Personal data ecosystem

How is the handling of personal user data on the internet going to change?

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February 15, 2012

Personal data ecosystem

Research and experts discussion group Personal Data vs. Economy (September 2011)

- Participants

    - IT Security / Privacy (private sector)

    - IT Security / Privacy (public sector)

    - Corporate representatives

    - Research institutions

    - Critics and alternative opinion leaders

    - Digital Natives

Initial questions

Who has the overall view and the sovereignty on the users' data?

"What are the social expectations on the security of privacy on the internet?"

"What do the basic principles in a culture of trust need to be like regarding the usage of user data on the internet?"

(following Henning Kagermann, President acatech, www.digital-zeitschrift.de, September 2011)

"Personal data is the new oil of the Internet and the new currency of the digital world."

(Meglena Kuneva, European Consumer Commissioner, March 2009, webciety.de)

„Personal Data"

- Originally: barter economy, in which data is traded for services (e.g. stayfriends).

- Companies have understood how to earn money with data. (e.g. google, facebook: value based on user action and data)

- High asymmetry in power relations: Customers are not aware of the value of their data, instead they give it away willingly.

- Trend: „Data enlightenment" (enlightenment of the user): *„Why do we give data to services for free?"*

„Personal Data" – „Big Data"

- ## Volunteered data

  - created and explicitly shared by individuals, e.g., social network profiles.

- ## Observed data

  - captured by recording the actions of individuals, e.g. location data when using cell phones.

- ## Inferred data

  - data about individuals based on analysis of volunteered or observed information, e.g., credit scores.

source: World Economic Forum 2010

Inferred Data: Current Example – Smart Metering

MEDIEN / Beitrag vom 23.09.2011 **DRadio Wissen**

DATENSCHUTZ

Strommessgeräte dokumentieren Fernsehkonsum

Gespräch mit Jürgen Kuri, stellvertretender Chefredakteur der Computerzeitschrift c't

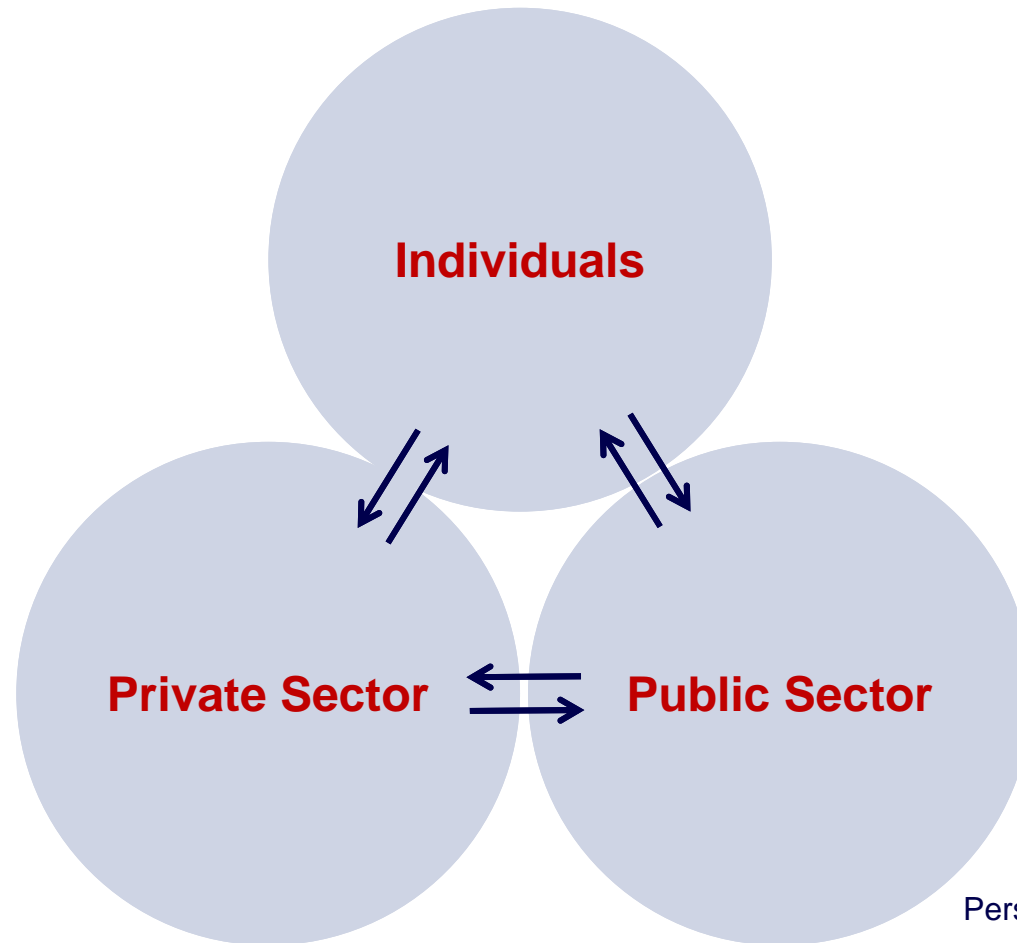Smart Meter: Intelligenter Stromzähler (EVB Energie AG / wikipedia-cc-by-sa)

