

Personal Data for Whom?

Pimping, protecting and purposing the most valuable resource in the digital economy

NESTA presentation, 10 May 2017

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hatcentral.hubofallthings.net

On the Internet, we constantly give away our information

- **Filling in forms**
- **Browse websites**
- **Watch videos**
- **Like, comment, interact**



DATA TRANSFER

UPLOAD

[Click here for more information](#)



Personal data "transfer" is everything we do on the Internet

- It's a manifestation of digital "work"
- But more importantly..... it tells people who we are.....the type of persons we are.... and our preferences.



the current state of the personal data "harvesting" system

- **is given away (not easily reused, unless you keep it on Google, Facebook, Amazon or Apple or other providers) - often without the right to dictate how it is used or reused**
- **After it is given away, services can resell the data in the name of 'better service'**



And it's now a commodity

- **personal data becomes a powerful resource to know who we are and to influence how, when and what we buy**
- **It's a commodity not because it's precious.....**



It is a commodity because there is a market for it



**Unless a market happens, the worth of
a commodity is unknown**

The 'secondary' data market

Now thriving with buyers and sellers

Using predictive analytics

Using AI and machine learning

Able to strip personal identifying information and 're-identify' you with a number or ID through 'very good analytics' - therefore it is inferential data and can bypass the law (maybe)

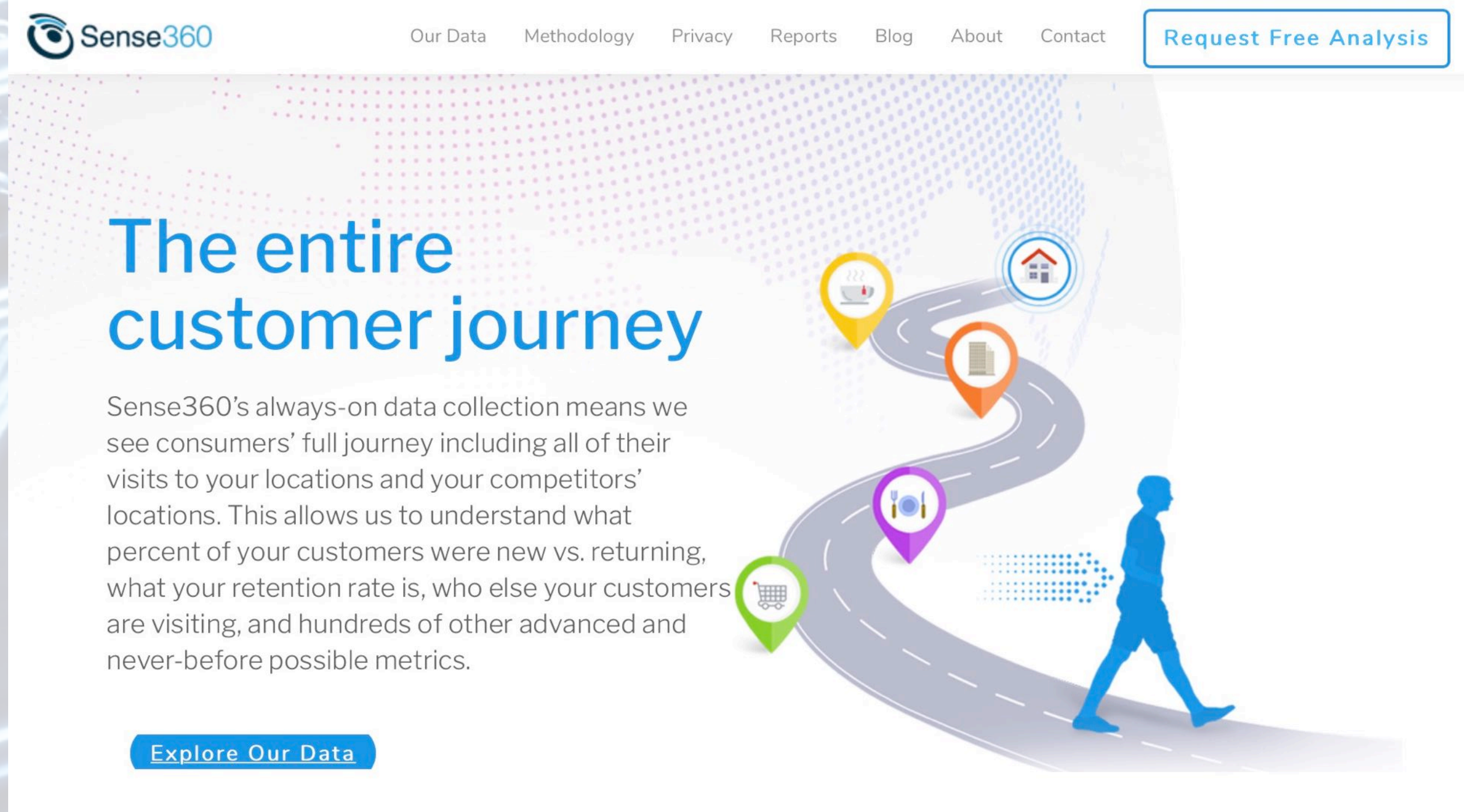
Sell on the inferential data for better targeting of consumers



The market is after a lot more than "just" personal data

- **The precious commodity of personal data is just symptomatic of the real commodity**
- **In an era of IoT, personal data would be everything about you**
- **It is your entire person, in a digital form**
- **That's the real game, not some scrappy few pieces of personal data**

And the capabilities are there to do it



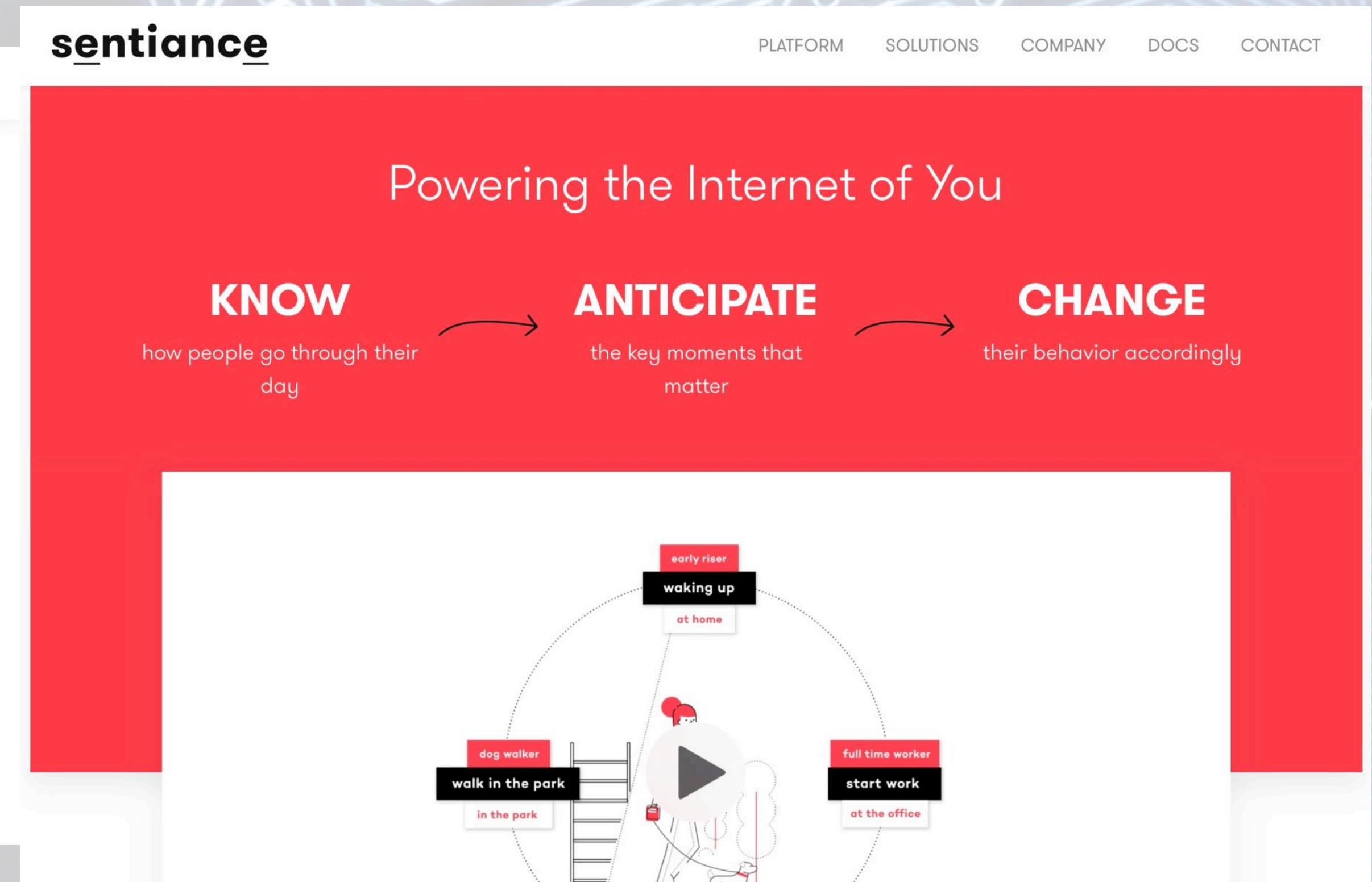
Sense360 Our Data Methodology Privacy Reports Blog About Contact [Request Free Analysis](#)

