The Chemistry of Knowledge

Rethinking how knowledge is developed, validated and deployed in complex organizations

Our work is focused on knowledge-how: knowledge that helps people act, decide, and improve what they do.

We build and validate knowledge for gnarkly situations.

The Chemistry of Knowledge

I have spent much of my life close to markets shaped by disruption and change.

From the shift from mechanical to digital electricity metering, to the rise of CRM, digital communication, and digital printing, I have seen how industries change when new technologies, new conditions, and new ways of working reshape what is possible. Across more than 150 cases, one thing has become clear:

We always need to evolve. But change is neither the trigger nor the goal.

The real challenge is to understand what matters.

Technology and business models evolves in all markets. But also Organizations need to evolve their capabilities. Individuals need to evolve their skills. Sometives in disruptive environments and sometimes as an incremental change. In all changes we must protect the strengths that still matter and evolve the one we need. We need to understand what should change, what should remain, and what new knowledge is needed to act wisely in a new environment.

Knowledge travels.

Knowledge is not an isolated object. It lives, changes, and takes new forms as it moves between people, teams, organizations, and situations. It is a bit like a song. The same song can be performed by different musicians, with different instruments, in different settings. It remains recognizable, but the sound changes.

That is why knowledge needs to be designed for travel.

We often turn knowledge into models, frameworks, methods, and tools. This is useful. Packaging knowledge makes it easier to share, discuss, apply, and scale. It helps ideas move across boundaries.

But something can also be lost in the packaging.

When knowledge becomes a model, it becomes easier to carry — but also easier to detach from the situation where it was created. We may lose sight of its purpose, its assumptions, and the conditions under which it actually works.

That is where the difficulties begin.

I have seen organizations introduce new models to become more modern, only to weaken the capabilities that once made them strong. Not because the ideas were bad, but because they were applied without enough respect for context, purpose, and existing strengths.

The challenge, then, is not only to create, find, and deploy knowledge.

The challenge is to create knowledge that is fit for purpose, to choose carefully what knowledge to use, and to apply it wisely.

Knowledge becomes valuable when it helps us think more clearly and act better in the situations we actually face.

This is where **The Chemistry of Knowledge** begins.

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Magnus Billgren

The Paradox of Modern Knowledge

We live in a time of extraordinary knowledge abundance.

Every week, new frameworks appear in management literature. Academic research continues to produce insights at a remarkable pace. Consulting firms introduce conceptual models designed to guide organizations through change and transformation. Conferences, webinars, books, podcasts, and keynote stages continuously present success stories and lessons from companies that appear to have found better ways forward. Increasingly, artificial intelligence can generate analyses, strategies, and frameworks almost instantly.

Never before has so much knowledge-like material been available.

And yet organizations across industries continue to struggle to evolve organizational capabilities and individual skills. Deploying new knowledge that is useful and usable. Making use of all the wonderful knowledge developed has become more difficult the more knowledge that is created.

This is the paradox of modern knowledge.

If knowledge is more abundant than ever before, why is it still so difficult to turn that abundance into meaningful understanding and effective action?

Part of the answer lies in how knowledge is produced, how it is packaged, and how it travels.

Knowledge typically emerges within four different environments.

Academic research

Universities have developed powerful methods for analyzing the world. Scientific research offers rigorous ways of studying phenomena, testing hypotheses, and establishing evidence. Through disciplined reasoning and careful method, researchers can isolate variables and explore causal relationships with great precision. This has produced some of the most reliable knowledge in the history of humans.

But the strength of scientific research is also its limitation. In order to establish causality and evidence, research needs to simplify reality. Complex systems are reduced to controlled environments where variables can be separated and tested.

Organizations rarely operate under such conditions. Real organizational life is dynamic, interconnected, and shaped by many forces at once. Technology interacts with human behavior. Institutional structures shape decision-making. Economic pressures, cultural norms, and historical choices all influence outcomes simultaneously. In such environments,

reality rarely unfolds through simple cause and effect. It unfolds through patterns of interaction, which can rarely be turned into evidence based knowledge.

There is another distinction here that matters. Much research is descriptive: it helps us understand and explain what happened, why something emerged, or how a phenomenon can be interpreted. This is valuable. But descriptive knowledge does not always help organizations answer a more pressing question: what should we do? In environments where organizations are trying to build capabilities, make choices, and move forward, normative knowledge (knowledge-HOW TO) becomes essential. They do not only need explanations. They need guidance.

