



# Realizing value through AIOps and Observability

# Realizing value through AIOps and Observability

---

**Carlos Casanova**  
Principal Analyst

April 19th, 2023

**BOLD  
AT  
WORK**

# Topics To Be Covered

Intersection of Monitoring – Observability – AIOps

Foundations

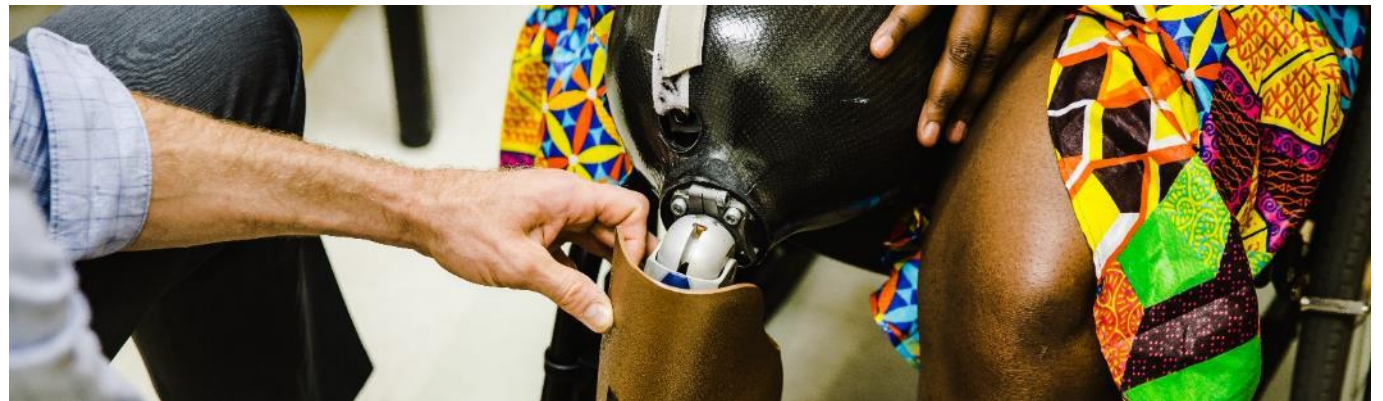
Value-Driven AIOps Use Cases

Generative AI

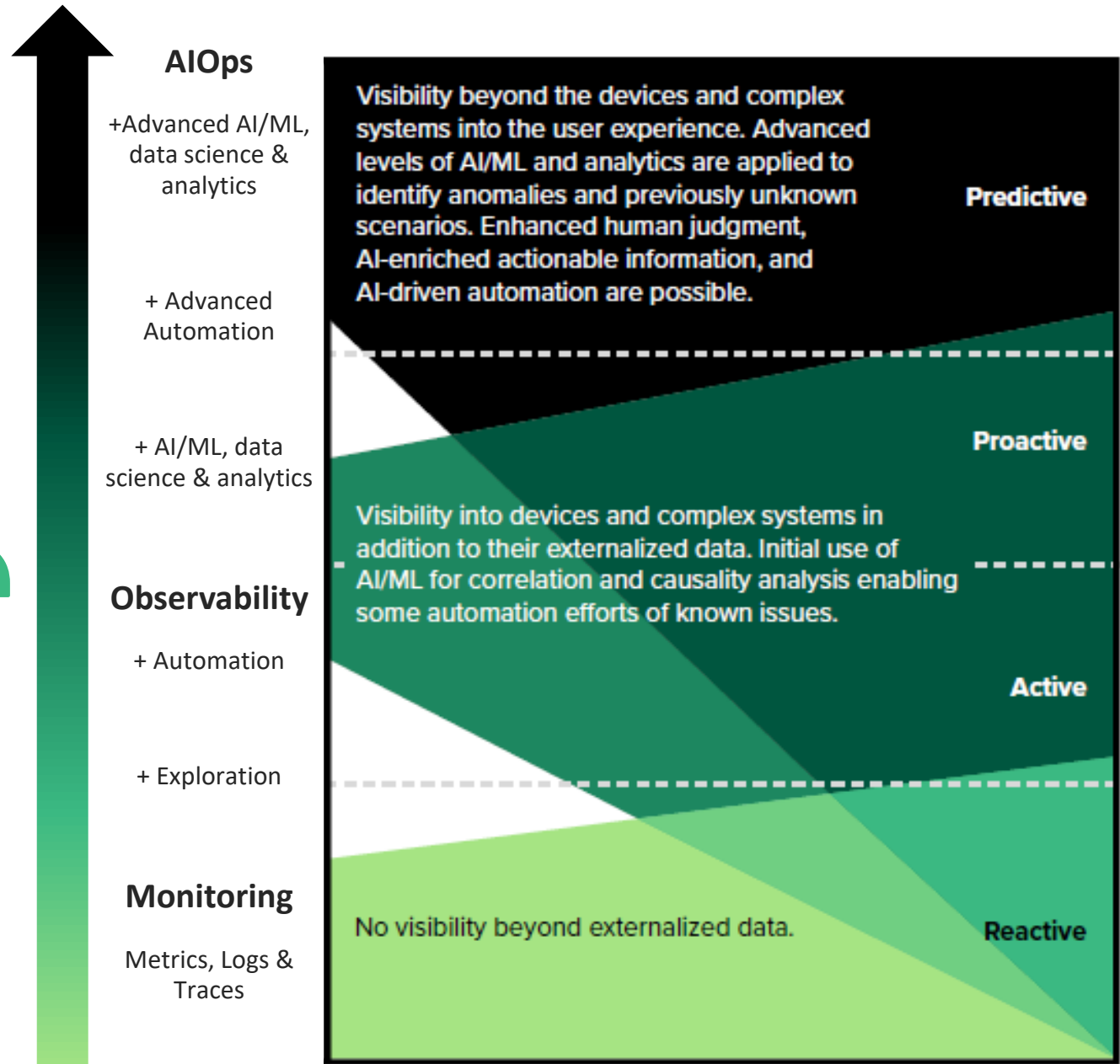
# Monitoring Observability AIOps

---

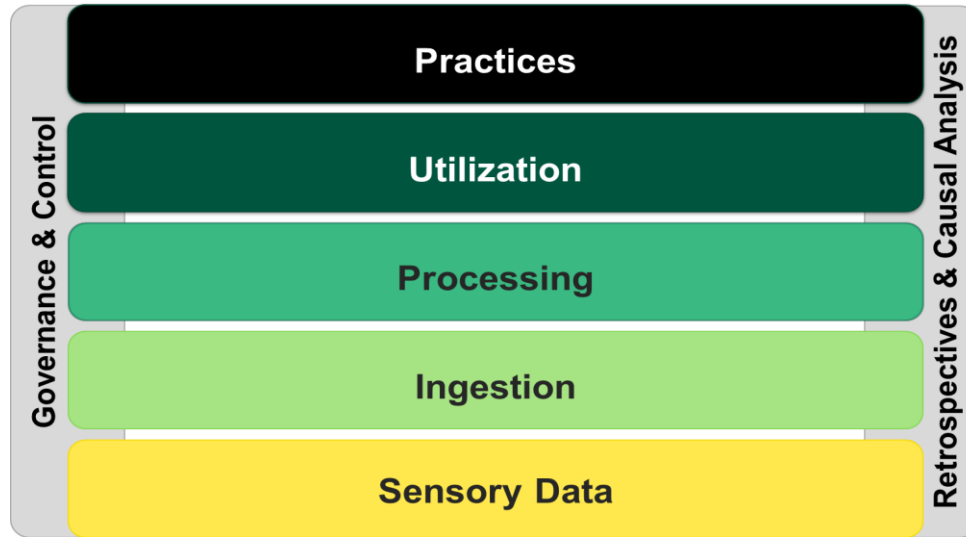
It's patient, not provider-centric  
*(the observed vs the observer)*



