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

PRT237

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J&J improves critical application resiliency with IBM Consulting for AWS

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IBM & AWS
Relationship Momentum

2019

Executive Commitment from both IBM and AWS cementing our focus helping **clients transform in the hybrid cloud environment** today and in the future.

2020

Joint Client Projects
IBM and AWS work together, coordinating to **deliver clients valuable outcomes**

Inorganic Growth
Acquisitions of **Taos and Nordcloud**, cloud-native service providers that bring more value & expertise to customers

2021

New AWS Business Units!

- IBM Consulting created an **AWS business unit** to meet clients on the cloud platform of their choice.
- IBM Software relationship was established with AWS to offer customers flexibility.

Certifications Reached **15K+ AWS certifications**, 14 competencies, 16 Service delivery programs within IBM Consulting and IBM Software.

2022 - beyond

New Offerings
IBM and AWS are actively **partnering to deliver new industry offerings** with IBM Consulting and IBM Software to enable superior customer outcomes. To date, **IBM has launched 29+ Software offerings** on AWS & we're just getting started!

IBM Consulting on AWS

15K+

AWS certifications

16

AWS service validations

14

AWS competencies

Pillars

- SAP – IBM has one of the largest SAP install bases, which complements 5,000 SAP clients running workloads on AWS
- Modernization – IBM delivers multiple large, complex modernizations and regulated workload migrations on AWS from its incumbent clients
- Data & Technology Transformation – IBM helps clients transform their businesses toward the virtual enterprise through human-centered design and transformative AI technology
- RedHat OpenShift Service on AWS (ROSA) – Hybrid cloud with ROSA to accelerate workloads with adoption of AWS-native services
- Security – IBM Security is one of the largest SI and managed security services provider with framework and accelerators compliant with AWS' Well-Architected Framework

• Growth commitment

- Acquisitions – Nordcloud and Taos strengthen IBM cloud-native and managed service capabilities on AWS
- GTM – Investment in GTM and architects strengthens its capability to scale its partner originated opportunity for AWS

AWS Competencies

- DevOps Consulting
- Retail Consulting
- Migration Consulting
- Security Consulting
- SAP Consulting
- Government Consulting
- Security Consulting
- Financial Services Consulting
- Data & Analytics Consulting
- Level 1 MSSP Consulting
- Energy Consulting
- Travel and Hospitality Consulting
- Healthcare Consulting
- Industrial Software Consulting

About Johnson & Johnson

- Healthcare company founded in 1886
- Develops medical devices, pharmaceuticals and consumer packaged goods
- One of the world's most valuable companies
- Sells products in more than 175 countries



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Time to market matters

- Patients are waiting
  - Complex supply chain systems with multiple integrations
  - Complex end to end technical stack
  - Reliability of SC system is key for product delivery

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Impact to J&J – Putting things in perspective

- A “simple” system unavailability can cause multiple millions of dollars in cascading impact
  - A printer failure could cause product delivery issues affecting scheduled surgeries
  - A payroll systems outage can cause legal and compliance issues for companies

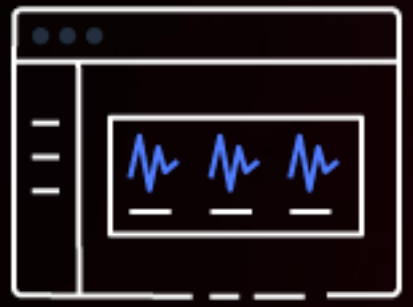


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Challenges – No longer an afterthought…



Observability



Reliability



Reporting

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Challenges – Observability

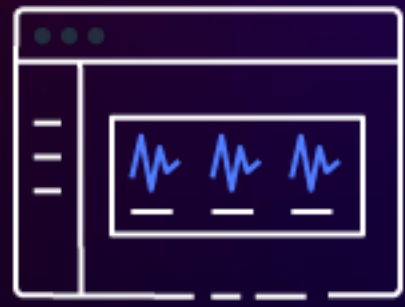
- Enabling visibility is fundamental:
  - Undetected critical events leading to failures, which take longer to fix
  - Product delivery disruption directly affects patients, brand reputation, loss of revenue etc.



