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Infomediaries' second chance: a matter of trust and responsibility

Data Coop Workshop

The Hebrew University of Jerusalem, 22 December 2019

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University of Leeds/
FGV/Stanford

The rise and fall of the infomediary



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Business and the Internet

The rise of the infomediary

The Internet is producing a string of racy new business models

Jun 24th 1999

IT IS a fact of life in the road-haulage industry that whereas for outbound journeys loads are likely to be full, on the way back there is usually not much to carry. According to one industry estimate, about half the lorries on America's roads at any one time are running empty.

The problem is that there has been no mechanism to link up potential buyers of lorry space with all those empty containers, says Gregory Roque, a former logistics manager for McDonald's. His answer was to set up a new organisation, National Transportation Exchange (NTE), which uses the

- PIMs “data trustees” (Monopolkommission, 2019)
- Data intermediaries enabling data sharing, data processing services, payment and clearing services and legal services (OECD, 2019)
- GDPR-driven infomEDIATION (2018): Access, portability, explanation
 - Portability also from Digital Content Directive and Reg. on Free Flow for Non-Personal Data
 - Explanation also in new consumer framework and P2BF Reg

1) Right of Access



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Art. 15: Right to access one's own personal data, and...

- Purpose of processing
- Categories of data
- Recipients or categories of recipients
- Retention period
- Sources of additional data
- Existence of automated decision-making

Free of charge, 1 month limit, electronic form



Potential for collective exercise

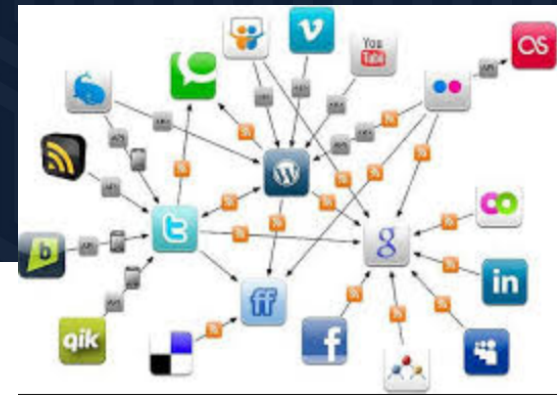


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SECTOR	N	CONTAINS DATA (SPECIFIC OR GENERAL)		PURPOSE OF COLLECTION	METHOD OF COLLECTION	DATA SHARING (SPECIFIC OR GENERAL)	
EDUCATION	7	14%	43%	57%	43%	29%	29%
FINANCE	6	50%	17%	67%	50%	17%	67%
GOVERNMENT	25	24%	24%	36%	24%	24%	20%
PLATFORMS	7	71%	12%	43%	29%	0%	71%
RETAIL	6	50%	17%	33%	33%	33%	17%
TELECOM	6	50%	7%	33%	0%	0%	33%
TRANSPORT	13	46%	0%	54%	15%	8%	46%
UTILITIES	6	50%	17%	50%	67%	0%	50%
OTHER	8	62%	38%	50%	62%	62%	12%
<i>TOTAL</i>	<i>84</i>	<i>61% <u>10</u></i>		<i>45%</i>	<i>32%</i>	<i>55%</i>	

Mahieu, R. & Asghari, H. & van Eeten, M. (2018). Collectively exercising the right of access: individual effort, societal effect. Internet Policy Review, 7(3)

2) Right to Data Portability



Art. 20: right to receive the personal data in a structured, *commonly used* and machine-readable format and have the right to transmit those data to another controller without hindrance from the controller to which the data have been provided

A29WP Conditions:

- (a) personal data concerning the data subject;
- (b) provided by the data subject;
- (c) not adversely affecting rights and freedoms of others

Common formats may enable “syntactic” interoperability, i.e. the transfer of “data from a source system to a target system using data formats that can be decoded on the target system”. Not semantic “interoperability, defined as transferring data to a target such that the meaning of the data model is understood.

