

Big Data – Das neue Versprechen der Allwissenheit

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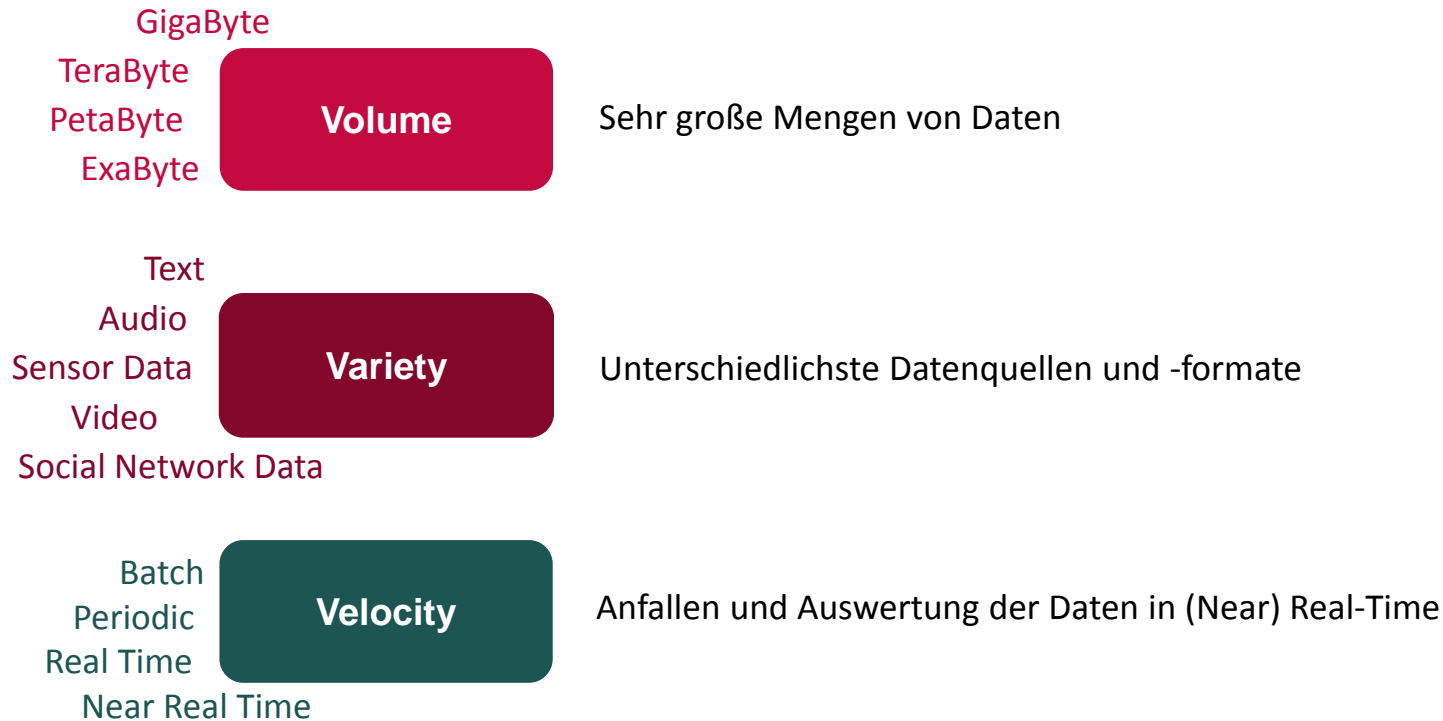
Munich Network Management Team
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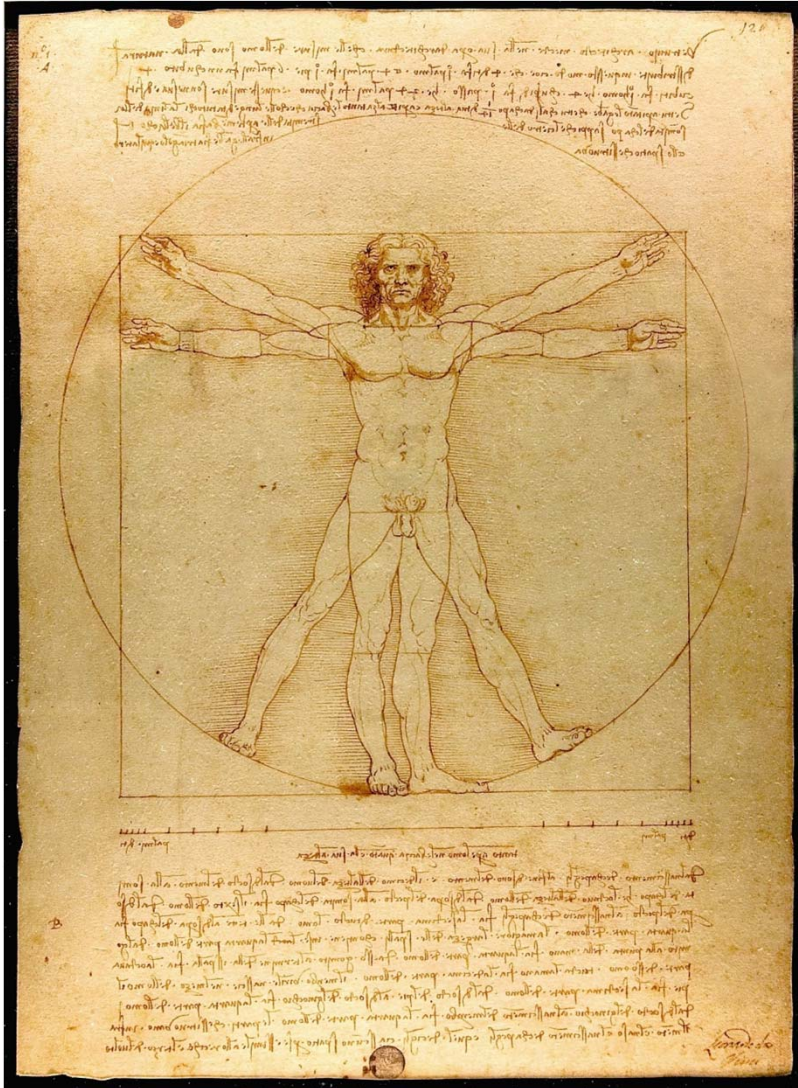
Quelle: Google Analytics

