Creating Business Value through Digital Technology. The Central Role of Business Process Management

Prof. Dr. Jan vom Brocke,
Hilti Chair of Business Prozess Management
Institute of Information Systems
University of Liechtenstein

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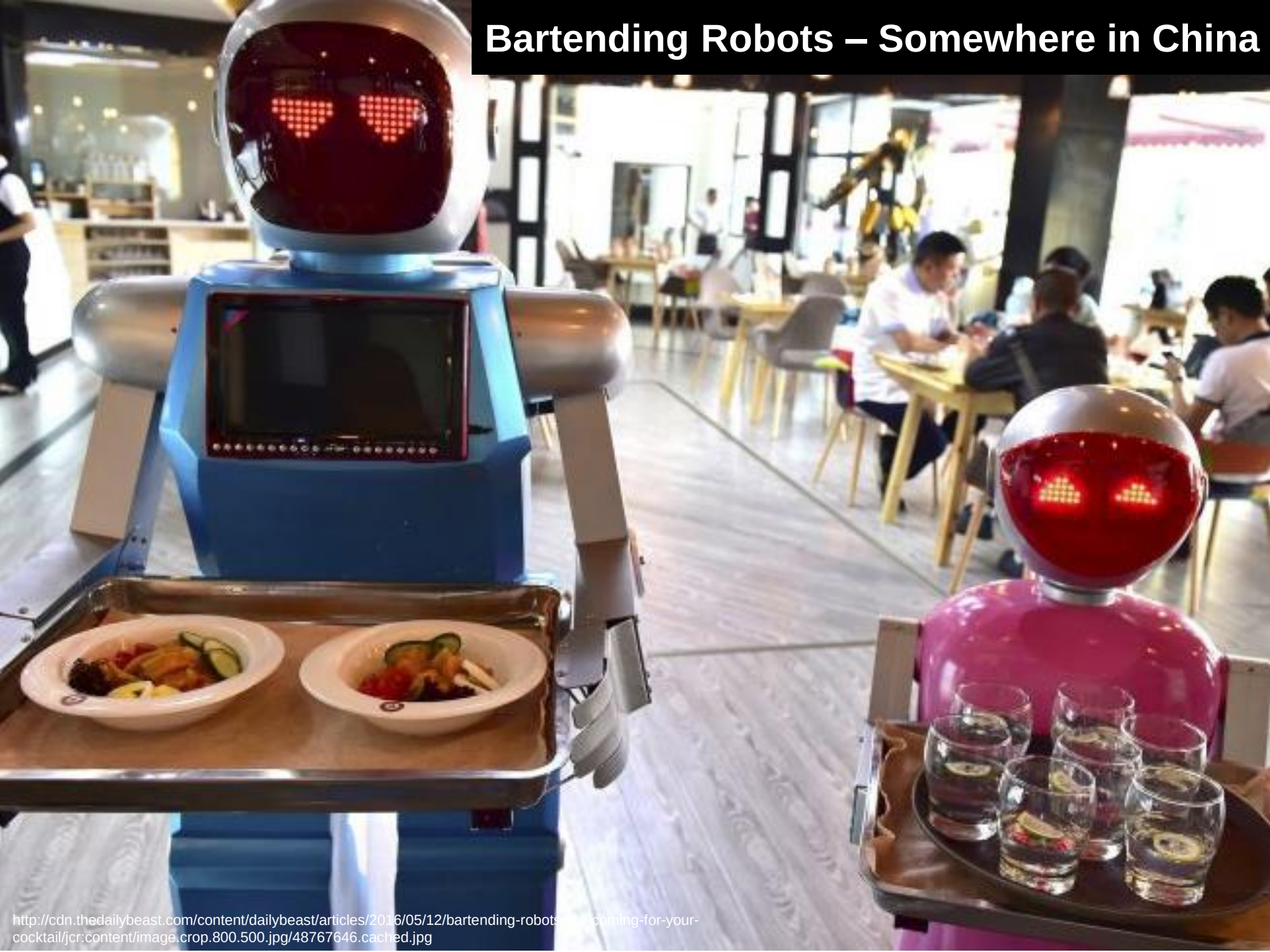
IT for the real world

Source: http://www.hansoninc.com/assets/The-Age-of-Everywhere-Computing-is-Here_smarthome.jpg

Bartending Robots – Somewhere in China



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Source: http://techandfacts.com/wp-content/uploads/2013/07/virtual-store-116.jpg

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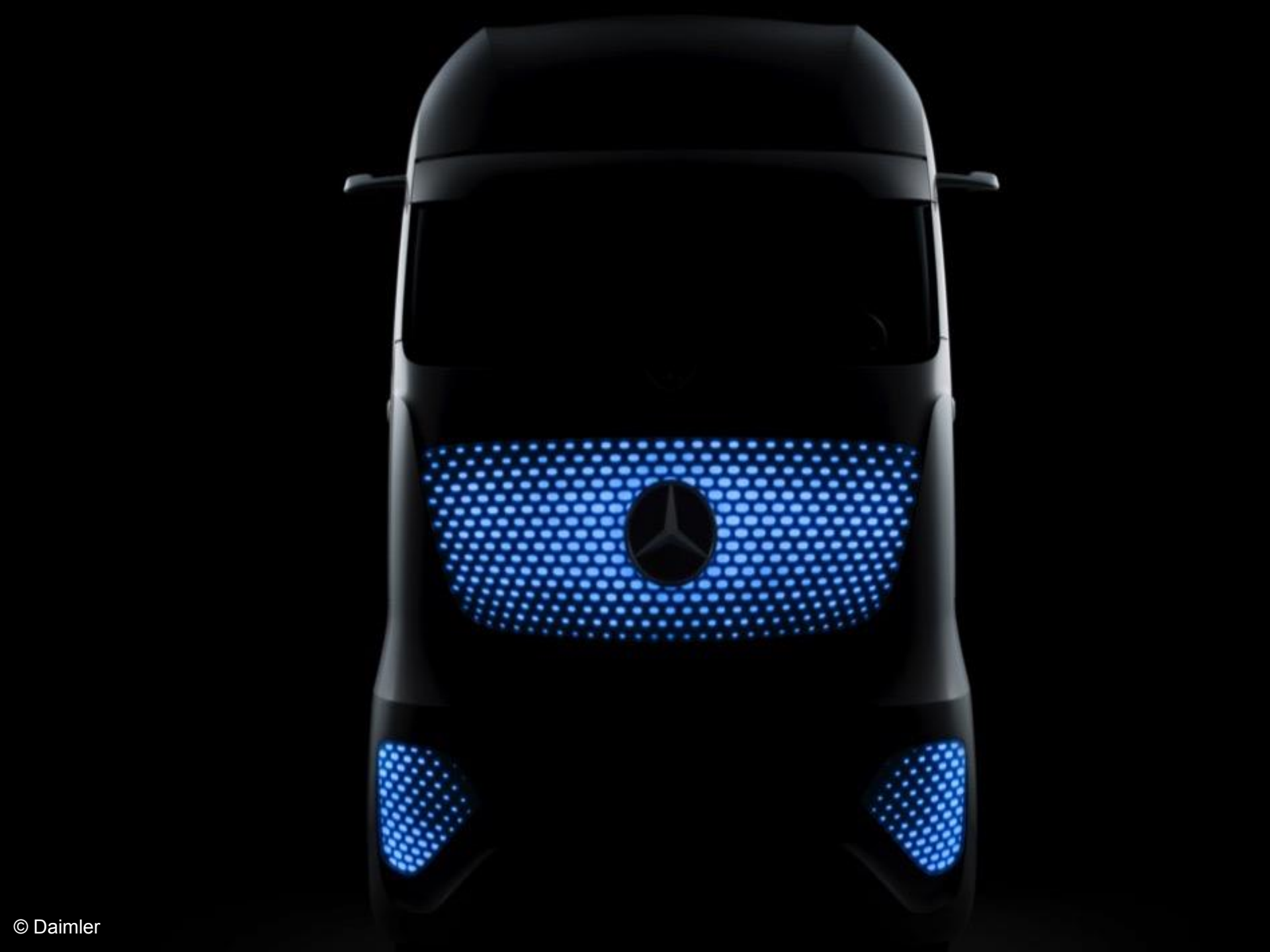
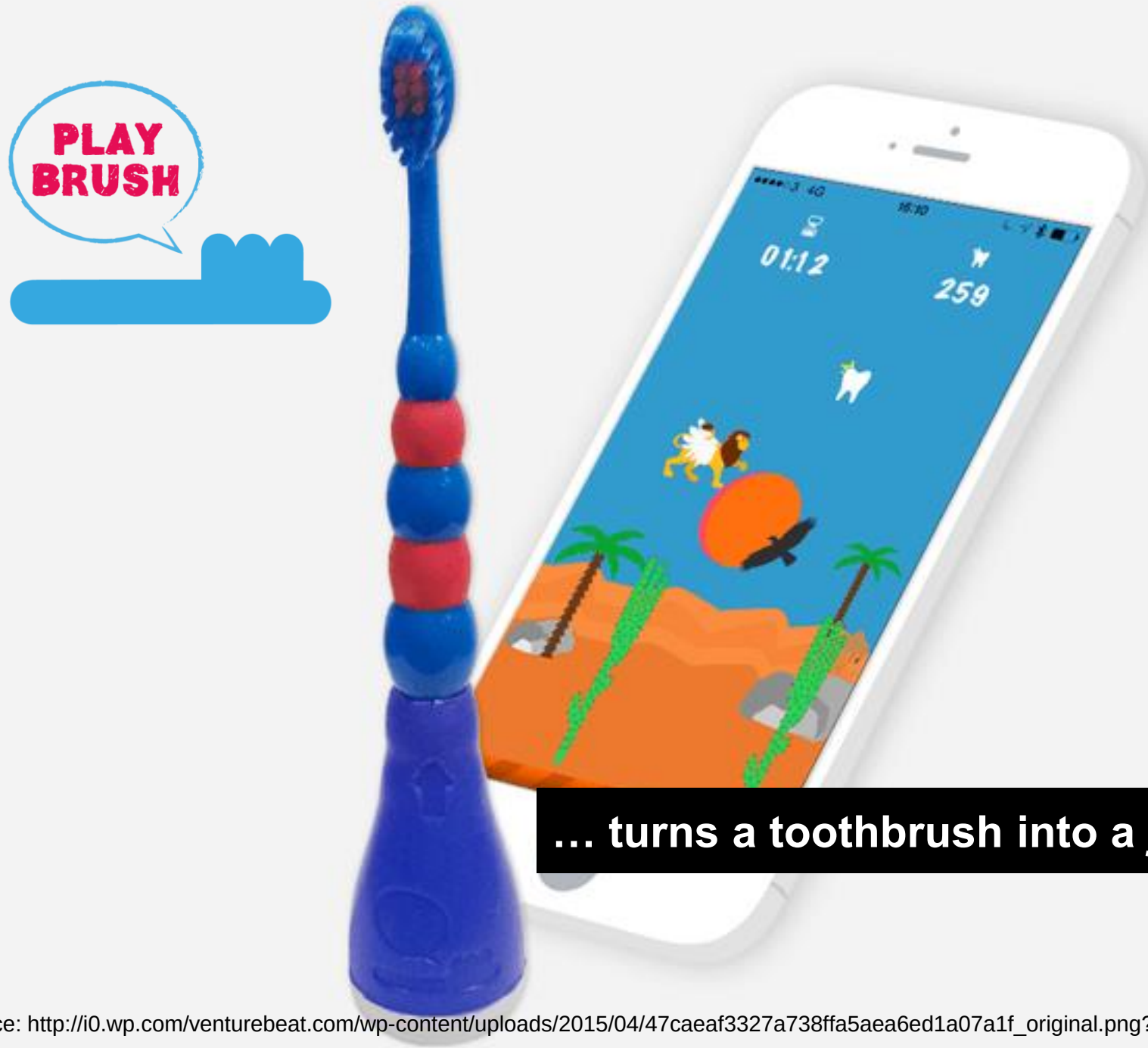