The entire customer journey

Sense360's always-on data collection means we see consumers' full journey including all of their visits to your locations and your competitors' locations. This allows us to understand what percent of your customers were new vs. returning, what your retention rate is, who else your customers are visiting, and hundreds of other advanced and never-before possible metrics.

[Explore Our Data](#)

The image shows a blue silhouette of a person walking on a winding road. The road is marked with various icons: a coffee cup, a house, a building, a shopping cart, and a fork and knife. The background is a light blue and white pattern of dots and lines.



sentiance PLATFORM SOLUTIONS COMPANY DOCS CONTACT

Powering the Internet of You

KNOW how people go through their day → **ANTICIPATE** the key moments that matter → **CHANGE** their behavior accordingly

The image shows a diagram of a person's daily routine. A central figure is surrounded by various activities: "early riser waking up at home", "dog walker walk in the park in the park", and "full time worker start work at the office". The diagram is set against a red background.

Of course, with user consent

The secondary market has several negative effects due to:

Temptation to cheat (long user agreements)

Opacity (no one knows)

Creep (let's do something else with it)

Because the incentive of the market is not aligned with the incentive of society



Your personal data on sale to scammers and cold callers for just 4p



Potential nuisance callers and scammers could be able to buy sensitive personal and financial information for as little as 4p a record

By
DAVID BEHRENS, DIGITAL EDITOR



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People Don't Know You Can Check For PPI Without A Phone Call

The Claims Guys



<http://www.yorkshirepost.co.uk/lifestyle/personal-finance/your-personal-data-on-sale-to-scammers-and-cold-callers-for-just-4p-1-8344959>

We've seen this before?

- It wasn't long ago that we had a secondary market of exchanges that didn't involve the source that produced it
- Quality was dubious, legality was questioned and later deemed illegal
- The market for personal data is starting to behave like the market for contraband - laundering tactics, shady

The screenshot shows the Napster v2.0 BETA 1 interface with a list of files being downloaded and uploaded. The interface includes a menu bar (File, Actions, Help) and a toolbar with buttons for Home, Chat, Library, Search, Hot List, Transfer, Discover, and Help. The main area is divided into two sections, each with a table of file transfer details.

Filename	File Size	User	Status	Speed	Progress	Rate	Time Left
Comedy - Maclean & Maclean - The Gross Manual (14 Sure Fire Jo...	299,200 of 2,220,560	ldhul	Downloading..	Unknown	13%	5.05 k/s	00:06:19
(Comedy) Maclean & Maclean - Johnny Marijuana Seed .mp3	270,048 of 7,381,800	srtrin	Downloading..	Cable	2%	6.50 k/s	00:18:13
Comedy - Maclean & Maclean - The Gross Manual (14 Sure Fire Jo...	539,936 of 2,220,560	big_bang_	Downloading..	Cable	24%	7.33 k/s	00:03:49
MacLean and Maclean - Bowser and Blue.mp3	5,606,005	adie_m	Getting Info..				
Andrew Sisters - Little Toot.mp3	375,392 of 8,528,129	F4phantom...	Downloading..	DSL	4%	4.14 k/s	00:32:50
70's CHILDREN'S STORY RECORD -- LITTLE TOOT .mp3	89,512 of 5,840,561	dude_way	Downloading..	14.4	1%	1.10 k/s	01:26:59
Disney Parks Toontown-Little Toot.mp3	64,608 of 2,354,597	hitmerbiter	Downloading..	Cable	2%	1.28 k/s	00:29:47
Maclean & Maclean - Little Toot MP3	12,288 of 602,112	KASDJFLKJ..	Downloading..	Cable	3%	0.24 k/s	00:41:39
Disney Parks Toontown-Little Toot.mp3	185,648 of 2,354,597	Cresno1	Downloading..	56K	9%	5.82 k/s	00:06:12
Maclean & Maclean - Little Toot .mp3	210,944 of 882,688	steach	Downloading..	56K	24%	4.44 k/s	00:02:31
Big Tiny Little & Mickey Finn - Toot Toot Tooti.mp3	40,128 of 2,800,844	obear69	Downloading..	Cable	1%	1.89 k/s	00:25:08
Comedy - Maclean & Maclean - Little Toot .mp3	6,816 of 882,688	catalina2136	Downloading..	DSL	0%	0.55 k/s	00:26:45
Brenda Lee - Toot Toot Tootie Goodbye (Little Miss Dynamite, CD..	44,368 of 2,250,710	enge3339	Downloading..	Unknown	1%	1.10 k/s	00:33:26
MacLean & MacLean - Little Toot (edf).mp3	115,600 of 1,180,444	123412341...	Downloading..	14.4	9%	4.68 k/s	00:03:47
Maclean & Maclean - Little Toot .mp3	882,688	uybauduc	Getting Info..				

Filename	File Size	User	Status	Speed	Progress	Rate	Time Left
Crosby, Stills, Nash And Young - Ohio.Mp3	2,725,888 of 3,709,496	cybermoose	Uploading..	56K	72%	1.55 k/s	00:10:33
lollipop lust kill - jesus chrysler.mp3	3,339,493	45tingMF	File Complete!				
Simpsons - The Life Of Homer Simpson.mp3	1,406,976 of 2,756,736	soldude67	Uploading..	56K	51%	1.45 k/s	00:15:30
Fear Factory - Cars.mp3	3,921,141	subbedbird	File Complete!				
Comedy - Richard Pryor - New Niggers.mp3	3,796,451	subbedbird	File Complete!				
Unknown - Mopar (Drysler) 440 6-pak V8 race-bait - real men don't..	869,049	TYLERSEX..	File Complete!				
Comedy - Jerky Boys - Fanning My Balls.mp3	675,840 of 1,784,264	subbedbird	Uploading..	14.4	36%	7.33 k/s	00:02:31
Ben Stiller & Andy Dick - Can We Get It Together Again.mp3	1,230,600	fluidpockets..	Waiting..				

