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Big Data in Zusammenarbeit von Business & IT: Wie fachliche und technische Aspekte gemeinsam das Big Data Management weiterbringen

Informatik
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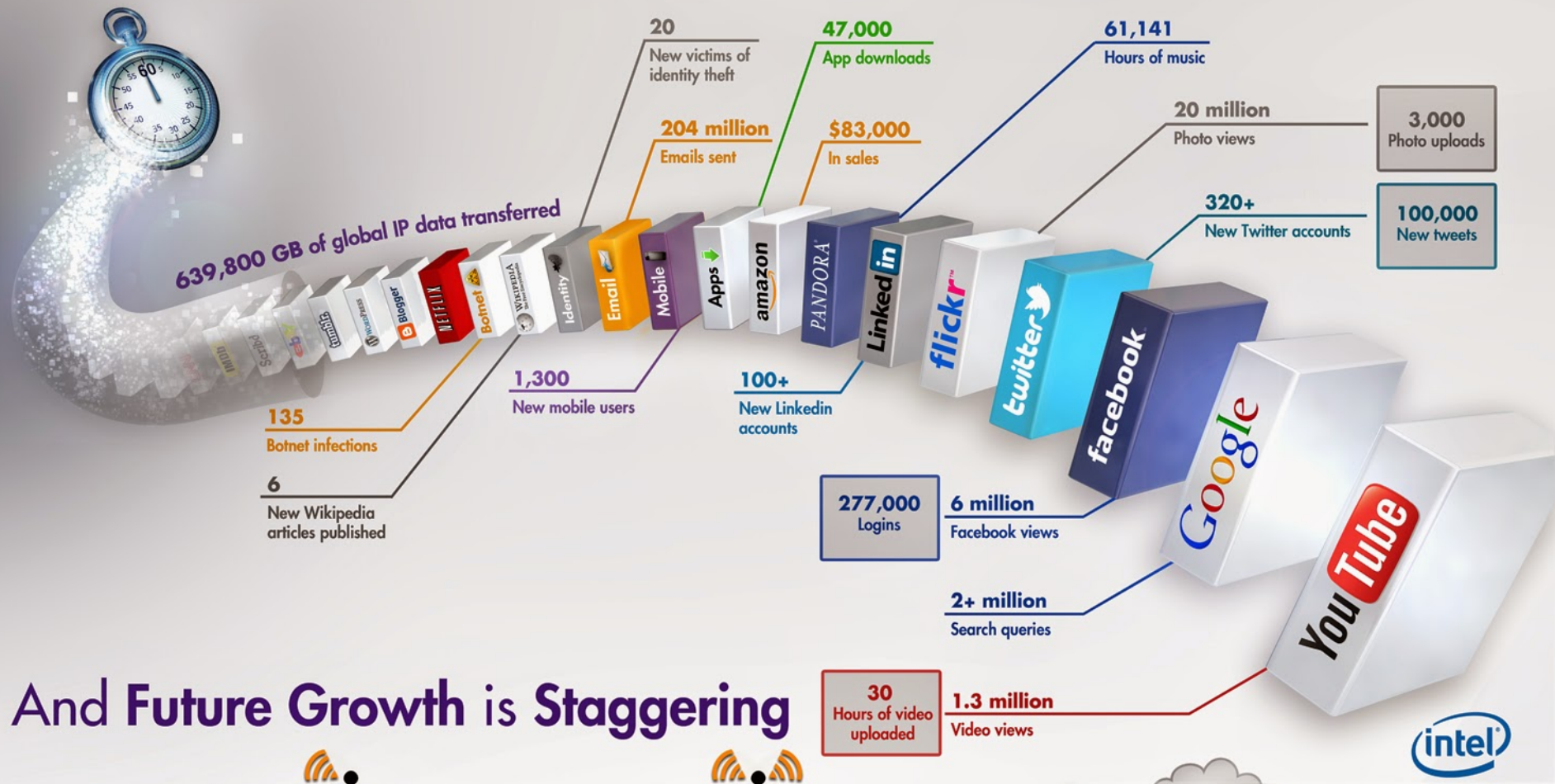
Workshop Pitch
Big Data Seminar der Hochschule Luzern, 15.03.2016

