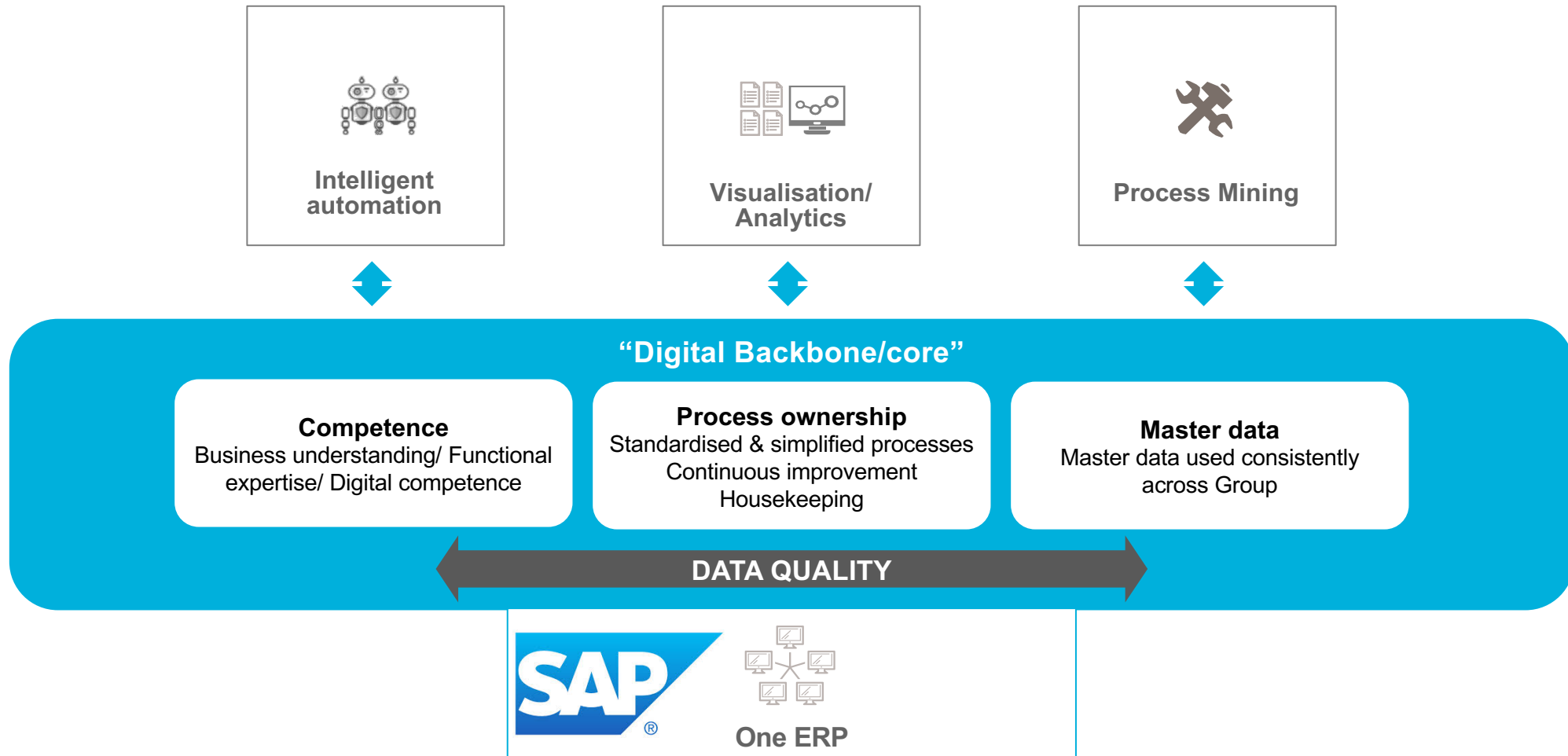


Process Mining in Statkraft

17.04.2020 | TERJE WOLD

CFO Digital focus areas



It is a software...



Intelligent
automation

What is RPA?

RPA is integrated in an existing IT infrastructure



As a renewal of the existing IT landscape is not required, a high level of automation can be reached without major effort. RPA uses established control mechanisms and can communicate with all systems. Therefore, no interface has to be created.

