AuthentiQ

White Paper 1.0 | 21.12.2025

envienta™

Covision • OpenRDI • Collaboration

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Introduction – New Perspectives on the Social and Technological Paradigm Shift

The current civilizational system exhibits extreme tensions due to the limitations of hierarchical power structures, closed forms of ownership, and linear development models. This metacrisis—an interplay of the crises of the biosphere, technosphere, and infosphere—necessitates the emergence of a new, network-based civilization in which decentralization, collective intelligence, and digital social participation become foundational values, and in which the tools of technological progress are placed in the service of social justice.

Social sciences typically examine three main interpretive frameworks: modern, postmodern, and metamodern modes of thought. While the modern paradigm emphasizes rationality and scientific progress, postmodern relativism has produced identity crises and fragmentation. The metamodern approach transcends both, offering a systemic and complex analytical lens in which emotion and logic, as well as individual and collective interests, are brought into balance. **This perspective—integrating elements of social competence into value creation—enables the development of new narratives capable of addressing climate challenges, resource depletion, and digital inequalities simultaneously.**

The interpretation of the social need hierarchy emerges as a central element: beyond basic physiological requirements, security is increasingly provided through social participation and open knowledge sharing.

In summary, we propose an evolutionary trajectory in which a networked, informational civilization is based on the symbiosis of the individual and the collective. This implies a transition toward a new, network-based, decentralized social and economic system—one that constitutes a global digital infrastructure, a public utility enabling the free, transparent, and decentralized flow of information and knowledge for all humanity.

The key to these solutions lies in systemic transformation—in the development of protocols that enable the self-regulation of social processes and the emergence of new societal interfaces.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

This study is unconventional in that it offers readers a broadened, multidisciplinary understanding of contemporary civilizational challenges and the required paradigm shift, framed through the terminology and perspectives of international civilizational theories, technological decentralization, and research on collective intelligence.

Keywords: decentralization, networked civilization, collective intelligence, digital society, planet-scale public utility, transparent social interfaces, metamodern thinking

Authors

Áron Luczek
Envienta Magyarország Egyesület
LinkedIn

András Murzsicz
Envienta Magyarország Egyesület
LinkedIn

Gábor Kiss
Envienta Magyarország Egyesület
LinkedIn

Bálint Drahota
Envienta Magyarország Egyesület
LinkedIn

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

I. The Era of Global Transition (Macro Context)

"The real problem of humanity is that we have Paleolithic emotions, medieval institutions, and godlike technology." — Edward O. Wilson

— How can we understand, illuminate, and transcend this insight?

We have moved beyond our natural relational frameworks and transitioned into a technological civilization. Our traditional modes of thinking, our societal structures (the *illusion of democracy*: citizens as uninformed participants), and our evolutionarily inherited behavior patterns and instincts (fight-or-flight responses) no longer support our ability to adapt, solve, or heal our emerging problems.

The depth and speed of today's technological and societal transformation are historically unprecedented. Yet a paradigm shift is also taking place *within the human being*. Globally accessible knowledge and information—namely, the use of the internet—are quietly reshaping us socially and culturally.

1.1 A Diagnostic Portrait of Our Present Era

The current global crises reflect cultural and religious differences between nations amid an ongoing global power realignment. The relative weakening of Western hegemony gives rise to new conflicts, which in turn lead to cooperation agreements that remain prosperous only for limited periods. These cyclically recurring phenomena can be substantiated with numerous historical examples.

Thus, the present state of the world can be interpreted as the intersection point of systemic tensions:

- Individual consciousness – collective systems
- Hierarchy – network
- Closed ownership – open commons
- Exploitation – regeneration
- Representative democracy – participatory processes

These concepts raise new questions about the meaning of human existence, social responsibility, and possible modes of coexistence. The current civilizational threshold is both a convergence of economic, political, and environmental challenges and the brink of a

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

systemic transformation known as the ***metacrisis*** (Consilience Project, Daniel Schmachtenberger). **This metacrisis, understood as the totality of mutually reinforcing and self-amplifying crisis processes, simultaneously affects the three foundational layers of human existence: the biosphere, the technosphere, and the infosphere—or in other terminology, the natural, the social, and the "networked" realms.**

Thus, the parallel crises of multiple systems can be interpreted as a single, complex cluster of interrelated phenomena—interdependent layers that together constitute our lived reality. Existence is **interdependent** and dynamic, illuminated and interpreted only through interactions and relational frameworks. **Metamodern** thinking, in this context, emerges from ***meta-theory***: a theory about theories, examining how different domains of interpretation relate to and inform one another.

1.2 Major Systems of Thought:

- Modern thinking
  - Belief in progress and development
  - Pursuit of objective truth
  - Rationalism, primacy of science
  - Grand narratives (e.g., Enlightenment, technological modernization)
  - Separation of humans and nature
  - Optimism and a linear view of progress

- Postmodern thinking
  - Doubt toward grand narratives
  - Relativism of truth, the coexistence of multiple truths
  - Irony, skepticism, deconstruction
  - Identity and meaning crisis
  - Cultural pluralism and fragmentation

- Metamodern thinking
  - Reconstructed yet critical belief in meaning
  - Networked complexity thinking, coherent integration
  - Integration of individual and collective development
  - Alignment of emotion and reason
  - Experimentation with new narratives, an open vision of the future

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

The classical logic of the past has become a constraint on human understanding: a mode of thinking fixated on definitions and narrow details is no longer adequate for grasping reality. Instead, creative analogies, symbols, and dynamic concept formation are required. A growing need for a unification of the sciences is now clearly observable. **This also highlights that, from an ontological perspective, none of the processes of our ecology nor any physical law can be fully understood within the limitations of a single interpretive dimension or framework. In physics, a "closed system" is a hypothetical construct isolated from its environment (influenced only by internal forces, constant over time). In reality, however, meaningful communication is only possible about the interactions of *open systems*. Consider, for example, the states of water: any perceived change depends on the observer's own state and perspective.**

Therefore, when examining multiple planes simultaneously, it is NO LONGER SUFFICIENT to define or interpret events or phenomena in the Aristotelian sense (polarity, either–or logic). It is now well understood that the observer influences the outcome of the event. Consequently, inherent contradictions arise: a law that holds true within one interpretive plane may not necessarily hold within another. Higher-complexity systems typically contain the properties of the systems beneath them but possess greater "degrees of freedom," requiring an expansion of the governing principles.

This points to an urgent contemporary need to understand more deeply and broadly the reality in which we exist. The rapid, exponential transformation unfolding today fundamentally reshapes the domains of human experience, opening space for the recognition and comprehension of multidimensional realities—so they may become integrated into everyday life through conscious application.

1.3 Overview of the Three Fundamental Layers of Human Existence:

It can now be stated with confidence that the biosphere, technosphere, and infosphere are intertwined, interdependent systems that together constitute the full **eco-socio-technical** environment in which human civilization operates and evolves.

The **biosphere** forms the foundation — the ecological substrate of living systems and the natural environment upon which everything else is built.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

The **technosphere** emerges through the use of resources extracted from the biosphere, transforming nature through technological means for human purposes—resulting in the formation of power structures as a consequence of this transformation.

The **infosphere** is the digital layer of the technosphere, where information flows, governance, and knowledge sharing take place. This layer exerts feedback on the functioning of technological systems as well as on our relationship with the biosphere.

The reason and purpose of adopting an interdisciplinary approach is to create systems that are ecologically **sustainable**, **socially** just, and **technologically efficient** at the same time—systems that enable harmonious coexistence between humans and their environment in a complex world.

1.4 Social Need Hierarchy:

1.4.1 Natural Law, Social Adaptation

The functioning of **self-organizing** systems and **decentralized networks** is grounded in the fundamental principles of biological and physical systems. Evolution, **ecosystem dynamics**, and the **theory of complex adaptive systems** all demonstrate that long-term sustainable structures operate through distributed feedback. Although human civilizational development has diverged from its inherent natural foundations, it increasingly recognizes these underlying laws—albeit often through confronting societal anomalies.

It is now evident that societies flourish when cooperation and individual freedom are held in balance. **Decentralized systems provide this equilibrium even within the digital sphere. Technology therefore offers additional surfaces and vectors for extending human cognitive capacities.**

1.4.2 Needs Reinterpreted

- **Basic needs:** Authentication and accessibility of information; securing the conditions for life (food, housing, healthcare, belonging).
- **Safety needs:** Through community-driven innovations and knowledge sharing, individuals and communities create and regulate the environment

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

(common-access points) in which security arises not from self-maximization but from social participation.

- **Community needs:** Strengthening social relations through community-based solutions. Open-source research and development of participatory society and universal social objectives, followed by their innovative implementation (OpenRDI).

1.5 Universal Cooperation

We must acknowledge that none of today's major problems can be solved regionally, because our problems have become global in nature.

Typically, we live as citizens embedded in various cultures across the planet, inheriting several thousand years of civilizational development. Our problems are shared. — *But what can those do who possess critical thinking and a heightened social sensitivity?*

1.5.1 What Could New Universal Visions Be?

The maximization of accumulation as a socially legitimized mode of life has now inflicted visible wounds upon our entire civilization. Michel Bauwens argues *a priori* that we need a **networked form of social cohesion.**

But why?

- Because society encompasses the market economy—not the other way around. Thus, a "socio-economic" framework or network is required, one that allows regionally perceived truths to be transcended (e.g., commons, value-based society).

- **The structured facilitation of international dialogue enables a global overview of the system, including the analysis and reinterpretation of its fundamental concepts and axioms.**

Kurt Gödel states explicitly that in any sufficiently complex axiomatic system capable of handling basic arithmetic statements, there will always be true statements that cannot be proven. This raises not only mathematical but also philosophical questions about truth, provability, and the nature of human knowledge—highlighting the limits of logic and

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

mathematics, as well as the inherent constraints of scientific understanding. It also encourages us to examine reality with multidimensional and complex approaches, acknowledging its layered nature. In times of exponential change, **truth can be fully described only by an ever-expanding sequence of richer logical frameworks—though it *can* be described.** We observe this same cosmic dilemma between classical physics and quantum mechanics—and further, in neurobiology, in the interactions between neural networks and astrocyte networks.

If we attempt to describe this as a process of conscious activity, our descriptive tools must possess different parameters than those of the past. Phenomena occur across multiple dimensions and coordinate systems. These broader interrelations can only be approached if our methods and logical systems evolve accordingly and flexibly converge toward the tendencies of manifestation that exist across multiple dimensions.

This demands the use of multiple interpretive planes even in everyday life.

Psychological research also shows that in a well-illuminated, transparent environment, the internal cognitive activities of humans become optimized and culminate in creativity. This expanded awareness allows us to assume universal—and multidimensional—forms of individual and social responsibility that transcend personal interests, revealing the potential pathways toward a planetary civilization.

The **Kardashev scale** (1964) is a theoretical framework originating from astrophysics that classifies the technological advancement of civilizations based on the amount of energy they are capable of harnessing, divided into three main categories:

- **Type I Civilization:** Capable of harnessing and integrating all available energy on its home planet.
- **Type II Civilization:** Capable of utilizing the full energy output of its star.
- **Type III Civilization:** Capable of controlling the total energy of its entire galaxy.

Although originally designed for classifying extraterrestrial civilizations, the Kardashev scale offers a perspective—a metaphorical framework—for understanding and narratively structuring technological, societal, and environmental development.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

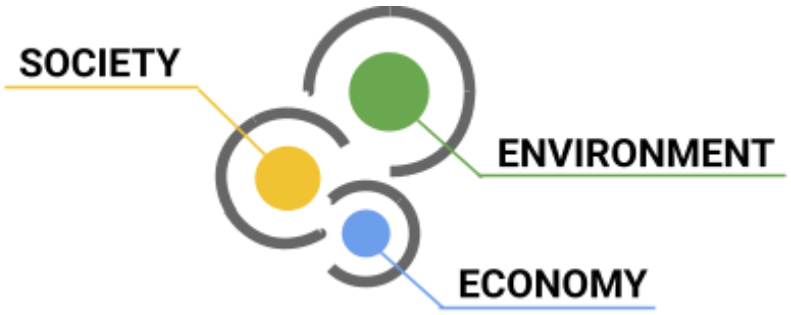
H-1093 Budapest, Pipa u. 2/B

1.5.2 Redefining Energy and Resources

In this context, the definition of "energy" can take multiple forms when we create a differential analysis based on modes of operation:

- Information, knowledge, and resources flow freely through networks as forms of "living energy."
- Interactions of social cooperation and collective intelligence enable innovative approaches to solving complex problems.
- Sustainable management of natural resources grounded in the equitable stewardship of the planet's ecosystems.

Within this framework, the concept of "energy" acquires an expanded interpretation: beyond physical (work-performing) energy, it encompasses informational, cognitive, social, and ecological resources. This allows **thermodynamic principles**—particularly the laws governing energy and material flows—to be understood in a broader sense and interpreted through the lens of open systems.



The internal functioning of different systems (e.g., economic, social, ecological) and their informational interactions with their environment can also be interpreted through the concepts of thermodynamics, as they all exhibit inputs, outputs, transformations, and losses. The second law of thermodynamics introduces the concept of **entropy** to describe a system's internal state—the measure of disorder or the loss of usable energy. This helps identify the qualitative gradient within which a given system—whether technical, social, or ecological—operates efficiently.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

1.5.3 Networks as Integrators of Energy

Decentralization, collective intelligence, and digital social participation together form the "fuel" of a network-based civilization, enabling the management of energy at a Kardashev Type I level:

- **Decentralization:** Decision-making and resource governance are distributed across both local and global scales.
- **Collective intelligence:** The knowledge and capabilities of millions of individuals and communities aggregate to create new qualities within the informational sphere.
- **Digital social participation:** Access to information and opportunities for participation become truly democratized, enabling citizens to become active, informed contributors.

Decentralized systems, shared knowledge, and social participation collectively constitute the moral and cognitive infrastructure without which development—interpreted solely through energy consumption—would be unsustainable or even self-destructive.

1.5.4 Integrating the Metamodern Paradigm

Linking Kardashev Type I with metamodern thinking is a narrative choice that simultaneously embraces the technological ambitions of modernity, the pluralism of postmodernity, and the pursuit of complex balance:

- Dynamic integration of emotion and rationality, individual interest and collective well-being.
- Concurrent affirmation of regeneration, social justice, and innovation.
- A developmental trajectory that advances not only materially but also culturally and spiritually.

1.5.5 Summary: Kardashev Type I as Developmental Myth, Value, and Its Role

Kardashev Type I offers a coherent and visionary framework that:

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

- **Captures the essence of a networked civilization in a simple and comprehensible way.**
- **Supports social discourse around regenerative, decentralized, and knowledge-based futures.**
- **Enhances transparency across technological, social, and ecological dimensions (Open RDI).**
- **It contributes to strengthening the metamodern narrative, which bridges the divides between the modern and postmodern paradigms.**

Thus, it becomes a new evolutionary myth—one that may serve as a key concept for the societal transformations of the present and near future, laying the foundation for the ideal of a network-based, planet-scale, and cooperative society discussed throughout this document.

1.6 New Levels of Social Responsibility

Our society is undergoing transformation, and as an evolutionary response, new perspectives on social responsibility are emerging—perspectives that transcend isolated and closed conceptual frameworks. As a result, methodological research and both invasive and non-invasive applications aligned with integrative metamodern thinking are coming to the forefront.

Until now, humans have defined themselves as part of nature and as social beings. Today, through digital networks and collective knowledge-sharing, humanity has entered a new existential sphere. Previously isolated forms of knowledge—local traditions, written documents, hierarchical structures—are increasingly reorganizing into networks.

