BLU AGE

AWS Blu Age Assessment

Analyzing The AWS Blu Age Refactor Strategy In The AWS Mainframe Modernization Offering

L2 - Course 01

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Also, some of the contents have been prepared using the CardDemo application which is an open-source application (https://github.com/aws-samples/aws-mainframe-modernization-carddemo/). Please read and respect the license Apache License 2 that manages it.

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AWS Blu Age T3 - Section d24h1045 - AWS Blu Age Refactor - XPL

AWS Blu Age naming reference

Xavier Plot

Principal BD, AWS Blu Age,
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AWS Mainframe Modernization components naming (1/3)

Meaning	Full name (for the first mention in any document)	Short form (for any subsequent uses in the same document)
AWS technology	AWS Blu Age	AWS Blu Age
AWS practice	AWS Blu Age Professional Services	AWS Blu Age Professional Services or just “the Professional Services”
	AWS Blu Age Practice	AWS Blu Age Practice or just “the Practice”
AWS transformation strategy	AWS Mainframe Modernization Refactor with AWS Blu Age	AWS Blu Age Refactor, AWS Blu Age Automated Refactor, AWS Refactor or AWS Automated Refactor
	AWS Mainframe Modernization Automated Refactor with AWS Blu Age	AWS Mainframe Modernization Refactor with AWS Blu Age or AWS Blu Age Refactor or AWS Automated Refactor or AWS Refactor
AWS Blu Age feature	AWS Mainframe Modernization Automated Refactor Blu Age Transformation Center	AWS Mainframe Modernization Automated Refactor Transformation Center, AWS Automated Refactor Transformation Center or AWS Refactor Transformation Center
	AWS Mainframe Modernization Blu Age Runtime	AWS Blu Age Runtime
	AWS Mainframe Modernization Blu Age Runtime Library	AWS Blu Age Runtime Library
	AWS Mainframe Modernization Blu Age Managed Runtime	AWS Blu Age Managed Runtime
	AWS Mainframe Modernization Blu Age Custom Runtime	AWS Blu Age Custom Runtime

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AWS Mainframe Modernization components naming (2/3)

Meaning	Full name (for the first mention in any document)	Short form (for any subsequent uses in the same document)
AWS Blu Insights	AWS Blu Insights	AWS Blu Insights
AWS Blu Insights features	AWS Blu Insights Shared Spaces	AWS Blu Insights Shared Spaces
	AWS Blu Insights Codebase	AWS Blu Insights Codebase
	AWS Blu Insights Transformation Center	AWS Blu Insights Transformation Center
AWS Blu Age other features	AWS Blu Age Factory	AWS Blu Age Factory
	AWS Blu Age Workflow	AWS Blu Age Workflow
	AWS Blu Age Quality Gate	AWS Blu Age Quality Gate
	AWS Blu Age Compare Tool	AWS Blu Age Compare Tool
	AWS Blu Age DB Modernization	AWS Blu Age DB Modernization
	AWS Blu Age Transformation Engine	AWS Blu Age Transformation Engine
	AWS Blu Age Runtime Library	AWS Blu Age Runtime Library
	AWS Blu Insights Transformation Center	AWS Blu Insights Transformation Center

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AWS Mainframe Modernization components naming (3/3)

Meaning	Full name (for the first mention in any document)	Short form (for any subsequent uses in the same document)
AWS service	AWS Mainframe Modernization service	AWS Mainframe Modernization service, or just “the service”
AWS funding	AWS Mainframe Modernization Migration Acceleration Program (MAP)	AWS Mainframe Modernization MAP or just “the AWS MAP”
AWS solutions with partners	AWS Mainframe Modernization Scheduling with Stonebranch AWS Mainframe Modernization <<pattern>> with <<vendor>>	AWS Mainframe Modernization Scheduling with Stonebranch
AWS solution	AWS Mainframe Modernization Application Testing	AWS Mainframe Modernization Application Testing or just “the AWS Application Testing”

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AWS Blu Age T3 - Section d23h0915 - AWS M2 Blu Age refactor value proposition – XPL

AWS Blu Age Refactor value proposition

Xavier Plot

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AWS Blu Age Refactor value proposition

AWS Blu Age T3 - Section d23h0915 - AWS M2 Blu Age refactor value proposition – XPL

Overview

Presentation and positioning of the AWS Blu Age Refactor strategy in the AWS Mainframe Modernization offering, introducing high level value proposition, benefits and pricing model of such a transformation.
AWS Mainframe Modernization service technical highlights (20 min)
AWS Blu Age pricing (20 min)

Performance objective

Get familiar with the AWS Blu Age offering and relative positioning with the other transformation strategies

Target audience

All

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Agenda

60 min

- AWS Blu Age Automated Refactor (20 min)
- AWS Mainframe Modernization service technical highlights (20 min)
- AWS Blu Age pricing overview (20 min)

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AWS Blu Age Automated Refactor

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AWS Blu Age introduction and experience

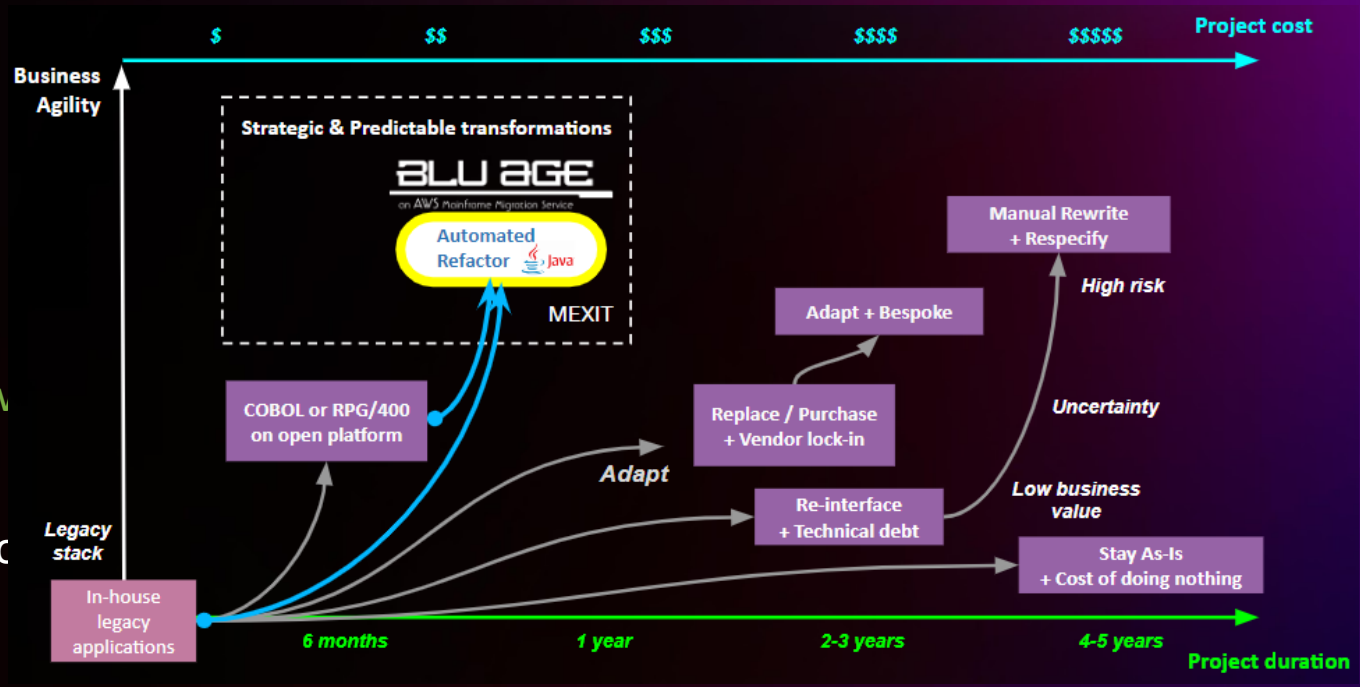
20 years of Blu Age maturity and experience integrated into the **AWS console**

