technische universität
dortmund

Lehrstuhl für Enterprise Computing
Fakultät für Informatik

Business Process Management
Virtual Lecture Series

The Long Tail of Business Processes

Virtual Lecture Series on Business Process Management

Say “Hi” to Dave!

- This is **Dave**
- **For the past 10 years**, Dave has successfully led his medium-sized company as CEO
- He’s **always relied on BPM** to leverage organizational performance

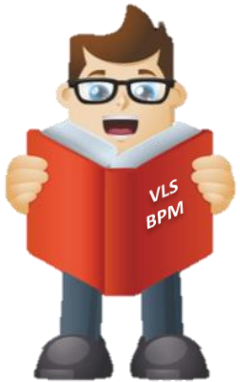
Say “Hi” to Dave!

- This is **Dave.**
- **For the past 10 years**, Dave has successfully led his medium-sized company as CEO
- He’s **always relied on BPM** to leverage organizational performance

- Recently, however, **Dave‘s company is increasingly losing market shares** to competitors – especially to highly digitalized start-ups

Say “Hi” to Dave!

- Dave’s **smart**, though
- Dave read about the ongoing **infusion of digital technology**, the **ongoing digital transformation** of businesses and highly **disruptive business model innovations**
- Ultimately, he read about the **Long Tail of Business Processes**



“Digitalization Is Eating Traditional BPM”

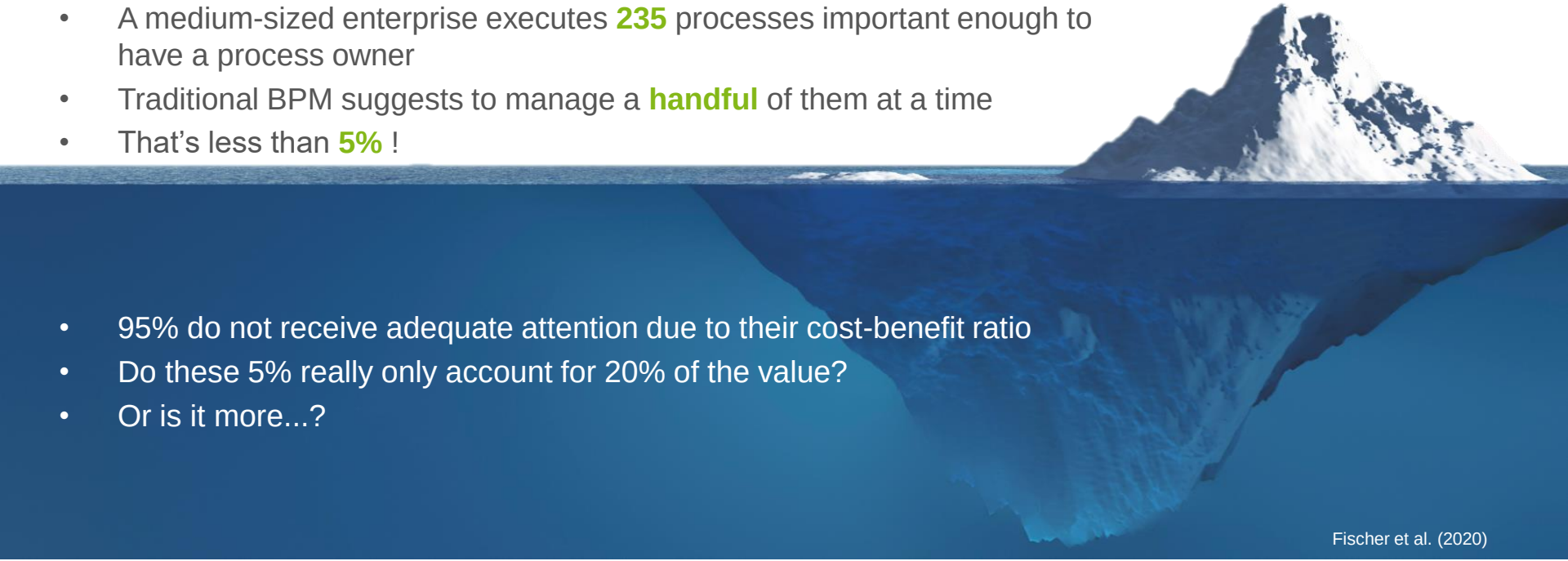
Top-down organized BPM

In practice, we observe two kinds of BPM

Bottom-up organized BPM

A Case with a Medium-sized Enterprise

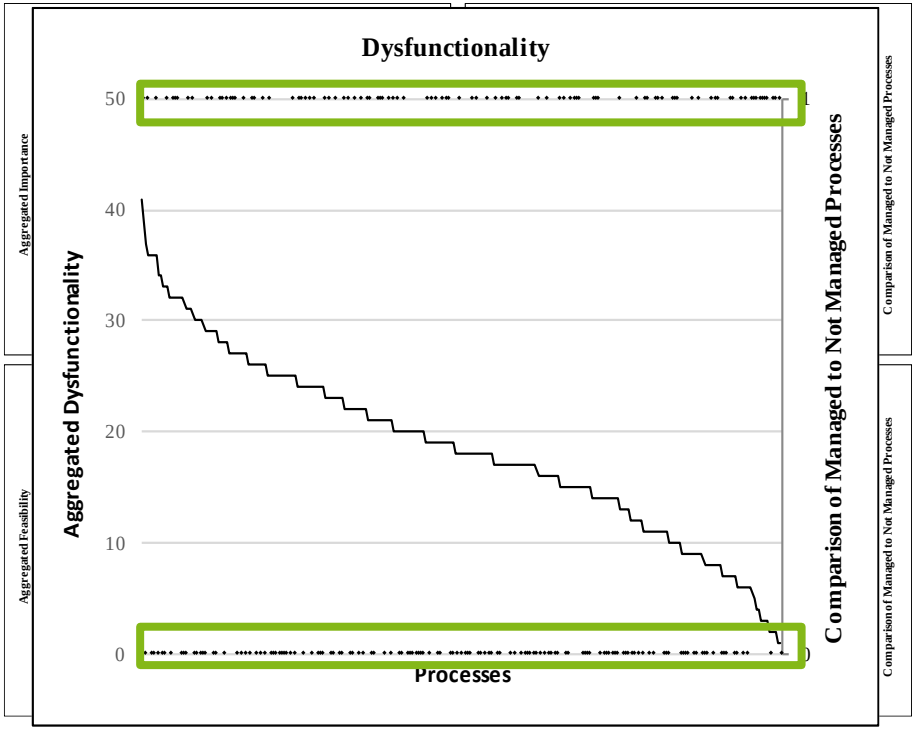
- A medium-sized enterprise executes **235** processes important enough to have a process owner
- Traditional BPM suggests to manage a **handful** of them at a time
- That's less than **5%** !



