EMPOWERING AUTONOMOUS OPERATIONS

AIOPS SOLUTION

06.Aug.25

Table of Contents

AUTOMATION VISION AND ALIGNMENT

Our automation solutions help to deliver step change in Business agility, Resiliency and Customer experience through Integrated Operations Design and effectively harnessing Digital capabilities.

Integrated Operation

Well integrated to customer system. Smooth in operation & good ROI

Flexibility in Operating Model to accommodate Business Nuances

Strategy Alignment

Align with Customer IT strategy

Focus on Automation and continuous Improvements

AI in Operations

Enable AI in Operation

Augmenting human capability of inference, decision making and learning

Catalog of Services

Catalogue of Services across Business Operation, Infra and App Support

Resilient Outcome Based operations

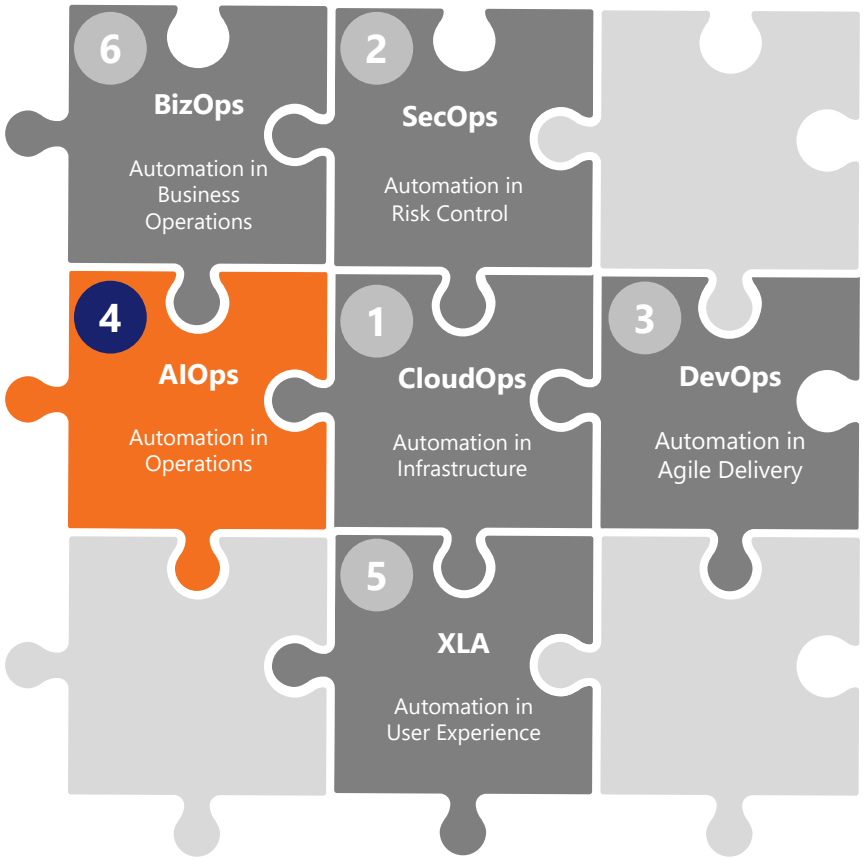
Talent Transformation

Well managed transition from current working model to future state with:

Well change management methodology

Well training

xOps - Revolutionizing it with AUTOMATION EVERYWHERE



1 **AUTOMATION IN INFRASTRUCTURE**

Streamline provisioning, scaling, and management for a resilient, cost-efficient IT environment.

2 **AUTOMATION IN RISK CONTROL**

Enforce security policies and compliance standards in real time, reducing risk and manual effort.

3 **AUTOMATION IN AGILE DELIVERY**

Speed up development cycles with automated testing, CI/CD pipelines, and intelligent code management.

4 **AUTOMATION IN IT OPERATIONS**

Optimize incident response, reduce downtime, and improve service reliability with **AI-powered automation**.

5 **AUTOMATION IN USER EXPERIENCE**

Enhance digital experiences with AI-driven monitoring and proactive issue resolution.

6 **AUTOMATION IN BUSINESS OPERATION**

Optimize business processes, reduce bottleneck, and improve business reliability with new digital workforce.

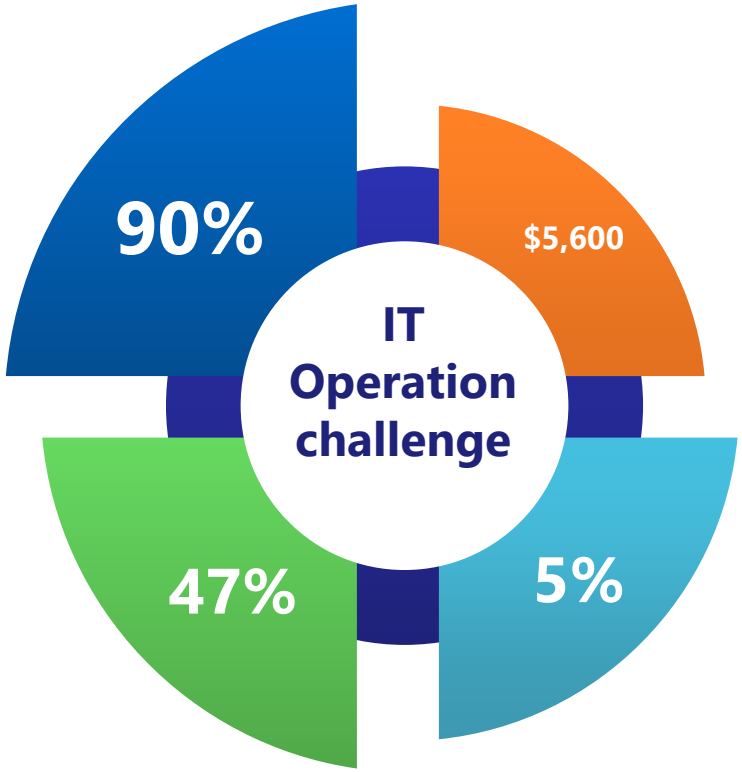
AIOPS - CHALLENGES IN MODERN IT PROCESS MANAGEMENT

Overwhelming Workloads and Inefficient Processes

- **90%** of employees feel overwhelmed by tasks that can be automated. Reflecting inefficiencies in existing processes.
- IT departments spend over **5 hours/week** on repetitive inquiries. Leading to significant time lost on routine tasks that could be automated or streamlined.

