Why did BPM fail?

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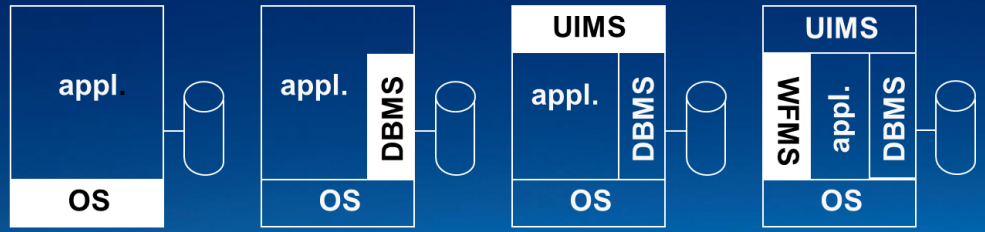
Chair of Process and Data Science

RWTH AACHEN UNIVERSITY

This is what I believed in 1995:



It did not happen …

Miguel Valdes
CEO and co-founder of BonitaSoft at BPM 2017

Why?

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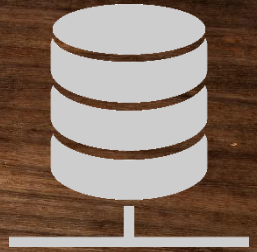
human behavior

O2C, P2P processes having hundreds of thousands of variants.

classic

BPM



data-driven systems

Information systems having thousands of tables with complex dependencies recording what people really do.

actual/effective process improvements

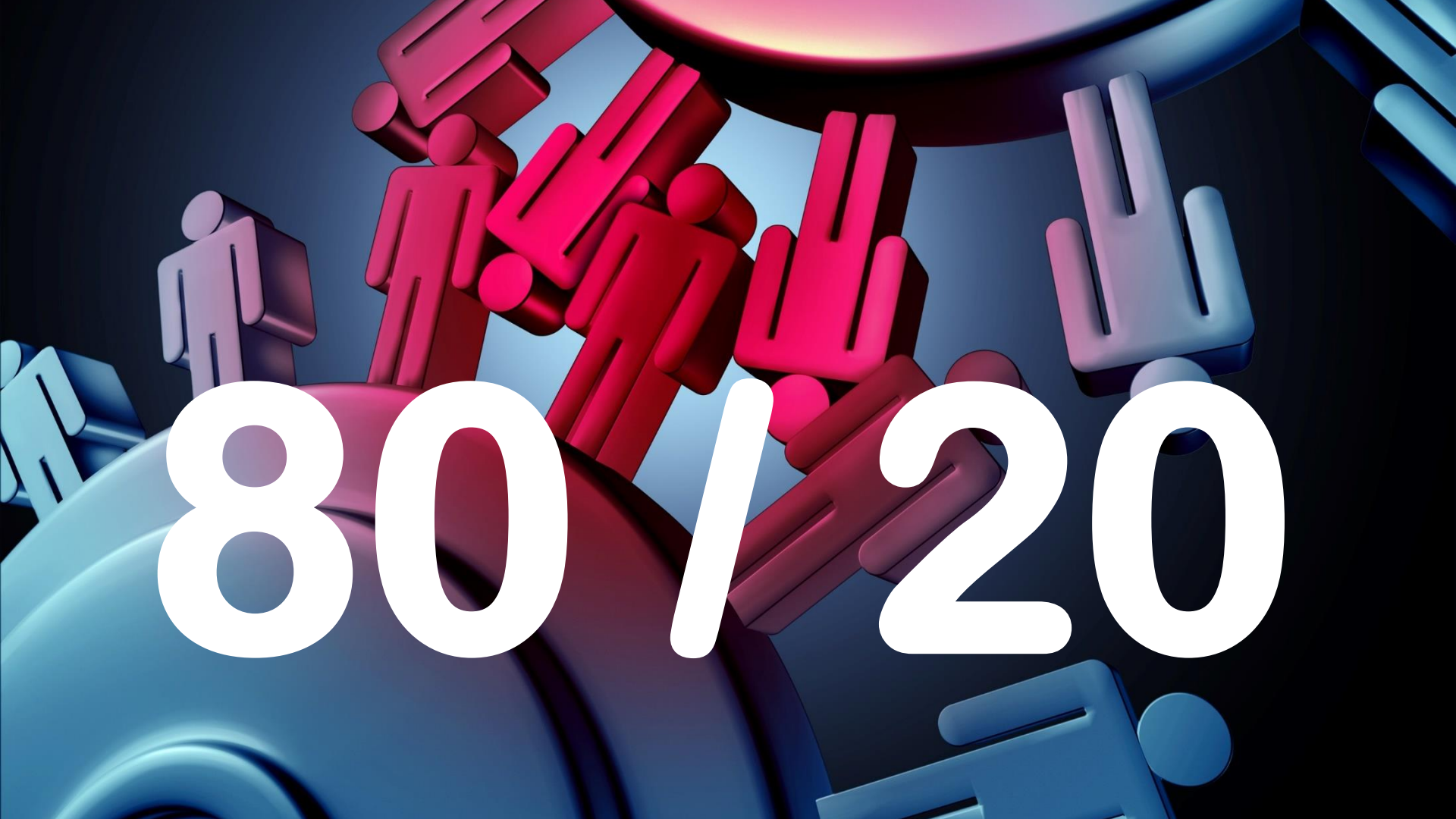
Transforming insights into actions (not models or PowerPoints).

