

Connected by Purpose, Driven by Innovation

Strengthening our partnership
to create a smarter,
sustainable energy future

Network of the Future





Agenda

HCLTech Network Overview	1
Agentic AI Operations	2
Automation Demos	3

Enterprise Networks | How HCLTech is your ideal Transformation partner ?

HCLTech offers 360-degree offerings to meet the requirements; Our vast experience with global clients across verticals makes us the go to partner for next gen network transformations

Capability Overview

\$1.2 Bn MNS Revenue	\$12 Mn Investments into Innovation labs
30+ Years of Legacy	300+ Customers
16 K + Network Resources	600 + Automation Use Cases



Marquee Clients



Ecosystems For Breakthrough Innovation

As an ecosystem orchestrator, we provide our clients curated, best-in-class components from a network of technology partners and innovators—platform, product, cloud and SaaS leaders.



Strategic Partner Ecosystems

Strategic 360°



Growth



Next Generation



- Cisco Powered Service (CPS) for **Catalyst SD-WAN, Meraki Access, and Full Stack Observability (FSO)**
- Joint Solution – **Managed SD-WAN Offering, Cisco Ultra Reliable Wireless Backhaul (CURWB), PI to DNAC (Pervasive Wireless)**
- Achieved the **Cisco Hybrid Cloud Networking Solution Specialization** status in the US



- Launch **Private 5G Solution** with HPE, (Athonet)
- **HPE EOSL Network Equip Refresh** signed.
- HPE to divest assets from CTG group to HCLTech.
- Created a joint SD-WAN offering- **Managed SD-WAN and Aruba EdgeConnect.**



- Achieved the **VMware VeloCloud Master Services Competency SD-WAN Partner** status for the Americas.



- Achieved the **AWS Networking Competency Status**
- HCLTech is recognized as **L1 MSSP Competency Partner** for AWS.



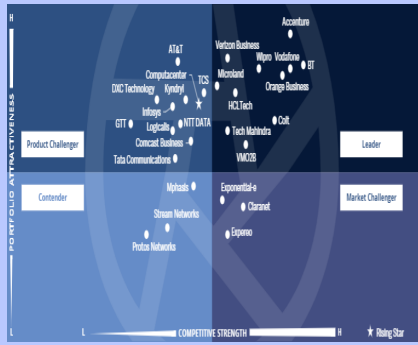
- Won Fortinet's GSI **partner of the year 2023** award.

Recognized By Leading Advisors And Analysts



LEADER

Network-Software Defined
Solution and Services 2024
(UK, US, APAC)



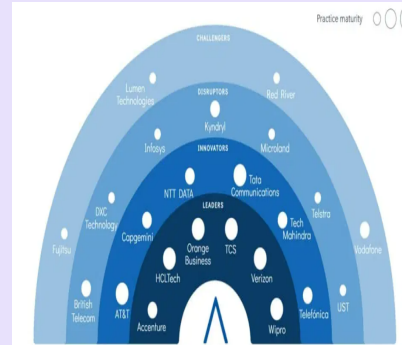
LEADER

Managed Network
Services, 2024



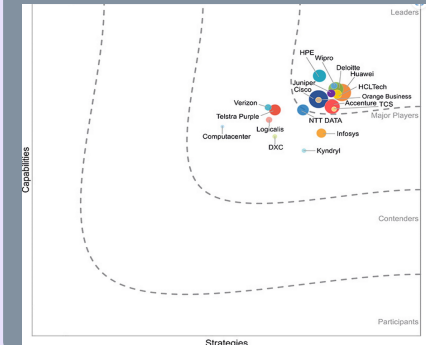
LEADER

Advanced Network
Services, 2024



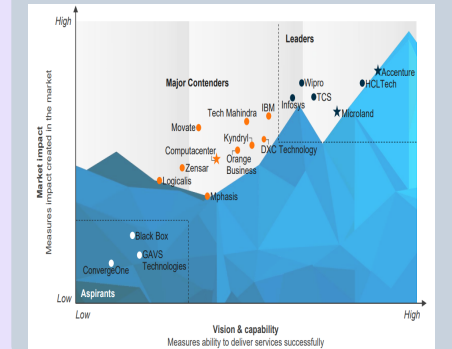
LEADER

Network Consulting
Marketscape 2024



LEADER

Network Transformation &
MNS – SIs 2023



Innovating for the future: HCLTech's Proprietary tools and frameworks



Network & security convergence
SDWAN+SSE

Managed SD-WAN Services

Integrated SASE



Cloud and Data Center
Networking

Managed Multi-Cloud Network

Data Center Networking



Ensure seamless connectivity
Private 5G/ Wi-Fi 6

Managed LAN/WLAN Services

PI to DNAC/ Pervasive Wireless



The power of Network edge
Edge Networking

Multi Access Edge Computing

Network Consulting and Assessment Services

Network Automation (DRYiCE iAutomate NetBot and GenAI)

Agile Methodologies (NetDevOps, Network Reliability Engineering)

NaaS (Network as a Service)

HCLTech Network Services Package

Tenets of HCLTech Network Services



Assessment



Transformation & Transition



Manage

HCLTech Network Services Layout

Extreme Automation & Orchestration

Service Management & Service Exchange



Consult

Assessment

(Re)Design

SDN & UC&C
Readiness

Network & UC&C
Architecture

Business Process
Transformation

Business Process
Redesign

Security, NaaS,
UCaaS, CCaaS

Project planning &
Road mapping



Transform

Re-Architect &
Migrate

Integrate &
Configure

Use case based
development

Legacy/hybrid
Integration

Infra migration &
modernization

Multi-cloud network
migration

Network
Engineering

Network configuration
& Integration



Run

Automation

Management &
Service Excellence

Extreme
Automation

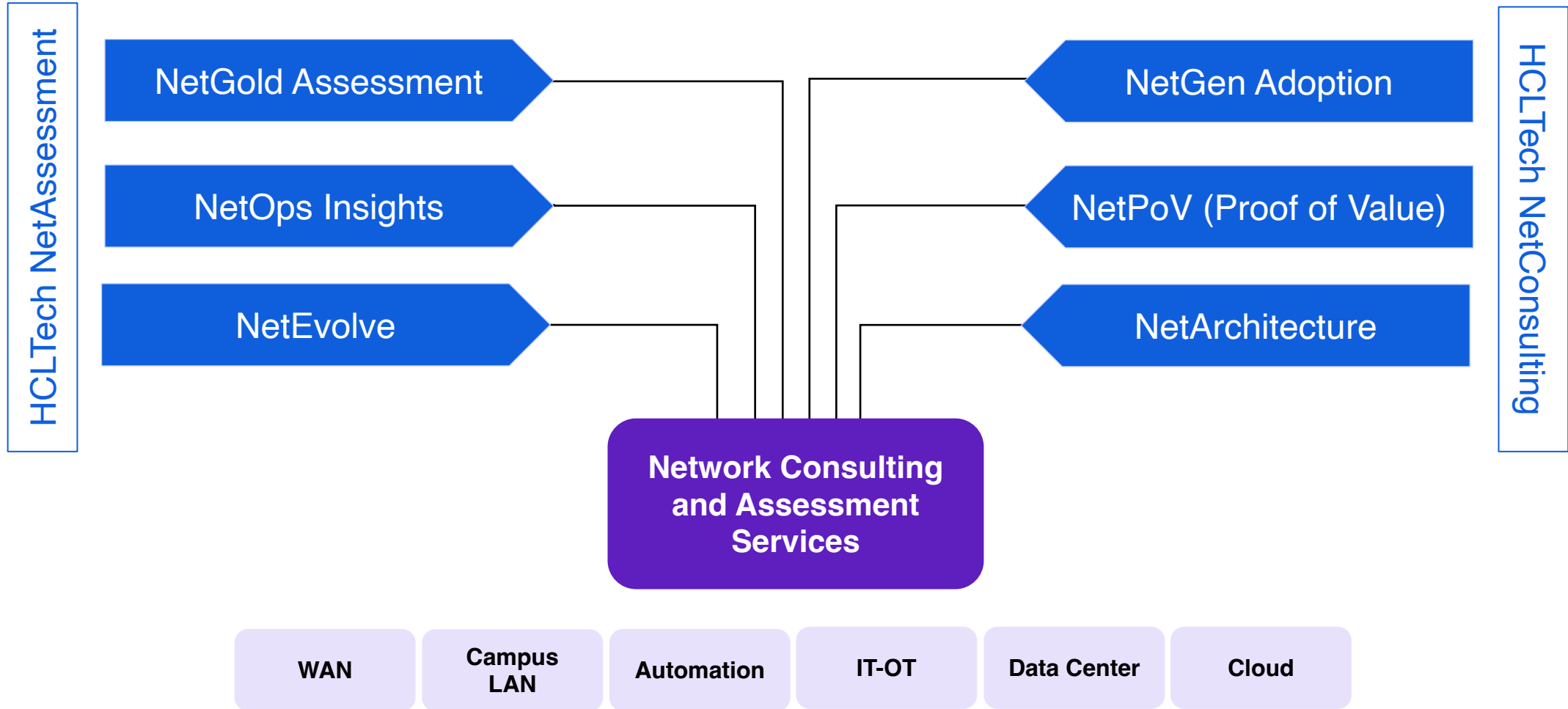
Continuous
Feedback
& Cognitive
Improvement