What Happens in an **Internet Minute?**



And **Future Growth** is **Staggering**

Today, the number of **networked devices** = the global population

By **2015**, the number of **networked devices** = **2x** the global population

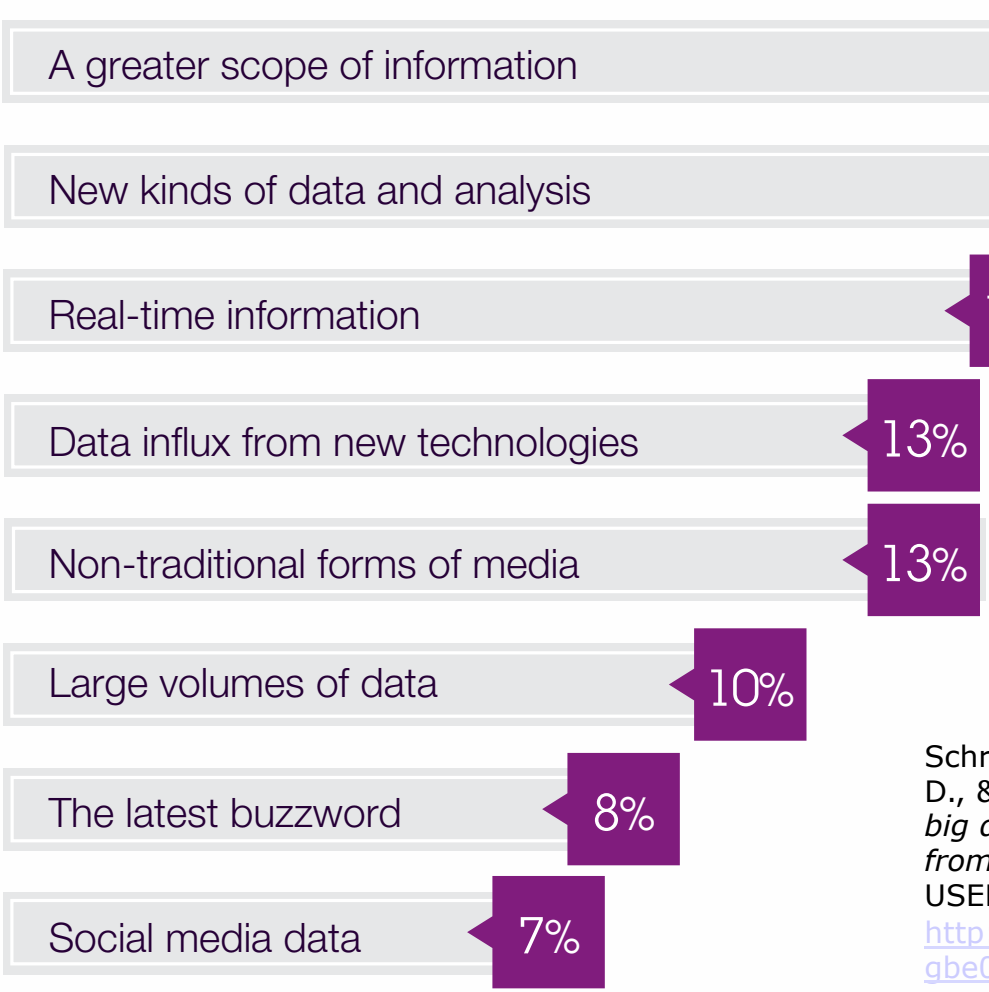
In **2015**, it would take you **5 years**

to view all video crossing IP networks each **second**

intel

Bern, Oktober 2014

Defining big data



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Saïd Business School
UNIVERSITY OF OXFORD

IBM Institute for Business Value

Schroeck, M., Shockley, R., Smart, J., Romero-Morales, D., & Tufano, P. (2012). *Analytics: The real-world use of big data - How innovative enterprises extract value from uncertain data* (Executive Report No. GBE03519-USEN-00). New York: IBM Institute for Business Value. http://public.dhe.ibm.com/common/ssi/ecm/gb/en/gbe03519usen/GBE03519USEN.PDF

Respondents were asked to choose up to two descriptions about how their organizations view big data from the choices above. Choices have been abbreviated, and selections have been normalized to equal 100%. Total respondents=1144.

