

KDD072 - Mobility Application for Enterprise Application Management

Status	Approved
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Stakeholders	FINN, Shannon

Issue

This Key Decision Document (KDD) outlines critical decisions, considerations and recommendations essential for implementing and managing an EAM Mobility solution to best support business processes and incorporate new functionalities S/4HANA will bring to Syensqo.

As part of [KDD016 - Mobility Solution Direction for Enterprise Asset Management](#) a decision was made to implement a **specialized Enterprise Asset Management (EAM) mobility solution** to enhance Syensqo's Work Management process and ensure effective asset and work management.

The solution must offer a modern, intuitive user experience aligned with SAP Fiori UX principles, provide robust offline capabilities for uninterrupted field operations in remote or low-connectivity areas and support key functionalities such as Dynamic Forms, Inspection Rounds / Checklists and Digital Permit to Work.

To identify the most suitable solution, this Key Decision Document (KDD) evaluates commercially available specialized EAM mobility applications, assessing their functional, technical and usability aspects in alignment with Syensqo's strategic objectives. The selection will focus on a future-ready solution that meets current operational requirements while ensuring scalability, compliance and digital innovation to support Syensqo's long-term growth.

Recommendation

Based on our comprehensive evaluation using the decision matrix provided, [BlueWorx](#) emerges as the recommended mobile solution for Syensqo. Operating on the **Neptune platform**, BlueWorx combines the strengths of a specialized Enterprise Asset Management (EAM) application with enhanced flexibility.

This platform supports a wide range of maintenance tasks including work order management and inspections. Its flexibility allows for easy adaptation to deliver functionality tailored to your specific business needs. With robust offline support, advanced synchronization features and a user-friendly interface across both mobile and desktop platforms, BlueWorx ensures seamless integration and efficient maintenance operations. These capabilities make BlueWorx an preferred choice for enhancing mobile capabilities within plant maintenance scenarios at Syensqo.

Background & Context

Syensqo is currently leveraging a custom Neptune-based application, which is deployed across 46 global plants. While this solution has served its purpose, it has reached a point where it must evolve to accommodate the evolving needs of the organization. The SyWay project is introducing several new capabilities and functionalities that require a more robust and scalable solution. Among these capabilities are enhanced Work Clearance Management (WCM), phase-based maintenance processes, and seamless integration with the SAP S/4HANA platform.

The primary goal is to modernize the mobile application environment to ensure it aligns with these emerging capabilities. The transition to SAP S/4HANA presents specific challenges that need to be addressed, particularly around integration and process optimization. In addition, the organization seeks to streamline maintenance workflows, ensuring greater operational efficiency and real-time access to data. The new solution should offer a comprehensive, user-friendly mobile experience that enables users to manage tasks and responsibilities more effectively, while also improving data visibility and supporting informed decision-making.

This evolution is aimed at ensuring a smooth operational transition during the ERP upgrade, enabling Syensqo to fully capitalize on the new features within SAP S/4HANA such as real-time asset tracking, dynamic resource allocation and other advanced capabilities.

Assumptions

SAP S/4HANA Integration: The selected solution will be fully integrated with SAP S/4HANA.

Online / Offline Capability: The EAM mobility solution must support both online and offline functionality to accommodate field operations in areas with limited connectivity.

User Experience: The user interface must align with Fiori UX to ensure ease of use for field personnel.

Scalability: Syensqo's operations will continue to expand globally, requiring a scalable mobility solution.

Usage: The EAM mobility solution will be used across all Syensqo plants globally.

Constraints

Project Timeline: The mobility solution must be implemented within the timeline set for the SyWay project.

IT Infrastructure Compatibility: The selected solution must be compatible with Syensqo's existing and future IT infrastructure.

Functionality & Technical Limitations: Any significant gaps in functionality or technical compatibility may delay the implementation.

Customization Requirements: There may still be a need for customization to align the solution with Syensqo's specific business processes and operational requirements.

Impacts

The selected EAM mobility solution will impact several areas of Syensqo's operations:

EAM Processes: The selected solution will impact asset and work management processes including scheduling, work execution and time confirmation.

Data Synchronization: The solution must ensure real-time synchronization with SAP S/4HANA to maintain data consistency across systems.

Field Personnel: Training and adoption of the new solution will impact how field personnel interact with the system.

IT Infrastructure: The solution will require IT support for integration, maintenance and updates.

Compliance & Safety: The new solution must ensure that safety standards and compliance regulations are met, particularly with respect to Work Clearance Management and Permit to Work functionalities.

Business Rules

To be finalized following the completion of the Execution and Mobility detailed design workshops.