3 V’ s: “Big data is high-volume, -velocity and -variety information assets that demand cost-effective, innovative forms of information processing for enhanced insight and decision making.”

Beyer, M. & Laney, D. (2012): The Importance of 'Big Data': A Definition, Gartner Research Report



Quelle: Arnold Picot, Munich School of Management, LMU



Besteht aus ungefähr

$3,72 \times 10^{13}$

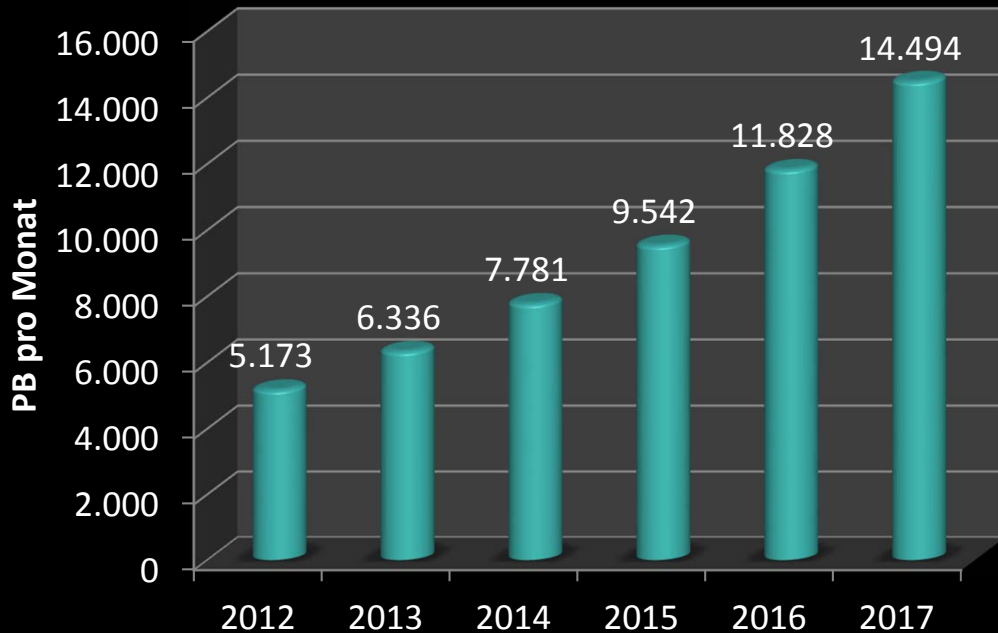
(37,2 Billionen)

Zellen

Quelle: Bianconi, Eva et al: *An estimation of the number of cells in the human body*. In: *Annals of Human Biology* 40 (2013), Nr. 6, S. 463–471

Quelle: http://upload.wikimedia.org/wikipedia/commons/2/22/Da_Vinci_Vitruve_Luc_Viatour.jpg

Consumer Web, Email, Data



Besteht 2013 aus
ungefähr

633.600 x 10¹³
(6,3 Trillionen)

Bytes/Monat(!)

