

The misunderstanding of excessive communication (4)

The case of digital finance ecosystems



Long version

1. A reminder

The misunderstanding of excessive communication (1) — The first article in this series began with a simple question: Do we communicate too much when it comes to explaining complex innovations? An examination of the work of Herbert Simon and Everett Rogers led to an initial conclusion. The difficulties encountered by innovations generally stem less from an excess of information than from a lack of shared understanding. The more complex an innovation, the more explanations, reformulations, and mediations it requires.

The misunderstanding of excessive Communication (2) — The second article shifted the analysis to the networks that support innovations. Through the work of Michel Callon, Bruno Latour, and John Law, we saw that socio-technical networks do not pre-exist the actors who compose them. They are built, maintained, and transformed through a continuous process of translation that aligns interests, circulates knowledge, and preserves collective coherence.

The misunderstanding of excessive communication (3) — The third article applied this analytical framework to digital finance ecosystems. The multiplicity of actors, the diversity of languages, and the increasing abstraction of objects led to a central conclusion: behind the visible technical infrastructures lies an invisible infrastructure of intelligibility. The circulation of data, assets, and transactions itself depends on the circulation of meaning, understanding, and trust.

A new question — One question remains open, however. If networks thrive on translation and if intelligibility constitutes an essential infrastructure, who actually produces this intelligibility? What actors, organizations, documentation systems, and practices maintain the chains of understanding necessary for the functioning of contemporary socio-technical networks? This is the question we will examine in this fourth article.

2. A multitude of actors

An exemplary case — Digital finance ecosystems constitute a particularly interesting area for observing the mechanisms described in the previous sections. They combine complex technologies, evolving regulatory frameworks, varied economic interests and territories often far from decision-making centers. Under these conditions, the circulation of information never depends on a single actor. It is based on a dense network of relationships, mediations and translations.

Growing diversity — Unlike certain more traditional economic activities, digital finance simultaneously mobilizes technical, financial, legal, institutional and territorial skills. No actor naturally masters all of these dimensions. The functioning of the system therefore depends on the ability to articulate different expertise around common objectives. This diversity constitutes a wealth but also a permanent source of complexity.

Developers — Behind many devices are developers, software architects and digital infrastructure specialists. Their role consists of designing the technical mechanisms allowing the recording, validation and circulation of data. They master blockchain logic, smart contracts, digital identity systems and security protocols. Their universe is that of code, architectures and technical performances.

Specialized language — This expertise is based on highly specialized knowledge. Developers use concepts and vocabularies that often remain inaccessible to actors outside their field. Yet the systems they design need to be understood and used by much broader audiences. A first translation operation therefore becomes necessary in order to transform complex technical mechanisms into intelligible realities for other categories of actors.

Operators — Between technical infrastructures and concrete uses, operators intervene. They ensure the daily implementation of the systems, organize procedures, manage information flows and ensure compliance with the rules defined by the system. Their role often consists of transforming a theoretical architecture into operational practices adapted to the constraints of the field.

The reality on the ground — Operators occupy a particular position in the network. They must understand the technical requirements while taking into account local realities. They are often confronted with situations that the designers had not anticipated and must continually adjust procedures to the concrete conditions of their implementation. Their activity is also based on significant work of interpretation and mediation.

Public institutions — Administrations, regulatory authorities and political leaders constitute another essential category of actors. Their mission consists of guaranteeing the compliance of systems with general interest objectives, legal rules and the strategic orientations of public policies. They are not only interested in technical performance but also in the economic, social and institutional consequences of the proposed innovations.

A different logic — Public institutions generally operate on different timescales and according to different criteria than developers or operators. They prioritize stability, legal certainty, accountability, and the coherence of public policies. This difference in

perspective does not hinder cooperation, but it necessitates ongoing translation work between the technical and institutional spheres.

Investors — Investors operate with yet another set of concerns. They are interested in economic models, valuation mechanisms, risks, and development prospects. For them, technological innovations primarily represent economic opportunities or uncertainties. Their understanding of the project is based on criteria that are not always those of engineers or government agencies.