- 95% do not receive adequate attention due to their cost-benefit ratio
- Do these 5% really only account for 20% of the value?
- Or is it more...?

Fischer et al. (2020)

Distribution of Managed Processes



Fischer et al. (2020)

Intermediate Findings

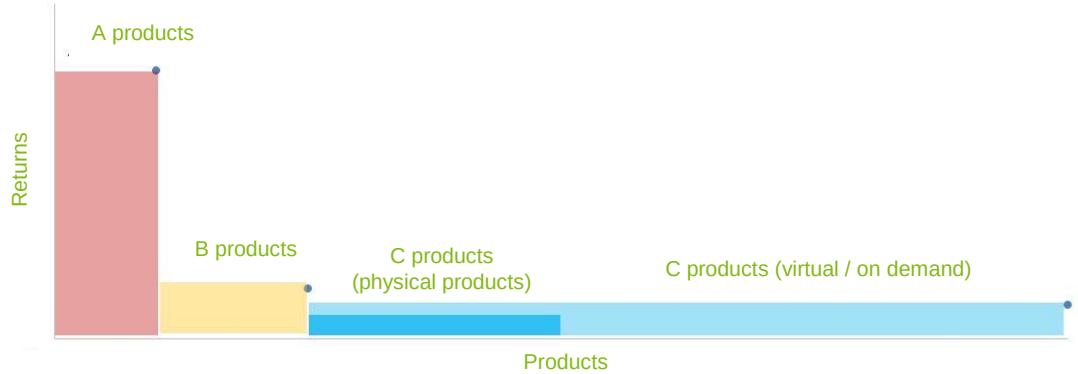
- Our findings indicate, that **neither central nor decentral BPM approaches** can fully realize the improvement potential in all processes of an organization

