
AWS
re:Invent
NOV. 28 – DEC. 2, 2022 | LAS VEGAS, NV

ENT215

Gain value from AWS Mainframe Modernization Replatform with Micro Focus

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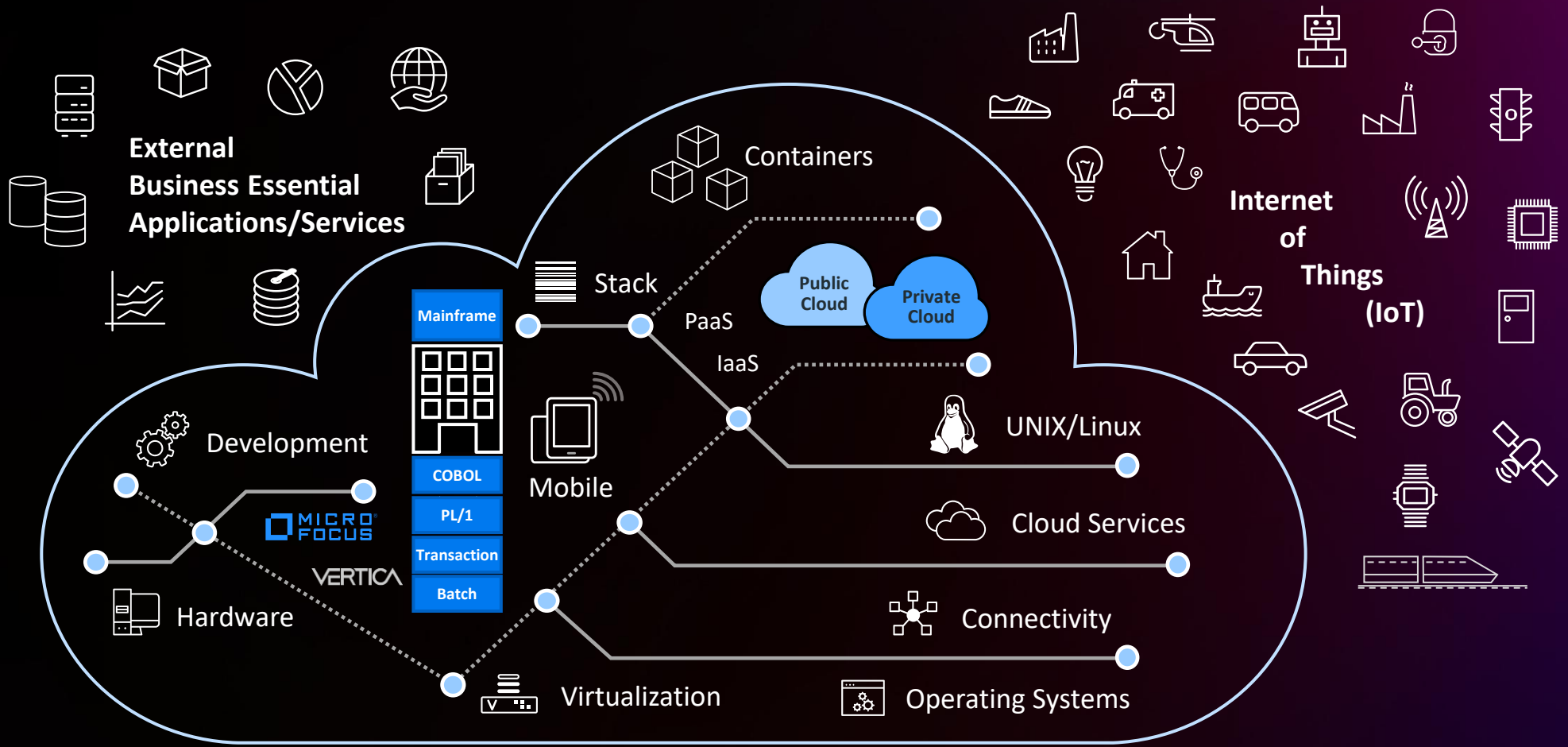
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Micro Focus and AWS value proposition

Neil Fowler

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Enterprise Landscape



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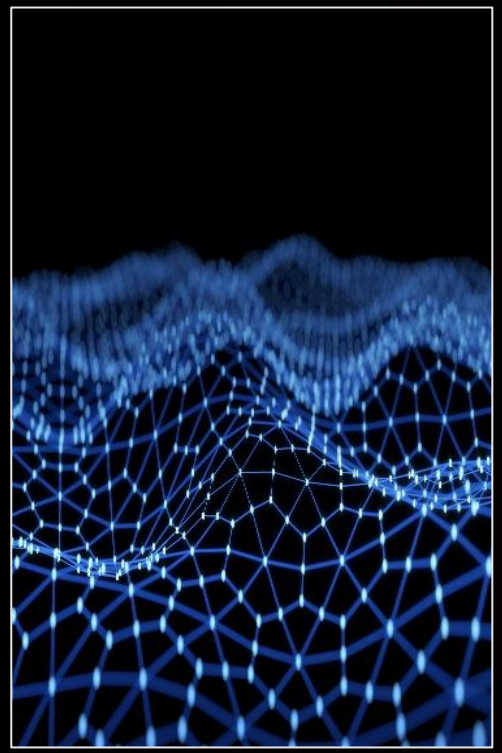
The Modernization Topics



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Modernization – A pragmatic approach

Portfolio Complexity



Business Drivers

Cost Optimization | Standardization | Strategic Alignment

Operational Risk | Simplification | Time-to-Market

Application Business Assessment

Complexity | Availability | Maintainability

Technical Debt | Security | Scale

Technical Drivers

Application Strategy

- Retire
- Replace
- Retain
- Rehost
- Replatform
- Refactor

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Rewrite, Replace, or Reuse?

"Rip and replace is in many cases too costly, risky and time-consuming, and has a high impact on the business. We advise organizations to instead take an iterative approach: continuous application modernization."