Process Mining

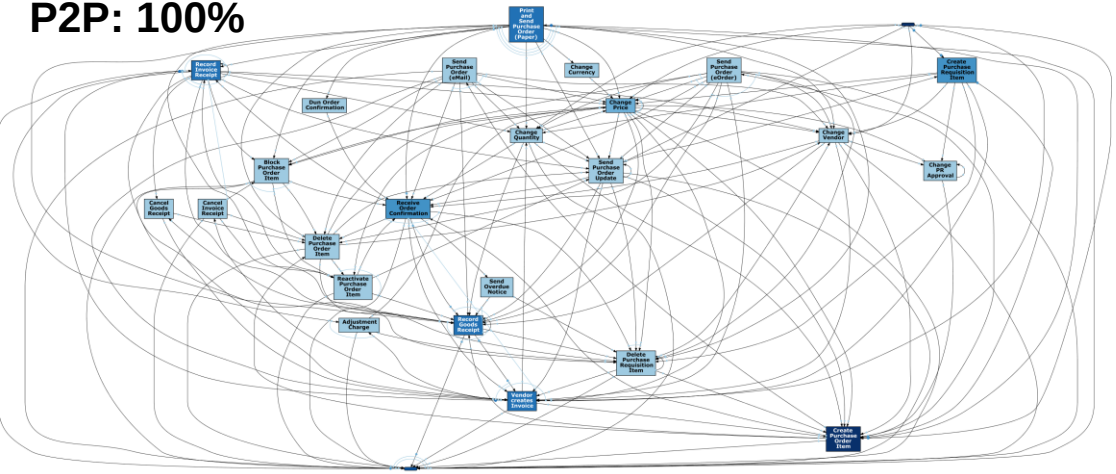
(initiated from academia)

Robotic Process Automation

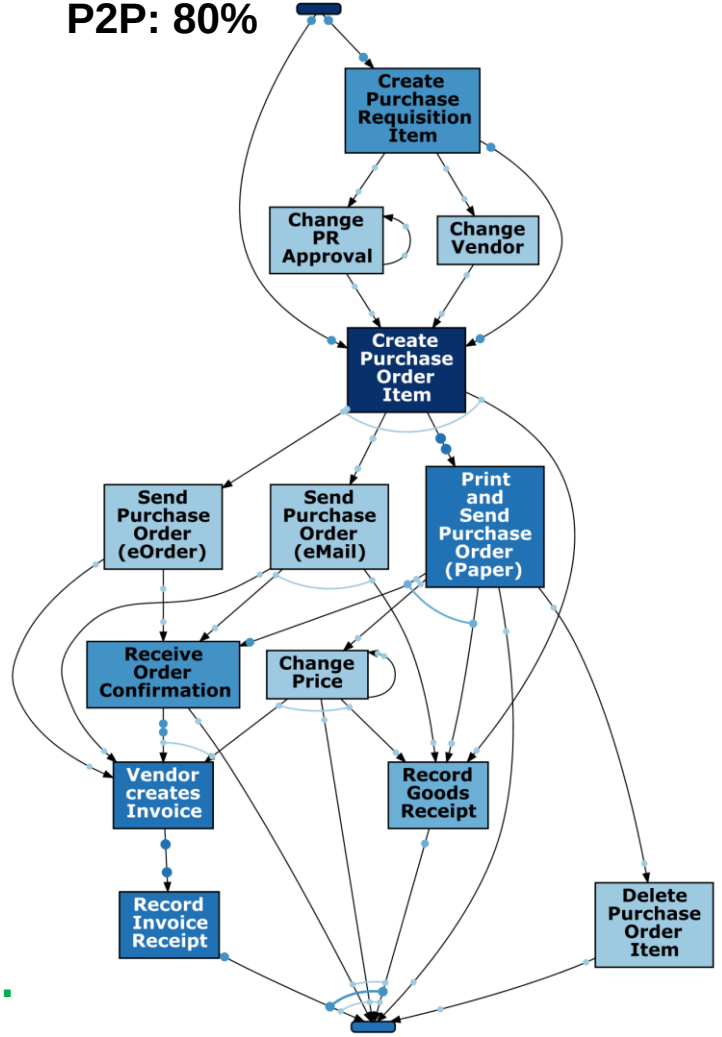
(initiated from industry)


