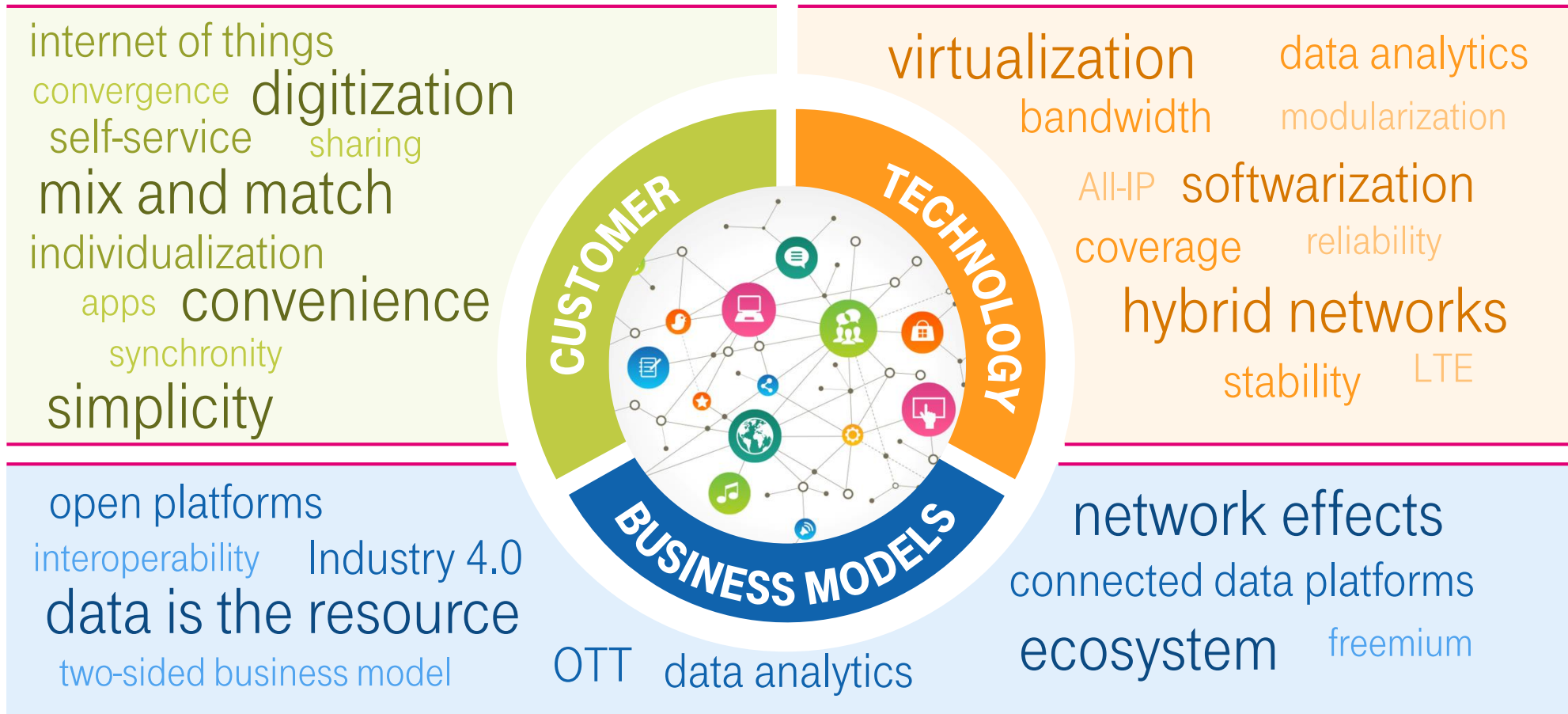# PRESERVING THE UTILITY OF DATA AND PRIVACY OF INDIVIDUALS

Dr. Claus D. Ulmer, SVP, Global Data Privacy Officer Deutsche Telekom AG

Brussels November 8th 2016

LIFE IS FOR SHARING.
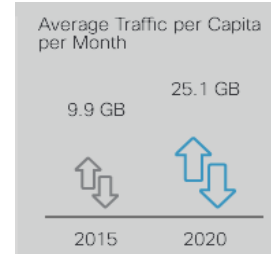
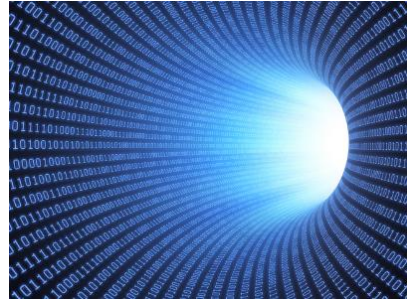# THE DIGITAL ERA IS CHANGING INDUSTRY'S PARADIGMS

CUSTOMER

internet of things
convergence digitization
self-service sharing
mix and match
individualization
apps convenience
synchrony
simplicity

TECHNOLOGY

virtualization data analytics
bandwidth modularization
All-IP softwarization
coverage reliability
hybrid networks
stability LTE

BUSINESS MODELS

open platforms
interoperability Industry 4.0
data is the resource
two-sided business model
OTT data analytics

network effects
connected data platforms
ecosystem freemium

LIFE IS FOR SHARING.

