

Highlighter | Silverpond

Closing the Perception Gap

Solutions Paper

Enterprises have spent years capturing more of the world.

Cameras watch infrastructure. Sensors measure operating conditions. Drones inspect assets. Systems record maintenance, inventory, incidents and work. People add experience that no model can replicate.



The perception gap is the cost of not knowing.

Enterprise has never had more information. What it needs now is operational understanding.

Yet despite this abundance of information, organisations still struggle to answer three critical questions: what is happening, why does it matter and what should happen next?

This is the perception gap — the gap between what an organisation observes and what it understands.” This explains the gap more completely and makes the reader feel the strategic problem before the product appears.

Wasted truck rolls. Missed maintenance windows. Repeated inspections. Decisions made on incomplete information. Teams are working harder to find what matters, while critical signals remain buried inside growing volumes of data.

An observation hidden inside a video stream has no operational value. A defect disconnected from its asset history cannot guide maintenance. A safety condition discovered in the next reporting cycle cannot prevent today’s incident.

The next evolution of enterprise operations is not more data, another dashboard or simply better detection. It is perception. Detection alone does not change outcomes. The value appears when organisations can understand significance early enough to act.

Seeing is faster than being told. Fast enough to change decisions.

Perception is the ability to create a shared operational understanding of what is happening, why it matters and what should happen next while there is still time to change the outcome.



The progression of thinking

From collecting information to changing outcomes

Enterprise technology has advanced in stages. Each stage creates value. But each also reveals the need for the next.

Stage	What it enables	Where it stops
Data collection	Captures events, conditions and activity.	Stops at distributed information.
Analytics	Explains trends and reports on what has already happened.	Stops when insight arrives after the operational moment.
AI detection	Identifies objects, defects, anomalies and patterns at speed and scale.	Stops because detection does not explain significance or initiate the right response.
Enterprise perception	Connects observations with context, human judgement, operating rules and action.	The enterprise understands, decides, acts and verifies.

Enterprise Perception does more than improve visibility. It reduces the cost of not knowing.

The perception gap begins to disappear. Maintenance can be planned before windows are missed. Inspections become targeted instead of repeated. Field teams act on evidence instead of assumptions.

This is the shift that matters.

A model can recognise corrosion. Enterprise perception establishes which asset is affected, whether the condition is worsening, what risk it creates, whether work is already planned nearby and who should act.

The opportunity is no longer hidden in the data. It becomes operational.

And because perception operates continuously, enterprises are no longer limited to periodic sampling. Every asset can be watched continuously instead of

sampled occasionally. Human expertise is applied where it creates the greatest value: deciding what happens next.

Why now?

Enterprise Perception is possible now because three conditions have arrived together.

First, perception has become technically capable: models can read operational reality and separate meaningful events from noise.

Second, demand for autonomous capability is moving faster than enterprise readiness, creating a need for governed operational environments.

Third, context quality — not model quality — is now the ceiling. The organisations that win will be the ones able to supply current, permissioned, entity-aware context and turn it into trusted action.

What is an Enterprise Perception System?

One place for insight, control and context

An **Enterprise Perception System** is the perception layer for enterprise operations. It continuously connects observations from the physical and digital world with enterprise context, AI agents and human expertise to create shared understanding.

Element	What it contributes	Why it matters
 Perception	Identifies meaningful change, conditions and relationships across video, imagery, LiDAR, sensors, documents and human observations.	The enterprise recognises significance, not simply activity. Critical signals become visible while there is still time to respond.
 Context	Connects observations with assets, locations, history, policy, operating standards, workflows, work orders and business priorities.	People understand what an observation means, why it matters now and what it may affect.
 Expertise	Brings human judgement, local knowledge, validation, governance and accountability into the system.	People remain responsible for decisions that require human authority. AI agents support experts rather than replace them.
 Awareness	Creates a living operational picture across teams, systems, locations and environments. AI agents provide continuous attention at a scale human teams cannot sustain alone.	Teams work from a shared understanding of what is happening, where attention is needed and how conditions are changing.
 Action	Turns operational understanding into governed workflows, escalation, intervention and verification. Actions follow defined permissions, operating limits and approval paths.	Perception becomes trusted action. Every response is controlled, traceable and connected to its evidence and outcome.

From perception to action

In one controlled operational environment, perception, context and control come together so organisations can understand what is happening, why it matters and what should happen next while there is still time to act.