*"…the analysis of the household's **electricity usage profile** […] does reveal **what content was displayed** on a CRT, a Plasma display TV or a LCD television set […]*

*two **5 minutes**-chunks of consecutive viewing […] is **sufficient to identify the content** (e. g. DVD movie)."*

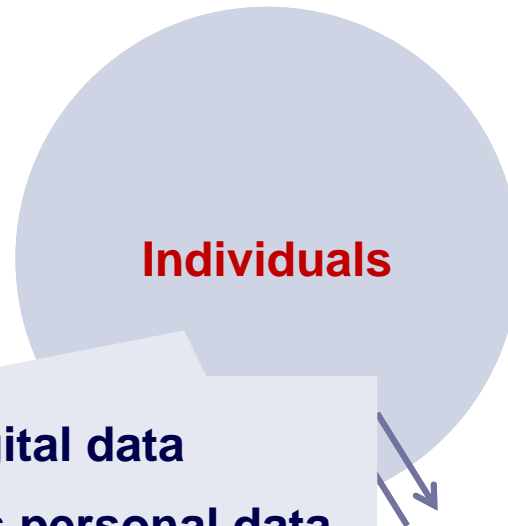# The ‚Personal Data Ecosystem'

Key Stakeholders

source: following
Personal Data New Asset Report,
World Economic Forum, 2011

Model Approach: The ‚Personal Data Ecosystem'

Key Stakeholders

Individuals

Public Sector

Generate about **70%** of digital data

Different **attitudes** towards personal data

Become increasingly aware that they have **no control over their data**.

Discussion about **use/abuse** increasingly confuses consumers

source: following
Personal Data New Asset Report,
World Economic Forum, 2011

Example: Health Care

The particular location of a dementia patient can be determined precisely.

In the case of loss of orientation a readily understandable navigation home will be activated.

E.g. Digital Care Support – TP Berlin

Mobile Technologies for the health & care-market: Support from people suffering from dementia

source: TP Berlin

Example: Health Care

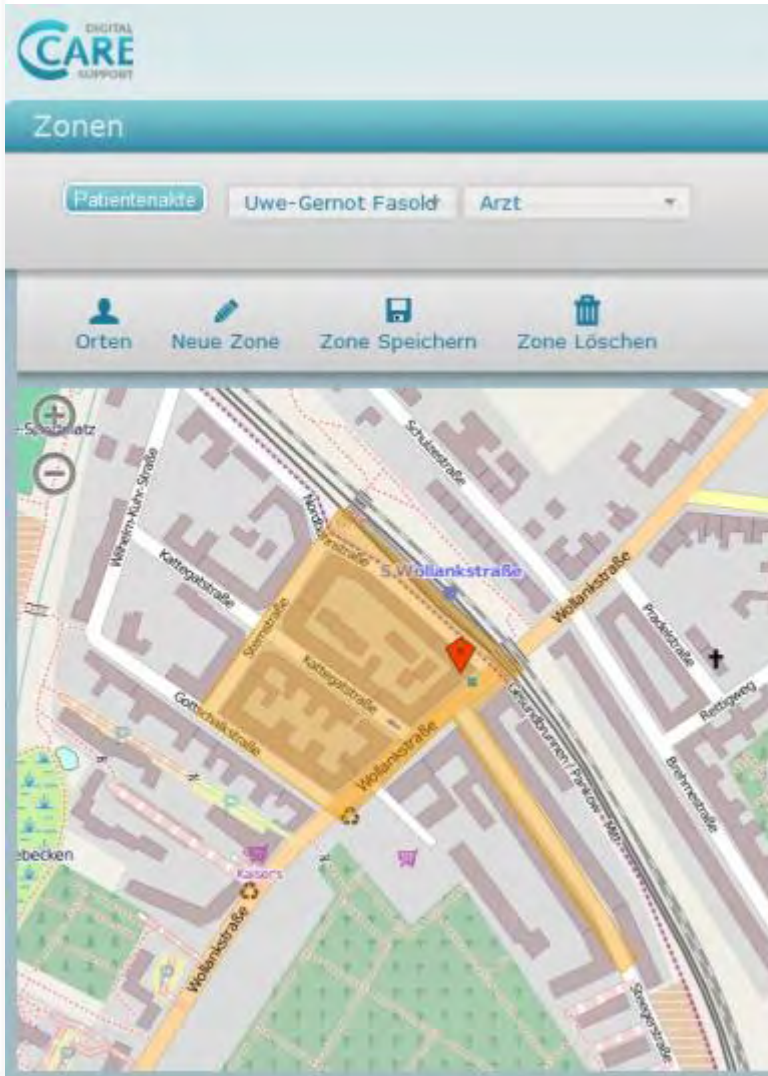**E.g. Digital Care Support – TP Berlin**