DATA EXCHANGE, PROCESSING AND ANALYTICS CONTINUE TO INCREASE

Extensive collection and processing of personal data

Internet Users: % of Population

40% 52%

2015 2020

Average Speeds

24.7 Mbps 47.7 Mbps

2015 2020
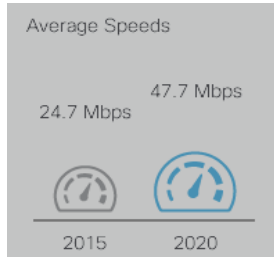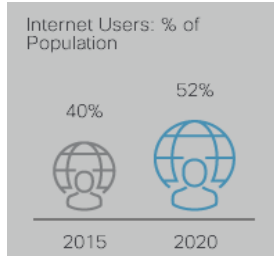
Increasing complexity through global data flows

Average Traffic per Capita per Month

9.9 GB 25.1 GB

2015 2020

"... in the 60 seconds you've been on this (internet) page, approximately 1354440 GB of data was transferred over the internet ..."

Comprehensive connection of devices and everyday objects

Devices and Connections per Capita

2.2 3.4

2015 2020

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PUBLIC SKEPTICISM AND LACK OF TRUST ENDANGER DIGITAL BUSINESS MODELS

CERES study "Digital Self-Determination"*

91% of Germans believe that users' personal data is accessed on the Internet unnoticed.

82% believe that most companies share their customer data with other companies.

85% believe there is no way to find out which private companies or government agencies save their customers' personal data.
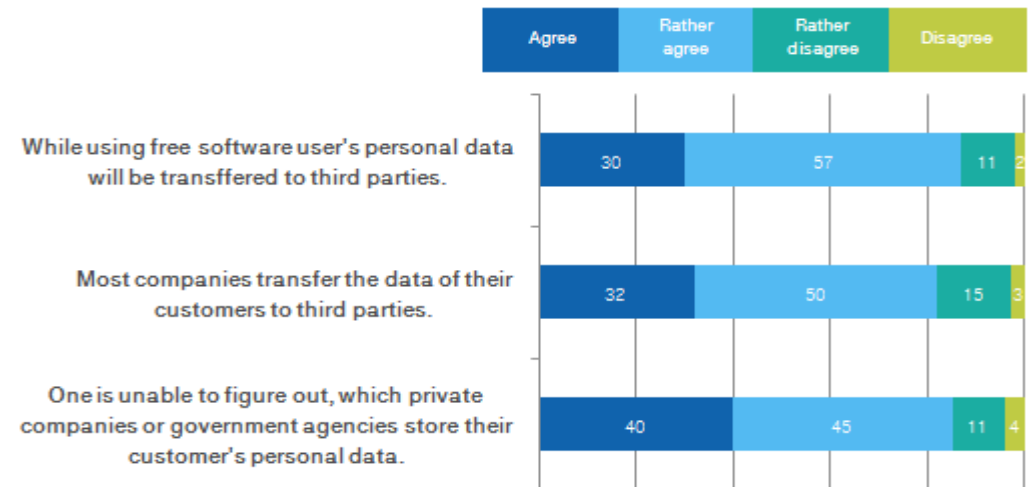
Dimap study "EU and Digitization"**

80% of Germans aged 18-24 want politicians "to pay special attention to strengthening privacy protection."

Example excerpts from CERES study*

NTIA survey – U.S.***

45% of 41,000 surveyed American households stated that they limit their Internet use due to privacy concerns.

	Agree	Rather agree	Rather disagree	Disagree
While using free software user's personal data will be transffered to third parties.	30	57	11	2
Most companies transfer the data of their customers to third parties.	32	50	15	3
One is unable to figure out, which private companies or government agencies store their customer's personal data.	40	45	11	4

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CUSTOMERS EXPECTATIONS AND DEMANDS*

TRANSPARENCY AND "DIGITAL SOVEREIGNTY"

91% of those surveyed want to know which data is available about them online.

