



# Best Practice in Rail Asset Management with S/4 HANA

*Orianda Solutions AG*

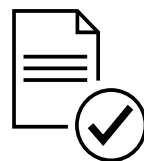
# Orianda – Asset Management with SAP

## Our Highlights



### #1

in the **DACH region** for rail projects based on **SAP Intelligent Asset Management**



### 500+

**successfully** completed projects



### 100+

consultants with more than **400 years** of combined expertise in SAP EAM



**4,5** ★★★★★  
Kununu Score  
97 Bewertungen



## Longstanding customer relationships

Especially to leading companies with focus on Rail



## EAM Expertise

We are one of the **leading consulting firms** with a focus on SAP Asset Management in the DACH region and combine **end-to-end processes in Asset Lifecycle Management** with technological expertise and deep industry know-how.



## Strong partners

Innovative solutions through strong partnerships



# Agenda

Best Practice in Rail Asset Management with S/4 HANA

- I. What is Best Practice?*
- II. What does SAP Best Practice in Maintenance Management offer?*
- III. How does Orianda provide best practice for rail asset management?*
- IV. Conclusion – Benefits and summary*



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# What does Wikipedia say about best practice?

“A best practice is a method or technique that has been **generally accepted as superior to other known alternatives** because it often produces **results that are superior** to those achieved by other means or because it has become **a standard way of doing things, ...**”

[https://en.wikipedia.org/wiki/Best\\_practice](https://en.wikipedia.org/wiki/Best_practice)

- Does this mean that there is a standard way to implement SAP Maintenance Management?
- Also for rolling stock and infrastructure?
- Are there preconfigured templates for this?



# Railway-specific norms & standards

## Synonyms for best practice?

ISO, EN, DIN, ÖNORM, SIA, etc.

1. Which standards are applied for asset management?
2. Which standards are used for modelling of master data Rolling Stock?
3. Which standards are used for modelling of master data Infrastructure?
4. Which standards are applied for modelling of processes in maintenance and asset management?
5. Which key figures are most relevant for a railroad company?
6. Which key figures and KPIs does your company use to manage maintenance?



# Survey

Relevance of Best Practices in Rail Asset Management with SAP S/4 HANA?



37 votes

# Survey

What is the biggest impact of best practices in Rail Asset Management with SAP S/4 HANA?

Improved Asset Maintenance Planning



Enhanced Asset Performance Management



Optimized Asset Lifecycle Management



Improved supply chain integration



Compliance and reporting



41 votes



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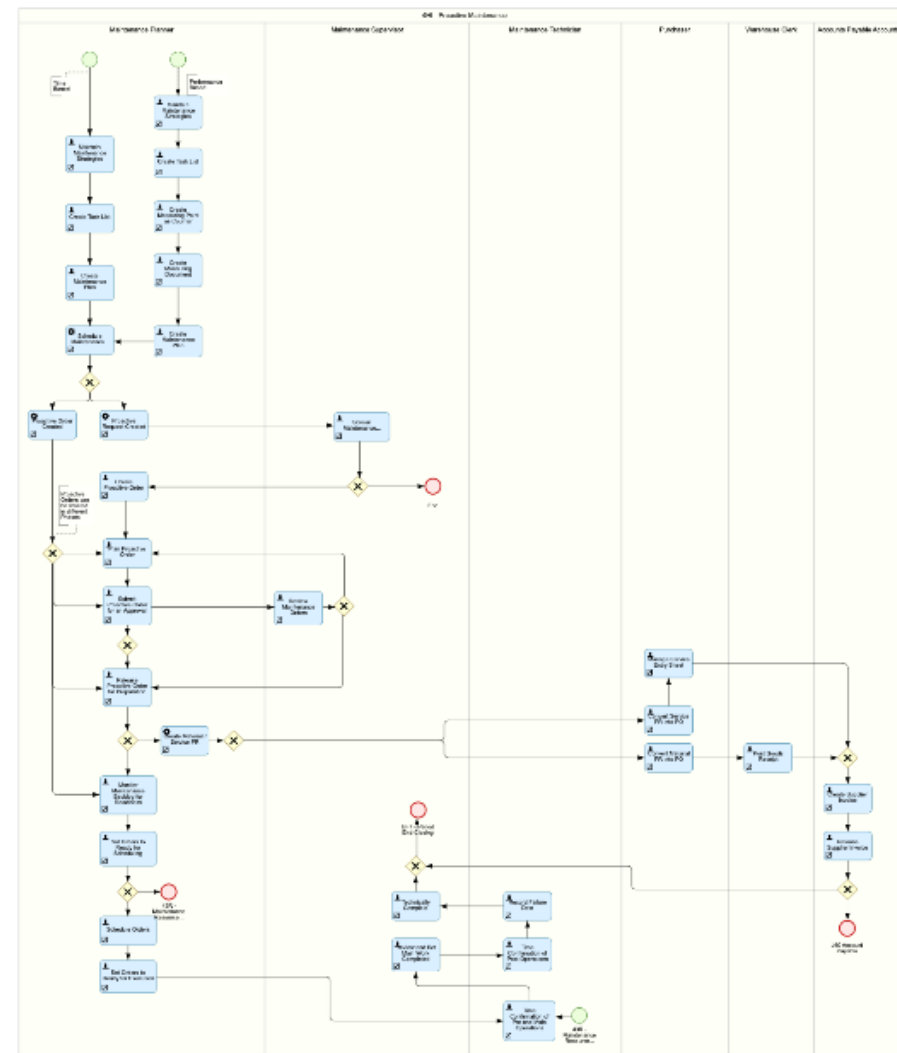


# S/4HANA Maintenance Management

## Overview Best Practice Processes

SAP introduces a set of new documented best practice processes that simplify and standardize the implementation of SAP in maintenance.

