



WHAT IS

Adaptive Capacity?

An Inquiry into How Organizations Remain Intelligently
Related to Changing Reality

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What Is Adaptive Capacity? A Systems Inquiry into How Organizations Remain Intelligently Related to Changing Reality

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Relationship to a Larger Body of Work

This paper forms part of the broader theoretical work developed in *Conscious Leadership: Structural Integrity for the Network Age* (de Oliveira, 2026). It introduces Adaptive Capacity as an independent conceptual contribution within a larger systems theory of organizational intelligence, distributed responsibility, Structural Integrity, and intelligent adaptation.

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Abstract

Organizations rarely lack intelligence. Their recurring difficulty lies in transforming specialized and distributed knowledge into coordinated judgment and timely action while conditions continue to change. Existing concepts such as agility, resilience, dynamic capabilities, organizational learning, and decentralization explain important aspects of organizational adaptation, yet none fully explains how distributed knowledge repeatedly becomes coherent organizational response across the system as a whole.

This paper defines Adaptive Capacity as the emergent system property expressed in the ability of a complex social system to remain intelligently related to changing reality while preserving systemic coherence. It becomes visible in the system's recurring ability to recognize material change while action remains possible, bring distributed knowledge into judgment and coordinated action, and learn in ways that improve its response to what follows.

The paper develops the construct through four interdependent dimensions: the Mechanics of Movement, the Mechanics of Structure, the Dynamics of Evolution, and Integrative Capacity. Together, they explain how organizations transform distributed perception into coordinated action while preserving Structural Integrity under changing conditions. The framework distinguishes Adaptive Capacity from adjacent concepts, clarifies the changing function of hierarchy in distributed systems, develops a diagnostic architecture for identifying the relationship that most constrains coherent action and redesigning the conditions surrounding it, and illustrates its explanatory value through six organizational cases.

The central proposition is that Adaptive Capacity is neither a managerial practice nor the product of accumulated capabilities. It emerges from the quality of the relationships through which information, judgment, authority, responsibility, action, and consequence remain sufficiently coupled for the organization to perceive, respond, learn, and continue adapting as a coherent whole. Adaptive Capacity is cultivated when consequential responses strengthen these relationships and thereby improve the system's capacity to recognize, judge, act, and learn as conditions continue to change.

KEYWORDS: Adaptive Capacity; complex adaptive systems; organizational cognition; Integrative Capacity; Structural Integrity; distributed leadership; dynamic capabilities; organizational resilience; systems thinking; organizational learning; enterprise transformation; organizational theory.

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Why "What Is Adaptive Capacity?"

In 1996, Michael E. Porter's essay "What Is Strategy?" gained force by separating strategy from operational effectiveness and from the managerial practices commonly presented as strategy. The question performed diagnostic as well as definitional work: it distinguished the concept from the practices surrounding it and clarified what strategy uniquely explained (Porter, 1996).

Adaptive Capacity does not occupy the same established place in management language that strategy did when Porter wrote. The relevance of his essay lies not in the prominence or misuse of the term, but in the method: asking what a concept names that its adjacent ideas do not.

Adaptive Capacity should be distinguished from familiar ideas such as agility, resilience, flexibility, robustness, learning, decentralization, innovation, and efficiency. Each describes a quality, practice, or outcome that may contribute to adaptation. None, by itself, explains how an organization repeatedly brings these elements into relationship at the level of the whole. An organization may respond quickly through executive intervention, withstand disruption through redundancy or excess resources, generate extensive learning without changing the conditions shaping its next response, decentralize decisions while fragmenting responsibility for their consequences, or become more efficient by suppressing the variation on which future adaptation may depend. These achievements may be valuable. The question is what allows them to reinforce one another rather than remain isolated or episodic.

Adaptive Capacity names this larger organizational accomplishment: sustaining performance while developing the conditions from which an effective response can recur. The issue is not simply whether an organization can sense, learn, change, or absorb disturbance, but whether these functions can operate jointly across the system without depending on continuous centralized direction.

Distributed perception must inform judgment across the system; authority and responsibility must remain connected where action occurs; and consequence must return as learning. When these relationships remain sufficiently coupled to sustain coordinated action across time and scale, the system possesses **STRUCTURAL INTEGRITY**: the load-bearing capacity of its regulatory architecture. Adaptive Capacity is what allows this integrity to be maintained as conditions change. In complex social systems, that capacity ultimately depends on people who can carry responsibility within action, a capacity developed later in this paper as autonomy.

Leadership then becomes a property of the system, expressed through the capacity of participants to exercise judgment, carry responsibility, and coordinate action without continuous command from above. This systemic functioning depends on **INTEGRATIVE CAPACITY**: the organization's cognitively grounded ability to bring distributed signals, perspectives, and consequences into relationship so that participants can form judgment and coordinate action adequate to changing conditions. Gravity provides the shared orientation that makes such action possible. It allows people to act on what is sufficiently clear while directing unresolved distinctions to those parts of the system able to integrate

them. As the organization learns, adapts, and evolves through this configuration, Adaptive Capacity emerges and strengthens as a property of the whole.

The intelligence problem inside modern organizations

Consider a global manufacturer learning that production has stopped at a supplier of a specialized material used across several product families. The supplier cannot yet confirm when production will resume, how much inventory remains usable, or whether existing commitments can be fulfilled. A seemingly discrete supplier notification immediately enters a network of technical, operational, commercial, financial, and regulatory consequences.

Procurement begins verifying inventory, contractual commitments, alternative sources, and capacity elsewhere in the supply network. Planning reruns production scenarios. Engineering evaluates alternative materials or designs. Quality examines qualification, safety, and regulatory implications. Operations considers production sequencing, labor, tooling, and capacity. Finance models premium costs and margin exposure. Commercial teams reassess customer commitments. Each function encounters a legitimate part of the same event. None encounters the whole.

Locally sound decisions can therefore produce a fragmented enterprise response. Procurement may reserve material that engineering later determines cannot be used. Planning may allocate inventory without seeing a qualification constraint or portfolio dependency. Finance may reject an expedited option without visibility into the larger cost of interrupted output. Commercial teams may make commitments based on supply assumptions that procurement cannot sustain. Functional competence remains high while judgment across the enterprise remains incomplete.

Preparedness reduces exposure but cannot eliminate this condition. The organization may have mapped critical dependencies, qualified alternatives where feasible, established inventory buffers, and developed continuity plans. Novel combinations of timing, consequence, and constraint will still exceed the prepared repertoire. The disturbance may also evolve faster than knowledge distributed across the organization can be integrated into judgment. By the time information has moved through functional channels, been reconciled, elevated to authority, and translated into action, supplier conditions, inventory positions, schedules, and customer expectations may already have changed.

This is the intelligence problem inside the modern organization. Organizations possess immense volumes of data, specialized expertise, formal methods, and computational power. The constraint increasingly lies at the interfaces where partial realities must become an actionable account of the whole. The decisive question is whether relevant knowledge can enter relationship, become judgment, remain coupled to authority, responsibility, and consequence, and guide action while the conditions surrounding the decision remain actionable.

Specialization creates this requirement. Industrial organization achieved scale by differentiating work, stabilizing roles, standardizing activity, and concentrating expertise within functions.

Differentiation increased the range and depth of reality the system could encounter. It also increased the need to integrate distinct forms of knowledge, authority, and consequence. Integration is specialization's systemic counterpart, a relationship long recognized in organization theory and in information-processing accounts of design (Galbraith, 1974; Lawrence & Lorsch, 1967).

Beneath their formal designs, organizations display dynamics associated with complex adaptive systems. People interpret norms, act on local information, respond to one another, retain experience, and generate collective patterns that exceed what was formally intended. Organizational behavior arises through continuing interaction among people, technologies, incentives, relationships, accumulated past experience, structures, and environments (de Oliveira, 2026).

The machine and organism metaphors offer contrasting ways of interpreting these dynamics. Industrial management, shaped by a mechanistic worldview, tends to treat the organization as an object that can be understood through decomposition, stabilized through standardization, and directed through centralized control. Its order is attributed primarily to design imposed from above. When outcomes diverge from expectation, the governing instinct is to correct the component, tighten the process, add control, or improve the plan.

The organism metaphor draws attention to what the mechanistic interpretation obscures. Organizational participants are differentiated and interdependent. Local action alters conditions elsewhere. Feedback changes later behavior. Experience becomes embedded in routines, relationships, technologies, and structures. Collective patterns emerge through interaction and cannot be understood by adding together the performance of separate parts. Coherence must therefore arise not only from formal design, but continuously within the system through the relationships among information, judgment, authority, responsibility, and consequence.

This distinction does not make linear methods obsolete. Linear reasoning and systemic reasoning describe different relationships between organizations and the reality they inhabit. LINEAR REASONING interprets and guides action through bounded, sequential relationships, treating the organization as separate from an environment it observes, interprets, and acts within. It remains indispensable where the structure of consequence is sufficiently stable, repeatable, and traceable, particularly where safety, reliability, regulatory requirements, or irreversible consequences require variation to be constrained and defined conditions to be preserved.

SYSTEMIC REASONING interprets and guides action through patterns of interdependence, feedback, and emergence across time and scale, recognizing that organizational action continually contributes to shaping the conditions under which subsequent judgment and action occur. It becomes necessary where no individual, function, or level of management encounters the whole; where consequences cannot be understood within the boundaries of individual decisions or functions because they arise through their interaction; and where organizational performance increasingly depends on how distributed knowledge becomes coordinated judgment rather than on improving the quality of decisions within individual parts of the enterprise. The relevant distinction is therefore not between

mechanistic and organismic interpretations of organizations, nor between an obsolete and a superior mode of management, but between different structures of consequence. Effective judgment depends on recognizing which structure of consequence the situation presents, and therefore which mode of reasoning it requires.

