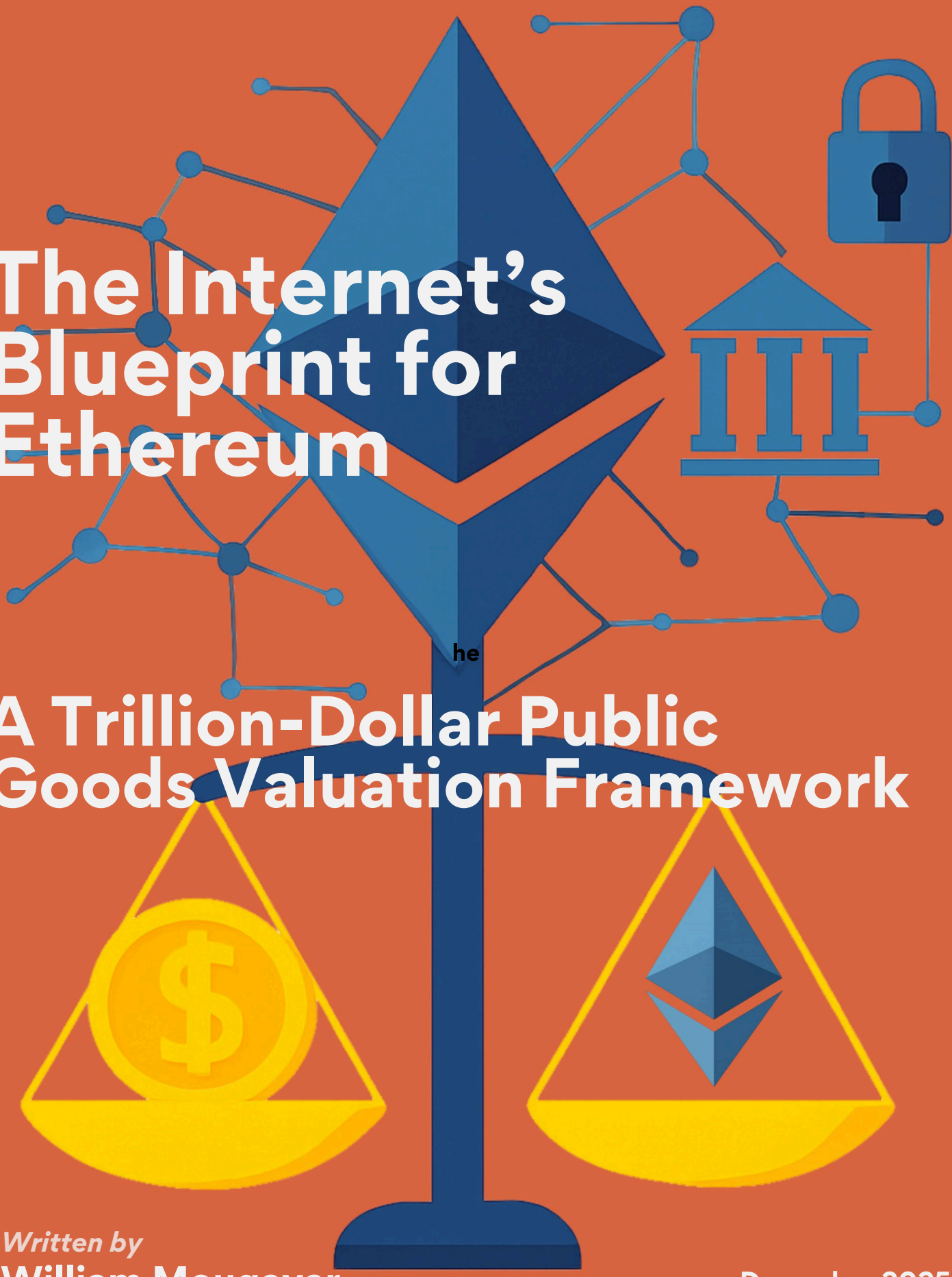
Ethereum Market Research Center

The Internet's Blueprint for Ethereum

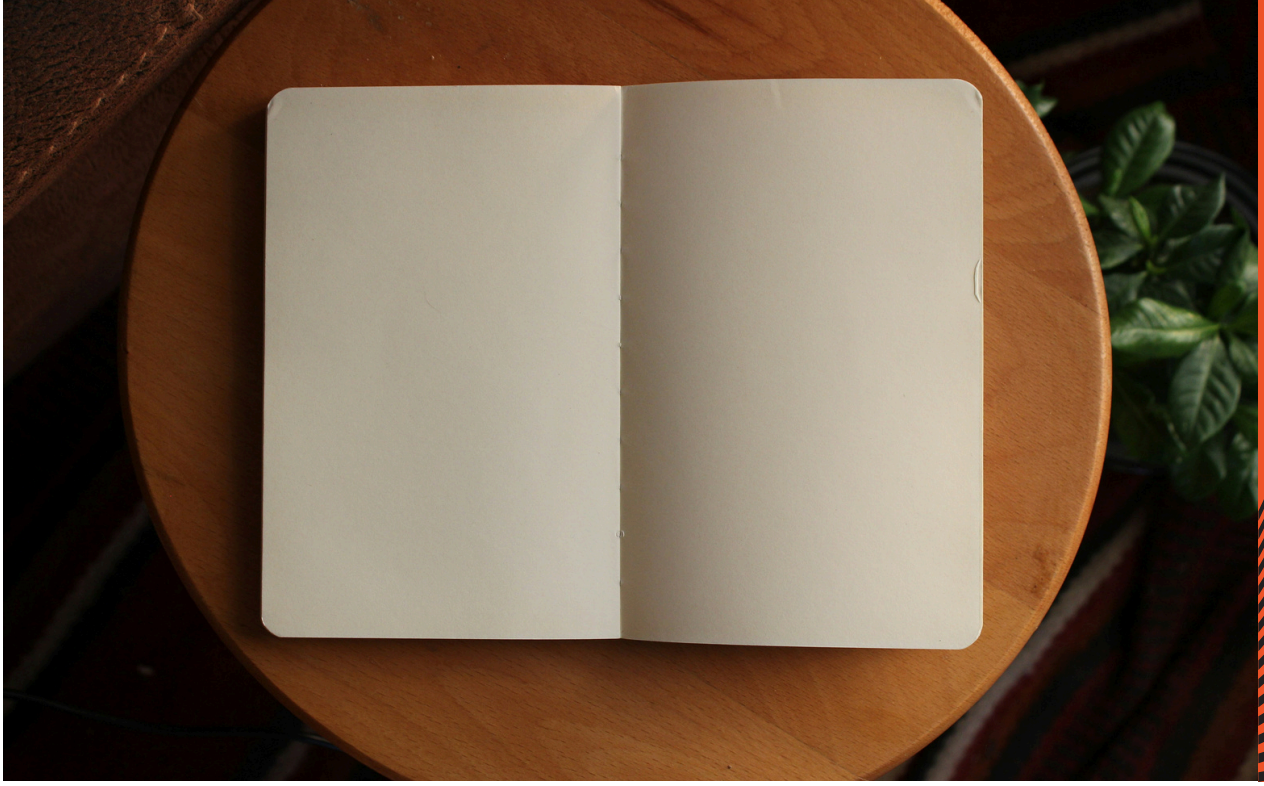


he

A Trillion-Dollar Public Goods Valuation Framework

Written by
William Mougayar

December 2025



Contents

Executive Summary

Ethereum must be valued as a public good, analogous to the foundational Internet protocols (such as TCP/IP), rather than as a for-profit company.

Markets misprice Ethereum because its value is derived primarily from positive externalities, non-excludability, and non-rivalry properties of a public good.

This research proposes a **three-lens valuation framework for "Ethereum-the-System" (not just the ETH asset's market cap)**, drawing parallels to the Internet's value:

1. Captured Value (Visible, Financialized Layer): The current market cap of ETH, L2s, and DeFi blue chips (estimated at $0.6–0.9 trillion today).

2. Ethereum-Dependent Economic Flow (Digital GDP Equivalent): The annual value added from activities that rely on Ethereum, such as stablecoin settlement, tokenized assets, NFT activity, and DeFi (capitalized valuation: $300 billion – $3 trillion).

3. The Trust Surplus (Consumer Surplus Equivalent): The "invisible" economic gain created by Ethereum's reduction of risk, intermediaries, and fraud (capitalized valuation: $150–600 billion).

By combining these lenses, this research concludes that Ethereum's valuation as a public good is in the near-term range of **$2–6 trillion**, with a long-run scenario of **$10–20 trillion** if it becomes the global trust and settlement layer, mirroring the Internet's decades of trillion-dollar valuation.