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Challenges – Reliability

- Measured in technical silos vs as felt by customer
- High number of changes across technical stacks
- High number of activities requiring human touchpoints, causing human errors
- Lack of observability solutions to proactively detect failures



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Challenges – Reporting

- Too many technical alerts
- Threshold-based alert vs. Intelligent alerting
- Technology-centric vs. business process-centric
- Drill-down capability for deep insights relating business process and technology stack



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Observability on AWS

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Why does observability matter?

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The (hidden) cost of downtime



$42,000 per hour

Average hourly cost downtime per year



87 hours per year

Of downtime*

*Gartner

Interruptions to IT operations

Opportunity loss, cost of not doing business

Penalties of not meeting customer SLAs

Brand alienation

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Monitoring impacts operational and business outcomes



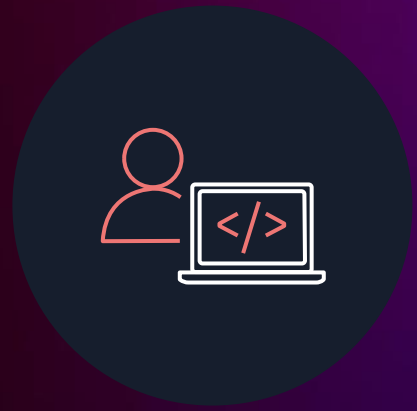
Get visibility



Troubleshoot in real time



Improve customer experience



Build highly-resilient apps

Operational

Business

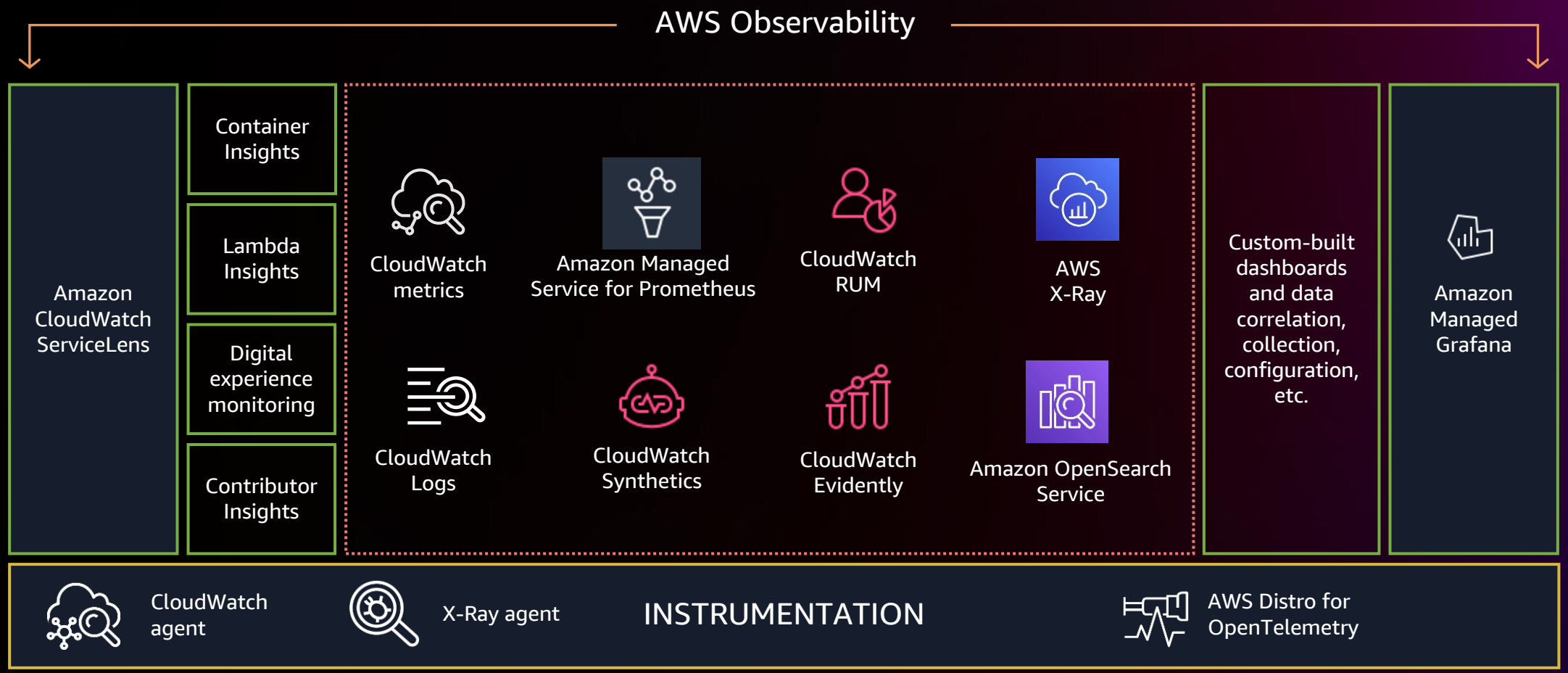
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What is observability?