Siloed Information & Fragmented Workflows

- **47%** of workers struggle to find necessary data. They need to perform their tasks, pointing to inefficiencies in data management and access.
- Poor data management can cost businesses over **$15 million/year** due to outdated information and inefficiencies. The time spent managing inaccurate information.



Incident and Outage Impacts

- Average downtime resolution is **200 minutes**, leading to lost productivity.
- Cost of downtime: **$5,600/minute**. The financial impact of IT downtime is significant, highlighting the critical need for faster incident resolution.

Compliance Risks & Audit Difficulties

- Error rates range from **0.5% to 5%,** complicating compliance efforts.
- **67%** of organizations struggle with inconsistent documentation, and 45% have issues with data retention and archiving.

HOW AIOPS CAN RESOLVE CHALLENGES IN MODERN IT MANAGEMENT

AIOPs can address the IT challenges highlighted in the chart by leveraging automation, advanced analytics, and AI-driven insights to improve operational efficiency and minimize the impact of IT issues. Here's how AIOps can resolve these challenges

Challenges	AIOps resolution	Result
Overwhelming Workloads and Inefficient Processes	**Automate Tasks**	• **Automation**: AIOps can automate repetitive tasks, reducing manual workload and minimizing the time spent on routine inquiries, thus improving efficiency. • **Proactive Monitoring**: AI-driven solutions can streamline workflows by identifying and addressing inefficiencies in real time, leading to better resource allocation.
Incident and Outage Impacts	**Detect Incidents**	• **Faster Incident Detection**: AIOps can reduce downtime by quickly detecting issues through real-time monitoring and AI-based root cause analysis. • **Automated Remediation**: With automated responses and predictive capabilities, AIOps can resolve incidents faster and reduce the impact of outages, cutting down downtime costs.
Siloed Information & Fragmented Workflows	**Unify Data**	• **Unified Data Access**: AIOps centralizes data from disparate sources and provides a single view of system health, enabling faster decision-making and better data access. • **Streamlined Workflows**: By automating data processing and providing integrated platforms, AIOps reduces fragmentation and ensures smooth collaboration across departments.
Compliance Risks & Audit Difficulties	**Improve Compliance**	• **Improved Documentation**: AIOps can maintain consistent, automated logs and documentation, ensuring better compliance and audit readiness. • **Error Reduction**: AI-driven monitoring can minimize human errors, which are crucial for compliance and reducing audit-related difficulties.

AIOps Problem-Solving

INTEGRATION PRINCIPLES & KEY OUTCOMES

Design Principles	Outcomes
Product centric operation model	Right Sourcing
	Ownership & accountability
DevOps way of working	Operational Excellence
	Excellence Employee Experience
Right Sourcing Services	DevOps for Product Centricity
	Automation and Innovation

Key Solution Enablement

XLA & BizOps Orchestration

- **XLA Orchestration** - optimizes IT operations by focusing on user experience, using real-time data and automated workflows to proactively address issues, enhance service quality, and ensure consistent satisfaction.

AIOps – Cognitive Service Desk Journey

- **GenAI Digital Assistant** - understand natural language, provide personalized responses – Journey to Zero Touch Service Desk
- **Self-services Portal** - enhances user experience by providing quick and easy access to resources, improving efficiency and satisfaction.
- **Automation resolution** - handle routine and complex problems without human intervention, significantly reducing downtime and operational costs.

AIOps|SecOps – Intelligent IT Services Management

- **Data pipeline automation solution** – improved data quality & scalability, reducing manual effort and enabling proactive issue resolution
- **Telemetry – Data Collection & Integration** – Collects data from various IT infrastructure and application resources, including Logs, Metrics and Events.
- **Observability Platform** – providing comprehensive visibility into system performance, enabling real-time monitoring, faster root cause analysis.
- **Cognitive Automation** – enable Anomaly Detection, Root Cause Analysis Automation, Capacity Planning Automation, Proactive Maintenance

