



DECISION MAKING INSIGHT SERIES

Good decision-making requires exposing three usually-invisible layers — human judgment, functional process, and time. Treating any one of them as mere background is what causes accountable decisions to fail

Article 3 of 3 — Organisational Architecture

Decision Architecture III — The Depth: Adding the Dimension of Time

Why decision making needs to evolve

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The Problem This Article Addresses

...is that risk management, as currently modelled, is **flat** — it maps which functions exist (sensing, deciding, governing) without showing the depth those functions actually operate through. A functional hexagon of roles tells you *what* is done, but not *why* judgment varies between equally competent people, *why* well-governed organisations still make bad calls, and *why* decisions that were sound six months ago quietly become wrong without anyone noticing. This missing depth isn't a gap to be patched with another framework — it's a missing architecture. Without an explicit account of the human/philosophical substrate beneath decisions and the temporal layer above them, risk management remains a set of disconnected mechanics rather than a coherent system for leadership under uncertainty.

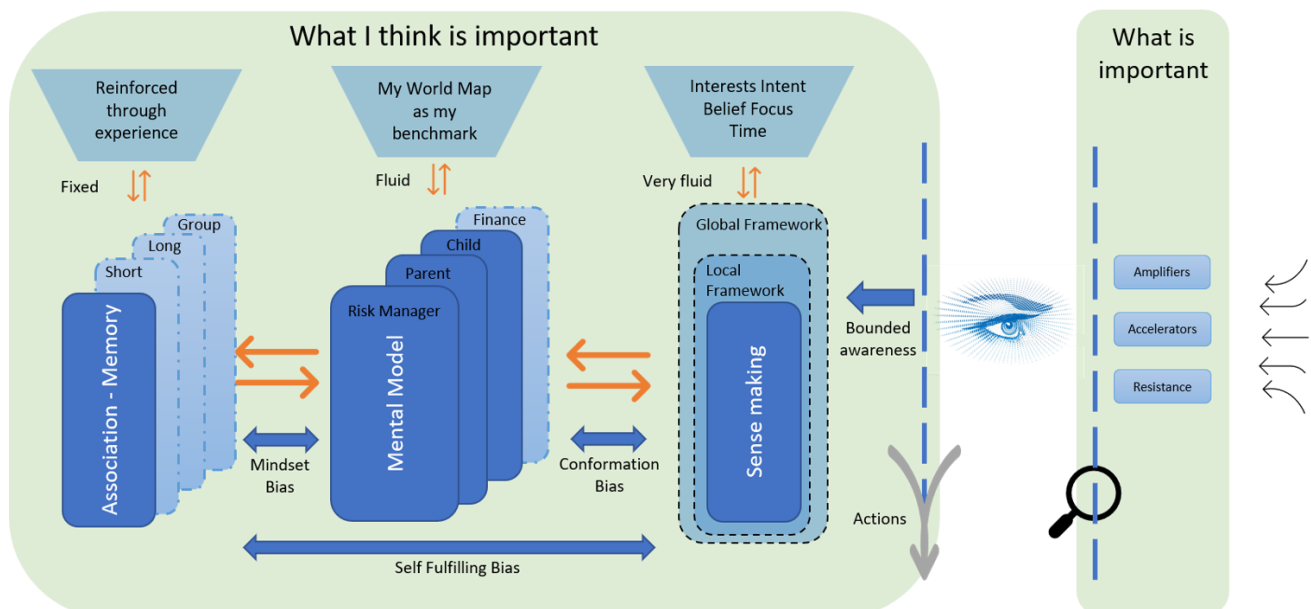
Summary

The article proposes that decision-making architecture is three-layered, not one. Layer 1 is the human and philosophical substrate — risk philosophy, judgment formation, ethical boundaries, incentive effects, psychological load, dissent, knowledge quality, and institutional memory. This is presented not as "culture" in the soft, ambient sense typically used, but as the actual foundation every functional failure traces back to. Layer 2 is the functional decision architecture itself — a five-part cycle of Sense, Interpret, Execute, Govern, Decide, Learn — but now explicitly grounded in Layer 1 rather than treated as a self-contained process. Each stage is tied to who actually performs it (engineers and analysts sense; SMEs interpret; program teams execute; CROs and boards govern; executives decide) and the article is precise that interpreting is not neutral and deciding is not the same as concluding — it is the act of a specific accountable person knowingly accepting what remains. Layer 3 is the