In parallel, the collective intelligence enabled by decentralized, network-based operation opens new levels of human understanding as forms of shared social participation and responsibility:

- **Scientific inquiry is liberated from the narrow constraints of the market economy (e.g., open science).**
- **Open-source research and its organizational forms emerge (e.g., DAO-based RDI platforms).**
- **Collective and universal truths begin to form (e.g., value-based societies).**

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

- **New forms of community consensus arise (e.g., public utilities in the form of blockchain-based protocols and platforms).**

The internet and digital communication have made it possible for information to remain in constant motion, allowing the interconnections of global systems to become increasingly transparent and applicable. This includes the emergence of **decentralized financial systems** (DeFi), **blockchain-based self-organizing** enterprises **(DAOs)**, and smart contracts.

Let us ask the essential question: *What is required for this transformation to take place?*

Einstein's often-cited axiom states: *"We cannot solve our problems with the same thinking we used when we created them."*
In this sense, it becomes evident that the technological explosion and the presence of machine intelligence compel us to develop interdisciplinary responses to these fundamental challenges.

1.6.1 Ethical Attention Economy and Cognitive Responsibility

Attention has become one of the most important social resources of the 21st century.
In the digital environment, economic value is generated by the direction and quality of human focus. Platforms and networked systems compete for the time and emotional energy of human presence. **At the center of this process is not information itself, but the *cognitive space* in which information is transformed into meaning.**

The modern attention economy is built upon the management of consciousness. Algorithms analyze and reproduce attention patterns, thereby tuning individual and collective perception of reality. Over time, this logic leads to mental exhaustion, informational distortion, and social polarization. Systems built on attention often reward the *quantity* of engagement while neglecting the *quality* and ethical dimension of attention.

The goal of an ethical attention economy is to restore balance between consciousness and technology, thereby elevating social responsibility to a new level.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

1.7 The Evolution of Civilizational Cycles; Paradigm Shift

Looking back through history, we find countless precedents showing that the collapse of major socio-economic systems has consistently been followed by the emergence of decentralized structures. From the Sumerian city-states to medieval trade leagues, decentralization has always been an adaptive response to the limitations of centralized power systems.

Traditional GDP-based growth paradigms are unable to address the exponentially accelerating pace of external pressures (climate change, migration, technological explosion, digital transformation). At the same time, scientific development—especially in quantum physics and nanotechnology—is radically redefining our understanding of work, energy, and matter. This has direct impact on fundamental principles of resource management and on everyday life.

Its significance also lies in the fact that historical periods of decentralization have been less durable. In the past, feudal tendencies—and today, the power instincts and regional interests of capitalism—heavily influence social decision-making and historical perspectives.

Yet the key to success lies in synchronizing technological development, the transformation of economic models, and cognitive evolution. At our current level of technological advancement, the internet and advanced communication (the immediacy of information-sharing) provide us with a complex knowledge base that allows us to learn from the failures of the past and to transcend our repetitive historical patterns.

By addressing open-source technological solutions in an integrated way, we now possess the means to respond to global challenges. These components include: AI, IoT, Web3, distributed ledger technologies, digital product passports, and Creative Commons 3.0 | 4.0.

— And why is this the case?
Because today the greatest value lies in data and the information extracted from it.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

1.7.1 The World of Information Networks

"Data is the new oil." — Clive Humby

The deepest driving force behind modern civilizational transformations is information. **Information is a dynamically flowing, self-organizing entity which, through the advancement of network-based culture, relocates the interactions and interdependencies of civilizational layers into new dimensions.** Within the informational sphere, the autonomy of information and its organization into distributed networks reshapes energy use, the economy, politics, education, and the entire social structure—including ourselves. Information is the raw material of cognition, something we are capable of processing, storing, and iterating as human beings. **The freer the flow of information, the more complex systems and networks emerge.**

The distribution of information can be understood as data transfer, yet it necessarily involves a cognitive commitment on the part of the receiver. The reception of information simultaneously triggers the requirement for its interpretation, a process through which meaning is constructed by activating mental structures. Why? Because every generated vibration carries information and, in thermodynamic terms, tends toward a state of equilibrium—in the context of information, a quasi "Aha moment, I understand" experience.

As a consequence of networked existence, knowledge organizes itself into interconnected nodes that transcend previous structural limitations, forming new civilizational patterns. The stability of a network results from a multitude of connections and their dynamic adaptability. Therefore, within the individual coordinates that make up such patterns, divergent cognitive processes can be observed.

The **DIKW model** represents a form of knowledge hierarchy and knowledge management that describes the four stages of information processing. The model illustrates how raw, unprocessed data becomes meaningful information, then valuable knowledge, and ultimately wisdom. Making tacit knowledge explicit is what enables informed decisions and purposeful action.

- **Data: Raw,** unprocessed facts, numbers, and observations that are, by themselves, without context or meaning. **Data represents the lowest level of reality-mapping.**

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

- **Information:** The organized, structured form of data that is already relevant and contextualized, thus capable of supporting decision-making. **(Information is interpreted data.)**
- **Knowledge:** The analysis, interpretation, and synthesis of information, representing understanding and experiential grounding in solving complex problems. Understanding arises from recognizing the relationships between pieces of information. **Knowledge is the integrated, functional form of understanding.**
- **Wisdom:** The level of knowledge that enables one to make thoughtful, deliberate, and ethical decisions based on deeper understanding—while considering broader contexts and long-term consequences. **Wisdom is the integration of knowledge into moral, social, and ecological dimensions.**

The more rationalized variation of the DIKW model is **DIKD**, which replaces the final stage of wisdom with **decision**. This modification transforms the traditional knowledge hierarchy by refining the transition from understanding to action. The DIKD model is structured as follows:

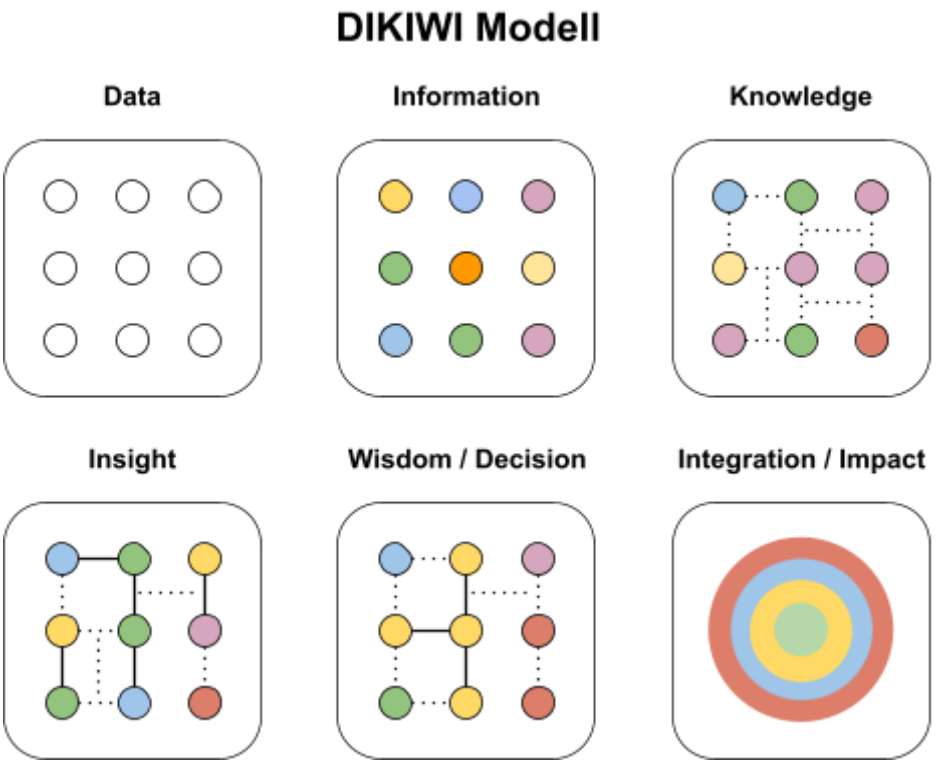
- **Data:** Raw, unprocessed facts and observations.
- **Information:** Organized and contextualized data.
- **Knowledge:** The analysis and application of information.
- **Decision:** Concrete, targeted decisions and actions based on knowledge.

Scientific consensus generally regards the DIKW model as a foundational framework in knowledge management and information systems, yet there is an increasing shift toward decision-centric approaches that bridge theory and practice. The **DIKD model** represents this more advanced, action-oriented perspective, foregrounding weighted and context-aware decision-making rather than the abstract concept of wisdom. This is particularly important in fields such as business intelligence, artificial intelligence, and decision-support systems, where data and knowledge must be transformed into immediately actionable decisions.

Today, several decision-theory-oriented extensions are gaining prominence. The **DIKIWI model**, for example, describes six levels of human cognition and information processing, mapping the chain through which raw data evolves into meaningful, logically interpretable collective human understanding.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B



Each level builds upon the previous one and represents its qualitative transformation.

Data – the starting point.

Data by itself is a raw fact: a measurement result, event, number, set, or phenomenon. It carries no inherent meaning—only the *potential* for interpretation.

Information – data acquires meaning.

When data is placed in context, organized, and interpreted, it becomes information. For example, a datum is no longer just a number but the description of a message or phenomenon.

Knowledge – information becomes experience.

Knowledge is the practical and cognitive processing of information. This is the level at which a person recognizes relationships and draws conclusions.

Insight – knowledge reveals deeper patterns.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Insight not only *knows* but *understands* why things happen. This level of recognition generates new patterns as well as logical and emotional connections. (Our inner vision must oscillate in order to break out of one-sidedness and arrive at true in-sights.)

Wisdom (Decision) – insight is elevated to an ethical level.

Wisdom—and the decisions derived from it—not only understands interrelations but also weighs their social and moral consequences. This represents the necessary ethical dimension of all meaningful decision-making.

Integration / Impact – knowledge becomes communal.

Integration refers to the social embedding of acquired wisdom: the open sharing of knowledge and its transformation into collective intelligence. This is the point at which individual insights become valuable on a networked scale.

The accompanying diagram (referred to in the text) extends the conceptual progression by one further step: **impact**, where value-based action—arising from individual integration—achieves measurable environmental and societal effects. The continuous interaction between internal and external environments catalyzes an ongoing process of collective learning.

T.S. Eliot, the American poet, illuminates the same ideas in his own words in the following quotation:

"Where is the wisdom we have lost in knowledge?

Where is the knowledge we have lost in information?" — T.S. Eliot

Analogous needs for conceptual scaling also emerge within the behavioral sciences. In the socio-sphere, three interpretive layers describe the operating mechanisms of human cognition:

- **When we engage in concrete activity**, we possess a specific or intentional focus; conditions and the dominance of the external world prevail; sensory data streams shape perception — a *closed* aspect.
- **Belief systems**, socio-psychological and cultural environments, the human world of imagination, desire–fear orientation, the relationship between the self and others — an *aspectual dissonance* emerges.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

- **Long-term memory**, broader environmental and temporal awareness, cognitive experience, the inner world, creativity, social competence, diffuse attention — *multiple aspects* are integrated.

This bioelectrical, subliminal network is a tacit—implicitly operating—system that subtly, almost imperceptibly yet fundamentally influences and shapes an individual's behavior, decisions, and perceptions. The cognitive processes unfolding within this mental space form networks and gravitate, like a kind of "dark matter," toward a planetary, value-based society—one that illuminates and renders transparent our social relations, while also incorporating moral considerations such as **the Paul Grice maxims.**

Interestingly, this subliminal cognitive–behavioral network can be algorithmically modeled using elements that can be quantitatively weighted, such as:

- **Quantity:** Provide sufficient and adequate information — "no more, no less."
- **Quality:** Communicate truthfully — that is, the interacting parties must be sincere.
- **Manner:** Approach the topic competently — be clear and understandable.
- **Relevance:** Stay on topic — maintain communication that is contextually appropriate.

The resulting *consequence layer* is suitable for both quantitative and qualitative inferences. This includes the scalable dynamics of self-maximization versus social participation, or indicators such as the ecological footprint. Its comprehension is therefore a process grounded in mutual intention, in which communicative partners may choose to apply the **Paul Grice maxims** — whether within a platform, between platforms, or between a platform and external actors. Such an approach opens pathways toward the intelligent management of open social dialogue and global interaction.

— *What justifies and what perspective supports the illumination of communication itself?*
Immanuel Kant's categorical imperative places all the above into a timeless horizon:
"Act only according to that maxim whereby you can at the same time will that it should become a universal law."
Today, technological conditions finally exist to assign concrete, operational mechanisms to the long-invoked notion of "thinking differently."

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

In the informational sphere, the relational structure of communities transcends geographical or national belonging, because communities increasingly form through the shared processing and interpretation of information. Our perceptual capacity also becomes progressively multidimensional, as individuals connect to various networks operating under different informational paradigms.

The Integrated Information Theory (IIT) proposes that consciousness arises from a complex, interconnected information network that is inherently more than the mere sum of its parts.

The theory attempts to describe what makes a system conscious through quantities that measure the complexity and unity of information, emphasizing the cohesion and multidimensional relationships of complex systems. This naturally recalls Gestalt psychology's fundamental insight: *"the whole is more and different than the sum of its parts."* The whole contains within itself the interactions, organization, hierarchy, and relational properties of its components.

The theory of **collective intelligence** holds that the knowledge of community members aggregates, and through interactions aimed at shared goals, new solutions emerge. **Routledge** extends this idea, arguing that collective intelligence forms the scientific foundation for a new mode of democratic governance—one that supports innovative decision-making based on knowledge-sharing, participation, and collaboration.
Glocally (global + local) or **cosmo-locally** coordinated structures point in the same direction: systems where local autonomy operates in fine-tuned harmony with global coordination.

1.7.2 Information Theory in Science

Every system in existence is built upon informational structures—from biological evolution to social organization, from technological networks to the expanding theoretical frameworks of physics regarding the nature of matter.

In theoretical physics, the Bekenstein bound suggests that entropy, information, and gravity are not separate but deeply intertwined aspects of the cosmos (quantum gravity theory). **Crucially, the disorder of physical systems cannot be infinite; it is constrained by the system's energy and by the smallest possible enclosing informational region—a sphere, or, according to Bousso, a toroidal boundary.**

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Yet life is more than the perception of linear time in the surrounding physical space. One may assume that beyond sensory data streams lies a vitality field attributed to the observer—a shifting orientation of individual focus, attention, or interest.
It is possible that the interpretation, coding, and meaning-making of events render time linear, then cyclic—thus shaping its toroidal or even spiral tendencies. The deeper and broader our perspective becomes, the clearer it is that the universe is a dynamically unfolding dance—shaped by spirals and vortices, from microscopic to cosmic scales.

1.7.3 Information as Value in Society

Today, in the study of matter, we have reached the point where the particles that constitute matter cease to be "matter" below the Planck length. In cosmology as well, dialogue revolves around fields, interactions, resonances, and quantum entanglement.

Information, alongside matter and energy, constitutes the third foundational dimension of reality:

- **Matter** provides the structural fabric of the universe.
- **Energy** drives change.
- **Information** creates relationships and coherence.

The Role of Information in Human Systems

- **Economy – information as value flow**
  The economic system treats information as value. Prices, money, supply, and demand are informational structures — representations of collective decision-making and resource allocation.
- **Law and legislation – information as order structure**
  The legal system is the formalized processing of information. It determines how society interprets action, responsibility, and consequences. Legal frameworks form informational networks that regulate collective behavior.
- **Education – information as knowledge transfer**
  The educational system constitutes the evolutionary chain of information:
  data → information → understanding → knowledge → wisdom.
  Here, information is the carrier of human learning and development.
- **Healthcare – information as a life process**

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

The functioning of the human body and mind is based on informational dynamics. Healthcare regulates this physiological, psychological, mental, and social information system.