80/20

P2P: 100%



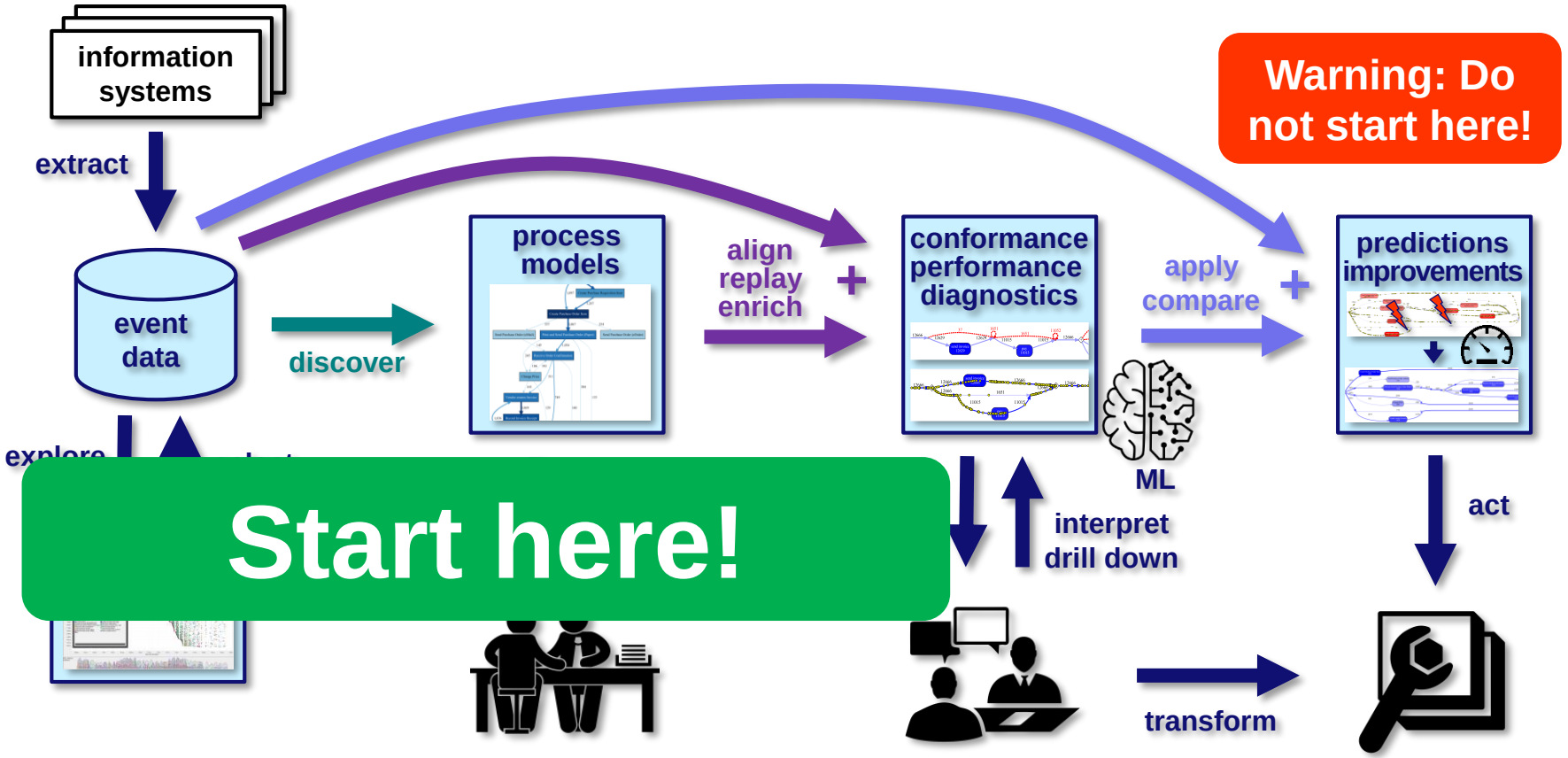
P2P: 80%



- **The remaining 20% of the cases account for 80% of the variants.**
- **The remaining 20% of the cases account for 80% the friction (rework, complaints, etc.).**

- **80% of the cases are described by 20% of the variants.**
- **80% of the cases cause only 20% of the friction (rework, complaints, etc.).**

20% of cases is causing
80% of the friction!
Deviations
Rework
Loops
Delays
Unresponsiveness
Lost cases
Ping-pong
Fraud



