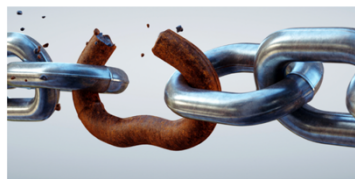
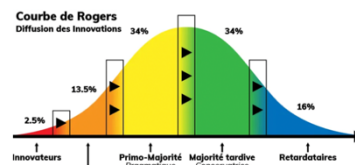


The misunderstanding of excessive communication (1)

Why complex innovations need to be explained



Long version



1. From a seemingly innocuous remark to a fundamental question

An article on translation — On April 7th, in an article titled “From Forest and Mine to Token: Keeping the Thread of Translation,” I demonstrated that the valuation of natural resources relies on a dual translation. The first is technical: it transforms forest carbon or artisanal gold into traceable and tradable assets through measurement, recording, validation, and tokenization processes supported by blockchain. The second is social and institutional: it makes these transformations understandable, legitimate, and appropriable by the stakeholders involved. The circulation of value thus depends on the ongoing interplay between technical translation and translation of meaning.

A recurring observation — Today, I would like to return to the question of meaning and the translations it entails: in terms of socio-technical innovation programs, do we communicate too much or never enough? Indeed, over the past few weeks, some partners have expressed a recurring observation about this blog. In their view, publishing two, sometimes three, blog posts per week on the challenges of WinstantGold, the first pilot project of the Democratic Republic of Congo's national AXIS program, represents an excessive pace for placing it within the context of digital finance, blockchain, traceability, or tokenization. This observation is all the more interesting given that it often comes from organizations that choose a traditional communication style and whose public statements generally consist of endlessly disseminating the same institutional information, at the risk of repetition. The issue is therefore not merely quantitative. It also concerns the function attributed to communication.

A legitimate question — Yet, this observation deserves to be taken very seriously. Is there a point at which the effort of explanation becomes excessive? Does a complex innovation need to be continually reformulated for different audiences, or is it sufficient to periodically present its main elements? In other words, does the proliferation of analyses constitute unnecessary redundancy, or does it respond to a need inherent in projects that involve numerous stakeholders, new technologies, and heterogeneous frames of reference?

A research question — Behind a seemingly innocuous discussion about the frequency of publications lies a much more fundamental question. Do socio-technical networks require constant translation to maintain their coherence and capacity for collective action? Or is there a threshold beyond which the effort of translation becomes pointless? Through this question, the very nature of complex projects is at stake: should we speak less, or should we translate more?

A question of approach — For a decade, my work focused on innovations and the socio-technical networks that make them possible. I never imagined that one day I would be directly involved in such a network, bringing together blockchain, traceability, digital finance, natural resources, and territorial development. This situation leads me today to revisit an old question: how can we ensure that the value generated from African resources benefits the communities that produce them more fully? To answer this question, technological innovations are necessary. But they are not enough. They must also become understandable, accessible, and legitimate for all stakeholders.



2. The misunderstanding of excessive communication

Information, communication and understanding

Three different realities — Debates about too much or too little communication often stem from a confusion between three distinct realities: information, communication, and understanding. Informing means making content available. Communicating implies that a message is transmitted between several parties. Understanding implies that a shared meaning is actually constructed. These three operations are linked, but they are not synonymous. The presence of one never automatically guarantees the other two.

A common misconception — In many organizations, disseminating information is spontaneously equated with successful communication, for example, by the number of viewers on social media. When a document has been sent, a presentation given, or a memo distributed, it is often considered that the bulk of the work is done. This conception is based on a relatively linear view of exchanges: a sender produces a message, a receiver receives it, and meaning is assumed to flow with the content. Experience shows, however, that things are rarely so simple.

The illusion of the transmitted message — Receiving information does not necessarily mean understanding its implications. A report can be read without being assimilated. A presentation can be followed without changing the understanding of those listening. A concept can be memorized without being truly grasped. The physical transmission of content therefore guarantees neither its appropriation nor its ability to guide action. Between reception and understanding, there is always a process of interpretation.

Understanding as a construction — Understanding is never a passive act. Each individual interprets the information they receive based on their knowledge, experience, expectations, and the constraints they face. Meaning is not contained within the message like an object in packaging. It is constructed through a process of interpretation that mobilizes intellectual, professional, and cultural resources specific to each individual. Understanding is therefore as much a production as a reception.

Multiple meanings — This interpretive dimension explains why the same information can give rise to different understandings. What appears as technological progress to some may be perceived as a source of risk to others. What constitutes an economic opportunity for an investor may be interpreted as a regulatory constraint by an administration or as a revenue issue by a local community. The message remains the same, but the meanings produced diverge.