Unique combination of best of both worlds: AWS Mainframe Modernization Blu Age Automated Refactor

A simple frontend implementing the end-to-end workflow of the transformation cycle

Mainframe and midrange managed by a single engine into a single process

- Automated analysis of codebase
- Centralization and monitoring of progress
- Transformation Center: a game changer
- Automate testing and verification of results



AWS Blu Age Refactor Quality Gate

- Codebase & DB Modernization completeness
  with AWS Blu Insights
- Functional equivalence
  with AWS Blu Age Compare
- Same or equivalent performance
  with same test dataset
- Code quality
  with SonarQube
- Test coverage
  with JaCoCo

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AWS Automated Refactor value proposition

Lessons learned

Manual tasks and rewrite are antipatterns

➔ Go for an industrial end-to-end and reliable process

Tools with no methodology is a pitfall

➔ Work backward to simplify complexity
➔ Go for an industrial process implementing repeatable tasks with a predictable quality

Require commitment on results

➔ Offer transition at fixed price and for predictable planning

Legacy-agnostic workflow

AWS Blu Insights **Capture & Replay**

AWS Blu Insights **Codebase** analysis

AWS Blu Insights **Transformation Center**

- Powered by AWS Blu Age Velocity engine

AWS Blu Insights **Testing Management**

AWS Blu Age **Compare**

AWS Blu Age **Managed Runtime**

Focus on the outcome!

Java/Spring app in the **AWS Cloud**

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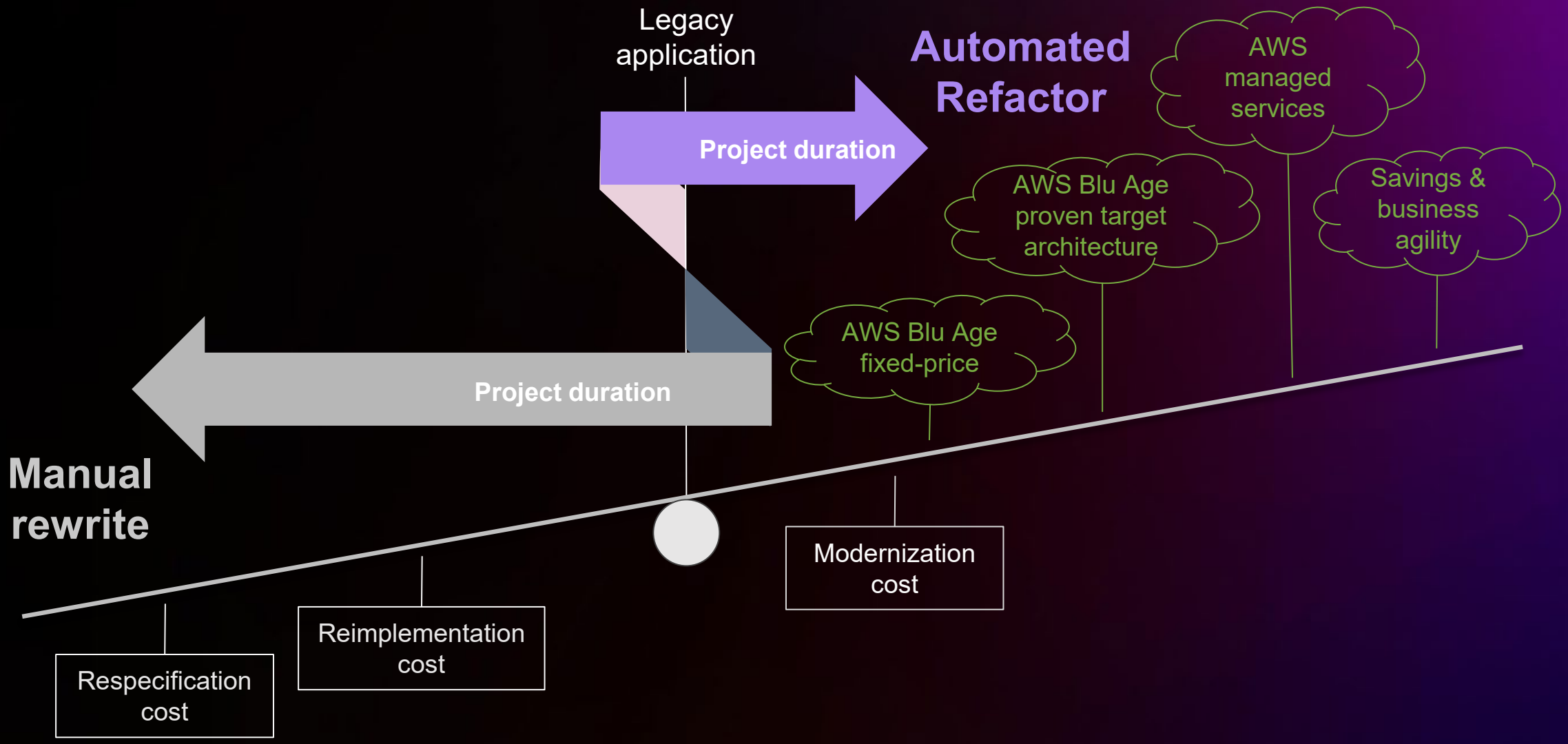
AWS Automated Refactor benefits