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Full-stack observability at AWS



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Why AWS observability



Observability on a single platform across applications and infrastructure



Easiest way to collect metrics in AWS and on-premises



Improve operational performance and resource optimization



Get operational visibility and insight



Derive actionable insights from logs

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Customer impact

>6

QUADRILLION

metric observations monitored each month

>3.5

EXABYTES

logs ingested monthly

>32

TRILLION

events ingested monthly in Amazon EventBridge

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Observability use cases



Full stack observability



Tool consolidation



AIOps and DevOps



Digital experience monitoring



Modern application and architecture monitoring



Managed observability services

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IBM Consulting Platform Services on AWS (PSA)

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Introducing IBM Consulting Platform Services on AWS (PSA)



Knowledge from 1000+ enterprise application management projects



IBM Consulting assets (Platform Services assets)



AWS Cloud management and observability tools

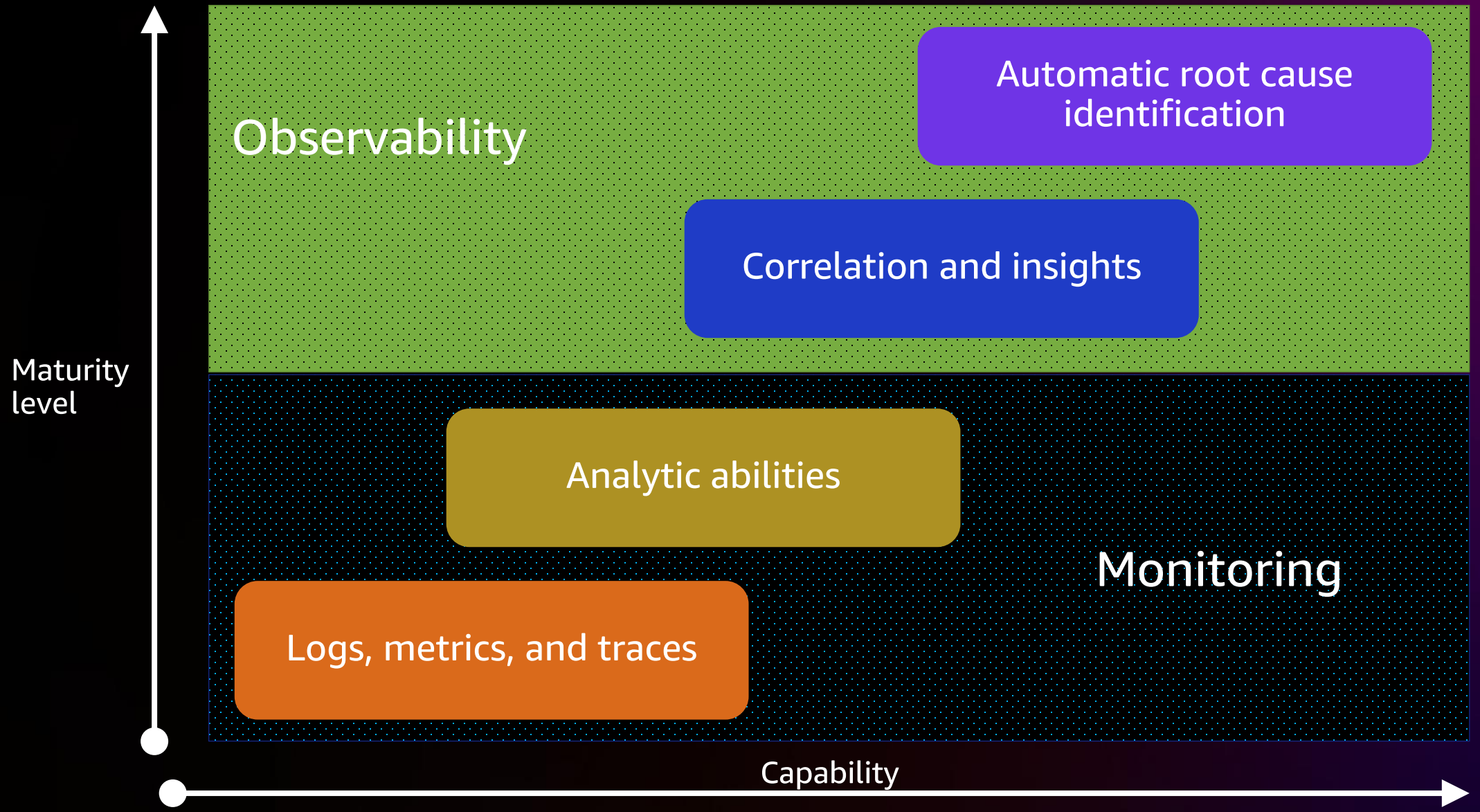


Tailored for mission-critical enterprise applications

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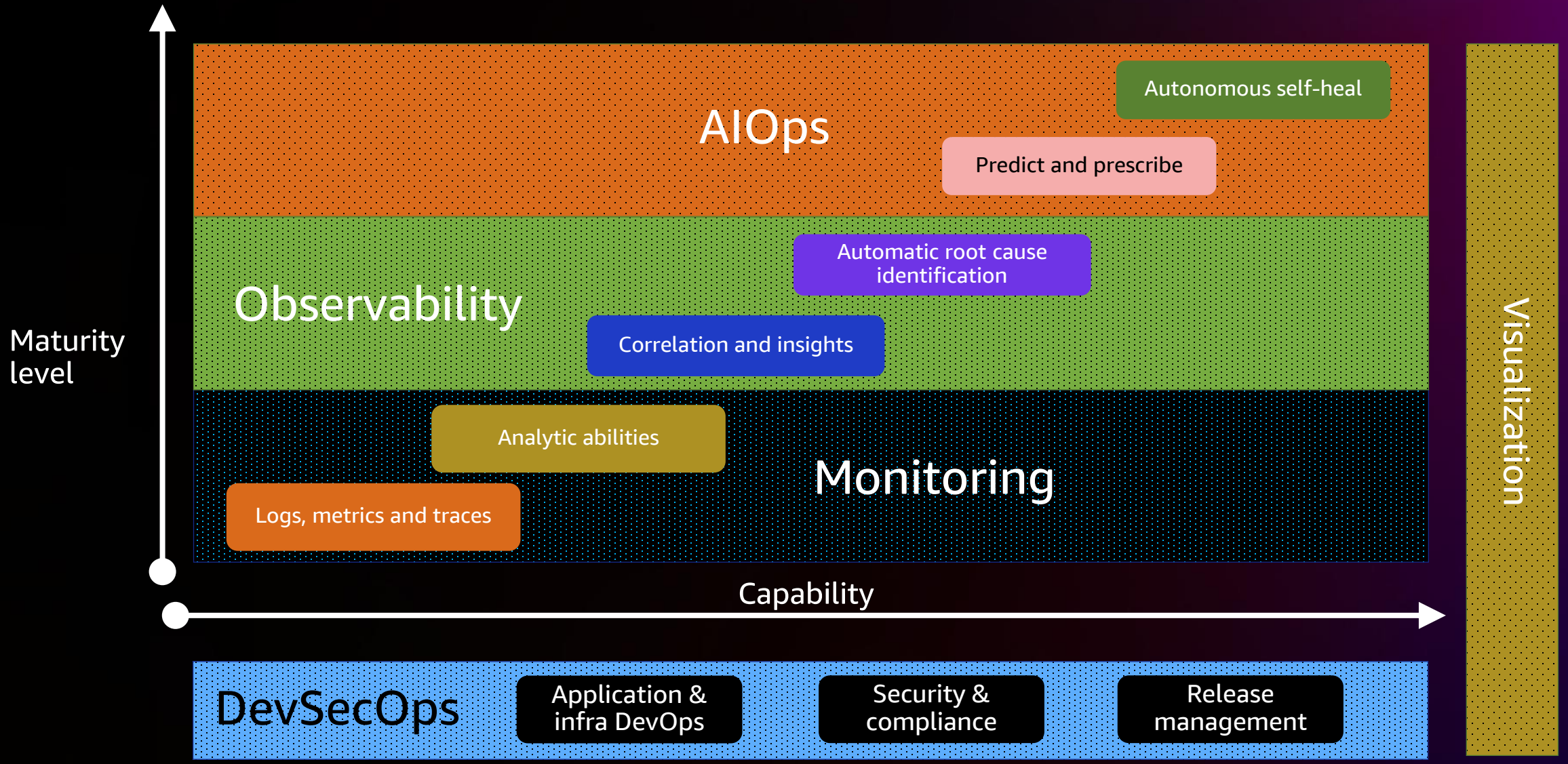
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Maturity level



