

Research Article

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Collective Sense-Making in Public Governance



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Introduction

Every generation encounters moments in which familiar assumptions become insufficient to explain rapidly changing realities. Financial crises develop through unexpected interactions between economic systems, technological innovation transforms societies faster than regulatory frameworks can adapt, pandemics emerge before scientific understanding is complete and geopolitical events reshape international relations with remarkable speed. During such periods, governments cannot simply retrieve established solutions from institutional memory because the situations they confront possess characteristics that have not previously been experienced in exactly the same form. Public institutions must first understand what is happening before they can determine how they should respond.

Traditional models of public administration frequently assume that governance begins with reasonably well-defined problems that can be analysed, evaluated and addressed through established administrative procedures. Yet contemporary governance increasingly operates under conditions where the nature of the problem itself remains uncertain during the earliest stages of decision-making. Information may be incomplete, contradictory or continuously evolving. Different institutions may observe different aspects of the same phenomenon, while experts legitimately disagree regarding its significance or likely consequences. Under such circumstances, governance cannot proceed directly from observation to decision. An intermediate cognitive process becomes indispensable: institutions must collectively construct an interpretation of reality before coordinated action becomes possible.

This interpretative process is commonly described as **sense-making**. At its simplest, sense-making refers to the human capacity to organise ambiguous observations into coherent explanations that allow meaningful action. Within the framework of Institutional Cognition, however, this concept extends beyond individuals or single organisations. Modern governance depends upon **collective sense-making**, whereby multiple autonomous institutions progressively develop shared interpretations of complex and evolving situations through continuous interaction, evidence integration and institutional learning. Meaning emerges not within isolated organisations but across entire governance ecosystems.

This distinction reflects the increasing complexity of contemporary public administration. No individual institution possesses sufficient observational capacity to understand every dimension of large-scale societal transformation independently. Scientific organisations contribute empirical evidence, intelligence services monitor strategic developments, local authorities observe operational realities, regulatory bodies interpret legal implications, healthcare institutions identify emerging risks and international organisations provide broader comparative perspectives. Each institution contributes valuable yet inherently partial knowledge. Governance Intelligence arises because these different perspectives are progressively integrated into richer collective interpretations that no single organisation could construct alone.

The previous article explored how institutions build shared intelligence by exchanging knowledge and developing common situational awareness. Collective sense-making represents the next stage of this cognitive evolution. Shared intelligence provides the relationships through which knowledge circulates, while sense-making explains how that knowledge acquires meaning. Institutions do not merely exchange observations; they collectively determine what those observations imply, how different developments are connected and why particular patterns deserve strategic attention. The transition from information to understanding therefore depends upon continuous processes of collective interpretation.

This perspective also reshapes our understanding of uncertainty itself. Conventional administrative thinking often regards uncertainty primarily as a temporary absence of information that should be reduced before significant decisions are taken. Although additional evidence undoubtedly improves governance, many contemporary challenges cannot be fully understood

simply by collecting more data. Their complexity arises because multiple interpretations remain plausible simultaneously while events continue to evolve. Collective sense-making therefore does not eliminate uncertainty immediately. Instead, it enables institutions to navigate uncertainty intelligently by progressively refining shared interpretations as new evidence becomes available. Understanding develops through continuous learning rather than through the sudden discovery of complete certainty.

Artificial intelligence further increases the importance of this institutional capability. Advanced computational systems can process enormous quantities of information, identify subtle relationships across multiple datasets and generate increasingly sophisticated analytical outputs. Yet these technologies cannot independently determine the societal meaning of emerging developments or establish the constitutional priorities that should guide public action. Computational analysis expands institutional observation, but interpretation remains a fundamentally collective governance activity involving democratic accountability, professional expertise and institutional judgement. Sense-making therefore becomes even more significant in AI-enabled governance because institutions must increasingly interpret not only society itself but also the complex analyses generated by intelligent computational systems.

The purpose of this article is to explore how collective sense-making enables Governance Intelligence under conditions of uncertainty. Rather than treating interpretation as an informal or secondary aspect of public administration, it argues that the construction of shared meaning represents one of the central cognitive functions of modern governance. By understanding how institutions collectively transform ambiguity into coherent situational understanding, we gain a deeper appreciation of why the future effectiveness of governance will depend not only upon better information or more advanced technologies but upon the continuous capacity of institutions to make sense of an increasingly complex world together.