Protection / Orientation with „Geofencing" – Definition of geografic areas.

Warning signal, when patients **leave the perimeter**; to the patients themselves or to the assisting nurses.

source: TP Berlin

Example: Health Care

Opportunities

- **E.g. dementia patients: a high degree of mobility and independence for a longer time**

- **Reduction of costs, increase of well-being**

- **Sustainable reduction of stress for nursing relatives**

Risks

- **Discussion „electronic leash"**

- **Ethical Discussion**

source: TP Berlin

Facebook: How safe is my data?

"Face to Facebook" – Action artists stole 1 million facebook profiles, and used the information to start an online dating website.

Goal of this action: to show what you can do with these virtual indentities because of their **low security levels.**

Awarded with the **Prix Ars Electronica** 2011

source: prix2011.aec.at

„The Internet will not forget."

Signs of the social networking times.

… the **solution**?

Google CEO Suggests You Change Your Name to Escape His Permanent Record

By **Marshall Kirkpatrick** / August 16, 2010 11:52 AM / **79 Comments**

Tweet 1,174 | Recommend 1k | Share 2 | +1 1 | Share

Google CEO Eric Schmidt has a great way of making public statements that are at once frank, unorthodox, thought provoking - and a little frightening. This weekend The Wall St. Journal ran an interview with Schmidt that offered tidbits like that on a wide range of topics. One statement in particular, that Schmidt thinks teenagers should be entitled to change their names upon reaching adulthood in order to separate themselves from the Google record of their youthful indiscretions, is something worth stopping to take note of.

What are people most worried about?

What are your biggest concerns regarding misuse of your personal data?
What would be a worst case scenario?

Concern	Percentage
Identity theft	24%
Access to bank account/details	13%
Credit or bank card fraud (purchases, stealing money,...)	11%
Financial misuse/losses in general	10%
Misuse for committing crime	10%
Threats to the person or family (blackmail, kidnapping)	8%
Misuse/usage of personal data without knowledge	8%
Negative effects on oneself (reputation, credit worthiness)	7%
Spam, advertising calls and other unwanted contact	7%
Fraud in general	5%
Invasion of personal privacy/personal rights	5%
Being billed for goods never purchased	4%
Publication of personal data/access to personal data	4%
Theft/robbery in general	3%
Unauthorized transfer/sale of personal data to 3rd parties	3%
Hacking in general (passwords stolen)	2%
Pretended conclusion of a contract/opening account	2%
Monitoring/spying	1%
Others	3%
Don't know/no answer	5%

Global (n=5562)

