

When Coaching Is Not Enough

Using the SIGNAL Framework to Convert Leadership Conversations into Organisational Learning and Sustainable Business Adoption

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Abstract

Coaching can strengthen individual judgement, confidence, and leadership capability, yet a productive coaching conversation does not necessarily produce sustained organisational change. People return from developmental interventions to existing workloads, routines, decision structures, incentives, and cultural expectations. Where those conditions remain unchanged, new intentions can gradually be absorbed by the old system. This article develops the SIGNAL Framework as a practice-derived architecture for addressing that adoption gap. SIGNAL comprises six interconnected functions: *Surface weak signals*, *Interpret them in context*, *Ground accountability in evidence*, *Navigate from hindsight toward foresight*, *Act and Adapt*, and *Lock in Learning*. The framework emerged from an executive leadership intervention integrating coaching, Flow, psychological safety, and high-reliability thinking. Drawing on organisational learning, employee voice, sensemaking, implementation and high-reliability research, the article argues that sustainable business adoption requires more than individual motivation. Information must become discussable early; interpretation must remain open long enough to avoid premature conclusions; accountability must preserve both psychological safety and ownership; learning must influence future capability; action must create observable change; and useful knowledge must survive beyond the individuals who first generated it. SIGNAL is therefore proposed as a recursive organisational-learning architecture rather than a linear management process. Its present contribution is conceptual and practice derived. Further empirical research is required to establish whether SIGNAL improves decision quality, adaptive capability, or organisational reliability across settings.

Keywords: coaching, organisational learning, psychological safety, high reliability, weak signals, sensemaking, business adoption, leadership

The Environment Is Stronger Than Intention

Why Coaching Alone Rarely Changes a System

A productive coaching conversation can change how a person sees a problem. It can clarify priorities, challenge assumptions, and strengthen confidence. Yet the organisation determines whether that new thinking survives contact with everyday work.

This distinction became visible during the leadership intervention that informed SIGNAL. People could leave coaching conversations, energised, and clear about what they intended to change, only to return to competing priorities, interruptions, workload pressures, and established routines. The more useful leadership question

therefore became less about whether coaching had been effective and more about whether the organisation supported the behaviour that coaching was intended to develop.

That observation challenges an individual-centred interpretation of performance. Development programmes often assume that better knowledge, motivation, or leadership skill will translate naturally into improved behaviour. In practice, people act within systems of authority, workload, social expectations, resources, incentives, and constraints. The individual may genuinely intend to change while the surrounding environment continually rewards the previous behaviour.

This is particularly relevant when coaching is expected to improve judgement rather than merely transfer technical knowledge. Judgement requires discretion. People need sufficient autonomy to apply what they have learned, enough clarity to understand the outcome they are responsible for, and access to information and support when conditions change. If every unusual situation still requires approval from several levels above, coaching may increase insight without increasing agency.

Self-determination research provides one explanation for this tension. Deci et al. (2017) synthesised evidence showing that workplace environments supporting autonomy, competence and relatedness are associated with higher-quality motivation and more effective functioning. Their analysis is important because it shifts attention away from treating motivation as something located entirely inside the employee. Organisational conditions can support or frustrate the psychological needs through which people sustain motivated behaviour.

The implication for coaching is significant. A conversation may strengthen competence by helping someone understand a problem more deeply, yet the effect can be weakened if organisational routines subsequently remove autonomy or if social conditions punish experimentation. Leadership development therefore cannot be separated from work design.

Flow Is an Organisational Condition, Not a Demand for Greater Effort

Flow provided an important bridge in the original masterclass because it introduced a different way of thinking about performance. The intervention did not begin by asking how employees could work harder. It asked how organisations could create conditions in which people were more able to perform effectively. The practical examples emphasised clearer priorities, reduced unnecessary complexity, improved communication, and better leadership questions rather than increased effort.

Research on work-related flow supports the importance of context. Bakker (2008) conceptualised flow at work through absorption, work enjoyment, and intrinsic work motivation, and developed the Work-Related Flow Inventory across multiple occupational samples. More recent meta-analytic evidence also indicates that work-related flow is associated with positive performance and well-being outcomes, while its occurrence is influenced by characteristics of the work environment rather than individual disposition alone.

This matters because Flow can easily be misunderstood in managerial practice. It should not become another expectation placed upon employees: be focused, be engaged, perform at your best. Such language simply relocates responsibility to the individual.

The stronger interpretation is architectural.

Leaders influence whether concentration is repeatedly interrupted. They influence whether priorities compete with one another. They determine how much discretion employees possess, whether goals are understandable and whether feedback arrives quickly enough to support adjustment. The organisation therefore affects whether sustained attention is feasible before it asks whether employees are sufficiently engaged.

Sustainable performance is an outcome of deliberately created conditions. Its sequence was explicit: build the conditions, enable stronger human performance, improve reliability, and ultimately create sustainable value.

This is also consistent with the broader Job Demands–Resources tradition (Bakker & Demerouti, 2007). The central insight of this literature is that working conditions contain demands that consume physical or psychological resources and resources that support goal achievement, learning and development. Subsequent applications have repeatedly shown that the interaction between demands and available resources matters for engagement, well-being, and organisational outcomes.

For leadership, the practical question becomes uncomfortable but useful:

Are people failing because they lack capability, or because the organisation makes capable behaviour unnecessarily difficult?

The answer will sometimes be capability. Employees may genuinely require knowledge, practice, coaching, or clearer performance expectations. But leaders who default immediately to training or motivation risk overlooking system friction. A recurring performance issue may originate in conflicting objectives, cumbersome approval processes, unavailable equipment, information delays, or incentives that reward the opposite behaviour from that formally requested.

This creates an important principle for SIGNAL:

Before interpreting a weak signal as evidence about the person, leaders should examine what the operating environment is asking that person to overcome.

That distinction becomes particularly important later in the **Interpret** and **Ground** stages of the framework.

Psychological Safety Without Accountability Is Incomplete

The environment also determines whether information can surface.

Weak signals are often socially inconvenient. A frontline employee may notice that a procedure no longer reflects the work. A supervisor may suspect that a target is driving unintended behaviour. A technical specialist may question a decision already endorsed by senior management. None of these observations automatically reaches organisational attention merely because a reporting channel exists.

Edmondson's research on psychological safety established that team learning is affected by whether people believe interpersonal risk-taking is safe. This does not mean employees must feel comfortable at all times. It means they can ask questions, acknowledge mistakes, raise concerns, and challenge assumptions without expecting humiliation or interpersonal punishment (Edmondson, 1999).

For SIGNAL, psychological safety creates the conditions for **Surface**.

But the real case adds an important qualification. Psychological safety and accountability were deliberately presented together. People argue that safety answers, "*Can I speak up?*" while accountability asks, "*What will we do once I speak up?*"

That distinction is important because organisations can fail in either direction.

Where accountability exists without psychological safety, problems remain hidden because people protect themselves. Where psychological safety exists without meaningful ownership, organisations may become good at discussing problems without resolving them. The leadership task is therefore not to choose between safety and performance discipline. It is to create conditions in which candour leads to responsible action.

This also changes the function of coaching.

Coaching should not simply make employees feel heard. It should help them improve the quality of their reasoning and strengthen their capacity to act responsibly. In the original intervention, coaching was explicitly positioned as a means of developing judgement rather than creating dependency. Leaders were challenged to move from being the organisation's fastest problem-solvers toward developing capability throughout the organisation.

This creates a useful distinction between supportive leadership and capability-building leadership.

Supportive leadership may help an employee through today's problem.

Capability-building leadership asks whether that employee will be better able to handle the next unfamiliar problem without requiring the same intervention.

The difference matters for reliability. An organisation cannot become genuinely adaptive if every ambiguous event travels upward until a senior executive interprets it. What appears to be strong leadership may actually be concentrated dependency.

If every important decision depends on the leader, the organisation has built dependence rather than capability.

The Coaching Paradox: When a Good Conversation Meets an Unchanged System

Coaching can create an unusually productive moment in organisational life. A leader and colleague step outside the normal pace of work, examine a problem carefully, challenge assumptions, and consider a stronger response. The individual leaves with clarity and commitment.

Then the organisation takes over.

Urgent requests return. Workload remains high. Decision rights are unchanged. Established routines compete with the newly agreed behaviour. The intervention may have worked psychologically while failing organisationally.

This tension became the starting point for SIGNAL. During the leadership intervention from which the framework developed, the question gradually shifted from "Did coaching work?" toward a more systemic one: "Did the organisation support the new behaviour?" The practical experience was that similar coaching conversations produced more sustainable outcomes when workflows, communication, and decision rights were addressed alongside individual development.

This distinction challenges an individual-centred view of performance. People operate inside systems of authority, workload, incentives, technology, social expectations, and resources. Self-determination theory similarly suggests that working environments influence motivation by supporting or frustrating needs for autonomy, competence, and relatedness (Deci et al., 2017). Work-related Flow research also indicates that deep engagement is influenced by the conditions surrounding work rather than individual effort alone (Bakker, 2008; Liu et al., 2023).

The resulting proposition is straightforward:

The unit of intervention may be the individual, but the unit of sustained performance is the organisational system.

This does not reduce the importance of coaching. It expands its strategic role. Coaching becomes valuable not simply because it develops individuals, but because it can improve the quality of thinking distributed throughout an organisation.

That distinction is particularly important where leadership expertise is highly concentrated. If every ambiguous situation continues travelling upward until a senior leader interprets it, the organisation may appear well led

while remaining structurally dependent. The leadership intervention explicitly challenged this pattern by moving from directing toward developing judgement and from individual expertise toward organisational capability.

March's (1991) distinction between exploitation and exploration provides a useful organisational parallel. Exploitation converts established knowledge into consistency and efficiency; exploration keeps the organisation attentive to new possibilities. Too much exploitation can make a business increasingly efficient within assumptions that are becoming obsolete. Too much exploration creates ideas without discipline.

SIGNAL operates inside that tension. It seeks to preserve what organisations already know while creating a mechanism through which experience can challenge what they think they know.

From Individual Improvement to Distributed Judgement

The deeper issue, therefore, is not whether coaching works. The question is where the learning lives after coaching has occurred.

If the learning remains inside the individual, the organisation may gain a better manager or supervisor. That has value. But organisational capability has not necessarily changed.

If the insight alters team routines, decision rights, information flows, management expectations, or subsequent coaching practices, something more consequential has happened. The organisation itself has begun to learn.

This distinction separates individual development from business adoption.

A coaching intervention can reasonably be regarded as adopted only when the behaviour it seeks to develop is supported by the operating system surrounding the participant. At that point, new judgement is no longer dependent purely on personal motivation. It begins to acquire structural reinforcement.

Individual motivation is more difficult to sustain when surrounding systems remained unchanged, whereas redesigning workflows, communication, and decision rights made the effects of similar coaching conversations more durable.

This observation should not be interpreted as causal proof. The intervention was not designed as a controlled experiment, and other factors could have contributed to the observed change. It is better treated as a practice-based proposition requiring empirical testing:

The organisational impact of coaching is moderated by the degree to which the work environment enables the judgement and behaviour that coaching seeks to develop.

That proposition also provides the transition to SIGNAL.

If coaching helps people think differently and organisational conditions determine whether that thinking can survive, a further problem remains: *how does what people notice and learn move beyond the coaching relationship into the wider organisation?*

A leader may help one employee recognise a recurring operational problem. A team may identify an emerging customer concern. An operator may notice a deviation that has not yet reached an incident threshold. Unless these observations travel through a process that converts ambiguity into shared understanding, responsibility, action and memory, the organisation can repeatedly rediscover the same lesson.

This is the adoption gap that SIGNAL seeks to address.

The Adoption Gap: More Data, Less Understanding

Modern organisations rarely lack information. They have performance dashboards, customer feedback, audits, employee observations, near misses, operational reviews, and increasingly sophisticated digital systems.

The problem is what happens to that information.

A signal is not yet an explanation.

A recurring workaround could indicate poor compliance, inadequate process design, intelligent adaptation, or an emerging operational risk. A customer complaint may be isolated or the first visible sign of changing expectations. An unusual operating condition may prove insignificant or become the earliest observable indication of deterioration.

Organisations therefore face an adoption gap between possessing information and converting information into useful organisational judgement.

Attention Is a Strategic Resource

The importance of organisational attention becomes clearer when uncertainty increases. Organisational attention is finite, and structures influence which issues and answers receive decision-makers' attention (Ocasio, 1997).

Senior leaders often have access to more information than they can meaningfully process. Dashboards simplify that complexity by directing attention toward selected indicators. This is necessary. No executive can interpret every operational event individually. Yet every act of simplification also creates the possibility that something significant remains outside the frame.

High-reliability research provides a useful perspective on this problem. Weick et al. (1999) associated reliable organising with collective mindfulness: a sustained concern with failure, reluctance to simplify interpretations, sensitivity to operations, commitment to resilience and deference to expertise. These principles do not imply constant anxiety. They describe an organisation that remains sufficiently attentive to recognise when apparently minor deviations deserve a second look.

Vogus and Sutcliffe (2007) later operationalised related behaviours through the Safety Organizing Scale. Their work showed that practices such as discussing mistakes, questioning assumptions, and drawing on relevant expertise can be observed at team level rather than remaining abstract organisational ideals. The study found that higher safety organising was associated with fewer subsequently reported medication errors and patient falls in hospital nursing units.

The sector differs from the present business application, but the principle is transferable: reliability depends partly on what teams routinely pay attention to and how they discuss what they notice.

This reframes weak-signal detection as a leadership responsibility.

Leaders cannot personally notice every signal. Their responsibility is to influence what the organisation considers worth noticing.

That distinction matters.

If management attention is dominated exclusively by formal performance thresholds, people may learn that observations have little value until a metric turns red. If leaders respond only when a problem is supported by complete evidence, ambiguous but potentially important information may remain unspoken precisely during the period when intervention would have been easiest.

The SIGNAL material reflects this tension directly. Weak signals are characterised there as small and often ordinary: an unusual vibration, a temporary workaround, a customer comment, a near miss or a concern someone

nearly decided not to mention. The challenge is not their absence, but the ease with which organisations dismiss them because nothing serious has happened yet.

This produces an important managerial paradox:

The earlier a signal appears, the less convincing it may look; once the evidence becomes convincing, the opportunity for inexpensive intervention may already have narrowed.

SIGNAL therefore requires leaders to create a legitimate space for ambiguity.

People should be able to say, *“I do not yet know what this means, but something appears different.”*

That is a hugely different organisational behaviour from waiting until someone can present a fully developed business case for concern.

Seeing Is Different from Understanding

Even when a signal receives attention, the organisation can still misread it.

