Research Article

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What Is Institutional Cognition?

IDHUS Institute

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Introduction

We live surrounded by institutions that shape our lives, yet we rarely ask how they actually think

There are few realities that accompany us as constantly throughout our lives as institutions. Long before we are capable of understanding what they are or why they exist, institutions are already present, quietly organising the world into which we are born. The hospital where we first open our eyes, the civil registry that records our existence, the healthcare system that protects us during childhood, the schools in which we begin to learn, the local administration that provides essential public services, the transport networks that connect our cities, the courts that safeguard our rights, the universities that generate knowledge, the central banks that help preserve economic stability or the international organisations that coordinate cooperation between nations all form part of a vast institutional landscape that sustains the functioning of modern society. We inhabit this landscape so naturally that it almost becomes invisible. Institutions are everywhere precisely because they have become part of the ordinary fabric of everyday life.

Most of the time, however, we think about institutions only when something goes wrong. We notice them when a public service fails, when an administrative procedure becomes frustratingly slow, when governments appear unable to respond to an unexpected crisis or when public policies produce results very different from those that had originally been intended. During periods of stability, institutions tend to fade into the background of our attention, operating almost silently as the infrastructure that makes collective life possible. Yet when uncertainty emerges, they suddenly become the centre of public debate. Citizens ask whether governments are acting correctly, whether public administrations are sufficiently prepared, whether international organisations are coordinating effectively or whether existing policies are capable of addressing entirely new problems. In those moments, our confidence in institutions often depends upon a single underlying question, even if we rarely formulate it explicitly: **are our institutions capable of making good decisions?**

At first sight, this may appear to be a straightforward question. We often assume that institutions make decisions simply by applying laws, regulations and administrative procedures. Indeed, much of the way in which institutions are traditionally explained reinforces this impression. Textbooks describe constitutional structures, legal competences, organisational charts, chains of command, political responsibilities and formal decision-making processes. These elements are unquestionably important because they define how institutions are organised and establish the framework within which they operate. Without rules there can be no stable governance, just as without clearly defined responsibilities there can be no meaningful accountability. Formal structures remain an essential foundation of every functioning institution.

Nevertheless, anyone who has observed institutions closely soon discovers that these explanations, while necessary, are not sufficient. Knowing how an institution is organised does not necessarily explain how it behaves. Two public administrations may possess almost identical legal frameworks and remarkably similar organisational structures, yet respond in completely different ways when confronted with the same challenge. One government may anticipate emerging problems long before they become crises, while another may react only after circumstances have deteriorated significantly. Some organisations consistently learn from previous experience, adapting their practices over time and gradually improving the quality of their decisions, whereas others appear trapped in cycles of repetition, reproducing the same errors despite possessing access to comparable information and equivalent technical resources. If institutions were nothing more than collections of rules, such differences would be difficult to explain.

This observation invites us to look beyond the visible architecture of institutions and to pay attention instead to the dynamic processes that unfold within them every day. Public organisations are constantly receiving information from the societies they serve. They monitor economic indicators, analyse demographic trends, collect environmental data, study scientific evidence, evaluate citizen feedback, coordinate with experts, exchange information with other organisations and observe developments occurring across the world. None of this information possesses meaning by itself. Before it can influence public action, it must be interpreted, discussed, compared with previous experience and integrated into broader understandings of what is happening. Only then can institutions begin to formulate responses, design policies or modify existing strategies. Between the arrival of information and the implementation of decisions lies an extraordinarily rich world of interpretation, deliberation, coordination and learning that often remains hidden beneath the formal appearance of bureaucracy.

It is precisely this invisible world that deserves far more attention than it has traditionally received. When we speak about the quality of governance, we frequently focus on legislation, political leadership or administrative efficiency, all of which are undeniably important. Yet beneath each of these dimensions lies another question that is perhaps even more fundamental. Before an institution can govern effectively, it must first understand the reality that it is attempting to govern. It must distinguish meaningful signals from background noise, recognise emerging patterns before they become obvious, anticipate possible consequences, coordinate diverse forms of expertise and adapt its behaviour as circumstances evolve. In other words, before institutions can act wisely, they must first develop the capacity to make sense of an increasingly complex world.

This becomes particularly evident when we consider the nature of the challenges that define the twenty-first century. Climate change, artificial intelligence, demographic transformation, cybersecurity, energy transitions, geopolitical instability, global health emergencies and technological disruption all share one important characteristic: they are not isolated problems that can be solved independently of one another. Instead, they interact continuously, producing complex chains of cause and effect that evolve faster than traditional administrative processes were originally designed to accommodate. Decisions taken in one domain frequently generate consequences in many others, while new information constantly forces policymakers to revise previous assumptions. Governing under these conditions requires something more than efficient administration. It requires institutions capable of continuously observing, interpreting, learning and adapting as the environment around them changes.

Interestingly, these are precisely the kinds of activities that we normally associate with cognition. When we think about cognition in everyday life, we usually imagine the human mind perceiving the world, organising knowledge, remembering previous experiences, reasoning about possible alternatives and choosing appropriate courses of action. These processes allow individuals to navigate uncertainty despite possessing only partial information about the environments in which they live. Yet if we momentarily set aside the biological mechanisms through which human cognition operates and focus instead on its functional characteristics, an intriguing possibility begins to emerge. Many of the activities that institutions perform every day appear remarkably similar. Institutions also gather information, interpret evidence, preserve knowledge, coordinate distributed expertise, evaluate competing alternatives, make decisions and gradually modify their behaviour in response to experience. Although these processes unfold through organisations rather than brains, their underlying functions display surprising parallels.

At this point, an understandable objection naturally arises. Institutions, after all, are not human beings. They possess no nervous system, no biological consciousness and no subjective experience. A ministry does not think in the same way that a person thinks, nor does a parliament experience emotions or awareness. These observations are entirely correct, and recognising them is essential. Yet perhaps they also point us towards a deeper question. If institutions do not think as individuals do, what exactly are they doing when they continuously transform information into collective decisions that affect millions of people? What kind of process allows large organisations, composed of thousands of individuals distributed across multiple departments, to

develop coherent responses to complex and uncertain realities? How is knowledge combined, interpreted and converted into coordinated public action when no single individual possesses complete understanding of the entire system?

These questions may initially appear unusual because we have become accustomed to describing institutions primarily through the language of law, politics and administration. However, as the complexity of governance continues to increase, another perspective gradually becomes both possible and necessary. Perhaps institutions should also be understood through the language of cognition. Perhaps, alongside their legal structures and political responsibilities, institutions possess something that can only be described as a collective capacity to perceive, interpret, remember, learn and decide. Perhaps the effectiveness of governance depends not only on the quality of regulations or the competence of individual leaders, but also on the quality of these deeper cognitive processes that silently organise institutional behaviour every day.

It is precisely from this intuition that the concept of **Institutional Cognition** emerges. Rather than asking whether institutions resemble machines or whether they behave like individuals, Institutional Cognition invites us to see them as complex systems whose primary challenge is not simply to administer society but to understand it. Throughout the pages that follow, we shall explore this idea gradually, examining how institutions transform information into knowledge, how collective intelligence emerges from organisational structures, why learning has become one of the central challenges of modern governance and how recent developments in artificial intelligence may fundamentally reshape the cognitive capacities of public institutions. By the end of this journey, we shall discover that understanding how institutions think may prove to be one of the most important questions for anyone interested in the future of governance, public administration and democratic society itself.

Institutions Are More Than Organisations

If we wish to understand what Institutional Cognition actually is, the first step is not to define the concept itself, but rather to reconsider the way in which we have traditionally understood institutions. Throughout history, institutions have been examined from many different intellectual perspectives, each of which has illuminated an important dimension of their nature. Lawyers have understandably focused on their legal foundations, explaining how constitutions, laws and regulations establish the legitimacy of public authority. Political scientists have concentrated on the distribution of power, the relationships between governments and citizens, the mechanisms of representation and the dynamics through which collective decisions acquire democratic legitimacy. Economists have explored how institutions reduce uncertainty, coordinate incentives and facilitate cooperation, while sociologists have examined the shared norms, values and cultural practices that allow organisations to endure across generations. Each of these perspectives has contributed profoundly to our understanding of institutional life, and none of them should be regarded as incomplete or mistaken. On the contrary, together they have provided the conceptual foundations upon which modern public administration has been built.

Yet there is a remarkable characteristic shared by nearly all these approaches. They tend to describe institutions primarily in terms of what they are rather than in terms of what they continuously do. They explain the structures through which authority is organised, the formal procedures through which decisions are authorised and the legal frameworks that define institutional responsibilities. They tell us how institutions are constituted, how they acquire legitimacy and how they interact with society from a constitutional or organisational perspective. What they explain less frequently is the continuous internal activity through which institutions

transform an ever-changing flow of information into coherent collective action. In other words, they describe the architecture of institutions with extraordinary precision, but they devote comparatively less attention to the dynamic processes that animate that architecture every single day.

This distinction may appear subtle, yet it fundamentally changes the questions we ask. Imagine, for a moment, that someone wished to understand the human brain solely by studying the anatomy of the skull. Such an investigation would undoubtedly reveal important structural information, but it would tell us remarkably little about memory, reasoning, perception or learning. Knowing where different regions are located is not the same as understanding the processes that occur within them. Something similar happens when we study institutions exclusively through their organisational charts, legal competences or administrative procedures. These elements tell us how institutions are arranged, but they do not fully explain how they continuously observe their environment, interpret emerging events, integrate specialised knowledge or gradually adapt their behaviour in response to new circumstances.

The distinction between structure and process has become increasingly significant because the environments in which institutions now operate have changed profoundly during the last few decades. For much of modern history, public administrations functioned within contexts that, although never entirely stable, evolved at a pace that allowed institutional procedures to adapt gradually. New legislation could be prepared over months or years, administrative reforms could unfold across political cycles and policy adjustments often took place within relatively predictable frameworks. Today's reality is very different. Technological innovation transforms entire sectors in remarkably short periods of time. Global events rapidly produce consequences across multiple countries. Scientific discoveries generate new ethical and regulatory challenges almost immediately. Social expectations evolve continuously, while digital communication accelerates the circulation of information to a degree that would have been unimaginable only a generation ago. Institutions now inhabit environments characterised not simply by complexity, but by permanent cognitive pressure: they must continuously understand realities that are themselves changing while they attempt to govern them.

Under these conditions, simply possessing well-designed organisational structures is no longer sufficient. Institutions may have clear legal mandates, competent professionals and carefully established procedures, yet still struggle if they cannot correctly interpret the significance of new developments or recognise how different events interact with one another. Indeed, many of the governance failures that attract public attention do not arise because institutions lack authority, but because they misunderstand the situations they are attempting to address. Decisions based upon incomplete information, outdated assumptions or fragmented knowledge often produce unintended consequences that become visible only after policies have already been implemented. Conversely, some of the most successful institutions are distinguished not by possessing radically different legal powers, but by demonstrating an exceptional capacity to observe emerging trends, integrate expertise from multiple domains and revise their understanding as new evidence becomes available.