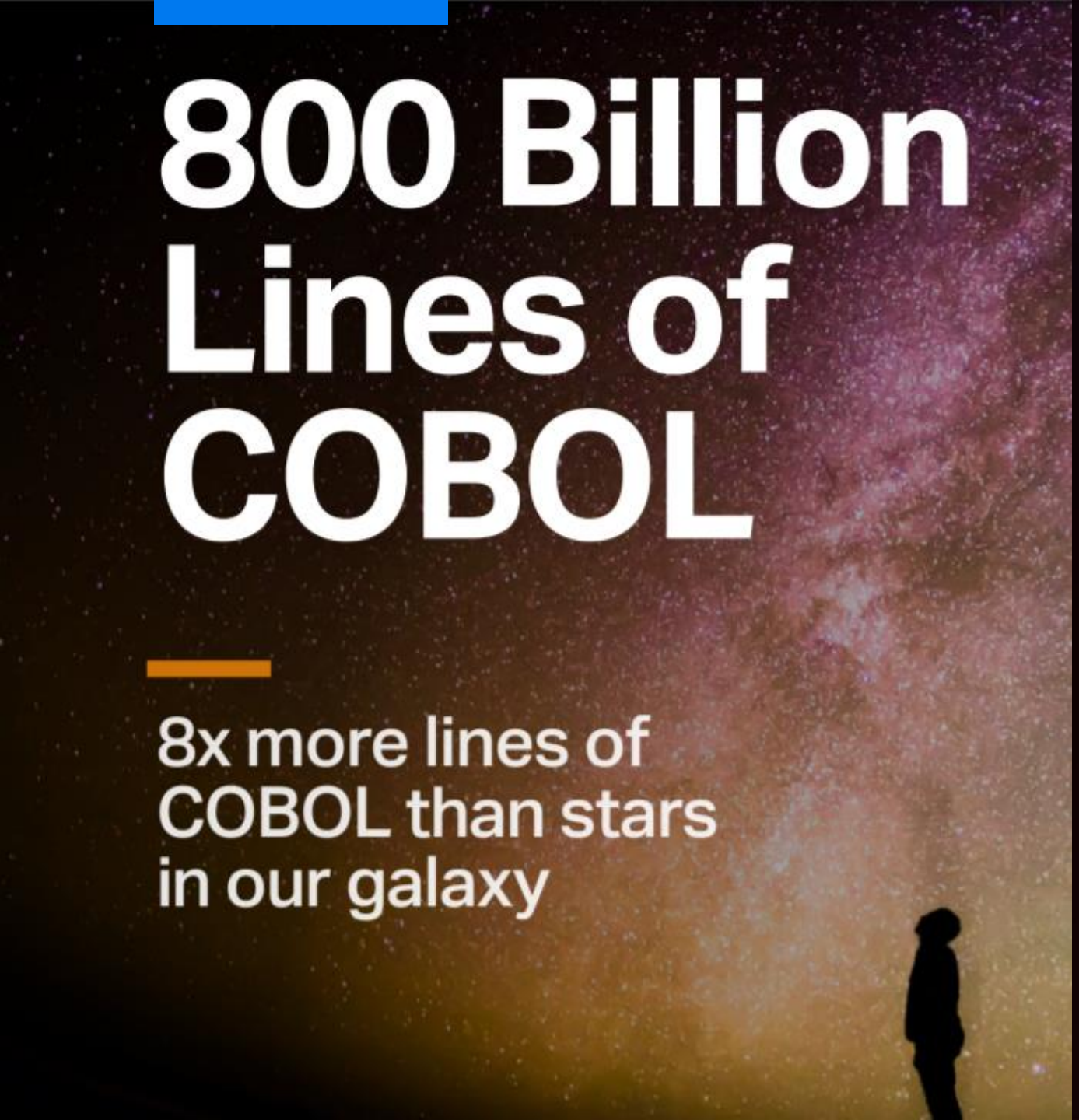
Gartner, Use Continuous Modernization to Build Digital Platforms From Legacy Applications, Thomas Klinect, Stefan Van Der Zijden, 2 November 2020

"Those 'starting from scratch' had a success/failure ratio of 26% against 20%. 'Modernizing' businesses enjoyed a 71% success rate versus a failure rate of just 1%."

Standish Group International, Inc., ENDLESS MODERNIZATION: How Infinite Flow Keeps Software Fresh, Jim Johnson, Hans Mulder, 2020

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92%

COBOL apps are strategic

72%

Prefer modernization as a business strategy

54%

COBOL use will increase in next 12 months

83%

COBOL will survive this generation and give opportunities to the next

36%

Digital is a driver for COBOL modernization

43%

COBOL apps will support cloud by 2021

The Micro Focus Modernization Maturity Model

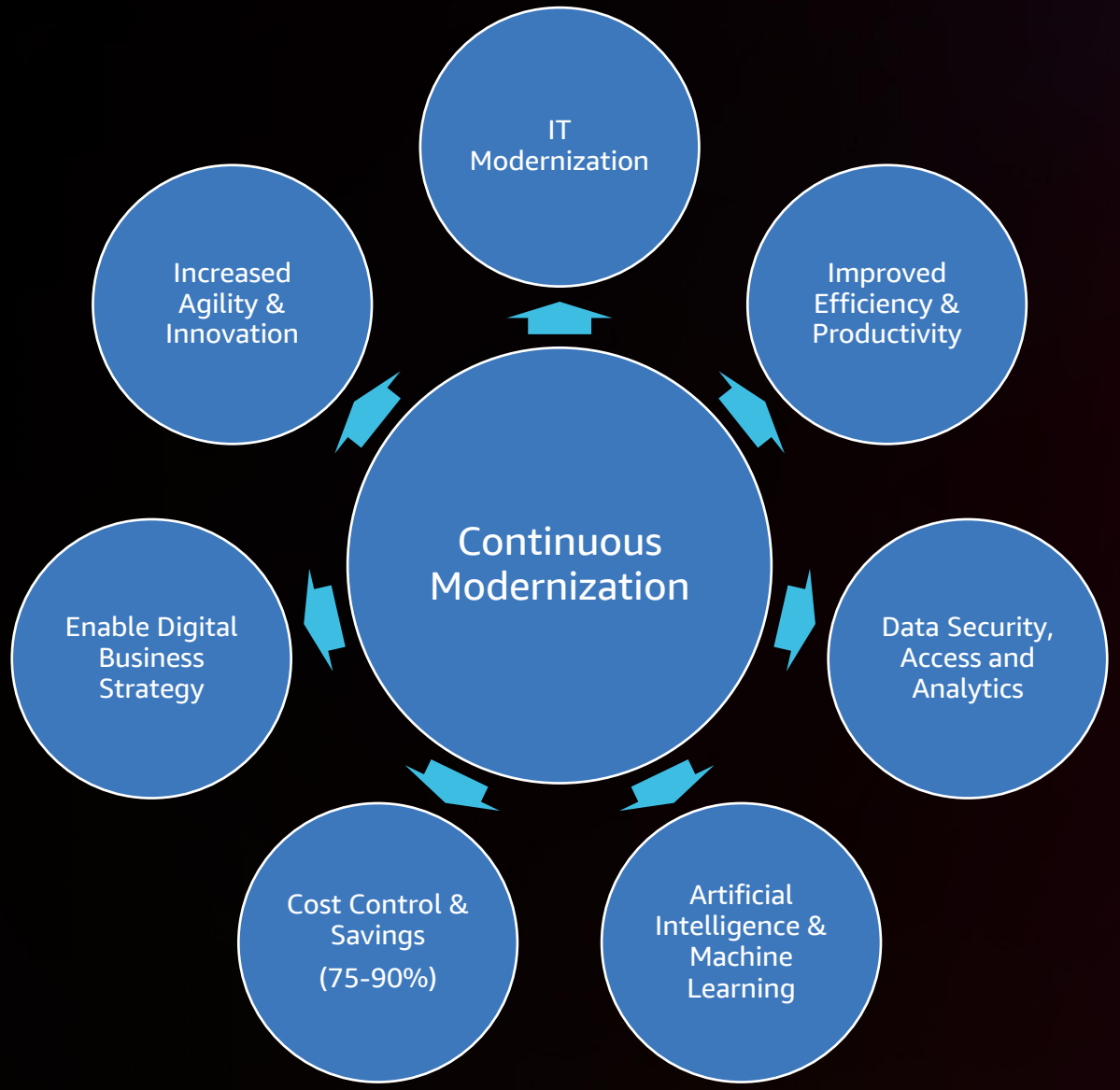
Plotting modernization readiness as part of the digital transformation journey