Under earlier industrial conditions, linear reasoning and centralized coordination were often well matched to the environments organizations encountered. Information moved more slowly, many consequences were delayed or locally contained, and centralized structures frequently retained enough time to gather knowledge, deliberate, and direct a response. Their limitations became more consequential as those conditions changed. Contemporary organizations inhabit a different operating regime. Global networks connect decisions across companies, technologies, jurisdictions, markets, communities, and ecosystems. Digital infrastructure allows signals and commitments to propagate continuously. Automation compresses the interval between interpretation and execution. Feedback closes more rapidly, and local interventions travel farther before established processes have integrated their implications.

Organizations often respond to increasing complexity by attempting to restore the conditions under which linear coordination previously remained effective. Additional procedures, approvals, reporting requirements, specialization, standardization, and performance measures may improve coordination under some conditions. Under others, they attempt to preserve centralized intelligibility by suppressing the very variation, local judgment, feedback, and distributed intelligence through which complex systems remain capable of adapting. Like ecological interventions that eliminate natural disturbance only to increase the severity of future collapse, organizational interventions can create an appearance of greater order while progressively weakening the relationships through which the enterprise remains intelligently related to changing reality.

The resulting constraint is temporal as well as cognitive. Before the system completes one cycle of recognition, judgment, and action, the conditions it is attempting to govern may already have reorganized around the change. More information becomes available while the time available to integrate it contracts. At the individual level, this compression is experienced as overload, fragmentation, and loss of orientation. The challenge is not simply that people have too much to do, but that they must act while relevant information remains incomplete, consequences continue to propagate, and the conditions surrounding the decision are still changing. What appears individually as cognitive strain is therefore often a systemic condition: the organization is asking human judgment to integrate complexity faster than its structures allow.

This operating regime exposes the structural limit of the leader as the central intelligence of the organization. No executive can personally receive every material signal, understand every specialized context, anticipate every interaction, and direct every affected part in time. The relevant knowledge is distributed because organizational reality is encountered from many locations and through different

forms of expertise. Formal authority may hold a wider field of responsibility, but it does not contain every distinction required for judgment.

Yet organizations continue to place extraordinary weight on the individual leader. When performance falters, attention frequently returns to the person at the top: whether the organization needs a more decisive, participative, transformational, or empowering executive. None of these approaches resolves the structural insufficiency of locating the organization's integrative intelligence primarily in the individual leader. The deeper question is not simply which leadership style is best suited to increasing complexity, but whether any individual leader can provide the integrative intelligence that complexity now demands. Individual leadership remains consequential, but it is no longer sufficient as the primary architecture through which an organization perceives, judges, and coordinates action.

Crucially, the limits of centralized cognition do not make hierarchy obsolete. Distributed intelligence does not automatically become coordinated system-wide action. Because the organization's regulatory architecture is ultimately authorized at the top, those holding integrative authority remain responsible for recognizing when centralized decision-making has reached its limits and for legitimating the conditions under which judgment can remain distributed and coupled to consequence. Without such recognition, decision-making is repeatedly drawn back to the center, local judgment is overridden by familiar procedures, and signals requiring structural adaptation are reinterpreted as imprudence, misalignment, or loss of discipline.

The problem therefore extends beyond leadership style. It concerns the architecture through which leadership itself becomes possible under conditions of distributed knowledge and increasing complexity. The present framework returns to this problem after introducing Adaptive Capacity. In earlier work, I defined LEADERSHIP AS A SYSTEM PROPERTY as the emergent capacity of an organization to convert distributed judgment into coherent action over time toward shared direction. It exists when information, judgment, authority, responsibility, and consequence remain sufficiently coupled as action propagates across roles, levels, and time (de Oliveira, 2026).

Adaptive Capacity and Leadership as a System Property describe different but complementary features of organizational functioning. Leadership as a System Property concerns how distributed judgment becomes coherent collective action. Adaptive Capacity concerns whether the larger system can repeatedly remain intelligently related to changing reality as it recognizes material change, integrates differentiated knowledge, coordinates responsible action, and learns through consequence. The constructs therefore intersect, but neither should be treated as a substitute for the other.

The shift is therefore not merely a redistribution of where leadership occurs, but a change in the architecture through which leadership is constituted. Within this architecture, individuals continue to lead and positional authority remains consequential, but neither serves as the sole intelligence of the system. Accountability remains proportionate to the reach and irreversibility of action, while participating agents must be able to carry responsibility within action rather than defer it entirely to hierarchy or procedure. Executive authority assumes an increasingly regulatory and integrative

function: maintaining the conditions under which distributed judgment remains reliable, resolving consequential trade-offs that cannot be resolved elsewhere, and intervening when ambiguity, drift, or delay prevents the system from converging in time.

Artificial intelligence intensifies this requirement. AI can detect patterns, preserve knowledge, trace dependencies, compare scenarios, and generate possible responses at unprecedented scale. In this sense, it dramatically expands the organization's capacity for computation and awareness: its ability to register conditions, distinguish signals, and make relationships visible across domains. Yet awareness is not consciousness. Important knowledge remains contextual, tacit, emerging, or contested, and system-wide judgment still requires people to determine which distinctions matter, interpret conflicting accounts, evaluate consequences across time and scale, determine where authority must reside, and bear responsibility for trade-offs. AI can strengthen the informational and analytical processes through which judgment is formed, but it cannot experience consequence as consequential. The integrative function through which information acquires meaning, obligation, and responsibility remains deeply human.

The central management question is therefore not simply whether the organization can become more informed or analytically powerful, but whether it can remain in effective relationship with the complex reality it inhabits. Material change must reach attention while it remains actionable. Distributed knowledge must become organizational judgment without erasing legitimate differences. Judgment must remain coupled to authority, responsibility, and consequence. Experience must alter the relationships through which the organization encounters what comes next.

Adaptive Capacity names that possibility.

Adaptive Capacity: Concept and Lineage

ADAPTIVE CAPACITY is the emergent system property expressed in the ability of a complex social system to remain intelligently related to changing reality while preserving systemic coherence.

It becomes evident when material change enters attention while response remains possible, distributed signals and perspectives become situated judgment and coordinated action, and what action reveals changes how the system responds in the future. These functions may occur in different parts of the system, but they must compose as conditions unfold.

The capacity belongs to the system as a whole. No individual, function, process, or technology possesses it independently. Knowledge is distributed, conditions are encountered locally, and consequences propagate within and beyond formal boundaries. A system may therefore perceive change in one location, understand its significance in another, and possess the means to respond elsewhere while remaining unable to bring these elements together in time. Adaptive Capacity

emerges from the relationships through which differentiated contributions become a systemic response.

Because complex social systems are enacted through conscious agents, these relationships cannot be explained by structure and process alone. Their deeper human foundation is autonomy. Autonomy does not mean independence, self-direction, or freedom from constraint. It is the conscious capacity to participate in an intelligent order larger than the self by apprehending, aligning with, and expressing that order through responsible action. Within an organization or other social system, it is expressed through internalized regulatory responsibility: the capacity to remain answerable to what is apprehended as binding while exercising judgment within the multiple orders in which action is situated.

Organizational participation places autonomous judgment within nested fields of obligation and consequence. Participants remain answerable to a moral order that exceeds the organization while also participating in the organizational order expressed through Gravity, the technical and professional responsibilities associated with role and expertise, and the immediate conditions encountered in action. These demands enter judgment together. Autonomy is expressed in the capacity to hold them in relationship, discern what the situation requires, and act responsibly without transferring the burden of judgment entirely to hierarchy, procedure, convention, or personal preference.

At the organizational level, Integrative Capacity addresses a different problem: how the judgments, signals, perspectives, and consequences distributed among autonomous participants become related at the level of the whole. It is the organization's cognitively grounded capacity to bring these differentiated contributions into relationship so that locally situated judgment can compose into judgment adequate to the whole and coordinated action. Integration does not require every signal to travel upward for synthesis by a senior leader, nor does it create the autonomy on which distributed judgment depends. It provides the relational capacity through which autonomous participation can become intelligible and consequential across the system.

GRAVITY gives this distributed integration shared orientation. It provides enough common identity, direction, and meaning for participants to act on what is sufficiently clear without waiting for continuous instruction from above. Questions and distinctions that cannot be resolved within the system's current Gravity move upward or across the system selectively, reaching those with the perspective, authority, or responsibility needed to integrate them. Leadership can therefore distribute without dissolving into disconnected local action.

None of these conditions is sufficient independently. A system composed of highly developed autonomous individuals may still lack Adaptive Capacity if their judgments are not oriented by a sufficiently shared Gravity or cannot be integrated across the whole. Conversely, an organization may possess exceptional clarity of purpose, strategy, roles, and expectations while remaining dependent

on procedural compliance if participants do not exercise autonomous judgment at sufficient developmental depth.

Psychological Safety illustrates the same configurational limit. Conditions that allow people to speak, dissent, question, admit uncertainty, and surface weak signals can improve a system's prospects for adaptation (Edmondson, 1999). Voice alone, however, does not produce a systemic response. What is expressed must still enter judgment, integration, shared orientation, coordinated action, and retained learning. Adaptive Capacity therefore depends not on any single favorable condition, but on the configuration through which these distinct capacities operate together.

As the system senses, judges, coordinates, learns, and evolves through this configuration, Adaptive Capacity emerges and strengthens as a property of the whole. It is expressed in the system's ability to adapt without fragmenting responsibility or losing contact with the consequences of its actions. Sustained over time, this capacity preserves Structural Integrity by keeping information, authority, judgment, responsibility, action, and consequence sufficiently coupled as conditions and forms of coordination change.

Adaptive Capacity can therefore be understood as a configurational meta-capability of complex social systems. It is emergent because it arises through relationships among differentiated elements. It is configurational because the same resources, structures, and practices produce different effects depending on how they are connected. It is a meta-capability because its quality is revealed in how the system combines, redirects, and renews its other capabilities as conditions change.

This distinguishes Adaptive Capacity from an adaptive response. An adaptive response is an adjustment made under changing conditions. It may succeed through exceptional intervention, excess resources, luck, or favorable circumstances. Adaptive Capacity is evident when effective responses recur across different conditions, become less dependent on exceptional intervention, strengthen the system's ability to meet what comes next, and preserve the Structural Integrity required for continued adaptation.