Concurrent Downloads: 25 Concurrent Uploads: 1

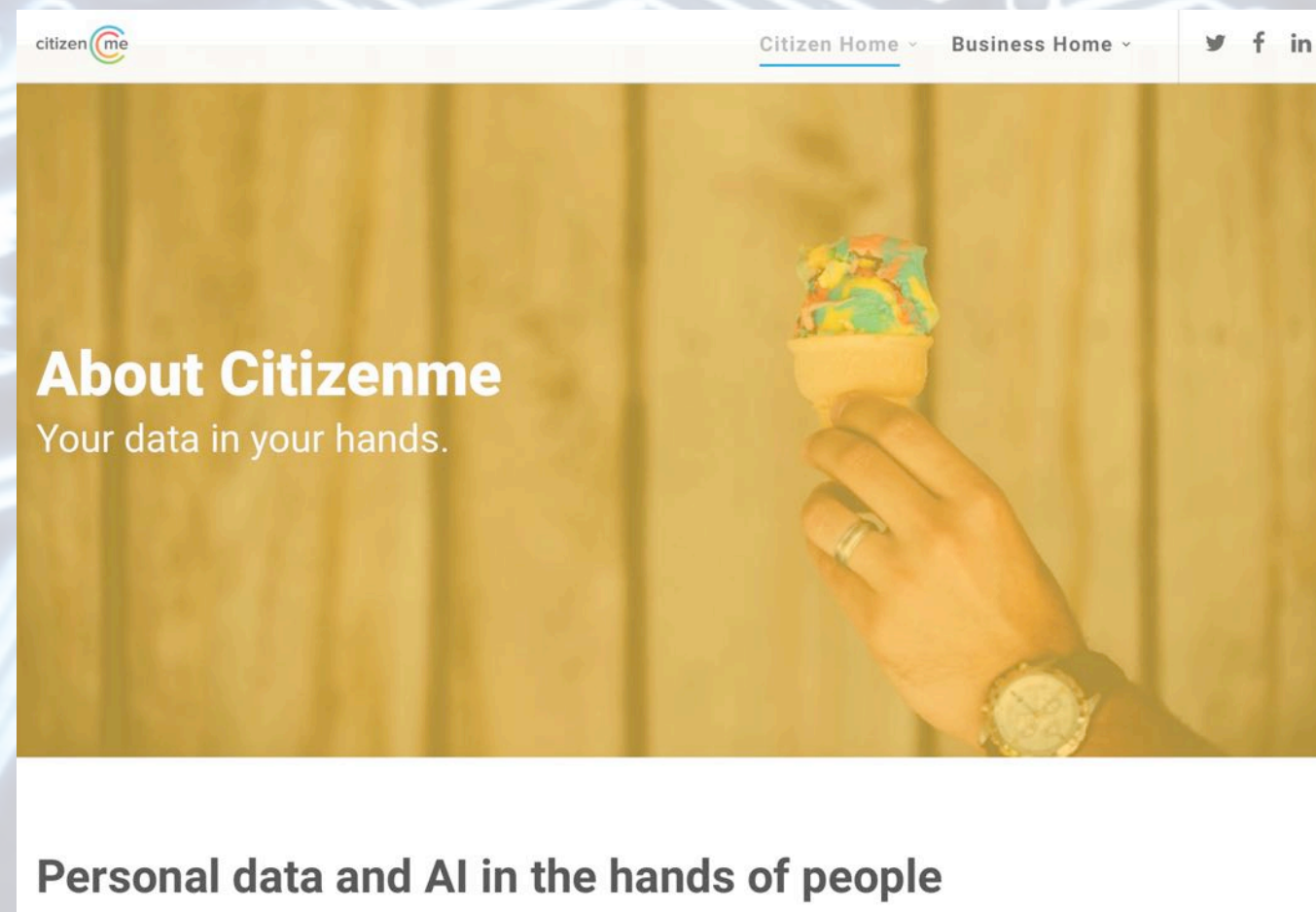
Clear Finished Cancel

Online (f/g/fudfobfvcv): Sharing 2703 files. Currently 526,589 files (2,246 gigabytes) available in 8,411 libraries.



**We all think we know the
solution**

They think so too



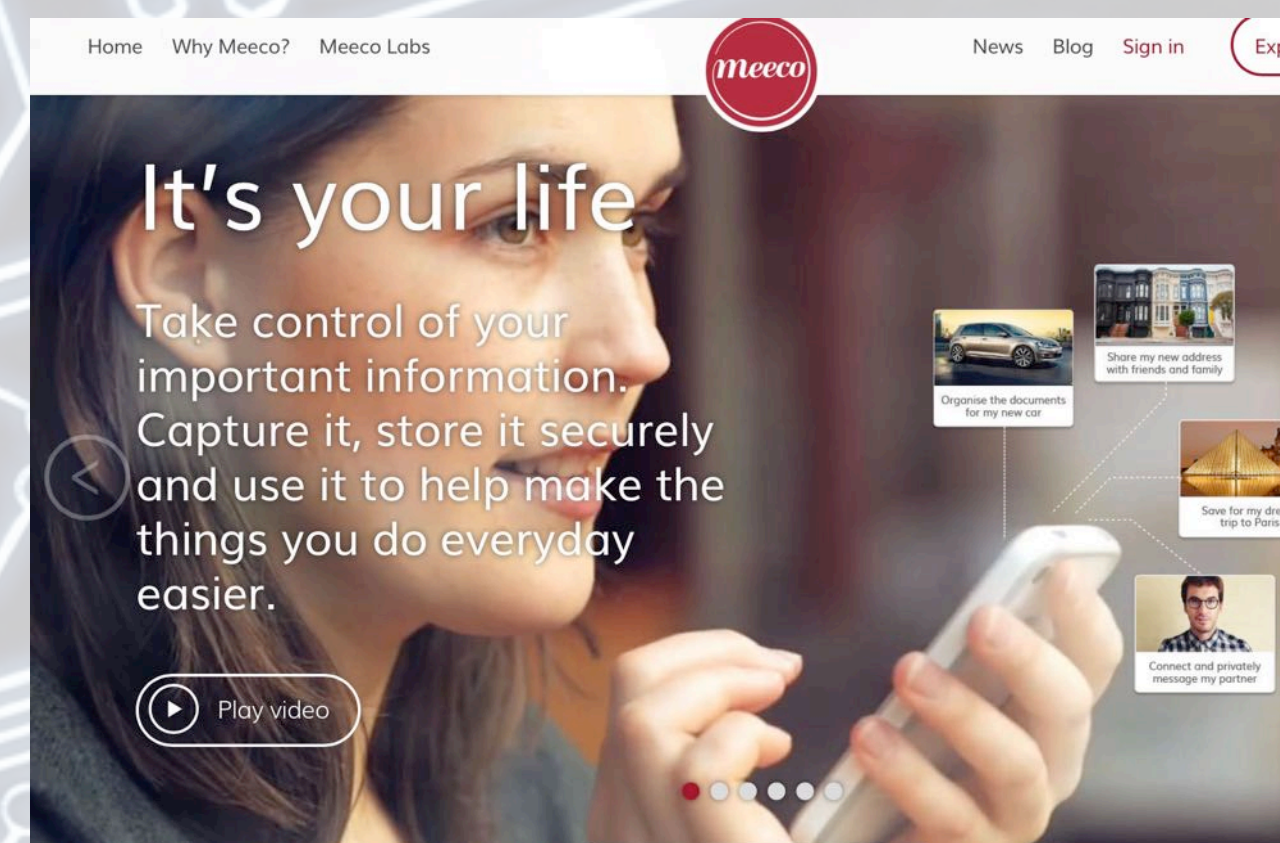
citizenme Citizen Home Business Home

About Citizenme

Your data in your hands.

Personal data and AI in the hands of people

The screenshot shows the Citizenme website with a navigation bar and a main image of a hand holding an ice cream cone. The text 'About Citizenme' and 'Your data in your hands.' is prominent.