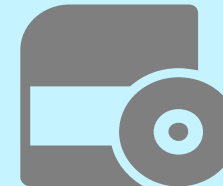
“Robots deliver repetitive, deterministic, high-volume tasks efficiently, quickly, and consistently. People build relationships, provide subjective judgement, deliver low-frequency tasks, and manage change and improvement”

RPA simulates an employee

The software robot has access to diverse applications with an ID or a password. The robot can gather information or change data. Consequently, business and administrative processes can be fully automated.



RPA is a software



RPA is a computer software that runs repetitive, rule-based processes. The software is trained based on functional specifications and can be adjusted at any time.

Visualisation tools

Self-service

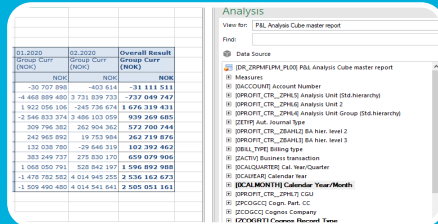
Easy to use

Visualisation

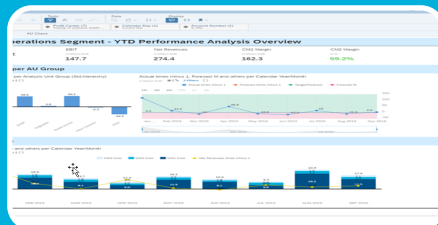
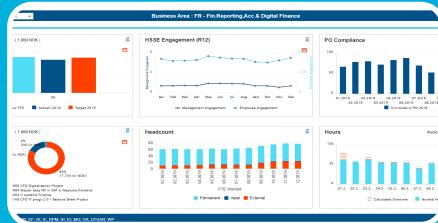
Live data connection



Visualisation/
Analytics



SAP Analysis for Office



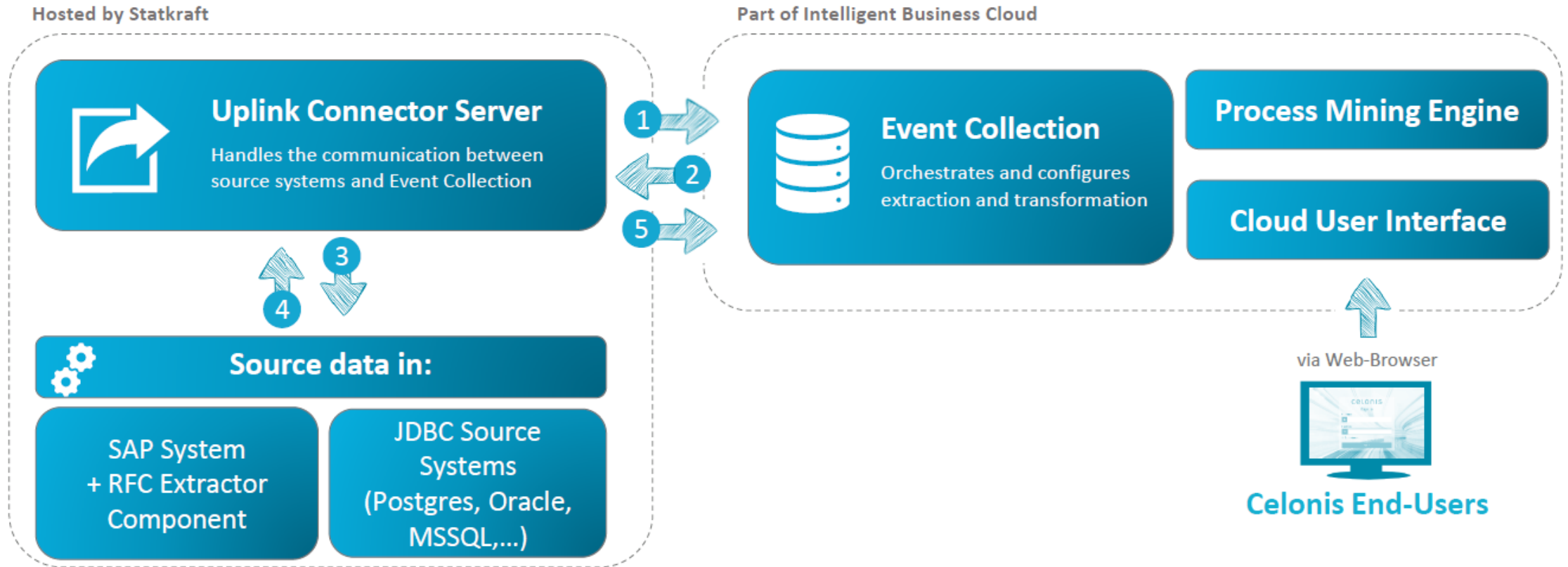
SAP® Analytics Cloud

Why Process Mining and Why Celonis?

