

Blockchain: Decentralizing the Internet

Trent McConaghy & Masha McConaghy

emerce e-day

Amsterdam, Oct 6, 2016

BIGCHAIN^{DB}



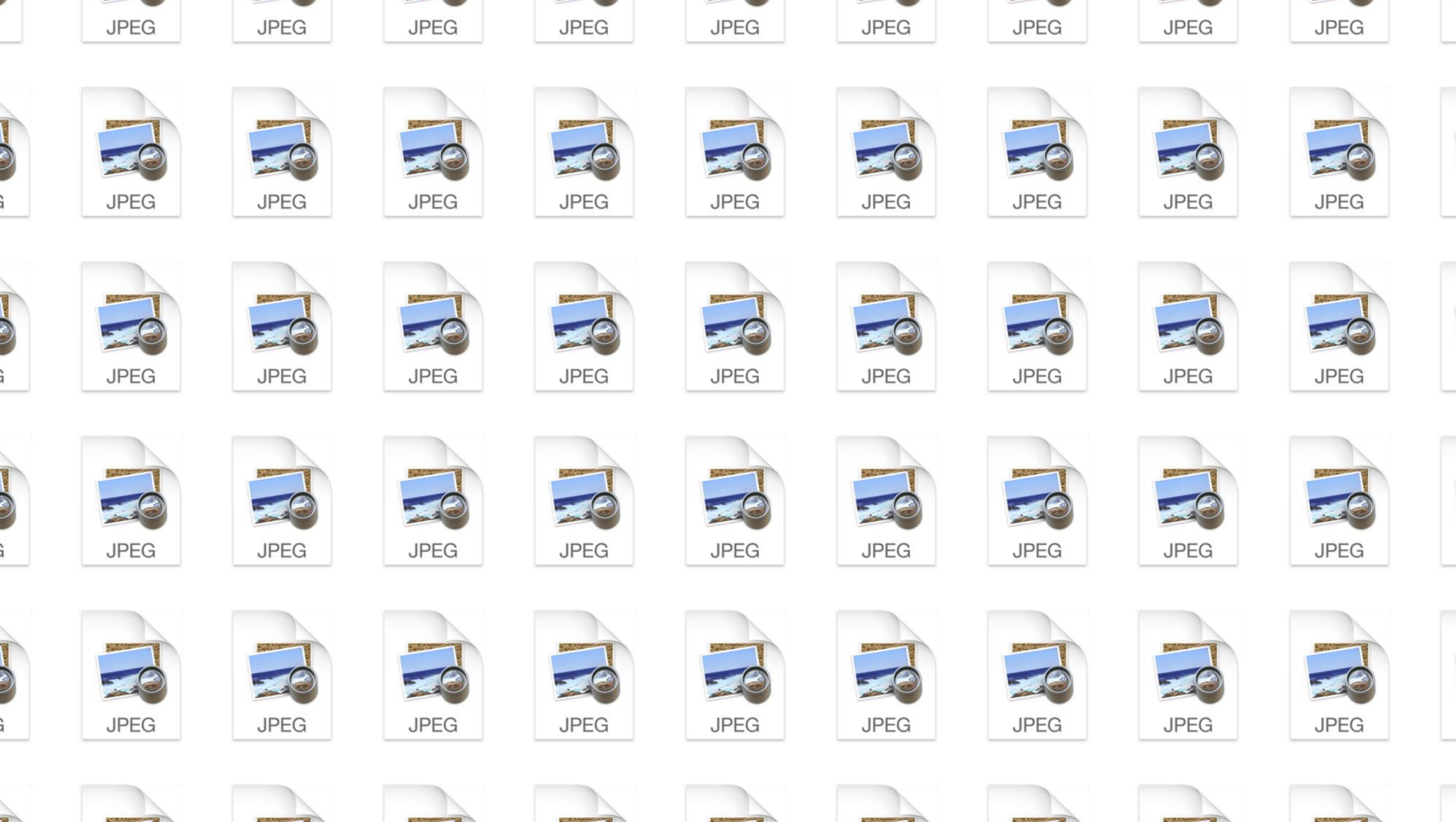




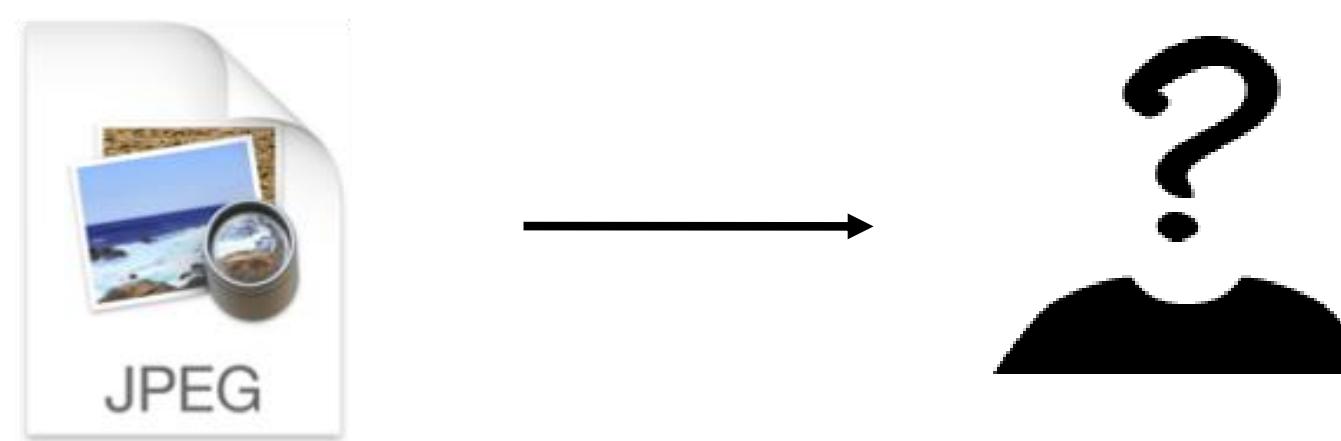
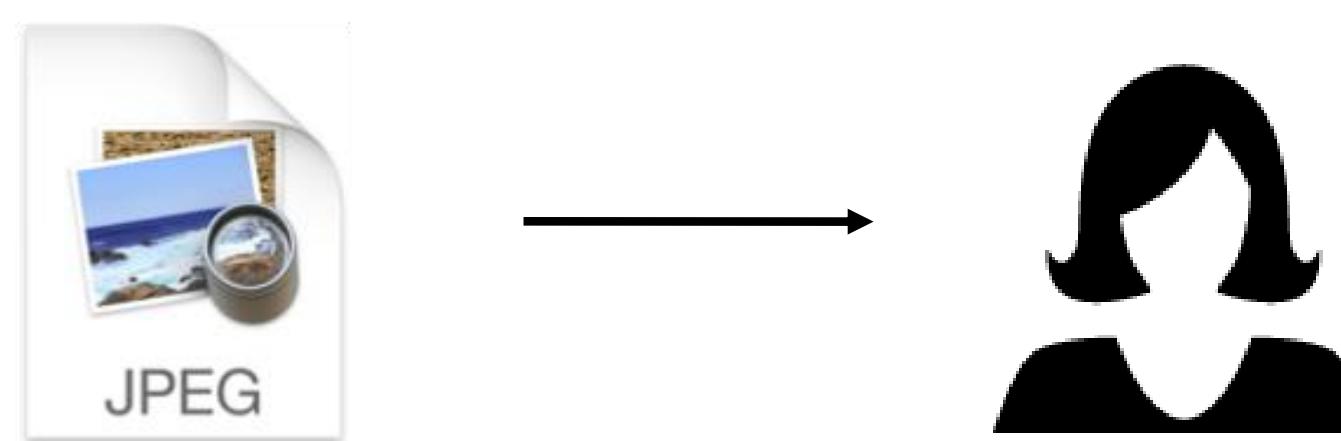
This video is not available in your
country