About the Author

William Mougayar *is a longtime Ethereum advisor, investor, and influential voice in blockchain. With 40+ years in technology as an executive, entrepreneur, analyst, and author, he brings rare depth to the industry. His book The Business Blockchain (Wiley, 2016) became a global reference in 10 languages. He previously held senior roles at Hewlett-Packard, Cognizant, and Aberdeen Group, founded three startups, and advises leading blockchain companies. He also created the Token Summit, OnCoins, the WMX Iconomi index, and the Ethereum Market Research Center.*

Why Ethereum Must Be Understood as a Public Good

Ever since its inception, attempts to value Ethereum have been constrained by narrow analogies: corporate revenue models, discounted cashflows, fee-based economic frameworks, comparisons to competing Layer-1 blockchains, or simplistic supply-and-demand token models.

These frameworks are not merely inadequate; they fundamentally misinterpret the structure and purpose of Ethereum. Ethereum is not a company. It is not a platform that extracts value from users. It is not a product that can be optimized for revenue.

Ethereum is a public good and must therefore be valued as such.

Public goods, such as roads, clean air, GPS signals, scientific knowledge, and open Internet protocols, generate vast economic value but rarely capture it directly, yet they are inherently extremely valuable. They serve as foundational infrastructure enabling countless layers of activity above them. Ethereum belongs in this category.

It is a global trust settlement fabric, an open, decentralized system that enables economic coordination, reduces systemic risk, minimizes fraud, and expands the frontier of what is possible in finance, business models, governance, computation, and digital identity.

Because Ethereum is a public good, the market routinely misprices it. **Markets struggle with assets whose value arises from externalities, shared benefits, and long-horizon systemic effects.** Public goods always appear "overpriced" early in their lifecycle and "underpriced" once their societal role becomes indispensable. The Internet followed this trajectory. So did GPS. So did TCP/IP. Ethereum is following it now.

This essay articulates a rigorous, academic, and holistic economic valuation framework for Ethereum-the-System, not just the ETH asset's market cap. It integrates public goods economics, Internet history, benefits of trust minimization, advantages of systemic risk reduction, digital GDP analogies, and the emerging institutional adoption curve.

Only by understanding Ethereum as a public goods platform can its true economic potential be meaningfully assessed.

Understanding Public Goods: Properties and Market Failures

Public goods create outsized collective benefits, often far beyond what any individual or company can capture financially.

If something:

- benefits everyone,
- can be used without diminishing others' use, and
- underpins innovation and economic activity,

...then failing to value it leads to underinvestment, free-riding, and fragility.

Ethereum itself is a prime example of a public good: if you don't value its client teams, researchers, evangelists, security auditors, open-source tooling, data standards, and protocol development, you risk undervaluing the entire ecosystem.

Public goods are defined by two properties: **non-rivalry** (one person's use does not diminish another's) and **non-excludability** (it is difficult or impossible to prevent access). These two characteristics make public goods the most economically valuable and the most chronically undervalued.

Non-rivalrous goods include knowledge, scientific research, open-source software, GPS signals, weather satellites, and TCP/IP packets.

Non-excludable goods include street lighting, clean air, national defense, and base-layer Internet infrastructure. The combination of the two yields goods that scale exceptionally well but defy traditional monetization structures.

Understanding Public Goods: Properties and Market Failures

Ethereum exemplifies this paradox. It is non-rivalrous: one user's onchain transaction or smart contract execution does not meaningfully reduce others' capacity because the system scales through a variety of technologies and global state execution. It is also non-excludable: anyone with a private key and an Internet connection can access its global settlement environment.

Markets undervalue what they cannot meter, monetize, or restrict.
Public goods are the purest expression of this paradox.

Markets are great at pricing scarce private goods. They are terrible at pricing shared, non-excludable ones.

Understanding Public Goods: Properties and Market Failures

Left to the market:

- Companies won't fund what they can't monetize directly
- Individuals won't contribute because others can free-ride
- Essential infrastructure remains invisible until it breaks

This is why bridges, clean air, standards bodies, vaccines, public universities, and open-source software thrive when **alternative funding** mechanisms are in place to sustain them.

Historically, taxpayers, philanthropists, governments, and multinational organizations have footed the bill, funding a variety of public goods.

In the real world, societies create tax systems, public agencies, foundations, and cooperative structures, just as Ethereum designs funding mechanisms to sustain the shared infrastructure that individual actors would underfund.

This includes funding from the Ethereum Foundation, retroactive funding, corporate sponsorships, protocol issuance, EIP-1559 burn dynamics, client team grants, DAO funding, gas fees, L2 ecosystem or community grants, private investors, philanthropists (e.g., Vitalik Buterin), and companies or startups building on Ethereum (e.g., tooling providers, MEV research groups, wallet providers, security firms performing audits).

This is why so many argue that **Ethereum's advantage is a moat not owned by anyone: it produces a healthier, more sustainable ecosystem than chains that depend on hype cycles, centralized treasury spending, or excessive economic extraction from its users.**

Factors Leading to Potential Failures

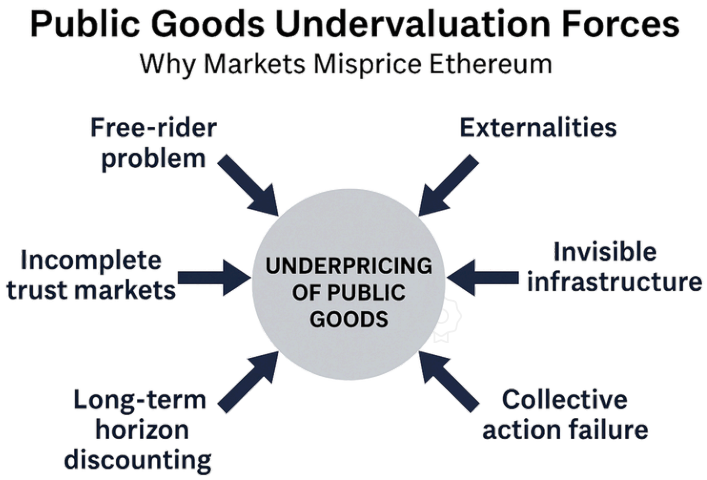
Public goods also face challenges in their evolution. Economists have long understood that markets struggle to properly value public goods due to well-documented structural failures. This context is helpful in understanding why the Ethereum ecosystem must continue circumventing them:

- **Free-rider effects:** When everyone benefits without paying, individuals wait for others to fund the system. This reduces direct contributions, leading to chronic underfunding.
- **Tragedy of the commons:** Shared resources get overused or neglected because no single party feels accountable. Everyone maximizes personal gain, while long-term maintenance suffers, weakening the underlying infrastructure.
- **Positive externalities:** Public goods create far more value for society than producers capture. Markets miss this surplus, causing significant undervaluation of systems that generate widespread economic benefits.
- **Collective-action failures:** When costs are concentrated, but benefits are widely shared, coordination breaks down. No one invests enough, even when everyone agrees that improvement is needed, harming shared infrastructure.
- **Long-term horizon discounting:** Markets favor short-term gains over long-term resilience. Future benefits get undervalued, leading to persistent underinvestment in infrastructure that requires decades of sustained commitment.
- **Invisible infrastructure effect:** People notice public goods only when they fail. Smooth functioning becomes invisible, causing markets to overlook the constant maintenance and innovation required to keep systems running.

Factors Leading to Potential Failures

Ethereum endures all these forces simultaneously. It is global, permissionless, and inherently cooperative. It is indispensable to the functioning of stablecoins, DeFi, DAOs, NFTs, and tokenization ecosystems, but none of these dependents need to pay more than the minimal network fee to Ethereum.

The majority of economic value Ethereum enables is external, not internal.



Public goods do not charge rent. They act as the underlayer upon which value is created, not the apparatus through which it is extracted. Ethereum's token economics obscure this truth: ETH accrues indirect value because it is the coordination asset of the system, but it does not capture a proportional share of the GDP it enables.

This makes Ethereum systematically undervalued when analyzed through corporate or fee-based frameworks.

Historical Precedents

When public goods are undervalued, systems collapse.

Economic history offers examples of failures to recognize and value public goods, with catastrophic consequences.

The **collapse of the Atlantic cod fishery** in the 1990s resulted from treating a renewable resource as a monetizable commodity rather than as a public ecological reserve.

The **Dust Bowl of the 1930s** was triggered by the failure to manage topsoil as a shared ecological public good.

The **Flint water crisis** highlighted the consequences of underfunding critical infrastructure, which remain invisible until they break.

Venice's lagoon deterioration, Amazon rainforest deforestation, and climate change all stemmed from inadequate valuation of public resources.

These failures share a pattern: short-term extraction overshadowed long-term stewardship. Society discounted the value of shared assets, and once those assets degraded or collapsed, the rebuilding costs were far greater than the original maintenance costs.

Ethereum risks exhibiting some of these properties. If Ethereum were to deteriorate due to neglect, regulatory suppression, protocol ossification, or capture by a narrow group of actors, its global digital coordination infrastructure would suffer.

Therefore, Ethereum's public-good nature is valuable but also vulnerable to under-recognition.