The framework developed here operationalizes the conceptual architecture first articulated in *Conscious Leadership: Structural Integrity for the Network Age*. The book established how leadership can distribute across a complex social system without fragmenting responsibility. This paper focuses specifically on the capacity through which such a system remains intelligently related to changing reality while preserving systemic coherence, isolating and developing it here as a distinct construct: Adaptive Capacity. It introduces and develops elements of the broader architecture only to the extent required by the present argument. This formulation preceded the author's encounter with the earlier organizational adaptive-capacity literature discussed below (de Oliveira, 2026).

Subsequent review revealed an earlier and directly relevant organizational lineage. Staber and Sydow distinguished adaptation to existing conditions from the capacity to cope with unknown future circumstances. They identified *multiplexity*, *redundancy*, and *loose coupling* as structural properties that

can support adaptive capacity and used *institutional reflexivity* to explain how those properties are interpreted, legitimized, governed, reproduced, and changed (Staber & Sydow, 2002).

Their analysis also exposed the tensions within each property. *Multiplexity* can broaden access to knowledge while increasing ambiguity and distortion. Redundancy can preserve options while consuming resources. Loose coupling can support local variation while weakening coordination. None produces adaptive capacity automatically. Its contribution depends on how organizational actors interpret, regulate, and use it.

This convergence is significant. It situates the present framework within a prior organizational lineage and reinforces one of its central claims: no structural attribute or managerial practice produces adaptiveness independently. Its contribution depends on the configuration in which it operates and on the system's ability to interpret, regulate, and revise that configuration.

Complexity Leadership Theory approaches a closely related question. It argues that leadership can emerge through interactions within complex adaptive systems rather than residing exclusively in formal authority (Uhl-Bien, Marion, & McKelvey, 2007; Uhl-Bien & Arena, 2018). The present framework is compatible with that perspective but addresses a different explanatory problem. Rather than explaining how adaptive leadership emerges, it examines the conditions through which distributed signals, perspectives, and judgments become legitimate coordinated action across the organization.

Leadership may emerge through interaction, but Adaptive Capacity depends on whether those interactions remain sufficiently coupled to authority, responsibility, consequence, and shared orientation to produce coherent systemic functioning. Integrative Capacity explains the specifically cognitive process through which differentiated knowledge becomes organizational judgment, while Gravity explains how that judgment remains oriented toward the whole. The framework therefore complements Complexity Leadership Theory by focusing less on the emergence of leadership itself than on the organizational conditions through which distributed intelligence becomes responsible systemic action. The Nokia case developed later makes the distinction concrete: situated knowledge and informal leadership may emerge while Adaptive Capacity remains constrained because fear-shaped and authority-shaped boundaries prevent those judgments from becoming legitimate coordinated action.

Related research approaches the problem from other directions. Research on *dynamic capabilities* examines how firms sense opportunities and threats, seize opportunities, and reconfigure resources and competencies (Teece, 2007). Wang and Ahmed identify *adaptive capability*, *absorptive capability*, and *innovative capability* as common components of dynamic capability (Wang & Ahmed, 2007). Research on *organizational resilience* examines anticipation, coping, and adaptation in relation to adversity, while *social-ecological resilience* extends the concept to persistence, adaptation, and transformation (Duchek, 2020; Wieland & Durach, 2021). *Organizational capacity for change* focuses on the multidimensional capacity to prepare for and enact deliberate change (Judge, 2012).

The present contribution does not claim that sensing, learning, resilience, flexibility, innovation, or reconfiguration have been overlooked. Each has a substantial theoretical lineage. The unresolved problem is how these capabilities compose at the level of the whole. A complex social system may possess each of them and still remain unable to adapt systemically.

The framework locates the central constraint not necessarily within any single capability, but in the relationships through which distributed signals, perspectives, and consequences become situated judgment, coordinated action, and retained learning. It explains those relationships through three functional clusters derived from complex adaptive systems and identifies Integrative Capacity as the cognitively grounded organizational capacity through which differentiated judgment among autonomous participants becomes systemic. Gravity provides the shared orientation through which distributed judgment and action remain related to the whole. Adaptive Capacity emerges as these elements function together and, when sustained, preserves Structural Integrity through change. The framework translates this architecture into a practical diagnostic method for locating where systemic response becomes slow, fragmented, or dependent on exceptional effort.

The Living Architecture of Adaptive Capacity

Complex adaptive systems remain viable through interacting dynamics of movement, structure, and evolution. This framework organizes their application to complex social systems into three functional dimensions. The dimensions operate simultaneously and should not be understood as stages, maturity levels, organizational types, or separable subsystems (de Oliveira, 2026).

The MECHANICS OF MOVEMENT explain how action and consequence propagate through a system. *Nonlinearity* means that the same intervention can produce different effects depending on its timing, location, and surrounding conditions. *Interdependence* allows local action to alter conditions elsewhere, while *feedback* returns those effects to the system. *Dynamic balance* describes the continuous adjustment through which stability and change remain in relationship.

The MECHANICS OF STRUCTURE explain how interaction acquires durable form. *Constraints and boundaries* channel activity, determine what can connect, and help preserve identity. *Self-organization* allows recurring local coordination to stabilize into patterns. *Holarchy* describes how relatively whole units remain nested within larger wholes across teams, functions, organizations, networks, institutions, and wider ecosystems. Formal structures participate in this process, as do routines, technologies, incentives, relationships, and informal authority.

The DYNAMICS OF EVOLUTION explain how a system remains viable through time. *Openness* maintains exchange with the environment. *Diversity and heterogeneity* expand the distinctions and possible responses available to the system. Autonomy enables participants to apprehend an order larger than their immediate interests, align with it, and carry regulatory responsibility within situated action. Together, these properties support variation, selection, retention, and renewal as conditions change.

These evolutionary dynamics should not be interpreted as calls for maximizing openness, autonomy, or diversity. Adaptive systems remain viable through selective permeability rather than unrestricted exchange. Biological membranes, for example, preserve viability not by maximizing exchange with their environment, but by regulating what enters, what leaves, and what is retained. Likewise, adaptive organizations depend on boundaries that selectively determine which information, perspectives, and potential responses become consequential for collective judgment while filtering distinctions that need not shape coordinated action.

Applying these dynamics to complex social systems introduces a constitutive difference. Such systems act through conscious participants who interpret, judge, justify, defer, and bear responsibility. A biological system need not deliberate about the meaning or legitimacy of its response. Human participants do, and their accounts of reality may be partial, divergent, or suppressed.

Integrative Capacity is a complex social system's cognitively grounded, practiced ability to bring differentiated signals, perspectives, assumptions, and consequences into relationship so that participants can form judgment and coordinate action adequate to emerging conditions (de Oliveira, 2026). It is presented as a fourth practical dimension, although it is not a fourth CAS-derived cluster. It is the specifically human capacity through which the other dynamics become intelligible and consequential within responsible action.

Integrative Capacity depends upon, but is not reducible to, individual cognitive development. Cognitive development concerns the capacity of individuals to differentiate perspectives, examine assumptions, hold tensions, revise existing frames of interpretation, and carry responsibility within action. Integrative Capacity concerns the organizational conditions through which those differentiated capacities become collective judgment and coordinated action.

A growing body of constructive-developmental research beginning with Rooke and Torbert (1998) associates later developmental stages in leaders with greater capacity to lead organizational transformation and navigate complex environments (Rooke & Torbert, 2005; Herdman-Barker & Torbert, 2011). Although this literature remains relatively limited and primarily reflects one developmental tradition, it supports the proposition that individual developmental capacity has organizational consequences. The present framework asks a different question: under what organizational conditions do those capacities become collective judgment and coordinated action?

Kegan's (1994) subject-object relationship provides a useful developmental foundation for understanding this distinction. What remains *subject* organizes perception from within: assumptions, identities, loyalties, established causal models, and interpretive frameworks through which reality is understood without themselves becoming available for examination. What becomes *object* can be observed, questioned, related to other perspectives, and revised. Development therefore increases the capacity to remain in relationship with complexity without immediately reducing it to existing assumptions. The significance of this distinction is not simply psychological. It determines whether contradictory information can transform judgment or must instead be assimilated into existing

interpretations. As organizational complexity becomes increasingly consequential, the ability of participants—particularly those exercising integrative authority—to hold their own interpretations as objects of reflection rather than unquestioned grounds of judgment becomes increasingly important.

Organizations do not themselves undergo subject-object development in Kegan's sense. Rather, they depend upon participants whose developmental capacities influence whether differentiated perspectives become collective judgment. Relevant distinctions therefore cannot simply be accumulated; they must remain in relationship long enough to modify one another and, where necessary, the assumptions through which collective judgment is formed. Organizational conditions determine whether differentiated individual capacities become consequential beyond the individual. Attention, translation, voice, decision forums, authority, organizational memory, and the legitimate return of consequence determine whether differentiated perspectives modify collective judgment or remain isolated within individuals. These conditions determine whether greater informational variety expands organizational intelligence or merely increases noise, conflict, and cognitive load.

Power makes this process asymmetric. People with greater authority can widen or narrow the distinctions the system is permitted to recognize. They can determine which accounts receive legitimacy, force premature closure, or protect the conditions through which inconvenient consequences return. Consequently, leaders may actively encourage participation while remaining unable to integrate what challenges the assumptions through which they understand the situation. Conversely, highly integrative individuals with little authority may improve local understanding without changing system-wide judgment. Integrative Capacity is therefore power-weighted and structurally mediated.

Strong structures can partially buffer the effects of limited Integrative Capacity among senior leaders by formalizing dissent, distributing decision rights, preserving evidence, and requiring cross-domain review. They cannot eliminate the influence of those who control resources, legitimacy, and the survival of those structures. Even developmentally advanced executives cannot ensure high organizational Integrative Capacity when hierarchy, incentives, identity protection, or political calculation prevent distributed knowledge from changing judgment and action. The relevant question is not how developed leaders appear individually, but whether necessary distinctions can become consequential within the organization.

