

Experience sharing & ASPM case study

SBN Asset Management Day

Andreas Bauge & Anders Nystøl – 25th of May 2021



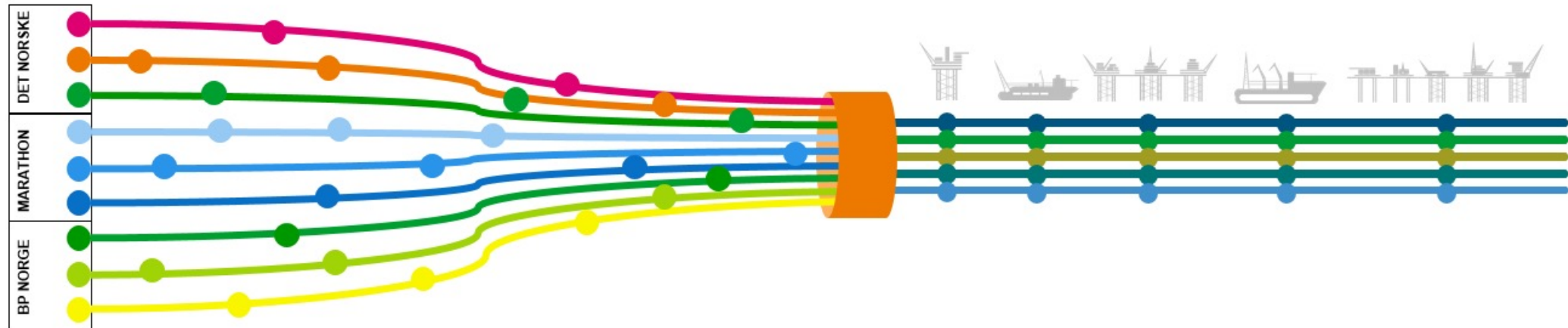
Setting the scene

SAP project history

- 2016 – AkerBP established
- 2017 – Decision on future maintenance management system
- 2017 – Common BMS processes
- 2018 – Complete future SAP Blueprint
- 2018/2019 – "Waves" to existing SAP assets
- January 2020 – Go-live