- **Politics and governance – information as a power factor**
  Political systems exercise power through the control of information and thereby shape social reality.
- **Culture and media – information as a meaning system**
  Culture is the space of collective meaning-making, where information becomes symbols, narratives, and identities. Media accelerates — or distorts — this process.

In the digital age, information has become an even more direct organizing force, permeating every domain of life. Although global access to information has expanded dramatically, its *quality* and *interpretation* present profound challenges.
Disinformation, algorithmically distorted data, and overwhelming informational environments have produced new forms of measurable psychological stress (mental environmental pollution, the "attention economy").
This pressure — once recognized and understood — becomes the evolutionary catalyst for the emergence of a **value-based society**. It can be interpreted as an empathic environmental response from evolution itself, since the human species is not a finished entity, and the "merchant instinct" cannot be humanity's final virtue.

Deep Value Transformation Is Reflected in the Following Shifts:

- Competition → Cooperation
- Ownership-centricity → Access, commons
- Hierarchy → Decentralized networks
- External regulation → Internal protocol-based self-regulation
- Data = power → Data = public utility, transparency
- Centralized information → Decentralized information
- Distrust → Trust
- Representative democracy → Participatory processes
- Exploitation → Regeneration
- Profit maximization → Value-based economy
- Individual interest → Collective responsibility
- Closed systems → Open, interoperable systems

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

1.7.4 Information in Human Perception

Information manifests on three levels within human cognition:

- **Natural level:** Information shapes the laws of the universe, determining the patterns of matter and energy as well as our electromagnetic physiology. This corresponds to *Space*, which forms the building blocks of matter, flora, and fauna.

- **Social level:** Information serves as the foundation of culture, language, science, and the economy, enabling human cooperation. This corresponds to *space and time*, within which individual, environmental, and societal changes and cycles unfold.

- **Consciousness level:** Information shapes human thoughts, feelings, and the interpretation of reality. This corresponds to *nonlinear perception*: the transcendence of sensory data streams, long-term memory, tacit knowledge, and methodological inquiry.

*"**Think about it: there is a material reality—climate, geography, technology; there is a sociological reality—the way society is organized into classes or castes; but there is also a distinctive way of seeing the world and evaluating it, shaped by our 'state of consciousness' and focus.** Clearly, what we see or do not see—depending on our frames—determines how we organize society and how we perceive material reality."*

— **Michel Bauwens**

1.8 Metacrisis–Meta-Solution Interpretive Matrix

Crisis Dimension	Nature of the Problem	AuthentiQ Solution	Outcome
Ecological crisis	Resource depletion, environmental overload	Decentralized, local resource-tracking and circular resource management	Sustainable, regenerative economic ecosystems
Crisis of social trust	Institutional distrust, social polarization	Self-validating identity system, reputation protocol, community	New forms of horizontal and vertical trust networks

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Crisis Dimension	Nature of the Problem	AuthentiQ Solution	Outcome
		governance (DAO)	
Technological crisis	Centralized data and power concentration	Open-source, decentralized protocol architecture	Technological autonomy and transparency
Information crisis	Misinformation, distortion of information	Authenticated data chain, DIKIWI-based knowledge processes	Collective intelligence and verifiable knowledge sharing

1.9 Summary

We are changing. Our environment is changing as well, and we can no longer remain confined within the dense web of expectations that once defined what it meant to be human.

Information is more fundamental than Life, and Life is more fundamental than the human being.

For the first time in recorded history, we now have the technological possibility to create **civilizational utilities**—based on Web3, blockchain and AI—that can support and sustain a *decentralized* social structure over the long term. This marks an evolutionary moment: the potential to rebuild human autonomy and to co-create a society in which individuals can finally participate as authentic selves.

To achieve this, and to rewire our social interfaces, we must establish:

- Protocols as digital public utilities
- Platforms as social interfaces
- Case studies demonstrating the community-based implementation of housing, food, security, and essential services. (Attached link)
- Technical documentation, installation guide, and application manual for administrators and users. (Attached link)

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

II. AuthentiQ Protocol (Micro context)

Blockchain technology, in the context of Web3, is a digitally **distributed ledger system** that stores data across independent nodes—ensuring secure preservation without relying on third-party intermediaries. This structure enables transparency and traceability of data, helping to rebuild trust in digital systems. **Once recorded on the blockchain, data is immutable—it cannot be altered or deleted. The blocks are chronologically linked using cryptographic hash functions, ensuring the integrity of the entire chain.**

The concepts of *fragility* and ***antifragility***, introduced by Nassim Nicholas Taleb, are essential for understanding the behavior of decentralized systems. Antifragile systems not only withstand disorder—they learn from it, adapt, and grow stronger in changing environments. **While individual components may lack antifragile traits, their interactions can give rise to entirely new functions and emergent structures that characterize the system as a whole.**

Protocols **running on the blockchain** represent the next layer of this technology. Based on established rules and standards, they enable the creation of decentralized applications (DApps) and smart contracts, offering an interpretive framework for decentralized logic and cooperation.

2.1 Why Is Web3 the Solution?

The Evolution of the Web: Web1 → Web2 → Web3

2.1.1 Web1 (approx. 1990–2005) – "Readable Web"

- Static, one-way content sharing (mainly websites and blogs).
- Limited interaction – users could only read and follow simple hyperlinks.
- Centralized servers and dominance of content providers.

2.1.2 Web2 (approx. 2005–present) – "Readable and Writable Web"

- Users can create and share content (e.g., social media, blogs, video sharing).
- Interactive platforms (Facebook, YouTube, Wikipedia).
- Data-centric ecosystems and platform monopolies (Big Tech dominance).

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

2.1.3 Web3 (currently emerging) – "Readable, Writable, and Ownable Web"

- Decentralized, blockchain-based systems (e.g., cryptography, NFTs, DAOs).
- User control over personal data and digital assets.
- Smart contracts and peer-to-peer transactions reduce the need for intermediaries.

2.1.4 Key Differences:

- **Web1**: Static and information-driven.
- **Web2**: Interactive and community-oriented, but centralized.
- **Web3**: Decentralized, ownership-based, and user-centric.

2.2 Protocol Overview

The ecological, social, and economic crises of the 21st century raise deeply systemic questions that cannot be addressed through traditional industrial thinking or globalized economic models. One of the main drivers of the biosphere crisis is the system of centralized, long, and often opaque global supply chains. These chains are characterized by excessive energy consumption, environmental degradation, and increasing social vulnerability. In contrast, **short supply chains** increasingly represent a new paradigm of an emergent, adaptive, and ecologically conscious economy.

Restoring balance to natural systems requires a **radical reduction of our ecological footprint**, which can be best achieved through **localized, decentralized production systems**. Short supply chains allow production to move closer to consumption, thereby reducing emissions from transportation, energy use, and waste.

The recurring crises of global supply chains—such as pandemics, geopolitical conflicts, and resource shortages—have exposed the risks of overdependence on external systems. The economy cannot fully substitute depleting natural resources with capital or labor. In contrast, short supply chains enhance **local autonomy**, empower **small-scale producers and communities**, and strengthen **economic and social resilience**. Small-batch, local

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

production revalues craftsmanship and supports community-based value creation—thus generating **new forms of social capital** (e.g., commons-based assets).

According to the concept of cosmo-localism, knowledge and technology are shared globally, while material production and resource use occur locally. In this context, short supply chains are part of a new planetary logic of coexistence.

Web3 technologies and decentralized digital infrastructures offer the tools and new operational principles necessary for this shift—enabling a future in which natural ecosystems, social humanity, and networked existence form a balanced whole.

Blockchain-based contracting, transaction authentication, data recording, and peer validation make this vision technologically feasible. As a **civilizational** undertaking, this form of **social and community organization** is capable of digitally mapping and expressing idealized structures in a transparent and trustless way.

Blockchain serves as a digital architecture that reflects the current level of systemic complexity—a ledger of the visible world's operations and processes. The chain cannot exist without information, and beyond a certain threshold of informational density, information itself can only persist as part of a networked chain of interlinked clusters.

2.3 Technical Structure of the Protocol

Our protocol provides a **toolset for enabling collaboration** within ecosystems, based on predefined rules and **consensus mechanisms**. In essence, the protocol delivers the **underlying micro-transacted digital logic and environment** that powers these ecosystems.

The **developer of AuthentiQ** is **Envienta**, and the network of ecosystems operating the protocol collaboratively is referred to as the **Platform Cooperative**—a **cooperative model implemented in a Web3 environment**. Within this Platform Cooperative, participating organizations uphold **ethical interoperability**, ensuring that digital cooperative operations allow for cross-organizational collaboration based on a shared set of ethical principles.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

The protocol offers standardized capabilities for all participants:

- **It standardizes and authenticates user profiles.**
- **It can verify user-contributed value.**
- **It operates a keyword-based database aligned with supply and demand.**
- **To these keywords, it assigns modular template agreements, which describe the consensus rules of the ecosystem.**

The protocol functions as a bridge between Web2 and Web3. It provides platform-independent access to unique offers, agreements, and other transaction-specific data by creating Ethereum-compatible blockchain entries (hashes).

AuthentiQ is a server-side solution, operated in a distributed manner by each ecosystem within its own runtime environment. The core of AuthentiQ is formed through the synthesis of three primary databases:

2.3.1 User Profile Database

- This database stores user profiles in a traditional, local Web2 environment. User accounts are validated by an administrator and associate an **email address with an Ethereum-compatible wallet ID**. Over time, this process becomes automated during registration, following successful verification. Email addresses must be confirmed to proceed with account creation.
- When a blockchain wallet is created, a **public key** is generated to identify the user's wallet within the network. This key is visible to all participants and acts as a digital identifier. A corresponding **private key** is also created, used to authorize transactions—known only to the user. The blockchain wallet is a **digital tool** that enables users to access, manage, and interact with their cryptocurrencies and decentralized applications. If a user already has a wallet ID, they may also link it through the platform interface. (By default, these keys provide access only to the wallet itself; however, access to **authenticated wallets** within specific ecosystems may require additional conditions, such as live registration. Thus, some services may only require a verified email address, while **duplicate account prevention** at the anonymous user layer is handled algorithmically.)

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

- A sample public key format:
  `0x974870133496897ab6b39882d58ecfc7611cb99f`

- A unique **QR code** is generated from the public key. Users may optionally add a **profile photo**, address, and phone number to their profile. These data are stored on an **EVM (Ethereum Virtual Machine)-compatible blockchain** and in **Ethereum Swarm**, while remaining fully under the user's control. The core idea is that a user profile authenticated via **MetaMask** now serves as a **passport** across all platforms using the **AuthentiQ protocol**. This eliminates the need to repeatedly create new accounts and frees platform operators from the burden of storing personal data. For each platform and context, **explicit permission** must be granted by the user to access personal data. Platforms are required to request access for a specific purpose and timeframe, and this access **automatically expires** upon the termination of the relevant smart contract.

2.3.2 Value Matrix Database

The **Value Matrix database** stores the potential individual **needs and offers** of users who have undergone the onboarding process and possess identifiable data. Its structure is defined by the **ecosystem operator**, based on the specific **consensus and contextual rules** of each ecosystem. Within the Value Matrix, each user can define **what they are looking for** and **what they can offer** to the community. This structure is essential for subsequent **matchmaking** and **smart contract generation**. As such, this database holds a set of **Value Matrix keywords**, which enable **automated matchmaking** between two or more parties based on aligned interests, needs, or offerings.

2.3.3 Matchmaking Database

The **Matchmaking database** stores the results of automatic matchmaking processes between users. These results are **visible to system operators in real time**, including metadata collected for **statistical, analytical, or predictive purposes**, which can serve as meaningful feedback for improving the system. For users, the results are **filtered and personalized** based on individual profiles and

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

preferences. For each specific offer, a **draft contract** is generated, containing the data of the parties intending to enter into an agreement, along with the **terms of cooperation**. This draft is stored **locally on the server** by the protocol.

This remains the case **until all parties digitally sign the agreement**. Once the contract is finalized and **written to the blockchain**, the temporary data stored on the local server is **automatically deleted**. This approach provides **significant cost savings for service providers** and **eliminates the legal burden of storing personal data**.

2.4 Protocol Application

2.4.1 Proof of Provenance DAO

The **value matrix** that describes the supply-demand relations within a given ecosystem can only be populated and utilized by users with elements that verify **actual added value**. To support such verification, uniquely structured entities such as **DAOs (Decentralized Autonomous Organizations)** can be established. **Non-Fungible Tokens (NFTs)** issued by a DAO are used to **represent specific products, services, or underlying intellectual assets** listed within the protocol. These NFTs serve as **proof of origin** tied to individual items.

In the context of Web3, DAOs can take various forms. Within **AuthentiQ**, a DAO can validate the existence of a **real-world or newly formed organization**, cooperative, or enterprise, and can embody the **shared, consensus-based value commitments** built around a particular brand or initiative.

Throughout the verification process, a DAO—linked to a user account and indicating **actual ownership and responsibility rights**—acts as an **individual or organizational guarantee** for the authenticity and origin of a chosen product, service, or intellectual creation. This mechanism constitutes the **Proof of Provenance**. DAOs can be **jointly owned and governed** by multiple individuals or organizations.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

The protocol enables the creation of an **unlimited number of Proof of Provenance DAOs**. Users can query and list past guarantees by reading the associated DAO data. Additional related files—such as images, certificates, or other digital documents—can be stored and accessed via **Ethereum Swarm**, serving as a decentralized storage backend for the DAO.

2.4.2 Proof of Item NFT

Pre-verified DAOs that represent **added value**—known as **Proof of Provenance DAOs**—can be **further tokenized** in the form of **non-fungible tokens (NFTs)**. These NFTs can be divided into individual items based on supply-demand dynamics, making them **quantifiable** and **time-sensitive** within value exchange processes. These are referred to as **Proof of Item NFTs**, and they represent **individual, verifiable units** issued by a Proof of Provenance DAO.

The types of DAOs and NFTs users are allowed to create within a specific ecosystem—representing various **products or services**—are entirely determined by the **consensus of that ecosystem**, including the structure of **framework agreements** between users. When a user creates a new item, the protocol automatically attaches the corresponding **framework contract**, which is:

- Approved by the ecosystem's consensus,
- Created by the ecosystem admin, and
- Linked to the relevant **keyword**.