Intermission: Some theory

Long Tail Economics

- If you thought this was the **long tail**, you got it all wrong:

- That's more like it:



Cf. Anderson (2006)

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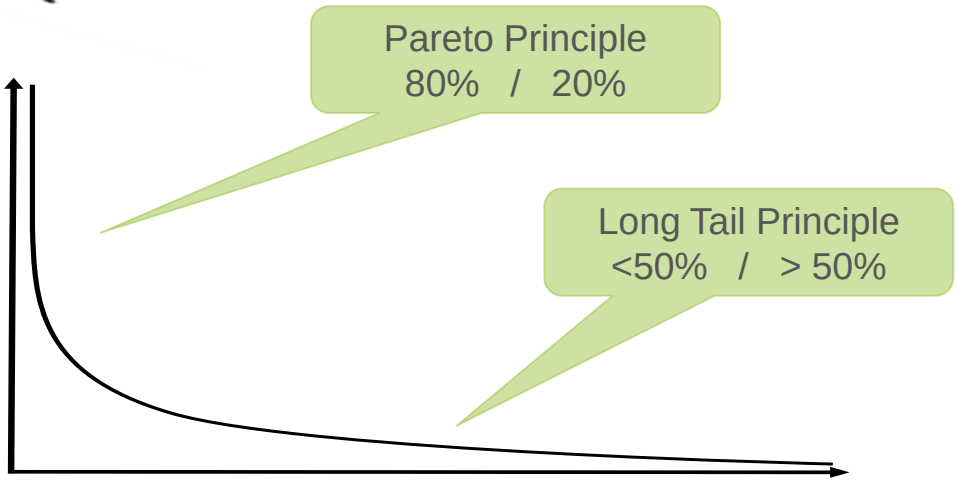
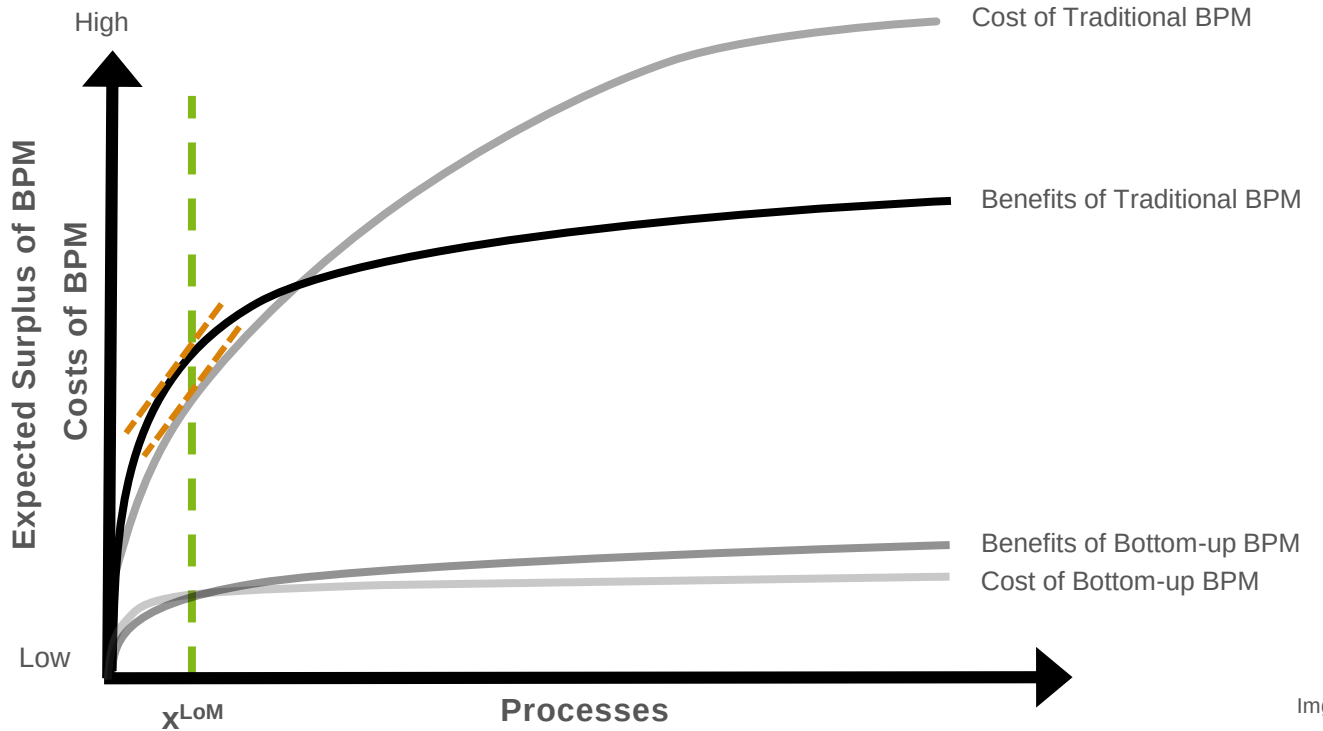
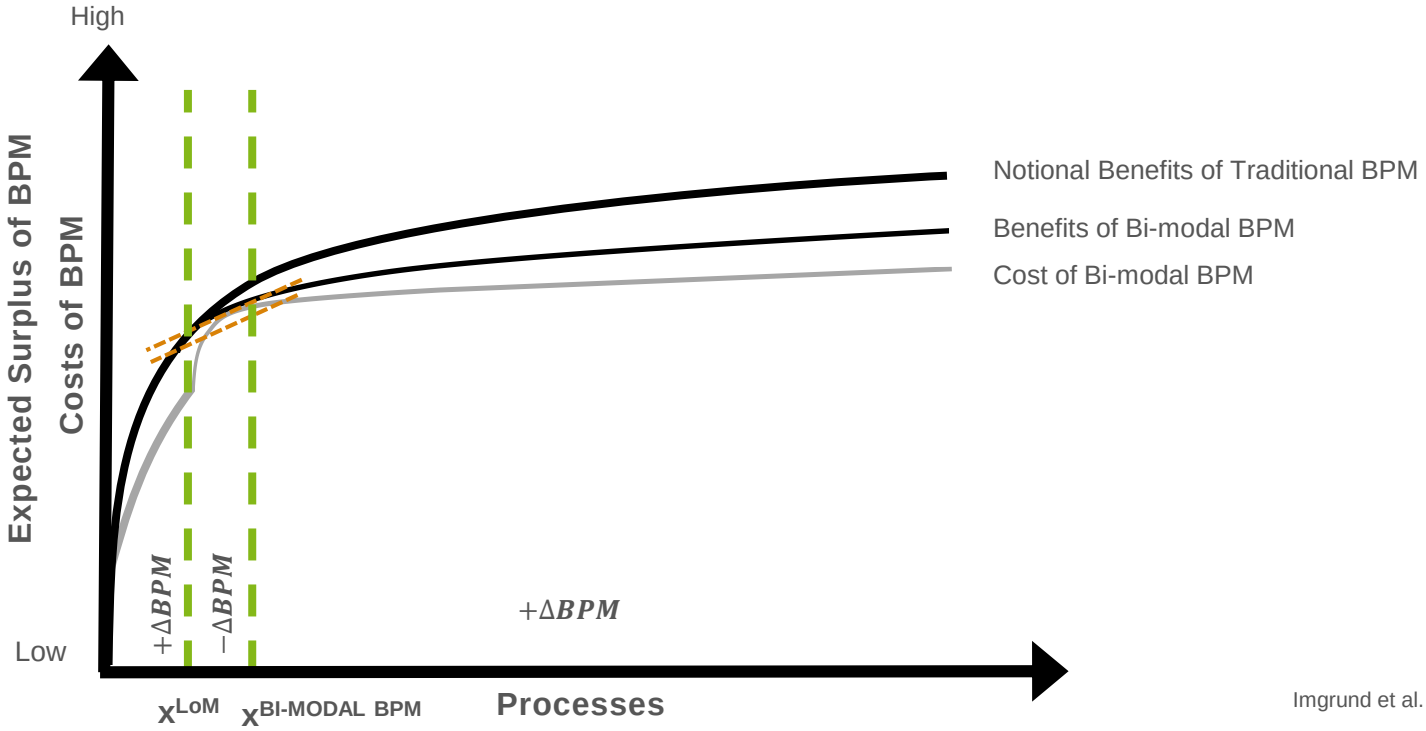