source: Nokia Siemens
Networks Privacy survey
2009
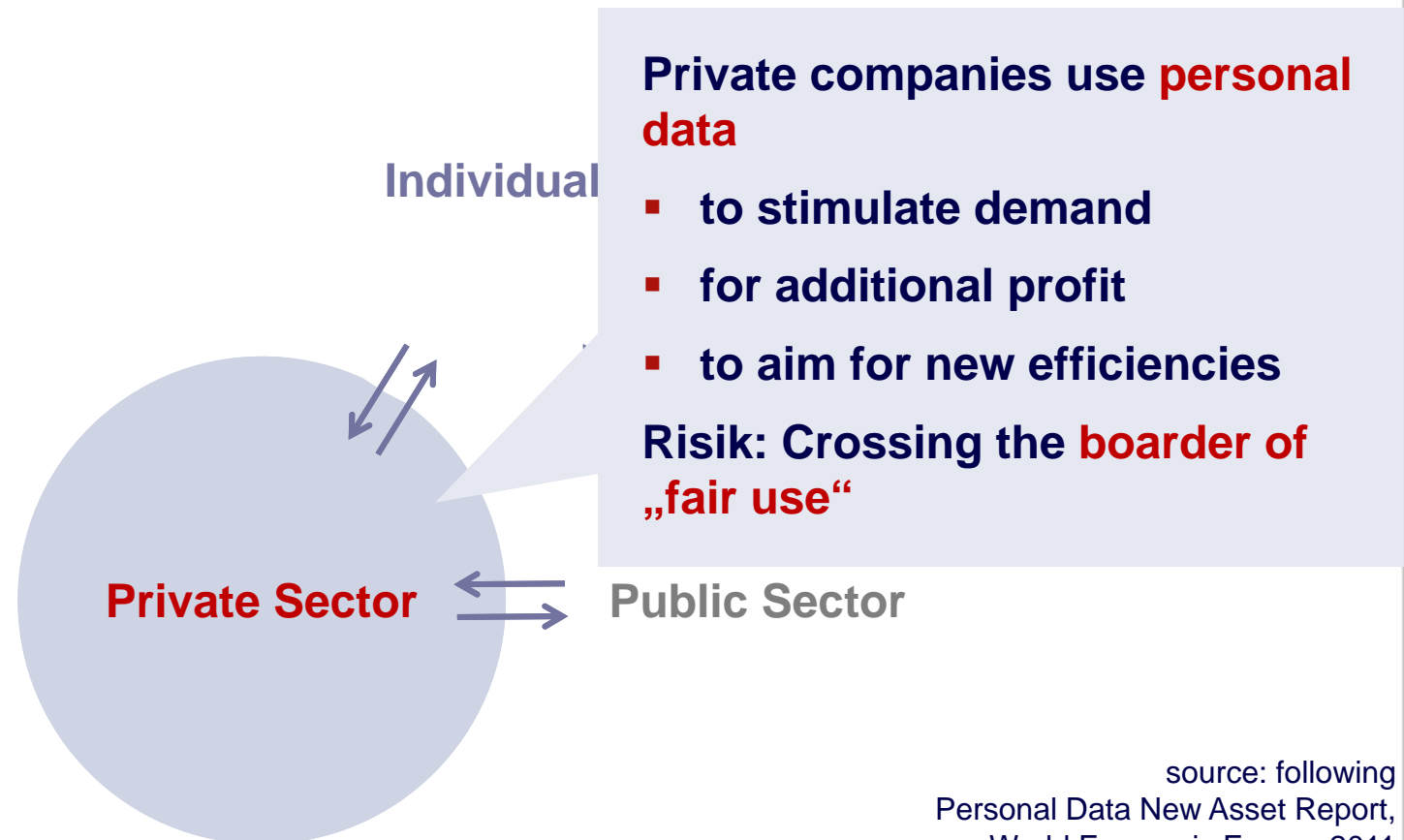
Individuals

Private Sector ⇄ Public Sector

Individuals (comsumers): Questions

1. **Is there a risk of dividing society?:**
   "An elite, which knows how to protect itself and a bourgeoisie, which gives away its data because of ignorance and disinterest." **(Zeit.de)**

2. **Does privacy not even exist anymore – "Post-Privacy?":**
   "Privacy was revoked by the internet and is no longer practicable. Now we have to see how we deal with it." **(Spiegel.de)**

3. **Who does personal data belong to? Which rights do they possess?**

4. **Does it seem possible that comsumers self-organize and find non-commercial alternatives for handling data (e.g. wikipedia, linux, diaspora)?**

The ‚Personal Data Ecosystem‘

Key Stakeholders

Individuals

Private companies use personal data

- **to stimulate demand**
- **for additional profit**
- **to aim for new efficiencies**

Risik: Crossing the boarder of „fair use"

Individual

Private Sector   **Public Sector**

source: following
Personal Data New Asset Report,
World Economic Forum, 2011

Social Networks:
Can the value per user be calculated?