Big Data Definition von IBM

Volume

Data at scale

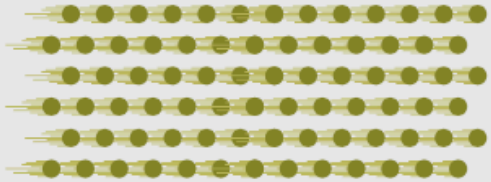
Terabytes to
petabytes of data

Variety

Data in many forms

Structured, unstructured,
text, multimedia

Velocity



Data in motion

Analysis of streaming data
to enable decisions within
fractions of a second

Veracity

Data uncertainty

Managing the reliability and predictability
of inherently imprecise data types

Schoeck et al. 2012, p. 4

What is Big Data?

"Big data" represents a cultural shift in which more and more decisions are made by algorithms with transparent logic, operating on documented immutable evidence. I think "big" refers more to the pervasive nature of this change than to any particular amount of data.

Daniel Gillick
Senior Research Scientist, Google

https://datascience.berkeley.edu/what-is-big-data

Die NIST-Standard-Definition

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- US National Institute for Standards andTechnology - Big Data Public Working Group:

- "*Big Data* consists of extensive datasets primarily in the characteristics of volume, variety, velocity, and/or variability that require a scalable architecture for efficient storage, manipulation, and analysis."

- "The *Big Data paradigm* consists of the distribution of data systems across horizontally coupled, independent resources to achieve the scalability needed for the efficient processing of extensive datasets".

- (NIST, 2015, p. 5)

NIST. (2015). NIST Big Data Interoperability Framework: Volume 1, Definitions (NIST Special Publication No. 1500-1). NIST Big Data Public Working Group. Retrieved from http://bigdatawg.nist.gov/_uploadfiles/NIST.SP.1500-1.pdf

Das 5V-Modell für Big Data

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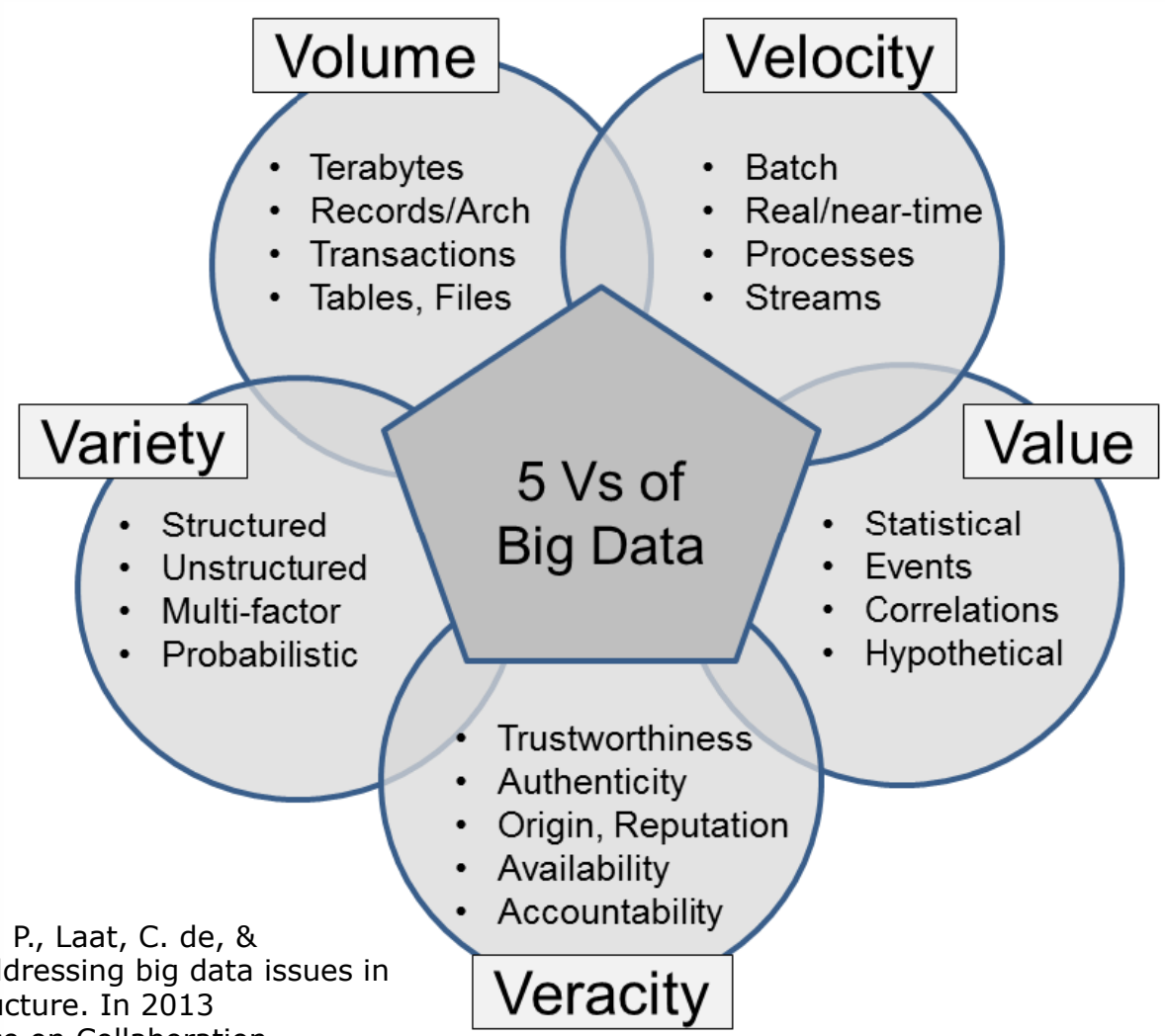