Observation is different from explanation. Declining productivity, a customer complaint, or an abnormal equipment condition are described as observations that require interpretation rather than conclusions that justify immediate action.

This distinction appears elementary, yet it is difficult in practice because human judgement naturally seeks coherence.

When information is incomplete, people construct plausible explanations from experience, expectations, and available evidence. Those explanations can be useful, but they can also become prematurely persuasive.

Sensemaking research is therefore highly relevant to SIGNAL. Weick and colleagues' work on organisational sensemaking emphasises that people do not simply receive objective environments and respond to them; they interpret cues and construct meaning through social interaction. In high-reliability settings, the danger of premature simplification is especially important because an early interpretation may determine which evidence is subsequently sought and which possibilities are ignored.

SIGNAL's Interpret function is designed to interrupt that movement from observation to certainty.

The practical discipline is simple:

What do we know?

What are we assuming?

What else could explain this?

Whose perspective is missing?

These questions matter because complex organisational outcomes rarely fit neatly within functional boundaries.

This is where SIGNAL begins to move beyond a conventional escalation process.

Escalation asks:

Who needs to know?

Interpretation asks:

Who needs to think about this with us?

The difference is substantial.

The first transfers information vertically. The second expands cognition horizontally.

That is particularly important in complex organisations because no single function owns the complete causal system.

Organisational Learning Begins Before the Lesson Is Obvious

March's (1991) exploration–exploitation framework adds another dimension. Organisations need to exploit established knowledge to operate efficiently, while continuing to explore possibilities that may challenge what they currently know.

Weak signals sit directly in this tension.

Established procedures represent accumulated learning. They should not be abandoned whenever an anomaly appears. Yet treating every deviation as irrelevant because the existing process has previously succeeded can make the organisation overconfident in yesterday's knowledge.

The managerial challenge is therefore not to choose between procedure and curiosity.

It is to preserve operational discipline while maintaining enough curiosity to recognise when experience is beginning to contradict the model on which that discipline was built.

This is especially important because successful outcomes can hide deteriorating conditions.

A team may continue meeting its target because experienced employees compensate for poor processes. Maintenance performance may remain acceptable because technicians repeatedly intervene before failures become visible. Customer service may appear stable because frontline supervisors absorb work that should have been resolved structurally.

The result is a dangerous form of organisational invisibility: the system looks reliable because people are continually rescuing it.

Hollnagel's (2018) Safety-II perspective is useful here because it directs attention toward how everyday work actually succeeds under variable conditions rather than studying failure alone. Adaptive performance can be a source of resilience, but persistent adaptation can also reveal the distance between work as imagined and work as performed.

This is one reason SIGNAL should capture positive deviations as seriously as negative ones.

A recurring workaround is not automatically evidence of poor compliance.

It may be telling the organisation:

- the procedure is unrealistic,
- employees lack a required resource,
- the formal process contains unnecessary friction,
- frontline workers have developed a better method,
- an emerging operational condition has not yet entered formal governance.

The leadership task is interpretation, not reflexive judgement.

Psychological Safety Determines Whether Reality Reaches the System

Information cannot be interpreted if it never surfaces.

Edmondson's (1999) foundational study defines team psychological safety around whether members believe interpersonal risk-taking is safe and demonstrates its relationship with learning behaviour. Subsequent review work connects psychological safety with voice, teamwork, team learning and organisational learning more broadly.

For SIGNAL, psychological safety should therefore be understood less as an employee-experience programme and more as part of the organisation's information infrastructure.

If employees anticipate ridicule, career consequences or public blame, the system loses access to information they possess.

This creates an operational consequence.

Silence is not simply an engagement issue.

It is a data-quality problem.

A management dashboard may be technically accurate while organisational reality remains incomplete because relevant observations were never entered into the formal information system.

Conversely, psychological safety alone cannot guarantee useful learning. People may speak freely but produce speculation, personal interpretation, or poorly tested assumptions. SIGNAL therefore links safety to disciplined interpretation and accountability.

The framework's original formulation captures this relationship succinctly: *psychological safety asks whether a person can speak; accountability asks what happens after they do.*

This pairing is essential.

High reliability does not require an organisation where every concern automatically triggers intervention. That would create noise, resource waste, and eventually signal fatigue.

It requires an organisation where concerns can surface without unnecessary interpersonal risk and then enter a disciplined process for interpretation.

The Real Constraint Is Often Signal Travel

There is another problem beyond noticing and understanding: information must travel.

Reliability is created when signals travel through the organisation faster than risk can escalate.

For the journal, I would treat this statement as a conceptual proposition, not an empirically established law.

Nevertheless, it captures an important organisational dynamic.

Consider two organisations exposed to the same early warning.

In the first, an employee notices something unusual. The observation reaches a supervisor. The supervisor asks for context. Relevant expertise is brought into the discussion. Evidence is gathered. Responsibility is assigned and a small intervention occurs before the issue develops.

In the second, the same employee hesitates. The issue is discussed informally but not documented. The supervisor assumes it is temporary. Functions interpret the eventual symptoms separately. Formal attention begins only when performance deteriorates significantly.

The external event may have been identical.

The organisational outcome is different because the information-processing capability of the system differs.

This suggests that high reliability may depend partly on what could be termed signal velocity: the speed with which potentially meaningful information moves from observation to interpretation and, where justified, action.

However, speed alone would be dangerous.

Fast movement of poorly interpreted information can produce overreaction. Rumours can travel quickly. Senior escalation can amplify weak evidence. Organisations can act decisively on the wrong diagnosis.

SIGNAL therefore does not seek maximum velocity.

It seeks an appropriate balance between:

early visibility,

interpretive quality,

accountable ownership,

and timely action.

That balance provides the bridge into the framework itself.

SIGNAL as a Business Adoption Architecture

From Weak Observation to Organisational Capability

The SIGNAL Architecture contains six functions: **Surface, Interpret, Ground, Navigate, Act and Adapt, and Lock in Learning**. The original leadership intervention presented these as the mechanism through which everyday observations, conversations and feedback can become organisational learning.

Organisational reality is rarely linear.

Interpretation can expose additional signals. Evidence gathered during Ground may challenge the original interpretation. Action can produce unexpected consequences requiring renewed observation. A lesson institutionalised through Lock may later become obsolete and require adaptation.

SIGNAL is therefore better conceptualised as a recursive six-function architecture for business adoption and organisational learning.

Its purpose is not simply to prevent failure.

It is to answer a more demanding question:

How does something noticed by an individual become something understood, owned, acted upon, and eventually remembered by an organisation?

The next section will examine each of the six functions individually: beginning with S: Surface, where organisational learning either starts early or begins too late.

Silence Is Not an Absence of Information

Employee silence is often interpreted as evidence that nothing important needs attention. Organisational research suggests otherwise.

Morrison (2014) describes employee voice as discretionary communication of ideas, concerns, or suggestions intended to improve organisational functioning, while silence can emerge when employees perceive speaking up as risky, ineffective, or unnecessary. Her review shows that decisions about voice are influenced by individual characteristics, leadership behaviour, and wider organisational conditions. A later review confirms that employee voice and silence remain shaped by calculations about safety, efficacy, and organisational responsiveness rather than simply by whether employees possess relevant information (Morrison, 2023).

For SIGNAL, this distinction is fundamental.

An organisation may possess the information required to identify an emerging problem while remaining functionally unaware of it because the people holding that information have decided not to speak.

This reframes silence.

Silence is not necessarily the absence of a signal.

It may be the failure of the system to receive one.

That failure can occur for several reasons. Employees may fear reputational consequences. They may believe management has already decided. They may assume the observation is too small to deserve attention. Previous concerns may have disappeared into reporting systems without visible action. Hierarchical distance may encourage people to wait for certainty before challenging a more senior colleague.

In each case, management can mistake silence for stability.

This is why the original leadership intervention placed such emphasis on leaders asking, “*What am I missing?*” The purpose of that question was not rhetorical humility. It was to improve the organisation’s information quality by inviting perspectives that hierarchy might otherwise suppress. Coaching is the behaviour that enables this process: curiosity invites information, while leadership follow-through determines whether people believe speaking up is worthwhile.

Psychological Safety Is Part of the Information System

Edmondson’s (1999) study of work teams established psychological safety as a shared belief that the team is safe for interpersonal risk-taking and linked it with learning behaviour. Its relevance to SIGNAL is operational rather than merely relational.

If people cannot safely say:

“I may be wrong, but something does not look right,”

then the organisation systematically loses access to uncertain information.

Psychological safety therefore functions as part of the organisation’s early-warning infrastructure.

This does not mean every observation is correct. Nor does it mean leaders should treat every concern as fact. The objective is to ensure that information can enter the system early enough to be examined.

This is different from creating an environment in which everyone must agree, or everyone must feel comfortable. The purpose is to lower the unnecessary interpersonal cost of contributing relevant information.

The masterclass makes the complementary role of accountability explicit:

psychological safety answers whether people can speak; accountability concerns what happens once they do.

This pairing is important because an organisation can fail in either direction.

If accountability dominates without safety, people may hide errors, soften concerns, or remain silent.

If safety exists without disciplined follow-through, the organisation may accumulate conversations but develop little capability.

For SIGNAL, Surface is complete only when speaking creates the possibility of meaningful organisational attention.

This adds an important condition to conventional discussions of voice. Employees do not learn whether an organisation values speaking up from posters or values statements. They learn from what happens after the first difficult piece of information is raised.

A leader's reaction therefore becomes part of the reporting system.

Curiosity encourages future information.

Dismissal suppresses it.

Punishment distorts it.

Indifference eventually stops it.

Weak Signals Require a Lower Threshold for Conversation, Not a Lower Threshold for Action

One risk in advocating early signalling is obvious: organisations can become overwhelmed by noise.

Not every anomaly deserves escalation. Not every concern predicts failure. If leaders respond dramatically to every deviation, they create alarm fatigue and teach employees that reporting generates unnecessary disruption.

SIGNAL therefore makes an important distinction between the threshold for discussion and the threshold for intervention.

The threshold for discussing uncertain information should be relatively low.

The threshold for consequential action should remain evidence based.

This distinction helps preserve curiosity without creating organisational hypervigilance.

A frontline employee should be able to raise an unusual observation without being required to prove its significance. That information can then move into Interpret, where context, evidence and alternative explanations are examined.

This is why SIGNAL does not move directly from Surface to Act.

The architecture deliberately places interpretation between observation and intervention.

The sequence protects the organisation from two opposite failures:

silence through excessive certainty requirements, and

overreaction through insufficient interpretation.

That balance is particularly important in high-reliability environments, where the cost of ignoring a meaningful anomaly can be substantial but false positives are inevitable.

Collective Mindfulness Begins With Curiosity About Small Failure

High-reliability theory gives academic grounding to this discipline.

Weick et al.'s (1999) conception of collective mindfulness emphasises preoccupation with failure and reluctance to simplify, alongside sensitivity to operations and deference to expertise. Later work on high-reliability organising repeatedly returns to the importance of noticing small departures from expectation before they accumulate. Vogus and Sutcliffe's (2007) empirical work, for example, operationalised safety organising through behaviours including learning from errors, discussing mistakes, and drawing upon relevant expertise; higher safety-organising scores were associated with fewer subsequently reported medication errors and patient falls in the hospital units studied.

The relevance to SIGNAL lies in the organisational stance toward apparently minor information.

Weak signals frequently compete with success.

When performance is good, leaders have understandable reasons to assume the system is healthy. Success can become evidence supporting the existing operating model. Yet high reliability requires leaders to remain interested in small deviations precisely when there is no visible crisis forcing attention.

A recurring workaround provides an example.

One interpretation is behavioural: employees are not following procedure.

A second interpretation is structural: the procedure does not adequately support the work.

A third is innovative: employees have discovered a better method that has not yet been recognised formally.

A fourth is hazardous: normalisation of deviation is gradually weakening control.

The observation alone cannot determine which interpretation is correct.

But if the workaround never surfaces, none of those questions can be asked.

SIGNAL begins from the same practical concern. The original framework used deliberately ordinary examples of weak signals: an unusual vibration, a temporary workaround, a customer comment, a near miss or a concern someone nearly decided not to mention.

The paradox is that the earlier a signal appears, the less convincing it may look; once it becomes convincing, the opportunity for inexpensive intervention may already have narrowed.

This is why SIGNAL is concerned with information while uncertainty still exists.

SIGNAL: From Observation to Organisational Capability

The framework consists of six interconnected functions:

Surface → Interpret → Ground → Navigate → Act and Adapt → Lock in Learning.

Although this sequence provides clarity, SIGNAL is better understood as recursive rather than linear. Interpretation may reveal another signal. Action may produce unintended consequences requiring renewed interpretation. A lesson institutionalised today may later become outdated and generate tomorrow's workaround.

The architecture therefore asks a broader question:

How does something noticed by one part of the organisation become something the organisation can understand, own, act upon and retain?

S — Surface: Make Reality Discussable

The first challenge is getting information into the organisational conversation.

Morrison (2014, 2023) demonstrates that employee voice is discretionary. People weigh whether speaking is safe, useful, and likely to make a difference. Silence therefore should not automatically be interpreted as absence of information. It may represent failure of the organisation to receive information that employees already possess.

Edmondson's (1999) work on psychological safety is central here. When people believe interpersonal risk-taking is safe, they are more able to acknowledge uncertainty, raise concerns and participate in learning. Edmondson and Lei (2014) later demonstrated the wider relevance of psychological safety to voice and organisational learning.

For SIGNAL, psychological safety is consequently part of the organisation's information infrastructure.

Yet safety alone is insufficient. The intervention deliberately paired psychological safety with accountability: people need confidence that they can speak, while also believing that speaking will lead to responsible attention and action.

The threshold for conversation should therefore be lower than the threshold for consequential action. People should be able to say, "I may be wrong, but something looks different," without being required to prove its significance.

Surface also applies to opportunity. An unusual positive result, an effective workaround or an emerging customer behaviour may contain knowledge worth exploring.

The diagnostic question becomes:

Did reality surface early enough to preserve meaningful choice?

When Surfacing Fails: Three Organisational Blind Spots

The business application suggests three recurrent blind spots.

The first is **hierarchical filtering**. Information becomes progressively cleaner as it moves upward. By the time an issue reaches senior management, uncertainty, disagreement, and operational texture may have been removed. The report becomes easier to consume but less useful for understanding reality.

The second is **threshold blindness**. Leaders pay attention to indicators once they cross predetermined limits. This creates discipline, but it can also cause organisations to ignore patterns forming below those limits.

The third is normalisation. A workaround, minor defect or recurring complaint becomes familiar. Familiarity reduces its ability to attract attention even though recurrence may be exactly what makes it strategically important.

