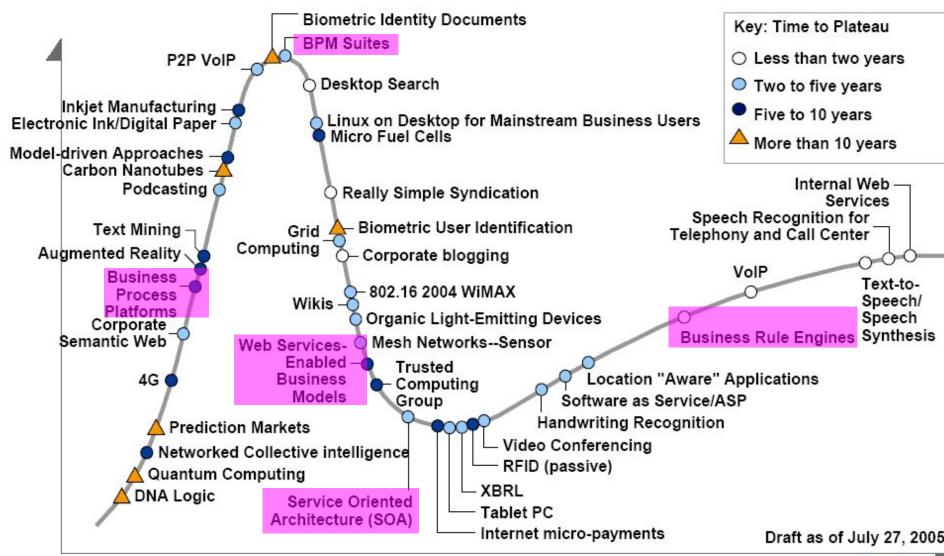
The Past, Present and Future of Business Process Management Prof. Dr. Jan Mendling (WU Vienna)



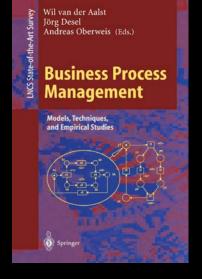


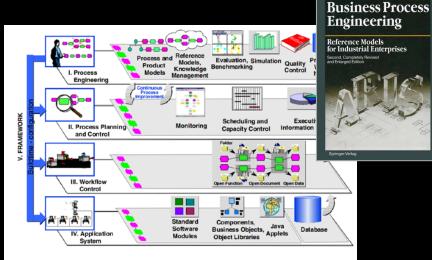
GREAT.





# BPM in the year 2000

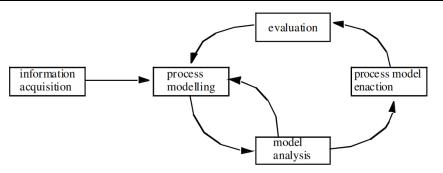




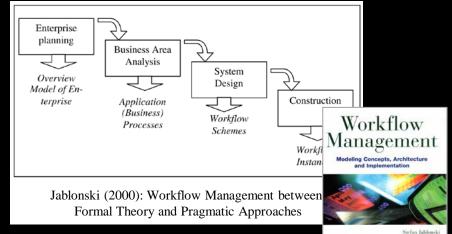
A-W. Scheer

Christoph Bussler

Scheer/Nüttgens (2000). ARIS Architecture and Reference Models for Business Process Management

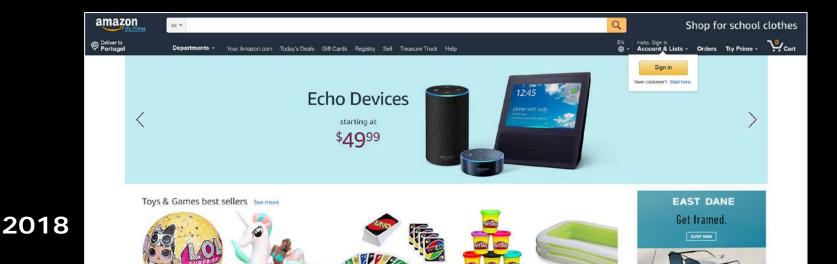


Deiters (2000). Information Gathering and Process Modeling in a Petri Net Based Approach





#### How business processes have changed



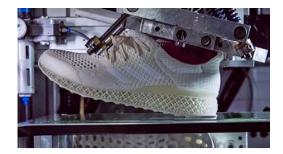
## **Turbulent Times for many industries**