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PSA – AIOps Stack



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PSA – AIOps Stack



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Use Case – Incident Analysis and Management


Incident Collaboration


RCA Identification


Single Pane View


ChatOps


Amazon Lex


Systems Manager


Lambda


AWS Config

Capabilities

- Incident Prediction (incl. SLA breaches)
- Similar Incident Identification
- Right Resolution Group Prediction
- Incident Lifecycle Management

Benefits

- Faster MTTR
- Improve Operations Efficiency & Productivity

KPIs

- Similar Incident Identification
- Predict Issue Category, Owner Group, Assignee & SLA
- Automation Maturity

Use Case – Observe and Auto Heal


Event Correlation. De-duplication


Detect Anomalies


Predict Outages


ChatOps


CloudWatch


Amazon Lex


EventBridge


AWS Config


Lambda

Benefits

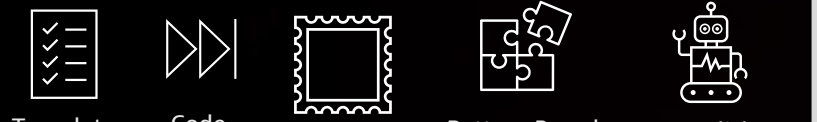
- Reduce Toil
- Prevent Outages
- Improve Reliability

KPIs

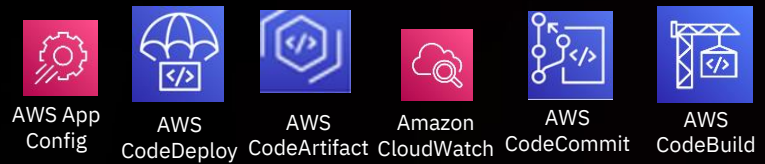
- RCA Insights

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Use Case – Application DevOps



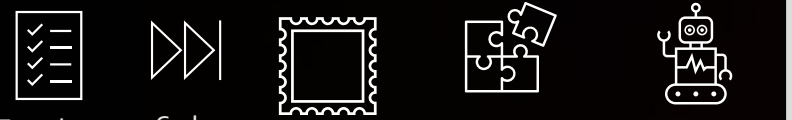
Capabilities
- Application specific template enhancements (Container, Manifest, …)
- Build, Package, Secure & Deploy
- Pattern Based Appl. Deployment



Benefits
- Productivity
- Time to Market
- Reusability

KPIs
- Time to release & value
- Number for defects promoted to higher env

Use Case – Infrastructure DevOps



Capabilities
- Template Definition
- Build, Package, Secure & Deploy
- Pattern Based Infra. Provisioning