Main observations and choices:

- Hard to describe “**current state**” processes, but eager to describe “**to be**”.
- As part of our Digitalisation journey, **Process Mining** along with RPA and Analytics was onboarded.
- Statkraft is using Gartner in technological advice for using the right tools ahead. **Celonis** was and still is ranked as No 1 in PM.
- Statkraft tested one other SW. We had some calls with other users that had already made a POC with Celonis which turned out in huge saving potentials. Last, not least, at the time of decision – few other SW providers could provide details (system and usage along with numerous processes already in place) on a scale comparable to Celonis using SAP as source.

Technical Set-Up for Statkraft



- 1 The uplink connector establishes connection to event collection.
- 2 Tables and filter will be defined in the event collection module of the Intelligent Business Cloud.
- 3 Establish JDBC connection for data extraction from source system. Remote Function Call (RFC) is the standard SAP interface for communication between SAP- and external systems.
- 4 Extract data from database in chunks. For SAP: The data extraction is performed through the execution of an ABAP report in the SAP source system. Data chunks are compressed, written to hard drive and sent to the Uplink Connector Server via HTTP.
- 5 The Uplink Connector sends the data chunks to the Event Collection module.

What is Process Mining?

PROCESS

“a series of actions that you take in order to achieve a result”

PROCESS MINING

“mining process data for insights to answer questions or solve problems”