Best practice processes	S4 Cloud	S4 On-Premise
Reactive Maintenance (4HH)	Q4 2020	Q4 2021
Proactive Maintenance (4HI)	Q4 2020	Q4 2021
Improvement maintenance (4VT)	Q4 2020	Q4 2022
Operational Maintenance (4WM)	Q4 2020	Q4 2022
Overhead Work in Maintenance (4WM)	Q4 2020	Q4 2022
Minor Work & Repair (4HH)	Q2 2022	Q4 2022
In-House Refurbishment	Q2 2022	Q4 2023
Refurbishment with Subcontractors	Q3 2022	Q4 2023
Inspection Rounds	Q4 2022	Q4 2023



# SAP S/4HANA Asset Management

## - a good basis for best practice

SAP offers many possibilities

1. SAP Maintenance Management in S/4HANA is the "core" or "basis" for the topic of asset and maintenance management with SAP.
2. S/4HANA is available as a cloud and on-premise variant.
3. It contains the core functionalities to manage technical assets over their lifecycle, to map the maintenance processes of correction, prevention and improvement and to systematically evaluate data.
4. To this end, SAP has defined new best practice processes to facilitate and standardize the implementation of maintenance processes in SAP.
5. The central entry point is the Fiori Launchpad.

In the new releases, SAP provides numerous new functionalities (e.g. new Fiori apps, planning folders, checklists)



**SAP Best Practice Explorer, will be deprecated on June 30th, 2023**  
SAP will release an entirely different application that will also cover SAP Best Practice solutions.

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# What are the triggers of the project?

## Motivation



1	Change of Legacy Systems	Initial implementation of an SAP EAM solution (paper), replacement of a non-integrated legacy solution, heterogeneous EAM applications, switch to S/4HANA, introduction of a cloud solution, etc.
2	Cost pressure in maintenance procurement	Efficient use of assets (availability, reliability) and/or increased RoA (return on asset), end-to-end cost transparency, etc.
3	Generation change & Knowhow digitalization	Generation change of employees or maintenance specialists, optimization of employee utilization, better or simplified workflows, secure decision making, etc.
4	Automation & Mobilization	Automation of tasks, mobile IH solutions, consistency, transparency, traceability, legal security, etc.
5	Investment programs	Use of government funding opportunities or special investments in the EAM environment, for example, to modernize assets, modernize EAM processes and tools, etc.
6	High regulatory requirements	Legal certainty, traceability, increasing regulatory requirements, proof requirements (especially in the areas of safety and health), etc.
7	Harmonization of master data and processes	Comprehensive asset segmentation, consistency of relationships between different data objects, comparability of processes, cross-system and cross-country standards

# What are the goals of the project?

Added value

## Asset Complexity

Increasing complexity and high savings and optimization potential in maintenance

## Industry standards


Increasing legal requirements and industry standards demand innovative maintenance solutions

## Competition & Customer Satisfaction

Minimize maintenance costs and unplanned downtime with predictive maintenance, for example

## Cooperation

Automated data exchange between operators, manufacturers and maintainers of assets is becoming increasingly important

- 
- 01 Maximization of asset availability
  - 02 Improvement of asset condition
  - 03 Increasing customer satisfaction
  - 04 Optimization of ROI (asset-related)
  - 05 Up-to-date asset information over the entire lifecycle



# Everything revolves around assets

What assets are involved ?