Supporting collective integration

Organizations need not wait until every participant possesses an advanced individual developmental capacity before integrative collective judgment becomes possible. They can create developmental scaffolding that helps people perform cognitive work they may not reliably sustain alone. Such scaffolding can make assumptions visible, preserve consequential dissent, bring specialized accounts into contact, examine governing frames, trace effects across boundaries, and return consequence to future judgment.

Scaffolding does not manufacture maturity or allow structure to perform the work of consciousness. It supports and stabilizes integrative practice while remaining dependent on the people who inhabit and govern it. Concentrated power, identity protection, incentives, and the developmental limits of those able to preserve or override the scaffold remain consequential. At its best, scaffolding enables the organization to produce more integrated collective judgment than unaided interaction would reliably generate. At its worst, it hardens into procedural compliance that simulates integration without allowing distributed knowledge to change judgment or action.

Table 1 summarizes the four dimensions, the dynamics each contains, and the organizational work each performs. The distinctions are analytic: the dimensions operate interdependently, and none produces Adaptive Capacity on its own.

Table 1: The four dimensions of Adaptive Capacity.

Dimension	Constituent dynamics	Organizational work performed
Mechanics of Movement	Nonlinearity; interdependence and feedback; dynamic balance	Propagates signals, decisions, resources, actions, and consequences across boundaries; makes timing, interaction, and feedback visible
Mechanics of Structure	Constraints and boundaries; self-organization and holarchy	Gives interaction durable form through roles, interfaces, decision rights, technologies, routines, relationships, and nested units
Dynamics of Evolution	Openness; autonomy; diversity and heterogeneity	Maintains environmental contact, response variety, responsible situated action, experimentation, retention, and renewal
Integrative Capacity	Differentiation held in relationship; judgment adequate to the whole; responsibility for consequence	Brings differentiated signals, perspectives, assumptions, and consequences into judgment and coordinated action adequate to changing conditions.

People have good ideas all the time. But what makes them “right”? Gravity provides the orienting relationship through which the organization determines which distinctions become governing for collective judgment. Organizations continuously encounter more legitimate possibilities, perspectives, improvements, and local opportunities than they can simultaneously pursue. Integrative Capacity allows these distinctions to enter relationship. Gravity determines which of them become governing by relating them to the larger purpose, direction, and strategic intent of the enterprise.

This selective function is essential because Adaptive Capacity does not depend on maximizing the range of possible organizational responses. Adaptive systems require sufficient diversity of responses to remain intelligently related to changing conditions, not that every signal, perspective, or possible response receive equal organizational attention. Without selective reduction, additional information

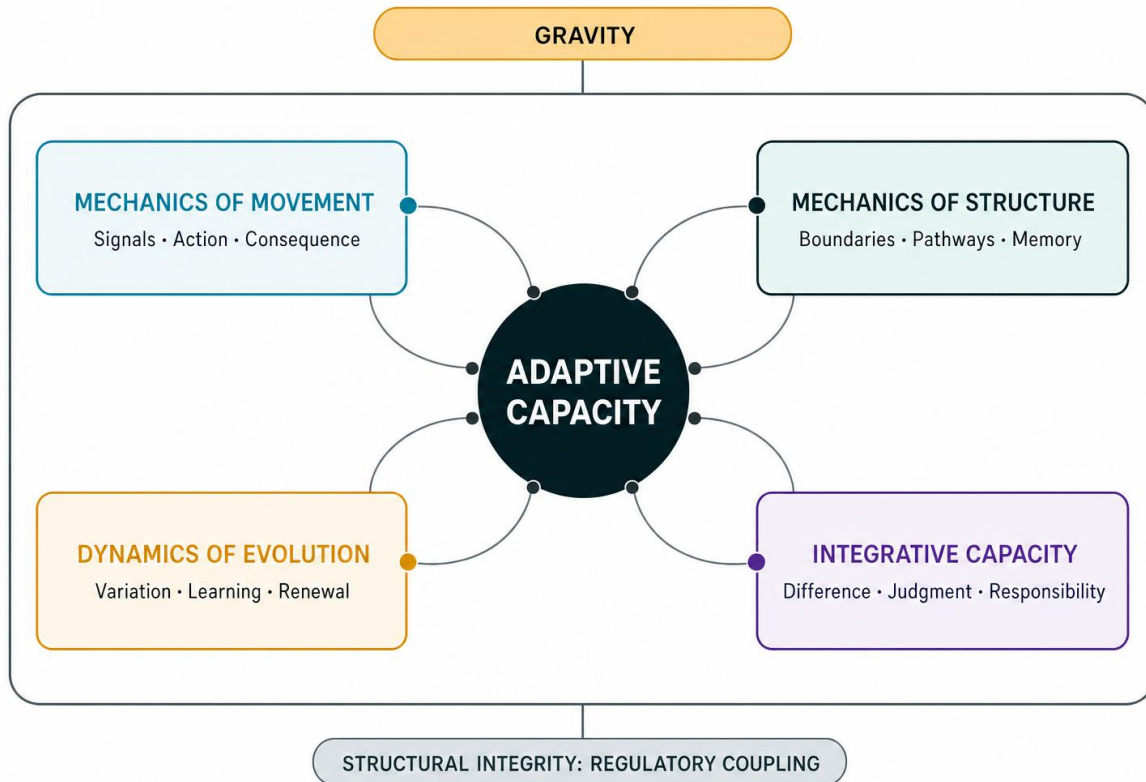
eventually becomes cognitive burden rather than adaptive advantage. By orienting judgment toward a strategically desirable cause or outcome, Gravity preserves the distinctions necessary for intelligent response while reducing the demands placed on Integrative Capacity.

Gravity therefore does not eliminate differentiation, nor does it require agreement or make every perspective equally governing. It enables locally valid distinctions to be held together, evaluated against wider consequence, and coordinated without continual dependence on centralized translation because participants increasingly inhabit a shared orientation rather than merely comply with centrally issued decisions. Situated judgment becomes progressively more autonomous, not because constraints disappear, but because participants become better able to determine what serves the whole from within the situation itself.

The more fully participants inhabit strategic intent, the more autonomous judgment converges on coherent action without requiring central direction. The organization can therefore exercise greater local discretion while simultaneously reducing fragmentation because participants increasingly distinguish between locally attractive actions and those that best serve the whole. Gravity does not simply align organizational action. It allows strategic intent to become progressively inhabited by the system itself, so that situated judgment increasingly expresses the governance of the whole.

Structural Integrity is the load-bearing condition maintained when that systemic functioning endures through change. It exists when information, authority, judgment, responsibility, action, and consequence remain sufficiently coupled across time and scale. When the three CAS-derived dimensions and Integrative Capacity function together under Gravity, Adaptive Capacity emerges. Sustained over time, this capacity maintains Structural Integrity as the system adapts and evolves (de Oliveira, 2026). Figure 1 summarizes this architecture.

The four dimensions are interdependent but not interchangeable. Movement propagates information, action, and consequence. Structure gives interaction durable pathways, boundaries, authority, and memory. Evolution maintains environmental contact and renews the system's response repertoire. Integrative Capacity allows differentiated human knowledge to become judgment and coordinated action through organizational conditions that transform individual developmental capacities into collective intelligence. Gravity orients their combined functioning toward the whole. Each dimension performs work the others cannot perform independently. Their configured functioning gives rise to Adaptive Capacity, but does not guarantee favorable outcomes.

Figure 1: The living architecture of Adaptive Capacity.

Movement propagates signals, action, and consequence; Structure gives interaction durable form; Evolution renews the system's response possibilities; and Integrative Capacity brings distributed signals, perspectives, and consequences into judgment and coordinated action. Under Gravity, the four dimensions function as a systemic whole, giving rise to Adaptive Capacity. Sustained over time, Adaptive Capacity maintains Structural Integrity as conditions change.

Foundational Principles of Adaptive Capacity

The architecture can be condensed into four foundational principles. Together, they state what Adaptive Capacity requires, how it emerges, where it becomes constrained, and what constitutes evidence of its presence. They are not stages or prescriptions, but relational claims about the conditions under which adaptation becomes a recurring property of the system.

PRINCIPLE 1: Irreducible systemic requirements

A complex social system must be able to carry information, action, and consequence across boundaries; provide durable structures through which interaction is organized; generate, select, and retain variation over time; and bring differentiated human knowledge into judgment and coordinated action adequate to the whole. These requirements correspond to the Mechanics of Movement, the Mechanics of Structure, the Dynamics of Evolution, and Integrative Capacity.

PRINCIPLE 2: Configurational emergence

The dimensions are necessary but not independently sufficient. Movement without adequate structure produces circulation without dependable coordination. Structure without movement produces order that loses contact with consequence. Evolution without Integrative Capacity generates variation that cannot reliably become responsible systemic adaptation. Integrative work without pathways, authority, or retained learning cannot become system-wide action or alter future response. Adaptive Capacity therefore arises from configuration rather than from the isolated strength of any dimension.

PRINCIPLE 3: Binding relationships

Adaptive Capacity is constrained by the relationship least able to carry the adaptive demand within a defined domain and time horizon. This binding relationship is not necessarily the system's weakest attribute in general. It is the coupling that most limits movement from the recognition of material change to judgment, action, consequence, and retained learning under the conditions being examined. Strength elsewhere may compensate temporarily through slack, redundancy, exceptional intervention, or informal networks. Recurring dependence on such compensation indicates fragile underlying capacity.

Identifying the binding relationship is itself an act of integration rather than a mechanical diagnostic procedure. The principle guides disciplined comparative interpretation rather than mechanical prediction: identifying the binding relationship requires evidence, rival explanations, and judgment about the adaptive demand being examined.

PRINCIPLE 4: Recurring manifestation

Adaptive Capacity is evidenced by recurring adaptation adequate to changing conditions, rather than by isolated success. Favorable outcomes may result from luck, slack resources, executive heroics, or unusually benign conditions. Stronger evidence appears when the system repeatedly recognizes material change while response remains possible, forms judgment adequate to the conditions, acts across boundaries, and learns through consequence while reducing dependence on exceptional intervention and maintaining Structural Integrity.