© Daimler

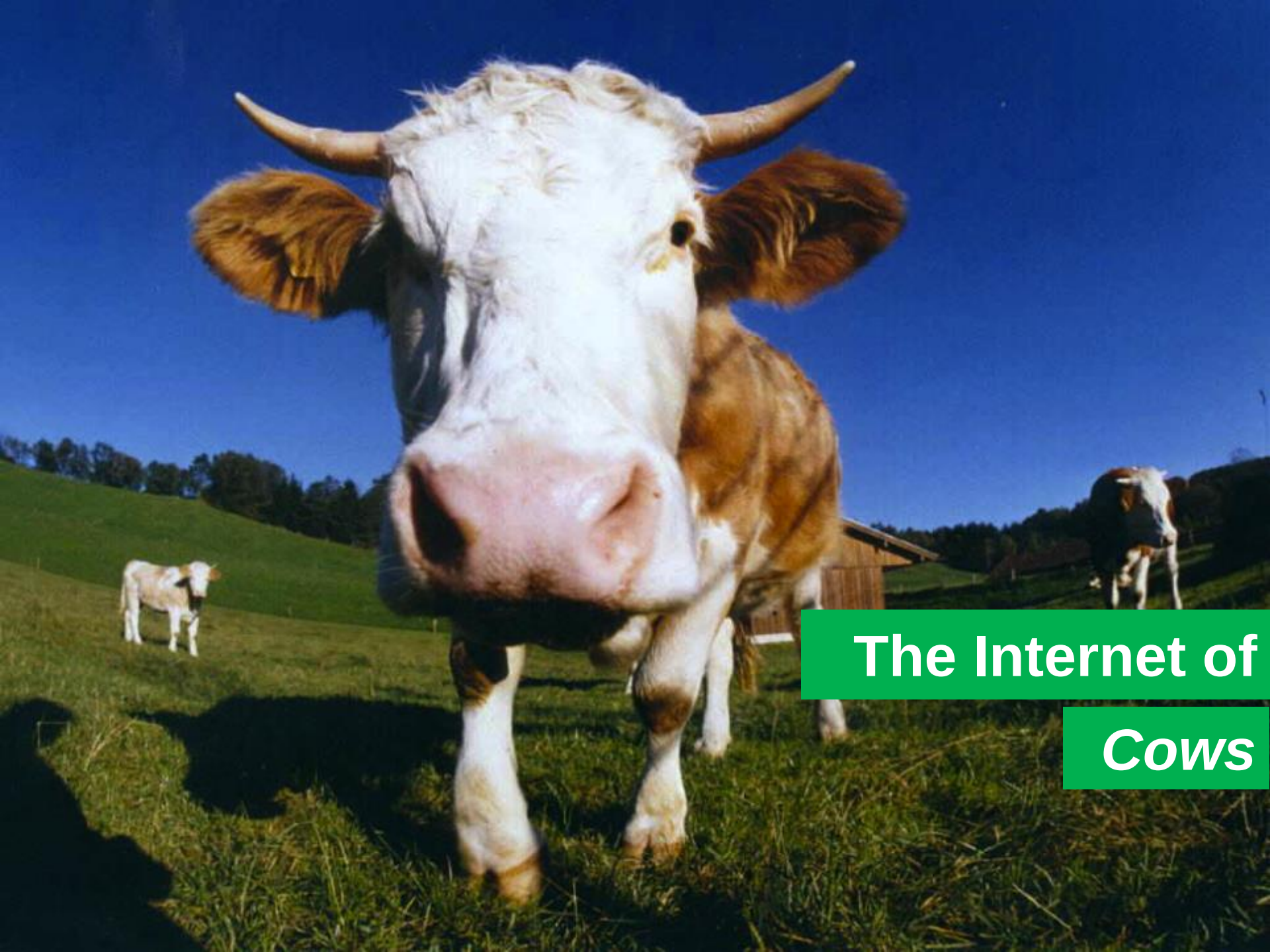
BARILLA
Stampante Pasta 3D, 2015
3D Pasta Printer
Barilla
SMART
PASTA
3D shapes with a purpose

BELL
4:21 PM
100%
Kolibree
Pamela
Sam
Lucy
LAST BRUSHING
80%
completed
20:51
time of your brushing
02 min : 25 sec
your score



… turns a toothbrush into a joystick ;-)

Source: http://i0.wp.com/venturebeat.com/wp-content/uploads/2015/04/47caeaf3327a738ffa5aea6ed1a07a1f_original.png?fit=780%2C9999


The Internet of
Cows

How to create business value from digital technology?

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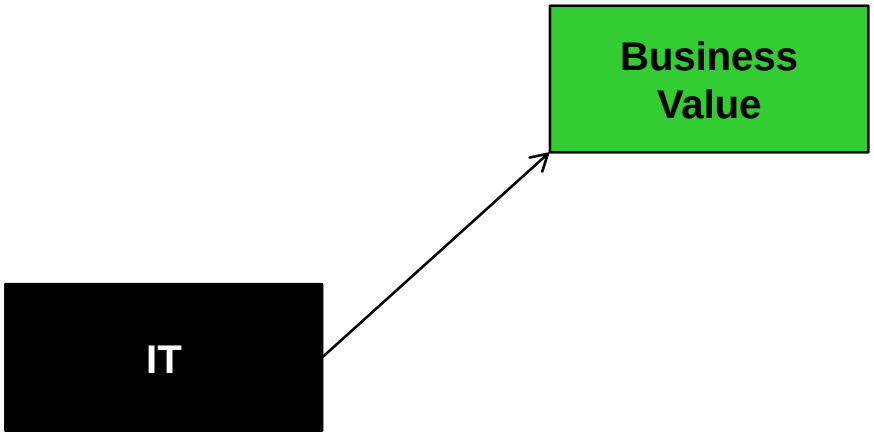
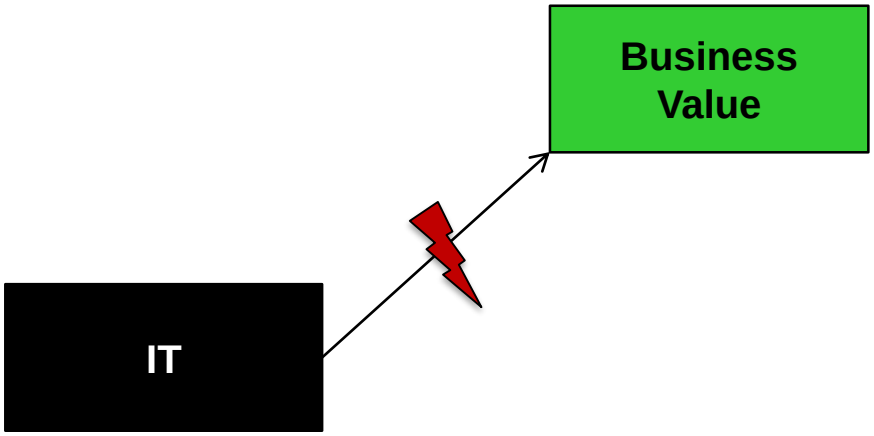
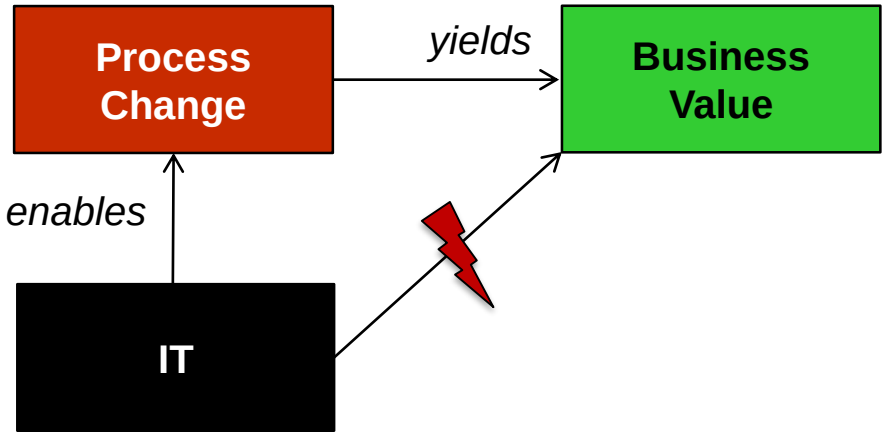
Digital Value Creation