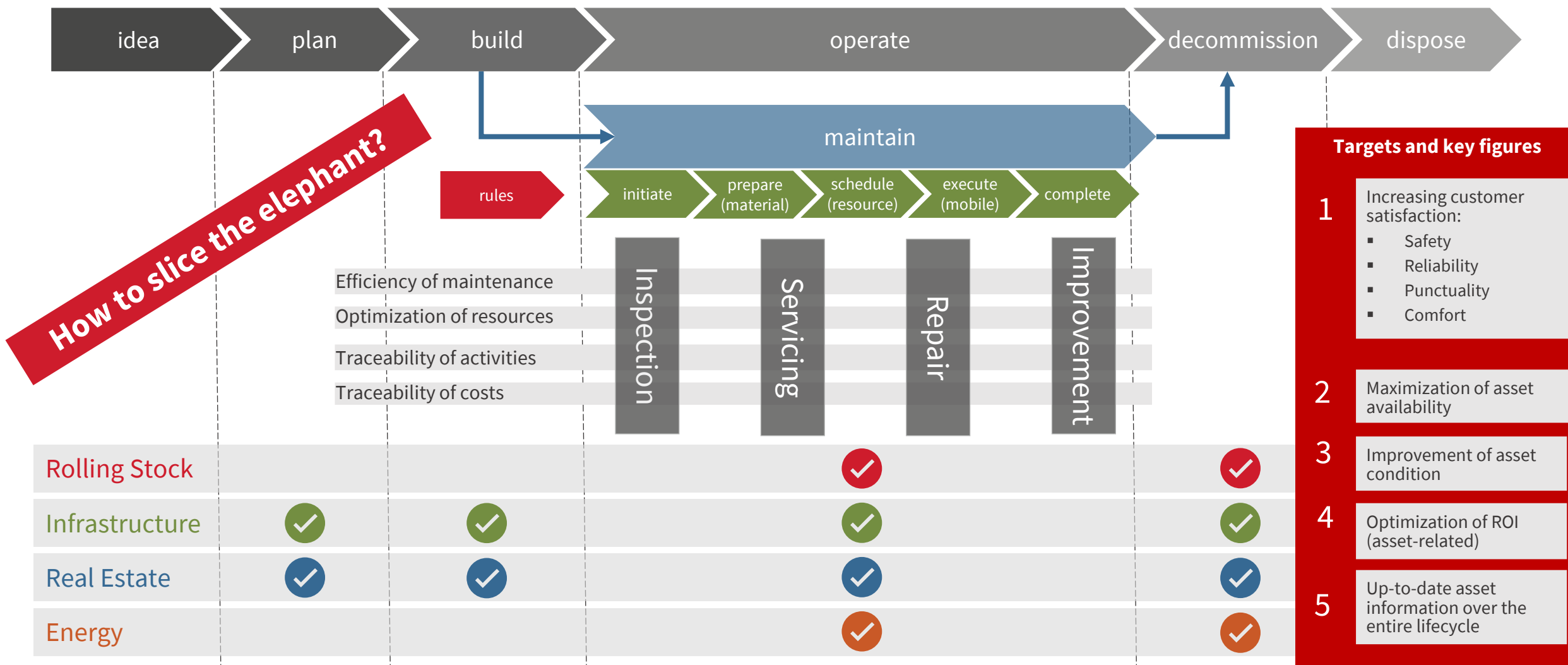
The following are typical topics in the asset management of railroads:



rolling stock, infrastructure, real estate and energy.

# Rail Asset Management

Asset Lifecycle Management – Maintenance Management (Acquire to Decommission)