AI Driven
NetOps 2.0

Automation
Governance

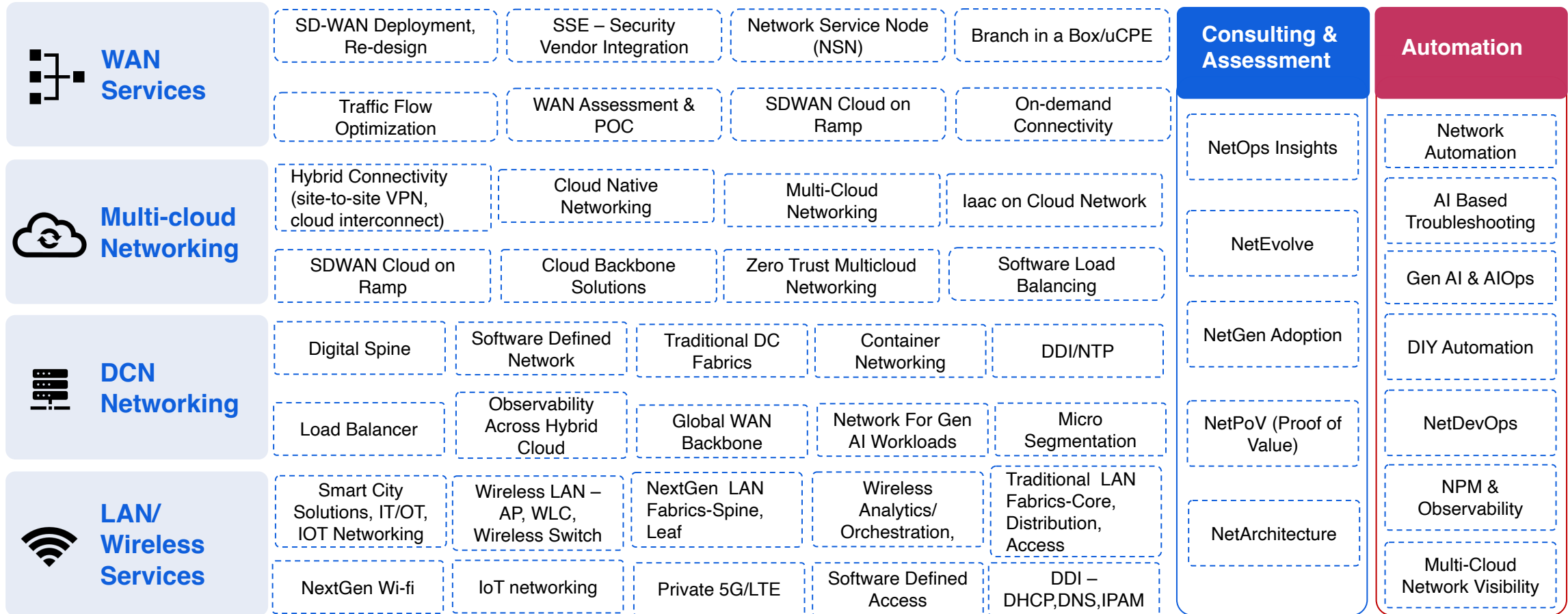
SD Controller
Orchestration

HCLTech Network Consulting & Assessment Portfolio



Our Offering portfolio meets end to end requirements

HCLTech's comprehensive portfolio meets the requirements of modern-day enterprises looking for next gen network infrastructure transformations



Delivering a Consulting driven Approach

HCLTech offers a stepwise consulting driven approach to end to end transformation

01 | Assessment & Discovery

- Analysis & Discovery | Early identification of constraints & dependencies | Approach & High-Level Architecture
- Network Design Consulting | Telecom Solution & Spectrum Consulting.

02 | Design & Plan

- Architecture Design Finalization | Solution Architecture documentation | Use case development | System Integration
- Network Design & Planning | Site Surveys.

03 | Procurement

- Includes Equipment Procurement | Licenses & software | Procurement of support services
- Co-ordination with Partner OEM's | Bill of Materials

04 | Build | Migration | Deployment

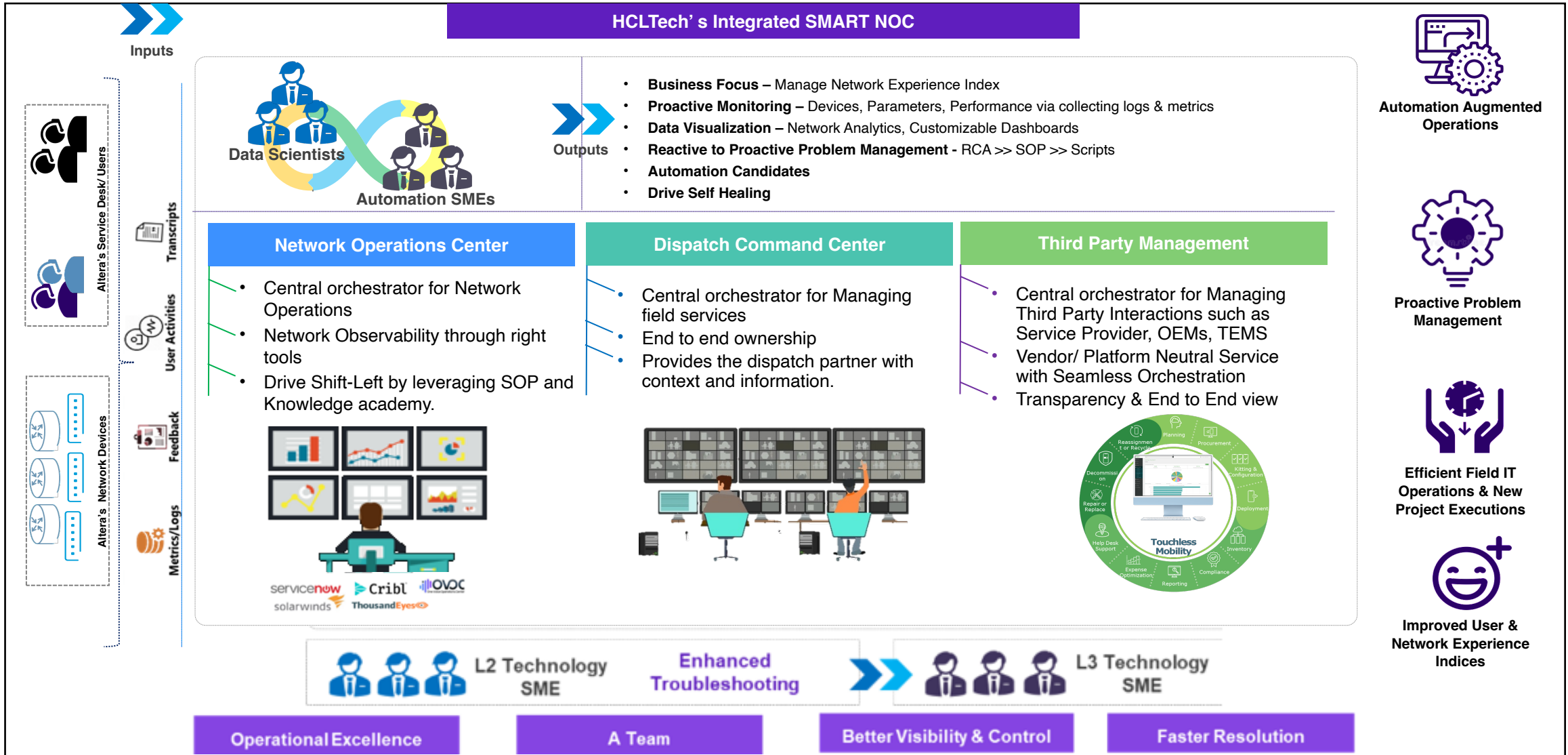
- Core Infra build | Implementation & Migration | Cabling | Performance testing & user acceptance test
- Equipment Installation | Racking | Network Optimization | Solution Integration

05 | Service Operations | Managed Services

- Administration | monitoring & troubleshooting | Capacity Management, performance reporting | Managed Services – L1/L2 & L3 Support | Life Cycle Management | Field services operations



Integrated NOC



HCL Network-as-a-Service Construct

Key Solution Tenets

1

A globally available solution model consisting of:

- Hardware Procurement
- Asset Management.
- Capacity management.
- Deployment services
- Decommissioning and disposal of old devices

2

A predictable fixed monthly payment for entire investment.

3

End to End management of entire network which includes managed services responsible for taking care of break fix issues.

Network as a service is a networking model combining stack of services which are bundled together to ensure quality of service with minimal governance of your network allowing organizations to shift their networking spends into an Opex model .

Single, predictable pricing per month



Hardware Procurement



Deployment Services



Managed Services



Hyper Care Support



Asset Decommissioning



Asset Disposal

Certified OEMs



American Telecommunications Company- Scale, Scope and Complexity



Infrastructure Scale

657000

Equipment Units



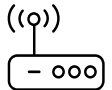
156150

LAN Switches



267900

WLAN Controllers



139000

Routers



27898 Firewalls & VPN

2200 Proxy



4900

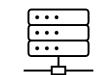
Network Optimization

4300

Transport

3550

NAC



17000

Servers



6000 VOIP

6000 SBC

8000 UCC

Scope (Managed & Un-managed Services)

- **Service Assurance**
 - Global Customer Support
 - Managed Network and Security Services NOC (L2 & L3)
 - Operational Engineering
 - Unmanaged Repair
- **Service Delivery**
 - Quote/Order
 - Provisioning and Activation
 - Engineering
 - Logical Activation for Managed Services
 - Project Management
- **Service Management and Support**
 - Service Support

Retained Functions by Customer

Retained Functions:

- Sales and Pre-sales
- Product development and certifications
- Contract Management
- Tools, Licenses
- Assets
- Field Services

A Leading Energy & Chemical Company | APMEA | Energy & Utilities

HCLTech delivered SD-WAN Transformation, Wi-Fi 6 and central management & orchestration capabilities

Brief Overview

The client, a leading energy and chemical company with presence across South Africa, Europe, Asia and North America was looking at network transformation. The company is a large organization with around 30000 employees located in 22 countries and markets products in about 120 countries globally. The existing infrastructure offered limited visibility and control and offered manual service provisioning. Hence, they needed a partner who could help them transform



Infrastructure Scale

- 90+ remote Sites
- 6 Datacenters
- 6 Secure Internet Gateways



Key Solution Components

FORTINET



solarwinds



Challenges Faced

- The existing infrastructure offered limited visibility and control and had absence of load sharing between active –passive MPLS links
- Multiple Bandwidth upgrade projects that led to high costs and delivery timelines
- Customer was running EOL & EOS network devices that had high risk
- Wireless infrastructure was outdated and legacy based

Solution Delivered

- HCLTech offered HCLTech Managed SD-WAN Framework with custom Fortinet SD-WAN Solution
- Offered Full visibility, links can be used on active mode, smooth load balancing and sharing, ISP dependency was minimized
- Implemented Wi-Fi-6 along with Cisco DNAC with 2.5 Gig speed for all sites
- Infused LAN Automation capabilities with Solarwinds and Cisco DNAC
- Deployed Zscaler in customer environment via Zaap
- Single solution for WAN, Internet & SIG

Impact Delivered

- Capacity of WAN Links increased by **100%**
- LAN refresh enabled Capex savings by nearly **\$5 Mn.**
- Deployed SD-WAN solution integrated with SASE and interconnect with Non- SD-WAN Fabric

A Global Mining Organization | Europe | Energy & Utilities

Delivered LAN services, full stack observability & AIOps & Automation capability; Ensured 70% reduction in P1& P2 Incidents MTTR

Brief Overview

Our client is a leading global mining company headquartered in United Kingdom. The organization is in the business of production and extraction of copper, platinum, Iron ore, diamonds, crop nutrients and other minerals and it generates revenue in excess of \$30 Bn. The company has over 60000 employees with office presence across key regions across the globe. The company operates 159+ sites and is the largest platinum supplier globally.



Infrastructure Scale

- 32000+ EUC devices
- 7000+ Servers
- 11000+ Network Devices
- 3800+ Wireless Access points
- PaaS Instances – 15K

Challenges Faced

- Client operated a large wireless infrastructure that included 3800+ wireless access points, 3500+ switches/routers & ~50 wireless controllers. Lacked ticket automation, troubleshooting & observability
- Requirement to manage Azure Landscape, DR landing zones, multi cloud support for AWS & Azure & datacenter to cloud migration for certain applications
- The client lacked monitoring & ticket automation for network devices. Needed automation for switch down incident, device discovery, live network inventory, network config. Push etc.