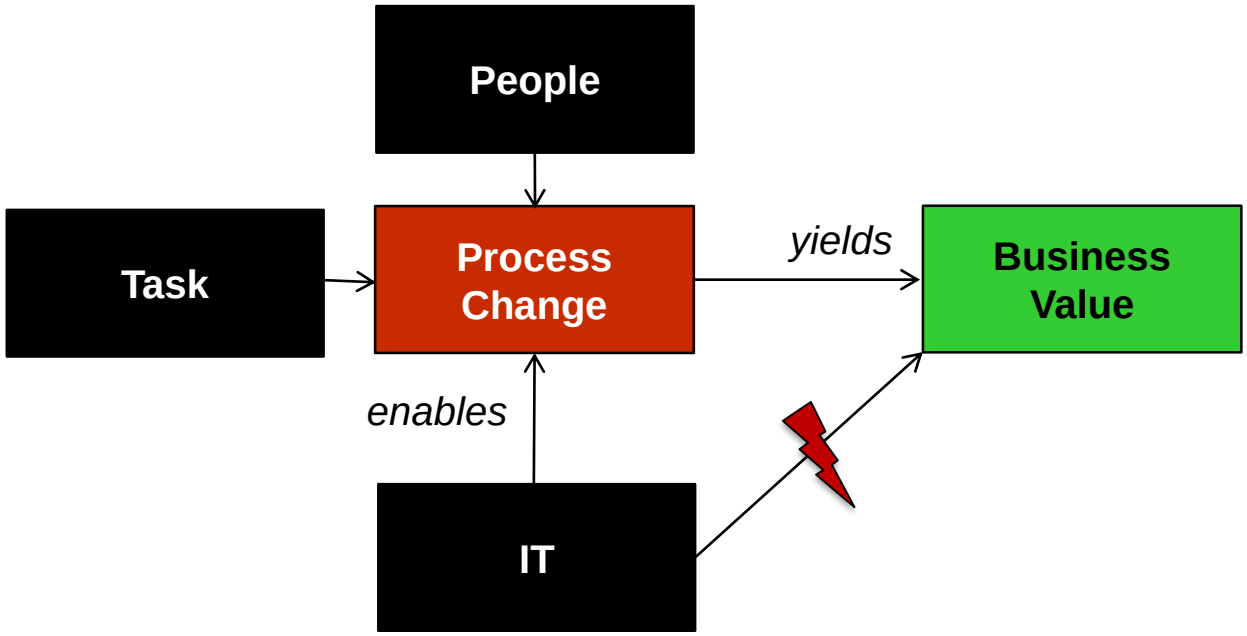
Digital Value Creation



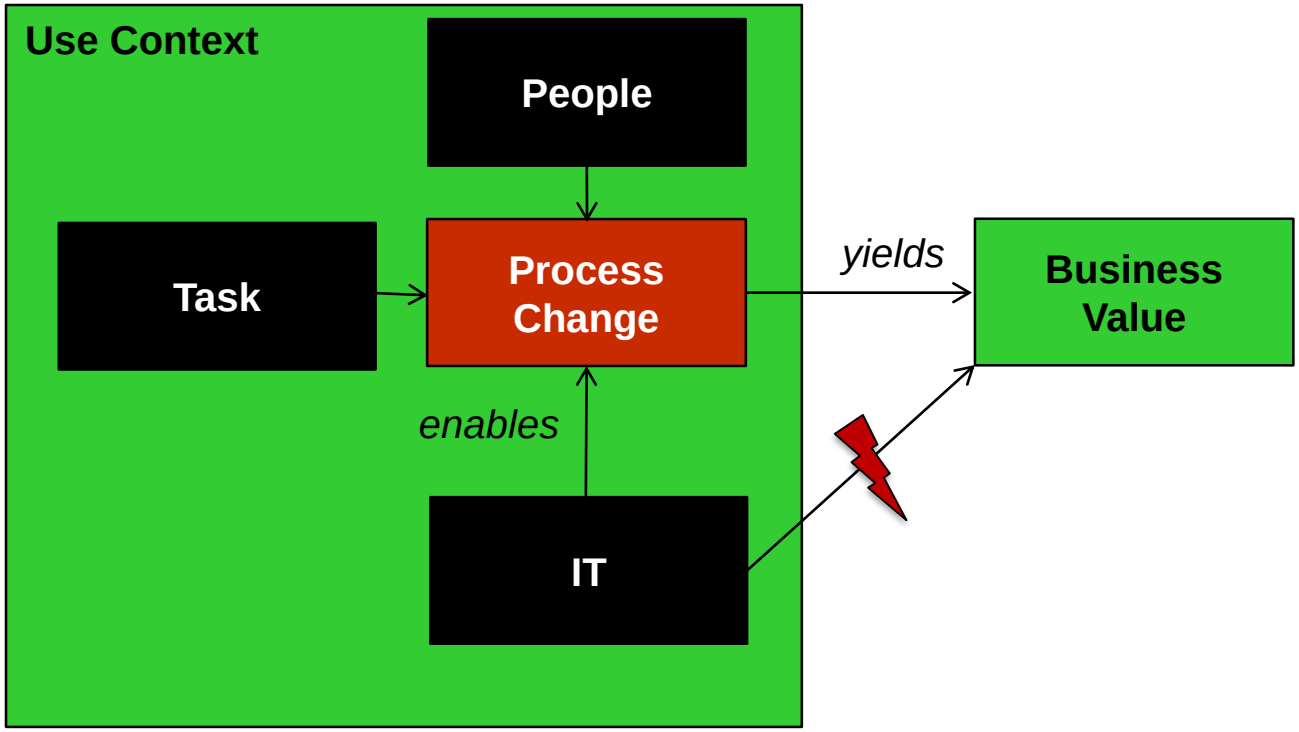
Digital Value Creation



Digital Value Creation

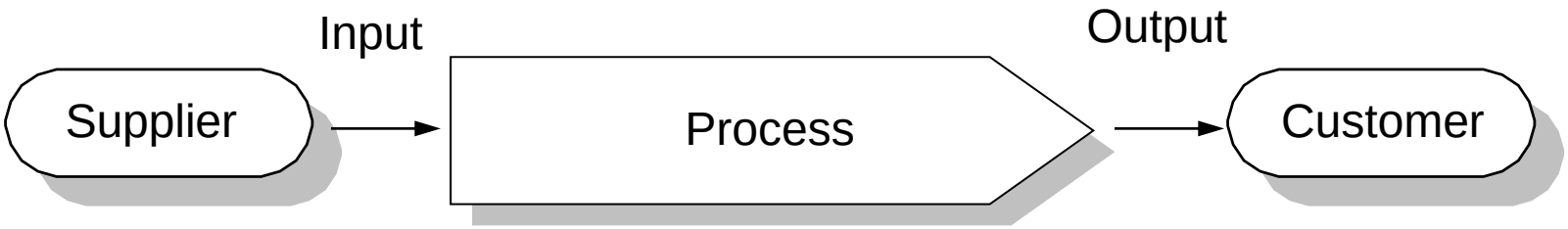


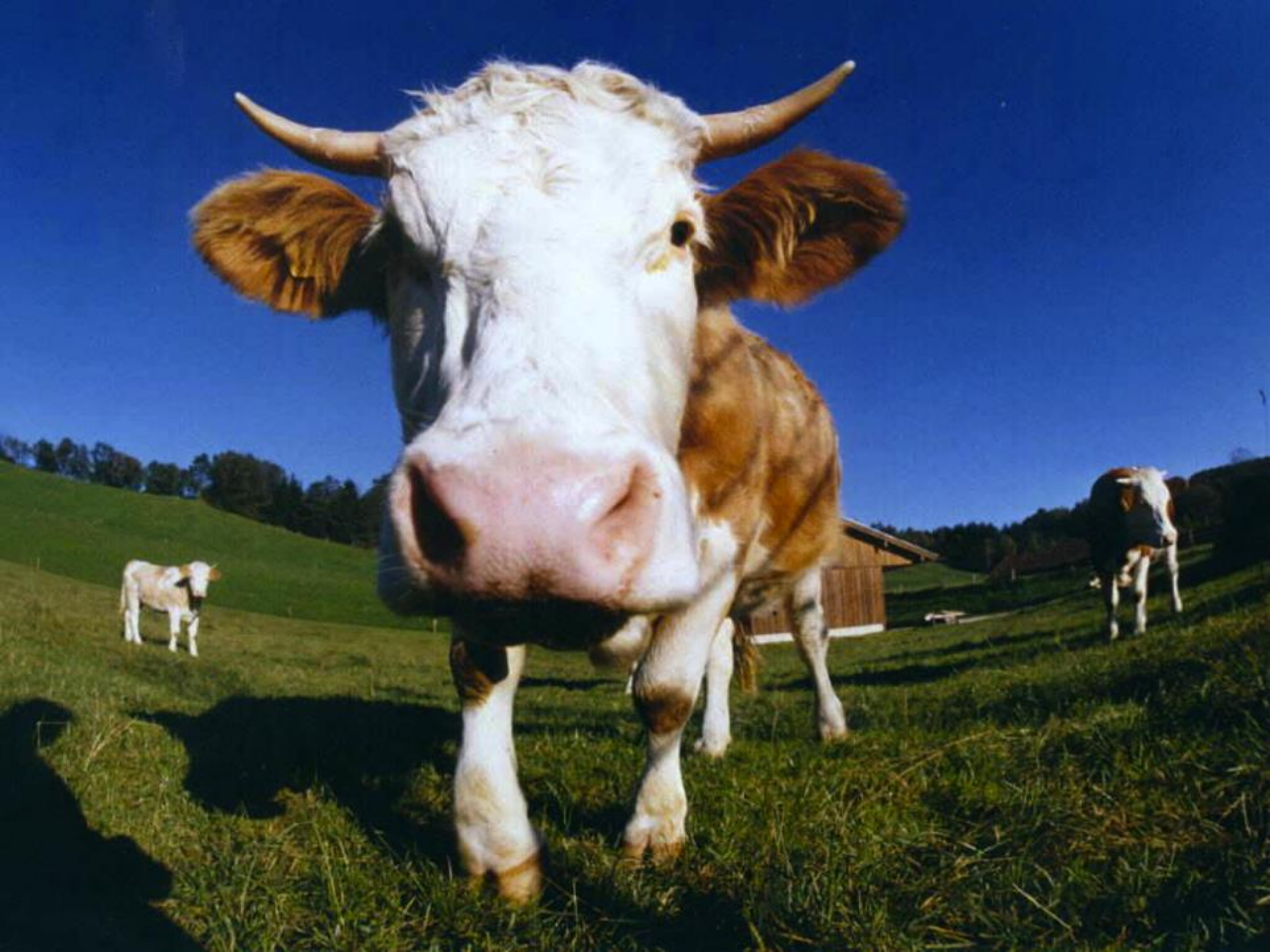
Digital Value Creation

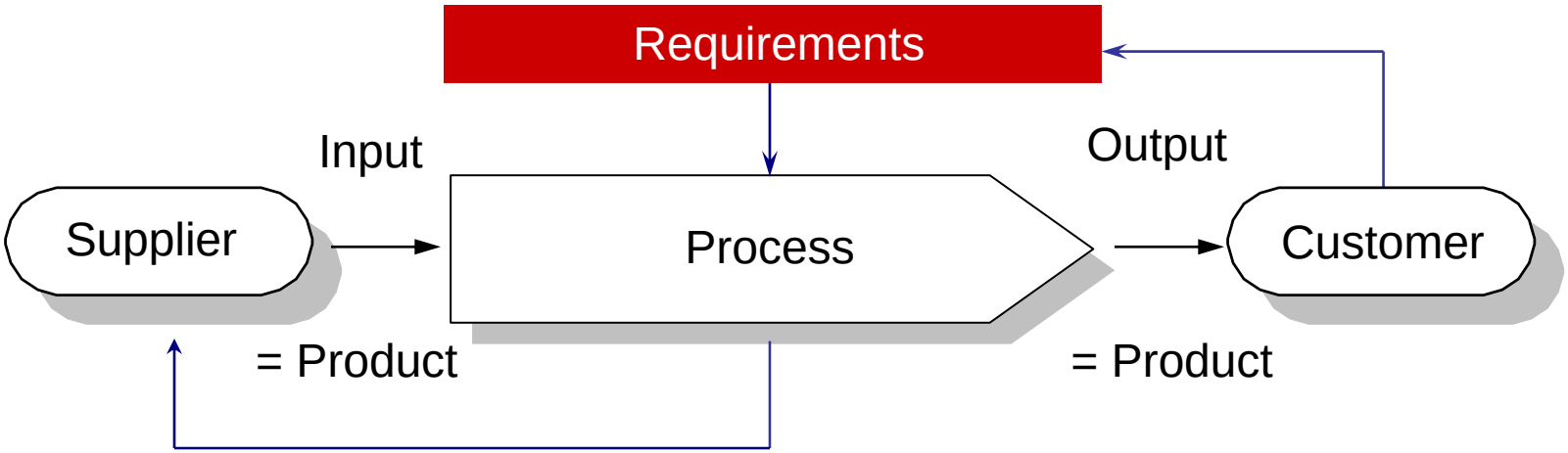


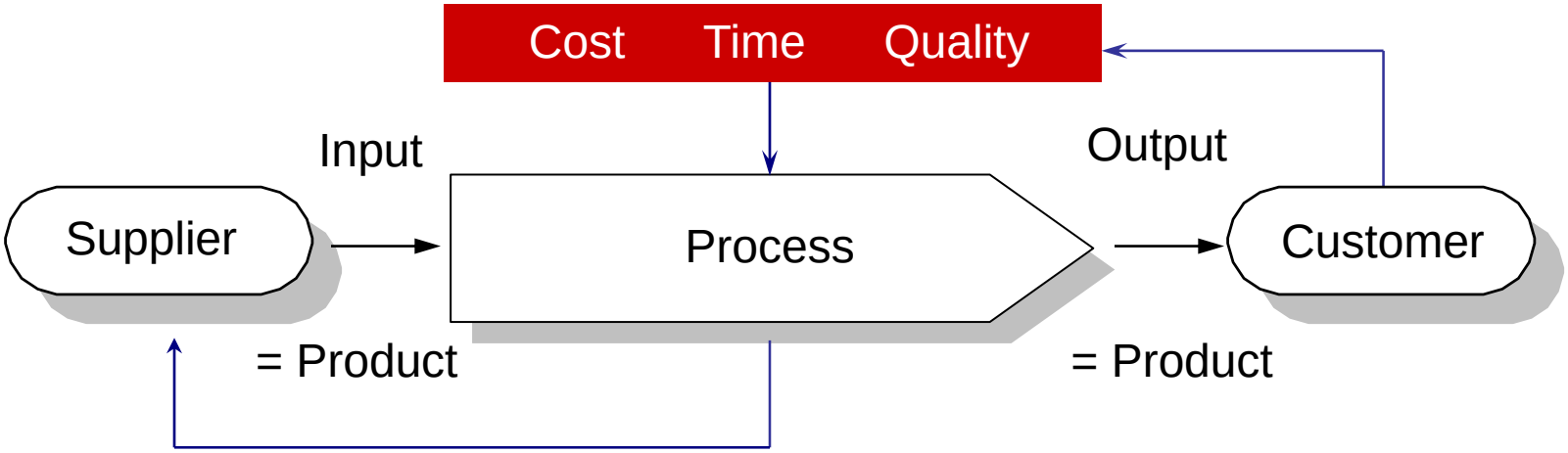
What is a process?

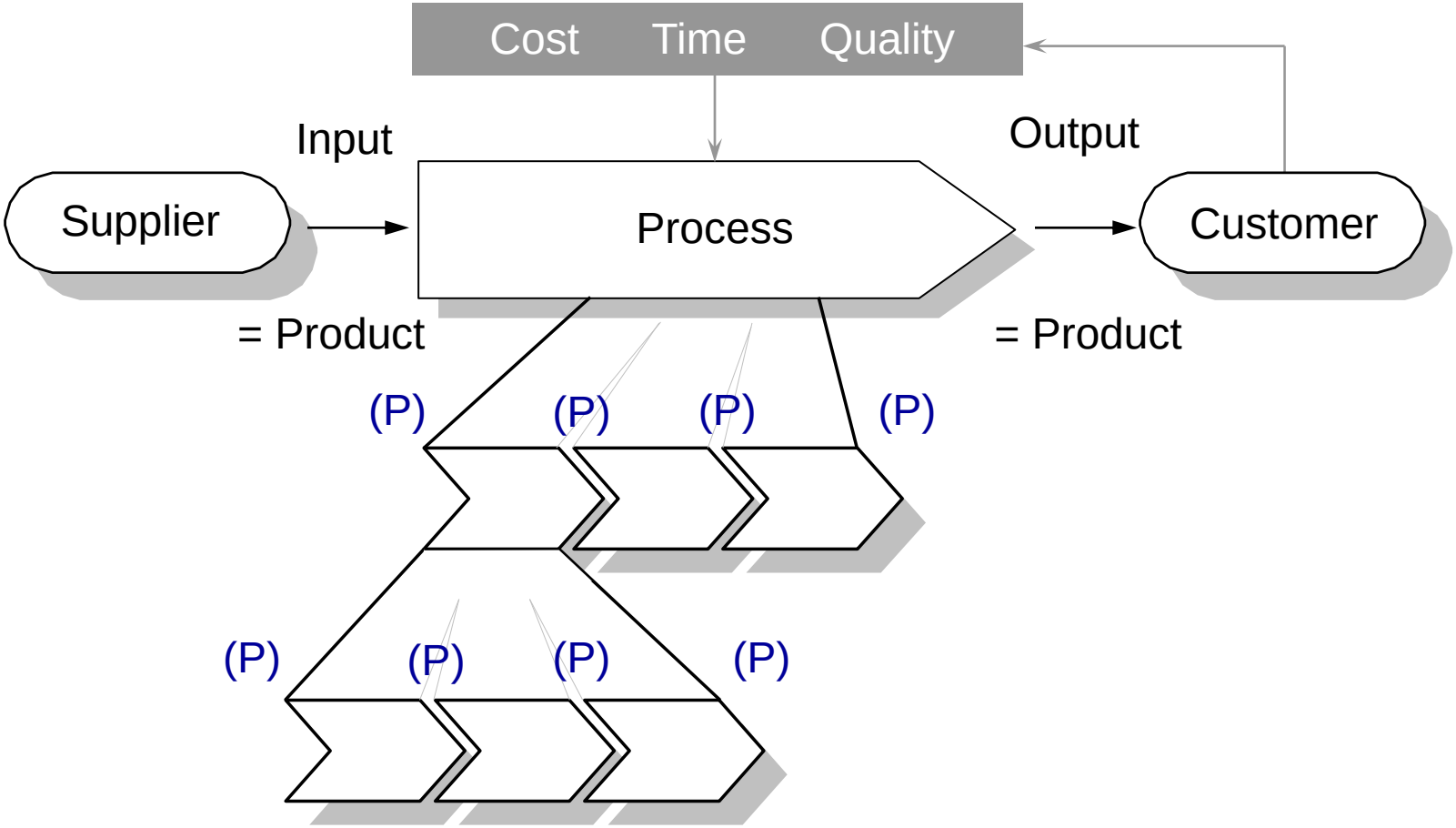
© Prof. Dr. Jan vom Brocke


Input