Options considered

The applications selected for detailed evaluation, SAP Service & Asset Manager (SSAM), BlueWorx and Unvired were chosen based on their strong alignment with the SyWay Design and their ability to support critical EAM functionalities such as phase-based maintenance, WCM, dynamic forms and offline work execution. Each solution offers proven integration with SAP S/4HANA, robust offline capabilities, SAP Fiori-aligned user interfaces and comprehensive functional coverage, including work order management, inspections and spare parts handling. Additional selection criteria included multilingual support for Syensqo's global operations and scalability across multiple plants. These factors ensured the shortlisted applications were best positioned to meet Syensqo's long-term strategic, technical and operational requirements.

Option A: Service and Asset Manager (SSAM) - SAP

SAP Service and Asset Manager is designed for managing enterprise assets and maintenance activities, forming a key part of SAP's comprehensive suite of asset management solutions. It offers robust functionalities for asset tracking, maintenance planning, work order management, inspection management, safety compliance and asset performance monitoring.

Maintenance technicians, supervisors and asset managers use SAP Service and Asset Manager to streamline maintenance workflows, perform asset inspections, execute work orders and track asset health and performance indicators.

As an SAP solution, it is optimized for seamless integration with S/4HANA, ensuring real-time data synchronization and streamlined workflows between the mobile app and the core ERP system. Furthermore, integration with IoT devices enables real-time monitoring and data collection, enhancing maintenance efficiency and asset performance.

SSAM Landscape

SAP Service and Asset Manager (SSAM) operates within the **SAP Business Technology Platform (BTP) Mobile Services**, which provides essential backend services to support mobile applications.

Option B: BlueWorx - Accenture

BlueWorx is a cutting-edge, fully integrated solution designed to extend SAP Plant Maintenance to both mobile devices and desktop browsers with seamless usability. Its robust functionality includes:

Key Functionalities:

- Work and Service Orders
- Notifications

- Comprehensive Asset Inspections
- Functional Location and Equipment Details
- Material Management (balances, issues, reservations and exchanges)
- Measurement Readings, Points, and Documents
- Bills of Materials
- Document Management

BlueWorx features a responsive SAP user interface that aligns with modern SAP Fiori application designs, providing an intuitive and familiar experience. It supports **offline functionality** without requiring additional servers or complex configurations, ensuring consistent performance across all device types. Unlike other solutions, BlueWorx maintains a unified codebase for both mobile and desktop platforms, eliminating the need for separate versions and ensuring consistent functionality across devices.

BlueWorx System Landscape

BlueWorx operates directly within the existing **SAP S/4HANA environment**, built on the **SAP-certified Neptune Software** platform. It runs within its own SAP namespace ensuring independence from SAP-delivered code and customer-specific developments.

Option C: Mobile Enterprise Asset Management - Unvired

Unvired Mobile Enterprise Asset Management (EAM) is a flexible and feature-rich mobility solution designed to streamline maintenance and asset management processes for enterprises using SAP S/4HANA. The solution provides an intuitive user experience while ensuring robust offline capabilities, real-time synchronization and seamless SAP integration.

Key Functionalities:

- Work Order and Service Order Management
- Notifications (Creation, Updates & Attachments)
- Asset Inspections and Checklists
- Functional Location and Equipment Details
- Material Management (Reservations & Issues)
- Measurement Documents
- Bills of Materials (BOMs) Management
- Document Handling
- Work Clearance Management (WCM)
- Time Confirmation for Maintenance Tasks
- Advanced Scanning Capabilities (QR Code, Barcode, RFID)

Unvired EAM Landscape

Unvired EAM operates as a cloud-based or on-premise solution that seamlessly integrates with SAP S/4HANA. It does not require additional middleware like SAP SMP or SAP Gateway, simplifying deployment and reducing IT overhead. The solution supports both iOS and Android platforms, as well as web browsers, providing flexibility in device selection and ensuring accessibility for field technicians across various operational environments.

Design and Requirement Comparison Table

	Option A - Service and Asset Manager (SSAM) - SAP	Option B: BlueWorx - Accenture	Option C - Mobile Enterprise Asset Management - Unvired
Synchronization	PRO: Provides strong and integrated synchronization functionality with SAP backend, ensuring real-time updates and data consistency across mobile and desktop platforms	PRO: Provides synchronization functionality with advanced features, ensuring seamless data integration and synchronization across various operational scenarios.	PRO: Provides synchronization capabilities with flexible integration options to align with SAP S/4HANA environments.
Online & Offline Capabilities	PRO : Robust online and offline capabilities, leveraging SAP's technology stack for reliable data synchronization and real-time updates	PRO : Provides online and offline capabilities with advanced offline mode features. Supports seamless synchronization of data	PRO: Supports offline mode with data caching for improved performance and user experience in field operations.
Application	PRO: A structured and process-driven application that encompasses a wide range of functionalities, enhancing the overall user experience. Standard Fiori apps are also accessible while online on the Syensqo network.	PRO: Delivers a SAPUI5 user experience that closely mirrors SAP Fiori. A major strength of this solution, powered by the Neptune Software development framework, is its flexibility to effortlessly adapt to meet specific customer requirements and validated return on investment (ROI) criteria.	PRO: Offers a responsive and adaptable UI allowing users to navigate workflows efficiently.
Technical Objects	PRO: Provides comprehensive functionality for managing technical objects, also supports detailed management, real-time updates.	PRO: Provides functionality for managing Function Location & Equipment, also supports complex hierarchies, detailed tracking and integration capabilities.	PRO: Provides configurable options for managing technical objects, enabling better alignment with industry needs.