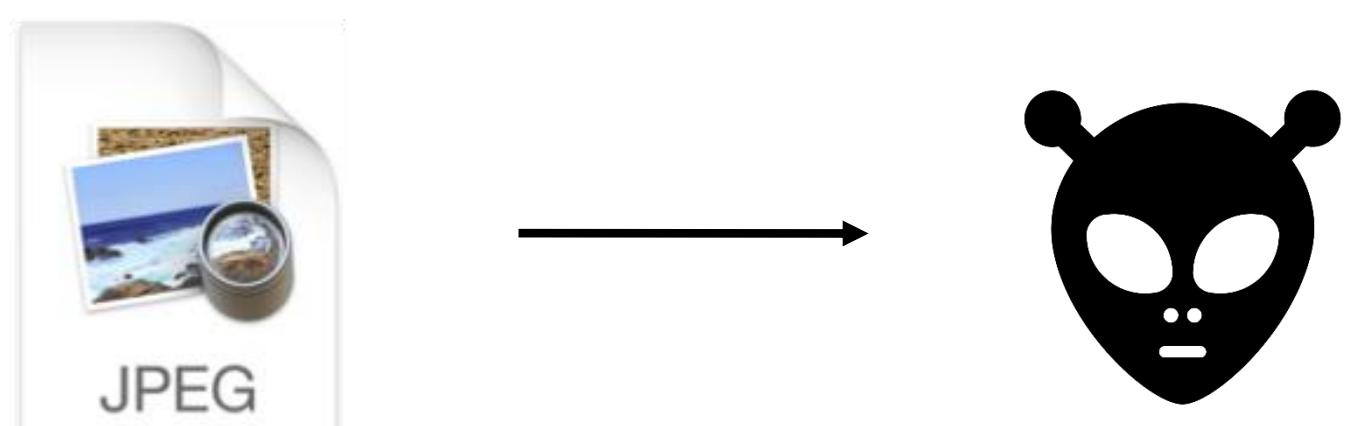
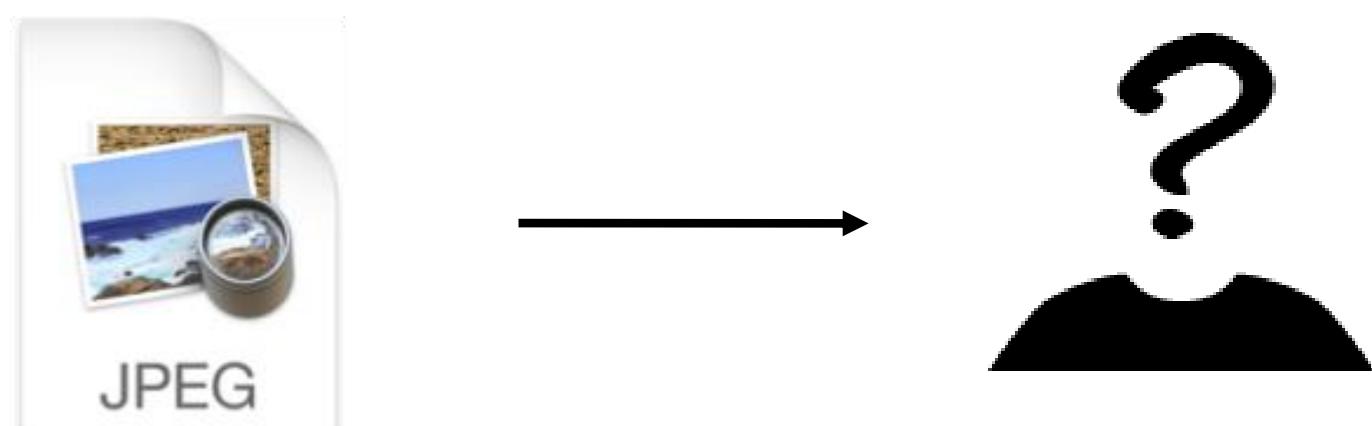
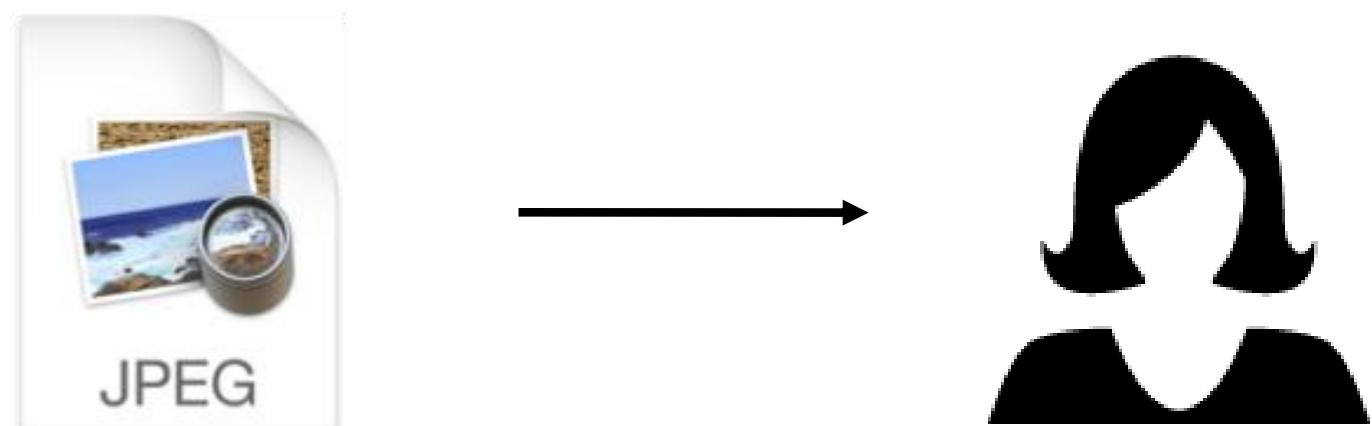
Sorry about that











“My conclusion is that whatever you put on the internet you lose it.

Maybe keep the rights, but lose the power over it.”

*-User on Shapeways blog
(3D printing marketplace)*



How did we get here?

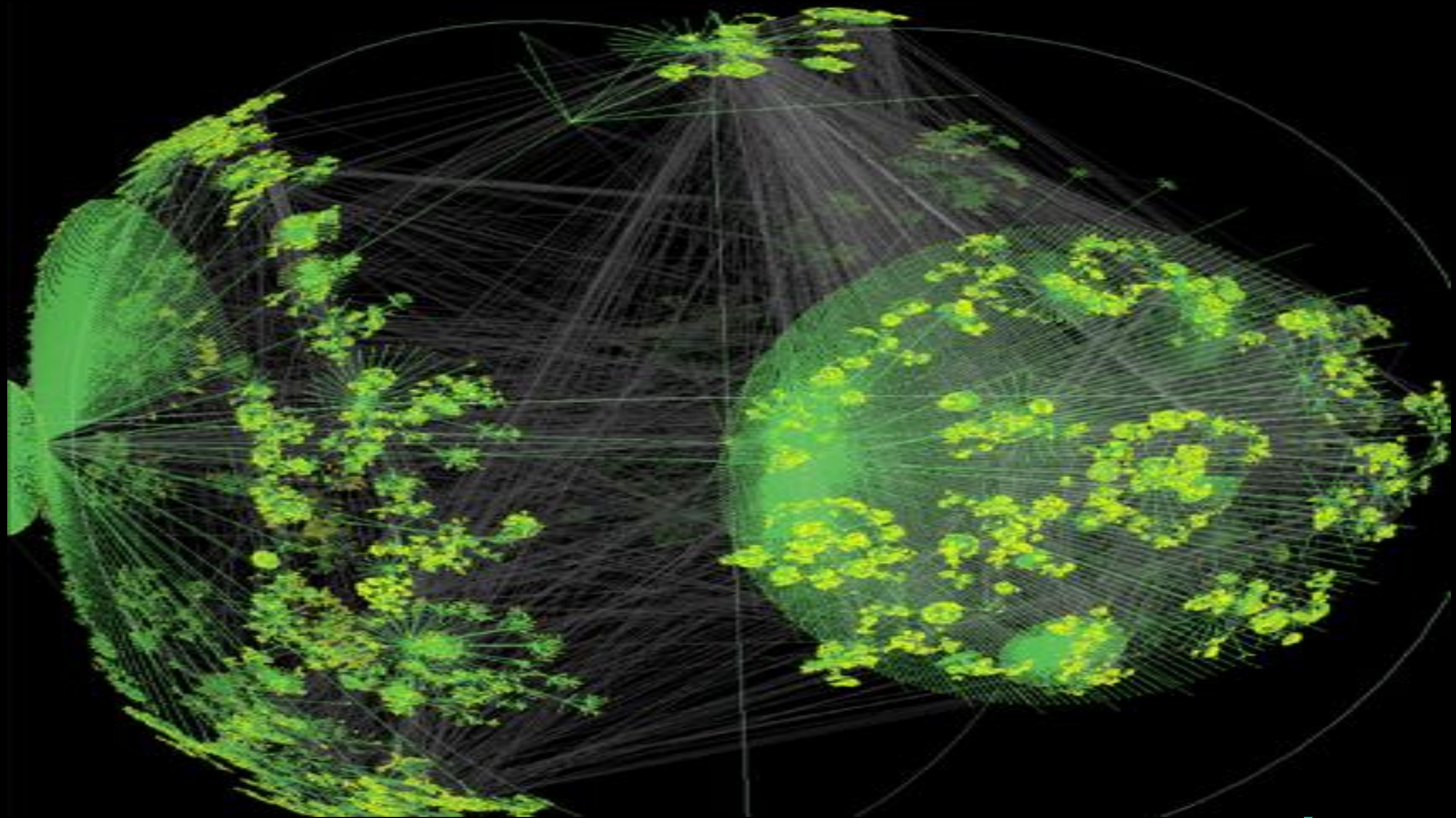
IBM

360

J.C. Licklider



ARPAnet



Internet

CERN

The European Laboratory for Particle Physics, located near Geneva[1] in Switzerland[2] and France[3]. Also the birthplace of the World-Wide Web[4].