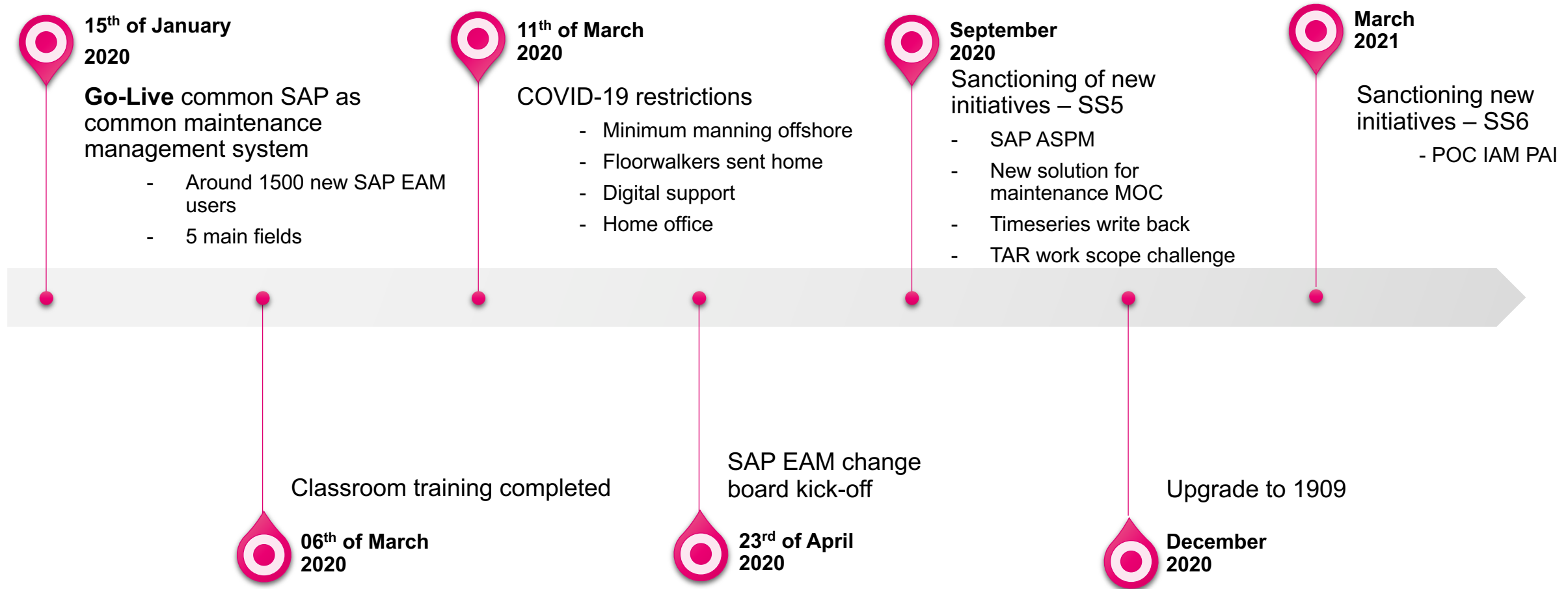
Alignment, roll out and training

- 5 big application with common go-live
- Separat program to cover training and communication
 - Started January 2019
 - Classroom courses for 2000+ users
- Floorwalkers offshore



SBN ASSET MANAGEMENT DAY

Timeline after go-live



Fiori - philosophy

■ Scope

- Full app stack for large user groups
- Develop one platform/launchpad where all SAP related activities take place
- Where apps are not available/not custom developed add the standard SAP transaction codes to Fiori Launchpad

■ Goals

- Happy end-users
- Get offshore users on handheld devices
- Reduce training time
- Reduce support need
- Solution fit for the future



DESIGNING THE **PRODUCT** VS DESIGNING THE **EXPERIENCE**

SBN ASSET MANAGEMENT DAY

Fiori – did we meet our goals?

- Training, onboarding and support need
- Diversity in the organisation
 - New SAP users vs. experienced SAP users
 - Difference across roles and business units
- Data migration
- Benefits from one common system
- Need for stabilization and minor improvements
 - Eye-opener for further possibilities

