



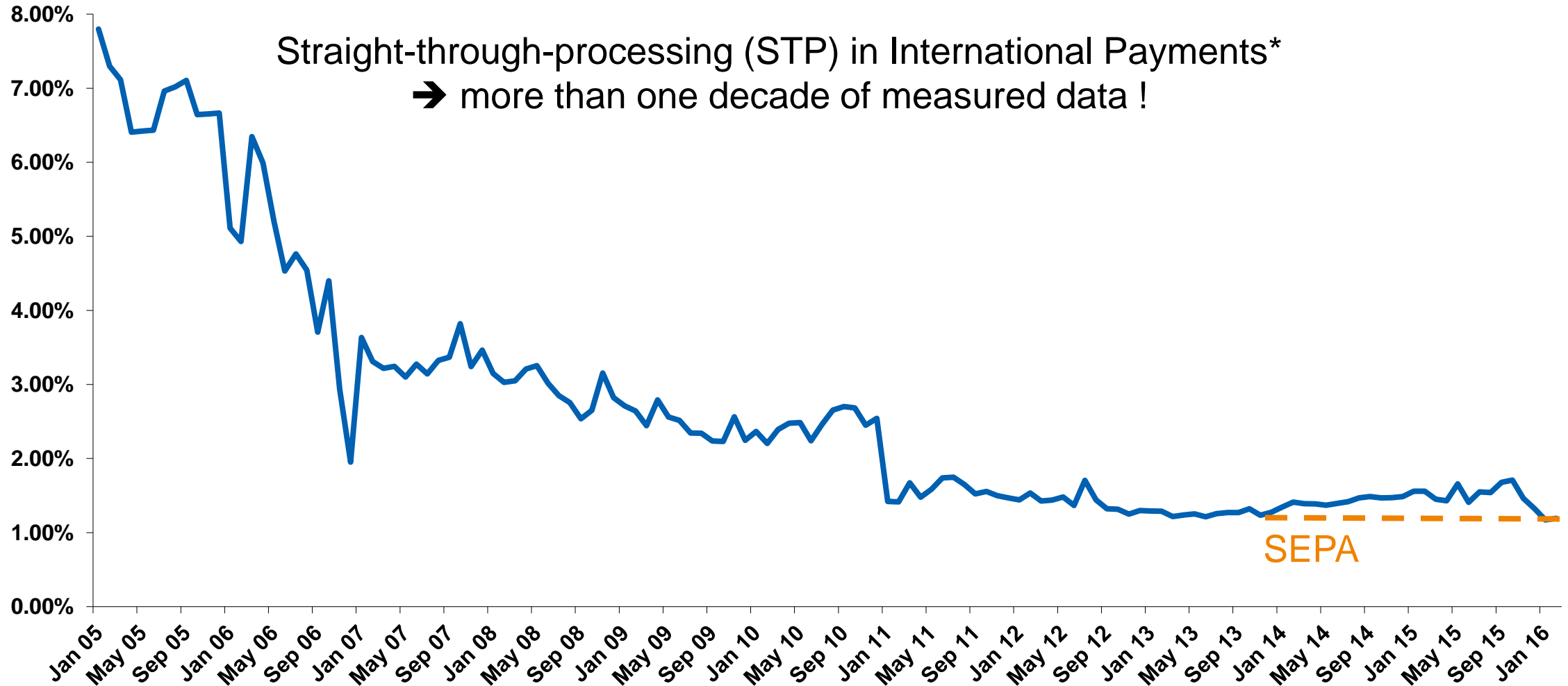
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Robotic Process Automation and more ...

Dr. Udo Milkau, Chief Digital Officer, Transaction Banking, DZ BANK
ECB, Frankfurt, March 9, 2017