^{*)} Nur Consumer Web, Email, Instant Messaging und anderer Datenverkehr (ohne File Sharing)

Quelle: Cisco Visual Networking Index: Forecast and Methodology, 2012-2017, Cisco 2013



Entspricht der Anzahl aller Körperzellen aller Einwohner von Saarbrücken (Einwohner 2012 gemäß Statistischem Bundesamt, 2013)



Quelle: <http://www.google.com/about/datacenters/>

Entspricht in etwa der Anzahl aller Körperzellen aller Einwohner Deutschlands (Einwohner 2012 gemäß Angaben der Weltbank von 2013)



ungefähr

280.000.000 x

10¹³

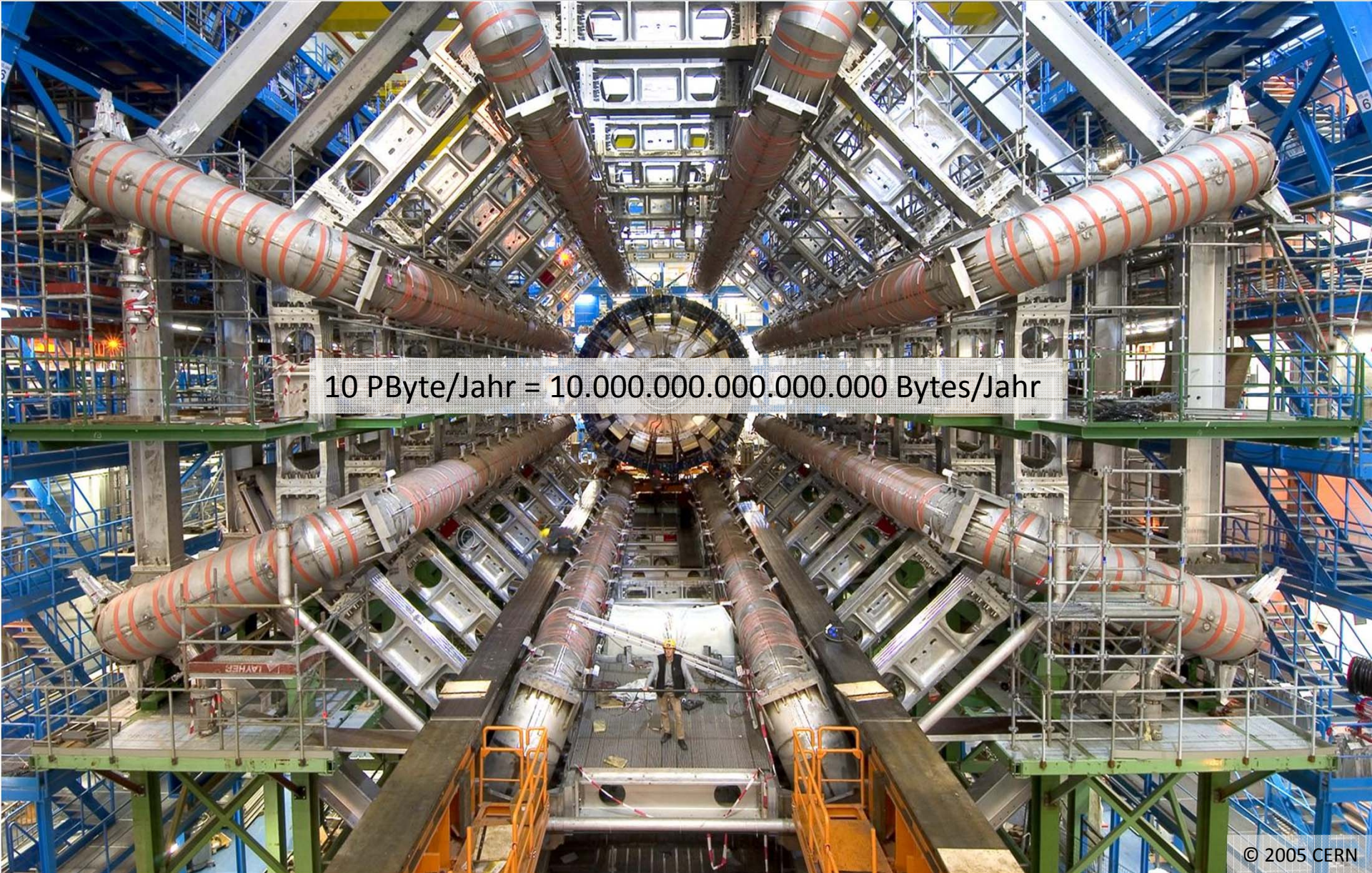
(2,8 Zettabyte oder 2,8 Trilliarden)