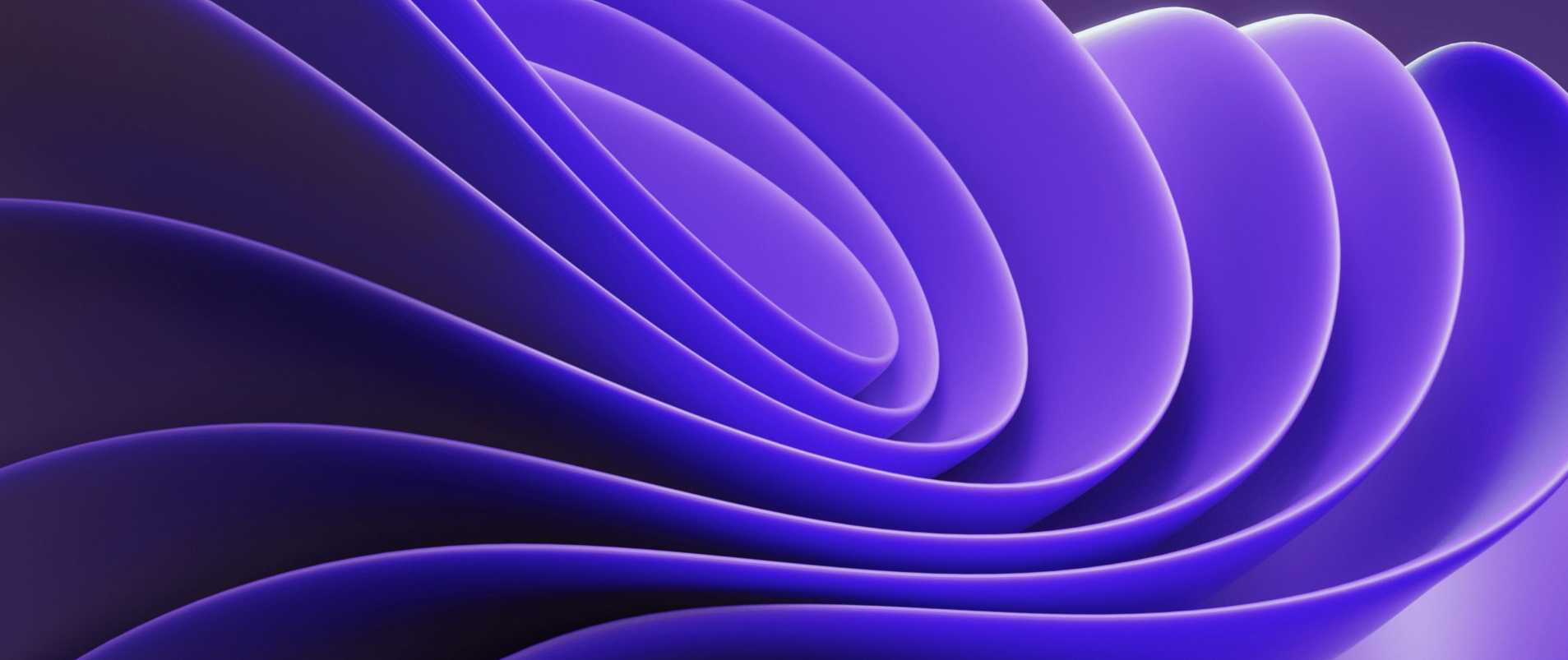
Solution Delivered

HCLTech delivered a comprehensive transformation which included:

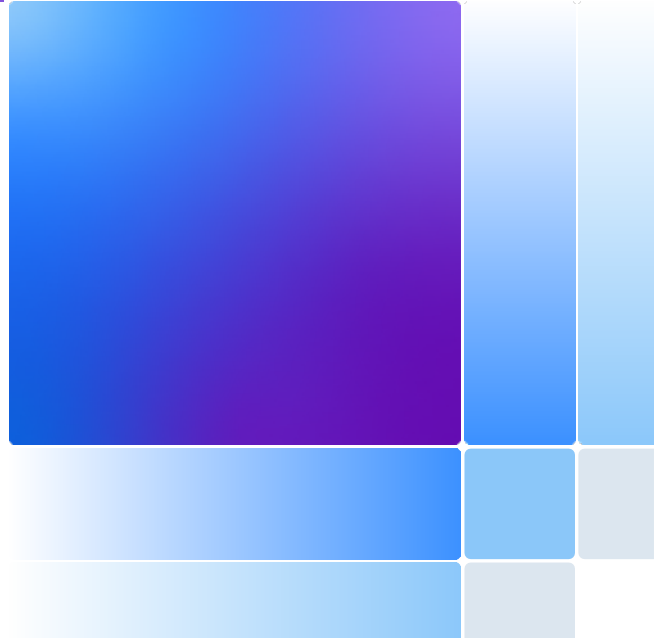
- AIOps and automation enabled full stack observability layer including complete architectural transformation of Collection, inventory, monitoring, event aggregation, analytics & remediation layer. Used ServiceNow, IAutomate, MYXalytics, Moogsoft & other tools
- HCLTech MNS for 159 sites with network LAN & wireless infra management, Incident & change management, problem management, design and implementation support, OT device monitoring and management, DC LAN, Branch LAN & IPAM address management.

Impact Delivered

- **70%** reduction in P1 & P2 incident MTTR
- **78%** automation of monitoring ticket resolution
- **200+** Run books automated leading to 5 minutes average time to resolve tickets
- **70%** Incident auto closure



Agentic AI Operations



HCLTech Autonomics Practice – AIOps & Observability

	384 Customers	105 Fortune 500/ Global 1000	33 IPs, Products & Frameworks	1152 International Deployments	40+ Innovation Labs	27 Yrs Experience
KEY IPs, PRODUCTS & FRAMEWORKS						
STRATEGIC KEY PARTNERS						

Services

- Assessment of Tools – Tools Portfolio Optimization & Rationalization
 - Architecture, Designing & Consulting
- Transition & Transformation
 - Monitoring & Event Management
 - Hybrid Cloud Lifecycle Management
 - Runbook Automation
 - Workload Automation
 - Automated Patching & Configuration Management
 - Reporting & Dashboard

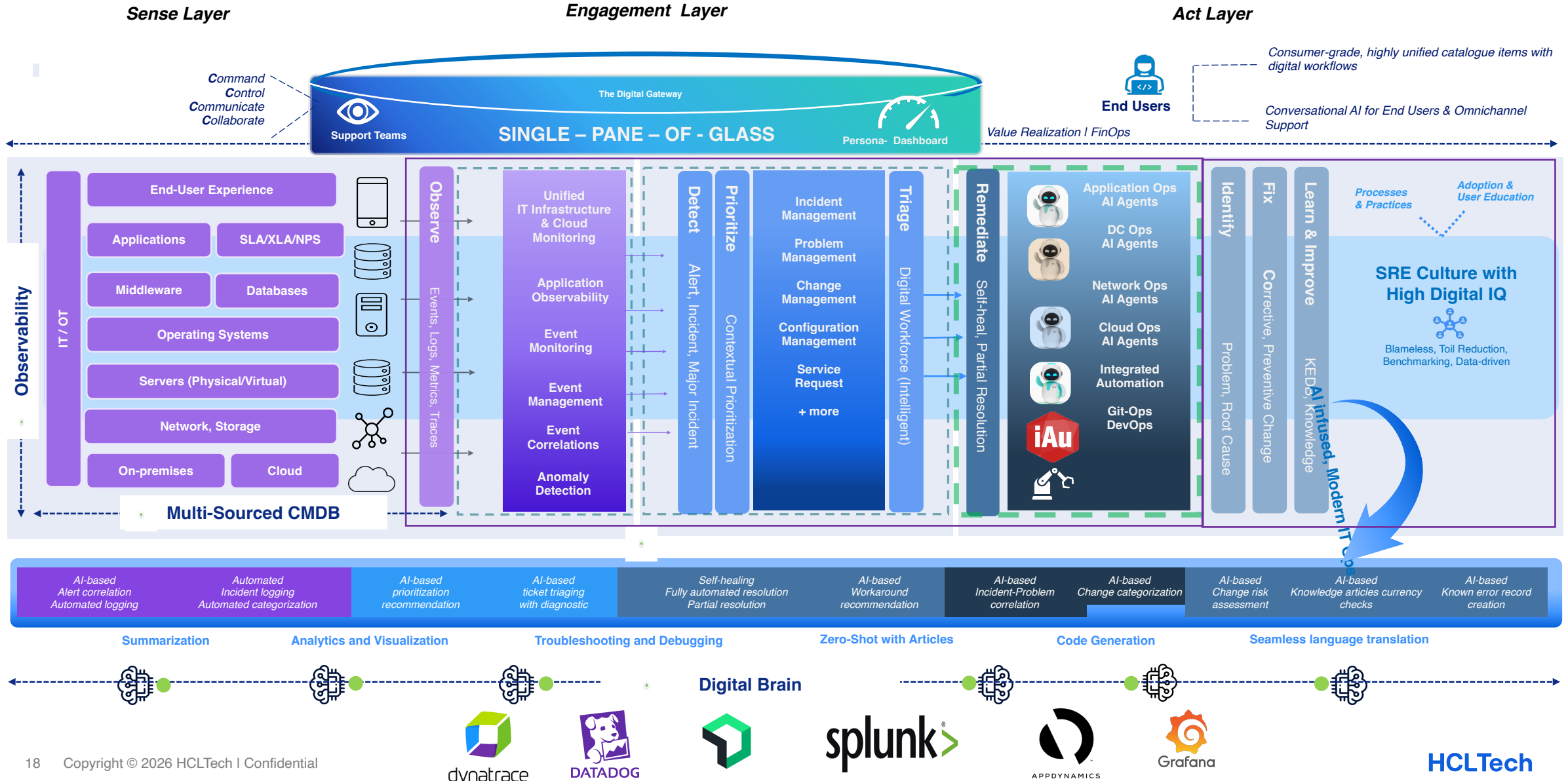
Key achievements

- Greater than 35% FTE reduction within first 2 years
- 70-80% of Service Requests automated
- 50-60% P1 & P2 incidents reduction
- 65% Self-heal & predictive Incident resolution through Automation
- 40% reduction in Outages of Critical Apps via Full Stack Observability and Business Aligned SLI/SLO
- Reduction in Business Process SLA Breaches
- DevOps:
 - Increased deployment rate for new software releases
 - Establishment of standard 'error-free' work environments
- Infra & Service Provisioning in minutes

Analyst accolades

- ISG - Leader, Future of Work (Workplace) Services - Employee Experience (EX) transformation services - Australia, Germany, UK, US 2023
- ISG Star of Excellence™ - Overall 2023 Winner | Universal ITO 2023 winner | Mainframes 2023 winner
- 2023 Gartner® Magic Quadrant™ leader for Public Cloud IT Transformation Services
- 2024 Gartner® Magic Quadrant™ for Outsourced Digital Workplace Services
- A Leader in IDC MarketScape: Asia/Pacific Cloud Professional Services 2023–2024 Vendor Assessment