Individuals

Private Sector ⇄ Public Sector

Value

(Billions of Dollars)
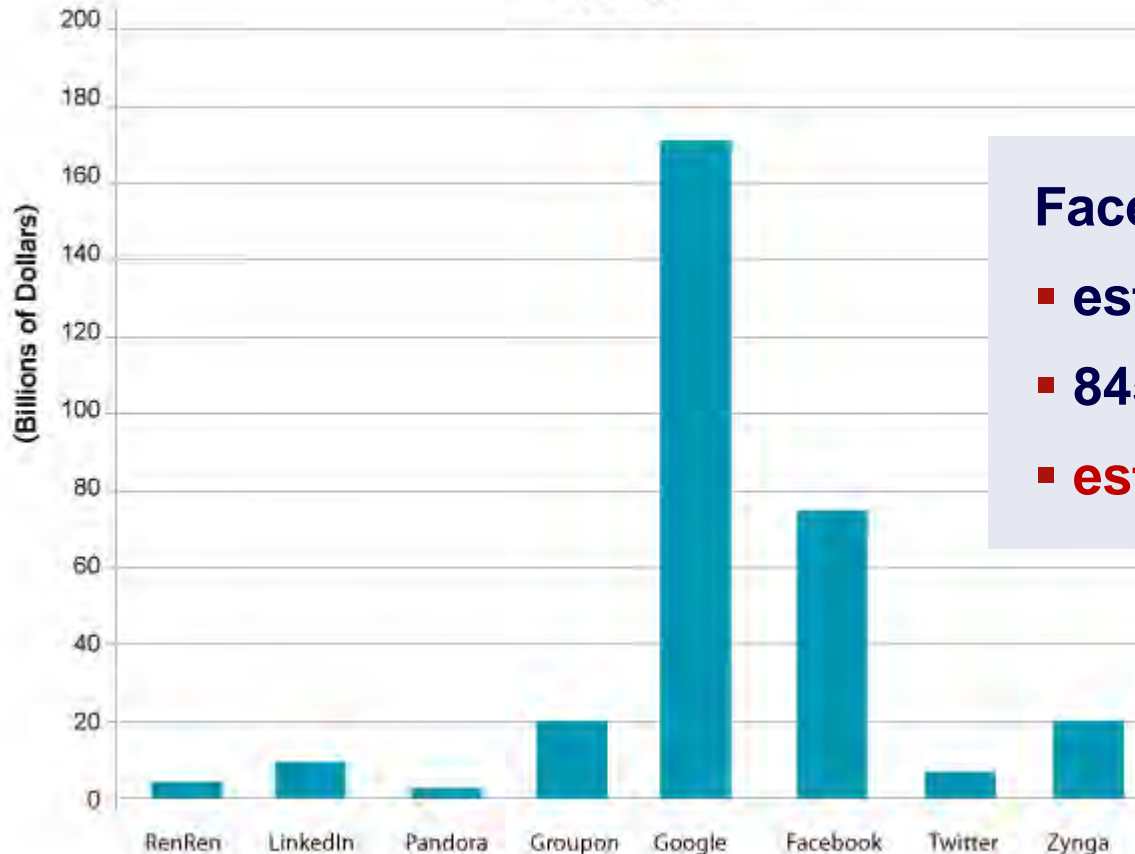
Facebook

- **estimate value $75 billion**
- **845 million users worldwide**
- **estimate value per user: $89**

Chart x-axis: RenRen, LinkedIn, Pandora, Groupon, Google, Facebook, Twitter, Zynga

Private Sector: Questions

1. Does personal data become a **primary currency of the digital economy**?

2. Will its use as a means to create **competitive advantage** increase?

3. Will businesses engage in a "**race to the bottom**" to capture personal data?

4. What happens, if little regard is paid to the **needs of other stakeholders**?

The ‚Personal Data Ecosystem'

Key Stakeholders

On the one hand, **privacy** and security, on the other hand, the **promotion** of the private sector

Use of **personal data** for their own purposes: e.g. health, education, law enforcement

Private Sector → **Public Sector**

source: following
Personal Data New Asset Report,
World Economic Forum, 2011

Public Sector

Proposed EU data protection rules include right to be forgotten

COMPUTERWORLD

The European Commission wants companies that fail to comply with the proposed rules to pay signficant fines

By Jennifer Baker
January 25, 2012 07:29 AM ET

💬 2 Comments   Gefällt mir 1 +1 1

IDG News Service - A proposed new data-protection law for the European Union includes fines of up to 2% of global turnover for companies that breach the rules, E.U. Justice Commissioner Viviane Reding announced Wednesday.

Despite rumors that the figure would be 5%, Reding insisted the legislative proposals had not been watered down. "Five percent was not something in my pipeline," she said at a news conference to unveil the proposals.

Fines will be on a sliding scale: 0.5% of a company's global turnover for charging a user for a data request, 1% if a firm refused to hand over data or failed to correct bad information and 2% for more serious violations.

Under the proposals, companies with more than 250 employees will have to appoint a data-protection officer to be responsible for compliance with the new rules, which include the controversial "right to be forgotten", allowing people to have data held about them deleted if there are no legitimate grounds for retaining it.

Reding insisted that "personal data belongs to the person" and that individuals have the right to take any information about them held by a company and move it to another company. They also have the right to insist that personal data be deleted, and companies must comply unless they can show legitimate grounds for retaining the data.

The recently proposed new data-protection law for the European Union takes a step towards solving the issues of the personal digital space / safe spaces

(source: computerworld.com)

Individuals

Private Sector ⇄ **Public Sector**

Public Sector

THE WALL STREET JOURNAL. | TECHNOLOGY REPORT

JUNE 29, 2011

Privacy Matters

How can firms make the most of the opportunities in online personal data while retaining individuals' right to privacy?