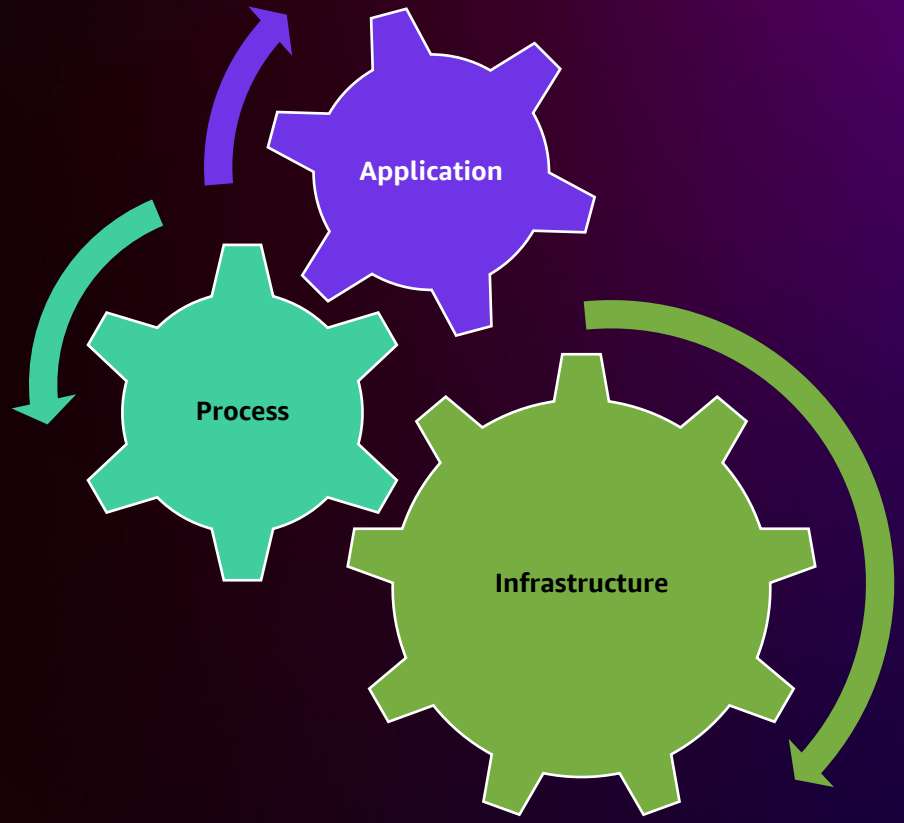
Lens/Layer	1	2	3	4	5
Infrastructure	Mainframe	Distributed	Cloud Cloud-ready	Cloud-optimized	Cloud-native
Application	Monolithic Proprietary ACID transactions	N-tier Portable Virtualised	Loosely-coupled Relational Macro Container	Components API Services Containers	Microservices NoSQL BASE transactions
IT Process	Waterfall	Iterative	Agile	DevOps	DevSecOps
Management	Initial	Managed	Defined	Measured	Optimizing
Culture	Departmental	Directed	Collaborative	Trusted	Performance

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Continuous Modernization Benefits





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Nassau Financial Group Mainframe modernization journey



Neel Datar

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Nassau Financial Group (NFG)

A high growth and digitally enabled financial services company with a differentiated approach across insurance, reinsurance, and asset management

Insurance/Reinsurance

- Scalable platform
- Built through acquisitions and organic growth
- Best-in-class service and digital capabilities
- Leverages internal asset management strategies



Asset Management

- 6 Specialty Strategies
- Permanent asset and fee base
- Grows through organic insurance sales
- Strategies offered to 3P alongside Nassau