IT Process Cognitive Automation (ITPCA) foundation solutions

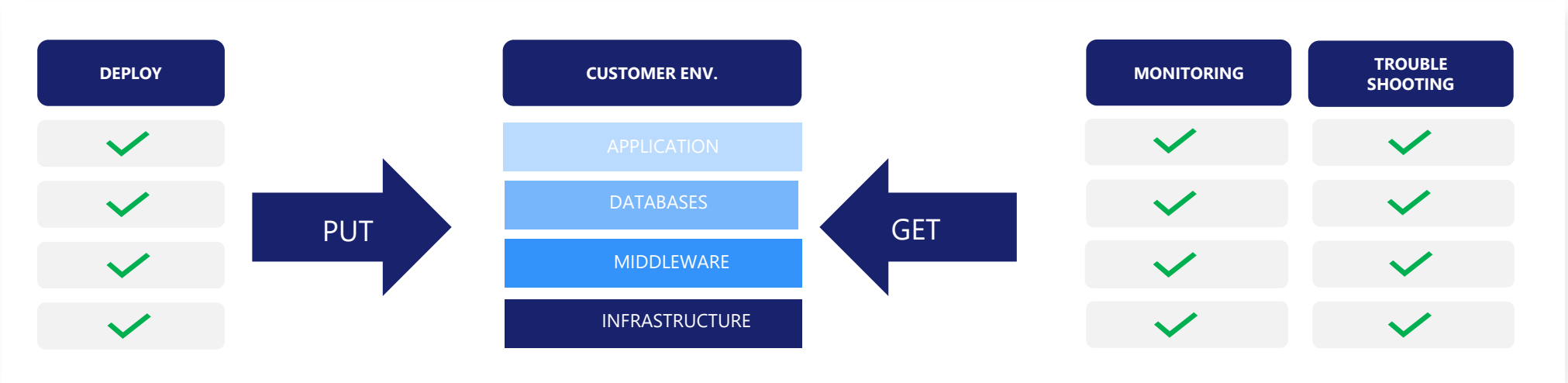
- **CloudOps, SecOps, DevOps** – Help to enable & speed-up product centric operation model as well as secure system from cyber attacks.

Key Outcome*

100%	Support Customer Onwership & Accountability and Right Sourcing
>90%	Employee Experience Level Agreement (XLA)
>80%	Increased Speed & Flexibility with DevOps for Product Centricity
>70%	Automation led platforms & delivery
>95%	Performance of Operational Excellence Metrics

Anticipated benefits based on FPT experience

AIOPS - XOPS WITH CUSTOMER SYSTEM IN MANAGED SERVICE

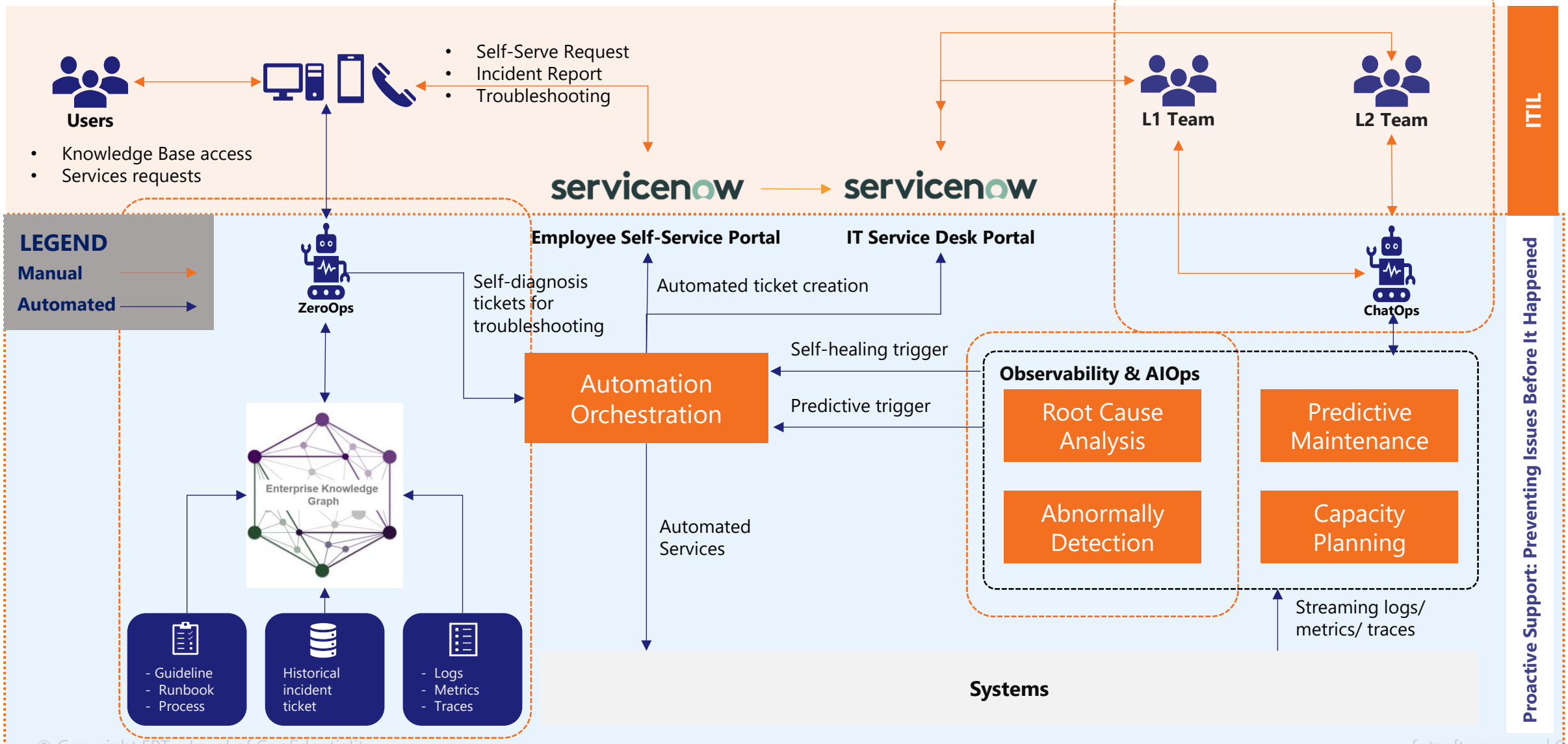


There are two types of interactions with the customer's system during operations: **put** and **get.**

In this scope, we will focus only on two use-cases: monitoring and troubleshooting with an emphasis on aiops, finops and zeroops service desk.