# Monitoring Observability AIOps



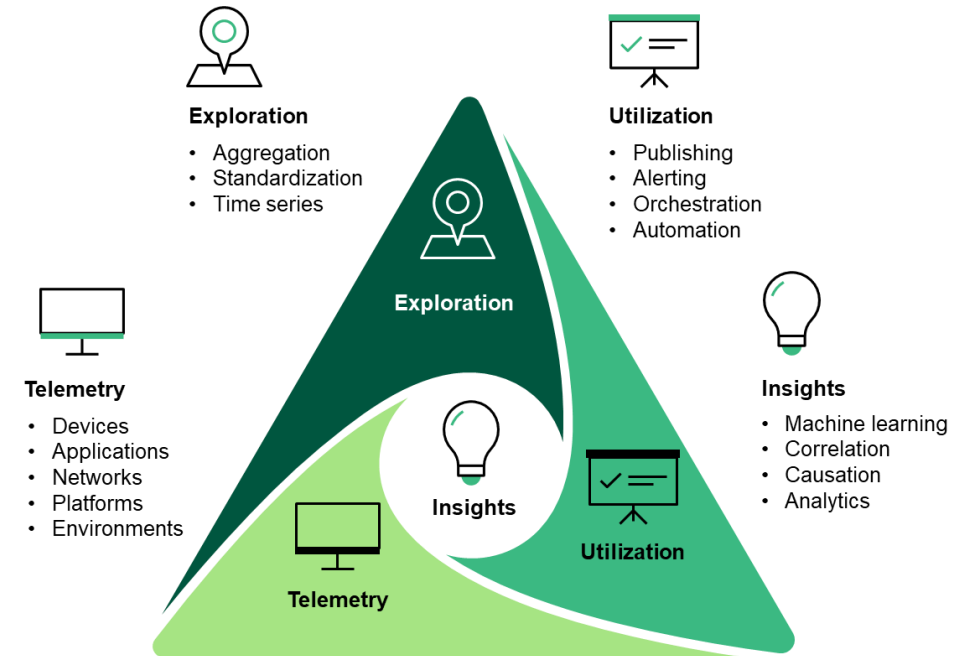
# Reference Architectures



Source: Forrester Research, Inc. Unauthorized reproduction, citation, or distribution prohibited.

**AIOps:** A practice that combines **human and technological applications** of AI/ML, advanced analytics, and operational practices to business and operations data. AIOps **enhances human judgment**, proactively alerts on known scenarios, predicts likely events, recommends corrective actions, and **enables automation**. It is fueled by coalescing and transforming sensory data into **AI-enriched actionable information**. A retrospective causal analysis and governance structure fuels foundational improvements and trust.

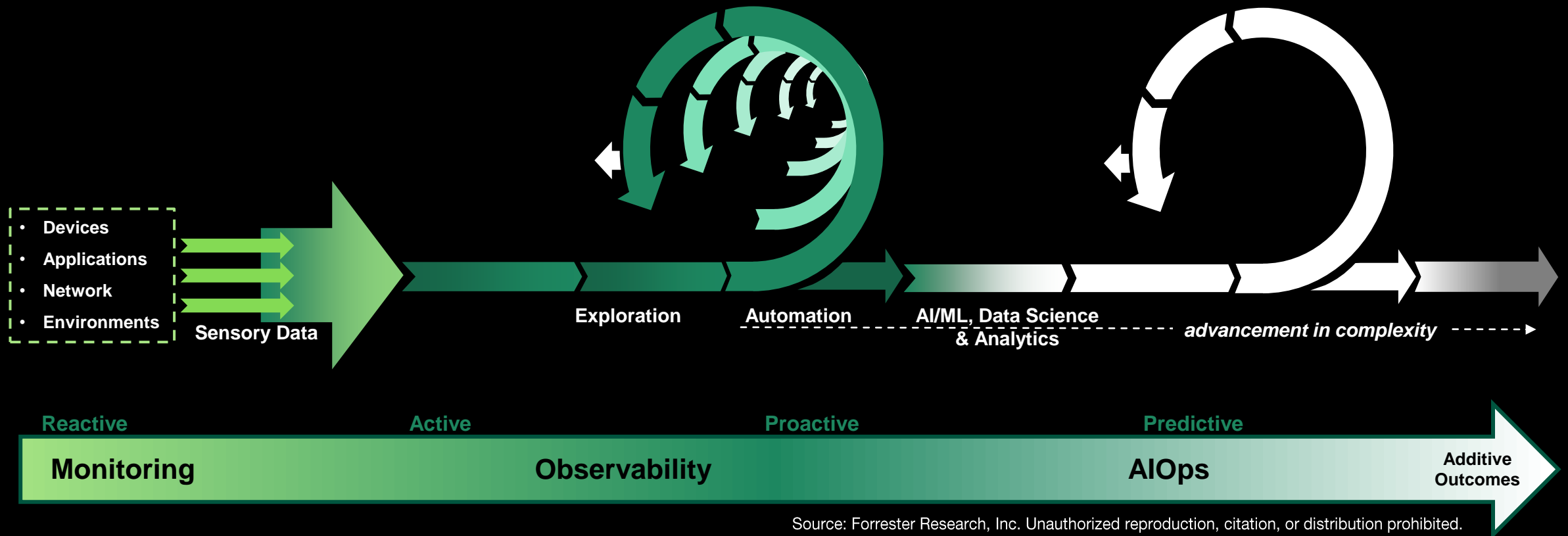
© Forrester Research, Inc. All rights reserved.



