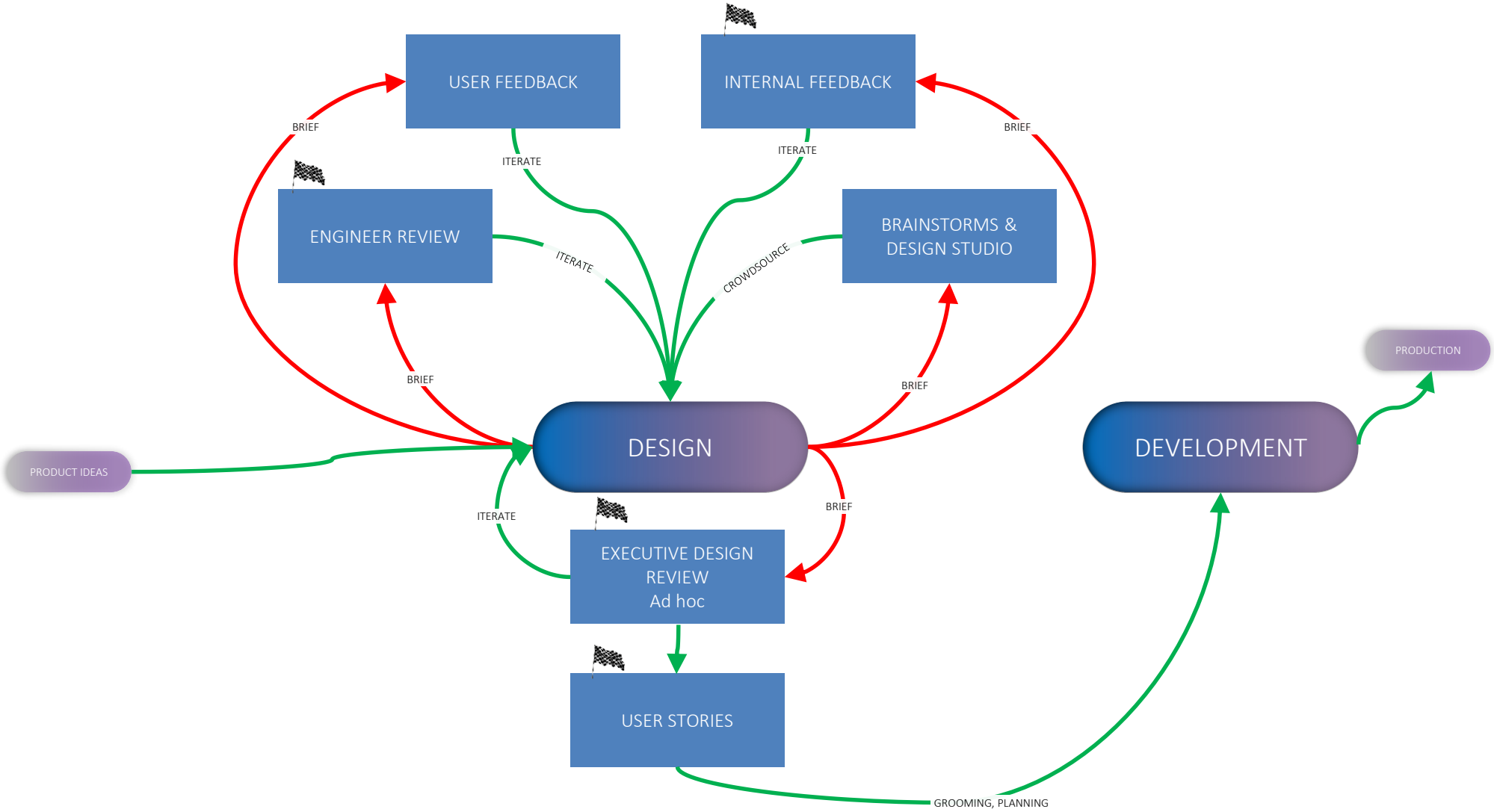
- Cloud Provisioning & Modernization
- Cloud Infra Automating
- Event Driven Microservices
- Containerization
- DevOps
- Cyber Security
- 24x7 Monitoring Support