	AIOPS	FINOPS	ZEROOPS	CLOUDOPS	SECOPS
GET	✓	✓	✓	✗	✗
PUT	✗	✗	✗	✗	✗
DATA	LOGS METRICS, TICKETS DATA KBS	BILLING, METRICS	LOGS METRICS, TICKETS, KB		

XOPS USE-CASE: JOURNEY TO ZERO SERVICE DESK WITH GENAI DIGITAL ASSISTANT



AIOPS – SOLUTION IN AMS

We provide AiOps solutions to automate and integrate AI-driven models in Application Management Services (AMS). Our approach enhances operational efficiency, reduces manual efforts, and ensures proactive issue resolution through intelligent automation and observability.

ZeroOps

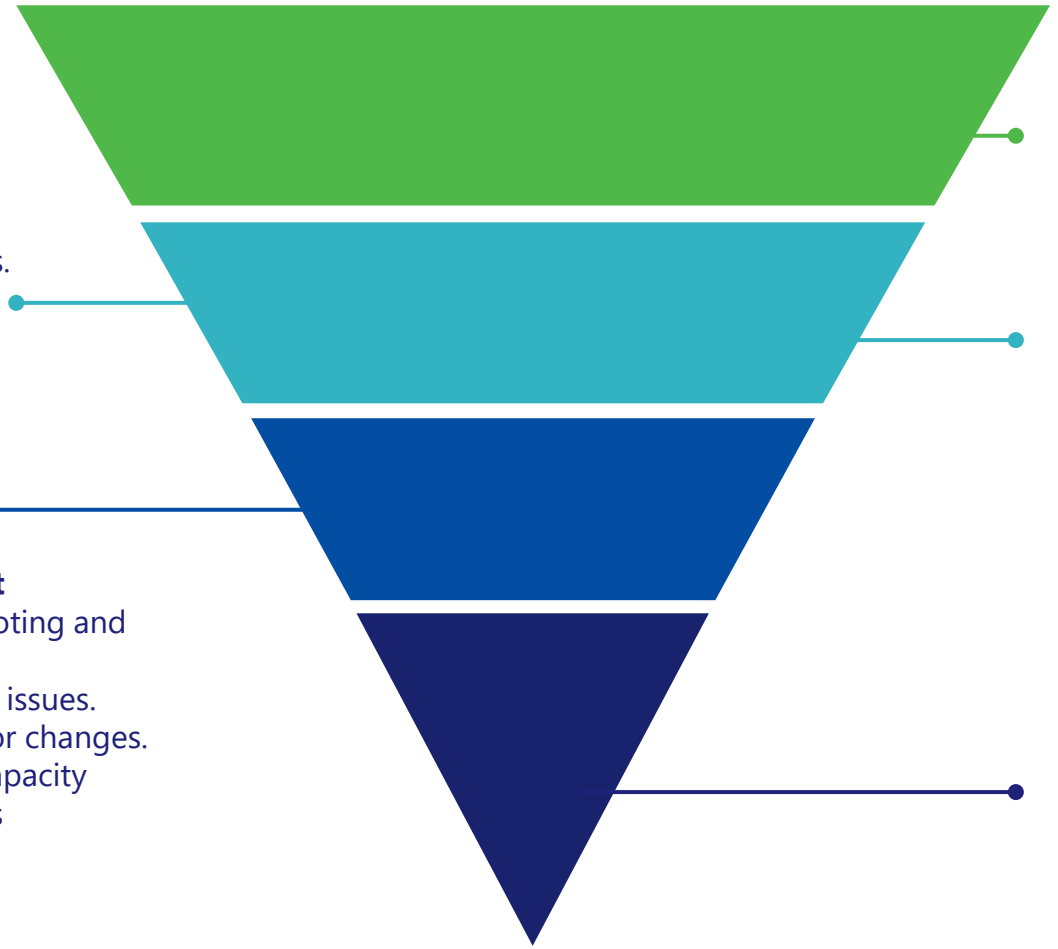
Level 0 (L0) - Self-Service Support

- Provides access to knowledge base articles, videos, and FAQs.
- Basic in-application help or portal access.

AIOps & ChatOps

Level 2 (L2) - Advanced Support

- Performs in-depth troubleshooting and issue replication.
- Qualifies and resolves product issues.
- Processes customer requests or changes.
- Support anomaly detection, capacity planning & root cause analysis



Transition

Power Insight Assessment
AI Power Assessment tool to speed up transition phase

ZeroOps

Level 1 (L1) - Basic Troubleshooting

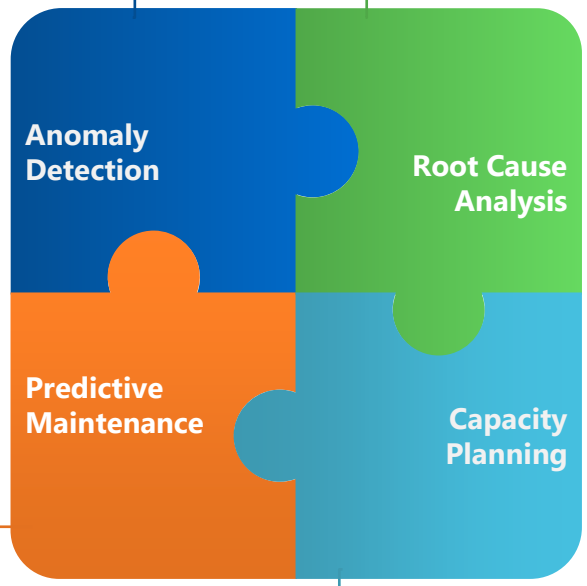
- Handles initial ticket receipt and classification.
- Dispatches tickets and collects information for Level 2.
- Resolves common issues like password or login problems.
- Contacts customers for further details.