Founded in **2015**
Legacy back to **1851**

Hartford CT
Headquarters

Executed
7 Acquisitions

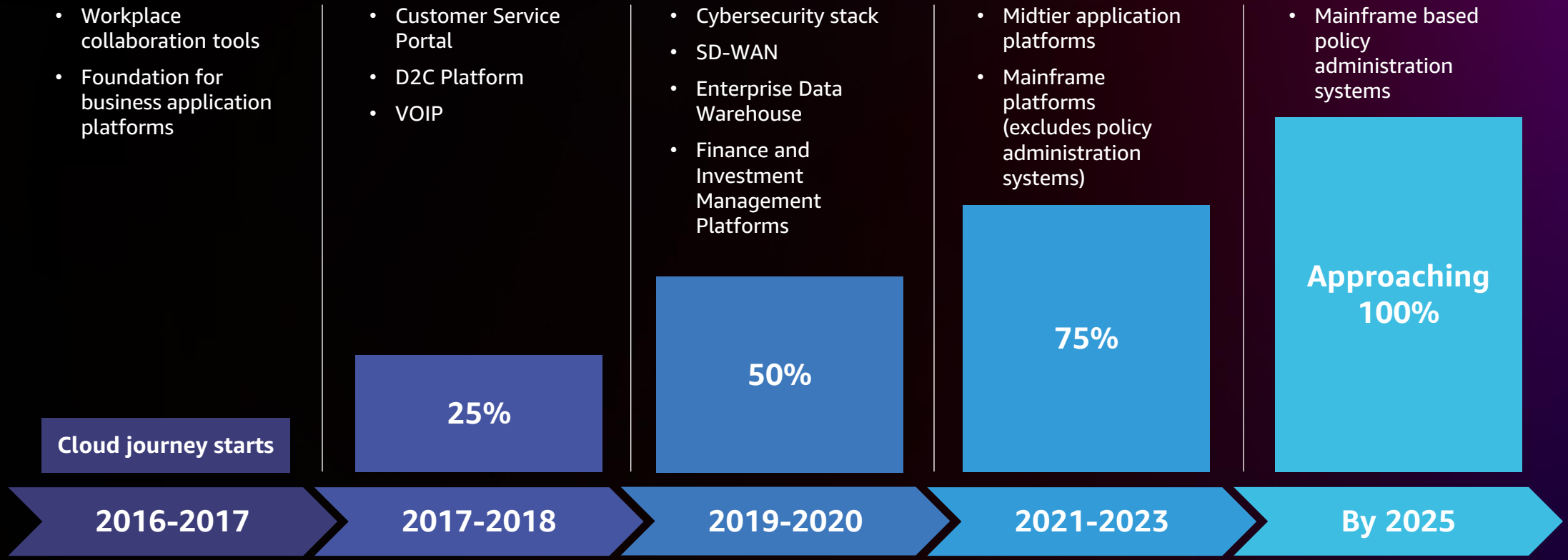
$19.5B
Total Assets

$7.4B
Third-Party Assets Under Management

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NFG cloud strategy and journey

Transforming legacy technology platforms to secure modern cloud-based platforms with focus on reducing risk and improving operational efficiency



- Workplace collaboration tools
- Foundation for business application platforms

- Customer Service Portal
- D2C Platform
- VOIP

- Cybersecurity stack
- SD-WAN
- Enterprise Data Warehouse
- Finance and Investment Management Platforms

- Midtier application platforms
- Mainframe platforms (excludes policy administration systems)

- Mainframe based policy administration systems

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Project Plato – Mainframe replatform

Mainframe migration and modernization to drive operational efficiency and increase productivity



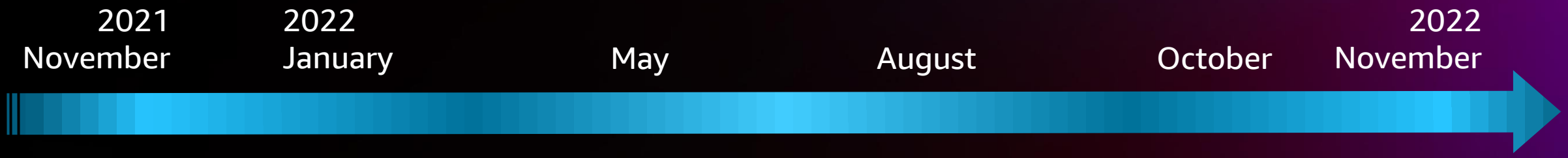
Objectives:

- Replatform commission calculation and valuation systems aligned to NFGs cloud strategy
- Reduce risk for technology and support resources
- Leverage existing cloud infrastructure, security, and landing zone
- Maintain and enhance integration capabilities with other NFG platforms
- Migrate with minimal Organizational Change Management (OCM)

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Mainframe replatform project timeline – 1 year



Assessment & POC

- Project kickoff
- Discovery
- Environment setup
- Proof of concept

Migration & Recompilation

- Code adaptations
- Code recompilation
- Data migration
- Unit testing

Integrations

- Scheduler migration
- RACF migration
- Integrations configuration
- System integration testing

User Acceptance Testing

- UAT completion
- Business review
- Signoff

Parallel Run

- Parallel run of batch, reports and online
- Signoff
- Cutover plan

Go Live

- Warranty support
- Mainframe application decommission
- Transition to support team

tcs | TATA CONSULTANCY SERVICES **TCS partners with NFG for mainframe modernization and data warehousing**

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Replatform technology mapping

Technology	Source mainframe	Target AWS
Languages	COBOL, Assembler	Micro Focus COBOL
Scripting	Mainframe scripts	Micro Focus REXX
Transaction manager	Mainframe TM, Maps	Micro Focus CICS, BMS
Batch	Control language	Micro Focus JCL
Database	Relational database	Compatible database
Scheduler	ESP	Stonebranch
Security	Mainframe access control	LDAP, AD
Operating system	Mainframe OS	Linux x86

