DEVOPS ENTERPRISE SUMMIT

Experian Engineering

Building a better future with modern technology

Moied Wahid

experian

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Technologist @ Heart

EVP, CTO
Bureau, Decisioning, Employer & Verification & Housing

Experian unlocks the power of data to create opportunities for consumers, businesses, and society at life's big moments, helping to shape a better tomorrow.

Modernization Objectives

Resilient, Scalable & Secure Platform in Cloud to support Heterogenous workload for Real-time, Batch and Analytics Products

No Client Disruption

Backward compatible **silent launch** approach to seamlessly migrate with no client disruption and no impact on current business operations

Focus on Resiliency

Zero downtime and continuous **high availability** with intelligent self-healing **fault-tolerant** services fleet

Security First Approach

Shift left philosophy with strict adherence to data security controls and policies. Strict Adherence to **Data Security & Policies**

Operational Efficiencies

Operational efficiencies to **reduce costs** leveraging automation, and **DevSecFinOps**

Embrace Emerging Technologies

Leverage **AI & ML** to transform business operations and user experiences with **SRE and fail fast approach**

Technology Modernization Patterns

Rehost
Rebuild

- No Code change
- Same Tech stack
- No Hardware Dependency
- DB, App, and OS are Cloud Ready
- Lift & Shift for IaaS