Language	PRO: Supports all required languages, including the four core languages English, French, Italian and Mandarin, along with additional languages relevant to Maintenance operations: Brazilian Portuguese, German, Spanish and Thai.	PRO: Supports majority of required languages, including the four core languages English, French, Italian and Mandarin, along with additional languages relevant to Maintenance operations: Brazilian Portuguese, German and Spanish CON: Does not support Thai	PRO: Supports key languages including English, French, Italian, Mandarin, German, Spanish and Brazilian Portuguese. considered for future releases. CON: Does not support Thai
Notification			
Create and Manage	PRO: Offers comprehensive tools for creating detailed notifications, including templates and predefined fields. Allows for detailed updates to notifications, with seamless integration to reflect changes immediately in the SAP backend.	PRO: Offer functionality for Users to view, create and update Notifications. Only when connected, users can see previous Notifications specifically for an Equipment or Functional.	PRO: Enables flexible notification creation and updates with mobile-friendly input options.
Attachments	PRO: Robust attachment support, allowing various file types to be attached to notifications.	PRO: Advanced attachment capabilities, supporting multiple file types and integration, with easy access to view and manage attachments.	PRO: Supports multiple attachment formats with integration to cloud storage for enhanced accessibility.
Work Order			
Create and Manage	PRO: Offers robust and integrated work order management, with comprehensive features and seamless SAP backend integration, ideal for EAM processes.	PRO: Excels in work order functionality with advanced features, extensive customization options and strong support for EAM processes, suitable for large environments.	PRO: Provides essential work order management with intuitive mobile-friendly workflows.
Attachments	PRO: Robust attachment support, allowing various file types to be attached to work orders and integrated within the SAP system.	PRO: Advanced attachment capabilities, supporting multiple file types and integration, with easy access to view and manage attachments.	PRO: Supports attachments with optimized performance for handling large files in an offline environment.
Work Order Operation	PRO: Offers a user-friendly and intuitive interface that ensures effortless access and management of work order operations. Provides streamlined functionality for executing maintenance tasks efficiently, aligned with business processes.	PRO: Offers advanced capabilities encompassing all required Work Order operation functionalities, with easy access to view and manage requirements based on processes. Design for efficient task management and enhanced user experience	PRO: Enables efficient execution of maintenance tasks with an intuitive operation management interface.
Task Lists	CON: No standard functionality available to view or import a task List into a Work Order.	PRO: Offers the capability for users to assign selected Task Lists to their profiles. These Task Lists can be viewed and imported into new or existing work orders. Users also have the option to refine their selected Task Lists before importing them.	PRO: Supports task list assignment and customization within work orders for enhanced usability.
Spare Parts	PRO: Enables users to manually enter, search or scan materials needed for Work Order Operations. Additionally, it supports viewing and assigning spare parts linked to a Bill of Materials (BOM) associated with Function Locations or Equipment.	PRO: Enables users to manually enter, search or scan materials needed for Work Order Operations. Additionally, it supports viewing and assigning spare parts linked to a Bill of Materials (BOM) associated with Function Locations or Equipment.	PRO: Provides an intuitive interface for spare parts lookup, scanning, and allocation to work orders.
Inspection Round & Checklists	PRO: comprehensive and integrated functionality for setting up and managing inspection rounds, checklists and associated tasks. Integration with SAP backend ensures real-time updates and compliance.	PRO: Provides functionality with extensive features for creating and managing complex inspection rounds, checklists and tasks. Supports detailed compliance checks and reporting.	PRO: Supports configurable inspection checklists and automated workflows for compliance tracking.
Form Solution	PRO: Basic form functionality for capturing and processing structured data.	PRO: Provides customizable form solutions with extensive options for tailoring data entry and workflow requirements.	PRO: Offers basic form capabilities with options for customization to support specific data capture needs.
WCM - Permit to Work	PRO: Provides comprehensive WCM Permit to Work functionality integrated with SAP backend, supporting creation, approval and compliance checks for permits.	CON: Whilst BlueWorx supports WCM functionality, it does not support the creation, approval and issuing of Permit to Work (PTW)	CON: Unvired provides its own Safe Work Permit solution, which may require additional customization to ensure seamless integration with SAP PTW.
Time Confirmation	PRO: Offers extensive functionality for time confirmation, including the ability to enter time for single or multiple operations simultaneously, operations spanning multiple days, clock in /clock out capabilities and confirmation of notification activities.	PRO: Offers intuitive functionality for capturing time confirmations, allowing users to confirm time for specific operations and add confirmations to multiple operations. Crew managers also have the capability to add time to orders on behalf of their crew, enhancing operational efficiency.	PRO: Enables time tracking with crew management options and bulk confirmation capabilities.
Scanning	PRO: Supports QR and RF scanning capabilities for materials and equipment, enabling real-time asset tracking and efficient management.	PRO: Supports QR and RF scanning capabilities for materials and equipment, enabling real-time asset tracking and efficient management.	PRO: Provides scanning capabilities for barcodes and QR codes, supporting asset tracking and material management.

