

.arianee

Reclaiming the Web:

Pathways to digital empowerment

How brands are leveraging Tokenization of Real-World Products and Memberships to Restore Internet Sovereignty and Drive Innovation.

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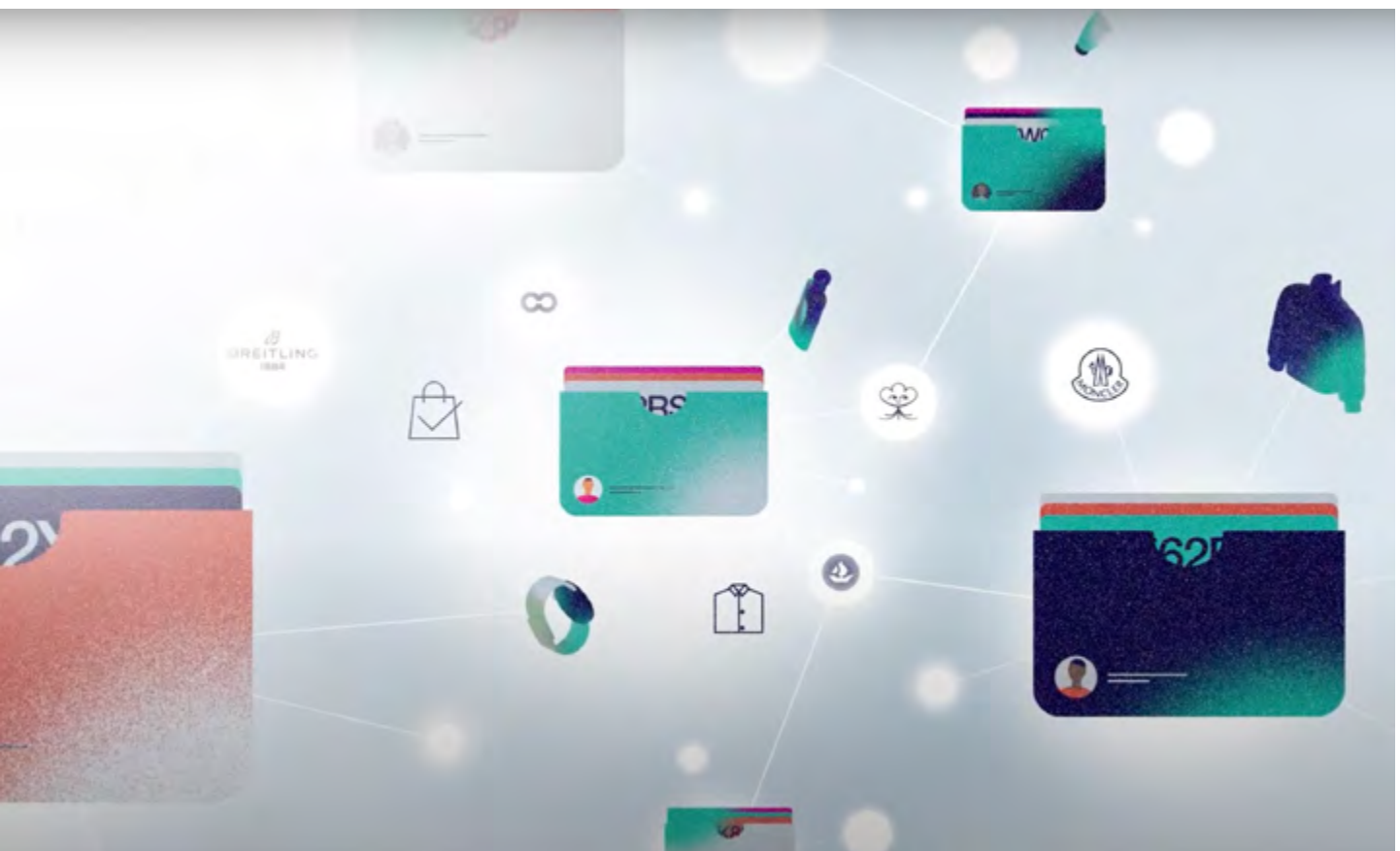
Introduction.