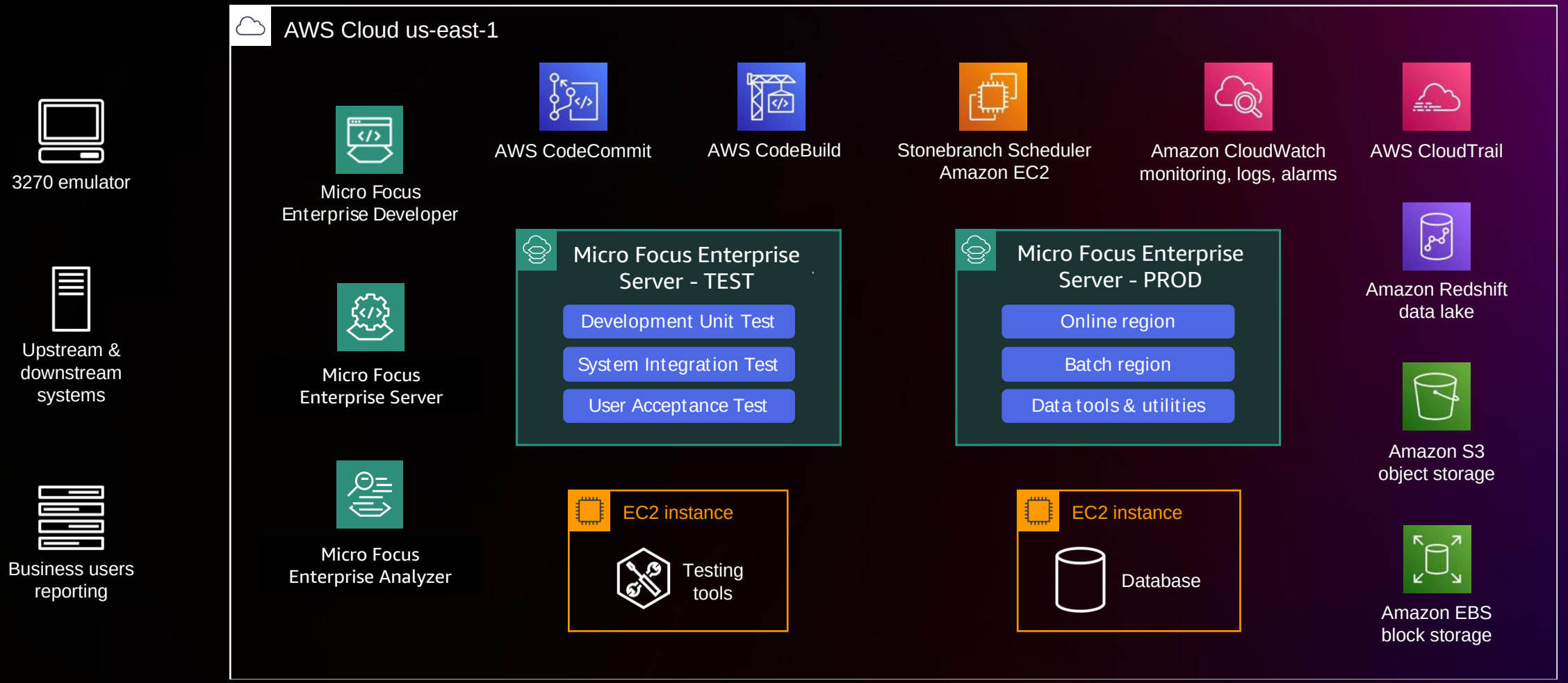
Maintain business functionality

Infrastructure and process modernization

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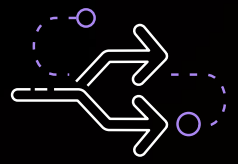
Project Plato – Target architecture



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Mainframe replatform benefits

Improved Operational Efficiency



75%

Improvement in data ingestion & processing



50%

Reduction in fault recovery time



35%

Reduction in turnaround time for business enhancements



30%

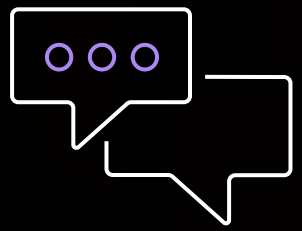
Reduction in infrastructure cost (excluding mainframe hardware cost)

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Lessons learned

Top-down executive commitment is essential



Replatforming project is driven by business value for business owners

Frequent communication to all stakeholders about rational and progress

Project requires in-house business and technology subject matter experts

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Enabling NFG future innovations

#1 Migrate and modernize mainframe policy administration systems

#2 Expand DevOps and automation to further drive efficiencies

#3 Create new data streams for analytics and business intelligence

#4 Opportunity to expose migrated functions to new channels

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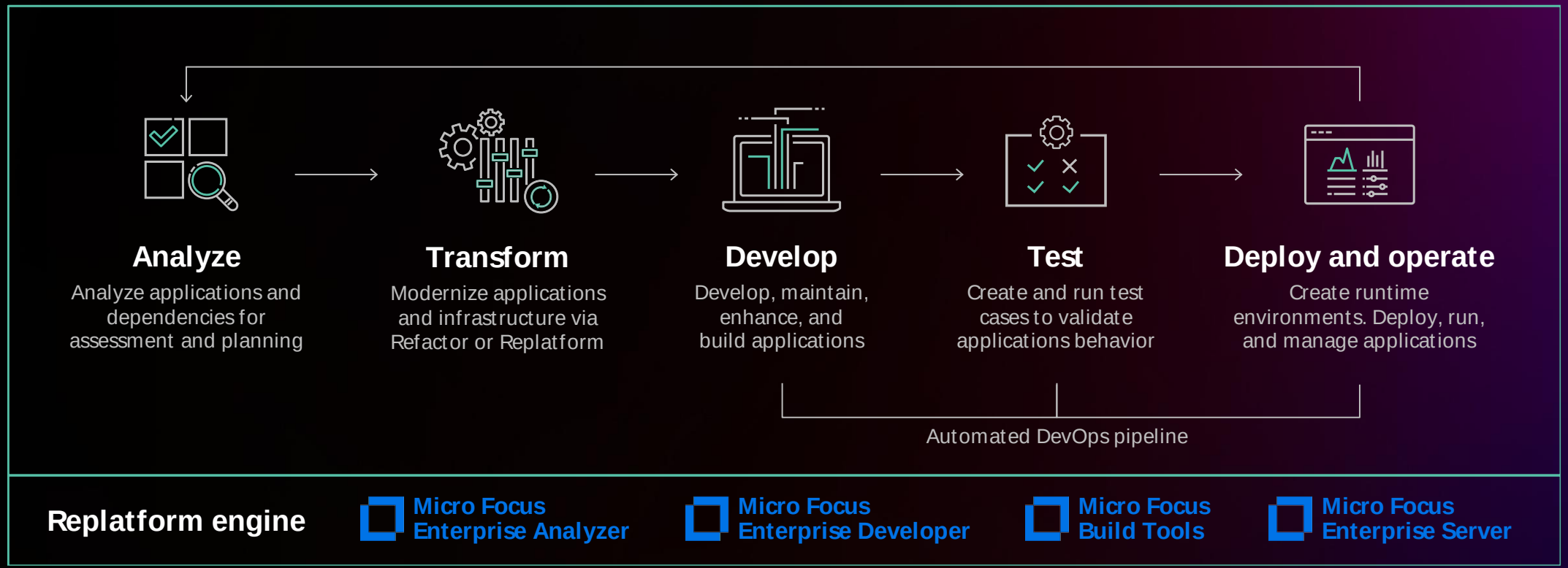
AWS Mainframe Modernization service

Phil de Valence

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AWS Mainframe Modernization service - Replatform

AWS Mainframe Modernization service is a cloud native platform to migrate, modernize, execute, and operate mainframe applications



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AWS and Micro Focus modernization journey

Mainframe monolith

Complex dependencies
Slow release cycles
Escalating costs
Skills shortage
Locked data
Vendor lock-in
Technical debt
Siloed platform
Tightly coupled
Limited capacity
Little innovation
Long procurement
Outdated interfaces
Legacy components
Undocumented code

Migrate & Modernize

Short-term AWS Cloud native services

AWS Cloud

Micro Focus engine

- On-demand Analyzer
- On-demand Developer
- Cloud-native elastic runtime
- DevOps CI/CD pipeline
- Continuous testing
- Cloud database
- Infrastructure-as-code
- Cloud SysOps
- Pay-as-you-go

Operate & Optimize

Mid-term innovations

AWS Cloud

Micro Focus tools

- API-enablement
- Logic extraction
- Data extraction
- New channels
- Front-end revamping
- Web services