Output
Supplier
Process
Customer




Requirements
Input
Output
Supplier
Process
Customer
= Product
= Product


Cost
Time
Quality
Input
Output
Supplier
Process
Customer
= Product
= Product


Cost
Time
Quality
Input
Output
Supplier
Process
Customer
= Product
= Product
(P)
(P)
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What is BPM?

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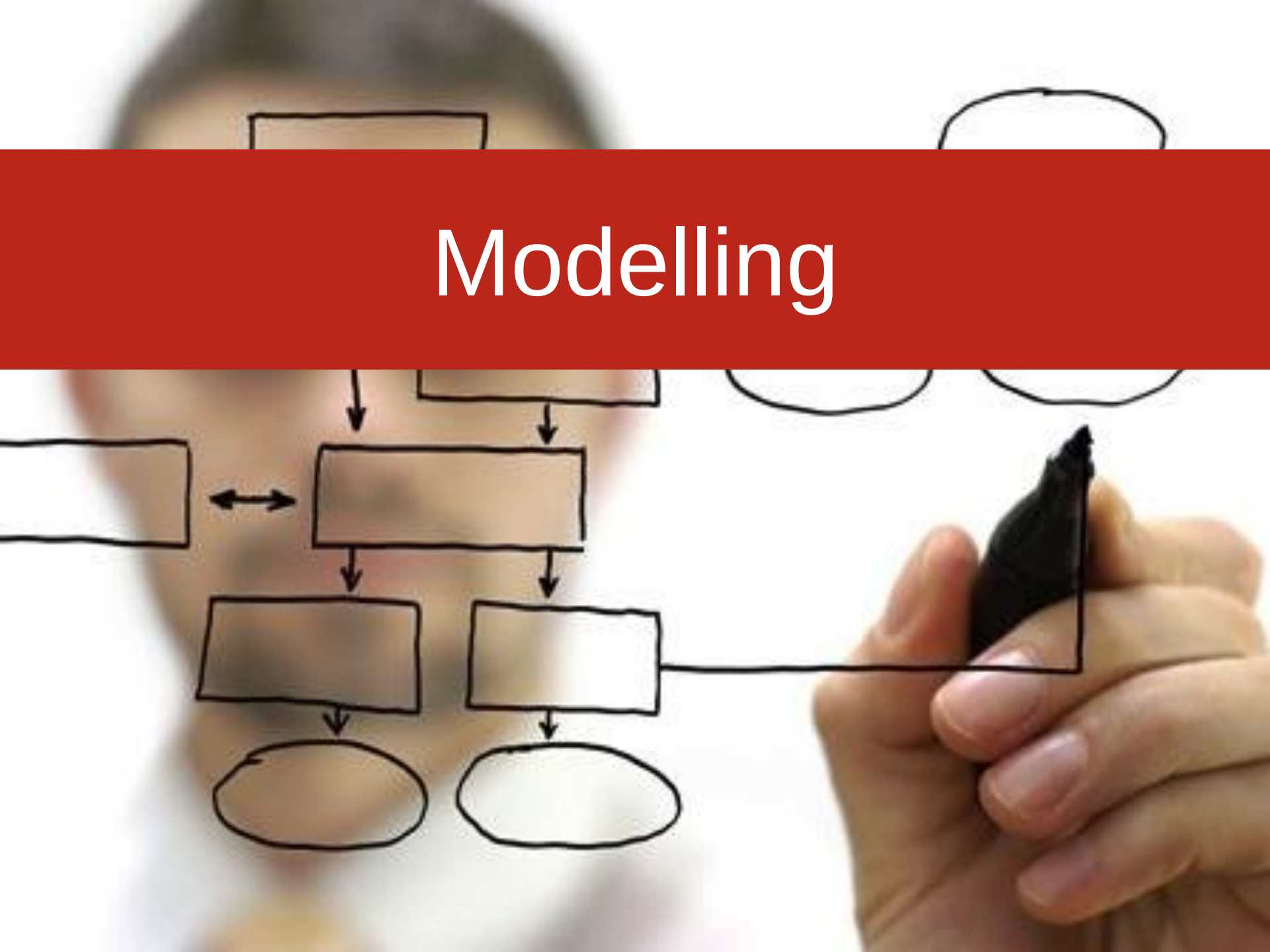
Modelling