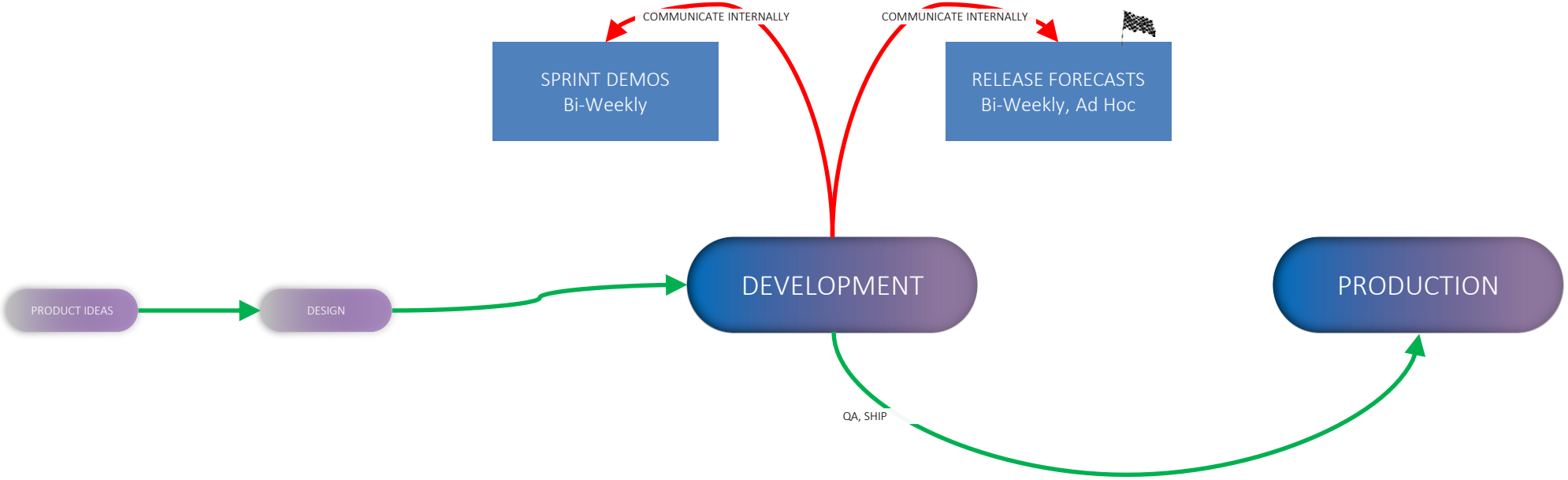
Product Development Roadmap

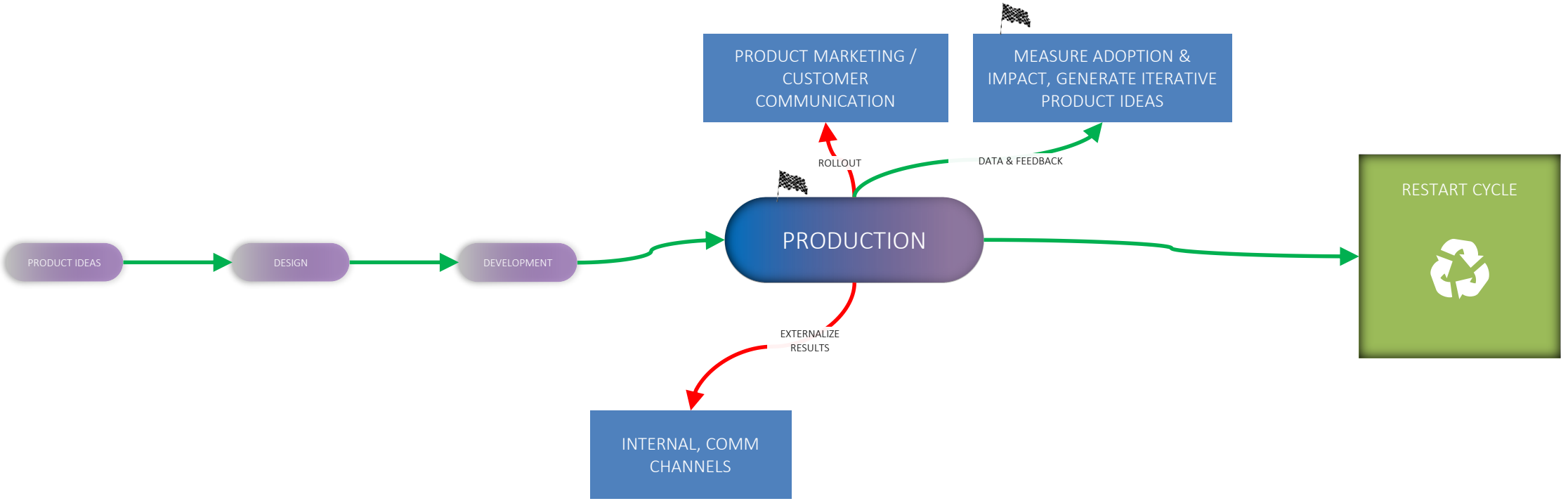
ROADMAP



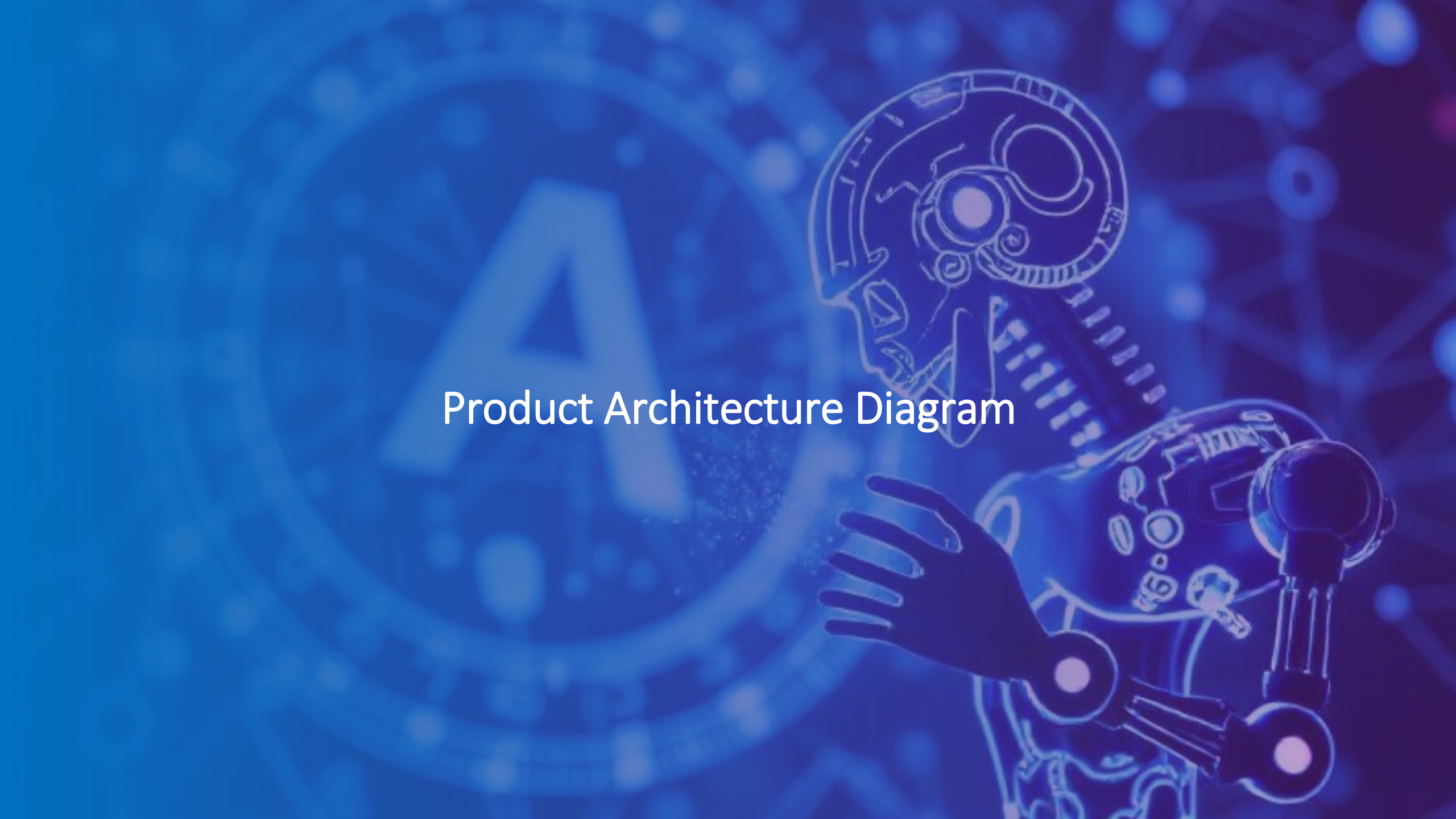

PRODUCT / LEADERSHIP ROADMAP SYNC Bi-weekly
EXECUTIVE STRATEGY MEETINGS Ad hoc
INTERNAL DIALOGUE Ongoing
GATHER STAKEHOLDER INPUT
IDEATE CREATIVELY
GATHER STAKEHOLDER INPUT
EXTERNALIZE ROADMAP
MONITORING & ANALYSIS Ongoing
EXTERNALIZE ROADMAP & DESIGNS
PRODUCT/GO-TO-MARKET TEAM SYNC Bi/tri-weekly
PRODUCTION
DEVELOPMENT
STUDY & SYNTHESIZE
PRODUCT IDEAS
GATHER STAKEHOLDER INPUT & CUSTOMER INSIGHT
DESIGN
ROADMAP PROPOSAL BY PRODUCT TEAM
GATHER INSIGHTS
RESEARCH, DISCUSS, LISTEN
INTERNAL FEEDBACK
EXECUTIVE REVIEW
DIALOGUE WITH CUSTOMERS Ongoing
SOLICIT STAKEHOLDER INPUT
ORG-WIDE ROADMAP EXTERNALIZATION