This is the CERN laboratory main server. The support team provides a set of Services[5] to the physics experiments and the lab. For questions and suggestions, see IAMI Support Contacts[6] at CERN.

[About the Laboratory\[7\]](#) - [Hot News\[8\]](#) - [Activities\[9\]](#) - [About Physics\[10\]](#) - [Other Subjects\[11\]](#) - [Search\[12\]](#)

About the Laboratory

[Help\[13\]](#) and [General information\[14\]](#), divisions, groups and activities[15] (structure), [Scientific committees\[16\]](#)

[Directories\[17\]](#) (phone & email, services & people), [Scientific Information Service\[18\]](#) (library, archives or Alice), [Preprint\[19\]](#) Server

1-45, Back, Up, <RETURN> for more, Quit, or Help:

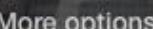
Find hotel deals

 Sign in to unlock up to 35% savings with Private Deals.

Where

 Check in  Check out 

 Search





Walls of the Web



Centralization of the Web

A new hope







Blockchain:
A Special
“Spreadsheet
in the Sky”



Centralized
Clearing



Blockchain

Shared global compute infrastructure



IPDB: Interplanetary Database

Powered by BigchainDB





How does this *apply*
to the real world?

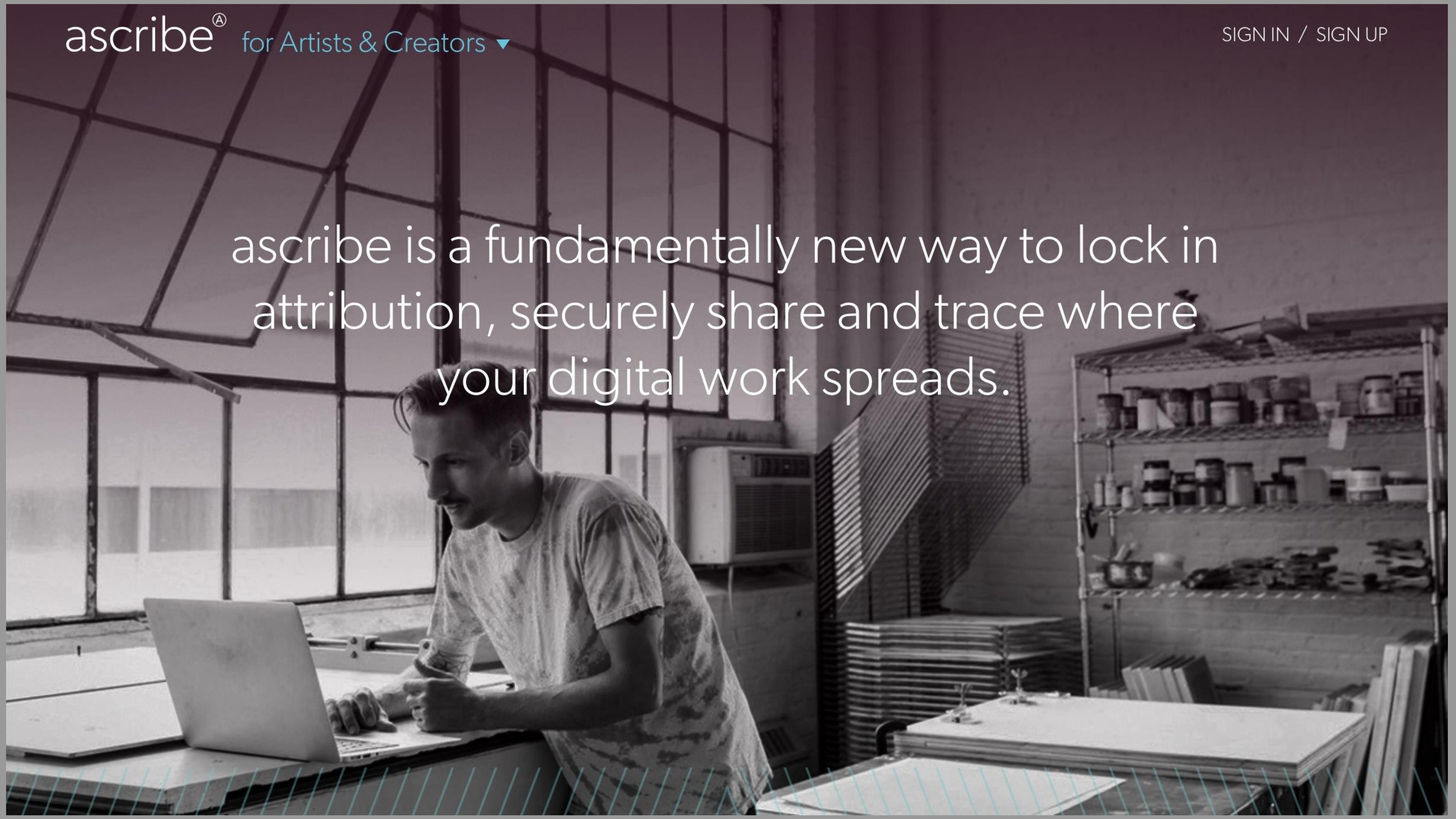


Imperial Faberge Easter Egg.
AFP PHOTO / WARTSKI

Provenance is important for
Authenticity
Chain of Ownership
Valuation



ascribe is a fundamentally new way to lock in attribution, securely share and trace where your digital work spreads.



.zip

Event Listeners

CREATED BY Harm van den Dorpel

DATE 2015

EDITION 24 of 100

ID 1CbB2YEnBQUkHjWZvqfNNfjK8wh2cg69zQ

OWNER Masha McConaghy

ACTIONS EMAIL TRANSFER CONSIGN LOAN DELETE ?

+ Certificate of Authenticity

- Provenance/Ownership History

Apr. 17, 2015, 16:15:21

Registered by mail@harmvandendorpel.com

Apr. 20, 2015, 20:54:16

Transferred to Masha McConaghy

+ Consignment History

+ Notes

.zip

Event Listeners

CREATED BY Harm van den Dorpel

DATE 2015

Share Tweet Download .zip

EDITION 24 of 100

ID 1CbB2YEnBQUkHjWZvqfNNfjK8wh2cg69zQ

OWNER Masha McConaghy

ACTIONS EMAIL TRANSFER CONSIGN LOAN DELETE ?