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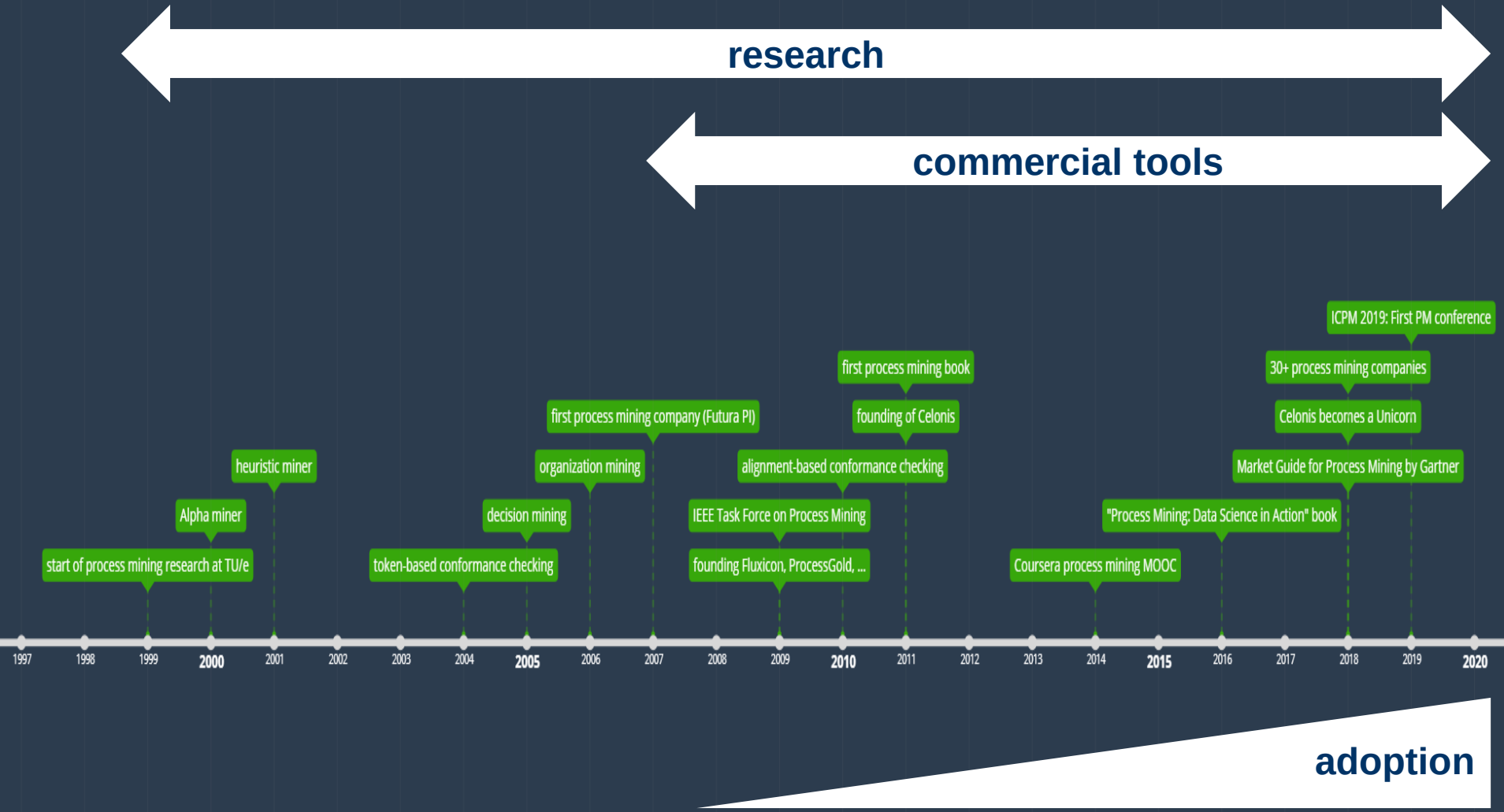
research
commercial tools
start of process mining research at TU/e
Alpha miner
heuristic miner
token-based conformance checking
decision mining
organization mining
first process mining company (Futura PI)
IEEE Task Force on Process Mining
founding Fluxicon, ProcessGold, ...
alignment-based conformance checking
first process mining book
founding of Celonis
Coursera process mining MOOC
"Process Mining: Data Science in Action" book
Market Guide for Process Mining by Gartner
Celonis becomes a Unicorn
30+ process mining companies
ICPM 2019: First PM conference
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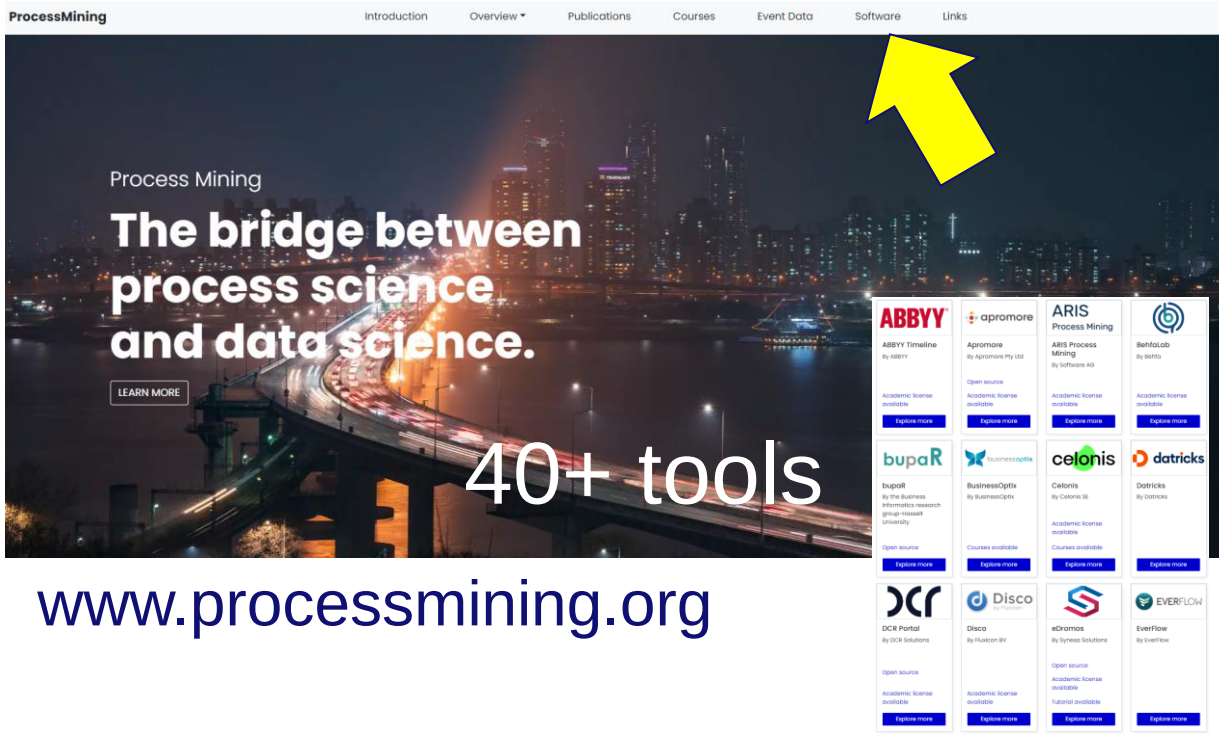
2018
2019
2020
adoption