Level 3 (L3) - Expert Support
AI in SDLC – not in focus scope

AIOPS - AI IN OPERATION

1. Anomaly Detection

- **Automatically** identify and **remediate** issues
- **Self-healing*** capability minimizes downtime and ensures continuous operation without manual intervention.



2. Root Cause Analysis

Determine the relationships and dependencies that point to the root cause of a problem.

4. Predictive Maintenance

- **Detect** patterns or signs that precede equipment failures
- Schedule **repairs** at optimal times, reducing unplanned downtime and extending the lifespan of their equipment.

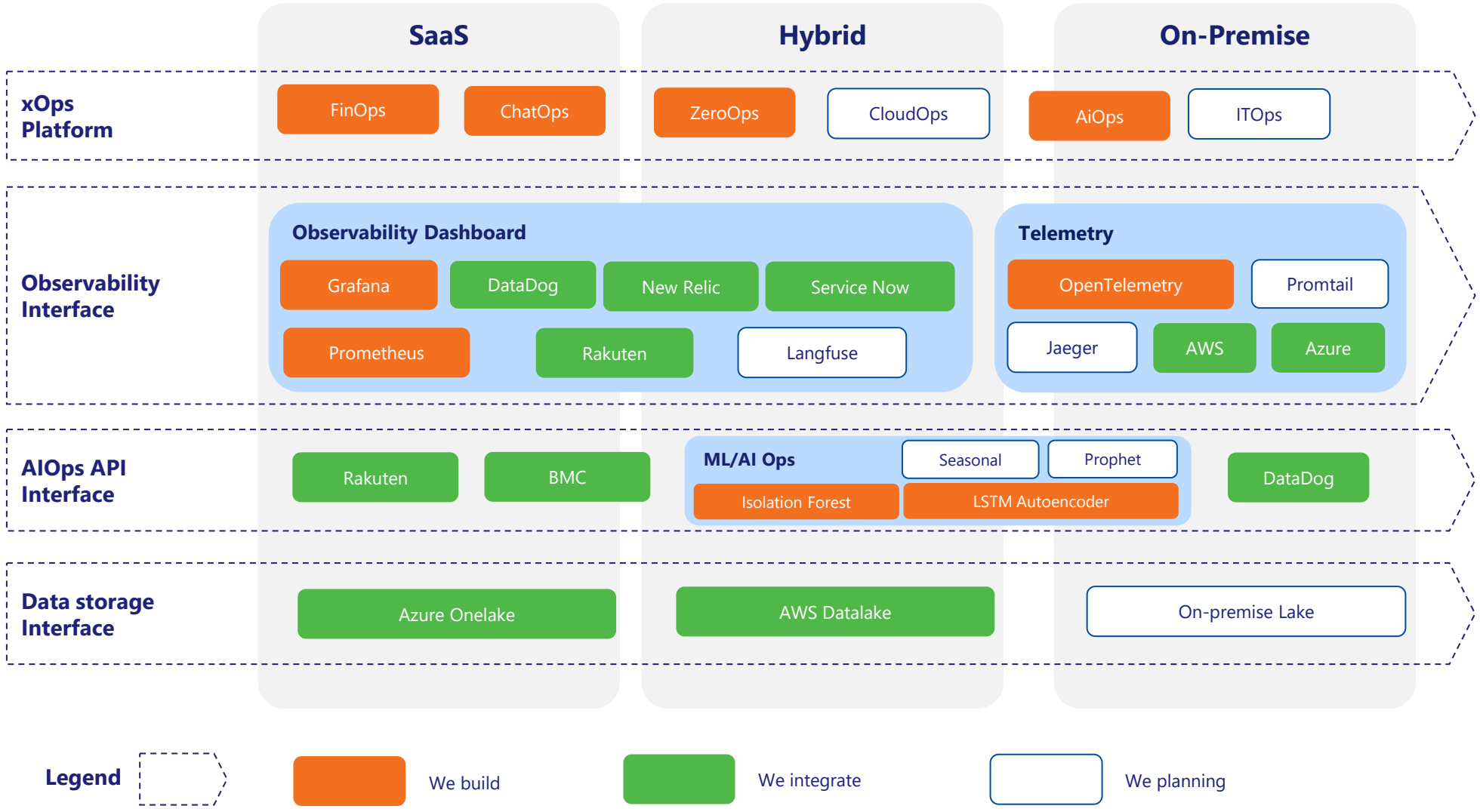
3. Capacity Planning

- **Dynamically allocate** resources based on real-time demand and workload characteristics
- **Scaling** up or down virtual machines, containers, or server less functions to optimize performance and cost efficiency automatically.

Platforms

Grafana, Copilot, PyTorch, scikit learn, puppet labs, CHEF, Terraform, SALTSTACK, ANSIBLE, docker SWARM, Pulumi, openstack., kubernetes

AIOPS - DETAILED IMPLEMENT



AIOPS - DEMO USE CASE NO.1: INCIDENT DETECTION AND RESOLUTION

Business Overview

An e-commerce company's website crashed intermittently due to high traffic during a flash sale.
The AIOps platform detected spikes in server metric utilization and correlated them with database connection errors.
The platform then automatically redistributed the workload to other replicated database servers, distributing traffic to the affected database services, eliminating the issue without human intervention.
As a result, we were able to keep our website up and running during peak traffic.