Seeing The Invisible Infrastructure

Concrete examples make the public-goods nature of Ethereum impossible to ignore. The ecosystem depends on a constellation of critical contributors:

- **client teams** such as Geth, Nethermind, Erigon, Lighthouse, Nimbus, Lodestar, Grandine and Teku;
- **the global research community** advancing zero-knowledge proofs;
- the **standards process** that produces ERCs;
- the **security reviewers and auditors** who harden the system;
- the developers maintaining **open-source tooling**;
- and the **educators and documenters** who lower the barrier to entry.

Each of these elements is foundational, and none of them can be taken for granted. If these components were undervalued or allowed to wither, Ethereum's reliability and resilience would eventually weaken.

The same dynamic appears outside crypto. Society relies on public goods such as **Internet protocols like TCP/IP and DNS**, public road **networks** that enable mobility, **libraries** that preserve knowledge, and **scientific research** that produces breakthroughs like mRNA vaccines and GPS.

These systems generate vast collective benefit, yet they capture only a sliver of the value they enable. And when they are underfunded, when roads crumble, when libraries decline, when core scientific research stalls, when foundational Internet infrastructure is neglected, everything built on top becomes weaker and more fragile. The pattern is universal: **public goods form the substrate of thriving systems, and their health determines the health of everything above them.**

Seeing The Invisible Infrastructure

Valuing public goods is NOT the same as monetizing them

To “value” a public good doesn’t mean you turn it into a product. Valuing it means:

- Recognizing its economic externalities
- Funding it sustainably
- Rewarding contributors
- Measuring its impact
- Preventing exploitation by free riders
- Ensuring resilience and long-term maintenance

Public goods should be valued because they are the roots of every thriving ecosystem.

Valuing them is how you prevent collapse, encourage innovation, and align incentives for long-term success.

In crypto terms:

A chain that undervalues public goods eventually becomes brittle, centralized, insecure, or irrelevant.
A chain that values public goods compounds innovation.

Ethereum chose the second path.

On Ethereum, the ETH asset serves as the coordination asset, capturing a portion of this economic premium by securing and coordinating the infrastructure, thereby ensuring the funding and resilience needed to prevent collapse.

The Internet as the Archetypal Public Good

The most powerful public good of the modern era is the Internet. It offers the clearest analogy for understanding how Ethereum should be valued.

A quantification analysis of the Internet's three-part valuation model applies equally well to Ethereum. By quantifying Ethereum's market cap, its trillions in dependent settlement flows, and its vast unpriced trust surplus, we establish a fuller, Internet-scale framework for understanding Ethereum's true valuation potential.

The Internet is structured as a layered system:

- **Layer 0: Physical networks** (fiber, cables, towers) - *common basic layer*
- **Layer 1: Protocols** (TCP/IP, DNS, SMTP, HTTP) - *pure public goods*
- **Layer 2: Access networks** (ISPs, mobile carriers) - *club goods*
- **Layer 3: Applications** (Google, Amazon, Facebook) - *private goods*

The Internet's Layer 0 is its physical foundation: fiber cables, undersea lines, towers, routers, and data-center links. Monetization comes from bandwidth sales, mobile subscriptions, wholesale transit, and long-term fiber or interconnect leases, supporting the capital-intensive networks all digital services rely on. In this context, it is a neutral layer because it is equally relied upon by the upper-level Internet and Ethereum layers.

At the Layer 1, TCP/IP, DNS, and HTTP are non-rivalrous (one person's use doesn't reduce availability) and non-excludable (anyone can use them, no license required). They generate massive economic value but extract virtually none of it.

These protocols were largely created through public universities, government-funded research, academic collaboration, and open standards organizations.

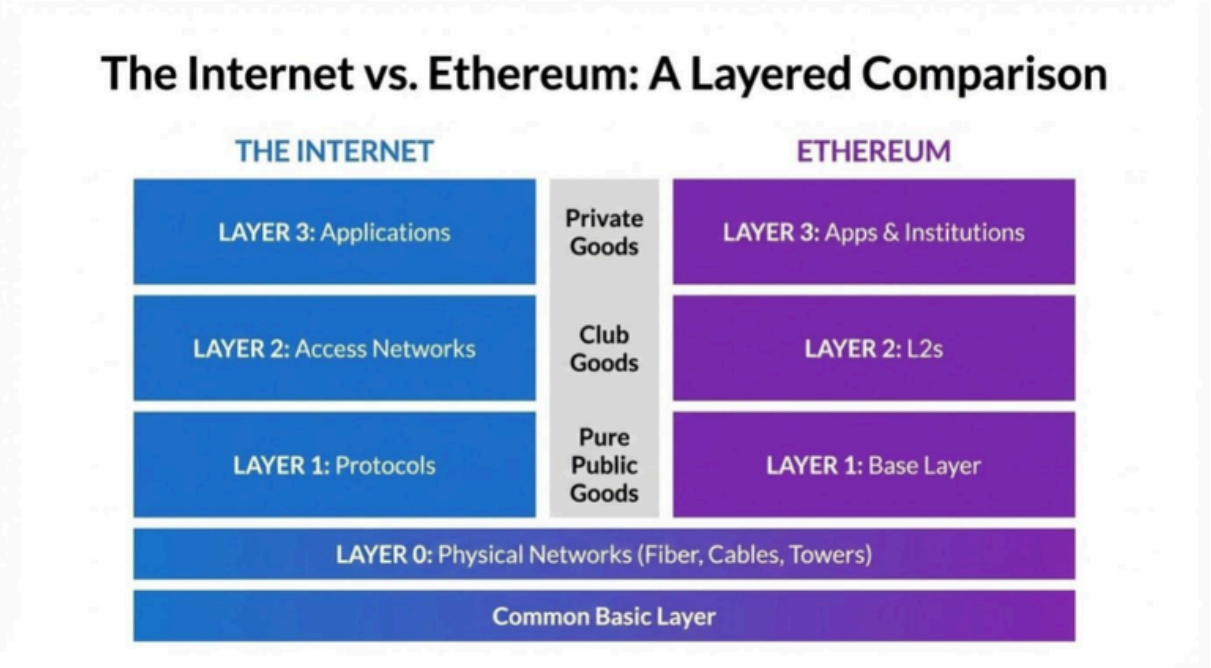
The Internet as the Archetypal Public Good

This layer behaves exactly like a public good. Everyone benefits, no one can easily monetize it, and society relies on it.

Yet the protocols themselves generate near-zero cash flows. The value they enable is orders of magnitude greater than what they capture.

This is the closest analogy to Ethereum's base-layer research and standards work.

The majority of monetization occurs at Layer 3, where corporations leverage the public protocol substrate to build private business models.



The Internet as the Archetypal Public Good

This is the closest analogy to Ethereum's base-layer research and standards work.

The majority of monetization occurs at Layer 3, where corporations leverage the public protocol substrate to build private business models.

The Internet didn't win by extracting value. It won by giving it away.

This refusal to extract value made the Internet the world's most powerful economic catalyst. Its power came not from what it charged, but from what it enabled. It reshaped the world not by monetizing every interaction, but by letting everyone build on top of it.

It became the backbone of modern civilization precisely because it never tried to be the tollbooth.

The Internet proved that the greatest value comes from enabling others, not enclosing them. It sparked trillions in prosperity by serving as a platform that charged almost nothing for participation.

Similarly, Ethereum is the trust protocol that allows higher layers (L2s, applications, institutions) to operate.

The Internet's historical undervaluation offers a critical lesson: public goods create enormous global value that markets fail to recognize early on. Ethereum is at exactly this stage today.

The Internet as the Archetypal Public Good

At the Layer 2, Internet Access is NOT a pure public good.
Internet access (ISP service, fiber lines, cable networks, cellular towers) is:

- Excludable (you need an account to use it)
- Rivalrous (bandwidth is limited, networks can congest)

This layer behaves like a **club good or utility**, not a classical public good. It's similar to Ethereum's L2s: they are built on top of open protocols but run by businesses.

At the Layer 3, Content Platforms are private goods.

Everything on the Internet, Netflix, Amazon, Google search, and social networks is in the category of private goods. They are owned, monetized, restricted, and often proprietary.

This layer is explicitly commercial.

The majority of the Internet's monetization occurs at Layer 3, where corporations leverage the public protocol substrate to build private business models.

The Internet created trillions in wealth not by capturing value, but by refusing to capture it.

It matters that Internet protocols are public goods because their public-good nature enables global innovation, interoperability, universality, permissionless entrepreneurship (anyone can start a company), and massive economic value.

Valuing the Internet as a Public Good

The *public-private* innovation model is one of the most successful in human history.

This is exactly why this matters for Ethereum: **its public base enables an explosion of private and collective innovation.**

If the Internet were valued monetarily, what would its valuation be today, more than 30 years into its worldwide expansion?

There's no single "official" price tag. Still, if you treat the Internet like an asset and value its cash flows and welfare impact, you very quickly end up in the low hundreds of trillions of dollars – comfortably bigger than all global stock markets combined.

Let's unpack that in a structured way and explain what's already being priced, as a first sanity check.

a) Market cap of Internet-centric companies: visible value

If we just add up the publicly listed "Internet companies" (platforms, marketplaces, online services), we already get about $12–13 trillion in equity value.