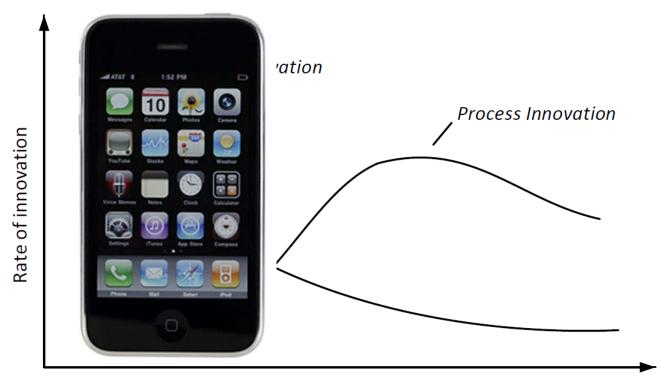








# Old Wisdom by Utterback & Abernathy (1975)

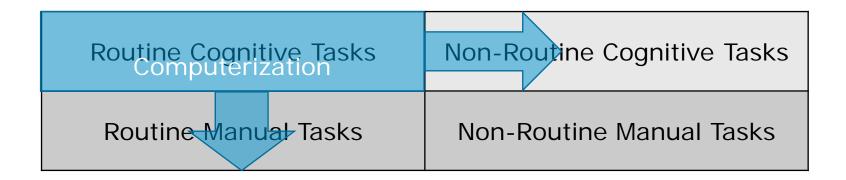


WIEN VIENNA UNIVERSITY OF ECONOMICS AND BUSINESS

Stage of development

### **Computerization of Tasks**





Autor, D. H., Levy, F., & Murnane, R. J. (2003). The skill content of recent technological change: An empirical exploration. *The Quarterly journal of economics*, *118*(4), 1279-1333.

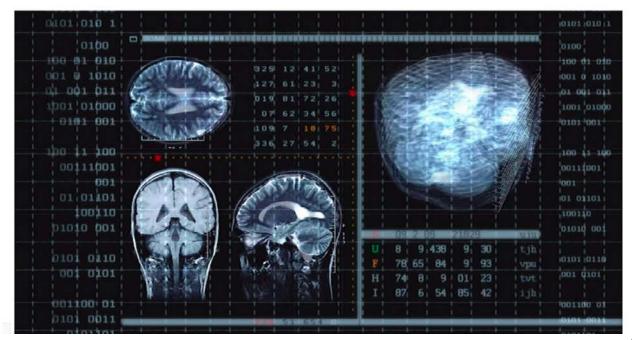
**Computerization of non-routine cognitive tasks** 



#### HEALTH

# Watson goes to Asia: Hospitals use supercomputer for cancer treatment

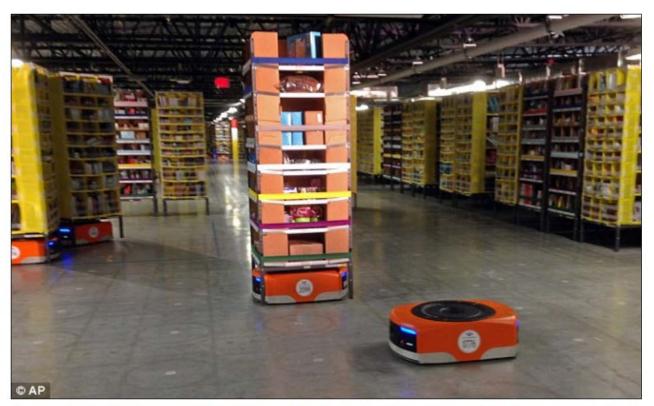
By IKE SWETLITZ @ikeswetlitz / AUGUST 19, 2016



https://www.statnews.com

### **Computerization of routine manual tasks**

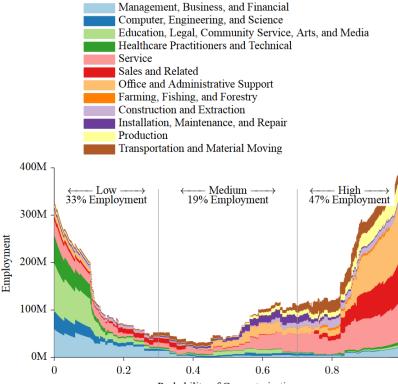




Amazon has added more soldiers to its robot army over the past year. The e-commerce giant now has 45,000 robots shuffling products around 20 distributions centers. This is a 50% increase from the 2015 holiday season when the company reported 30,000 robots

### **Impact of Computerization on Tasks**





Probability of Computerisation

Frey, C. B., & Osborne, M. A. (2017). The future of employment: how susceptible are jobs to computerisation?. *Technological Forecasting and Social Change*, *114*, 254-280.