+ Certificate of Authenticity

- Provenance/Ownership History

Apr. 17, 2015, 16:15:21

Registered by mail@harmvandendorpel.com

Apr. 20, 2015, 20:54:16

Transferred to Masha McConaghy

+ Consignment History

+ Notes

.zip

[Share](#) [Tweet](#) [Download .zip](#)

Event Listeners

CREATED BY Harm van den Dorpel

DATE 2015

EDITION 24 of 100

ID 1CbB2YEnBQUkHjWZvqfNNfjK8wh2cg69zQ

OWNER Masha McConaghy

ACTIONS [EMAIL](#) [TRANSFER](#) [CONSIGN](#) [LOAN](#) [DELETE](#) [?](#)

+ Certificate of Authenticity

- Provenance/Ownership History

Apr. 17, 2015, 16:15:21

Registered by mail@harmvandendorpel.com

Apr. 20, 2015, 20:54:16

Transferred to Masha McConaghy

+ Consignment History

+ Notes

Certificate Of Authenticity

As of 30 November 2015, 17:36:00 GMT, Masha McConaghy is the owner.
To verify current owner, please visit <http://ascr.be/1luAOpo>



DOLLAR
EURO
SWISS FRANCS
JEFF KOONS
BITCOIN

Currency

Date: 2014

Edition: 3 of 100

Created by: Dan Perjovschi

Owner: Masha McConaghy

ARTWORK DETAILS

Artwork ID: 17uZBwSbLGfxY3vRRMWzF5PMjFVNc1tkQ2

File: currency-2014.jpg (499 KB)

PROVENANCE/OWNERSHIP HISTORY

Apr. 30, 2015, 12:36:19 - Registered by mail@cointemporary.com

May. 01, 2015, 09:46:08 - Transferred to admin

May. 08, 2015, 13:04:59 - Transferred to trent

Nov. 27, 2015, 19:35:14 - Transferred to Masha McConaghy

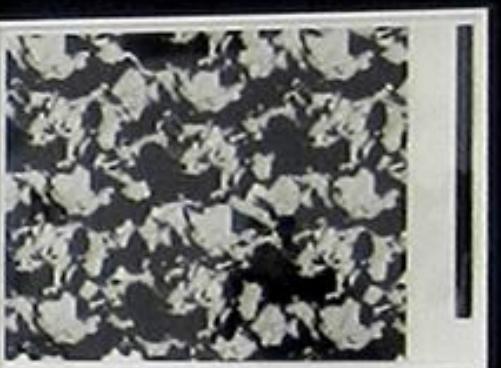
CRYPTOGRAPHIC STAMP

Use the summary and signature below to authenticate this certificate:
<http://ascr.be/1Szr45Q>

Summary: Dan Perjovschi*Currency*3/100*2014*2015Apr30-12:36:19

Signature: 438B24CE06182FA3AA82BC285F867D03FB73F3BCC0F73FDBA6
EC2BFF7088E011E60355B7DC75D5745A9D5CA2A8115512FF835
C4ABEF6869BF6A991668A820F3FB03A48C6A9E05834716F6500
68E8E07E5266620BA815948DC265605D23FAF016CB46ACD4BC
BE75F08D0DEBD7AF55E4CB085B9A0A14583F135DBB399121B24
ED1L

THE WORK DISPLAYED IN THE VIENNA BIENNALE IS PROVIDED BY THE THIRD PARTY INDICATED AS THE ARTISTS. ULRICH NAUSNER DOES NOT CREATE THIS WORK, VOUCH FOR ITS ACCURACY, OR GUARANTEE THAT IT IS THE MOST RECENT WORK AVAILABLE FROM THE ARTISTS. THE MAK (A) EXPRESSLY DISCLAIMS THE ACCURACY, ADEQUACY, OR COMPLETENESS OF ANY EXHIBITION AND (B) SHALL NOT BE LIABLE FOR ANY CHANGE IN THE WORK, OR FOR ANY ACTION TAKEN IN RELIANCE THEREON. NEITHER ULRICH NAUSNER NOR ANY OF THE ARTISTS WILL BE LIABLE FOR ANY DAMAGES RELATING TO YOUR PERCEPTION OF THE WORK PROVIDED HEREIN.



Creative Commons France

The screenshot shows the Creative Commons France website with a blue header bar containing the "cc France" logo and navigation links: A PROPOS, LICENCES, ACTUALITÉS, RESSOURCES, and PARTENARIATS.

The main content area features a large blue circular icon on the left with a figure holding a tablet displaying a checklist, and the text "ENREGISTRER SON OEUVRE SUR ASCRIBE" in bold blue capital letters. Below this, a paragraph of text explains the service, followed by a link "... Lire la suite".

A prominent blue button labeled "ENREGISTRER UNE OEUVRE" is centered below the text. At the bottom of the page, there are footer links for "CC-LICENSE YOUR WORK AND SECURE ITS ATTRIBUTION. THIS IS AN EXPERIMENT BY: creative commons France" and "ascrIbe®".

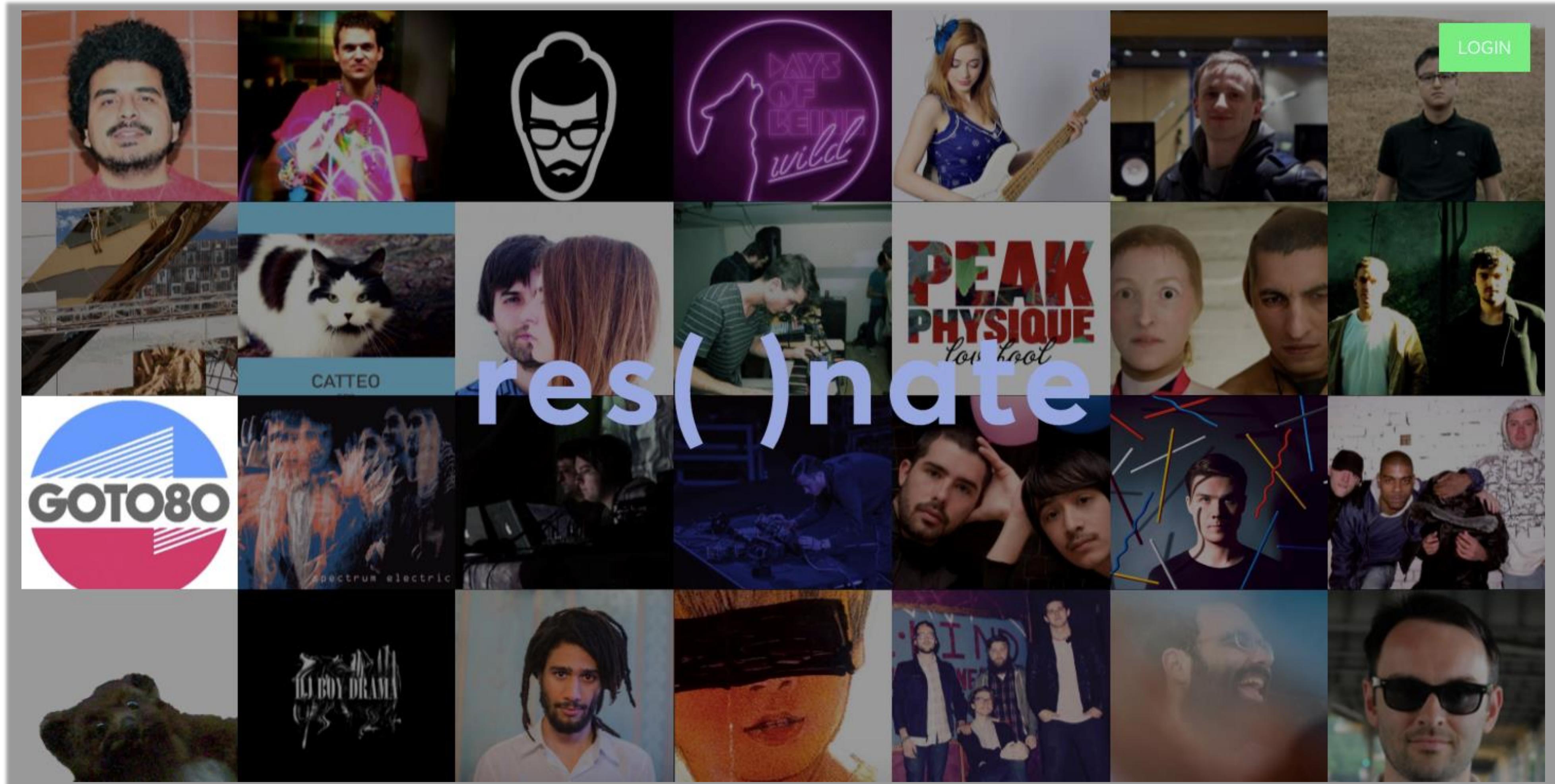
The main form area is titled "Register under a Creative Commons license". It includes fields for "Your Work" (with a file upload area), "Artist Name" (e.g. Andy Warhol), "Title" (e.g. 32 Campbell's Soup Cans), "Year Created" (e.g. 1962), and "Copyright license...". A dropdown menu in the "Copyright license..." field lists several Creative Commons licenses, with "CC-BY-NC-ND-4.0: Attribution-NonCommercial-NoDerivs 4.0 International" selected. A "Submit" button is located at the bottom of the form.

The background of the image is a dark, star-filled night sky. A faint, curved light trail, likely from a meteor or a satellite, stretches across the upper portion of the frame. The foreground is completely black, creating a strong contrast with the starry sky.