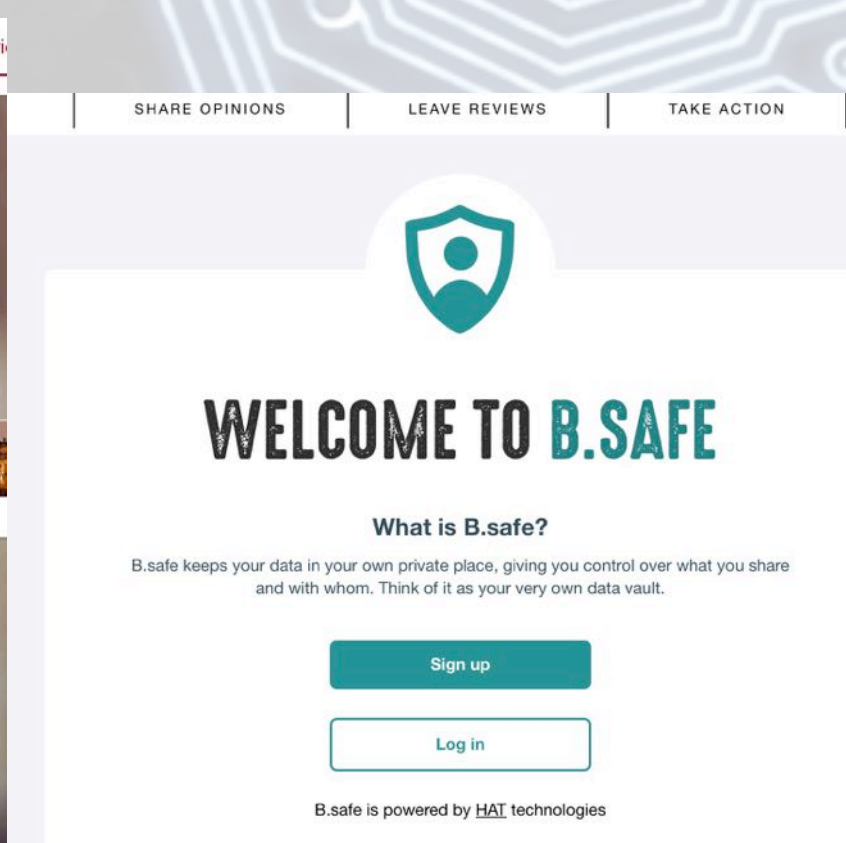
Home Why Meeco? Meeco Labs News Blog Sign in

It's your life

Take control of your important information. Capture it, store it securely and use it to help make the things you do everyday easier.

Play video

The screenshot shows the Meeco website with a navigation bar and a main image of a woman looking at her phone. The text 'It's your life' and 'Take control of your important information...' is prominent.



SHARE OPINIONS LEAVE REVIEWS TAKE ACTION

WELCOME TO B.SAFE

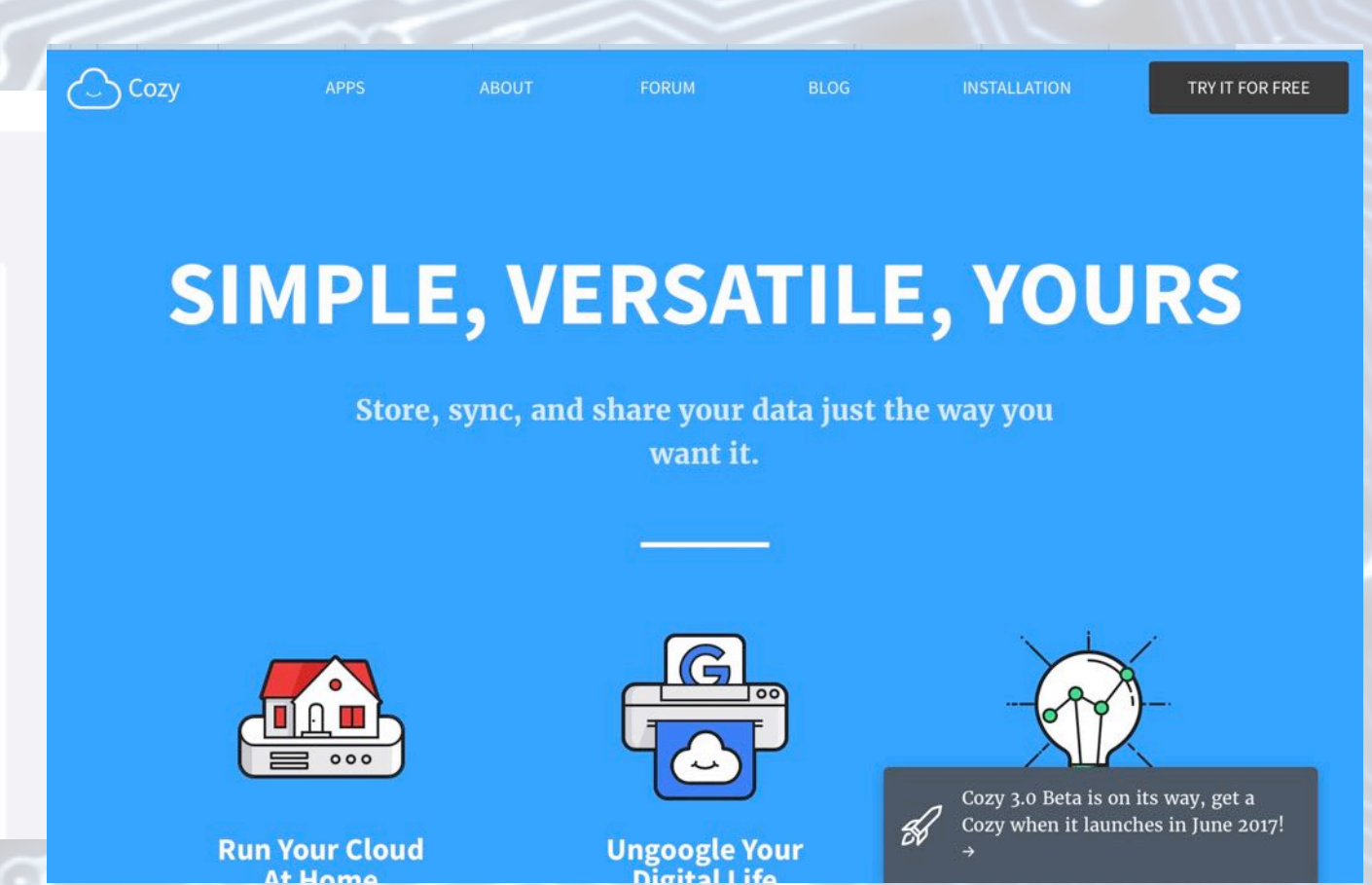
What is B.safe?

B.safe keeps your data in your own private place, giving you control over what you share and with whom. Think of it as your very own data vault.

Sign up Log in

B.safe is powered by HAT technologies

The screenshot shows the B.safe website with a navigation bar and a main image of a shield icon. The text 'WELCOME TO B.SAFE' and 'What is B.safe?' is prominent.