IntelliOps framework for modern IT management



Day in Life of Monitoring Operations Center

Eye-Ball Monitoring

Objective:

- Monitor and ensure infra & apps are up and running with no errors or defects

Participants:

- MOC Lead, MOC Engineer, Delivery Operation Manager

Tasks:

- Monitor all the alerts from respective tools
- Create & Validate incidents in ITSM
- SOP based triaging, escalations & reduction in MTTR

E2E Service Management

Objective:

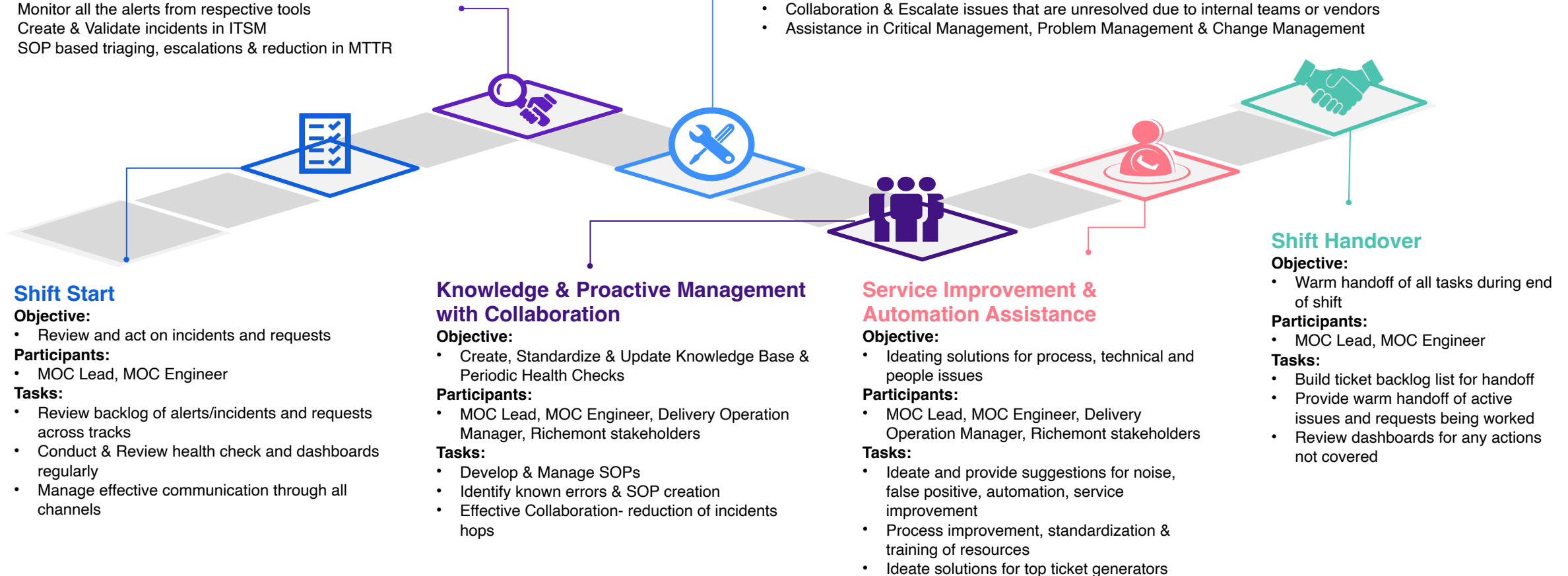
- E2E ownership of all event-based Incidents & Requests (Resolution, Triaging, etc)

Participants:

- MOC Lead, MOC Engineer, Delivery Operations Manager

Tasks:

- Acknowledge & Resolve all issues and requested within defined SLA
- Collaboration & Escalate issues that are unresolved due to internal teams or vendors
- Assistance in Critical Management, Problem Management & Change Management



Shift Start

Objective:

- Review and act on incidents and requests

Participants:

- MOC Lead, MOC Engineer

Tasks:

- Review backlog of alerts/incidents and requests across tracks
- Conduct & Review health check and dashboards regularly
- Manage effective communication through all channels

Knowledge & Proactive Management with Collaboration

Objective:

- Create, Standardize & Update Knowledge Base & Periodic Health Checks

Participants:

- MOC Lead, MOC Engineer, Delivery Operation Manager, Richemont stakeholders

Tasks:

- Develop & Manage SOPs
- Identify known errors & SOP creation
- Effective Collaboration- reduction of incidents hops

Service Improvement & Automation Assistance

Objective:

- Ideating solutions for process, technical and people issues

Participants:

- MOC Lead, MOC Engineer, Delivery Operation Manager, Richemont stakeholders

Tasks:

- Ideate and provide suggestions for noise, false positive, automation, service improvement
- Process improvement, standardization & training of resources
- Ideate solutions for top ticket generators

Shift Handover

Objective:

- Warm handoff of all tasks during end of shift

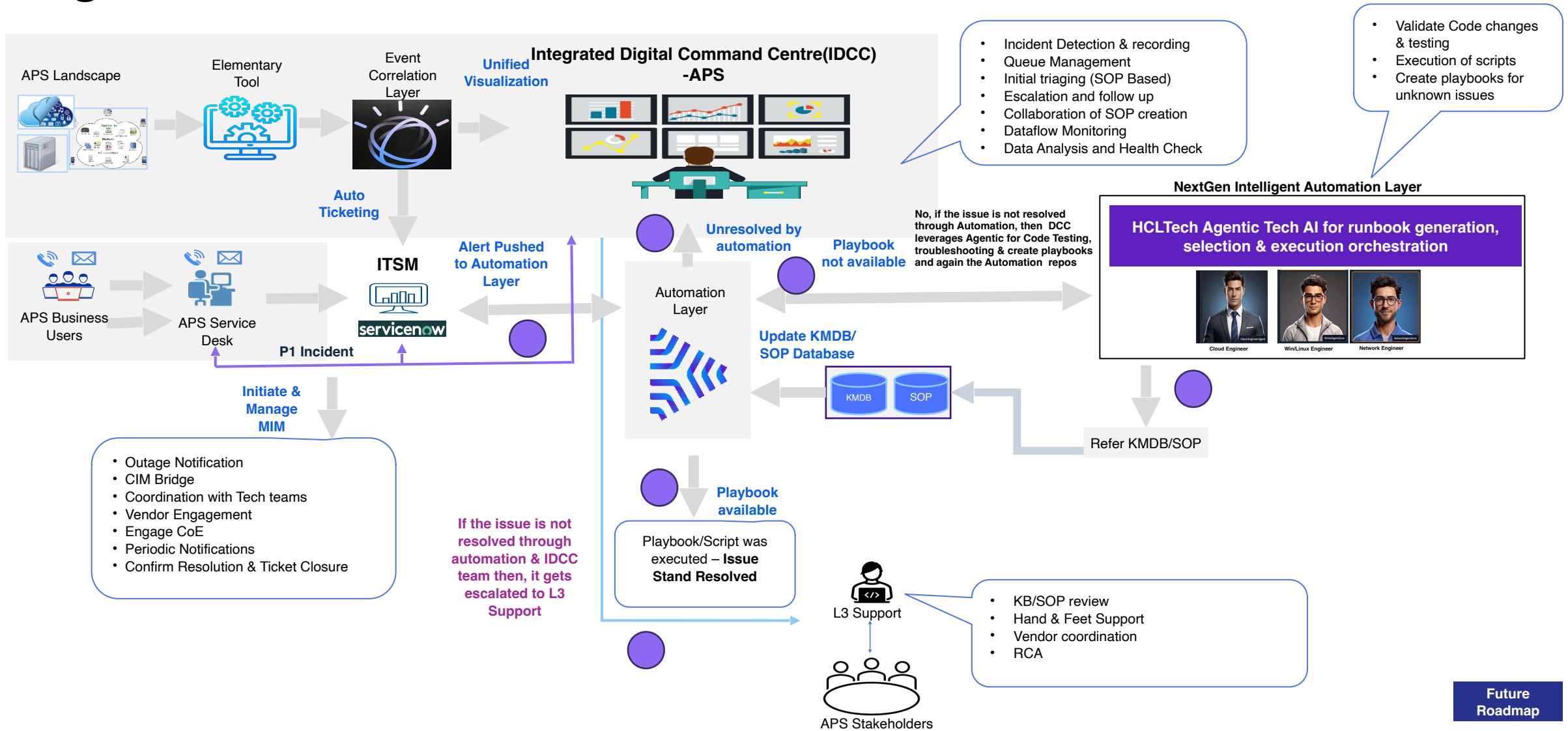
Participants:

- MOC Lead, MOC Engineer

Tasks:

- Build ticket backlog list for handoff
- Provide warm handoff of active issues and requests being worked
- Review dashboards for any actions not covered

Day in a Life of Intelligent and Intuitive Command Centre – Target State



ITOPS Workflow

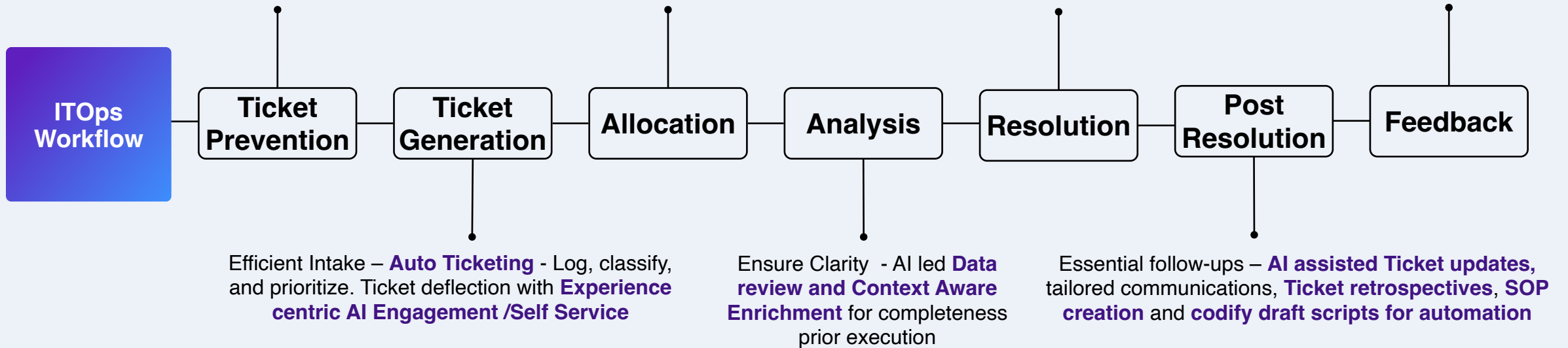
Modern AIOps, Gen AI and Agentic AI key use cases

Preemptively eliminate future incidents through **Robust Observability(FSO)** and **AI Reliability Engineering**

Intelligent distribution - Swiftly **Triage** and **Route** tickets to the appropriate resolver groups/assignees, **Manage MIM scenarios**

Agentic workflow orchestration enabling **Automated/Assisted Recommendation Assisted Diagnostics** for conclusive fix, **Assisted SDLC** – Codegen, Testcasegen..