Many process mining tools are available

Vendor	Tool	Website	Acad. ver.
Abbyy	ABBYY Timeline	www.abbyy.com	No
Appian (Lana Labs)	LANA Process Mining	lanalabs.com	No
Apromore	Apromore Enterprise Edition	apromore.org	Yes
bupaR	bupaR	bupar.net	Yes
businessOptix	businessOptix	businessoptix.com	Yes
Celonis	Celonis EMS	celonis.com	Yes
Datricks	Datricks	datricks.com	Yes
DCR	DCR Portal	www.dcrsolutions.net	Yes
Deloitte	Process X-ray	processxray.deloitte.com	No
EverFlow	EverFlow	everflow.ai	No
Fluxicon	Disco	fluxicon.com	Yes
FortressIQ	FortressIQ	fortressiq.com	No
Fraunhofer FIT	PM4Py	pm4py.fit.fraunhofer.de	Yes
Hyland	Onbase	www.hyland.com	No
IBM (myInvenio)	myInvenio	my-invenio.com	No
Integris	Explora Process	integris.it	No
Kofax	Kofax Insight	www.kofax.com	No
livejourney	livejourney	www.livejourney.com	No
Logpickr	Logpickr Process Explorer 360	www.logpickr.com	No
Mavim	Mavim	www.mavim.co	No
Mehrwerk GmbH	MPM	mpm-processmining.com	No
Mindzie	mindzie	mindzie.com	Yes
Minit (Microsoft)	Minit	www.minit.io	Yes
Nintex UK ltd	Nintex	www.nintex.com	No
Oniq	IQ/A	www.oniq.com	No
PAFnow (Celonis)	PAFnow	pafnow.com	No
Process.science	process.science	www.process.science	No
ProcessDiamond	ProcessDiamond	processdiamond.com	Yes
ProcessM	PmBI	processm.com	Yes
Puzzle Data	ProDiscovery	www.puzzledata.com	No
QPR Software	QPR ProcessAnalyzer	www.qpr.com	No
SAP (Signavio)	SAP Signavio	www.signavio.com	Yes
Skan AI	Skan	www.skan.ai	No
Software AG	Aris	aris-process-mining.com	Yes
Soroco	Scout Platform	soroco.com	No
StereoLogic	StereoLogic Process Mining	www.stereologic.com	No
TU/e	ProM	www.promtools.org	Yes
TU/e	RapidProM	www.rapidprom.org	Yes
UI Path	UI Path Process Mining	www.uipath.com	Yes
UltimateSuite	UltimateSuite TM/RPA	www.ultimatesuite.com	No
Upflux	Upflux	upflux.net	No
Worksoft	Worksoft	www.worksoft.com	No



www.processmining.org

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Process mining is used in all domains

- **finance and insurance** (Rabobank, Wells Fargo, Hypovereinsbank, Caixa General, ADAC, APG, Suncorp, VTB, etc.),
- **logistics and transport** (Uber, Deutsche Bahn, Lufthansa, Airbus, Schukat, Vanderlande, etc.),
- **production** (ABB, Siemens, BMW, Fiat, Bosch, AkzoNobel, Bayer, Neste, etc.),
- **healthcare, biomedicine, and pharmacy** (Uniklinik RWTH Aachen, Charite University Hospital, GE Healthcare, Philips, Medtronic, Pfizer, Bayer, AstraZeneca, etc.),
- **telecom** (Deutsche Telekom, Vodafone, A1 Telekom Austria, Telekom Italia, etc.),
- **food and retail** (Edeka, MediaMarkt, Globus, Zalando, AB InBev, etc.),
- **energy** (Uniper, Chevron, Shell, BP, E.ON, etc.),
- **IT services** (Dell, Xerox, IBM, Nokia, ServiceNow, etc.), and
- **consultancy** (Deloitte, Ernst & Young, KPMG, PwC, etc.)!

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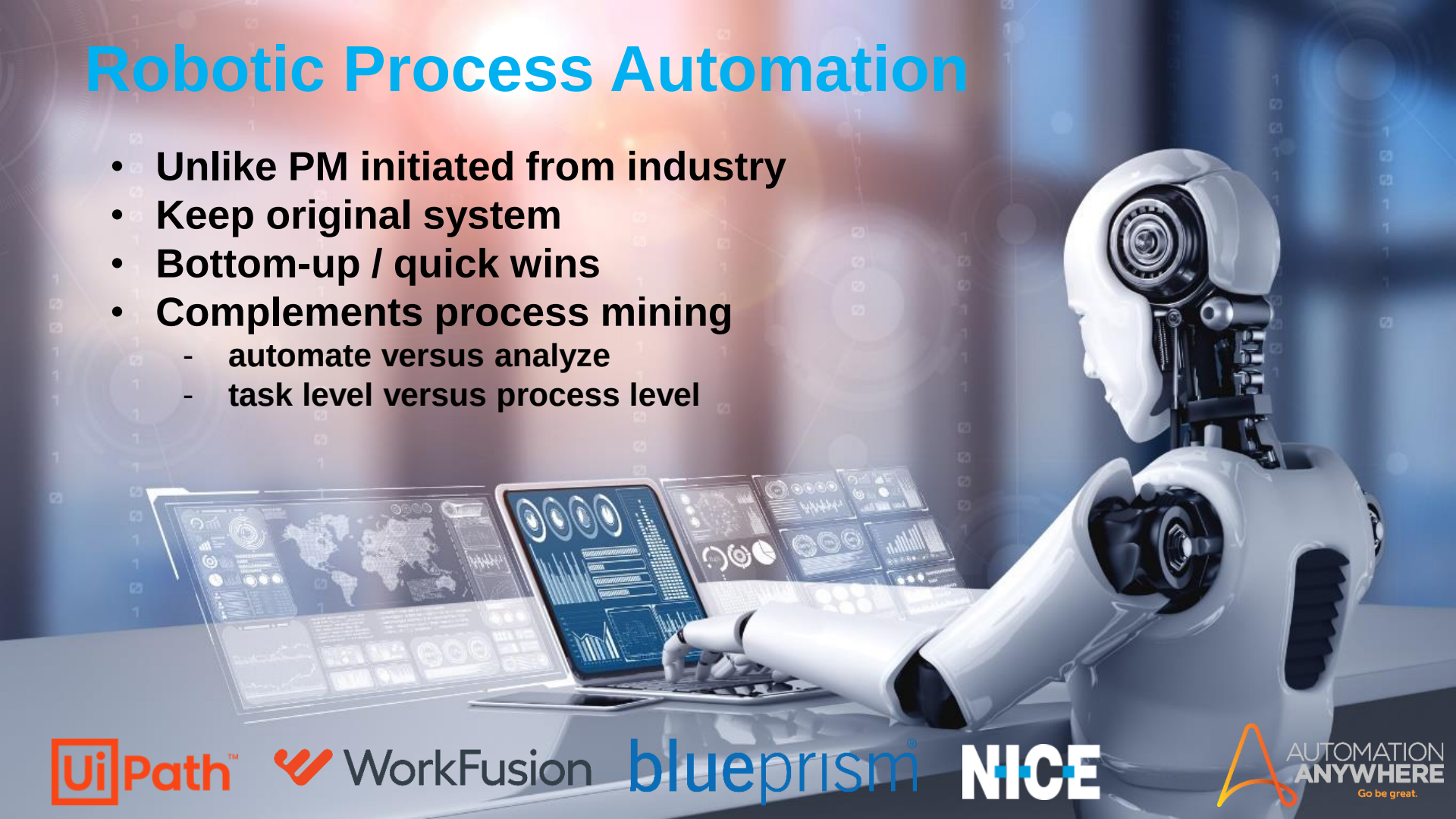
Robotic Process Automation