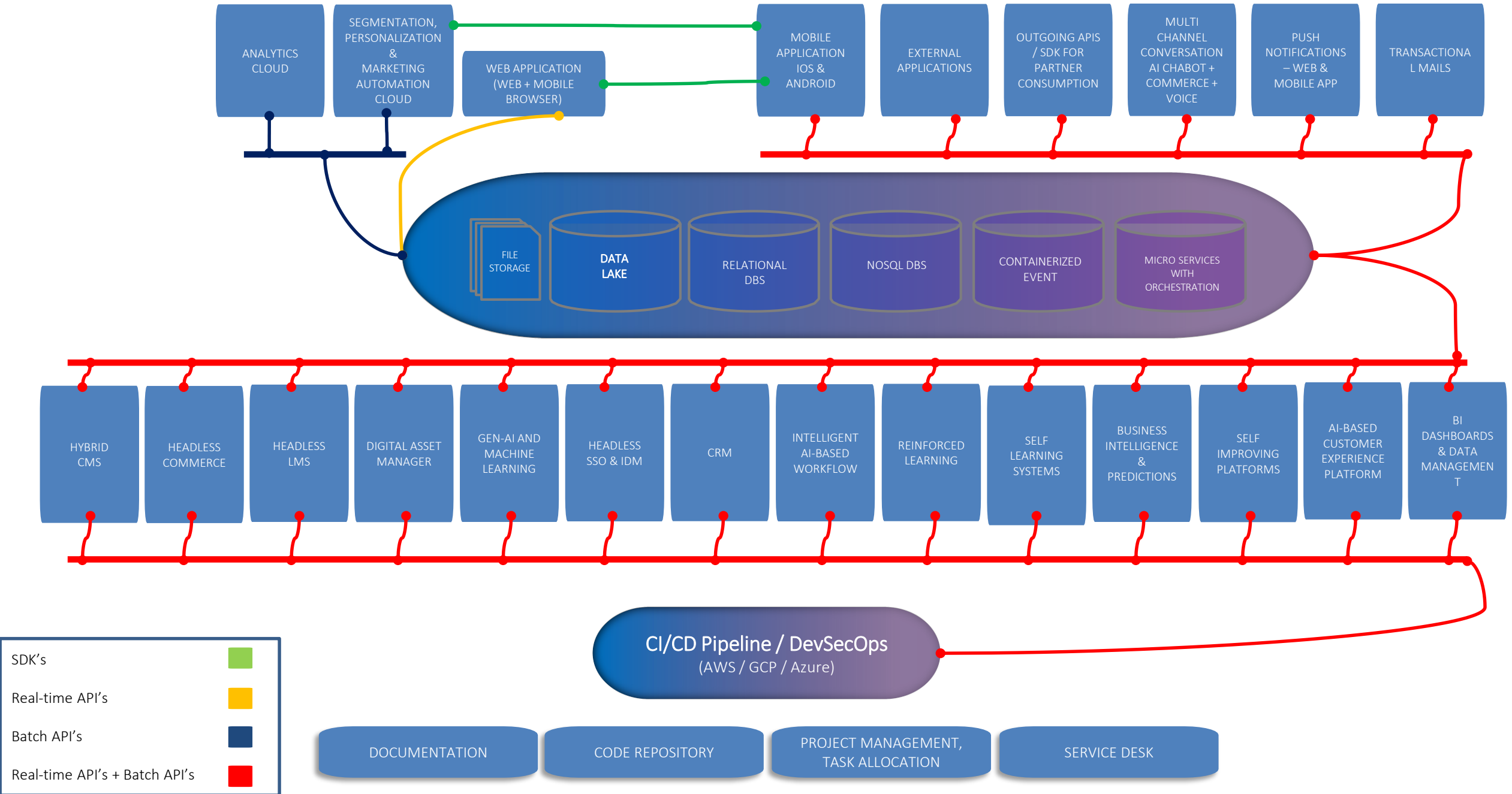

USER FEEDBACK
INTERNAL FEEDBACK
BRIEF
ITERATE
ITERATE
BRIEF
ENGINEER REVIEW
BRAINSTORMS & DESIGN STUDIO
ITERATE
CROWDSOURCE
BRIEF
BRIEF
PRODUCTION
PRODUCT IDEAS
DESIGN
DEVELOPMENT
ITERATE
BRIEF
EXECUTIVE DESIGN REVIEW Ad hoc
USER STORIES
GROOMING, PLANNING


COMMUNICATE INTERNALLY
COMMUNICATE INTERNALLY
SPRINT DEMOS
Bi-Weekly
RELEASE FORECASTS
Bi-Weekly, Ad Hoc
PRODUCT IDEAS
DESIGN
DEVELOPMENT
PRODUCTION
QA, SHIP


PRODUCT MARKETING / CUSTOMER COMMUNICATION
MEASURE ADOPTION & IMPACT, GENERATE ITERATIVE PRODUCT IDEAS
ROLLOUT
DATA & FEEDBACK
RESTART CYCLE
PRODUCT IDEAS
DESIGN
DEVELOPMENT
PRODUCTION
EXTERNALIZE RESULTS
INTERNAL, COMM CHANNELS