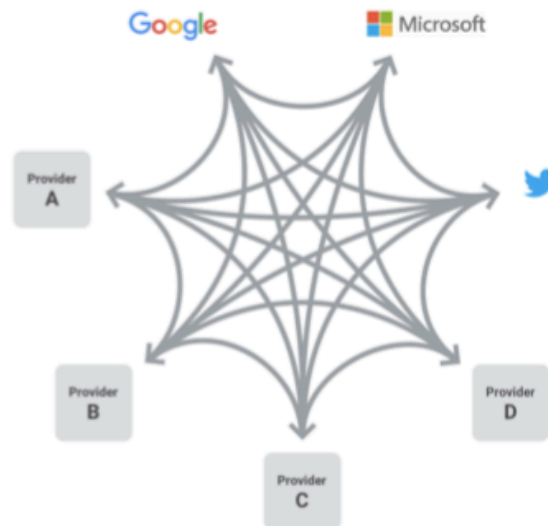
Example:

```
"timestamp": 1477442502, "data": [{  
    "comment": {  
        "What a beautiful picture that is!", "author": "Alan Aaronson"  
    } }],  
"title": "Alan Aaronson commented on Brandi Barnacle's photo."
```

Data Transfer Project



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Without DTP

Each Provider has to build and maintain Adapters for every other Provider's proprietary APIs and, potentially, data formats



With DTP

Each Provider only has to build and maintain an API that supports the DTP Data Models, which are based on standard formats where available

3) Rights to explanation for automated decision-making



Art 22: right not to be subject to decision based solely on automated processing...which produces legal effects or significantly affects him or her.

Exemption in case of explicit consent or necessity for contract

But art. 22 (3) safeguards in such cases:

- (a) the right to obtain human intervention on the part of the controller
- (b) the right to express his or her point of view
- (c) the right to contest the decision

...and/or the right to explanation (recital 71)



Art 13- 14: duty to inform on... the existence of automated decision-making....and at least in those cases, **meaningful information** about the logic involved, the significance and the envisaged consequences for the data subject (X)

Art 15: right of access...to personal data and information on X

A concrete example



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Why you're seeing this ad



You may be seeing this ad because **CompetitionFeed** wants to reach people who are located here: **Belgium**.

You can view and manage information connected to your account that Twitter may use for ads purposes. [See your Twitter data](#).

Twitter also personalizes ads using information received from partners as well as app and website visits. You can control these interest-based ads using the ["Personalize ads" setting](#).

×

Interests from partners

Twitter's partners build audiences around shopping decisions, lifestyle, and other online and offline behaviors. [Learn more](#)