Source: Forrester Research, Inc. Unauthorized reproduction, citation, or distribution prohibited.

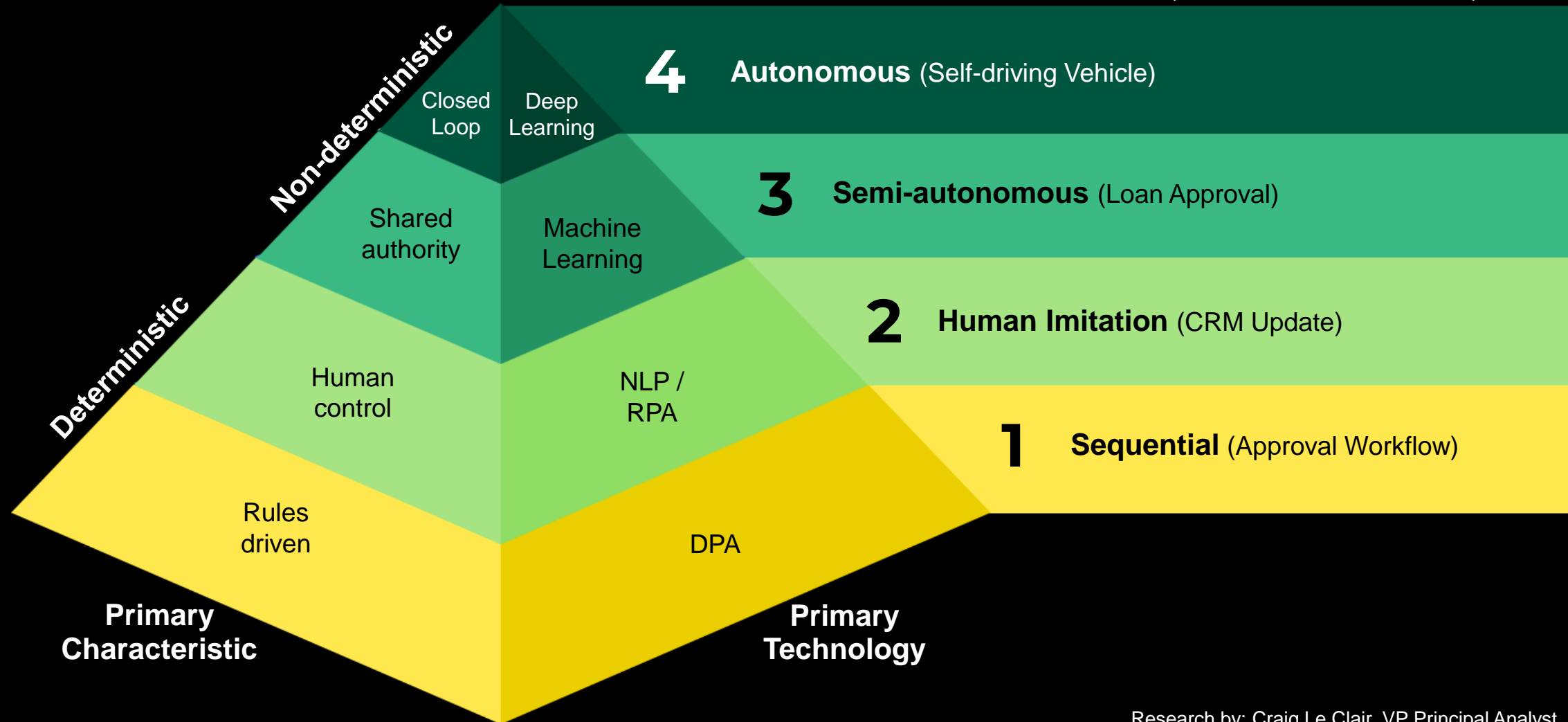
**Observability:** An **inherent ability** of an entity to allow **exploration and analysis** through immutable **externalized outputs**. Exploration of its **characteristics and behavioral patterns** provides **real-time visibility**; real-time and historical analysis interprets and infers the internal state and operations to provide **insights and actionable information**.