These principles do not claim that the four dimensions exhaust every contextual influence or guarantee successful outcomes. Environmental limits, irreversible conditions, resource scarcity, and chance remain consequential. They specify the minimum systemic requirements and relational tests through which the proposed construct can be examined.

No systemic function belongs exclusively to one dimension. Feedback, for example, belongs to the Mechanics of Movement because it returns consequence to the system. It supports Integrative Capacity when participants can interpret that consequence together. It becomes evolutionary when the resulting judgment changes future capability, structure, or action. The same relationship performs different systemic work depending on what the system can do with it.

This architecture also explains why initiatives composed of sensible elements can produce weak results. More data may expand awareness while overwhelming collective judgment. Greater local discretion may increase responsiveness while fragmenting collective direction when Gravity is weak or responsibility for the whole has not been internalized. Stronger governance may clarify authority while slowing feedback and suppressing necessary variation. Additional redundancy may preserve options while increasing cost and ambiguity. Every intervention changes a configuration. Its contribution depends not only on what it adds or removes, but on how it alters the relationships through which the system encounters consequence, forms judgment, and adapts through time.

From Distributed Intelligence to Systemic Functioning

Organizational cognition without a central mind

Describing an organization as intelligent does not require personalizing it. Organizational cognition occurs through the patterned interaction of people, business artifacts, routines, technologies, language, and authority. It becomes visible when those interactions allow the system to notice, interpret, remember, judge, and respond in ways that no participant could accomplish alone.

Research on *distributed cognition* strengthens this account. From this perspective, cognition is not treated as contained within an individual mind; it is analyzed as distributed across participants, representations, artifacts, and coordinated activity through time. Dashboards, classifications, procedures, models, and technologies therefore do not merely communicate thought completed elsewhere. They can participate in the cognitive work through which an organization notices, retains, compares, and acts upon information. The relevant unit of analysis is the relational system through which these contributions are functionally coordinated and become consequential (Hutchins, 1995; Hollan, Hutchins, & Kirsh, 2000).

This view is consistent with research that treats organizational intelligence as an emergent property of structuration rather than an aggregate of individual intelligence. It also extends established accounts of organizations as interpretation systems and of collective mind as heedful interrelation among distributed contributions (Akgün et al., 2007; Daft & Weick, 1984; Weick & Roberts, 1993). Intelligence does not reside in any single participant or artifact. It depends on the quality and continuity of the relationships through which their contributions become systemic.

Ashby's *Law of Requisite Variety* supplies a necessary cybernetic condition: effective regulation requires a response repertoire adequate to the variety of relevant conditions (Ashby, 1956). Organizations often answer this requirement by adding specialists, data, technologies, options, or distributed decision rights. These resources expand potential variety. They increase regulatory capacity only when material distinctions can reach judgment, guide coordinated action, and return as learning. Adaptive Capacity therefore depends on usable variety: differentiation must be preserved without overwhelming the relationships through which the system acts as a whole.

Conant and Ashby's *Good Regulator theorem* adds a related cybernetic implication: effective regulation depends on a model adequate to the system being regulated (Conant & Ashby, 1970). In a complex organization, that model cannot reside completely in any leader, plan, or information system. It is distributed across situated knowledge, operating assumptions, representations, relationships, and accumulated experience. Integrative Capacity provides the means through which these partial models can correct one another and compose into judgment and coordinated action before changing conditions make that judgment obsolete.

This does not require every participant to possess an equivalent understanding of the whole. It requires the organization to preserve distinctions relevant to consequence, connect them to appropriate authority and responsibility, and allow unresolved matters to reach those able to integrate them. Systemic intelligence is not universal participation in every decision. It is the selective composition of distributed knowledge at the level required by the consequences of action.

Artificial intelligence can expand the variety available to organizational cognition through signal detection, memory, dependency tracing, scenario comparison, and access to specialized knowledge. Its contribution depends on whether those additional distinctions can enter legitimate human judgment and remain connected to uncertainty, responsibility, and consequence. AI can process signals and generate alternatives, but it does not bear consequence or internalize responsibility in the developmental sense required of conscious participants. Where Integrative Capacity is weak, AI may increase cognitive load and accelerate fragmentation. Where the relational architecture is strong, it can extend the range and speed of responsible response.

Why Adaptive Capacity is configurational

Adaptive Capacity is configurational rather than additive. Practices, resources, technologies, and structural attributes acquire adaptive value through their relationships. A portfolio of individually credible initiatives can leave the system constrained if those initiatives do not meet where recognition must become judgment, judgment must become coordinated action, and consequence must alter future response.

The four dimensions are irreducible not because they operate separately, but because each performs systemic work that the others cannot perform in its absence. Their boundaries are analytic; their functioning is interdependent. A dimension belongs in the architecture only if it performs systemic work required for adaptation that none of the other dimensions can perform.

Table 2: The irreducible dimensions of Adaptive Capacity.

Dimension	Necessary systemic work	Constraint when insufficient	Why the other dimensions cannot substitute
Mechanics of Movement	Propagates signals, commitments, resources, action, feedback, and consequence across boundaries	Knowledge remains local, action arrives late, and consequence fails to return to those whose judgment must change	The system cannot integrate, organize, or learn from what cannot move
Mechanics of Structure	Gives interaction durable pathways, boundaries, responsibility, and memory	Coordination depends on personal influence, informal workarounds, or exceptional intervention; commitments collide or remain unowned	Movement, integration, and variation cannot retain dependable form by themselves
Dynamics of Evolution	Generates, selects, and retains variation while renewing the system's response repertoire	The system repeats established responses, absorbs novelty into existing routines, and reproduces constraints created by previous success	The other dimensions can improve present response but cannot renew what the system will be capable of next
Integrative Capacity	Brings differentiated signals, perspectives, assumptions, and consequences into relationship so that participants can form judgment and coordinate timely response to changing conditions	Information and participation increase, but trade-offs remain unresolved, disappear into procedure, or return repeatedly to hierarchy	The other dimensions can carry, organize, and vary information, but cannot determine its meaning and consequence for responsible systemic action

The irreducibility of these dimensions does not arise from an analytic preference. The first three express recurrent requirements of complex adaptive systems across scale: effects must propagate, interaction must acquire form, and variation must be generated, selected, and retained. These dynamics are visible throughout living nature because they constitute the means through which complex systems remain viable without central control. In complex social systems, however, they operate through conscious agents who interpret conditions, choose among possibilities, and bear responsibility for consequence. Integrative Capacity is therefore equally unavoidable, not as another CAS property, but as the specifically human requirement through which natural adaptive dynamics become judgment and coordinated action.

Gravity and Structural Integrity occupy different positions in this architecture. Gravity provides the shared orientation through which the four dimensions function as a systemic whole. It gives situated participants a common basis for judgment while allowing unresolved distinctions to move selectively across or upward through the system. Structural Integrity is the load-bearing condition maintained when information, authority, judgment, responsibility, action, and consequence remain sufficiently

coupled through change. When the four dimensions function coherently under Gravity, Adaptive Capacity emerges. Sustained over time, Adaptive Capacity maintains Structural Integrity as the system adapts and evolves.

The absence of Integrative Capacity produces a particularly important failure. The organization does not become structureless or inactive. It falls back on stored rules, precedent, centralized arbitration, and familiar categories of performance. It may alternate between tighter managerial control and broader participation without allowing distributed judgment to change coordinated action. Participation may increase, but the system remains dependent on established memory or senior authority to perform the work of integration.

This explains why familiar organizational investments produce inconsistent results. A real-time control tower can expose changing conditions quickly yet add little if ownership of the resulting decision is ambiguous. Cross-functional teams can assemble expertise yet remain performative if participants cannot commit resources or alter priorities. Distributed decision rights can improve situated response yet create incompatible commitments when Gravity, shared constraints, and escalation paths are weak. Standard processes can preserve reliability yet reduce response variety when exceptions cannot be surfaced and governed. Each practice strengthens particular possibilities while placing new demands on the surrounding configuration.

Staber and Sydow's (2002) analysis makes the same principle visible in structural terms. *Multiplexity* can widen access to knowledge while increasing distortion and coordination burden. Redundancy can preserve alternatives while duplicating cost and obscuring accountability. *Loose coupling* can support local experimentation while weakening timely system-wide response. None produces adaptiveness independently. The contribution of each depends on its configuration and on the system's capacity to recognize when a previously useful arrangement has become a constraint.

Competitive priorities make this configurational problem concrete. Every organization must decide which demands should govern when not all desirable outcomes can be maximized simultaneously. Speed, reliability, quality, cost, flexibility, innovation, safety, and resilience may all matter, but they do not carry equal weight under every condition. Gravity becomes operational when shared identity and direction are translated into distinctions that allow situated participants to govern among these legitimate demands.

A firm competing on delivery speed and reliability, for instance, must translate those commitments into operational relationships among lead time, inventory availability, defect rates, process capacity, supplier exposure, and recovery options. A methodology such as *Quality Function Deployment (QFD)*, using the *House of Quality* as its central matrix, can support this translation by bringing customer demands, competitive priorities, and technical characteristics into a shared field of judgment (Hauser & Clausing, 1988). Used well, such a methodology strengthens Gravity by making strategic orientation actionable across functions.

The methodology does not itself produce Adaptive Capacity. A QFD matrix may encode priorities while relying on outdated customer assumptions, excluding relevant operational knowledge, or remaining disconnected from authority and resource allocation. Its adaptive contribution depends on Movement bringing changing signals and consequences into the model, Structure connecting its distinctions to decisions and commitments, Evolution allowing priorities and capabilities to change, and Integrative Capacity enabling participants to resolve tensions and coordinate action. The same methodology can therefore strengthen systemic functioning or preserve obsolete organizational memory.