The gap in frames of reference — Actors do not operate within the same cognitive universes. They use different vocabularies, employ distinct analytical frameworks, and sometimes pursue disparate objectives. Engineers, financiers, public officials, lawyers, field operators, and community representatives do not view a situation through the same categories. This diversity is an asset for collective action, but it considerably complicates the flow of meaning.

The need for reformulation — When actors from different worlds must cooperate, the simple transmission of information becomes insufficient. Additional work appears necessary: that which consists of reformulating, contextualizing, illustrating and



adapting the content so that it can be understood in different frames of reference. This operation is not only intended to transmit more information; it seeks to make this information intelligible for audiences who do not spontaneously share the same knowledge.

The challenge of complex innovations — This difficulty becomes particularly visible when innovations mobilize new technologies, abstract mechanisms or new institutional architectures. The more complex a project is, the more gaps in understanding tend to multiply between the actors participating in it. The notions of blockchain, tokenization, digital traceability or digital finance perfectly illustrate this situation. Their operation can be technically rigorous while remaining largely opaque to those who do not master the specialized languages that describe them.

A poorly asked question — Under these conditions, the question of whether we communicate too much or not enough often appears poorly formulated. The real question concerns less the volume of information produced than the capacity of actors to build a common understanding. This shift in the gaze is essential. It leads to an interest not only in the messages that circulate, but in the operations that allow these messages to acquire a shared meaning.

Towards another problem — Therefore, the main problem is perhaps not the abundance of information, but the difficulty in maintaining chains of intelligibility between different actors. This hypothesis invites us to examine the way in which innovations are diffused, how networks are built and how complex projects manage to coordinate heterogeneous universes. It is towards this question that the analysis of socio-technical networks and the translation mechanisms that make them possible leads us.

3. The arguments of "too much"

An old criticism — The idea that excessive communication can become counterproductive is not new. Long before the advent of social media and continuous digital feeds, researchers, policymakers, and business leaders were already questioning the effects of information overload. This concern runs throughout the history of modern societies, whose functioning relies on the ever-increasing production of knowledge, reports, statistics, and documents.

The scarcity of attention — One of the most frequently cited authors on this issue is Herbert Simon. In a now-classic text published in the early 1970s, he observes that an abundance of information simultaneously produces a scarcity of attention. According to him, as information proliferates, the truly limited resource is no longer the available knowledge but the human capacity to devote time and interest to it. This shift forms one of the foundations of what would later be called the attention economy.

A limited resource — Unlike digital data, attention cannot be multiplied indefinitely. Individuals have limited time to read, listen, analyze, and understand. Each new request competes with the previous ones. From this perspective, increasing the volume of available information does not automatically lead to a corresponding increase in comprehension. On the contrary, it can fragment concentration and make it more difficult to identify what is truly important.

The risk of information overload — This observation leads to an initial critique of information overload. When an individual is exposed to too many messages, documents, or requests, they may struggle to prioritize the information received. The content then ends up competing with each other. What was intended to enhance understanding sometimes produces the opposite effect: confusion, indecision, or the gradual disengagement of recipients.

Too much information, less clarity — This situation is frequently observed in large organizations. Reports pile up, summaries follow one after another, presentations multiply, but decisions remain difficult to make. Theoretically, stakeholders have more information than ever before, yet they sometimes feel they understand the overall situation less well. The sheer quantity of available information then becomes an obstacle to its effective use.

The emergence of information overload — With the development of digital technologies, this criticism has taken on a new dimension. The terms "information overload" or "information overload" have gradually emerged to describe a situation in which the volume of information produced exceeds individuals' capacity to process it effectively. Abundance then ceases to be seen as an advantage and becomes a problem to be managed. Information is no longer scarce; it is its selection that becomes difficult.

A familiar experience — Everyone can experience this phenomenon. Emails, social media, newsletters, specialized studies, internal memos, and 24/7 news feeds all demand our attention daily. In this saturated environment, it becomes tempting to view any new publication as an additional burden rather than a useful resource. The rejection reaction doesn't necessarily reflect opposition to the content; sometimes it simply expresses an inability to absorb more information.



The discreet institutions — Some organizations have drawn a practical conclusion from this analysis: they should communicate sparingly but in a targeted way. They favor rare, carefully prepared, and tightly controlled public statements. In this logic, the scarcity of the message helps to increase its visibility and impact. The less an organization speaks, the more attention each of its interventions is expected to attract. Silence then becomes a communication management tool.

The value of stability — This strategy has several advantages. It limits the risk of contradiction, reduces communication costs, and facilitates control over the messages disseminated. Organizations that adopt it often seek to maintain a consistent and stable image. They prioritize a few essential messages that they repeat regularly rather than multiplying analyses, commentaries, or interpretations that could introduce new nuances into institutional discourse.