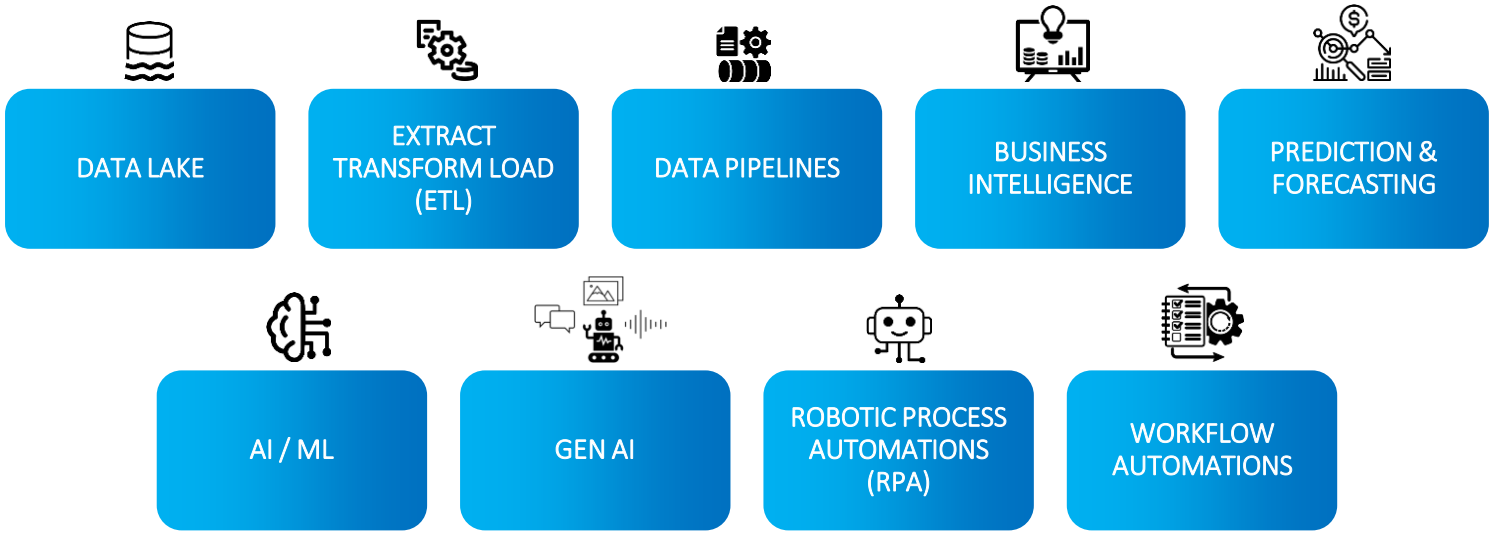
Product Architecture Diagram




ANALYTICS CLOUD
SEGMENTATION, PERSONALIZATION & MARKETING AUTOMATION CLOUD
WEB APPLICATION (WEB + MOBILE BROWSER)
MOBILE APPLICATION IOS & ANDROID
EXTERNAL APPLICATIONS
OUTGOING APIS / SDK FOR PARTNER CONSUMPTION
MULTI CHANNEL CONVERSATION AI CHABOT + COMMERCE + VOICE
PUSH NOTIFICATIONS – WEB & MOBILE APP
TRANSACTIONAL MAILS
FILE STORAGE
DATA LAKE
RELATIONAL DBS
NOSQL DBS
CONTAINERIZED EVENT
MICRO SERVICES WITH ORCHESTRATION
HYBRID CMS
HEADLESS COMMERCE
HEADLESS LMS
DIGITAL ASSET MANAGER
GEN-AI AND MACHINE LEARNING
HEADLESS SSO & IDM
CRM
INTELLIGENT AI-BASED WORKFLOW
REINFORCED LEARNING
SELF LEARNING SYSTEMS
BUSINESS INTELLIGENCE & PREDICTIONS
SELF IMPROVING PLATFORMS
AI-BASED CUSTOMER EXPERIENCE PLATFORM
BI DASHBOARDS & DATA MANAGEMENT
CI/CD Pipeline / DevSecOps
(AWS / GCP / Azure)
SDK's
Real-time API's
Batch API's
Real-time API's + Batch API's
DOCUMENTATION
CODE REPOSITORY
PROJECT MANAGEMENT, TASK ALLOCATION
SERVICE DESK

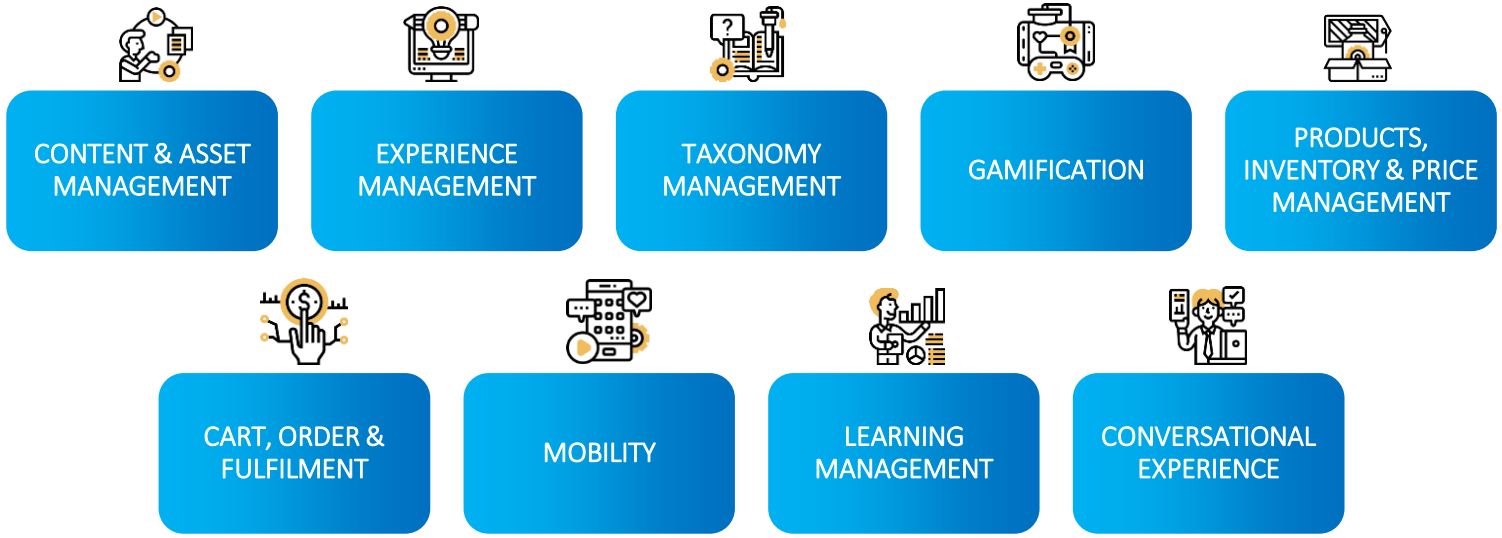
Our Skills

DATA ENGINEERING + GENAI



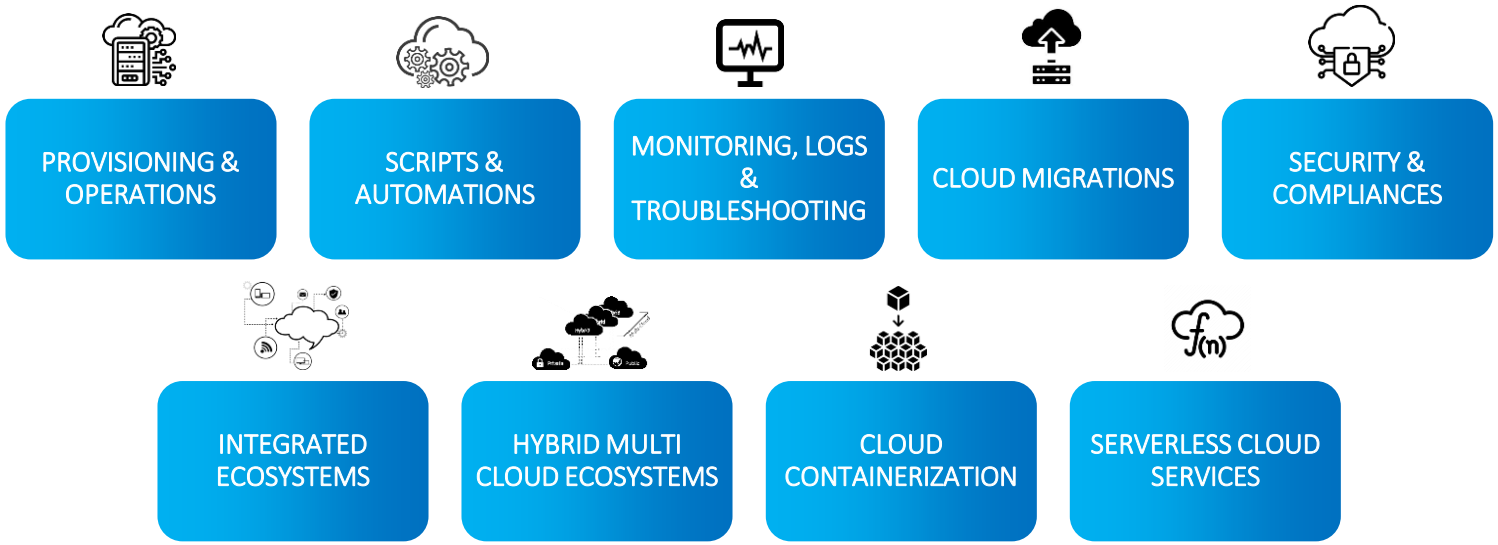
snowflake
Google Big Query
deepseek
Amazon Bedrock
tableau
Phi-3
LLAMA 2
python
Apache Airflow
slack
Azure Data Lake
databricks
Power BI
LlamaIndex
OpenAI
Gemini
GO
kafka
Microsoft Teams

ENTERPRISE PLATFORMS & CUSTOM DEVELOPMENT



Adobe Experience Manager · strapi · Acquia · WordPress · Microsoft .NET · React · python · spring boot · node · Flutter · React Native · Adobe Commerce Cloud · AngularJS · shopify · salesforce commerce cloud · canvas · Adobe Learning Manager · moodle