This observation suggests that effective governance depends upon something deeper than administrative efficiency alone. Before institutions can respond intelligently to society, they must first develop an adequate understanding of the reality before them. They must recognise which information deserves attention, distinguish temporary fluctuations from long-term transformations, identify connections between apparently unrelated phenomena and evaluate how present decisions may influence future developments. None of these activities can be reduced to the mechanical application of predefined rules. They require continuous interpretation, judgement and learning. They require institutions to behave not merely as administrative organisations, but as systems capable of constructing meaningful representations of an increasingly complex world.

Here we begin to approach one of the central ideas that underpins Institutional Cognition. Every institution exists within a constant flow of information. Citizens communicate new needs, researchers publish new evidence, markets generate economic signals, technologies create

unforeseen possibilities, environmental systems produce measurable changes and international events reshape political realities. Institutions are never isolated from this stream of information. On the contrary, they are immersed within it. The challenge is not obtaining information, modern institutions often possess more information than they can realistically process, but rather transforming that abundance into coherent understanding. The real limitation of governance is therefore rarely the absence of data. It is the capacity to interpret that data wisely, to integrate it into existing knowledge and to convert it into decisions that improve collective outcomes.

Seen from this perspective, institutions begin to appear in a rather different light. They are no longer simply organisations that implement decisions taken elsewhere, nor are they merely bureaucratic mechanisms designed to execute predefined procedures. Instead, they become living systems of collective interpretation, continuously engaged in making sense of the societies they serve. Their everyday activity consists not only of administering regulations, but also of reducing uncertainty, organising knowledge, coordinating expertise and producing shared understandings that allow coherent public action to emerge. Even the most routine administrative decision is preceded by countless invisible processes through which information has been gathered, interpreted, evaluated and incorporated into broader institutional knowledge.

Once we begin to see institutions in this way, an intriguing possibility naturally presents itself. Perhaps what distinguishes highly effective institutions from less successful ones is not solely the quality of their legal frameworks or the amount of resources at their disposal. Perhaps the decisive difference lies in the quality of their internal cognitive processes: in how effectively they perceive reality, how intelligently they interpret information, how successfully they preserve organisational memory and how rapidly they learn from experience. If this is true, then understanding institutions requires more than studying their structures. It requires understanding the invisible cognitive architecture that allows those structures to transform information into collective intelligence.

This shift in perspective does not replace the traditional study of institutions; rather, it complements and extends it. Legal analysis, political science, economics and sociology continue to provide indispensable insights into institutional behaviour, but Institutional Cognition introduces an additional layer of understanding that becomes increasingly important as governance itself grows more complex. It invites us to examine not only how institutions are organised, but how they come to know what they know; not only how authority is exercised, but how understanding is constructed before authority can be exercised wisely. It is this subtle yet profound change in perspective that opens the door to an entirely new way of thinking about public administration, one that will accompany us throughout the remainder of this article.

From Administration to Cognition

If institutions are indeed engaged in a continuous process of observing, interpreting and responding to the world around them, then we arrive naturally at a question that, although deceptively simple, represents one of the most significant intellectual shifts proposed by Institutional Cognition. What if administration itself has always been, beneath its legal and organisational appearance, a fundamentally cognitive activity? What if the true purpose of an institution is not simply to apply rules, but to transform uncertainty into coordinated collective action through processes of understanding, interpretation and learning?

At first, this idea may appear unfamiliar because the language traditionally used to describe public administration has rarely been the language of cognition. We speak comfortably

about competencies, regulations, procedures, hierarchies, mandates, governance frameworks and institutional responsibilities, yet we seldom describe public organisations as systems that perceive, reason or learn. These concepts seem to belong naturally to psychology, neuroscience or artificial intelligence rather than to ministries, municipalities or international organisations. Nevertheless, this separation may tell us more about the history of academic disciplines than about the actual nature of institutions themselves. The fact that different fields have developed different vocabularies does not necessarily mean that they are studying fundamentally different processes.

Indeed, if we observe carefully how institutions operate on a daily basis, we begin to recognise patterns that are remarkably difficult to explain using purely administrative language. Every morning, thousands of public officials across countless organisations begin their work not by making decisions immediately, but by attempting to understand situations that remain incomplete, uncertain or continuously evolving. Reports are analysed, meetings are held, experts are consulted, statistical trends are examined, legal implications are discussed and previous experiences are revisited before any significant course of action is adopted. This activity occupies an enormous proportion of institutional life, yet it is often regarded simply as preparation for decision-making, as though understanding itself were merely an administrative preliminary rather than one of the institution's principal functions.

In reality, understanding is not a secondary activity. It is the indispensable condition that makes intelligent action possible. Before a government can design an effective public policy, it must first construct an interpretation of the problem that the policy intends to address. Before a health authority can respond to the emergence of a new disease, it must first determine what kind of phenomenon it is facing, how rapidly it is spreading, which populations are most vulnerable and what scientific evidence can reasonably support different interventions. Before an environmental agency can develop strategies for climate adaptation, it must integrate information originating from disciplines as diverse as meteorology, ecology, economics, engineering and urban planning. In every one of these situations, the institution is engaged in a process that is fundamentally cognitive: it is transforming dispersed information into coherent knowledge capable of supporting collective action.

This distinction between information and knowledge deserves particular attention because it has become one of the defining challenges of contemporary governance. Modern institutions rarely suffer from a lack of information. On the contrary, they operate within environments saturated with data. Digital technologies generate continuous streams of administrative records, economic indicators, environmental measurements, satellite imagery, sensor networks, scientific publications, social media activity and countless other sources of information. Every passing day produces quantities of data that would have overwhelmed even the largest public organisations only a few decades ago. The difficulty therefore lies elsewhere. The central question is no longer whether institutions can obtain information, but whether they can successfully transform that information into meaningful understanding without becoming paralysed by its sheer volume and complexity.

Here we encounter one of the great paradoxes of the digital age. As information has become increasingly abundant, understanding has not necessarily become easier. In many respects, quite the opposite has occurred. The greater the quantity of available information, the greater the challenge of distinguishing what is genuinely significant from what is merely incidental. Institutions must decide which signals deserve attention, which apparent trends represent temporary fluctuations and which indicate profound structural transformations. They must evaluate the reliability of competing sources, reconcile contradictory evidence and recognise connections between events that may initially appear unrelated. None of these tasks can be automated simply through the accumulation of more data. They require judgement, interpretation and continuous learning. They require cognition.

Seen from this perspective, the familiar image of public administration as a vast bureaucratic machine begins to lose much of its explanatory power. Machines execute predetermined instructions with remarkable precision, but they do not reinterpret their

environment when circumstances change unexpectedly. They do not revise their own assumptions, integrate new forms of knowledge or modify their understanding of reality through experience. Institutions, however, must constantly perform all these activities if they are to remain effective within rapidly changing societies. Their purpose is not merely to preserve stability, but also to adapt intelligently without sacrificing continuity, legitimacy or democratic accountability. This delicate balance between stability and adaptation can only be understood if we recognise that institutions continuously engage in processes of collective cognition.

Perhaps the most illuminating way to appreciate this transformation is to consider how profoundly the nature of governance itself has evolved over recent decades. For much of the twentieth century, many public challenges could be approached as relatively well-defined administrative problems. Governments were expected to provide services, implement legislation and manage public resources efficiently within environments that, although complex, often changed gradually enough for institutional structures to adjust over time. Today, however, governance increasingly consists of navigating systems characterised by uncertainty, interdependence and constant transformation. Artificial intelligence reshapes labour markets while simultaneously raising ethical, legal and geopolitical questions. Climate change influences agriculture, migration, public health, infrastructure and economic resilience all at once. Cybersecurity concerns extend far beyond technology into diplomacy, national security and democratic governance. Under these conditions, institutions are required not simply to administer known realities, but to develop the intellectual capacity to understand realities that are themselves still emerging.

It is here that the concept of Institutional Cognition begins to reveal its full significance. Rather than treating governance as the execution of predefined procedures, it invites us to understand governance as an ongoing process through which institutions continuously construct, revise and refine their understanding of the world. Decisions become only the visible expression of a much deeper activity that precedes them: the gradual formation of collective knowledge. Every successful public policy, every effective institutional reform and every intelligent response to an unexpected crisis is ultimately rooted in this invisible cognitive work through which organisations learn to perceive reality more accurately than they did before.

Understanding this point also helps explain why the future of public administration cannot be reduced simply to digital transformation or technological modernisation. New technologies undoubtedly expand the capacities available to institutions, but they do not automatically improve the quality of institutional understanding. Sophisticated information systems remain tools. Their value depends entirely upon the cognitive processes within which they are embedded. An institution equipped with advanced technological infrastructure but incapable of interpreting information wisely may perform little better than one operating with far more modest resources. Conversely, organisations that cultivate strong capacities for learning, reflection and collective reasoning often demonstrate remarkable adaptability even under conditions of significant material constraint. The decisive factor is therefore not technology itself, but the quality of the institutional cognition through which technology is understood, integrated and ultimately employed.

For this reason, the transition from administration to cognition should not be interpreted as replacing one conception of institutions with another. Administration remains indispensable because societies require stability, continuity and reliable procedures. What changes is our understanding of the foundations upon which effective administration ultimately depends. Beneath every regulation, every policy and every organisational structure lies a continuous process through which institutions seek to understand the societies they govern. Recognising this hidden cognitive dimension does not diminish the importance of law or public administration; instead, it reveals the deeper processes that allow both to function intelligently. It is this recognition that prepares us to explore the central idea of the following section: if institutions truly possess cognitive processes of their own, then we must begin asking not simply how they are organised, but how they actually perceive, remember, learn and, ultimately, think collectively.

What Do We Really Mean by Cognition?

Having reached this point, we are finally in a position to address a concept that, although it appears throughout contemporary science with increasing frequency, is often misunderstood in everyday language. The word *cognition* is commonly treated as little more than a sophisticated synonym for thinking, as though it referred exclusively to the conscious reasoning that takes place within the human mind. Yet this popular understanding captures only a very small part of what the concept has come to represent within fields such as cognitive science, neuroscience, psychology, systems theory and artificial intelligence. If Institutional Cognition is to become more than an attractive metaphor, we must first understand what cognition actually is, because only then can we appreciate why the concept can legitimately be extended beyond individual human beings and applied to complex organisations.

One of the most important developments in cognitive science during the last half century has been the gradual shift away from defining cognition in biological terms towards defining it in functional terms. Earlier approaches often assumed that cognition was inseparable from the human brain and that understanding intelligence necessarily meant understanding the neurological processes occurring within it. The extraordinary progress achieved in neuroscience has undoubtedly deepened our knowledge of these biological mechanisms, but it has also revealed something equally significant. While the brain provides one remarkable implementation of cognition, the cognitive functions themselves can be described independently of the biological material through which they are realised. In other words, cognition is not defined by the substance from which a system is made, but by the kinds of processes that the system is capable of performing.

This apparently subtle distinction has transformed several scientific disciplines. Artificial intelligence, for example, has never attempted to reproduce the biological architecture of the human brain neuron by neuron. Instead, it seeks to construct computational systems capable of performing functions that resemble certain aspects of human cognition, such as recognising patterns, processing language, solving problems, generating hypotheses or learning from experience. Although these systems operate through silicon processors rather than biological neurons, few researchers would deny that they perform at least some genuinely cognitive functions. Similarly, systems biology increasingly studies cognition as an emergent property that may arise whenever sufficiently complex systems continuously process information in order to adapt their behaviour to changing environments. Under this perspective, cognition becomes less a uniquely human attribute than a particular way in which complex systems organise information and transform it into adaptive action.