These are not primarily employee failures.

They are properties of the information architecture.

A strong Surface function therefore requires several leadership disciplines: channels for upward voice, direct exposure to operations, curiosity about repeated anomalies, cross-functional conversations, and visible response to concerns.

The objective is not to create more reporting.

It is to improve signal fidelity.

Business Adoption Test 1: Did Reality Surface Early Enough?

Each SIGNAL function should have a practical test.

For Surface, the test is:

Did reality surface early enough to preserve meaningful choice?

This is stronger than asking whether the problem was eventually reported.

Every major issue becomes visible eventually.

The business value lies in when it becomes visible.

If the organisation detects a pattern while intervention remains inexpensive, options remain broad.

If the same pattern becomes visible only through disruption, the organisation is no longer choosing among options. It is responding to consequences.

That distinction is at the heart of business adoption.

Early visibility expands managerial discretion.

Late visibility narrows it.

The original SIGNAL architecture captures this idea through one of its three overarching tests: “*Did reality surface early?*”

That question becomes the first diagnostic test of the framework.

However, surfacing alone is insufficient. An organisation can hear the truth and still misunderstand it.

A weak signal is valuable only when interpretation improves its meaning without destroying its uncertainty.

That brings the framework to its second function.

I — Interpret: Resist the First Plausible Explanation

Once a signal surfaces, the organisation faces a second risk: explaining it too quickly.

Weick et al. (2005) describe sensemaking as the process through which ambiguous circumstances become understood sufficiently to support action. Importantly, organisations act on interpretations of reality, not reality in some unmediated form.

Experience helps leaders recognise patterns quickly, but familiarity can also create premature certainty. The SIGNAL intervention therefore deliberately separated observation from explanation. A productivity decline, complaint or abnormal operating condition was treated as something to investigate rather than an established diagnosis.

Useful questions include:

What do we know? What are we assuming? What else could explain this? Whose perspective is missing?

Cross-functional interpretation is particularly important because complex organisational outcomes rarely belong to one function. Yet more perspectives do not automatically produce better judgement. Groups can privilege

information everyone already shares while neglecting uniquely held evidence (Stasser & Titus, 1985). Diversity therefore needs disciplined integration.

Interpretation should expand before it converges.

Relevant expertise should also influence interpretation regardless of hierarchical position. Senior leaders may have broader organisational visibility, while frontline employees and technical specialists often possess greater local resolution.

The test is therefore:

Was judgement sound given what was known at the time?

Sound judgement does not guarantee a favourable outcome. It means the reasoning was defensible, alternatives were considered and residual uncertainty was recognised.

Sensemaking Turns Signals Into Organisational Meaning

Sensemaking provides a strong theoretical foundation for this function.

Weick et al. (2005) describe sensemaking as the process through which circumstances are converted into an explicitly understood situation that can become the basis for action. The important implication is that organisations do not act on raw reality. They act on interpretations of reality.

This distinction is critical in SIGNAL.

Two leadership teams may receive identical operational information and reach hugely different conclusions because they bring different histories, expectations, professional identities, and assumptions to the interpretation process. Organisational culture itself can influence how people construct meaning from events; Harris (1994), for example, examined how cultural assumptions become embedded in individual sensemaking structures.

Interpretation is therefore never entirely neutral.

A finance leader may see an emerging cost problem.

An operations leader may see a resource constraint.

A human-resources leader may see a capability issue.

A technical specialist may see an asset condition.

A customer-facing leader may see changing expectations.

Each may be correct about part of the system.

The failure occurs when one partial interpretation is allowed to become the organisational explanation.

This is why Interpret should be understood as a collective rather than purely individual cognitive process.

A Plausible Story Is Not Necessarily a Correct Story

Sensemaking is powerful because human beings can construct coherence from incomplete information. That same strength creates risk.

Once an explanation becomes plausible, attention can shift toward evidence that supports it. Alternative explanations receive less attention. Ambiguous evidence may be interpreted in ways consistent with the emerging narrative.

The managerial problem is intensified by experience.

Experienced leaders recognise patterns quickly. That is often an advantage. Expertise allows faster diagnosis and reduces unnecessary analysis. Yet experts remain susceptible to cognitive bias, particularly when familiar patterns appear to fit new situations. Experience can accelerate pattern recognition, but experience alone should not be equated with expertise. Expertise is domain-specific and depends substantially on the quality of learning and practice through which it develops (Rousseau & Stouten, 2025).

The implication is not that intuition should be rejected.

It should be treated as a hypothesis, not a verdict.

A senior executive who has seen a similar problem ten times may quite reasonably say:

“This looks like a capability issue.”

SIGNAL asks for one additional move:

“What evidence would convince us that it is not?”

That question changes interpretation from confirmation to inquiry.

It also preserves the role of experience while protecting the organisation from becoming trapped by it.

Interpretation Should Expand Before It Converges

One practical discipline within SIGNAL is to separate two moments that organisations often collapse together.

The first is divergence.

What are the possible explanations?

The second is convergence.

Which explanation is best supported by evidence?

Moving directly to convergence feels efficient but can prematurely narrow the search space.

This is particularly dangerous in complex systems because causes frequently interact. A maintenance problem may involve technical degradation, procurement delay, workload pressure, and production priorities simultaneously. A service problem may involve staffing, contract specification, customer behaviour, and supervisory capability. Asking which single factor caused the outcome can therefore create an artificial simplicity.

Organisational sensemaking research increasingly treats interpretation as dynamic and socially constructed rather than as a one-time diagnostic event. A systematic review of more than 400 sensemaking contributions by Cristofaro (2022) describes organisational sensemaking as an evolving process in which interpretation and environmental conditions influence one another.

For SIGNAL, this means Interpret should remain revisable.

A preliminary interpretation directs information gathering.

New information may alter that interpretation.

Action may reveal further evidence.

The organisation may then return to Surface and Interpret.

This is one reason SIGNAL should be treated as a recursive architecture rather than a linear six-step checklist.

Cross-Functional Diversity Helps; But Does Not Automatically Improve Judgement

The case application strongly supports bringing multiple functions into interpretation. That practice has intuitive appeal because different functions hold different information.

However, the academic evidence suggests an important caution.

Cross-functional collaboration can support organisational learning (Bendig et al., 2018). For example, research on cross-functional interaction has linked such collaboration with increased organisational learning and performance under certain conditions. Yet information diversity by itself does not guarantee superior decisions. Xiao et al.'s (2016) work on team decision-making cautions that simply sharing uniquely held information does not always improve decision outcomes.

This matters because SIGNAL should not assume:

More perspectives = better interpretation.

The relationship is conditional.

Teams need processes that enable them to compare evidence, challenge reasoning, and prevent status from determining which interpretation dominates.

A cross-functional meeting can still fail if:

- the most senior voice anchors the discussion,
- technical language excludes other functions,
- participants defend departmental interests,
- disagreement is interpreted as resistance,
- information is shared but never integrated,
- everyone assumes someone else has the complete picture.

The purpose of Interpret is therefore not simply to gather perspectives.

It is to integrate perspectives into a more defensible account of reality.

This distinction strengthens the framework considerably.

Deference to Expertise Should Follow the Problem, Not the Hierarchy

High-reliability thinking contributes another important discipline: deference to expertise.

In conventional hierarchy, authority generally moves downward.

In reliable interpretation, relevant expertise sometimes needs to move upward.

The individual closest to the signal may possess information senior leadership does not. A technician may understand an equipment condition more deeply than an executive. A frontline service leader may understand changing customer behaviour before corporate functions see it in aggregated data.

This does not mean organisational hierarchy should disappear.

It means interpretation should distinguish between decision authority and epistemic authority.

Decision authority answers:

Who is accountable for the final decision?

Epistemic authority asks:

Whose knowledge should carry the greatest weight in understanding this particular issue?

High-reliability organisations become stronger when those two forms of authority can coexist.

The leader does not surrender accountability by listening to expertise.

The leader exercises accountability more intelligently.

Recent organisational research continues to emphasise the importance of understanding how experts and expertise contribute to consequential decisions and how organisations recognise and use that expertise effectively (Rousseau & Stouten, 2025).

Within SIGNAL, this means Interpret should actively ask:

Who understands this problem because they are closest to it, even if they are not the most senior person in the room?

Coaching Slows Certainty Without Slowing Responsibility

This is where coaching returns to the architecture.

Coaching during Interpret helps people “think more clearly rather than simply think faster.

That distinction is important.

Good coaching questions prevent leaders from taking over the interpretation process.

Instead of saying:

“Here is what happened.”

a leader might ask:

“What have we actually observed?”

“What are we inferring?”

“What evidence supports that explanation?”

“What evidence does not fit?”

“Who has a different interpretation?”

“What would we need to know before acting?”

These questions do not remove leadership authority.

They improve the quality of judgement preceding its use.

This also develops capability in others. If executives always provide the interpretation, teams learn to escalate ambiguity rather than reason through it.

Over time, an organisation may become operationally dependent on a small group of experienced interpreters.

SIGNAL seeks the opposite outcome: distributed judgement.

The goal is that people across the organisation become increasingly capable of distinguishing signals from conclusions and evidence from assumptions.

Team Reflexivity Strengthens Interpretation

The Interpret function also connects with research on team reflexivity, the extent to which teams reflect on objectives, strategies and processes and adapt them when required.

Recent meta-analytic evidence indicates that team reflexivity is positively associated with team performance, although the benefits vary with team design characteristics such as team size and tenure (Leblanc et al., 2024).

This is useful for SIGNAL because interpretation is not merely an incident-management activity.

Teams should periodically examine how they are interpreting reality even when nothing has failed.

For example:

- *Which assumptions are we repeatedly making?*
- *Which indicators receive disproportionate attention?*
- *Which functions rarely influence our interpretation?*
- *Which previous explanation turned out to be wrong?*
- *Where have successful outcomes reinforced weak reasoning?*

That last question is particularly important.

Good outcomes can conceal poor decisions.

A team may make an unjustified assumption and still experience success because conditions happened to be favourable. If leaders evaluate only outcomes, weak reasoning can become reinforced.

Interpret therefore requires attention to decision quality independent of outcome quality.

That idea will become even more important in **Ground**.

Interpretation Has a Time Boundary

There is also a practical danger on the opposite side.

If premature certainty is risky, endless interpretation is equally problematic.

Complex organisations can use analysis as a defence against responsibility.

More data is requested.

More stakeholders are consulted.

More scenarios are considered.

Eventually the organisation misses the window in which intervention would have been useful.

SIGNAL therefore needs a decision discipline:

How much understanding is sufficient for the consequence and reversibility of the decision we face?

A reversible, low-impact action may justify acting with incomplete information.

A high-consequence, difficult-to-reverse decision may require much stronger evidence.

This means the amount of interpretation should be proportionate to:

- Consequence,
- Uncertainty,
- Reversibility,
- Urgency,
- available expertise.

This is an area where future empirical development of SIGNAL could be especially valuable because different organisational contexts will require different thresholds.

The framework should never imply that every signal deserves the same analytical effort.

Business Adoption Test 2: Was Judgement Sound?

The second overarching test already present in the original SIGNAL architecture is:

Was judgement sound?

For business adoption, this question should be expanded.

Sound judgement does not mean the outcome was favourable.

It means the interpretation process was defensible given the information available at the time.

A strong Interpret process should therefore be able to answer:

What did we know?

What did we assume?

Whose expertise informed the interpretation?

What alternative explanations were considered?

Why did we converge on this interpretation?

What uncertainty remained?

This creates an audit trail of reasoning rather than merely an audit trail of decisions.

That may become one of SIGNAL's most valuable contributions.

Traditional management systems often document what was decided.

High-reliability learning also needs to capture how the organisation thought.

Because if a decision later proves unsuccessful, the organisation needs to distinguish between:

a poor outcome arising from a sound decision under uncertainty,

and

a poor outcome arising from weak interpretation.

Those are hugely different learning problems.

G — Ground: Accountability Without Premature Blame

After interpretation comes responsibility.

Organisations often begin adverse-event discussions with “*Who is responsible?*” SIGNAL starts somewhere else:

What contributed to this outcome, and what responsibility follows from that understanding?

Reason’s (1997) analysis of organisational accidents demonstrates why this matters. Visible human errors can be shaped by latent conditions embedded in processes, resources, supervision, and management decisions. Correcting the person while preserving those conditions creates the appearance of action without addressing vulnerability.

Systems thinking, however, must not become an excuse for personal irresponsibility.

Ground therefore holds two ideas together:

system contribution and individual agency.

An employee may have exercised poor judgement. At the same time, targets, instructions, workload, resources, or leadership decisions may have increased the likelihood of that judgement.

Fair accountability asks which factors were genuinely within someone’s control and which belonged to the surrounding system.

Ground also expands accountability upward. If leadership decisions contributed to the operating conditions, those decisions belong inside the same analysis rather than being treated as background context.

The purpose is not collective ambiguity. Ownership must become clearer:

Who owns the immediate response?

Who owns the underlying system condition?

Who develops the missing capability?

Who verifies that improvement occurred?

Ground is therefore complete when responsibility becomes clear, fair, and connected to future improvement.

Blame Simplifies Complexity Too Early

Blame is cognitively attractive because it reduces ambiguity.

A complex event becomes easier to explain when responsibility is attached to one person, one decision or one function. The organisation can then demonstrate that action has been taken: someone is corrected, retrained, disciplined, or replaced.

Yet this can create the appearance of control without changing the conditions that produced the problem.

Reason’s work on organisational accidents is especially relevant here. His distinction between active failures and latent conditions demonstrates that visible human error can be shaped by deeper organisational arrangements such as procedures, resource decisions, supervision, and system design. Correcting the individual while leaving those conditions untouched can therefore preserve the underlying vulnerability.

This does not mean individual behaviour is irrelevant. A person can make a poor decision, ignore a procedure or act negligently. SIGNAL should never become a mechanism for explaining away personal responsibility.

The more useful question is:

What part of this outcome belongs to individual judgement, and what part was enabled or shaped by the system?

That produces a more accurate accountability map.

The distinction is particularly important in leadership. If a frontline employee makes an error because instructions were unclear, staffing was inadequate and conflicting priorities were created by management, treating the outcome purely as an individual failure may protect senior leadership from examining its own contribution.

Ground therefore requires accountability to travel both downward and upward.

Psychological Safety and Accountability Must Converge Here

The Ground function is also where the relationship between psychological safety and accountability becomes most visible.

The original masterclass expresses the distinction clearly:

psychological safety asks, *“Can I tell the truth?”*

accountability asks, *“What responsibility will I take now that the truth is known?”*

This is more than a rhetorical pairing.