That excludes telecoms & ISPs, most computer hardware, a panoply of enterprise software, all the private and state-owned players, and the consumer surplus from free services.

So $12–13T is just the visible tip of the iceberg.

Valuing the Internet as a Public Good

b) The "digital economy" slice of global GDP: flow value

The World Bank and others estimate that the digital economy (broadly: activities built on digital networks and data) is now about 15% of global GDP, roughly $16 trillion of a ~$108T world economy in 2024. [1]

Not all of that is "the Internet" strictly defined, but in practice, e-commerce, online advertising, cloud services, digital content, and many layers of logistics, finance, and services are Internet-dependent. Even if we conservatively say half of that $16T is truly Internet-enabled, we're already at $8T per year of value added that simply wouldn't exist without the Internet.

If we then treat that like an infrastructure asset whose payoff persists (assume we capitalize $8T of annual value at a 5% discount rate), we're looking at something like:

$8T / 0.05 ≈ $160T of "shadow value" just from measured GDP activity, clearly dependent on the Internet.

That's already more than the total market cap of all listed companies worldwide (~$134T).[2]

Valuing the Internet as a Public Good

c) The part GDP doesn't see: consumer surplus as an unpriced value

A lot of the Internet's value doesn't show up in revenue at all. Think about the value of:

- Search
- Maps
- Email
- Messaging
- Many social platforms
- Free content, Wikipedia, etc.

Erik Brynjolfsson and co-authors have been measuring this for years. One widely cited study[3] finds that consumers value:

- Search engines at about $17,500 per user per year in the US
- Email at ~$8,400 per year
- Video streaming at ~$1,100 per year
- Facebook at ~$40–50 per month, i.e., $500–600 per year

These are generally accepted values for how much money you'd have to pay people to give up the service for a year.

Valuing the Internet as a Public Good

Now let's scale that.

There are roughly 5+ billion Internet users globally. Obviously, not everyone gets "US-level" value, and not everyone uses everything.

But even if those US estimates are slashed by a factor of ~5–10 for a conservative global average and assume maybe $1,000 of net consumer surplus per user per year, we get about $5 trillion per year in extra welfare that doesn't show up in GDP but is very real.

Capitalized at a 5% discount rate yields $100T.
Capitalized at a 7% discount rate yields $70T.

That's on top of the $160T rough "GDP-based" shadow value above.

3 Parts to Valuing the Internet as a Public Good

Part 1: Visible Value	Part 2: Flow Value	Part 3: Consumer Surplus Unpriced Value
Market cap of Internet-centric companies	The "digital economy" slice of global GDP	The part GDP doesn't see
$33-43T	$160T	$70-150T

Putting it Together: A Plausible Valuation Band

Let's work with credible ranges across three layers:

1. Captured / financialized value (equity)

- Pure Internet companies' market cap: ~$13T[4]
- Add a decent share of big tech, cloud, semiconductors, telecom, etc., and one might argue $20–30T of currently priced equity "belongs" to the Internet.

2. Measured economic flow (GDP contribution)

- Digital economy ≈ $16T/year, at least half clearly Internet-dependent.[5]
- Capitalized like infrastructure: order of $100–200T.

3. Unpriced welfare (consumer surplus from free/cheap services)

- Likely $5T+/year globally, maybe much more.[6]
- Capitalized: roughly $70–150T.

Being conservative and avoiding double-counting, we still comfortably land in a broad band like:

Internet "valuation" today: roughly $100–300 trillion equivalent, i.e., on the order of one to three times annual world GDP, and several times larger than the total market cap of all public equities.

One could argue for a higher number if you:

- Take upper-end consumer surplus estimates
- Include more of the digital economy as fully Internet-dependent
- Factor in the real options value of future innovations built on this base

A Conceptual Takeaway

...but even the conservative math already makes the point.

- Markets have only priced a slice: maybe ~$20–30T in listed companies.
- The underlying infrastructure + welfare flows justify something in the low hundreds of trillions.
- The Internet's public-good layer (open protocols, global connectivity, shared standards) enables those flows, yet it captures almost none of the value directly.

If we draw an analogy to Ethereum as a public-good base layer, the framing could be:

"Thirty years in, the Internet's true economic value is likely in the hundreds of trillions, while the entities built on top capture only a fraction of that. Ethereum, if it succeeds as the trust and settlement layer of the Internet, sits in a similar position: the public-good base whose valuation can't be reduced to its own direct revenues."

This refusal to extract value made the Internet the world's most powerful economic catalyst.

A Conceptual Takeaway

In sum, the Internet today supports:

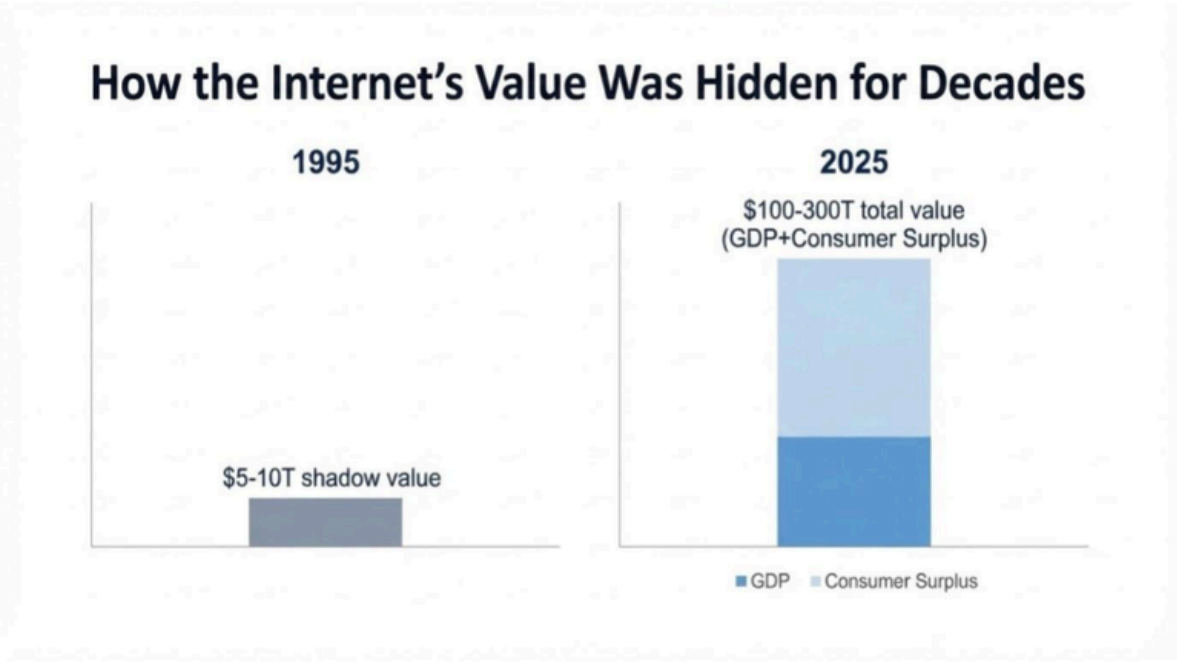
- ~$160T in digital-economy-linked GDP
- ~$12–13T in global tech equity markets
- ~$70–150T in consumer surplus
- ~$100–300T in total societal value

By following this structure, Ethereum is the trust protocol that allows higher layers (L2s, applications, institutions) to operate.

It is no more reasonable to value Ethereum based on gas revenue than it is to value TCP/IP based on packet fees.

The Internet's historical undervaluation offers a critical lesson:

Public goods create enormous global value that markets fail to recognize early on.



Ethereum's Structure and Function

Ethereum's architecture is designed to enable global coordination, minimize trust requirements, and enable programmable settlement. Unlike corporate platforms, Ethereum is not controlled by any single entity and does not rely on extractive business models. Instead, it operates as a neutral, decentralized, credibly neutral public infrastructure layer.

Ethereum's structure resembles a multi-layered economic stack:

- **Base Layer (Ethereum)**: security, final settlement, state consensus
- **Rollup Layer (L2s)**: execution scaling, high-throughput environments
- **Application Layer (DeFi, DAOs, identity, gaming, NFTs)**
- **Institutional Layer (Stablecoins, RWAs, ETFs, corporate treasuries)**

Each layer depends on the one below it. Ethereum's base layer, like the Internet's protocols, is the foundation upon which the rest of the system builds.

Ethereum is not simply a blockchain. It is the programmable settlement layer for the global onchain economy.

This layering is central to understanding Ethereum's valuation. Just as the Internet's value is not captured by HTTP packets but by the entire digital economy they support, Ethereum's value is not captured by gas fees or staking yields but by the full spectrum of economic activity that relies on the Ethereum Virtual Machine, the ETH asset, and the credible neutrality of Ethereum's global validator network.