Seen from this functional perspective, cognition may be understood as the continuous process through which a system acquires information about its environment, distinguishes what is relevant from what is irrelevant, integrates new evidence with existing knowledge, constructs meaningful interpretations of reality, anticipates possible developments, evaluates alternative courses of action and modifies its future behaviour in light of experience. Each of these activities depends upon the others. Information without interpretation produces confusion rather than understanding. Memory without learning becomes little more than accumulation. Prediction without perception loses contact with reality. Decision-making without reflection risks becoming arbitrary. Cognition is therefore not a single activity but an ongoing cycle through which understanding is progressively constructed and continuously refined.

This description already begins to illuminate why the concept possesses such extraordinary relevance for the study of institutions. If cognition is understood as a biological phenomenon that occurs exclusively inside individual brains, then speaking about Institutional

Cognition would indeed make little sense. Institutions have no neurons, no cerebral cortex and no subjective consciousness. They neither experience emotions nor possess personal identities in the way human beings do. Any attempt to attribute psychological characteristics to organisations would therefore risk confusing metaphor with scientific explanation. However, if cognition is instead understood as a set of functional processes through which complex systems transform information into adaptive behaviour, the question immediately changes. We are no longer asking whether institutions possess minds comparable to those of individuals. We are asking whether institutions perform comparable cognitive functions through entirely different organisational mechanisms.

The significance of this shift cannot be overstated because it invites us to separate two ideas that have often been unconsciously merged together: **intelligence and consciousness**. Human beings experience both simultaneously, which naturally leads us to associate them with one another. Yet they are not identical concepts. Consciousness refers to subjective experience, to the internal awareness that accompanies our thoughts and perceptions. Cognition, by contrast, refers to the processes through which information is organised, interpreted and transformed into behaviour. An intelligent navigation system can calculate optimal routes without possessing consciousness. A machine-learning system can recognise complex visual patterns without any subjective awareness of what it is doing. Likewise, an institution may develop increasingly sophisticated capacities for interpreting information and coordinating collective decisions without implying that it has somehow become conscious. Institutional Cognition concerns the architecture of collective intelligence, not the existence of institutional minds.

This distinction also helps us avoid one of the most common misunderstandings surrounding the concept. When people first encounter the expression *Institutional Cognition*, they sometimes imagine that it attributes human qualities to organisations, as though governments or public administrations possessed personalities, emotions or intentions comparable to those of individuals. Nothing could be further from the purpose of the theory. The objective is not to anthropomorphise institutions but to recognise that complex organisations perform functions which, when examined from a systems perspective, display striking similarities to the functional architecture of cognition. The comparison therefore operates at the level of processes rather than personalities. Just as economists routinely describe markets as systems that allocate resources without suggesting that markets possess consciousness, Institutional Cognition describes institutions as systems that organise knowledge without implying that they possess human minds.

Once this conceptual clarification has been made, many familiar features of institutional life begin to appear in a different light. The continuous collection of evidence from multiple sources resembles processes of perception. The integration of legal analysis, scientific expertise and administrative experience resembles forms of collective interpretation. Archives, legislation, databases and organisational routines function as distributed systems of memory. Policy evaluation and institutional reform become mechanisms of learning through which future behaviour is modified in response to previous outcomes. Strategic planning represents an effort to anticipate possible futures before they materialise, while public decision-making emerges from the coordination of multiple forms of specialised knowledge that no single individual could fully encompass. None of these parallels depends upon metaphorical language. They arise naturally once cognition is understood as a functional process rather than an exclusively biological phenomenon.

Perhaps the most profound consequence of adopting this perspective is that it encourages us to reconsider the very nature of intelligence within complex societies. For centuries, intelligence has largely been imagined as an individual capacity located within exceptional persons: philosophers, scientists, political leaders or technical experts whose personal abilities shaped historical events. There is undoubtedly truth in this view, for individual intelligence remains indispensable to every society. Yet modern civilisation increasingly depends upon another form of intelligence that receives far less attention: the capacity of institutions to organise, preserve and continually expand knowledge across generations, allowing collective decisions to become wiser than those that any isolated individual could produce alone. Roads,

healthcare systems, judicial institutions, scientific academies, central banks and international organisations all embody accumulated knowledge that far exceeds the lifespan or expertise of any single person. Their effectiveness depends not simply on the intelligence of the individuals who temporarily work within them, but on the quality of the cognitive processes through which individual knowledge becomes collective understanding.

It is precisely here that the concept of Institutional Cognition acquires its full meaning. It does not ask us to imagine institutions as people, nor does it seek to replace existing theories of public administration with an entirely different intellectual framework. Instead, it invites us to recognise something that has long existed in plain sight but has rarely been described in explicit conceptual terms: that institutions survive, adapt and improve because they continuously process information, generate knowledge and organise collective intelligence on a scale that transcends individual human cognition. Once this becomes visible, an entirely new field of inquiry begins to emerge. The central question is no longer whether institutions think in the human sense, but rather **how collective cognition itself becomes possible within large organisations composed of thousands, sometimes millions, of individuals who together produce decisions that no single participant could have generated alone.** It is this question that will guide the remainder of our exploration.

Can Institutions Think?

At this point, we arrive at the question that perhaps gives this article its title and, at the same time, represents the greatest conceptual obstacle that readers usually encounter when they are first introduced to Institutional Cognition. It is a question that appears almost paradoxical because it seems to challenge one of our most deeply rooted intuitions about intelligence itself. **Can institutions think?** For many people, the immediate answer is an unequivocal no. Thinking, they would argue, is an activity that belongs exclusively to conscious individuals. Only human beings possess minds, experience the world subjectively, formulate intentions and reflect upon their own thoughts. Governments, ministries, universities or international organisations are simply collections of people connected by rules and procedures. To suggest that they might think appears, at first sight, to be little more than an attractive metaphor.

This reaction is entirely understandable because everyday language naturally associates thinking with personal experience. When we imagine someone thinking, we picture an individual reflecting internally, weighing alternatives, remembering previous events and consciously choosing between different possibilities. Institutions clearly do none of these things in the way human beings do. A ministry does not possess a brain hidden somewhere within its headquarters. A parliament does not experience curiosity before debating new legislation. A city council does not dream about future urban development, nor does a public administration feel satisfaction when a policy succeeds. If Institutional Cognition were claiming that institutions possess minds comparable to those of individuals, the theory would indeed collapse under the weight of its own assumptions.

Yet this is not what Institutional Cognition proposes. The apparent paradox disappears as soon as we stop asking whether institutions think *like people* and begin asking a much more precise question: **how do large organisations transform distributed knowledge into coherent collective decisions?** The difference between these two questions is subtle but profound. The first concerns psychology and subjective consciousness. The second concerns the architecture of complex systems. Institutional Cognition belongs entirely to the second category.

To appreciate this distinction, it is useful to reflect for a moment on the extraordinary complexity of modern institutions. Consider a national public administration employing hundreds of thousands of civil servants across dozens of ministries, agencies and regional offices. Within

such an organisation, knowledge is dispersed among economists, engineers, lawyers, doctors, educators, statisticians, environmental scientists, diplomats, digital specialists and countless other professionals whose expertise covers only a small part of the institution's overall responsibilities. No single individual possesses complete knowledge of everything the institution knows. Indeed, no minister, senior official or public servant could ever fully comprehend every piece of information circulating within the organisation at any given moment. The institution's knowledge therefore cannot reside inside any one person because it is inherently distributed across thousands of individuals, countless documents, digital systems, legal frameworks, historical records and organisational routines.

This simple observation immediately reveals something remarkable. If no individual contains the institution's complete knowledge, yet the institution nevertheless produces coordinated decisions that depend upon the integration of all these different forms of expertise, then something must exist that allows fragmented knowledge to become collective understanding. Somewhere between isolated individuals and institutional decisions lies a process through which information originating from many different sources is progressively organised, interpreted, debated, refined and eventually transformed into coherent action. This process does not belong to any single participant. It emerges from the organisation as a whole.

The idea of emergence is particularly important because it appears repeatedly throughout the natural world whenever complex systems are formed from large numbers of interacting components. A single neuron cannot think. It merely exchanges electrical and chemical signals with neighbouring neurons according to relatively simple biological mechanisms. Yet when approximately eighty-six billion neurons interact continuously within the extraordinarily intricate architecture of the human brain, consciousness and cognition emerge as properties of the system that cannot be explained by examining any neuron in isolation. Similarly, an individual ant possesses only limited behavioural capabilities, yet an ant colony collectively solves problems, allocates labour, discovers efficient routes to food sources and adapts to changing environmental conditions without any central commander directing the behaviour of every insect. In both examples, intelligence arises not because one component becomes extraordinarily sophisticated, but because many relatively specialised components become effectively coordinated.

Institutions display a surprisingly similar organisational logic. Individual civil servants contribute specialised knowledge within their own domains of expertise. Departments develop competencies that differ from those of other departments. Independent agencies gather information unavailable elsewhere. Universities produce scientific research that informs policymaking, while statistical offices monitor demographic and economic developments. Courts interpret legislation, regulatory authorities oversee compliance and local administrations observe conditions that may never become visible at the national level. Each component contributes only part of the overall picture. The institution's capacity to understand society therefore depends not on concentrating all knowledge in one location, but on coordinating distributed knowledge so effectively that meaningful collective decisions become possible despite the fragmentation of expertise.

Seen from this perspective, asking whether institutions think begins to resemble asking whether an orchestra produces music. No individual musician performs the entire symphony. Each contributes only one instrumental voice, following a musical score while simultaneously adapting to the performance of everyone else. The resulting composition emerges from coordination rather than from any isolated performer. It would make little sense to search for the symphony inside the violin section or within the woodwind instruments alone because the music exists only as the organised interaction of the entire ensemble. Likewise, institutional understanding cannot be found inside any individual office or department because it emerges from the continuous coordination of many different forms of knowledge distributed throughout the organisation.

This perspective also helps explain why institutional performance often changes dramatically without corresponding changes in legal structures or organisational charts. Two administrations may possess nearly identical formal arrangements while exhibiting profoundly

different capacities for understanding complex situations. One institution may successfully integrate expertise across multiple domains, encourage continuous organisational learning and adapt rapidly to emerging evidence. Another, operating under almost identical legislation, may struggle with fragmented information, poor communication and repeated policy failures. The difference cannot be explained solely by organisational design. It reflects differences in the quality of the cognitive processes through which distributed knowledge becomes collective intelligence.

Recognising this hidden dimension transforms the way we evaluate institutional success. Traditionally, institutions have often been assessed according to indicators such as administrative efficiency, financial performance, regulatory compliance or political effectiveness. While these measures remain important, they primarily evaluate the outcomes of institutional activity rather than the deeper processes that generate those outcomes. Institutional Cognition invites us to examine something that usually remains invisible: **how well does an institution actually understand the reality it is attempting to govern?** Can it recognise weak signals before they become crises? Does it preserve organisational memory effectively? Is knowledge shared across departments or trapped within isolated administrative silos? Does experience genuinely improve future decision-making, or are the same mistakes repeated generation after generation? These questions concern the cognitive quality of institutions rather than merely their administrative performance.