Configuration also changes as success unfolds. Senge's *limits to growth* archetype describes how a reinforcing process that initially produces growth eventually encounters a balancing condition that slows further progress (Senge, 2006). Organizations often respond by intensifying the lever responsible for their earlier success. As returns diminish, they increase investment, pressure, or control without recognizing that the binding constraint has moved elsewhere in the system. Like increasing the dosage of a medicine after the condition has changed, the familiar intervention produces progressively less benefit and may create new consequences of its own.

The constraint is cognitive as well as structural. Prior success stabilizes assumptions about what creates value, which signals matter, and where responsible action should occur. A company built through product innovation may continue adding features when its next constraint lies in commercialization. A business that grew through online commerce may intensify customer acquisition while fulfillment capacity, supplier exposure, or service reliability becomes binding. The higher-leverage response may initially appear counterintuitive because it requires the organization to recognize distinctions that its established model of success does not encode.

Natural systems respond to feedback without deliberating about what that feedback means. Complex social systems must interpret it. Participants must recognize that a familiar causal model has become incomplete, preserve signals that challenge organizational memory, and coordinate action around a different lever. Movement allows the limiting effects to return as information. Structure determines whether they can reach consequential authority. Evolution makes new capabilities and responses possible. Integrative Capacity enables the organization to revise its account of reality and coordinate action accordingly. Gravity preserves continuity of direction while allowing the means through which that direction is pursued to change.

This distinction also clarifies the relationship between Gravity and formal strategy. Gravity cannot be reduced to a declared purpose, list of values, strategic plan, or performance system. These may express or strengthen it, but only if participants can use them to exercise judgment under conditions not fully anticipated when the statements or measures were created. Gravity is operative when people can recognize what the organization's direction requires in the situation before them, act on what is sufficiently clear, and identify which distinctions require wider integration.

Within a defined adaptive domain and time horizon, the system's development is constrained by the relationship least able to carry the adaptive demand. This binding relationship is not necessarily the weakest attribute in general. It is the relationship whose condition most restricts movement from recognition to judgment, coordinated action, consequence, and retained learning under the circumstances being examined.

Strength elsewhere may compensate temporarily, and several constraints may interact or become binding at different moments. Executive intervention may reconnect information and authority. Slack may absorb delayed coordination. Informal networks may move knowledge around blocked structures. Such compensation can produce successful outcomes while leaving underlying capacity fragile. The diagnostic task is to identify the relationship whose redesign would most improve systemic response. Improving an unconstrained element may yield little benefit and can intensify pressure elsewhere. More sensing may reveal weak Integrative Capacity sooner. More local discretion may expose insufficient Gravity. Faster execution may amplify a delayed feedback loop.

This contextual character also limits practice transfer. A practice developed in one configuration carries assumptions about information quality, expertise, trust, regulatory exposure, time pressure, and available slack. Transplanting the visible practice without those conditions can produce a ritual that resembles the source while performing different systemic work.

Necessary tensions

Because the four dimensions are irreducible, Adaptive Capacity cannot be sustained by maximizing any one of them over time. Emphasizing one dimension may be necessary under particular conditions, but doing so changes the demands placed on the others. Adaptive Capacity therefore depends on governing necessary tensions rather than permanently resolving them.

Speed, local discretion, flexibility, learning, resilience, and efficiency can each contribute to adaptation. Each can also weaken the wider configuration when pursued without regard to consequence elsewhere. A tension is not necessarily a defect to eliminate. It is a relationship between legitimate demands whose viable balance depends on the adaptive domain, the consequences at stake, and the operating regime. Treating a tension as a choice to be permanently settled often transfers cost to another part of the system or to a later time.

Table 3: Necessary tensions within Adaptive Capacity.

Tension	Legitimate value on each side	Adaptive question
Local speed and integration breadth	Fast situated action; adequate view of system-wide consequence	Which decisions can remain situated, and what conditions make wider integration mandatory?
Local discretion and system integration	Initiative close to information; coordination across interdependent action	What shared constraints allow situated judgment without producing incompatible commitments?

Standardization and variety	Reliability and efficient coordination; response options under novel conditions	Where must variation be constrained, and where must it remain available?
Efficiency and slack or redundancy	Current resource performance; options and absorption capacity	Which forms of slack protect material viability, and how will their value be reviewed?
Present performance and renewal	Delivery under existing commitments; investment in future capability	How will learning become structural change before current success becomes rigidity?
Openness and integrative load	Contact with changing reality; finite capacity to interpret distinctions	Which signals are material, and how will attention be allocated without insulating the system?

These tensions are where binding relationships become visible in practice. Strong configurations do not eliminate them. They make them governable by establishing thresholds, decision rights, feedback, and review mechanisms suited to consequence. A team may act within agreed exposure limits and trigger wider integration when dependencies, uncertainty, or irreversibility cross a threshold. Standardization may govern safety-critical activity while experimentation is protected upstream. Redundancy may be concentrated around dependencies whose interruption carries disproportionate consequence.

The appropriate balance changes with conditions. A tension settled for one operating regime can become a source of rigidity in another. Reflexive governance is therefore part of Adaptive Capacity: the organization must be able to examine the constraints through which it regulates itself, including those that previously produced success.

Relationship to adjacent concepts

Adaptive Capacity overlaps with several established constructs. Clear boundaries make those literatures more useful and prevent Adaptive Capacity from becoming a synonym for every desirable organizational quality. Its distinct contribution does not rest on claiming that recognition, learning, resilience, flexibility, or reconfiguration have been overlooked. The unresolved problem is how these functions compose at the level of the whole.

Table 4: Relationship to adjacent concepts.

Concept	Primary question	Relationship to Adaptive Capacity
Agility	How quickly and responsively can the organization act?	Speed can support adaptation, but its value depends on integration, orientation, and contact with consequence

Resilience	How does the system anticipate, cope with, persist through, adapt to, or transform after adversity?	Resilience concerns viability in relation to disturbance; Adaptive Capacity addresses systemic response across opportunity, change, and adversity
Flexibility	How readily can the organization vary its actions, resources, or arrangements?	Flexibility expands possible responses; Adaptive Capacity concerns whether those options can be selected, coordinated, and retained responsibly
Decentralization	Where should decision authority reside?	Distributed authority can improve situated response, but Adaptive Capacity also requires shared orientation, integration across dependencies, and responsibility for wider consequence
Dynamic capabilities	How does the firm sense, seize, and transform to sustain strategic fit?	A close strategic relative; Adaptive Capacity foregrounds relational configuration, distributed cognition, Integrative Capacity, and Structural Integrity across strategic and operational domains
Absorptive capacity and organizational learning	How is knowledge acquired, assimilated, transformed, exploited, and retained?	Learning contributes to adaptation when it changes judgment, coordinated action, capability, or future response
Organizational capacity for change	How ready and able is the organization to prepare for and enact deliberate change?	Important for planned change; Adaptive Capacity also concerns continuous and emergent adjustment without a predefined program
Transformation	How does the organization make a substantial shift in strategy, form, or capability?	A possible adaptive response; Adaptive Capacity concerns the continuing systemic ability evidenced before, during, and after transformation

These distinctions are analytic rather than territorial. Practitioners can use resilience to examine exposure to disruption, dynamic capabilities to examine strategic renewal, absorptive capacity to examine knowledge use, and capacity for change to examine deliberate transformation. Adaptive Capacity asks whether the relationships among perception, judgment, authority, responsibility, action, consequence, and learning allow the social system to meet changing reality as a whole. Its distinctiveness lies in this relational center of explanation, not in denying the contributions of adjacent theories.

An organization may be agile while accelerating a fragmented response; resilient while repeatedly restoring a configuration that remains vulnerable; flexible while possessing options it cannot evaluate or coordinate; decentralized while producing incompatible local commitments; or highly committed to learning while allowing experience to change neither authority nor future capability. These qualities may contribute to adaptation, but none can substitute for the systemic configuration through which changing reality becomes judgment, coordinated action, consequence, and retained learning.

Adaptive Capacity therefore concerns neither the accumulation of desirable qualities nor the adoption of a particular organizational model. It concerns whether distributed intelligence can function systemically: whether changing reality can enter the organization, become judgment and coordinated action under shared orientation, return as consequence, and alter what the system can do next. The proposed conception of Adaptive Capacity can now be examined in practice.

Adaptive Capacity in Practice

Adaptive Capacity becomes visible when established routines no longer relate action adequately to changing conditions. The cases that follow are not presented as rankings of successful and unsuccessful organizations, but as examinations of specific adaptive demands within defined domains and time horizons. They ask whether material change became visible while action remained possible, whether distributed knowledge became collective judgment and coordinated action, whether authority and responsibility remained coupled, and whether consequence altered the organization's future capacity to respond.

No single event establishes the presence or absence of Adaptive Capacity. Favorable responses may result from slack resources, exceptional intervention, favorable circumstances, or chance. Conversely, a breakdown in one adaptive domain does not demonstrate that an organization lacks Adaptive Capacity more generally. Adaptive Capacity is evidenced by recurring relationships that repeatedly enable—or constrain—effective adaptation across consequential demands.

Each case therefore illuminates a different relationship within the architecture of Adaptive Capacity. Some reveal how distributed judgment became coordinated action. Others show why signals never became governing judgment, why hierarchy either supported or constrained adaptation, why shared orientation enabled autonomy without fragmentation, or why learning altered the architecture through which future conditions would be encountered. Together, they should be read less as examples of organizational success or failure than as different windows into the relational architecture through which Adaptive Capacity emerges.

Selective integration without recentralization: Buurtzorg

When COVID-19 reached the Netherlands, Buurtzorg's community nurses faced changing clinical guidance, limited knowledge, shortages of protective equipment, new risks to patients and caregivers, and the need to preserve care within people's homes. Its self-managing teams could respond locally, but local autonomy alone was insufficient to integrate rapidly changing information across a national organization.