Psychological safety matters because organisations need accurate information before they can assign responsibility. If people expect immediate blame, information becomes defensive. Individuals minimise their involvement, simplify the story or withhold uncertainty.

But safety cannot become immunity from consequence.

High standards still matter.

A mature organisation should be able to say simultaneously:

“We want to understand what happened without premature blame,”

and

“Once we understand it, people are responsible for the choices that were genuinely theirs to make.”

This is a much harder leadership posture than either punishment or permissiveness.

It requires judgement.

Edmondson’s work on psychological safety is frequently misinterpreted as a call for comfort. In fact, its relevance to learning is precisely that people can take interpersonal risks in pursuit of better performance. Psychological safety and performance standards are therefore not opposites. The stronger challenge is to maintain high expectations while allowing people to reveal mistakes, uncertainty, and disagreement early enough for learning to occur.

Within SIGNAL, Ground is where that balance becomes operational.

Accountability Should Follow Causal Understanding

One of the most important design principles for Ground is sequencing.

The masterclass notes a practice of beginning operational reviews with the question:

“What can we learn?”

before moving to responsibilities and actions.

This sequence changes the quality of the conversation because it separates understanding from judgement.

A useful Ground discussion might therefore proceed through four questions:

What happened?

What conditions contributed?

Which decisions were reasonably within whose control?

What responsibility follows from that understanding?

This sequencing is important because responsibility without causal understanding risks unfair attribution.

At the same time, causal understanding without responsibility produces analysis without ownership.

Ground seeks the middle path.

From Personal Fault to Distributed Ownership

Complex organisations create another challenge: responsibility is often distributed.

A process can fail because several functions each made locally rational decisions.

Procurement may prioritise cost.

Operations may prioritise continuity.

Finance may protect budget.

Human resources may operate within recruitment constraints.

Technical teams may prioritise asset reliability.

Each function may act rationally within its own mandate while the collective outcome becomes fragile.

This creates what might be described as distributed causality without distributed ownership.

Everyone contributed, but no one feels responsible for the whole.

SIGNAL attempts to resolve this by distinguishing causal contribution from accountable ownership.

Not every contributing factor needs the same owner.

Instead, the organisation should ask:

- *who owns the immediate corrective action?*
- *who owns the system condition that enabled recurrence?*
- *who owns the capability gap?*
- *who owns the governance or policy change?*
- *who is responsible for checking whether the intervention worked?*

This converts accountability from a search for a guilty party into an architecture of responsibility.

That is more useful for business adoption because change requires specific ownership at multiple levels.

Ground Also Protects Against Leadership Immunity

The most uncomfortable application of Ground concerns senior leadership.

In many organisations, accountability becomes more precise as it moves downward and more abstract as it moves upward.

A frontline employee may be associated with a specific error.

A supervisor may be associated with insufficient oversight.

At executive level, contributing decisions may be described more vaguely as strategic context.

SIGNAL should resist that asymmetry.

If workload, unrealistic targets, resource constraints, poorly designed incentives, or conflicting instructions contributed to the outcome, leadership decisions form part of the causal system and should be examined with the same discipline as frontline behaviour.

This does not imply moral equivalence between every contributor.

It implies analytical consistency.

A system cannot learn honestly if organisational hierarchy determines which causes are discussable.

That is why Ground should be evidence-based rather than status-based.

Accountability Is Forward-Looking as Well as Retrospective

Traditional accountability often looks backward:

Who made the decision?

Who failed to act?

Who breached the standard?

Those questions remain necessary.

SIGNAL adds another:

Who now owns making the organisation stronger?

This shifts accountability from explanation toward stewardship.

A person may have contributed little to the original event but become the right owner for the improvement.

Conversely, someone may have contributed to the problem but lack the authority or capability to correct the system condition that enabled it.

Business adoption therefore requires ownership of the future state, not merely identification of the past actor.

This distinction is important because otherwise accountability can become ceremonial. A person accepts responsibility, the event is considered closed, and the organisation remains unchanged.

Ground is complete only when ownership connects interpretation with a credible path forward.

Just Culture Offers a Useful Parallel

Research and practice around just culture offer a useful comparison.

The central idea is that organisations should distinguish among human error, risky behaviour, and reckless behaviour rather than responding to every adverse outcome in the same way. Although developed strongly within safety-critical sectors, the underlying principle is relevant to SIGNAL: accountability should reflect the nature of the behaviour, the surrounding system, and the degree of conscious choice.

Dekker's (2016) work on just culture has been influential in shifting attention from punishment toward learning while preserving the possibility of accountability.

For SIGNAL, the important contribution is not to reproduce a just-culture model wholesale. It is to reinforce a principle:

Fair accountability requires behavioural and systemic context.

A person who makes a reasonable decision with incomplete information should not be treated the same as someone who knowingly disregards a critical control.

Likewise, repeated workarounds may indicate misconduct, but they may also indicate that formal procedures no longer fit operational reality.

Ground therefore asks leaders to distinguish:

- error from negligence,
- adaptation from violation,
- system pressure from personal choice,
- reasonable judgement from avoidable recklessness.

That level of discrimination is essential for trust.

The Business Risk of Blame Is Information Degradation

Blame has another consequence beyond fairness.

It changes what information the organisation will receive next time.

If people observe that an employee who raised a problem became the focus of investigation, they learn that surfacing weak signals carries personal risk.

Future concerns are then softened, delayed, or hidden.

The organisation loses information quality.

This creates a feedback loop:

blame reduces candour → reduced candour lowers signal quality → weaker signal quality produces poorer interpretation → poorer interpretation increases future failure risk.

Ground therefore protects not only the current investigation.

It protects the integrity of the future information system.

This connects directly back to Surface.

SIGNAL is recursive because the way accountability is handled today influences whether reality surfaces tomorrow.

Evidence Should Ground Accountability, but Evidence Is Never Perfect

There is also an important caution.

Grounding responsibility in evidence does not mean waiting for perfect certainty.

Evidence in organisational settings is often incomplete.

Records may be missing.

People remember events differently.

Multiple causes may interact.

The organisation may never know precisely how much each factor contributed.

Leadership therefore still requires judgement.

The objective is not forensic perfection.

It is reasonable attribution based on the best available evidence, combined with transparency about uncertainty.

This protects SIGNAL from becoming bureaucratic.

If Ground requires exhaustive proof before ownership is assigned, the organisation may become paralysed.

The practical standard should be proportionality: the stronger the consequence attached to an accountability decision, the stronger the evidence required.

Business Adoption Test 3: Is Ownership Clear and Fair?

The third SIGNAL test can therefore be stated as:

Is ownership clear, fair, and connected to the conditions that produced the outcome?

A strong Ground process should allow leaders to answer:

What contributed to the outcome?

Which factors were within individual control?

Which were systemic?

Which assumptions or leadership decisions contributed?

Who owns the immediate response?

Who owns the deeper system improvement?

What will prevent the same accountability problem from recurring?

This last question matters.

If the organisation repeatedly assigns accountability for the same issue while the underlying system remains unchanged, Ground has failed.

Accountability should produce learning.

Otherwise, it becomes repetition with consequences.

N — Navigate: Convert Hindsight Into Foresight

An organisation can become excellent at explaining yesterday and remain poorly prepared for tomorrow.

Navigate changes the time orientation.

Let's start with a simple question:

“If we face this situation again six months from now, what will we do differently?”

The question moves organisational learning beyond correction.

Corrective thinking asks:

What should we fix?

Capability thinking asks:

What must the organisation become better able to do?

That difference matters. A single event may reveal a wider weakness in decision speed, information visibility, technical capability, cross-functional coordination, or leadership judgement.

Dynamic capabilities research similarly argues that organisations must sense environmental developments and reconfigure capability as conditions change (Teece et al., 1997; Teece, 2007). Foresight contributes when it becomes embedded in these adaptive processes rather than remaining a periodic strategy exercise (Rohrbeck & Kum, 2018; Schwarz et al., 2020).

Navigate does not claim that leaders can predict the future. Its purpose is to increase preparedness and preserve options.

The stronger question is:

What can we strengthen now so that we are less dependent on predicting correctly?

That may mean cross-training, improved information, different decision rights, alternative suppliers, scenario rehearsal, or stronger distributed judgement.

A lesson becomes strategically useful when it changes what the organisation will be capable of doing next.

Hindsight Is Necessary but Insufficient

Most organisational learning begins retrospectively.

An incident occurs. A customer raises a concern. A target is missed. An operational review identifies unexpected behaviour. Leaders examine what happened and determine what should change.

Retrospection is indispensable because experience creates evidence.

The danger arises when the organisation becomes trapped there.

Weick et al. (2005) recognised this limitation in their development of sensemaking theory, explicitly arguing for a perspective that is more future-oriented and more connected to action. Their account positions sensemaking as a process through which circumstances become comprehensible enough to provide a basis for action.

For SIGNAL, which means interpretation should eventually create prospective consequences.

If the organisation understands yesterday more accurately but enters tomorrow with the same assumptions, capabilities, and decision routines, it has generated insight without adaptation.

This is a surprisingly common failure.

Lessons-learned reviews can become repositories of retrospective wisdom. Reports explain what happened. Actions are closed. Recommendations are documented. Yet the organisation may never ask whether the experience changes its assumptions about future operating conditions.

Navigate makes that question explicit.

From “What Went Wrong?” to “What Must Become Possible?”

There is a subtle difference between corrective thinking and capability thinking.

Corrective thinking asks:

What do we need to fix?

Capability thinking asks:

What must this organisation be able to do more effectively in the future?

The first may result in a procedure amendment.

The second may reveal that the organisation needs stronger technical capability, faster decision rights, better cross-functional coordination, greater supervisory judgement, improved information visibility or a different relationship with suppliers or customers.

Both may be appropriate.

The difference lies in depth.

An organisation can remove the immediate cause while remaining vulnerable to a different manifestation of the same underlying weakness.

Consider a recurring operational delay. A corrective response may change the approval process associated with that event. A Navigate discussion would go further:

- *Why did the organisation lack sufficient decision speed?*
- *Where else does the same dependency exist?*
- *Which decisions genuinely require escalation?*
- *What capability would allow decisions to be made closer to the work?*
- *What information would people need to exercise that authority safely?*

Now the lesson is no longer attached to one incident.

It has become a question about organisational design.

That is the movement SIGNAL seeks to encourage.

Foresight Is Not Prediction

Navigate should not be interpreted as an attempt to predict the future accurately.

That would create a false standard.

The objective of foresight is not to know exactly what will happen. It is to improve the organisation's capacity to recognise plausible change, preserve options and respond intelligently as conditions evolve.

This distinction is consistent with work on strategic sensemaking and dynamic capabilities. Pandza and Thorpe (2009) argue that creative search and strategic sensemaking complement experiential learning by allowing organisations to depart from knowledge trajectories that would otherwise develop only incrementally from past experience.

This is particularly relevant to SIGNAL because organisational learning can become path dependent.

If every lesson is interpreted solely through the lens of yesterday's operating model, the organisation may continuously improve a system whose assumptions are becoming less relevant.

Navigate therefore asks leaders to use experience without becoming imprisoned by it.

The question is not:

"How do we ensure this exact event never happens again?"

It is:

"What does this event tell us about the kind of uncertainty we may need to handle better?"

That is a much more transferable form of learning.

Future Capability Requires Organisational Imagination

The word navigate is deliberate because leadership under uncertainty involves direction without complete maps.

Organisations need enough imagination to consider conditions that have not yet become operational facts.

This may involve asking:

- *What would make the current problem materially worse?*
- *Which assumption are we depending on remaining true?*
- *If that assumption failed, what capability would we wish we had developed earlier?*
- *Where else could this pattern appear?*
- *Which emerging change could make today's successful process inadequate?*
- *What capability would give us more options if conditions shifted?*

These questions turn weak signals into strategic conversations.

They also prevent foresight from becoming restricted to formal strategy functions.

A technician noticing equipment behaviour, a customer-facing employee observing changing expectations or a supervisor seeing repeated workarounds can each contribute evidence about the future before it appears in a strategic planning document.

This is why Navigate remains connected to Surface.

The organisation's future is often first visible in small changes occurring at its edges.

Dynamic Capability Begins With the Ability to Sense

The dynamic-capabilities literature provides another useful lens.

Teece et al.'s (1997) foundational work frames dynamic capabilities around an organisation's ability to integrate, build and reconfigure internal and external competencies as environments change. Later research has increasingly examined the managerial and cognitive processes that make such reconfiguration possible.

Corporate foresight has similarly been examined as a possible micro foundation of dynamic capabilities. Schwarz et al.'s (2020) connect foresight practices with capabilities such as sensing, scanning, learning, and interpretation, arguing that these processes can strengthen how managers respond to changing environments.

SIGNAL does not seek to replicate dynamic-capabilities theory.

Its contribution is more operational.

It asks how the raw material for sensing—observations, conversations, anomalies, and feedback—moves into decisions about what the organisation should strengthen.

Navigate therefore serves as the bridge between learning from experience and reconfiguring capability.

Without this bridge, SIGNAL would remain an incident-learning framework.

With it, the architecture becomes relevant to business adoption and strategic adaptation.

Scenario Questions Convert Lessons Into Preparedness

One practical mechanism for Navigate is the disciplined use of counterfactual and scenario questions.

The original masterclass used a simple formulation:

“If we face this situation again six months from now, what will we do differently?”

The power of this question lies in its time orientation.

It moves the team out of the emotional and political dynamics of the current event and asks it to imagine the organisation encountering a similar challenge with improved capability.

The question can be extended:

If the same problem occurred at twice the scale, would our response still work?

If the most experienced person were unavailable, could the team manage it?

If the customer requirement changed, which part of our current process would become fragile?

If technology failed, what decision capability would remain?

If the problem emerged somewhere else in the organisation, would we recognise the pattern?

These are not predictions.

They are capability stress tests.

Their value lies in exposing dependencies that are invisible while current conditions remain favourable.

The Organisation Should Learn From Near Success as Well as Near Failure

Navigate should also apply to positive outcomes.

A successful response can create complacency if leaders assume that the outcome validates the system.

Yet success may have depended on circumstances unlikely to recur:

- an unusually experienced individual was present,
- a supplier responded exceptionally quickly,

- extra resources were temporarily available,
- a customer tolerated a delay,
- a problem was detected by chance.

The result was positive.

The system may still have been fragile.

This is why future-oriented learning needs to distinguish outcome quality from decision and system quality.

A favourable outcome should trigger questions similar to those following failure:

What made this work?

Which elements were deliberate?

Which depended on luck?

Would we succeed again under less favourable conditions?

What should we institutionalise while we have the opportunity?

This is particularly important for high reliability because organisations that study only failure may miss the adaptations through which employees are quietly preserving success.