Perpetual optimization – **AI Insights** for **Continuous improvement loop**

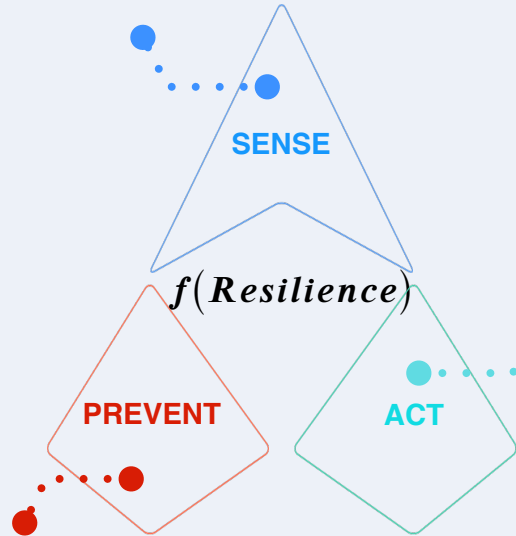


Governance, Service Management
Overarching layer, powered by **AI-driven dashboards and analytics**, provides real-time insights into **service performance, engagement health, and adherence to contractual commitments**. Solutions to drive strategic initiatives like **training, cross-skilling**, and **continuous quality assurance**

What is Observability for HCLTech?

See everything, instantly

Unified visibility across applications, infrastructure, networks, and user experience eliminates blind spots



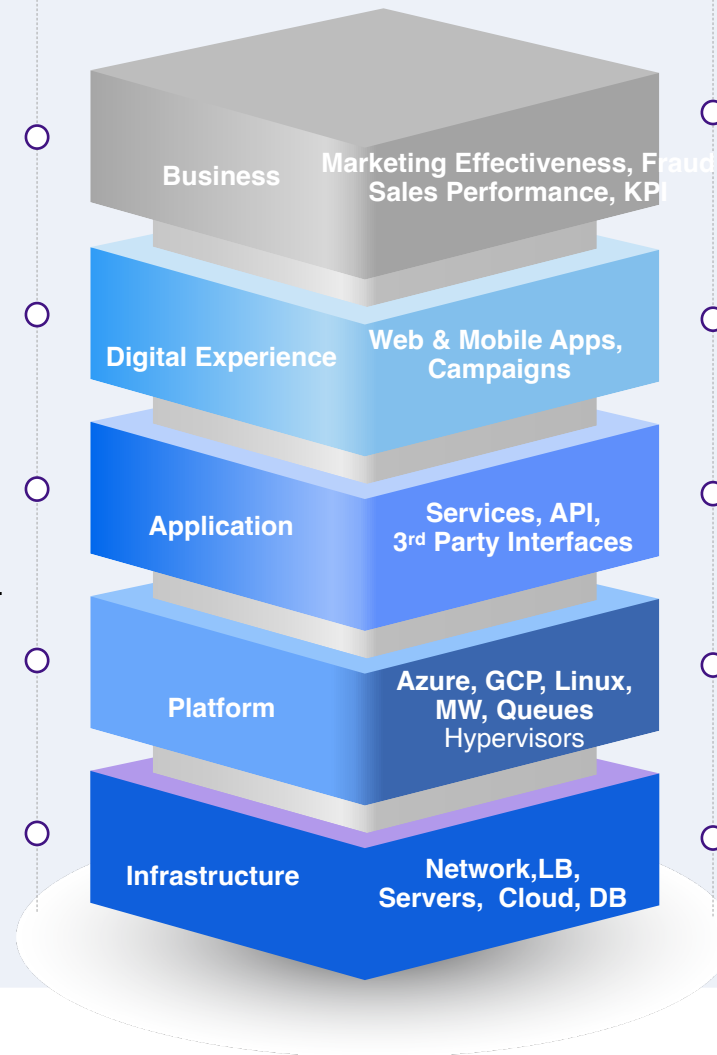
Predict & Prevent future occurrences

Continuous resiliency with permanent fix improving business outcomes and stakeholder's experiences

Resolve Faster

AI assisted diagnosis and resolution for quick disaster recovery and improved MTTR.

Platform Architecture



Key Monitoring Elements

- | | |
|--|---|
| <ul style="list-style-type: none"> • Marketing Analytics • Sales Performance • Ratings, reviews and Sentiment Analysis | <ul style="list-style-type: none"> • Fraud Detection • Cart abandonment rates • Checkout completion • Conversion analysis |
| <ul style="list-style-type: none"> • Page load times • Synthetic monitoring • Real user sessions • Conversion Funnel | <ul style="list-style-type: none"> • Consumer interactions • Channel Analysis • Web vitals, SEO, Accessibility scoring • App crash and UX |
| <ul style="list-style-type: none"> • Application performance • Business Transactions • 3rd Party performance | <ul style="list-style-type: none"> • SLI/SLO/SLA monitoring • Log monitoring & analysis • Errors and availability monitoring |
| <ul style="list-style-type: none"> • Capacity monitoring • Performance Monitoring • Availability Monitoring | <ul style="list-style-type: none"> • Throughput & Error analysis • Security Monitoring • Virtual machine health, resource allocation |
| <ul style="list-style-type: none"> • Traffic distribution, failover readiness • CPU, memory • Availability Monitoring • Capacity monitoring / FinOps | <ul style="list-style-type: none"> • Query performance, connection pools, storage capacity • Bandwidth, latency, connectivity • Security Monitoring • Bottleneck identification |

Structured way to Enhance Full Stack Observability for American Multinational Consumer Goods Corporation

1. CMDB

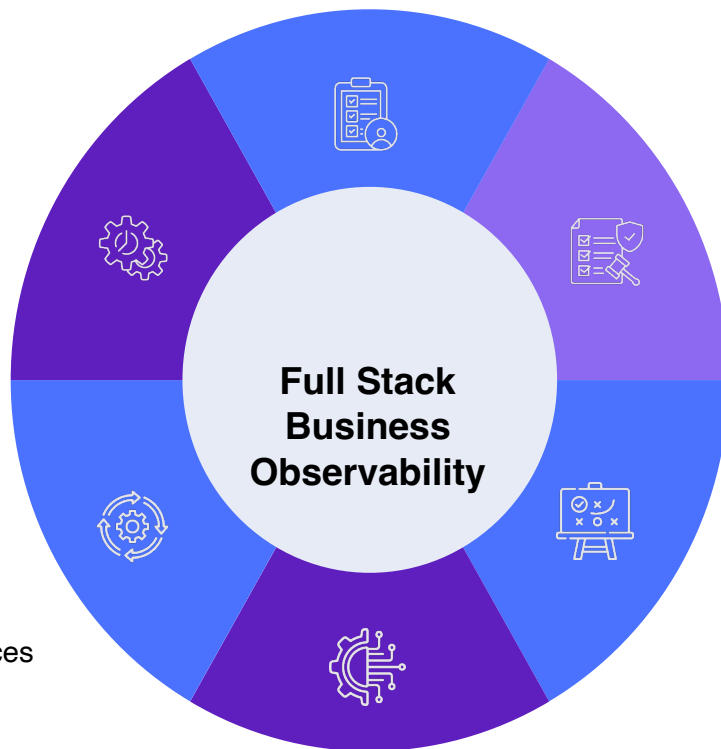
- Minimum CMDB Accuracy of 95%
- Right Set of attributes for CI
- Asset Tagging with the right attributes

6. Visualization layer

- Persona based dashboard to be designed based on the need
- Continuous feedback process to Fine tune the dashboard requirement

5. Business Objectives

- Clearly defined SLI & SLO specific to business units
- Validating the right metrics for identifying the Business services impact



4. Technology and Tool Selection

- Identify the functionality requirement
- Select the right tool to meet the requirement
- Develop the deployment architecture.

2. Service Mapping

- Service Mapping of the Application, CI and related components is needed
- Ability to ingest Additional service Mapping data for FSO tools
- Identification of Impact to Business

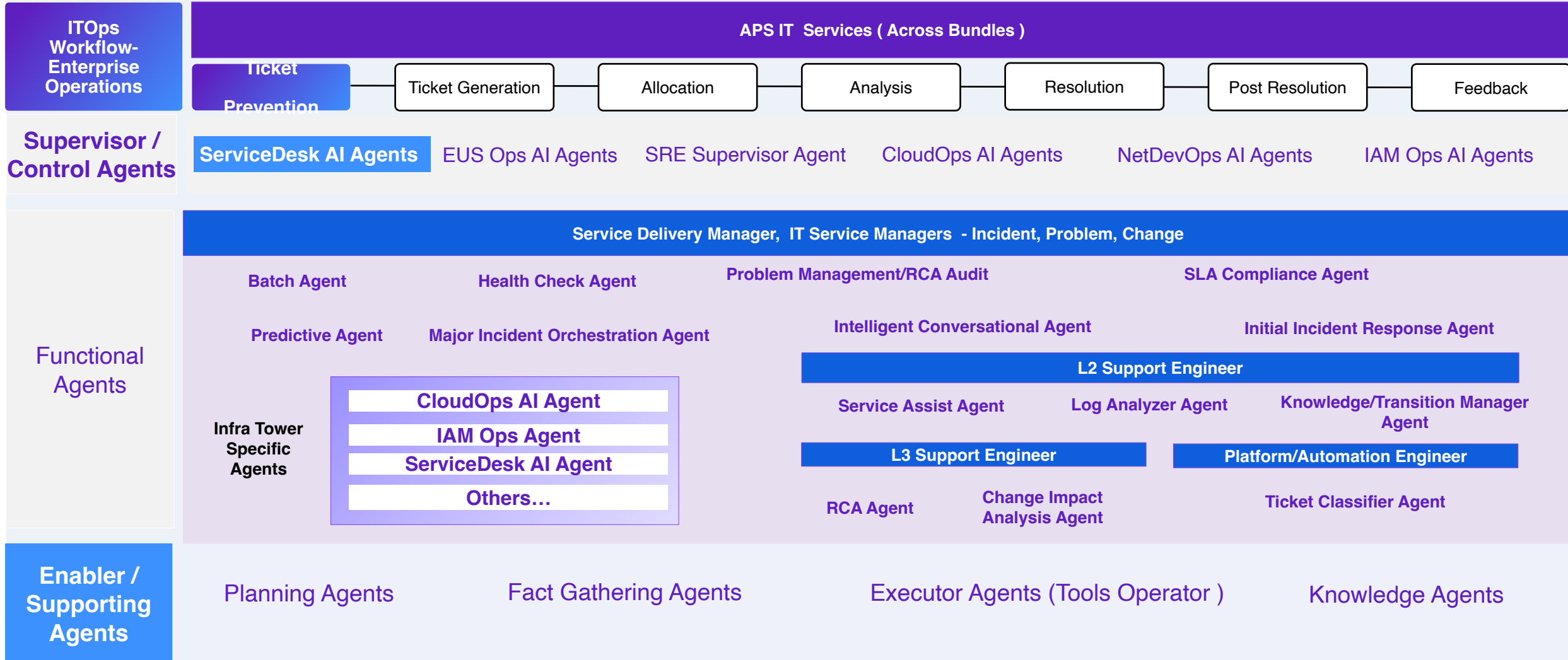
3. Monitoring and Maintenance

- Monitor the right set of parameters
- Simplify Monitoring tools
- Remove Functionality overlap

Outcomes


- **Lower MTTR:** Reduce MTTR by 40% with efficient full stack observability.
- **Reduction in MTTD:** 70% reduction in MTTD by identifying the issue faster.
- **Cost Reduction:** Tech debt reduction in terms of Licensing optimization and Operational cost reduction.
- **Business Visibility:** Structured data archival across the organization.
- **Noise Reduction :** Reduce Noise in the environment by 60 – 70%.
- **Optimize Tools Portfolio:** Retire non-essential tools and retain required Functionality.