### **Organizating BPM of Today**



#### Fundamentals of Business Process Management

Marlon Dumas Marcello La Rosa Jan Mendling Hajo A. Reijers

Deringer



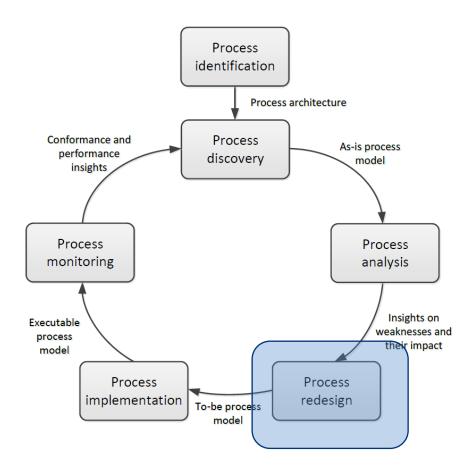
#### Fundamentals of Business Process Management

Marlon Dumas · Marcello La Rosa Jan Mendling · Hajo A. Reijers

Second Edition

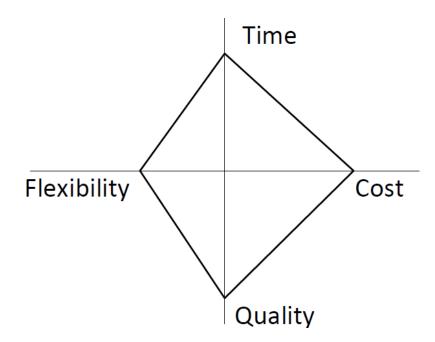
O Springer

## 1) Redesign has changed





#### The Devil's Quadrangle



#### **Elements of Redesign**

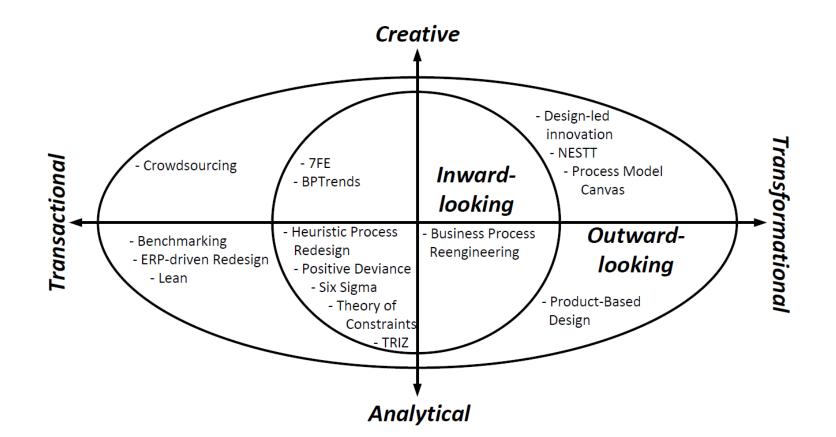
- Customers
- Business Process Operation
- Business Process Behavior
- Organization
- Information
- Technology
- External Environment

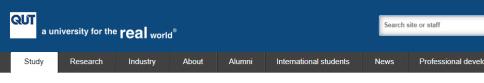
# Putting back the "Design" into Redesign



#### **The Process Redesign Orbit**







★ Study → Short courses and professional development → Rapid process redesign with the NESTT

#### Rapid process redesign with the NESTT

Overview Details Register your interest



#### Make a real difference

Working collaboratively over the three days of the course, you'll learn to dramatically change organisational processes to achieve a more efficient, pain-free experience for service users.

The NESTT is a rapid process redesign methodology developed by QUT's business process management discipline. It combines approaches from diverse fields like process improvement, agile development, project management and design thinking into a unique methodology.

Pregister your interest for future courses.

The NESTT is tailored for complex business processes that require transformational

change in a short period. It's a people-focused approach with new ideation tools to ensure a comprehensive design space. User validation and business cases convert this design space into pragmatic solutions targeting the defined success measures.

QUT has conducted a number of successful redesign projects with the NESTT, leading to substantial organisational improvements.