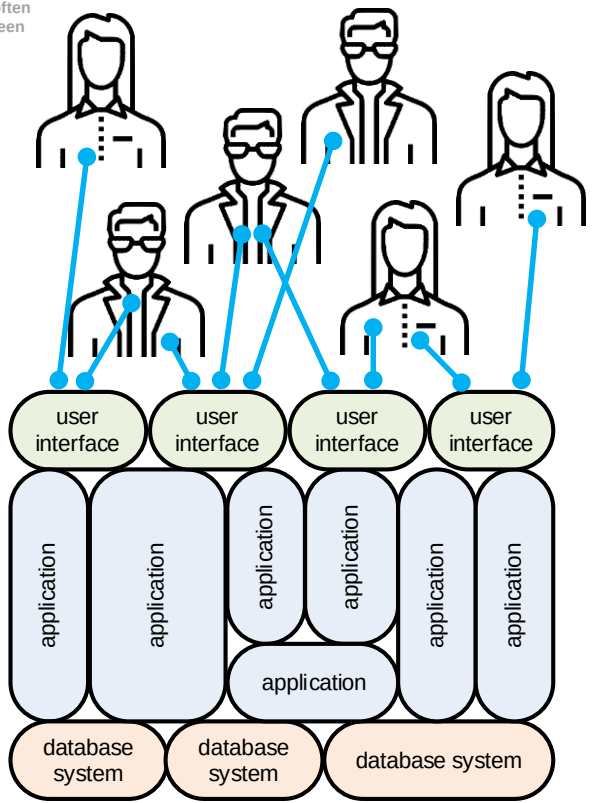
- **Unlike PM initiated from industry**
- **Keep original system**
- **Bottom-up / quick wins**
- **Complements process mining**
  - **automate versus analyze**
  - **task level versus process level**

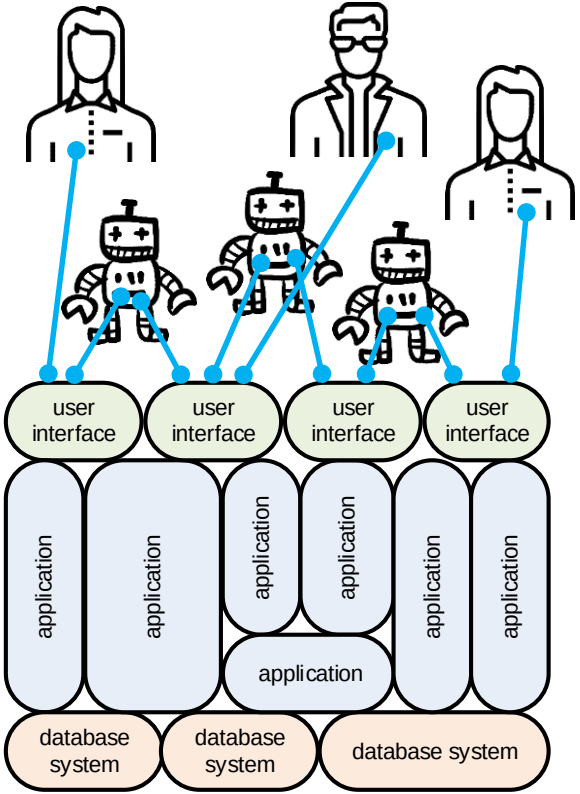


UiPath™ WorkFusion blueprism® NICE AUTOMATION ANYWHERE Go be great.