SAP EAM is already a better tool than WorkMate was

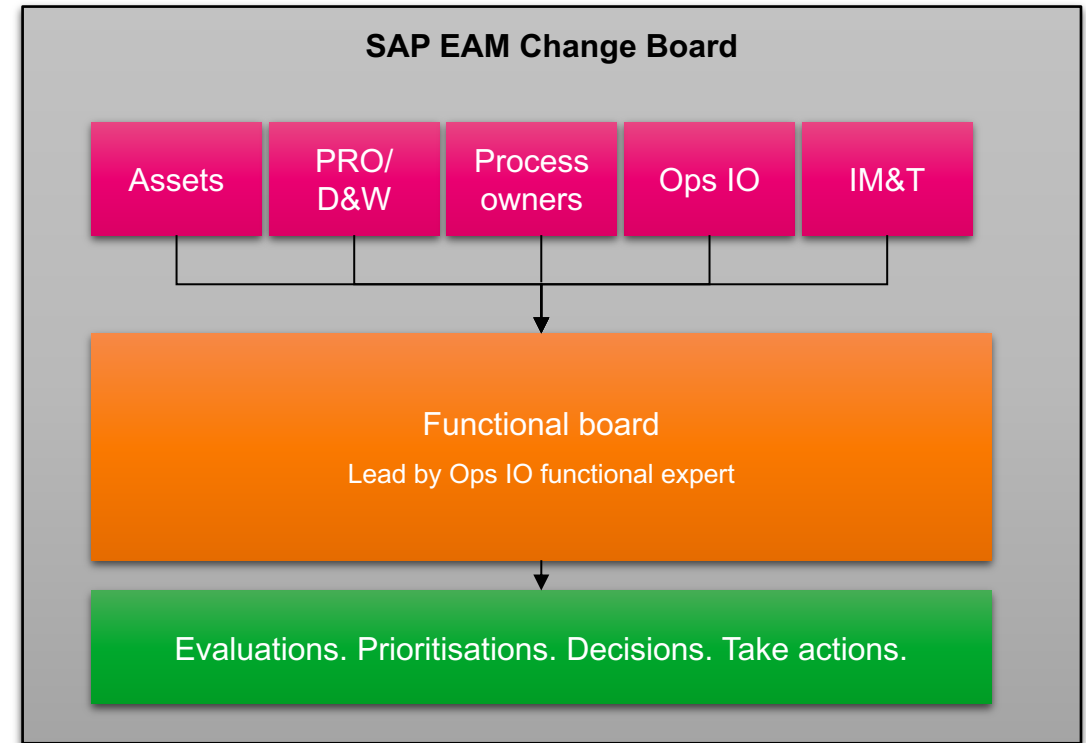
- Former WorkMate enthusiast

The screenshot displays the SAP EAM Fiori interface. On the left, a 'Functional Location' tree lists various assets like 'IAA-1000001 - IAA-1000001 PLATFORM' and 'IAA-2000001 - IAA-2000001 PLATFORM'. The main area shows a list of functional locations with columns for 'Standard', 'Description', 'Status', and 'Action'. Below this, a detailed view of a specific functional location (IAA-2000001 - IAA-2000001 PLATFORM) is shown, including its 'General Information', 'Functional Location', 'Description', 'Status', and 'Action'.

The screenshot displays a Gantt chart for a work order in the SAP EAM Fiori interface. The chart shows the timeline of the work order, with tasks and their durations. The tasks are color-coded: green for completed, yellow for in progress, and red for not started. The chart includes a 'Workorder calendar' and a 'Gantt Report'.

SAP EAM Change board

- Why create a change board?
 - Loud and clear asset voice
 - Align cross assets in need and priority
 - Align different business units
 - Make sure changes are anchored in our BMS system
 - One way to deal with all SAP EAM related changes
- Strong focus on value realization and cost/benefit
- User driven changes vs. strategic/roadmap driven changes
- Experience
 - Alignment
 - Volume of change request
 - Volume of changes dealt with in the change board
 - Drawing the line
 - Communication



Case Study ASPM

IAM ASPM as consequence classification tool

SBN ASSET MANAGEMENT DAY

Background



Requirements and commitments

- PSA activity regulation §46 classification
- Norsok Z-008
- New common internal procedure
- All assets to be re-classified by end of 2022



Software

- No AkerBP classification tool
- Depend on contractors
- No place for a common truth
- Documentation spread across excel, pdf, doc, databases etc.



Data quality

- Fragmented approach
- No common methodology used
- A lot of physical modifications
- End result migrated multiple times
- High volume of high classified tags



NORSOK STANDARD

Z-008
Draft Edition 2017

Til godkjenning i Sektorstyret Petroleum
13 Desember 2017

Procedure

Risk Based Maintenance
Consequence Classification
(Additional requirements
Norsok Z-008)



PETROLEUMSTILSYNET

uence

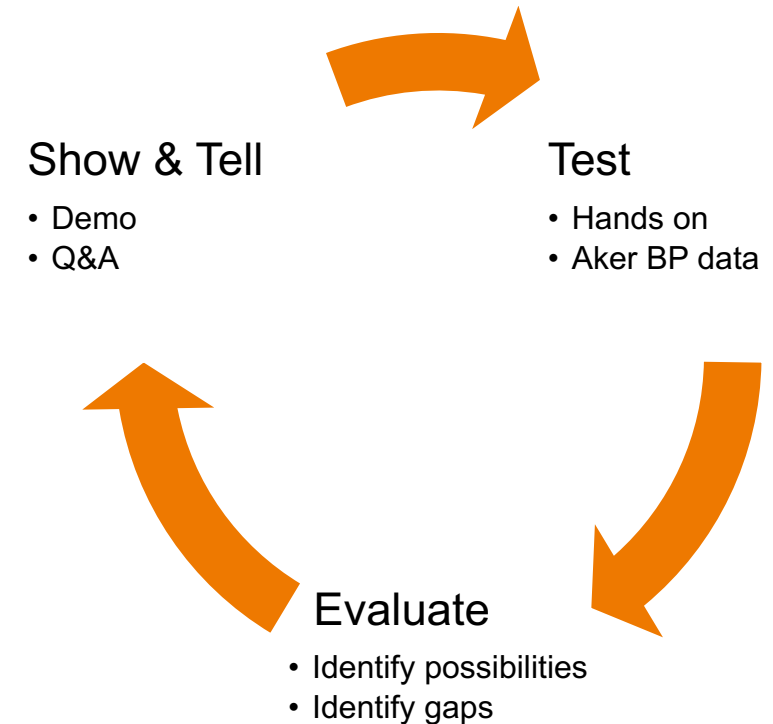


SBN ASSET MANAGEMENT DAY

Proof of Concept

Hands on evaluation of ASPM for consequence classification

- SAP ASPM demo environment setup towards AkerBP S/4HANA sandbox
- Weekly demo sessions to showcase functionality using «real» data
- Creating a common understanding of consequence classification requirements between AkerBP and implementation team
- Demo system available for AkerBP core team to perform hands on testing
- Evaluation of the tool against NORSOK and AkerBP specific requirements for consequence classification
- Small team doing the evaluation
- Gap analysis and strategy to close gaps evaluated with implementation partner



Conclusion: Despite the gaps towards Z-008, ASPM covers a piece of a larger puzzle, that other niche software providers do not.