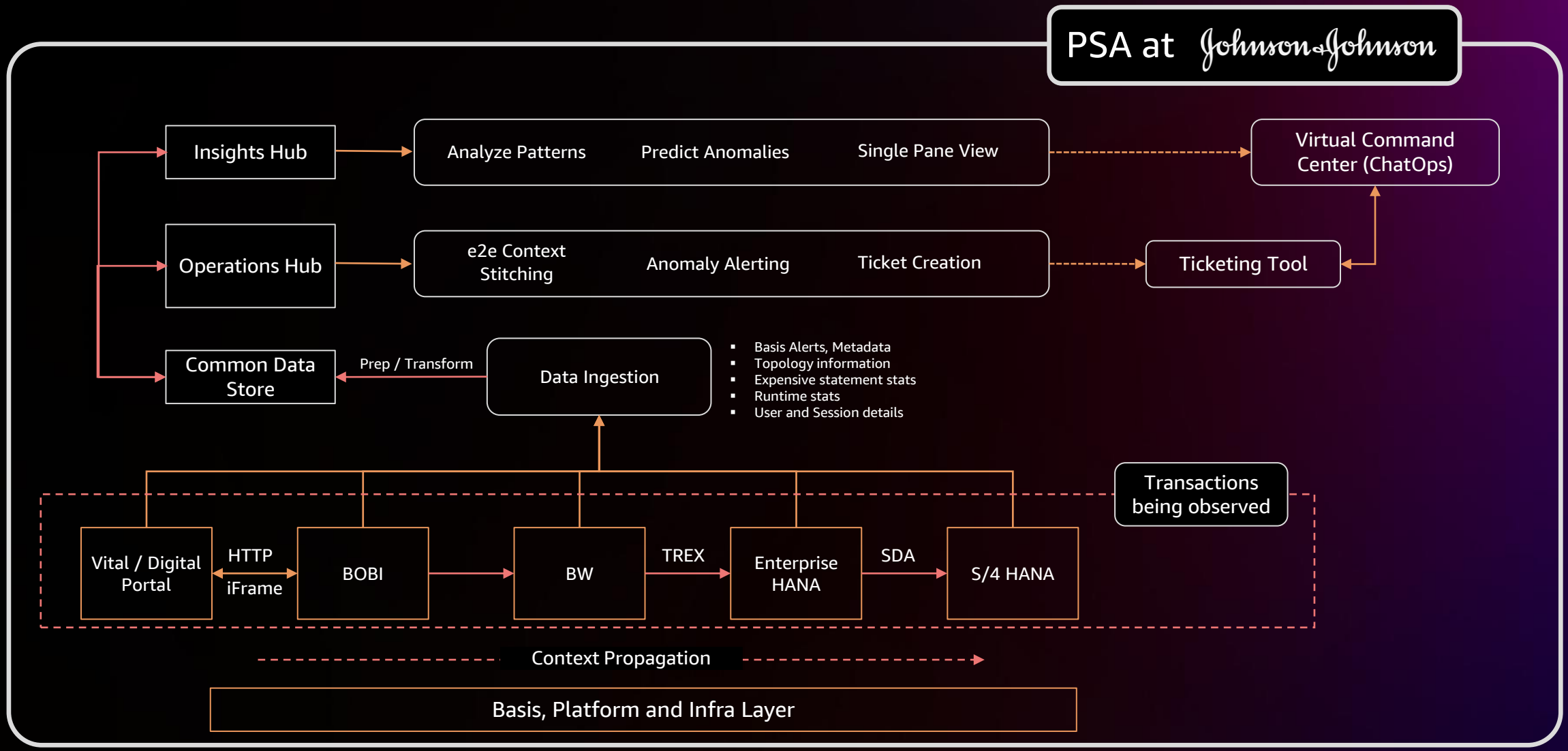


Benefits
- Productivity
- Time to Market
- Reusability

KPIs
- Time taken from request to release

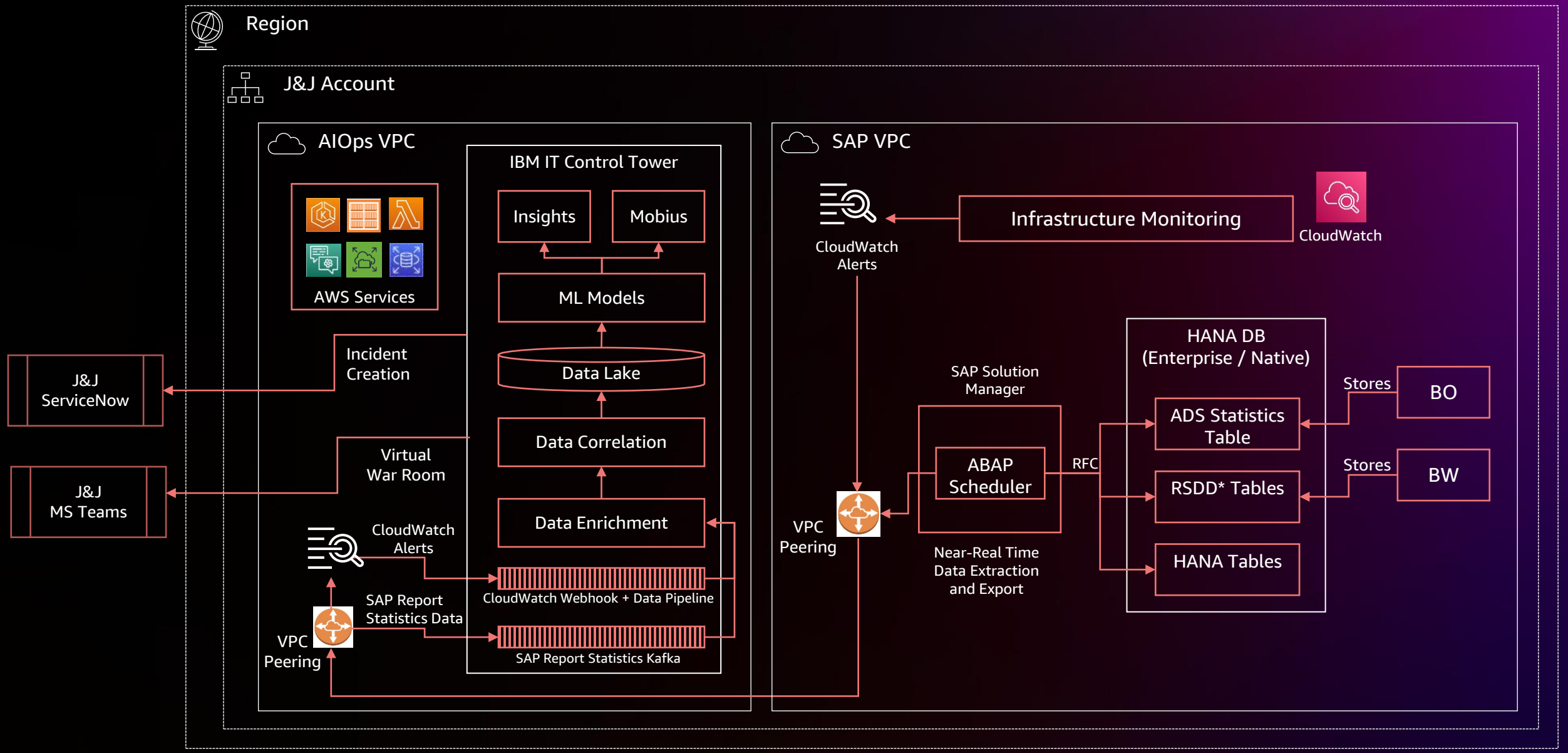
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Our approach to increasing observability of Reporting workflow



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PSA architecture for transformation at scale



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PSA-based solution at J&J – the results of the MVP

***expected results*

Observability



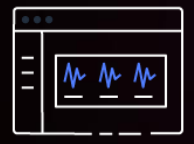
SOLUTION

- Observability to **track end-to-end process** to identify which users are triggering the expensive SQL statements in CFIN system
- Observability data to be used for **Anomaly Detection & Root Cause Analysis** so that any bottleneck created at the infrastructure stack can be identified and automatically remediated using AWS Systems Manager

RESULTS**

80% faster identification of anomalies to help detect & remediate critical events faster and hence remove any disruption to product delivery

Reliability



SOLUTION

- Monitoring solution to **identify the report runtime** and generate a notification whenever the report runtime **breaches the defined runtime SLA**
- Root Cause Analysis & Observability instrumentation to **proactively predict SLAs** and take relevant remediation action that will help reduce the bottlenecks