Information Technology

Performance Measurement

Culture

BPM should

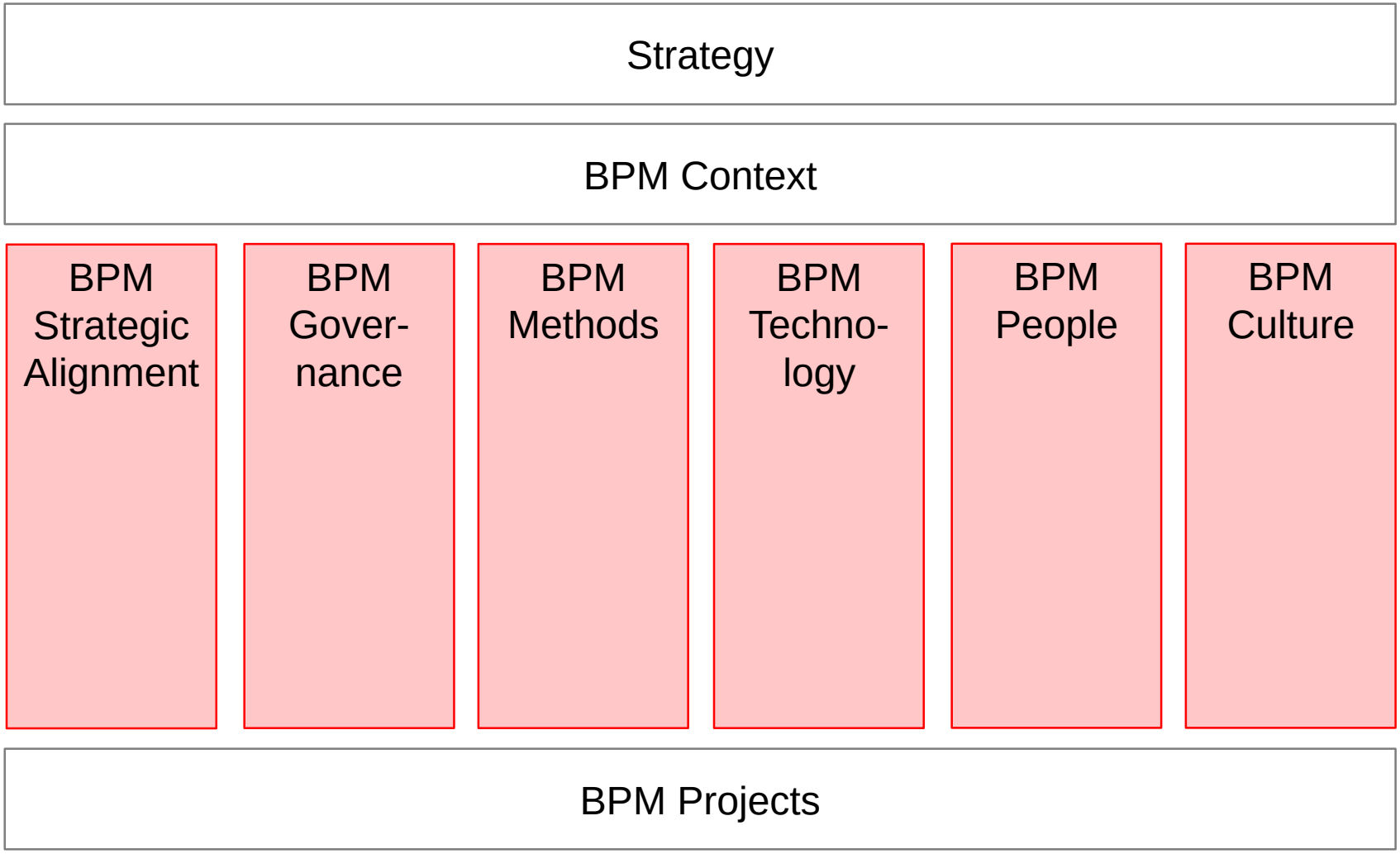
deliver

Business Value

through driving business

BPM should
play the
Symphony of …
modeling, technology, culture,
measurement, and more.

BPM Framework



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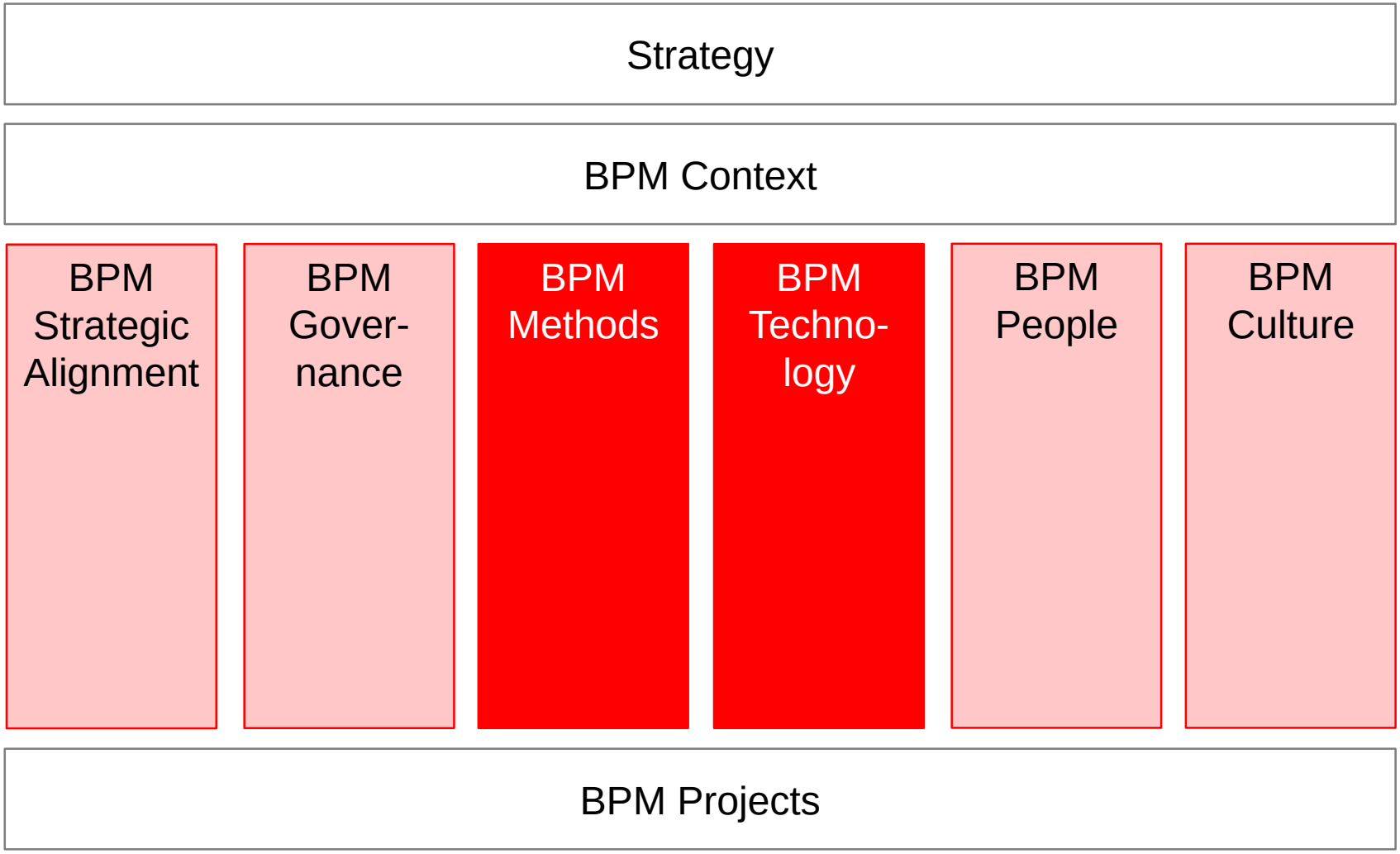
BPM Framework



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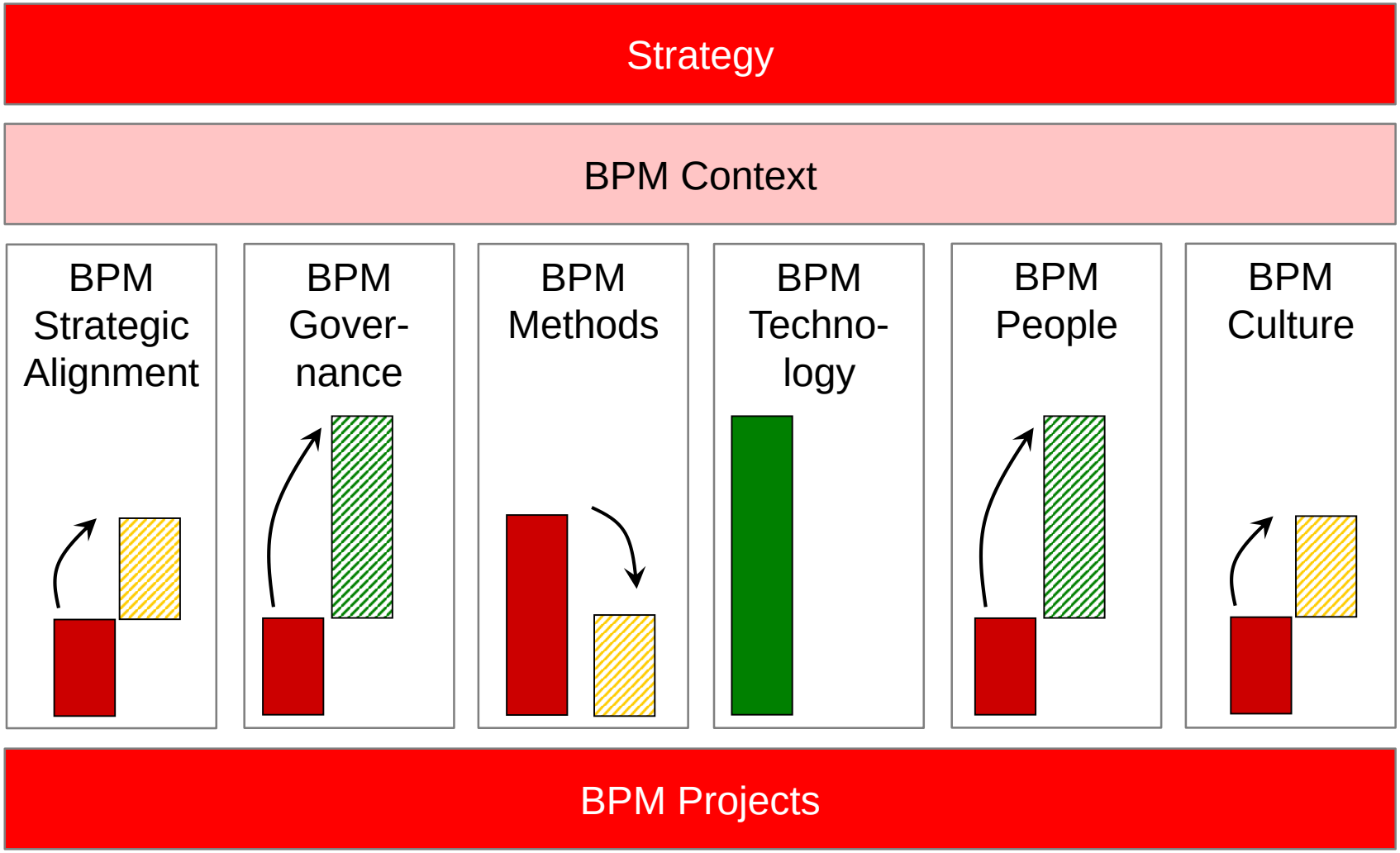
BPM Framework