95% want to be notified about the further use of their data.

88% want to have personalized influence over how their data is used and processed on the Internet.

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DEUTSCHE TELEKOM TAKES DIGITAL RESPONSIBILITY

"Deutsche Telekom assumes responsibility for consistently fostering **people's trust** in how their data is used. This is the only way that digital business/processing models can be **successfully** further developed for the **good of society** and the individual.

The individual's **digital sovereignty** takes center stage. This autonomy is guaranteed through a high degree of **transparency, decision-making freedom** and the **development of privacy-friendly solutions**. To this end, privacy experts need to be involved **from the start** in the development of new products and services that process personal data."

(Excerpt from DT green paper "Privacy in the digital world")

Means: consent based data processing ...

SOLUTION

PROBLEM
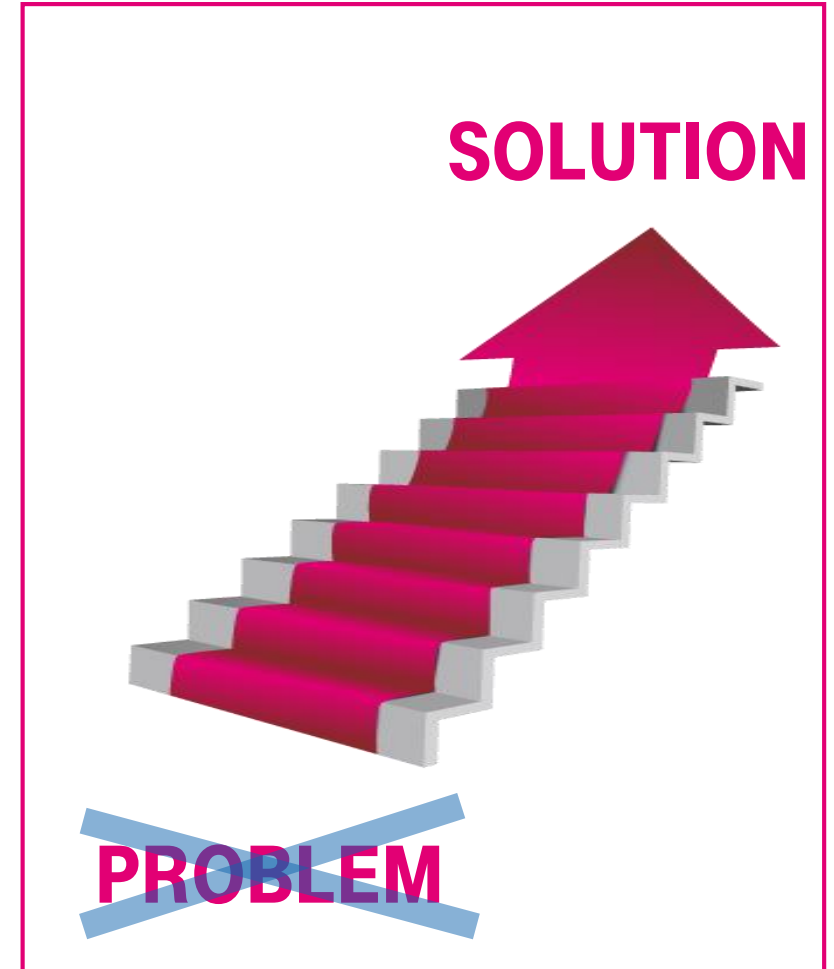
DEUTSCHE TELEKOM HAS A GOOD PUBLIC PERCEPTION WHEN IT COMES TO TRUST AND DATA PRIVACY

MOST TRUSTED INTERNET AND MOBILE BRAND[1]

T (Telekom)	Apple	Microsoft	Vodafone	amazon	GMX	ebay	WEB.DE	1&1	Google	O2
47	28	27	25	24	24	22	21	20	18	18