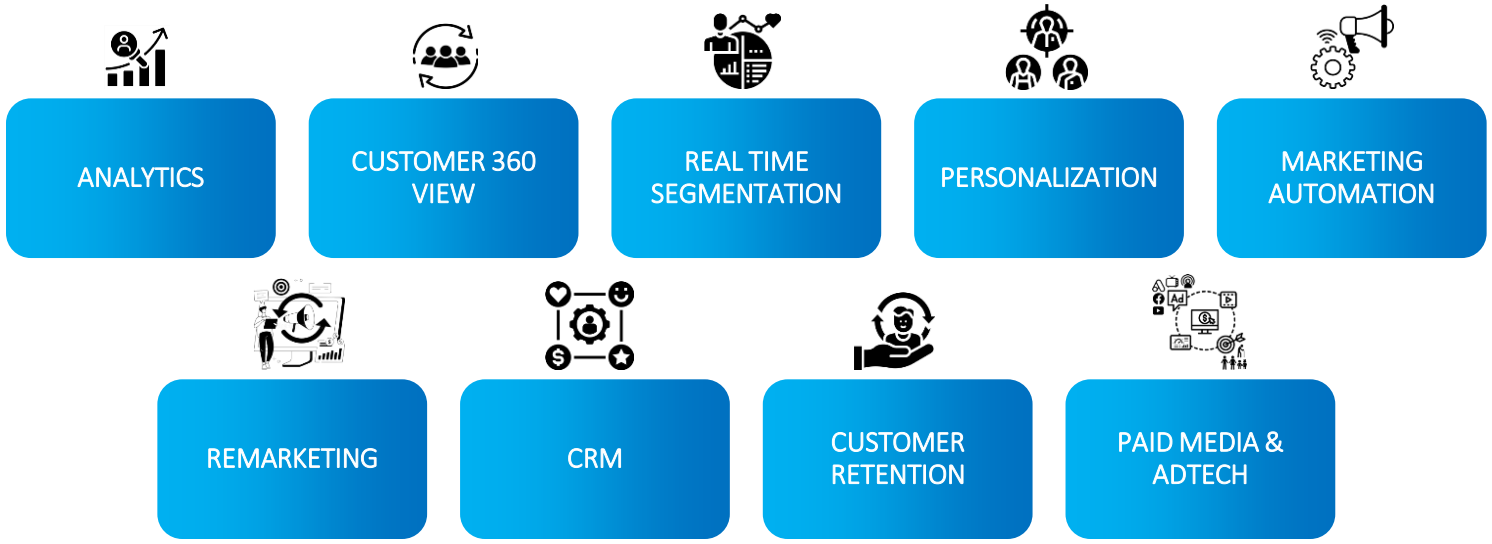
CLOUD & DEVSECOPS



aws · kubernetes · Terraform · Akamai Experience the Edge · New Relic · Firebase · Prometheus · elasticsearch · logstash · kibana

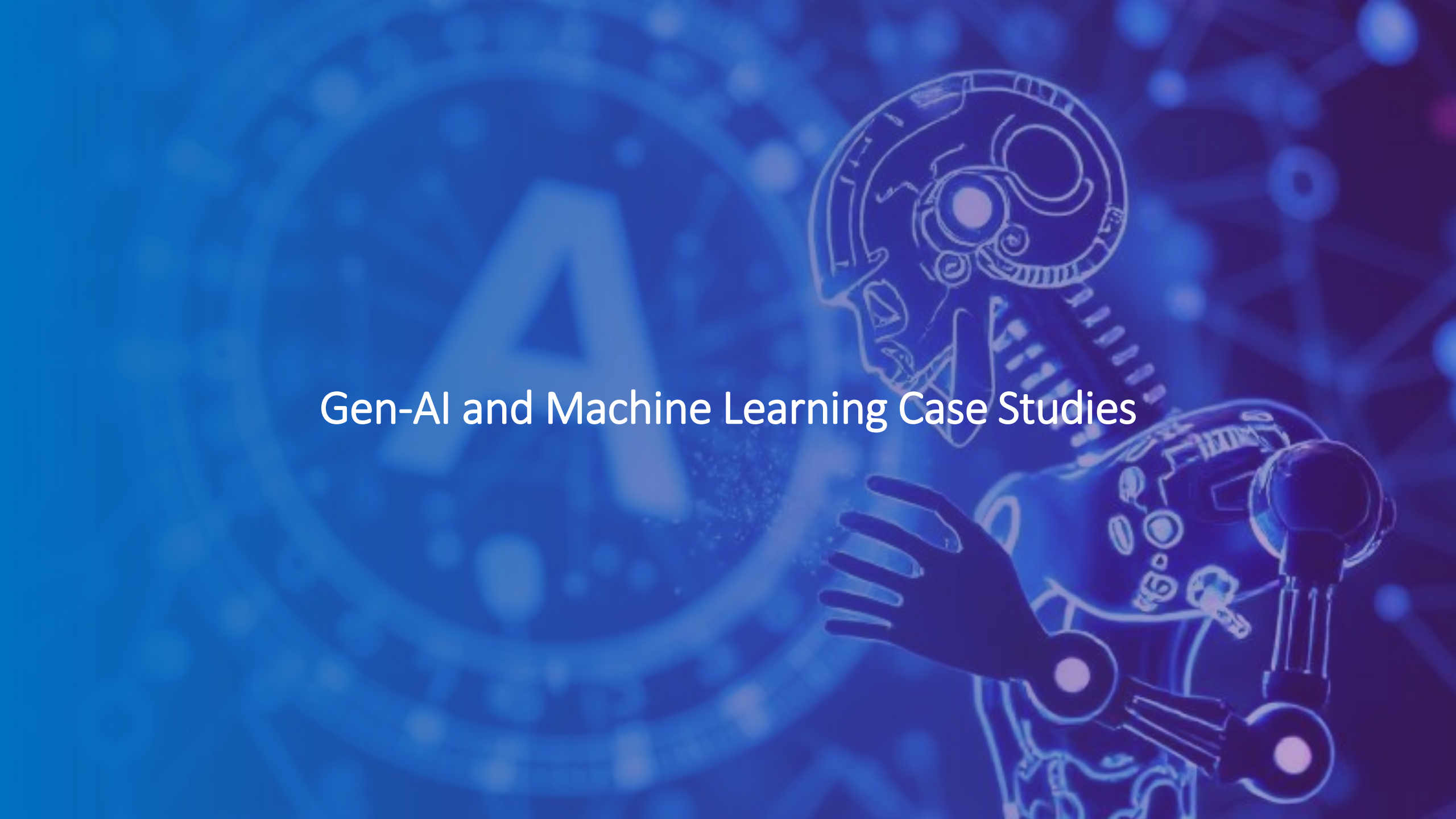
Azure · docker · okta · kafka · redis · APACHE HTTP SERVER · NGINX · Grafana · splunk> · Beats