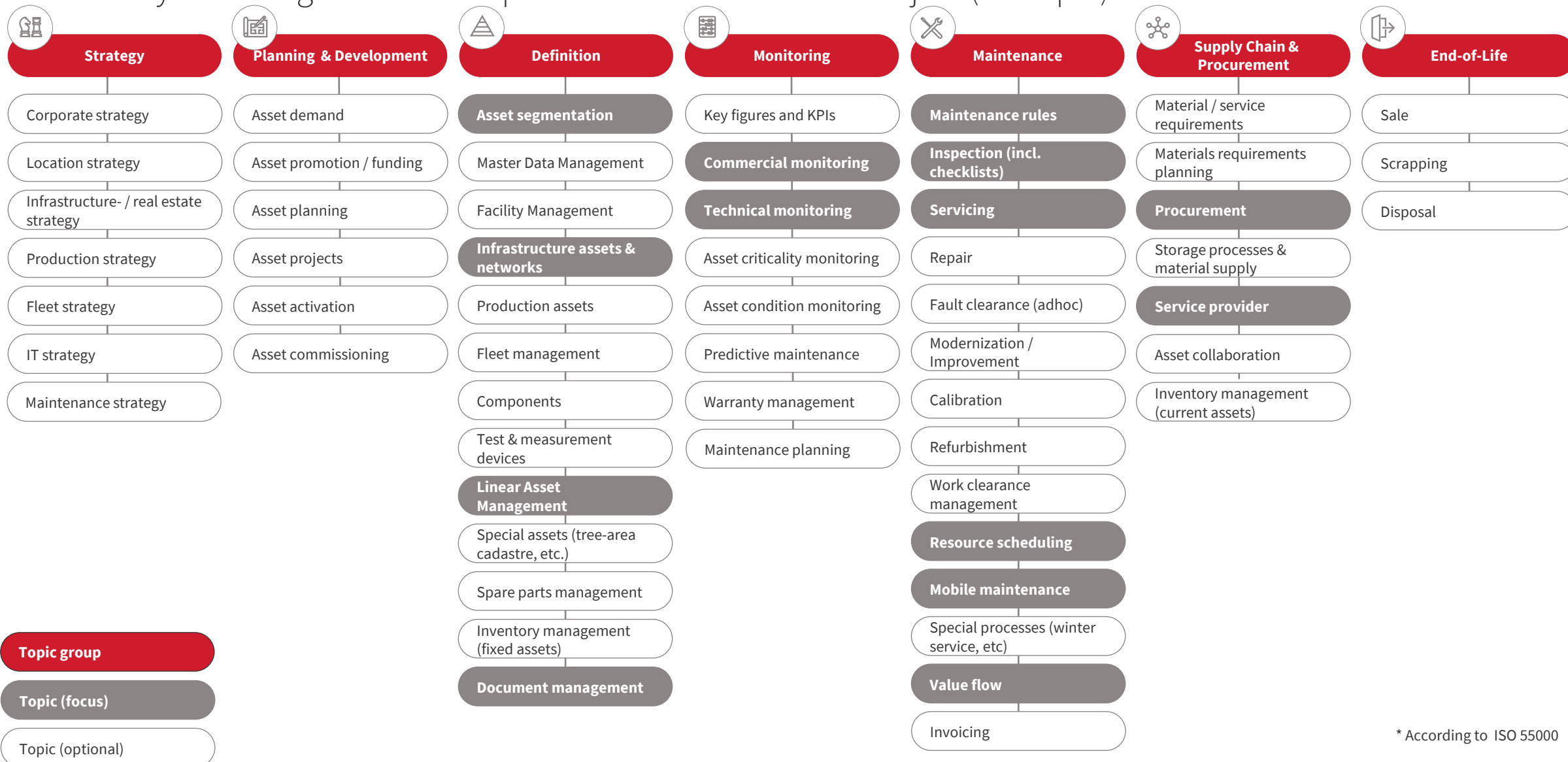


- 1 Increasing customer satisfaction:
  - Safety
  - Reliability
  - Punctuality
  - Comfort
- 2 Maximization of asset availability
- 3 Improvement of asset condition
- 4 Optimization of ROI (asset-related)
- 5 Up-to-date asset information over the entire lifecycle