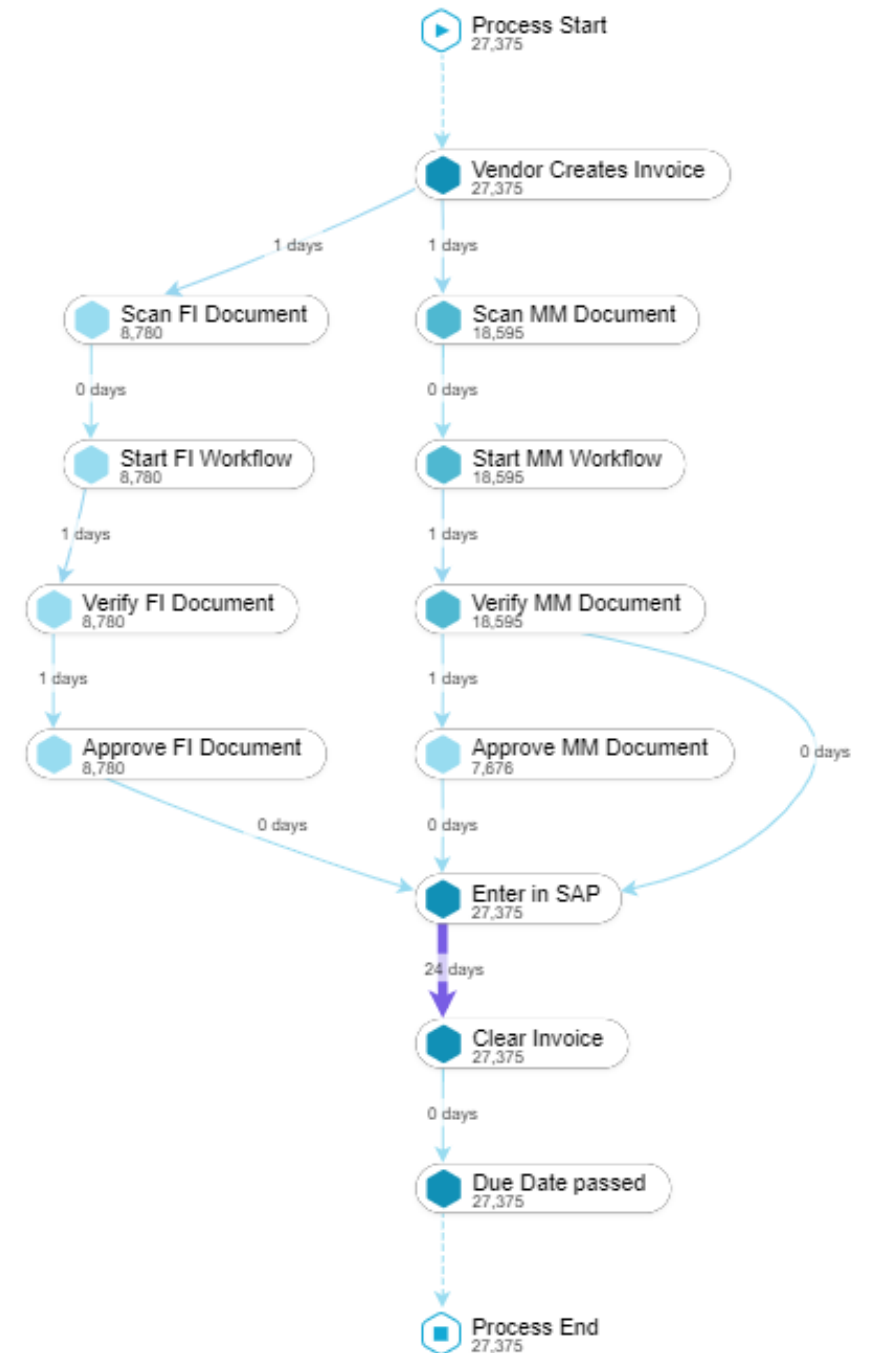
From digital footprint to process

100345	12/2/2015	13:05:09	register
100345	12/2/2015	13:15:12	define permit
120443	12/2/2015	13:16:24	re-open case
100345	12/2/2015	13:17:11	confirmation
138332	12/2/2015	13:19:43	reservation
120443	12/2/2015	13:16:24	re-open case
100345	12/2/2015	13:17:11	confirmation
138332	12/2/2015	13:19:43	reservation
100345	12/2/2015	13:05:09	register
100345	12/2/2015	13:15:12	define permit
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100345	12/2/2015	13:17:11	confirmation
100345	12/2/2015	13:05:09	register
100345	12/2/2015	13:15:12	define permit
120443	12/2/2015	13:16:24	re-open case
100345	12/2/2015	13:17:11	confirmation
138332	12/2/2015	13:19:43	reservation