„Cloud computing and increased use of the Internet will increase the focus on privacy and data protection."

(Dirk Jan van den Berg, Delft University of Technology – source: wsj.com)

The Washington Post *with* **Bloomberg**
BUSINESS

Posted at 04:42 PM ET, 06/28/2011

Consumers want privacy, do-not-track rules

By Cecilia Kang

The vast majority of Internet users want to be able to stop companies from tracking their online activity and feel the government should take a more active role in safeguarding their privacy, according to a poll by Consumers Union.

Consumers Union found that eight out of 10 respondents agreed they should be able to opt out of Internet tracking from a single location. That

Eight of 10 Internet users want the government to take a more active role in protecting their privacy online.

(source: washingtonpost.com)

Individuals

Private Sector

Public Sector

Public Sector: Questions

What is the role of the government in the development of a balanced 'Personal Data Ecosystem'?

1. **How do governments perceive empowered citizens?**

2. **How do governments react to accusations of 'Big Brother' control and manipulation?**

3. **Where can the state intervene – at national and at a global level?**

4. **How are cultural differences to be treated?**

5. **At which point do legal frameworks stifle value creation by overregulating?**

6. **How can governments participate actively – through their purchasing power, ongoing experiments of their own?**

source: following Personal Data New Asset Report, World Economic Forum, 2011

‚Personal Data Ecosystem': End User-Centricity

Vision for the future

"Data account" – Greater control over personal data, compensation for providing own data
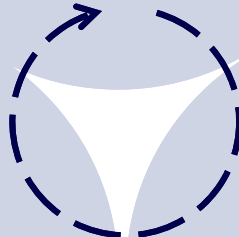
Individuals

Holistic approach to the issues of stability, security and privacy rights

Enhance trust by facilitating information exchange and increasing transparency

Private Sector

Public Sector

‚Personal Data Ecosystem': End User-Centricity

‚Privacy-Preserving Marketplaces'

De-identification of personal data?

Compensation for providing own data, if appropriate, reimbursement for economic losses?

Individuals

Inter-mediary?

Private Sector

Public Sector

source: Latanya Sweeney, Carnegie Mellon University/ Data Privacy Lab

Current Discussion

THE WALL STREET JOURNAL. | **TECHNOLOGY REPORT**

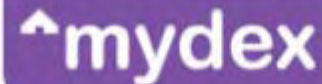JUNE 29, 2011

Privacy Matters

How can firms make the most of the opportunities in online personal data while retaining individuals' right to privacy?

- **Personal data stores which leave the ownership of personal data in the hands of the individual.**

- **Organizations and governments that need data can request information via API calls.**

- **The individual knows what information is being used and for what purposes.**

Solution to the issue:

"On the one hand you need the ability to access information. On the other, people expect information to be private."

"Personal Data Eco-System" – e.g. Mydex

mydex

Your data, your way

Mydex gives you back control over your p

Home   Our Service   Prototype   FAQs   Resources   Big Picture   About us   Contact

What Personal Data Stores do

Personal Data Stores help individuals undertake a range of
including:

- Storing personal data
- Managing this data
- Sharing it
- Collecting and receiving data to build a personal data da
- Verifying data
- Identity assurance and fraud protection
- Privacy management
- Managing preferences and permissions
- Expressing interests and intentions
- Planning and implementing projects

Mydex – "a social enterprise that is designing a platform where **people can manage all the data they share** with others"