# Enhanced Insights and outcomes through exploration



# Automations Across Four Process Patterns

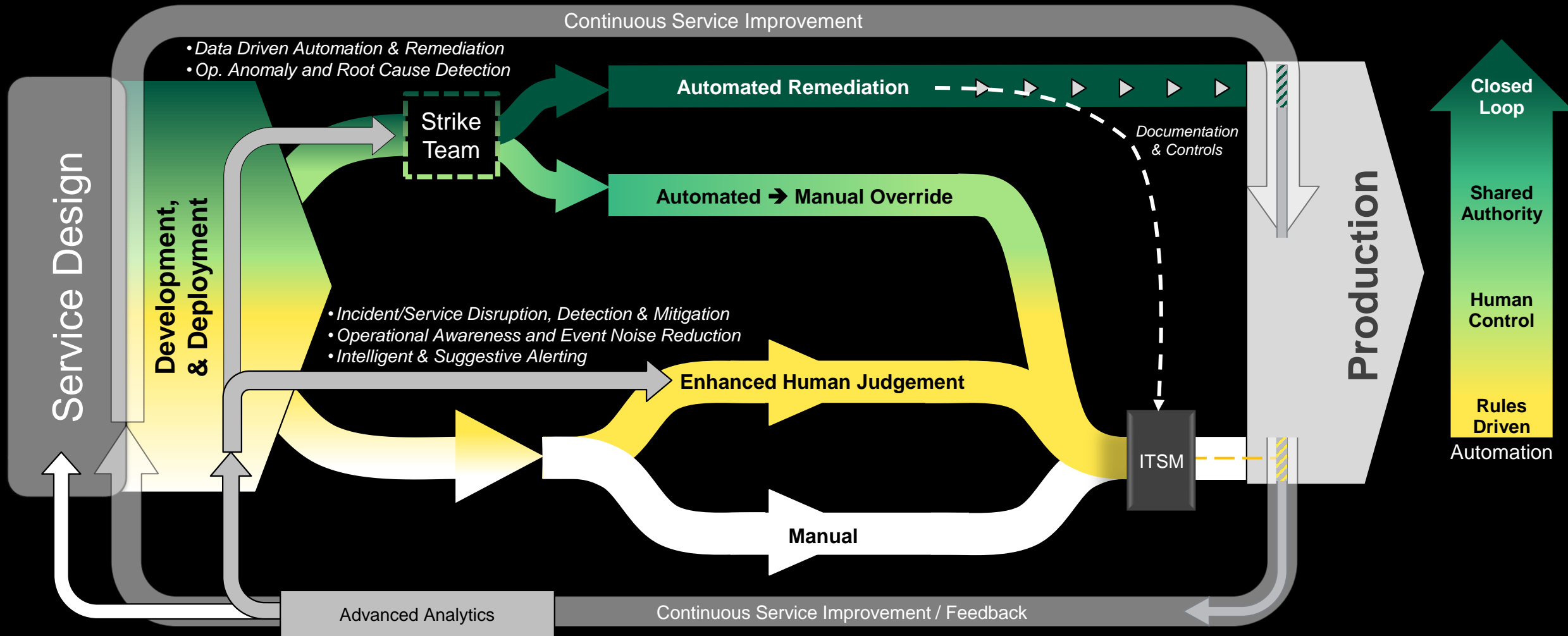
Source: Forrester Research, Inc. Unauthorized reproduction, citation, or distribution prohibited.



Research by: Craig Le Clair, VP Principal Analyst



# Modern IT Ops...meets business outcome demands



Source: Forrester Research, Inc. Unauthorized reproduction, citation, or distribution prohibited.