Evaluation

The evaluation of EAM mobility solutions considers three options: SAP Service & Asset Manager (Option A), BlueWorx - Accenture (Option B) and Mobile Enterprise Asset Management - Unvired (Option C).

SAP Service & Asset Manager (Option A) offers deep integration with SAP S/4HANA, robust synchronization and extensive asset management functionalities. While leveraging SAP BTP for enhanced mobility support it comes with higher licensing costs. Customization efforts may be necessary to align with Syensqo's specific operational needs.

Mobile Enterprise Asset Management - Unvired (Option C) provides strong offline capabilities and a broad set of asset management functionalities. However, it lacks refined SAP-native UI/UX and has limitations in Work Clearance Management (WCM) - Permit to Work functionality. Some features may require additional configuration to fully integrate into Syensqo's operational framework.

Among the three, BlueWorx (Option B) stands out for its advanced synchronization features, strong offline capabilities, and flexibility to adapt to specific customer requirements. It delivers a seamless user experience across both mobile and desktop platforms while supporting critical maintenance tasks such as work order management, notifications and complex inspection rounds.

**The evaluation scoring system ranges from Low to Very High. In this system, a low score indicates a negative attribute, such as high costs.*

Criteria	Weight	Option A Service and Asset Manager (SSAM) - SAP	Option B BlueWorx - Accenture	Option C Mobile Enterprise Asset Management - Unvired
Synchronization	VH	Very High	Very High	High
Online & Offline Capabilities	H	Very High	Very High	High
Function Location	M	High	High	High
Equipment	M	High	High	High
Notification	VH	High	High	High
Work Order	VH	High	High	High
Work Order Operation	VH	High	Very High	High
Task Lists	H	Low	High	High
BOMs	H	Medium	High	High
Inspection Round & Checklist	VH	High	High	High
Form Solution	H	High	High	High
WCM - Permit to Work	VH	Medium (requires additional personas)	Low	Low
Time Confirmation	H	High	High	High
Scanning	M	High	High	High
Spare Parts	H	High	High	High
Application	M	Very High	High	High
Technical Complexity	M	High	High	High
Interface	L	High	High	High
Licenses & Cost	M	Low (Expensive reoccurring licensing costs)	Medium	Medium
User Experience	VH	High	High	Medium
Scalability	H	High	High	High
Future Roadmap	M	High	High	Medium
Overall		High	Very High	High

Weight Scoring Legend:

- **VH** = Very High
- **H** = High
- **M** = Medium
- **L** = Low

See Also

The following section describes the reference documentation used. Please note that the documentation for the specialized EAM Mobile Applications is provided only as a reference point for conceptual design.

Document Name	Description
BlueWorx Functionality	Summary outline of the BlueWorx product capabilities from a 'SAP functional' perspective
BlueWorx Solution Information	BlueWorx Solution Overview
SAP Service & Asset Manager	Product Overview, Functional & Technical Information
Unvired - Mobile Asset Management	Solution overview and capabilities

Change log

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Title	Last Updated By	Updated	Status
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May 07, 2025	Actor	Type	Activity	Version
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Approved	WENNINGER-ext, Sascha	State	changed state to Approved at 3:00 pm	v24
Pending SteerCo Review	WENNINGER-ext, Sascha	State	gave <i>Final Approval</i> approval at 3:00 pm Not required for SteerCo as per Gabriela's advice on 7 May 2025, so moving to <i>Approved</i>.	
May 06, 2025				
	 FINN, Shannon	State	changed expiry date to '20 May, 2025 06:20 pm' at 6:20 pm	
		State	changed state to Pending SteerCo Review at 6:20 pm	v24
Pending Stakeholder Review	 FINN, Shannon	State	gave <i>Stakeholder Review</i> approval at 6:20 pm	
Apr 23, 2025				
	WENNINGER-ext, Sascha and LEIGHTON-ext, Dean	Edit	multiple updates from WENNINGER-ext, Sascha and LEIGHTON-ext, Dean	LEI