A crisis team emerged from project employees working in infection prevention who were receiving questions from nurses across the country. The team developed fact sheets, created telephone and email channels, updated Buurtzorg's internal platform, and initially met daily to interpret emerging

guidance. Managing director Jos de Blok joined its meetings, but the team did not assume control of local care. Nursing teams continued to exercise situated judgment, adapting visits, coordinating with general practitioners and other care providers, and creating voluntary “corona routes” across neighborhoods to reduce transmission between infected and uninfected patients. Some of these routes crossed the boundaries of established teams and were organized by the nurses themselves (ten Barge et al., 2021).

The case is important because it does not present decentralization and central coordination as alternatives. The crisis team can be interpreted as strengthening Integrative Capacity by making changing knowledge available across the organization and receiving questions from practice. The teams retained authority to determine how that knowledge applied to particular patients and local conditions. Information moved upward and across the system when it required wider interpretation, while action remained close to the consequences it produced (ten Barge et al., 2021).

Buurtzorg’s response therefore illustrates selective integration. The center became more active where uncertainty exceeded the knowledge available to individual teams, but it did not absorb decisions that teams remained capable of making. In the terms developed here, Buurtzorg’s stated commitment to patient-centered care can be understood as functioning as Gravity: a shared orientation that allowed temporary integrative structures to support rather than displace autonomous action. Participants also reported that some forms of collaboration created during the pandemic continued into other work. The response did not eliminate the tension between local discretion and consistent guidance. It created relationships through which that tension could be governed (ten Barge et al., 2021).

Networked adaptation within hierarchy: Toyota

The Great East Japan Earthquake of March 2011 severely disrupted Toyota’s production network. The difficulty extended far beyond the company’s own facilities. Toyota’s investigation eventually identified damage at 659 supplier sites, including suppliers several tiers removed from the company. Procurement problems affected an estimated 1,260 items and potentially up to 80 percent of Toyota’s global vehicle production (Toyota Motor Corporation, 2012).

The response required knowledge no central group initially possessed. Purchasing and production personnel began visiting approximately 200 supplier locations. Information about damaged facilities, inventories, production constraints, and expected recovery times was integrated with expertise from engineering, production engineering, manufacturing, and suppliers. Immediate action was required for approximately 500 items. Where facilities could not be restored quickly, Toyota and its suppliers developed alternative parts, transferred production, and conducted accelerated quality assessments. Supply concerns fell from approximately 500 items in late March to 30 by May. Japanese production returned to normal operating levels in early July, followed by the near normalization of Toyota’s global production in September, earlier than initially projected (Toyota Motor Corporation, 2012).

Toyota's response was neither leaderless nor structurally flat. It combined central mobilization with distributed technical judgment across functions, organizational boundaries, and supplier tiers. Authority, expertise, resources, and responsibility were repeatedly organized around particular constraints as they became visible. The relevant system was not Toyota alone, but the wider production network through which its ability to act was constituted (Toyota Motor Corporation, 2012; Fujimoto et al., 2019).

The longer-term response is equally important. Toyota subsequently developed the RESCUE supply-chain information system with its suppliers, strengthened visibility beyond first-tier relationships, and instituted regular training for future disruptions. The system was later shared more broadly through the Japan Automobile Manufacturers Association (Toyota Motor Corporation, 2019). The response extended beyond recovery. Toyota subsequently altered the architecture through which future disruptions would be recognized and addressed (Toyota Motor Corporation, 2019; Fujimoto et al., 2019).

The case illustrates that Adaptive Capacity does not depend on eliminating hierarchy. It depends on whether formal authority can mobilize distributed knowledge without pretending to contain it. Hierarchy can support systemic functioning when it connects domains, protects the movement of consequential information, relocates judgment and action to the level where relevant knowledge resides, and retains what the system learns.

Signals with insufficient integration: Nokia

Nokia's loss of leadership during the smartphone transition is often described as a failure to recognize technological change. That interpretation is too simple. Nokia possessed substantial technical expertise, conducted extensive research, and understood that Apple and other competitors presented a serious threat. The deeper problem concerned what the organization could do with what its participants knew.

Vuori and Huy's study of Nokia's smartphone innovation process found interacting patterns of fear among senior and middle managers. Senior leaders, concerned about competitors and shareholder pressure, placed greater demands on middle managers without always communicating the full severity of the external threat. Middle managers, fearing superiors and peers, became less willing to communicate negative information about technical capabilities and development progress. Senior leaders consequently formed an excessively optimistic view of what the organization could deliver. Short-term product pressures then displaced the longer-term development on which a viable response depended (Vuori & Huy, 2016).

The organization did not lack signals. The relationships through which those signals became legitimate judgment and coordinated commitment were insufficient to support effective organizational response under the conditions described. Information flowed, but power shaped its meaning, credibility, and consequence. Pressure increased the appearance of alignment while

reducing the organization's contact with its operational reality. As negative technical and developmental information became harder to communicate upward, the accounts available to senior judgment became less adequate to the conditions Nokia needed to govern (Vuori & Huy, 2016).

The case illustrates why sensing, innovation, learning, and agility do not independently establish Adaptive Capacity. An organization can possess each of them in identifiable forms while remaining unable to integrate their implications. Integrative Capacity depends not simply on whether people perceive and speak, but on whether distinctions can survive their encounter with authority long enough to change judgment, commitments, and action. Where fear, identity, or structural position shape what reality is permitted to become consequential, intelligence remains distributed but the system may not function intelligently (Vuori & Huy, 2016).

Efficient operations without recovery capacity: Southwest Airlines

Southwest Airlines entered the 2022 holiday period with an operating system capable of performing efficiently under familiar conditions. Winter Storm Elliott then caused disruptions across a large portion of the United States. As cancellations accumulated, however, the problem changed. What began as a weather event became a network-wide recovery problem involving aircraft, flight crews, stations, schedules, customer communication, and rapidly changing operational constraints.

The volume and speed of cascading cancellations overwhelmed station operations, Southwest's Crew Network, and the tools and processes used to reconstruct the schedule. The company could no longer reliably determine where crews and aircraft were located or compose that information into timely recovery decisions. Southwest reported cancelling more than 16,700 flights between December 21 and December 31. The U.S. Department of Transportation later reported approximately 16,900 Southwest cancellations associated with the broader disruption, which extended into early January and affected more than two million passengers (Southwest Airlines Co., 2023; U.S. Department of Transportation, 2023).

Southwest's internal review concluded that cascading, close-in cancellations overwhelmed station operations, the Crew Network, and established processes and tools, hindering the creation of timely operational solutions. The Department of Transportation separately documented breakdowns in passenger notification, customer-service access, and refunds as the disruption propagated. Crew reassignment, aircraft recovery, station operations, flight information, and customer assistance became mutually constraining (Southwest Airlines Co., 2023; U.S. Department of Transportation, 2023).

Southwest illustrates how strong performance under normal variation can reveal limitations in Adaptive Capacity. A system optimized for efficiency may function well until disruption requires relationships to form that its operating architecture cannot support. When every exception enters saturated channels, additional information and effort can increase congestion rather than restore

coordination. Employees may act heroically while the system remains unable to convert their effort into an integrated response.

The company subsequently upgraded crew-reassignment technology, expanded telephone capacity, improved coordination between schedule design and network operations, and invested in tools intended to integrate aircraft and crew recovery. These changes indicate that the disruption was translated into organizational redesign. They do not, by themselves, prove that stronger Adaptive Capacity has been cultivated. That judgment requires evidence that the redesigned relationships continue to perform under different consequential demands. Corrective investment is evidence of reconfiguration. Adaptive Capacity is evidenced by what the reconfigured system can repeatedly do (Southwest Airlines Co., 2024).

Boundary illustrations: FAVI and Zappos

FAVI offers a compact illustration of Gravity supporting autonomous collective action. According to retrospective accounts of the French manufacturer's response to the 1990 Gulf War downturn, falling automotive orders left the company with insufficient work and pressure to dismiss temporary employees. Chief executive Jean-François Zobrist presented the dilemma directly to the workforce, including those whose employment was at risk. A worker proposed that everyone work and receive pay for three weeks of the month so the temporary employees could remain. The proposal was reportedly accepted unanimously in less than an hour (Laloux, 2014). The value of the example lies not in unanimity or speed as such, both of which can also reflect conformity or pressure. It lies in the reported capacity to hold economic constraint, human consequence, and responsibility for action within one shared deliberative field. Those carrying the consequences participated in forming the response. Because the available evidence consists primarily of practitioner and retrospective accounts, the case is best treated as an illustration rather than as equivalent empirical support.

Zappos provides the opposite boundary. Its adoption of *Holacracy* redistributed formal authority through explicitly defined roles and governance processes. After approximately 18 months of transition, chief executive Tony Hsieh accelerated implementation by offering severance to employees who did not wish to continue under the model. Fourteen percent of the workforce departed, including twenty percent of the technology function (Petriglieri, 2016). The case is not presented as an evaluation of Holacracy as an organizational model. It instead illustrates a narrower possibility: formal decentralization can increase structural and cognitive demands faster than an organization cultivates the capacity to inhabit them. Decision rights, roles, and governance practices can distribute authority while also increasing the work required to interpret tensions, coordinate dependencies, and carry responsibility for the whole. Formal decentralization is therefore neither evidence of Adaptive Capacity nor a substitute for Integrative Capacity (Lee & Edmondson, 2017).

Taken together, the six cases prevent the framework from collapsing into an argument for any particular organizational form. Buurtzorg shows that decentralization alone is insufficient; integration

remains necessary. Toyota shows that hierarchy alone is insufficient; distributed judgment remains necessary. Nokia shows that signals alone are insufficient; they must become legitimate organizational judgment. Southwest shows that efficiency alone is insufficient; coordination must remain viable under disruption. FAVI shows that shared purpose alone is insufficient; participants must also carry responsibility for consequence. Zappos shows that distributed authority alone is insufficient; participants must be able to inhabit the developmental demands it creates.

Table 5 translates these distinctions into observable evidence. It separates indications visible during a consequential response from stronger evidence that can be established only across repeated events. No single signature is independently sufficient. Adaptive Capacity is evidenced by their recurring configuration rather than by the isolated presence of any one of them.

