

Building Net-Zero Commerce for a Circular Economy

Vinay Gupta | CEO

What we will cover today

- 1. Our Journey: Mattereum's conceptual origins**
- 2. Building the Mattereum platform: Preserving value to protect the planet**
- 3. Why blockchain: Building unbreakable**
- 4. Working with Mattereum: How we can engage**



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Our Journey

Mattereum's conceptual origins

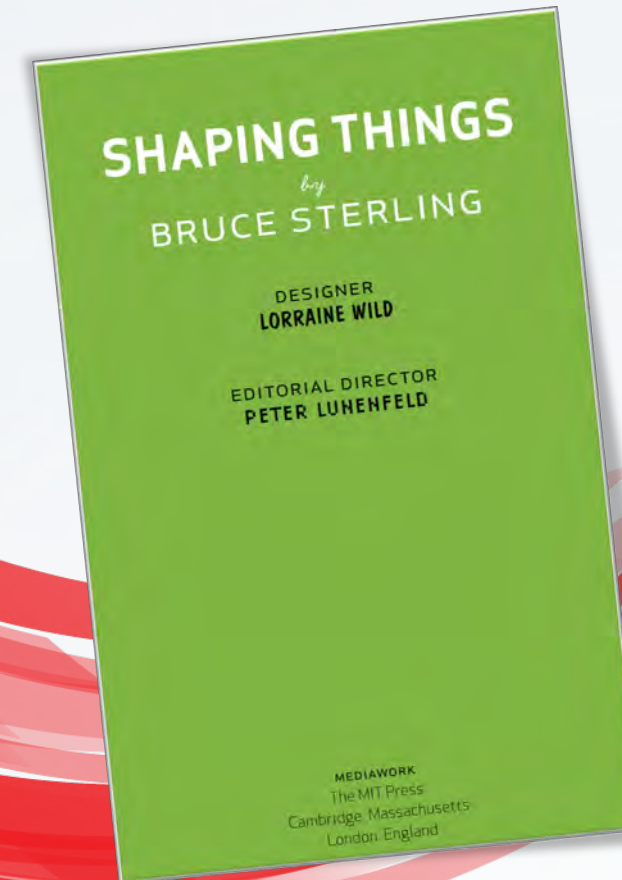
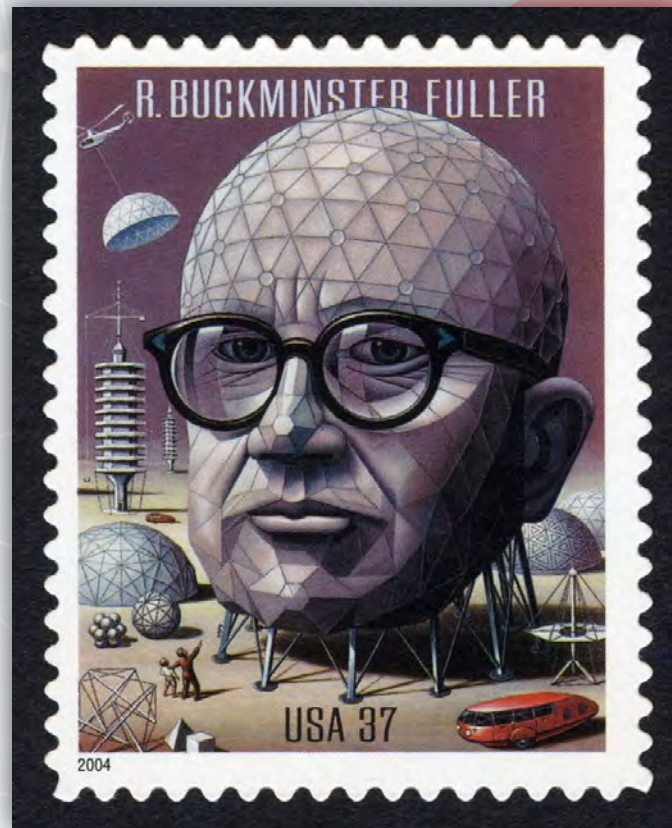
Our origins: Planetary scale decentralised thinking

- 30+ years high technology background
- Recognised thought-leader in the blockchain space
- 15+ years complex systems and policy analyst with military and civilian resilience think tanks
 - Rocky Mountain Institute
 - US Department of Defense
 - Institute for Strategy, Resilience & Security @ UCL
- 20+ years in refugee sheltering design
 - Inventor of the *hexayurt*, a highly scalable open source sheltering solution
- Release co-ordinator for Ethereum's 2015 launch (\$545BN mar cap)
- Mattereum founded in 2017 to be the "One Ring"



Vinay Gupta
Founder & CEO

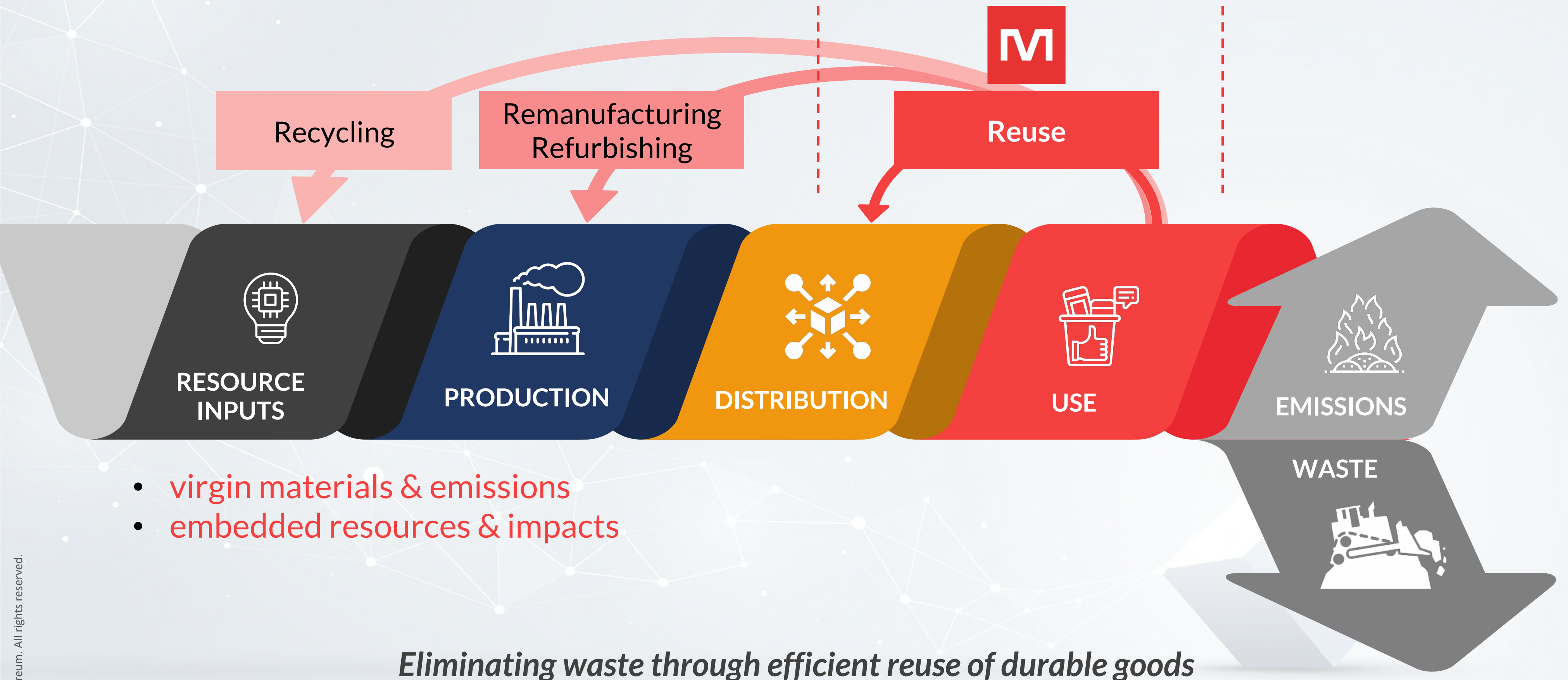
Our journey to this place - deep influences



Common theme

Objects require embedded knowledge to be properly valued as part of a circular economy

Reuse - the most efficient form of circular economy



Building the Mattereum Platform

Preserving value to protect the planet

We live in a world that is being buried in its own rubbish



Humanity generates
**2.5 BILLION
TONNES**
of solid waste annually
500kg/person (EU)