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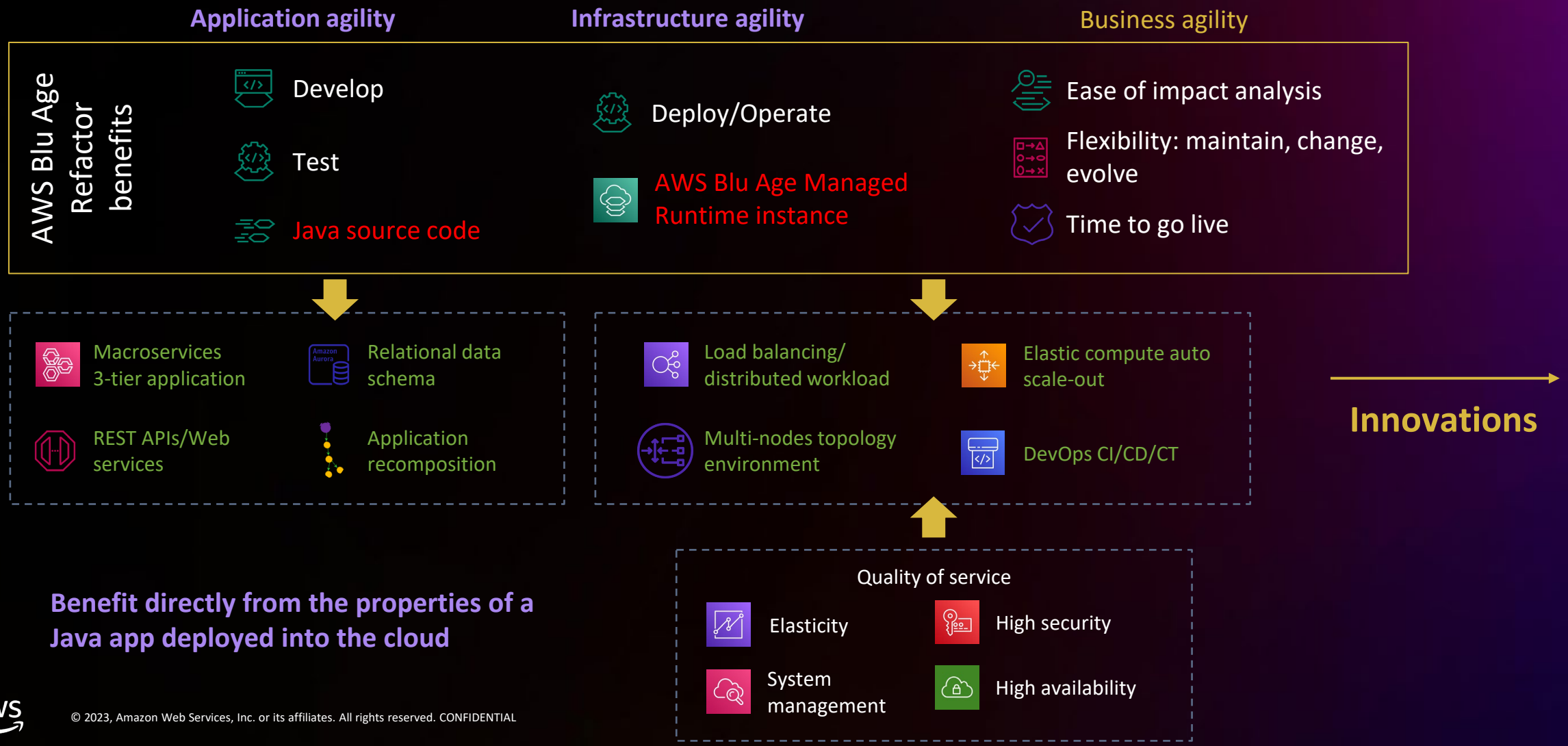
AWS Blu Age target-state value proposition: Technical and business



Benefit directly from the properties of a Java app deployed into the cloud

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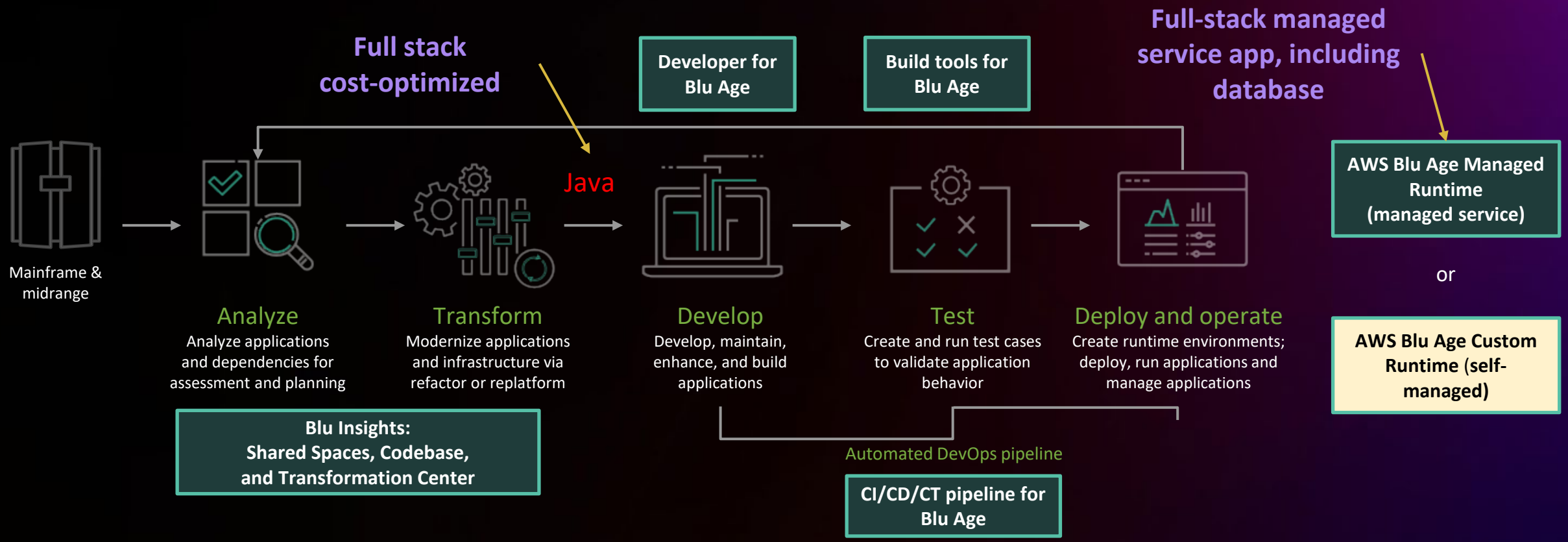
AWS Mainframe Modernization service

"AWS Mainframe Modernization service is a platform for assess, migration, modernization, execution, and operation of mainframe applications."