# Use Cases

---

Value Driven AIOps

**80%\*\***

**Reduction in MTTD, MTTA, MTTR**

*\*\*AIOps vendor metric*

Detections: AI/ML, anomaly, behavioral, signature

Predictive and causal analysis

Digital experience monitoring

# Incident/Service Disruption, Detection & Mitigation

---

*Identification or prediction of service interruptions to avoid unplanned service outages or degradation of services*

# Operational Awareness & Event Noise Reduction

---

*Process operational and contextual data to eliminate irrelevant data points so as to emphasize applicable scenario*



**74%\*\***  
**suppression through correlation**

*\*\*AIOps vendor metric*

Predictive and causal analysis

Contextual data enrichment

Real-time analytics with dynamic thresholding

**96%\*\***

**Auto creation of network-related tickets**

*\*\*AIOps vendor metric*

Contextual data enrichment

Predictive and causal analysis

Real-time analytics with dynamic thresholding

# Intelligent and Suggestive Alerting

---

*Enhance human judgement with recommended actions to address technological patterns and trends indicating disruptions or outages*

# Operational Anomaly and Root Cause Detection

---

*Identification of abnormalities in  
patterns and trends to pinpoint areas  
negatively impacting IT operations  
and business services*



Detections: AI/ML, anomaly, behavioral, signature

Predictive and causal analysis

Session Replay

# Data-driven automation & remediation

---

*Orchestration and automation that automates repetitive tasks, decreases human workloads, and remediates known vulnerabilities.*

**30%\*\***

**Effort reduction of service desk manual team**

*\*\*AIOps vendor metric*

AI/ML-driven automation and orchestration

Real-time analytics with dynamic thresholding

Predictive and causal analysis



OpenAI  
ChatGPT 4.0

Tell me how  
generative AI can be  
used to enable AI  
Operations for IT

Generative AI can be a powerful tool for enabling AI operations in the IT industry. Specifically, generative AI can be used to automate various tasks related to IT operations, such as:

- 1. Predictive Maintenance:** By analyzing data from IT systems and infrastructure, generative AI can predict potential equipment failures and system downtime before they occur. This allows IT teams to proactively address these issues before they become more significant problems.
- 2. Automatic Ticket Routing and Prioritization:** With the help of natural language processing (NLP) and machine learning (ML) algorithms, generative AI can automatically analyze support tickets and route them to the appropriate IT team members based on their skills and availability. It can also prioritize tickets based on their severity and the potential impact on the business.
- 3. Intelligent Automation:** Generative AI can automate repetitive and time-consuming tasks, such as system monitoring, backups, and updates. This can free up IT personnel to focus on more strategic initiatives that require human expertise.
- 4. Virtual Assistants:** By leveraging NLP and ML algorithms, generative AI can create intelligent virtual assistants that can answer common IT-related questions and provide support to end-users. This can reduce the workload on IT support teams and improve the overall user experience.
- 5. Anomaly Detection:** Generative AI can analyze large amounts of data from IT systems and infrastructure to detect anomalous behavior that may indicate security breaches, system failures, or other issues. This allows IT teams to quickly identify and resolve potential problems before they become more significant.

Overall, generative AI can help IT teams operate more efficiently and effectively by automating routine tasks, identifying potential issues before they occur, and providing support to end-users.





OpenAI  
ChatGPT 4.0

Tell me how  
generative AI can be  
used to enable AI  
Operations for IT

Generative AI can be used in IT operations to automate and optimize a wide range of tasks and processes. Here are some examples:

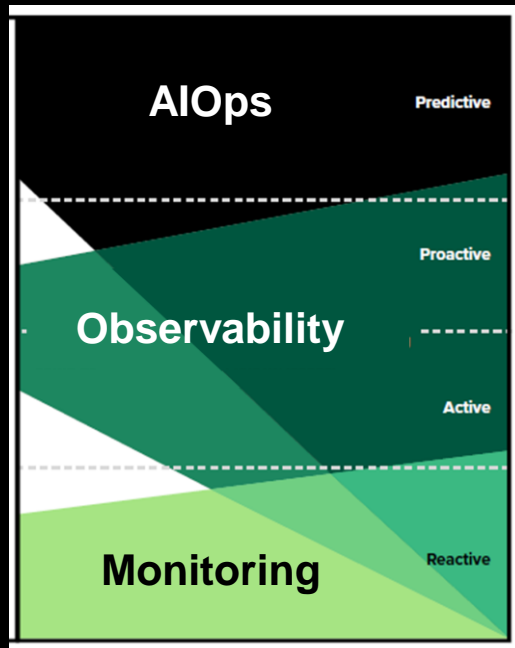
- 1. Infrastructure management:** Generative AI can be used to automatically provision and manage infrastructure resources based on real-time demand. For example, it can predict when more computing power will be needed and automatically spin up additional virtual machines or containers.
- 2. Incident management:** Generative AI can be used to automatically detect, diagnose, and resolve incidents in real-time. It can learn from historical data to identify patterns and root causes of incidents and suggest solutions to IT teams.
- 3. Predictive maintenance:** Generative AI can be used to predict when IT equipment will fail or require maintenance. It can analyze sensor data and other indicators to identify early warning signs, enabling IT teams to proactively address potential issues before they escalate.
- 4. Security operations:** Generative AI can be used to detect and respond to cyber threats in real-time. It can analyze network traffic, user behavior, and other data sources to identify suspicious activity, and automate responses such as blocking traffic or isolating compromised systems.

Overall, generative AI can help IT teams operate more efficiently and effectively, enabling them to better meet the needs of the business while reducing costs and improving service levels.

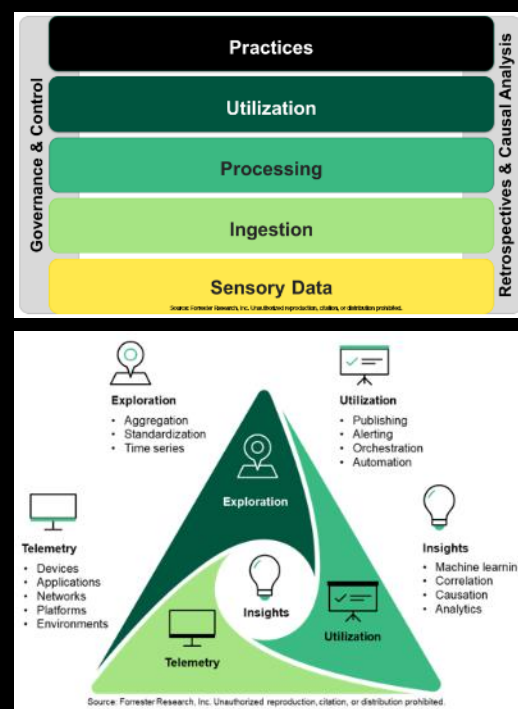


# Recap

## Intersections



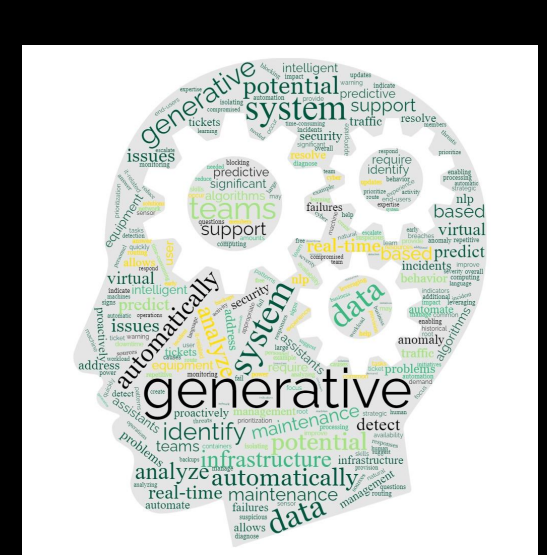
## Foundations



## Use Cases



## Generative AI





*Bon  
appetit*

*Thank you*


Carlos Casanova  
Principal Analyst, Forrester Research

# Thank You.

---

**Carlos Casanova**  
**Principal Analyst**

 <https://www.forrester.com/analyst-bio/Carlos%20Casanova/BIO17624>

 <https://www.linkedin.com/in/carlosacasanova/casanova/>

 <https://twitter.com/CarlosCasanova>

**BOLD**

**AT**

**WORK**