Project execution and timeline



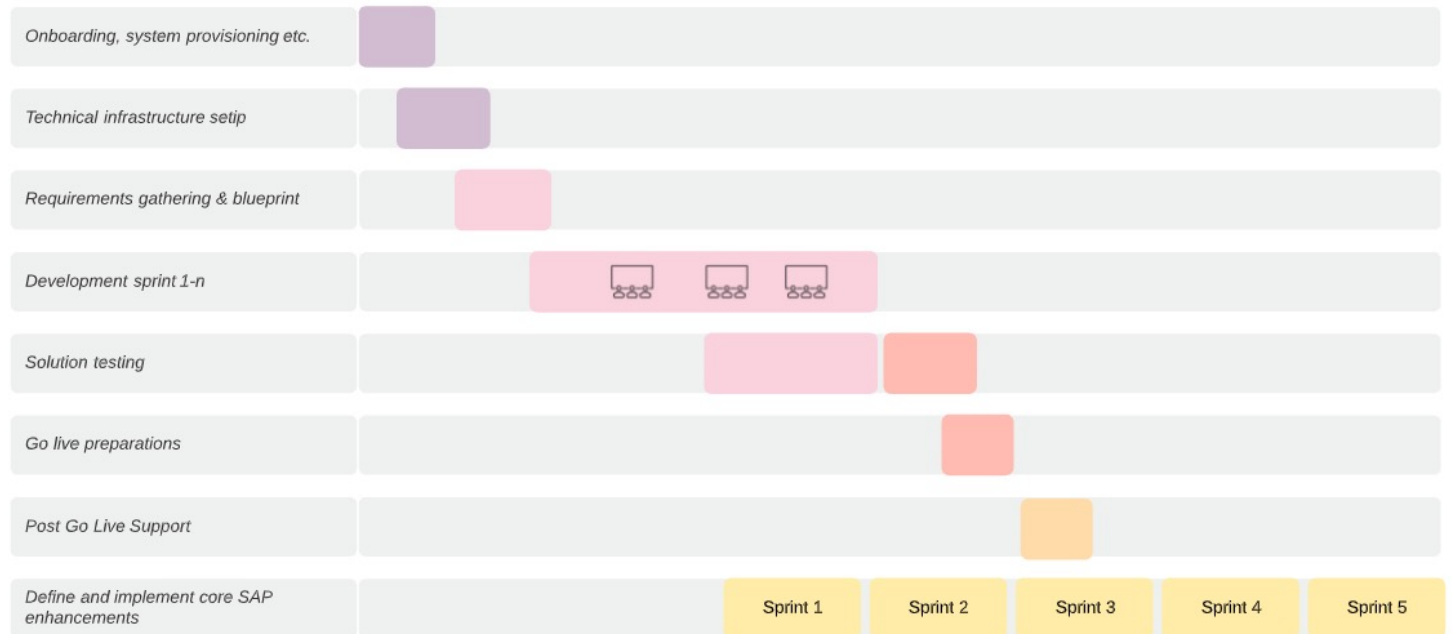
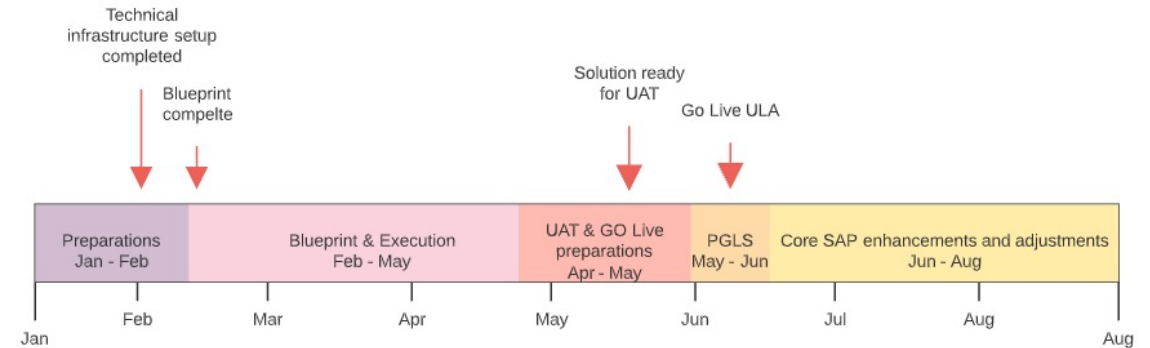
Methodology