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AWS Mainframe Modernization service technical highlights

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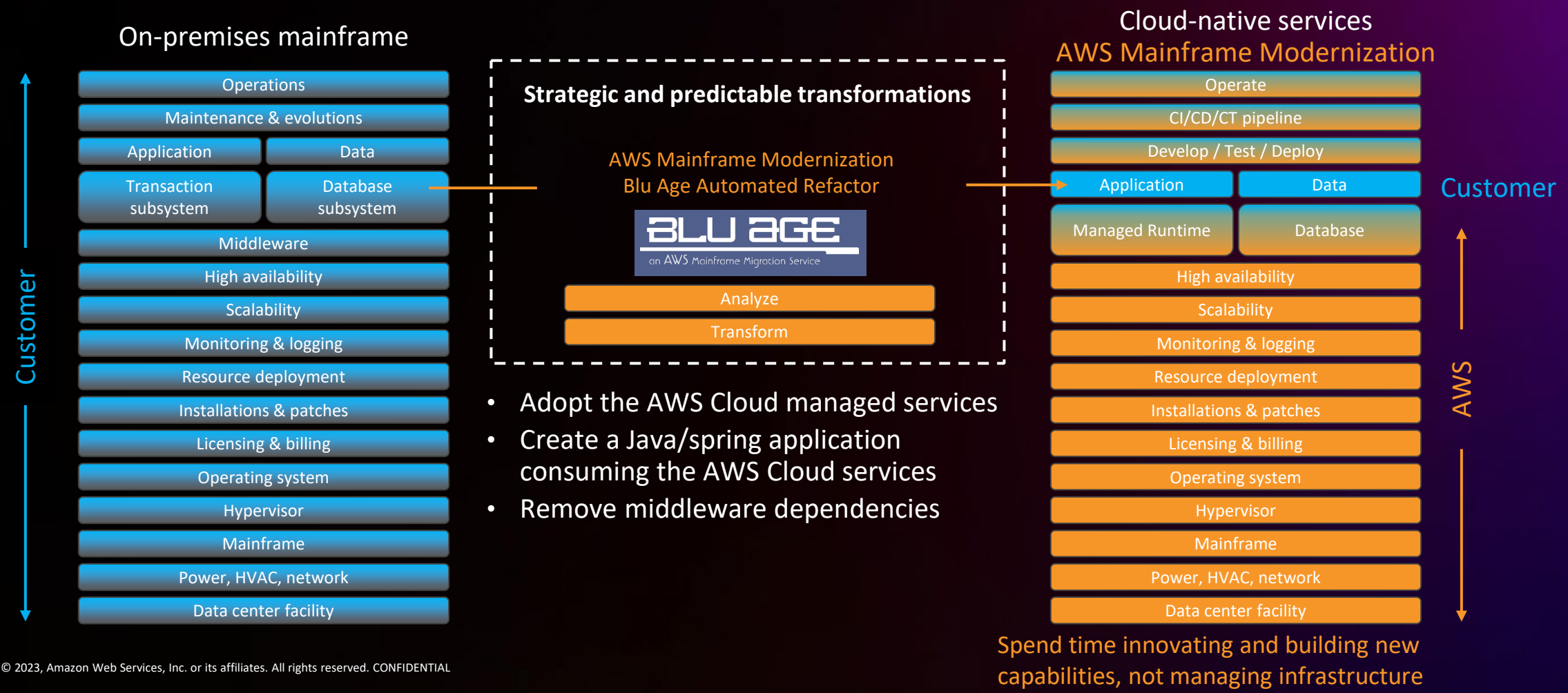
AWS Mainframe Modernization

AN AWS CLOUD-NATIVE SERVICE

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



- Adopt the AWS Cloud managed services
- Create a Java/spring application consuming the AWS Cloud services
- Remove middleware dependencies

Spend time innovating and building new capabilities, not managing infrastructure

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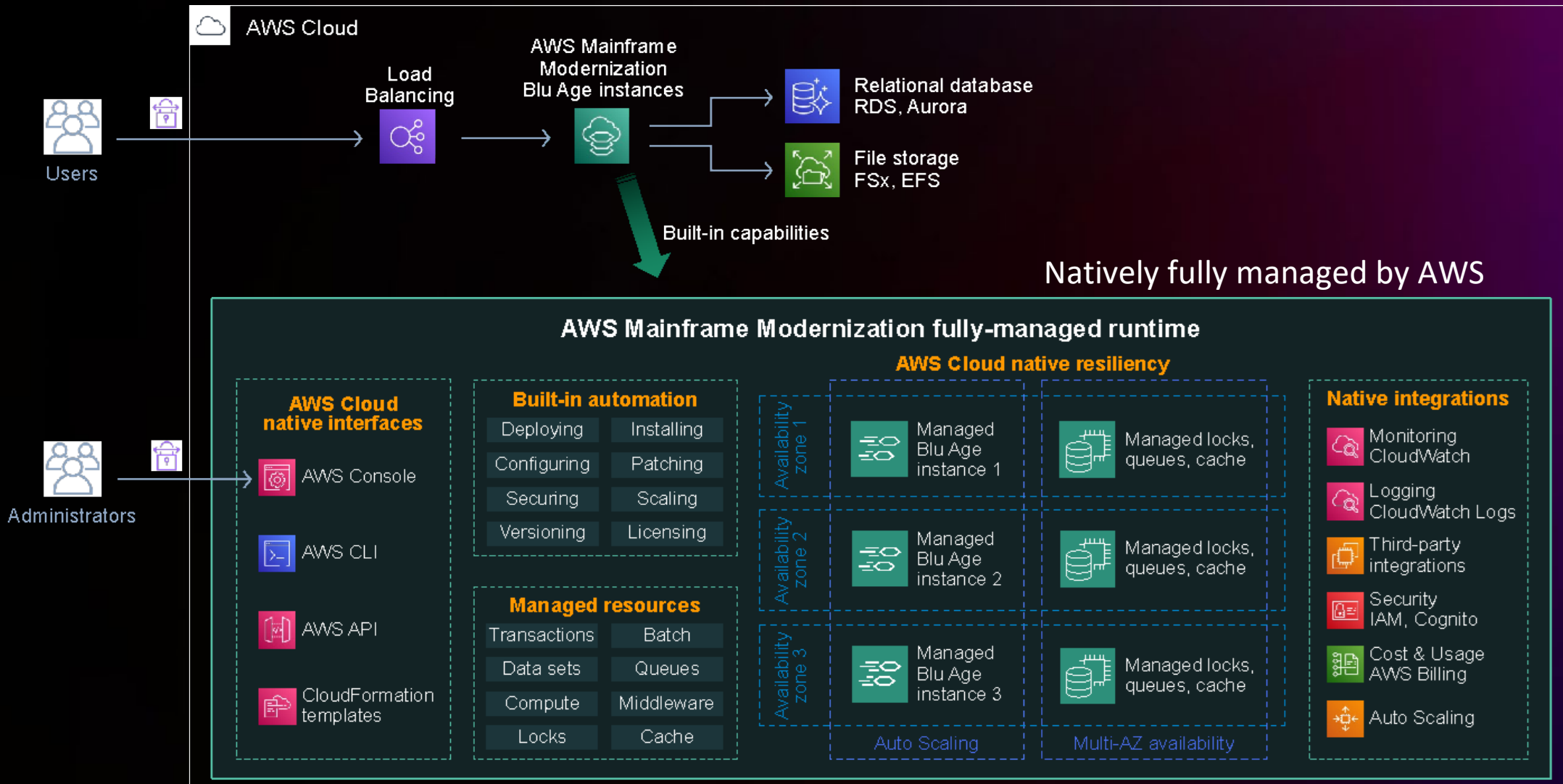
AWS Blu Age Managed Runtime instance