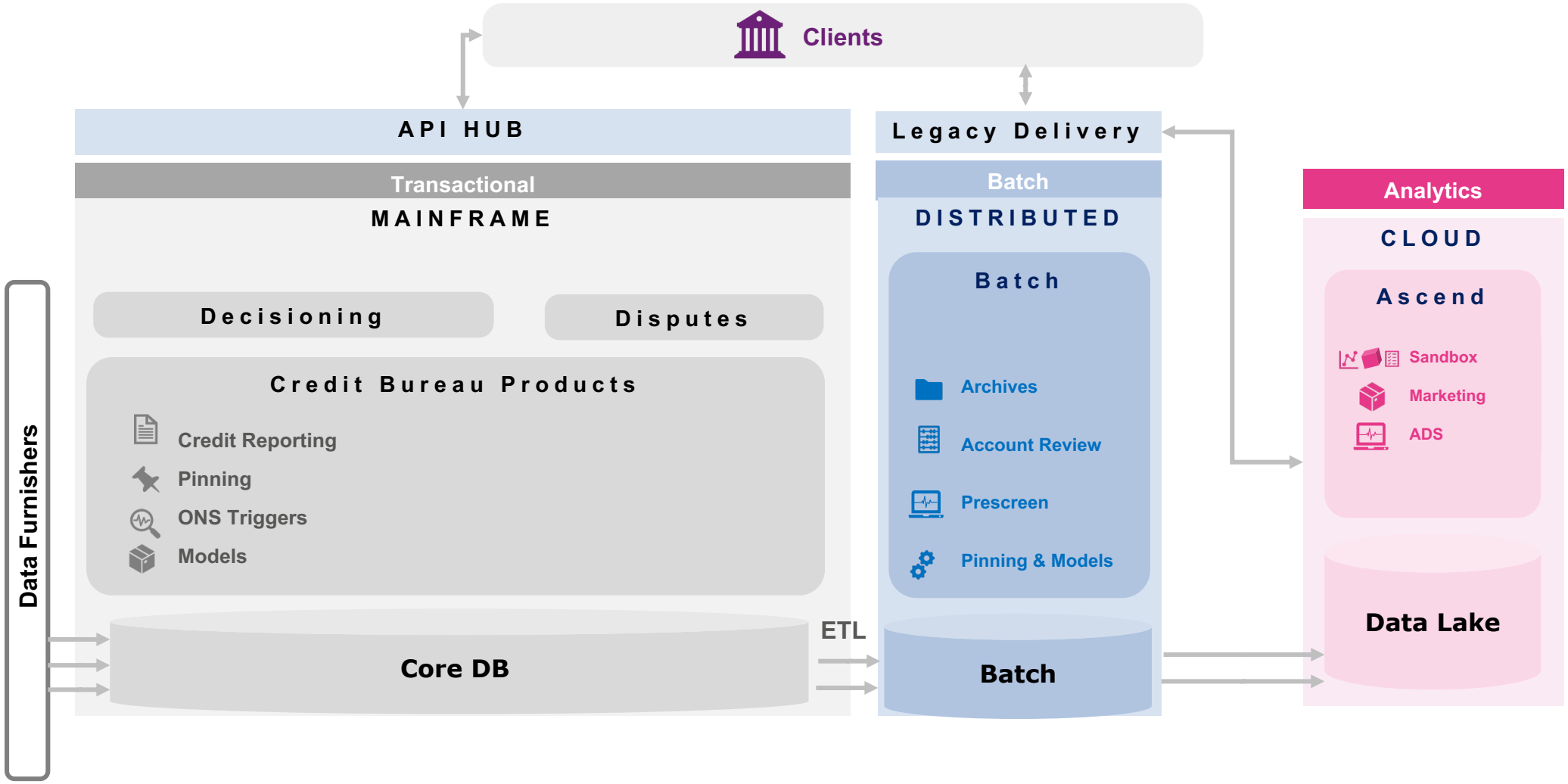
Replatform

- Minimal Code Changes
- Same Tech Stack
- App, Server, OS, DB, Middleware upgrade required
- Containerization & PaaS required