Increasing to
**4 BILLION
TONNES**
by 2050

Only
**20%
RECYCLED**
80% waste

Our goal is to create a world where nothing is ever made to be thrown away



OUR MISSION

Build a global circular economy by enhancing the tradability and liquidity of the world's physical assets

Commodities achieve high liquidity

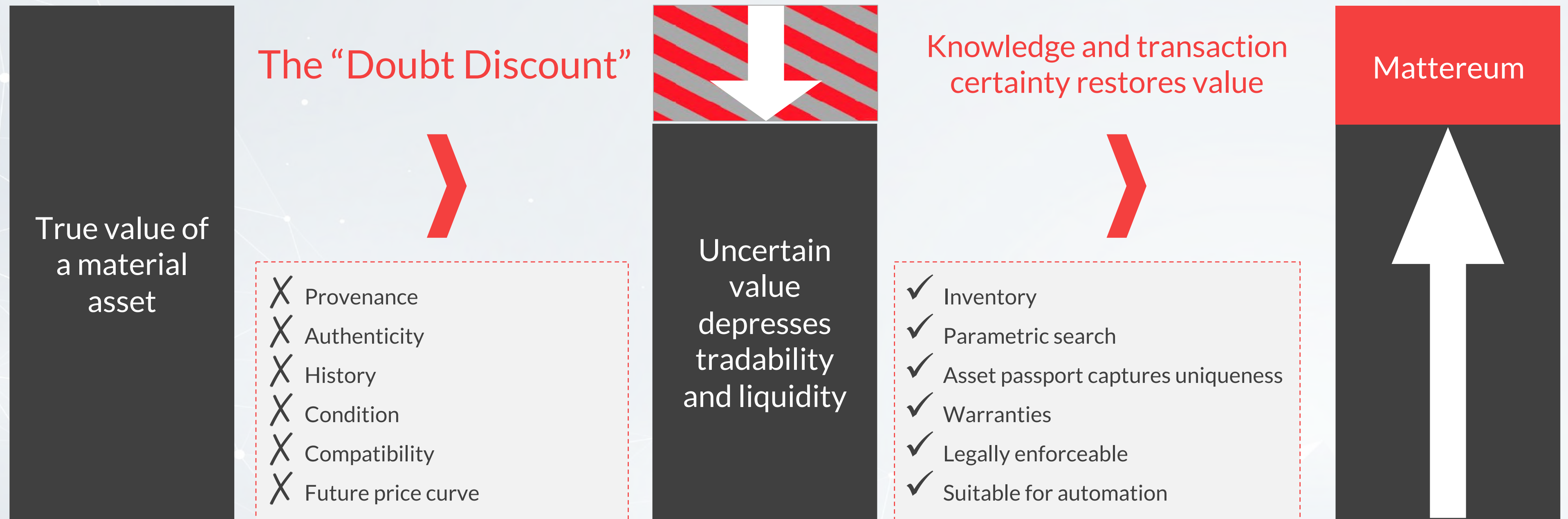
- Almost as old as human civilization (~4000BCE)
- Centralized, highly liquid marketplaces for professional traders
- Derivatives ensure price-discovery and spreading of risk among market participants
- Prices may fluctuate wildly but the *specification* of the commodity is never in question



KEY TO LIQUIDITY

All market participants have a standard specification
Doesn't work for real-world goods, because each is unique

Much of the world's *manufactured* goods are “stranded”



The circular economy depends on precision around specification and legal enforceability
precise specification → agreement on value + enforceability → willingness to transact

Value uncertainty is measured in trillions of dollars annually

BBC NEWS

Kobe Steel scandal sparks car and train checks

12 October 2017



Car, train and aircraft makers are investigating whether they have used any sub-standard materials made by Kobe Steel.

The checks come after Japan's third largest steelmaker admitted falsifying quality data, possibly for as long as a decade.

"On 13 October 2017, Kobe Steel **admitted to misleading more than 500 companies** including Ford, Toyota, Nissan, General Motors, Hitachi, Boeing and Mitsubishi Heavy Industries with potential safety implications for their vehicles."

Forbes

Fake Wine Is A Billion Dollar Market And Here Are The Ways To Identify Them



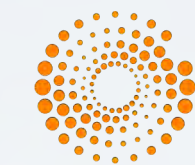
Jeannie Cho Lee Former Contributor Asia

This article is more than 4 years old.

I spent two full days at Wine Fraud's wine authentication training classes in Hong Kong in early February 2017. I walked in vaguely aware of how serious a problem wine fraud was around the world, but I walked out with a very clear picture of how easy it is to fake wine and why it is so prevalent. The total value of fake wine according to **Maureen Downey**, one of the foremost experts on fake wine who was leading the wine authentication classes, is around \$3 billion. The value of just one fraudster, Rudy Kurniawan, currently serving time in jail, is valued at around \$550 million. Then, if you add others such as Kahled Rouabah, Enzo and Nicola Lucca and Alex Anikin who were caught and whose wines are also circulating in the market, you can imagine how quickly this number can grow.



"The **total value of fake wine** according to Maureen Downey, one of the foremost experts on fake wine who was leading the wine authentication classes, is around **\$3 billion**."



REUTERS

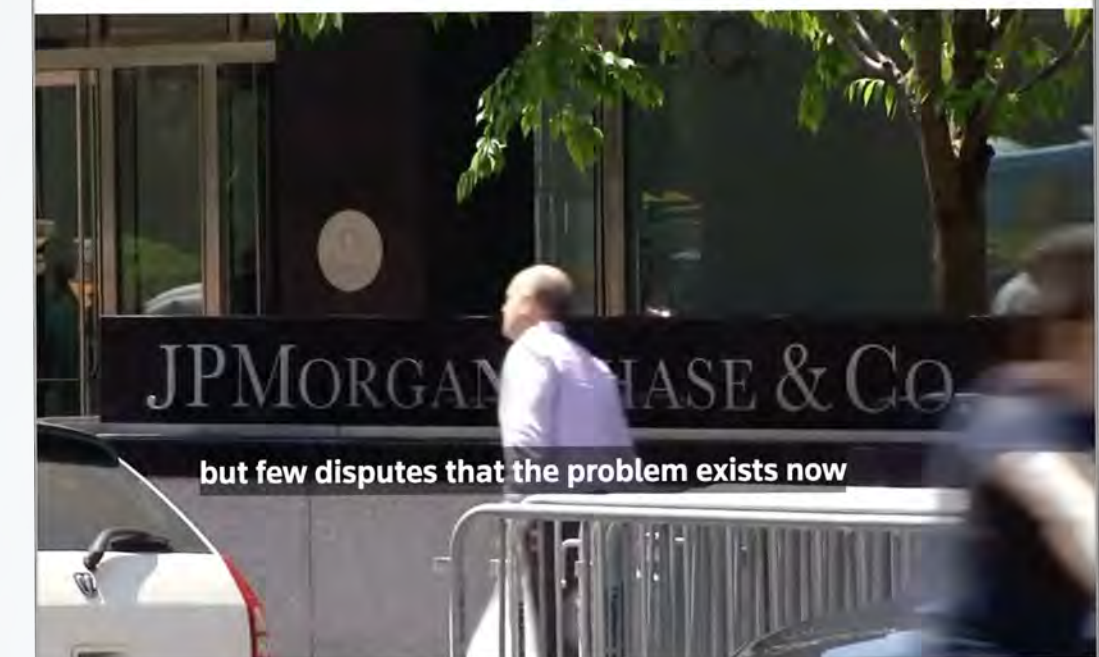
Exclusive: Fake-branded bars slip dirty gold into world markets

By Peter Hobson

14 MIN READ



LONDON (Reuters) - A forgery crisis is quietly roiling the world's gold industry.



"**Bars worth at least \$50 million** stamped with Swiss refinery logos, but not actually produced by those facilities, have been identified by all four of Switzerland's leading gold refiners and found in the vaults of JPMorgan Chase & Co., one of the major banks **at the heart of the market in bullion**."