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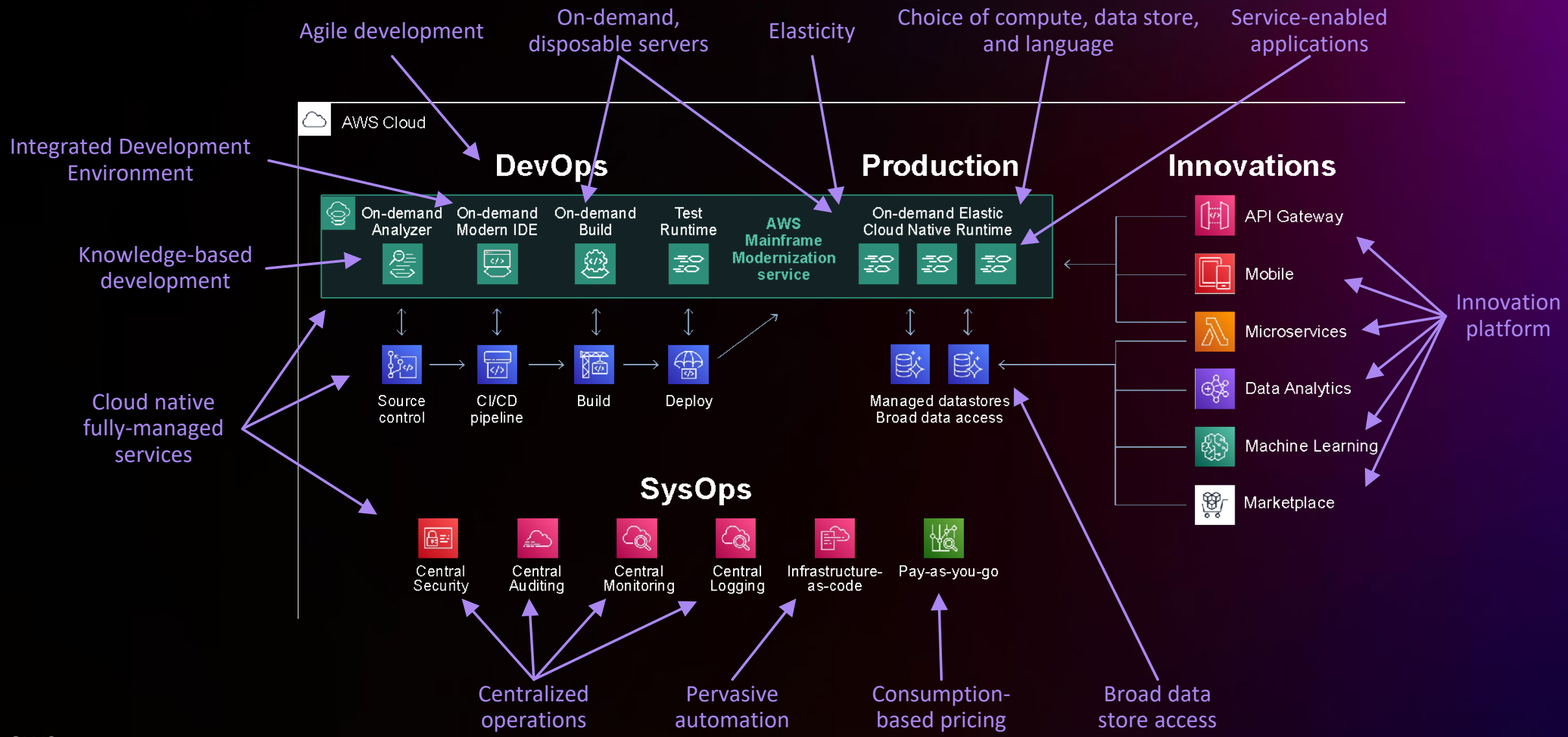
Agility benefits from a Java app into the AWS Cloud