# Selected range of business functions

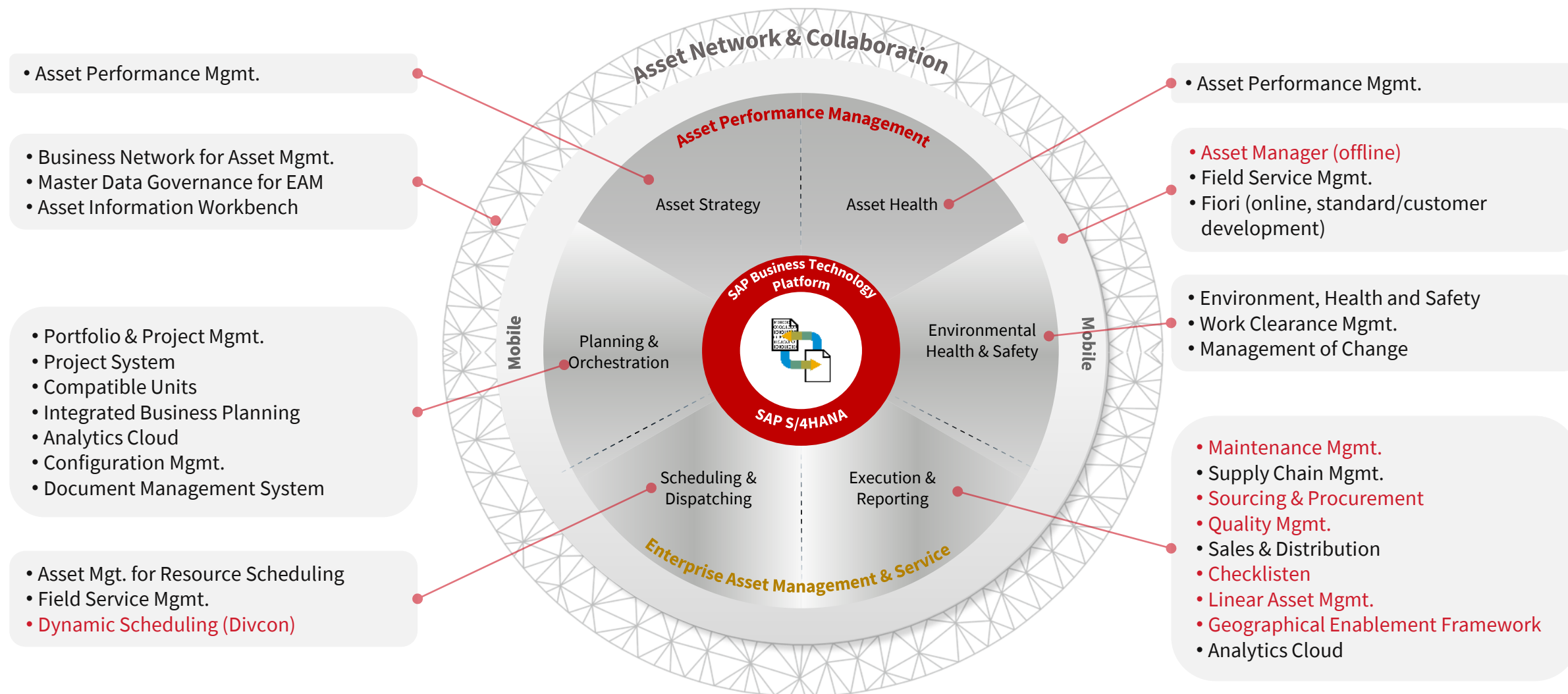
Asset Lifecycle Management\* – Scope of a Rail Infrastructure Project (example)



\* According to ISO 55000

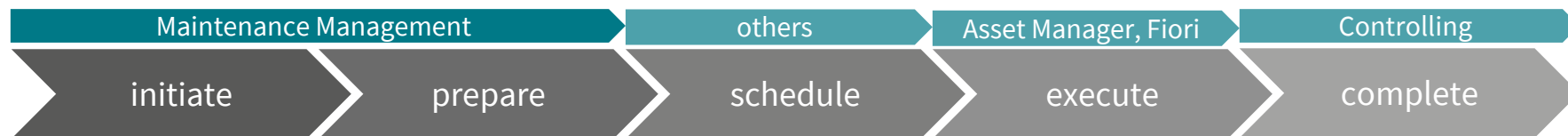
# Selected SAP solutions

SAP Intelligent Asset Management – Scope of a Rail Infrastructure Project (example)