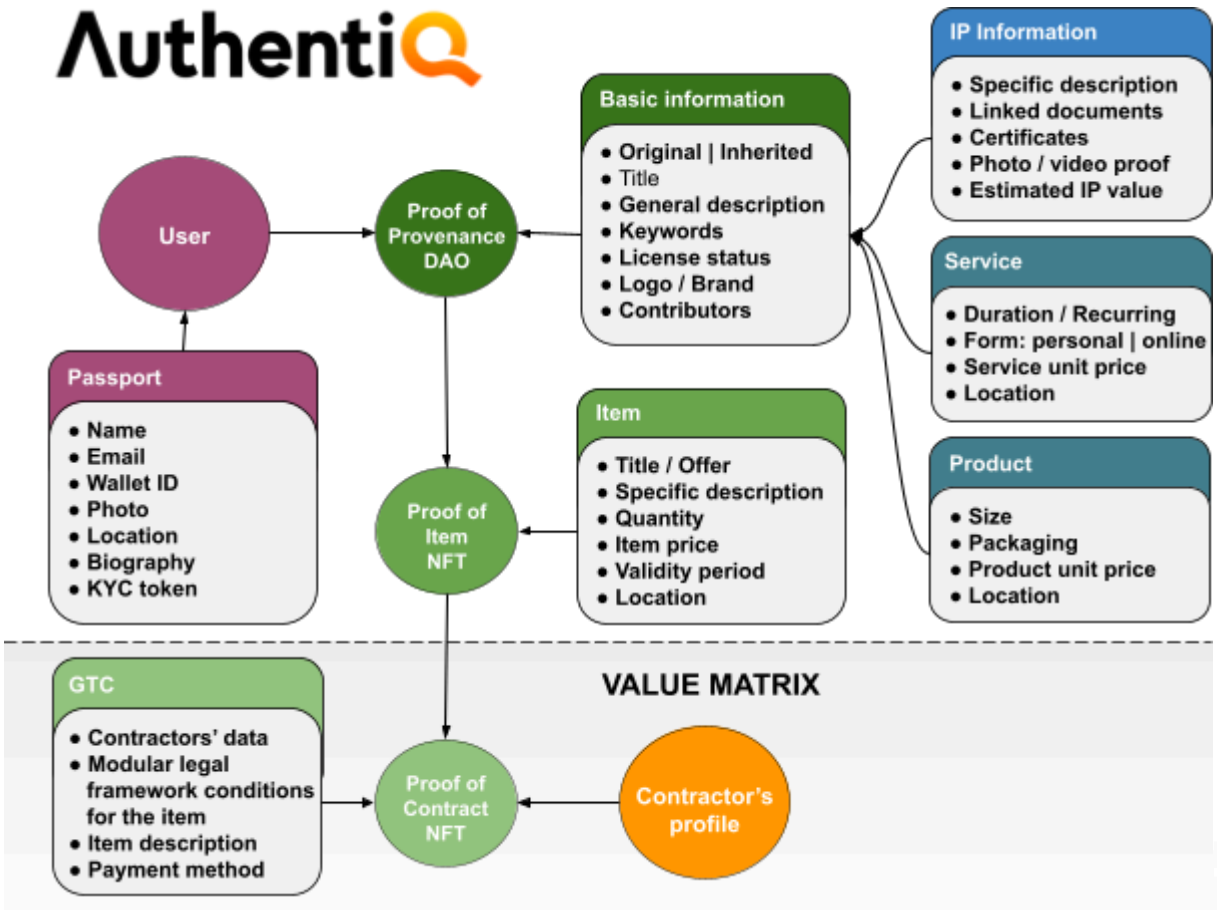
Each **Proof of Item NFT** representing an item in a specific offer can also be used to **track physical changes**, such as condition updates or to **record sub-items**, depending on whether the asset is a **physical product** or an **intellectual service**. Ultimately, these **verified, tokenized items**—issued by a Proof of Provenance DAO—form the **core subject of individual offers and transactions** within the ecosystem.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

2.4.3 Proof of Contract NFT

Until the contracts that frame individual offers and items—while representing the consensus of the ecosystem—are accepted by the involved parties, they remain **locally stored within the ecosystem**, accessible via users' **match result lists**. Once a contract containing a specific offer is approved, the protocol **generates a Proof of Contract NFT**, which is then **placed into the wallets of the involved parties**. This NFT serves as a **receipt**, allowing users to **read back and review their signed agreements**. Additional files, photos, or digitized certificates **attached to the NFT describing the subject of the contract** (Proof of Item NFT) are accessible via **Ethereum Swarm**, which serves as the **decentralized storage layer**.



Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

The Proof of Contract NFT stores the following general elementary parameters:

1. **Identification of Contracting Parties**
   Includes the contracting parties in the form of AuthentiQ profiles linked to Wallet IDs, between whom the agreement and/or transaction regarding the item is established.

2. **Purpose and Content of the Contract**
   Detailed definition provided by the ecosystem running the AuthentiQ protocol, specifying the rights and obligations included in the contract, and which products or services it pertains to.

3. **Conditions and Trigger Events**
   Records the conditions, events, or trigger points upon which the contract is automatically activated and executed.

4. **Execution Mechanism**
   Describes the precise actions to be taken once conditions are met (e.g., payment settlement or transfer, transfer of ownership of the NFT item).

5. **Legal Consequences and Penalties**
   Outlines the handling methods in case any contract terms are not fulfilled, including any legal or financial consequences that may apply.

6. **Time Constraints**
   Specifies the contract's validity period, deadline, and the conditions under which the contract is considered closed.

7. **Amendment and Dispute Resolution Rules**
   Provides alternative procedures and legal protocols for contract amendments or the resolution of legal disputes between the contracting parties.

8. **Liability and Risk Provisions**
   Includes declarations of risk assumption and delineation of responsibilities in specific scenarios.

9. **References**
   Insertion of other relevant attachments, annexes, or hyperlinks to referenced documents that form part of the contract. The existence of such documents is verified through associated Proof of Provenance tokens.

10. **Technical Documentation and Code**
    Attached supporting documents containing the contract's code and operational logic to ensure transparency and verifiability of execution.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

2.5 Programmed Settlements Along the Value Chain

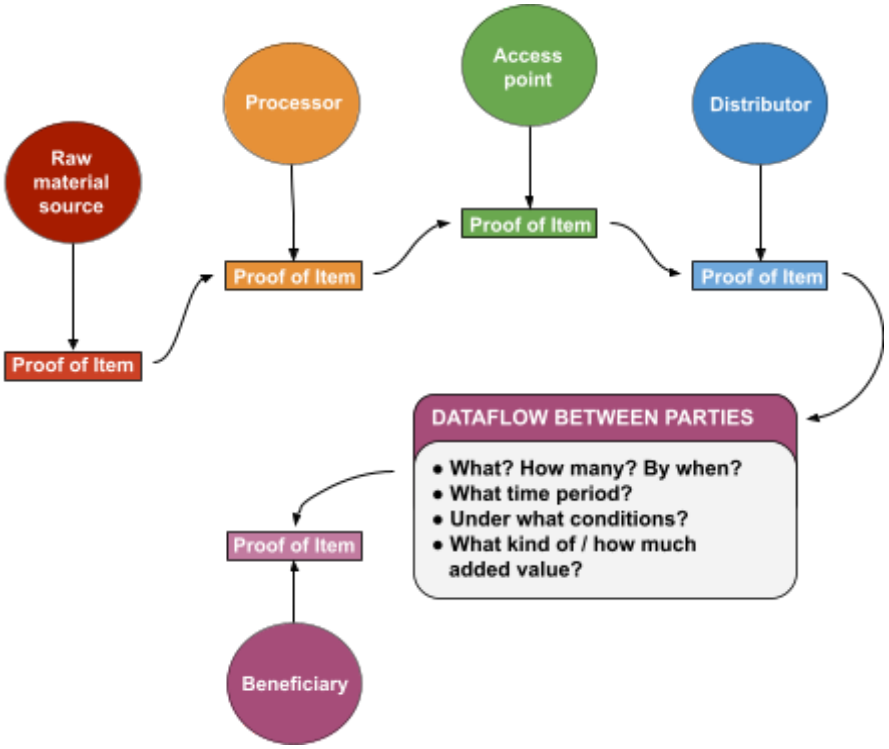
Within a given value chain, **any number of ecosystem-specific exchange instruments** (ERC-20 utility tokens) may be used to **settle accounts between cooperating parties**. The **unit value**, **circulating supply**, as well as the **conditions for issuance and withdrawal** of these tokens are all determined by the **consensus of the ecosystem**.

2.5.1 Foundation of Programmed Settlements

1. The basis of programmed settlements is the **verified real-time contribution**, represented by a **Proof of Item NFT**, the value of which may be settled in the following way:
    - By the receiving party using the **ecosystem's utility token**. In this case, the system must ensure the **possibility of FIAT-based token purchases** for participants, in order to guarantee secure and continuous account settlement. The **ownership of the NFT**—which verifies the item—is transferred **from the creator to the recipient** simultaneously with the **settlement of the utility token amount** specified in the contract.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

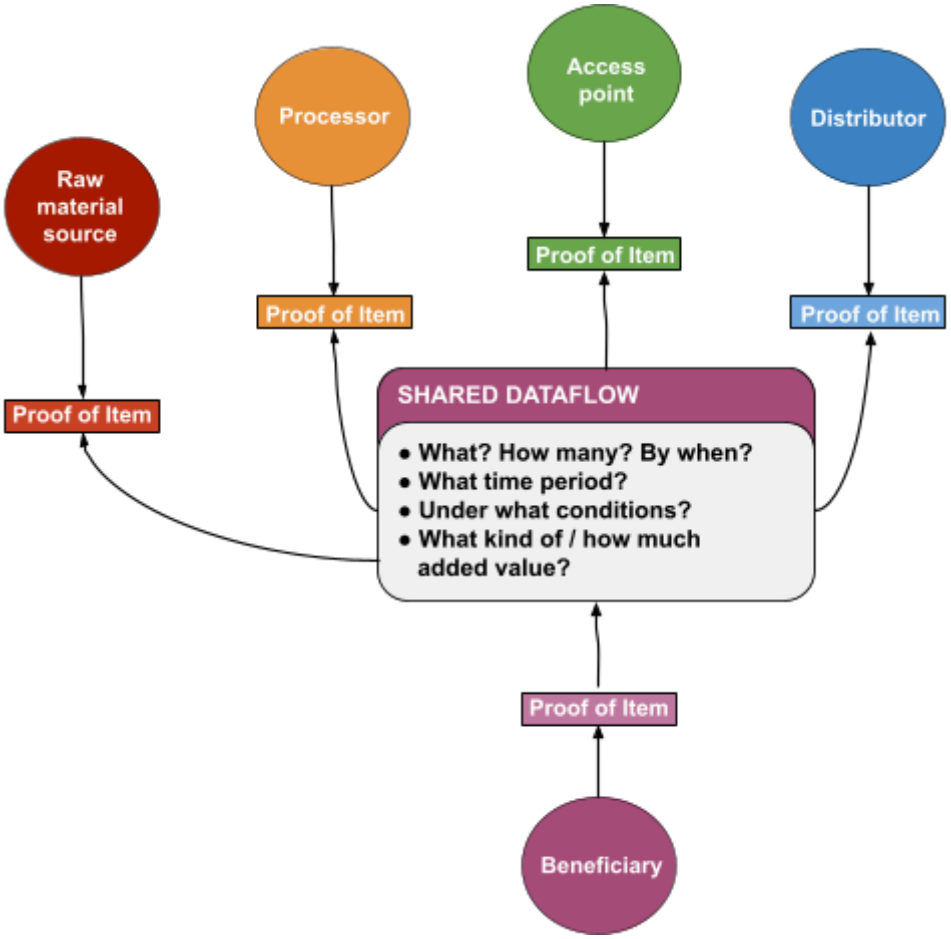
H-1093 Budapest, Pipa u. 2/B



- Alternatively, settlement may be initiated **by the ecosystem itself**—in this case, the ecosystem **rewards the successful execution of a contract** related to the item with its **own utility tokens**, thereby ensuring that all parties are compensated for their contributions. This mechanism significantly **facilitates internal value circulation**, as the ecosystem provides the circulating token required for transactions between participants. Such an approach is viable in cases where **members of the value chain trust each other and the ecosystem**, and where the **newly issued tokens** can be **backed by ongoing FIAT income** generated through the value chain's sales processes.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B



2. Enforcement of Additional Licensing Rights for Previously Verified Collaborating Parties Within a Proof of Provenance DAO
    - This is particularly important in contexts such as **innovation platforms**, where the **portability of intellectual property rights** should be ensured through **digitally accessible commons-based registries**. In such cases, **licensing-related settlement conditions** can be automatically triggered based on previously stored blockchain data.
    - By agreement, it is also possible to **program the protocol** to handle licensing transactions by evaluating and executing settlements **based on the percentage of consent provided by DAO members**. The resulting value can then be **automatically recorded and transacted** to the respective beneficiaries.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

2.5.2 Token Responsible for Consensus-Based Settlements

1. A token may be issued as **proof of verified contribution**, in which case it is primarily **backed by contributions or resource-based collateral**. This model is favored by ecosystems where **internal tokens are valued for their intrinsic utility**, **stability of value is important**, and **frequent conversion to FIAT currencies is not necessary**. In such cases, the settlement token can be **exchanged among members for various goods and services**, facilitating a robust internal market. If the internal economy **cannot fully meet the needs of its members**, the AuthentiQ protocol may offer access to **other ecosystems**, where the same tokens can be used **after conversion**. These cross-ecosystem token exchanges are governed by **inter-ecosystem agreements** defining conversion rules and mutual acceptance.
2. The token may also be **purchased or redeemed using FIAT currency or stablecoins**, depending on **regional tax regulations**. However, this exposes users to **exchange rate volatility risks** related to the FIAT value of a single token unit.
3. A **hybrid approach** is also possible—for example, within **incentive or discount systems** where customers can use **tokenized coupons** as an alternative to FIAT payments, receiving **percentage-based discounts** on goods or services.

2.6 Usage Costs and Payment Gateway

Partners and users integrating the **AuthentiQ protocol** must account for the **costs of on-chain data storage and decentralized file storage**. Executing transactions requires payment of **gas fees**, which cover the computational costs on the Ethereum network. To reduce these expenses and the associated administrative burden, **ecosystems may choose to fully subsidize these fees** on behalf of their users or apply a **percentage-based transaction fee**, which can be integrated into the pricing of products and services.

Since the protocol may operate across multiple ecosystems—where the **output values of one ecosystem serve as input values for another**, or where **two optimized ecosystems operate in parallel**—the **interoperability between ecosystems** and the **conversion of tokens** is handled by the protocol's built-in **Payment Gateway**. This same service also enables the exchange of **traditional FIAT currencies**, using currently available **European and US stablecoins**, allowing ecosystems to accept **bank card payments** for all services accessible via the protocol.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

2.7 AuthentiQ OmniPass – Data Integrity and Traceability

The **AuthentiQ protocol** offers a unique solution for **tracking complex, multi-layered processes**. Not only are individual contracts traceable, but so are the **referenced products, services**, and the **intellectual or creative assets** behind them, along with any **modifications to their state**—all represented through **DAOs and NFTs**. Moreover, these entities can **reference each other in an interoperable format**, enabling **unified content retrieval from a single source** and enforcing the **Single Source of Truth** principle across the ecosystem.

Additionally, data related to **logistics, site locations, HR involvement**, and all associated documents are uploaded to the **ETH Swarm Distributed Hash Table (DHT)**, ensuring **tamper-resistance** and the **unstoppability** of the system.