From Observation to Meaning: How Institutions Construct Shared Interpretations

Every act of governance begins with observation. Institutions continuously monitor economic indicators, demographic developments, technological innovation, environmental change, public opinion, security risks and countless other aspects of societal life. Modern governments have never possessed greater access to information than they do today. Digital infrastructures generate enormous quantities of administrative data, scientific research expands at unprecedented speed, international organisations publish continuous assessments of global developments and artificial intelligence increasingly assists institutions in identifying patterns that would previously have remained invisible. Yet despite this extraordinary abundance of information, one fundamental challenge remains unchanged. Observing reality is not the same as understanding it.

This distinction lies at the heart of collective sense-making. Information consists of descriptions of events, measurements, reports, observations and signals originating from numerous sources. Meaning emerges only when institutions begin to interpret how these elements relate to one another, what they reveal about underlying processes and why they matter for governance. Public administration therefore performs far more than the technical management of information. It engages in a continuous cognitive effort to transform fragmented observations into coherent representations of evolving reality. Governance becomes intelligent because institutions learn to construct meaning collectively rather than merely accumulate data individually.

The need for this collective interpretation becomes particularly evident during periods of rapid societal transformation. Emerging technologies provide a clear illustration. In their earliest stages, innovations such as artificial intelligence, quantum computing or synthetic biology rarely present governments with fully defined policy problems. Instead, institutions observe numerous disconnected developments: new scientific publications, commercial investment, changes in labour markets, regulatory debates, ethical concerns and international competition. None of these observations independently explains the transformation taking place. Only through sustained dialogue between scientific institutions, regulatory bodies, economic ministries, educational organisations and international partners does a coherent interpretation gradually emerge. Institutions do not simply discover the meaning of technological change; they collectively construct that meaning through continuous interaction.

This process should not be understood as an attempt to eliminate diversity of interpretation. On the contrary, Institutional Cognition recognises that different institutions necessarily observe reality from different perspectives because their constitutional responsibilities, operational experiences and professional expertise differ. A healthcare authority examining the societal consequences of artificial intelligence will naturally focus upon clinical safety, medical ethics and healthcare delivery. Educational institutions will interpret the same technological developments through questions of skills, learning and future employment. Economic agencies may concentrate upon productivity and competitiveness, while legal institutions examine accountability and citizens' rights. These multiple interpretations do not represent obstacles to governance. They constitute the very resources from which richer collective understanding is constructed.

Collective sense-making therefore depends upon preserving institutional diversity while simultaneously creating mechanisms through which these diverse perspectives can interact productively. Governance ecosystems become cognitively stronger when institutions remain capable of challenging one another's assumptions, introducing alternative explanations and contributing complementary evidence without fragmenting into isolated interpretations. Shared meaning emerges through dialogue rather than uniformity. Every institution contributes part of the broader picture, while none possesses the complete picture independently. The quality of governance consequently depends upon the capacity to integrate these partial understandings into increasingly coherent representations of complex realities.

An important characteristic of this process is its iterative nature. Institutions rarely achieve complete understanding immediately after encountering new developments. Initial interpretations frequently remain provisional because available evidence is incomplete and emerging situations continue evolving while governance attempts to understand them. Early hypotheses are gradually refined as additional observations accumulate, previous assumptions are reassessed and alternative explanations are explored. Collective sense-making therefore resembles an ongoing conversation between institutions and reality itself. Every new observation modifies existing interpretations, while every revised interpretation influences how future observations are understood. Meaning evolves continuously alongside the phenomena being interpreted.

This recursive relationship explains why institutional learning occupies such a central position within Governance Intelligence. Sense-making is not a single analytical exercise conducted before decisions are taken. It continues throughout implementation, evaluation and subsequent adaptation. Public policies generate new evidence, operational experience reveals unforeseen consequences and societal responses reshape the context within which governance operates. Institutions must therefore revisit earlier interpretations repeatedly, refining their collective understanding as reality unfolds. Governance remains intelligent not because it avoids revising previous assumptions but because it systematically incorporates new knowledge into continuously evolving interpretations of the world.