The Long Tail of Processes



Imgrund et al. (2017)

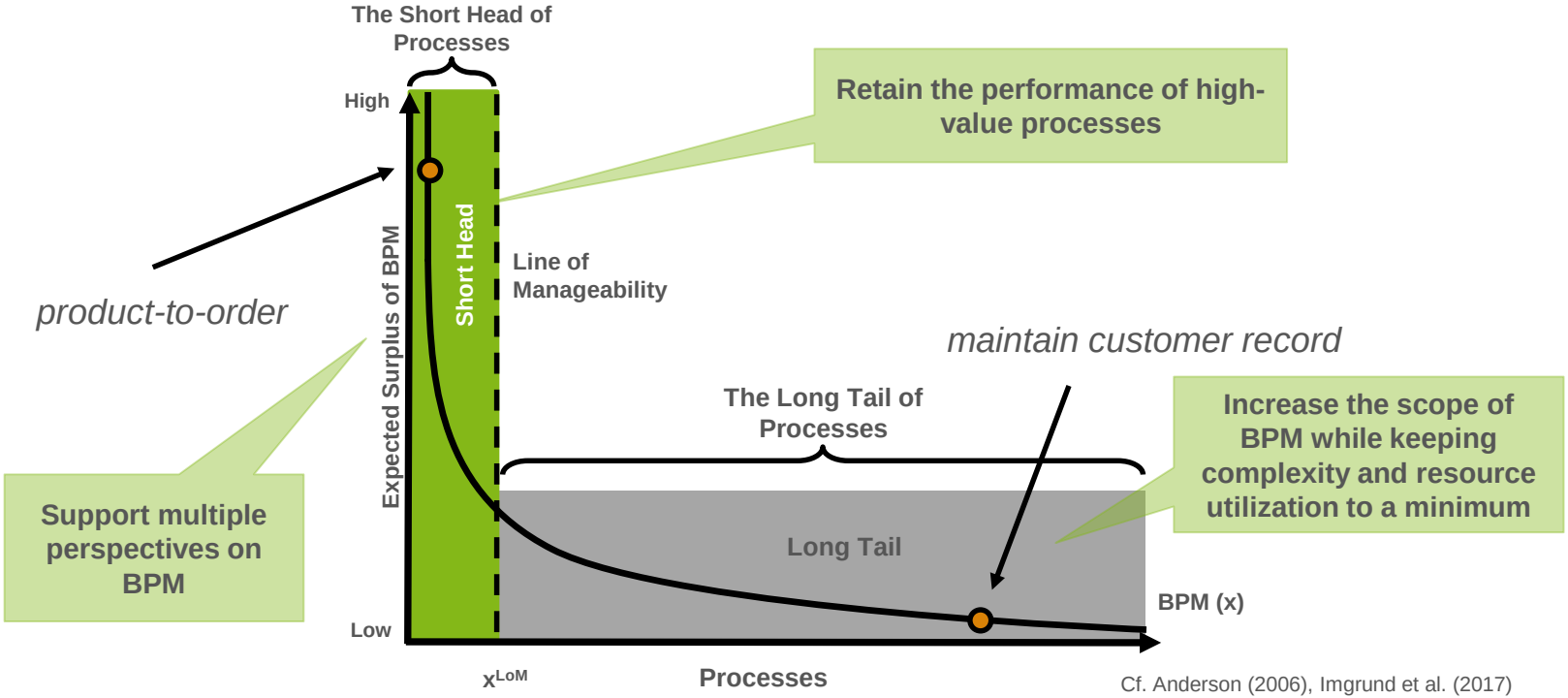
The Long Tail of Processes



Imgrund et al. (2017)

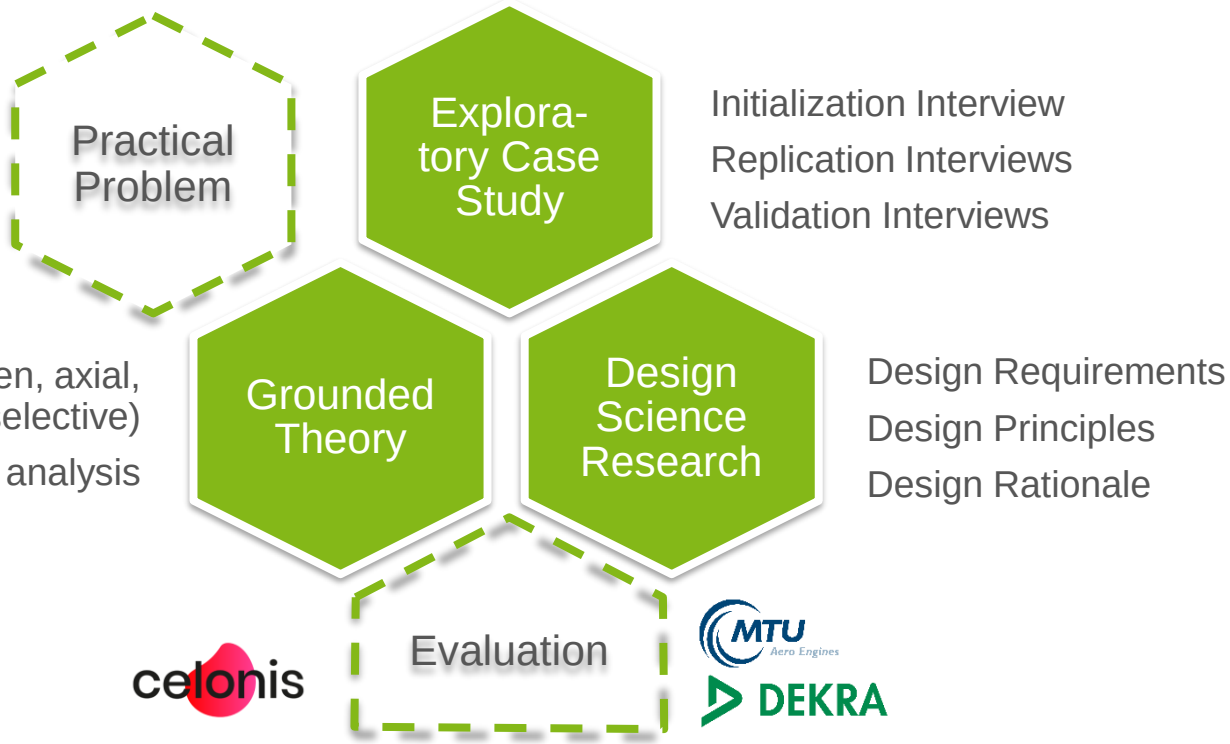
OK. We're back!

The Long Tail of Processes

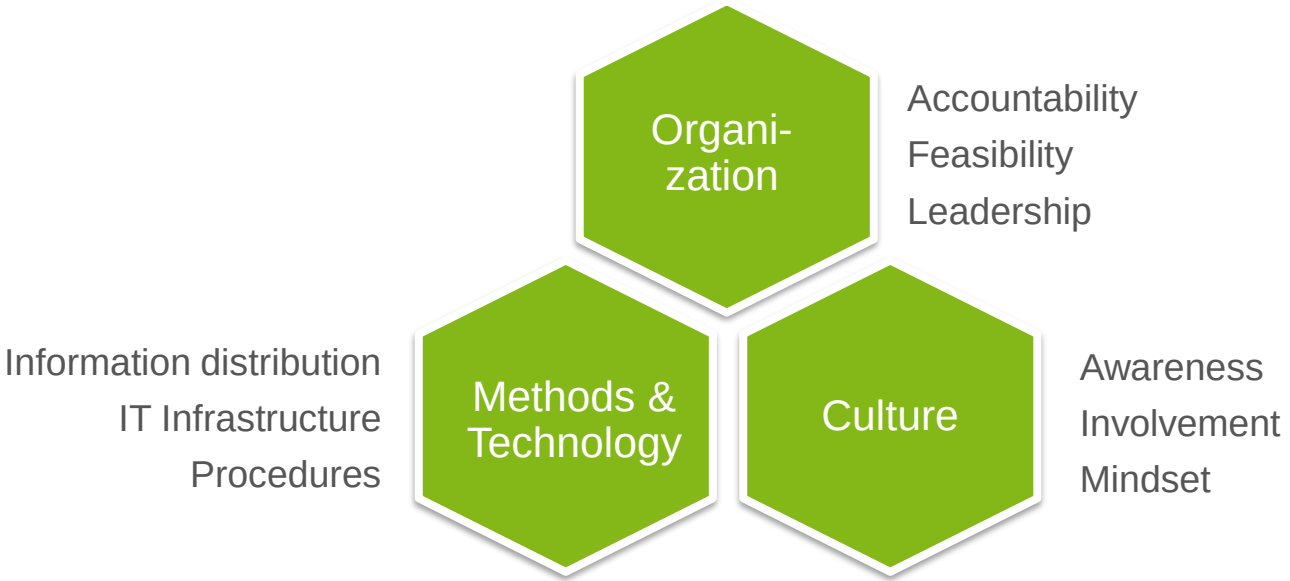


Cf. Anderson (2006), Imgrund et al. (2017)