Cozy APPS ABOUT FORUM BLOG INSTALLATION TRY IT FOR FREE

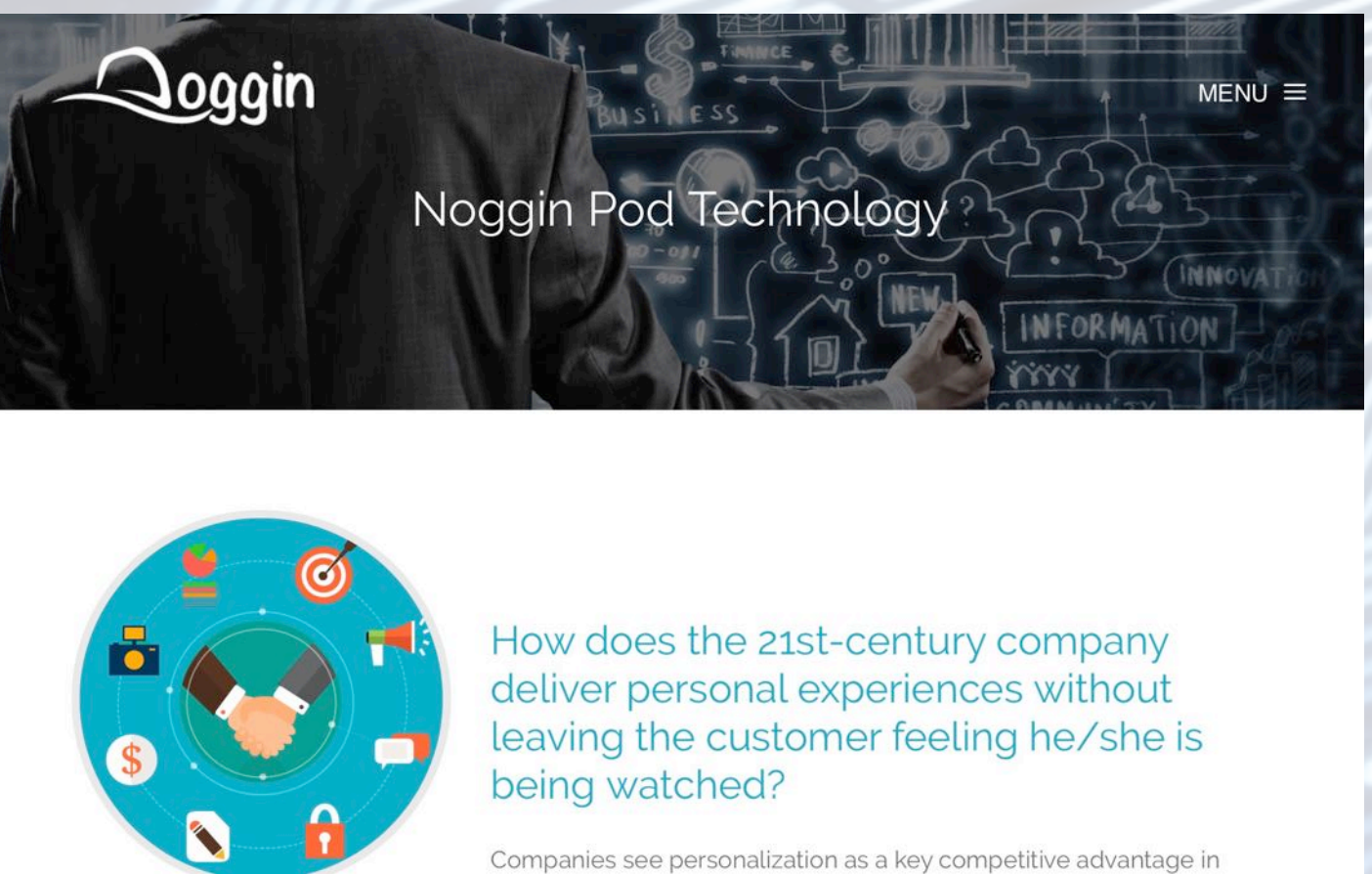
SIMPLE, VERSATILE, YOURS

Store, sync, and share your data just the way you want it.

Run Your Cloud At Home Ungoogle Your Digital Life

Cozy 3.0 Beta is on its way, get a Cozy when it launches in June 2017!

The screenshot shows the Cozy website with a navigation bar and a main image of a house icon. The text 'SIMPLE, VERSATILE, YOURS' and 'Store, sync, and share your data...' is prominent.

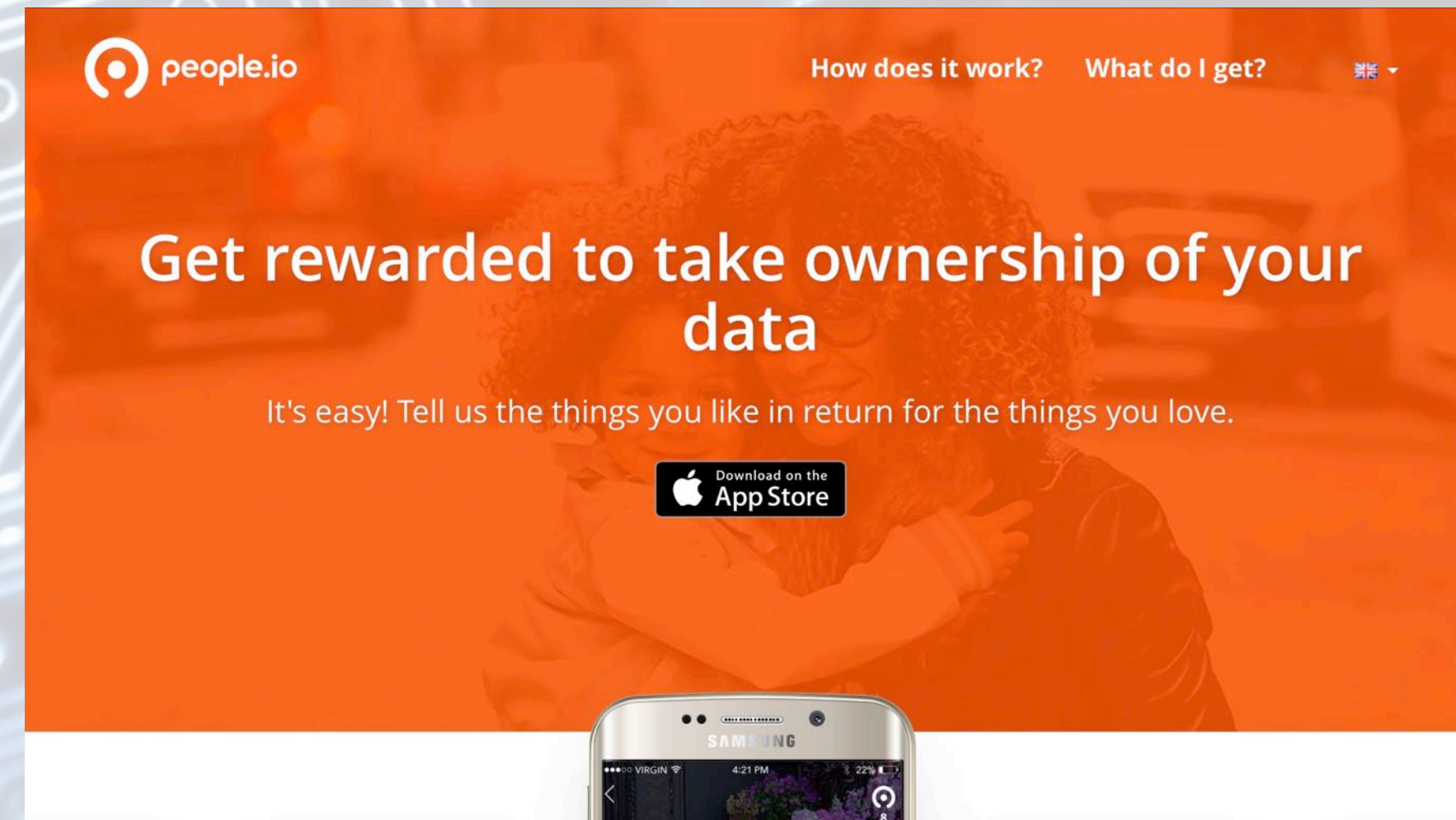


Noggin Pod Technology

How does the 21st-century company deliver personal experiences without leaving the customer feeling he/she is being watched?

Companies see personalization as a key competitive advantage in

The screenshot shows the Noggin website with a navigation bar and a main image of a person writing on a chalkboard. The text 'Noggin Pod Technology' and 'How does the 21st-century company...' is prominent.