temporal/adaptive dimension, described as almost entirely absent from current practice: assumption decay, decision reopening, cumulative anomaly detection, schedule-pressure distortion of evidence, cascading risk ownership, and an adaptive learning loop that feeds lived experience back into Layer 1. The three streams from the prior paper (silent architecture, who decides, process-to-capability) are mapped onto this three-layer structure, and the article closes with its central claim: this is not a risk management framework, it is a leadership-under-uncertainty architecture.

The multidimensional nature of decision making

Any decision making takes place at different levels and to different intensities. Risk management is one of those functions where this can play a significant role and specifically when we are in a very uncertain stage. What does this mean?



As people are making decision based on a mind map as highlighted above, each person has a different view and interpretation of reality. This needs to be taken into consideration when talking about risks and opportunities as this mind map affects personal appetite and prioritisation of objectives.

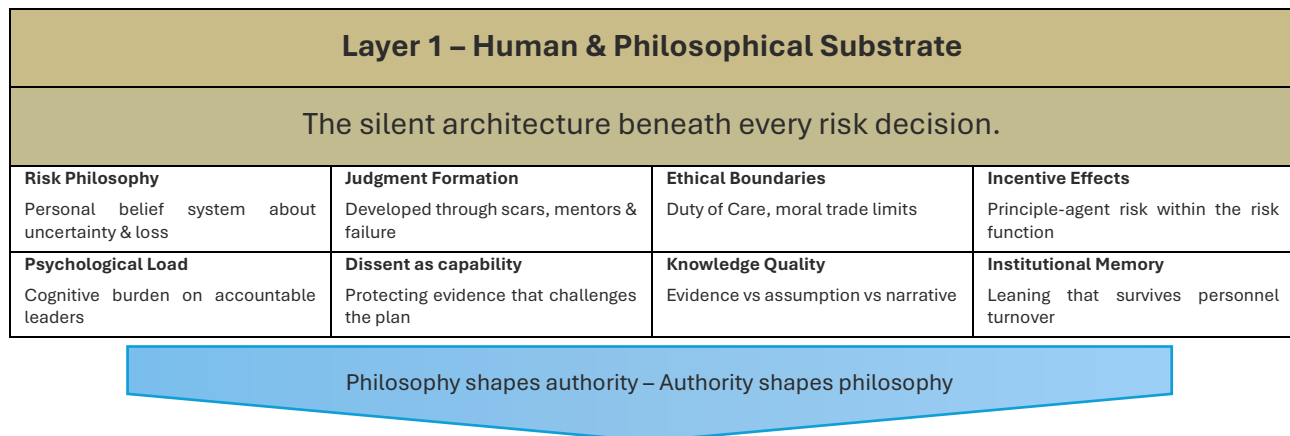
The diagram created in article 1 of this series is still essentially flat — it shows *what* functions exist but not *through what layers of reality* those functions operate. Through interviews it can be shown that we can add three vertical dimensions that sit beneath and above the functional hexagon:

- **Below:** the human/philosophical substrate — judgment, ethics, incentives, psychological burden, philosophy
- **Middle:** the functional decision architecture (the hexagon)
- **Above:** the temporal/adaptive layer — assumption decay, decision reopening, institutional learning

These three layers aren't additions. They're the *depth* the profession needs to move forwards.

Building on the first two papers we can propose the following future oriented architecture for a more decisive decision making management approach.

Layer 1 is the foundation, not the decoration. Every functional failure — poor decisions, diffused accountability, captured risk functions — traces back to something in this layer. Risk philosophy never articulated. Incentives misaligned. Dissent that was heard but couldn't change the outcome. Ethical boundaries assumed rather than drawn. Traditional organisational architectural design treats these as "culture" — a soft surround to the real structure. This architecture treats them as the substrate *on which* everything else rests.