Real World Use, by Vertical

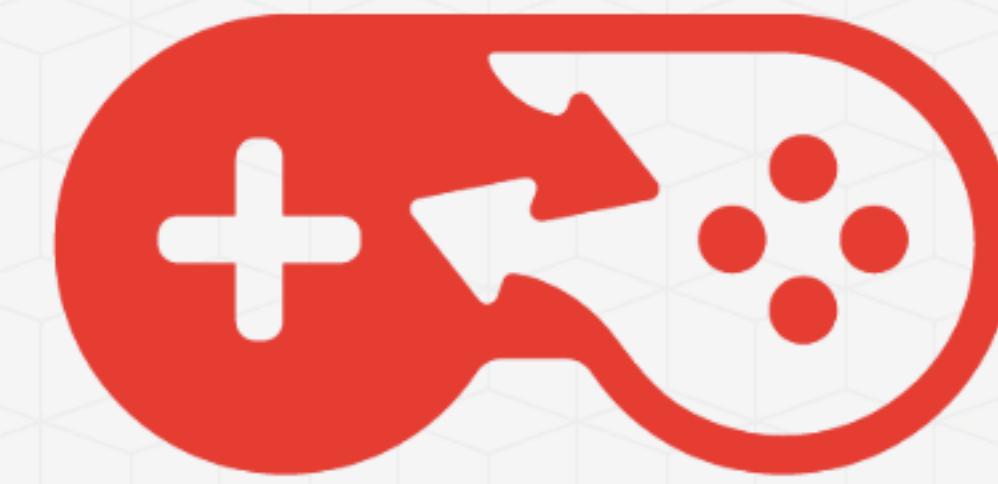
A photograph of a live concert. In the foreground, the silhouettes of audience members' heads and raised hands are visible against a bright stage. On stage, two musicians are performing: a man on the left singing into a microphone and another person on the right. Stage lights create a hazy, colorful atmosphere.

Intellectual Property
(IP)



Resonate Coop

[COMMUNITY](#) [JOBS](#) [CONTACT US](#)



OWNAGE

AN ETHEREUM BASED PLATFORM TO DISTRIBUTE, COLLECT
AND TRADE DIGITAL GAME CONTENT.

JOIN US FOR THE RIDE...

My name is...

My email address is...

SUBMIT

Ownage



Identity (Sovereign Personal Data)