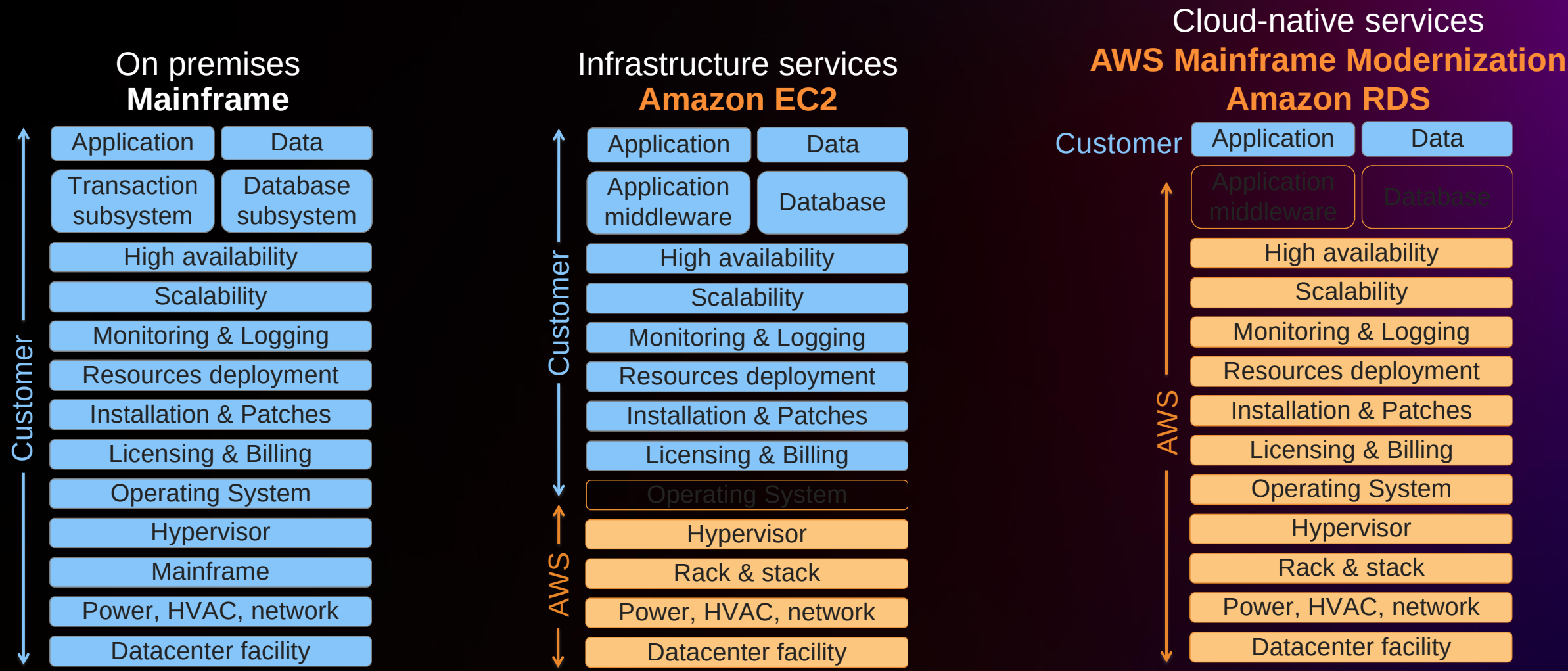
- API Gateway
- Mobile
- Microservices
- Data Analytics
- Machine Learning
- Marketplace

Unleash business value of application processes and data

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AWS Mainframe Modernization is an AWS Cloud native service

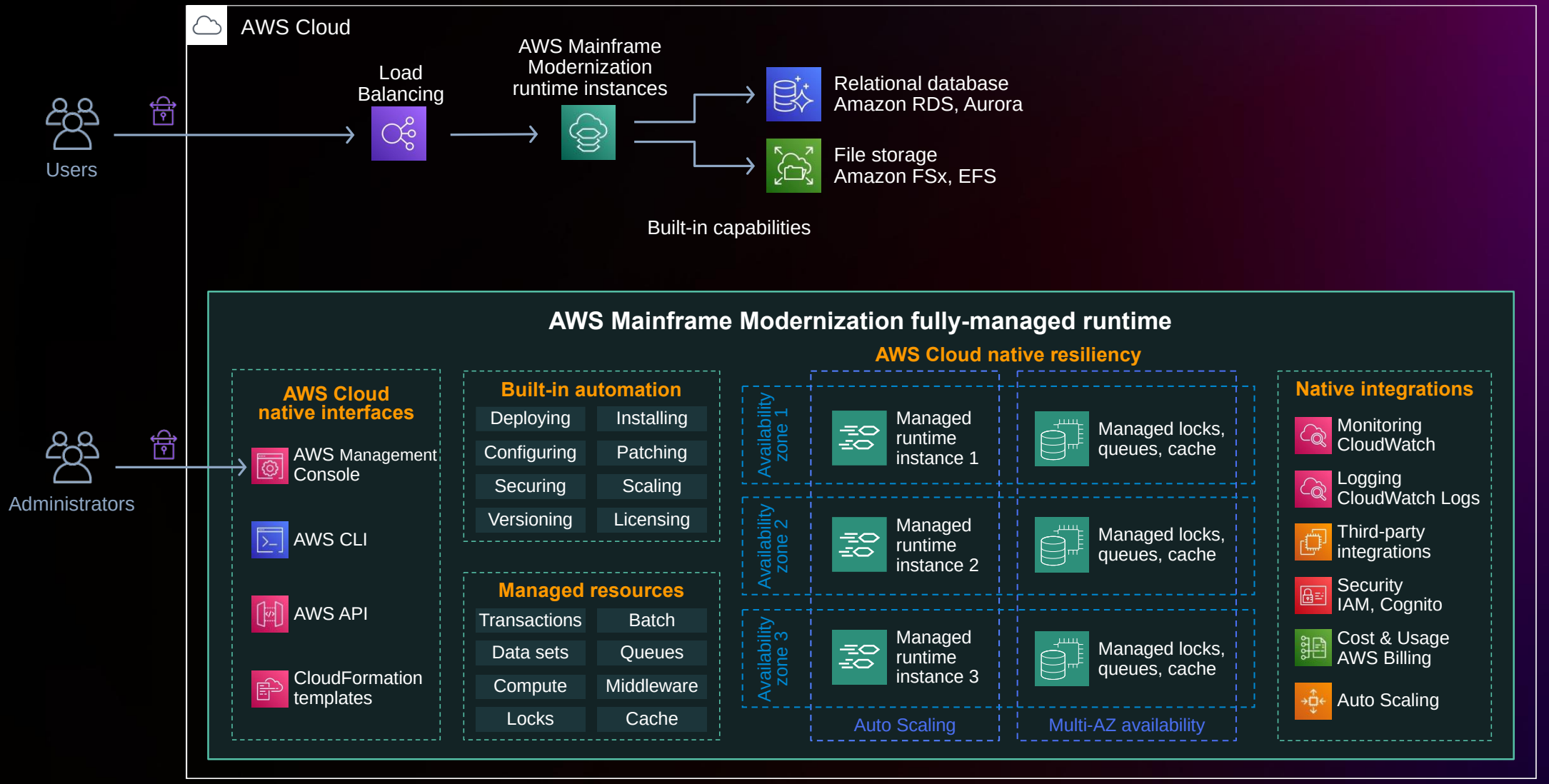
Born in the cloud, fully-managed, automated infrastructure and middleware operated with AWS Console, APIs, and CLI
Not a managed service provider (MSP) offering