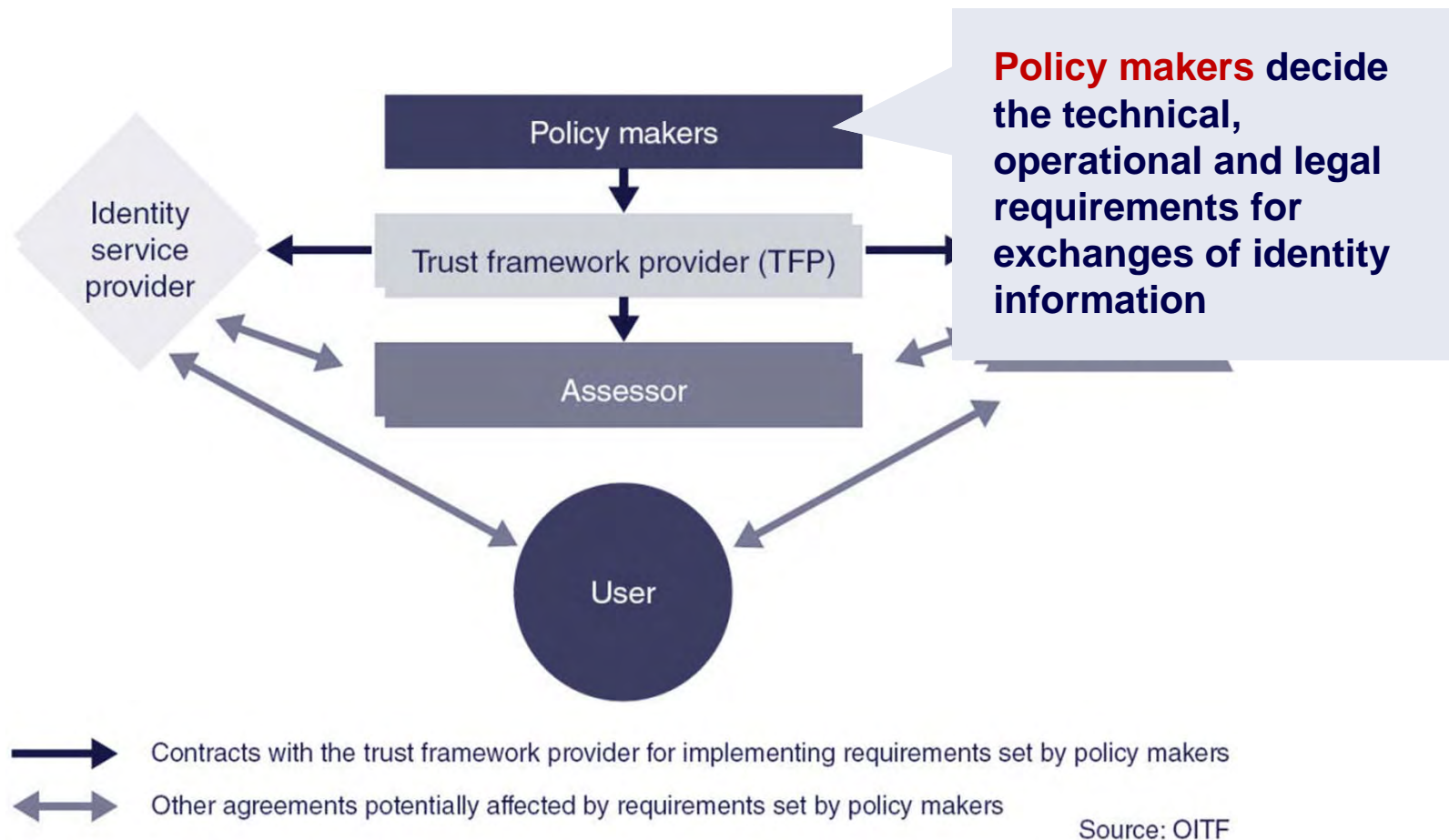**David Alexander, director Mydex:**

People need a "dashboard for their lives" – a "personal data eco-system" to allow people "to stand on an equal footing with government and big corporations", when it comes to data sharing.

source: mydex.org

The open identity trust framework model: Roles

Policy makers decide the technical, operational and legal requirements for exchanges of identity information

Identity service provider

Policy makers

Trust framework provider (TFP)

Assessor

User

→ Contracts with the trust framework provider for implementing requirements set by policy makers

↔ Other agreements potentially affected by requirements set by policy makers

Source: OITF

source: World Economic Forum, 2011

The open identity trust framework model: Roles

Policy makers

Identity service provider

Trust framework provider (TFP)

Relying party

Assessor

Trust framework providers

- **translate requirements into a trust framework.**
- **certify identity verification providers that provide identity management services**
- **recruits assessors**

Contracts with the trust framework pr

Other agreements potentially affected

source: World Economic Forum, 2011

The open identity trust framework model: Roles

Identity providers (IdPs) issue, verify and maintain online credentials for an individual user. Relying parties accept these credentials

Policy makers

Identity service provider

Trust framework provider (TFP)

Relying party

Assessor

User

→ Contracts with the trust framework provider for implementing requirements set by policy makers

↔ Other agreements potentially affected by requirements set by policy makers

Source: OITF

source: World Economic Forum, 2011

The open identity trust framework model: Roles

Source: OITF

Contracts with the trust framework provider for implementing requirements set by policy makers