Navigate therefore treats positive performance as evidence to investigate, not simply as a reason to celebrate.

Foresight Must Reach Resource Allocation

A recurring weakness in organisational learning is that future-oriented discussion remains conceptual.

Leaders agree that capability should improve.

The budget remains unchanged.

Decision rights remain unchanged.

Training remains optional.

Technology remains unfunded.

Workload remains intact.

Nothing material follows.

Navigate therefore becomes meaningful only when foresight begins influencing the allocation of organisational attention and resources.

If a leadership team concludes that a future operating environment will require stronger maintenance capability, for example, the question becomes:

- *What competence needs to exist?*
- *Where should it exist?*
- *How will it be developed?*
- *What investment is necessary?*
- *What current activity must make room for it?*
- *How will readiness be tested?*

Foresight without resource commitment becomes aspiration.

Navigate Should Preserve Options, Not Produce One Perfect Plan

Planning under uncertainty creates another temptation: once leaders recognise a potential future challenge, they may seek one definitive solution.

That can recreate the same problem SIGNAL is trying to prevent.

If uncertainty is genuine, the organisation may be better served by increasing its range of viable responses than by committing prematurely to one forecast.

The concept of dynamic capability is useful here because adaptation concerns the capacity to reconfigure as conditions evolve, rather than merely executing a fixed plan. Teece et al. (1997) positioned this capacity as particularly relevant where environments demand ongoing renewal of organisational competencies.

For SIGNAL, Navigate should therefore ask:

What options can we create now that would make us less dependent on predicting correctly?

Examples might include:

- cross-training,
- alternative suppliers,
- modular technology,
- more distributed decision authority,
- stronger operational data,
- scenario-based rehearsal,
- contingency resources,
- transferable leadership capability.

This shifts foresight from prediction toward optionality.

The organisation becomes better prepared because it has more ways to respond.

Learning Organisations Convert Knowledge Into Adaptive Performance

There is empirical support for connecting organisational learning with adaptive outcomes.

Research examining learning-organisation dimensions and adaptive performance has found positive relationships between learning, knowledge-related outcomes, adaptive performance, and broader organisational performance (Kim, 2021). While such findings do not validate SIGNAL specifically, they support the wider proposition that learning creates greater value when it changes an organisation's ability to respond to altered conditions.

This distinction is central to Navigate.

Knowledge itself is not the outcome.

Improved response capability is.

An organisation may know more after a review yet remain no more capable of handling the next disruption.

Navigate asks whether learning has changed that equation.

Coaching Moves From Reflection to Judgement Rehearsal

The role of coaching also changes at this stage.

During Surface, coaching creates curiosity and voice.

During Interpret, it helps distinguish evidence from assumption.

During Ground, it supports accountability without premature blame.

During Navigate, coaching becomes a form of judgement rehearsal.

Rather than telling people what the next response should be, leaders can ask them to reason through future possibilities:

“What would you notice earlier next time?”

“At what point would you make a different decision?”

“What information would you want sooner?”

“Which decision could you make without escalating?”

“What would cause you to change course?”

This is important because future capability cannot be developed entirely through written procedures.

People need opportunities to practise judgement before high-consequence situations demand it.

In this sense, Navigate converts a coaching conversation from reflection about the past into preparation for uncertainty.

From Lessons Learned to Capability Built

Many organisations use the phrase lessons learned.

SIGNAL should apply a higher threshold.

A lesson has not necessarily been learned because it has been identified.

The organisation should ask:

What capability now exists that did not exist before the lesson?

This produces a hierarchy:

Event reviewed

does not automatically mean

Lesson identified,

which does not automatically mean

Action completed,

which does not automatically mean

Capability strengthened.

Navigate focuses specifically on the transition between the second and fourth states.

The lesson becomes strategically useful when the organisation has translated it into greater readiness.

Business Adoption Test 4: Are We More Prepared Than Before?

The fourth practical test of SIGNAL is therefore:

Are we materially better prepared for the future because this signal surfaced?

A strong Navigate process should allow leaders to answer:

What has this experience changed about our assumptions?

Where else could the same underlying pattern appear?

Which future conditions could make the risk or opportunity more significant?

What capability do we need before that occurs?

Which options should we preserve?

What resources or decisions are required now?

How will we know whether readiness has actually improved?

The final question prevents Navigate from becoming abstract strategy discussion.

Preparation should eventually become observable.

That takes SIGNAL to its fifth function.

A — Act and Adapt: Make Learning Visible

Insight is cheap if nothing changes.

Klein and Sorra (1996) showed that implementation depends partly on whether organisational conditions make new behaviours expected, supported, and rewarded. Meyer and Goes (1988) similarly demonstrated that organisational assimilation occurs through a process rather than a single adoption decision.

This distinction is critical.

Executive approval is not adoption.

A revised policy is not adoption.

Training delivered is not adoption.

The stronger test is whether work itself changes.

Act and Adapt therefore asks:

What is observably different because of what we learned?

The change may involve decision rights, workflow, capability, technology, resources, leadership behaviour, performance measures, or incentives.

Importantly, not every signal requires a major intervention. Some warrant monitoring. Others justify experimentation. A reversible, limited adjustment can generate more learning than a large transformation

programme. The case material similarly observed that repeated small adjustments could create substantial cumulative improvement.

Action should therefore be treated as a hypothesis:

If we change this condition, we expect this outcome to improve.

The organisation then examines what actually happened and adapts accordingly.

This protects SIGNAL from solution attachment. Leaders should remain willing to modify or stop an intervention when new evidence contradicts the original assumption.

The Knowing–Doing Gap Is an Implementation Problem

The distinction between adopting an idea and implementing it is well established in organisational research.

Klein and Sorra (1996) argued that the effectiveness of innovation implementation depends substantially on the organisational context into which an innovation is introduced. Their model emphasises the importance of an implementation climate, shared perceptions that the use of an innovation is expected, supported, and rewarded, and the fit between the innovation and organisational values.

The implication for SIGNAL is significant.

A leadership team may decide that a new behaviour is necessary, but adoption will remain fragile if the surrounding organisation continues rewarding something different.

Suppose an operational review concludes that supervisors should escalate weak signals earlier. The recommendation appears straightforward.

Yet the existing environment may still reward supervisors almost exclusively for uninterrupted production, low escalation rates, and short-term target achievement. Raising an ambiguous concern could therefore create delay, scrutiny, and additional administrative work.

The formal message is:

Speak up early.

The operating system says:

Do not create unnecessary problems.

In this situation, issuing a revised procedure does not represent genuine implementation.

The organisational conditions supporting the old behaviour remain stronger than the instruction promoting the new one.

This connects directly back to the coaching paradox with which this article began. The same principle operates at organisational scale:

A new behaviour cannot be expected to survive consistently when the system surrounding it continues reinforcing the old one.

Act therefore requires leaders to examine more than the desired action. They must examine whether incentives, resources, authority, technology, workload, and management behaviour make that action realistic.

Implementation Requires More Than Executive Agreement

Senior leadership endorsement is important, but it should not be confused with organisational adoption.

A decision made in the executive room represents the beginning of implementation rather than its completion.

The distinction is visible in research on innovation assimilation. Meyer and Goes (1988), for example, conceptualised organisational assimilation as a process involving multiple stages through which innovations are evaluated, adopted, and implemented rather than as a single decision event. Their longitudinal study tracked potential innovations through organisations over time, illustrating that organisational adoption develops through successive decisions rather than one moment of approval.

SIGNAL adopts the same practical caution.

An organisation has not truly acted merely because:

- the leadership team agreed,
- an action owner was appointed,
- a policy was revised,
- a communication was issued,
- training was delivered,
- a project was declared complete.

These may all be necessary.

They are intermediate outputs.

The deeper question is whether the way work is actually performed has changed.

This distinction is especially important in large organisations because formal implementation can become detached from operational adoption.

A new process may exist in documentation but remain circumvented in practice.

A new technology may be installed but underused.

A delegation framework may formally empower supervisors while managers continue making decisions for them.

A coaching programme may encourage curiosity while performance meetings remain dominated by instruction.

An organisation can therefore complete an implementation programme while preserving the behavioural architecture that existed before it.

SIGNAL asks leaders to look beyond formal completion toward adoption fidelity:

Are people actually using the new capability in the conditions for which it was intended?

Action Should Be Proportionate to the Signal

Act does not imply that every weak signal should generate major intervention.

That would make SIGNAL expensive, cumbersome, and eventually unsustainable.

The appropriate response should reflect what has been learned through Surface, Interpret, Ground, and Navigate.

Some signals require immediate containment.

Some require experimentation.

Some require monitoring.

Some require capability development.

Some reveal that no intervention is presently justified.

This is an important point because deciding not to intervene can itself be a disciplined action, provided that the decision is conscious, evidence-based and accompanied by appropriate monitoring.

SIGNAL should therefore avoid equating action with organisational activity.

More activity is not necessarily better action.

The stronger question is:

What is the smallest responsible intervention capable of testing our understanding or improving the situation?

This creates room for incremental experimentation.

In many situations, a limited adjustment provides more useful information than a large transformation programme. A revised workflow can be piloted. Decision authority can be expanded within defined boundaries. A maintenance routine can be tested at one site. A leadership behaviour can be introduced within one team before wider adoption.

Small interventions preserve reversibility while generating additional evidence.

They also reinforce SIGNAL's recursive nature.

Surface → Interpret → Ground → Navigate → Act

does not end the learning process.

Action produces new information.

That information returns to Surface.

Adaptation Means Treating Action as a Hypothesis

This is why the fifth function is deliberately called Act and Adapt, rather than simply Act.

An action represents management's current best judgement about what should improve the situation.

It does not guarantee that the judgement is correct.

The intervention should therefore be treated as a hypothesis:

If we change this condition, we expect this behaviour or outcome to improve.

That expectation can then be tested.

This mindset protects organisations from one of the more subtle risks of implementation: solution attachment.

Once leaders have invested political capital, budget, and reputation in an intervention, acknowledging that it is not working can become difficult. The organisation starts defending the solution instead of continuing to examine the problem.

Adaptation requires the opposite behaviour.

Leaders should be willing to ask:

What did our intervention actually change?

What remained unchanged?

What unexpected consequence appeared?

Which assumption behind the intervention now looks weaker?

Should we continue, modify, scale, or stop?

This is not implementation failure.

It is implementation learning.

Argote and Miron-Spektor's (2011) framework is particularly relevant here. They describe organisational learning as a process through which experience interacts with organisational context to create knowledge. SIGNAL extends that logic into practice: action creates new experience, and new experience must be allowed to modify the organisation's previous interpretation.

Learning is therefore cyclical rather than terminal.

From Sensing to Reconfiguration

Dynamic-capabilities research provides a complementary strategic perspective.

Teece (2007) describes dynamic capabilities in terms of the organisational capacities needed to sense opportunities and threats, seize them, and reconfigure organisational assets and structures as environments change. His framework emphasises that sensing alone is insufficient; organisations must eventually translate perception into reconfiguration.

SIGNAL operates at a more applied level, but the parallel is useful.

Surface and Interpret contribute to sensing.

Ground and Navigate create decision ownership and direction.

Act and Adapt moves toward reconfiguration.

The relevance extends beyond risk.

A signal may reveal a threat requiring mitigation, but it may equally expose:

- an inefficient workflow,
- a new customer expectation,
- an emerging technology use,
- a workforce capability opportunity,
- unnecessary management layers,
- an innovative frontline practice,
- a new partnership possibility.

Act and Adapt therefore asks whether the organisation can convert sensing into changed organisational capacity.

Without this conversion, weak-signal detection can become intellectually interesting but commercially irrelevant.

Action Must Reach the Operating System

For SIGNAL to influence business adoption, action should be traceable to one or more components of the operating system.

These may include:

Decision rights.

Who is now authorised to act differently?

Processes.

Which workflow has changed?

Capability.

What can people now do that they could not do previously?

Information.

What will become visible earlier?

Technology.

Which tool changes the quality or speed of work?

Resources.

What has been added, removed, or reallocated?

Leadership behaviour.

What will managers do differently?

Performance measures.

What will the organisation now pay attention to?

Incentives.

What behaviour will be reinforced?

The value of this approach is its specificity.

“Improve communication” is not implementation.

“Strengthen accountability” is not implementation.

“Develop collaboration” is not implementation.

Each needs to become observable in the system.

For example:

Instead of improve communication:

Introduce a 15-minute cross-functional operating review whenever a defined early-warning threshold is reached.

Instead of empowering frontline leaders:

Specify which categories of operational decision can now be taken locally without executive escalation.

Instead of increasing psychological safety:

Require leaders to begin incident reviews by separating observation, interpretation, and responsibility before discussing fault.

The stronger the behavioural specificity, the easier it becomes to assess whether adoption has occurred.

Implementation Climate Can Reinforce (or Defeat) the New Behaviour

The importance of surrounding conditions brings SIGNAL back to Klein and Sorra's implementation-climate argument.

People notice what an organisation genuinely expects from the consequences attached to behaviour. If an organisation announces one priority while its incentives and leadership practices reward another, employees usually learn which message is real.

For SIGNAL adoption, leaders should therefore inspect the alignment between:

what we say matters, what we measure, what we reward, what we resource and what leaders themselves do.

A weak signal might reveal precisely such a misalignment.

For example, senior management may advocate proactive maintenance while operational incentives heavily favour maximum short-term utilisation.

The maintenance team then encounters a tension.

Formally, prevention matters.

Operationally, downtime is penalised.

The resulting behaviour should not automatically be attributed to poor commitment. It may be a rational response to contradictory signals from the organisation itself.

Act and Adapt therefore has a systemic obligation:

Do not ask employees to resolve contradictions that leadership has embedded in the operating model.

This makes adaptation a leadership responsibility rather than simply a frontline expectation.

Small Adjustments Can Produce More Learning Than Large Programmes

Some valuable improvements emerged through relatively small adjustments rather than large transformation initiatives, with consistent adaptation creating cumulative impact.

Large programmes have a role when structural change is necessary.

But not every learning event justifies one.

Small changes offer several advantages.

They are easier to reverse.

Their effects are easier to observe.

They involve lower implementation risk.

They allow organisations to compare expected and actual outcomes.

They shorten the feedback cycle between action and learning.

They can build confidence before wider scaling.

This approach is consistent with a learning architecture because SIGNAL values iteration over declarations of completion.

The objective is not to make the organisation appear transformed.

It is to improve its capacity continually.

Acting Quickly and Acting Thoughtfully Are Not Opposites

A recurring challenge in executive environments is the perceived tension between analysis and speed.

Leaders are often praised for decisiveness.

In genuine emergencies, speed can be essential.