A logic of control — Behind this preference for scarcity often lies a deeper concern: that of controlling the meanings associated with a project or an organization. The more limited the number of public statements, the easier it becomes to control their content. Conversely, the proliferation of explanations, analyses, or viewpoints can be perceived as a factor of dispersion. Reducing communication then appears as a way to preserve the unity of the discourse.

A coherent thesis — All of these arguments form an intellectually coherent position. Since attention spans are limited, since individuals can be saturated with information, and since organizations seek to maintain the coherence of their messages, it would seem reasonable to conclude that an excess of communication does indeed carry risks. At first glance, proponents of "communicating less" therefore have solid arguments.

A persistent difficulty — Yet, this analysis leaves one essential question unanswered. It implicitly assumes that the information disseminated is already understood by those who receive it. It is primarily concerned with the quantity of available messages, but much less with the mechanisms by which these messages acquire meaning. It is precisely this assumption that now needs to be examined more closely.

3. The limitations of this position

An implicit assumption — Despite its apparent coherence, the critique of excessive communication often rests on an assumption rarely explicitly stated. It presupposes that the information disseminated is already understood by those who receive it. If this is indeed the case, then any further repetition may appear unnecessary. But this conclusion depends entirely on a prerequisite: the existence of a sufficient understanding of the topics addressed. This condition is far from always being met.

A common confusion — In many situations, the dissemination of information is equated with its understanding. A memo has been sent, a meeting organized, a document made available; it is then assumed that the participants now possess the necessary knowledge. However, the transmission of content and its actual assimilation correspond to two different realities. Just because a message has circulated does not mean that its meaning has also circulated.

The problem of interpretation — All information is subject to interpretation. Individuals never receive messages as neutral objects whose meaning is immediately obvious. They analyze them based on their knowledge, experiences, interests, and the constraints specific to their environment. Between the information disseminated and the information understood, there is always an intervening process of meaning-making that largely escapes the sender's control.

Divergent understandings — This interpretive dimension explains why the same information can produce very different effects depending on the actors involved. A technological innovation may be perceived as a strategic opportunity by some, as a regulatory constraint by others, or as a source of uncertainty for those who do not understand its mechanisms. The content transmitted remains the same, but the meanings attributed to it can vary considerably.

The cost of silence — When explanatory efforts are excessively reduced, a significant part of the mechanisms at work remains invisible. Specialized concepts, technical choices, institutional constraints, or economic assumptions then remain the preserve of a limited number of insiders. Silence does not necessarily produce clarity; on the contrary, it can reinforce opacity. What is not explained does not disappear. It simply becomes more difficult to understand.

The invisibility of mechanisms — This situation is particularly common in technical fields. Digital infrastructures, financial mechanisms, or regulatory architectures can function effectively while remaining largely incomprehensible to those who were not involved in their design. The more complex the systems become, the greater the risk of invisibility. The smooth functioning of the system can then mask the extent of the knowledge required to understand it.

Cognitive asymmetries — Added to this difficulty is a second problem: the actors involved in the same project do not have the same knowledge. Engineers, lawyers, financiers, public officials, field operators or community representatives have different expertise. Everyone masters a part of collective reality without necessarily understanding precisely the logics which structure the other areas. This diversity constitutes a wealth, but it also creates gaps in understanding.



Imperfect cooperation — Complex projects rely precisely on cooperation between actors who share neither the same knowledge nor the same references. Under these conditions, the simple circulation of information is not enough to guarantee coordination. Participants must also understand the constraints, objectives and reasoning of other members of the network. This mutual understanding does not result spontaneously from the coexistence of the actors; it requires specific work.

Intelligibility as a condition — Sustainable coordination relies less on the quantity of information available than on its intelligibility. Actors must be able to relate the information they receive to their own concerns, but also understand their place in the larger picture. When a project becomes incomprehensible for some of its participants, misunderstandings multiply, decisions shift and collective action capacities gradually weaken.

Another reading of the problem — From then on, the question is no longer just how much information must be produced or disseminated. It involves determining how to make this information understandable to different audiences. The main problem is perhaps not the abundance of messages but the insufficiency of the mechanisms allowing their appropriation. This hypothesis leads to moving the analysis of communication towards translation.

A necessary transition — If this hypothesis is correct, then innovations do not diffuse simply because they exist or because they are described. They must be explained, reformulated, adapted and gradually appropriated by those who are called upon to use or support them. Understanding how this diffusion takes place then becomes essential. This is precisely the question addressed by the literature devoted to innovations and their adoption mechanisms.

4. Innovations need to be explained

A different perspective — If we accept that understanding does not automatically result from the dissemination of information, then another question arises. How do new ideas manage to spread within a society, an organization, or a network of actors? Why are some innovations quickly adopted while others struggle to reach beyond the small circle of their creators? These questions have given rise to a significant body of research dedicated to the diffusion of innovations.