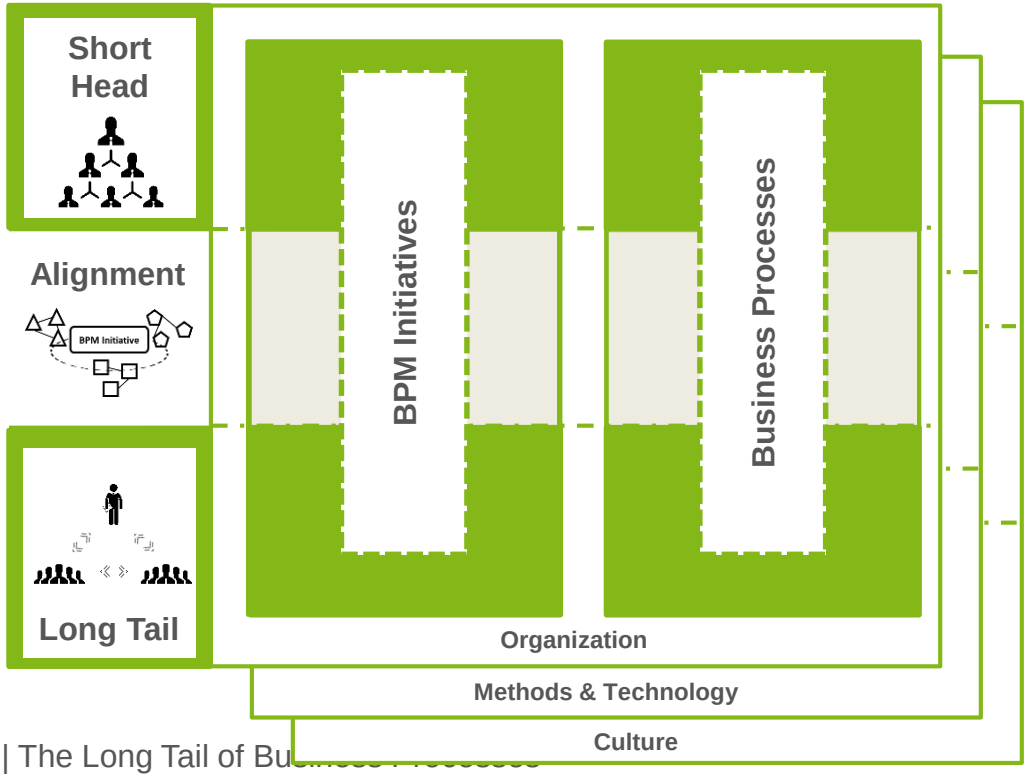
Theory-generating Design Science Research



Emerging Concepts and Dimensions

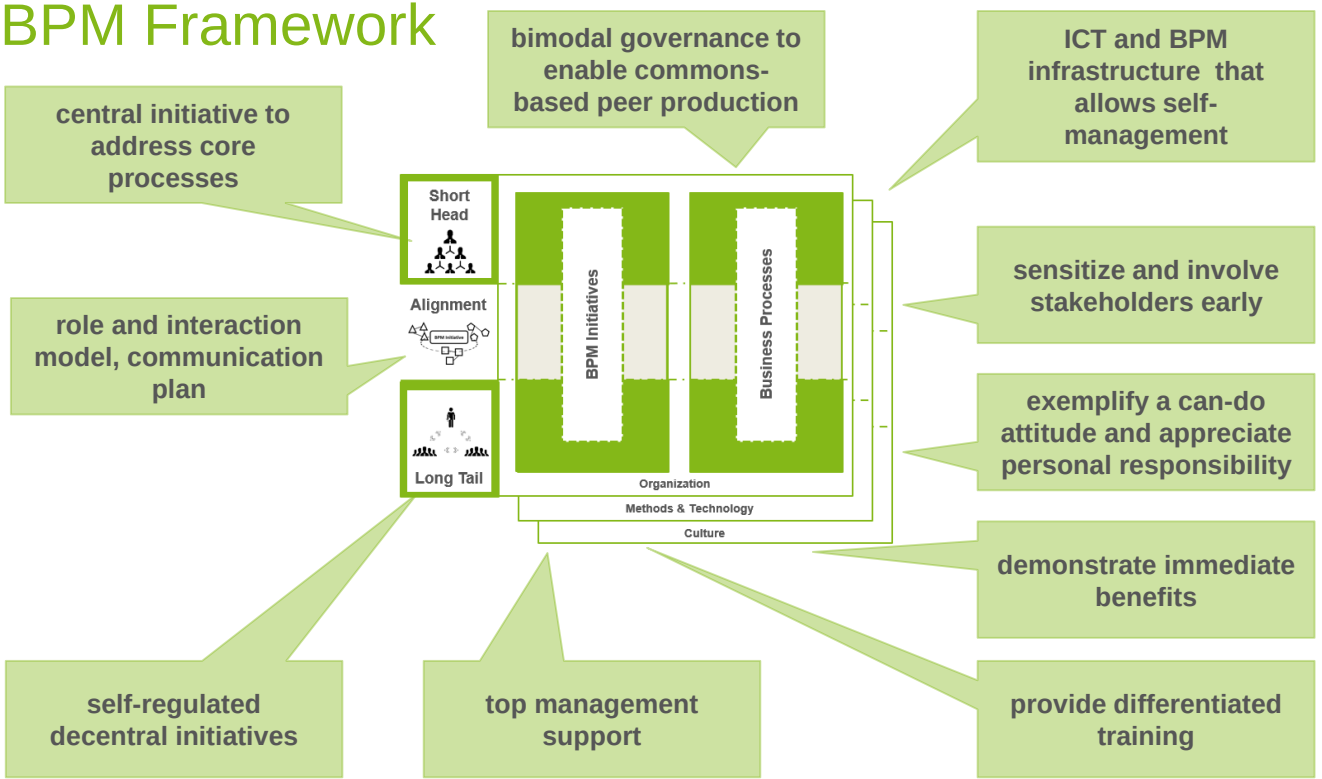


Bi-modal BPM Framework



Imgrund et al. (2018)