Today's internet, a departure from its **original vision of openness**, is **dominated by a few platforms** that set the rules for our digital interactions, economy, and playfield. This concentration of power creates significant challenges for both individuals and businesses, curtailing innovation.

This position paper examines **how to reverse this trend** and restore the internet as a common good that is open and accessible without prior permission. We seek to identify where to begin and which path to take toward this goal with scale.

Here, we will outline how Web3, with its emerging principles and technologies, can provide tangible solutions. Our aim is to **delineate a clear plan for the deployment of Web3**, seen as the key to a decentralized, fair, and universally accessible internet.

The final section of this position paper outlines what **Ariane** concretely offers to **support this strategy**, and how dozens of brands and millions of users validate its feasibility **on a large scale**.



Executive Summary:

Key points

Centralization

The internet's shift from open architecture to platform dominance hinders innovation and user freedom.

Decentralization Vision

Advocates for a return to an open, accessible, and permissionless internet through Web3 technologies.

Brand Empowerment

Positions brands as the driving force behind the transition to a decentralized internet, using tokenization to regain data control.

Arianees Role

Introduces Arianees as a practical solution for implementing Web3, enabling tokenization of products and memberships.

Innovation and Sovereignty


Emphasizes the potential for Arianees to revolutionize customer relationships and data usage, promoting innovation and digital sovereignty.

Revolutionizing Customer Relations

How Digital Product Passport and Membership Tokenization create persistent, engaging touchpoints for enhanced customer interaction and precision targeting based on deeper customer knowledge.

Call to Action

Encourages brands to lead the charge towards a more equitable internet with Arianees framework as the cornerstone.



Chapter 1

The Current Internet Structure Poses Numerous Problems

Internet's Foundational Open Architecture and its Shift to Centralization

Initially, the internet was constructed upon an open architecture. This “**permissionless**” system is composed of **open protocols**, technologies, and languages—HTTP, TCP/IP, HTML form the technological foundation of the internet—that permit machines to connect to the network without requiring permission, as well as to offer and access content and services **without the need for approval from any centralized authority**.

While these protocols are open, their use requires hardware resources, energy, costs, and expertise that the general public does not possess. However, **platforms quickly emerged** that simplified the hosting of user data, particularly those enabling communication.

The Advantages of Centralization During Internet's Deployment and Adoption Phase

By managing the technological complexity and the operational costs of the necessary hardware layer for data hosting, platforms (in the form of social networks / communication tools) **significantly lowered the barrier to entry** for individuals and companies to use the internet, enabling a broader audience to begin their digital experience.

Data Retention on Platforms that Pay for the Technical Infrastructure

Data is kept on platforms that finance the technical infrastructure, allowing a large number of users to utilize services without concern for technical complexity and cost.

Misalignment of Interests Between Platform Designers/Owners and Their Users

The goal of these platforms is to capture maximum value from their users: individuals pay by giving their data; brands pay for visibility to these consumers.

The platforms' interest lies in **expanding their sovereignty at the expense of individuals and businesses** that use their product, aiming to make them as captive as possible.

Inevitably, the Balance of Power Favors the Platforms

This power dynamic is invariably used to the platforms' benefit. By design, these platforms are **invariably driven to collect more data** from individuals to process and enhance their monetization strategies. From the brands' perspective, the platforms aim to distance them as much as possible from their customers to maintain their intermediary role. These two strategies have proven to be incredibly effective.

Chapter 2

The Growing Number of Associated Problems

Impossibility of Interoperability

For instance, in the realm of contact graphs: companies spend enormous budgets to create followers, and individuals spend time to create connections with people they know or want to follow. Yet, these followers are only accessible through a specific platform and cannot be transferred elsewhere.