C2C e-commerce today: expensive, poorly incentivised

- No parametric search: you can't find it
- Items explicitly listed for sale
- Poor specification/verification
- Expensive listing fees
- Fraud / error prone → low trust
- Manufacturers do not participate



Today's mainstream commerce incentivises the first sale only, then disposal

BIG IDEA: Trust communities

The Mattereum Trust Community

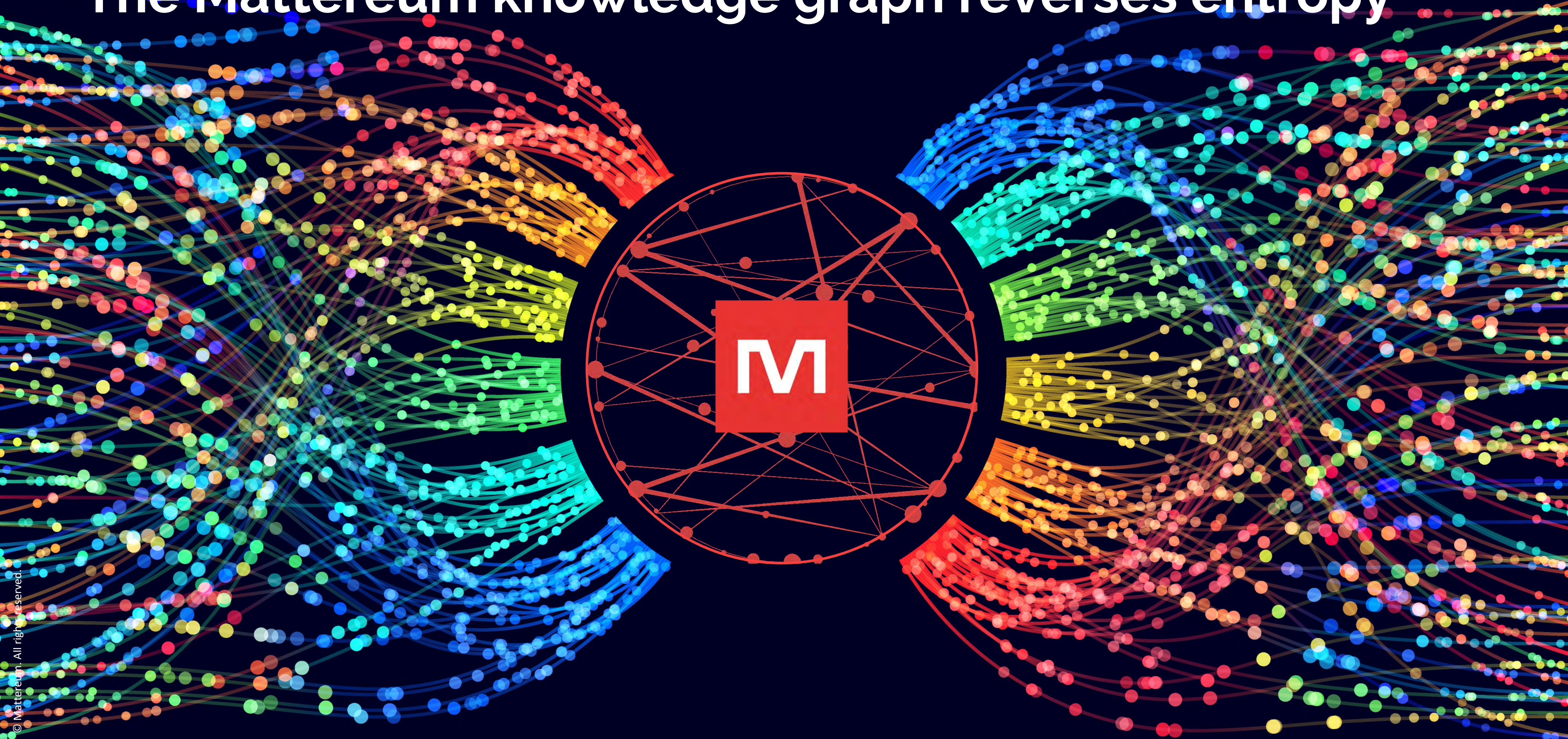


- **Experts effectively create “mini DAOs”** around the assets they warrant
- **Combined expertise maximises certainty**, which increases value of goods
- **Environmental impact data** is now a critical component of any product
- **Experts**, not sellers, provide digital warranties around the facts in the NFT
- **Warranties are secured cryptographically** and may be backed by insurance
- **Trust** is spread across a network of actors in the d-commerce NFT

**By restoring liquidity to the world's manufactured stuff
Mattereum enables it to go to where it is most valued.**



The Mattereum knowledge graph reverses entropy



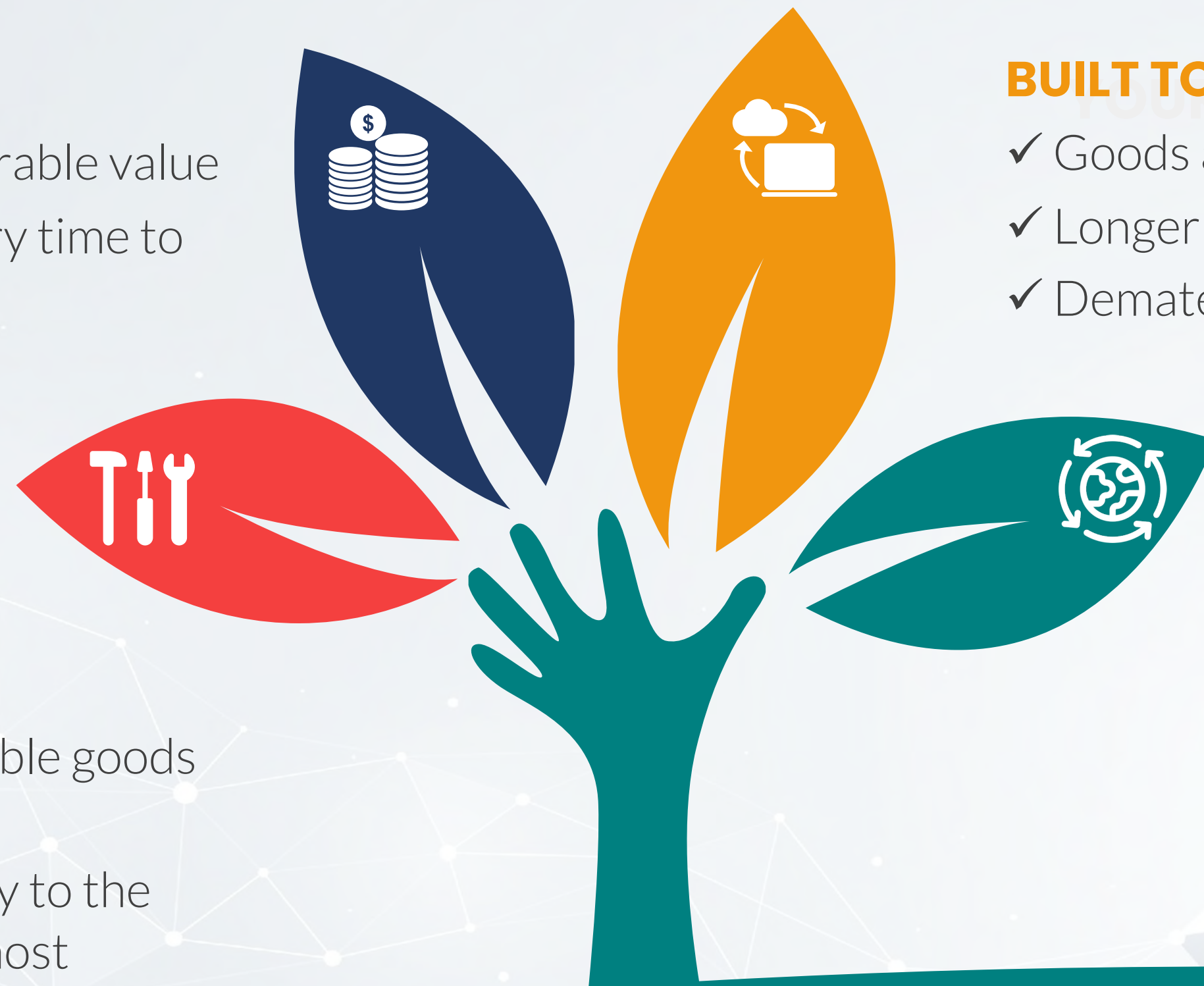
How this helps to fix the world

ECONOMIC INCENTIVES

- ✓ Shift purchasing towards durable value
- ✓ Manufacturers get paid every time to reward higher quality

EFFICIENT EXCHANGE

- ✓ Asset & price discovery
- ✓ Efficient markets move durable goods to new owners
- ✓ Material goods find their way to the actor that values them the most



BUILT TO LAST

- ✓ Goods are made more durable
- ✓ Longer / more intensive use
- ✓ Dematerialisation

REDUCED IMPACT

- ✓ Reuse where possible
- ✓ Towards net zero

Key features of the Matterereum platform



Ricardian Contract	Immutable & Secure	Force of Law	Custodian	Warranty	Asset Passport	Arbitration/Court
 • Smart contract • Both human and machine readable	 • Hash stored and contract executed on-chain • Independent of chain	 • Legally-enforceable • Resolution via court or arbitration	 • Fully-automated	 • Policies cover losses • May be backed by insurance	 • Defined physical asset • Ontology • Backed by experts	 • Settles and enforces legal disputes

Matterereum is the first-to-market smart contract ecosystem that comprehensively enables the sale, lease and transfers of rights of physical assets

Mattereum business model & ecosystem



Why blockchain?