AI driven Enterprise Operations



AI Agents on Scale – Market place

Hosting Augmented/Assistive




Database Agent

- ✓ SQL Operations Management
- ✓ SQL JOB failure Management
- ✓ OEM Reachability Management

INC Reduction:45% CM Reduction:20% SR Reduction: 25%

Hosting Assistive/Augmented




Cloud Ops Agent

- ✓ AKS Cluster Configurations
- ✓ Adding/Modifying/Removing RBAC to AKS
- ✓ Tools Installations(Ingress Controller, Velero, Sedai.Wiz)

INC Reduction:45% CM Reduction:20% SR Reduction: 25%

NetOps Assistive/Augmented




Network Agents

- ✓ Enabling/Disabling/Reconfiguring Ports
- ✓ Configuration Management(VLAN)
- ✓ Connectivity Reports

INC Reduction:45% CM Reduction:20% SR Reduction: 25%


Enabler Augmented



Fact Gathering Agent

- ✓ Gather's Information from ecosystem
- ✓ Policy Context awareness
- ✓ Knowledge article awareness

Enabler Autonomous




Resolver Agent

- ✓ Remediation Engine
- ✓ Cognitive Decision-Making
- ✓ Intelligent Orchestrator

INC Reduction:45% CM Reduction:20% SR Reduction: 25%


Enabler Autonomous



Information Agent

- ✓ Relevance Pruning
- ✓ Contextual Disambiguation

IAM Augmented




Security Agent

- ✓ Auto-classify/route & Gather missing info
- ✓ KCI updates & Attach evidence
- ✓ SNOW Agent Workspace

INC Reduction:45% CM Reduction:20% SR Reduction: 25%

Assurance Augmented




Patching & Remediation Agent

- ✓ RCA hypotheses & Safe runbooks
- ✓ Evidence packs (last-change, blast-radius)
- ✓ Splunk/Dynatrace/UiPath

INC Reduction:45% CM Reduction:20% SR Reduction: 25%


Assurance Autonomous



Catch & Dispatch Agent

- ✓ FP suppression , SLO breach prediction
- ✓ Monitor tuning recommendations
- ✓ AIOps/Observability

Assurance Augmented




Guardian(Critic)

- ✓ Risk score & blast-radius & Schedule options
- ✓ Pre/Post checks , CAB evidence packs
- ✓ SNOW/CMDB/Ekara

Y1 Targets: Change success +20 pts • Rollback –30%

Hosting Augmented




Linux/Unix Agent

- ✓ Connectivity Check
- ✓ Event Trouble Shooting
- ✓ Preventive Health Checks

INC Reduction:45% CM Reduction:20% SR Reduction: 25%

Hosting Assistive

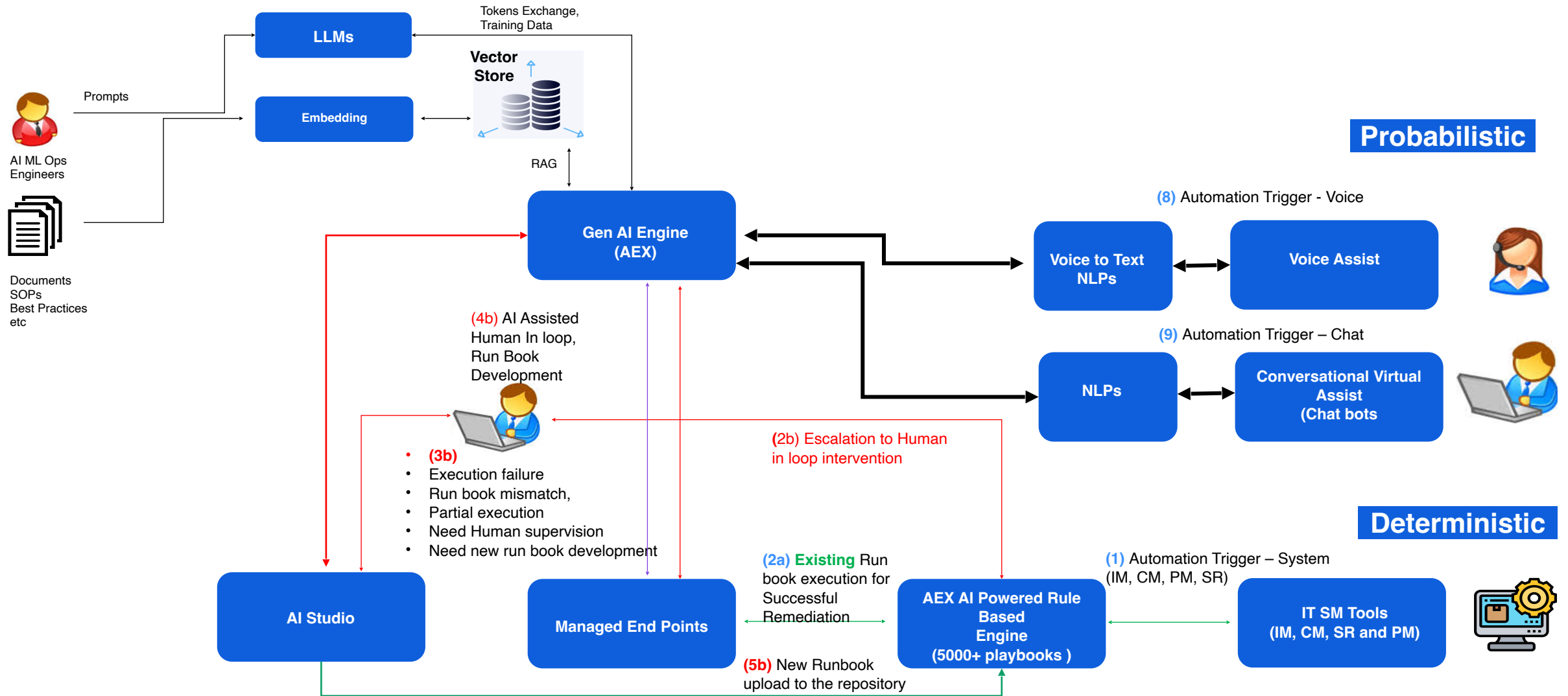


Back Up Agent

- ✓ Billed vs designed/used mismatches
- ✓ Leakage detection • Dispute packs
- ✓ Billing/Rating/CRM

INC Reduction:45% CM Reduction:20% SR Reduction: 25%

Agentic AI Powered Automation Execution Work Flow



Value Realization

Augments and Streamlines the ITOps lifecycle

AI / ML Led

- Inconsistent Data (alerts / events, not interpretable by LLMs)
- Lack of context sharing among systems
- SOP-driven resolution for known use cases
- Long troubleshooting & remediation cycles for unknown use cases

Compounded by

- 3600+ Reusable and Configurable Runbook Repository which is validated and tested
- Enriched Custom Ontology & Metadata

Agentic Led

Features



- Agentic Builder
- Agent Library
- Multi-Agent Orchestration
- Agent Reasoning Engine
- Model Hub and Playground
- Logging and Reporting



Impact

60-70%

Autonomous Resolution of Tickets

~70%

Reduction in Playbook Generation time

~60%

Reduction in SLA breaches

~40%

Reduction in MTTD

~85%

Reduction in MTTR

Combined

Differentiators

Cost Savings – Optimized LLM Token usage for only unknown scenarios

Agility – Faster Execution via pre-built runbooks for known repetitive scenarios

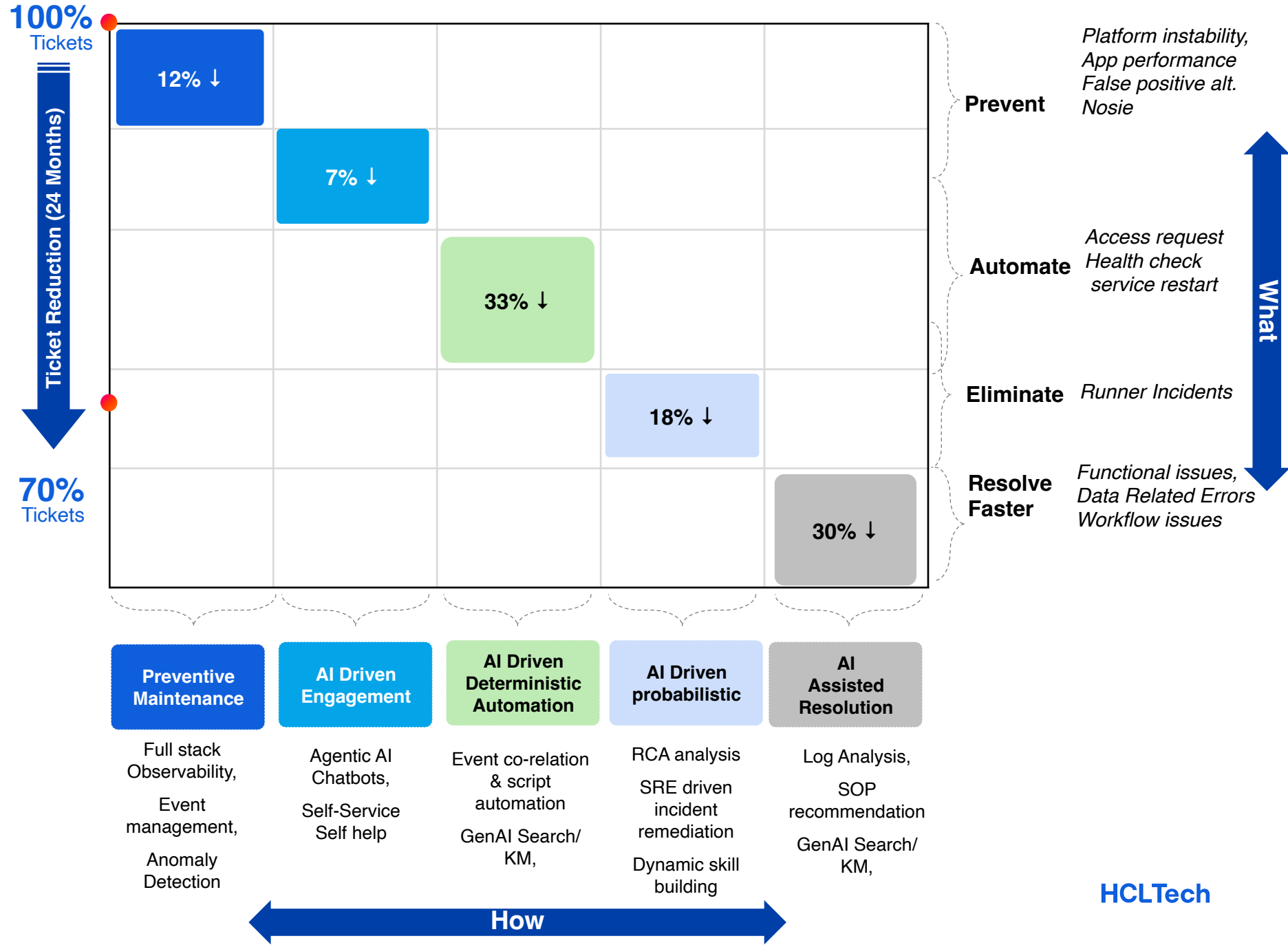
Scalability – Reusability across teams, environments and use cases