For this reason, the expression *Institutional Cognition* should never be interpreted as poetic language or philosophical speculation. It describes a concrete analytical perspective through which institutions become intelligible as systems of distributed cognition. They do not think because they possess minds, but because they continuously organise information, integrate knowledge, construct shared interpretations and coordinate adaptive collective action across scales that exceed the cognitive capacities of any individual participant. Their intelligence is therefore not individual but systemic; not psychological but organisational; not conscious but functional. Once this distinction becomes clear, the question with which we began this section gradually loses its paradoxical character. We no longer ask whether institutions think in the human sense because we have discovered a more interesting question altogether: **how does collective intelligence emerge from the organised interaction of thousands of individuals who, together, become capable of understanding and governing realities that none of them could fully comprehend alone?** It is from this question that the scientific programme of Institutional Cognition truly begins.

How Institutions Perceive the World

If institutions can be understood as cognitive systems, then one question naturally follows from everything we have explored so far. Every cognitive system, regardless of whether it is biological, artificial or organisational, must establish some form of relationship with the environment in which it exists. No system can make intelligent decisions in complete isolation because every decision depends, in one way or another, upon an understanding of external reality. Human beings perceive the world through their senses. Artificial intelligence systems receive information through digital inputs and sensors. Institutions, although operating through entirely different mechanisms, also require ways of perceiving the societies they are expected to govern. Before they can interpret, deliberate or decide, they must first become aware of what is happening around them.

This observation may appear almost self-evident, yet it carries profound implications for the way we understand governance. Traditional descriptions of public administration often begin

with institutions already making decisions, as though those decisions emerged directly from legal authority or political will. In practice, however, every meaningful institutional decision is preceded by an extensive process through which reality is progressively observed, measured and described. Long before a government approves a new policy, thousands of pieces of information have already been collected, compared, verified and organised. Economic statistics have been analysed, scientific reports examined, demographic changes monitored, legal implications considered, expert opinions debated and citizen concerns documented. None of this activity is peripheral to governance. It constitutes the very foundation upon which governance becomes possible.

Perhaps one of the greatest misconceptions surrounding public institutions is the assumption that they simply possess information because information is somehow available. Reality is considerably more demanding. Information must first be discovered before it can be analysed, and discovering it requires institutions to develop sophisticated mechanisms for observing environments that are becoming more complex every year. Modern societies generate an almost unimaginable volume of signals every day. Financial transactions, environmental measurements, hospital admissions, transport flows, educational outcomes, labour market indicators, judicial decisions, energy consumption, social media conversations, scientific publications and countless other phenomena continuously produce information that may or may not become relevant for public decision-making. The challenge facing institutions is therefore not merely to receive information but to determine which fragments of reality deserve attention among the overwhelming abundance of data that surrounds them.

For this reason, institutional perception should never be confused with simple data collection. Human perception provides a useful analogy. Our eyes receive enormous quantities of visual information every second, yet our brains immediately select only a tiny fraction of that information for conscious attention. Without this selective process, meaningful perception would become impossible because every detail would appear equally significant. Institutions confront an equivalent challenge. They cannot observe everything with equal intensity, nor can they allocate unlimited resources to monitoring every possible development occurring within society. Consequently, institutional perception is always selective. Decisions must constantly be made regarding what should be measured, how frequently observations should be updated, which indicators deserve priority and which developments require immediate investigation. These choices inevitably shape the way institutions understand the realities before them.

This selectivity explains why perception is never entirely objective, even when supported by sophisticated scientific methods. Institutions do not simply discover reality as it exists independently of observation; they construct representations of reality through the information systems they choose to develop. A government that invests heavily in economic statistics but devotes comparatively little attention to indicators of mental health, social cohesion or environmental resilience will inevitably perceive society through a particular lens. Likewise, institutions that monitor short-term performance while neglecting long-term systemic trends may fail to recognise profound transformations until they have already become difficult to manage. What institutions are capable of seeing depends largely upon the cognitive architecture through which observation itself is organised.

History provides numerous illustrations of this principle. Many institutional failures have not resulted from poor decision-making after reality had been correctly understood, but from the inability to perceive crucial changes while they were still emerging. Financial crises often develop gradually through the accumulation of subtle warning signals that individually appear insignificant but collectively reveal systemic fragility. Public health emergencies frequently begin with isolated medical observations scattered across different regions before eventually revealing broader epidemiological patterns. Environmental degradation rarely occurs as a single catastrophic event; instead, it unfolds through countless incremental changes that only become visible when institutions possess sufficiently sophisticated systems of long-term observation. In each of these examples, the decisive challenge lies not primarily in deciding what to do, but in recognising early enough that something important is happening at all.

This capacity to perceive weak signals has become one of the defining characteristics of highly adaptive institutions. Unlike obvious events, weak signals rarely announce themselves clearly. They emerge quietly at the margins of existing systems, appearing initially as isolated anomalies, unexpected behaviours or seemingly insignificant deviations from established trends. Most eventually disappear without consequence, but a small number gradually evolve into transformations capable of reshaping entire societies. Technological revolutions, demographic transitions, geopolitical realignments and scientific breakthroughs often begin in precisely this way. Institutions capable of identifying these subtle changes while they remain embryonic acquire an extraordinary advantage because they gain time, perhaps the most valuable strategic resource in governance. Time allows reflection, experimentation and preparation before uncertainty becomes crisis.

It is precisely here that Institutional Cognition begins to reveal one of its most practical implications. Improving governance is not simply a matter of producing better policies after problems have become visible. It also requires improving the perceptual capacities through which institutions become aware of those problems in the first place. Better governance therefore begins long before legislation is drafted or political decisions are announced. It begins with the quality of institutional observation itself. The more accurately institutions perceive the evolving realities around them, the greater their capacity to construct meaningful understanding, anticipate future developments and respond intelligently before events exceed their ability to influence them.

For this reason, perception should be regarded as the first cognitive function of every institution. It is the gateway through which reality enters the institutional system. Without reliable perception there can be no sound interpretation, without interpretation there can be no genuine understanding, and without understanding even the most sophisticated decision-making processes become little more than exercises in educated guesswork. Yet perception alone, however refined, remains insufficient. Observing the world is only the beginning of cognition. The far greater challenge lies in transforming countless observations into coherent meaning.

How Institutions Build Meaning

Perceiving reality, however, is only the beginning of the cognitive journey. No matter how sophisticated an institution's observational systems may become, perception alone cannot produce understanding. Every day, public organisations collect extraordinary quantities of information from an ever-expanding variety of sources. They monitor economic performance, environmental conditions, demographic evolution, public health indicators, technological innovation, educational outcomes, international developments and countless other dimensions of social life. Yet none of these observations possesses intrinsic meaning simply because it has been recorded. Information, by itself, remains little more than a description of isolated events. It is only when institutions begin to interpret relationships between those events, to compare them with previous experience and to situate them within broader explanatory frameworks that genuine understanding starts to emerge. In this sense, perception answers the question of **what is happening**, whereas cognition must go much further by asking **what does it mean?**

This distinction is perhaps one of the least visible yet most decisive aspects of governance. Citizens often imagine that governments respond directly to objective facts, as though reality presented itself with complete clarity and institutions merely selected the appropriate course of action. The practice of governance is considerably more complex. Before any response becomes possible, institutions must first construct an interpretation of the situation before them. They must decide whether a phenomenon represents an isolated incident or the beginning of a wider trend, whether apparently unrelated events are in fact connected, whether existing explanations remain valid or whether entirely new conceptual frameworks are required.

In other words, institutions do not simply react to reality; they first attempt to understand what kind of reality they are actually confronting.

The importance of this process becomes immediately apparent whenever societies encounter genuinely novel situations. Consider the emergence of a new technology capable of transforming labour markets, communication systems or scientific research. During its earliest stages, there is rarely any consensus regarding its long-term significance. Economists may emphasise productivity gains, educators may focus on new learning opportunities, labour organisations may express concern about employment, legal scholars may identify regulatory gaps, while ethicists may raise questions that have not previously existed. Each perspective highlights an important aspect of reality, yet none is sufficient on its own. Institutions are therefore confronted not with a lack of information but with an abundance of competing interpretations. Their challenge is to organise these diverse forms of knowledge into a coherent understanding capable of supporting responsible public action.

This illustrates one of the central characteristics of institutional cognition: **meaning is rarely discovered; it is constructed.** This statement should not be misunderstood as suggesting that institutions invent reality according to their own preferences. Reality continues to exist independently of institutional observation. Economic recessions, pandemics, technological innovations or environmental transformations do not depend upon whether governments recognise them. What institutions construct is not reality itself, but the explanatory models through which reality becomes intelligible. These models allow countless individual observations to be organised into narratives that make sense of complexity. Without such interpretative frameworks, information would remain fragmented, making coherent decision-making almost impossible.

Human cognition operates in a remarkably similar manner. Every individual constantly receives far more sensory information than can possibly be processed consciously. The brain therefore organises this information into meaningful patterns that allow the surrounding world to become understandable rather than overwhelming. We rarely notice this process because it occurs continuously beneath conscious awareness. Institutions face an analogous challenge on a much larger scale. They must transform millions of isolated observations into coherent representations of society, representations that allow governments, administrations and public organisations to act with a reasonable degree of confidence despite operating within environments characterised by uncertainty and constant change.

This process of interpretation is inherently collaborative because no individual, regardless of expertise or experience, can fully comprehend the complexity of modern governance alone. Contemporary institutions bring together specialists from disciplines that often employ entirely different conceptual languages. Economists, epidemiologists, engineers, climate scientists, urban planners, lawyers, sociologists, cybersecurity experts and countless other professionals each contribute valuable perspectives shaped by their own fields of knowledge. Institutional understanding therefore emerges through the continuous interaction of these different forms of expertise. Dialogue, deliberation and interdisciplinary collaboration are not simply administrative procedures designed to improve organisational efficiency. They are fundamental cognitive mechanisms through which fragmented knowledge gradually becomes integrated into collective understanding.

For this reason, disagreement should not automatically be interpreted as evidence of institutional weakness. On the contrary, thoughtful disagreement often represents an indispensable stage in the construction of knowledge. Scientific research progresses through the comparison of competing hypotheses rather than through immediate consensus, and institutions frequently follow a similar path. Different departments may initially interpret the same information in different ways, not because one is necessarily correct and the other mistaken, but because each observes reality through distinct conceptual frameworks developed in response to different responsibilities. Productive institutional cognition depends upon creating environments in which these differing perspectives can be examined critically, reconciled where possible and preserved where uncertainty legitimately remains. In this sense, effective governance is not the elimination

of complexity but the disciplined organisation of complexity into progressively more reliable forms of understanding.

This perspective also explains why institutional failures often originate not in poor execution but in flawed interpretation. History contains numerous examples of governments that possessed abundant information yet misunderstood its significance. Warning signs were present, expert reports had been produced and statistical indicators were available, yet the institution interpreted them through conceptual models that no longer corresponded to the evolving reality. By the time alternative interpretations gained acceptance, valuable opportunities for anticipation had frequently been lost. Such situations remind us that cognition depends not simply upon acquiring knowledge but upon maintaining the intellectual flexibility necessary to revise existing assumptions whenever reality demands it. Institutions that become excessively attached to established explanatory frameworks risk losing the very adaptive capacity upon which intelligent governance ultimately depends.