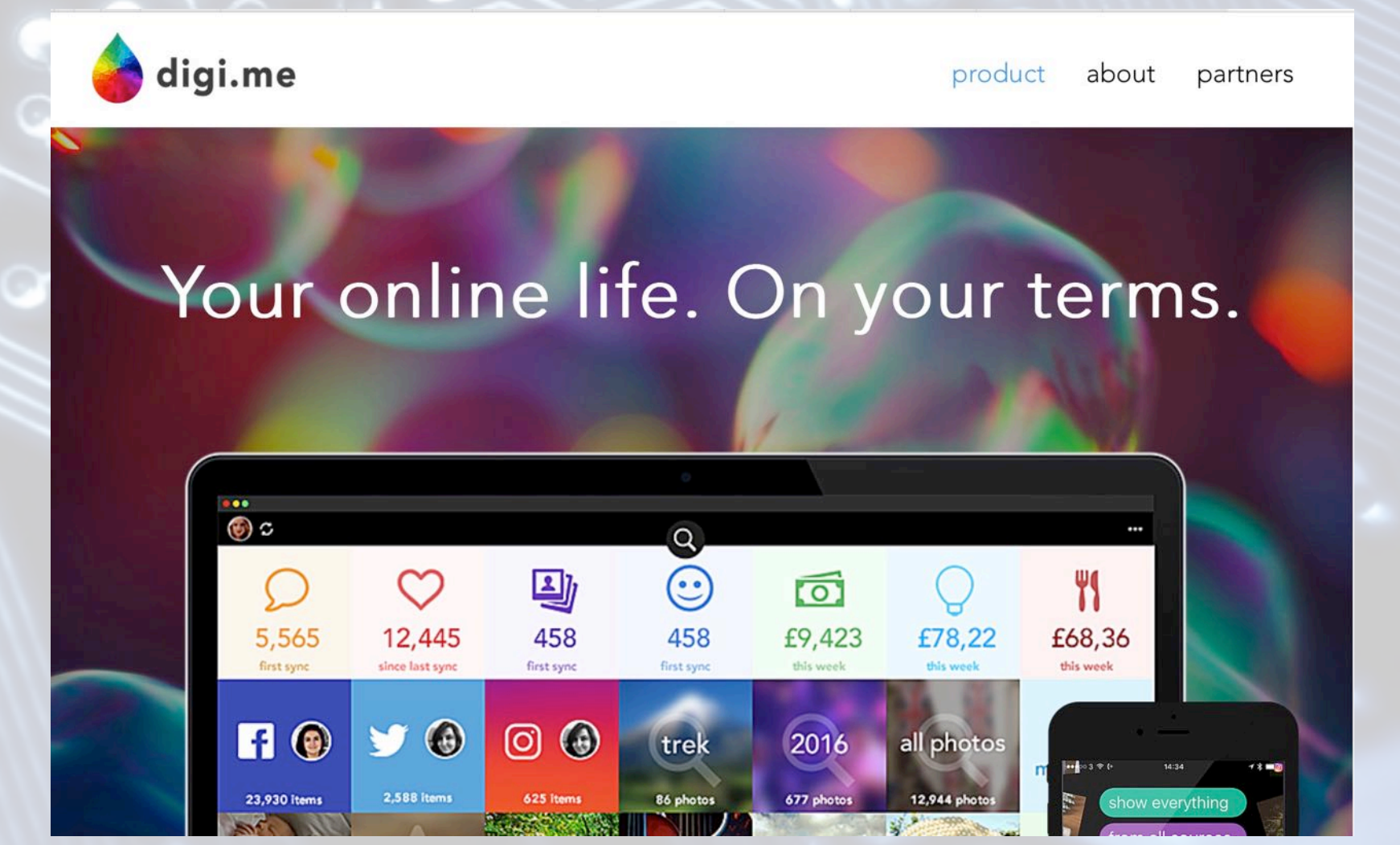
people.io How does it work? What do I get?

Get rewarded to take ownership of your data

It's easy! Tell us the things you like in return for the things you love.

Download on the App Store

The screenshot shows the people.io website with a navigation bar and a main image of a person's face. The text 'Get rewarded to take ownership of your data' and 'It's easy! Tell us the things you like...' is prominent.



digi.me product about partners

Your online life. On your terms.

5,565 first sync 12,445 since last sync 458 first sync 458 first sync £9,423 this week £78,22 this week £68,36 this week

23,930 Items 2,588 Items 625 Items 86 photos 677 photos 12,944 photos

The screenshot shows the digi.me website with a navigation bar and a main image of a tablet displaying various data points. The text 'Your online life. On your terms.' and '5,565 first sync...' is prominent.

But there's a problem

- **Everyone is building a personal data store so that individuals can control how they share**
- **But no one is asking the big question**



Personal data is raw material

Has Value to the person

- **Only** with services that the individual can buy to process and use
- (Yes, we're back to the theory of the firm)

Has worth to others

- **Only** when there is a market

The value and worth of personal data is dictated by the data exchange infrastructure that can bring parties together to exchange



How do we share our data
Who manages the **sharing infrastructure**?
Who polices **access to our data**?
Where is it sitting on, who runs it, who **runs**
the services around it

All data exchanges sit on a platform

- **The data exchange infrastructure controls all roads to personal data - whether you own the data store or not**
- **Who builds that data infrastructure. Who builds the exchange. Who controls it. What is it built on.**



The background is a solid red color with a complex, repeating pattern of white circuit board traces and nodes. In the center, there is a semi-transparent, light-colored padlock icon with a keyhole, which is slightly tilted. The text is centered horizontally and overlaid on the padlock and circuit pattern.

Platforms are controlled by whoever funds it

Funding will determine use cases, and what is being built

People.io secures a six figure investment from Wayra Munich and plans to launch in Germany in Q3 2016

By Thomas Ohr - May 4, 2016

142 0

Share on Facebook Tweet on Twitter



people.io, a new service that allows consumers to dynamically license their data and attention to brands and be rewarded for it, today announced a major strategic partnership with Wayra Munich, the Telefónica backed accelerator programme. The deal, which combines a six figure investment with strategic support to help develop the business, will allow the London-based startup to expand its reach onto mainland Europe by the

end of the year.

Since its UK launch in the beginning of this year, thousands of beta users registered for the service, helping to refine the experience ahead of a nationwide roll out later



digi.me raises £4.2M (\$6.1m) in Series A funding round

June 30, 2016 Announcements, Business Intelligence, Data Privacy, Using Digi Me digi.me, Permissioned Access, personal data, Personal Data Economy, Series A funding, Swiss Re Emma Firth

Digi.me, the pioneering start-up revolutionising how consumers and businesses harness the power of personal data, has secured £4.2m (\$6.1m) from Series A funding led by global re-insurer Swiss Re.

COZY CLOUD RAISES € 4 MILLION TO FUEL ITS GROWTH

THE START-UP ACCELERATES ITS DEVELOPMENT WITH MAIF AND INNOVACOM

Paris, 10th June 2016: Start-up Cozy Cloud has closed a EUR 4 million investment round from MAIF (via its investment fund MAIF Avenir) and Innovacom. The objective is to accelerate its commercial development and to support digital transformation of major brands by offering a new personal data and customer relationship paradigm.

Personal data: a key issue

Major brands are now engaging in a complex digital transition to address the risk of disintermediation caused by the GAFAs and their clients' new expectations. Their key issue: accessing customer data. The GAFAs already have an expanded access to data, and they have entered a state of great digital intimacy with their users. Users rely on these services in their everyday life, and they end up giving up control of their personal data.

This paradox has been partly addressed first by recent evolutions in substantive law (data portability in French Lemaire law, EU regulation "Directive on Payment Service (PSD2)"). Second, there is a Self-data movement emerging, of which Cozy is a pioneer. Self-data aims at providing individuals with the opportunity of taking back control on

Data stores funded commercially

And then there are these people who also have been funding data stores for digital identity

Singapore to overhaul its digital identity scheme

Prime Minister Lee Hsien Loong points to Estonia's digital identity as a benchmark.



By Charlene Chin

27 FEB 2017

DIGITAL GOV



The Singapore Government wants to build a new digital identity for its citizens, Prime Minister Lee Hsien Loong has said.

How GOV.UK Verify works



It takes about 15 minutes to verify your identity the first time you use GOV.UK Verify, and a couple of minutes any time after that.

When you use GOV.UK Verify to access a government service, you choose from a list of companies certified to verify your identity.

The company you've chosen may ask you some questions, or perform other checks using photo identification and financial information before confirming your identity to the



INNOVATION

e-Estonia: The power and potential of digital identity

Published on 20 Dec 2016 by Joyce Shen



Twice in the last six months, I've had the opportunity to visit Estonia to attend two separate conferences (**Latitude59** and the **Future of Identity**). Both trips provided me with insight into how emerging technologies and governmental policies can enable digital transformation for a country and its citizens, as well as the potential for advanced digital identity systems.

But first, a little background on Estonia

Estonia is a small country with a **long history** dating back to 9000 B.C. From the Middle Ages to the modern period, Estonia was ruled by various nations until in 1991, the Republic of Estonia was formed as an independent

What ALL platforms have in common


- Rules
 - You have to know what is allowed, and what is not allowed
- Boundary
 - You have to know when you are inside and outside
- Have **public** services
 - Shared amongst all
- Have **community** services
 - Shared amongst a group
- Have **private** services
 - Between people, or for yourself
- Have an exchange currency (money, labour, digital labour (etc.))