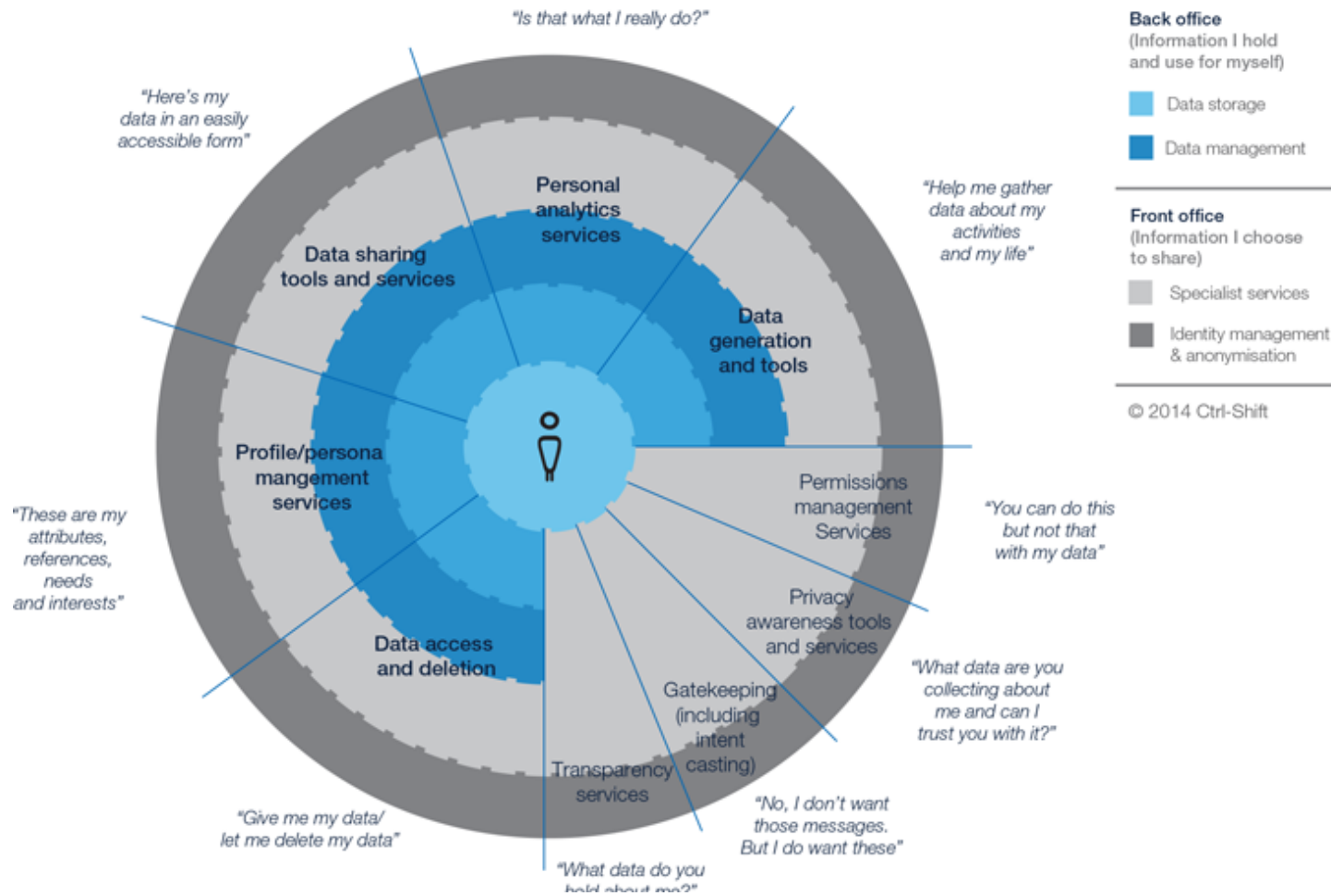
- | | |
|--|--|
| <input checked="" type="checkbox"/> Auto > Body style: cross over vehicle | <input checked="" type="checkbox"/> Auto > Body style: entry/economy/compact |
| <input checked="" type="checkbox"/> Auto > Body style: midsize car | <input checked="" type="checkbox"/> Auto > In market: new or used vehicle |
| <input checked="" type="checkbox"/> Auto > In market: new vehicle | <input checked="" type="checkbox"/> Auto > In market: used vehicle |
| <input checked="" type="checkbox"/> Auto > Make: Honda | <input checked="" type="checkbox"/> Auto > Near market: body style: full-size sedan |
| <input checked="" type="checkbox"/> Auto > Near market: body style: luxury sedan | <input checked="" type="checkbox"/> Auto > Near market: body style: minivan |
| | <input checked="" type="checkbox"/> Auto > Near market: body style: small/mid-size SUV |
| <input checked="" type="checkbox"/> Auto > Near market: body style: sports car/convertible | <input checked="" type="checkbox"/> Auto > Owners: body style: cross over vehicle |
| <input checked="" type="checkbox"/> Auto > Owners: body style: full-size sedan | <input checked="" type="checkbox"/> Auto > Owners: body style: small/mid-size SUV |
| <input checked="" type="checkbox"/> Auto > Owners: make: Honda | <input checked="" type="checkbox"/> Auto > Used: body style: entry/economy/compact |
| <input checked="" type="checkbox"/> Auto > Used: body style: hybrid/alternative fuel | <input checked="" type="checkbox"/> Auto > Used: body style: luxury SUV |
| | <input checked="" type="checkbox"/> Auto > Used: body style: midsize car |
| <input checked="" type="checkbox"/> Auto > Used: make: Honda | <input checked="" type="checkbox"/> Auto > Vehicle age: 11-15 years old |
| <input checked="" type="checkbox"/> Auto > Vehicle age: 16-20 years old | <input checked="" type="checkbox"/> Auto > Vehicle price: \$20k or under |
| <input checked="" type="checkbox"/> Auto > Vehicle purchase: 13-24 months | <input checked="" type="checkbox"/> CPG BuyStyles > Quick & easy |

4) Changes in enforcement

- **Fines & DPOs**
- **Accountability**
 - Burden of proof
 - Privacy by design & by default
 - Codes of conduct & certification
- **Representation of data subjects** by non-profit entity with statutory objectives in the public interest, including compensation where admitted by MS law