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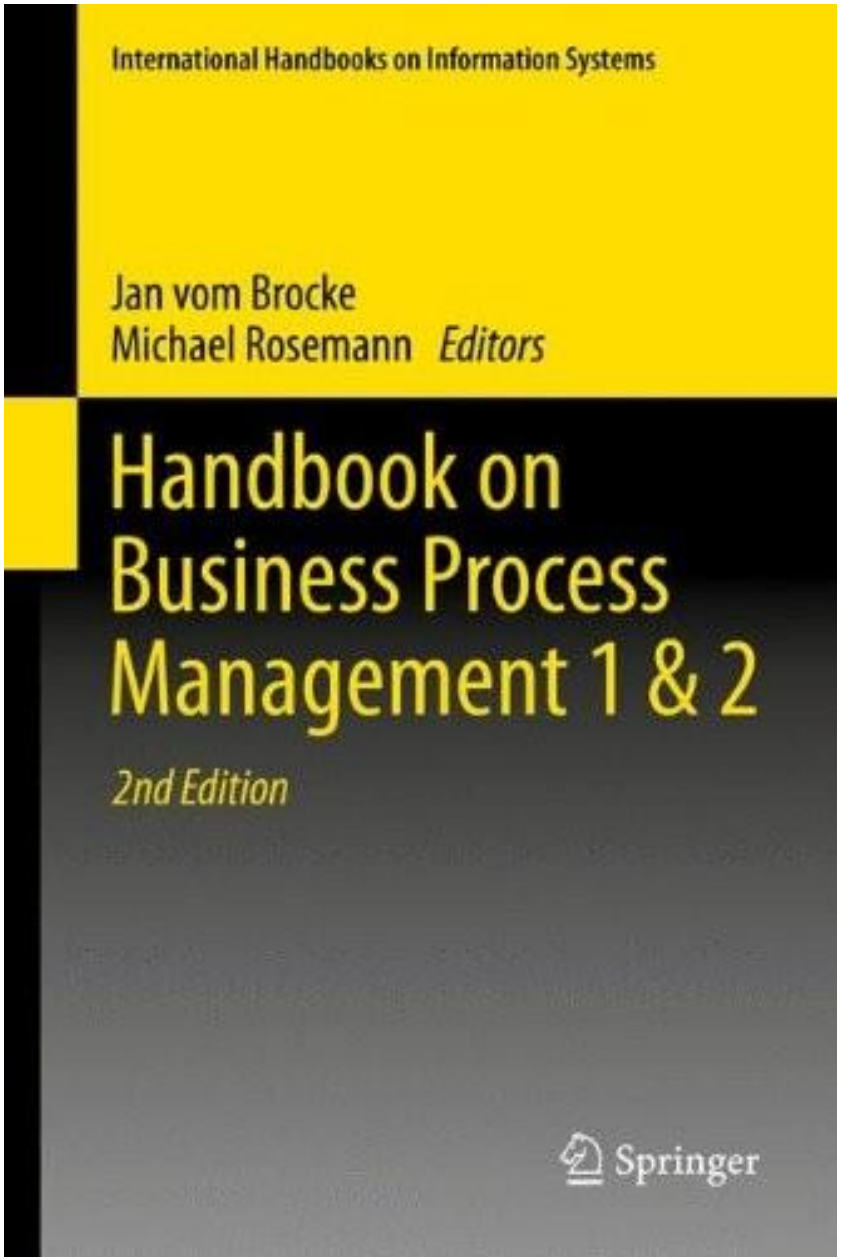

www.bpm-handbook.com

- Covers all six elements
- On 1.700 pages
- By 121 authors

- Including authors, such as Michael Hammer, Tom Davenport

- Cases from leading companies, such as Hilti, SAP, Lufthansa

- 1st edition 2010
- 2nd edition 2015

- Top 25% of Springers eBook Collection
- Translations to Portuguese -> Russian? ;-)

[vom Brocke, Rosemann 2015]

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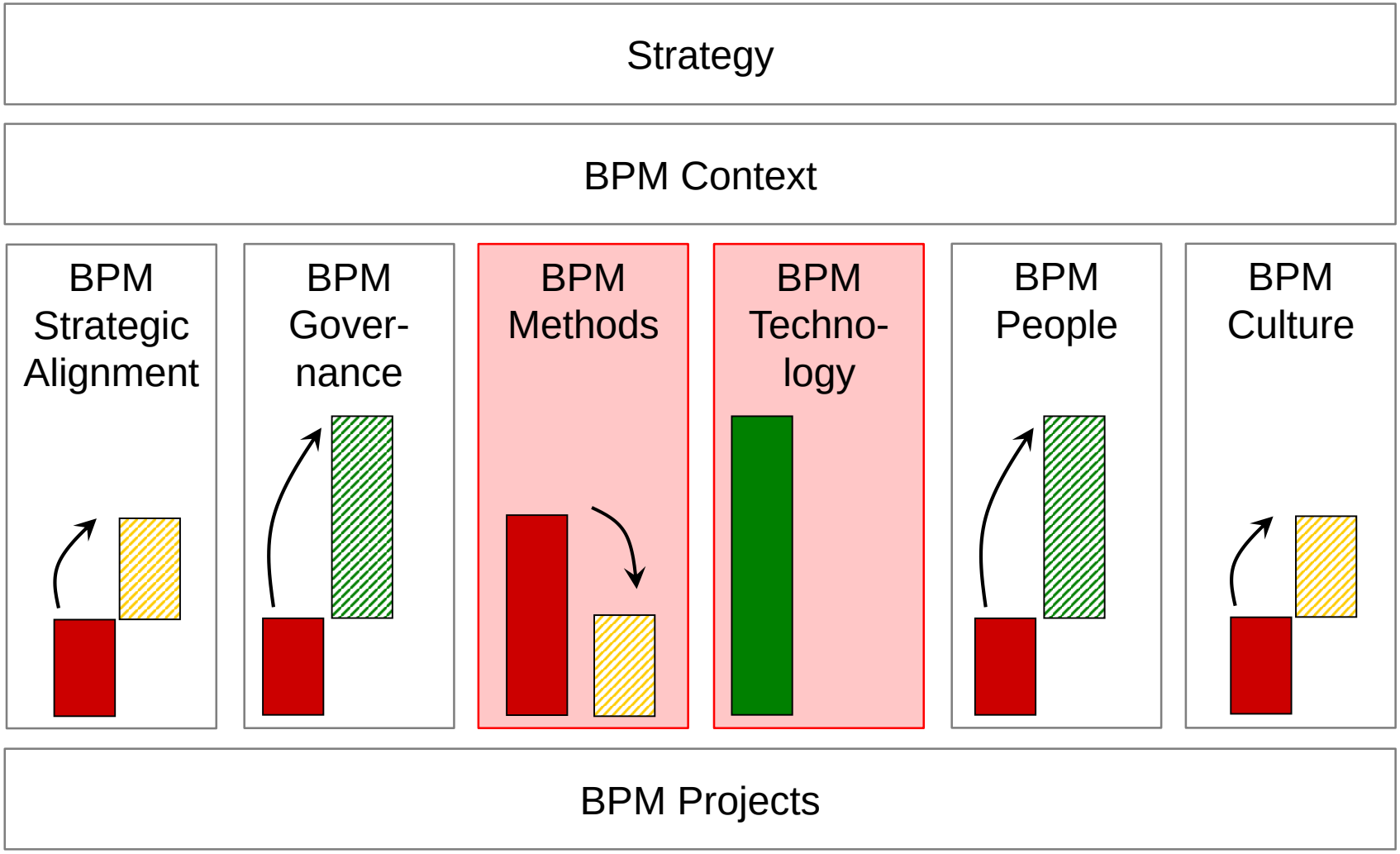
BPM Framework



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“

Data is the new oil”

Clive Humby

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Case: Analyzing the Voice of the Customer

Customer Care Note (CCN)
«Customer had registered tool (2 items) for pickup for purpose of maintenance (Retail Item). The pickup by 3PL failed, however, because nobody showed up on the construction site.»

UNIVERSITÄT LIECHTENSTEIN

Source: Müller, Junglas, Debortoli, vom Brocke, MISQe (2016)

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Topic 01	
uzm	0.12
nicht	0.11
sendung	0.06
zugestellt	0.05
info	0.04
abc	0.03
referenz	0.03
zustellung	0.03
empfänger	0.03
xyz	0.03

Topic 02	
says	0.14
rtm	0.11
failed	0.11
drs	0.11
pickup	0.11
not	0.04
arrived	0.03
adapter	0.02
nobody	0.02
reached	0.02

Topic 03	
nicht	0.12
kunde	0.07
passen	0.02
kartusche	0.02
braucht	0.02
kein	0.02
bekommen	0.02
falsch	0.02
auspressgerät	0.01
bestellt	0.01

Topic 04	
erhalten	0.09
nicht	0.09
rechnung	0.08
auftrag	0.08
kunde	0.07
gutschrift	0.06
zurück	0.03
schicken	0.03
mail	0.02
vb	0.02

Topic 05	
maintenance	0.21
te	0.09
customer	0.06
fleet item	0.05
fleet mgnt	0.04
vc	0.03
item	0.03
fleet	0.03
dd	0.03
number	0.02

Topic 06	
article	0.14
price	0.12
items	0.10
number	0.08
euro	0.06
wrong	0.06
pos	0.05
net	0.04
right	0.04
agreement	0.03

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Source: Müller, Junglas, Debortoli, vom Brocke, MISQe (2016)

Case: Analyzing the Voice of the Customer

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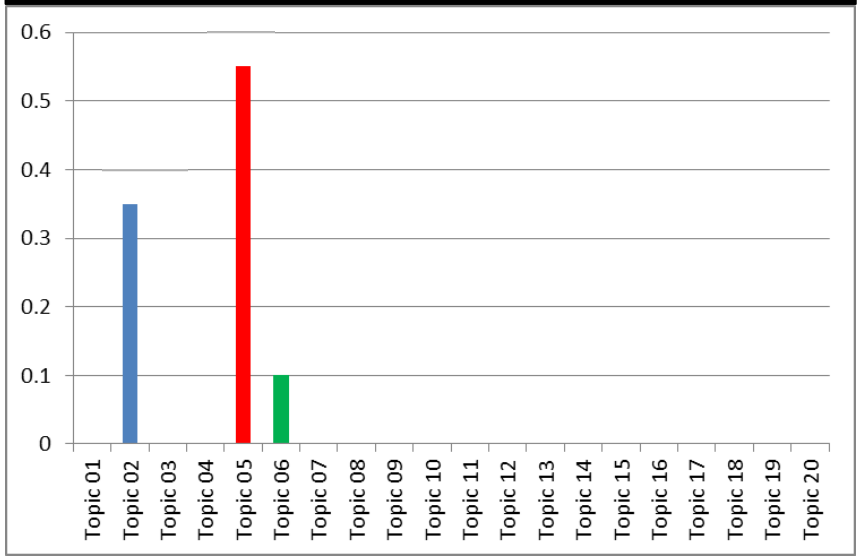
Topic Distribution