Yet speed becomes dangerous when it is achieved by collapsing Surface, Interpret and Ground into immediate action.

SIGNAL seeks a different form of speed: decision velocity with sufficient reasoning.

The required balance depends on consequence, reversibility, and uncertainty.

For a highly reversible decision with limited downside, rapid experimentation may be appropriate.

For an irreversible decision with severe consequences, stronger interpretation and evidence may be necessary before action.

This creates a simple leadership principle:

The less reversible the decision, the more disciplined the preceding interpretation should be.

Conversely:

The more reversible the intervention, the more willing the organisation can be to learn through action.

This principle prevents SIGNAL from becoming bureaucratic.

It also encourages leaders to redesign decisions so that uncertainty can be managed through staged commitment rather than waiting for impossible certainty.

Action Without Measurement Produces Stories, Not Learning

A further requirement is measurement.

If an organisation changes something but cannot determine what happened afterwards, the intervention produces experience without usable learning.

This does not mean every action requires sophisticated analytics.

The measurement can be simple.

What was the expected change?

What indicator or behaviour would suggest improvement?

When will it be reviewed?

What unintended consequences should be monitored?

Who will make the decision to continue, modify, or stop?

These questions turn implementation into a learning cycle.

They also reduce another organisational bias: the tendency to evaluate interventions by activity rather than consequence.

Training delivered is an activity.

Capability demonstrated is an outcome.

Technology installed is an activity.

Technology consistently used to improve decisions is an outcome.

A process revised is an activity.

Fewer avoidable delays or stronger decision quality is an outcome.

SIGNAL should continually distinguish between the two.

Implementation Is Social, Not Merely Technical

There is also a behavioural dimension to Act and Adapt.

A technically sound intervention can still fail when people do not understand it, do not trust it, or do not see it as compatible with the way they believe work should be performed.

Klein and Sorra's implementation framework explicitly include the fit between an innovation and users' values alongside implementation climate.

This is especially relevant when SIGNAL produces changes to authority or accountability.

A new escalation process may technically improve information flow while being perceived by supervisors as reducing their autonomy.

A new digital tool may increase visibility but create concern about surveillance.

Cross-functional decision-making may improve interpretation while challenging established functional status.

The adoption problem therefore cannot be solved solely by explaining the technical merit of the change.

Leaders must understand how people interpret what the change means.

Coaching becomes useful here because it creates space for people to examine those interpretations rather than merely receive implementation instructions.

This reinforces a broader argument of the article:

Business adoption is psychological as well as structural.

Systems change behaviour partly through the meanings people attach to them.

Action Should Increase Capability, Not Executive Dependency

SIGNAL also needs a test concerning where implementation authority resides.

When a weak signal reaches senior management, executives may solve the immediate issue personally.

The business may obtain a good result.

But the organisation may not have become stronger.

If the same category of decision returns to the executive team next month, the intervention solved the event without developing capability.

If every important decision depends on the leader, dependence rather than capability has been created.

Act and Adapt should therefore ask:

After this intervention, can the appropriate level of the organisation handle more of this type of uncertainty independently?

Where appropriate, action should strengthen:

- local judgement,
- role clarity,
- decision authority,
- cross-functional access,
- technical capability,
- escalation intelligence.

This is distributed judgement made operational.

The aim is not decentralisation for its own sake.

Some decisions appropriately remain centralised.

The aim is to ensure that decision authority follows the level at which information, expertise and consequence can be managed responsibly.

Institutionalisation Is Different From Implementation

There is one final boundary to establish.

Act and Adapt changes practice.

It does not yet guarantee organisational memory.

A successful improvement may depend on the individuals who participated.

A strong supervisor remembers the lesson.

A particular management team maintains the practice.

A project leader continues prompting the new behaviour.

Then people move roles.

Leadership changes.

Priorities shift.

The practice gradually disappears.

Crossan et al. (1999) influential 4I framework is especially relevant here because it conceptualises organisational learning as moving through intuiting, interpreting, integrating, and institutionalising, connecting individual, group, and organisational levels.

The final movement is critical.

An insight that changes one person's behaviour is individual learning.

An insight shared by a team can become collective learning.

For it to survive beyond those people, however, some aspect must become institutionalised within organisational routines, systems, or shared practices.

This is precisely where SIGNAL's final function begins.

Business Adoption Test 5: What Is Observably Different?

The fifth practical test is:

What is observably different in the business because we acted on what we learned?

A strong Act and Adapt process should be able to answer:

What changed?

Where did it change?

Who now behaves or decides differently?

What assumption was the intervention testing?

What evidence suggests the intervention is working?

What unintended effects have appeared?

Should we continue, modify, scale, or stop?

Has capability increased, or has the solution simply created another dependency?

The last question is especially important.

An action can remove today's problem while making tomorrow's organisation more dependent.

SIGNAL should favour interventions that improve both immediate performance and future capacity where circumstances permit.

But even a successful intervention remains vulnerable if its learning stays with the people who created it.

That brings us to the final function.

L — Lock in Learning: Make Improvement Survive

Implementation does not guarantee memory.

People move. Managers change. Priorities shift. The rationale behind yesterday's improvement disappears.

Walsh and Ungson (1991) conceptualised organisational memory through the acquisition, retention, and retrieval of information. Levitt and March (1988) similarly showed how organisational experience becomes encoded in routines.

Crossan et al.'s (1999) 4I framework provides another useful connection: organisational learning moves through intuiting, interpreting, integrating, and institutionalising across individual, group and organisational levels.

SIGNAL's Lock function addresses this institutionalisation problem.

The original intervention suggested embedding lessons in leadership routines, training, standard operating procedures, coaching conversations, performance reviews, knowledge-sharing mechanisms, and succession practices.

However, documentation alone is insufficient.

A procedure can change while behaviour remains untouched.

The stronger question is:

Where does this learning need to live so that it influences future judgement when it matters?

Sometimes the answer is standardisation.

Sometimes a decision principle.

Sometimes a coaching routine.

Sometimes the organisation should develop judgement rather than create another rule.

There is also a counter-risk. Institutionalised learning can become institutional rigidity. Tsang and Zahra (2008) argue that organisational unlearning, the discarding of outdated routines, deserves explicit attention.

SIGNAL must therefore preserve a paradox:

An organisation that cannot remember repeats its mistakes. An organisation that cannot reconsider what it remembers repeats its assumptions.

Every Lock must eventually remain capable of being unlocked by better evidence.

An Organisation Does Not Remember in the Same Way a Person Does

The idea of organisational memory needs to be used carefully.

Organisations do not possess memory in a literal human sense. Rather, past experience becomes encoded in structures through which information can be retained and retrieved.

Walsh and Ungson's (1991) seminal work conceptualised organisational memory around processes of information acquisition, retention, and retrieval. They also warned that organisational memory can be used, misused, or abused, an important qualification for SIGNAL because retaining the past can strengthen future decisions while also preserving outdated assumptions.

Levitt and March (1988) similarly described organisational learning as routine-based, history-dependent, and target-oriented. In their account, organisations encode inferences from experience into routines that subsequently guide behaviour.

This has a direct implication for Lock.

If an insight remains only in the recollection of the people who experienced it, it is vulnerable.

If the insight changes:

- *how a meeting is conducted,*
- *what information is reviewed,*
- *who has authority to decide,*
- *how new employees are trained,*
- *which questions supervisors ask,*
- *which thresholds trigger attention,*
- *how a process is designed,*
- *what capability is included in succession planning,*
- *then the organisation has begun to convert experience into memory.*

The difference is fundamental.

Individual memory says: I remember why we changed this.

Organisational memory says: The way we now work reflects what was learned, even when the original people are no longer present.

From Experience to Knowledge; and From Knowledge to Institution

Argote and Miron-Spektor (2011) describe organisational learning as a process through which organisational experience interacts with context to create knowledge. Their framework is particularly useful because it treats learning as embedded within an organisational context rather than as knowledge acquisition by isolated individuals.

Crossan et al.'s (1999) 4I framework provides an even clearer bridge to SIGNAL. They conceptualise organisational learning through four related processes (intuiting, interpreting, integrating, and institutionalising) across individual, group and organisational levels.

The parallel with SIGNAL is significant, although the frameworks are not identical.

A weak signal may begin with an individual's intuition or observation.

SIGNAL's Surface creates visibility.

Interpret helps people construct meaning collectively.

Ground and Navigate help move that meaning toward shared ownership and direction.

Act and Adapt converts understanding into changed practice.

Lock in Learning addresses the institutionalisation problem: how new understanding becomes embedded deeply enough to influence future behaviour.

SIGNAL therefore does not claim to replace established organisational-learning theory. Rather, it provides a managerial architecture for operationalising a similar movement from individual observation toward organisational capability.

That distinction is important for academic integrity.

The theoretical contribution being proposed is not that organisations have never before been understood to institutionalise learning. The potential contribution lies in providing leaders with a practical six-function mechanism for managing the journey from an ambiguous signal to a retained organisational response.

Documentation Is Necessary but Is Not Institutionalisation

One of the easiest mistakes at this stage is to confuse learning with record keeping.

Organisations frequently respond to incidents or reviews by updating procedures.

The document changes.

The organisation may not.

A revised standard operating procedure can preserve useful knowledge, but only if it affects actual behaviour. The same applies to lessons-learned databases, audit reports, policy updates, and training materials.

A document can contain a lesson while the organisation continues behaving as before.

Lock therefore asks a more demanding question:

Where does this learning need to live so that it influences future judgement at the moment it is needed?

Sometimes the answer will be a procedure.

Sometimes it will be a decision rule.

Sometimes it will be training.

Sometimes a technology control.

Sometimes an organisational routine.

Sometimes it should become part of how leaders coach.

Sometimes the lesson is sufficiently contextual that it should remain a principle rather than a rigid rule.

This makes Lock a design decision, not an administrative closing step.

The Strongest Knowledge Is Often Embedded in Routines

There is a reason routines matter.

People cannot reconsider every organisational lesson from first principles each time they work. Reliable performance requires large parts of accumulated experience to become accessible without constant conscious analysis.

Levitt and March's account of organisational learning emphasise this role of routines: historical experience becomes encoded in behavioural structures that help organisations respond repeatedly without having to rediscover the rationale each time.

This creates efficiency.

It also allows organisations to scale.

Imagine that one supervisor discovers through experience that a particular category of emerging issue benefits from early cross-functional review.

If only that supervisor knows this, performance depends on the individual.

If the organisation subsequently establishes a clear routine for when such a review occurs, future supervisors can benefit without first repeating the original mistake.

The lesson has moved from:

experience

to

judgement

to

routine.

That movement is the essence of Lock.

Resilient organisations should depend less on exceptional individuals and more on strong organisational-learning systems, with knowledge shared rather than privately owned.

Lock Should Capture the Reasoning, Not Just the Rule

There is, however, a subtle danger.

When lessons are converted into procedures, organisations often preserve what was decided but lose why.

Future employees encounter a rule without knowing the conditions that gave rise to it.

Over time, the original environment changes.

The rule remains.

Eventually people either comply with something whose purpose has disappeared or develop informal workarounds around an obsolete requirement.

SIGNAL should therefore encourage organisations to preserve decision rationale alongside important institutional changes.

For significant lessons, the organisation should be capable of explaining:

What signal triggered this change?

What did we understand about the situation?

What assumption was challenged?

Why were this response chosen?

Under what conditions might the decision need to be reconsidered?

This is more valuable than storing an instruction alone.

It turns organisational memory from a collection of rules into a record of reasoned adaptation.

That distinction becomes increasingly important in volatile environments because today's best response may not remain appropriate indefinitely.

Institutionalisation Can Become Institutional Rigidity

This is the most important counterargument to Lock in Learning.

If learning is valuable, it seems intuitive that organisations should preserve as much of it as possible.

That conclusion is incomplete.

The past is useful until conditions change.

Walsh and Ungson's (1991) work explicitly recognises that organisational memory can have dysfunctional consequences as well as useful ones. Levitt and March (1988) similarly portray organisational learning as history-dependent, which means organisational experience can shape future behaviour in ways that are powerful but not necessarily optimal under new conditions.

This leads to an important SIGNAL paradox:

An organisation that cannot remember repeats its mistakes. An organisation that cannot reconsider what it remembers may repeat its assumptions.

Lock must therefore never mean freeze.

A procedure developed from yesterday's lesson can become tomorrow's source of friction.

A successful control can become bureaucratic accumulation.

A leadership practice suited to one organisational stage may become unsuitable as capability improves.

A reporting threshold designed for one operating environment may lose relevance as technology changes.

In that sense, every Lock should remain potentially unlockable.

This reinforces the recursive architecture of SIGNAL:

Lock → new experience → Surface → Interpret → Adapt → Lock again.

The framework therefore treats organisational memory as provisional knowledge subject to future evidence, rather than permanent truth.

Learning Requires Exploitation and Forgetting Requires Exploration

March's (1991) exploration–exploitation tension becomes particularly relevant at the final stage.

Lock is inherently an exploitation mechanism.

It captures what the organisation believes it has learned and makes that learning reproducible.

This produces efficiency, consistency, and reliability.

But excessive exploitation creates the danger that the organisation becomes increasingly effective at repeating established solutions while losing sensitivity to changing circumstances.

Exploration therefore remains necessary even after learning has been institutionalised.

Leaders need to ask periodically:

Is the assumption behind this routine still valid?

Has technology changed the problem?

Are employees working around this process for a reason?

Is this control still reducing risk, or merely creating effort?

Does the evidence still justify the practice?

The purpose is not to destabilise every standard.

It is to prevent organisational memory from becoming unquestioned inheritance.

This is why SIGNAL must operate as a learning loop, not a compliance staircase.

What Should Be Locked and What Should Remain Flexible?

Not every lesson deserves the same level of institutionalisation.

Some lessons concern stable technical requirements and may reasonably become tightly standardised.

Others involve contextual judgement and should be embedded differently.

A useful SIGNAL distinction is between three forms of learning.

1. Standardise

Where the evidence is strong, recurrence is predictable and variation adds little value, the lesson may become:

- a procedure,
- a technical control,
- a mandatory threshold,
- a checklist,
- a system rule.

2. Guide

Where situations vary but underlying principles are reasonably stable, the lesson may become:

- a decision principle,
- a leadership expectation,
- a coaching question,
- a review criterion,
- a scenario guide.

3. Develop judgement

Where uncertainty is inherently high, the strongest institutional response may not be a rule at all.

The organisation may need:

- Simulation,
- case-based learning,
- coaching,
- cross-functional exposure,
- deliberate practice,
- progressively delegated decisions.

This distinction is important because organisations frequently respond to uncertainty by creating more procedure.

But complex judgement cannot always be standardised.