- Agile project execution
- Blueprint phase to define high level design and clarify details from PoC phase
- Using Azure DevOps for pipelines, deployment, sprint planning and execution



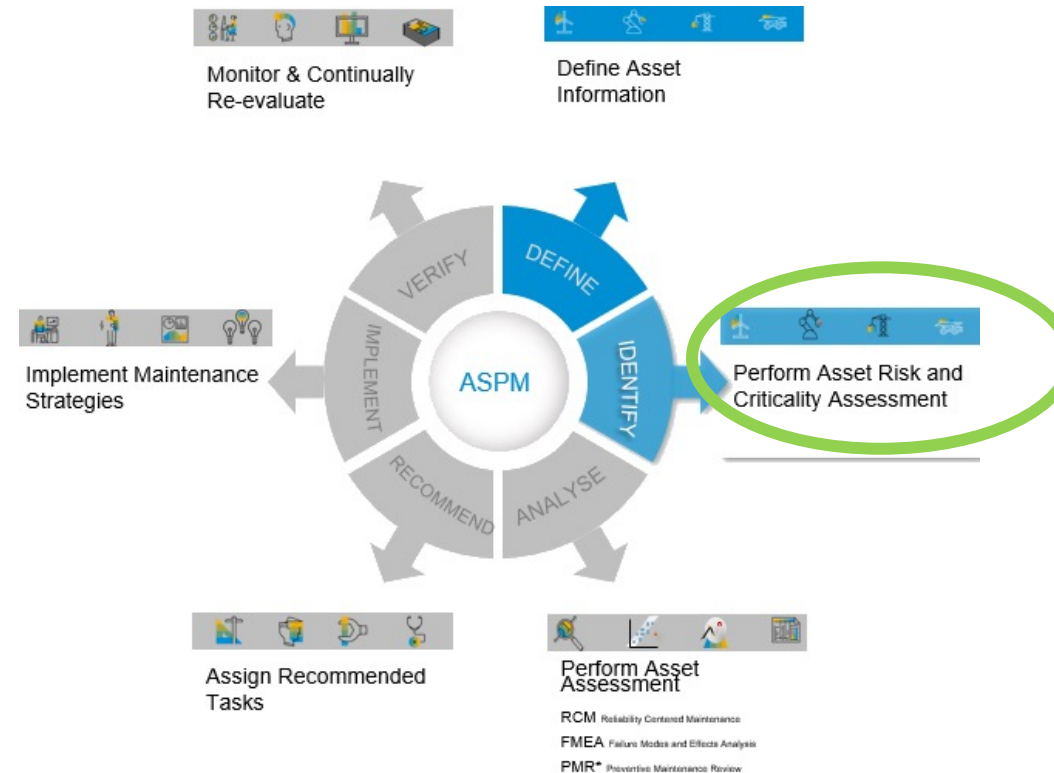
Organization

- Internal core team of 4: reliability engineers, EAM system owner and IT project manager
- Implementation partner w/ functional and technical consultants



Asset Strategy & Performance Managment

Implementation scope



SBN ASSET MANAGEMENT DAY

ASPM Scope

Implementing SAP Asset Strategy & Performance management

1. Implementation and configuration of cloud solution
 - Risk & Criticality assessments and process
 - Infrastructure setup (Cloud connector, custom Fiori Launchpad, Azure AD SSO++)
 - Master data integration with core SAP solution
2. Enhancement for assessment «inheritance»
 - Simplifying the consequence classification process and remove manual steps with «inheritance rules»
 - Built according to NORSOK Z-008 rules copying assessments from main functions down to sub functions and tags
 - Built using node.js and custom APIs
3. Design and development of Functional Hierarchy Builder app
 - Tool to simplify building and managing complex functional hierarchies according to NORSOK Z-008 and internal procedures
 - SAP Fiori app built on top of ASPM using UI5, Node.js and public and custom APIs
 - App deployed to ASPM launchpad

The screenshot displays the SAP Risk and Criticality Assessment interface. At the top, it shows the assessment name 'AB Assessment' and status 'Published'. Below this, a summary bar indicates a Risk Score of 75.00, Criticality of B 'Medium', Current Risk of AT.AKERBP.3, and 1 assignment.