Bi-modal BPM Framework



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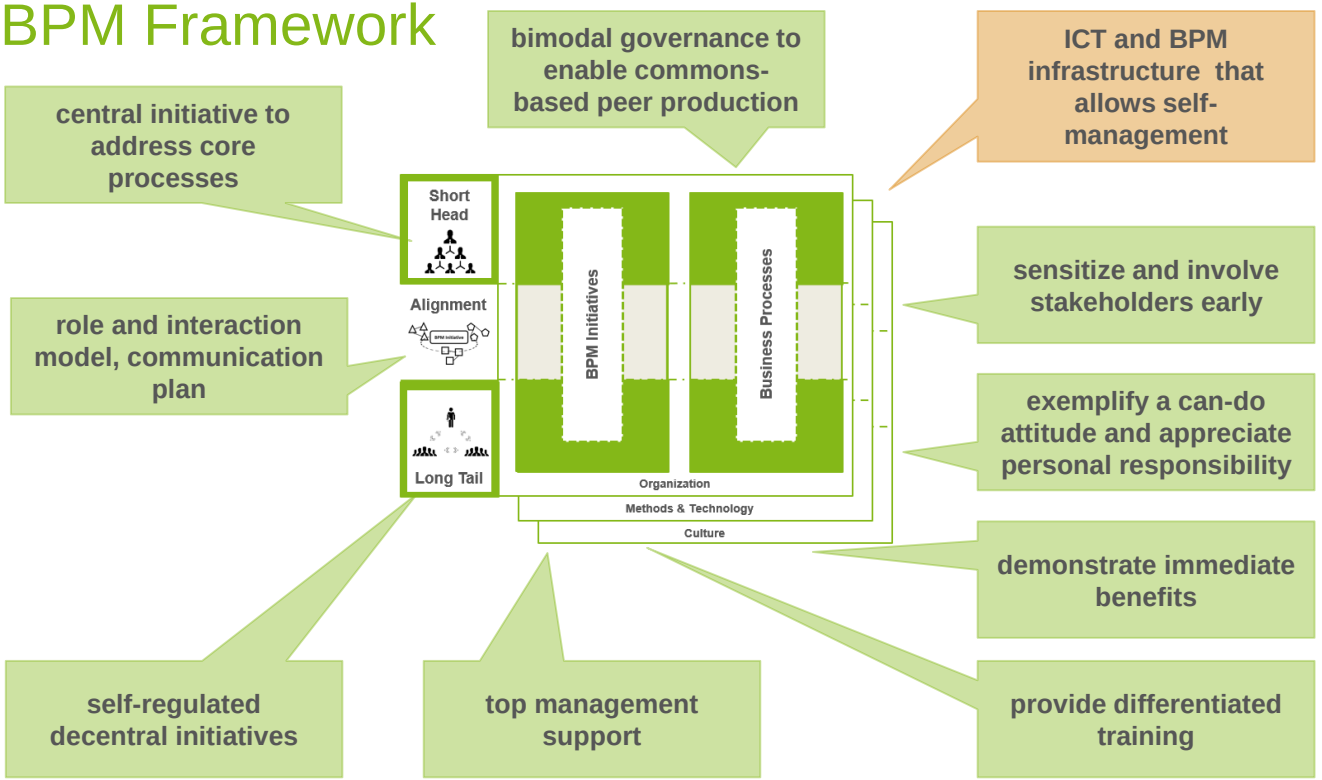
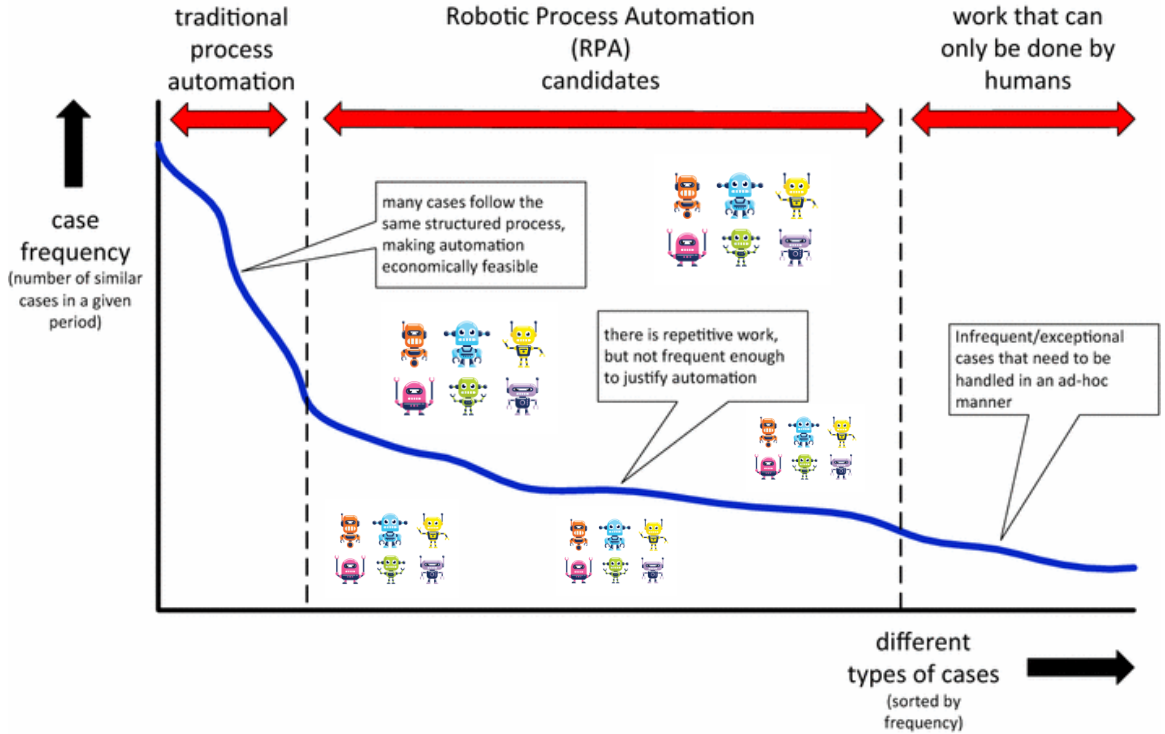
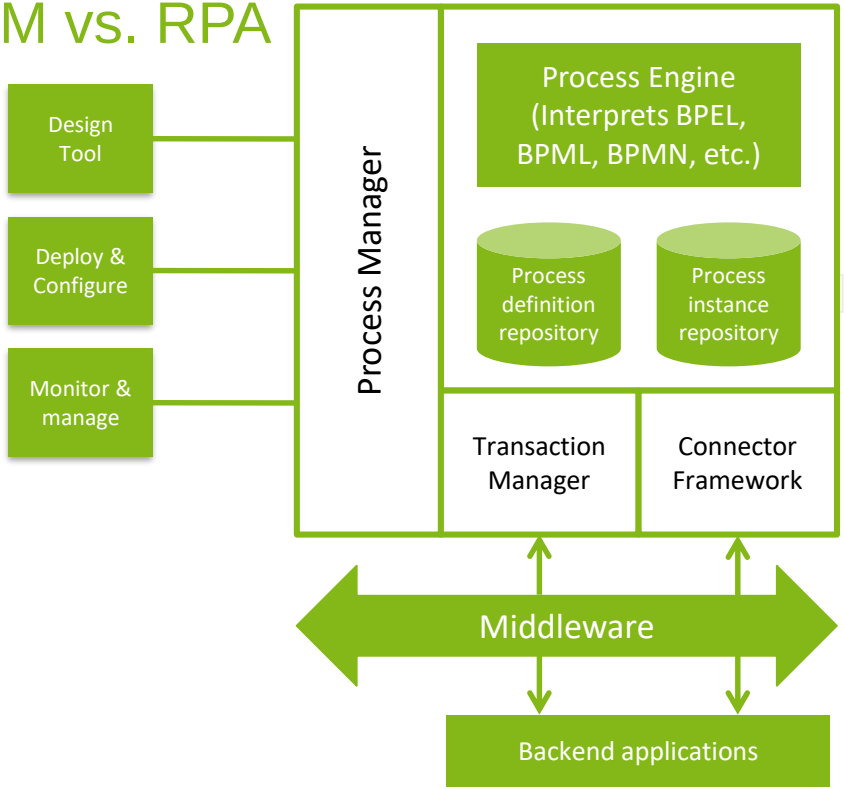