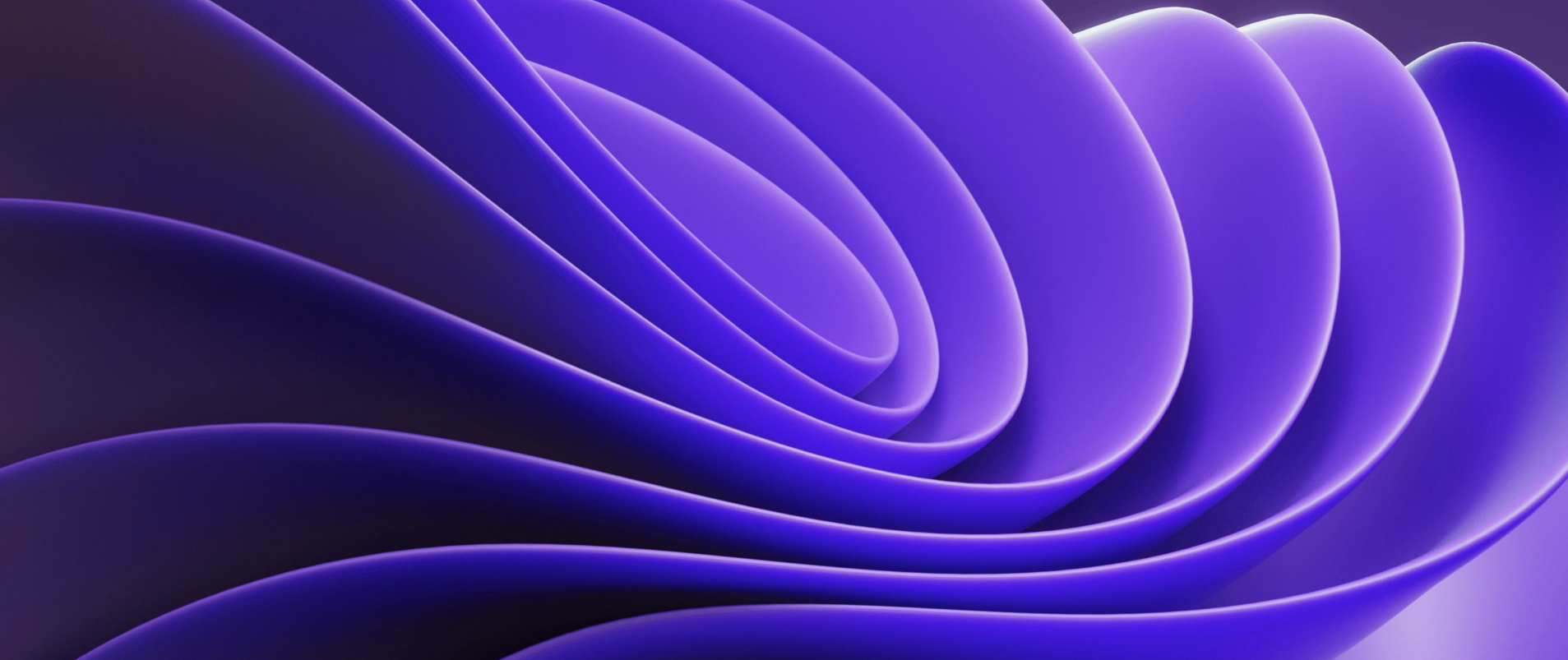
Reliability – Validated & tested playbooks reduces errors & inconsistencies

Compliance – Auditable, Version-controlled automation approach

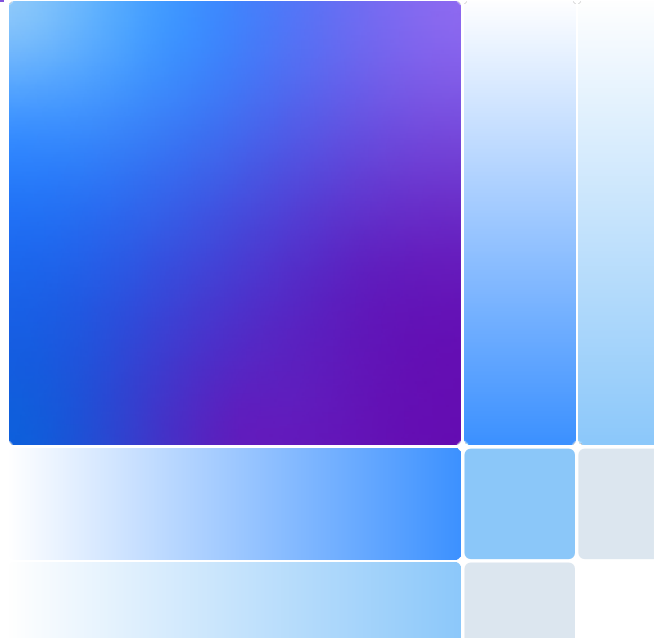
Dependencies

- End to End organizational Change management
- Accelerate API, MCP & Connector readiness
- Implement Governance that allows faster deployment and testing
- Drive AI Adoption across technologies
- AI Design co-creations and security approvals.





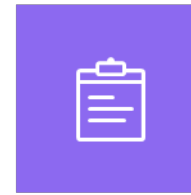
Automation Demos



GenAI/Agentic AI Use Cases

Config Drift Remediation & MTTR Reduction

Config Drift Identification and log analysis, identify Probably R



Network Vulnerability Management

Analyze all critical Vulnerability Recommendations and take action based on criticality using DNAC, gpt LLM,

Wireless Agent Failure Remediation

Analyses Wi-Fi Logs, DNAC Config Drift, History of tickets, CMDB, Cisco Knowledge Articles and predict RCA

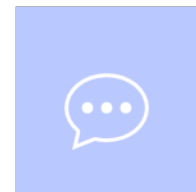


Demand Prediction

Check Interface utilization, WAN Utilization, consider application utilization, predict, optimize Bandwidth capacity

Bespoke Agent for Layer 3 Cisco Bot

Identify and remediate the L3 issue in network with input from multiple sources.



Interface issues prediction

Analyze past tickets, CMDB, Interface stat and predict interface /Device Health

Bespoke agent Layer 2 Cisco Bot

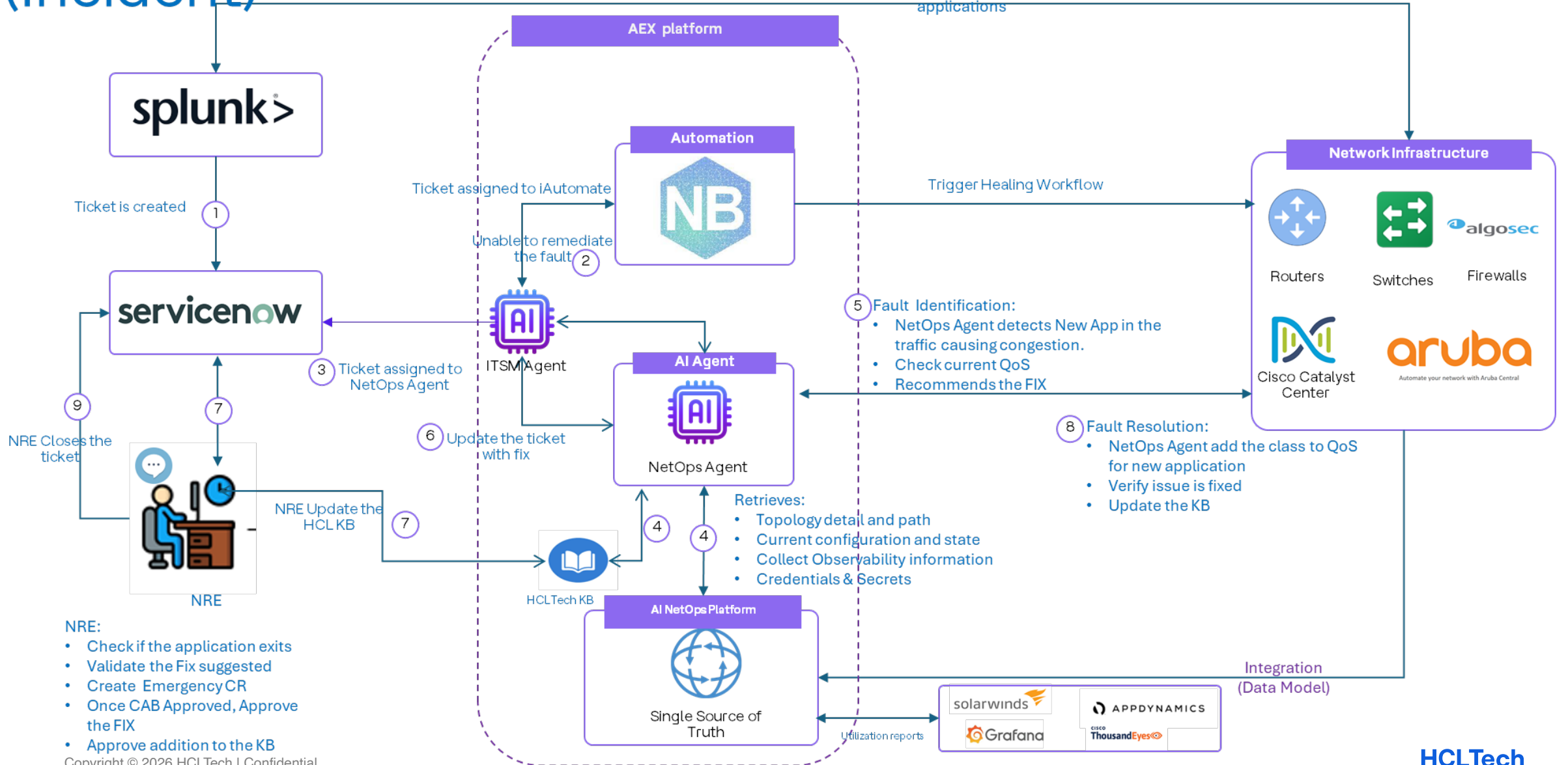
Identify and remediate the L2 issue in network with input from multiple sources.