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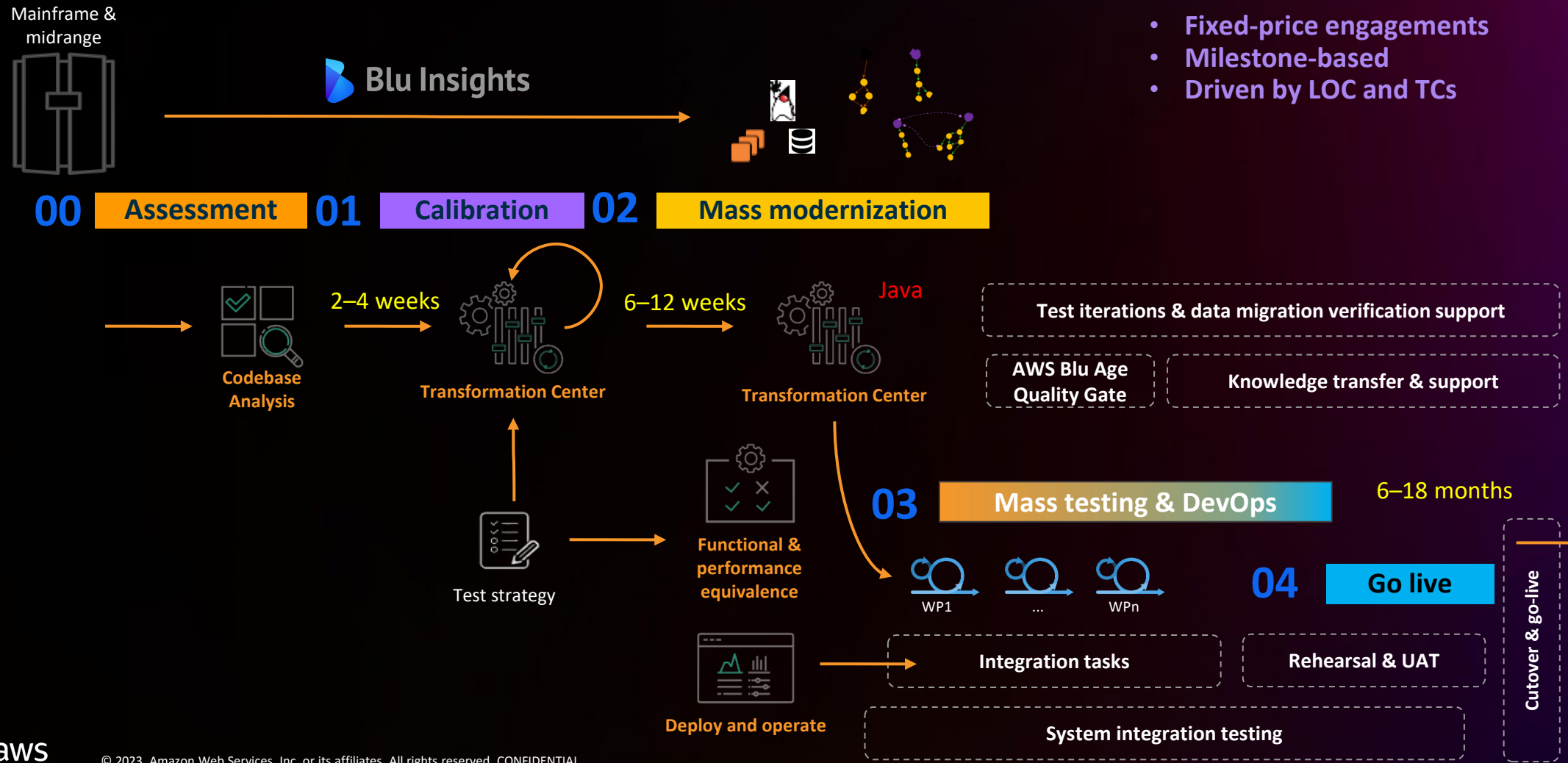
AWS Blu Age Automated Refactor project methodology



- Fixed-price engagements
- Milestone-based
- Driven by LOC and TCs

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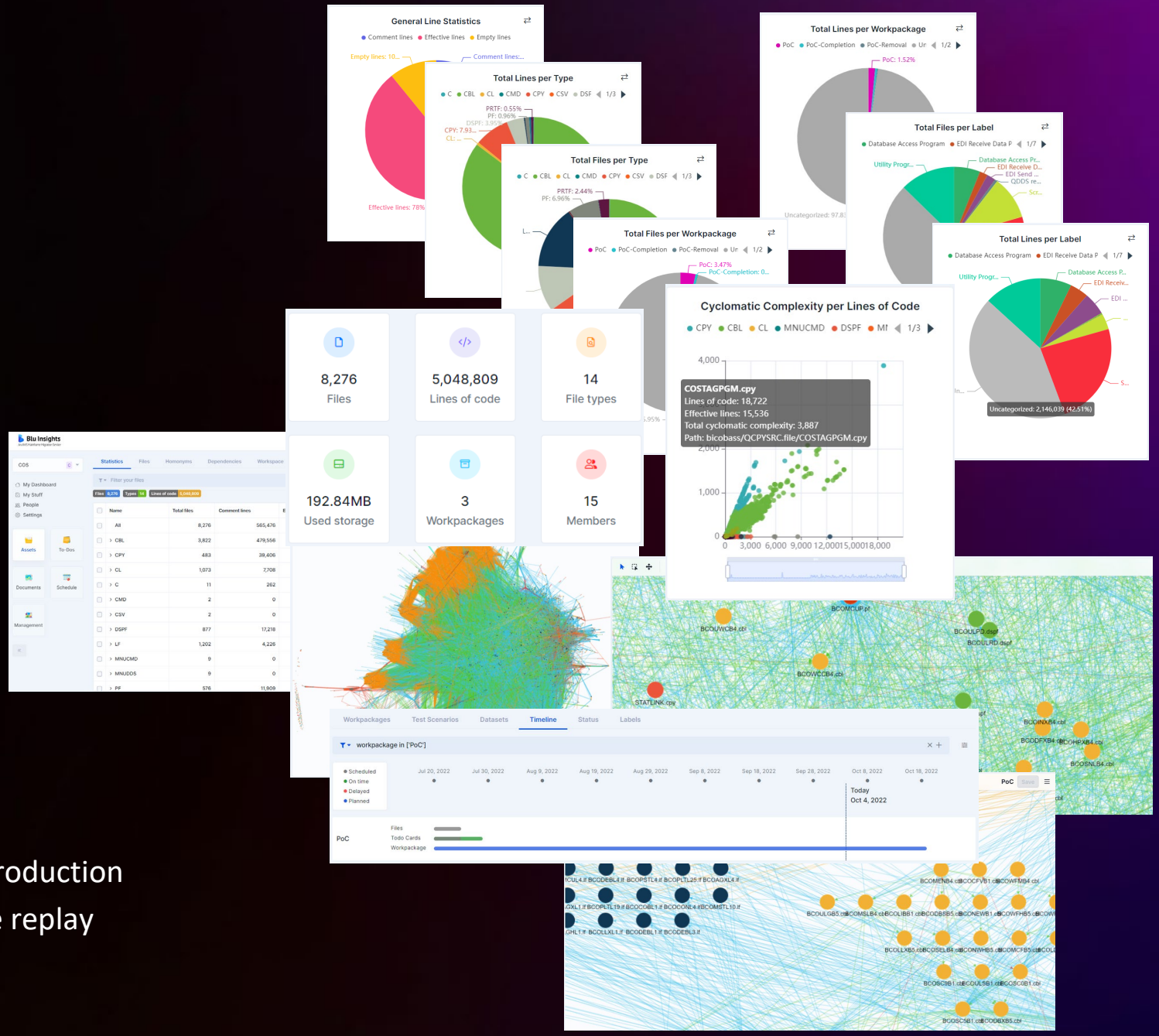
AWS Blu Insights Codebase Analysis

BRING YOUR SOURCE CODE . . .