(c) Ctrl Shift



New intermediation model

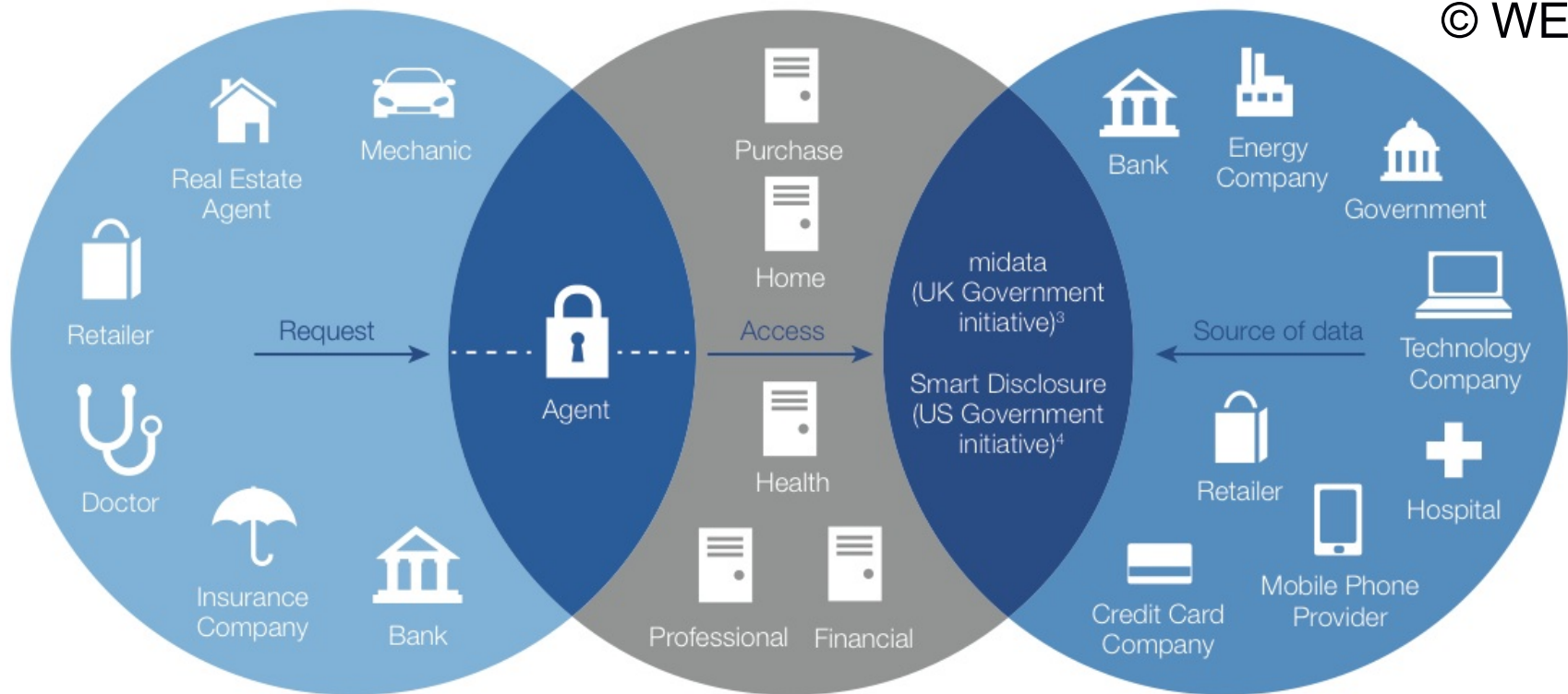


Requesting party

Personal data store¹

Data handback²

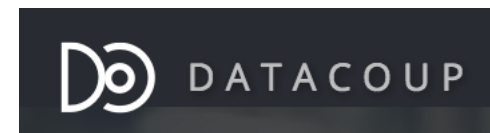
© WEF



Companies who want to access data about individuals can request it through data agents

Several data stores are now up and running allowing individuals to exercise control over how data about them is used

Several governments are working with the private sector to give individuals access to a copy of data about them in a usable format which can then be stored in their locker and shared with other providers



From reactive to proactive engagement



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Rotterdam, Netherlands (RTM) to London, United Kingdom

[Watch this route](#): get alerts and travel deals

Then
To find

Get price alerts and travel deal emails.

Email

Get Alerts

Why switch your home energy with UKPower.co.uk?

UK Power is an energy comparison site. We compare gas and electricity suppliers to help you find the cheapest energy prices, switch to a better deal and cut the cost of their bills!

✓ Saving is quick

It only takes five minutes to switch to a better deal, and you could save more than £482* on your annual energy bills.

✓ Switching is free

You'll pay nothing. The commission is paid by suppliers, and this will not affect the price of any tariff you sign up to using our service.

✓ Saving is easy

We compare tariffs from a wide range of suppliers, and show you how much you could save by switching - just choose the best deal, and we'll take care of the rest.

✓ Switching is hassle-free

The switch should take no longer than 17 days, and there'll be no disruption to your service - gas and electricity will be supplied through the same pipes and cables.