In some circumstances, the most valuable thing to Lock is the capability to think, rather than a predetermined answer.

Coaching Is Part of Organisational Memory

This brings coaching back into the final stage of SIGNAL.

Coaching is the architecture rather than after the work. During Lock, its purpose is to transfer knowledge so that insight does not remain concentrated in individuals.

This is strategically significant.

Organisations often transfer explicit knowledge reasonably well.

Procedures can be documented.

Training materials can be distributed.

Data can be stored.

What is harder to transfer is judgement.

An experienced manager may know when a small anomaly deserves attention.

A technical specialist may recognise a pattern before being able to articulate precisely how.

A strong leader may understand how to balance competing priorities under uncertainty.

Much of this knowledge cannot be transferred adequately through a written procedure.

Coaching provides one mechanism through which experienced people can help others reconstruct the reasoning behind decisions.

The objective should not be to create replicas of the expert.

It should be to expose the learner to the questions, trade-offs, and assumptions through which expert judgement develops.

That allows organisational memory to contain more than answers.

It begins to contain ways of thinking.

Succession Planning Is Also a Knowledge-Retention System

This perspective changes how succession should be understood.

Succession planning is usually framed around role continuity: who can replace whom?

SIGNAL adds another question:

Which critical organisational judgement would disappear if this person left tomorrow?

That question may reveal risks invisible on the formal organisation chart.

A relatively junior technical specialist may hold knowledge developed over years of exposure.

A customer manager may understand an informal relationship network that has never been documented.

A supervisor may have developed an effective method of detecting emerging workforce issues.

A senior leader may carry strategic reasoning behind decisions that successors will inherit without context.

Lock therefore connects organisational learning with knowledge-risk management.

Before critical individuals leave, the organisation should determine what needs to be:

- documented,
- demonstrated,
- coached,
- shared,
- distributed,
- institutionalised.

The aim is not to capture every piece of personal knowledge.

It is to reduce single-person dependency where the consequences of loss are material.

Memory Must Be Retrievable to Have Value

Retaining knowledge is only part of organisational memory.

The organisation must also be able to retrieve it when relevant.

Walsh and Ungson's framework explicitly include retrieval alongside acquisition and retention.

This matters enormously in contemporary organisations.

A company may have thousands of historical reports, audit findings, incident investigations, and project reviews.

Technically, knowledge has been stored.

Operationally, it may be invisible.

Employees encountering a new problem may have no practical way of discovering that another part of the organisation faced something similar three years earlier.

This suggests that Lock should include a retrievability test:

Will the right person be able to access this learning when a similar situation arises?

The answer may depend less on the volume of documentation than on how knowledge is structured.

Useful mechanisms could include:

- searchable lessons libraries,
- tagged case repositories,
- embedded prompts in digital workflows,
- communities of practice,
- periodic scenario reviews,
- peer-learning forums,
- leadership handover routines.

Technology, including AI-enabled knowledge systems, may increasingly improve retrieval. But technology cannot compensate for poor knowledge architecture. If the underlying lesson has been documented without context, rationale or usable categorisation, faster search simply retrieves weak knowledge more efficiently.

Memory Needs Ownership

Another failure occurs when everyone assumes institutional learning belongs to someone else.

Operations expects quality to maintain the lesson.

Quality expects training to incorporate it.

Training expects line managers to reinforce it.

Line managers expect employees to remember.

Eventually no one owns whether the learning remains alive.

Lock therefore needs explicit custodianship.

The relevant owner may differ depending on the lesson.

A technical standard may belong to engineering.

A leadership practice may belong jointly to line leaders and people functions.

A governance lesson may belong to executive management.

A customer insight may belong to commercial and operational teams together.

The important issue is not bureaucratic ownership.

It is ensuring someone periodically asks:

Is this learning still embedded?

Is it being used?

Is it still valid?

Without those questions, organisational memory gradually decays.

Business Adoption Test 6: Did Learning Become Permanent Enough to Survive; and Flexible Enough to Evolve?

The original SIGNAL architecture asks its third overarching question:

“Did learning become permanent?”

I would refine that test.

Absolute permanence is neither realistic nor desirable.

A stronger question is:

Did learning become embedded enough to survive individual turnover, while remaining open enough to change when new evidence emerges?

A robust Lock process should be able to answer:

What exactly did we learn?

Where has that learning been embedded?

Who owns maintaining it?

Can someone who was not present during the original event understand why the practice exists?

Can relevant employees retrieve the knowledge when they need it?

Does the organisation still depend on one person to make the judgement?

When will the assumption behind the lesson be reviewed?

What signal would tell us that the lesson itself has become outdated?

That final question closes the SIGNAL loop.

Because eventually even institutionalised learning should become capable of generating a new signal.

SIGNAL in Practice: Business Adoption Rather Than Framework Compliance

The practical value of SIGNAL becomes visible when the functions operate together.

A frontline colleague notices an unusual condition.

Surface determines whether the observation enters the conversation.

Interpret prevents the first explanation from becoming the unquestioned answer.

Ground establishes what belongs to individual judgement, what belongs to the system and who owns improvement.

Navigate asks what future capability the experience implies.

Act and Adapt changes something tangible.

Lock in Learning ensures that future people benefit from a lesson they did not personally experience.

The movement is therefore:

individual noticing → collective meaning → accountable ownership → future capability → changed practice
→ organisational memory.

This is the business-adoption logic of SIGNAL.

It also changes the way coaching effectiveness is judged.

The question is no longer:

How many people were coached?

It becomes:

What became possible in the organisation because coaching changed how information, judgement, and learning travelled?

The original intervention explicitly positioned coaching as something operating throughout SIGNAL: encouraging curiosity during Surface, critical thinking during Interpret, dignity and standards during Ground, judgement during Navigate, behavioural change during Act, and knowledge transfer during Lock.

Coaching therefore becomes less an isolated leadership technique and more a social mechanism through which distributed organisational thinking develops.

From Six Functions to One Learning Architecture

SIGNAL Is a Loop, Not a Checklist

Taken individually, the six functions appear sequential:

Surface → Interpret → Ground → Navigate → Act and Adapt → Lock in Learning.

In organisational practice, however, SIGNAL should not be interpreted as a one-directional process.

Each function changes the conditions for the others.

How leaders Ground accountability today affects whether employees will Surface uncomfortable information tomorrow.

What the organisation Acts upon produces new evidence requiring Interpretation.

What becomes Locked into procedures may eventually create workarounds that themselves become new signals.

A Navigate discussion may reveal missing information and send the organisation back to Surface.

SIGNAL is therefore better conceptualised as a recursive learning architecture.

Its value lies less in moving mechanically through six letters and more in ensuring six organisational capabilities remain connected.

The architecture can be summarised through three larger questions already embedded in the original framework:

Did reality surface early?

Was judgement sound?

Did learning become embedded?

These questions connect information, cognition, and institutional capability.

They also allow SIGNAL to be used beyond failure prevention.

A customer opportunity can travel through the same architecture.

So can an emerging technology.

A promising employee practice.

A supplier innovation.

A shift in workforce expectations.

A change in regulation.

The architecture is therefore better understood as a business-adoption and organisational-learning system than as an incident-management tool.

Its central question remains consistent throughout:

SIGNAL in Practice: From Leadership Conversation to Business Adoption

The value of SIGNAL becomes clearer when the six functions are examined together rather than as separate leadership techniques.

The practical intervention from which the framework developed began with a familiar organisational problem: leaders could conduct meaningful coaching conversations, yet the behavioural effect was difficult to sustain when people returned to operating environments characterised by competing priorities, interruptions, workload

pressure, and established routines. The intervention therefore moved beyond coaching as an interpersonal activity and explored how leadership conversations could influence the wider system in which behaviour occurs.

The visual material accompanying this article provides the setting in which that discussion occurred. Its purpose is contextual rather than identificatory. The case is used here to examine the movement from individual observation to organisational adoption, rather than to evaluate or profile the organisation itself.

The case can be understood through a realistic operating pattern.

Imagine that a frontline colleague notices something unusual during normal work. Nothing has failed. No formal threshold has necessarily been crossed. The observation might concern a recurring workaround, an unexpected variation, a customer reaction, a maintenance concern, or another condition that appears slightly different from normal practice.

At this stage, the organisation possesses a potential signal, but not yet knowledge.

Whether that observation becomes valuable depends on what happens next.

Surface: The Observation Must Enter the Conversation

The first adoption challenge is whether the individual considers the observation worth raising.

Frontline colleagues frequently encounter emerging conditions before senior management and argued that leadership quality should therefore be judged partly by the organisation's capacity to listen effectively.

In practical terms, Surface begins when the employee decides:

This may matter enough to mention.

That decision is influenced by culture.

If previous concerns have been dismissed, the person may wait.

If leaders demand certainty before listening, the person may decide there is insufficient evidence.

If raising problems attracts blame, the signal may remain private.

The leadership intervention therefore used coaching behaviour to reduce this threshold. Leaders were encouraged to ask questions such as “*What am I missing?*” and to approach operating expertise with curiosity rather than immediate judgement. The underlying purpose was to create an environment in which information could enter the management system before its significance was fully established.

At this point, SIGNAL has achieved only visibility.

That is necessary, but insufficient.

Interpret: The Organisation Resists the Obvious Answer

Suppose the concern reaches a leader.

The most dangerous next move may be immediate explanation.

Observation must be separated from cause. A change in performance, a complaint or an abnormal operating condition tells the organisation that something deserves attention; it does not independently explain what produced it.

The leadership intervention therefore shifted the conversation toward questions:

What else might be influencing this?

What are we assuming?

What evidence do we have?

Whose perspective is missing?

This becomes particularly important when the issue crosses organisational boundaries.

The real case records occasions when an apparently straightforward explanation changed after perspectives from operations, human resources, finance and health and safety were connected. Each function saw a different part of the picture. The stronger judgement emerged not because one function possessed the answer, but because the organisation integrated several partial views.

SIGNAL therefore converts an individual observation into collective interpretation.

This is the first significant movement toward business adoption.

The signal is no longer merely something one person noticed.

It has become something the organisation is beginning to understand.

Ground: Accountability Moves From Blame to Ownership

Interpretation then creates a more difficult question: who owns the response?

The intervention deliberately avoided beginning with “Who caused this?” Instead, leaders were encouraged to examine what contributed to the outcome and what responsibility different actors had for strengthening the situation.

This distinction matters in complex operating environments because visible behaviour may sit at the end of a longer chain of influences.

A frontline decision may have been shaped by unclear instructions.

A recurring workaround may reflect resource constraints.

A supervisor’s behaviour may be influenced by contradictory performance expectations.

A delayed response may reflect decision rights located too far from the point of work.

Ground therefore examines both personal agency and system conditions.

The result should not be vague shared responsibility where everyone owns the issue and therefore nobody does.

The purpose is clearer ownership.

Who addresses the immediate condition?

Who addresses the underlying system weakness?

Who strengthens capability?

Who checks whether the response worked?

In this sense, accountability becomes an implementation mechanism.

It creates the bridge between understanding and movement.

Navigate: The Lesson Is Projected Forward

Once the organisation understands the issue and establishes ownership, SIGNAL deliberately moves away from the event itself.

The original intervention used a future-facing coaching question:

“If we face this situation again six months from now, what will we do differently?”

The related leadership reflection was similarly framed around the capability that should be strengthened for the next occurrence rather than around who had been correct in the previous one.

This changes the quality of organisational learning.

The issue is no longer:

How do we prevent this exact event?

It becomes:

What organisational capability does this event reveal that we need to strengthen?

The answer may concern judgement.

It may concern communication.

It may involve technology, information visibility, capability, resources, or decision authority.

This is where retrospective learning begins turning into preparedness.

In the real-world intervention, that shift was important because the objective was never simply to develop stronger coaching conversations. The deeper leadership objective was to create an organisation capable of making sound decisions without constant reliance on a few senior individuals. This as a movement from directing toward enabling, from controlling toward developing judgement, and from individual expertise toward organisational capability.

Navigate therefore transforms the meaning of coaching.

The leader is no longer helping someone solve today’s problem.

The conversation is beginning to develop tomorrow’s organisational capacity.

Act and Adapt: Learning Must Change Something Real

At this stage, the organisation may understand the issue extremely well.

That still does not constitute adoption.

The original intervention recognised this problem directly: organisations can produce sophisticated reports while struggling to translate insight into changed practice. Its practical test was therefore simple:

“What will be different because of what we have learned?”

The answer must become observable.

Perhaps a workflow changes.

Perhaps a leader’s coaching behaviour changes.

Perhaps information reaches management earlier.

Perhaps decision authority is moved closer to operational expertise.

Perhaps a technical routine is redesigned.

Perhaps a small experiment is introduced before wider adoption.

This observation strengthens the practical credibility of SIGNAL.

Adoption should not be measured by the size of the initiative.

It should be measured by whether organisational behaviour has changed in a useful and sustainable way.

Lock in Learning: The Improvement Must Outlive the Conversation

The final transition is from implemented change to organisational memory.

Several mechanisms through which this can happen: leadership routines, training, standard operating procedures, coaching conversations, performance reviews, knowledge sharing, and succession planning. are less important than the principle.

If the improved judgement remains inside the people who participated in the original discussion, the organisation remains dependent on their memory.

If the lesson becomes embedded in how future people work, decide, and learn, business adoption has occurred at a deeper level.

This is where the SIGNAL cycle reaches its most consequential outcome.

A frontline observation has travelled through:

individual noticing → collective meaning → accountable ownership → future capability → changed practice → organisational memory.

Coaching should not be judged simply by how many people leaders coach, but by whether coaching makes the organisation better at thinking and learning.

That is the central case insight.

The business value of the initial conversation does not lie entirely in the conversation itself.

Its value depends on what the organisation is capable of doing with what emerged from it.

From Case Application to a Wider Leadership Proposition

Seen through this lens, SIGNAL changes the unit of analysis.

Traditional coaching usually begins with the individual:

What does this person need to understand or do differently?

SIGNAL adds a second question:

What does the organisation need to learn from what this person is seeing?

This matters because individual development and organisational learning can easily become disconnected.

A manager can become better at solving problems without the organisation becoming better at preventing them.

A technician can acquire stronger expertise while dependency on that technician increases.

A leadership team can become skilled at analysing incidents while lessons fail to travel beyond the room.

SIGNAL attempts to connect these levels.

Coaching develops the quality of conversation.

Psychological safety improves the probability that reality enters the conversation.

Interpretation improves the quality of meaning.

Accountability creates ownership.

Navigation converts hindsight into future capability.

Action changes the business.

Institutionalisation protects the learning.

The case application therefore suggests that the deeper contribution of coaching may lie less in developing isolated individuals than in increasing the organisation's capacity to distribute judgement.