Global 500 2015

Most valuable European Telco brand

MOST TRUSTED BRAND 2014 Reader's Digest

Most trusted internet and mobile brand
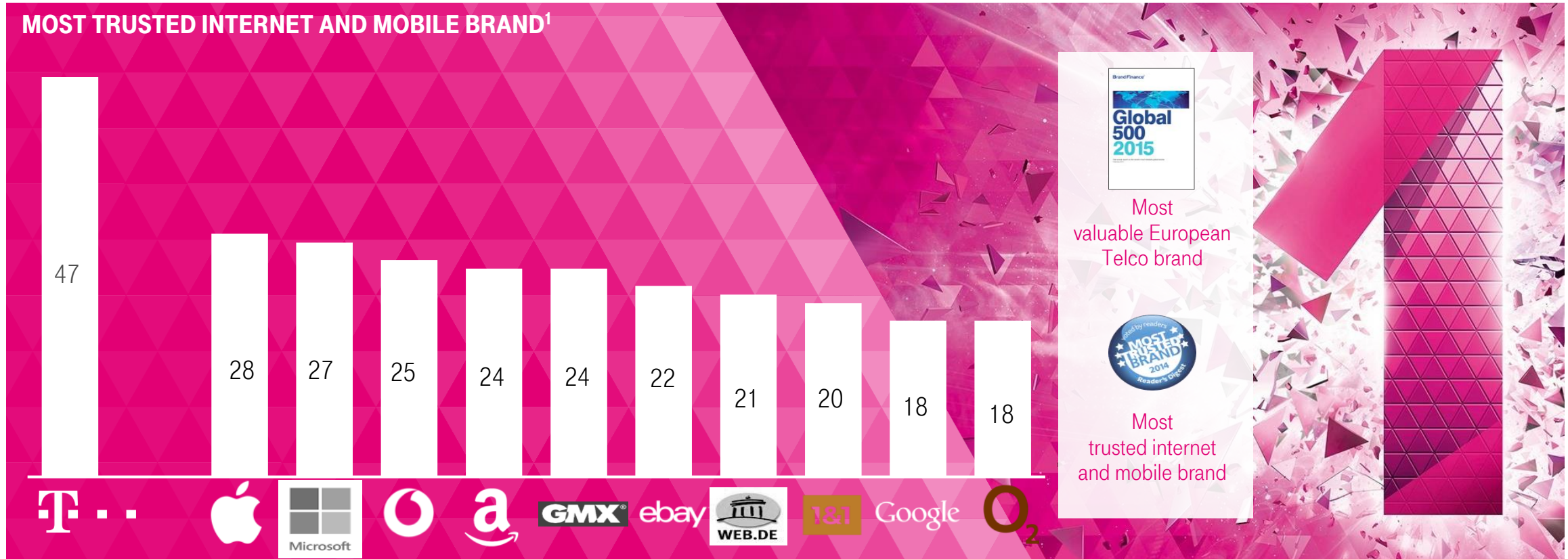
Source: Institut für Demoskopie Allensbach, 2016   [1] Share of people who consider these companies to be reliable

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ANONYMIZATION AND PSEUDONYMIZATION SOLUTIONS BY DEUTSCHE TELEKOM

IF CONSENT IS NOT SUFFICIENT OR CONCRETE PERSONAL INFORMATION IS NOT IN FOCUS,

WE NEED STABLE PSEUDONYMIZATION AND ANONYMIZATION SOLUTIONS.

SUCH AS ...