Unpacking Ethereum's Valuation Model

1. "Captured Value" (Visible, Financialized Layer)

This first lens is the part that markets already price. It includes:

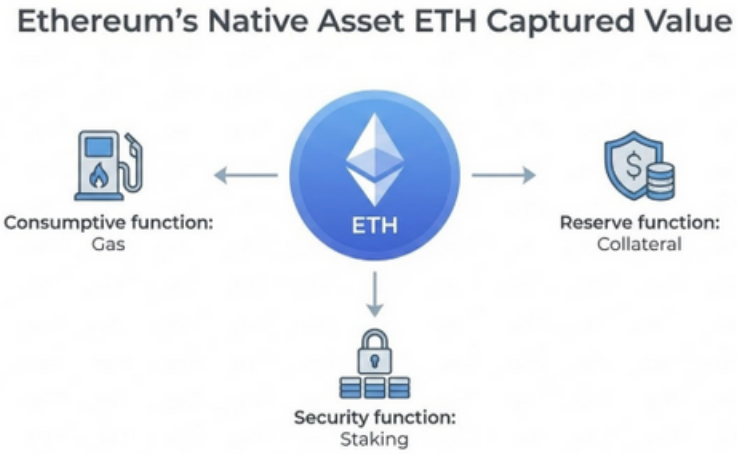
- ETH market cap
- Valuations of L2s, DeFi blue chips, liquid-staking networks, infrastructure, and peripheral services to the infrastructure.

Today, this cluster sits around $600B – $900B. Let's call it $0.6–0.9 trillion.

This is the "AOL/Yahoo/Netscape" level of 1995 Internet valuation, the visible sliver.

It's easy to see why "captured value" exists for Ethereum in the first place. Unlike public goods such as TCP/IP, Ethereum has a native asset with a consumptive function (gas), a reserve function (collateral), and a security function (staking).

These properties parallel the way industrial commodities serve multiple, simultaneous economic roles. ETH's tri-functional identity means that as Ethereum's public-good utility grows, demand for the commodity that powers it grows even faster, giving ETH a commodity-driven valuation layer absent in traditional protocols.



Unpacking Ethereum's Valuation Model

2. Ethereum-Dependent Economic Flow (Digital GDP Equivalent)

This lens represents Ethereum rail–dependent global economic activity in stablecoins, DeFi, RWAs, smart contracts, custody, tokenization, staking, and other flows.

The **ETH Digital Oil** model maps naturally onto these flows. Every stablecoin transfer, every RWA issuance, every L2 compression proof, and every settlement batch consumes ETH either through gas or through its role as economic collateral. In other words, ETH demand scales with economic throughput, just as oil demand once scaled with industrial output. This turns Ethereum's expanding digital GDP into a structural driver of monetary demand for ETH, transforming the asset into the default fuel and reserve commodity of the onchain economy.

Ethereum today secures and processes trillions of dollars in value-transfer flows, including:

- Stablecoin settlement (USDC, USDT, PYUSD)
- DeFi liquidity cycles (DEXs, lending, perps, options, structured products)
- Layer-2 rollup settlement (Arbitrum, Optimism, Base, zkSync, Starknet)
- Tokenized assets and RWAs (treasuries, funds, credit products)
- NFT transactions and royalties
- DAO governance operations
- Identity proofs, attestations, and verifiable credentials

If Ethereum were a country, these flows would constitute its digital GDP, the total economic activity occurring within or relying upon its ecosystem.

Unpacking Ethereum's Valuation Model

Unlike GDP calculated through production, Ethereum's GDP is measured through value settled, not fees collected. This mirrors financial markets, where settlement infrastructure (e.g., SWIFT, DTCC, clearinghouses) sees only a tiny fraction of the economic value of the transactions it processes.

Stablecoins alone generate gross settlement volumes that cannot function without Ethereum or its rollup stack:

- $2.8 trillion in monthly settlement
- $30+ trillion in annualized throughput

DeFi adds trillions more in:

- trading volume
- lending flows
- derivatives settlement
- leveraged liquidity cycles

When aggregated, Ethereum-dependent flows easily exceed $50 trillion per year, even by conservative accounting.

Applying the standard economic rule that financial infrastructure captures 0.3%–1% of the value it intermediates, yields $15–150 billion in annual value added.

Capitalized at a 5% discount yields a multiple of 20. Capitalized at a 7-8% discount yields a multiple of 12-14. Using an average institutional discount rate implies an Ethereum flow-based valuation of $300 billion to $3 trillion. This is the equivalent of valuing the Internet in 1995 at $5–10T.

This valuation captures only Ethereum's role as a settlement rail; it does not incorporate a monetary premium, trust surplus, or future economic layers.

Unpacking Ethereum's Valuation Model

3. The Trust Surplus (Consumer Surplus Equivalent) Ethereum's Invisible Value Engine

This lens covers the trust surplus. Trust Surplus is a way of capturing the hidden economic value created when a system reduces the need for verification, intermediaries, audits, duplication of work, or counterparty risk.

In this case, it is the net economic gain produced when the Ethereum infrastructure eliminates or minimizes the need for third-party trust. It represents the value unlocked when coordination, verification, and settlement become more reliable, cheaper, and more universal than traditional systems.

In other words, it measures the economic contribution of trust itself.

Ethereum collapses many trust functions into cryptography, consensus, and code.

This trust surplus is not priced into gas fees; it is expressed as **economic value saved or economic activity enabled.**

Examples of trust surplus:

- Stablecoins reduce cross-border frictions by 98–99%
- DeFi eliminates market-maker monopolies
- Tokenized treasuries reduce custody premiums
- DAOs reduce operational opacity
- Onchain identity reduces verification costs
- Smart contracts reduce contractual enforcement disputes

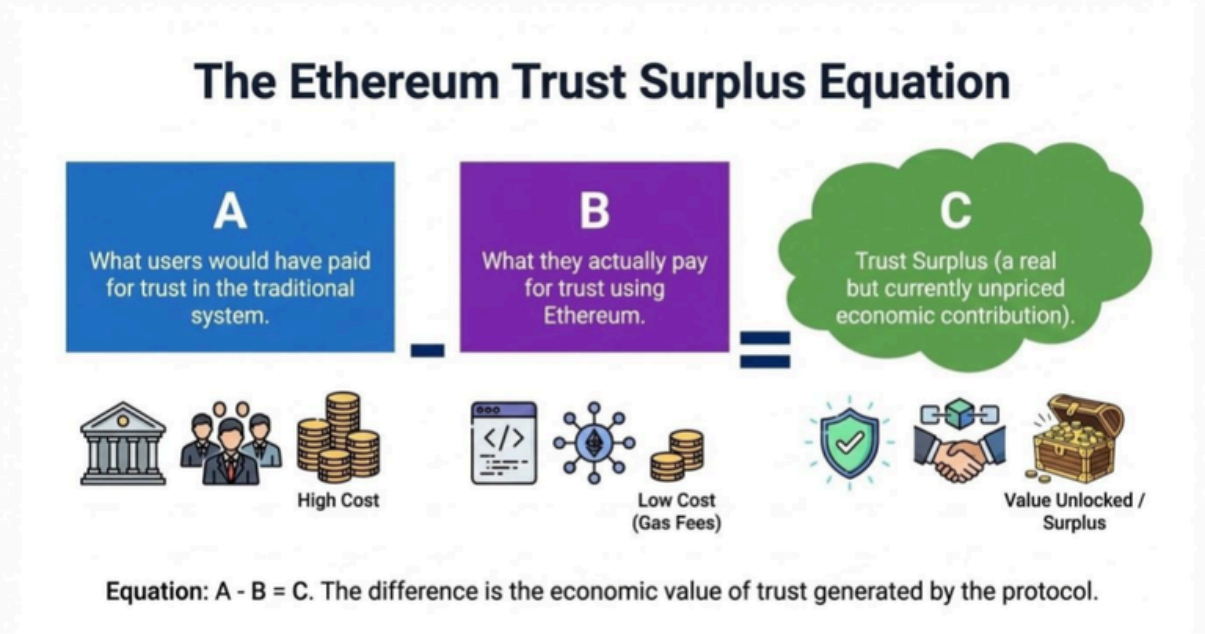
Major financial institutions today spend vast sums to maintain trust (through compliance, settlement, reconciliation, and auditing). Ethereum absorbs these functions at near-zero marginal cost for users.

Unpacking Ethereum's Valuation Model

This is the valuation layer almost every analyst misses.

Ethereum's trust surplus is the 21st-century equivalent of the Internet's consumer surplus.

Trust Surplus is the economic gap between what users would have paid for trust in the traditional system and what they actually pay for trust using Ethereum.



Ethereum's trust surplus also flows into three measurable ETH premiums: monetary, collateral, and security. Together, they explain why ETH appreciates as Ethereum becomes more essential to the world.

1. Monetary Premium: ETH as Programmable Money
As Ethereum secures more economic activity, ETH gains a monetary premium. Users, apps, and institutions hold ETH because it is the trusted settlement currency of a global compute economy. This premium reflects velocity-adjusted monetary demand, gas reserves, L2 operating balances, and the share of settlement denominated in ETH.