Thank you! Based on your answers, we recommend restricting the following 11 app(s):

Click category to view/change recommendations

> Deny 1 app(s) access to Calendar

> Deny 9 app(s) access to Location

	Facebook (50 times)		Allow	<input checked="" type="checkbox"/>
	News & Weather (0 times)		Deny	<input type="checkbox"/>
	Contacts+ (28 times)		Deny	<input type="checkbox"/>
	Messenger (16 times)		Allow	<input checked="" type="checkbox"/>
	Snapchat (84 times)		Deny	<input type="checkbox"/>
Why deny? This Social app accesses your Location for App Functionality and Consumer Tracking & Profiling.				
	QR Code Reader (0 times)		Deny	<input type="checkbox"/>
	Skype (0 times)		Deny	<input type="checkbox"/>

Do you want to make these changes?

YES, DENY THE 8 APP(S) SELECTED

NO, DO NOT MAKE ANY CHANGES

A paradigm shift that cannot be missed...



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...and can expand to other markets



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Telefónica presents AURA, a pioneering way in the industry to interact with customers based on cognitive intelligence

Telefónica shows its transformative 4th Platform project for the first time at the MWC



Systemic consequences?



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- Exclusive dealing
 - + research needed on critical mass & interrelation of complements
- Raising rivals' costs
 - Beyond GDPR portability
- Abuse of fiduciary relationship

Partial or Incomplete market coverage



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Type of problem	Examples of problem	Total number of websites with problem	% of swept websites
Price/Offers	the price on the page of the comparison list was not the same as the price ultimately displayed in the booking page	113	32.1%
	the total price (inclusive of taxes) – or the way this is calculated – is not clear	106	30.1%
	websites presented special prices and offers, which were not then available as advertised through the actual booking page	73	20.7%
	websites gave the impression that certain offers were scarce (e.g. "only 2 left", "only available today") without specifying that this scarcity applied strictly to their own website	91	25.9%
Information on the Provider	websites only gave limited information (e.g. name, address of establishment) on the identity of the provider of the comparison tool	80	22.7%
	websites gave no information (e.g. name, address of establishment) on the identity of the provider of the comparison tool	14	4%
User Reviews	websites presented consumer reviews in an unclear or un-transparent way (and/or included elements that could question their truthfulness)	75	21.3%
21 Coverage Of comparison	websites did not provide material information that was important for the comparison	37	10.5%

Possible theory of harm:

- Self-preferencing
- Exclusion by misrepresentation, with high burden of proof for materiality

The challenge is likely to become even more significant...



Over ½ of Alexa's first recommendation was a product from the "Amazon's Choice" algorithm, which implies a well-rated Prime product.

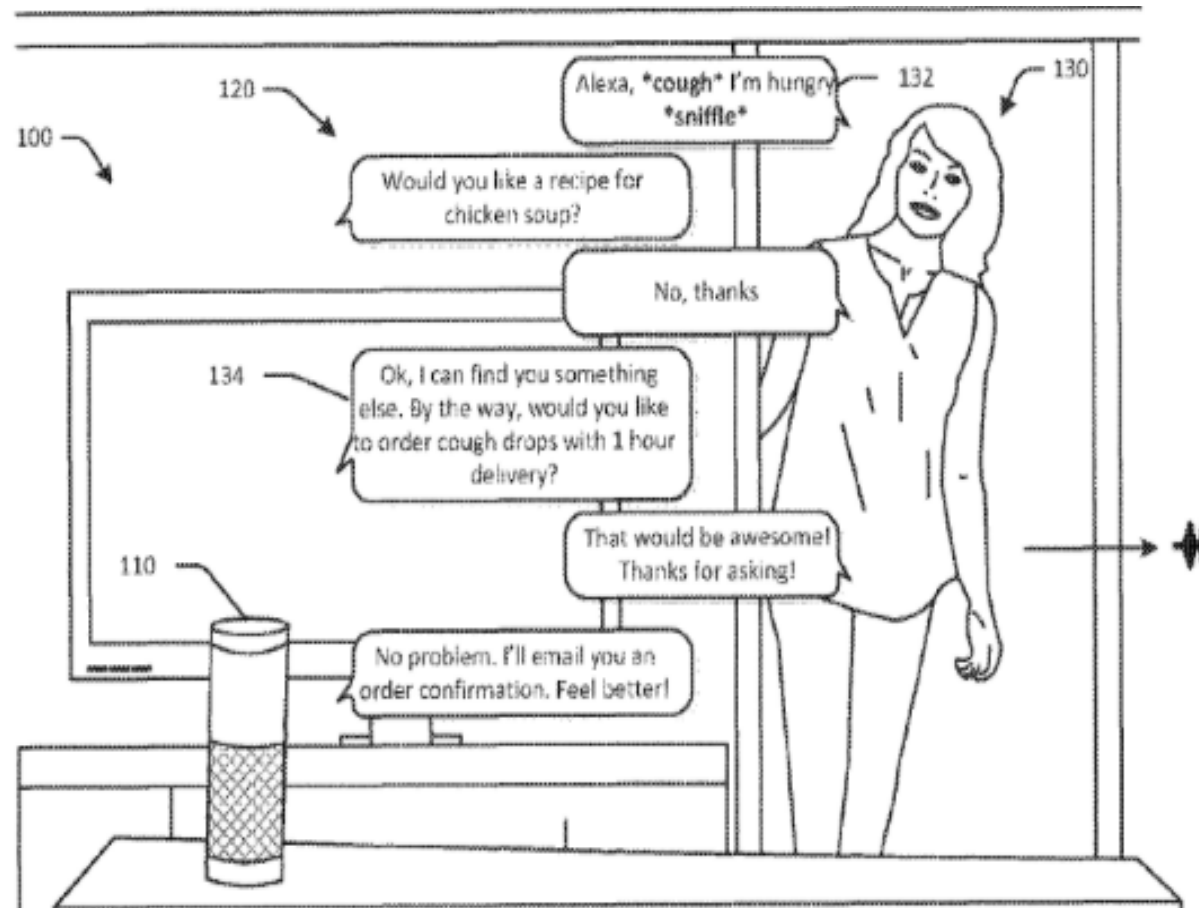
In categories in which Amazon has a private brand, 17% recommendations are private-label products, even though they make up just 2% of volume sold.