This solution enables a wide range of advantages, including:

1. **Clear attribution of responsibility** across the entire supply chain
2. **Detailed product information** accessible directly from packaging via QR code, barcode, or unique identifiers
3. **Verification, intelligent issuance, and display of certificates**
4. **Actionable recommendations** for reducing ecological footprint
5. **Verified ESG (Environmental, Social, and Governance) scoring data**
6. **Transparent insight into a company's ecological performance**
7. **Easy and verifiable environmental impact offsetting**
8. **Authentic ownership tracking**, including by-products and waste management
9. **Quality and safety assurance** of integrated components
10. **Open license-based accounting**
11. **Optimized use of available capacity and inventory**
12. A **cosmo-local marketplace** that lowers total costs through the utilization of local surplus capacity and stock
13. **Improved productivity**
14. **Proof of fair trade practices**
15. **Verification of ethical sourcing**, including traceability from origin and identification of key positive/negative impacts
16. **Verification of product origin and provenance**

17. **Intelligent and transparent summaries** of health-related claims
18. **Instant disbursement of financing or insurance** upon meeting contract conditions
19. **Trust-minimized revenue sharing**
20. **Dispute handling** for claims and quality issues
21. **Acquisition of additional data via semantic mapping**
22. **Predictive maintenance readiness**, including automatic ordering of required spare parts
23. **Automated preparation for forecasted demand**
24. **Transparent risk statistics**
25. **Support for self-sustaining value cycles**
26. **Dynamic pricing based on product quality ratings**

Anyone can build applications on top of this. The tools we offer can be used for this purpose, for example:

1. **Users can define contract clauses** that include customizable parameters and are labeled with tags to ensure discoverability by relevant parties.
2. When a user needs something, they **submit a request to the matrix**, which offers a selection of **matching contract clauses**.
3. They then fill in the parameters they can provide and may also edit the text if needed—this version is still stored in the **Web2-compatible database**, allowing later modifications. The user can share the link publicly, or—if the contract is marked as public—it becomes **searchable and visible to others**, who can find it via **map view or filtering options**.
4. While waiting for tenders, the user selects **how they intend to provide the tokens** offered as compensation. If the required tokens or liquidity aren't yet in their wallet, they can:Complete a **quick KYC process** to obtain an IBAN account, where EUR or USD transfers are converted into liquid stablecoins, **or** Choose to pay a **2% convenience fee** for direct bank card purchases.
5. If someone is interested in taking on the contract, they can **comment with questions** or request modifications via **private messaging**. Once the terms are mutually acceptable and all remaining parameters are finalized, all parties

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

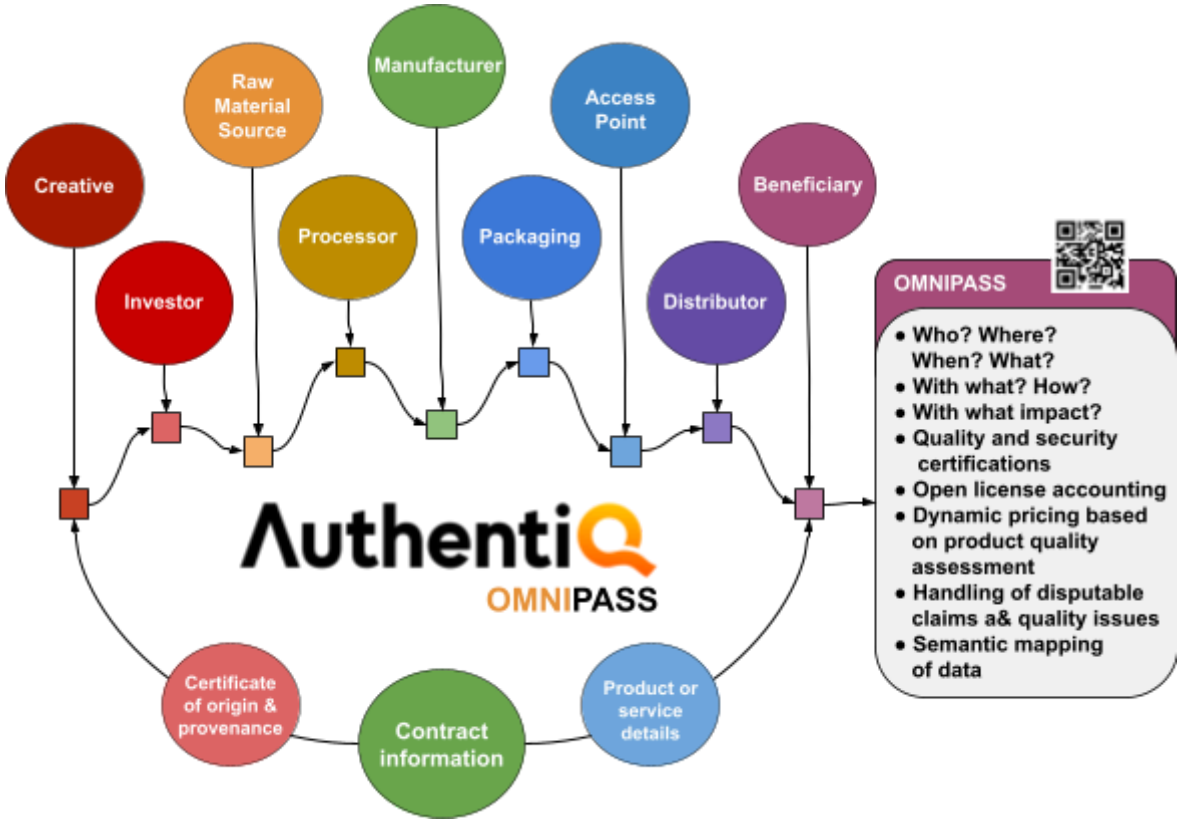
irrevocably sign the contract on-chain. This signature instantly **triggers Smart Contract operations**, which execute the agreement as defined.

6.

- Based on the **TypeScript logic** describing the interrelated contract parameters (Who? Where? When? What? With what? How? With what impact?), a **product or know-how lifecycle** is generated and recorded on the **Swarm Distributed Hash Table**.
- The **full contract text** is also stored on this **future-proof, peer-to-peer storage network**.
- An **NFT is created in the supplier's wallet**, containing **metadata references** to the above two components—**immutable but not necessarily public** content.
- When viewing the **visualized product profile**, wallets with the appropriate permissions see a **purchase button**, allowing them to buy the NFT using **any of the specified tokens**.
- The verified NFT can then be **referenced as a component in other products**, enabling **forward and backward traceability** across (ideally short) supply chains over time.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B



2.8 AuthentiQ and EU Data Protection Regulations (GDPR)

The operation of the **AuthentiQ decentralized identity and value exchange protocol** is aligned with several core principles of the **EU General Data Protection Regulation (GDPR)**. The system is designed following the **privacy by design** and **privacy by default** approaches, ensuring compliance from the ground up.

2.8.1 Lawfulness, Fairness, and Transparency (Art. 5(1)(a) GDPR)

- How this is ensured:
  - **Explicit user consent** is required for the processing of personal data during the registration process.
  - **Completion of the value matrix is entirely voluntary**—users decide which data to provide.
  - **All data processing activities on the platform are documented and transparent**, with accessible information provided to users (e.g., privacy policy and data processing notices).

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

2.8.2 Purpose Limitation (Art. 5(1)(b) GDPR)

- How this is ensured:
  - The data collected is used **exclusively for the purposes of matchmaking, contract formation, and value exchange transactions**.
  - The **AuthentiQ protocol does not sell or use personal data for third-party marketing purposes**.

2.8.3. Data Minimisation (Art. 5(1)(c) GDPR)

- How this is ensured:
  - Only data that is **strictly necessary for system functionality** is stored (e.g., wallet ID, email address, value matrix keywords).
  - **Personal data is stored in a local buffer** only until the contract is approved by all parties, after which it is **automatically deleted**.
  - Many functions operate using **anonymized or pseudonymized data processing**.

2.8.4. Accuracy (Art. 5(1)(d) GDPR)

- How this is ensured:
  - Users can **update their value matrix and profile data at any time**.
  - **Profile administration and verification mechanisms** ensure that registered data remains accurate and up to date.

2.8.5. Storage Limitation (Art. 5(1)(e) GDPR)

- How this is ensured:
  - **Temporary personal data** (e.g., pre-contract profile information) is **automatically deleted** if the contract is not approved.
  - **No personally identifiable information (PII)** is stored on the blockchain — on-chain content consists solely of **hash values and contract identifiers**.

2.8.6. Integrity and Confidentiality (Art. 5(1)(f) GDPR)

- How this is ensured:

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

- The **blockchain data structure is immutable**, and **hashes ensure data integrity**.
- **Access to personal data is protected through cryptography and key management** systems.
- **Off-chain data is stored on the Ethereum Swarm DHT network**, which is **resistant to tampering and outages**.

2.8.7. Primary User Control (Art. 12–23 GDPR – Data Subject Rights)

- How this is ensured:
  - **Right of access**: Users can request and view the data stored about them at any time.
  - **Right to rectification**: Users can update and correct their profile information.
  - **Right to erasure ("right to be forgotten")**: Personal data stored locally can be deleted upon request.
  - **Right to data portability**: Personal data is always linked to the user's **own blockchain-stored profile**, enabling controlled and portable access.

2.8.8. Privacy by Design és Privacy by Default (*(Art. 25 GDPR)*

- How this is ensured:
  - The system's **default operation enforces the highest level of data protection** — users are required to **make explicit decisions** about any data sharing.
  - The **decentralized architecture surpasses centralized data collection models**, thereby **reducing the risks associated with data controllership under GDPR**.

The **AuthentiQ protocol** supports **GDPR principles** both architecturally and operationally, as it:

- **Minimizes the amount of personal data stored**,
- **Leaves control of data management in the hands of the user**,
- Ensures **decentralized and transparent data processing**,

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

- And **integrates the core principles of regulatory compliance at the technological level**.

2.9 Operating Environment of the AuthentiQ Protocol

The protocol elevates the system mechanisms of participation in social responsibility to a new level, establishing a peer-to-peer framework among all participating parties.

What does this mean? In a Web3 environment, a **blockchain-integrated protocol** such as AuthentiQ is capable of establishing the necessary **legal framework** for creating a **new mode of existence**—one in which individuals, companies, and organizations collaborate to generate **greater societal value**, both globally and locally.

This emerging legal environment offers numerous advantages. It can differentiate and assess the balance between acquisition and participation in terms of societal need hierarchies. At the same time, it offers the potential to replace the current structure of capitalist market logic with new forms of cooperative agreements. These principles manifest in the automated operations of smart contracts, the multi-functional capabilities of blockchain (e.g., value exchange, data storage, governance, tokenomics), the rise of Web3 identity, and the expansion of DAO networks.

A DAO (Decentralized Autonomous Organization) can serve as the foundation of a contractual agreement or act as the digital fingerprint of an entire organizational model. Through DAOs, parties can achieve decentralized governance, automated operations, transparency, and rights-based, competence-driven participation in decision-making processes.

Tokens are fundamental components of blockchain technology, representing digital value, rights, or assets within a given network. **DAOs (Decentralized Autonomous Organizations)** are free to define the value assigned to tokens and their specific roles within their ecosystem. **Fixed-value tokens** also serve as internal units of account and mediums of exchange across platforms and ecosystems, facilitating decentralized settlements and operations.

Blockchain-based tokens are the building blocks of the decentralized economy. They can be **fungible or non-fungible**, and may represent **financial assets, access rights,**

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

services, or other forms of value. Depending on their design, tokens can function as **payment instruments**, **proof of ownership**, or **tools for participating in network governance**. Standards such as **ERC-20** (for fungible tokens) and **ERC-721** (for non-fungible tokens) on Ethereum and other blockchain platforms define the technical behavior of tokens—how they are **created, stored, and transferred**—and play a key role in the evolution of blockchain ecosystems.

Beyond standardization, tokens can also be categorized based on their **purpose and use case**, including types such as:

- **Utility tokens**
- **Security tokens**
- **Governance tokens**
- **Stablecoins**
- **Asset-backed tokens**
- **Reward tokens**

  ...and more, depending on the structure and intent of each decentralized system.

2.10 The Transformation of Money: Value Shift in a Networked Civilization

The perceived stability of today's fiat-based monetary system rests on **institutional guarantees**, yet it inherently contains **structural fragility**. Since the **collapse of the Bretton Woods system in 1971**, triggered by the so-called *Nixon Shock*, modern money is no longer backed by tangible assets such as precious metals. From that point on, the value of fiat currencies has depended solely on **trust**—trust in the issuing government, its **economic performance**, and the effectiveness of its **monetary policies**. This trust-based construction, however, is **highly sensitive to political, economic, and social disruptions**, which can quickly lead to **currency devaluation**, **inflationary spirals**, or **sovereign debt crises**. Central bank-controlled **money issuance and credit creation** inherently generate **constant inflationary pressure**, eroding the currency's role as a **store of value** and contributing to long-term systemic instability. These dynamics suggest that **fiat currency is increasingly inadequate** as a reliable **medium of exchange** and **unit of account** in the emerging era of **networked civilization**.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

2.10.1 The Current System (Centralized FIAT Money)

The traditional monetary system is built upon **nation-states**, **central banks**, and **physical or state-backed digital currencies**. In this system, money is:

- **Centrally issued**: a tool controlled by institutional authority.
- A **physical form** or a **digitally guaranteed representation** backed by the state.
- Its functions include: **unit of account**, **store of value**, and **medium of exchange**.
- Its value is based on **trust in the issuing state**, its **economic stability**, and its **monetary policy**.
- Its underlying logic is defined by: **scarcity**, **inflationary pressure**, and **profit maximization**.

2.10.2 The New System (Fixed-Value Token-Based Economy)

Tokens built on **blockchain technology** represent a **new form of socio-economic relationship**. In this system, money is:

- **Decentralized in origin**: a unit of value created and maintained by **communities through programmable logic**.
- **Digital, unique, and transparent**: each token is backed by a **specific use case, function, or community consensus**.
- Its function is primarily that of a **medium of exchange** and **governance tool**, while its role as a **store of value** takes on a new interpretation—e.g., as a form of **community trust**.
- Its value is derived from **ecosystem participation**, **transparency**, and **functional utility**.
- Its underlying logic is **dynamic, adaptive**, and **driven by community-based incentives**.

Factor	Traditional Money	Token-Based Value
Basis of Value	State guarantee, monetary policy	Network trust, ecosystem participation
Issuance Mechanism	Centralized (central banks)	Programmed, decentralized
Ownership / Usage	User as passive holder	User as active participant
Logic of Valuation	Scarcity, market supply-demand	Community participation,

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Factor	Traditional Money	Token-Based Value
		functional utility
Economic Context	National markets, sovereign states	Glocal ecosystems (global+local integration)

2.10.3 Tokenomics and Its Core Elements

Tokenomics (a blend of *token* and *economics*) refers to the **economic system design and operation of blockchain and crypto-based projects**. It encompasses everything that determines a token's value, utility, and long-term sustainability within a given ecosystem.

Why Is Tokenomics Important?

Tokenomics is **crucial to the success of Web3 projects** because it:

- Defines the project's financial stability
  – Token supply, demand, inflation/deflation mechanisms directly impact long-term viability.
- Builds trust among investors and users
  – A well-structured token model brings transparency and predictability to the ecosystem.
- Provides sustainable incentives to the community
  – Usage, staking, governance, and rewards mechanisms drive active user engagement.
- Enables organic growth of the network
  – Strong tokenomics encourages self-sustaining expansion and participation.
- Creates a socially governed framework
  – Token usage allows the community to define and regulate core operational rules (especially when combined with DAOs).

2.10.3.1 Supply

- **Maximum Supply**:
  How many tokens can exist in total?
- **Circulating Supply**:
  How many tokens are currently in circulation?
- **Inflation / Deflation**:
  Does the total number of tokens increase or decrease over time?

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

2.10.3.2 Distribution

- **Who receives the tokens, and in what proportions?**
  (e.g. developers, investors, community)
- **What are the issuance conditions?**
  (e.g. time-based vesting, milestone-based releases)

2.10.3.3 Utility

- What can the token be used for?
  - **Transactions**
  - **Governance Voting**
  - **Yield Generation (Staking rewards, etc.)**
  - **Access to Services** (e.g. unlocking core or premium platform features)

2.10.3.4 Incentive Mechanisms

- How does the system motivate user participation?
  - **Staking**
  - **Liquidity Mining**
  - **User/Contributor Rewards**

2.10.3.5 Burning, supply control

- How does the system motivate user participation?
  - **Token Burning** (deflationary mechanism)
  - **Buyback Models** (community-driven or protocol-level)
  - **Dynamic Economic Models**
    (based on real-time supply and demand, feedback loops)

2.11 What Does the Future Hold?

Our intention with the examples provided was to demonstrate the vast potential of blockchain-based collaboration and settlement systems. The set of tools required for this continues to evolve—adapting flexibly to the ever-expanding boundaries of human creativity and intelligence. Thanks to these technological innovations, the objective contribution of participants can be transparently validated, assuming trust as a built-in feature rather than a precondition.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

As metadata continues to grow, we will gain increasingly accurate and nuanced insights into our social processes (social impact measurement). In response to the fragility of global supply chains, the protocol opens new pathways for industries, enterprises, and institutions—including the emergence of new open science models in academia. It does so by prioritizing short supply chains and resilient operations through algorithmic optimization. Solutions like product passports and process verification (OmniPass by Trace.Market) offer a realistic Web3 transition framework for companies seeking traceability and digital integrity.