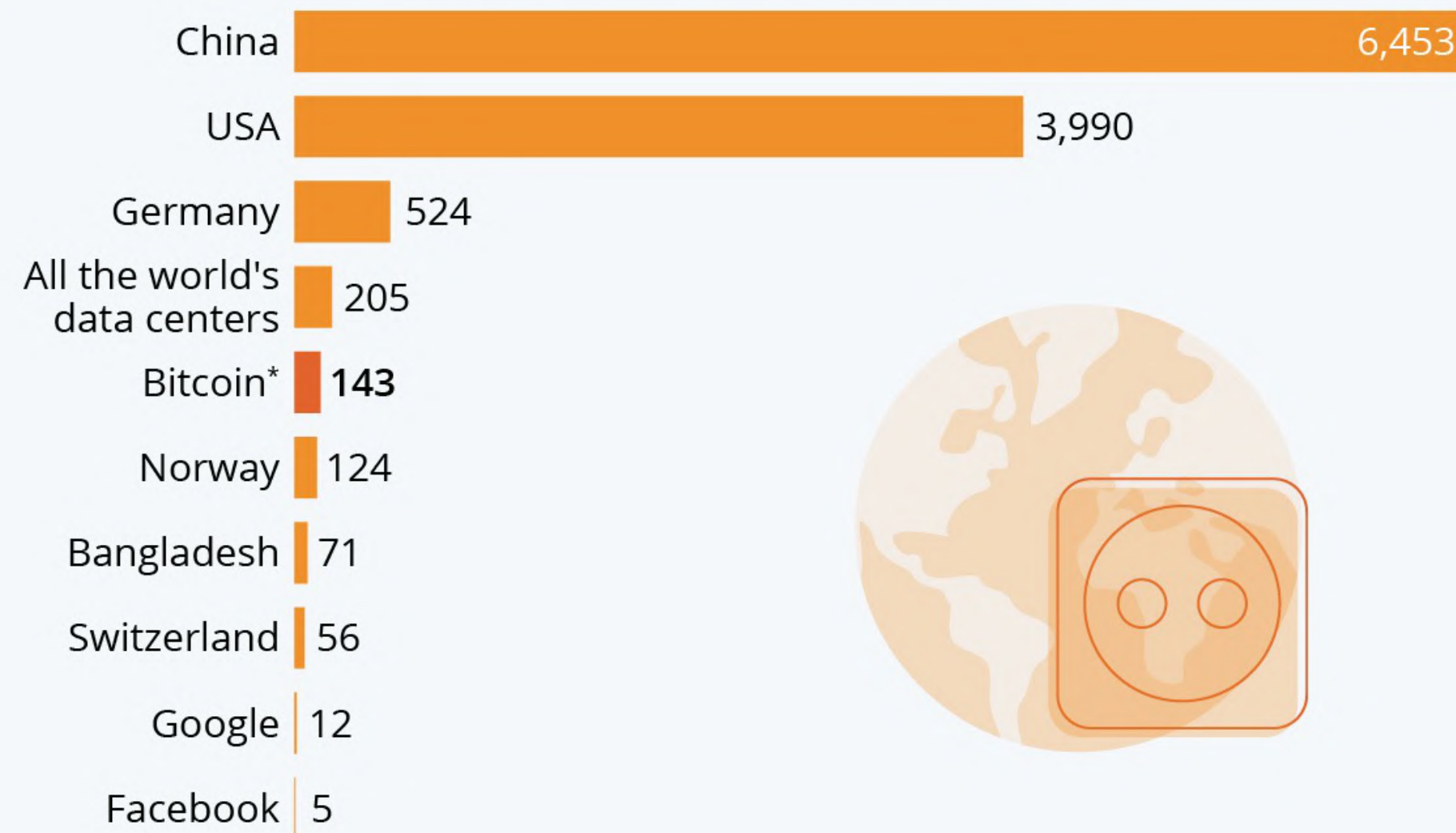
Building unbreakable

Using the blockchain – the right way



Bitcoin - the new “coal”

Annual energy consumption (TWh)



* Bitcoin figure as of May 05, 2021. Country values are from 2019.
Sources: Cambridge Centre for Alternative Finance, Visual Capitalist



AVALANCHE

- ✓ Open, programmable smart contracts platform for decentralized applications.
- ✓ Fast
- ✓ High throughput
- ✓ Interoperable with other blockchains
- ✓ Proof-of-stake
- ✓ Low energy consumption
- ✓ Fully-offset