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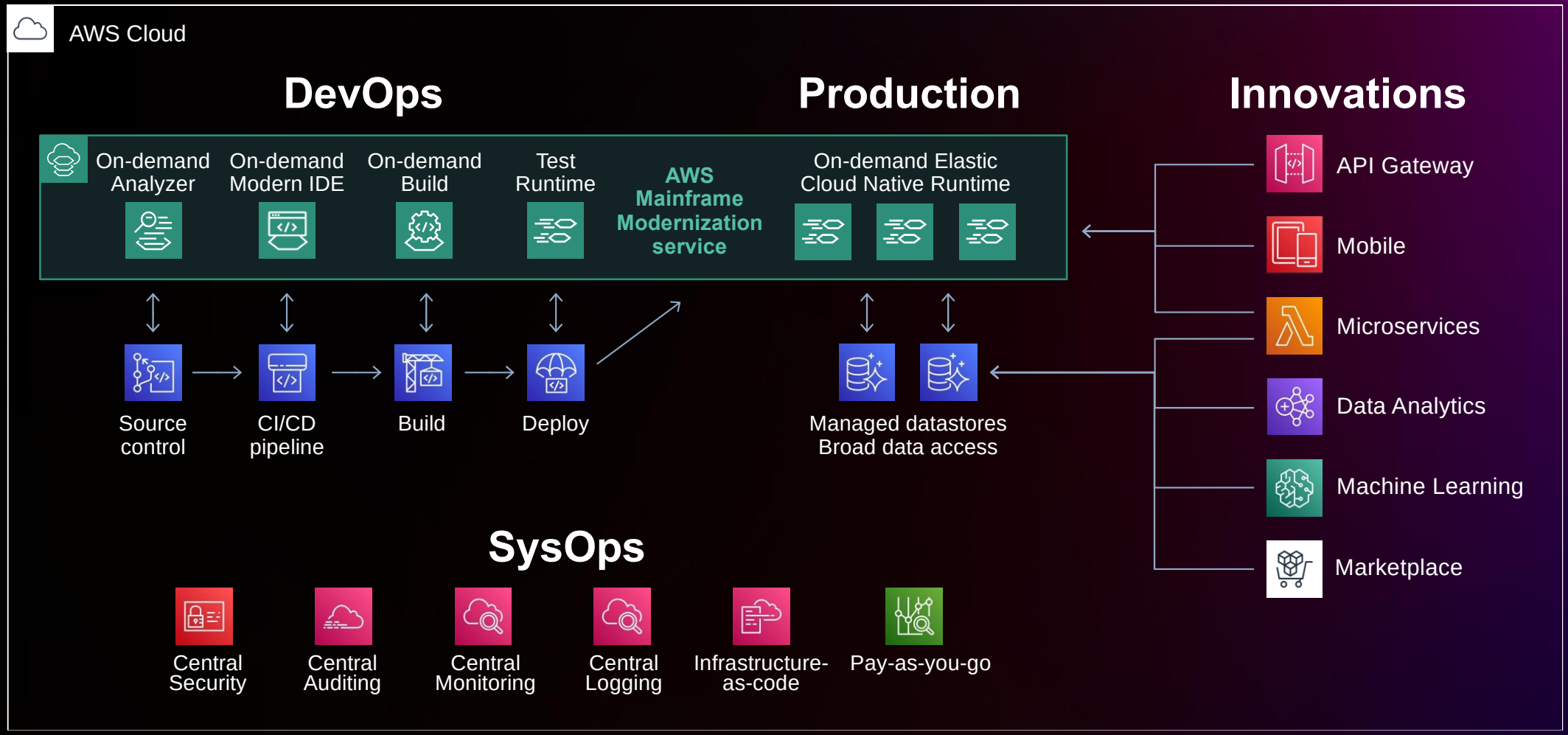
Spend time innovating and building new capabilities, not managing infrastructure

AWS Cloud native fully managed runtime



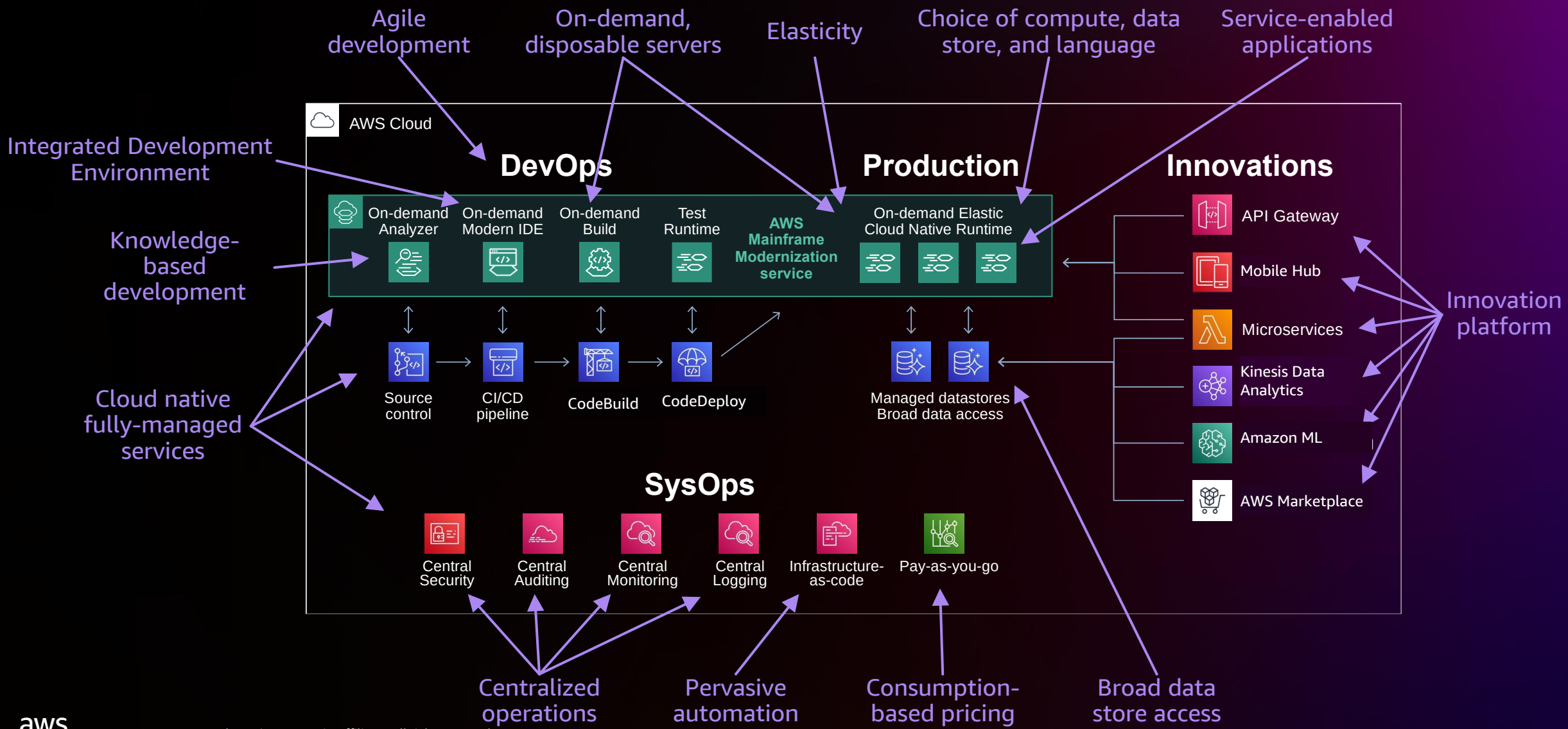
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Short-term architecture