Ai Force NetOps - Day in a Life (Incident)

Problem Statement:

- Intermediate access ,latency issue was reported for business-critical applications

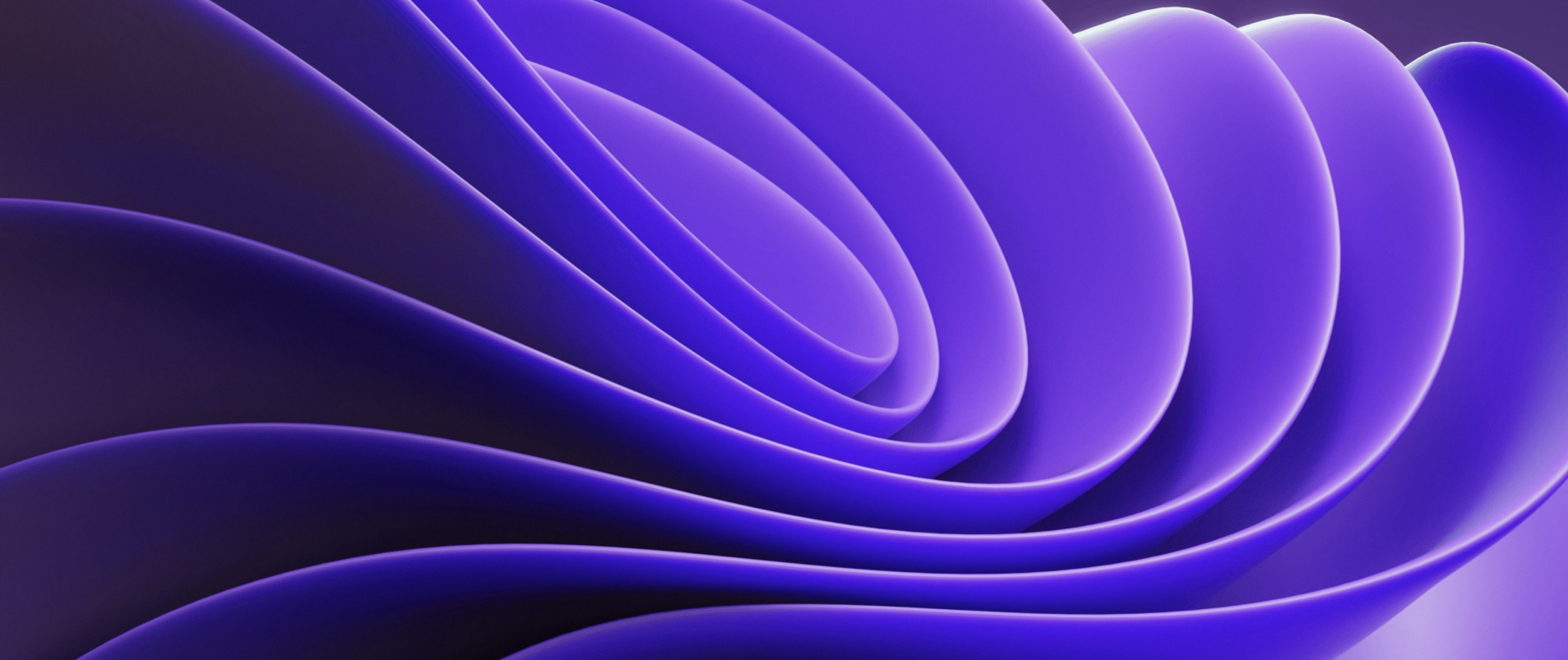


- 5 Fault Identification:
- NetOps Agent detects New App in the traffic causing congestion.
 - Check current QoS
 - Recommends the FIX

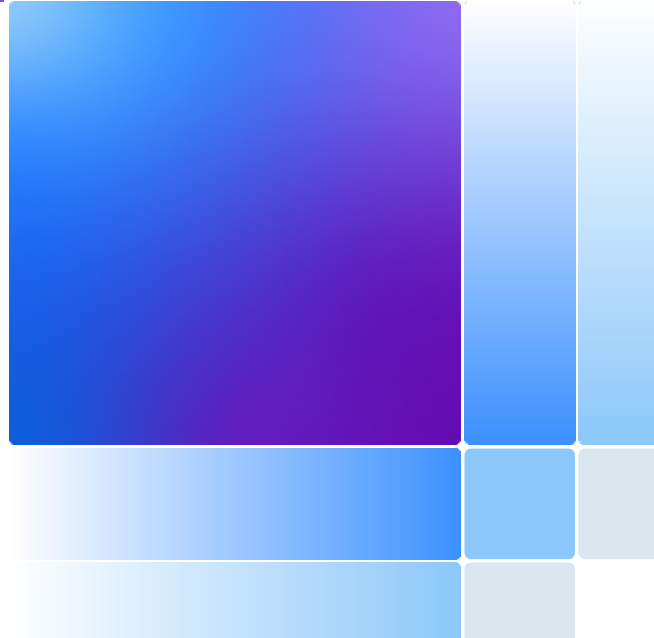
- 8 Fault Resolution:
- NetOps Agent add the class to QoS for new application
 - Verify issue is fixed
 - Update the KB

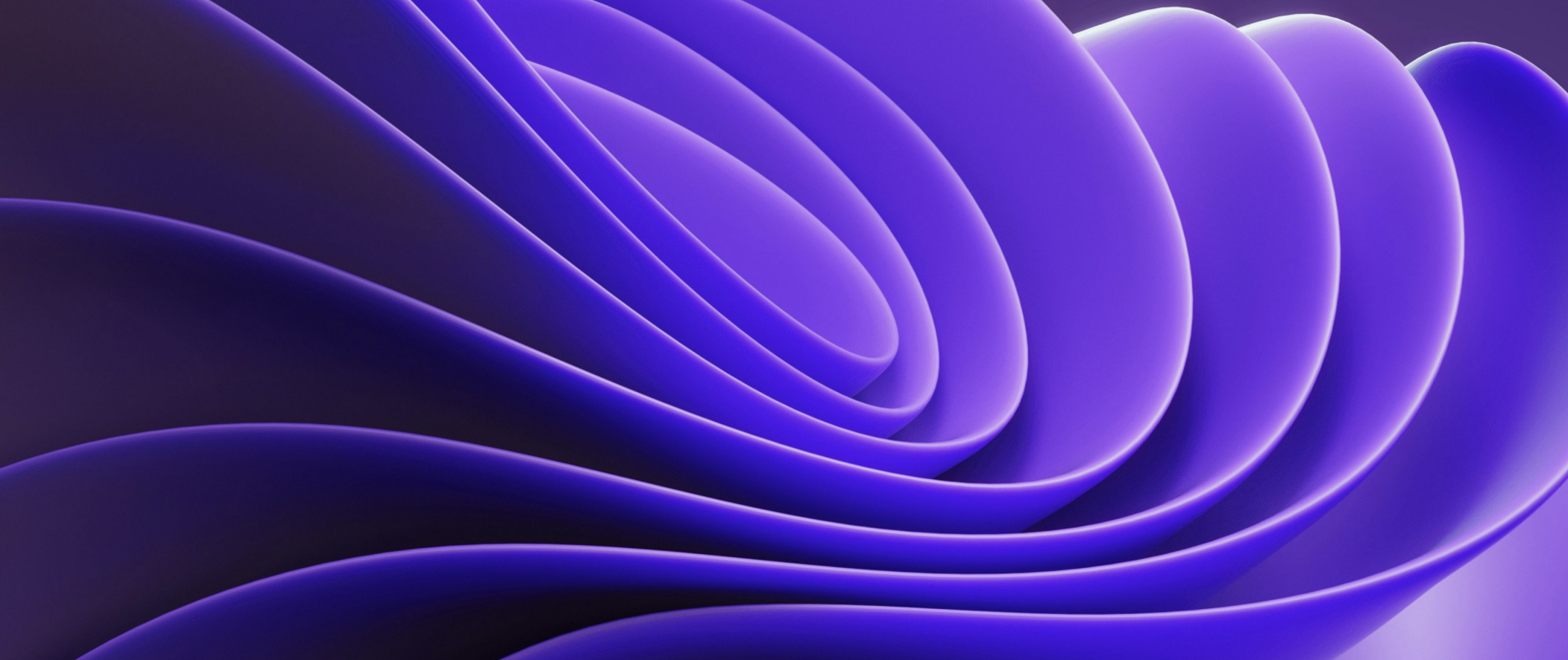
- Retrieves:
- Topology detail and path
 - Current configuration and state
 - Collect Observability information
 - Credentials & Secrets

- NRE:
- Check if the application exits
 - Validate the Fix suggested
 - Create Emergency CR
 - Once CAB Approved, Approve the FIX
 - Approve addition to the KB

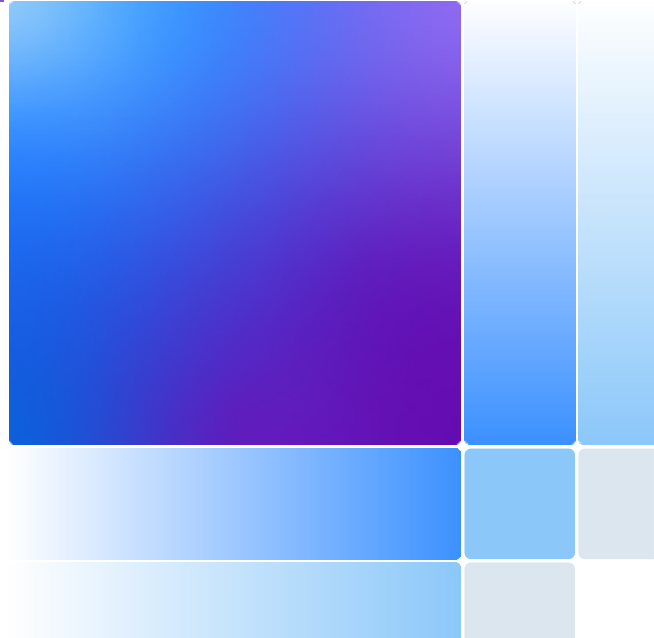


Latency 1.mp4





[AEX AP Down Demo V2 17.mp4](#)



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