RESULTS**

40% reduction in high severity incidents across business-critical applications caused due to performance issues within CFIN / SigniFi application areas

Reporting



SOLUTION

- **Capability to drill down** in the monitoring system to identify where the report execution is taking more time (BW query/HANA model/SDA data read etc.)
- **Single-pane view** of the end-to-end solution stack with **AI-enabled dashboards** providing insights into the IT Value Stream co-related with CFIN's business processes

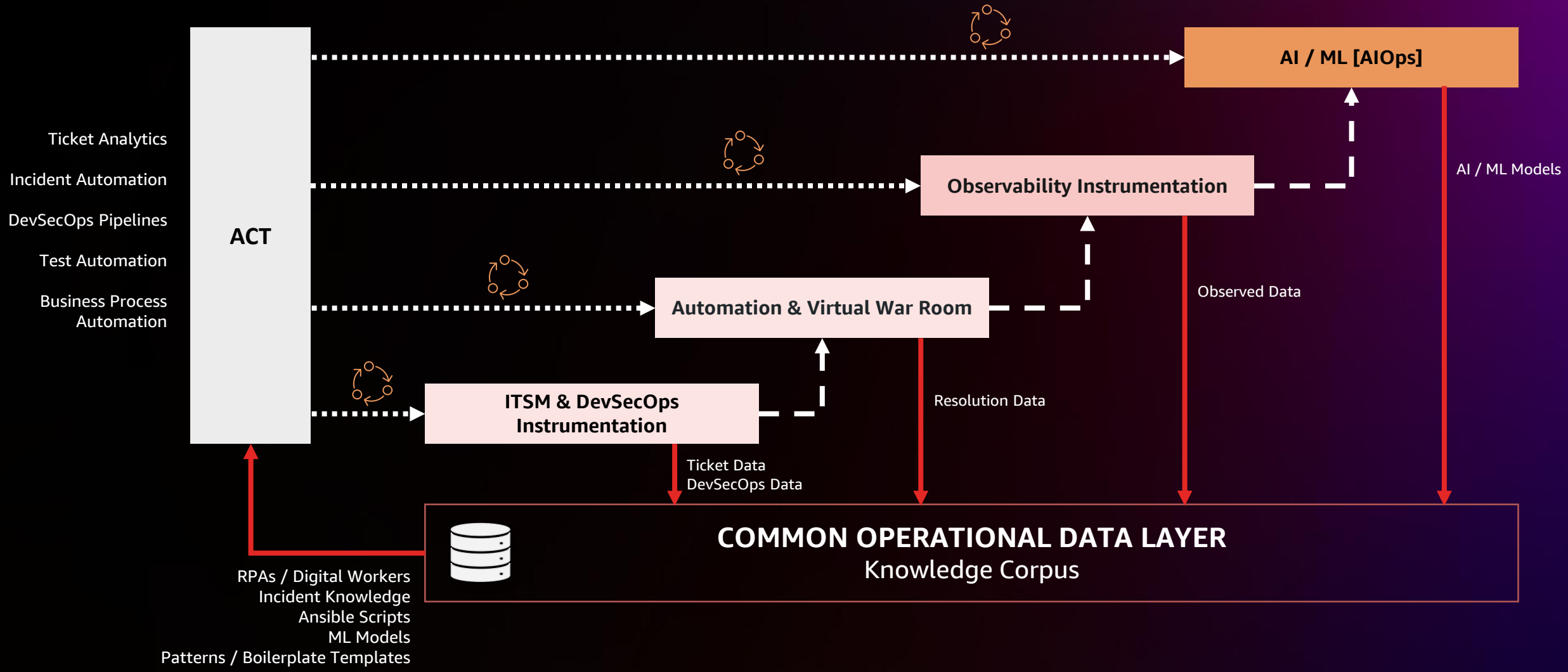
RESULTS**

60% reduction in MTTI & **25**% reduction in MTTR enabled by the insightful reports generated by IBM IT Control Tower

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PSA approach for J&J's transformation at scale

REUSE-REDUCE-REPEAT



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Q&A

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Thank you!

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