# Exemplary representation of maintenance processes

Rail Asset Management – Infrastructure (example)



Scope of implementation (first wave)

## Repair

*reactive, medium-term, opex*



## Inspection/servicing

*preventive, opex*



## Fault clearance

*adhoc, opex*



## Complex Repair

*planned long-term, opex/capex*



## Improvement

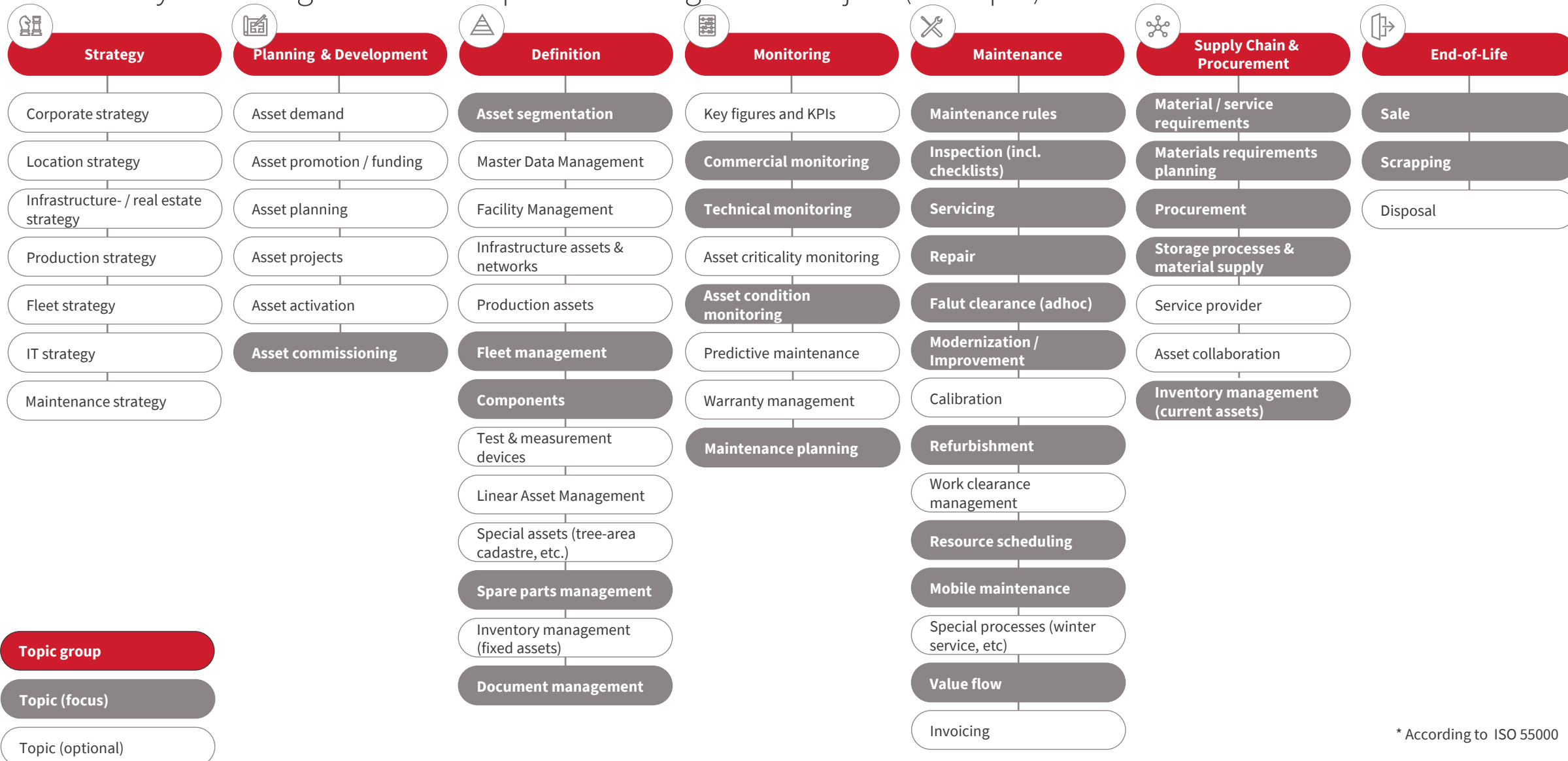
*planned, capex*



1) Initiate follow-up activity 2) Permanent work order oder single work order

# Selected range of business functions

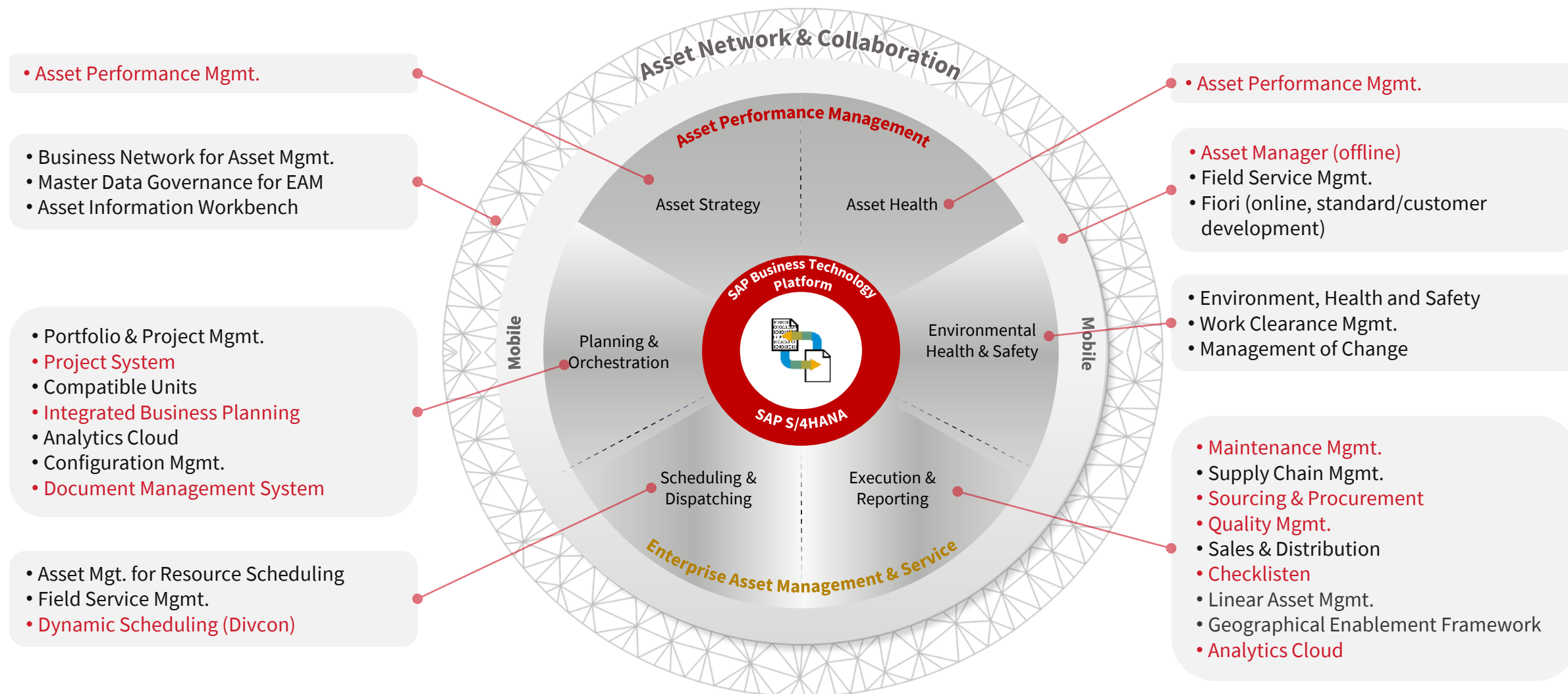
Asset Lifecycle Management\* – Scope of a Rolling Stock Project (example)