Our peer to peer network

Traditional



Centralized

Reliant on middlemen

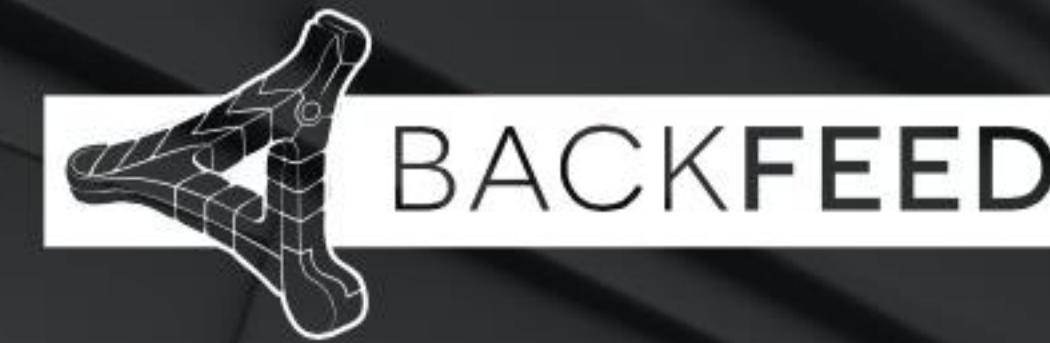
Synereo



Decentralized

Applications working together

Social Network: Synereo

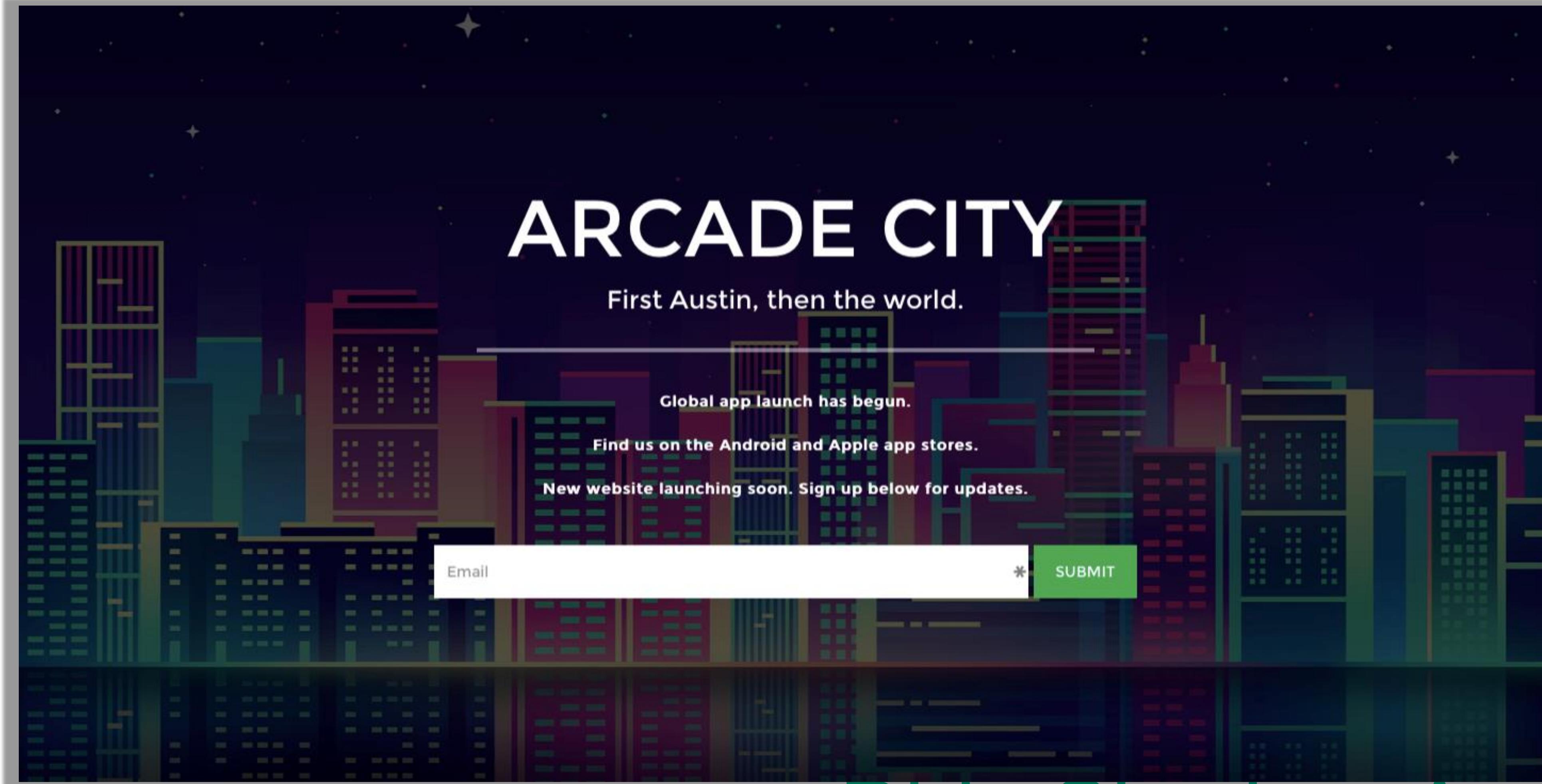


A SOCIAL OPERATING SYSTEM FOR DECENTRALIZED ORGANIZATIONS

ENABLING MASSIVE OPEN-SOURCE COLLABORATION WITHOUT CENTRAL COORDINATION



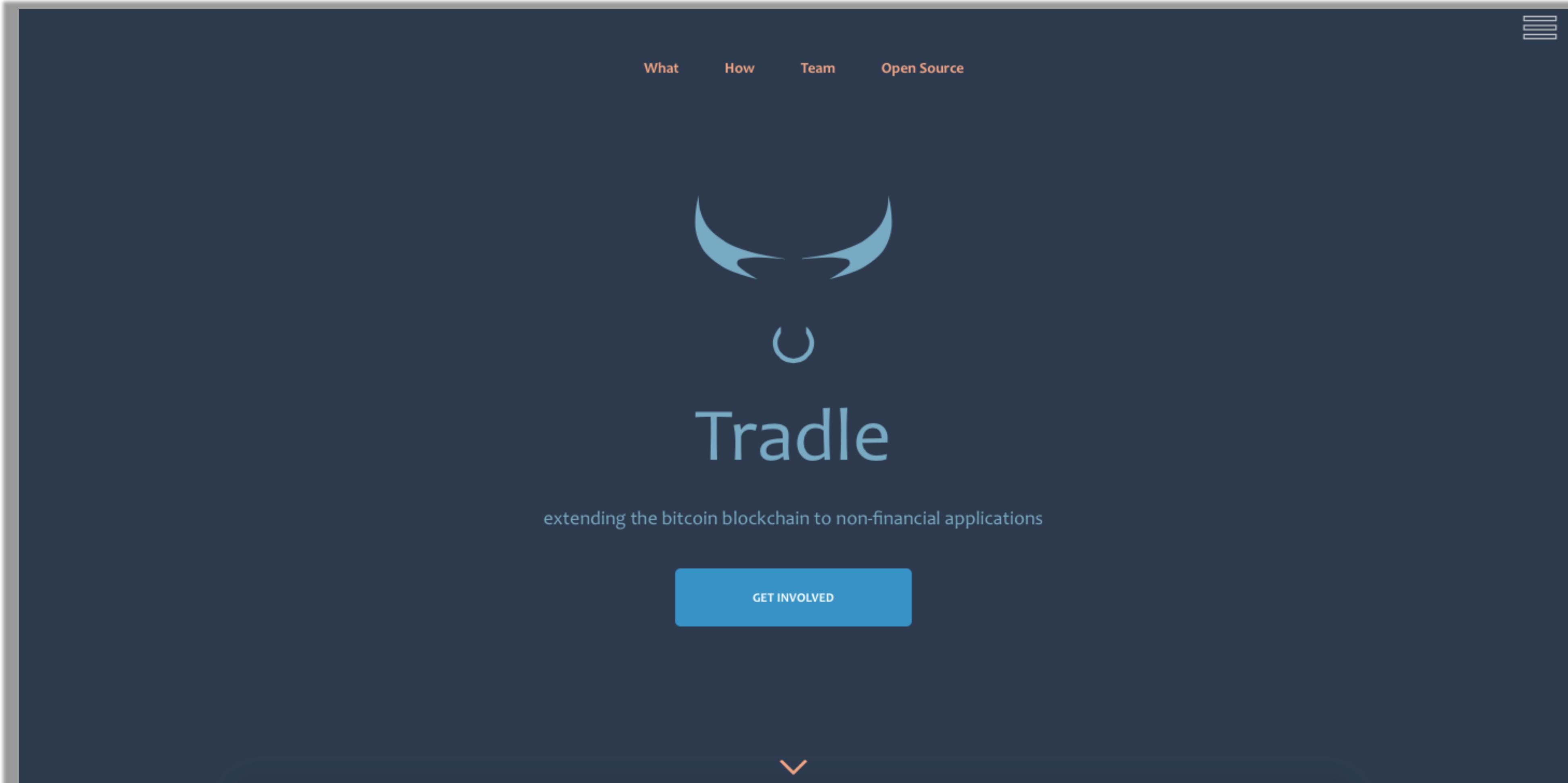
Reputation: Backfeed



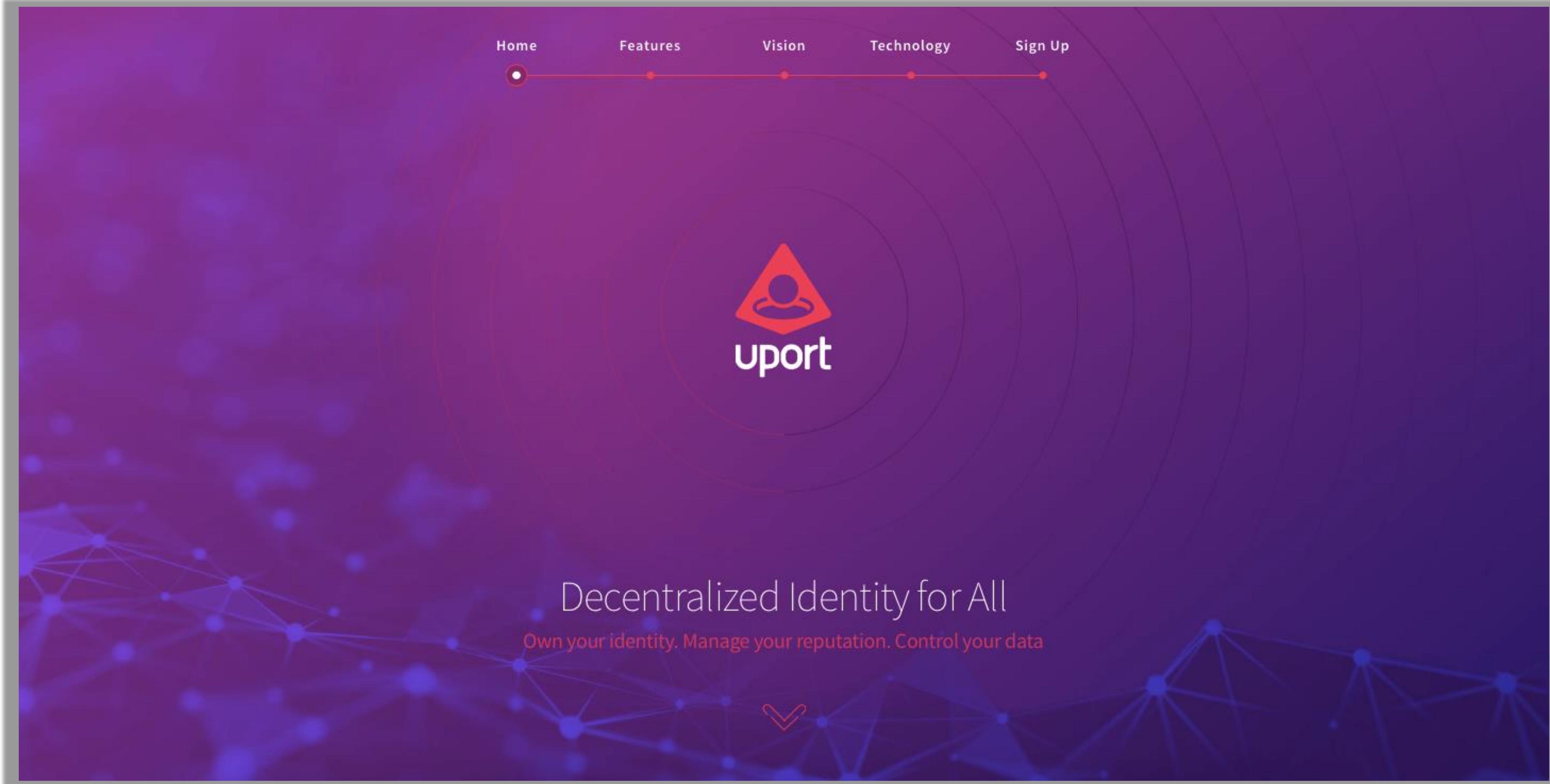
Ride Sharing: Arcade
City



Identity (Assurance)



Banking Assurance:
Tradle



Login: uport



Finance



Solutions ▾

Technology

Network ▾

Resources ▾

About ▾

Contact

Join the Global Settlement Network

Instant, certain, low-cost international payments

Watch Video

Enabling the Internet of Value

Global commerce is rapidly changing. Businesses are increasingly global from day one and consumers are programmed to expect on

Money Transfer:
Ripple



R3 is an innovation firm focused on building and empowering the next generation of global financial services technology.

Bank consortium: R3CEV

Stellar is a platform that connects banks, payments systems, and people.

Integrate to move money quickly, reliably, and at almost no cost.