Financial logics — In order to evaluate a project, investors must be able to understand the underlying technical mechanisms while translating them into their own economic language. Concepts such as traceability, compliance, or tokenization must therefore be linked to issues of value creation, liquidity, governance, and profitability. A new chain of mediation then emerges between innovation and its financing.

Local communities — The territories involved in the projects are also integral actors in the network. In areas related to natural resources, the environment, or economic development, local communities are not simply passive beneficiaries. They participate directly in the production of the realities that digital systems then seek to record, value, or certify.

Another project experience — For communities, the issues are often very concrete. They concern income, employment, infrastructure, the recognition of rights, and prospects for local development. The technical concepts used by other actors only acquire meaning when they can be linked to these everyday concerns. Translation then becomes essential to connect abstract mechanisms to lived realities.

The media — Finally, the media occupy a special position in this system. They help to make visible projects that would otherwise remain confined to specialized circles. By selecting certain topics, constructing narratives, and giving a voice to different actors, they actively participate in the dissemination of innovations. Their role goes far beyond simply transmitting information.

A function of making information understandable — The media often act as collective translators. They reformulate technical, economic, or institutional issues to make them accessible to wider audiences. This function is particularly important in areas where the complexity of the systems risks creating an excessive distance between experts and citizens. The public visibility of an innovation depends largely on this ability to make information understandable.

A network of translations — Developers, operators, public institutions, investors, local communities, and the media do not participate in the same project in the same way. Each has its own objectives, constraints, and languages. Yet, the success of digital finance ecosystems depends precisely on their ability to cooperate. This cooperation is only possible through a continuous series of translation operations that allow these different worlds to remain connected within a single network.

3. A plurality of languages

An often underestimated challenge — The diversity of actors within digital finance ecosystems is only part of the problem. This diversity of positions also corresponds to a diversity of languages. Participants may discuss the same project, use the same words, and attend the same meetings, yet attribute different meanings to the concepts that structure their discussions. The difficulty, therefore, lies not only in the flow of information but also in the flow of meaning.

Technical language — Developers and architects of digital systems employ a vocabulary shaped by the design and operational constraints of infrastructures. They speak of distributed ledgers, consensus, smart contracts, protocols, digital tokens, and oracles. These concepts have precise meanings within their professional world but often remain opaque to those who do not share this technical culture.

A logic of operation — Technical language primarily seeks to describe how systems function. Its main objective is precision. Ambiguities must be minimized to ensure the consistency of the designed systems. This requirement is a strength in the field of engineering, but it can also become a challenge when concepts must be presented to audiences with different backgrounds and needs for understanding.

Financial language — Actors in the financial world generally approach the same realities from different perspectives. They speak of valuation, liquidity, risk, return, assets, markets, and investment mechanisms. Technical infrastructures interest them insofar as they produce observable economic effects. This shift in perspective profoundly transforms how innovations are described and evaluated.

A value-driven logic — Where the engineer seeks to understand how a system works, the investor primarily seeks to understand the mechanisms of value creation and circulation. The same systems can thus be described from very different perspectives. A blockchain becomes an infrastructure for some and a potential market for others. This change in language reflects a change in purpose.

Political language — Public officials and institutional decision-makers use yet another register. They reason in terms of sovereignty, economic development, the common good, inclusion, spatial planning, and national strategy. Innovations are no longer evaluated solely on the basis of their technical or financial performance, but also according to their collective consequences and their contribution to public objectives.

A guiding logic — Political language aims less to describe mechanisms than to define directions and establish priorities. It seeks to integrate projects into broader visions of economic and social development. This approach is essential for coordinating numerous stakeholders, but it also introduces new interpretations of the relationship between technical realities and the collective ambitions associated with them.

Regulatory language — Lawyers, regulatory authorities, and compliance bodies also have their own lexical universe. They speak of authorization, liability, compliance, evidence, traceability, data protection, and governance. Their role is to define the conditions under which innovations can be deployed without disrupting existing legal and institutional balances.