#### Who should participate

This course is designed for business analysts, project managers, service owners and managers in business improvement units.

Delivery

Where:

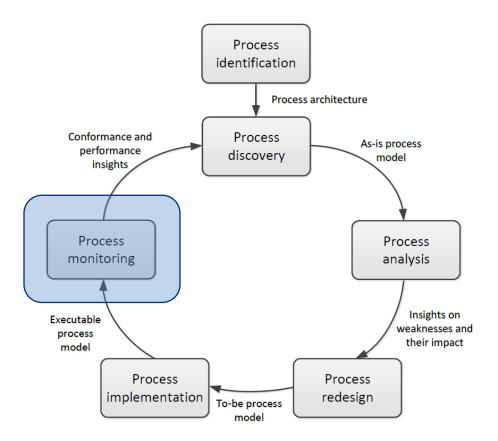
#### The Future

20 mths 20 days 2020 Process Vision - Ideas The to-be process People – Systems - Documents Policies - Procedures The Resources Customer Journey Map The As-is Process – Issues

WON 94T

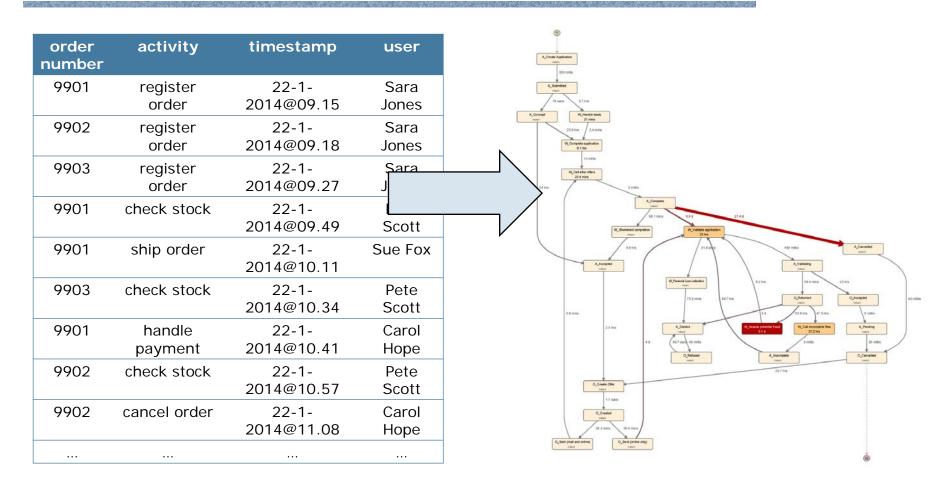
Guidelines

#### 2) Process Monitoring has changed



# **Process Mining**

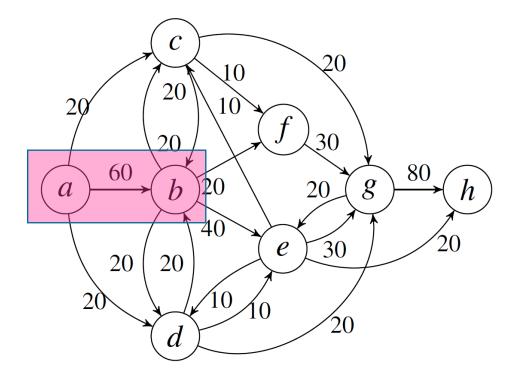




### **Behavioural Relationships**



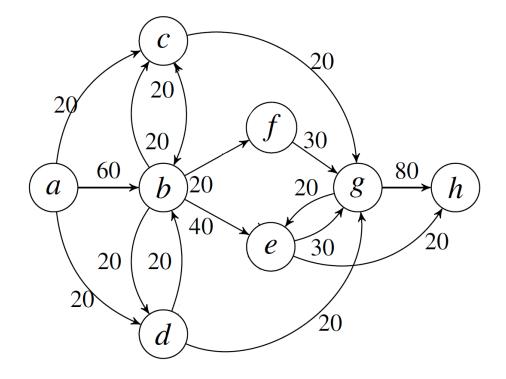
**Event log:** 10: a,b,c,g,e,h 10: a,b,c,f,g,h 10: a,b,d,g,e,h 10: a,b,d,e,g,h 10: a,b,e,c,g,h 10: a,b,e,d,g,h 10: a,c,b,e,g,h 10: a,c,b,f,g,h 10: a,d,b,e,g,h 10: a,d,b,f,g,h