"We do not guarantee that Alexa or its functionality or content (including traffic, health, or stock information) is accurate, reliable, always available, or complete"

...and sensitive



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Qualification of infomediaries under DP law?



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Controller: “natural or legal person, public authority, agency or other body which, alone or jointly with others, **determines the purposes and means of the processing** of personal data ”.

Key choices concern the essential elements (so called *effective* means) of processing, such as selecting the data to be processed or the third parties that may have access to it.

Useful elements are the **level of prior instruction** given by the data controller; **the monitoring** by the data controller of the level of the service; the **visibility towards data subjects**; the **expertise of the parties**; the **autonomous decision-making power left** to the various parties

Our vision of privacy

At Cozy Cloud, we think that we each have our responsibilities. Let's start with those of Cozy Cloud!

Our responsibilities

- Cozy Cloud is committed to being at the state of the art as a professional hosting personal data.
- With regard to your 'private' data, you are solely responsible for the purpose (what you want to do with your 'private' data) and the means (the price / time you are willing to pay / spend to collect and process your data) of the processing of such personal data, Cozy Cloud is then only a technical subcontractor processing your 'private' data.
- Cozy Cloud prohibits any use, for its benefit or for the benefit of anyone, of all or part of your 'private' data.

Your responsibilities

- Read the data privacy policy and the conditions of use of the Cozy service.
- If you are already a Cozy customer, you must read and accept the new terms of services to continue using the Cozy service.
- If you are not yet a customer, when creating your Cozy, you will have the obligation to consult and accept



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FREE TO ACCESS

COST TO CLIENT

PAYOUT FOR CITIZEN

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PER QUESTION PER CITIZEN

£0.12
PER QUESTION

Self reported MeData

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£0.06+
PER MEDATA

Behavioural MeData

Unlimited access to verified digital behavioural, psychometric and social data.

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PER MEDATA PER CITIZEN

£0.08+
PER MEDATA

‘Citizen’ a human who uses CitizenMe applications to gather and manage their personal data (MeData) and gain personal value from it. Value may include combining MeData to unlock personal insights either privately or in collaboration with other Citizens. These insights also become new MeData data records. It may also include explicitly consenting to license their MeData to third parties for altruistic purposes or personal financial gain.

‘CitizenMe’ means CitizenMe Limited, a company registered in England and Wales No. 08616830. CitizenMe’s intention is to give Citizens control of their personal data, making them a controller of their own data. In practice CitizenMe may perform the function of both controller and processor of MeData on behalf of Citizens.