Unpacking Ethereum's Valuation Model

2. Collateral Premium: ETH as Pristine Digital Collateral
ETH becomes higher-quality collateral as trust in Ethereum strengthens. Lower perceived risk increases its usefulness in DeFi, RWAs, structured products, and institutional settlement. Rising trust shrinks haircuts, increases leverage capacity, and expands ETH's role as the dominant digital reserve asset.

3. Security Premium: ETH as the Asset Ethereum Sells Trust In
Ethereum monetizes trust through staking, fees, and MEV. As demand for verification from L2s, RWAs, consumer apps, and global coordination grows, the value of Ethereum's trust, as priced in ETH, rises.

In sum, ETH Value = Monetary Premium + Collateral Premium + Security Premium

Each component is tied to a measurable function of trust:

- Monetary premium grows with network credibility → monetary demand
- Collateral premium grows with settlement assurances → collateral safety
- Security premium grows with verification demand → trust revenues

This triad forms a complete macroeconomic model for Ethereum as a public goods platform whose native asset is both the beneficiary and the monetizer of trust.

Trust surplus is one of the most powerful but least understood dimensions of Ethereum's value. Economic value is generated when a neutral, reliable, global infrastructure reduces systemic risk, fraud, uncertainty, and the need for human intermediaries.

Unpacking Ethereum's Valuation Model

In traditional finance, trust is expensive:

- Verification requires auditors, regulators, and enforcement
- Settlement requires clearinghouses and custodians
- Creditworthiness requires rating agencies
- Reconciliation requires armies of accountants
- Legal adjudication requires courts and counsel

This is the equivalent of search/email/Wikipedia consumer surplus for the Internet.

This includes every transaction verified by Ethereum, replacing or reducing layers of:

- Legal overhead
- Institutional intermediation
- Counterparty risk
- Settlement latencies
- Reconciliation costs
- Fraud probabilities and prevention
- Cross-border rail complexity
- Old financial infrastructure & processes
- Rigid legacy financial infrastructure

Having a truly neutral global settlement layer creates an institutional safety premium that is worth measuring.

Conservative assumption:
Ethereum provides $50–150 in net trust surplus per active user per year. With ~20–30 million meaningful annual users, that's $1–4.5 billion in trust surplus per year.

Capitalized at infrastructure multiples yields $12–90 billion.

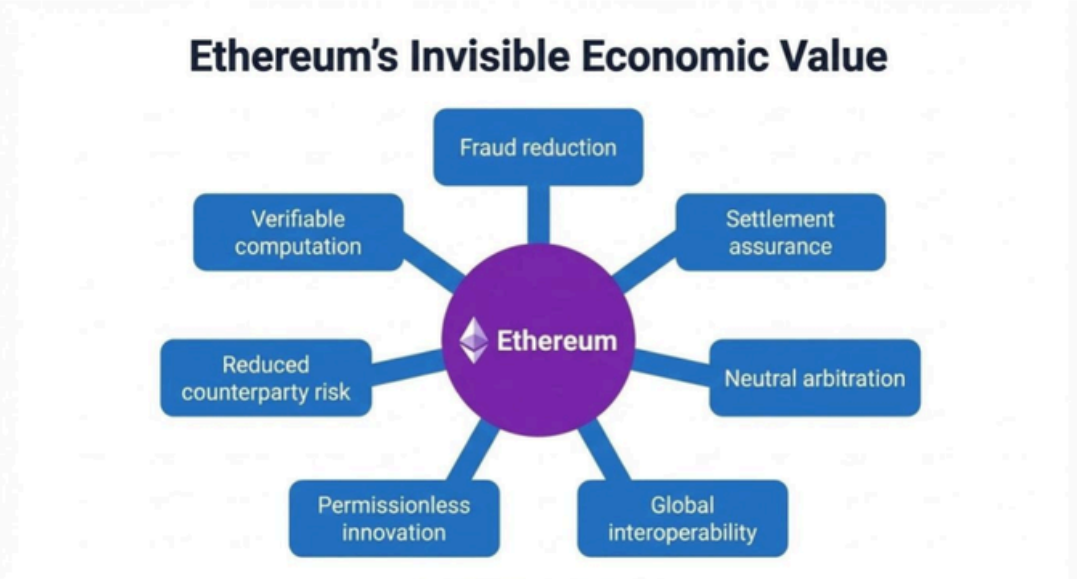
However, this ignores something bigger. Ethereum's trust surplus is systemic, not per-user.

Unpacking Ethereum's Valuation Model

If Ethereum replaces:

- Settlement rails
- Registries
- Attestation systems
- Custody
- Identity
- High-value wholesale rails
- Tokenization infrastructure

...then the surplus is determined not by the number of consumers but by the amount of value secured.



Ethereum + L2s today secure or settle:

- **$1–2 trillion** in tokenized assets
- **$1–2 trillion** in annualized DeFi open interest
- **$2–3 trillion** in stablecoin flows on L2s
- **$5–10 trillion** in annual value transacted via Ethereum-connected systems

Economically, if Ethereum reduces global financial trust costs by even 1–3 basis points, across trillions in assets, the surplus reaches $10–30 billion per year.

Capitalized at standard rates, yields, and Ethereum trust-surplus valuation of **$150–600 billion**.

Aggregate Valuation Combination

To make the valuation path unmistakably clear, we anchor this model in four chronological horizons that mirror Ethereum's real-world evolution.

Today's value reflects what the market already recognizes. The 2025–2026 window captures the next step: when cheaper rollups, exploding stablecoin volumes, and early institutional adoption reshape Ethereum's economic gravity. By 2027–2028, Ethereum looks more like a public utility than a speculative asset, settling vast amounts of digital value across L2s and global markets. And by 2029–2035, if Ethereum follows an Internet-like trajectory, it will become the trust and settlement layer for the world, an invisible backbone that powers entire sectors.

These stages create a logical sequence for combining captured value, flow value, and trust surplus into a unified valuation arc, assuming that Ethereum becomes the dominant neutral settlement layer, as the Internet became the dominant communication fabric.

These aggregates are grouped to avoid double-counting:

Low-case (very conservative) Present	**Mid-case (realistic) 2026 - 2027**	**High-case (mature Internet-analogy) 2027 - 2028**
• Captured value: $0.6T • Flow value: $0.3T Trust surplus: $0.15T	• Captured value: $0.7–0.9T • Flow value: $1–2T Trust surplus: $0.3–0.6T	• Captured value: $1–1.5T • Flow value: $2–3T Trust surplus: $1–2T
→ Total: ≈ $1.0–1.2 trillion	**→ Total: ≈ $2–3.5 trillion**	**→ Total: ≈ $4–6 trillion**

Long-Run: Ethereum as the Global Trust Underlayer

When Ethereum is appropriately viewed as the public trust underlayer for the next digital economy, the long-run valuation perspective becomes clear.

Under a very-high scenario, if Ethereum reaches “Internet-level public good” scale, around 2030-2035, we can map Ethereum’s place on an analogous curve. This yields a plausible upper bound of $10–20 trillion, assuming Ethereum becomes the “trust & settlement layer of the global economy” by 2035.

This is neither optimistic nor speculative; it is consistent with:

- The Internet’s historical trajectory
- Financial infrastructure valuation models
- Settlement-layer economics
- Trust externalities
- Global institutional adoption schedules
- Public-goods S-curve diffusion
- Stablecoin and RWA markets approaching multi-trillion scale

Ethereum’s economic role is expanding, not contracting. Every year, more sectors of the global economy rely on Ethereum for coordination and settlement.

Ethereum is becoming the digital institution of institutions, a neutral global settlement layer without borders, biases, or intermediaries.

This is the ultimate public-goods role.

Institutional Adoption and the Onchain Economy

Ethereum's importance is accelerating as institutional adoption grows. Stablecoins alone represent the largest single use case of blockchain technology worldwide. They rely overwhelmingly on Ethereum and its rollup ecosystem for settlement finality, liquidity provisioning, and interoperability.