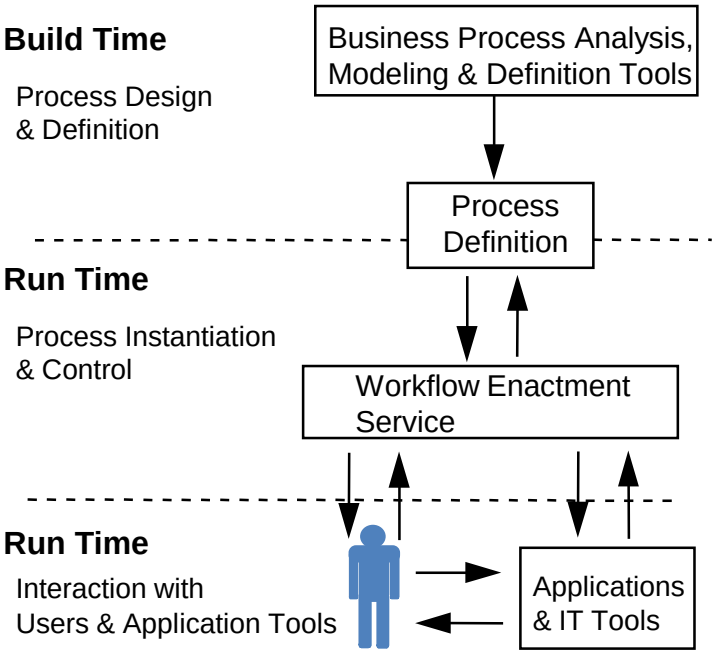
Robotic Process Automation: Making the Long Tail Work



van der Aalst et al. (2018)

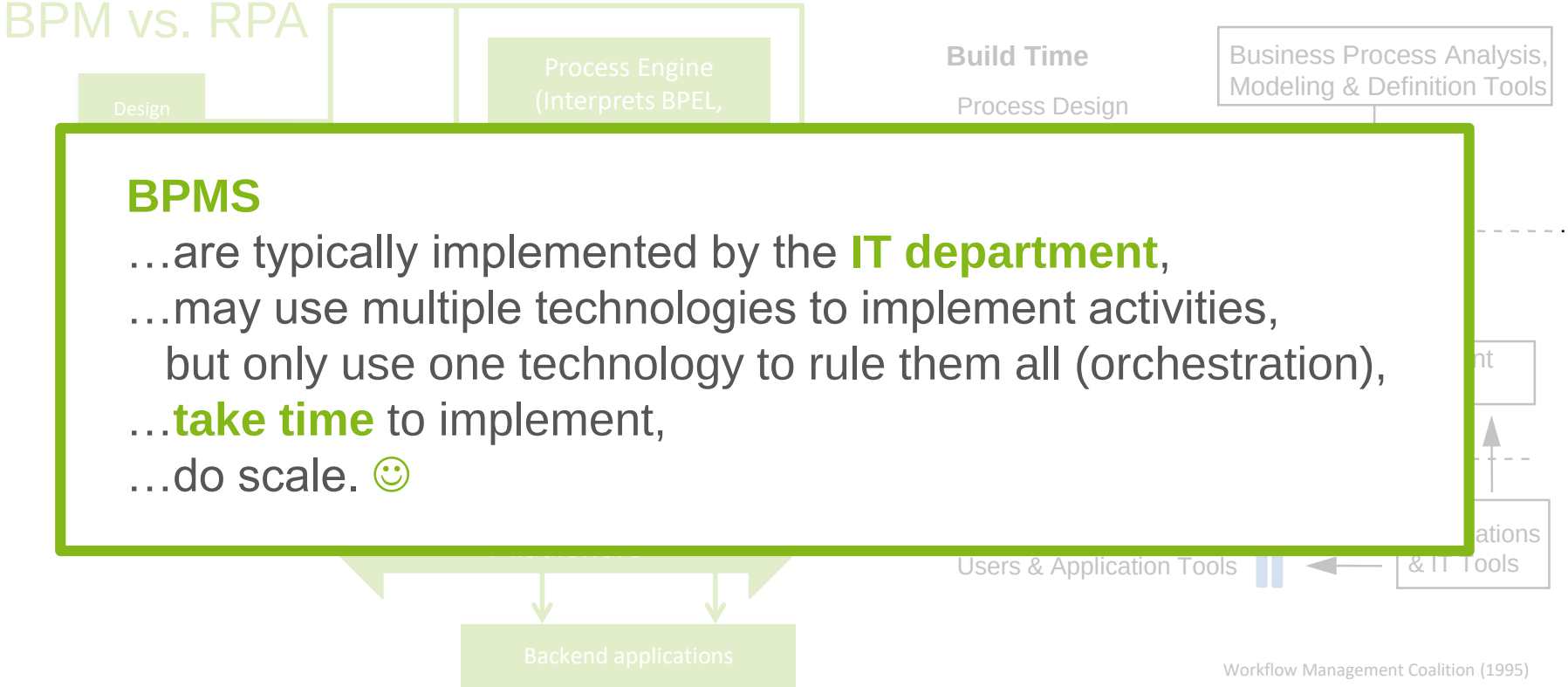
BPM vs. RPA





Workflow Management Coalition (1995)