A security-based approach — From this perspective, innovations are analyzed through the risks they may generate as much as through the opportunities they create. Regulatory language seeks to frame transformations without hindering them. It is an essential step for any innovation wishing to move beyond the experimental stage and become a lasting part of economic and institutional practices.

Citizen language — Finally, citizens, local communities, and potential project beneficiaries use a vocabulary distinct from all the others. They speak of jobs, income, access to services, trust, transparency, and local development. Their understanding of these systems relies less on technical or legal mechanisms than on the concrete consequences observable in their daily lives.

A logic of experience — This perspective is often overlooked by experts, yet it plays a decisive role in the social acceptance of innovations. A project can be technically sound, financially viable, and legally compliant without gaining support if it remains incomprehensible to those it is supposed to affect. Lived experience, therefore, also constitutes a language in its own right.

The difficulties of transition — These different languages are not incompatible. They often describe the same realities from different perspectives. However, the transition from one to another is never automatic. Concepts change meaning, priorities shift, and evaluation criteria transform. What appears essential in one world may seem secondary in another.

The risk of compartmentalization — When translation mechanisms become insufficient, each group gradually tends to retreat into its own language. Exchanges continue, but mutual understanding diminishes. Actors use the same terms but attribute different meanings to them. Misunderstandings then multiply, often without being immediately apparent.

Translating translations — In complex networks, the difficulty is no longer simply translating a technology for a non-specialist audience. It is also necessary to translate the translations themselves. The representations produced by engineers must be understood by financiers. The expectations of local authorities must be intelligible to government agencies. Political objectives must be linked to operational realities. Translation becomes a continuous process of ensuring coherence.

A direct consequence — The more languages are used, the greater the need for intermediation. Digital finance projects, therefore, do not primarily suffer from a lack of information. They are confronted with a plurality of interpretive frameworks that must be continually articulated. This articulation is one of the essential conditions for the trust, coordination, and sustainability of contemporary socio-technical networks.

4. The chains of intelligibility

A necessary synthesis — The preceding analyses have examined, in turn, the diffusion of innovations, the sociology of translation, reference chains, boundary objects, invisible infrastructures, and the plurality of languages that characterize contemporary networks. Despite the diversity of these approaches, a common idea gradually emerges: the circulation of technologies, data, or assets is never sufficient to ensure their understanding. A second condition appears necessary: the construction of a shared intelligibility.

A second infrastructure — When observing a digital finance system, attention is generally focused on its visible infrastructures: digital platforms, blockchain ledgers, validation mechanisms, traceability systems, or regulatory procedures. Yet, behind this technical architecture lies another infrastructure, much less visible but just as essential. This infrastructure consists of all the operations that make the system understandable to those who must use, finance, govern, or trust it.

An intangible infrastructure — This second infrastructure does not rely on servers, software, or protocols. It relies on briefing notes, analyses, presentations, training sessions, exchanges, articles, meetings, and discussions. It mobilizes translators, mediators, experts, journalists, public officials, and field workers. Its objective is not to make the system work but to make it understandable.

A comparable function — From a certain point of view, this infrastructure of intelligibility fulfills a function comparable to that of technical infrastructures. The former ensures the flow of data, the latter ensures the flow of meaning. The latter enables transactions, the latter enables understanding and acceptance. The former connects information systems, the latter connects different frames of reference. These two dimensions are distinct but deeply interdependent.

Translating without simplifying — This function of translation is often misunderstood. It is sometimes equated with a simple effort at popularization aimed at simplifying complex realities. Such a conception is reductive. Translating does not mean eliminating complexity but making it accessible. The goal is not to simplify the described mechanisms but to reformulate them in language adapted to the needs and knowledge of the various audiences involved.

Preserving the essentials — All translation necessarily involves selection. It is impossible to simultaneously convey all the technical, financial, legal, and institutional details that make up a complex system. The challenge then lies in identifying what must be retained to maintain understanding of the system. Translation is less about reducing than about preserving the essentials through forms adapted to different contexts of use.