Our Demo Scenarios

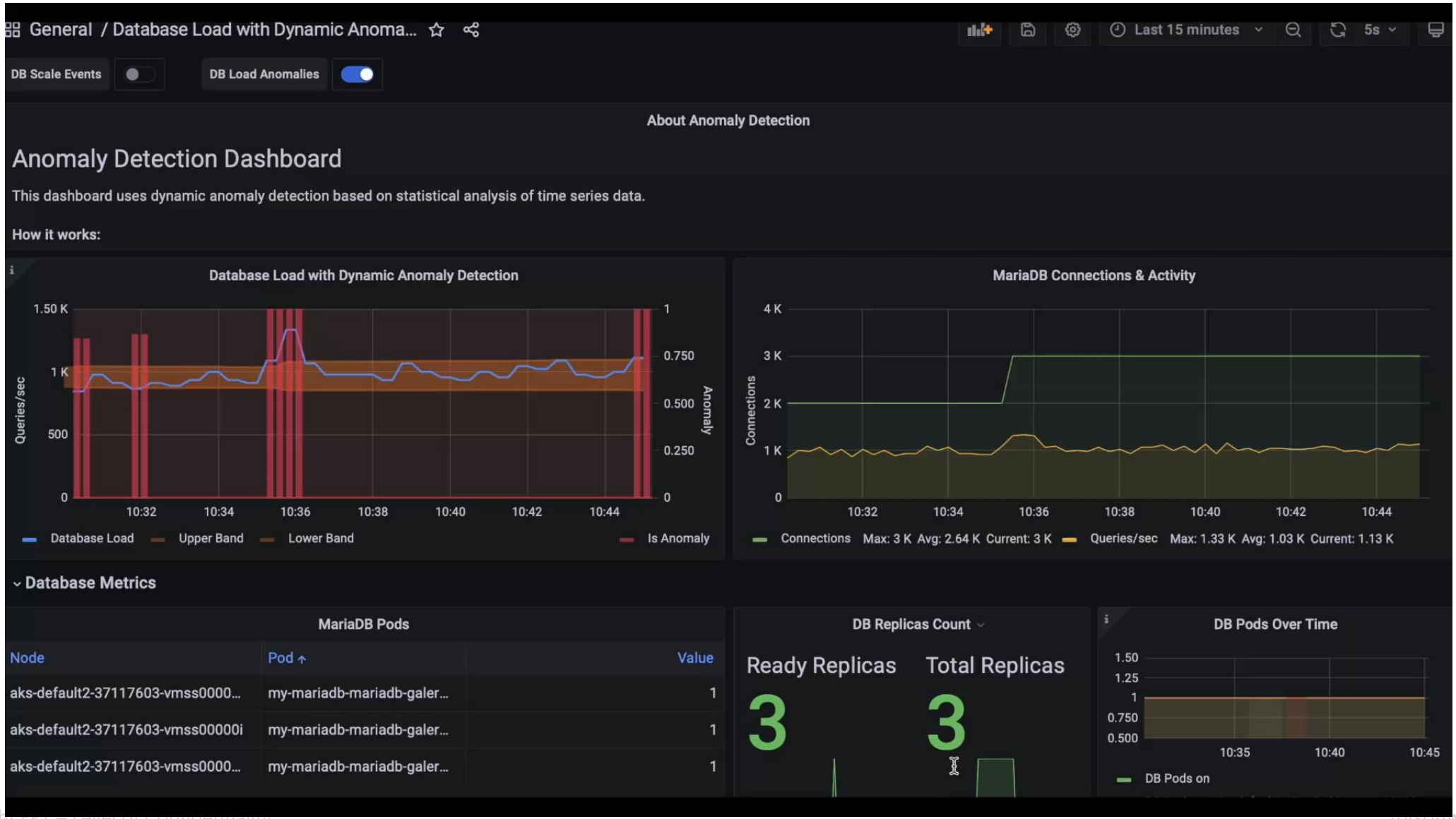
- Start a stress test by loading the server.
- On the dashboard, you can check the upper and lower bands for anomaly detection.
- This band is automatically tuned in real-time by ML/AI based on the workload of the service.
- If a metric exceeds that range, it is determined that an anomaly has occurred.

The AIOps system automatically does the following:

  - Scale out database replication
  - Dynamically update anomaly detection bands based on workload
  - Alerts/notifications are sent to Teams channels to share status instantly.

→ This will keep your website up and running even during peak traffic.

AIOPS - DEMO USE CASE NO.1: INCIDENT DETECTION AND RESOLUTION



AIOPS - DEMO USE CASE NO.2: PREDICTIVE MAINTENANCE

Business Overview

A financial institution's data center uses predictive analytics to constantly monitor the health of its servers.

The AIOps system detected signs of overheating on one server based on rising temperatures and error logs from the cooling system.

Before the server failed, the system automatically scheduled the replacement of the cooling fan and at the same time temporarily rerouted the workload to another server.

This allowed us to avoid service outages during critical banking operations.

Our Demo Scenarios

- The AIOps system continuously monitors the temperature of the server.
- Based on temperature trends and cooling system error logs, the AIOps system detects signs of overheating on a server.
- After detection, an alert/notification is sent to the end user.
- If the monitor continues for several hours and the fan speed reaches its maximum value while the temperature remains high.
- The AIOps system makes the decision to detach the target server from the workload and sends a notification for approval.
- If the AIOps system is able to automatically provision a replacement server.
- Detach the server without approval and let it take over the workload.
- After disconnecting, the AIOps system will continue to monitor the server and put it into maintenance mode.
- This makes it possible to prevent system outages during critical banking operations.