A secure, distributed, ownerless, permanent database

Four key data items that require immutable capture

Publication of
what
something is

Change of
ownership

Guarantee
payments

Dispute
resolution



MATTEREUM

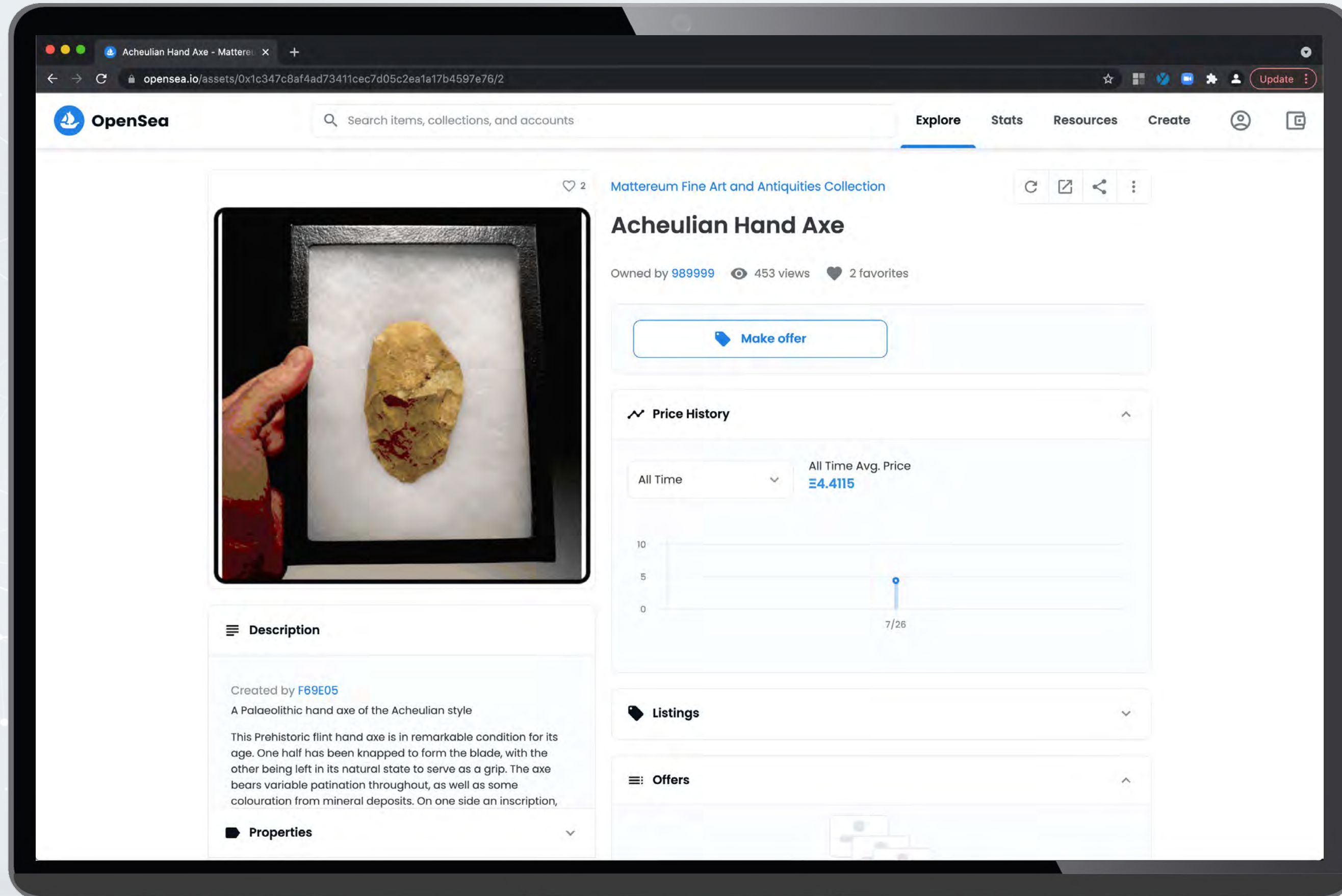
THE FUTURE OF STUFF

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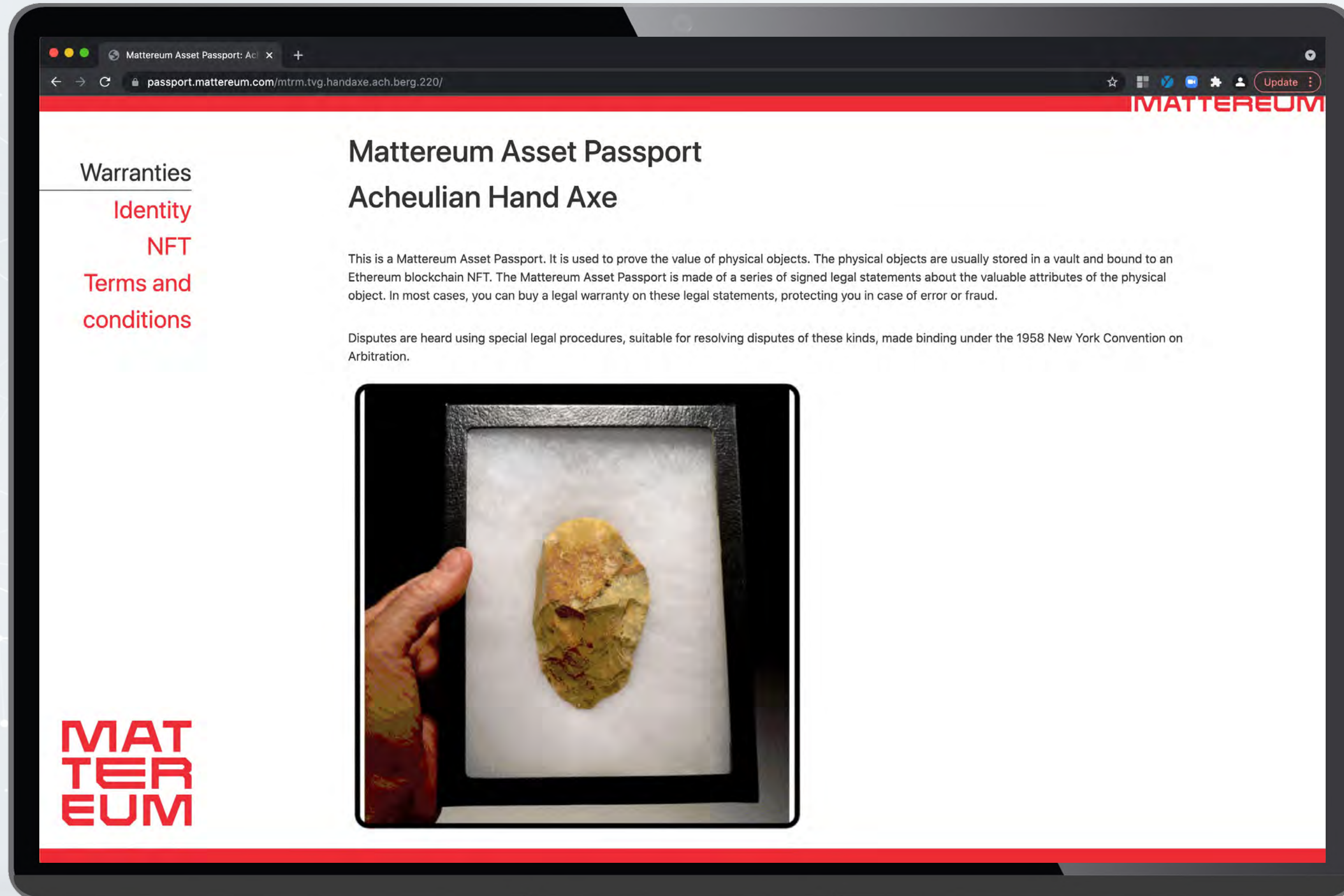
Working with Mattereum