What you once accomplished on MySpace had to be replicated on Google+ (are you OG enough to remember this one? :)), Facebook, Twitter, LinkedIn, Snapchat, TikTok, and others. Notably, **none of these platforms offer transferability or interoperability.**

Innovation Limitation

Because platforms act as permissioned black boxes, normal market mechanisms fail to function correctly. **New entrants are unable to build and innovate** by offering fresh opportunities, as the Big Tech gatekeepers do not allow the construction of new possibilities for their users without their express consent—a consent that, of course, is seldom granted.

To draw a parallel with the tangible world: imagine being unable to cook unless your pots, dishes, appliances, and ingredients are all sourced from the same company. Want to make a soup with vegetables bought elsewhere? That's only possible if you're willing to replace everything in your kitchen.

Data are Aggregated and Processed En Masse, Becoming the Platform's Property

Once a set of raw data is used through algorithms to deduce insights about a company or an individual, the **ownership of that knowledge slips away and shifts towards the platform**, resulting in an invaluable loss of value and further fueling the power of that platform.

Unfair competition

Business example: You are a company manufacturing batteries and selling them on a marketplace. The marketplace knows the sales figures and demand sources more precisely than you do. One day, it might introduce its own batteries, replacing yours, and **capture the bulk of the margin on the product**.

There are over 2,000 product references branded as “Amazon Basics,” ranging from batteries to mattresses...

Economic Dependence for brands

The dominant position of platforms has long enabled them to **dictate market conditions** with no transparency: setting prices, deciding who can use their service, and in what manner.

In the realm of Web3, few platforms allow the purchase of visibility when a product or service is associated with blockchains, NFTs, or tokens.


Data Leakage / Hacking

Data breaches and theft occur daily, becoming increasingly problematic due to the size of the affected databases. In just this year of 2023, T-Mobile, Tesla, NTT, MGM, HCA Healthcare have all experienced leaks of private information affecting hundreds of millions of individuals. The more data platforms accumulate, the more valuable their databases become, and the more **these data are targeted by those who will sell them on the black market**. It's a vicious circle.

A Threat to the Integrity of Democracy

The use of data presents a significant risk to democratic processes and institutions. When data is **distorted or maliciously handled**, the integrity of democratic decision-making is compromised. Misinformation can spread rapidly, influencing public opinion and the outcomes of elections. Equivalent cases to the Cambridge Analytica scandals are silently repeating every day.

Additionally, content farms and bot farms thrive because identities on platforms can be manipulated. Since profiles on these platforms are not tied to any tangible value or ownership, scalable methods for creating **fake profiles and spam** remain possible.



Chapter 3

The Quest for a More Virtuous Internet

Respecting User Data and User Choices

When data is collected by a platform, it's impossible to know what becomes of it: how it's processed, in what context, and for whose benefit. It should be up to each individual to decide in what context their data is used. Personnel compliance requires platforms to provide information on processing purposes but purposes are in practice very broad - users have no real control on what data is collected, stored and used by platforms then by customers of these platforms.

It is normal for brands to want to get to know their customers well, and the problem does not lie there. The quality of services provided is enriched by understanding the customer. The problem arises when a platform, acting as an intermediary, gradually gains precise knowledge of our consumption habits and, for instance, sells this information to a company that can infer health problems, which in turn sells that information to health insurers. This happens every day.

Open for Greater Interoperability Data and User Choices

Instead of being confined to closed systems, we advocate for the reliance on **open**, auditable, freely usable, **permissionless** technologies.

Open to Enable Greater Innovation Data and User Choices

Based on composable architecture to unleash the full potential for innovation. Composability in Web3 catalyzes innovation by enabling seamless integration and interoperability among decentralized applications and services. This ecosystem allows developers to rapidly prototype and develop by building upon existing components, leading to a network effect where each addition amplifies the ecosystem's overall value. Such interoperability not only encourages diverse participation, broadening the innovation landscape, but also ensures continuous improvement as advancements in one area can enhance the entire network. This democratization and synergy of development efforts result in a dynamic ever-evolving digital landscape, rich with possibilities for novel applications and solutions.