Activity

Timestamp

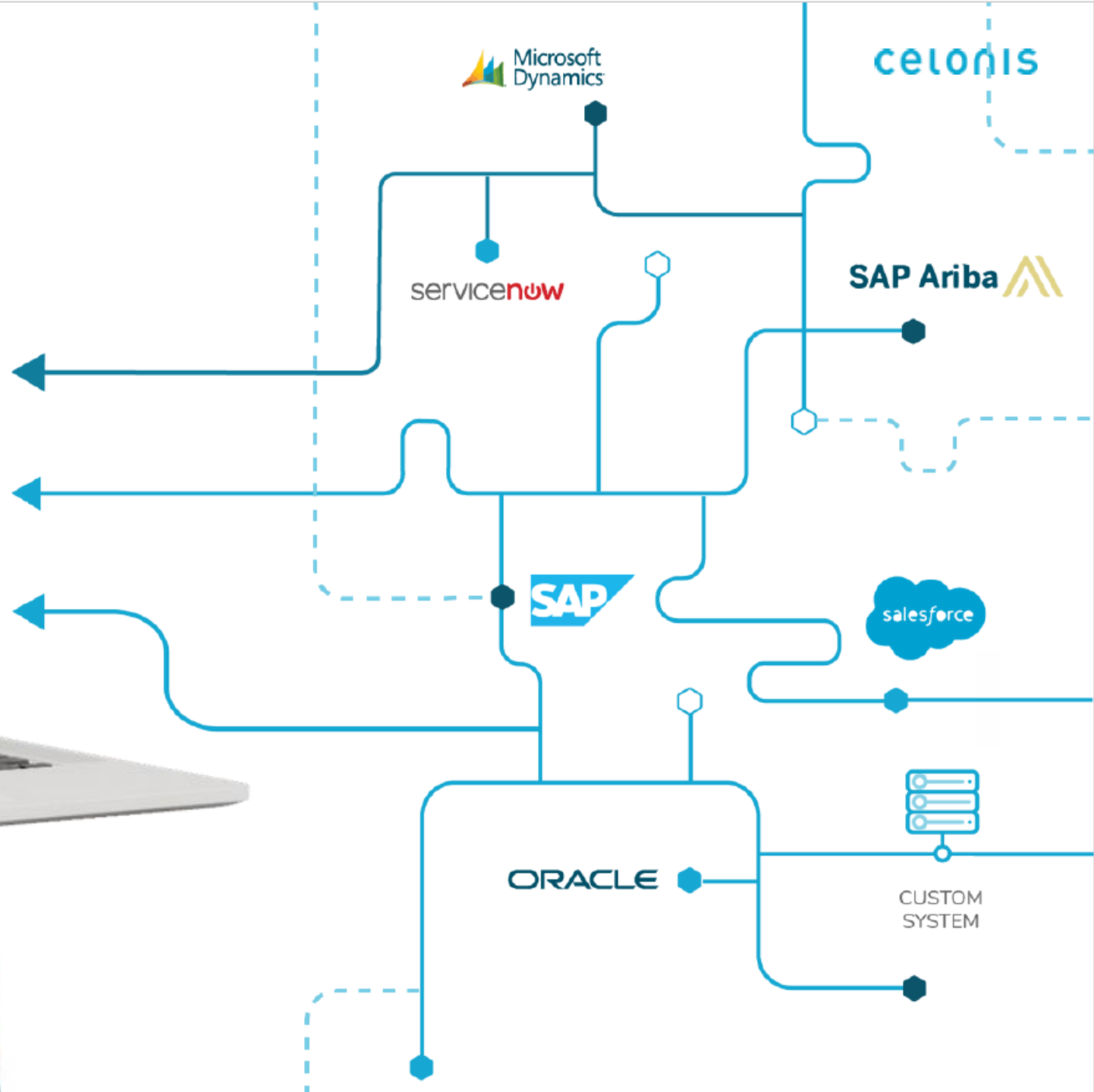
Case ID



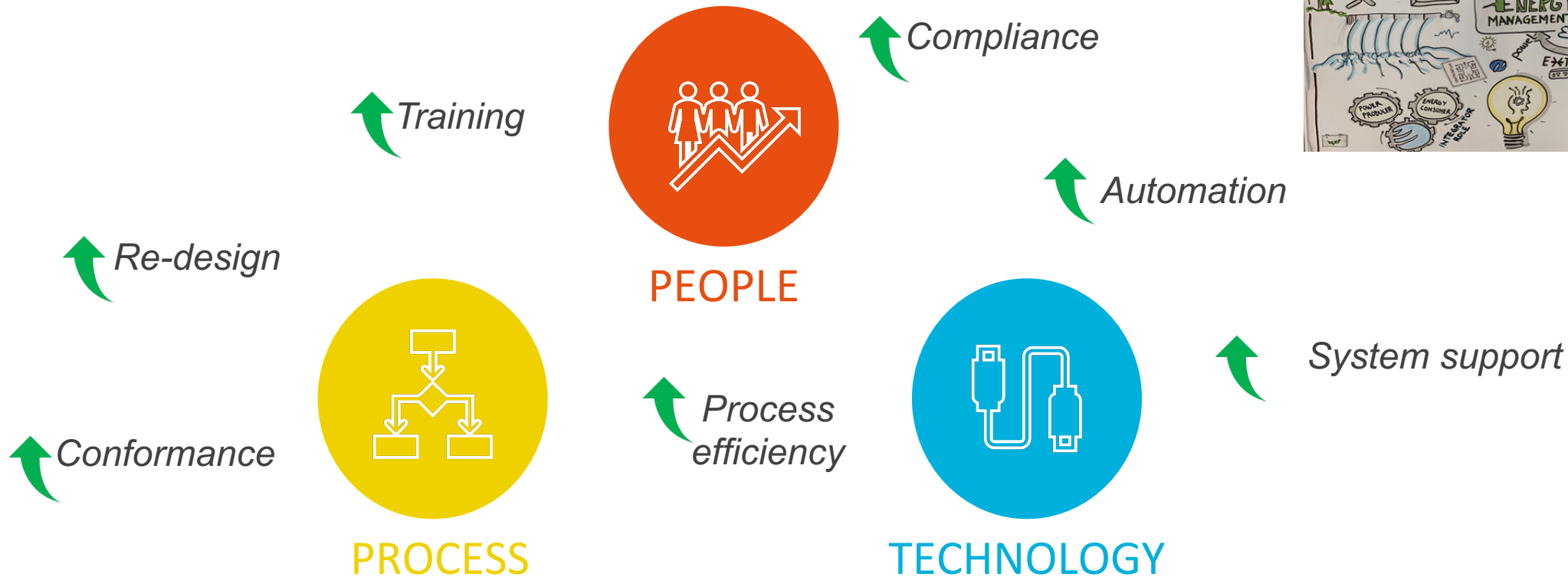
CELONIS PROCESS MINING TECHNOLOGY



Celonis' Process Mining technology visualizes the actual process and leverages AI-powered analysis capabilities for improving your business.



Process Mining offers a new approach to process analysis and improvement

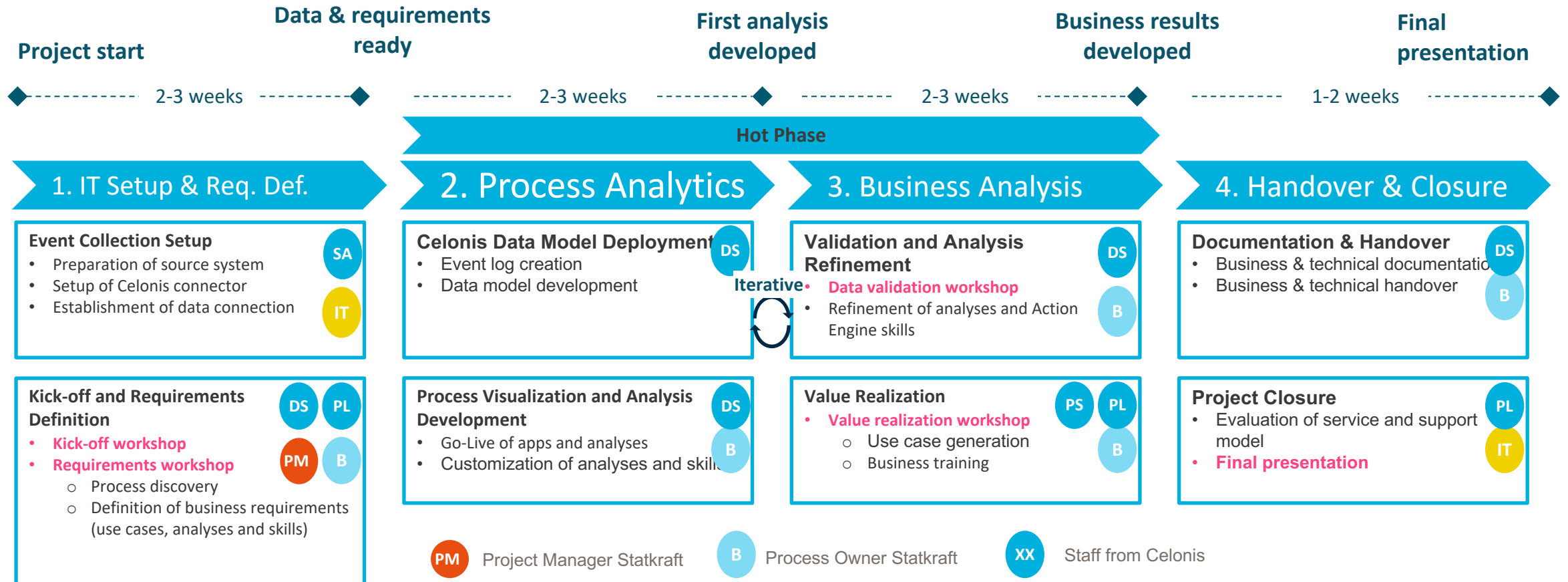


Traditional BPM

Project Plan – One Process



Process
Mining



We currently have three Statkraft business processes connected (with daily data uploads)

Connected



«Accounts Payable»

- ID: *Invoice*
- Process owner: *CFO*



«Purchase to Pay»

- ID: *Purchase order item*
- Process owner: *Procurement (BA E)*



«Plant maintenance»

- ID: *Work order*
- Process owner: *BA P*

Next in line?