MOTIONLOGIC
ANONYMIZATION OF TRAFFIC DATA

ENKRODER
ANONYMIZATION / PSEUODNYMIZATION OF DATA

- **Scaleable pseudonymization and anonymization solution**

- **It ensures that ...**

- **that you still can make analysis of the data**
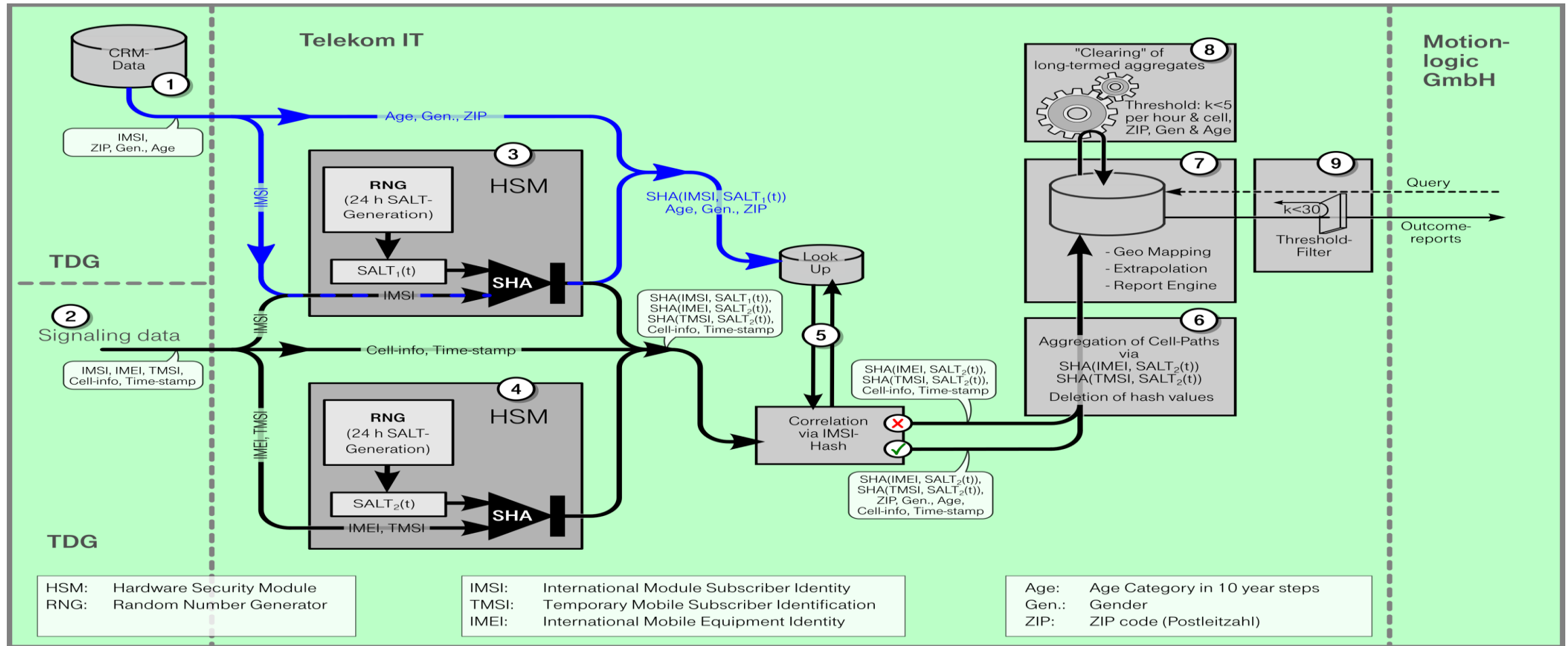
LIFE IS FOR SHARING.

ENKRODER
ANONYMIZATION / PSEUODNYMIZATION OF DATA
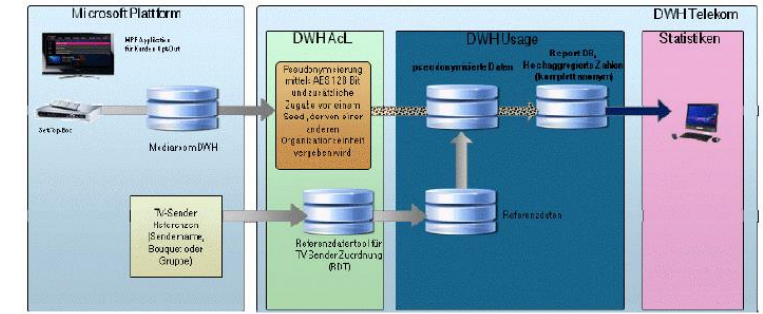
ENTERTAIN TV
PSEUDONYMIZATION OF USAGE TELEVISION

- EntertainTV is an IP-TV solution

- remote control generated actions will be pseudonymized by AES 128 encryption for reports of households or several Set-Top-Boxes in one household

- On the basis of obligations to public broadcasters Telekom submits statistics on the usage of television

Datum	ard_das erste	das erste hd	wdr	wdr aachen	wdr bielefeld	wdr bonn	wdr dortmund	wdr duesseldorf	wdr duisburg	wdr essen	wdr muenster	wdr siegen	wdr wuppertal	...	Sum_ARD	Sum_WDR	Sum_NichtÖR
01.08.2010 00:00	870	50	110	10	0	0	0	10	0	0	0	0	0	...	1050	140	6820
01.08.2010 00:01	900	50	90	0	0	0	0	10	0	0	0	0	0	...	1120	120	7100
01.08.2010 00:02	970	40	110	10	0	0	10	10	0	0	0	0	0	...	1140	140	6930
01.08.2010 00:03	1020	40	90	0	0	0	0	10	0	0	0	0	0	...	1190	120	7110
01.08.2010 00:04	1030	40	110	10	0	0	10	10	0	10	0	0	0	...	1230	160	7010
01.08.2010 00:05	1050	50	120	10	0	0	10	10	0	10	0	0	10	...	1220	160	7070
01.08.2010 00:06	1250	60	90	10	0	0	0	10	0	0	0	0	0	...	1430	130	6810

OUTLOOK − WHAT TO COME

- the General Data Protection Regulation (GDPR) gives us the floor for harmonization, and therewith standardization

- serveral projects are initiated already

- let us try to further develop these cooperations ...