At the same time, the protocol enables a higher degree of responsibility from both public and private sectors, while giving end-users a new form of participatory trust capital—one they can reinvest into the infrastructure they rely on. This is particularly crucial in sectors where quality assurance, food safety, and product traceability are critical. Moreover, the protocol supports automated project and task management, allowing companies to offload administrative and accounting processes to a smart contract–driven infrastructure that handles ledger records autonomously.

Looking beyond individuals and organizations, this technology also offers pathways to address broader, collective challenges—such as global issues of ownership, governance, and accountability.

This brings us to the legal question:
In what contexts and under what conditions can the protocol operate as a legitimate interface?

That's what we will explore next.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

III. Inherent qualities and values of the platform(s)

3.1 Introduction

In this study, the concept of a *platform* is understood as the digital representation of a new societal surface layer. The realization of a Web3-based network of platforms—operating as digital cooperatives—emerges through the reproducibility of decentralization. In doing so, it offers a tangible alternative to centralized operations and institutional culture by leveraging the technologies currently available to us.

In this sense, a platform is not merely a tool, but an *ecosocio-technical interface*—a living and evolving framework in which value is not an abstract notion, but the consequence of co-structured and collectively perceived reality.

The term *sociology* derives from the Latin *socius* ("companion", "social being") and the Greek *logos* ("science", "reason", "discourse"). Literally translated, it means "the study of social existence" or "the interpretation of society." The AuthentiQ protocol seeks to provide a cultural and structural instrument for society—offering a logical compass adaptable to collective needs on the path toward *cosmo-localization*. **As a decentralized network infrastructure, AuthentiQ ensures trust, transparent governance, and cooperation within the digital domain—not through hierarchies, but through protocols, enabling self-sovereign identities to interact freely and meaningfully.**

Platforms operating on the basis of protocols do not rely on a single technology or community. Their layered and modular structure connects multiple levels of existence: individual decisions, collective coordination, and global flows of information. This makes it possible for social organization not only to respond to change, but to continuously redefine and iterate itself.

Such interfaces are capable of structuring deeper layers of societal collaboration, resource allocation, and value distribution—providing systemic responses to the rigidity, blind spots, and limitations of traditional institutional structures. Where entropy dominates—where rigid, one-dimensional worldviews prevail—systems are upheld by polarity, until they evolve into frameworks that transcend those polarities, giving rise to new degrees of freedom.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

This is always a signal of **collective transformation**, whose *how* has historically been determined by the unique features of a given era—its conditions, its individual and collective interests, its values. Just as in the past, so too in the present.

3.2 The Platform as a Socio-Ecological Innovation Infrastructure

The network of platforms introduces a new mode of operation not only technologically, but also on a societal level. The logic of decentralized platforms challenges conventional ownership structures, hierarchical innovation models, and linear value flows. Instead, it fosters an ecosystem where **value creation becomes multidimensional**—encompassing not only material, but also intellectual, relational, and ecological forms of value.

In this sense, the platform can be understood as **infrastructure or public utility**—a shared system that enables cross-sectoral collaboration. It has the potential to connect diverse stakeholders, such as **local governments, educational institutions, community organizations, and social enterprises**, encouraging cooperation and mutual value generation.

3.3 Interpretive Table

Layer	Main Component	Function	Connection
Base Infrastructure *(Web3)*	Blockchain, IPFS, smart contracts	Secure and transparent data and value storage	Ensures data integrity and authenticity
Community Layer *(DAO)*	Decentralized Autonomous Organizations	Participatory decision-making, self-regulation	Governance, consensus, and ethical variation
Value Layer *(Tokenization)*	Utility, reputation, and impact tokens	Community values, reputation, and impact measurement	Value transformation based on the DIKIWI model
Knowledge Layer *(AuthentiQ Protocol)*	Data validation, identity management, knowledge chains	Transforming information into collective knowledge	Meta-level integration and insight generation

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

3.4 Game Theory in a New Playing Field – From Competition to Cooperation

Game theory models the strategic decisions within human interactions—it examines how rational actors behave in relation to one another (the mathematical analysis of strategic decision-making). Its core concepts include **strategy**, **payoff**, **equilibrium**, and **incentive systems**. The aim is to understand participants' behavior, decision patterns, and the conditions for cooperation. The **classical model** (e.g., the Prisoner's Dilemma) assumes that actors are rational and seek to maximize their own gain, which often fails to lead to a **collective optimum**. In today's social and economic structures, this logic reinforces the dominance of competition and the absence of trust. All players know that **cooperation** would yield the best overall result, yet the lack of trust and a trust-based environment sustains the **spiral of self-interest**.

The **AuthentiQ Ecosystem** as a "**New Playing Field**"

The decentralized, value-driven, and interoperable system described in this document introduces a **new model of collaboration**. Through **tokenized incentives**, **DAOs**, **value matrices**, and **transparent protocols**, previously **zero-sum games** are transformed into **positive-sum interactions**.

In this ecosystem, the **vectoral shift** moves from **competition toward cooperation**. At the level of **mechanism design**, the optimal strategy is to build the rules in a way that **individual rationality naturally leads participants toward a collective optimum**.

A Solution to Game-Theoretical Dilemmas

- In an illuminated environment, data flow eliminates hidden strategies—cooperation becomes the rational choice.
- Shared value structure: the value matrix expresses the collective optimum.
- Decentralized decision-making: DAOs enable alignment between individual and collective interests.
- Protocol-based trust: game rules are enforced through algorithmic consensus beyond hierarchy.
- Participants act as nodes processing each other's input in an adaptive system.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

- The traditional "game master" (central authority) disappears, replaced by algorithmic rule sets (the protocol).

In game-theoretical terms, the AuthentiQ ecosystem is the technological implementation of the “cooperative optimum”—a game space where trust is algorithmically embedded, rules are transparent, and all participants benefit by contributing to shared prosperity.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Summary

The protocol and its network of platforms integrate and transcend the dominant models based on economies of scale, offering a more complex approach that builds bridges for a gradual transition toward the network state paradigm. In this context, the platform's information network catalyzes the continuous presence and sharing of self-multiplying soft resources—such as tacit knowledge, information, creativity, and psychological energy.

The long-term goal of the Platform Cooperative is to evolve the platform cooperative model into a global network, where local communities operate as independent but interconnected units, maintaining their identity while collaborating as part of an open, cooperative, and regenerative economic system.

Every new order requires the entropy of the previous one. We are participating in a necessary and timely reinterpretation of our current knowledge, civilization, and perception of reality. Explaining our existence purely on material grounds has become scientifically outdated since the 2022 Nobel Prize in Physics. Our human and civilizational needs—as well as our emerging technological opportunities and solutions—require approaches that take these expanded insights into account.

Our goal is to outline solutions for the pressing challenges of our species and civilization—so that we may develop the capacity to recognize, understand, and apply broader individual and social interconnections.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

At the following link, you will find **currently active projects** that showcase **practical examples** of how cosmolocal platforms can be implemented and embedded into everyday practice.

We are **far from finished**. We **do not claim to know everything**. This is where we currently stand in our **research and development** efforts. These are our **proposed solutions**—and if not this way, then **what other way?** That is the question we continue to explore, while actively seeking **collaborative partners** from civil society, social organizations, and academic institutions.

CASE STUDIES

AuthentiQ | Case Studies 1.0

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Cited Books and publications:

Albert Einstein

- *The World As I See It*

Abraham Maslow (Psychologist)

- *A Theory of Human Motivation*
- *Toward a Psychology of Being*

Albert-László Barabási (Physicist, Network Scientist)

- *Network Science*
- *Linked: How Everything Is Connected to Everything Else and What It Means*
- *The Structure and Dynamics of Networks*
- *The Science of Science*

Buckminster Fuller (Architect, Systems Theorist, Inventor)

- *Operating Manual for Spaceship Earth*
- *Critical Path*
- *Synergetics: Explorations in the Geometry of Thinking*

Carl Gustav Jung (Psychiatrist, Psychologist)

- *The Earth Has a Soul*
- *The Structure and Dynamics of the Psyche*

Vilmos Csányi (Biologist, Ethologist)

- *Human Ethology*

Daniel Schmachtenberger (Civilization Researcher, Systems Thinker)

- *The Consilience Project*

David Orban (Technology Futurist, AI Researcher)

- *Something New?*

Donald D. Hoffman (Cognitive Psychologist)

- *The Case Against Reality: Why Evolution Hid the Truth from Our Eyes*

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Elinor Ostrom (Economist)

- *Governing the Commons: The Evolution of Institutions for Collective Action*
- *Understanding Knowledge as a Commons: From Theory to Practice*
- *Rules, Games, and Common-Pool Resources*
- *Trust and Reciprocity: Interdisciplinary Lessons from Experimental Research*

Herbert A. Simon (Political Scientist, Economist, Psychologist)

- *The Sciences of the Artificial*

Jacque Fresco (Futurist, Social Engineer, Inventor)

- *The Best That Money Can't Buy*

James Surowiecki (Journalist, Author)

- *The Wisdom of Crowds*

Jeremy Rifkin (Author, Economic and Social Theorist)

- *The Age of Resilience: Reimagining Existence on a Rewilding Earth*

Jerome N. Warren (Economist)

- *The Routledge Handbook of Cooperative Economics and Management*

Jordan B. Peterson (Clinical Psychologist)

- *Maps of Meaning: The Architecture of Belief*

Jürgen Habermas (Philosopher, Sociologist)

- *The Theory of Communicative Action*

Karl Polanyi (Economic Historian)

- *The Great Transformation: The Political and Economic Origins of Our Time*

Konrad Lorenz (Ethologist, Zoologist)

- *Civilized Man's Eight Deadly Sins*

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Ervin László (Systems Philosopher)

- *The Upshift: Wiser Living on a Small Planet*

Niels Bohr (Physicist)

- *On the Constitution of Atoms and Molecules*

Manuel Castells (Sociologist)

- *The Rise of the Network Society*

Michel Bauwens (Peer-to-Peer Theorist, Commons Researcher)

- *Peer to Peer: The Commons Manifesto*
- *The City as Commons: A Policy Reader*
- *Network Society and Future Scenarios for a Collaborative Economy*
- *Commons Transition Primer*
- *P2P Accounting for Planetary Survival*
- *Synthetic Overview of the Collaborative Economy*
- *Commons Transition: Policy Proposals for an Open Knowledge Commons Society*
- *Value in the Commons Economy*

Michael Levin (Biologist, Developmental and Systems Biologist)

- *Ahead of the Curve: Hidden Breakthroughs in the Biosciences*

Nassim Nicholas Taleb (Mathematician, Essayist, Risk Analyst)

- *Antifragile: Things That Gain from Disorder*

John von Neumann (Mathematician)

- *The Computer and the Brain*
- *Theory of Games and Economic Behavior*

Norbert Wiener (Mathematician)

- *Cybernetics: Or Control and Communication in the Animal and the Machine*

Peter Joseph (Activist, Author, Filmmaker)

- *The New Human Rights Movement*

Michael Polanyi (Philosopher of Science, Physicist)

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

- *Personal Knowledge*
- *The Tacit Dimension*

Ray Kurzweil (Inventor, Futurist)

- *The Singularity Is Near*

Hans Selye (Physician, Endocrinologist)

- *The Stress of Life*
- *Stress Without Distress*

Tim Berners-Lee (Computer Scientist, Inventor)

- *Foundations and Trends: A Framework for Web Science*
- *Weaving the Web*
- *The World Wide Web*

T. S. Eliot (Poet, Literary Critic)

- *The Complete Poems and Plays of T. S. Eliot*

Wictor Charon (Auther)

- *The new Eon*

Werner Heisenberg (Physicist)

- *Physics and Philosophy*
- *The Physicist's Conception of Nature*
- *Selected Essays*
- *Physics and Beyond: Encounters and Conversations*

Academic research papers:

- Allen, C., et al. (2016). The path to self-sovereign identity. Letölthető: https://github.com/WebOfTrustInfo/self-sovereign-identity
- Ákos Nagy, Noémi Krátki; Open value creation for the common good: a comprehensive exploration of social innovation in the context of social enterprises. Social Enterprise Journal 25 April 2024; 20 (3): 318–338. https://doi.org/10.1108/SEJ-08-2023-0103

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

- Bauwens, M., Kostakis, V., & Pazaitis, A. (2019). Peer to peer: The commons manifesto. Westminster University Press. https://doi.org/10.16997/book33
- Benkler, Y. (2006). The wealth of networks: How social production transforms markets and freedom. Yale University Press.
- Brookings Institution. (2022). It's time for collective intelligence. Brookings Institution.
- Castells, M. (1996) The Rise of the Network Society, The Information Age: Economy, Society and Culture, Vol. I. Cambridge, MA; Oxford, Egyesült Királyság: Blackwell.
- Chase R. (2012) The Rise of the Collaborative Economy. http://www.themarknews.com/articles/the-rise-of-the-collaborative-economy/#.UHQn-6cayc3
- Council of Europe. (2009). Recommendation CM/Rec(2009)1 on electronic democracy ("e-democracy"). Council of Europe.
- Csikszentmihályi, M. (1990) Flow: The Psychology of Optimal Experience. New York: Harper és Row.
- Daly, H. (2019) Növekedés: ökológiai, gazdasági és etikai korlátai. http://www.paecon.net/PAEReview/issue87/Daly87.pdf
- Frank, A., Grinspsoon, D., & Walker, S. (2022, február 7.). Az intelligencia mint bolygóléptékű folyamat. International Journal of Astrobiology, 21(2), 47–61. https://doi.org/10.1017/S147355042100029X
- Frazzetto, G. & Frischknecht, F. (2003) Helyi megoldások globális problémákra. EMBO Reports 4(6):553-5 DOI: 10.1038/sj.embor.embor878.
- Fukuyama, F. (1999) „Társadalmi tőke és civil társadalom". In: IMF Conference on Second Generation Reforms. http://www.imf.org/external/pubs/ft/seminar/1999/reforms/fukuyama.htm#I
- Giddens, A. (1984) A társadalom felépítése A struktúraelmélet vázlata. Cambridge: Polity Press.
- Ginestra Bianconi, Gravity from entropy, Physical Review D (2025). DOI: 10.1103/PhysRevD.111.066001 - Bekenstein kötés
- Gray, RH (2022) A kiterjesztett Kardasev-skála. The Astronomical Journal, 159:228 (5pp), 2020. május https://doi.org/10.3847/1538-3881/ab792b https://iopscience.iop.org/article/10.3847/1538-3881/ab792b/pdf
- Guliyev, R. (2023). Shaping an image of science in the 21st century: The perspective of metamodernism. Societies (MDPI).
- Heikkurinen, P., Ruuska, T., Ulvila, M., & Wilén, M. (2017). Az antropocén exit: A korszak és a diskurzus hátrahagyása.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

https://helda.helsinki.fi//bitstream/handle/10138/332176/The_Anthropocene_Exit.pdf?sequence=1