«Order to cash»

- ID: *Sales order*
- Process owner: *BA M*



«Service management»

- ID: *Service ticket*
- Process owner: *IT (BA M)*



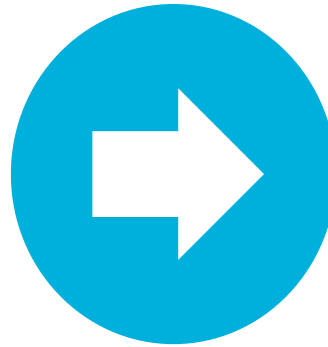
«Master Data»

- ID: *Service ticket*
- Process owner: *IT (BA M)*

Expectations from the Accounts Payable team

Main message

- Identify and prioritise need for **behavioural changes** along the process
- Suggestions for **process re-engineering**. Compare units/geographies
- Technical flow / **system capabilities**. See new patterns and suggest new ideas
- Use Celonis capabilities also to **«explorative» analysis, not only «confirmative» analysis** to support existing hypotheses



Hypotheses sorted into 5 analysis areas

- «First-time-right»
- «Due date»
- «Remittance»
- «Fraud prevention»
- «Automation»

Processes in Statkraft across SA and BA

Processes	SA's		BA's			
	F	S	M&IT	P	I	E
Corporate strategy	✓	✓	✓	✓	✓	✓
Business development	✓	✓	✓	✓	✓	✓
HR	✓	✓	✓	✓	✓	✓
Collaboration and tools	✓	✓	✓	✓	✓	✓
HSSE	✓	✓	✓	✓	✓	✓
Procurement - contract process	✓	✓	✓	✓	✓	✓
Procurement - transaction process	✓	✓	✓	✓	✓	✓
Market analysis/portfolio			✓		✓	
Front office/Market access/T&O			✓		✓	
Energy management			✓		✓	
Production planning				✓	✓	✓
O&M - preventive/analysis				✓	✓	✓
Maintenance - operational				✓	✓	✓
Project and portfolio	✓	✓	✓	✓	✓	✓
Production control				✓	✓	✓
Metering				✓	✓	✓
Middle office/risk			✓		✓	
Backoffice/settlement			✓		✓	
Backoffice/invoicing			✓		✓	
Accounting	✓		✓		✓	✓
Financial reporting	✓		✓	✓	✓	✓
Performance management	✓		✓	✓	✓	✓
Business controlling	✓		✓	✓	✓	✓
ICFR/Fraud and corruption	✓	✓	✓	✓	✓	✓
Tax/CA/IRU/Legal	✓					
Treasury processes	✓		✓		✓	✓

✓	Process owners
✓	Service providers to asset owner or local execution

Key outcomes

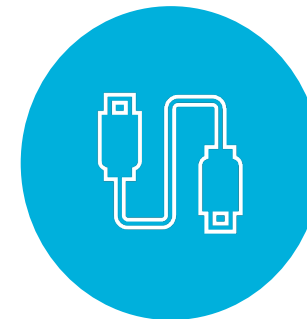
*More precise controls for **fraud checks** (duplicate payments)*



PEOPLE

*Substantial potential **time savings** in greater adoption of already-in-place system support*

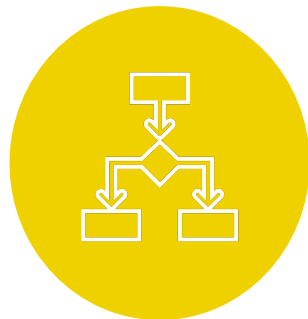
Easier connect invoice to purchase order



TECHNOLOGY

*Include **system support** to further process steps*

***Process understanding** and training*



PROCESS

***Working capital** improvement potentials / potential cost savings from reduced **interest fees** (due date analysis)*

*Transparency on **global standardisation** of processes*

Process Mining as part of continuous improvement