The next wave of onchain institutional activity includes:

- Tokenized money-market funds
- Tokenized treasuries
- Tokenized credit and private debt
- ETF products settling or proving via Ethereum
- Corporate treasuries using Ethereum for hedging or liquidity
- Central-bank collateral networks
- AI agents interacting with onchain assets
- Machine-to-machine commerce
- Embedded prediction markets

Each of these sectors depends on Ethereum's neutral infrastructure. **Institutions cannot rely on monolithic corporate chains susceptible to unilateral rule changes, governance capture, or opaque economics. They need Ethereum's credible neutrality, institutional security guarantees, and resistance to political manipulation.**

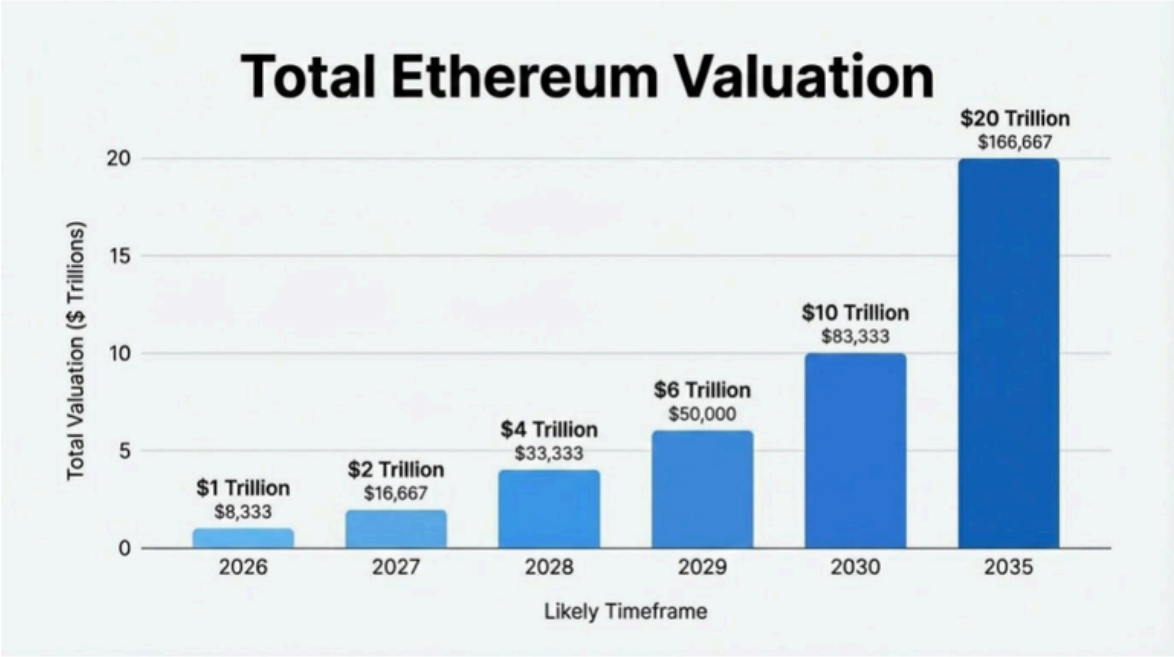
Ethereum's public-goods architecture is not a weakness; it is precisely why major institutions are beginning to adopt it. Open systems scale where permissioned systems stagnate.

Ethereum's True Valuation

Below is a clean numerical range for Ethereum's value as an Internet-scale public good, based on the multi-layer model presented above.

This is not ETH's market cap. It is the economic value of Ethereum-the-System, analogous to valuing "the Internet" rather than valuing "Internet companies." However, it is not inconceivable that, over time, ETH's market cap could track Ethereum's value.

Assuming an approximate circulating supply of 120 million ETH, here is a simplified valuation-to-price mapping, along with the various implied ETH prices, using structurally extrapolated scenarios:



Why Markets Misprice Ethereum

These numbers demonstrate that Ethereum doesn't require speculative euphoria to reach multi-trillion valuations. In a public-goods framework, such valuations are not extreme; they are logical.

ETH captures a share of the economic premium required to secure, coordinate, and operate a global trust fabric, something no corporate structure can replicate.

Much like the Internet's protocol layer never achieved equity value, Ethereum may never capture all the value it enables. But ETH does capture a portion of the economic premium associated with securing and coordinating this infrastructure.

ETH is not equity; it is the asset that binds the public good together.

Public goods are always mispriced during their early-to-mid adoption curves. Markets undervalue:

- Infrastructure
- Trust
- Neutrality
- Future network effects
- Global externalities
- Systems with diffuse beneficiaries

Why Markets Misprice Ethereum

Ethereum exhibits all of these characteristics:

- Its revenue understates its importance.
- Its token supply obscures its systemic function.
- Its decentralization defies corporate analogies.
- Its L2 ecosystem hides base-layer dependence.
- Its visible activity understates institutional flows.
- Its valuation models trail its economic role.

Therefore, Ethereum cannot be perceived as a company. It is public infrastructure.

Its value is not measured in fees. It is measured in:

- Financial flows secured
- Economic externalities generated
- Trust replaced by computation
- Global coordination enabled
- Institutions that depend on it
- Societal scale impact

Ethereum is the first global public good whose value can be directly invested in through its native asset. This makes ETH not only a digital commodity and settlement asset but also a store of value backed by societal reliance.

Ethereum's true valuation is not the sum of its revenues; it is the sum of the world's dependence on it.

Why Markets Misprice Ethereum

Ethereum's valuation cannot be understood through the narrow frameworks applied to corporate assets, platform ecosystems, or short-term revenue models. Ethereum must be valued as a public good, a global, neutral, decentralized trust substrate upon which the digital economy is being built.

This requires shifting from:

- Fee-based valuation → Flow-based valuation
- TPS comparisons → Economic settlement
- Short-term revenue → Long-term trust minimization
- Blockchain competition → Institutional adoption and digital GDP

Ethereum is the programmable settlement layer for the world's financial, computational, and organizational systems. It is the infrastructure through which global digital assets will move, where machine economies will transact, where institutions will coordinate, and where trust is minimized through cryptographic and economic guarantees.

As a public good, Ethereum's true value lies not in what it extracts but in what it enables. And what it enables is nothing short of a transformation of global economic structure, the creation of an open, international, programmable, and trust-minimized financial system.

The Internet reorganized information.
Ethereum will reorganize value.

And for that reason, the future valuation of Ethereum, measured in trillions, is not ambitious. It is inevitable.

An Appendix of Real-World Examples of Public Goods

1. Environmental & Ecological Public Goods

- **Clean Air & Water.** If undervalued, pollution rises, health costs soar, and quality of life collapses. Markets won't protect what no one owns.
- **National Parks & Natural Reserves.** Preserve biodiversity and ecological stability, but can't be monetized proportionally. Underfunding leads to species loss, weaker ecosystems, and reduced tourism.
- **Environmental Stability** (Forests, Wetlands, Pollinators). Ecosystems like bees, wetlands, and fisheries sustain agriculture and climate stability. Markets won't fund these despite the massive economic impact.
- **Emergency Response to Natural Disasters.** Flood control, earthquake alerts, crisis response. Private markets won't invest because the benefits are spread across millions.

2. Social Infrastructure & Human Capital

- **Public Education.** Education boosts productivity, reduces crime, and improves civic participation. Without support, inequality rises and mobility declines.
- **Public Health Initiatives.** Vaccinations, sanitation, and disease monitoring. Massive positive externalities: one person's protection benefits many.
- **Culture & Public Arts.** Museums, libraries, theaters, archives. They preserve identity and collective memory, which markets systematically undervalue.
- **Urban Planning & Public Spaces.** Parks, public squares, and community centers. Shared spaces strengthen social cohesion and make cities livable.

An Appendix of Real-World Examples of Public Goods

3. Core Economic Infrastructure

- **Roads, Bridges & Transportation Networks.** Highways, transit, ports, airports. Economies can't function without them; private firms won't provide universal access.
- **Public Statistics & Census Data.** Population counts, inflation indices, and employment data. Crucial for business planning, yet no single company can fund them.
- **Scientific Research** (Basic, Non-Commercial). Foundational research in biology, physics, agriculture, and medicine. Breakthroughs like GPS, MRI, and modern crops originated here.

4. Security, Governance & Stability

- **Safe Streets & Public Safety.** Police, firefighting, and EMS. Essential universal services cannot be run profitably on a per-use basis.
- **Rule of Law & Judicial Systems.** Courts, property registries, and dispute resolution. Enable contracts, investment, and trust—core to any functioning economy.
- **Diplomacy & International Cooperation.** Foreign services, trade alliances, and peacekeeping. Provide long-term stability and access to global markets; benefits are diffuse and non-excludable.
- **Public Broadcasting & Information.** Non-commercial reporting, archives, and educational media. Unbiased information underpins democracy but is difficult to monetize without distortion.