Permissionless Portability by Design

One of the prerequisites for a more virtuous internet is the absence of hegemonic platforms that unilaterally decide the price to be paid to reach a user, as well as how data is stored and processed.

In principle, the existence of platform services should not pose a problem as long as they do not have the ability to make their users dependent solely on their choices, by locking their data in proprietary and opaque systems.

We need permissionless portable data.



Chapter 4

Targeting the Heart of the Internet's Economic Model for Transformative Change

Profound changes occur either for economic reasons, to eliminate major frictions, or because they allow for a new proposition of substantial value. Sovereignty is not a sufficient argument to provoke change; otherwise, we would no longer use WhatsApp, TikTok, or Gmail, in favor of applications that are more respectful of our data.

That's why we are going to focus on the economic model to seek the levers that can trigger a shift towards a new paradigm.

Big Tech: The Gatekeepers of Our Personal and Brand Data

Technological advancements since the inception of the internet have made personal and business storage widely accessible at a minimal cost. Yet, most of our most confidential data remains out of our control, including our contact lists (followers, followings), conversations, likes, content, and the breadth of interactions they generate. This holds true for both individuals and brands.

Data Exploitation by Platforms: Serving the Visibility Demands of Paying Advertisers

The global digital advertising market is estimated at 500 billion dollars for 2022. In the same year, Alphabet Group (Google, Youtube, Waze, etc.) derives 80.2% of its revenue from advertising. A staggering 98.2% of Meta Group's (Facebook, Instagram, Whatsapp, etc.) revenue comes from advertising.

Consequently, it is entirely logical that these corporations strive to evolve the usage of apps that enable the capture of maximum data to meet as many demands from advertisers as possible. This data collection is only increasing: the content we consume, whom we interact with, the places we frequent, our movements, etc.

Brands, Not Platforms, Are the Economic Core of the Web

It is the Brands that are **Economically Exposed** to Platform Hegemony.

It is the Brands that **have been marginalized on the Internet**, Intermediated in their Relationship with Customers.

It is the Brands that **Fund the Platforms**.

It is the Brands and Developers who **are hindered in their innovation** by a proprietary technological foundation.

It is the brands that have the **greatest power to distribute new technology** globally, in a very short time.

Therefore, it is the **Brands' Problems we must address to change the way the internet functions**, for it is the brands that have the ability to first reclaim this space, and have the capacity to bring their customers along with them by leveraging the value of the trust placed in them, and by offering new services around their universe.

Chapter 5

Web3: The Game- Changing Architecture for Digital Empowerment

Web3 is also referred to as the “**Internet of Ownership**”. A significant shift in blockchain-based architectures is the manner of interaction with data: in a Web3 environment, **each user can control their own data**, which is maintained in an open, interoperable, and **freely usable format**. A token, particularly a Non-Fungible Token (NFT), can represent any type of data: membership in a group, proof of ownership of a product, interest in a topic, or a following/follower relationship, among others.

The technology is available, making it feasible to **build interest graphs and social graphs using an open architecture and technologies**, over which users have full control. This allows for a transition from an internet composed of proprietary platforms and ‘black boxes’ to one where each user has sovereignty, and the technological foundations are common goods made of open technologies.

The challenge now lies in the transition between these two architectures. One does not simply replace one technology with another overnight if there is no interest beyond mere curiosity for the new technology. There must be a strong economic or business incentive that sparks the desire for change.

What Blockchain Brings to the World of Data

The advent of blockchain technology introduces a novel element in the realm of digital data: the **ability to share the same information system among users who do not need to trust each other**, centered around an open technology, to eliminate any intermediary in the management of their data.

While it was already possible to share the use of a central database, it had to be administered and financed by a single entity, which poses a significant risk of dependence, security and integrity.

The Contributions of NFTs to the World of Data

We have talked far too much about NFTs for collectible applications and not enough about their advantages as a primitive at the infrastructure level.

NFTs enable the creation of **uniqueness in the digital world**. They are very practical for representing **ownership** of something. NFTs are an **open technology** and can be **under the control of the customer**.