- **Estimates** and business case (volumes)
- Automatic **classification** of artifacts
- Cyclomatic **complexity**
- **Dependencies** analysis
- **Missing artefacts** identification
- Monolith **decomposition** into vertical slices
- POC and project **scoping**
- Central place for TODOs to follow up on shared tasks and documents
- **Recomposition** to build a test strategy
- **Timeline** to monitor and report **progress** by connecting it to the CI/CD/CT pipeline
- Standard **dashboards**
- Versioning for **code refresh** and resync with legacy production
- Legacy **screen-based scenario capture** for immediate replay

Lines and artefacts statistics per type, work package, etc.



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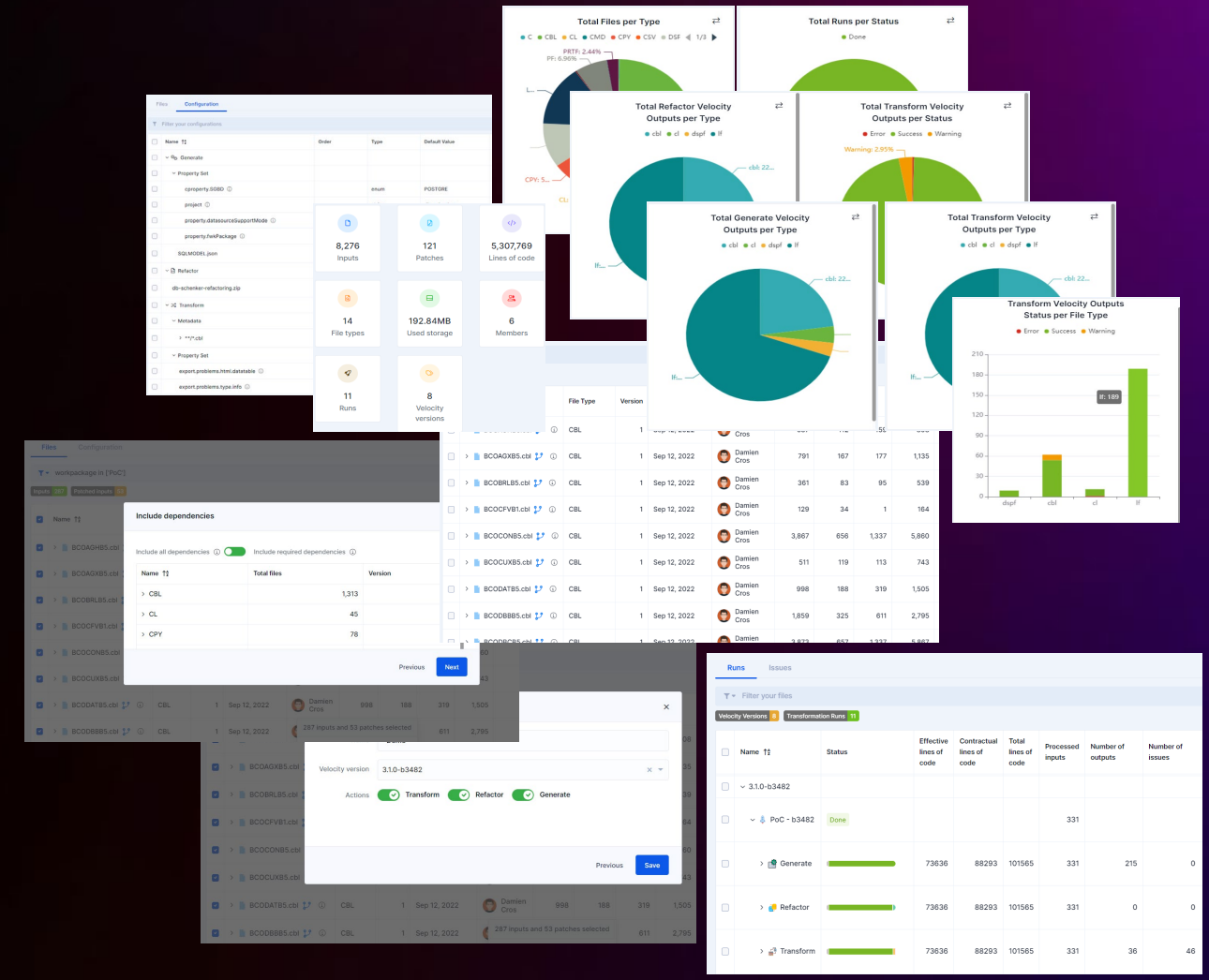
AWS Blu Insights Transformation Center

. . . THEN OBTAIN YOUR JAVA

From legacy language to Java in 3 steps

- Inputs
  - Patch allows us to fix inputs to progress faster
  - Configuration of the generated code
- **Transform**
  - Model-to-model approach
  - Relearn from legacy into a model
  - Recognize legacy pattern
  - Map them to target into a new model
- **Refactor**
  - Ad hoc refactoring on new model
  - Specific in-house legacy patterns
  - Expand legacy naming for meaningfulness
  - Refactor of legacy duplication
- **Generate**
  - Adaptable templates to converge with customer coding style and requirements
  - If issues: no manual touch on generated code, go to Transform or Refactor instead for new rules



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Mainframe Modernization develop, deploy, and test from the console