Our society today is shaped by platforms

Platform determine our behaviours. Platforms are templates of behaviours





**The future of our society will
depend on who controls the
personal data exchange
platform**

**The multiple stakeholders of personal data exchange
must collaboratively fund it. Even if the motivation is to
Purpose, Protect and Pimp it for their own goals**

Or are we saying that....

All services in the personal data exchange system should be commercial?



Who funds the future

State

Market

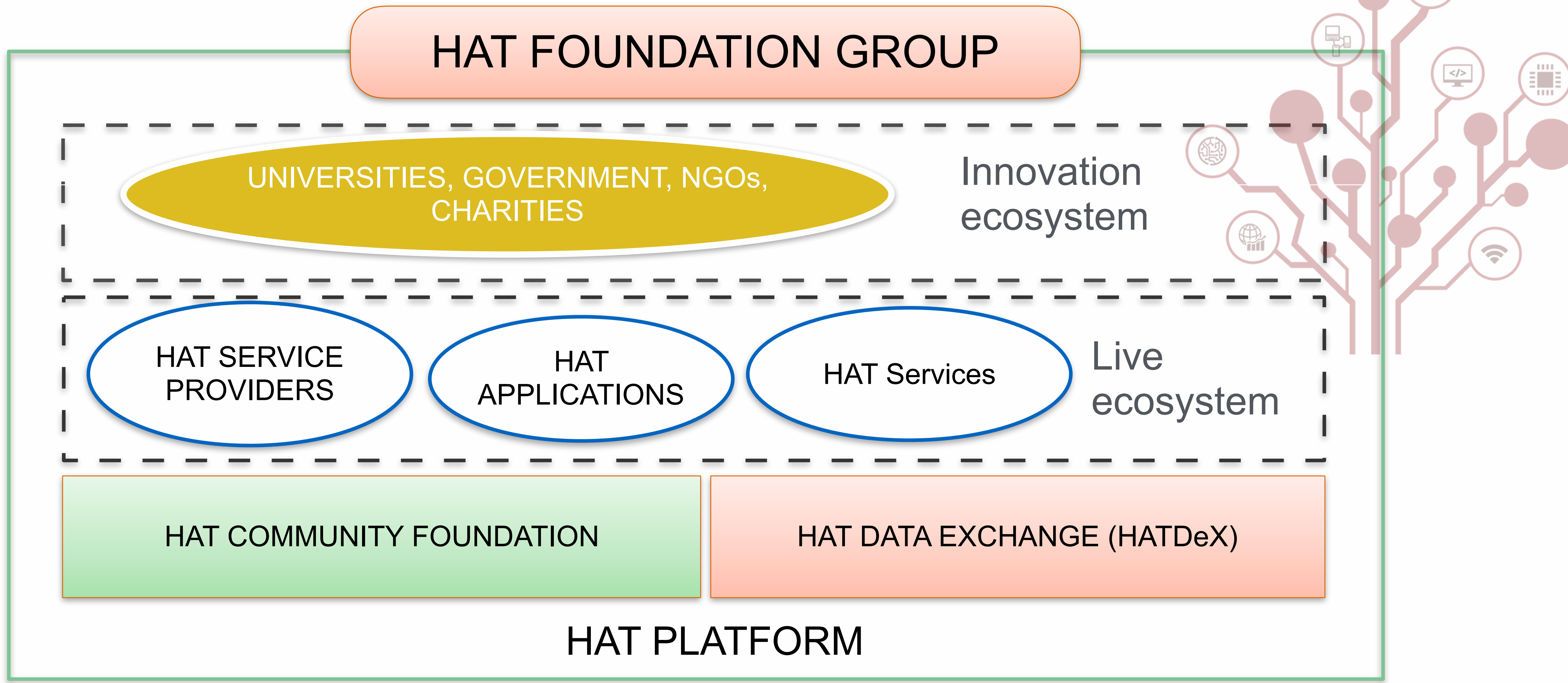
Users

Communities

Personal data exchange belongs to all of us

**At the HAT Foundation Group, we believe
there are some design principles a
personal data exchange should follow**

Based on > £3m EPSRC/RCUK Funding on
personal data platform design



Partners



1. Personal data exchange platform must enable all necessary platform services

- Who is building the public service? (Infrastructure)
- Who is building the private services (person-to-person data exchange)
- Who is building the community services (groups)
- Who is building the commercial proposition (market)

2. Even if the personal data stores are built on private or corporate clouds, the data exchanges should be built on the Internet

- single sign-on through APIs for other Internet services and applications
- Uses Internet standard protocols that are open and transparent – e.g. JSON web tokens, SSL encryption
- not built on a proprietary system e.g. within a subnet or private networks inside a cloud system
- For transparency, open, decentralised, egalitarian access rights on the Internet
- Allow community, public and private services to be built and be interoperable, instead of only private/commercial services
- To re-establish trust and transparency the Internet economy

3. Personal data exchange platform has to be future proof for all future personal data uses

- One way to future proof personal data **exchange** is through ownership of data stores instead of merely rights, so that custodial and 'super' rights can guarantee future access
- users become stakeholder in their own data, its uses, its quality and as digital assets
- Bundle of rights under property law 1790, simplified in 1925
 - Right of possession
 - Right of control
 - Right of enjoyment
 - Right of exclusion
 - Right of disposition

4. Data exchanges must be actioned upon by users themselves, and without a 'sysadmin' access

- E.g. Containerised, so that the individual is legally a **data controller** through the 'microservices', and in some cases, a data processor
- For the user to have legal standing in the future of the Internet
- So that users are stakeholders in the effort of building and controlling their own databases

5. Market-making

Allow brand owners (e.g. Banks, Insurance companies) to brand the private data account and customise it in the way they want to be consistent with their own branding initiatives for their customers for their own data exchange use cases

We all believe a PRIMARY market of a personal data exchange from source is good for the economy, the person and society

HATDeX

Digital Dependency White Paper

You are Now on: Home > Digital Dependency White Paper



The Need for a Personal Data Exchange Infrastructure

We live in an increasingly digitally connected society, with digital dependency in daily life only set to rise. Yet, where connectivity brings convenience it also brings challenges – especially in the area of personal data.



Benefits to users	Benefits to organizations	Benefits to society
Greater control over personal data usage	ability to access and request for more personal data for new services at reduced development costs.	Lower cybersecurity risks
More private	Lower risks and costs of personal data containment (assuming no duplication on the firm-side)	Better representation of individuals in the digital economy
Ability to use personal data for themselves	Champions digital empowerment and control	Enables peer to peer services without third party involvement
Ability to buy services to, organise and manage digital selves and personal effectiveness	Creates trust with customers	Enables individuals to engage with public services more seamlessly through data sharing
Ability make more informed decision based on historical and on-demand personal data	Create direct customer relationships rather than be dependent on third party supplier of personal data	Better operationalisation of a consent based digital economy of personal data
Able to buy intelligence services for computation and recall	Better quality of data as individuals are stakeholder of data quality	Creates a disincentive for secondary (and/or illegal) personal data markets since there is a primary market for personal data
Ability to share data for insights, recommendations	Increase supply of personal data resource without high costs	Efficient way for government and organizations to consult citizens e.g. Polls, opinions, surveys
Ability to share data for discounts and personalised products/services	Ability to access personal data services (e.g. Anonymisation, Blockchains) through the ecosystem without having to develop themselves	Benefit from scale effects when introducing new data services e.g. Ledgering/blockchains

<https://www.hatdex.org/digital-dependency/>

What is the killer app that will scale the personal data exchange economy

- Pimping? (Get your own data and make money for yourselves)
- Purposing? (use your own data for yourself - data services for individuals)
- Protection? (my data, my vault)