THANK YOU FOR YOUR KIND ATTENTION!
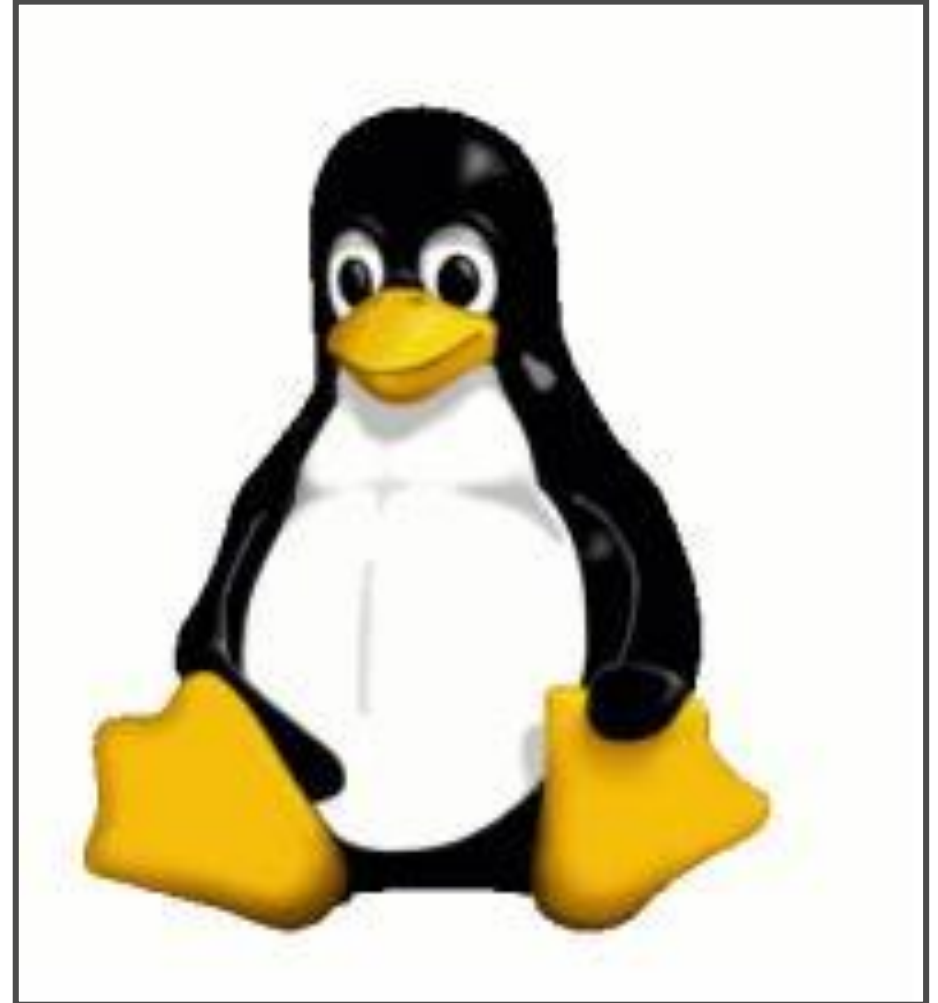
CLAUS.ULMER@TELEKOM.DE
TELEKOM.COM/PRIVACY

BACKUP

A BASIC PROBLEM

When encrypting an entire
set of data ...

LIFE IS FOR SHARING.