\* According to ISO 55000

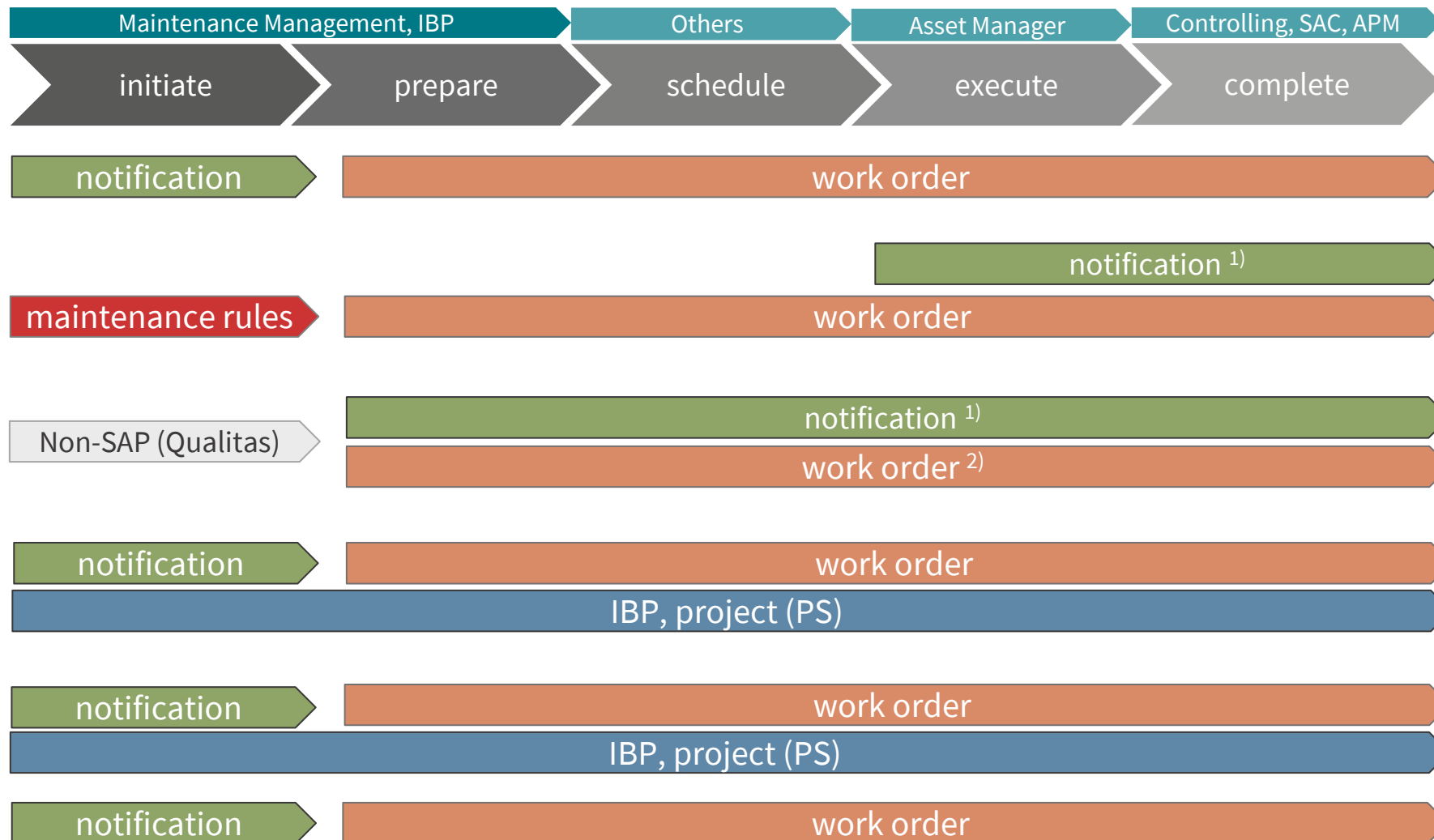
# Selected SAP solutions

SAP Intelligent Asset Management – Scope of a Rolling Stock Project (example)



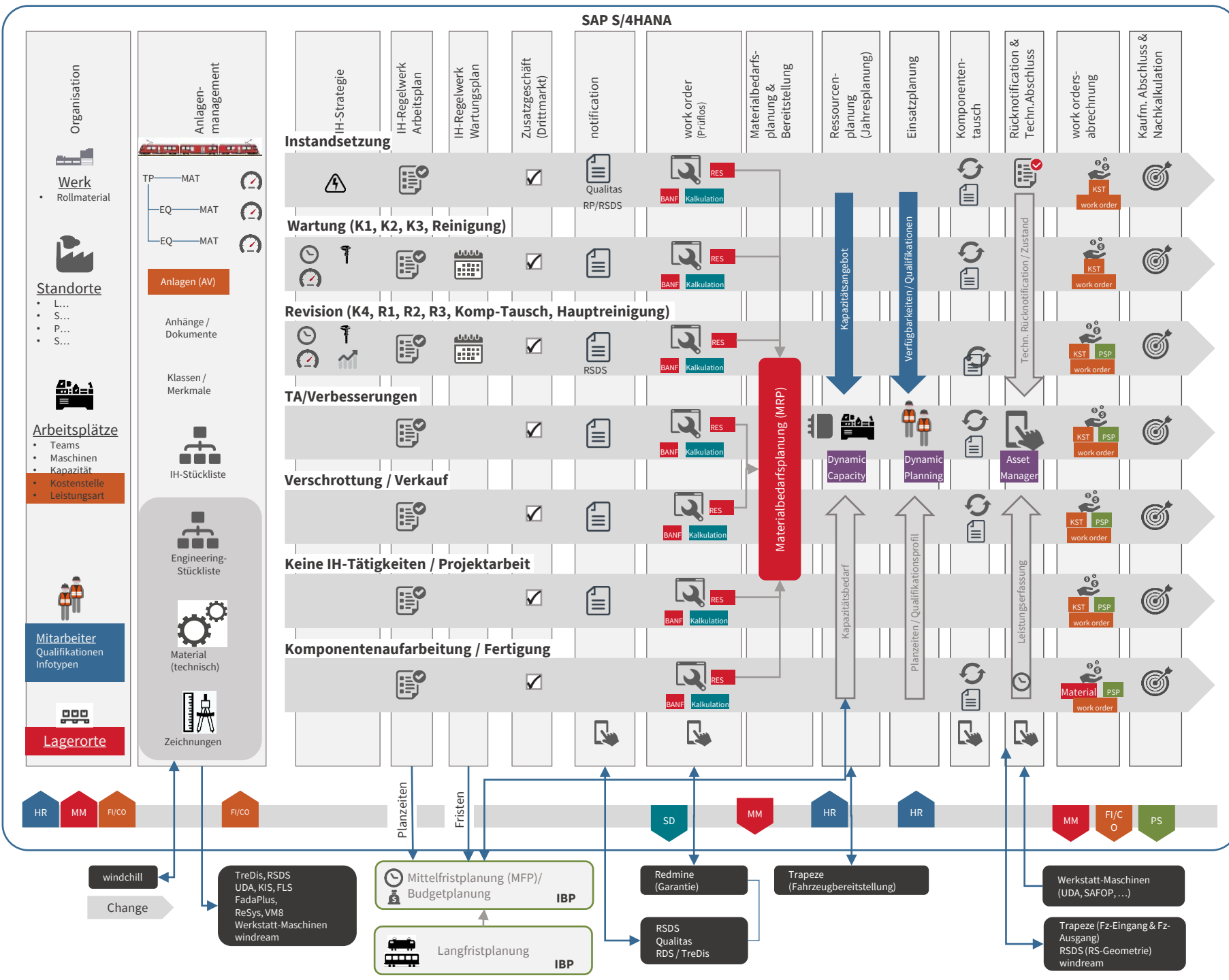
# Exemplary representation of maintenance processes