AIOPS - DEMO USE CASE NO.2: PREDICTIVE MAINTENANCE

AIOPS - DEMO USE CASE NO.3: CAPACITY OPTIMIZATION

- AIOps system continues learn traffic metrics of Application in Long time session and detect the repeatable pattern
- **High traffic:** 80% traffic during night-time (peak hours).
- **Low traffic:** 1% traffic during the day (off-peak hours).
- AIOps auto calculate capacity of Application in peak hours and pre adding the number of VM to handler traffic
- In off-peak hours AIOps system will scaling down VM to optimization resources

AIOPS - DEMO USE CASE NO.3: CAPACITY OPTIMIZATION

AIOPS - POC TIMELINE AND ACTIVITIES

	TRANSFORM		GROW		RUN
	1. Baseline & Setup	**2. Observability Enablement**	**3. AIOps Functionality**	**4. Validation & Demo**	**5. Report & Conclusion**
Input	• Understand current infrastructure and prepare the PoC environment	• Establish monitoring and data collection foundation	• Deploy initial AI-driven capabilities	• Validate and fine-tune implementation	• Wrap-up and plan next steps
Approach	• Collect CMDB, existing SLA, and performance metrics • Quickly assess current automation and observability capabilities • Set up PoC environment (cluster, observability stack) • Define PoC scope and success criteria	• Deploy Prometheus, Grafana, Loki/Tempo (if not already available) • Collect metrics/logs from 2–3 pilot services • Design monitoring dashboards • Integrate basic alerting rules	• Train basic Anomaly Detection models (e.g., CPU, Memory, Response Time) • Integrate self-healing scripts (e.g., auto-scale, restart service) • Create demo use case (e.g., auto-remediation after anomaly detection)	• Conduct 2–3 simulated incidents • Measure AI model accuracy and automation impact • Tune thresholds, models, and automation workflows	• Prepare final PoC report • Present results and recommendations for production rollout • Deliver technical documentation and user guides
Output	• Baseline report • Ready-to-use PoC environment	• Visual monitoring dashboards • Alert rules for pilot systems	• End-to-end AIOps use case for PoC APP • Working self-heal scripts	• Effectiveness report • Recorded PoC demo session	• Handover package • Proposal for full-scale implementation

Week 0 – 2 | **Week 3 - 6** | **Week 7 - 8** | **Week 9 - 10** | **Week 11 - 12**

SUCCESS STORY: AUTOMATION IN IT OPERATION

About Client

Leading company in Conglomerate industry

Conglomerate Corporation

Japan

70,000+ Employees

Revenue $47B+ (2023)

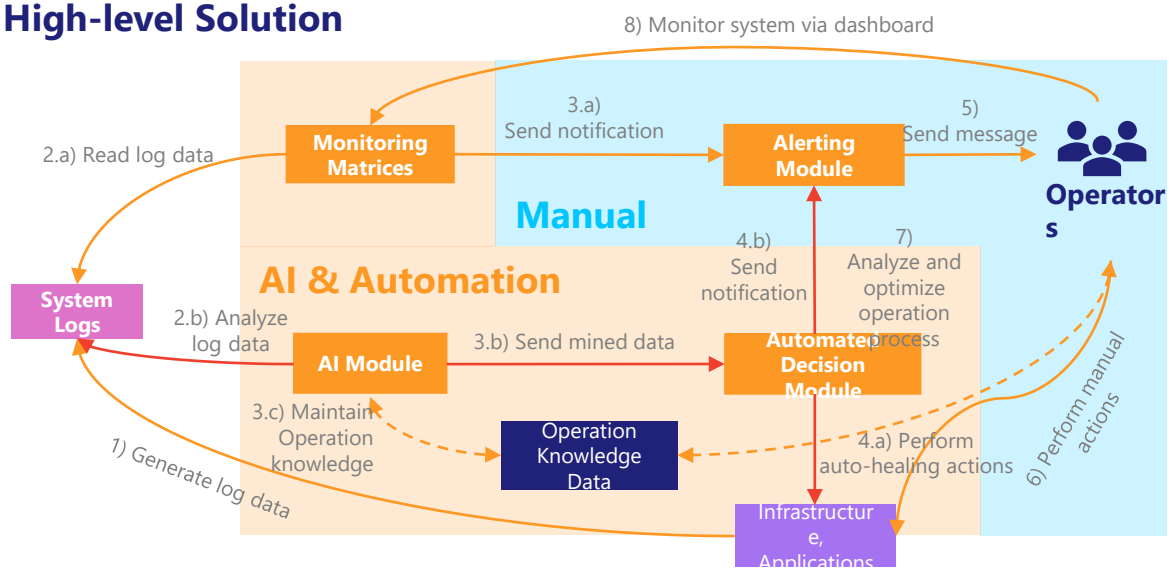
As-is State

- Localized infrastructures, maintain manually by local IT Team.
- Managed services is running with ITIL process, however because of system complexity and silos information, the team usually not able to keep up with committed SLA.
- End-user are not happy due to delay in support, their performance are also being impacted.

Requirement:

- Centralized hosting and operating environment for user systems of more than 5000 subsidiaries.
- Leverages **AI** and automation to provide highly stable, highly available, high quality, and cost-effective monitoring & operation services for many user systems.

High-level Solution



- **AI & Automation:** By analyzing different log data from various sources. The Platform shall learn behaviors and health status of user systems and therefore automatically monitor user systems smartly. It predicts potential problems. Once an abnormal case is detected. The Platform shall execute resolution activities proactively and automatically – so called auto-healing.
- **Manual:** Since AI and automation need time to evolve, manual monitoring and operation activities are still needed, especially for user request tickets. For manual activities, FPT provides efficient and high-skilled manpower 24/ 7 services.