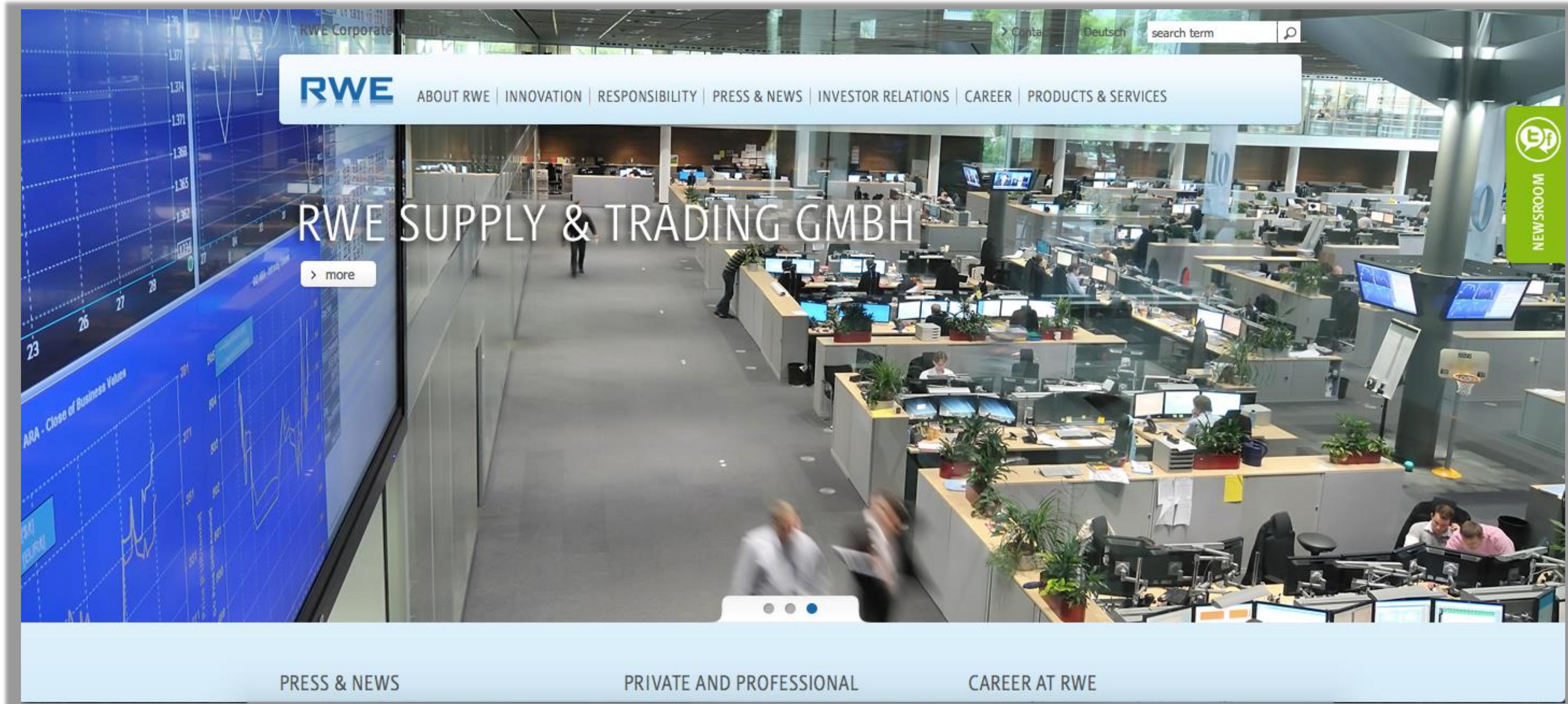
[SEE WHO USES STELLAR](#)

THE FUTURE OF BANKING IS HERE

The unbanked: Stellar



Energy



RWE

Supply Chain



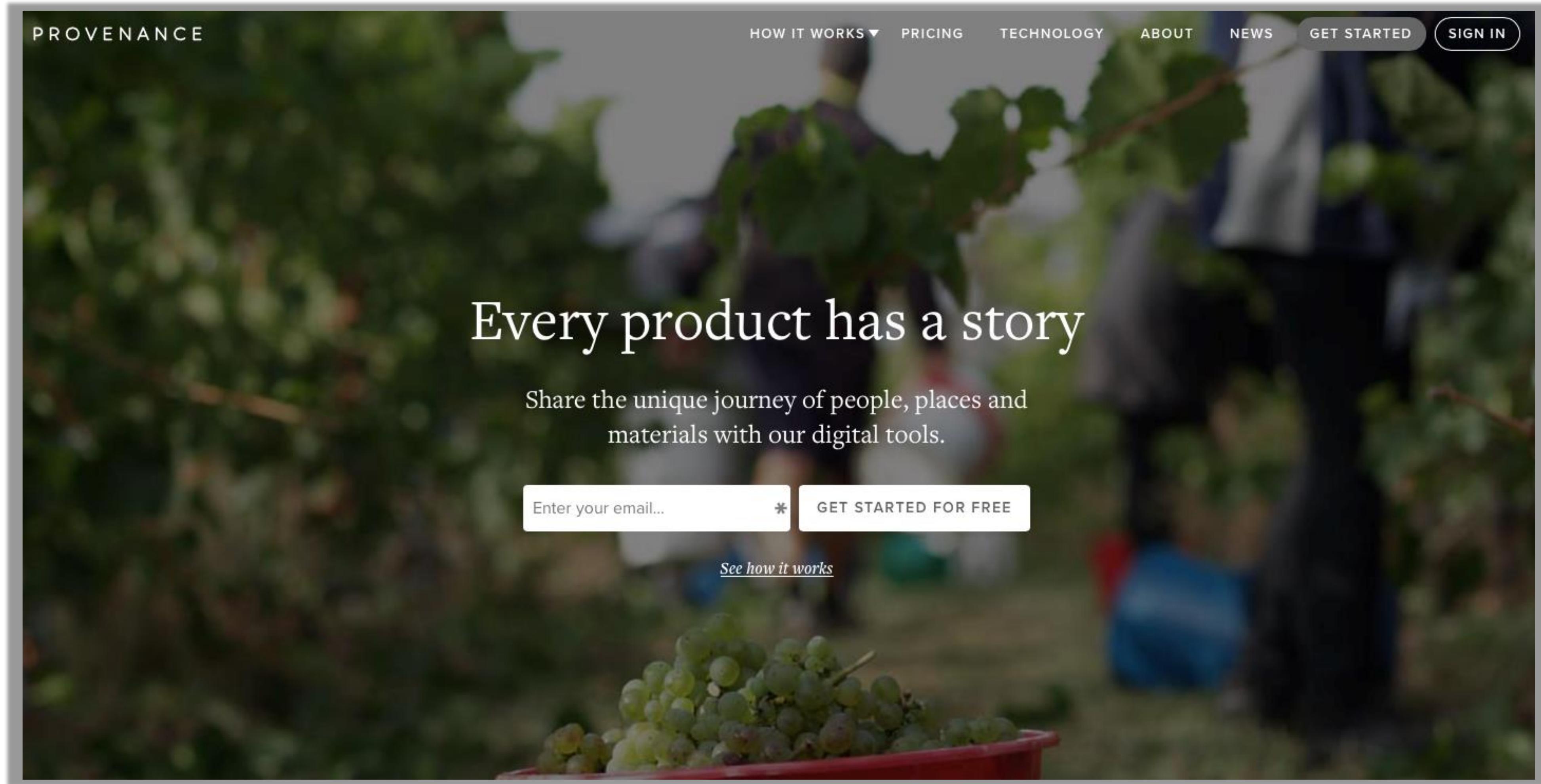
Shoes: Chronicled

The screenshot shows the Chronicled website's homepage. At the top, there is a navigation bar with links for CHRONICLED, ABOUT, TEAM, COMPANY, PARTNER PORTAL, FAQ, and JOBS. Below the navigation bar, there is a large, semi-transparent background image featuring various icons related to technology and fashion, such as a smartphone, a laptop, a bar chart, a globe, and a high-heeled shoe. Overlaid on this background, the main headline reads "Linking the Physical World to the Blockchain" in bold black text. Below the headline, there is a descriptive paragraph and a smaller section of text. The Chronicled logo, which consists of the word "CHRONICLED" in a stylized font inside a dark hexagon, is located in the bottom right corner of the page.

Linking the Physical World to the Blockchain

Chronicled provides a platform that allows any brand, physical IP creator, product authenticator / appraiser, or individual to assign a secure digital identity to a physical object by embedding an encrypted microchip and linking it to a blockchain record. Our goal is to create a common identity lookup for all IoT players as a first step to have their products to interact with each other.