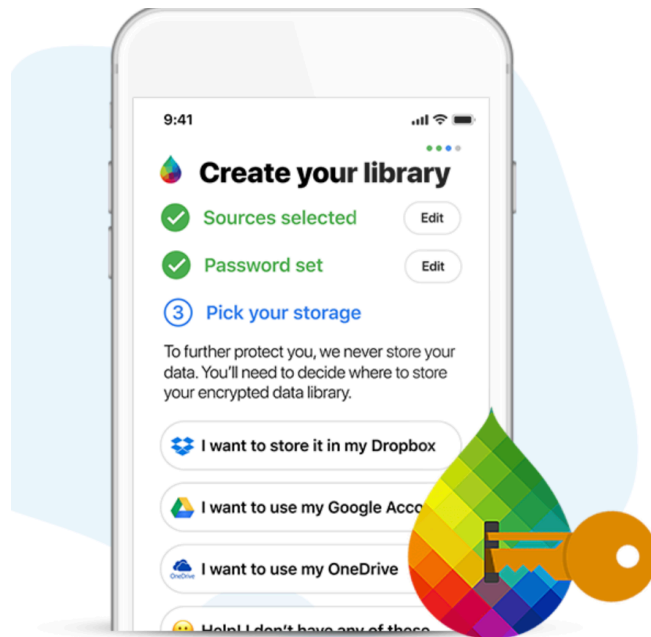
4.2. Confidentiality. CitizenMe will treat your Content as confidential information and only use and disclose it in accordance with these Terms (including our privacy policies). However, your Content is not regarded as confidential information if such Content: (a) is or becomes public (other than through breach of these Terms by CitizenMe); (b) was lawfully known to CitizenMe before receiving it from you; (c) is received by CitizenMe from a third party without knowledge of breach of any obligation owed to you; or (d) was independently developed by CitizenMe without reference to your Content. CitizenMe may disclose your Content when required by law or legal process, but only after CitizenMe, if permitted by law, uses commercially reasonable efforts to notify you to give you the opportunity to challenge the requirement to disclose.

Social media psychographics are provided by the Cambridge University Psychometric Centre who operate under the British Psychological Association’s ethical code of conduct. We partner with them specifically to provide you with insights about your Facebook behaviour. With your permission, they anonymously analyse a selection of roughly 10-20 of your page likes to perform this analysis and provide you with an insight. The insight is only visible to you inside your CitizenMe app. No one else is able to view your insight (including CitizenMe) unless you explicitly choose to share it.

Example: Digi.me



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We don't see, touch or hold your data

- ✓ Data is encrypted inside the **digi.me** Private Sharing app as it imports from your accounts
- ✓ Your encrypted data is then stored in a personal cloud of your choice (Dropbox, Google Drive, Microsoft OneDrive) - never on our servers
- ✓ Data is encrypted with a set of keys and ciphers equal to those of banks and the military

The challenge of decentralized responsibility: Hub of All Things



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Overarching architecture consisting of a database schema, a data logic layer and an API which allows information to be categorised and transacted on uniform terms.