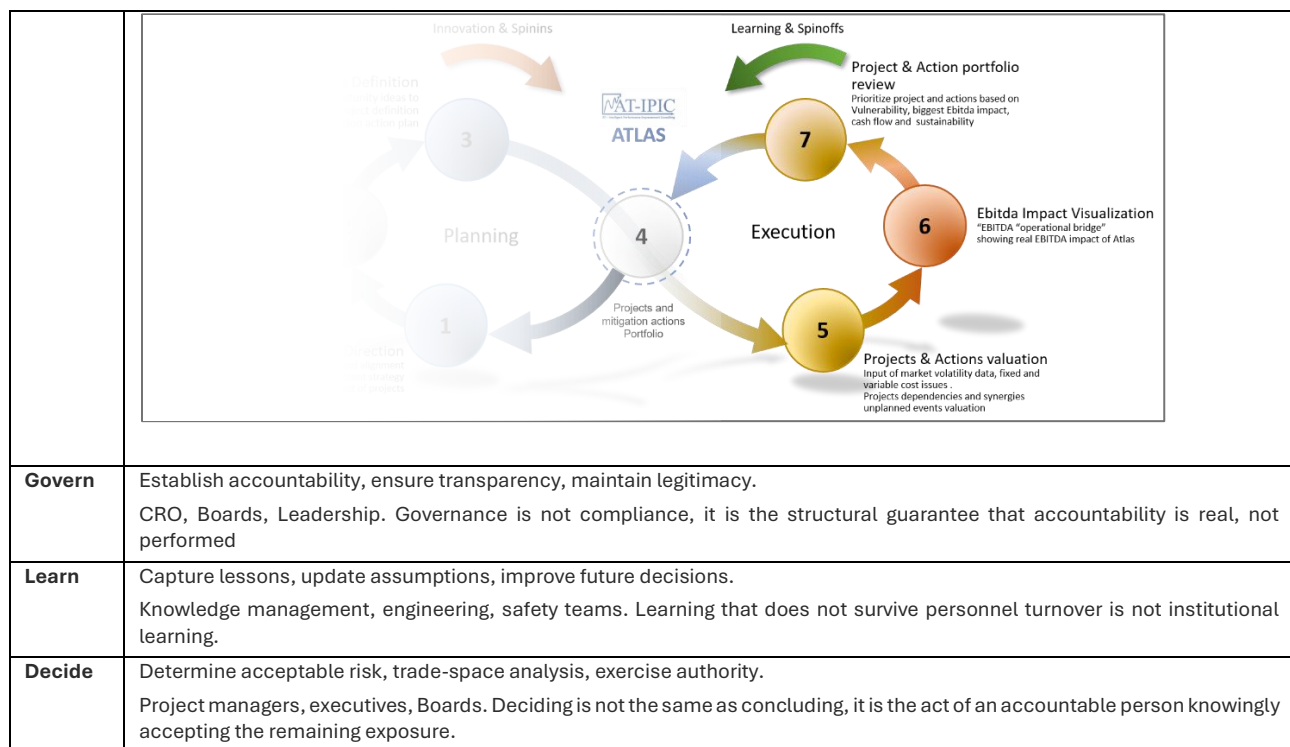


Layer 2 is the functional engine — but now grounded. The decision authority hexagon from the previous diagram sits in the middle layer, but it now has something beneath it (the philosophy that shapes how authority is exercised) and something above it (the temporal dynamics that determine whether yesterday's decision is still valid today).



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Sense	Detect weak signals, monitor assumptions, scan for opportunities and threats. Typically performed by engineers, operators and analysts but a Chief Engineer may also sense, interpret and learn simultaneously.
Interpret	Make sense of uncertainty, Challenge assumptions, integrate evidence and dissent. Technical authorities and SME's . Interpretation is not neutral, it is shaped by culture, incentives and who is in the room.
Execute	Implement decisions, allocate resources, management programs. Program teams. Execution is where the quality of the prior decisions becomes visible, and where new risk information is generated



Decision age – Assumptions expire – Context shifts

Layer 3 is the dimension most completely absent from current practice. Risk systems treat decisions as objects — entries in a register, positions on a heat map. The interview data shows that decisions are actually *interpretations*, and interpretations age. Assumptions expire. Pressure distorts what evidence means. Success creates dangerous confidence. This layer is the "temporal nervous system" of the organisation — continuously asking whether what was decided then is still right now.