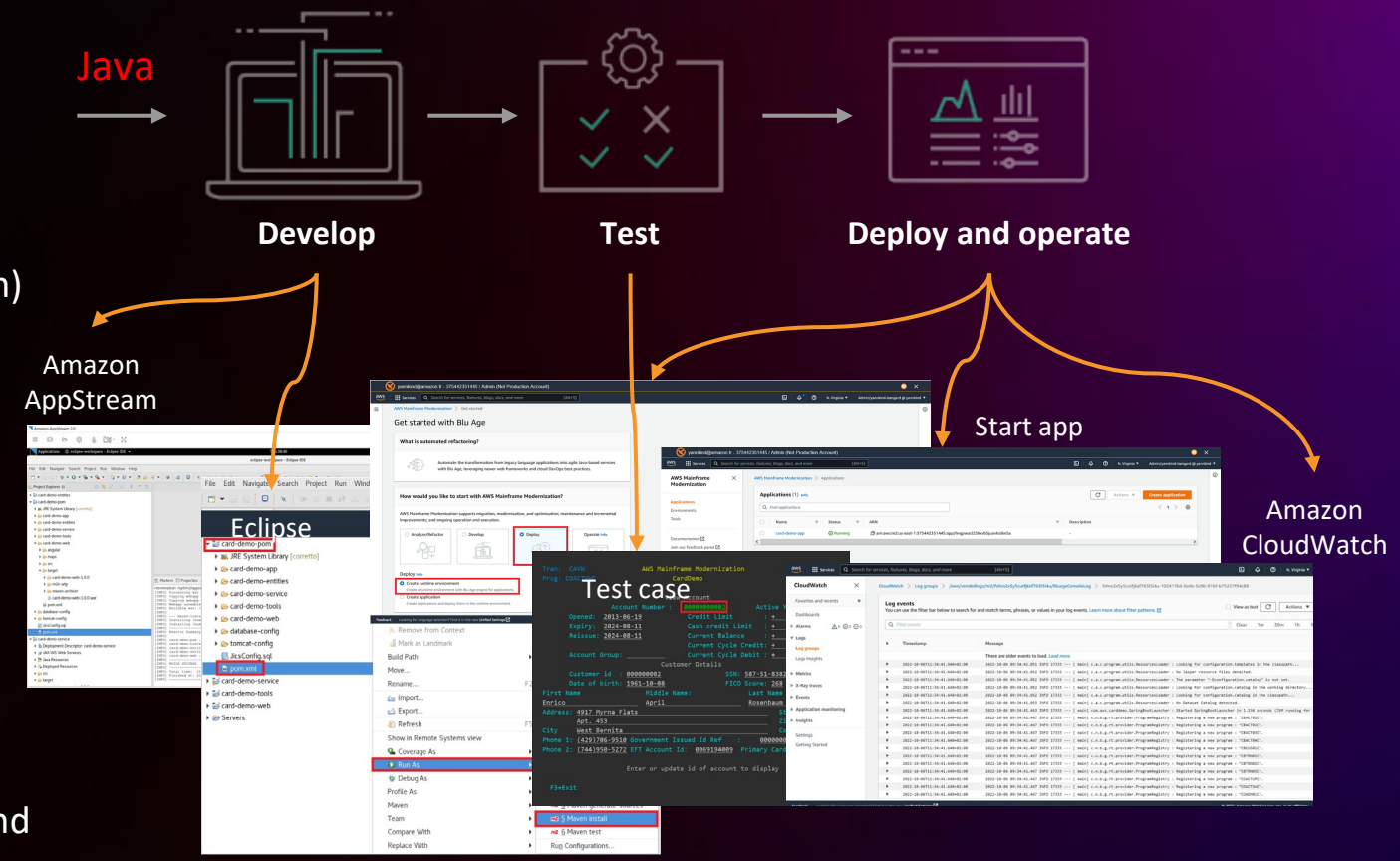
. . . THEN RUN FUNCTIONAL AND PERFORMANCE EQUIVALENCE

Data modernization stream
- Data schema modernization (from legacy to DDL)
- Datasets migration (reference and expected)

Code modernization stream using test cases
- Get modernized artifacts (Java/Angular/Groovy/ Configuration) from SCM
- Compile, build, and package

Deploy
- Configure databases (JICS/BlueSAM/etc.)
- Deploy frontend on static website (http or ng server)
- Configure web container server (Tomcat)
- Deploy backend on server (or Eclipse for dev)

Test
- Run test case scenario on migrated data
- Automated results check with expected data, performance, and logs



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How to engage?

Customers opting for a strategic change: Refactor to Java

Deliver

Deliver

(AWS Blu Age)

AWS Blu Age experts and experienced SDEs

Support

(Professional Services)

AWS Partners (GSIs or ISVs or AWS ProServe) Accredited individuals

Sharing exact same repeatable and scalable mechanisms

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AWS Blu Age pricing overview

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Build cost of a AWS Blu Age Refactor POC or Project

To create the modernized application (Angular, Groovy, Java/Spring, PostegreSQL)

- AWS Blu Age Professional Services fixed-price labor

  You can obtain a quote and pre-sale assessment of your codebase by contacting us

or

- AWS partner labor

  (Atos, Infosys, TCS, Vertusa, Deloitte, Kyndryl, Alithya, … and AWS ProServe)

  They might have different pricing model

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AWS Blu Age Fixed-price Refactor factory service (Professional Services labor)

AWS Blu Age Professional Services as an Automated Refactor service

- AWS Blu Age Professional Services service relies on fully automated refactoring of on-premises mainframe workloads and it preserves the investment in business functions while expediting the reliable transition to Java/Spring, data stores, test practices, and cloud services. It includes Labor & Products to cover the end-to-end legacy application transformation from Assess + Mobilize to Modernize + Migrate to Java.
- AWS Blu Age Refactor automatically creates modern applications from the legacy monolithic mainframe or iSeries source code. As a result, legacy applications – in COBOL, generated COBOL, PL/1, NATURAL, RPG/400, COBOL/400 – and their respective underlying databases and file-based persistence – DB2, DB2/400, VSAM, IMS, IDMS, etc. are transformed into modern distributed applications – Angular, Java/Spring, PostgreSQL (Aurora, RDS for PostgreSQL managed services or self-managed PostgreSQL or traditional alternatives such as Oracle Database, DB2, etc.

Take advantage of the AWS Blu Age Certified Senior Experts

- Benefit from experts who will guide you through AWS best practice methodology for automated AWS Blu Age Refactoring.
- AWS Mainframe Migration Consulting Partners could possibly subcontract or co-contract or let ProServe prime.

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AWS Blu Age Refactor tooling and infrastructure

Transformation tooling cost (AWS Blu Insights Transformation Center)

Provisioned into the AWS Account owned by the final customer (or by the partner)

- AWS Blu Insights Transformation Center (output is the modernized source code)
  Price model is per usage: one-off cost per LOC + weekly fee on the POC or project duration
  Estimate on demand calculated by an AWS Solution Architect

Infrastructure cost (AWS Cloud)

Provisioned into the AWS Account owned by the final customer (or by the partner)

- AWS Cloud resources and managed services, e.g. CI/CD platform + CT platform (AWS EC2 including the AWS Mainframe Modernization Blu Age Runtime and database)
  Price model is per usage: AWS resources consumption to execute the tests on the modernized application including the AWS Mainframe Modernization Blu Age Runtime cost
  Estimate on demand calculated by an AWS Solution Architect
- Some optional components such as Amazon AppStream 2.0 (see Amazon AppStream 2.0 pricing for details), AWS CodeBuild (see AWS CodeBuild pricing for details), etc.

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Run cost of a Blu Age Refactor POC or Project

Deployment into AWS Cloud

- On M2

  Price model is per usage:

  using the AWS Mainframe Modernization Blu Age Managed Runtime

- On AWS Customer Account

  Price model is per usage:

  using the AWS Mainframe Modernization Blu Age Custom Runtime

Deployment elsewhere (e.g. on premise)

- Price model is per usage:

  Paying the AWS Mainframe Modernization Blu Age Custom Runtime fee to AWS

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