

**Open Data**

# **How Companies and Society may benefit**

November 20<sup>th</sup> 2014

RDA DE

**“The Stone Age did not end  
because humans ran out of  
stones.**

**It ended because it was time  
for a re-think about how we live.”**

*William McDonough – Architect*

# Digitalization: Driver for Economic Growth

- mega-trend of the 21st century *(Schmidt/Cohen 2013)*
- Germany 2012, ICT-sector:  
850.000 employees, revenue≈150 billion € *(BITKOM)*
- average annual growth of German internet economy is approx. 8 % → approx. 4% of GDP in 2016 *(BCG)*
- by 2015: data is expected to create 4.4 million IT jobs globally *(SIIA)*

“I can't think of any industry sector or company which is immune from digital transformation ... and the pace of change will only increase.”

*Andy McAfee  
Principal Research Scientist am MIT*

→ reaction

action →

“I want us to ask ourselves every day, how are we using technology to make a real difference in people's lives.”

*Barack Obama*

source: <http://bit.ly/1nVRocA>

# Big Code – Lines of Code

Average iPhone app	= 50.000 lines
Hubble Space Telescope	= 2 million lines
Windows 3.1 (1992)	= 2.5 million lines
Control software for US military drone	= 3.5 million lines
Windows NT 3.1 (1993)	= 4.5 million lines
HD DVD Player Xbox	= 4.5 million lines
World of Warcraft Server	= 5.5 million lines
Google Chrome	= 6.5 million lines
Windows NT 4 (1996)	= 11 million lines
MySQL	= 12 million lines
Boing 787 Flight Software	= 14 million lines
F35 Fighter jet	= 23 million lines
Microsoft Office 2013	= 44 million lines
Large Hadron Collider	= 50 million lines
Facebook	= 61 million lines
US Army Future Combat System	= 63 million lines
MacOS X 4.1 Tiger	= 85 million lines
Average high-end car	= 100 million lines
1.3+ million iPhone apps,	
1.3+ million Android apps	= 170billion lines

source: <http://www.informationisbeautiful.net/visualizations/million-lines-of-code/>



# Data Driven Innovation

“A method to innovate, iterate and/or improve using sustainable & continuous ways using data based decision process, where data is sourced to help learn about people, process and technology critical to your organization”.

source: <http://bit.ly/1nnprH5>  
by Vishal Kumar

# “Data is the new gold”

“Imagine we had a resource available that could stimulate new innovations, a market worth tens of billions of euros, and increase the transparency and governance of public life. We do – it's the data held by Europe's public institutions.”

*Neelie Kroes, 2011*



“Information wants to be free.  
Information also wants to be  
expensive.  
...That tension will not go  
away.”

*Stewart Brand, 1987*

# Use and value creation of Open Data for Berlin

- Report by Technologiestiftung Berlin (link: <http://bit.ly/OdmGf0>)
- Different multipliers for estimating the added value (based on

Pollock):

$$\text{benefit} = F \lambda_1 \lambda_2 \lambda_3 \varepsilon$$

F costs  
 $\lambda_1$  cost multiplier  
 $\lambda_2$  benefit multiplier  
 $\lambda_3$  indirect benefit multiplier  
 $\varepsilon$  demand elasticity

- Quantitative estimate of Open Data for Berlin:

**32 million € per year**

- Berlin is ramping up at the moment, period of implementation approx. 2-6 years



# Berlin's data portal

- First data portal of a German city
- In cooperation with Fraunhofer FOKUS and Berlin Online Stadtportal GmbH
- Stable since 13. Juni 2013

Nutzungsbedingungen | Glossar | Suche | FAQ | Links | Login | Registrieren

Suchen

Startseite | Datensätze | Dokumente | Anwendungen | Interaktion

be Berlin

**{ CODING DA VINCI }**  
Der Kultur-Hackathon  
26./27. April – 5./6. Juli 2014

Coding da Vinci - Der Kultur-Hackathon  
"Coding da Vinci" Kultur-Hackathon startet am 26.04.

Coding da Vinci | Wettbewerb „GIS an Schulen“ | Gesundheits- und Sozialdaten im Datenportal

Offene Daten lesbar für Mensch und Maschine. Das ist das Ziel.

[www.daten.berlin.de](http://www.daten.berlin.de)

# Berlin Big Data Center (BBDC)

- Funded by the Federal Ministry of Education and Research (BMBF)
- under the management of Technical University Berlin
- Scheduled start: 10/2014
- Members: Zuse-Institute Berlin (ZIB), Fritz-Haber-Institute of MP-Society, Beuth Hochschule für Technik Berlin, German Research Center for Artificial Intelligence (DFKI)
- Aim: develop high-innovative technologies which can organise and integrate a huge amount of Data to extract knowledge, visual analysis, economic and social value

# Code for Germany – OK Lab Berlin

- Programme of the Open Knowledge Foundation Germany together with Code for America
- Aim: support developments in Open Data and Civic Tech
- since february 2014: Start of the Open Knowledge Labs



[www.codefor.de](http://www.codefor.de)

**Show me the money!**

# **Open Data: Opportunity for Berlin's Companies?**

# Thank you for your attention!

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