+60% Service capability and availability improvement

40% Cost Reduction of IT Operation

100+ AI & Automation Use-cases

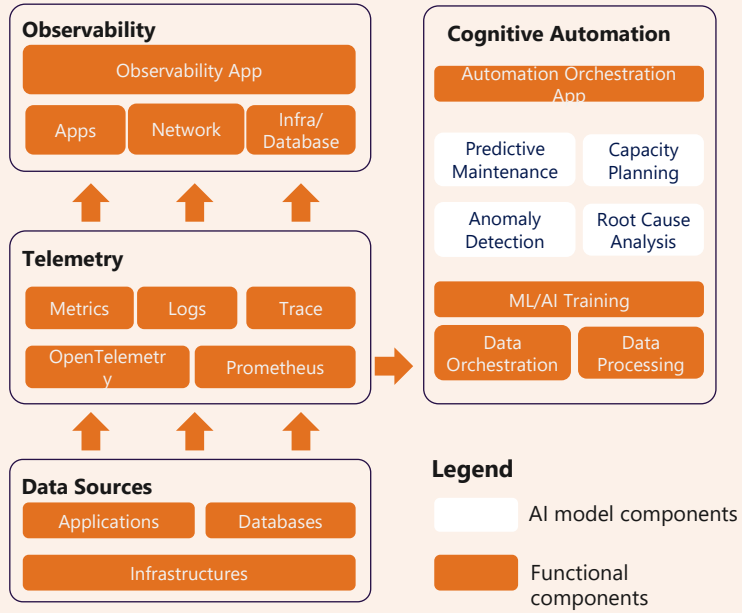
SUCCESS STORY: AUTOMATION IN IT OPERATION

FPT suggests an AIOps framework with 5 key services: **Observability, Capacity Planning, Self-healing, Predictive Maintenance, and Automation Solution**. It's scalable to align with our customer's business growth.

Product Owner

	Services	Objectives	Business Outcome
Gain insights into network behaviour, apps performance and system health	Observability	Achieve predictable IT service outcomes by understanding and managing system behaviour	Increased Autonomy of the systems
Optimize resource allocation	Capacity Planning	Ultilizing resource cost	Reduce infra cost
Improving SLA, reducing service downtime	Self-healing	Enhancing customer experiences, reduce mean time to resolution	Recovery Automation
Accelerate incident detection and resolution	Predictive Maintenance	Pinpoint underlying issues causing incidents, anticipate and prevent system failures	Reduce Incident & Increase Request Automation
Automation as a part of Product Backlog			

FPT Proposed AIOps Solution

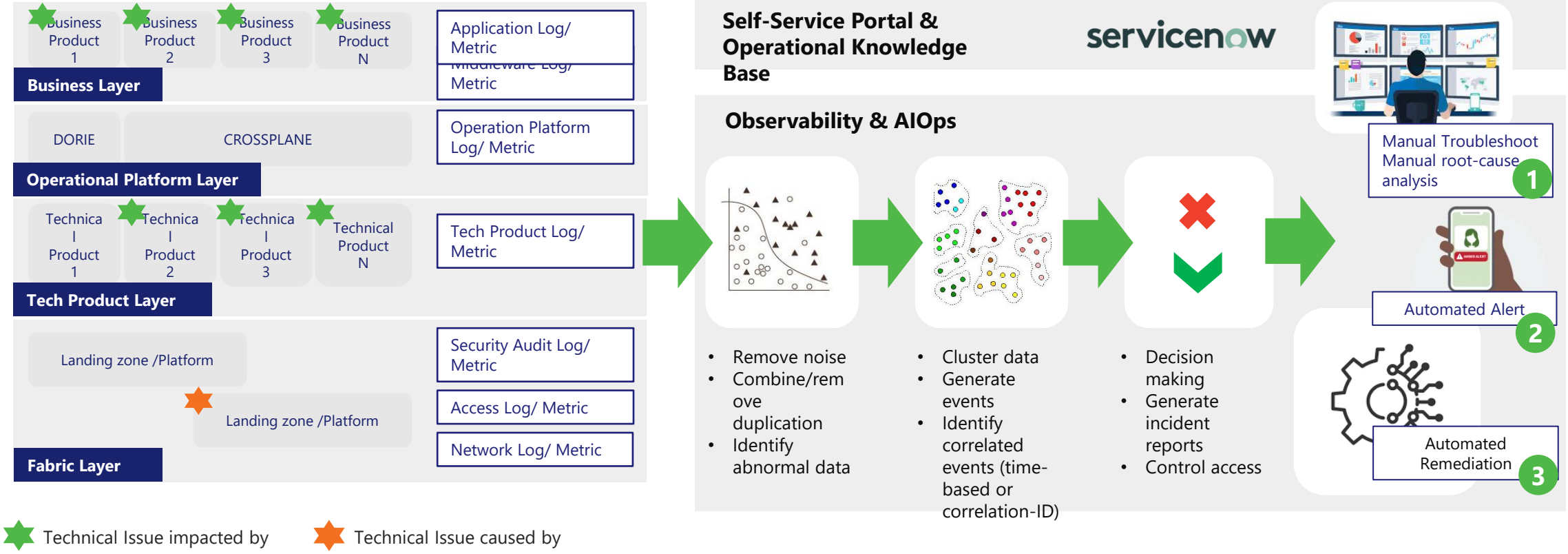


Continous Improvement	Measure Automation Outcomes	Assess demands and align forecasts – backlog, prioritization	Build Agility as per KPIs of Product Owners	Build Operational Stability
Standardization	Collaboration	Resuable Templates	Document before Automation	Zero Disruption

Implementing FPT's AIOps solution enables our client to **boost user experience and productivity** by leveraging automation and real-time insights. This leads to **reduced downtime, quicker issue resolution, and a more agile IT infrastructure**.

The next slide provides detailed principles for Observability & AIOps Design.

SUCCESS STORY: AUTOMATION IN IT OPERATION



Operational Use-cases

Troubleshooting & Diagnostics	**Security Monitoring**	**Operational Insights**	**Preventive Maintenance**	**Automated Business Continuity**
Performance Monitoring	**Automated Incident Monitoring**	**Compliance & Auditing**	**Configuration Management**	... and more

THANK YOU!

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