- Hess, C. & Ostrom, E. (reds.) (2007) Understanding Know as Commons Az elmélettől a gyakorlatig. MIT Press.
- Lessig, L. (2004) Szabad kultúra: Hogyan használja a nagy média a technológiát és a törvényt a kultúra lezárására és a kreativitás ellenőrzésére. New York: Penguin Press.
- Li, X., Zhang, Y., Chen, Q., & Wang, H. (2024). SoK: Decentralized storage network. IACR ePrint Archive, 258.
- Liu, Y., Wanga, L. & Wanga, XV (2018) Felhőgyártás: legújabb fejlesztések és jövőbeli trendek. Procedia Manufacturing 25 (2018) 62–73. https://www.sciencedirect.com/science/article/pii/S2351978918305778
- Masinde, E., & Graffi, K. (2020). Peer-to-peer-based social networks: A comprehensive survey. SN Computer Science, 1, 1–24.
- Oizumi, M., Albantakis, L., & Tononi, G. (2014). From the phenomenology to the mechanisms of consciousness: Integrated Information Theory 3.0. PLOS Computational Biology, 10(5), e1003588. https://doi.org/10.1371/journal.pcbi.1003588
- Okediji, M. (1999). Contemporary African-American art: Metamodern perspectives. African Arts.
- Olivares, F., & mtsai. (2025). Citizen participation in the digital age: A survey on the role of social media. SSRN
- Organisation for Economic Co-operation and Development (OECD). (2025). Tackling civic participation challenges with emerging technologies [Synthesis report]. OECD.
- Panagiotarou, A., & Rigou, M. (2024). Digital public consultation and the opportunities for participatory democracy: An exploratory study. Social Sciences (MDPI).
- Piques, C. & Rizos, X. (2019) Peer to Peer and the Commons: a way to átalakulás Anyag, energia és termodinamikai perspektíva. https://commonstransition.org/wp-content/uploads/2017/10/Report-P2P-Thermodynamics-VOL_1-web_2.0.pdf
- Prause, G. (2019) Smart Contracts for Smart Supply Chains. https://www.sciencedirect.com/science/article/pii/S2405896319315691
- Ramos, J. (2015) Cosmo-Localization. https://actionforesight.net/cosmo-localization/

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

- Rifkin, J., (2014) The Zero Marginal Cost Society: the Internet of Things, the Collaborative Commons, and the Eclipse of Capitalism. Palgrave Macmillan, New York
- Rittel, HWJ & Webber, MM (1973) Dilemmák a tervezés általános elméletében. Policy Sciences 4/2: 155–169. https://doi.org/10.1007/BF01405730.
- Ruotsalainen, J., Heinonen, S., Karjalainen, J., & Parkkinen, M. (2016). Peer-to-peer work in the digital meaning society 2050.
- Scharmer, O. (2007) Theory U: Leading from the Future as it Emerges – A bemutatás társadalmi technológiája. Cambridge MA: SOL Press.
- Scholz, T. (2016) Platform Cooperativism: Challenging the Corporate Sharing Economy. Rosa Luxembourg Stiftung NY Iroda. http://www.rosalux-nyc.org/wp-content/files_mf/scholz_platformcooperativism_2016.pdf
- Singh, M. & Kim, S. (2019) Negyedik fejezet – Blockchain technológia decentralizált autonóm szervezetek számára. https://www.sciencedirect.com/science/article/abs/pii/S0065245819300257
- Smith, J., [több szerző], & mtsai. (2024). Impact of online civic participation on the social and labor expectations of university students. Lifestyle Journal.
- Sosyalarastirmalar. (2024). The evolution of civic engagement in the digital age: A study of youth activism worldwide. JISR.
- Stallman, RM (2002) Szabad szoftver, szabad társadalom: Richard M. Stallman válogatott esszéi. GNU Press, Free Software Foundation, Boston, MA. https://www.gnu.org/philosophy/fsfs/rms-essays.pdf
- Stillman, LJH (2006): A technológia megértése közösségi alapú szervezetekben: Strukturális elemzés. PhD Tesis. A Monash Egyetem Informatikai Kara. http://webstylus.net/wp-content/uploads/2010/03/Stillman-Thesis-Revised-Jan30.pdf
- Toffler, A. (1980) A harmadik hullám. William Morrow.
- Van Alstyne, M. & Parker, GG (2021): A digitális átalakulás megváltoztatja a vállalatok értékteremtését. https://hbr.org/2021/12/digital-transformation-changes-how-companies-create-value
- Van Alstyne, M. (2022): Hogyan változtatják a platformok a struktúrát és a stratégiát. MIT kezdeményezés a digitális gazdaságról. https://lnkd.in/eXgffDqf

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

- Veress, J. (2017) Transformational Dynamism of Civil Society Organizations. Vezetéstudomány / Budapest Menedzsment Szemle XLVIII. évf. 11. szám. http://unipub.lib.uni-corvinus.hu/3169/1/VT_2017n11p12.pdf
- Vermeulen, T., & van den Akker, R. (2010). Notes on metamodernism. Journal of Aesthetics & Culture.
- Vermeulen, T., & van den Akker, R. (2022). Metamodernism and social sciences: Scoping the future. Social Sciences (MDPI).
- Wladawsky-Berger, I. (2022a) 5 út a platformok erejének kihasználásához. https://medium.com/mit-initiative-on-the-digital-economy/5-ways-to-view-the-power-of-platforms-82cfc1a7d89b
- Wladawsky-Berger, I. (2022b) A Web3 lehetséges hatása az internetre és a digitális gazdaságra. https://blog.irvingwb.com/blog/2022/07/the-potential-impact-of-web3-on-the-internet-and-the-digital-economy.html
- Woolley, A. W., Chabris, C. F., Pentland, A., Hashmi, N., & Malone, T. W. (2010). Evidence for a collective intelligence factor in the performance of human groups. Science, 330(6004), 686–688. https://doi.org/10.1126/science.1193147
- Zavarzadeh, M. (1975). Metamodernism. American Quarterly
- Zhu, K., Walker, D. & Van Alstyn, M. (2022) Is It It Time for a Platform Magna Carta? https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4083494
- Zwitter, A., & Hazenberg, J. (2020). Decentralized network governance: Blockchain technology and the future of regulation. Groningen University.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Dictionary:

Asset-backed token: A digital token that is backed by real-world assets (e.g., real estate, gold, stocks), where these assets provide the token's value. The purpose of such tokens is to offer stability within cryptocurrency markets while enabling digital representation and trade of physical assets.

Authentication server: A server that manages the identification of users or systems and verifies whether access requests are authorized. Authentication servers often use passwords, biometric data, or other verification mechanisms to secure access to systems.

Automated project management: The use of various tools and software to automate project management tasks such as task assignment, deadline tracking, resource allocation, and other processes. This increases efficiency and reduces the risk of human error.

Bekenstein bound: The Bekenstein bound is a theoretical physical limit that defines the maximum amount of information (or entropy) that can be stored within a given volume, based on its energy and size. It suggests that information storage is not infinite: the information capacity of a physical system is finite and is determined by the system's surface area—not its volume.

Biosphere consciousness: Biosphere consciousness refers to an awareness and deep understanding of environmental and ecological systems, emphasizing the impact of human activities on Earth's ecosystems. This perspective promotes sustainable development and planetary stewardship through a respectful, systems-level view of life on Earth.

Blockchain technology: Blockchain is a decentralized digital ledger that records data in chained blocks, ensuring each transaction is securely and transparently documented. It enables peer-to-peer data exchange without intermediaries and guarantees data integrity. Blockchain is widely used in cryptocurrencies, smart contracts, and public record systems.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Bretton Woods system: The *Bretton Woods system* was a post–World War II international monetary framework established in 1944. Under this system, global currencies were pegged to the US dollar, which in turn was backed by gold (fixed at 35 USD per ounce). This system laid the foundation for modern international finance but was dissolved in 1971 with the so-called "Nixon shock".

CBDC (Central Bank Digital Currency): A *CBDC* is a digital form of a country's official currency issued and regulated by its central bank. It aims to provide the legal and security benefits of physical cash in a digital format while enabling faster, cheaper, and more transparent monetary transactions. CBDCs are state-controlled and typically operate within a regulated monetary framework.

Circular economy: A circular economy is an economic model based on the efficient use of resources, the recycling of materials, and the sustainable circulation of energy, with the aim of minimizing waste and environmental impact.

Clean Social Interfaces: Digital platforms based on transparent, ethical, and open-source technologies, designed to promote community participation, knowledge sharing, and collaborative social interaction.

Commons management: *Commons management* refers to the governance and sustainable stewardship of shared resources—such as public spaces, water sources, or knowledge bases—that are accessible to all members of a community. The goal is to ensure fair and long-term access and use, avoiding overexploitation or exclusion.

Commons-based peer production: *Commons-based peer production* is an economic model where individuals collaborate voluntarily and outside of traditional market structures to create value for the public good. It is typically decentralized, open-source, and community-driven—examples include open-source software, Wikipedia, or distributed knowledge platforms.

Consensus Mechanism: A protocol used in distributed systems (especially blockchains) to validate transactions and ensure the integrity of the ledger. It allows participants to agree on a single version of the truth without a central authority. Examples include Proof of Work (PoW), Proof of Stake (PoS), and Delegated Proof of Stake (DPoS).

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Cosmology: Cosmology is the scientific discipline concerned with the origin, structure, evolution, and fundamental laws governing the universe as a whole.

Cosmo-localization: Cosmo-localization is a conceptual framework that focuses on the integration of universal (global) and local elements, for example by enabling locally applied adaptations of global knowledge, cultures, and technologies. This approach seeks to harness global opportunities and innovations at the local level, while taking into account the specific characteristics of local environments and needs.

Creative Commons (CC): *Creative Commons* is a legal framework that allows creators to specify how others can use their works, while retaining their authorship rights. Content under CC licenses is freely available and shareable, with varying usage permissions depending on the license type (e.g. attribution required, non-commercial use only, etc.).

DAO (Decentralized Autonomous Organization): A *DAO* is a decentralized organization governed by blockchain-based smart contracts and community decision-making rather than centralized leadership. DAOs allow participants to manage collective resources and make transparent, democratic decisions using token-based governance systems. They represent a shift toward programmable, peer-governed structures compared to traditional hierarchical organizations.

Decentralization: *Decentralization* refers to an organizational or governance structure in which decision-making power, authority, and resources are not concentrated in a central entity but are distributed across multiple autonomous units. The goal is to increase local autonomy and improve efficiency—often achieved through blockchain or other decentralized systems.

Decentralized application (dApp): A *decentralized application* (or *dApp*) is a software application that runs on a decentralized network, such as a blockchain, instead of relying on a centralized server. dApps are typically secure, transparent, and eliminate the need for intermediaries, allowing users to interact directly with the protocol.

Decentralized manufacturing: *Decentralized manufacturing* is a production model where manufacturing processes and capacities are distributed across multiple locations rather than centralized in one facility. This model often leverages digital technologies like 3D printing and community-based production to tap into local manufacturing resources.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Digital cooperative: A *digital cooperative* is a tech-based, community-owned organizational model that operates in the digital economy. It follows democratic principles (e.g., one member – one vote) and is typically powered by open-source technologies, decentralized platforms, and blockchain systems to ensure collective governance and fair participation.

DIKW model (Data–Information–Knowledge–Wisdom): The *DIKW model* represents the hierarchy of knowledge transformation: from raw *Data*, to *Information*, then to *Knowledge*, and ultimately to *Wisdom*. This framework illustrates how unprocessed data becomes meaningful and actionable insight, serving as the foundation for understanding and decision-making.

Distributed ledger technology (DLT): *Distributed Ledger Technology* refers to digital systems that record data (such as transactions) across multiple locations and computers in a decentralized way. As there is no central authority, all updates to the ledger are agreed upon via consensus and recorded transparently. *Blockchain* is the most well-known example of DLT.

Distributed manufacturing: *Distributed manufacturing* is a model in which production processes are spread across multiple locations, enabling decentralized and flexible manufacturing. Digital technologies—such as 3D printing—support localized, on-demand production of customized goods, reducing transportation costs and the need for centralized infrastructure.

EU GDPR (General Data Protection Regulation): The *EU General Data Protection Regulation (GDPR)* is a regulation that governs the processing of personal data of individuals within the European Union and the European Economic Area. Its purpose is to strengthen individuals' data protection rights and create a harmonized legal framework for data handling across the EU.

ERC-20: *ERC-20* is a technical standard for tokens issued on the Ethereum blockchain. It defines a common set of rules for token behavior, including how tokens can be transferred, how balances are tracked, and how they interact with smart contracts. ERC-20 tokens are the most widely used standard for dApps and Initial Coin Offerings (ICOs).

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

ERC-721: *ERC-721* is a technical standard for creating unique, non-fungible tokens (NFTs) on the Ethereum blockchain. Unlike ERC-20, each ERC-721 token is unique and cannot be exchanged on a one-to-one basis, making them ideal for representing digital collectibles and individual assets.

Ethereum: *Ethereum* is a decentralized, blockchain-based platform that allows developers to run smart contracts and build decentralized applications (dApps). Its native cryptocurrency is Ether (ETH), which is used to pay for transactions and computational services on the network. Ethereum is one of the most widely adopted blockchains and plays a central role in the decentralized finance (DeFi) ecosystem.

Ethereum Swarm: *Ethereum Swarm* is a decentralized storage network developed as part of the Ethereum ecosystem. It is designed to provide reliable and censorship-resistant file storage and sharing for Ethereum applications. Swarm eliminates the need for centralized storage providers by enabling peer-to-peer storage and ensuring file persistence and availability.

Ethical Interoperability: A systemic capability that enables different technological, economic, and social networks to connect on a value-based level. It refers not only to technical interoperability but also to the ability of platforms, algorithms, and community protocols to align with shared moral and ethical principles.

Interest Matrix: A submatrix of the value matrix (alongside the needs matrix), identifying possible cooperation paths based on resource sharing or alignment of interests.

Resource-Based Economy: An economic model that prioritizes the sustainable and efficient use of resources, minimizing waste and maximizing recycling, sharing, and optimization. Production and consumption are guided not only by financial gain but also by environmental and social impacts.

Feedback-Based Quality Control: A quality assurance method focused on continuous improvement through the collection and analysis of user or customer feedback. It enables early detection of issues and facilitates iterative product or service enhancement.

Fiat Currency / Money: Legal tender not backed by physical commodities (such as gold or silver). Its value relies on trust in the issuing government, its authority, and economic

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

stability. Fiat currencies are issued by central banks and are regulated according to national economic needs.

Gas Fee: A transaction fee paid by users to perform operations on a blockchain network (especially on Ethereum). It compensates network validators (miners or stakers) for the computational energy required to process and validate transactions or smart contract executions.

Gestalt Psychology: A psychological approach that originated in early 20th-century Germany, emphasizing that "the whole is greater than the sum of its parts." It primarily explores perception, learning, and problem-solving, focusing on how people naturally organize sensory information into meaningful wholes.

Governance Token: A type of cryptocurrency or blockchain-based token that grants holders voting rights on decisions related to the operation, development, and governance of a decentralized platform, protocol, or project.

Hash Function: A mathematical algorithm that takes input data of any size and produces a fixed-size string of characters (called a hash). It is used to ensure data integrity and allows for efficient data identification and verification.

Innovation Hub Network: A system of interconnected centers or nodes that foster innovation by facilitating collaboration, idea-sharing, and support for startups, researchers, and businesses. These hubs often serve as catalysts for regional or global innovation ecosystems.

Interoperability: The ability of different systems, platforms, or technologies to seamlessly work together, exchange data, and interpret shared information based on common standards or protocols. It is the technical foundation of cross-system cooperation.

Infosphere: The total environment of information production, storage, processing, and flow, encompassing the internet, media systems, data platforms, and the social-cultural frameworks linked to them. It increasingly defines human reality as an information-based reality.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Information Autonomy: The individual or collective capacity to control one's own data, digital behavior, and information consumption. It includes the right to understand, manage, and make informed decisions about what data is shared, seen, and used.

Smart Contract: A smart contract is a self-executing program running on a blockchain where the terms of the agreement are written in code. It automatically enforces and executes contractual conditions when predefined criteria are met, using conditional logic without the need for intermediaries.