Demchenko, Y., Grosso, P., Laat, C. de, & Membrey, P. (2013). Addressing big data issues in Scientific Data Infrastructure. In 2013 International Conference on Collaboration Technologies and Systems (CTS) (pp. 48–55).

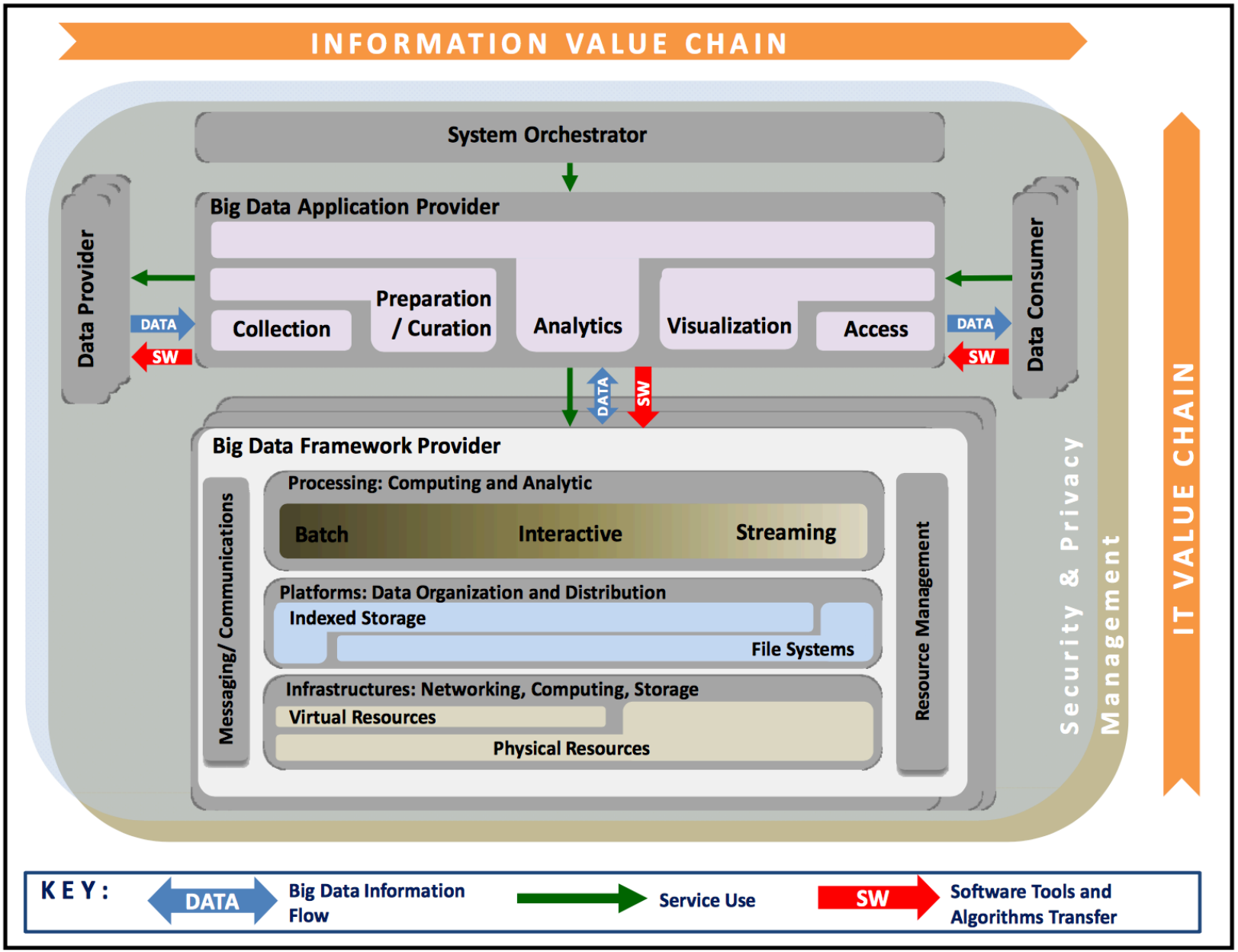

Figure 1: NIST Big Data Reference Architecture