This proposition is consistent with the leadership architecture articulated in the original intervention. There, sustainable business performance appears at the end of a chain rather than at its beginning: leadership creates conditions for coaching and candour; those conditions support stronger performance and learning; learning strengthens reliability; and reliability supports sustainable organisational performance.

However, this interpretation also raises an important academic obligation.

The practical usefulness of SIGNAL should not be mistaken for empirical validation.

The case shows how the framework can organise leadership thinking and convert a real intervention into a coherent business-adoption architecture. It does not establish that SIGNAL independently causes superior organisational performance, nor that each of its six functions contributes equally, nor that the architecture will operate identically across different organisational cultures or contexts.

Those boundaries must remain explicit.

What SIGNAL Adds; and What It Does Not Yet Prove

The framework should not be presented as an empirically validated theory.

Its current contribution is integration.

Existing research already explains psychological safety, voice, sensemaking, implementation, high reliability, dynamic capabilities, and organisational memory. SIGNAL does not claim originality for those phenomena. Its potential contribution lies in connecting them through a practical business-adoption architecture.

Several risks remain.

First, more signals can create information overload. Organisations need triage rather than indiscriminate escalation.

Second, weak signals inevitably create false positives. Early discussion should be encouraged without lowering the evidential standard for significant intervention.

Third, interpretation remains vulnerable to bias and organisational politics.

Fourth, psychological safety is uneven. People may feel safe discussing technical issues while remaining unwilling to challenge senior decisions (Detert & Burris, 2007).

Fifth, Ground can revert to blame under commercial or regulatory pressure.

Sixth, Navigate can become foresight theatre if discussion never reaches resource allocation.

Seventh, continuous adaptation can create change fatigue.

Finally, Lock can produce bureaucratic accumulation if every historical lesson adds another permanent control.

There is an additional danger: SIGNAL itself could become the kind of process it was designed to avoid. Organisations could create six-stage forms, dashboards, and compliance rituals without improving judgement.

Its success should therefore not be judged by whether employees can recite six letters.

It should be judged by whether the organisation becomes better at seeing, interpreting, owning, preparing, acting, and learning.

Future Research: From Practice Architecture to Testable Theory

The next development of SIGNAL should be empirical rather than conceptual expansion.

Research could examine whether the framework affects three levels.

At the individual level, studies could test relationships with psychological safety, willingness to speak, critical thinking and judgement under uncertainty.

At the team level, researchers could assess whether SIGNAL improves detection of emerging issues, use of distributed information, team reflexivity, and decision quality.

At the organisational level, longitudinal work could examine repeated failure, adaptive performance, knowledge retention, executive dependency, and reliability outcomes.

One particularly useful construct would be signal velocity: the time between initial observation, organisational recognition, interpretation, accountable decision, and intervention.

Faster is not automatically better. Poorly interpreted information can produce faster mistakes.

A stronger proposition would therefore be:

Organisational reliability may improve when meaningful signals travel with sufficient speed to preserve choice and sufficient interpretive quality to avoid premature action.

Cultural context also requires examination. Voice, hierarchy, and accountability may function differently across high- and low-power-distance environments. Comparative research across operational, service, healthcare, infrastructure, and knowledge-intensive settings could test whether different SIGNAL functions become more important under different conditions.

The central relationship ultimately worth examining is:

SIGNAL capability → stronger organisational learning → greater adaptive reliability.

At present, this remains a proposition rather than a demonstrated causal relationship.

Conclusion: The Organisation We Leave Behind

The starting question was why a strong coaching conversation can fail to produce lasting change.

The answer is that people return to systems.

Coaching can improve thinking, but organisational conditions determine whether better thinking survives. SIGNAL extends the developmental conversation into an organisational architecture through which observations can surface, meaning can be tested, responsibility can be grounded, lessons can shape future capability, action can change work and knowledge can survive beyond individuals.

The framework therefore reframes leadership.

Strong leadership is not demonstrated by one person noticing every problem or making every important decision. That may produce excellent short-term performance while creating long-term dependency.

The deeper responsibility is architectural.

Leaders create the conditions through which relevant information can travel, expertise can influence judgement, people can speak honestly, accountability remains fair, learning reaches action and capability becomes increasingly distributed.

SIGNAL remains practice-derived and requires empirical testing. Its value at this stage lies less in claiming a new theory than in making one organisational question difficult to avoid:

Can something one person notices become something the organisation genuinely learns?

Business adoption occurs when the answer becomes yes.

It is not achieved because an idea was approved, a training programme completed or a policy revised. It occurs when the organisation becomes more capable of recognising, deciding, and responding; and retains that capability after the original conversation has ended.

The enduring measure of leadership is therefore not the number of problems leaders solve while they are present, but the quality of judgement the organisation retains when they are not.

References

- Argote, L., & Miron-Spektor, E. (2011). Organizational learning: From experience to knowledge. *Organization Science*, 22(5), 1123–1137. <https://doi.org/10.1287/orsc.1100.0621>
- Bakker, A. B. (2008). The work-related flow inventory: Construction and initial validation of the WOLF. *Journal of Vocational Behavior*, 72(3), 400–414. <https://doi.org/10.1016/j.jvb.2007.11.007>
- Bakker, A. B., & Demerouti, E. (2007). The Job Demands–Resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309–328. <https://doi.org/10.1108/02683940710733115>
- Bendig, D., Enke, S., Thieme, N., & Brettel, M. (2018). Performance implications of cross-functional cooperation in new product development: The mediating role of organizational learning. *Industrial Marketing Management*, 73, 137–153. <https://doi.org/10.1016/j.indmarman.2018.02.007>
- Cristofaro, M. (2022). Organizational sensemaking: A systematic review and a co-evolutionary model. *European Management Journal*, 40(3), 393–405. <https://doi.org/10.1016/j.emj.2021.07.003>

- Crossan, M. M., Lane, H. W., & White, R. E. (1999). An organizational learning framework: From intuition to institution. *Academy of Management Review*, 24(3), 522–537. <https://doi.org/10.5465/amr.1999.2202135>
- Deci, E. L., Olafsen, A. H., & Ryan, R. M. (2017). Self-determination theory in work organizations: The state of a science. *Annual Review of Organizational Psychology and Organizational Behavior*, 4, 19–43. <https://doi.org/10.1146/annurev-orgpsych-032516-113108>
- Dekker, S. (2016). *Just culture: Restoring trust and accountability in your organization* (3rd ed.). CRC Press.
- Detert, J. R., & Burris, E. R. (2007). Leadership behavior and employee voice: Is the door really open? *Academy of Management Journal*, 50(4), 869–884. <https://doi.org/10.5465/amj.2007.26279183>
- Edmondson, A. C. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(2), 350–383. <https://doi.org/10.2307/2666999>
- Edmondson, A. C., & Lei, Z. (2014). Psychological safety: The history, renaissance, and future of an interpersonal construct. *Annual Review of Organizational Psychology and Organizational Behavior*, 1, 23–43. <https://doi.org/10.1146/annurev-orgpsych-031413-091305>
- Harris, S. G. (1994). Organizational culture and individual sensemaking: A schema-based perspective. *Organization Science*, 5(3), 309–321. <https://doi.org/10.1287/orsc.5.3.309>
- Hollnagel, E. (2018). *Safety-II in practice: Developing the resilience potentials*. Routledge.
- Kim, K. (2021). A measure of adaptive performance and the DLOQ. *The Learning Organization*, 28(4), 397–412. <https://doi.org/10.1108/TLO-03-2020-0047>
- Klein, K. J., & Sorra, J. S. (1996). The challenge of innovation implementation. *Academy of Management Review*, 21(4), 1055–1080. <https://doi.org/10.5465/AMR.1996.9704071863>
- Leblanc, P.-M., Harvey, J.-F., & Rousseau, V. (2024). A meta-analysis of team reflexivity: Antecedents, outcomes, and boundary conditions. *Human Resource Management Review*, 34(4), Article 101042. <https://doi.org/10.1016/j.hrmr.2024.101042>
- Levitt, B., & March, J. G. (1988). Organizational learning. *Annual Review of Sociology*, 14, 319–338. <https://doi.org/10.1146/annurev.so.14.080188.001535>
- Liu, W., Lu, H., Li, P., van der Linden, D., & Bakker, A. B. (2023). Antecedents and outcomes of work-related flow: A meta-analysis. *Journal of Vocational Behavior*, 144, Article 103891. <https://doi.org/10.1016/j.jvb.2023.103891>
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71–87. <https://doi.org/10.1287/orsc.2.1.71>
- Meyer, A. D., & Goes, J. B. (1988). Organizational assimilation of innovations: A multilevel contextual analysis. *Academy of Management Journal*, 31(4), 897–923. <https://doi.org/10.5465/256344>
- Morrison, E. W. (2014). Employee voice and silence. *Annual Review of Organizational Psychology and Organizational Behavior*, 1, 173–197. <https://doi.org/10.1146/annurev-orgpsych-031413-091328>
- Morrison, E. W. (2023). Employee voice and silence: Taking stock a decade later. *Annual Review of Organizational Psychology and Organizational Behavior*, 10, 79–107. <https://doi.org/10.1146/annurev-orgpsych-120920-054654>

- Ocasio, W. (1997). Towards an attention-based view of the firm. *Strategic Management Journal*, 18(S1), 187–206. [https://doi.org/10.1002/\(SICI\)1097-0266\(199707\)18:1+<187::AID-SMJ936>3.0.CO;2-K](https://doi.org/10.1002/(SICI)1097-0266(199707)18:1+<187::AID-SMJ936>3.0.CO;2-K)
- Pandza, K., & Thorpe, R. (2009). Creative search and strategic sense-making: Missing dimensions in the concept of dynamic capabilities. *British Journal of Management*, 20(S1), S118–S131. <https://doi.org/10.1111/j.1467-8551.2008.00616.x>
- Reason, J. (1997). *Managing the risks of organizational accidents*. Ashgate.
- Rohrbeck, R., & Kum, M. E. (2018). Corporate foresight and its impact on firm performance: A longitudinal analysis. *Technological Forecasting and Social Change*, 129, 105–116. <https://doi.org/10.1016/j.techfore.2017.12.013>
- Rousseau, D. M., & Stouten, J. (2025). Experts and expertise in organizations: An integrative review on individual expertise. *Annual Review of Organizational Psychology and Organizational Behavior*, 12, 159–184. <https://doi.org/10.1146/annurev-orgpsych-020323-012717>
- Schwarz, J. O., Rohrbeck, R., & Wach, B. (2020). Corporate foresight as a microfoundation of dynamic capabilities. *Futures & Foresight Science*, 2(2), Article e28. <https://doi.org/10.1002/ffo2.28>
- Stasser, G., & Titus, W. (1985). Pooling of unshared information in group decision making: Biased information sampling during discussion. *Journal of Personality and Social Psychology*, 48(6), 1467–1478. <https://doi.org/10.1037/0022-3514.48.6.1467>
- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350. <https://doi.org/10.1002/smj.640>
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7<509::AID-SMJ882>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z)
- Tsang, E. W. K., & Zahra, S. A. (2008). *Organizational unlearning*. *Human Relations*, 61(10), 1435–1462. <https://doi.org/10.1177/0018726708095710>
- Vogus, T. J., & Sutcliffe, K. M. (2007). The Safety Organizing Scale: Development and validation of a behavioral measure of safety culture in hospital nursing units. *Medical Care*, 45(1), 46–54. <https://doi.org/10.1097/01.mlr.0000244635.61178.7a>
- Walsh, J. P., & Ungson, G. R. (1991). Organizational memory. *Academy of Management Review*, 16(1), 57–91. <https://doi.org/10.5465/amr.1991.4278992>
- Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. (1999). Organizing for high reliability: Processes of collective mindfulness. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (Vol. 21, pp. 81–123). JAI Press.
- Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. (2005). Organizing and the process of sensemaking. *Organization Science*, 16(4), 409–421. <https://doi.org/10.1287/orsc.1050.0133>
- Xiao, Y., Zhang, H., & Basadur, T. M. (2016). Does information sharing always improve team decision making? An examination of the hidden profile condition in new product development. *Journal of Business Research*, 69(2), 587–595. <https://doi.org/10.1016/j.jbusres.2015.05.014>

About the Author

Yohanes Jeffry Johary leads OCS Indonesia, over 11,770 employees across 771 work locations, within a global organization shaped by more than 126 years of heritage. His work focuses on delivering performance while continuously redesigning how organizations remain relevant in complex and evolving environments.

Over the past 19+ years, Jeffry has built his career around a central question: how to translate strategy into consistent execution. His approach has evolved into designing integrated systems by aligning customer experience, digitalization, and ESG into operating models that sustain long-term value.

He holds a Master of Science (MSc) in Business Psychology from the University of East London, graduating with distinction. His dissertation, *“Designing Flow-Driven Workplaces Through Integrated People Practices: A Strategic Research to Sustain Optimal Productivity in Facility Management,”* introduced the concepts of “flow-by-design” and “flow-compatible functioning,” reframing performance as a function of organizational design rather than individual capability.

He is also a graduate of the Alchemist 4.0 Program from the Graduate School of Business - University of Cape Town and in his last assignment to conclude the Graduate Certificate on Organization Resilience, Risk, and High Reliability programme from the Institute of Presilience® (Australia). This essay and framework are part of the last assignment as mentioned. Jeffry concluded the Social Enterprise program at Harvard Business School Executive Education in collaboration with the Hauser Institute for Civil Society at Harvard Kennedy School.

His leadership combines analytical clarity with systems thinking, enabling him to navigate complexity while maintaining execution discipline. He views intelligence not as an individual trait, but as an organizational outcome shaped by how decisions, information, and trust flow across the system.

This philosophy is most visible in how OCS Indonesia operates. While commercially disciplined in its business model, the organization is built with the mindset of a social enterprise by embedding workforce development, social mobility, & responsible employment practices into its core operations.

Beyond his corporate role, Jeffry contributes through British Chamber of Commerce (BritCham Indonesia) and American Chamber of Commerce (AmCham Indonesia) Indonesia to advancing governance and sustainability. He is the President of the Indonesia Chapter of IFMA and ASEAN President of The Institute of Strategic Risk Management (ISRM).

His work is guided by a simple principle: organizations do not underperform because people lack capability, but because systems are misaligned. Leadership, therefore, is about designing environments where the right behaviours can emerge consistently at scale.

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When Coaching Is Not Enough
Using the SIGNAL Framework to Convert
Leadership Conversations
into Organisational Learning and Sustainable
Business Adoption
Yohanes Jeffry Johary
Abstract

Coaching can strengthen individual judgement,
confidence, and leadership capability, yet a