The knowledge consulting business

The second environment is the consulting world. Consultants and management thinkers have developed many frameworks that help organizations interpret complex challenges. Strategy models, innovation methods, and organizational concepts have had enormous influence on how leaders think and act. These frameworks can be extremely valuable. But they operate under a different logic than academic research. Ideas often spread not only because they are true, but because they are persuasive, communicative, and usable. Concepts travel quickly when they are easy to visualize, easy to explain, and easy to deploy. Within management research, this is sometimes described as management fashion. This does not mean such frameworks lack value. Many have contributed greatly. But it does mean that their spread is not achieved by the knowledge it self but by the way it has been packaged and is percceived.

Within Organizations

The third environment is within organizations themselves. Historically, many organizations developed strong internal traditions of learning. Engineers, designers, product teams, and operational leaders created methods to handle complexity in architecture, development, delivery, and collaboration. Here, knowledge evolved through practice. It was shaped by repeated encounters with real constraints, real failures, real customers, and real systems. Much of the most valuable organizational knowledge has emerged in this way. But this form of knowledge often remains local, tacit, and under-articulated. And in many organizations today, the pressure of short-term delivery leaves limited space for deeper reflection. As a result, internal knowledge is not always developed, expressed, or carried forward as strongly as it could be.

The modern media industry

The fourth environment is the expanding world of conferences, webinars, books, podcasts, and public success stories. This world now plays a major role in how knowledge travels. Organizations are constantly exposed to stories about what has worked elsewhere: how a company transformed its culture, accelerated innovation, redesigned its operating model, or built new growth. These stories can be inspiring. They can open up possibilities and create momentum for change. But they also introduce a particular risk. Success stories are almost always compressed. They are shaped into narratives that can be told from a stage, written

into a book, or shared in a webinar. In that process, complexity is reduced. Context is thinned out. Failure disappears into the background. What remains is often a powerful story. What worked brilliantly in one organization may be deeply unsuited to another. A method born in one culture, one market, one maturity level, or one technological context may fail entirely elsewhere. The story travels more easily than the conditions that made it work.

Technology is changing the world of knowledge

Now artificial intelligence accelerates all of this. Knowledge can be produced, packaged, and circulated faster than ever. That is a remarkable opportunity. But it also makes the central challenge sharper.

The issue is no longer only how to access knowledge.

The issue is how to validate, select, and adapt knowledge that fits the situation at hand.

This becomes even more difficult because organizations are not only operating in complexity. They are constantly adding to it. New tools, new systems, new models, new reporting structures, new processes, and new layers of coordination are introduced with the intention of improvement. Sometimes they help. But they also increase the cost of complexity. Every addition creates new dependencies, new interfaces, new translation problems, and new demands on attention and coordination.

In such environments, linear reasoning is often not enough. Traditional deductive thinking assumes clearer chains of causality: from A to B to C. That remains useful in many settings. But in complex organizational life, many variables interact at the same time, and outcomes rarely follow a single line of logic. What becomes more important is the ability to work inductively: to observe patterns, compare situations, identify signals, and build confidence through interpretation rather than assume that one proven cause will reliably produce the same effect everywhere.

In complex environments, truth is rarely simple and universal. What works well in one setting may fail in another. A model may be sound, but still wrong for the context. A success story may be real, but still misleading when detached from the conditions that shaped it. A rigorous study may explain something important, but still leave open the practical question of what should be done next.

This does not mean that the knowledge being produced is bad. Much of it is highly valuable.

But it does mean that we need better ways of working with knowledge itself: better ways to create knowledge that is relevant, to validate what travels across contexts, to distinguish descriptive insight from normative guidance, and to identify patterns in the complexity organizations actually face.

That is where this work begins.

Not with the search for one more framework, but with the ambition to develop knowledge that is more contextual, more adaptable, and more useful in the realities organizations actually face.

That is the challenge, and the promise, of **The Chemistry of Knowledge**.

The Chemistry of Knowledge

This realization gradually led me to rethink how knowledge develops for complex environments.

Rather than viewing knowledge as a static collection of models or theories, it may be more useful to see it as something that emerges through interaction.

Ideas interact with experiences.
Perspectives interact with situations.
People bring different interpretations and histories into shared conversations.

Through these interactions, something new can emerge.

The process resembles a form of chemistry.

In chemistry, elements interact under specific conditions. Certain environments allow reactions to occur. Catalysts accelerate transformations without determining their precise outcome.

Something similar happens when knowledge develops.

Situations create the environment.
Perspectives introduce variation.
Dialogue acts as a catalyst.

Through interaction, ideas combine, dissolve, and sometimes crystallize into new forms of understanding.

This dynamic process is what I describe as **The Chemistry of Knowledge**.

We live in a time of extraordinary knowledge abundance.