As societies become increasingly interconnected, this interpretative challenge grows more demanding every year. Rarely does a contemporary public issue belong exclusively to one policy domain. Climate change simultaneously affects agriculture, health, infrastructure, migration, energy systems and financial stability. Artificial intelligence influences education, employment, cybersecurity, ethics, industrial competitiveness and democratic governance at the same time. Population ageing reshapes healthcare, labour markets, pension systems, urban planning and technological innovation simultaneously. These challenges cannot be understood adequately through isolated administrative perspectives because their most significant characteristics emerge precisely from the interactions between different systems. Institutional cognition therefore requires an increasingly systemic mode of interpretation, one capable of recognising relationships that extend beyond traditional organisational boundaries.

At this point, we begin to appreciate why the concept of Institutional Cognition extends far beyond efficient information management. The objective is not merely to organise documents more effectively or to improve access to data, important though these tasks undoubtedly are. The deeper objective is to cultivate institutions capable of generating progressively richer and more accurate understandings of the realities they govern. Every improvement in institutional interpretation enhances the quality of subsequent decision-making because decisions can never exceed the quality of the understanding upon which they are based. Wise governance is therefore inseparable from wise interpretation.

Yet even the most sophisticated understanding would remain fragile if it disappeared each time individuals retired, governments changed or administrative structures were reorganised. Knowledge must not only be created; it must also be preserved, accumulated and transmitted across time. Every cognitive system requires memory if learning is to become possible. Institutions are no exception. Indeed, one of the most remarkable characteristics of human civilisation is that institutions allow knowledge to survive far beyond the lifespan of those who originally produced it. Understanding how this becomes possible leads us naturally to the next essential dimension of Institutional Cognition: **institutional memory**.

Institutional Memory: How Institutions Remember Across Generations

If perception allows institutions to become aware of the world and interpretation enables them to construct meaning from what they observe, then a third question inevitably arises. What happens to that knowledge once the immediate problem has passed? Does it disappear together with the individuals who participated in its creation, or does it remain available so that future decisions may benefit from past experience? The answer to this question is far more important than it might initially appear, because it introduces one of the defining characteristics of every genuine cognitive system: **the ability to preserve knowledge over time.** Without memory, cognition would be condemned to begin again from the beginning each time a new situation emerged. Every lesson would have to be relearned, every mistake repeated and every discovery rediscovered. Learning itself would become impossible because there would be no mechanism through which experience could accumulate.

Human beings understand this intuitively because memory forms an inseparable part of our own lives. Every conversation we have held, every challenge we have overcome and every skill we have acquired gradually contributes to a personal reservoir of experience that shapes the decisions we make in the future. Although our memories are often incomplete and occasionally unreliable, they nevertheless allow us to build our lives upon previous knowledge rather than starting anew each morning. Memory provides continuity between past, present and future, making learning possible because experience does not vanish the moment it has occurred.

Institutions face exactly the same challenge, although on an incomparably larger scale. Every year, governments design policies, public administrations manage crises, regulatory agencies resolve unforeseen situations, courts establish legal precedents, hospitals develop new clinical practices and scientific organisations generate knowledge that may influence society for decades to come. Each of these activities produces valuable experience. Some initiatives succeed beyond expectation, while others reveal weaknesses that could not previously have been anticipated. Every decision, regardless of its outcome, enriches the collective understanding of the institution by adding another fragment to its accumulated experience. The crucial question is whether that experience remains available once the immediate circumstances have disappeared.

This is where institutional memory becomes one of the least visible yet most essential dimensions of governance. Contrary to what we might instinctively imagine, institutional memory is not stored in a single place. It does not reside inside one archive, one database or one official document. Rather, it exists as a vast and distributed network of knowledge woven throughout the institution itself. It is preserved within legislation that embodies lessons learned over decades, within judicial decisions that establish interpretative continuity, within administrative procedures refined through repeated practice, within scientific reports that inform future policymaking, within digital information systems that record previous actions, within organisational cultures transmitted from one generation of professionals to the next and, perhaps most importantly, within the countless routines through which institutions gradually learn how to respond to recurring situations. Institutional memory is therefore not an object but an ecosystem. It is the collective inheritance that allows organisations to extend their cognitive life far beyond the lifespan of any individual participant.

This continuity represents one of the great achievements of civilisation itself. Human societies have progressed not simply because individuals become more knowledgeable, but because institutions have gradually learned how to preserve knowledge across generations.

Universities retain and expand scientific understanding long after their original scholars have disappeared. Courts preserve legal reasoning that continues to shape justice centuries later. Public administrations maintain practical experience accumulated through decades of governing increasingly complex societies. National statistical offices construct historical records that allow long-term social transformations to become visible. Museums, libraries and archives safeguard cultural memory that would otherwise vanish irretrievably. Seen from this perspective, institutions are among humanity's most sophisticated technologies for overcoming the limitations of individual memory.

Yet institutional memory should never be confused with the simple accumulation of information. A library containing millions of unread books cannot by itself be described as a cognitive system. Information becomes memory only when it remains sufficiently organised, accessible and meaningful to influence future understanding. This distinction is fundamental because modern institutions often possess extraordinary quantities of stored information while simultaneously struggling to transform that information into usable knowledge. Reports are written but rarely revisited. Evaluations are completed but remain disconnected from future policy design. Lessons identified during one crisis fail to inform responses to the next. Digital repositories continue expanding while institutional understanding grows only marginally. Under these circumstances, the problem is not the absence of memory but the absence of living memory, that is, memory capable of participating actively in future cognition.

The consequences of weak institutional memory become particularly visible during periods of organisational transition. Governments change, senior officials retire, departments are reorganised and new generations of public servants gradually replace those who accumulated decades of practical experience. These transitions are both natural and necessary within democratic societies, yet they also introduce an often-overlooked cognitive challenge. If knowledge remains concentrated primarily within individuals rather than becoming genuinely institutionalised, every transition risks erasing part of the organisation's accumulated understanding. Lessons that required years to acquire may quietly disappear as experienced professionals leave, forcing institutions to confront familiar problems as though they were entirely new. History repeatedly demonstrates that societies often pay a considerable price when institutional memory becomes fragmented or forgotten.

For this reason, some of the most resilient institutions are distinguished not merely by their ability to generate knowledge but by their capacity to preserve it without preventing renewal. This balance is more delicate than it may first appear. An institution that remembers nothing cannot learn because every experience evaporates almost immediately. Yet an institution that remembers everything without questioning its inherited assumptions may become equally vulnerable, imprisoned by traditions that no longer correspond to contemporary realities. Genuine institutional memory therefore requires both continuity and critical reflection. It must preserve experience while simultaneously remaining open to reinterpretation whenever changing circumstances demand new ways of understanding. Memory should not become a museum in which the past is simply conserved; it should function as a living conversation between previous experience and present reality.

This dynamic relationship between memory and adaptation explains why institutional memory is inseparable from learning. Every meaningful lesson acquired through governance modifies, however slightly, the cognitive architecture of the institution itself. Successful policies strengthen confidence in certain approaches while unsuccessful initiatives reveal assumptions that require revision. Unexpected crises expose weaknesses that routine administration may never have detected, whereas technological innovation often creates entirely new forms of institutional knowledge that previous generations could scarcely have imagined. Memory allows these experiences to accumulate, but learning determines whether they actually transform future behaviour. Without learning, memory becomes little more than historical record. Without memory, learning becomes impossible because there is no continuity through which experience can influence what comes next.

As societies become increasingly complex, the strategic importance of institutional memory continues to grow. The challenges confronting contemporary governance rarely unfold within a single electoral cycle or administrative mandate. Climate adaptation, demographic change, digital transformation, public health resilience and the governance of artificial intelligence all require forms of understanding that develop over decades rather than months. Institutions capable of preserving and continuously refining their knowledge across long periods of time acquire an extraordinary advantage because they can respond to emerging realities using the accumulated wisdom of previous generations rather than relying exclusively upon immediate experience. Their intelligence becomes progressively deeper because it is rooted not only in present observation but also in the long historical trajectory through which understanding has been patiently constructed.

Institutional Cognition therefore encourages us to see memory not as a passive archive of past events but as one of the active foundations of intelligent governance. Every decision taken today silently depends upon countless decisions made before it, just as every future decision will, in turn, depend upon what institutions choose to remember from the present. In this sense, governance is never confined to the immediate moment. It is an ongoing dialogue across generations in which knowledge is continuously inherited, revised and expanded. The true measure of an institution's cognitive maturity is therefore not simply the quantity of information it possesses, but its capacity to transform accumulated experience into progressively wiser forms of collective action.

Yet even memory, however rich and carefully preserved, cannot by itself guarantee improvement. Knowledge may remain available without ever changing behaviour. Institutions, like individuals, must learn not only to remember the past but also to allow that past to reshape the way they understand the future. It is this capacity for continuous adaptation that introduces the next essential dimension of Institutional Cognition: **institutional learning**, the process through which experience ceases to be merely remembered and begins to transform the intelligence of the institution itself.

Learning as an Institutional Capability

If memory allows institutions to preserve experience across time, learning determines whether that experience actually changes the way institutions understand and govern the world. This distinction is subtle, yet it lies at the very heart of Institutional Cognition. An institution may possess extensive archives, comprehensive databases and decades of accumulated documentation without necessarily becoming more intelligent. Knowledge can be stored indefinitely without ever influencing future decisions. Learning begins only when experience modifies the cognitive architecture of the institution itself, enabling it to perceive reality differently, to interpret information more accurately and ultimately to act with greater wisdom than before. In this sense, memory preserves the past, whereas learning transforms the future.

Human beings encounter this distinction throughout their lives. We all possess memories that have little influence on our present behaviour, while other experiences fundamentally reshape the way we understand ourselves and the world around us. Learning occurs not when an event is merely remembered, but when it becomes integrated into our understanding so deeply that future decisions are made differently because of it. Institutions follow a remarkably similar path. Every policy implemented, every administrative reform, every judicial decision, every technological innovation and every public crisis presents an opportunity to expand institutional understanding. Yet whether these experiences become genuine learning depends upon the

institution's ability to reflect critically upon what has occurred rather than simply recording that it occurred.

This observation leads us towards one of the most important ideas of Institutional Cognition. Institutions do not learn automatically. Experience alone does not produce intelligence, just as the passage of time does not necessarily produce wisdom in individuals. A public administration may confront the same challenge repeatedly over many years and nevertheless continue responding in almost identical ways, reproducing familiar shortcomings because the underlying assumptions guiding its behaviour have never been questioned. Equally, another institution may experience a single unexpected crisis and emerge profoundly transformed because it has developed mechanisms capable of extracting lasting knowledge from that experience. The decisive factor is therefore not the quantity of experience accumulated but the quality of the processes through which experience is examined, interpreted and incorporated into future institutional behaviour.

This is particularly evident when we observe how societies respond to moments of profound disruption. Throughout history, crises have often functioned as extraordinary accelerators of institutional learning. Financial collapses have transformed systems of economic regulation. Public health emergencies have reshaped approaches to epidemiological surveillance and international cooperation. Natural disasters have fundamentally altered the design of civil protection systems. Technological revolutions have repeatedly forced governments to reconsider legal frameworks, educational priorities and administrative practices. In each of these situations, institutions have discovered weaknesses that remained largely invisible during periods of stability. Crisis, uncomfortable though it may be, often reveals dimensions of reality that routine governance fails to perceive.