A BASIC PROBLEM

... its information will be completely obfuscated.
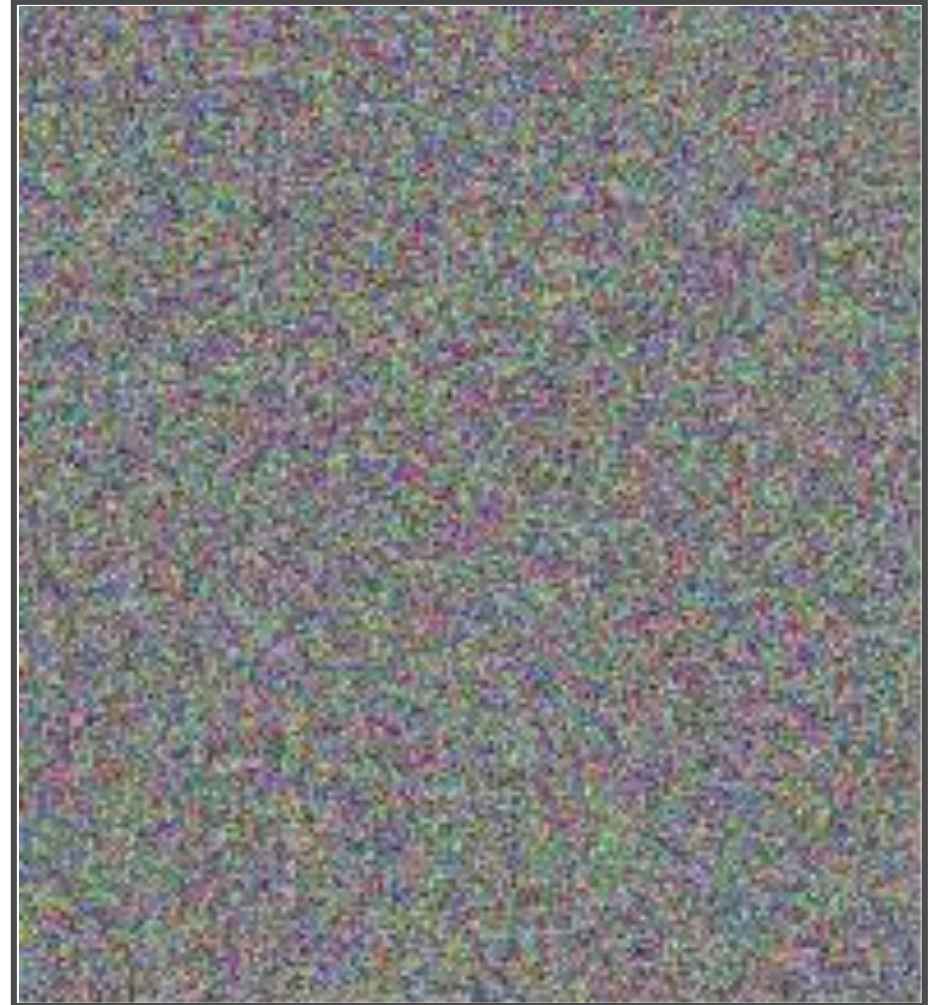
LIFE IS FOR SHARING.
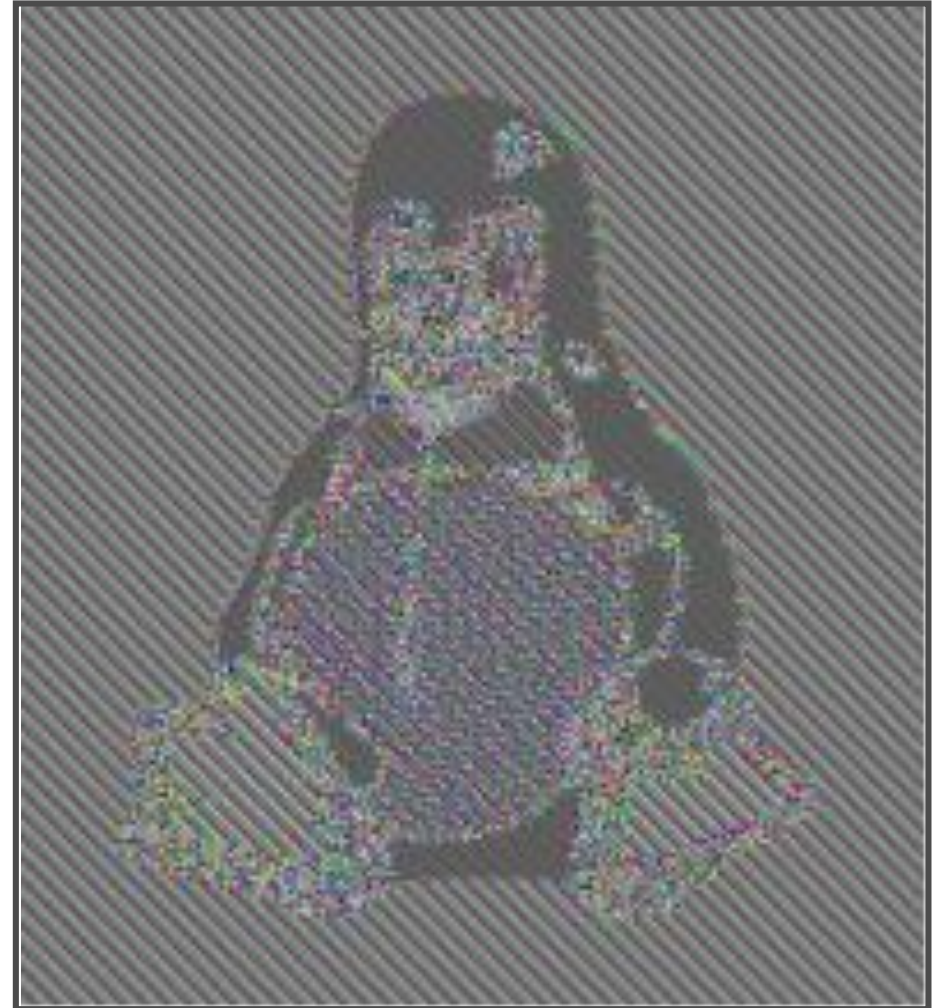
A BASIC PROBLEM

a complete data set consists out of single dates ...