Rail Asset Management – Rolling Stock (example)



1) Initiate follow-up activity 2) Permanent work order oder single work order

# Solution Map – Rolling Stock Project



**SAC**

Key Performance Indicator (KPI)

**APM**

Asset Performance Management

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# 23 years of experience in Rail Asset Management

Some personal insights

1. Projects in Rail Asset Management are usually **complex** and always operate in a **regulated environment**.
2. There are **many users involved**, often working with heterogeneous and non-integrated solutions.
3. A **great number** of assets and data objects are involved. Several hundred thousand functional locations, equipment, maintenance plans, notifications, orders are not uncommon.
4. There are **numerous peripheral systems** that **must be connected**. Railroad operations applications, management reporting, IoT applications with thousands of sensor data. Emerging questions: what data is relevant for asset performance assessment or predictive maintenance?
5. There are numerous **stakeholders** with **different** and sometimes **conflicting requirements**.

A photograph of a railway track stretching into the distance under a sunset sky. The tracks are flanked by gravel and overhead power lines. The sun is low on the horizon, casting a warm glow over the scene.

# 23 years of experience in Rail Asset Management

My lessons learned

1. **Focus** on the agreed targets. Moving targets are the death of any project.
2. Knowing and **applying standards** consistently for the asset's digital twin, processes, and KPIs.
3. **Perseverance** in implementing a variety of requirements.
4. **Discipline** to constantly believe in change and work on solutions for tomorrow.
5. **Patience**, change management or the change in the minds of the affected employees takes time.
6. **Strong** nerves, huge railroad companies move slowly - hopefully in the right direction.
7. **Motivation** - rail companies are sustainable and mostly on time.

# Relevance of best practice in rail asset management with SAP S/4 HANA

My personal assessment

In summary, best practice for managing rail assets with SAP S/4 HANA is important because it enables rail companies to leverage the system's advanced capabilities (for example, FIORI apps and SAP Intelligent Asset Management)

- To optimize asset management processes,
- Improve asset performance,
- Effectively manage assets throughout their lifecycle,
- Optimize supply chain integration and
- Provide transparency to meet regulatory requirements.

**This can lead to increased asset reliability, availability, performance and cost control, ultimately resulting in improved operational efficiency and better business outcomes.**



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a valantic company**

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# Thank you for your attention!

*I will be happy to answer all of your questions.*



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Scan for my contact information



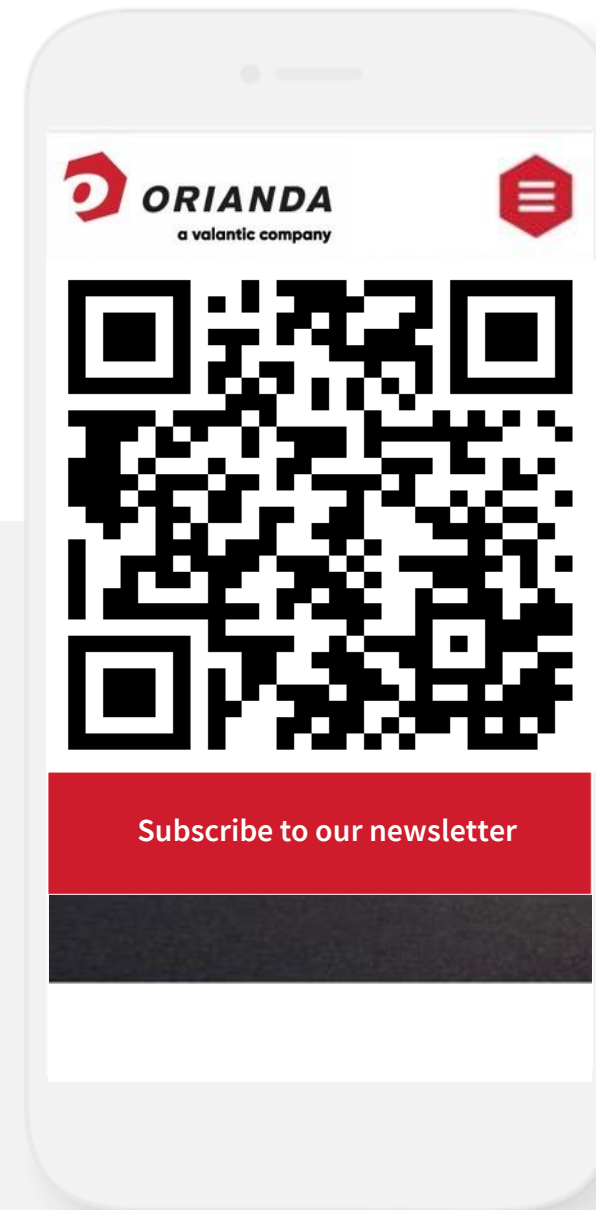
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your Asset Management.**