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Agility benefits from short-term architecture

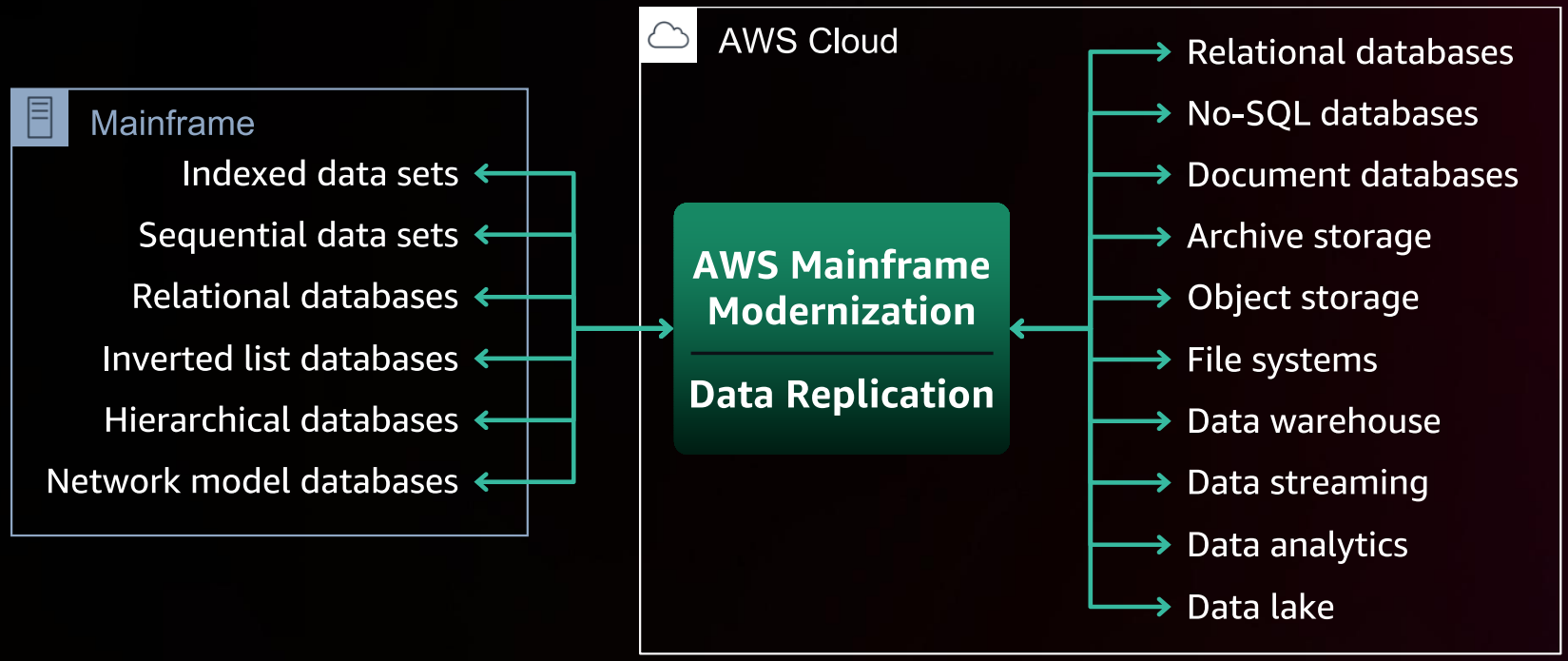


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New – AWS mainframe data integration and modernization

Unleash data-based innovations leveraging choice of AWS services:

- Precisely Data Replication for AWS Mainframe Modernization



Use cases:

- Data analytics
- New channels
- Processing offload
- Data science, AI/ML
- Augmentation patterns
- Large migration transitional architectures

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Learn more

re:Invent 2022:

- PRT332 breakout session - How a Fortune 100 firm seamlessly moved from mainframe to AWS
- ENT211 breakout session - Value of Blu Age automated refactoring with AWS Mainframe Modernization
- ENT318 workshop - Replatforming a mainframe application to AWS with Micro Focus
- ENT317 workshop - Automated refactoring of a mainframe application with AWS Blu Age
- ENT207 chalk talk - Unlock mainframes with AWS augmentation patterns

Reference content:

- AWS Mainframe Modernization Micro Focus Replatform website
  https://aws.amazon.com/mainframe-modernization/patterns/replatform/
- Micro Focus Replatforming Demo with AWS Mainframe Modernization
  https://www.youtube.com/watch?v=-sE2jIQ1lrQ
- Fast-Tracking Agility for Mainframe Workloads
  https://aws.amazon.com/blogs/apn/fast-tracking-agility-for-mainframe-workloads/
- Transitioning Mainframe Workloads into Agile Services with AWS and Micro Focus
  https://aws.amazon.com/blogs/apn/transitioning-mainframe-workloads-into-agile-services-with-aws-and-micro-focus/
- Managed Runtime for Micro Focus Tutorial
  https://docs.aws.amazon.com/m2/latest/userguide/tutorial-runtime.html

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Thank you!

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