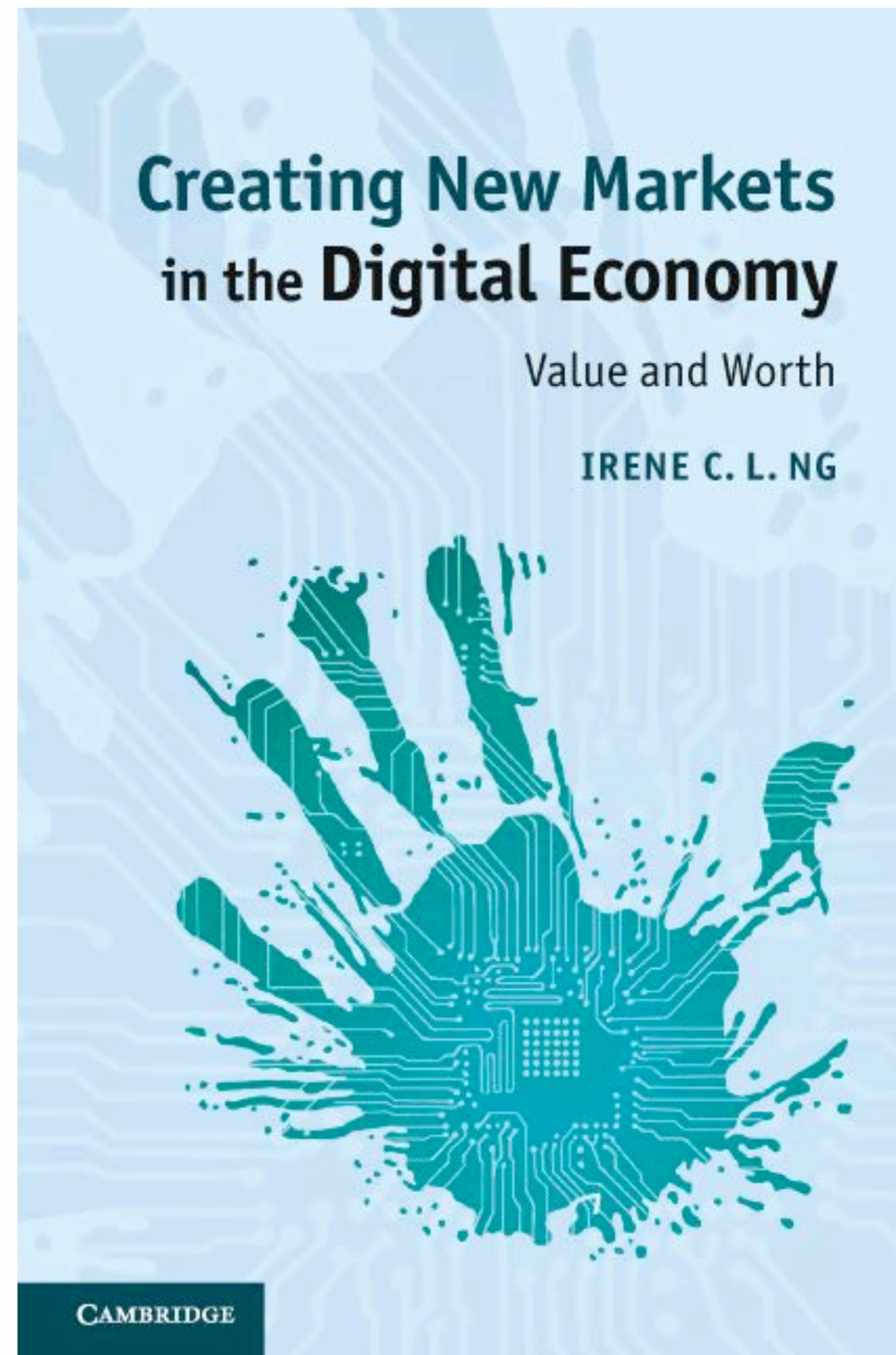
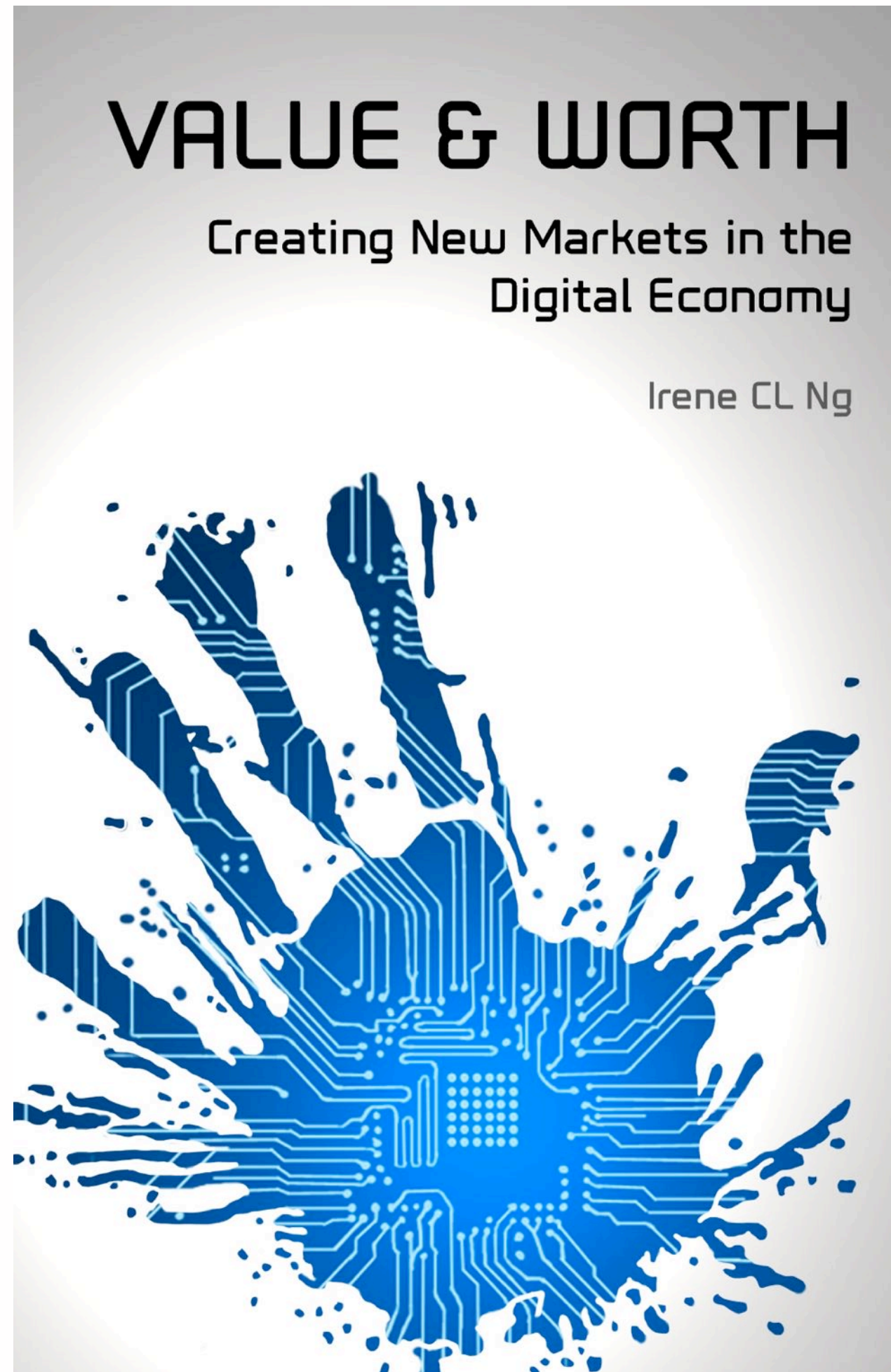
Multiple roads to designing, building and scaling a personal data exchange and emerge that primary market

The one that succeeds will dictate the society we become

And we may well be funding the next big Internet conglomerate



Shameless plug





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Move me to the **HAT** Launch

Change the internet

THE SHARD, LONDON - THURSDAY 18th MAY



HAT Week




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jonathan.holtby@hatdex.org

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