The main section is titled 'Cost Impact' and features a risk matrix. The matrix has two rows for 'Frequent' and 'Very likely' frequency, and six columns for cost consequences ranging from 15 to 135. The values in the matrix are: Frequent (61.00, 75.00, 90.00, 105.00, 120.00, 135.00) and Very likely (41.00, 55.00, 70.00, 85.00, 100.00, 115.00).

Below the matrix, the 'Functional Hierarchy Builder' app is shown. It includes a search bar and a list of technical hierarchies. The 'Sub Function attribute group' is also visible, showing a list of attributes and their values, such as 'System Type' (Sub Function) 4, 'Redundancy Inference Rule' (Copy from MF) MF, 'Environmental Inference Rule' (Copy from Main Function) MF, 'Safety Inference Rule' (Copy from Main Function) MF, and 'Production Inference Rule' (Copy from Main Function) MF.

SBN ASSET MANAGEMENT DAY

Core SAP scope

Core SAP enhancements

- Making consequence classification data easily accessible in relevant transactions and reports
 - Results from assessment data in ASPM synchronized to S/4HANA EAM module as characteristics
 - Characteristics made available in various relevant transactions, reports and Fiori apps
- ABC indicator enhanced to support AkerBP standards
 - Increased from 1 -> 2 characters to make the impact easily recognizable

Display Functional Location: Master Data

Classification Measuring points/counters Data origin...

Functional loc. ULD-24-V-0062 Cat. 6 Equipment unit ID (F...

Description BULK AIR BALL VALVE 3"-AB-3519-C1A

Status CRTE SERV

General Organization Structure MoC Assessments Asset Central

User data

Barrier System

Primary Barrier Element

Secondary Barrier Element

Tertiary Barrier Element

Risk Based Assessment - Maintenance

RBM Consequence Max	Serious
RBM Consequence Safety	Minor
RBM Consequence Environment	Negligible
RBM Consequence Production	Moderate
RBM Consequence Cost	Serious
RBM Frequency	Likely
RBM Risk	High
Item Redundancy	
ABC Indicator	HC High Risk Cost

Risk Based Assessment - Structural Integrity

RBA Consequence Max	
RBA Consequence Safety	
RBA Consequence Environment	
RBA Consequence Production	
RBA Consequence Cost	
RBA Probability	
RBA Risk	

ABC Indicator CMMS	
Value	Description
HS	High Risk Safety
MS	Medium Risk Safety
LS	Low Risk Safety
NS	Negligible Risk Safety
HE	High Risk Environment
ME	Medium Risk Environment
LE	Low Risk Environment
NE	Negligible Risk Environment
HP	High Risk Production
MP	Medium Risk Production
LP	Low Risk Production
NP	Negligible Risk Production
HC	High Risk Cost
MC	Medium Risk Cost
LC	Low Risk Cost
NC	Negligible Risk Cost
X	Not relevant for Analysis

Our experience from the project so far



Worked well

- PoC phase with hands on testing and evaluation on real/familiar data
- Cooperation with SAP locally and with product development team
- Early adoption (influencing product features and direction)
- Investing in ASPM as solid platform/foundation that is scalable and can be expanded



Challenges

- Research available APIs at an early stage
- Cloud considerations
 - No access to backend
 - Not possible to transport changes across systems (dev, test, prd)
- Early adoption
 - "Missing» functionality
 - Performance challenges
 - Overall product maturity



What puzzled us

- Terminology
- Functional location object not mature/available in ASPM (yet)
- Fields not available on synchronized master data objects
- Configuration possibilities

Next steps

1

Continuously improve

- Focus on asset daily needs and priority
- Countinously align with work processes
- Keep focus on similar things the same way

2

Expand and understand

- Evaluate extended possibilities within ASPM
- IAM PAI proof of concept
- SAP analytic cloud for EAM

3

Transformation of how we do maintenance

- End-2-End holistic perspective on maintenace
- Future application landscape
- What part shall SAP have compared to other applications