Artificial intelligence significantly enhances this process by expanding the range and complexity of observations available to institutions. Advanced analytical systems can identify weak signals across vast datasets, detect emerging correlations between apparently unrelated developments and simulate possible future trajectories under different policy assumptions. These

capabilities provide governance with richer observational foundations than ever before. Nevertheless, computational systems do not independently create meaning. They reveal patterns that require institutional interpretation. Whether a detected correlation represents a meaningful societal transformation, a temporary anomaly or an unintended statistical artefact remains a matter of collective judgement informed by constitutional responsibility, professional expertise and democratic legitimacy. Artificial intelligence strengthens observation; institutions remain responsible for interpretation.

Another important dimension concerns the temporal nature of sense-making. Governance is never concerned solely with understanding the present moment. Institutions simultaneously interpret the past, the present and the future. Historical experience provides analogies that help explain current developments, while emerging interpretations shape expectations regarding possible future scenarios. Collective sense-making therefore creates continuity across time by enabling institutions to connect previous knowledge with present evidence and future anticipation. Institutional memory becomes an active participant in interpretation rather than merely a repository of archived information. Governance constructs meaning by continuously integrating what has already been learned with what is currently being observed and what may soon emerge.

Over extended periods, these repeated cycles of collective interpretation gradually establish increasingly sophisticated cognitive capabilities across governance ecosystems. Institutions become more familiar with one another's analytical traditions, conceptual languages and professional reasoning. They learn how different organisations interpret uncertainty, evaluate evidence and recognise emerging societal patterns. This accumulated mutual understanding reduces cognitive friction during future periods of rapid change because institutions already possess shared interpretative foundations upon which new meaning can be constructed. Sense-making itself becomes progressively more adaptive through experience.

Viewed from this broader perspective, collective sense-making represents one of the most fundamental activities performed by public institutions. Governments do not simply respond to reality; they continuously construct increasingly refined interpretations of that reality through collaboration, dialogue and institutional learning. Decisions become possible because meaning gradually emerges from shared interpretation, allowing governance to move beyond fragmented observations towards coherent public understanding. In an increasingly uncertain world, this capacity to create meaning collectively may prove even more valuable than the ability to collect information itself.

Collective Sense-Making as the Foundation of Adaptive Governance

Once institutions develop the capacity to construct shared interpretations of emerging realities, governance undergoes a profound transformation. Decision-making no longer depends exclusively upon the analytical capabilities of individual organisations but increasingly emerges from the collective cognitive processes of the governance ecosystem as a whole. Institutions begin to operate less as isolated administrative units responding independently to changing circumstances and more as interconnected participants in a continuous process of shared understanding. It is through this ongoing construction of meaning that adaptive governance becomes possible.

Adaptive governance should not be understood simply as the ability to modify policies after new evidence becomes available. Such an interpretation captures only part of the phenomenon. Before institutions can adapt their decisions, they must first recognise that the environment itself is changing, determine the significance of those changes and develop sufficient confidence in a shared interpretation to justify coordinated action. Adaptation therefore depends upon interpretation before it depends upon intervention. Governance learns because institutions continually revise their understanding of reality, and it is this evolving understanding that enables intelligent adaptation over time.

This relationship becomes particularly visible during periods characterised by ambiguity rather than certainty. Many of the most significant challenges confronting contemporary governments do not announce themselves as clearly defined administrative problems. Instead, they emerge gradually through numerous small developments that initially appear unrelated. Changes in technological innovation, demographic behaviour, environmental conditions or geopolitical dynamics often begin as weak signals distributed across multiple institutional domains. No single organisation possesses enough observational capacity to recognise the full significance of these developments independently. Collective sense-making enables institutions to compare their observations, identify emerging patterns and construct explanations before those patterns become fully visible within any individual administrative perspective.

The value of this capability lies not only in improving the quality of understanding but also in increasing the speed with which governance can respond intelligently to change. Traditional administrative systems frequently rely upon sequential processes in which information is collected, analysed, transmitted through organisational hierarchies and eventually translated into policy decisions. While appropriate for relatively stable environments, these procedures may struggle to keep pace with rapidly evolving societal transformations. Collective sense-making introduces a more dynamic cognitive process in which interpretation develops continuously across institutional networks rather than progressing exclusively through linear administrative stages. Institutions learn together while events are unfolding, allowing understanding to evolve alongside reality itself.