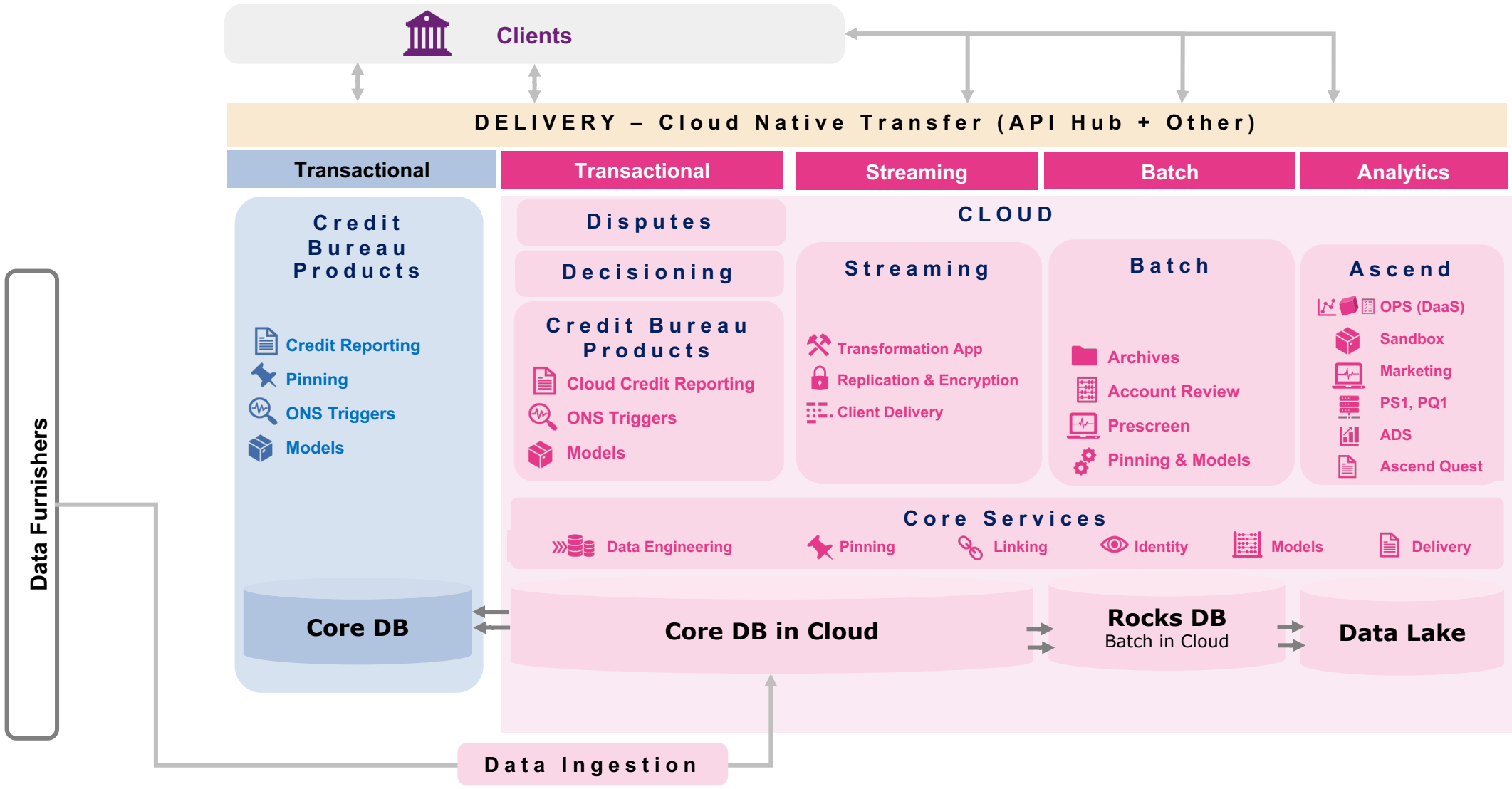
Refactor
Rearchitect

- Major Code Changes
- Modern Tech Stack
- Containerization Conversion Required
- Application Architecture changes

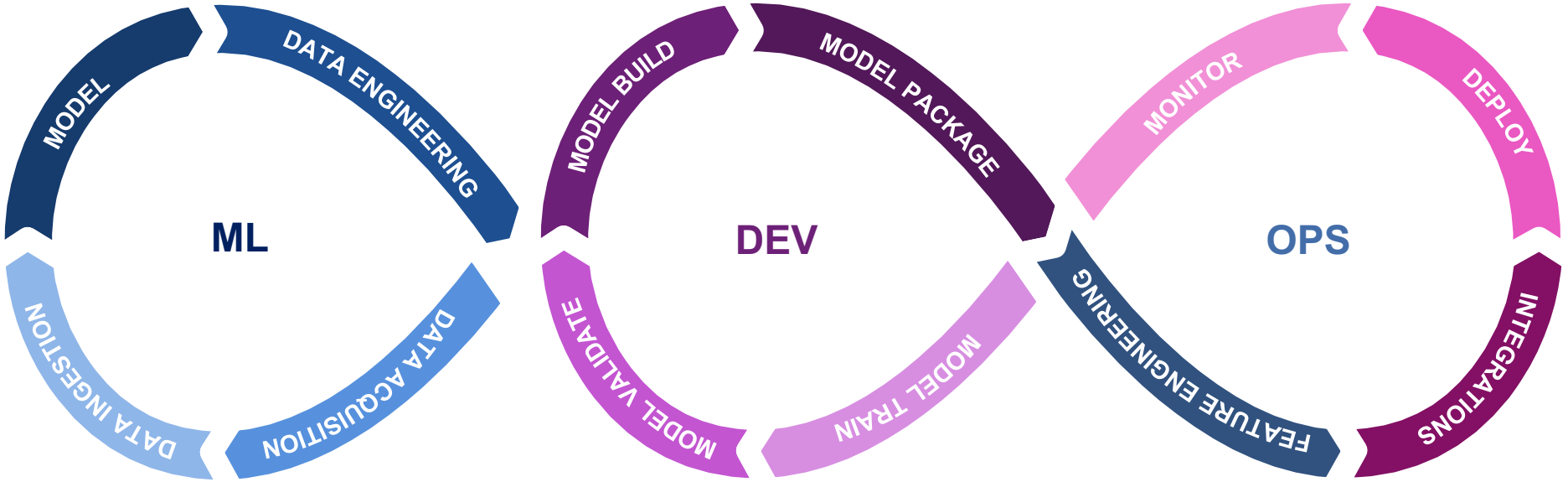
Our Approach - Previous State (1 of 2)



Our Approach – Future State (2 of 2)