A chain of reformulations — In complex networks, this operation never happens only once. Each actor, in turn, reformulates the elements they receive. Developers explain the technical mechanisms to operators. Operators present them to decision-makers. Decision-makers integrate them into public policies. The media make them accessible to wider audiences. Intelligibility thus circulates through a continuous succession of translations.



Maintaining consistency — This proliferation of reformulations could lead to a fragmentation of meaning. Yet, networks can only function sustainably if a minimum level of consistency is maintained between the different versions of the project. Each translation must be sufficiently adapted to its audience while retaining a link with other translations produced elsewhere in the system. It is this continuity that allows participants to remain engaged in the same collective dynamic.

Constant vigilance — This consistency is never a given. Contexts evolve, participants change, and technologies transform. What was understood yesterday may become ambiguous tomorrow. New participants join the network while others leave. Maintaining intelligibility therefore requires continuous work to adjust, clarify, and update collective representations.

Preventing breaks — An essential function of intelligibility chains is precisely to prevent breaks. The misalignments described by John Law, the divergences in interpretation observed by Susan Leigh Star, or the disruptions in communication analyzed by Bruno Latour often appear when translation mechanisms become insufficient. Actors then continue to participate in the same project while developing increasingly divergent understandings.

Silent ruptures — These ruptures generally do not take the form of spectacular conflicts. They appear gradually. Objectives become less clear. Priorities diverge. Concepts lose their stability. Decisions shift. The network continues to function outwardly, but its internal coherence weakens. Chains of intelligibility play a crucial preventive role by limiting the accumulation of these discrepancies.

Building trust — This function is closely linked to the issue of trust. In complex systems, trust is not based solely on technical performance or legal guarantees. It also depends on the actors' ability to understand what they are doing, why they are doing it, and how their actions relate to those of other participants. Trust is inseparable from intelligibility.

Informed trust — Actors more readily place their trust in systems whose fundamental logic they understand. They do not need to master every technical detail to participate effectively in the system. However, they must have a sufficient level of understanding to situate their own role within the whole. Chains of intelligibility contribute precisely to producing this informed trust, which enables collective action.

A different perspective on communication — From this perspective, the activities of translation, documentation, and explanation take on a new meaning. They are no longer an optional addition to existing infrastructures. They become one of the components of the system itself. Producing analyses, writing notes, publishing articles, or organizing exchanges then becomes a matter of maintaining the cognitive infrastructure that supports the network's functioning.

A provisional conclusion — Digital finance systems are thus based on two complementary infrastructures. The first ensures the circulation of data, assets and transactions. The second ensures the circulation of meaning, understanding and trust. Both are necessary. A technical infrastructure without an intelligibility infrastructure remains difficult to appropriate. An intelligibility infrastructure without a technical basis loses its credibility. The solidity of the network depends on their permanent articulation.

Conclusion — The risk is not in doing too much

A simple question, a complex answer — This article stemmed from a seemingly modest question. Does the regular publication of articles, analytical notes, and documents devoted to digital finance constitute a form of communication overload? Behind this question lay a much deeper debate concerning the very nature of contemporary socio-technical networks and the conditions for their sustainable operation.

A flawed diagnosis — Criticisms of information overload are based on sound arguments. Herbert Simon demonstrated that attention is a limited resource and that the proliferation of messages can lead to saturation and confusion. However, these analyses generally assume that the information disseminated is already understood by those who receive it. Yet this assumption often proves fragile when dealing with complex technologies, emerging innovations, or systems involving numerous and diverse actors.

A persistent confusion — Throughout this reflection, a crucial distinction emerged. Informing, communicating, and ensuring understanding are not one and the same. A document can be disseminated without being understood. Information can circulate without producing shared meaning. An innovation can be technically operational while remaining largely opaque to those who are called upon to use, fund, or govern it. The circulation of content never guarantees the circulation of its meaning.