This continuous interpretation also strengthens the resilience of governance systems. Resilience is often described as the capacity to withstand disruption or recover after unexpected events. From the perspective of Institutional Cognition, however, resilience depends equally upon the capacity to recognise disruption before it becomes overwhelming. Institutions capable of constructing shared meaning are better equipped to identify subtle changes, reassess existing assumptions and adjust their understanding before crises become fully established. Their resilience arises not simply from stronger operational resources but from richer cognitive

capabilities that allow governance to anticipate, interpret and respond more effectively to emerging uncertainty.

An equally important consequence concerns coordination between institutions. Effective coordination cannot rely solely upon procedural agreements or predefined administrative responsibilities because novel situations frequently evolve beyond existing organisational boundaries. Institutions must continually reinterpret how their respective responsibilities relate to changing circumstances. Collective sense-making provides the cognitive foundation for this coordination by ensuring that organisations are not merely exchanging operational information but are also developing compatible explanations of the realities they jointly confront. Shared interpretation reduces the likelihood that institutions will pursue contradictory responses based upon fundamentally different understandings of the same situation. Coordination becomes more coherent because it is grounded in common meaning rather than simple procedural alignment.

Artificial intelligence is likely to make this dimension of governance even more significant. Computational systems are becoming increasingly capable of detecting weak signals, integrating heterogeneous sources of information and generating sophisticated simulations of possible future developments. Such capabilities substantially enhance institutional observation, providing governments with unprecedented analytical resources. Yet these technologies also increase the complexity of interpretation. As computational systems generate larger volumes of increasingly sophisticated analysis, institutions must determine collectively which insights are strategically relevant, how different analytical outputs should be reconciled and what constitutional implications they carry for public decision-making. Rather than reducing the importance of collective sense-making, artificial intelligence expands its significance by requiring governance ecosystems to interpret not only societal developments but also the growing body of computational knowledge produced in support of governance.

Collective sense-making also reinforces one of the defining principles of democratic governance: the recognition that legitimate public understanding benefits from pluralism rather than uniformity. Democratic institutions deliberately distribute authority across different organisations because no single perspective should monopolise the interpretation of complex public realities. Scientific expertise, political judgement, administrative experience, judicial reasoning and local knowledge each contribute distinctive insights that strengthen governance precisely because they remain different. Collective sense-making does not seek to eliminate this diversity. Instead, it creates the conditions through which multiple interpretations interact constructively, allowing governance to develop richer and more balanced representations of reality than any isolated institution could achieve independently.

Over time, these repeated cycles of shared interpretation become embedded within the institutional memory of the governance ecosystem. Organisations gradually develop common conceptual frameworks, shared analytical languages and established relationships that facilitate future collaboration. Previous experiences of interpreting uncertainty collectively become valuable cognitive resources when new challenges arise. Institutions do not simply remember past events; they remember how they learned to understand those events together. This accumulated experience strengthens the capacity of governance to construct meaning more rapidly and with greater sophistication whenever future uncertainty emerges. Sense-making therefore becomes progressively more effective through continuous institutional learning.

This broader perspective ultimately reveals that Governance Intelligence depends as much upon the quality of institutional interpretation as upon the quality of institutional information. Modern governance operates within environments where complexity cannot be managed through data alone. Information acquires value only when institutions transform it into coherent understanding capable of supporting legitimate public judgement. Collective sense-making performs precisely this function. It enables governance ecosystems to organise ambiguity into meaning, diversity into complementary understanding and uncertainty into informed public action without ever assuming that complete certainty has been achieved.

Seen in this way, collective sense-making represents one of the essential cognitive mechanisms through which institutions become capable of governing complex societies adaptively. It connects observation with understanding, understanding with coordination and coordination with intelligent action, allowing governance to evolve continuously alongside the realities it seeks to serve. The ability to construct shared meaning therefore becomes not merely an analytical competence but a constitutional characteristic of cognitive governance itself.

Conclusion

The increasing complexity of contemporary governance has fundamentally altered the conditions under which public institutions operate. Governments are no longer confronted primarily with problems that are fully defined before administrative action begins. Instead, they increasingly face situations that evolve while they are being observed, interpreted and managed simultaneously. Technological innovation, environmental transformation, geopolitical instability, demographic change and rapidly shifting social expectations rarely present themselves with complete clarity. Under such circumstances, governance cannot depend solely upon gathering more information. It must also possess the capacity to understand what that information means before coherent public action can emerge.