Integrated Information Theory (IIT): Integrated Information Theory posits that consciousness arises from a system's ability to generate unified and differentiated information about itself. The degree of consciousness is quantified by the value of **Φ (phi)**, indicating how much integrated information the system possesses. The higher the Φ, the greater the level of consciousness.

IoT Infrastructure: IoT (Internet of Things) infrastructure refers to the devices, networks, platforms, and systems that enable the connection, data collection, communication, and processing of IoT devices. It supports seamless integration and automation across smart environments.

Game Theory: Game theory is the mathematical language of interaction, mapping out decisions, strategies, and interdependencies between rational actors. It models competitive and cooperative scenarios to predict outcomes in strategic decision-making.

JSON (JavaScript Object Notation): JSON is a lightweight, human-readable data format commonly used for data interchange between web applications and servers. It is widely adopted for structured data transmission and storage due to its simplicity and compatibility.

Balanced Supply and Demand: A state in the market where the quantity of goods supplied equals the quantity demanded. Prices remain stable, and there are no significant surpluses or shortages, indicating economic equilibrium.

Cryptocurrency: A digital or virtual currency that uses cryptography for security and operates on a decentralized ledger (typically a blockchain). It enables peer-to-peer transactions without intermediaries and is resistant to centralized control or manipulation.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Complex Adaptive Systems: Systems composed of numerous interacting components that adapt to their environment through feedback loops and learning processes. These systems exhibit emergent behavior—patterns that arise from interactions and cannot be predicted from individual parts.

Quantum gravity theory: Quantum gravity theory is a field of physics that seeks to unify quantum mechanics and general relativity in order to describe the behavior of gravity at extremely small (quantum) scales. Its goal is to explain the structure of spacetime at the Planck scale, where classical theories of gravity are no longer applicable.

Quantum mechanics: Quantum mechanics is a branch of physics that describes the behavior of matter and energy at very small scales, such as atoms and subatomic particles. Its foundational principles differ from those of classical physics and include concepts such as superposition, quantum entanglement, and probabilistic states.

Layer 2 solution: A Layer 2 solution is a blockchain scaling technology that operates on top of a base (Layer 1) blockchain, enabling faster and more cost-efficient transactions while preserving the security and decentralization properties of the underlying chain.

Makerspace / maker culture: A makerspace or maker culture refers to a community-oriented environment where individuals collaborate, develop ideas, and gain access to tools and equipment (such as 3D printers and fabrication tools), fostering innovation, creativity, and hands-on experimentation.

Metacrisis: A metacrisis is a global, systemic crisis that simultaneously affects multiple systems or dimensions—such as economic, social, and environmental domains—and requires complex, coordinated responses to address its interconnected challenges.

MetaMask: MetaMask is a cryptocurrency wallet and browser extension that allows users to manage Ethereum-based assets (such as ETH and tokens) and connect to decentralized applications (dApps).

Metatheory: A metatheory is a theory about theories—it does not describe a specific system but instead examines how theories are created, how they function, and how they relate or interact with one another.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Metamodern thinking: Metamodern thinking is a comprehensive worldview that seeks to transcend both modernism and postmodernism by offering a new interpretive framework for human experience, social development, and global perspective. It represents not only a philosophical or aesthetic stance, but also an emergent cognitive and systemic approach to the complex challenges of the 21st century.

Multichain system: A multichain system is a blockchain ecosystem that connects multiple independent blockchains, allowing for the transfer of tokens, data, and other digital assets across chains, thereby enhancing interoperability and scalability.

Nanotechnology: Nanotechnology is a field of science and engineering focused on the manipulation and design of materials at the nanometer scale (1–100 nm). It enables the development of novel materials, devices, and systems with unique physical, chemical, and biological properties.

Network Society: A social structure where the flow of information, the exercise of power, and most economic activities are organized through digital networks rather than hierarchical institutions. Connections are based on decentralized, distributed networks.

Network state: The network state is a novel societal formation based on digital communities, as conceptualized by Balaji Srinivasan. It refers to a globally connected, values-aligned online community that organizes itself through digital tools, such as blockchain infrastructure, and gradually establishes physical presence (e.g., settlements, zones). A network state aspires to gain economic and political influence, and may even seek recognition as a sovereign entity, potentially complementing or competing with traditional nation-states. Key features include global connectivity, a shared ideology or mission, decentralized coordination, online identity, and progressive real-world manifestation.

NFT (Non-Fungible Token): A unique digital asset stored on a blockchain that verifies ownership of a specific work of art, collectible, or other singular digital content. NFTs are non-interchangeable and cannot be substituted one-to-one with other tokens.

“Nixon Shock”: An economic policy announcement by U.S. President Richard Nixon in 1971 that unilaterally ended the convertibility of the U.S. dollar into gold. This decision effectively dismantled the Bretton Woods system and paved the way for the modern fiat currency regime.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Open-source R&D (Research and Development): A collaborative research and development approach in which project outcomes, data, and tools are publicly accessible, allowing the broader community to contribute freely to innovation and iterative advancement.

Open/global social dialogue: A democratic communication process involving diverse societal actors—citizens, institutions, civil organizations, experts, and policymakers—who engage transparently in the discussion of public issues to foster shared understanding, social consensus, and responsible collective action.

Ecological footprint: A unit of measurement that estimates the amount of biologically productive land and water area required to sustain a given lifestyle, including resource consumption and waste absorption.

Ecosystem dynamics: The processes of change and development in ecosystems, shaped by the interactions among living organisms, natural resources, and environmental conditions. This includes energy flow, nutrient cycles, and responses to disturbances such as fire, invasive species, or climate change.

Eco-sociotechnics: A holistic approach that examines and actively shapes the integrated functioning and interdependencies of ecological systems, social structures, and technological infrastructures.

Peer-to-peer (P2P): A decentralized networking model in which participants (nodes) interact directly with one another, exchanging data, resources, or services without reliance on intermediaries. Common examples include file sharing systems and cryptocurrencies.

Process Verification (or Process Authentication): A procedure that ensures a process complies with predefined standards, rules, or quality requirements. It often involves independent auditing to confirm that all steps follow necessary norms and protocols.

Trans-paradigmatic thinking/research: An approach that seeks to transcend established conceptual frameworks or scientific paradigms in pursuit of novel, often radical ideas and methodologies capable of addressing complex, multifaceted problems.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Third Party: An entity (individual or organization) that is not one of the primary participants in a transaction or interaction but is involved as an intermediary, observer, or external agent.

Gricean maxims: A set of conversational principles proposed by philosopher Paul Grice that underpin cooperative and effective communication. These maxims—quantity, quality, relevance, and manner—assume that participants in dialogue behave logically and sincerely.

Planetary civilization: A civilizational stage characterized by global coordination, long-term sustainability, and the collective capacity to make decisions on planetary-scale challenges such as climate change, ecosystem preservation, and technological governance.

Platform: A software or hardware foundation that facilitates the development, deployment, and integration of applications, services, or products by other users or entities (e.g., web platforms, blockchain networks).

Planck length: A fundamental unit in quantum physics, approximately 1.616×10^{-35} meters, representing the scale at which classical concepts of space and time break down and quantum gravitational effects dominate. Below this scale, spacetime is no longer meaningfully continuous.

Planetary utility infrastructure: A planetary utility refers to an ecosystem that integrates the biosphere, technosphere, and infosphere to support sustainable, network-based societal operations. It empowers communities to address both local and global challenges based on their needs, while decentralization reduces systemic risks and improves the efficiency of resource use.

Privacy by Design / Privacy by Default: An approach to data protection that incorporates privacy considerations into systems and processes from the earliest stages of design, rather than treating them as optional add-ons. This methodology proactively identifies and mitigates potential privacy risks by embedding safeguards directly into technologies, business practices, and physical infrastructure by default.

Private Key: A confidential alphanumeric code that grants access to cryptocurrency wallets or encrypted data. The private key must be securely guarded by the owner, as its

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

loss or exposure results in the permanent loss of access to the corresponding assets or information.

Protocol: A defined set of rules and procedures that govern how devices or programs communicate over a network. Protocols ensure standardized, reliable, and secure data exchange between interacting systems.

Public Key: A cryptographic key that is publicly shared and used to encrypt data or identify a cryptocurrency address. Without the corresponding private key, however, the encrypted data cannot be decrypted, nor can access to the associated wallet be obtained.

Soft Resource: An intangible asset based on social, cultural, intellectual, or relational capital. Examples include knowledge, creativity, trust, collaboration, social networks, and the formative power of identity and values. While not directly quantifiable in monetary terms, soft resources are essential for sustainable development, innovation, and societal cohesion.

Regenerative Development Goals: Objectives that go beyond sustainability by actively enhancing the health, resilience, and vitality of natural, economic, and social systems. These goals contribute to long-term restoration and renewal, rather than merely maintaining the status quo.

Reward Token: A type of cryptocurrency or digital token issued as an incentive for user participation or activity on a platform—such as staking, gaming, or contributing to a community. Reward tokens help drive engagement and reinforce ecosystem dynamics.

Short Supply Chain (SSC): A distribution model in which products are delivered directly from producer to consumer, minimizing intermediaries and logistical steps. This reduces costs, shortens delivery times, and often improves transparency and sustainability in the supply process.

SDG (Sustainable Development Goals): A set of 17 global goals adopted by the United Nations in 2015, providing a roadmap for humanity until 2030. The SDGs aim to balance social well-being, economic development, and environmental sustainability through coordinated international action.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Security Token: A digital token that represents ownership of a real-world asset—such as shares, bonds, or real estate—and is treated as a security under financial regulations. These tokens must comply with legal frameworks governing securities markets.

Single Source of Truth (SSOT): The principle that a specific data point or information exists in one authoritative and reliable source only, from which all other systems, applications, and processes derive their data. This ensures consistency, accuracy, and trustworthiness while avoiding duplication, conflicts, and misinterpretations. It is especially critical in complex systems with multiple stakeholders, such as product passports, contracts, or user profiles.

Scale-Free Network: A type of network topology characterized by a power-law distribution of node connections: many nodes have few links, while a few "hub" nodes have a disproportionately high number of connections. Such networks lack a characteristic scale and are central to the efficient flow of information, energy, and resources in complex systems.

Social Value Proposition: The unique benefit or value a company or initiative offers to society, such as addressing community needs, promoting sustainability, or fostering social responsibility. It articulates the broader societal impact beyond mere economic gain.

Stablecoin: A cryptocurrency designed to minimize price volatility by pegging its value to a stable asset such as fiat currency (e.g., USD) or a basket of assets. Stablecoins serve as reliable mediums of exchange and stores of value within digital economies.

Singularity: A hypothetical future point at which artificial intelligence surpasses human intelligence, triggering rapid and unpredictable technological advancement. This transition could profoundly reshape societal structures, decision-making, and existential frameworks.

Social Competence: The ability of an individual to interact effectively and appropriately with others across various social contexts. It encompasses emotional recognition, communication, collaboration, and conflict resolution skills.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Socioeconomics: The study and interrelation of social and economic factors, analyzing how societal norms, behaviors, and institutions influence economic activity and vice versa.

Subliminal Network: A covert or unconscious network system that subtly influences individual behavior, decisions, or perception without direct awareness. Such systems operate through hidden stimuli, background algorithms, or cultural patterns—for example, algorithmic newsfeeds that shape worldviews, informal power structures in organizations, or cognitive priming via unconscious cues.

Needs Matrix: A strategic tool for organizing, prioritizing, and assessing the needs and expectations of various stakeholders in a project or organization. It supports decision-making by clarifying which requirements should be addressed first.

Platform Cooperative / Cooperative: An organizational structure in which members collaborate on equal terms to achieve shared goals, often through a shared digital platform. Members co-own the platform and participate directly in decision-making and benefit distribution.

Certified Process Validation: A formal, independent audit procedure conducted in accordance with regulatory or industrial standards to ensure that a given process meets established quality, safety, and performance requirements.

Technosphere: The totality of human-made technological systems and infrastructures, including industry, transport, energy grids, built environments, and digital technologies. Functioning as a technological extension of the biosphere, the technosphere plays a defining role in resource consumption, ecological impact, and societal operations.

Product Passport: A digital document or database that contains comprehensive information about a product's lifecycle—including raw materials, manufacturing processes, quality controls, and logistics. It ensures transparency and traceability across the supply chain.

Token: A digital asset built on blockchain technology, used for various purposes such as facilitating transactions, storing value, or granting rights, including access or voting power within a decentralized system.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

Tokenomics: The economic system surrounding tokens, including their issuance, distribution, utility, and mechanisms for maintaining value. Tokenomics defines how tokens incentivize participation, sustain platform operations, and support long-term economic viability.

Tokenization: The process of creating digital representations of physical, intellectual (know-how), or digital assets on a blockchain, enabling ownership, transfer, and verification in a decentralized and programmable manner.

Utility Token: A type of token that provides functional access to a product or service within a specific platform or ecosystem. For example, ETH on the Ethereum network serves as a utility token for paying transaction fees and interacting with smart contracts.

Value Matrix: A tool or method that helps assess and compare different factors or parameters. It allows stakeholders to evaluate multiple options or decisions by considering various criteria, aiding in more informed and value-aligned choices.

Value-Based Society: A societal model where decisions, economic operations, and community life are guided not only by individual interests but also by collectively accepted ethical, cultural, and human values. In such systems, well-being is driven by internal values rather than merely external regulation.

Wallet-ID: A unique identifier representing a cryptocurrency wallet address. It enables a specific user or digital wallet to be recognized during blockchain transactions without disclosing personal information.

Web3: The next generation of the internet, characterized by decentralized infrastructure and blockchain-based applications. Web3 empowers users with control over their data, peer-to-peer financial transactions, and access to decentralized applications (dApps) without intermediaries.

Web3 Entity / Citizen: An individual, organization, or digital agent that operates within the Web3 ecosystem, equipped with digital credentials such as a crypto wallet or decentralized identity, enabling blockchain-based interactions and participation.

Wise city / smart city: A *smart city* is an urban area that uses technological and digital solutions to improve the efficiency of public services, infrastructure, and transportation,

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

while prioritizing sustainability, data-driven decision-making, and overall quality of life for citizens. Intelligent technologies help cities respond more effectively and rapidly to urban challenges.

Zero-Sum Game: A game-theoretical model in which one participant's gain is exactly balanced by the loss of another, making the total payoff across all players constant and zero-sum in nature.

Zero-Knowledge Proof (ZKP): A cryptographic method that allows one party (the prover) to demonstrate the validity of a statement or piece of information without revealing the information itself to another party (the verifier). Zero-knowledge proofs are widely used in blockchain and cryptographic systems to enhance privacy, security, and trust by enabling verification without disclosure.

Zero marginal cost: The concept of producing additional units of goods or services with no incremental cost. Emerging from the rise of information technologies and sharing-based circular economies, it challenges the industrial capitalist assumption that all value creation entails cost. Digital technologies allow for near-costless duplication and distribution of information, enabling sustainable resource reuse and collaborative consumption, thus unlocking new economic value through reduced waste and minimized input.

Web: envienta.com | Email: info@envienta.com | Tel:+36 501 149 040

H-1093 Budapest, Pipa u. 2/B

envienta™
Covision • OpenRDI • Collaboration

ENVIENTA MAGYARORSZÁG EGYESÜLET
Pipa utca 2/B, Budapest
1093 | Hungary

based upon authorization of

Asociación ENVIENTA Open Source Ecología
C/ Lanzarote Duplex Eurovillas No. 15.
San Fernando De Maspalomas
35100 | San Bartolome De Tirajana, Spain

Web: envienta.com
Email: info@envienta.com
Tel: +36 501 149 040

Follow Us

| WEB | Facebook | Twitter | YouTube | Telegram | Medium |
| LinkedIn | GitHub | BitcoinTalk | ProductHunt |