NIST. (2015b). *NIST Big Data Interoperability Framework: Volume 2, Taxonomies*. NIST Special Publication, NIST Big Data Public Working Group.

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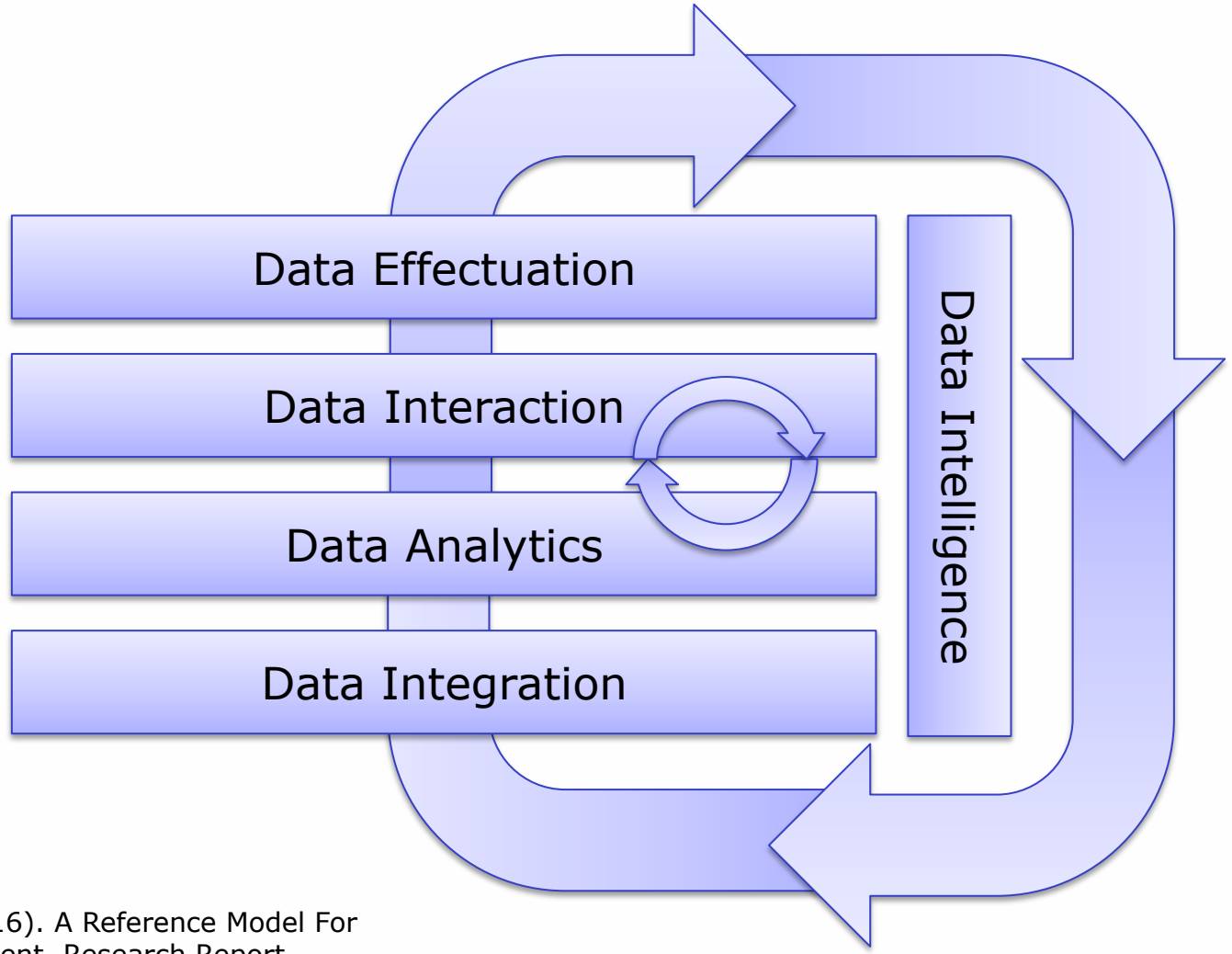
A reference model for big data management