MARKETING TECHNOLOGY

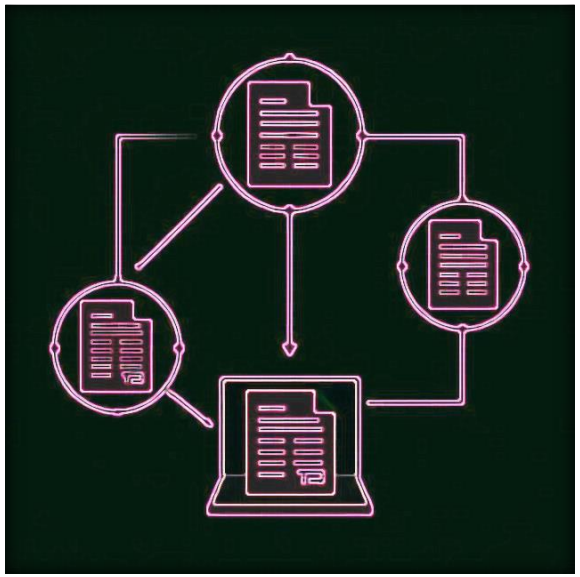


Adobe Marketing Cloud · salesforce marketing cloud · Google Marketing Platform · Google Analytics · hotjar · Microsoft Dynamics · WebEngage · CleverTap · NotifyVisitors · Google Ads · Adobe Advertising Cloud

Gen-AI and Machine Learning Case Studies



CASE STUDY GEN-AI AND AIML - TRANSFORMING LEGAL OPERATIONS



Summary:

This case study demonstrates how our tailored AI solutions revolutionized legal workflows, setting a new standard for efficiency and precision.

Frameworks Used:

- OCR Document Extraction
- Contract Co-pilot
- Document Comparison

LIVE DEMO AVAILABLE ON REQUEST.

Challenge

An in-house legal team faced significant challenges in managing high volumes of contracts and legal documents. Their existing workflow was time-consuming and error-prone due to:

1. Manual Extraction:
   - Manual extraction of information from diverse document formats (PDFs, images, and scanned documents).
2. Identification and Inconsistencies
   - Difficulty in identifying critical clauses and language inconsistencies within contracts.
3. Inefficiencies
   - Inefficiencies in comparing newly drafted contracts with previous versions, leading to overlooked changes and potential risks.

Solution

1. Document Extraction using OCR:
   - Implemented Advanced OCR to extract text from various document types, including images and PDFs.
   - Converted the extracted text into editable formats for seamless review, editing, and collaboration to reduce processing times
2. Contract Co-Pilot:
   - Extracted key clauses and salient points from complex contracts, giving the legal team a quick overview of critical terms.
   - Leveraged LLMs to provide intelligent recommendations for wording changes, ensuring contract language aligned with legal best practices.
   - Enabled dynamic clause editing to fit specific business needs.
3. Contract Comparison:
   - Facilitated side-by-side comparison of uploaded contracts with newly created versions.
   - Highlighted all edits and changes, ensuring no modifications went unnoticed.
   - Reduced the risk of inconsistencies and enhanced negotiation accuracy.

Business Impact

1. Increased Efficiency:
   - Document processing time was reduced by 60%, allowing the legal team to focus on strategic tasks.
2. Enhanced Accuracy:
   - Automated extraction and comparison minimized human errors, ensuring consistency across all contracts.
3. Improved Decision-Making:
   - Intelligent clause recommendations empowered legal professionals to make informed decisions swiftly.
4. Cost Savings:
   - Streamlined workflows resulted in a 40% reduction in operational costs related to contract management.

3X
Faster Contract Review

85%
Increase in Accuracy

50%
Time Saved

CASE STUDY GEN-AI AND AIML - ACCELERATED LEGAL RESEARCH AND CONTRACT MANAGEMENT

Summary:

Our AI solution streamlined a law firm's legal research and contract management, enhancing speed, accuracy, and strategic decision-making.

Frameworks Used:

- 5 Variable Query
- Contract Review Co-Pilot
- Structured/Unstructured/Mixed Search Engine
- Legal Smart Search Engine

LIVE DEMO AVAILABLE ON REQUEST.

Challenge

A prominent law firm struggled with time-consuming legal research, inefficient contract analysis, and disjointed data retrieval processes, leading to:

- Prolonged legal research cycles due to scattered information sources and manual review methods.
- Challenges in extracting key contract clauses and ensuring precise wording adjustments.
- Ineffective document search capabilities, resulting in inconsistent results and wasted effort.
- Difficulty in analyzing complex legal questions across structured and unstructured data, limiting strategic decision-making.

Solution

We developed and customized an AI-driven application that seamlessly integrated advanced frameworks to streamline the firm's operations:

- Unified Legal Research Platform: Integrated AI-powered search with a vast legal database for precise, contextual research, enabling case comparisons and precedent analysis.
- Intelligent Contract Analysis: Used AI to extract key clauses, suggest wording adjustments, and streamline reviews with redlining.
- Enhanced Document & Data Search: Implemented multi-variable search for accurate matches across documents, emails, and systems.
- Smart Data Analysis & Visualization: Automated complex legal queries, generating insights and Power BI visualizations for better decisions.

Business Impact

- Accelerated Legal Research: Reduced time spent on legal research by enabling lawyers to access relevant information faster and make quicker decisions.
- Enhanced Contract Review Efficiency: Tripled the speed of contract review cycles by automating clause extraction and utilizing intelligent redlining, ensuring accuracy and consistency.
- Improved Search Precision: Achieved 85% accuracy in search results, drastically reducing irrelevant outcomes and saving valuable time on document reviews.
- Reduced Operational Costs – Streamlined legal workflows, leading to a decrease in operational expenses associated with research and contract management.
- Visualization Analysis: Empowered legal teams with data-driven insights and dynamic visualizations, enabling more informed and strategic legal decisions.

65%
Faster Legal Research

5x
Contract Review Efficiency

85%
Search Accuracy

CASE STUDY GEN-AI AND AIML - AUTOMATING WORKFLOWS FOR A BANK

Summary:

Using end-to-end automation solutions to revolutionize complex business operations, providing measurable impact and sustainable value.

Frameworks Used:

- Real-time Analytics Dashboard
- i2i Workflow Management
- AI-Driven Intelligence for Documents

LIVE DEMO AVAILABLE ON REQUEST.

Challenge

The firm faced challenges due to outdated, manual processes that slowed down key operations:

- Manual Portfolio Management: Investment analysts spent excessive time updating and cross-referencing portfolios manually, leading to delays in data processing and potential errors.
- Disconnected Data Sources: Financial data was stored across multiple systems with no easy way to integrate, resulting in delayed reports and inefficient collaboration.
- Inefficient Document Management: Important circulars and reports were scattered across systems, requiring time-consuming manual searches, which slowed response times to clients and internal teams.

Solution

We deployed an integrated AI-driven automation solution that streamlined operations and enhanced productivity

- i2i Workflow Management: Connected different applications to automate complex workflows. This no-code platform enabled rapid deployment and scalability.
- Real-Time Analytics Dashboard: Provided interactive visualizations and real-time monitoring of key metrics, empowering leadership with data-driven insights.
- AI-Driven Intelligence for Documents: Centralized document management and retrieval using AI-powered search and chatbot functionality, ensuring quick access to investment reports and circulars
- End-to-End Integration: Seamlessly connected internal systems and external tools, ensuring efficient data flow and collaboration across departments.

Business Impact

- Reduction in Manual Effort – Automated repetitive tasks, enabling analysts to focus on strategic activities
- Faster Document Retrieval – Enhanced productivity and cross-team communication with intelligent document management.
- Improvement in Decision-Making Speed with real-time insights
- Cost Reduction – Lower operational expenses through streamlined workflows and resource optimization.
- Scalability – The solution's scalability allowed rapid adaptation to business needs, driving growth and competitiveness.