A more frequent deficit — The work of Everett Rogers, Michel Callon, Bruno Latour, John Law, and Susan Leigh Star ultimately leads to a convergent conclusion. Complex networks generally suffer less from an excess of information than from a lack of translation. The most frequent difficulties rarely stem from an overabundance of explanations. They arise more often when the mechanisms enabling mutual understanding become insufficient or gradually disappear.

Translation at the heart of networks — Innovations do not spread on their own. Facts do not circulate on their own. Complex objects do not speak for themselves. In each case, actors perform continuous work of reformulation, interpretation, and making intelligible. This work is not external to the networks. It directly contributes to their construction, stabilization, and maintenance over time. Translation thus appears as one of the constitutive dimensions of collective action.

A constant requirement — This necessity never completely disappears. Each new actor joining a network brings with them their own references, constraints, and questions. Every technological development alters existing balances. Every regulatory or institutional change demands new explanations. Understanding is never acquired once and for all. It must be reconstructed as the network transforms.

Networks forget — Collectives possess a more fragile memory than they often imagine. What seemed perfectly understood at a given moment can gradually become obscure. Knowledge disperses, actors change, and contexts evolve. Without permanent mechanisms for transmission and reformulation, networks risk losing some of the intelligibility that ensured their cohesion. Translating then consists as much of transmitting as it does of preserving.

A strategic condition — In digital finance ecosystems, this question takes on particular importance. The technologies used become more and more abstract, the devices more and more sophisticated and the value chains more and more extensive. In such a context, intelligibility ceases to be a simple educational issue. It becomes a strategic resource in the same way as technical infrastructures, financial mechanisms or regulatory frameworks.

A collective asset — The capacity of a network to produce and maintain shared understanding now constitutes a form of collective asset. It conditions trust, facilitates coordination, reduces misunderstandings and promotes the appropriation of innovations. Conversely, when this capacity weakens, the risks of misalignment increase and the coherence of the system becomes more difficult to preserve. Intelligibility thus produces a value that goes far beyond the sole question of communication.

Another reading of publications — From this perspective, strategic notes, analyses, documentary files or blog posts take on a different meaning. They do not just represent additional content added to an already abundant flow of information. They participate in maintaining the chains of intelligibility that connect the different actors in the network. Their function does not consist only of informing but of maintaining the very conditions of collective understanding.

The paradox of success — The more effectively these mechanisms work, the more invisible their necessity tends to become. The actors then end up considering the acquired understanding as a natural state. Translation efforts can appear redundant precisely because they have been successful. This paradox undoubtedly explains why mediation activities are sometimes perceived as excessive even though they contribute to preserving the balance from which all participants benefit.

A final lesson — The major contemporary systems are based on two complementary continuities. The first ensures the circulation of resources, data, evidence and assets. The second ensures the circulation of meaning, understanding and trust. One is technical, the other cognitive. One is visible in the infrastructures, the other in the translation operations which connect different worlds. The fragility of one always ends up affecting the other.

An answer to the initial question — Therefore, the question of whether two or three articles per week devoted to the translation of the technological discourse of digital finance constitutes an excess of communication receives a more nuanced answer. It all depends on the function we attribute to these publications. If they simply repeat information already understood, they may actually appear superfluous. But if they help maintain the intelligibility of a complex network, their role goes far beyond that of simple institutional communication.

A long-term issue — Projects that combine digital technologies, finance, natural resources, public institutions and territories are not built solely through investments, regulations or technical innovations. They are also constructed through stories, explanations, reformulations and collective learning. The quality of these mediations largely determines the capacity of networks to last, to expand and to produce the effects they seek.

A final formula — In a socio-technical network, translation is not a communication supplement. Nor is it a simple educational exercise intended to support innovations. It constitutes one of the conditions of their social existence. Networks are born from translation, live from translation and are transformed by translation. It is therefore not because we communicate that the actors understand; it is because we maintain the chains of translation that the networks continue to exist.