



FAST ENOUGH TO MATTER

A Playbook for
Turning Sensor
Intelligence into
Decisions, Safely





SEE THE PATTERN. CHANGE THE OUTCOME.

Remember when you first experienced asking ChatGPT a question and getting back insights you didn't think were possible? Physical and edge systems are about to have their ChatGPT a-ha moment.

AI creates an opportunity to reason across distributed information, uncover relationships that would otherwise remain hidden, and help organizations see patterns they could not see before.

But in operational environments, seeing is not enough. You need to be able to trust what you see.

Axonis Decision Intelligence brings AI to the data wherever it resides, enabling organizations to securely connect sensors, systems, and operational environments while maintaining governance, ownership, and control.

The result is a trusted, realtime data-to-decision pipeline that helps organizations identify risk sooner, improve resilience, coordinate action, and make better decisions faster.

If you work in environmental monitoring, smart cities, defense, or other mission-critical operations, this playbook is for you.

It will show you how to connect intelligence across distributed environments so you can anticipate change, strengthen resilience, coordinate response, and make consequential decisions with greater speed and trust.

BEYOND EDGE AI: AXONIS DECISION INTELLIGENCE

Edge AI represents an important shift in operational intelligence. By placing intelligence at or near the sensor, organizations can generate insights closer to where data is created in real time.

A transportation sensor may identify congestion. A utility sensor may detect an outage. A weather station may observe changing conditions.

Each provides valuable intelligence on its own. However, the most important patterns do not exist within a single sensor. They emerge from signals across sensors, systems, organizations, and operational environments.

This is where Axonis Decision Intelligence unlocks the real value of Edge AI.

By fusing sensor insights with operational systems, historical information, and other sources, Axonis Decision Intelligence creates a more complete understanding of the environment, enabling you to identify risks earlier, act with greater confidence, and improve outcomes where public safety, operational resilience, and mission success are at stake.

EDGE AI

- Creates intelligence at the sensor or device
- Realtime decisions based on specific sensor knowledge
- Typically requires AI-enabled devices or edge compute

EDGE AI WITH AXONIS

- Fuses intelligence across sensors, systems, and organizations
- Realtime decisions based on the correlation of sensors/signals from all data sources
- Works with existing sensors and operational systems

UNLOCKING MORE VALUE FROM EXISTING SENSOR INFRASTRUCTURE

Organizations have already invested heavily in sensors, monitoring systems, and operational infrastructure. Axonis Decision Intelligence helps maximize the value of those investments by unlocking intelligence that already exists across the environment.

✓ Improve Decision Quality

Connect intelligence across existing systems to create a more complete understanding of operational conditions.

✓ Reduce Manual Monitoring Costs

Automate the discovery of patterns, anomalies, and emerging conditions across distributed systems.

✓ Expose Coverage Gaps

Use intelligence from existing networks to determine where additional sensors will create measurable value.

✓ Increase Return on Existing Infrastructure

Generate more value from deployed sensors before investing in additional hardware.

✓ Improve Resource Utilization

Enable personnel to focus on response and decision-making rather than data collection and analysis.

✓ Validate Infrastructure Investments

Use operational intelligence to prioritize future sensor, network, and infrastructure expansion.

✓ Extend the Life and Value of Existing Assets

Transform disconnected monitoring infrastructure into a connected intelligence network without replacing deployed systems.

By helping organizations act earlier and with greater confidence, Axonis Decision Intelligence increases the return on existing infrastructure while creating a stronger foundation for future growth.