Topic 01	
uzm	0.12
nicht	0.11
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referenz	0.03
zustellung	0.03
empfänger	0.03
xyz	0.03

Topic 02	
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Topic 03	
nicht	0.12
kunde	0.07
passen	0.02
kartusche	0.02
braucht	0.02
kein	0.02
bekommen	0.02
falsch	0.02
auspressgerät	0.01
bestellt	0.01

Topic 04	
erhalten	0.09
nicht	0.09
rechnung	0.08
auftrag	0.08
kunde	0.07
gutschrift	0.06
zurück	0.03
schicken	0.03
mail	0.02
vb	0.02

Topic 05	
maintenance	0.21
te	0.09
customer	0.06
fleet item	0.05
fleet mgnt	0.04
vc	0.03
item	0.03
fleet	0.03
dd	0.03
number	0.02

Topic 06	
article	0.14
price	0.12
items	0.10
number	0.08
euro	0.06
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Source: Müller, Junglas, Debortoli, vom Brocke, MISQe (2016)

Case: Analyzing the Voice of the Customer

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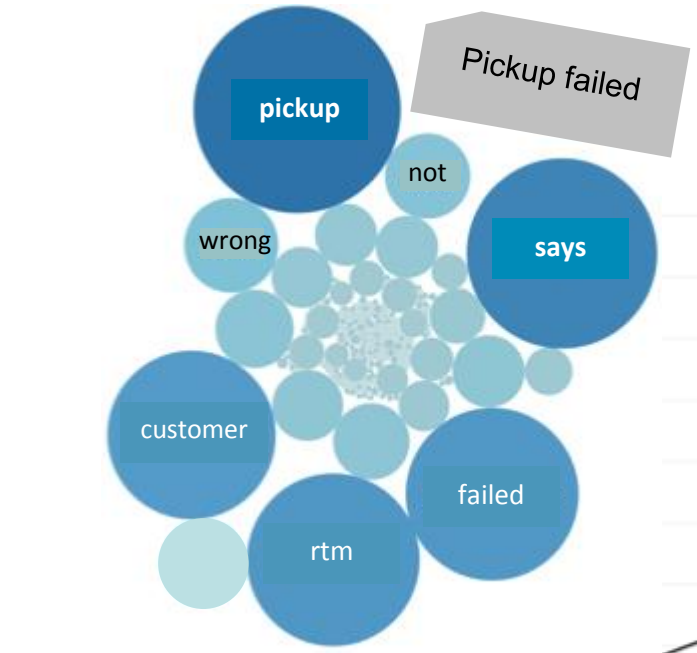

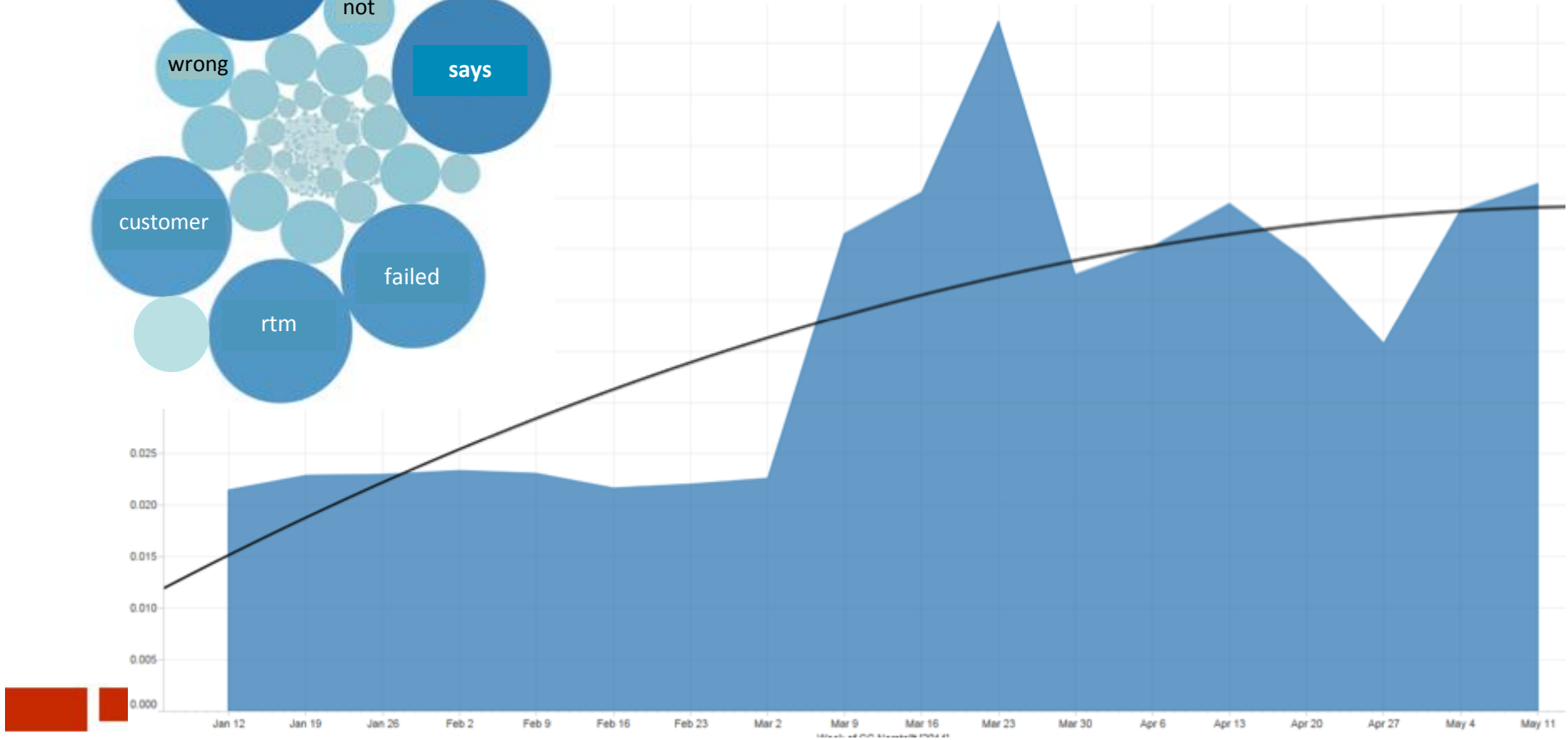

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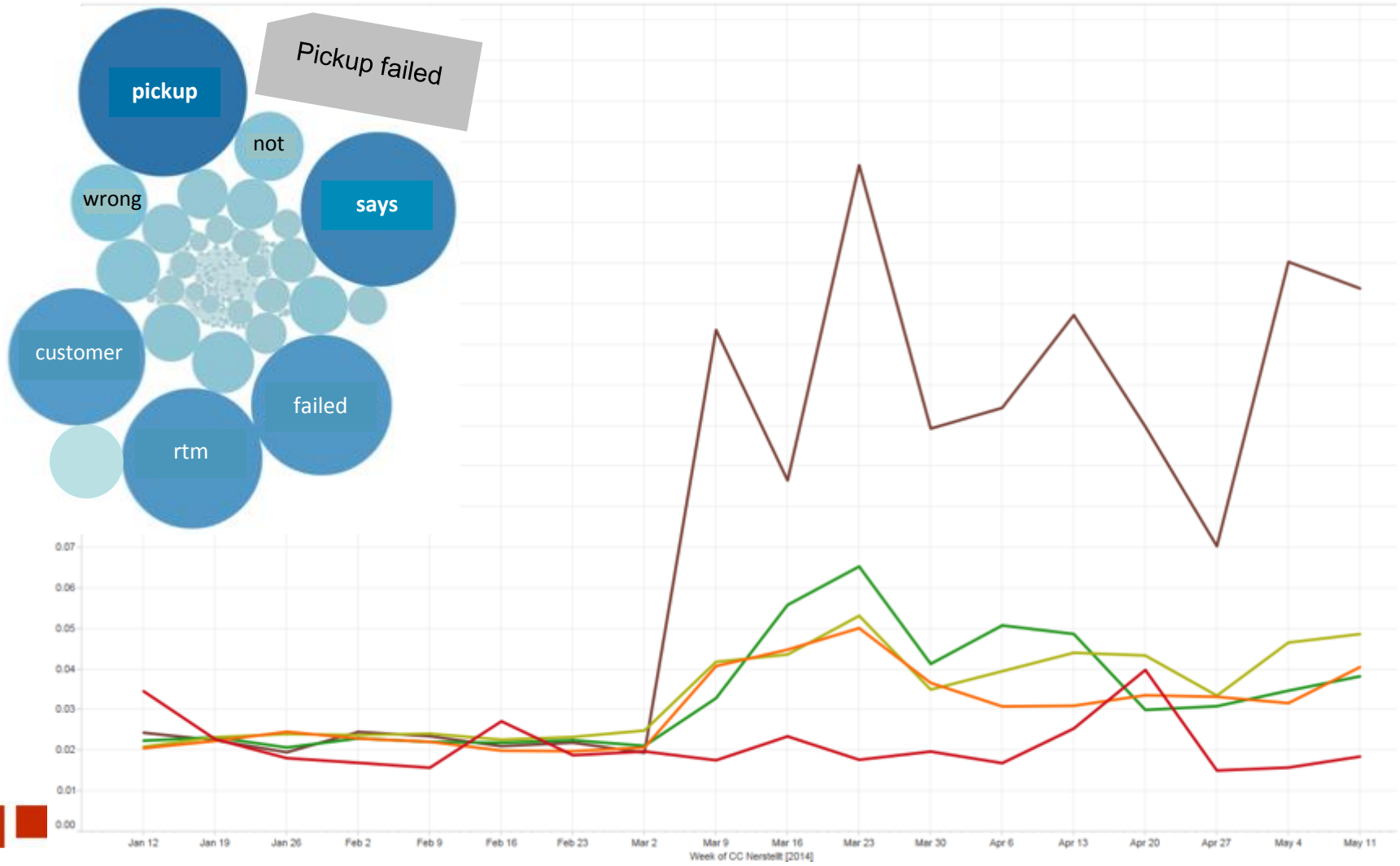
Case: Analyzing the Voice of the Customer



Source: Müller, Junglas, Debortoli, vom Brocke, MISQe (2016)

Case: Analyzing the Voice of the Customer

Trade Code	A	B	C	D	E
#N/A					
Civil Eng Contractor					
Commercial services					
Conveyance Systems					
Electrical Install'n					
Energy					
Food & Beverage Inds					
General contractors					
Institutions & Gover					
Interior Finishing					
Manufacturing Inds					
Mechanical Install'n					
Metal Processing Ind					
Mining Industries					
Other & diverse					
Petrochem&Ship Indus					
Pharmaceutical Ind.					
Rental / Tool Hire					
Services to Industry					
Specialized Industry					
Specialty Construct					
Steel/Metal					
Telecom					
Woodwork					