Table 5: Observable signatures of Adaptive Capacity

During a consequential event	Across repeated events
Material signals enter consequential judgment before certainty is complete.	Similar disruptions require less exceptional escalation, fewer workarounds, and less sustained overwork.
Relevant differences in technical, operational, commercial, and human consequence remain visible long enough to affect judgment.	Decision pathways become clearer without suppressing legitimate situated judgment.
Authority, expertise, resources, and responsibility converge around the decisions that must be made.	Learning changes capabilities, interfaces, assumptions, authority arrangements, and available response options.
Participants act on what is sufficiently clear without waiting for continuous instruction, while unresolved distinctions move selectively across or upward through the system.	Local autonomy becomes more dependable because shared orientation and escalation pathways become stronger.
Action changes as feedback returns and new consequences become visible.	Response variety expands where changing conditions require it and contracts where reliability requires consistency.
Extraordinary effort supports the response without becoming its principal coordination mechanism.	Dependence on heroic individuals, privileged informal networks, and emergency executive intervention declines.
The system remains related to shared orientation while adapting its response.	Structural Integrity is preserved or strengthened as conditions, participants, and demands change.

Examining Adaptive Capacity

Adaptive Capacity cannot be understood by examining organizational components in isolation. Processes, governance structures, technologies, decision forums, reporting relationships, and desirable practices may all contribute to adaptive functioning, but none constitutes Adaptive Capacity on its own. Like individual cognitive development, Adaptive Capacity is cultivated rather than

installed. It emerges through relationships that progressively change how an organization remains in effective relationship with changing reality.

For this reason, Adaptive Capacity is best examined through actual consequential responses rather than static organizational descriptions. The relevant question is not whether an organization possesses particular practices, but whether those practices repeatedly enable it to recognize material change while response remains possible, integrate distributed knowledge into collective judgment, coordinate action across boundaries, and retain what consequence reveals for future adaptation. The appropriate unit of analysis is therefore an adaptive demand within a defined domain and time horizon rather than the organization in general. A manufacturing enterprise may respond effectively to supplier disruption while adapting poorly to regulatory change. A hospital may coordinate clinical emergencies exceptionally well while struggling with digital transformation. Claims about Adaptive Capacity may therefore be domain-specific before they can be generalized to the organization as a whole.

Examining Adaptive Capacity begins by changing the observer rather than by classifying the organization. Conventional assessments often focus on whether desirable practices exist. The present approach instead asks what relationships become visible. Adaptive Capacity is examined less by asking what an organization possesses than by asking how it comes to know, judge, coordinate, and learn under changing conditions.

What assumptions governed judgment while conditions were changing? What remained invisible because it never became available for examination? Which consequential distinctions became visible, and which remained ignored, discounted, or isolated? Which perspectives entered collective judgment, and which remained local knowledge? Did locally valid initiatives converge toward what should govern the whole, or merely improve individual parts? Where did authority, responsibility, and consequence remain coupled, and where did they separate? Which consequences returned to reshape future judgment? These questions do not evaluate organizational maturity. They examine whether the organization remained in effective relationship with changing reality.

The diagnostic task is not simply to identify failure, but to locate the binding relationship: the relationship whose condition most constrained movement from recognition to judgment, coordinated action, consequence, and retained learning under the adaptive demand being examined. Identifying that relationship is itself an act of Integrative Capacity. Participants must hold partial, and often competing, accounts in relationship long enough for previously governing assumptions to become available for examination and for the constraint limiting collective adaptation to emerge. Different observers may initially identify different constraints, and resource scarcity, favorable external conditions, executive intervention, established routines, technological limitations, or chance may explain a particular outcome as plausibly as any relational account. Adaptive Capacity should therefore be treated as one explanatory hypothesis among others. The strongest diagnosis is not the fastest or most popular explanation, but the one that best accounts for the available evidence while remaining open to rival explanations, counterevidence, and revision.

This perspective also changes how organizations approach improvement. Adaptive Capacity does not arise because a single organizational component becomes stronger. Additional information cannot compensate for authority unable to act upon it. Broader participation cannot substitute for Gravity. Faster decisions cannot overcome absent learning. New governance structures, technologies, decision forums, redesigned processes, or additional autonomy are therefore not Adaptive Capacity itself. They are interventions whose value depends entirely upon whether they strengthen the relationships through which the organization recognizes change, forms judgment, coordinates action, learns through consequence, and remains effectively related to the reality it inhabits.

Adaptive Capacity therefore develops through cultivation rather than accumulation. Organizations do not become adaptive by collecting more practices, more data, more governance, or more autonomy in isolation. They become adaptive by progressively strengthening the relationships through which distributed human judgment becomes coherent organizational action. As those relationships mature, governing assumptions increasingly become available for examination, consequential distinctions remain visible longer, collective judgment becomes more integrative, Gravity allows autonomous judgment to remain coherently directed toward the whole, and learning progressively reshapes the conditions under which future judgment occurs. The result is not simply better decisions, but an organization increasingly capable of remaining in effective relationship with changing reality while preserving Structural Integrity.

No universal maturity model follows from this framework. Strengthening one relationship may expose another as the new binding condition, and different adaptive domains place different demands on the same organization. The framework is therefore offered as a conceptual synthesis and diagnostic architecture rather than as a validated measurement instrument. The cases presented illustrate its explanatory value but do not independently establish causality, and the four dimensions are proposed as irreducible systemic requirements rather than an exhaustive account of every contextual influence. Further research should examine their discriminant validity, longitudinal expression, operational measurement, and practical application across different organizational settings.

Conclusion

Modern organizations rarely lack intelligence in their parts. Their recurring difficulty is turning specialized knowledge into judgment and coordinated action while conditions continue to change. Adaptive Capacity names the emergent system property evidenced when a complex social system repeatedly accomplishes this across consequential situations and improves its ability to meet what follows.

This paper has argued that Adaptive Capacity cannot be explained by agility, resilience, flexibility, decentralization, learning, innovation, or dynamic capabilities in isolation. Each contributes to adaptation under particular conditions. The unresolved question is how these capabilities become

sufficiently related for distributed knowledge to produce coherent organizational response. The framework locates that explanatory center in the relationships through which information, authority, judgment, responsibility, action, and consequence remain coupled across time and scale.

The proposed architecture organizes those relationships through four irreducible dimensions: the Mechanics of Movement, the Mechanics of Structure, the Dynamics of Evolution, and Integrative Capacity. These four dimensions perform different but interdependent work, and Gravity orients their combined functioning toward the whole. Together, they explain how organizations recognize material change, integrate differentiated knowledge into collective judgment, coordinate action across boundaries, and retain what consequence reveals, propagating consequence, preserving dependable form, and renewing the response repertoire as they do so. Sustained over time, this recurring capability maintains Structural Integrity through continued adaptation.

The six cases illustrate this architecture from complementary directions. Buurtzorg and Toyota suggest that neither decentralization nor hierarchy alone is sufficient: Buurtzorg combined autonomous professional judgment with selective integration when uncertainty exceeded what individual teams could resolve, while Toyota mobilized distributed knowledge through a hierarchical but networked architecture and converted consequence into stronger supply-chain relationships. Nokia and Southwest suggest that sensing and efficiency alone are insufficient when relationships fail to transform distributed knowledge into coordinated judgment: Nokia possessed intelligence, technical expertise, and awareness of competitive change, but fear and power prevented critical distinctions from becoming consequential judgment, while Southwest performed efficiently under familiar conditions yet could not integrate the information, authority, and resources required to recover from cascading disruption. FAVI and Zappos illustrate that shared purpose and distributed authority become adaptive only when participants are able to inhabit the developmental demands they create: FAVI shows how Gravity can orient autonomous collective responsibility, while Zappos shows that distributing authority does not by itself create Integrative Capacity or systemic coordination. Taken together, the cases reinforce the central proposition that Adaptive Capacity resides not in any particular organizational form, but in the quality of the relationships through which organizations remain effectively related to changing reality.

The cases also illustrate why not every effective adjustment expresses Adaptive Capacity. A system may achieve an immediate objective by bypassing governance, concentrating authority, exhausting key people, deferring maintenance, or displacing consequences onto others. Such responses may succeed within a narrow horizon while weakening future functioning. The stronger test is whether information, authority, judgment, responsibility, action, and consequence remain sufficiently coupled as the system changes.

The practical implication follows directly. Organizations do not become adaptive by accumulating more practices, technologies, governance mechanisms, or distributed authority. They cultivate Adaptive Capacity by progressively strengthening the relationships through which consequential

reality becomes collective judgment, coordinated action, and retained learning. Diagnosis therefore begins not by evaluating isolated organizational components, but by reconstructing actual consequential responses, identifying the binding relationship that most constrained adaptation, and redesigning the conditions surrounding it. Evidence of cultivation appears in subsequent consequential responses: whether they become more timely, integrated, responsible, and less dependent on exceptional effort.

The framework offered here is intentionally conceptual rather than prescriptive. It proposes Adaptive Capacity as a distinct organizational construct, advances a relational explanation for how it emerges, and offers a diagnostic architecture through which it may be examined in practice. Future research should examine its discriminant validity, operational measurement, longitudinal development, and applicability across different organizational settings.

If modern organizations increasingly operate under conditions in which no individual or function can adequately apprehend the whole, then the central challenge of management is no longer simply directing action. It is cultivating the conditions under which distributed human intelligence becomes coherent systemic intelligence. Adaptive Capacity cannot be installed through a transformation program or accumulated through additional practices. It is cultivated through repeated contact with reality, responsible action, returned consequences, and the continuing reconfiguration of the relationships through which the system functions. Each consequential response becomes both a test of present capacity and an opportunity to strengthen what the system can do next.

The modern enterprise cannot remain intelligently related to changing reality through continuous translation and command from above. It requires people throughout the system who can exercise judgment, carry responsibility within action, and coordinate under shared orientation, while matters that exceed existing understanding move selectively to the places capable of integrating them. Adaptive Capacity is expressed when the enterprise can change without fragmenting, learn without losing direction, and preserve the Structural Integrity required to remain a functioning whole.

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