Other agreements potentially affected by requirements set by policy makers

Assessors **evaluate IdPs and relying parties**
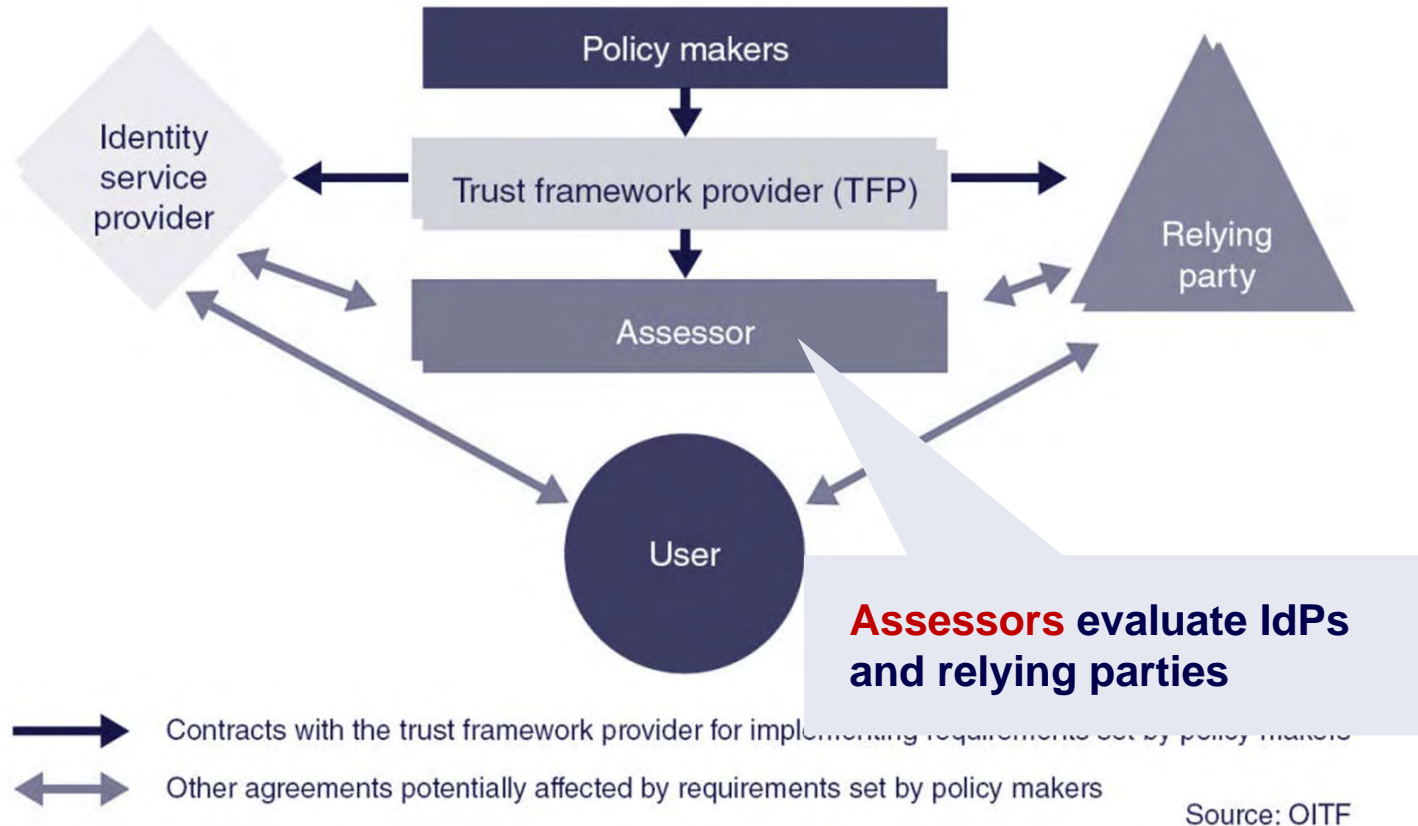
source: World Economic Forum, 2011

"Personal Data Eco-System": Questions/Discussion

Are new business models imaginable, which base themselves on the **responsible handling** of user data?

Does it seem useful to install a **trust center** / **marketplace**, which protects my data from abuse and simultaneously represents my needs and interests?
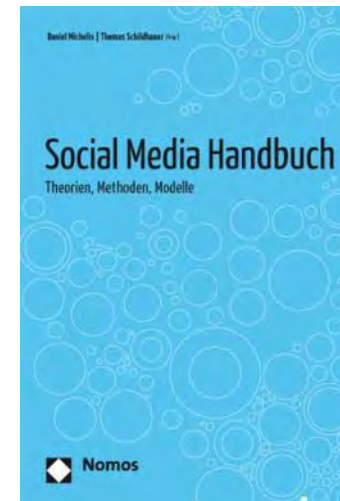
How would one of these trustees have to look like (which would be a counterbalance to e.g. google), to awaken **interest and acceptance**? „Turn trade into business"

How reasonable would a **user centered approach** be with a focal point on transperency, trust, control and distribution of values?

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Social Media Manual
Theories, Methods, Models

Edited by Prof. Dr. Daniel Michelis, Prof. Dr. Dr. Thomas Schildhauer, 2012