Pseudonymisation is done date by date. Therefore ...
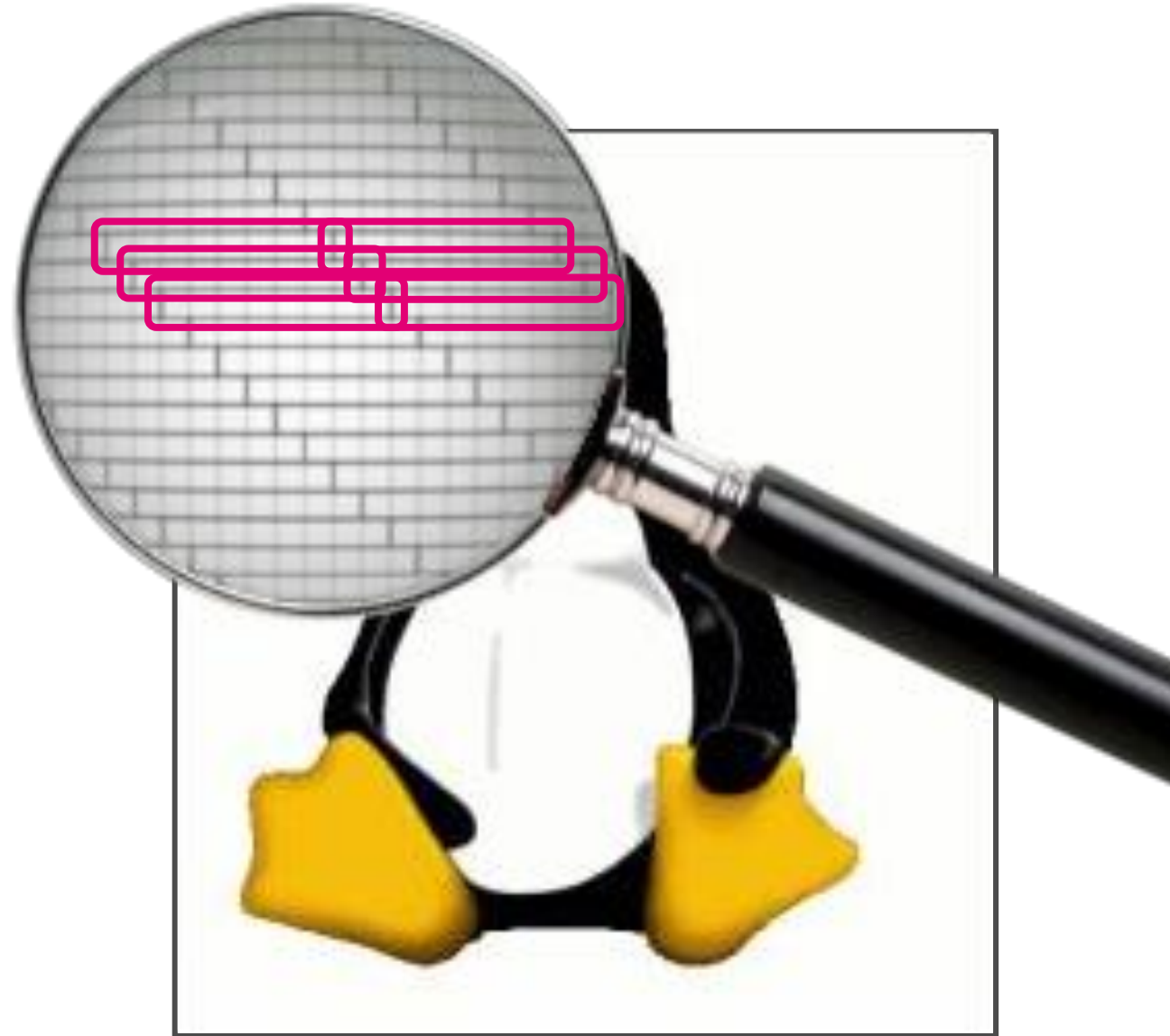
A BASIC PROBLEM

... some statistical **informationen**
will be preserved.

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