Yet crises themselves do not guarantee learning. History also provides countless examples of societies that endured severe disruptions only to repeat remarkably similar mistakes in subsequent decades. Reports were written, commissions established and recommendations published, yet little changed in the deeper cognitive patterns through which institutions interpreted reality. This reminds us that institutional learning cannot be reduced to producing evaluations after significant events. True learning requires something more demanding: the willingness to revise the conceptual models through which institutions understand the world. It requires recognising that the assumptions which proved effective under previous circumstances may no longer provide reliable guidance when the environment itself has fundamentally changed.

This capacity for intellectual adaptation has become increasingly important because the pace of societal transformation continues to accelerate. Many public institutions were originally designed to operate within environments where change occurred gradually enough for experience accumulated over decades to remain broadly applicable. Contemporary governance unfolds under very different conditions. Scientific knowledge expands continuously, technological innovation reshapes social behaviour at unprecedented speed and global events generate cascading effects that extend across multiple policy domains almost simultaneously. Under such circumstances, institutions cannot rely exclusively upon inherited experience. They must continuously update their understanding while preserving the valuable knowledge accumulated through previous generations. Learning therefore becomes not an occasional administrative exercise but a permanent institutional responsibility.

Seen from this perspective, learning is best understood as a process of continuous recalibration between past knowledge and present reality. Institutions constantly compare what they expected with what actually occurred. They evaluate why certain policies produced intended outcomes while others generated unforeseen consequences. They examine whether existing explanatory models continue to correspond to observed developments or whether emerging realities demand entirely new ways of thinking. Every meaningful act of learning therefore contains an element of intellectual humility. It begins with the recognition that previous understanding, however successful it may once have been, remains provisional and open to refinement. Institutions that lose this capacity for self-questioning gradually become less adaptive

because they continue interpreting new realities through conceptual frameworks developed for a world that no longer exists.

One of the most remarkable characteristics of institutional learning is that it rarely occurs in isolation. Human beings learn not only from their own experience but also by observing others, exchanging ideas and participating in communities of knowledge. Institutions display an equivalent capacity. Governments study successful public policies developed elsewhere. International organisations facilitate the circulation of administrative practices across countries. Universities contribute scientific discoveries that reshape regulatory frameworks. Professional networks allow specialised expertise to travel across institutional boundaries, while collaborative research increasingly enables organisations separated by geography, language and political systems to learn collectively from shared challenges. Institutional learning is therefore not confined within the borders of individual organisations. It increasingly unfolds through broader ecosystems of distributed knowledge in which understanding emerges through cooperation as much as through internal reflection.

This collaborative dimension introduces another important implication. The intelligence of an institution cannot be measured solely by the expertise it already possesses. Equally important is its openness to acquiring knowledge originating beyond its own boundaries. Institutions that regard themselves as self-sufficient gradually risk becoming intellectually isolated, interpreting new developments exclusively through their own established assumptions. By contrast, institutions that cultivate active relationships with scientific communities, civil society, international partners, technological innovators and other public organisations continually expand the diversity of perspectives available to them. Their learning becomes richer precisely because it is nourished by multiple sources of knowledge rather than by internal experience alone. In an increasingly interconnected world, the capacity to learn collaboratively may become one of the defining characteristics of institutional intelligence.

This observation also helps explain why the future of governance depends less upon the perfection of individual decisions than upon the quality of continuous learning. No institution, regardless of its expertise or technological sophistication, can consistently predict every consequence of every decision within environments characterised by profound complexity. Uncertainty is not an exceptional circumstance that governance occasionally encounters; it has become one of its permanent conditions. Under these circumstances, institutional success depends increasingly upon the ability to recognise errors early, revise assumptions rapidly and integrate new evidence without treating adaptation as a sign of weakness. In reality, the willingness to learn continuously represents one of the clearest indicators of genuine cognitive maturity.

Institutional Cognition therefore places learning at the centre of modern governance because it is through learning that institutions progressively increase their capacity to understand reality itself. Every successful lesson strengthens future perception, enriches interpretation, refines organisational memory and improves subsequent decision-making. The different cognitive functions we have explored are not isolated stages arranged sequentially but mutually reinforcing processes that continuously shape one another. Perception generates information, interpretation constructs meaning, memory preserves experience and learning transforms that experience into deeper understanding. Together they form a recursive cycle through which institutions gradually become more capable of navigating complexity.

As we reach this point, another question naturally begins to emerge. If institutions can observe, interpret, remember and learn through increasingly sophisticated cognitive processes, what happens when entirely new forms of intelligence become available to support those processes? During most of history, institutional cognition depended almost exclusively upon human capabilities organised through administrative structures. Today, however, artificial intelligence introduces a new possibility. For the first time, institutions are beginning to collaborate with technologies capable not merely of storing information but of participating actively in the analysis, interpretation and generation of knowledge.

Artificial Intelligence and the Next Stage of Institutional Cognition

Throughout the previous sections, we have explored Institutional Cognition as though it were an exclusively human organisational capability. We have seen that institutions observe the societies around them, construct meaning from the information they collect, preserve knowledge across generations and gradually learn from experience. All of these processes have existed, in one form or another, since the emergence of the earliest organised civilisations. Ancient administrations developed archives to preserve knowledge, medieval institutions refined legal traditions through accumulated precedent and modern states built increasingly sophisticated systems for collecting statistics, coordinating expertise and supporting public decision-making. The cognitive capacities of institutions have therefore evolved continuously throughout history, expanding as societies themselves became more complex. Yet despite these profound transformations, one characteristic remained remarkably constant. The cognitive work of institutions depended almost entirely upon the intellectual capacities of human beings organised through administrative structures.

Today, for the first time in history, this assumption is beginning to change.

The rapid development of artificial intelligence does not simply introduce another digital technology into the everyday operation of public institutions. It represents something considerably more significant. Previous technological revolutions largely expanded the physical capabilities of organisations. Steam engines transformed transportation and industry. Electricity extended productive activity beyond natural limitations. Computers accelerated calculation and information storage. The internet connected institutions across vast geographical distances with unprecedented speed. Each of these innovations profoundly reshaped governance, yet they primarily enhanced the efficiency with which institutions performed tasks that human beings continued to direct cognitively. Artificial intelligence differs in one crucial respect. It contributes not merely to the execution of administrative activities but increasingly to the cognitive processes that precede them.

This distinction deserves careful attention because it is often obscured by popular discussions surrounding artificial intelligence. Much public debate focuses on whether AI will replace human workers or automate existing tasks. While these questions are undoubtedly important, they address only part of the transformation now unfolding. The more fundamental question concerns the role that artificial intelligence may play within the cognitive architecture of institutions themselves. If institutions can already be understood as systems that continuously perceive, interpret, remember and learn, then artificial intelligence has the potential to participate in each of these functions, not as an autonomous decision-maker but as a new form of cognitive infrastructure that expands the institution's capacity to understand increasingly complex realities.

Consider, for example, the challenge of institutional perception. Contemporary governments receive information from thousands of different sources operating simultaneously across local, national and international scales. Economic indicators, satellite observations, environmental sensors, public health surveillance systems, transportation networks, scientific publications, legislative developments and citizen interactions together generate quantities of information far beyond the capacity of any group of individuals to examine exhaustively. Artificial intelligence can assist institutions by identifying subtle relationships within these enormous flows of information, detecting anomalies that might otherwise remain unnoticed and recognising emerging patterns while they are still too weak to become visible through conventional analytical methods. In doing so, AI does not replace institutional perception; it extends its range, allowing

institutions to observe dimensions of reality that would otherwise remain hidden beneath overwhelming informational complexity.

The same transformation becomes evident when we examine the construction of meaning. Earlier in this article, we argued that governance depends not simply upon collecting information but upon interpreting its significance. Artificial intelligence can contribute powerfully to this process by comparing vast quantities of evidence, identifying conceptual relationships across different domains of knowledge, modelling alternative scenarios and supporting interdisciplinary analysis that would previously have required enormous human effort. Yet interpretation remains, at its deepest level, a profoundly institutional responsibility. AI may generate hypotheses, reveal correlations or suggest possible explanations, but determining which interpretations should guide public action continues to require human judgement, democratic legitimacy and ethical reflection. Understanding society is never merely a technical exercise because societies are not composed solely of measurable variables. They are communities shaped by values, history, culture and political choice, dimensions that cannot be delegated entirely to computational systems.

This distinction points towards one of the central principles of Institutional Cognition in the age of artificial intelligence. **AI should not be understood as replacing institutional intelligence but as augmenting it.** The objective is not to create governments governed by algorithms, nor to transfer political responsibility from democratic institutions to autonomous computational systems. Rather, the goal is to strengthen the cognitive capacities through which institutions themselves perceive complexity, organise knowledge and support wiser decision-making. Artificial intelligence becomes, in this perspective, a collaborator within institutional cognition rather than its substitute. It expands the range of questions institutions are capable of exploring without assuming responsibility for the decisions that remain fundamentally public, political and accountable.

This principle is especially important because the increasing sophistication of artificial intelligence sometimes encourages misleading expectations. The impressive ability of contemporary AI systems to generate text, analyse images, produce software or assist scientific research can create the illusion that intelligence itself has become an autonomous commodity capable of replacing human institutions altogether. Institutional Cognition suggests a very different interpretation. Intelligence does not exist independently of the purposes it serves. Public governance involves questions that extend far beyond prediction or optimisation. Every significant institutional decision requires balancing competing values, considering legal principles, protecting fundamental rights and maintaining democratic legitimacy. These responsibilities cannot be reduced to computational calculation because they concern collective choices about the kind of society citizens wish to build together. Artificial intelligence can inform these choices with unprecedented analytical depth, but it cannot legitimately make them on behalf of society.

Indeed, one of the greatest risks associated with artificial intelligence does not arise from excessive machine intelligence but from insufficient institutional intelligence. Technologies of extraordinary analytical power introduced into institutions lacking robust cognitive capacities may inadvertently amplify existing weaknesses rather than correcting them. If organisational learning is poor, AI may simply accelerate ineffective routines. If institutional memory is fragmented, sophisticated analytical systems may repeatedly rediscover knowledge that should already have been available. If governance lacks clear ethical principles, increasingly powerful technologies may produce decisions that are technically efficient yet socially undesirable. The effectiveness of artificial intelligence therefore depends fundamentally upon the quality of the institutional cognition within which it operates. AI cannot compensate for institutions that fail to understand the societies they govern.

Seen from this perspective, the future relationship between artificial intelligence and governance becomes considerably richer than the familiar narrative of automation. The true transformation does not lie in replacing administrators with algorithms but in creating institutions capable of thinking more deeply, learning more rapidly and understanding complexity more comprehensively than ever before. Artificial intelligence expands the cognitive resources available to institutions, but those resources acquire public value only when they are integrated into

organisations that possess strong capacities for interpretation, reflection, accountability and continuous learning. Technology alone cannot produce intelligent governance. Intelligent governance emerges when technological capabilities become embedded within mature institutional cognition.