RPA: The Poor man's WFM system

Humans are often the glue between applications





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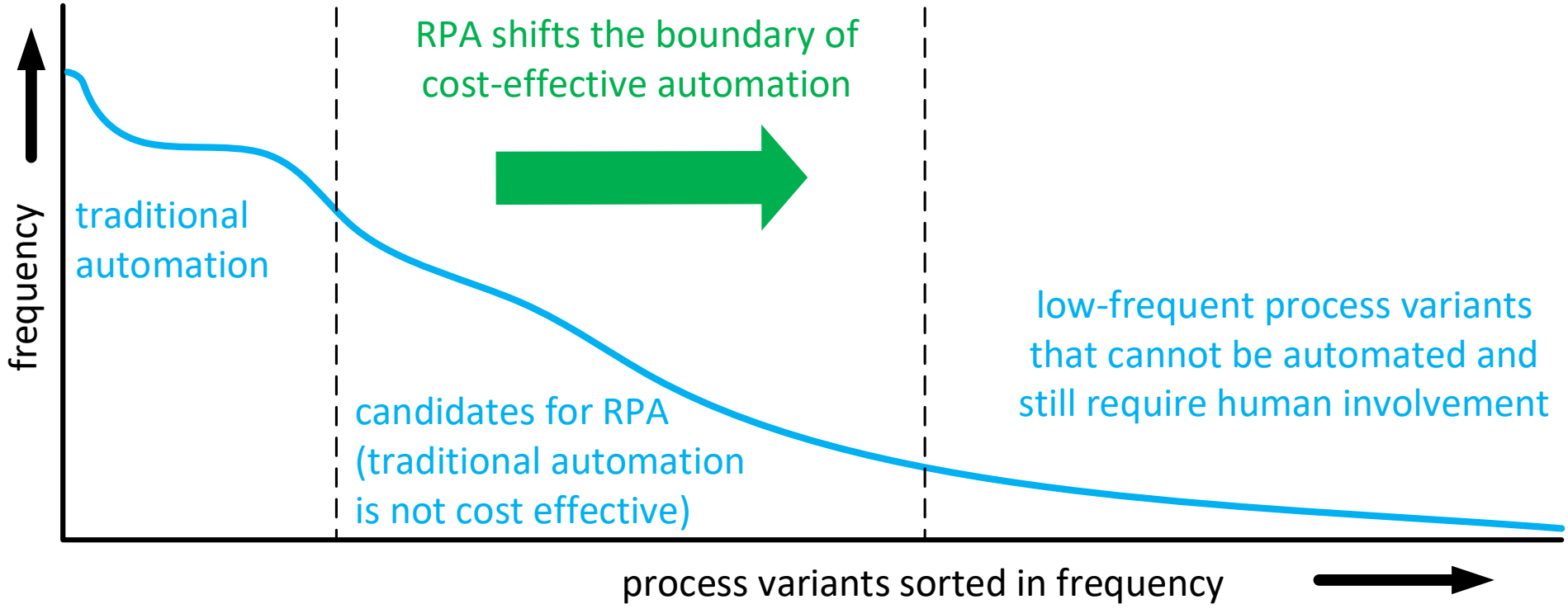
process mining is able to diagnose the full process spectrum
from high-frequent to low-frequent and from automated to manual



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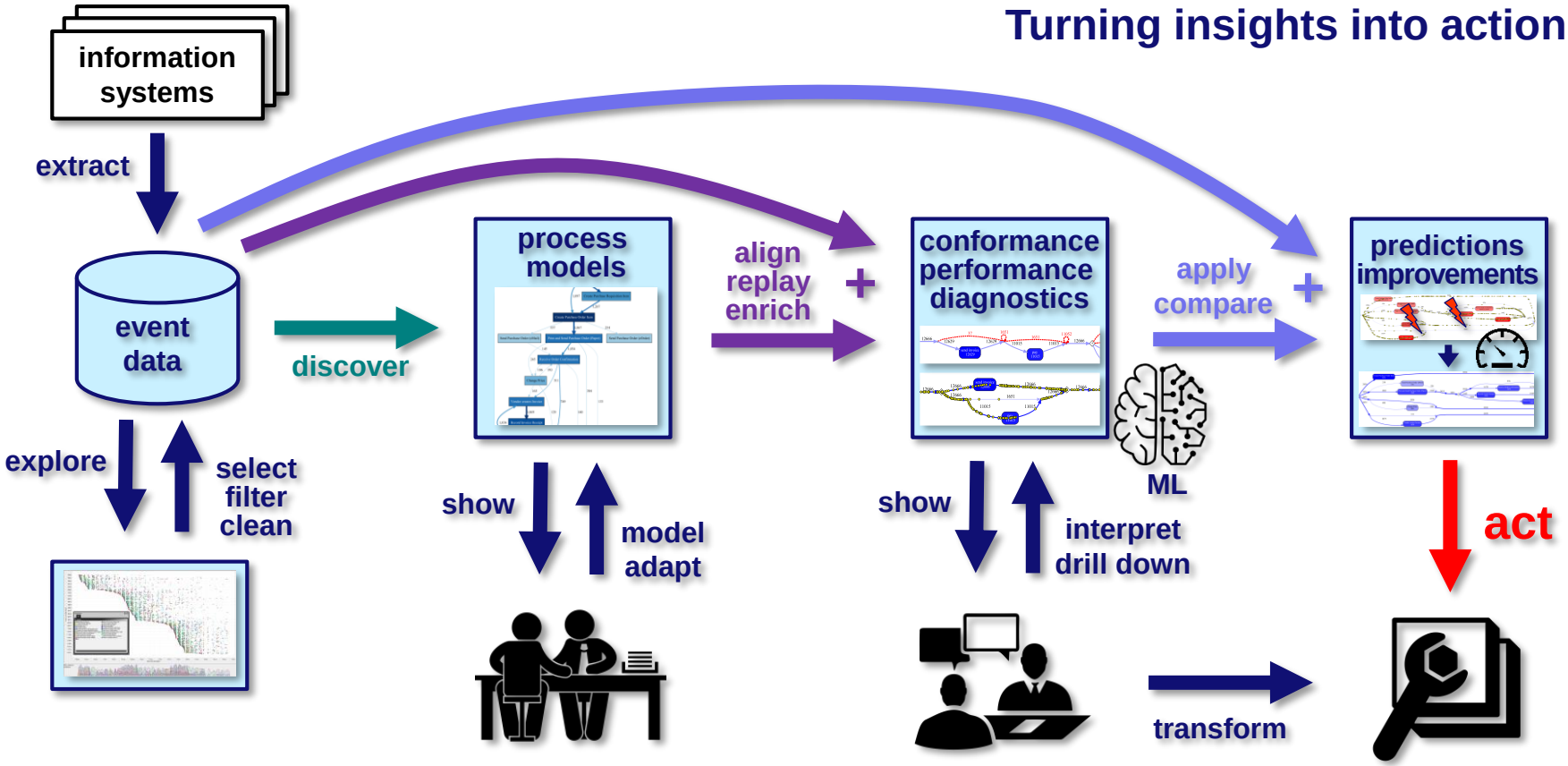
Turning insights into actions!