Kaufmann, M. (2016). A Reference Model For Big Data Management. Research Report, Faculty of Mathematics and Computer Science, University of Hagen (forthcoming)

Big Data Management: Technology & Business

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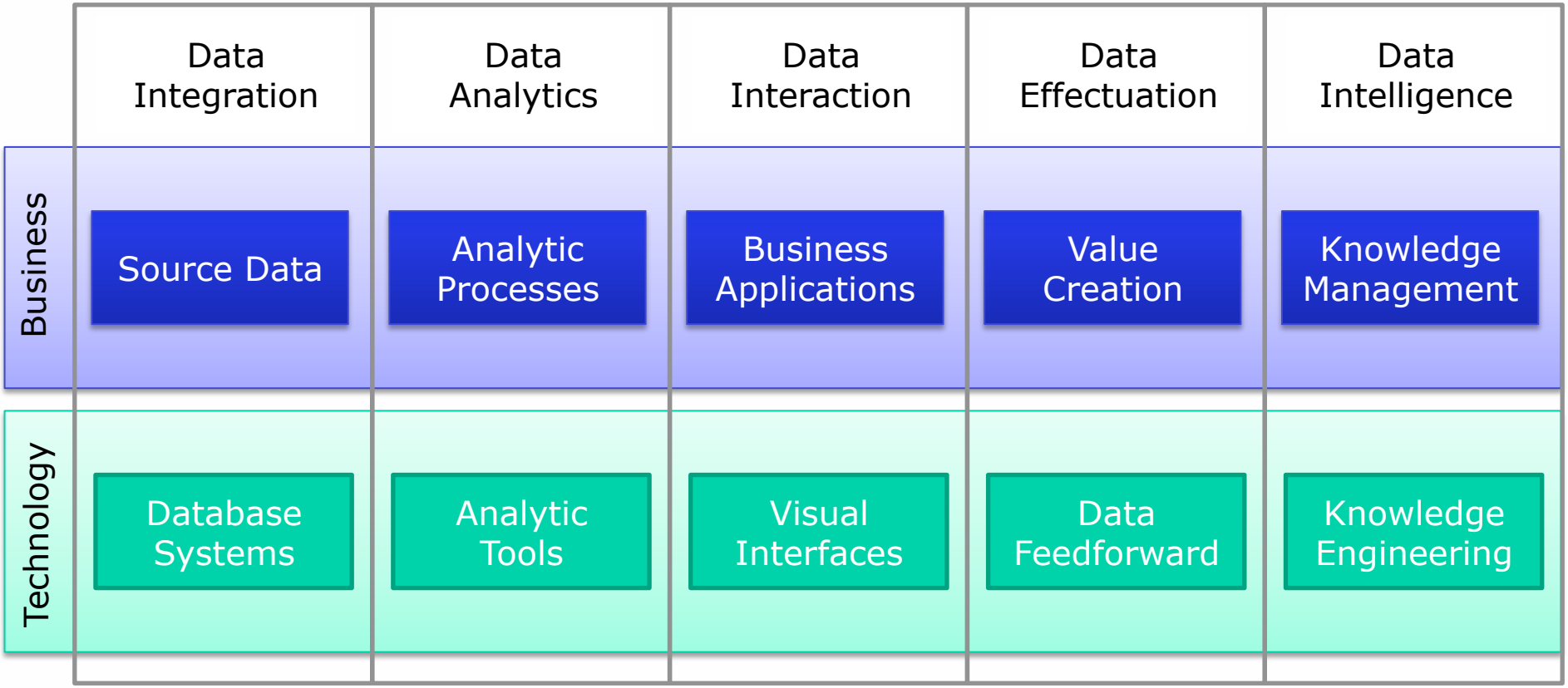

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