How we can engage

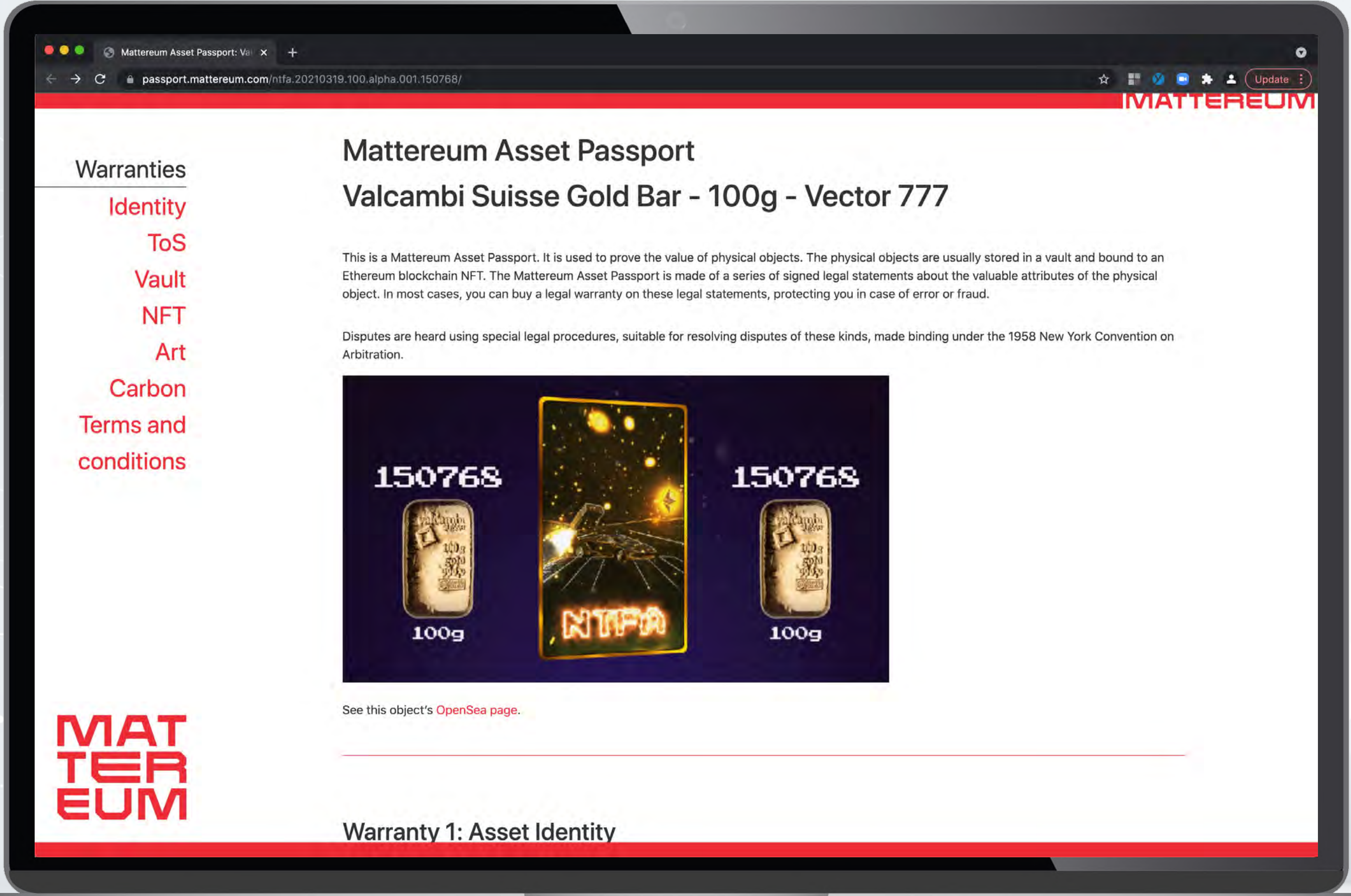
Live platform today with POC items



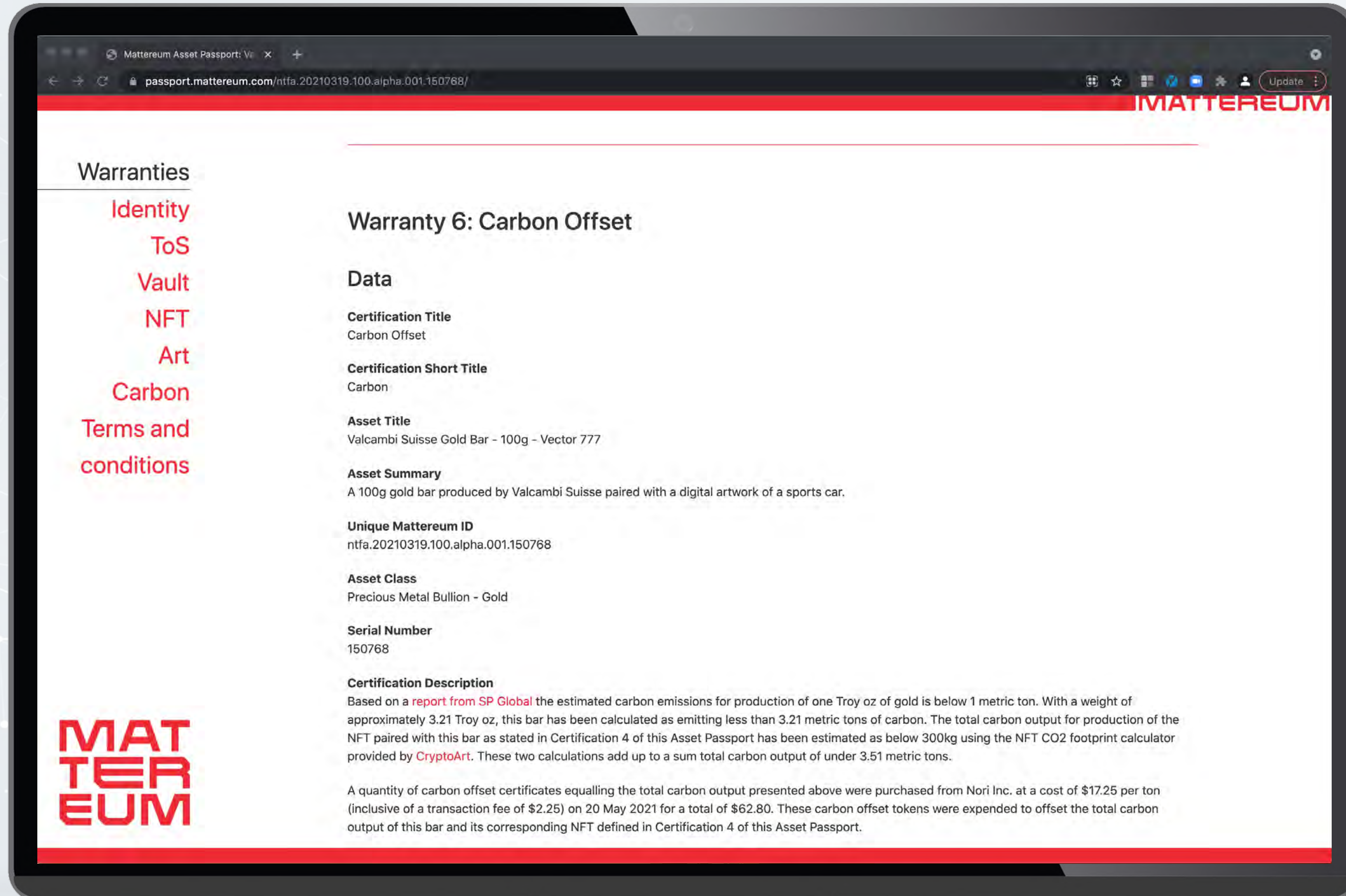
Corresponding Mattereum asset passport



Carbon offset capture

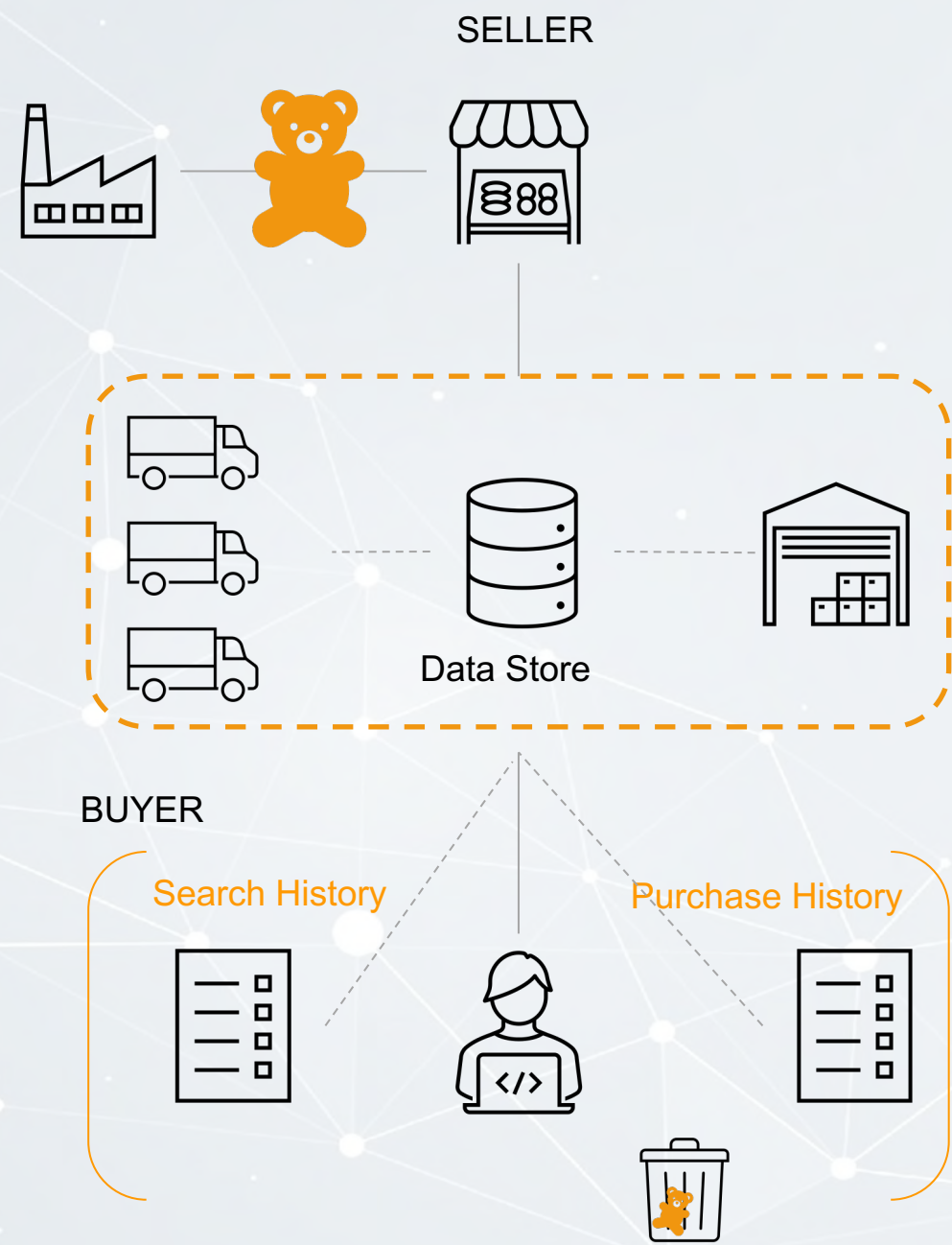


Carbon offset capture

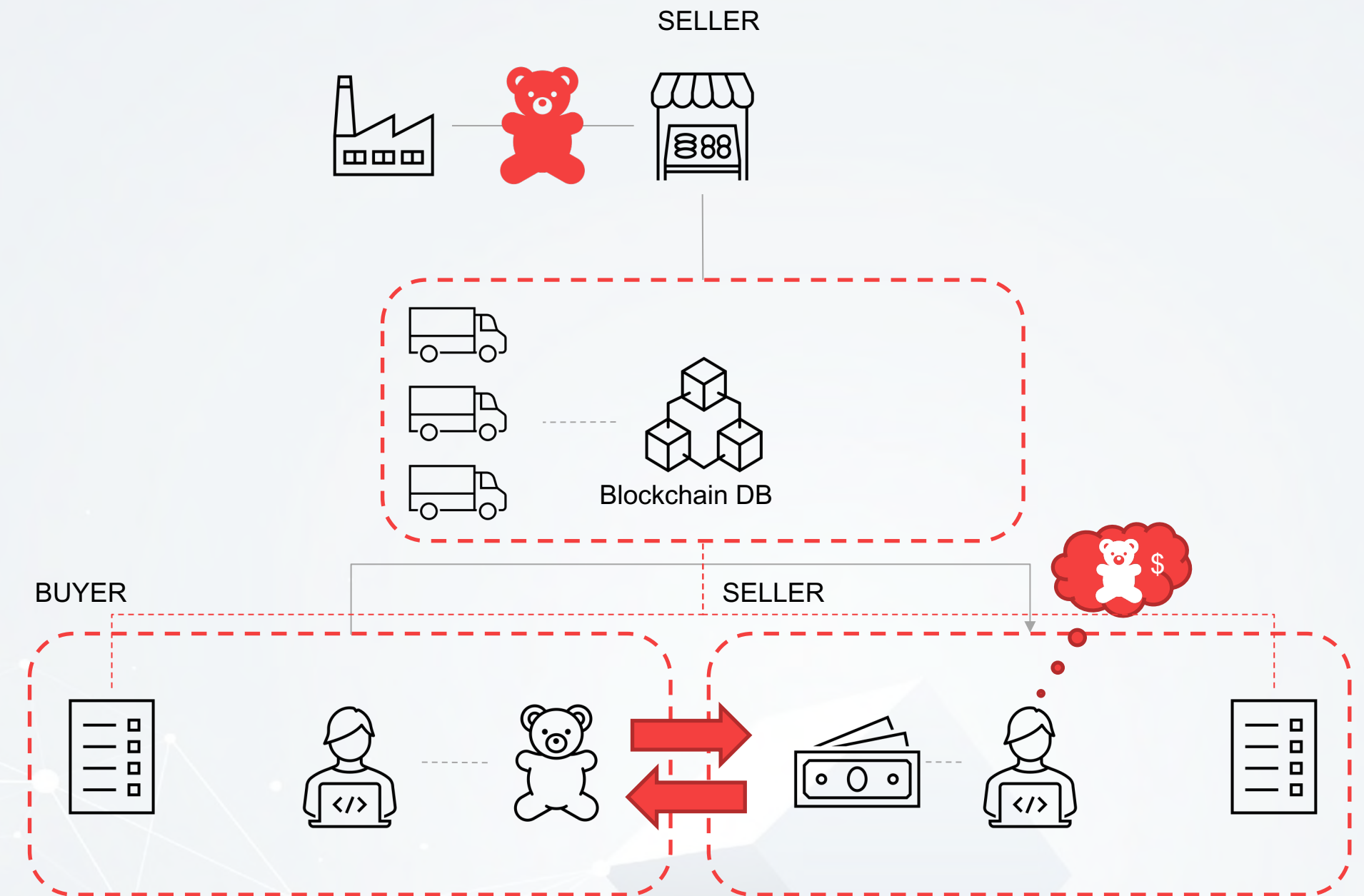


A new commerce model for manufacturers to work with

amazon - the next “coal”