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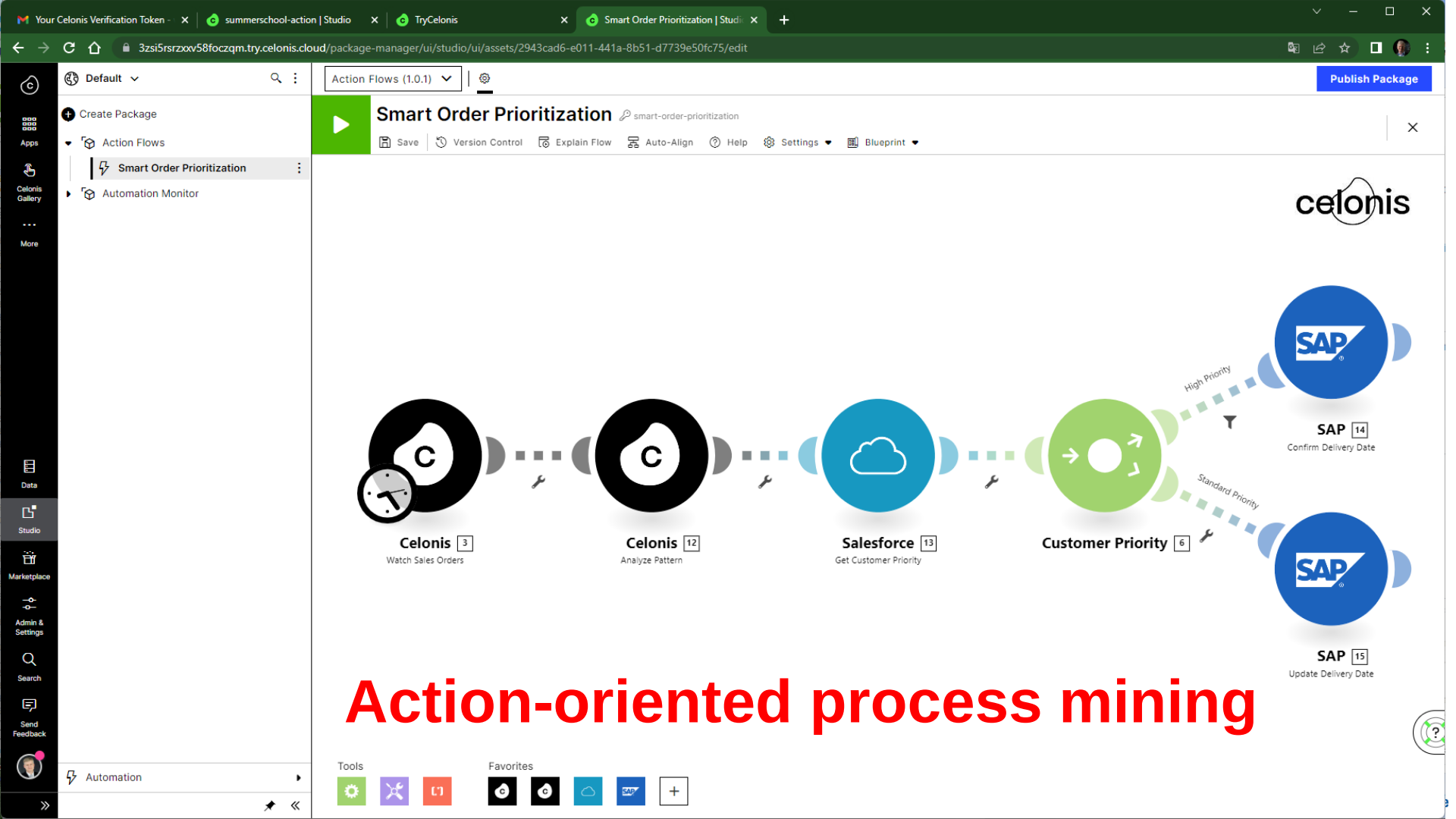
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Create Package
Action Flows
Smart Order Prioritization
Automation Monitor
Action Flows (1.0.1)
Publish Package
Smart Order Prioritization
smart-order-prioritization
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Version Control
Explain Flow
Auto-Align
Help
Settings
Blueprint
celonis
Apps
Celonis Gallery
More
Data
Studio
Marketplace
Admin & Settings
Search
Send Feedback
Automation
High Priority
Standard Priority
Celonis 3
Watch Sales Orders
Celonis 12
Analyze Pattern
Salesforce 13
Get Customer Priority
Customer Priority 6
SAP 14
Confirm Delivery Date
SAP 15
Update Delivery Date
Action-oriented process mining
Tools
Favorites

About Automation

- It is very naïve to replace existing software with something “fresh” (cf. # applications and # tables).
- Process mining helps to see the main problems and can trigger actions/workflows.
- Focus on the “pain points” and not on the whole to ensure a good ROI.
- Low-code automation (e.g., Make/Integromat) and Robotic Process Automation (RPA) help to interface with existing systems.

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Conclusion

Traditional
BPM

Conclusion

- **Lifelines for BPM:**
  - ✓ Process Mining
  - ✓ RPA
- **Accept people and systems as they are!**
  - ✓ Use event data
  - ✓ Note the 80/20 rule
  - ✓ Focus on improvements
  - ✓ Do not start from scratch

Learn more?
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