Ex: Brands have the ability to interact directly with NFT owners without knowing their identities, fully compliant with GDPR requirements. This embodies the 'Respect by Design' approach, adhering to the GDPR's data minimization key principle. It's a prime case of privacy by design, where minimal personal data is processed, and all data is pseudonymized. This innovative approach not only enhances user privacy but also opens new avenues for secure and private brand-consumer engagement in the digital space.

Chapter 6

Revolutionizing Customer Relationship Infrastructure in a Digital World

We've seen it: the relationship between a customer and a brand, through the price paid by brands to be able to communicate with their customers, is the economic engine of the internet. Changing the internet is, above all, about **changing the way the link between a brand and a customer is created** and the communication channel used for services and marketing.

At the heart of this relationship is **data**.

Third Party Data

The swift ascent of platforms has been fueled by a vicious cycle: the more they are used, the more user data they amass, the more precisely they can discern user interests, and thus, the more brands utilize them to target their messaging. This is known as Third Party Data: the phenomenon where the data used for advertising targeting does not reside with the users or the brands but is held on platforms that act as intermediaries.

In this model, the platforms of the **big tech firms act as custodians of data for both individuals and companies**, much like a bank does for financial assets. However, as we will see later, it is not possible to exit a platform taking one's data to utilize elsewhere.

First Party Data

To regain control, brands also began to equip themselves with database systems to collect data on their customers. Unlike third-party data, first-party data is the responsibility of the brands, which **requires significant investment in tech, compliance and security**. This is especially complex nowadays as regulatory constraints are becoming increasingly numerous and complicated. 137 countries around the world now impose regulations such as the GDPR in Europe, LGPD in Brazil, PIPEDA in Canada, DPA in the UK, Personal Information Protection Law in China, and so on.

Neither Third nor First Party Data Proves Satisfactory

Third-party data puts data at risk, commingles it, and constrains its use by brands in products that create dependency.

Furthermore, there is **no guarantee that the messages actually reach the intended target for brands**, as an increasing number of platforms and users opt for a paid use of platforms to avoid advertising messages. In the USA, 15% of YouTube users have switched to the Premium option and are therefore no longer exposed to brand-paid broadcasts. This is a 60% increase from 2022. As from Autumn 2023, Meta also offer an ad-free option with monthly subscription fees.

Both first and third-party data share the same problem: **the moment data is collected, it rapidly loses value over time**. For example, if a person buys a product to give as a gift, the brand at best gets the buyer's contact, who will immediately pass the product to someone else. The change of ownership will not be reported back to the brand. The rise of the second-hand market further exacerbates this issue of data obsolescence.

Zero Party Data: More Respectful, More Effective

The central idea of Zero Party Data is to **ensure that data is under the control of the person it pertains to**, rather than allowing a platform to manage it, or making brands bear that responsibility.

Zero Party Data represents digitally what pre-existed computers. Before databases existed, customers were given a paper proof of purchase and warranty. These documents were presented as a testimony. In a digital environment, replacing this document with data in a centralized database is certainly not the best solution since there is no notion of data ownership for the customer, and it's risky for all the above-mentioned reasons.

Zero Party data addresses this by returning control of the data to the customer while allowing the brand permanent access to it.

Zero party data
empowers the
individual by
distributing data
directly to the user
and granting them
control

Tokenizing Real Product Ownership and Membership: The Foundation of Customer Data

If we are to rethink the customer relationship from scratch, there are two types of information that are essential yet poorly represented digitally:

- Knowing precisely which products a user owns, how long they have had them, and when these products are transferred or sold to someone else.
- A user's membership in a group (loyalty program, community, status).

What NFT technology brings to the table is the ability to:

- Represent product ownership through its **Tokenized Digital Product Passport (DPP)** to turn it into a permanent point of contact with its owner for the entire lifecycle of the product.
- The potential for users to exert greater control over their memberships by possessing the **proof of enrollment** could revitalize lackluster and disengaged loyalty programs.