Bibliography & References

Ethereum Protocol, Economics, and Ecosystem Data

- Buterin, Vitalik. “Ethereum Blog, Research and Protocol Updates.” Ethereum Foundation. https://blog.ethereum.org
- Buterin, Vitalik. “Credible Neutrality as a Guiding Principle.” Vitalik.ca. https://vitalik.ca/general/2022/11/30/credible.html
- Buterin, Vitalik. “The Meaning of Decentralization.” Vitalik.ca. https://vitalik.ca/general/2017/02/28/decentralization.html
- Ethereum Foundation. “Ethereum Protocol Documentation.” https://ethereum.org/en/developers/docs/
- Ethereum Foundation. “Rollups and L2 Scaling.” https://ethereum.org/en/developers/docs/scaling/
- Growthepie. “Ethereum and L2 Metrics (Gas, Flows, Usage).” https://www.growthepie.xyz
- Ultrasound.money. “ETH Supply, Staking, Burn Economics.” https://ultrasound.money
- CoinMetrics. “Ethereum Network Data & Onchain Metrics.” https://coinmetrics.io
- DeFi Llama. “DeFi Market Data, TVL, Volumes.” https://defillama.com
- Chainlink Research. “Tokenized RWAs & Blockchain Settlement Reports.” https://chain.link/research
- Arbitrum, Optimism, Base, Starknet Docs. https://arbitrum.io • https://www.optimism.io • https://base.org • https://starknet.io
- Yoav Weiss, Vitalik Buterin, Marissa Posner, “The Trustless Manifesto” https://trustlessness.eth.limo/general/2025/11/11/the-trustless-manifesto.html
- William Mougayar. “Ethereum Platform vs. ETH the Digital Asset: Understanding the Distinction.” https://ethmrc.com/ethereum-platform-vs-eth-the-digital-asset-understanding-the-distinction-emrc/
- Etherealize. “The Bull Case for ETH, Digital Oil, Store of Value, and Global Reserve Asset for the Digital Economy.” https://ethdigitaloil.com/

Bibliography & References

Stablecoins, Tokenization, and Institutional Settlement

- Circle. *"USDC Transparency, Flows & Treasury Backing."* https://www.circle.com/en/transparency
- Tether Limited. *"USDT Transparency Reports."* https://tether.to/en/transparency
- Visa. *"Stablecoins: Charting the Next Payments Frontier."* https://usa.visa.com/visa-everywhere/blog/bdp/stablecoins
- Franklin Templeton. *"Onchain Money Market Fund (BENJI)."* https://www.franklintempleton.com/investments/options-and-solutions/blockchain-enabled-funds
- BlackRock. *"BUIDL Tokenized Fund Documentation."* https://blackrock.com/us/products/buidl
- Boston Consulting Group (BCG). *"Tokenization of Assets: A 16 Trillion Dollar Market."* https://www.bcg.com/publications/2022/future-of-asset-tokenization

Public Goods, Economic Theory, Externalities, Commons Problems

- Samuelson, Paul. *"The Pure Theory of Public Expenditure."* Review of Economics and Statistics, 1954. Classic foundational work defining public goods.
- Ostrom, Elinor. *"Governing the Commons."* Cambridge University Press, 1990. Canonical research on collective-action failures and shared-resource governance.
- Hardin, Garrett. *"The Tragedy of the Commons."* Science, 1968. https://www.science.org/doi/10.1126/science.162.3859.1243
- Stiglitz, Joseph. *"Economics of the Public Sector."* W.W. Norton. Leading reference for public goods theory and externalities. https://wwnorton.com/books/9780393925227
- Coase, Ronald. *"The Problem of Social Cost."* https://www.jstor.org/stable/724810
- Framework for externalities and incomplete markets. OECD Research. *"Public Goods and Market Failures."* https://www.oecd.org/economy
- World Bank. *"Public Goods for Economic Development."* https://www.worldbank.org

Bibliography & References

Internet Economics, Consumer Surplus, and Protocol Layers

- McKinsey Global Institute. "Internet Matters: Mapping the Value of the Digital Economy." https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights
- U.S. Bureau of Economic Analysis. "Measuring the Digital Economy." *https://www.bea.gov*
- OECD Digital Economy Outlook. https://www.oecd.org/digital
- Brynjolfsson, Erik & Oh, JooHee. "The Attention Economy: Measuring the Value of the Internet."
- MIT / NBER Working Papers. https://www.nber.org/papers
- Katz, Raúl & Koutroumpis, Pantelis. "Measuring the Economic Impact of the Internet." Telecom Policy Journal.
- Internet Society (ISOC). "The Internet as a Global Public Resource." https://www.Internetsociety.org
- Cerf, Vinton. "Protocol Restoration and Public Infrastructure Lessons." (Various talks and transcripts)

Financial Infrastructure, Settlement, and Trust Economics

- Bank for International Settlements (BIS). "Payment, Clearing and Settlement Systems Reports." https://www.bis.org/cpmi/paysysinfo.htm
- DTCC. "Annual Settlement & Clearance Volumes." *https://www.dtcc.com*
- IMF FinTech Notes. "Digital Money, Tokenized Assets & Settlement Innovation." https://www.imf.org/en/Publications/Fintech-Notes
- World Economic Forum. "Tokenized Economies and Digital Settlement Layers." https://www.weforum.org
- Federal Reserve Research. "Real-Time Settlement and Trust Frictions in Financial Systems."

Bibliography & References

Blockchain Market Analysis & Academic Research

- Cambridge Centre for Alternative Finance. “Global Cryptoasset Benchmarking Studies.” https://www.jbs.cam.ac.uk/faculty-research/centres/alternative-finance
- MIT Digital Currency Initiative. “Blockchain Research Publications.” https://dci.mit.edu/research
- Cornell IC3 Initiative. “Cryptography, Security, and Blockchain Systems.” https://www.initc3.org/
- A16z Crypto Research. “State of Crypto Report.” https://a16zcrypto.com/state-of-crypto-report
- Ethereum Market Research Center, William Mougayar. Ethereum Is Not a Blockchain: It’s a New System with Internet-Like Properties https://ethmrc.com/ethereum-is-not-a-blockchain-its-a-new-system-with-internet-like-properties/
- Ethereum Market Research Center, William Mougayar. Ethereum Can’t Be Valued on Discounted Cash Flow.
- https://ethmrc.com/why-ethereum-should-not-be-valued-based-on-fees-or-discounted-cash-flow/
- Ethereum Market Research Center, William Mougayar.ETH in Motion. https://ethmrc.com/eth-in-motion/

Data Sources Used in Valuation Models

- Growthepie.xyz – gas, blob, L2 settlement flows
- Ultrasound.money – ETH supply, burn, and staking stats
- DeFi Llama – DeFi flows, RWAs, TVL data
- CoinMetrics – transaction volumes, settlement value
- Visa & Mastercard reports – global settlement comparisons
- IMF – global digital money data
- OECD – digital economy macro data
- McKinsey/BCG – tokenization, digital-GDP data
- Federal Reserve – trust frictions, settlement liquidity models

Bibliography & References

Cited Concepts (Implicit, Foundational, or Derived)

- Consumer surplus theory (Varian, Brynjolfsson)
- Settlement-layer economics (BIS, DTCC working papers)
- Externality valuation models (Pigouvian frameworks)
- Public goods underfunding mechanisms (Samuelson, Ostrom)
- Trust economics and friction costs (Coase, WEF reports)
- Scaling laws & digital economies (MIT, OECD)

Footnotes

[1] https://www.idc-a.org/insights/qUi9XgvyrzSkyDUy9Tqr

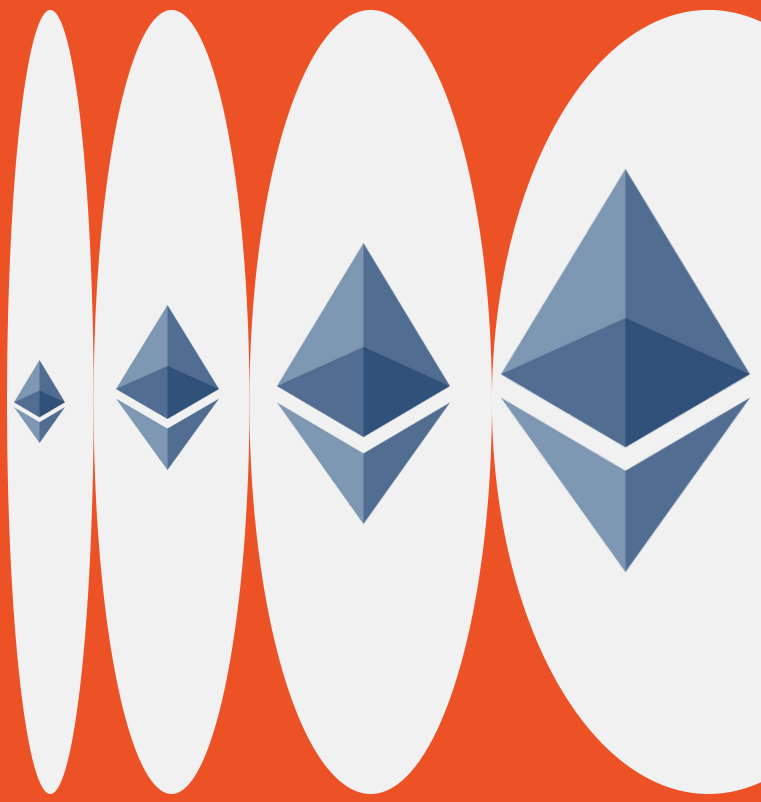
[2] https://companiesmarketcap.com/

[3] https://news.mit.edu/2019/online-tools-facebook-count-toward-gdp-0326

[4] https://companiesmarketcap.com/internet/largest-internet-companies-by-market-cap/

[5] https://www.idc-a.org/insights/qUi9XgvyrzSkyDUy9Tqr

[6] https://news.mit.edu/2019/online-tools-facebook-count-toward-gdp-0326



Ethereum Market Research Center

william@ethmrc.com

Ethereum Market Research Center

William's Blog

@wmougayar

@ethereum_mrc