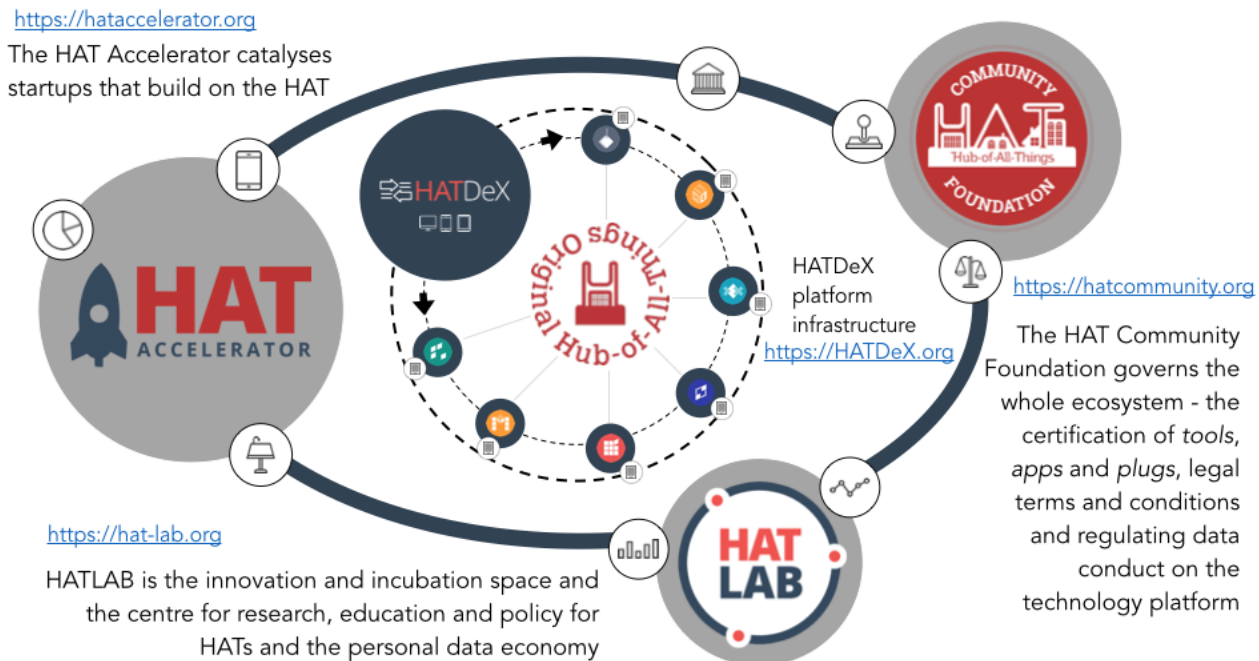


HAT providers offer the physical infrastructure for storage and analysis (cloud-based, server-based or hybrid)

Dataset providers offer access to aggregate data

Algorithms providers offer data analytics capabilities, e.g. insights about digital life and recommendations or nudges

Rules defined by **HAT foundation**, can be customized by HAT providers and users in a way that is scalable



“Using filters, a fan page administrator **can define a personalised audience**, which enables him not only to narrow down the group of people to whom information relating to his commercial offer will be published, but also, and most importantly, to **designate the categories of people whose personal data will be collected** by Facebook”.

“Actively involving fan page administrators in the observance of the rules on the protection of personal data by designating them as controllers is likely to have the **ripple effect** of encouraging the social networking platform itself to comply with those rules”

(cf. ECJ referring to “more complete protection”)

Main arguments for extension of responsibility



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Page admin uses FB tool to its **material benefit** (better insights into the profile of its users) and for the creation of the relationship with the data subject, which would not have happened without the contribution of the page administrator (**necessary intervention**)

New criterion! Relying on necessary intervention only would extend controller status to all infrastructure providers enabling personalization

Other possible criterion: “ripple effect” with full compliance requirements only on essential/critical infrastructures?

- Could also be imposed as part of licensing requirements for PIMs



The wording [does not support] a finding that the determination of the purpose and means of processing must be carried out by the use of written guidelines or instructions from the controller.

A natural or legal person who **exerts influence over the processing** of personal data, for his own purposes.

By **organising, coordinating and encouraging** the preaching activities of its members intended to spread its faith, participates, jointly with its members who engage in preaching, in determining the purposes and means

Fashion ID- resp. for social media plugins (Case C-40/17)



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Benefit: free publicity in conjunction with the use of the social plugin by a Facebook user

Intervention: directly sets the parameters of data collection through the installation of the plug-in

However, law should never be interpreted in such a way that the “obligations provided therein cannot actually be carried out by its addressees”--> phase-based processing

Alternative solutions not contemplated by ECJ

Joint & several liability (art. 82 GDPR), but what principles for internal allocation?

Respective roles and responsibilities (*Google Spain*)

Limitations: prove that they are *not in any way responsible* for the event giving rise to the damage (Art. 82 (2) GDPR).

- Expansion of vicarious/contributory liability could *de facto* swallow art. 82 (2)
- Connection with art. 2 (4): no prejudice to article 12-15 of Directive 2000/31

Looking for a better model: data cooperatives



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Promising ways to address some of the trust concerns and reinforce consumer empowerment

Challenges in data protection assessment:

- Qualification as joint controllers escaped if no economic benefit?
- If not, what responsibilities and liabilities?

Challenges in antitrust assessment about use of pooled data:

- + difficult to establish market power of a data pool
- Data not clearly as substitutable like patents
- Less of a concern when exchange of info is aggregate & concerning decisions, as opposed to raw data (*Asnef Equifax, John Deere*)
- Safe harbour for standardization where participation is unrestricted, the procedure is transparent, there is no obligation to comply with the standard, and access to it is on FRAND terms

Requisites & Obligations for data coops



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- Common purpose/beneficiary- defined bottom up/top down
- Duty of loyalty
 - Duty against self dealing
 - Duty of honesty
- Duty of care
 - Accomplishment of the purpose
 - Legal compliance
 - Safety and security of data
- Accountability
- Independence

Design issues

Delegation and identification issues

Are infomediaries going to further process the data stored within their ecosystem?

Enhanced value creation: verified data services?

Thank you!



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- Questions? Thoughts?

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