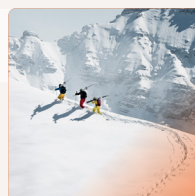
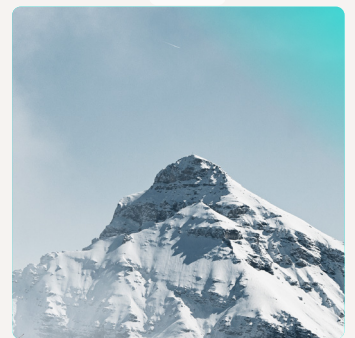
An EPS brings together sensors, systems, workflows, AI agents and human expertise. Fragmented observations become a living operational picture across the enterprise. AI agents extend attention, speed and scale, while people provide judgement, validation, governance and accountability.

An Enterprise Perception System is not another isolated model.

An EPS is the controlled operational environment in which models, AI agents, people and enterprise systems work together.

Control governs every element. Humans remain in control. AI agents operate with identity and permissions. Actions follow defined workflows, operating rules and approval paths. Every recommendation, decision and outcome is traceable, creating an auditable operational memory that improves through every verified action.

The result is shared operational understanding that enables organisations to understand, decide, act and verify with confidence.



How an Enterprise Perception System functions

A continuous loop from the physical world to trusted action

The operational difference is a continuous perception loop.

Stage	What happens	Operational result
Observe	Highlighter receives live or recorded inputs from cameras, drones, sensors, systems and people.	The relevant evidence enters a shared operational environment.
Interpret	AI agents detect, classify, track and compare conditions across large volumes of information.	Changes that human teams may not have time to find are surfaced.
Connect	Observations are connected with asset identity, location, history, standards, operating rules, work orders and current priorities.	A signal becomes an understood operational event.
Prioritise	Events are assessed by significance, confidence, urgency and business rules.	Attention is directed towards the exceptions most likely to change an outcome.
Act	Highlighter triggers the appropriate workflow, alert, inspection, control response or human escalation.	Perception enters the operation instead of remaining in a report.
Verify	Humans review evidence, validate or override responses, and retain a traceable record of what occurred.	Action remains trusted, accountable and improvable.
Operational memory	Every verified decision strengthens operational memory.	Highlighter records the relationship between observations, context, recommendations, decisions, evidence, approvals and outcomes, creating an auditable record that improves through use.

Trusted actions change the speed of operations.

Instead of discovering issues in the next reporting cycle, organisations can respond while events are still unfolding. Minutes can replace days. Intervention can happen before disruption becomes a consequence.

Highlighter connects inspection imagery, asset context and human review so experts can focus on the observations most likely to change an outcome.

Why perception matters

The value appears in the outcome, not the detection

Detection finds change. Perception explains significance, impact and the next best action.

Perception changes what an enterprise can do and when it can do it.

Some benefits improve existing operations. Others create entirely new operational capabilities that were previously impossible.

Operational environment	Perception in practice	Outcome
Energy distribution	Highlighter connects inspection imagery, asset context and human review so experts can focus on the observations most likely to change an outcome.	The result is fewer unnecessary field deployments, better use of maintenance windows, reduced repeat inspections and earlier intervention before asset conditions deteriorate.
Warehouse inventory	Forklift-mounted video gives Highlighter a moving view of warehouse operations. AI agents surface hazards and inventory variance while Highlighter connects those observations to the workflows and people responsible for action.	Warehouse operations move from periodic checks to continuous perception. Hazards and inventory issues are surfaced as they emerge, allowing teams to manage by exception rather than searching manually for problems.
High density farming	Highlighter brings together continuous camera feeds, animal behaviour, temperature and humidity across multiple sheds and farms. Within defined operating rules, Highlighter can trigger HVAC responses while operators retain oversight, intervention rights and accountability.	This is more than monitoring. One operator can understand multiple farms simultaneously, remotely and in real time. Conditions can be changed immediately instead of waiting for the next inspection or report. Enterprise Perception enables operations that were not previously possible.
Enterprise-wide operations	Across enterprise operations, Highlighter connects asset condition, maintenance activity, safety events, operational context, AI agents and human expertise into one living operational picture.	Fewer avoidable site visits. Better use of maintenance windows. Earlier intervention. Less repeated inspection. More expert time spent deciding rather than searching.

This is why perception matters more than detection alone.

A detection can tell you that something is present. Perception tells you whether it matters, what it affects, who should respond and whether the response worked.

That is the difference between an alert and an outcome.

Between seeing more—and seeing what matters.

Between discovering an event in the next reporting cycle—and acting while the opportunity is still open.

Highlighter surfaces what matters the moment it matters. Because perception is most valuable only when it arrives in time to act.

The challenge is not seeing more. It is understanding what matters while there is still time to act.

Highlighter transforms fragmented observations into operational understanding. As the Enterprise Perception System, it unites sensors, systems, workflows, AI agents and human expertise in one operational environment where perception, context and control come together. Humans remain in control. Perception becomes trusted action. Highlighter makes perception operational.

Highlighter.
See what's next.