Indeed, by tokenizing the ownership of each product, we turn it into a native component of the internet, which can be connected to the network by giving it a digital identity. **The DPP lays the foundation for disintermediating the customer relationship and acts as a bedrock for innovation and the opportunity to offer services.**

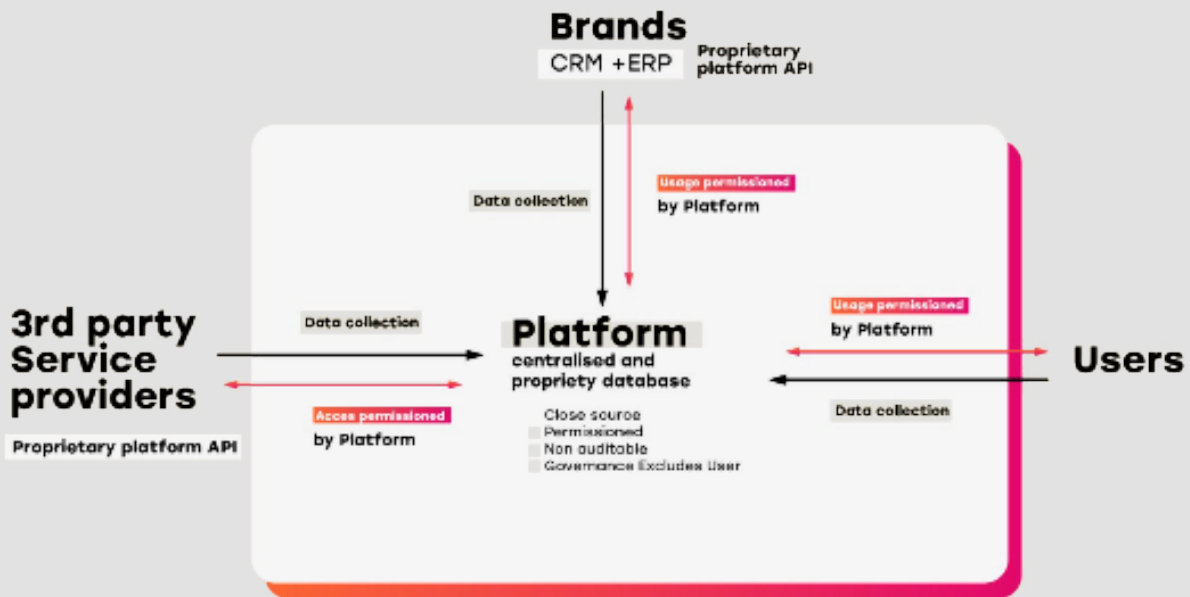
On the membership front, the portability, interoperability, and composability inherent in a tokenized membership will pave the way for greater empowerment and value for customers, while significantly reducing the costs of maintenance and evolution of loyalty program infrastructures.