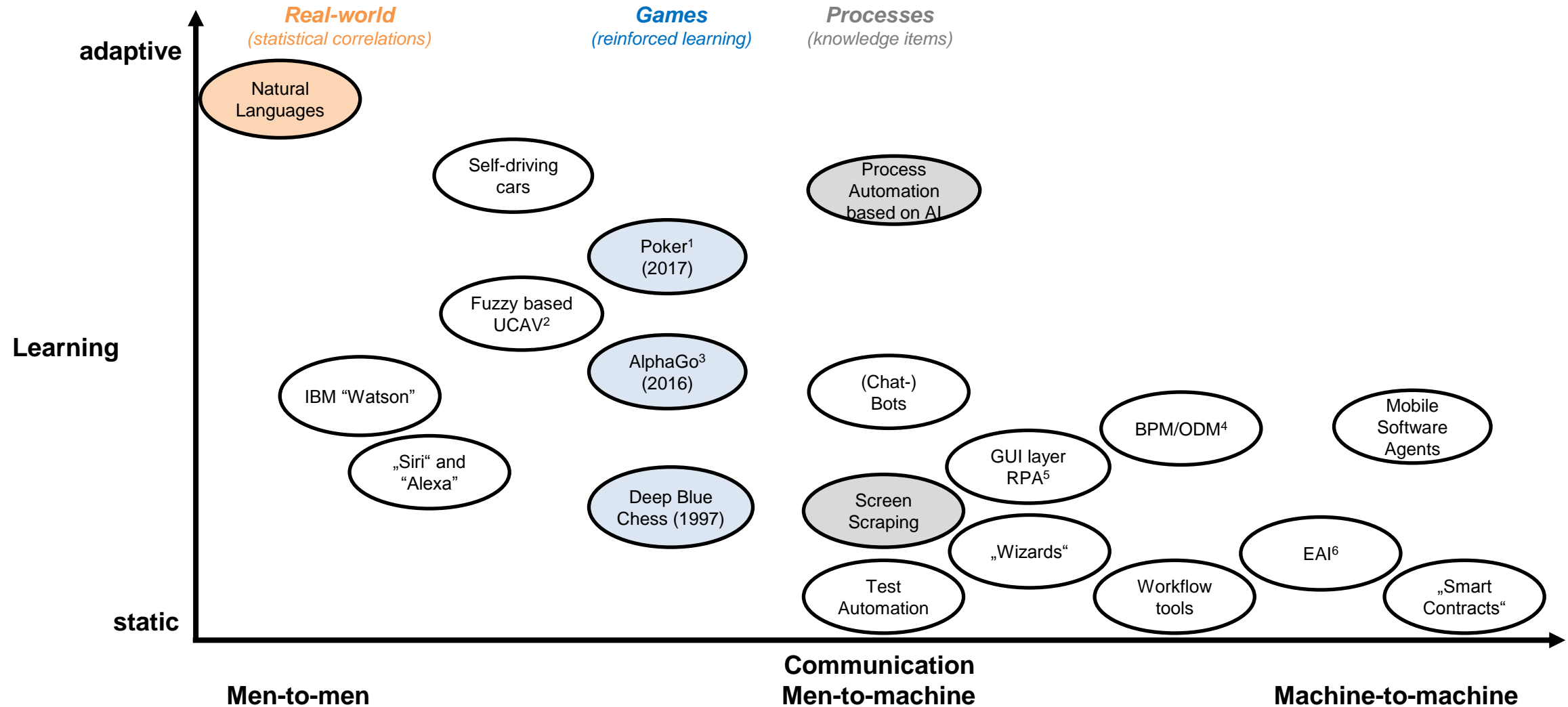
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Traditional approach to optimise: Systems with static code, scripts, rules ...



*) Source: Udo Milkau "A Six Sigma type of quality management in international and high-value payments", Journal of Payments Strategy & Systems, Vol.5/4, 2011 / updated March 2016

A Taxonomy of 'Robots' and Automation



1) human problem solving of issues not predicted before ; 2) ex-ante deterministic = programmable or recordable 3) Unmanned Combat Aerial Vehicle; 4) based on tree search + Artificial Neural Networks + reinforcement learning; 5) Cognitive systems ... do not "know" the answer. Rather, they are designed to weigh information and ideas from multiple sources, to reason, and then offer hypotheses for consideration." (John E. Kelly III "Computing, cognition and the future of knowing", IBM, Oct. 2015), 6) Business Process Management / Operational Decision Management; 7) Robotic Process Automation; 8) Enterprise Application Integration; *) Artificial Intelligence

Discussion

- Automation of sub-optimal processes leads automated sub-optimal processes.
→ Before automation a reduction of products and review of processes are required.
- Cost reduction (full costs) can be achieved by different approaches:
→ from offshoring to substitution of labour costs by technical costs.
- RPA with AI requires a good understanding of the opportunities but also of the requirements.
→ This is linked to a change of paradigm from the reductionism of Frederick Winslow Taylor, Henry Ford, and Henri Fayol* to the complex “digital” world of the 21st century.

*) “five functions of management”: planning, organizing, commanding, coordinating, and controlling (Fayol, Henri "Administration industrielle et générale; prévoyance, organisation, commandement, coordination, controle" H. Dunod et E. Pinat, Paris, 1917)