This understanding also invites us to reconsider the future evolution of public administration itself. During the coming decades, the most successful institutions are unlikely to be those that simply adopt artificial intelligence more rapidly than others. They will instead be those that redesign their cognitive architectures so that human expertise and artificial intelligence complement one another within coherent systems of collective reasoning. Public servants will increasingly devote less time to routine analytical tasks and more time to interpretation, ethical deliberation, strategic judgement and collaborative problem-solving. Institutional memory will become richer through intelligent knowledge systems capable of preserving and connecting experience accumulated across generations. Learning will accelerate as simulations, predictive models and continuous evaluation enable institutions to refine their understanding almost in real time. Governance itself may gradually evolve from a predominantly administrative activity into an increasingly cognitive one.

For this reason, artificial intelligence should be understood not as the beginning of Institutional Cognition but as the beginning of its next evolutionary stage. Institutions have always depended upon their capacity to transform information into collective intelligence. What is changing is the scale, speed and sophistication with which this transformation can now occur. The emergence of AI does not alter the fundamental nature of governance; rather, it magnifies the importance of the cognitive processes that have always existed beneath its administrative surface. In many respects, artificial intelligence is making visible something that was already there: that governing has never consisted merely of applying rules but of continuously understanding a world whose complexity constantly exceeds our previous assumptions.

As this transformation gathers momentum, one conclusion becomes increasingly difficult to avoid. The societies that prosper during the twenty-first century will not necessarily be those possessing the most advanced artificial intelligence in isolation, but those capable of integrating that intelligence within institutions that perceive wisely, interpret thoughtfully, remember faithfully and learn continuously. Ultimately, the future of governance will depend less upon the intelligence of our machines than upon the cognitive maturity of the institutions through which those machines are employed. And it is precisely this broader perspective that allows us to appreciate why Institutional Cognition is not simply an interesting theoretical concept, but one of the emerging foundations upon which the future of democratic governance may be built.

Why Institutional Cognition Matters

Having explored the foundations of Institutional Cognition, its relationship with perception, interpretation, memory, learning and, more recently, artificial intelligence, we may now return to the question with which this article began. Why does any of this matter? Why should public officials, researchers, policymakers or ordinary citizens adopt a new way of thinking about institutions when existing theories of public administration have served governments for generations? At first sight, Institutional Cognition may appear to be simply another conceptual framework designed to enrich academic discussions about governance. Yet its significance extends far beyond theoretical reflection. The importance of Institutional Cognition lies in the fact that it offers a new way of understanding the challenges that institutions already face every day

and, perhaps more importantly, a new way of preparing them for the increasingly complex world they will have to govern in the decades ahead.

The twenty-first century is confronting public institutions with conditions unlike any they have previously experienced. Complexity has ceased to be an occasional characteristic of governance and has instead become its permanent environment. Economic systems are intertwined with technological innovation, environmental transformations influence migration and public health simultaneously, geopolitical events rapidly generate consequences across continents, while digital communication accelerates social change at a pace that frequently exceeds the capacity of traditional administrative processes to respond. Under these conditions, governing is no longer simply a matter of administering existing realities. It increasingly consists of understanding realities that are themselves evolving while institutions attempt to act upon them.

This transformation fundamentally alters the nature of effective governance. Throughout much of modern history, institutional success could often be associated with qualities such as administrative stability, legal certainty, procedural consistency and organisational efficiency. These characteristics remain indispensable because democratic societies depend upon institutions that are predictable, accountable and governed by the rule of law. Yet they are no longer sufficient on their own. Stability without adaptation gradually becomes rigidity. Efficiency without understanding risks accelerating inappropriate decisions. Procedural consistency loses much of its value if the assumptions underlying those procedures no longer correspond to the realities institutions seek to govern. The defining challenge of contemporary governance is therefore not choosing between stability and change, but learning how to preserve institutional continuity while continuously improving institutional understanding.

It is precisely here that Institutional Cognition provides a perspective that traditional approaches often struggle to articulate explicitly. Instead of asking only whether institutions possess adequate legal powers, sufficient financial resources or efficient administrative procedures, Institutional Cognition encourages us to ask a different family of questions. How accurately do institutions perceive the societies they govern? How effectively do they integrate knowledge originating from different disciplines and organisations? How well do they preserve institutional memory across political transitions and generational change? How rapidly do they learn from new evidence? How capable are they of recognising emerging problems before those problems become systemic crises? These questions do not replace more familiar concerns regarding governance; rather, they illuminate the deeper cognitive capacities upon which successful governance increasingly depends.

One of the most valuable consequences of this perspective is that it shifts attention away from viewing institutions as static entities and towards understanding them as continuously evolving systems. Institutions are often criticised as though they possessed fixed characteristics, being described as efficient or inefficient, innovative or conservative, resilient or fragile. While such descriptions may occasionally capture important aspects of institutional behaviour, they risk overlooking a more fundamental reality. Institutions are not finished structures that simply exist in one condition or another. They are dynamic cognitive systems whose capacities can develop, mature and improve over time. Just as individuals can cultivate greater knowledge, stronger judgement and deeper understanding through education and experience, institutions can progressively strengthen their own capacities for perception, interpretation, learning and adaptation. Institutional intelligence is therefore not a fixed attribute but an evolving capability.

Recognising this possibility carries profound implications for public administration. It suggests that improving governance is not limited to reforming organisational structures or introducing new technologies, important though both may be. Genuine institutional transformation also requires cultivating the cognitive conditions through which better governance naturally emerges. Investments in knowledge systems, interdisciplinary collaboration, evidence-informed policymaking, organisational learning, strategic foresight and responsible artificial intelligence cease to appear as isolated administrative initiatives. Instead, they become interconnected components of a broader effort to strengthen the cognitive maturity of public institutions. Their

ultimate purpose is not merely to improve organisational performance but to improve the quality of collective understanding upon which every significant public decision ultimately depends.

This perspective also offers a more hopeful vision of institutional development than is often encountered in contemporary public debate. Discussions about governance frequently oscillate between excessive optimism regarding technological innovation and deep pessimism concerning institutional limitations. Some narratives suggest that artificial intelligence or digital transformation alone will solve longstanding public problems, while others portray institutions as inherently incapable of adapting to rapidly changing societies. Institutional Cognition rejects both extremes. It recognises that institutions possess genuine limitations, but it also argues that these limitations are neither fixed nor immutable. Like every cognitive system, institutions are capable of learning. Their intelligence can expand as new forms of knowledge, collaboration and technological support become integrated into their everyday functioning. The future of governance is therefore neither predetermined by institutional inertia nor guaranteed by technological progress. It depends upon the continuous development of institutional cognition itself.

There is also a broader civilisational dimension to this argument that deserves careful consideration. Human societies have achieved extraordinary progress not because individuals became infinitely more intelligent than previous generations, but because institutions gradually learned how to organise, preserve and expand collective knowledge across centuries. Scientific academies accumulated discoveries that no single researcher could have produced alone. Judicial institutions refined legal reasoning across generations. Universities preserved and transmitted knowledge through changing historical periods. Public administrations progressively improved their capacity to coordinate increasingly complex societies. In every case, civilisation advanced because institutions became better at thinking collectively than they had been before. Institutional Cognition simply makes this long historical process visible by providing a conceptual language through which it can be understood more clearly.

Seen from this wider perspective, the challenges associated with artificial intelligence, climate change, demographic transformation or global governance cease to appear as isolated policy problems. They become tests of institutional cognition itself. The central question is no longer whether humanity possesses sufficient information or technological capability to confront these challenges. In many respects, it already does. The deeper question concerns whether our institutions possess the cognitive maturity required to organise that knowledge intelligently, to integrate diverse forms of expertise into coherent public action and to continue learning as the world evolves around them. The future of governance will depend increasingly upon this capacity because the complexity of our problems now grows faster than the simplicity of traditional solutions.

For this reason, Institutional Cognition should not be understood merely as a theory about institutions. It represents a broader invitation to rethink the very purpose of governance in an age characterised by accelerating complexity. If earlier generations sought primarily to build stronger institutions, our generation may face a different responsibility: **to build institutions that are capable of becoming progressively wiser.** Strength remains essential. Legitimacy remains indispensable. Democratic accountability remains non-negotiable. Yet alongside these enduring principles, another objective is quietly emerging. Institutions must also become better at understanding the societies they exist to serve. They must become organisations that continuously improve their capacity to perceive reality accurately, interpret complexity responsibly, preserve knowledge across generations and learn without interruption.

It is this possibility, the gradual evolution of institutions from administrative organisations into increasingly intelligent systems of collective understanding, that gives Institutional Cognition its enduring significance. It is not simply another analytical framework through which existing institutions can be described. It is a perspective through which the future evolution of governance itself begins to appear in a new light. And it is from this point that we can finally turn towards the broader horizon opened by the concept of **Cognitive Institutions**, a horizon in which governance

becomes not only more efficient or more digital, but fundamentally more capable of understanding the complex civilisation it seeks to guide.

Towards Cognitive Institutions

Every important intellectual journey eventually reaches a moment in which the individual concepts explored along the way begin to reveal a larger picture. Throughout this article, we have gradually examined how institutions perceive the societies around them, how they transform information into meaningful understanding, how they preserve knowledge across generations and how they learn through experience while adapting to an increasingly complex environment. Each of these ideas has been presented as a distinct dimension of Institutional Cognition, yet none of them exists in isolation. Together they describe something far more ambitious than a collection of individual capabilities. They describe the gradual emergence of a new kind of institution, one whose defining characteristic is not merely its administrative competence but its capacity to understand, learn and evolve continuously. It is this emerging organisational form that the IDHUS Institute refers to as the **Cognitive Institution**.

At first glance, the expression may sound futuristic, as though it described organisations that belong to a distant technological age rather than to the present. Yet, in many respects, Cognitive Institutions are already beginning to appear around us, although often in fragmented and incomplete forms. Around the world, public administrations are investing in evidence-informed policymaking, integrating scientific advisory systems into decision-making, developing strategic foresight capabilities, strengthening interdisciplinary collaboration, adopting artificial intelligence to support analysis and creating increasingly sophisticated mechanisms for institutional learning. Each of these initiatives is frequently presented as an independent administrative reform, responding to a particular policy objective or technological opportunity. Institutional Cognition suggests a different interpretation. These developments are not isolated innovations. They are early manifestations of a deeper historical transformation through which institutions are progressively expanding their cognitive capacities.

Understanding this transformation requires us to distinguish carefully between digital institutions and cognitive institutions, because the two concepts are not synonymous. During the past three decades, governments across the world have invested enormous effort in digital transformation. Administrative procedures have moved online, public services have become increasingly accessible through digital platforms and information systems have dramatically improved the efficiency with which institutions manage routine operations. These developments have undoubtedly transformed public administration, yet digitisation alone does not necessarily produce institutional intelligence. A digital institution may process transactions more rapidly while continuing to interpret reality through outdated assumptions. It may possess vast quantities of data without developing a deeper understanding of the society from which that data originates. Technology can improve efficiency without fundamentally changing the way institutions think.