60%
Reduction Manual Effort

90%
Faster Document Retrieval

20%
Cost Reduction

CASE STUDY GEN-AI AND AIML - AUTOMATION FOR COMPLAINT MANAGEMENT

Summary:

A financial services firm leveraged AI tools to streamline complaint management, reduced response times, and improved resolution consistency to improve customer satisfaction.

Frameworks Used:

- AI Agent based Complaints Manager
- Advanced Document Reader (OCR)
- 5 Variable Query

LIVE DEMO AVAILABLE ON REQUEST.

Challenge

A leading credit card provider faced several challenges in managing customer complaints, leading to inefficiencies:

- Inefficient Complaint Resolution: Customer complaints were manually processed, leading to significant delays and an inconsistent resolution process.
- Fragmented Communication Channels: Complaints were received through multiple channels (email, paper forms), resulting in disorganization and missed follow-ups.
- Lack of Insight into Customer Trends: Identifying recurring complaint patterns

Solution

Using AI to automate the complaint management process and streamline communication for faster resolutions and enhanced customer service:

- AI Agent for Complaints:
- Automated complaint intake, categorization, and analysis.
- Customizable workflows allowed for tailored complaint resolution processes based on severity or type.
- Seamlessly integrated with email to provide instant, AI-driven responses to customers.
- Real-time data analysis to respond to systemic issues proactively.

Document Reader:

- Conversion of handwritten complaint forms into digital formats.
- Translated the content into structured data (JSON) for easy integration and analysis within the provider's systems.

Email Analyzer:

- Enabled advanced document search and categorization, streamlining the review of customer complaints and related documents.
- Automated email categorization, reading key details (subject, body, attachments) to ensure that no customer query was overlooked.
- Provided easy document formatting tools to ensure all complaints were standardized, reducing errors in processing.

Real-Time Feedback System:

- Delivered immediate, personalized responses to customers, improving their experience and reducing wait times.

Business Impact

- Faster Complaint Resolution: Automated intake and response, significantly reducing the time taken to resolve customer issues.
- Improved Customer Communication & Loyalty: Communication was consolidated and led to consistent, timely responses to improve customer loyalty
- Enhanced Data-Driven Insights: The AI system identified key complaint patterns, enabling proactive improvements in services and processes.
- Automation of document handling, complaint categorization, and email analysis reduced the manual workload, allowing staff to focus on higher-value tasks.

60%
Reduction in resolution time

15%
Increase in customer satisfaction

50%
Reduction in manual work

CASE STUDY GEN-AI AND AIML - IMPROVING OPERATIONAL EFFICIENCY FOR HEALTHCARE PROVIDERS

Summary:

Implemented AI-powered tools across healthcare operations to streamline workflows, reduce delays, and drive better, data-driven decision-making.

Frameworks Used:

- Insurance Policy Analyzer
- AI Agent For Healthcare
- Complex search query bot

LIVE DEMO AVAILABLE ON REQUEST.

Challenge

A healthcare provider with an insurance division faced multiple operational inefficiencies across both patient care and insurance policy management:

- Delayed Diagnosis and Treatment Decisions: Medical professionals struggled with the time-consuming process of diagnosing complex conditions, leading to delays in treatment
- Inefficient Insurance Policy Review: Insurance claims and policy analysis were largely manual, requiring significant time and effort to extract relevant information from policy documents.
- Lack of Integrated Data Insights: Healthcare and insurance teams operated in silos, with no centralized, real-time access to data that could drive decision-making and performance improvements across both areas.

Solution

We implemented an AI-powered ecosystem that integrated different workflows, enabling seamless data exchange, smarter decision-making, and faster service delivery:

AI Agent:

- Delivered advanced diagnostic support by analyzing patient data and providing treatment recommendations in real time.
- Helped healthcare professionals make faster and more accurate diagnoses by leveraging up-to-date medical knowledge

Policy Analyser:

- Automated the extraction of key data points from policy documents, making it easier for insurance teams to quickly interpret complex information.
- Implemented a Smart Bot to enable efficient querying of policy details, improving operational speed and accuracy.

Real-Time Analytics Dashboard:

- Unified healthcare and insurance data into a centralized dashboard, providing real-time monitoring of KPIs
- Enabled decision-making with real-time insights into patient care, treatment efficacy, and insurance claims status.
- Offered dynamic visualizations to help cross-functional teams identify areas for improvement.

Business Impact

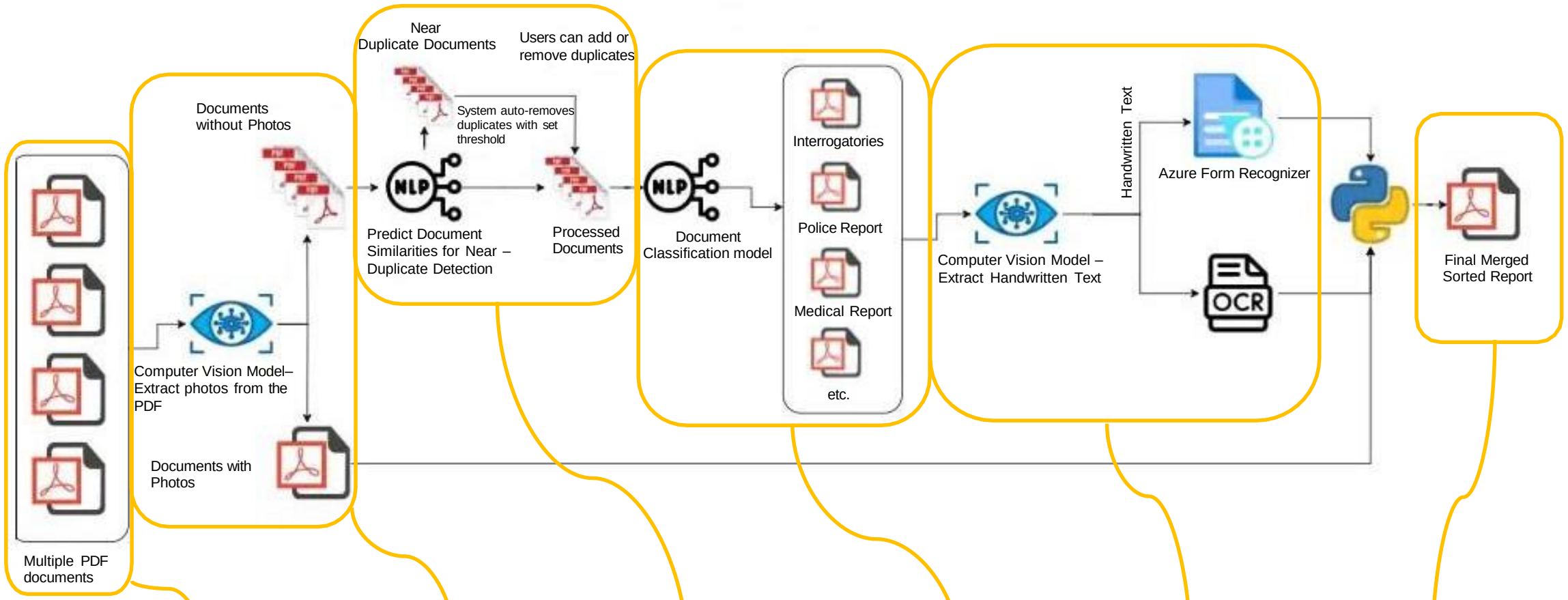
- Reduced Diagnosis Time: The AI healthcare assistant accelerated diagnosis and treatment planning, enabling faster and more precise patient care.
- Faster Insurance Policy Review: Automated policy extraction and smart search capabilities reduced the time to analyze complex insurance documents, improving response time to clients.
- Streamlined Decision-Making: Real-time analytics and customizable dashboards provided cross-departmental insights, improving response times and overall decision-making
- Enhanced Operational Efficiency: The integration of different systems reduced redundant manual tasks, ultimately improving service delivery and cost efficiency.