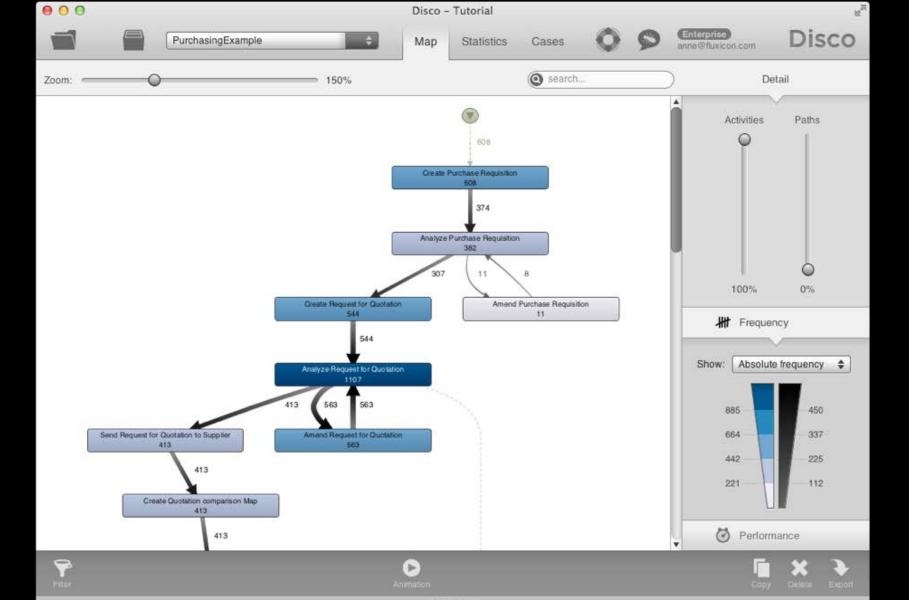




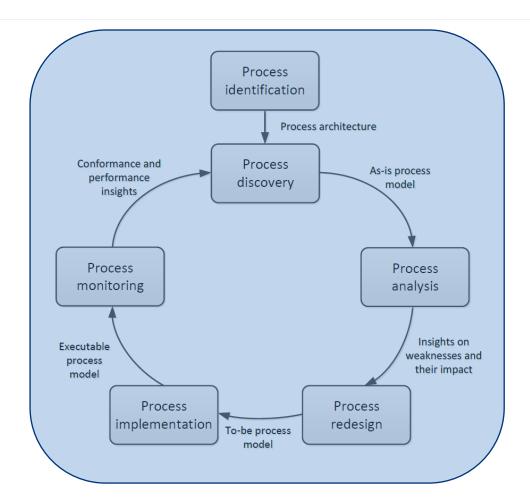
#### **Event log:**

- 10: a,b,c,g,e,h
  10: a,b,c,f,g,h
  10: a,b,d,g,e,h
  10: a,b,d,e,g,h
  10: a,b,e,c,g,h
  10: a,b,e,d,g,h
  10: a,c,b,e,g,h
  10: a,c,b,f,g,h
- 10: a,d,b,e,g,h
- 10: a,d,b,f,g,h





#### 3) The scope of BPM has changed



# **Factors of BPM Maturity**

Methods	Information Technology			
Process	Process			
identification	identification			
and discovery	and discovery			
Process analysis	Process analysis			
and redesign	and redesign			
Process	Process			
implementation	implementation			
and execution	and execution			
Process	Process			
monitoring	monitoring			
BPM project and	BPM project and			
program	program			
management	management			

### **Differing BPM Maturity Profiles**

Level	Label	Strategic Alignment	Governance	Methods	Information Technology	People	Culture
5	Optimizing	•	_٩	1	-9		
4	Quantitatively managed						
3	Defined						-
2	Managed	•			•		•
1	Initial	•	•				

#### **BPM of the Future**

# 1) Future BPM Objectives: Innovative Restructuring of Tasks and Coordination

"The extent of computerisation in the twenty-first century will thus partly depend on innovative approaches to task restructuring." Frey/Osbourne 2017





# 2) Future Types of Technology have Impact on Processes

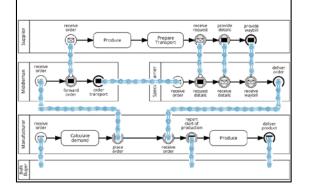
#### Automational Effect

- Makes process faster
- Provides scaling
- Potential to reduce cost



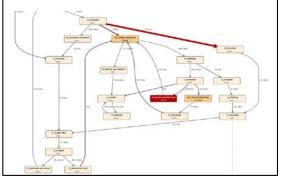
#### **Transformational Effect**

- Provides new way of coordination with partners
- Provides new way of collaboration with partners