The central argument developed throughout this article is that **collective sense-making constitutes one of the essential cognitive capabilities through which Governance Intelligence becomes possible**. Institutions do not simply observe reality independently and subsequently coordinate their responses. They progressively construct shared interpretations of emerging situations through continuous dialogue, knowledge integration, institutional learning and collaborative evaluation. Meaning therefore becomes a collective institutional achievement rather than the product of isolated organisational analysis. Governance becomes intelligent because institutions learn to understand complexity together before deciding how they should respond.

This perspective fundamentally reshapes the role of information within public administration. Information should not be regarded as the final objective of governance but as the starting point of a broader cognitive process. Observations, data, reports and analytical outputs acquire practical significance only when institutions collectively organise them into coherent explanations capable of guiding legitimate public judgement. The true value of information therefore lies not in its quantity but in its contribution to shared understanding. Institutions generate Governance Intelligence by transforming fragmented observations into meaningful representations of evolving public realities through continuous collective interpretation.

The article has also demonstrated that uncertainty should no longer be interpreted solely as an obstacle to effective governance. Traditional administrative thinking frequently assumes that uncertainty diminishes as additional information becomes available. Although evidence undoubtedly strengthens public decision-making, many contemporary challenges remain inherently complex because multiple plausible interpretations coexist while situations continue evolving. Collective sense-making enables institutions to operate constructively within this environment by progressively refining shared interpretations without waiting for complete certainty. Adaptive governance therefore emerges not because uncertainty disappears but because institutions become increasingly capable of learning while uncertainty persists.

Particular attention has been given to the importance of institutional diversity throughout this process. Every organisation observes society through the distinctive perspective created by its constitutional responsibilities, professional expertise and operational experience. Scientific institutions interpret empirical evidence, regulatory bodies examine legal implications, local administrations observe practical implementation, healthcare systems identify emerging risks and political institutions integrate broader democratic priorities. Collective sense-making does not attempt to replace these diverse perspectives with uniform institutional thinking. Instead, it enables governance ecosystems to combine their complementary insights into richer and more comprehensive representations of reality than any individual institution could construct independently. Diversity becomes the source of stronger collective understanding rather than a barrier to coordination.

Artificial intelligence is likely to increase the strategic importance of this capability during the coming decades. Computational systems will continue expanding the observational reach of governance by processing increasingly complex datasets, identifying subtle relationships across

multiple policy domains and supporting sophisticated simulations of future developments. Yet these technological advances do not eliminate the need for institutional interpretation. On the contrary, they make it even more significant. Governments will increasingly require cognitive mechanisms capable of collectively interpreting the insights generated by artificial intelligence while balancing constitutional principles, democratic legitimacy, ethical considerations and long-term societal priorities. Sense-making will therefore remain an irreducibly institutional activity, even within highly AI-enabled governance systems.

Perhaps the most profound implication concerns the future philosophy of governance itself. Public administration should no longer be understood simply as the implementation of predetermined solutions to clearly defined problems. It should increasingly be recognised as a continuous institutional process of constructing meaning within environments characterised by permanent complexity and accelerating change. Institutions govern effectively because they remain capable of revising their understanding, integrating new perspectives and adapting their interpretations as society evolves. Governance Intelligence therefore depends not only upon better decisions but upon better collective understanding preceding those decisions.

This interpretation also reveals why collective sense-making occupies such a central position within the broader framework of Institutional Cognition. Observation, organisational memory, shared intelligence, interoperability, adaptive public policy and collective learning all converge within the institutional capacity to create meaning. Sense-making connects these different dimensions into a coherent cognitive process through which governance continuously transforms experience into understanding and understanding into intelligent public action. It represents the bridge between institutional observation and institutional adaptation, ensuring that governments remain capable of responding to realities that are themselves constantly evolving.

Collective sense-making should be recognised as one of the defining characteristics of cognitive governance in the twenty-first century. It enables institutions to transform uncertainty into progressively coherent understanding, fragmented expertise into collective intelligence and continuous societal change into opportunities for institutional learning. As governance becomes increasingly distributed, technologically sophisticated and interconnected, the ability of institutions to construct shared meaning together will become one of the principal foundations upon which resilient, adaptive and genuinely intelligent public administration is built.