OODA LOOP — PROCESS SIGNALS FROM EVERYWHERE



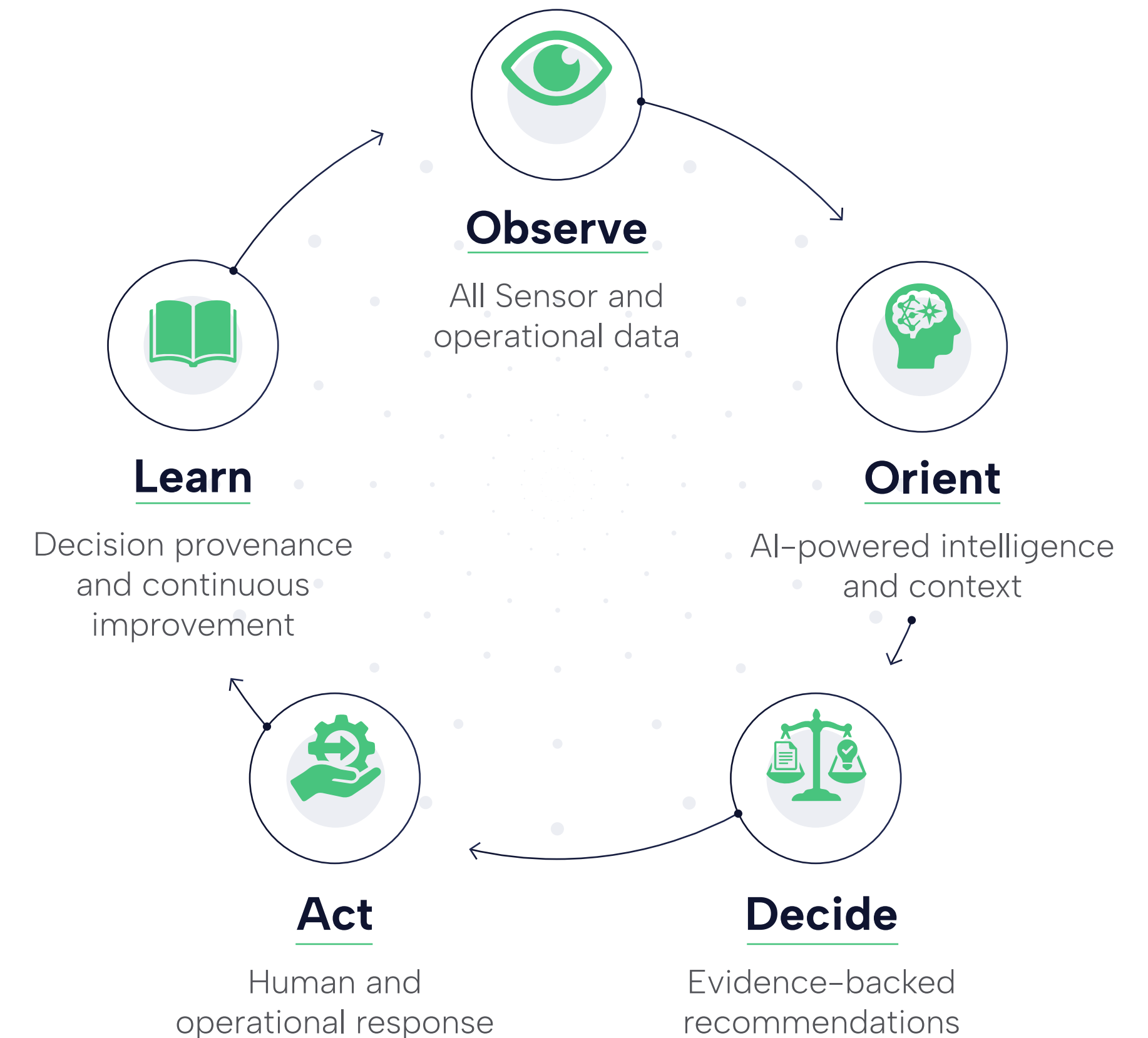
Inside the cockpit of a fighter jet, a pilot must process signals from everywhere: radar, instruments, communications, and the movement of other aircraft. They must observe what is happening, orient to what it means, decide what to do, and act.

That cycle — Observe, Orient, Decide, Act — became known as the OODA Loop, **developed by Air Force strategist John Boyd**. The framework helped American F-86 Sabre pilots achieve a 10-to-1 combat advantage over Soviet MiG-15s during the Korean War, demonstrating that decision advantage can outweigh technological advantage.

Boyd's insight was simple: advantage comes from understanding and responding to changing conditions more effectively than your competitors or adversaries. Organizations face a similar challenge.

Sensors, operational systems, and connected infrastructure generate unprecedented amounts of intelligence. But intelligence alone does not create advantage. Organizations must be able to connect information, understand its significance, and turn it into action before the opportunity or threat becomes obvious.

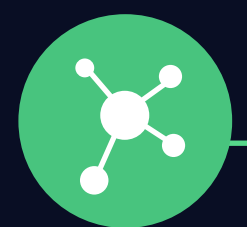
Axonis Decision Intelligence is architected around these same principles.



Axonis provides the intelligence-to-decision pipeline that enables organizations to move effectively through the modern OODA cycle and transform distributed intelligence into trusted decisions.

Axonis Decision Intelligence is designed for rapid deployment. One Axonis customer, a flood monitoring provider serving government agencies and community operators, proved what is possible. Instead of replacing existing infrastructure, the organization connected Axonis to public weather sources, federal gauge networks, local flood districts, and privately deployed sensors to create a live operational intelligence platform in just four weeks.