Bytes

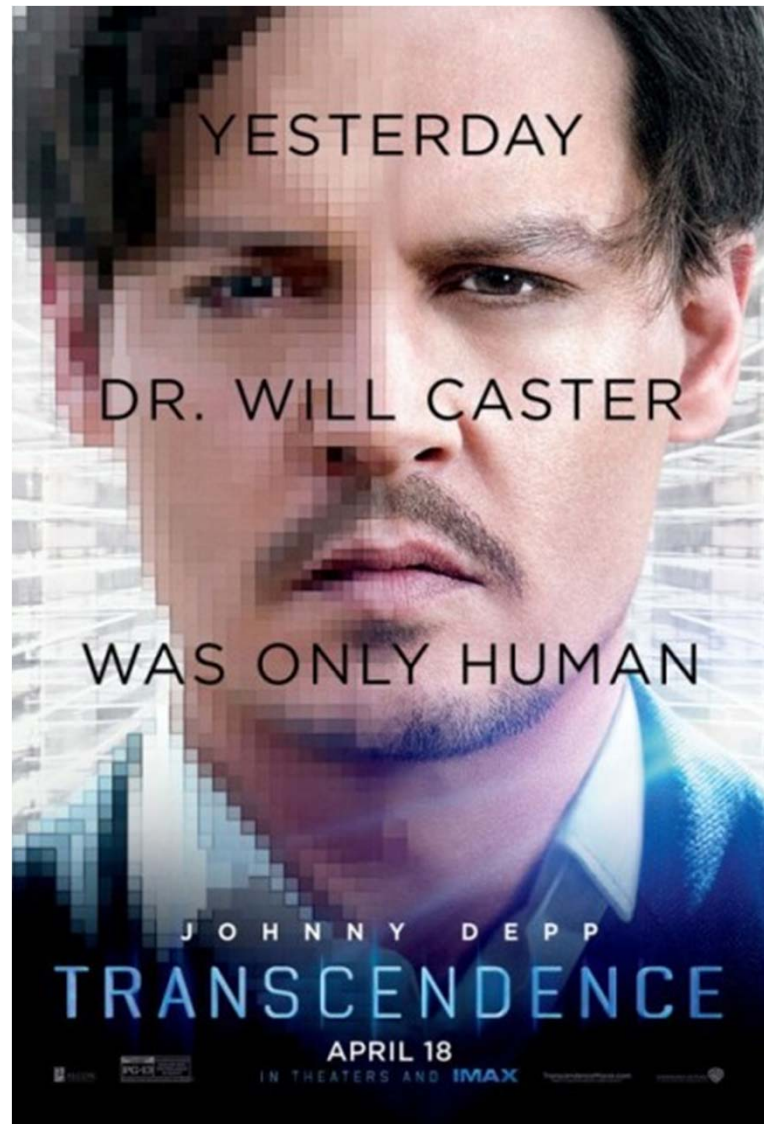
Quelle: Spiegel Online vom 11.12.2012
(<http://www.spiegel.de/netzwelt/web/das-internet-der-dinge-erzeugt-2-8-zettabyte-daten-a-872280.html>)



Foto: Karl Behler



© 2005 CERN



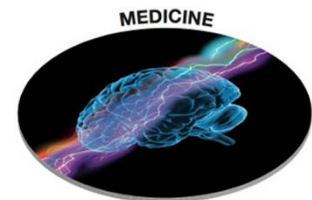
“Understanding the human brain is one of the greatest challenges facing 21st century science. If we can rise to the challenge, we can gain profound insights into what makes us human, develop new treatments for brain disease and build revolutionary new computing technologies. Today, for the first time, modern ICT has brought these goals within sight.”



Human Brain Project

“Molecular-level models require hundreds of exabytes of memory to simulate”

<https://www.humanbrainproject.eu/>



<http://www.transcendencemovie.com/>



Paul Butler a Facebook Intern, visualizes the relationships between 10 million pairs of Facebook friends

Quelle: <http://maptd.com/awesome-world-map-of-facebook-connections>



Quelle: www.go-globe.com (2011)

- Zur Verbrechens-aufklärung und –bekämpfung
- Überwacht und vergleicht Daten aus verschiedenen Quellen, u.a.:
 - 3.000 Videokameras
 - Nummernschildscanner
 - Strahlungsdetektoren
 - div. Datenbanken



Quelle: Zeit (2012)
<http://nymag.com/daily/intelligencer/2012/08/nypd-domain-awareness-system-microsoft-is-watching-you.html>



aka **Intelligence Community
Comprehensive National
Cybersecurity Initiative
Data Center**

Camp Williams, Bluffdale, Utah

http://en.wikipedia.org/wiki/Utah_Data_Center

1,5 million square feet
2 billion US\$ building
2 billion US\$ hardware
65 MW power
1 Yottabyte Storage



To process “all forms of communication, including the complete contents of private emails, cell phone calls, and Internet searches, as well as all sorts of personal data trails - parking receipts, travel itineraries, bookstore purchases, and other digital 'pocket litter'.”