Academic institutions produce rigorous research. Consultants develop frameworks and methods for change. Organizations generate practical know-how through everyday work. Books, conferences, podcasts, and success stories spread ideas faster than ever before. And now artificial intelligence can package, combine, and generate knowledge-like material almost instantly.

Never before has so much knowledge been available.

And yet many organizations still struggle to turn this abundance into meaningful understanding, stronger capabilities, and effective action. The challenge is no longer only access to knowledge. The challenge is knowing what knowledge to trust, what knowledge fits, and how knowledge can be made useful in a specific situation.

The problem is not a lack of knowledge. It is the “Spamming of Knowledge”

Knowledge is increasingly abundant, but not always validated for use. It is widely available, but not always connected to context. It is often inspiring, but not always deployable. It may

be rigorous, but not always practical. It may be practical, but not always tested. It may be persuasive, but not always transferable.

This creates a growing gap between knowledge production and knowledge use.

Organizations need knowledge that helps them understand their situation, make better choices, build capabilities, and act with greater confidence. But the current knowledge arena often leaves them with fragments: research insights, consulting models, internal experience, success stories, and AI-generated synthesis. Each fragment may be valuable. The difficulty lies in knowing how they fit together, what they depend on, and whether they can be trusted in the situation at hand.

That is why the a new way of evolving and managing knowledge matters.

The more knowledge we produce, the more important it becomes to understand the conditions under which knowledge is created, how it travels, what it loses along the way, and what is required for it to become useful in practice.

A Manifesto for a Different Kind of Knowledge Creation

The Chemistry of Knowledge begins with observations on how we use knowledge.

Knowledge does not emerge from the accumulation of theory.

Knowledge emerges from interaction.

It grows when people engage deeply with situations.
When perspectives collide.
When dialogue allows assumptions to surface and new interpretations to form.

The purpose of Chemistry of Knowledge (ChemoK) is therefore not simply to describe the world.

The purpose of knowledge is to **develop the capability to navigate it**.

This perspective leads to several commitments.

Principles of Catalytic Knowledge Development

The Chemistry of Knowledge proposes several guiding principles.

Situations as the Starting Point

Knowledge development begins with situations. A situation is not merely a problem. It is a configuration of actors, systems, technologies, histories, and constraints that together create a particular state of affairs.

Understanding a situation requires attention to its **context**, its **ontology**, and the **patterns** that emerge across similar situations.

Through these elements, situations become the foundation for an inductive form of knowledge development.

Perspective Shifts

Complex problems often persist because they are examined from limited viewpoints.

Perspective shifts allow problems to be examined through new conceptual lenses. A technological challenge might be explored through analogies from music, architecture, biology, or sport.

These shifts introduce variation into the system of ideas, allowing new insights to emerge.

Hypothesis Exploration

New interpretations give rise to hypotheses—tentative ideas about how situations might be understood or improved.

These hypotheses evolve through dialogue, experimentation, comparison with other situations, and reflection on practical experience.

Some ideas dissolve quickly. Others grow stronger through repeated interaction.

From Hypotheses to Precepts

As ideas mature, some stabilize into **precepts**—concise guiding principles derived from experience and reflection.

Precepts do not prescribe rigid solutions. Instead they provide orientation, helping individuals interpret similar situations in the future.

Capabilities as the Outcome

The ultimate aim of knowledge development is not theoretical certainty.

It is the development of **capabilities**—the ability to recognize patterns, interpret complex environments, and act intelligently within them.

Knowledge becomes valuable not because it perfectly describes reality, but because it enhances the capacity to navigate it.

Dialogue as Catalyst

Dialogue plays a central role in this process.

Knowledge grows through interaction between perspectives. Conversations allow ideas to encounter resistance, reinterpretation, and expansion.

Dialogue therefore functions as the **catalyst** of knowledge development.

Confidence and Continuous Validation

Finally, knowledge evolves through **confidence rather than certainty**.

In complex systems, definitive proof is rare. Instead, understanding grows through repeated observation, reflection, and experience.

Validation becomes continuous. Every stage of knowledge development remains open to revision as new situations emerge.

An Invitation

The Chemistry of Knowledge is not a finished theory.

It is an evolving practice.

It is an invitation to researchers, practitioners, engineers, designers, and thinkers who believe that the development of knowledge itself must evolve if we are to meet the challenges of our time.

Because perhaps the most important question is not how many frameworks we can produce.

The most important question is whether we can learn to **think together about the situations that shape our world**.

And when ideas, experiences, and perspectives begin to interact freely, something remarkable happens.

Knowledge begins to transform.

And within that transformation, new capabilities emerge.

That is the work of the Chemistry of Knowledge.