A Cognitive Institution represents something considerably more ambitious. It is an institution whose technologies, organisational structures, professional cultures and governance processes are deliberately designed to strengthen its capacity for collective understanding. Such an institution does not treat information merely as an administrative resource but as the raw material from which knowledge is continuously constructed. It does not preserve organisational memory simply for historical purposes but because accumulated experience enriches future judgement. It does not regard learning as an occasional activity associated with training programmes or post-project evaluations, but as an intrinsic characteristic of governance itself. Every interaction with society becomes an opportunity to refine understanding. Every policy becomes an experiment from which future knowledge may emerge. Every decision contributes

not only to immediate action but also to the gradual evolution of the institution's own cognitive capabilities.

Seen from this perspective, governance itself begins to acquire a different meaning. For centuries, public administration has often been understood primarily as the management of public authority. Institutions existed to implement laws, provide services, regulate economic activity and maintain social order through stable administrative structures. None of these responsibilities disappears within the framework of Institutional Cognition. On the contrary, they remain essential. What changes is the recognition that these visible functions all depend upon an underlying cognitive activity that has too often remained implicit. Before institutions can govern effectively, they must first understand the systems they seek to govern. The quality of governance therefore depends fundamentally upon the quality of institutional understanding. Administrative effectiveness becomes, in the deepest sense, an expression of cognitive maturity.

This shift in perspective carries consequences that extend far beyond public administration alone. As societies become increasingly interconnected, no institution can fully understand the complexity surrounding it in isolation. Environmental agencies require knowledge generated by climate scientists, economists, engineers and local communities. Public health systems increasingly depend upon international cooperation, real-time scientific exchange and technological innovation. Artificial intelligence governance demands collaboration between legal scholars, computer scientists, ethicists, industry, civil society and democratic institutions. The future therefore belongs not only to Cognitive Institutions but also to **cognitive ecosystems**: networks of organisations capable of sharing knowledge, coordinating expertise and learning collectively across institutional boundaries. Institutional intelligence gradually expands into distributed forms of collective intelligence that no single organisation could ever develop independently.

This evolution may ultimately represent one of the defining characteristics of the twenty-first century. Throughout history, human civilisation has repeatedly expanded its capacity for cooperation by creating institutions capable of organising increasingly large communities. Cities, universities, parliaments, courts, scientific academies and international organisations all emerged because existing institutional forms became insufficient for the complexity societies had reached. Today, humanity appears to be approaching another threshold. The challenges before us, artificial intelligence, planetary environmental change, global public health, technological disruption, demographic transformation and geopolitical interdependence, have become so interconnected that they increasingly exceed the cognitive capacities of institutions designed for a less complex world. The next stage of institutional evolution may therefore depend less upon creating entirely new forms of authority than upon strengthening the cognitive capacities of the institutions that already exist.

This is why Institutional Cognition should not be interpreted simply as a descriptive theory explaining how institutions currently function. Its deeper purpose is normative as well as analytical. It invites us to ask what kinds of institutions future societies will require if they are to remain democratic, resilient and capable of governing responsibly under conditions of accelerating complexity. The answer is unlikely to consist merely of more regulations, more administrative procedures or even more advanced technologies. It will require institutions capable of continuously integrating knowledge, reflecting critically upon their own assumptions, collaborating across traditional organisational boundaries and adapting without sacrificing the principles of legitimacy, accountability and public trust upon which democratic governance ultimately depends.

Perhaps this is the most important lesson that emerges from the journey we have undertaken throughout this article. Institutions have never been static constructions. They have always evolved together with the societies they serve. The bureaucratic institutions of the nineteenth century differed profoundly from the welfare institutions of the twentieth, just as today's digitally connected administrations differ from those that existed only a generation ago. Institutional Cognition suggests that another transformation is now beginning, one in which the defining characteristic of successful institutions will no longer be measured solely by their

administrative efficiency or technological sophistication, but by the depth of their capacity to understand an increasingly complex world.

In many respects, this represents an optimistic vision of the future. It assumes that institutions are not condemned to become progressively more obsolete as complexity increases, nor that technological innovation inevitably diminishes the importance of democratic governance. Instead, it suggests that institutions themselves can evolve cognitively, becoming progressively more capable of organising collective intelligence in ways that strengthen rather than weaken democratic societies. Artificial intelligence, systems thinking, scientific knowledge and digital infrastructures become valuable not because they replace institutions, but because they expand the cognitive foundations upon which institutions can govern wisely.

The central idea with which we began this article can now be understood from a very different perspective. We initially asked whether institutions can think, a question that seemed almost paradoxical when first encountered. Having travelled through the concepts of perception, interpretation, memory, learning and collective intelligence, the paradox gradually dissolves. Institutions do not think because they possess minds like individuals, nor because they imitate human consciousness. They think because they continuously transform distributed knowledge into coordinated understanding, allowing societies to make decisions that transcend the cognitive capacities of any single person. Their intelligence is collective rather than individual, organisational rather than biological, evolutionary rather than static. It emerges from the countless interactions through which information becomes knowledge, knowledge becomes learning and learning becomes wiser governance.

Ultimately, Institutional Cognition is not simply a new way of studying institutions. It is a new way of imagining their future. It invites us to recognise that the greatest challenge facing governance in the coming decades may not be technological, economic or even political in isolation. It may be cognitive. The quality of our collective future will increasingly depend upon the quality of the institutions through which we understand the world together. If we succeed in building institutions capable of perceiving reality more clearly, interpreting complexity more wisely, preserving knowledge more effectively and learning more continuously than ever before, then we shall also have created institutions capable of governing a civilisation whose complexity continues to expand. And perhaps that is the deepest promise contained within the idea of Institutional Cognition: not that institutions become more powerful, but that they become progressively more capable of understanding the societies they exist to serve.

Conclusion

Rethinking the Institutions of the Twenty-First Century

When historians look back at the great transformations of civilisation, they rarely describe them simply as a succession of political events or technological breakthroughs. With the benefit of historical perspective, it becomes clear that every major period of human development has also been accompanied by a profound transformation in the way societies understood the world and organised their collective existence. The invention of writing allowed knowledge to outlive individual memory. The emergence of universities created the conditions for the systematic transmission of learning across generations. The Scientific Revolution fundamentally changed the way reality was observed and explained, while the Industrial Revolution required entirely new institutional arrangements capable of governing societies whose complexity was expanding at an unprecedented pace. Each of these historical transitions represented, in its own way, an expansion of humanity's cognitive capacities.

It is entirely possible that our own era is experiencing a transformation of comparable significance. The extraordinary speed at which artificial intelligence, scientific discovery, technological innovation, geopolitical change and economic interdependence continue to evolve has fundamentally altered the challenge facing public institutions. Governing is no longer simply a matter of administering increasingly complex societies. It has become the far more demanding task of understanding societies that continue to transform while institutions are simultaneously attempting to guide them. Never before has humanity produced so much information, nor possessed such powerful tools for analysing it. Yet the abundance of information has not automatically produced greater understanding. On the contrary, the more complex our world becomes, the more essential it is to distinguish what truly matters from the overwhelming volume of available data, to construct coherent interpretations of rapidly changing realities and to make decisions capable of anticipating consequences that may unfold many years into the future.

It is within this context that the concept of **Institutional Cognition** acquires its full significance. Throughout this article we have explored the idea that institutions are far more than legal structures, administrative organisations or mechanisms for exercising public authority. They are also systems that perceive, interpret, remember, learn and organise distributed knowledge so that it can be transformed into coordinated action for the benefit of society. Recognising this cognitive dimension does not require us to abandon the traditional study of governance. Rather, it invites us to extend it. Just as it would be impossible to understand the human mind by studying anatomy alone, it is equally impossible to understand institutions solely by examining their laws, organisational charts or administrative procedures. Beneath these visible structures lies a continuous process of collective understanding that ultimately shapes every significant public decision. It is this invisible cognitive activity that gives institutions their capacity to respond intelligently to an ever-changing world.

Viewing institutions through this perspective also carries an important practical implication. If institutions possess cognitive capacities, then those capacities are not fixed. They can be cultivated, strengthened and continuously improved. Just as individuals develop greater understanding through education, experience and reflection, institutions can progressively enhance their ability to perceive emerging realities, integrate knowledge originating from multiple disciplines, preserve organisational memory and adapt to changing circumstances without sacrificing the stability and legitimacy upon which democratic governance depends. Institutional improvement therefore becomes something much deeper than administrative reform or technological modernisation. It becomes a long-term process of cognitive development through which organisations gradually increase their capacity to understand the societies they serve.

Artificial intelligence occupies a particularly important place within this evolution. It is often presented primarily as a technology capable of automating routine tasks or increasing organisational efficiency, yet its deeper significance may lie elsewhere. Used responsibly, artificial intelligence has the potential to expand the cognitive capabilities of institutions in unprecedented ways, helping them identify subtle patterns, explore alternative futures, preserve accumulated knowledge and support increasingly sophisticated forms of collective reasoning. At the same time, this article has argued that no technology, however powerful, can replace the foundations upon which democratic governance ultimately rests. Public deliberation, institutional legitimacy, political accountability and human judgement remain essential because governance concerns not merely the optimisation of systems but the continual negotiation of shared values within complex societies. Artificial intelligence may greatly augment institutional intelligence, but it cannot replace the collective purpose that gives institutions their legitimacy.

Perhaps the most important contribution of Institutional Cognition is that it encourages us to ask a different question about the future of governance. For many decades, debates concerning public administration have centred upon whether institutions should become larger or smaller, more centralised or more decentralised, more efficient or more flexible, more digital or less bureaucratic. These questions remain important, but another question may ultimately prove even more fundamental. **Are our institutions capable of understanding a world that is changing faster than they are?** Every public decision ultimately depends upon the quality of the understanding from which it emerges. If institutions fail to perceive reality accurately, if they cannot integrate increasingly diverse forms of knowledge or if they lose the capacity to learn continuously from experience, no amount of administrative efficiency will compensate for those deeper cognitive limitations.

Institutional Cognition does not claim to offer a definitive answer to this challenge. Like every emerging field of inquiry, it opens a much broader research programme whose implications will continue to develop over the coming years. Its purpose is not to replace existing theories of governance or public administration, but to complement them by illuminating a dimension of institutional life that has remained largely implicit despite its growing importance. In many respects, Institutional Cognition should be understood less as the conclusion of an intellectual debate than as the beginning of a new conversation about how societies organise collective intelligence and how that intelligence may continue to evolve in an age of accelerating complexity.

It is entirely possible that, several decades from now, the idea that institutions possess cognitive capacities will appear as natural as our contemporary understanding of ecosystems, economic systems or digital networks. Many concepts that initially seemed unfamiliar have eventually become part of ordinary language because they provided more complete explanations of the realities people experienced. If that happens, Institutional Cognition may eventually cease to be regarded as a novel theoretical proposal and instead become one of the ordinary ways through which future generations understand how societies learn, make decisions and shape their collective future.

And perhaps, when that moment arrives, we shall discover that the question with which this article began, **"Can institutions think?"**, was never the most important question after all. The deeper question is not whether institutions think in the same way that individuals do, but whether they are capable of developing progressively more intelligent ways of understanding the complex societies they exist to serve, and of transforming that understanding into decisions that make those societies more just, more resilient and better prepared for the future. If the institutions of the twenty-first century succeed in following that path, the history of governance will have entered a new chapter, one defined not simply by more powerful governments or more advanced technologies, but by the emergence of **Cognitive Institutions** whose greatest strength lies in their capacity to understand before they act, to learn before they repeat and to evolve together with the societies whose future they are entrusted to shape.