Layer 3 – Temporal & Adaptive Intelligence

What changes every prior decisions validity – the dimension traditional risk systems ignore

Assumption Decay

Half-life of risk knowledge, when does prior evidence expire?

Decision Reopening

Triggers for revisiting prior commitments

Cumulative Anomaly

When success conceals growing exposure

Pressure Distortion

How schedule & cost change what evidence means

Cascading Risk

Interactions that cross ownership boundaries

Adaptive Learning Loop

Learning that reshapes philosophy, not just process

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Assumption decay	Every risk decision rests on assumptions. Those assumptions have a half life. Organisations need explicit methods for identifying when inherited assumptions have expired, before the system acts on them as if they were still true.
Decision Reopening	A risk accepted six months ago may no longer be acceptable. What evidence or change in context should force an organisation to revisit a prior decision? This is structurally absent from most ERM systems.
Cumulative anomaly	Repeated success is no evidence of safety, it can be evidence of normalisation of deviance. When do cumulative anomalies become a new pattern that invalidates the current risk posture?
Schedule Pressure distortion	Schedule pressure changes the meaning of available evidence. The same data point that would trigger concern at programme start may be rationalised away under deadline pressure. The risk system must detect this distortion.
Cascading and systemic risk	Each risk may have an owner, while the interaction among risks belongs to no one. Interconnections cross organisational boundaries. Who owns the system level interpretation?
Adaptive leaning loop	Organisational learning must survive personnel turnover. Lessons must update assumptions, not just fill registers. The learning loop connects back to layer 1, refreshing the philosophical substrate with lived experience.

Learn

Capture lessons | Update assumptions | Improve future decisions | Knowledge management | engineering | Safety teams | Learning that does not survive personnel turnover is not institutional learning

Stream 1 – Silent architecture	Stream 2 – Who decides, who owns?	Stream 3 – Process → capability
Risk philosophy Incentive effects Culture & dissent Ethical boundaries Psychological load Knowledge quality	Objective setting risk Decision rights Residual risk acceptance Board & AI literacy Principle agent problem System-level ownership	Assumption management Temporal dynamics Opportunity discipline Leadership development Institutional learning Value of risk function

The single most important structural claim: this is not a risk management framework. It is a **leadership under uncertainty architecture** — which is precisely the reframe the research demands.

Conclusions

Fixing risk management's practical failures — diffused accountability, captured risk functions, poor decisions — requires treating judgment, ethics, incentives, and time as structural layers of the system, not as background conditions surrounding it. The functional hexagon (sense, interpret, execute, govern, decide, learn) is necessary but not sufficient; it only works correctly when it sits visibly on top of an examined philosophical substrate and beneath a temporal layer that continuously re-tests whether past decisions are still valid. The reframe is deliberate and total: this is not another addition to ERM's toolkit, but a claim that risk management should be re-understood as an architecture for leadership under uncertainty.

Key Takeaways

01- Depth, not breadth, is the missing piece.

The functional hexagon already exists in the profession's thinking; what's missing is the vertical dimension — what sits beneath it (judgment and incentives) and above it (time and adaptation) — and without that depth the functional model stays superficial.

02 - Culture is foundation, not decoration.

Risk philosophy, incentive effects, dissent, and ethical boundaries are reframed as the substrate every functional failure traces back to, not a soft environmental factor layered on top of "the real structure."

03 - Deciding is a distinct, accountable act.

The model draws a hard line between interpreting evidence, concluding something from it, and deciding — the last being the specific act of a named, accountable person knowingly accepting the exposure that remains.

04 - Time is the profession's largest blind spot.

Assumptions decay, schedule pressure distorts what evidence means, and repeated success can mask normalization of deviance rather than confirm safety — yet almost no ERM system has a mechanism for asking whether a past decision is still valid today.