50%
Reduction in diagnosis time

70%
Faster policy review process

50%
Increase in operational efficiency

CASE STUDY GEN-AI AND AIML
MEDICO-LEGAL : RECORD CLASSIFICATION AND SORTING - 1



The source consists of multiple PDF dumps, each containing numerous documents

- Identify individual documents
- Segregate documents with and without photos

- The system intelligently removes duplicates based on a set threshold using NLP
- A user interface for Human-in-the-loop for enhanced accuracy

Classification of each document

Identify the document date and extract relevant data, while accurately determining the document date

A consolidated pdf where each document is categorized and arranged in chronological order within its respective category.

CASE STUDY GEN-AI AND AIML
MEDICO-LEGAL : RECORD CLASSIFICATION AND SORTING - 2

PROBLEM STATEMENT:

- *Automate the process of receiving large PDF file dumps; extract individual records (documents) and provide for systematic organization of medical records, into distinct categories to facilitate easy access and analysis during legal proceedings.*

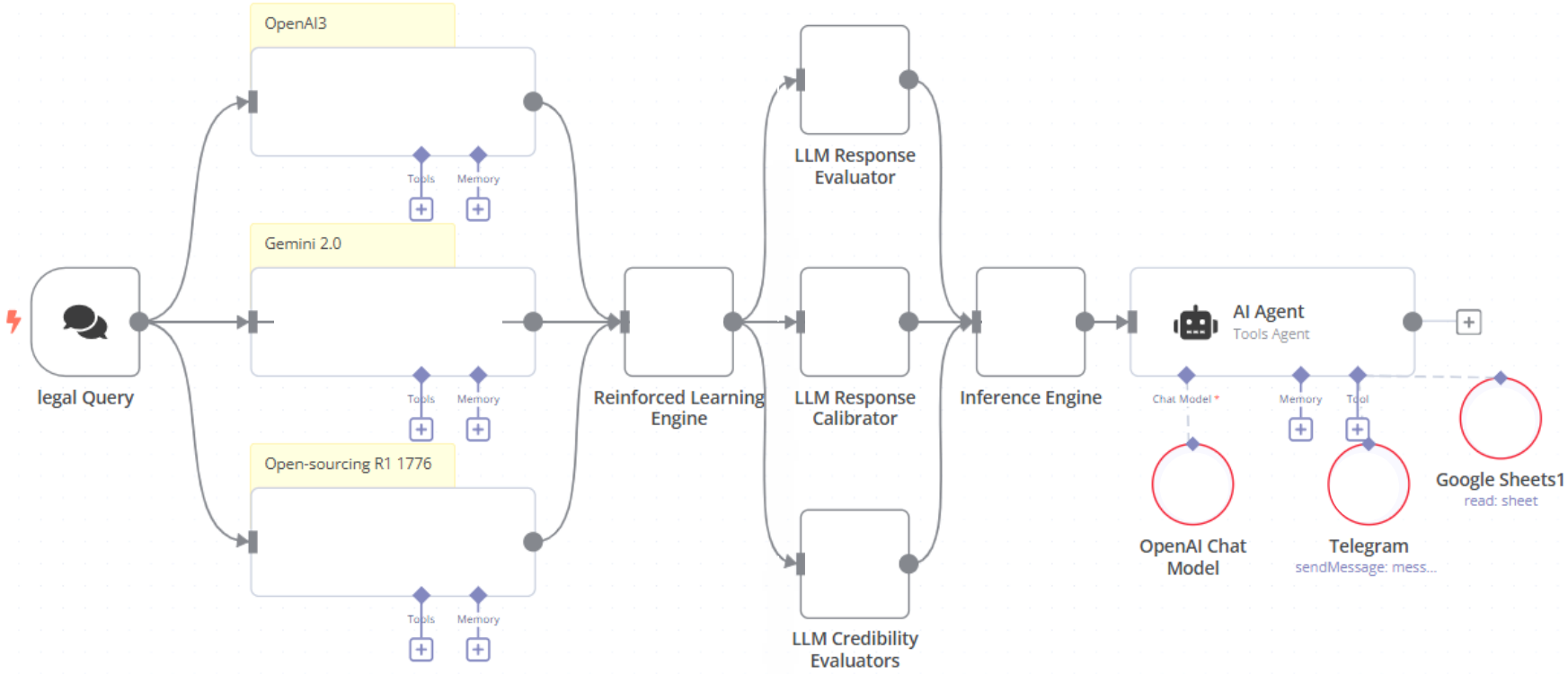
KEY ASPECTS OF MEDICO-LEGAL RECORD CLASSIFICATION AND SORTING:

- *Patient details identification*
- *Chronological arrangement*
- *Indexing and coding*
- *Relevant document identification and De- duplication*

TYPICAL MEDICO-LEGAL RECORDS THAT MIGHT BE CLASSIFIED AND SORTED:

- *Clinical notes*
- *Laboratory reports*
- *Photos*
- *Estimates*
- *Police reports; etc.*

ARCHITECURE – SELF IMPROVING SYSTEM



KEY FEATURES - SELF IMPROVING SYSTEM

- ***Continuous Learning:*** *LLMs can improve over time using fine-tuning, reinforcement learning, and retrieval-augmented generation (RAG).*
- ***Feedback Loops:*** *Systems analyzes user interactions and errors to refine responses dynamically.*
- ***Autonomous Optimization:*** *Techniques like self-distillation, active learning, and auto-corrective mechanisms enhance model efficiency.*
- ***Self-Improving LLMs:*** *Enhance Agentic Swarms by providing adaptive reasoning, better communication, and continuous learning.*
- ***Agentic Swarms:*** *Amplifies LLM self-improvement by enabling decentralized fine-tuning, multi-perspective learning, and real-time adaptation.*
- ***LLM Calibration:*** *Ensures the model's confidence accurately reflects its responses by reducing overconfidence in incorrect answers and under-confidence in correct ones.*
- ***LLM Evaluation:*** *Measures performance across accuracy, fairness, robustness, and adaptability while identifying biases, errors, and areas needing improvement.*

Thank you

Delhi-NCR, India

C-1, Sector 7, Noida, UP 201301

Phone : +91-120-419-0000

Hyderabad, India

2B, 2nd Floor, No.1-99/V/2, Vittal Rao Nagar

Madhapur, Hyderabad, Telangana 500081

Phone: +91-40-4853-2316

Dallas, USA

4512 Legacy Drive, Suite 100, Plano, TX 75024

Phone : +1-512-772-3193

London, United Kingdom

83 Victoria Street, London SW1H0HW

Phone : +44-207-096-9578

Toronto, Canada

1 Dundas St West, Suite 2500

Toronto, ON M5G 1Z3

Phone : +1-416-619-9258