MATTEREUM



Mattereum knows customers' inventories and needs

- Drive redistribution and inform what should be manufactured
- Improving vendor profitability and reduce the world's waste

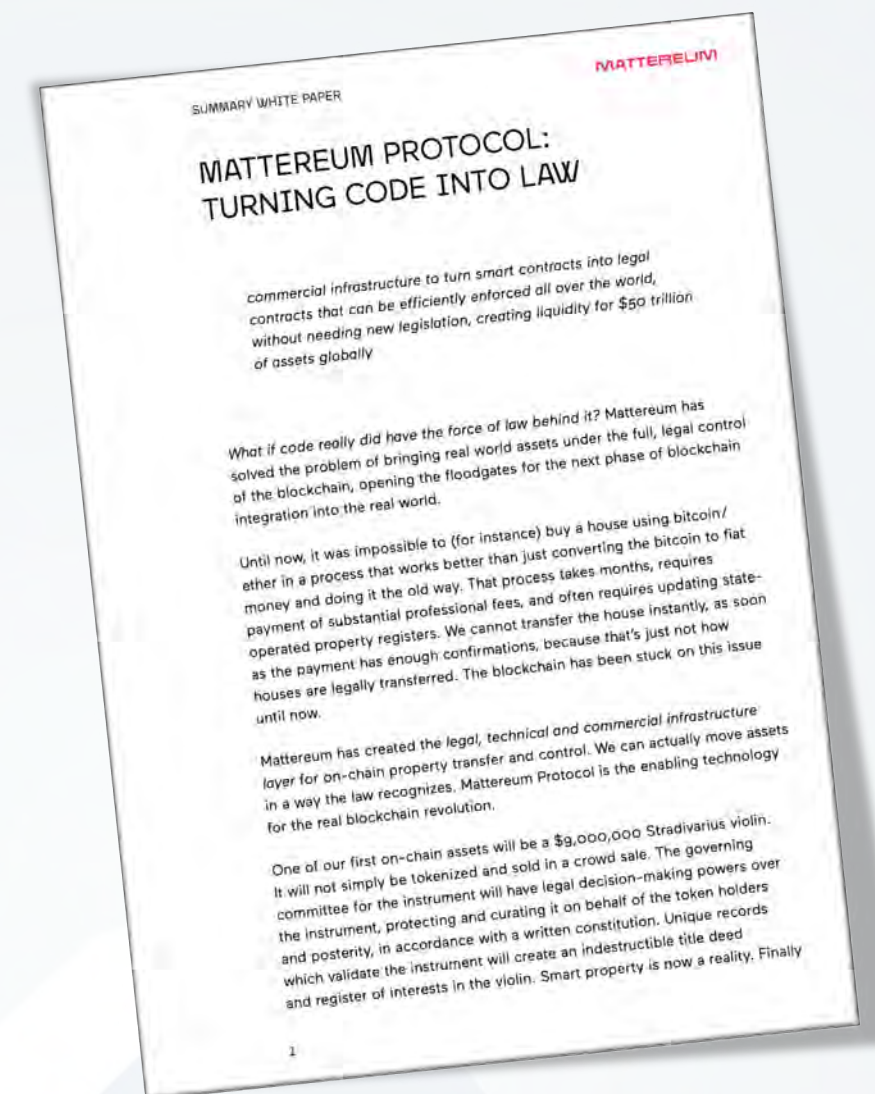
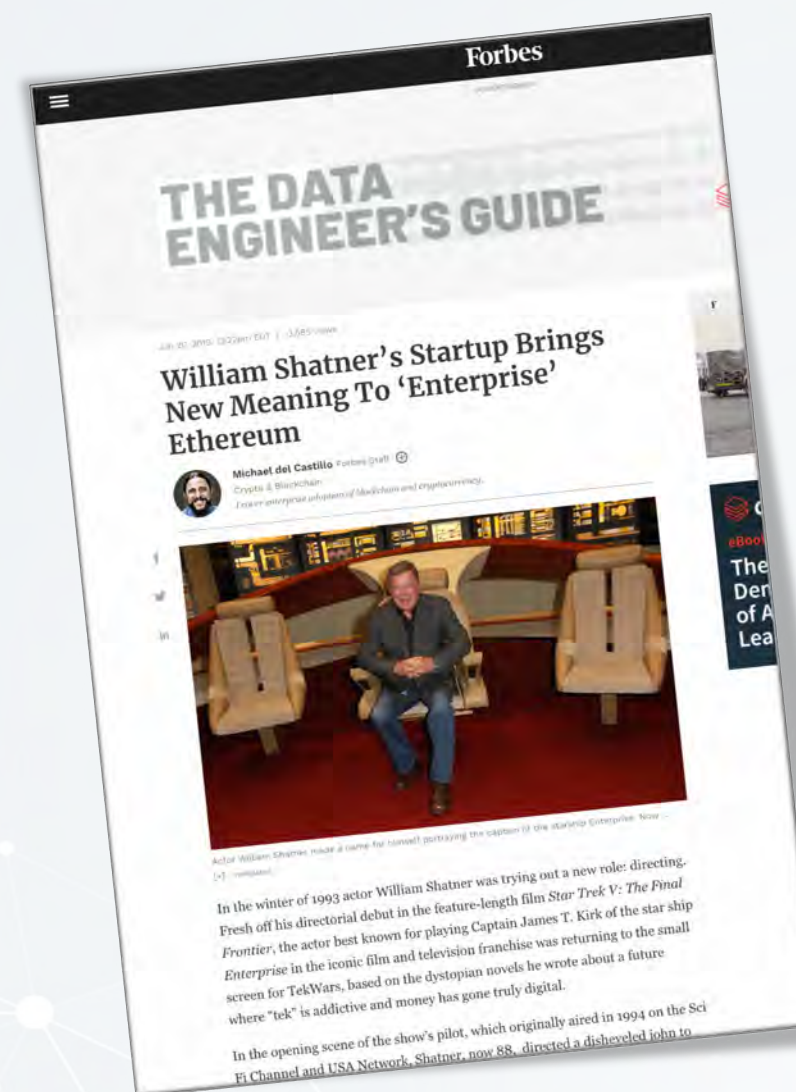
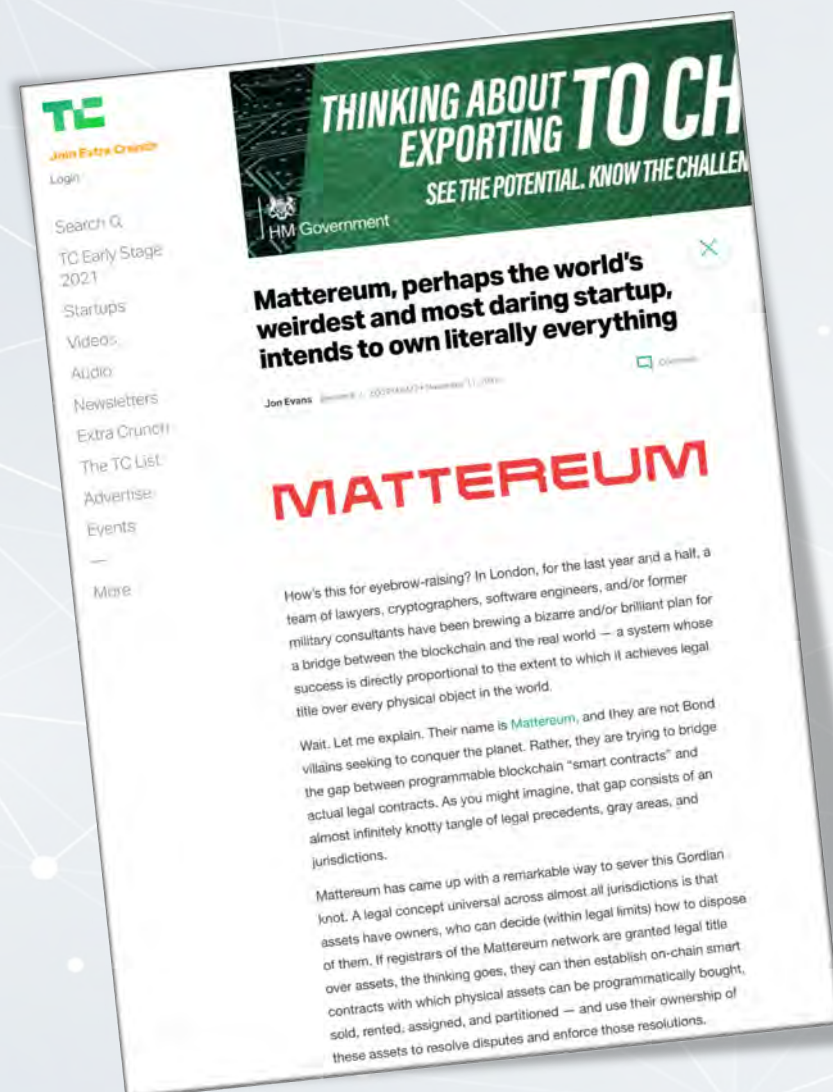
A model that is fundamentally incompatible with a sustainable future