READY NOW: FROM CONTRACT TO LIVE IN FOUR WEEKS



PHASE 1

Connect Existing Intelligence

Existing sensor networks, weather feeds, gauge data, and historical records were connected into a unified intelligence layer.



PHASE 2

Configure Decision Workflows

Natural language intelligence exploration, proactive alerting logic, and operational investigation workflows were established.



PHASE 3

Operationalize Intelligence

The organization deployed customer-facing applications, public awareness tools, automated alerts, and sensor health monitoring capabilities.



PHASE 4

Scale and Expand

With the intelligence foundation in place, new customers, sensors, and use cases could be added through configuration instead of custom development.

THE RESULT:

Production deployment in four weeks

Multiple government agencies onboarded

Highly targeted proactive alerts are now delivered for live weather events

Existing public and private sensor infrastructure fully leveraged

New intelligence surfaced without replacing existing systems

ENVIRONMENTAL INTELLIGENCE



Environmental threats rarely respect organizational boundaries.

Floods, wildfires, severe weather events, and infrastructure failures often involve intelligence distributed across weather agencies, utilities, transportation networks, emergency management organizations, and privately operated systems.

Organizations that can connect and act on all intelligence sensors and systems gain significant operational advantages:



Earlier Risk Identification

Identify emerging environmental threats before conditions become critical.



Improved Preparedness

Give decision-makers more time to evaluate options and coordinate response.



Greater Infrastructure Resilience

Monitor and protect critical assets before disruptions escalate.



Stronger Cross-Agency Coordination

Enable stakeholders to act from a shared understanding of changing conditions.



More Effective Resource Allocation

Deploy personnel, equipment, and city resources where they can have the greatest impact.



Better Public Safety Outcomes

Support faster, more informed decisions when lives and property are at risk.



Keep Data Secure

Strengthen cyber resilience by bringing AI to the data, allowing organizations to generate intelligence without moving, copying, or exposing sensitive information.

SMART CITIES

Modern cities generate intelligence everywhere.

Traffic systems, public safety platforms, utilities, environmental monitoring networks, transportation systems, and critical infrastructure continuously produce information about the health and operation of the urban environment.

The cities that can connect and act on intelligence across these systems gain significant operational advantages:



Enhanced Public Safety

Provide first responders and city officials with more complete situational awareness during incidents and emergencies.



Faster Incident Response

Identify developing situations sooner and coordinate response more effectively.



Improved Traffic Management

Reduce congestion and improve mobility through broader operational awareness.



Greater Infrastructure Resilience

Monitor critical infrastructure and identify emerging issues before they impact services.



Stronger Cross-Department Coordination

Enable city agencies to operate from a shared understanding of conditions and events.



More Effective Resource Allocation

Deploy personnel, equipment, and city resources where they can have the greatest impact.



Better Citizen Outcomes

Improve quality of life through more informed and proactive city operations.



Protect Critical Infrastructure Data

Support city-wide intelligence and coordination without exposing sensitive information from utilities, transportation systems, public safety networks, or critical infrastructure.



DEFENSE AND NATIONAL SECURITY

Creating Decision Advantage Across Distributed Operations

Defense and national security operations depend on intelligence generated across highly sensitive and often airgapped environments.

Sensors, biowearables, mission systems, ISR assets, logistics platforms, operational networks, and coalition partners all contribute valuable intelligence. The challenge is turning that intelligence into a decision advantage while maintaining security, sovereignty, and mission control.

Organizations that can connect and act on intelligence across operational environments gain significant advantages:



Greater Situational Awareness

Create a broader understanding of operational conditions across missions and theaters.



Decision Advantage

Enable leaders to understand changing conditions and act before adversaries.



Faster Decision Cycles

Reduce the time required to move from observation to action.



Improved Mission Effectiveness

Support commanders and operators with more complete intelligence and context.



Enhanced Force Protection

Identify emerging risks to personnel, assets, and operations earlier.



Stronger Coalition Coordination

Benefit from intelligence across organizations while maintaining sovereignty and control.



More Effective Resource Deployment

Optimize the use of personnel, equipment, and mission-critical assets.



Preserve Security and Sovereignty

Generate intelligence across distributed operational environments while maintaining classification controls, mission security, and sovereign ownership of data.



CONCLUSION

FAST ENOUGH TO MATTER

Ready to unlock the full potential of your sensor infrastructure?

Contact us to discuss how Axonis Decision Intelligence can help you connect intelligence across your environment, uncover hidden patterns, and change outcomes fast enough to matter.