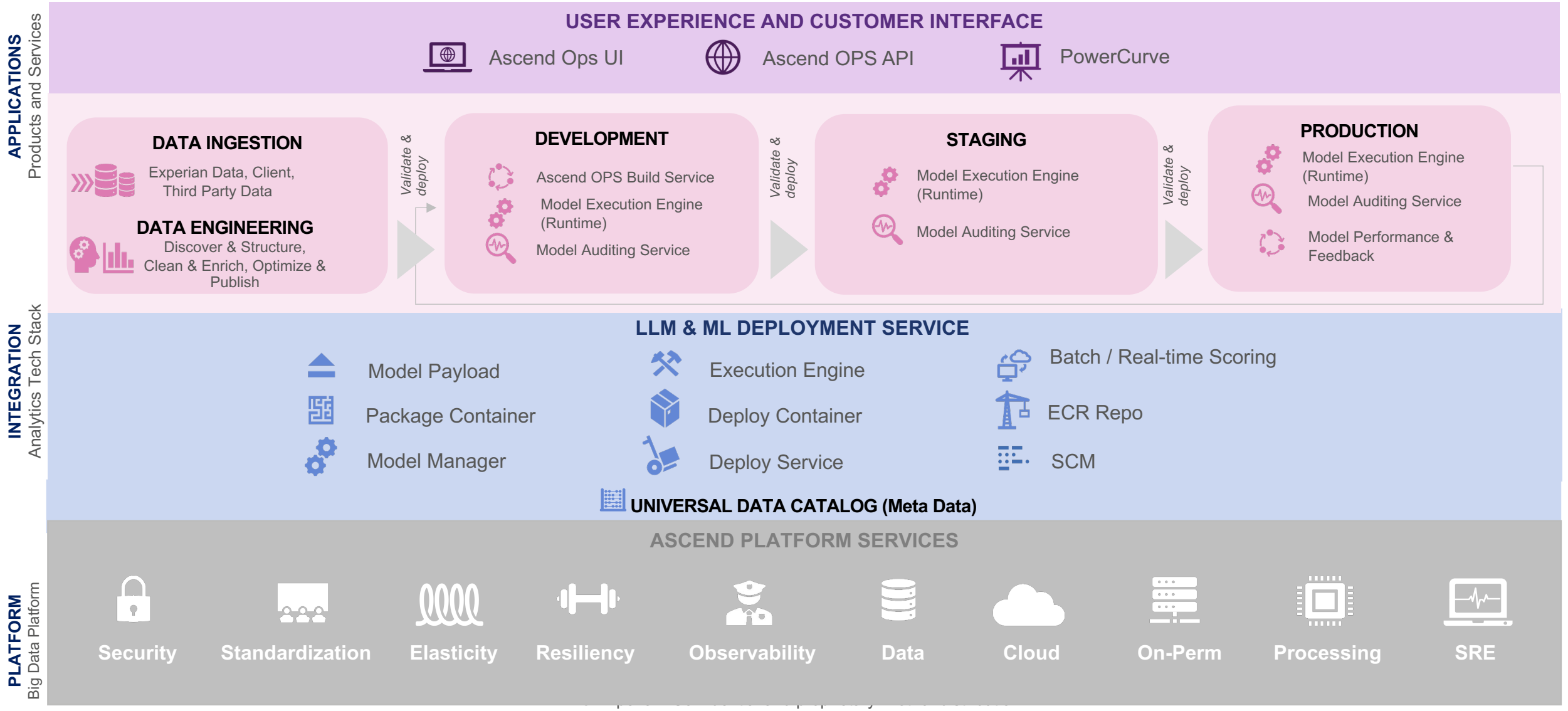
AI/MLOps in Action



DATA ENGINEERING	MODEL DEVELOPMENT	MODEL DEPLOYMENT
○ Data Acquisition ○ Data Freshness ○ Data Pipelines ○ Data Cleanup ○ Data Transformation ○ Data Processing (Pinning)	○ Experimentation ○ Automated Validation ○ Hyper-parameter Tuning ○ Version Control ○ Templatized logic ○ Model Testing ○ Code-free Modelling ○ Packaged Containers ○ Model Training ○ Apps for use cases	○ Scaled Deployment ○ Feature Engineering ○ Deployment Monitoring ○ Model CI/CD ○ MRM – Governance ○ Versioning

Ascend OPS - Analytics Operations in Action

Game changing MLOps capability to build, deploy, monitor and execute custom models from Sandbox to Production



Our Lessons Learned & Best Practices

Long Term Architecture (LTA)

Alignment with LTA to maximize reuse, implement DevSecFinOps and leverage Open Architecture

01

02

Engineering Excellence

Writing code, peer reviews, deep-engineering, solving hard problems

Talent Management

Target Operating model changes, Talent upscaling

03

04

Rainforest Effect

Culture of experimentation, SRE, accountability & excellence

Customer Centricity

Focus on customer value, impact, convenience, communication and cost efficiency

05

Engineering Transformation

Where We Were Before

- Monolithic Platform
- Waterfall Development
- Scattered Prioritization
- 5 Releases per year
- Manual Testing
- Traditional Operations
- Traditional Deployments
- Reactive Monitoring

Where We Are Today

- Microservices Architecture
- Agile & Kanban
- Streamlined Prioritization
- 50+ Releases and Daily on Cloud
- Test-Driven Development Automation testing
- CI/CD, Shift Left, DevSecFinOps
- Containers Deployment
- SRE Enablement

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Thank you

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