Everett Rogers — Among the authors who have most influenced this field is Everett Rogers. In his now-classic work, **Diffusion of Innovations**, he shows that the adoption of an innovation does not depend solely on its intrinsic qualities. An innovation can be technically successful and yet encounter considerable difficulties in diffusion. Its success also depends on the social mechanisms that enable its understanding, acceptance, and appropriation by different groups of actors.

Social diffusion — Rogers's main contribution is to show that the diffusion of an innovation is primarily a social process. A new idea doesn't circulate simply because it exists or because it's rational. It progresses through relationships, exchanges, discussions, and mechanisms of influence involving numerous intermediaries. Innovation spreads less like a physical object than like a collective conversation that gradually expands to include new participants.

Adoption categories — Rogers also observes that not all actors adopt an innovation at the same time. Some are willing to experiment quickly with new things, while others wait for more guarantees before changing their practices. Between innovators, early adopters, the early majority, the late majority, and laggards, diffusion generally follows a gradual progression that depends as much on social interactions as on the technical characteristics of the innovation itself.

Early adopters — Among these different categories, early adopters play a particularly important role. They often constitute the first group capable of connecting the designers of an innovation with potential users. Because they grasp the implications of the proposed innovation more quickly, they become essential agents of its dissemination. Their role is not simply to adopt; it also involves making the innovation more understandable to those around them.

A mediating role — Early adopters thus occupy an intermediary position in the diffusion process. They translate technological promises into concrete benefits, illustrate potential uses, and reduce the uncertainties associated with change. Their influence stems less from their formal authority than from their ability to make an innovation credible and understandable to groups who would not have spontaneously adopted the same practices.

Opinion leaders — Rogers also places great importance on opinion leaders. These individuals possess particular credibility within their social or professional networks. When they take an interest in an innovation, their stances help shape the perceptions and behaviors of other group members. They do not necessarily create the innovations, but they actively participate in their dissemination by giving them increased visibility and legitimacy.

Circulation through intermediaries — This analysis leads to an important conclusion. Innovations rarely circulate directly between their creators and all their potential users. They progress through a succession of intermediaries who explain, comment on, illustrate, and adapt them to different contexts. Each stage of dissemination thus introduces additional work of interpretation and reformulation.

Successive translations — During this process, the innovation often undergoes a series of discursive transformations. Technical terms are replaced by concrete examples. Complex mechanisms are reformulated in more accessible language. The potential benefits are presented in ways tailored to the concerns of each audience. Innovation is therefore not simply transmitted; it is continually reinterpreted as it moves from one stakeholder to another.

A necessary transformation — This succession of reformulations is not a flaw in the diffusion process. On the contrary, it is one of its essential conditions. Without these successive adaptations, the innovation would remain confined to the language of its creators. Diffusion thus requires the ability to convey the same concept through different frames of reference without losing its fundamental coherence.

The case of digital innovations — This necessity is particularly evident in the field of digital technologies. The concepts of blockchain, tokenization, distributed ledgers, and digital assets are based on complex conceptual architectures that are not immediately accessible to non-specialist audiences. Their adoption therefore requires significant mediation efforts to connect abstract technical mechanisms to understandable uses and concrete benefits.

A direct consequence — A conclusion naturally emerges from Rogers' work. The more complex an innovation, the more mediation it requires. The more specialized the knowledge needed to understand it, the more translations are needed for its dissemination. This observation leads us to reconsider the idea that efforts to explain necessarily constitute excessive communication. In some cases, they appear, on the contrary, as a normal condition for adoption.

Beyond diffusion — However, Rogers is primarily interested in how innovations spread within a population. Other authors take the analysis further, showing that translation does not only serve to disseminate an innovation. It also contributes to building the networks of actors that make this innovation possible. This is notably the perspective developed by Michel Callon and the founders of the sociology of translation.

A first conclusion — The preceding analyses allow us to answer the question that served as the starting point for this reflection. When dealing with complex innovations, the main problem is generally not an excess of communication but the difficulty of building a shared understanding. The more specialized knowledge an innovation mobilizes, the more it requires explanations, reformulations, and mediation. The challenge, therefore, is not only to produce information but to enable its appropriation by actors who do not possess the same knowledge or the same frames of reference.



A more fundamental question — This conclusion, however, leads to a deeper question. If innovations need to be explained, who performs this translation work? How do actors from different backgrounds manage to build a sufficiently shared understanding to act together? How can technologies, institutions, investors, operators, and local communities coordinate despite the diversity of their interests and languages? To answer these questions, we must now shift our focus from the diffusion of innovations to the construction of the networks that support them. This is precisely the subject of the next article, devoted to Michel Callon, Bruno Latour, and the sociology of translation, which shows that socio-technical networks do not pre-exist shared understanding: they are built through it.