Food: Provenance



PROVENANCE

HOW IT WORKS ▾ PRICING TECHNOLOGY ABOUT NEWS GET STARTED SIGN IN

Every product has a story

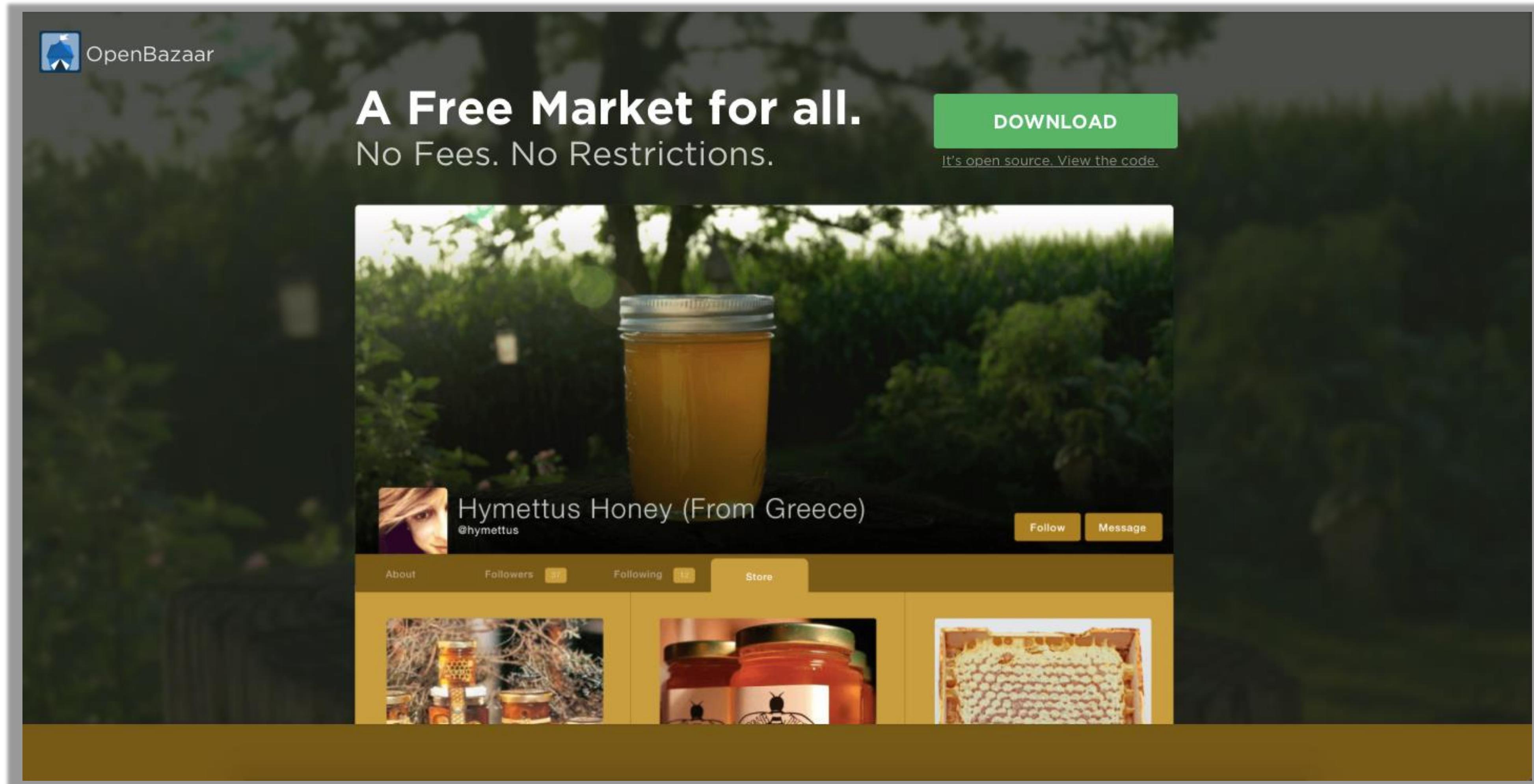
Share the unique journey of people, places and materials with our digital tools.

Enter your email... *

GET STARTED FOR FREE

[See how it works](#)

Online retail: OpenBazaar



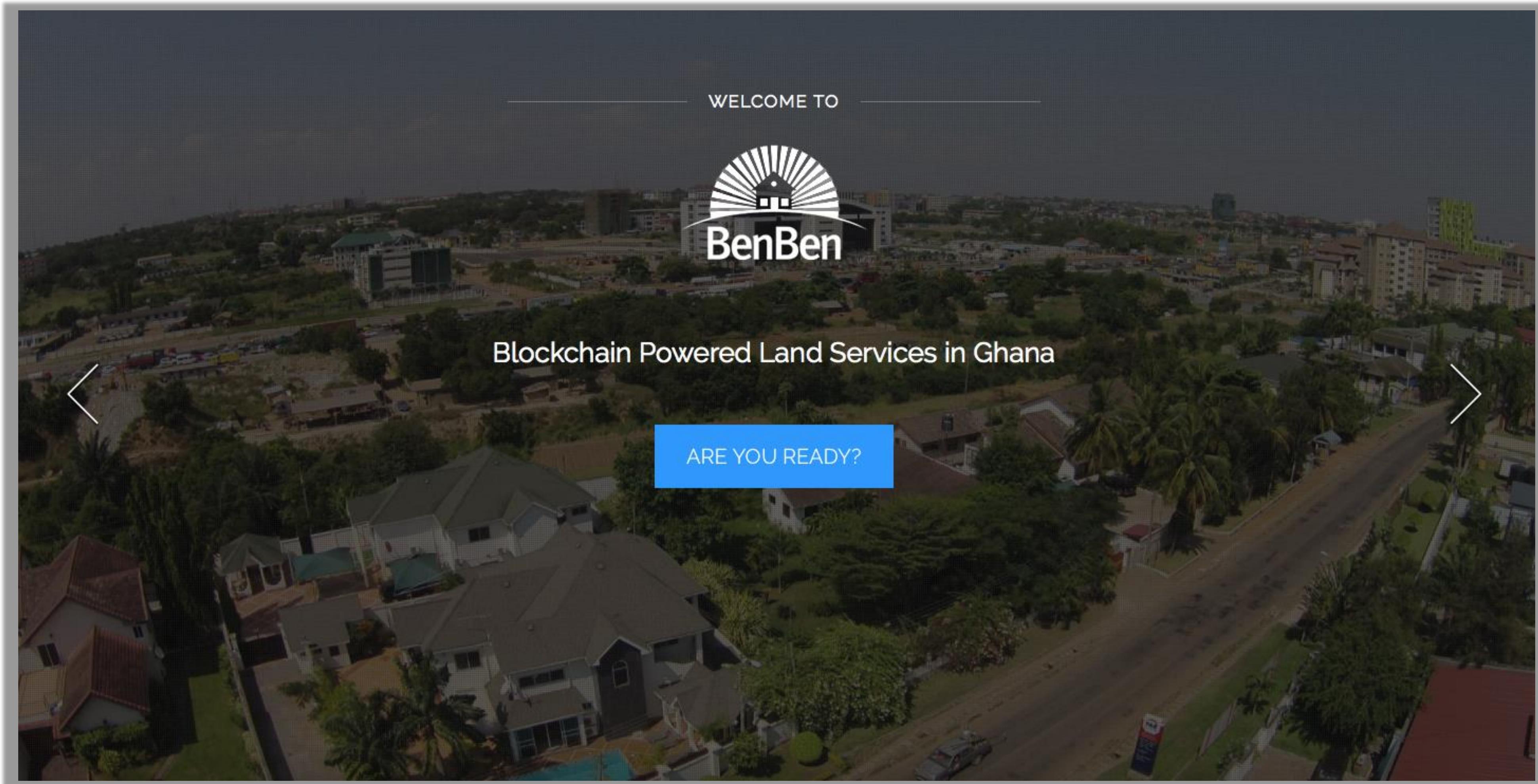
Government



Government Transparency: Estonia + Guardtime



Land registry: BenBen



3 Blockchain Benefits

Decentralized / Shared Control
Immutability / audit trail
Tokens / exchanges

Generating Opportunities: Vertical x Benefit

	Decentralized / Shared Control	Immutability / Audit trail	Tokens / Exchanges
Intellectual Property Identity		Dig art – ascribe	You?
Finance	R3	You?	
Energy	You?		
Supply Chain			Retail marketplace - OpenBazaar
Government			

Taking the next step with blockchains

1. Identify use cases, e.g. using tools here
2. Validate use cases with blockchain experts
3. Start experimenting. github.com/bigchaindb
4. Find the right expertise ;-)

Blockchains change the relationship between digital & dollars.
This could change everything.



Opportunity beckons. Are you ready?

Trent McConaghy & Masha McConaghy

BIGCHAIN^{DB}
bigchaindb.com