The Foundational Shift from Big Tech to NFT-Based Data Structures

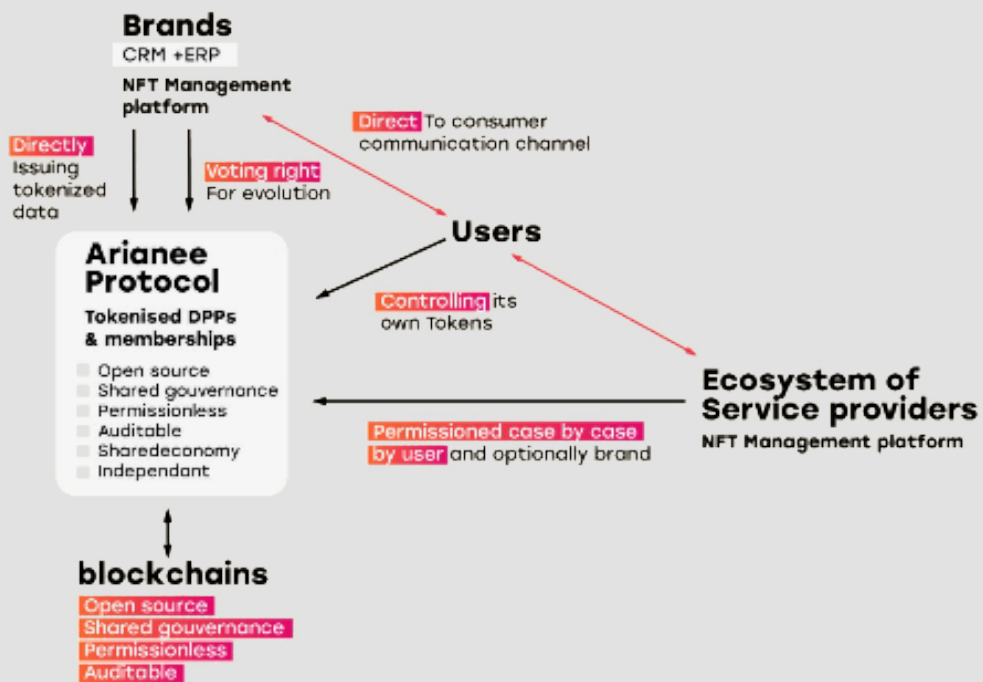
Today, the tech giants form the foundation of the internet. By **representing data as NFTs**, it is these tokens that become the bedrock, the underlying infrastructure of the web. Like building blocks, they can be freely utilized through **composability**.

This sets the stage for a digital landscape where no single actor can interpose as the intermediary in all interactions, thus realigning the interests of users with those who create services. It also allows for an ecosystem to construct and innovate atop this new, frictionless, and permissionless network.

Platform Based Architecture



Open Architecture





Chapter 7

The Arianee Framework

The Arianee Vision

Brands that are cherished globally **are in the prime position to transform the digital world** into a more virtuous and data-respectful space, as they hold their customers' contact and trust.

It is these brands that need to be equipped with open technologies, enabling them to utilize these tools and place them in the hands of their customers to better respect their data, and to create services that are unattainable in an internet dominated by big tech companies.

The Arianee Mission

Providing the **technological foundation** for a direct and permanent customer-brand relationship that respects user data, contributing to **enhanced digital sovereignty for both businesses and individuals**.

To this end, we enable brands to deploy **a new customer data infrastructure**, natively dynamic and controlled by users, complementing first and third-party data.

This **ownership intelligence** unlocks personalized engagement, deeper relationships, and paves the way for new business models.

Oracle-Endorsed Certifications: Arianee's Consensus-Driven Brand Authentication

The Arianee Association bears the responsibility of **certifying the cryptographic keys of brands** that request it, to ensure that a person in control of an NFT can be confident that it was indeed issued by the brand it purports to represent. An **admissions committee** within the association ensures that certification decisions are made **by consensus**. This committee consists of brands that are already members of the association, safeguarding the authenticity and trust within the ecosystem.

Distributed Governance: Empowering Collective Leadership

Customer relationships are a matter for brands. Therefore, it is naturally up to them to make decisions on the evolution of the Arianee protocol. Brands have the opportunity to join the 'Arianee Project,' a **non-profit association whose purpose is to design, evolve, and promote the Arianee open-source protocol**.

The Arianee Protocol

At the heart of our ownership intelligence platform lies the Arianee Protocol open source, selectively adopted and decisively leveraged by brands. It comprises a set of smart contracts deployed across various EVM chains, designed to create enriched and dynamic NFTs that brands can distribute to enhance user engagement.

The fundamental operations of this protocol include:

Minting

Enabling the distribution of ownership information controllable by clients in the form of an NFT.

Transfer NFT

Facilitating the movement of NFTs between parties.

Prove Ownership

Allowing the creation of a verifiable proof of ownership for an NFT, both online and in real life.

Timestamp Events On-Chain

Marking significant events in the NFT's lifecycle on the blockchain.

NFT History

Providing access to the full history and provenance of the NFT.

Send Message to NFT

Allowing an authorized blockchain wallet, typically a brand, to communicate directly with the NFT owner.