Mattereum's ambition is to become the world leader in the net zero transition of our customers.

Partner with us.



Mattereum is generating significant momentum



The grand vision

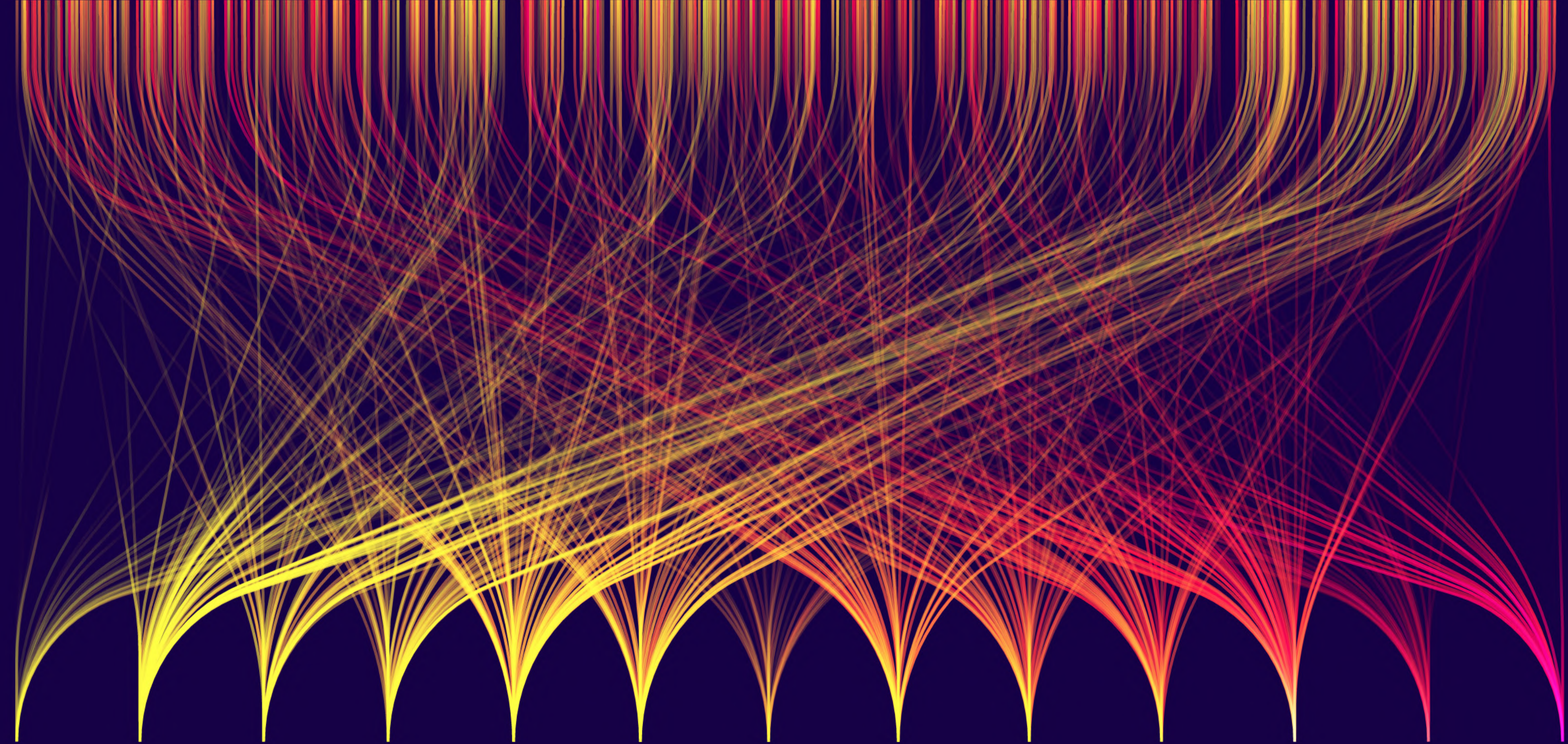
Crypto technology overview

William Shatner interview

White paper

More on our Vision





Vinay Gupta | CEO

Thank you