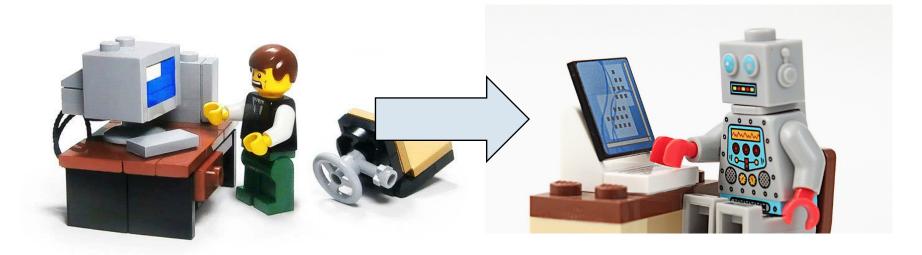
#### Informational Effect

- Provides transparency
- Makes processes better visible and understandable



# Automational Effects: Robotic Process Automation

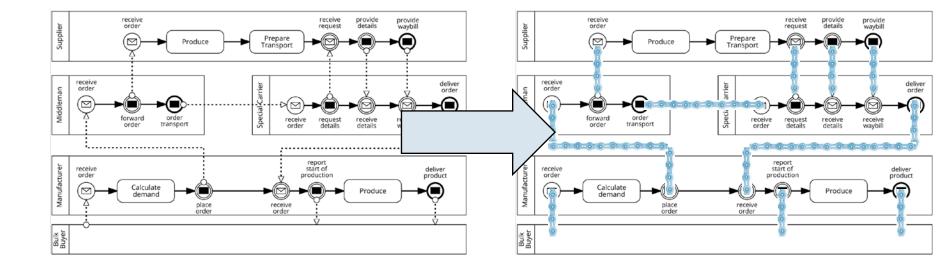




Sources: https://www.icapps.com/blog/linguistics-behind-chatbots https://www.reddit.com/r/lego/comments/6ajmq7/lego\_computer\_desk/

# **Transformational Effects: Blockchains**







Time

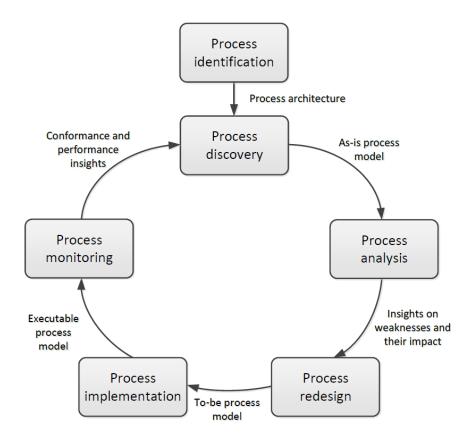
#### gartner.com/SmarterWithGartner

Source: Gartner (July 2017) © 2017 Gartner, Inc. and/or its affiliates. All rights reserved.

Expectations

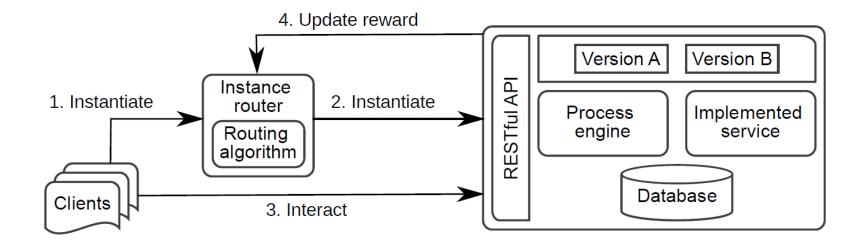
# **Gartner**

#### 3) Future shortcuts in the BPM lifecycle



#### **AB-BPM** Architecture





Satyal, S., Weber, I., Paik, H. Y., Di Ciccio, C., & Mendling, J. (2018). Business Process Improvement with the AB-BPM Methodology. *Information Systems*.

17<sup>th</sup> International Conference on Business Process Management Vienna, 1-6 Sept 2019



Email: jan.mendling@wu.ac.at Twitter: @janmendling