BPM vs. RPA



BPMS

…are typically implemented by the **IT department**,

…may use multiple technologies to implement activities,
but only use one technology to rule them all (orchestration),

…**take time** to implement,

…do scale. ☺

Workflow Management Coalition (1995)

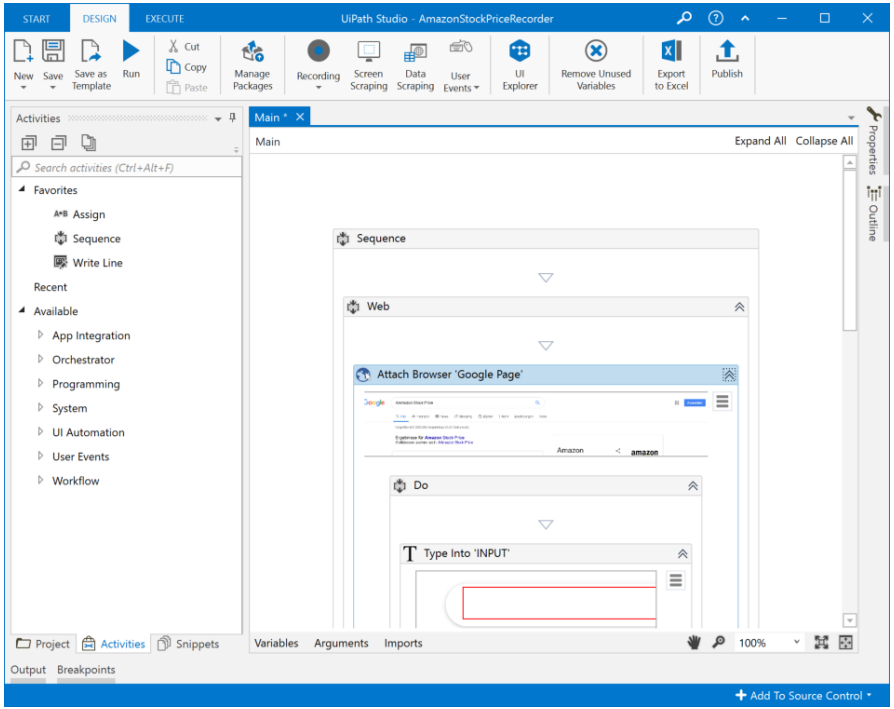
Robotic Process Automation

- Develop an automation (=robot) that is **functionally equivalent to a human** (acting in a specific business process)

- Characteristics of (ro)bots
  - RPA bots are **software** (robots)
  - RPA bots access only the **user interface**
  - RPA bots **execute activities** using **some rules**
  - RPA is **elastic** (one system, multiple bots)

- Result
  - **Scalable automation without change in legacy systems**

Czarnecki & Fettke (2021), Janiesch (2020)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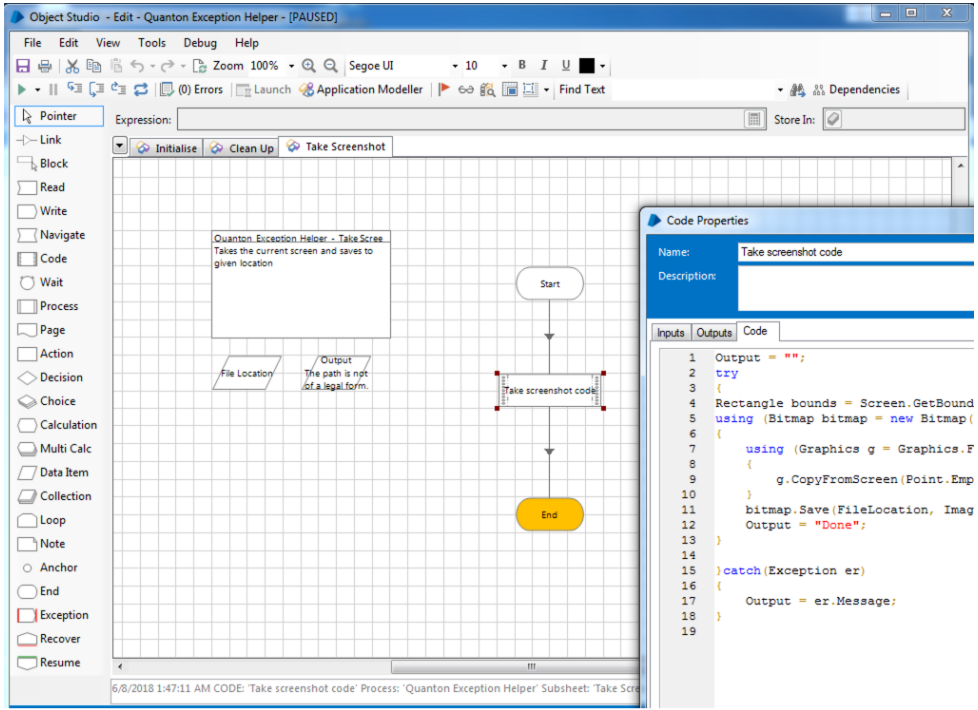
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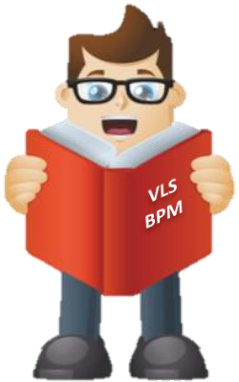
{
using (Graphics g = Graphics.F
{
g.CopyFromScreen(Point.Emp
}
bitmap.Save(FileLocation, Imag
Output = "Done";
}
}catch(Exception er)
{
Output = er.Message;
}

Summary

- **“Digitalization is eating traditional BPM”**
  - Companies cannot lean back and manage only a handful of processes at a time
  - Companies have to deal with bottom-up initiatives
- **Bi-modal BPM can address both, the short head and long tail**
  - Guidance necessary for organizational, methodological & technological, as well as cultural implementation of Bi-modal BPM
- **RPA provides a technology to address the long tail**
  - Companies require guidance for intelligent process selection (and implementation)
  - Check Wanner et al. (2019) & Herm et al. (2020, 2021) but that’s another story…
- **Caveats!**
  - Bi-modal BPM principles only provide high level guidance
  - RPA long-term costs and benefits have not been sufficiently investigated

Do you have any questions?



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