This open-source protocol is available for use with its accompanying **documentation** and its payment token: \$ARIA20, or with our **software-as-a-service**, API-based infrastructure including the NFT Management Platform and Embedded Wallets.

All the EVM deployments of the protocol are powered by the \$ARIA20 token and include Appchains built, in partnership with major blockchains like Polygon, for scalability and specific use cases.

Chapter 8:

The \$ARIA20: Empower Service Creators and Ensuring Autonomy

Fostering Unmediated Utilization: Laying the Foundations for Arianee Protocol's Independence

As we've observed, platforms have co-opted the governance of the digital world by funding the infrastructure for open protocols to function and then building proprietary applications on top of these protocols, within which they've confined their users' data. This infrastructure encompasses servers, the energy to power them, bandwidth, and the costs associated with maintenance, security, backup, and more.

We've discussed how to resolve the management of user data so that it isn't at the mercy of a single entity. To prevent actors from positioning themselves as intermediaries again, it's also **necessary to bind the economy of a protocol to the protocol itself**, making them inseparable and **ensuring no one can regulate access to it**.

This is made possible by certain principles of Web3, which form the foundation of Arianee: using the Arianee protocol requires **payment in \$ARIA20 tokens**, which users can acquire freely, in a permissionless manner. Thus, **no actor can impose itself as an intermediary since the protocol remains freely usable by its users directly**.

The Arianee token also allows for the creation of a **revenue stream for the Arianee Association**, which governs the protocol, again without any intermediary, **ensuring the lasting independence of this non-profit body**.

The primary utility and *raison d'être* of this token is to create conditions for Arianee's **enduring independence**, including independence from other tokens or cryptocurrencies. The Arianee protocol is agnostic and can be deployed across as many blockchains as necessary, using the same \$ARIA20.

Fueling Ecosystem Growth with Protocol-Generated Value

The protocol economy encompasses not just the reinvestment of revenues into the Arianee Project Association, but also extends to **third parties who innovate** and build services, driving engagement on the protocol. The **token-based revenue distribution model** ensures transparency, equitable sharing, and encourages fair participation.

In the second-hand market, for instance, a company that develops a service to connect buyers and sellers triggers a change-of-ownership record and sends a message from the brand, which in turn discovers a new touchpoint with the buyer. These actions generate activity on the protocol, resulting in token payments. A portion of these payments is automatically redirected to the service provider as a reward for stimulating activity on the platform.

Conclusion

Embrace the Future:
Lead the Charge in
Tokenization for a New
Era of Digital Integrity

In conclusion, the pathway to a more virtuous internet lies in the hands of forward-thinking brands that recognize the **transformative power of Web3 and tokenization**. It is an invitation to pioneer a new digital frontier—one where **customer relationships are enriched through direct and meaningful interactions**, unmediated by the gatekeepers of the old web.

By adopting a tokenization strategy, **brands can** not only reclaim sovereignty over their data but also **champion the cause of user empowerment and privacy**. This is not merely an upgrade to existing systems; it is a bold step towards an internet that aligns with the core values of transparency, respect, and innovation. We urge brands to take the helm in this journey, to communicate their commitment to a decentralized future, and to deliver on the promise of a more equitable internet for their customers.

The time to act is now—embrace the tokenization strategy with Arianee, and be part of shaping an internet that we can all trust and be proud of.

About Arianee

Founded in 2018, Arianee respectfully connects brands and users through digital product passports, seamlessly distributed regardless of where the product was originally bought: online, offline, brand new, pre-owned, or even gifted. The digital product passport serves as the first gateway to learn more about the product, follow its lifecycle, and confidently transfer or resell it while allowing the brand to have a direct connection with the second-hand buyer. Arianee brings together major brands such as the Richemont Group, L'Oréal Group, Breitling, Paris Fashion Week, Moncler, Mugler and Lacoste, as well as partners in technology, including POAP and The Sandbox, in its vision to build the new internet of ownership. www.arianee.com.