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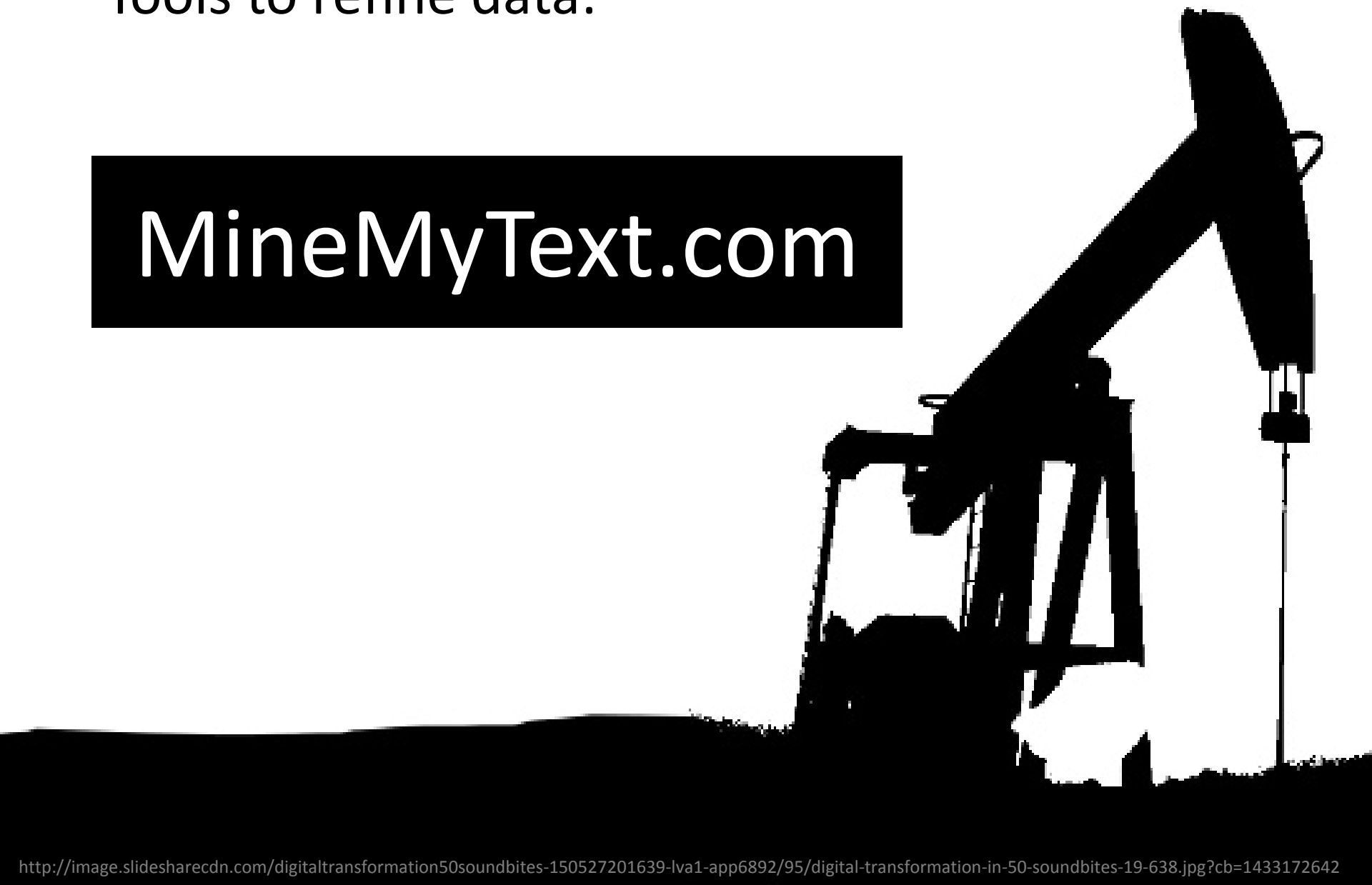
Source: Müller, Junglas, Debortoli, vom Brocke, MISQe (2016)

Whow to do this?

Tools to refine data:

MineMyText.com



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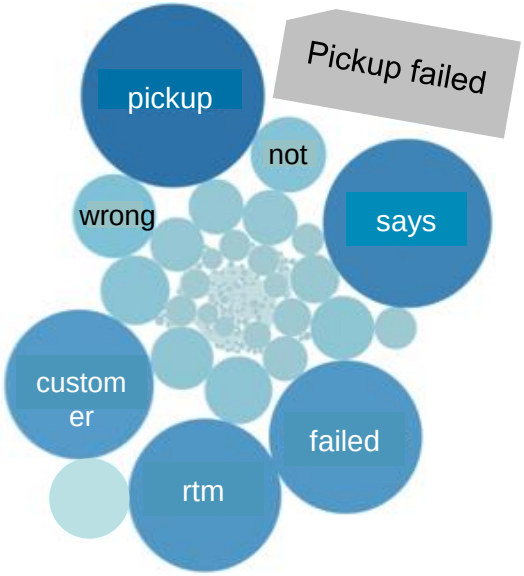
MineMyText.com - Suite

1. Upload Data 2. Set Parameters 3. Get Results



MineMyText.com - Suite

1. Upload Data
2. Set Parameters
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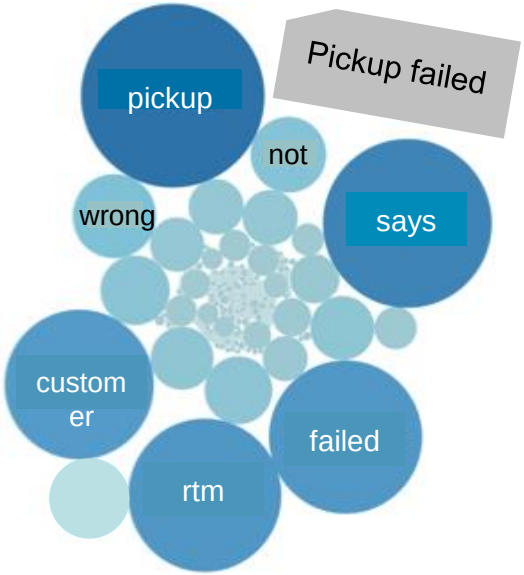
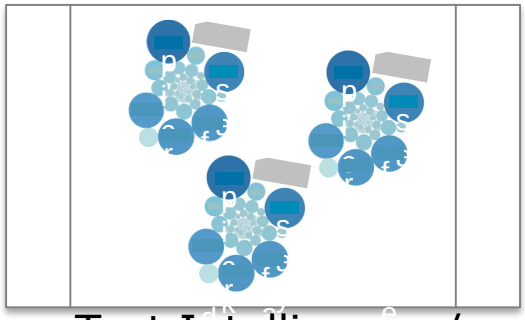


MineMyText.com - API

1. Call API

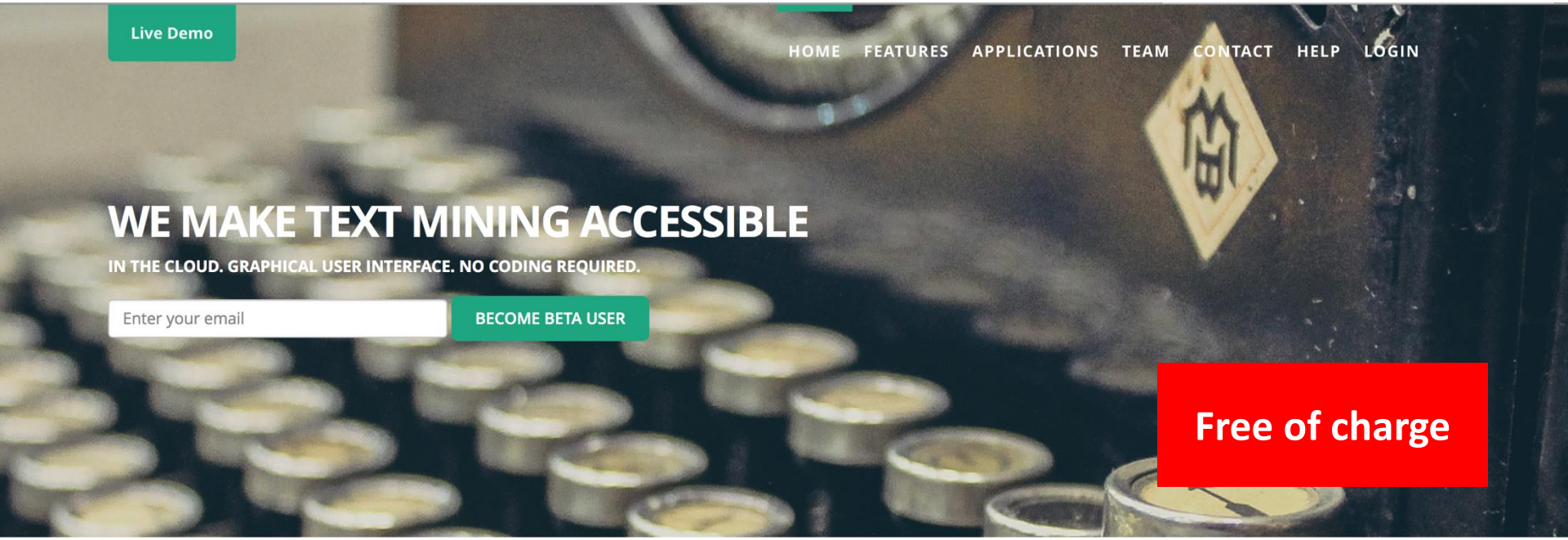


Text Intelligence /
Smart Services

2a. Process Optimization

2b. Process Innovation

MineMyText.com



TOPIC MODELING

Discover topics running through large collections of unstructured texts in a completely automated, data-driven manner.

SENTIMENT ANALYSIS

Quantify the positive and negative emotions expressed in texts. Observe the temporal dynamics of the emotions.

NATURAL LANGUAGE PRE-PROCESSING

Clean noisy texts through stopword removal, n-gram analysis, parts-of-speech tagging, stemming, and lemmatization.

VISUALIZATION

Visualize topics and sentiments in intuitive ways. Observe the emergence of new topics and apply drill down and filter options.

API AND WIDGETS

Manage your analysis via APIs and embed the results in the frontend tool of your choice with our selection of widgets.

The data-driven company

R&D by “Customer Feedback” at Starbucks

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http://bargainbabe.com/wp-content/uploads/2015/03/Starbucks-Frappuccino11-300x281.png

Management by “Customer Feedback” at AVIRA

https://lh5.googleusercontent.com/-pkN27GTLL3U/AAAAAAAAAAI/AAAAAAAAAAng/4zB8sSaaTNI/s0-c-k-no-ns/photo.jpg

Lessons learned

- In order to generate value through digital technology you need to innovate processes through digital technology
- Business Process Management is a rich field with fantastic job opportunities
- BPM is about innovative technology, methods, governance, strategic alignment, people and culture

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Study Further Education Research Transfer Liechtenstein University

Master`s degree programme in Information Systems (MSc)

Contact me!

Professor
Jan vom Brocke

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