

Vanderlande A Path to Successful Mobility

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Agenda

- › About Vanderlande
- › Delivering Outstanding Services
- › Vanderlande Mobile Use Cases
- › Approach for mobile platform selection and implementation
- › Current Status / Mobile Demo

Vanderlande Introduction Movie

Lost and Found



DISCLAIMER

About Vanderlande: Company profile



About Vanderlande: Local and global presence



Our life-cycle services partnerships

Asset services



Asset

Logistic services

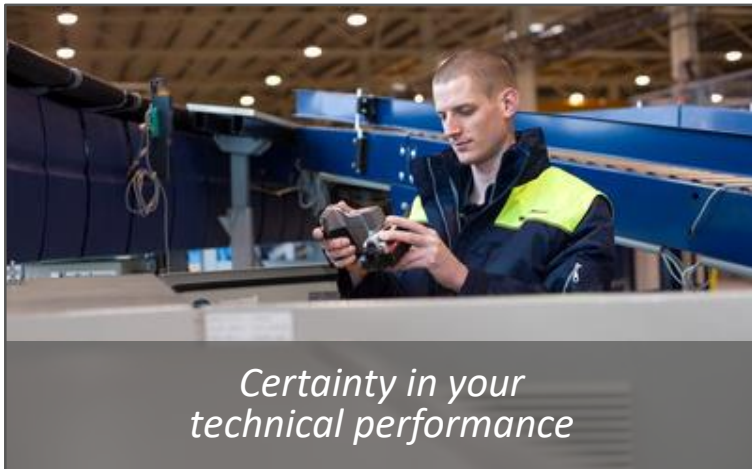


Process

Business services



Business



*Certainty in your
technical performance*

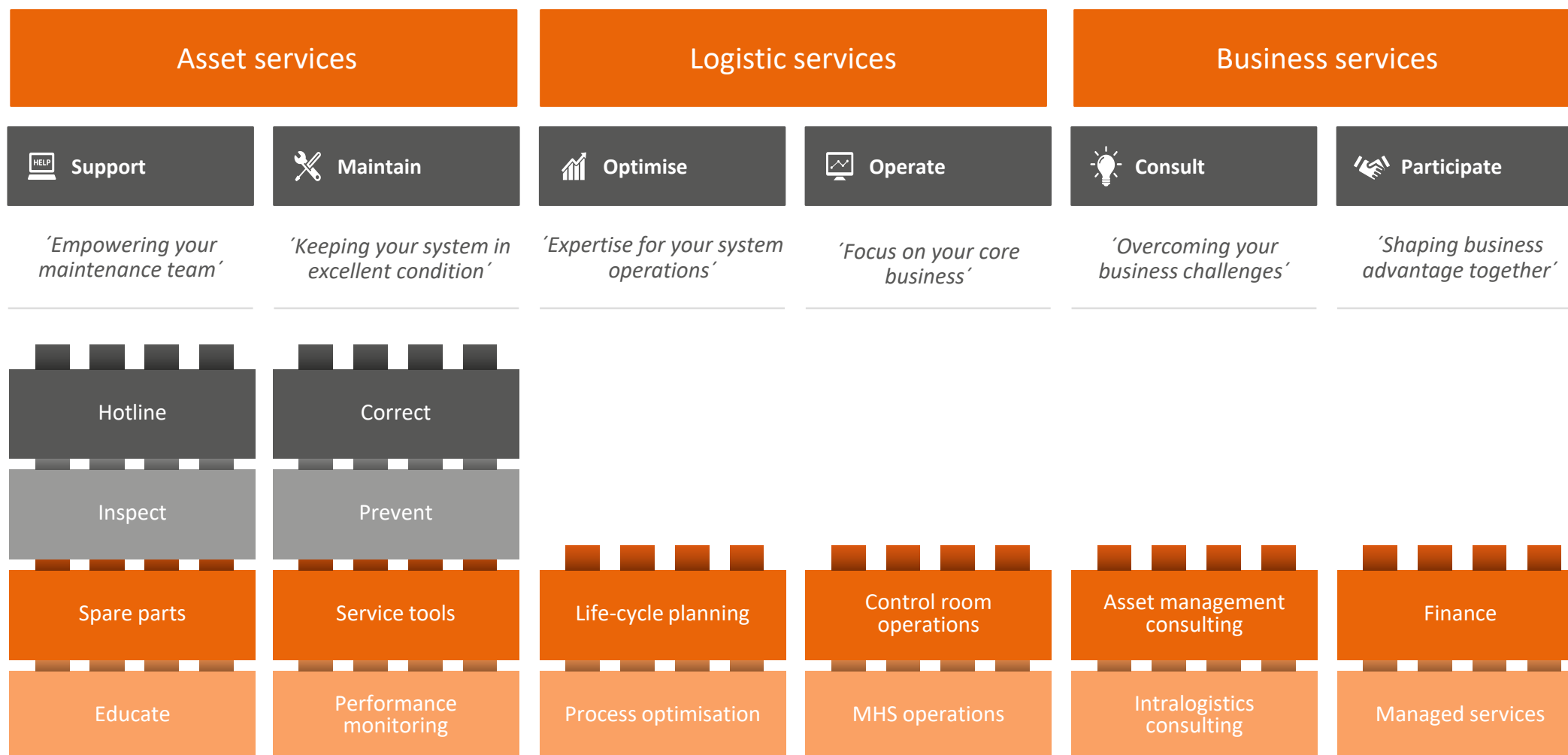


*Excellence in material
handling logistics*



*Future proof your
business success*

Our life-cycle services products



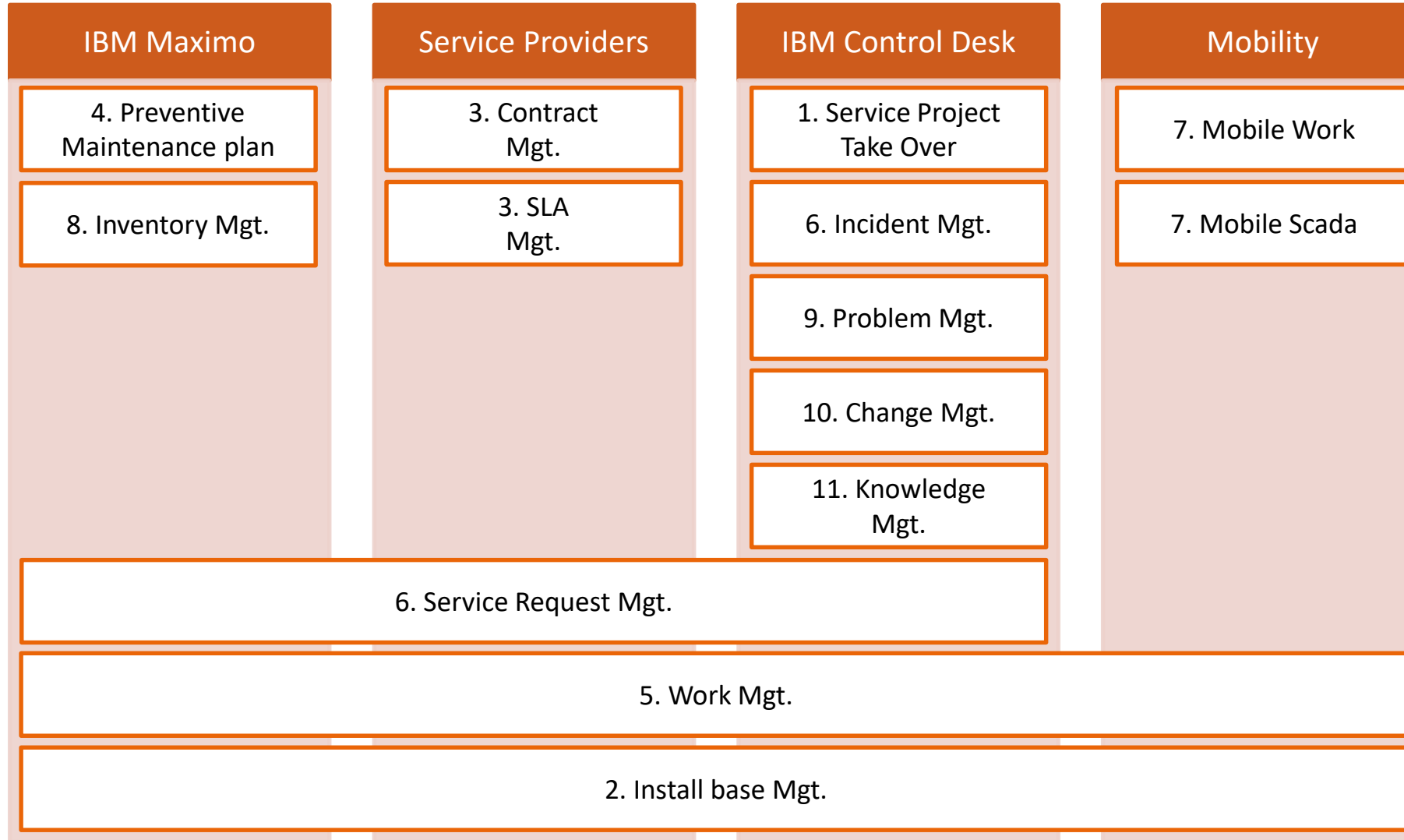
Deliver Outstanding Services

Providing a world-wide Service Operations organization one way of working, one master data source and one IT solution:

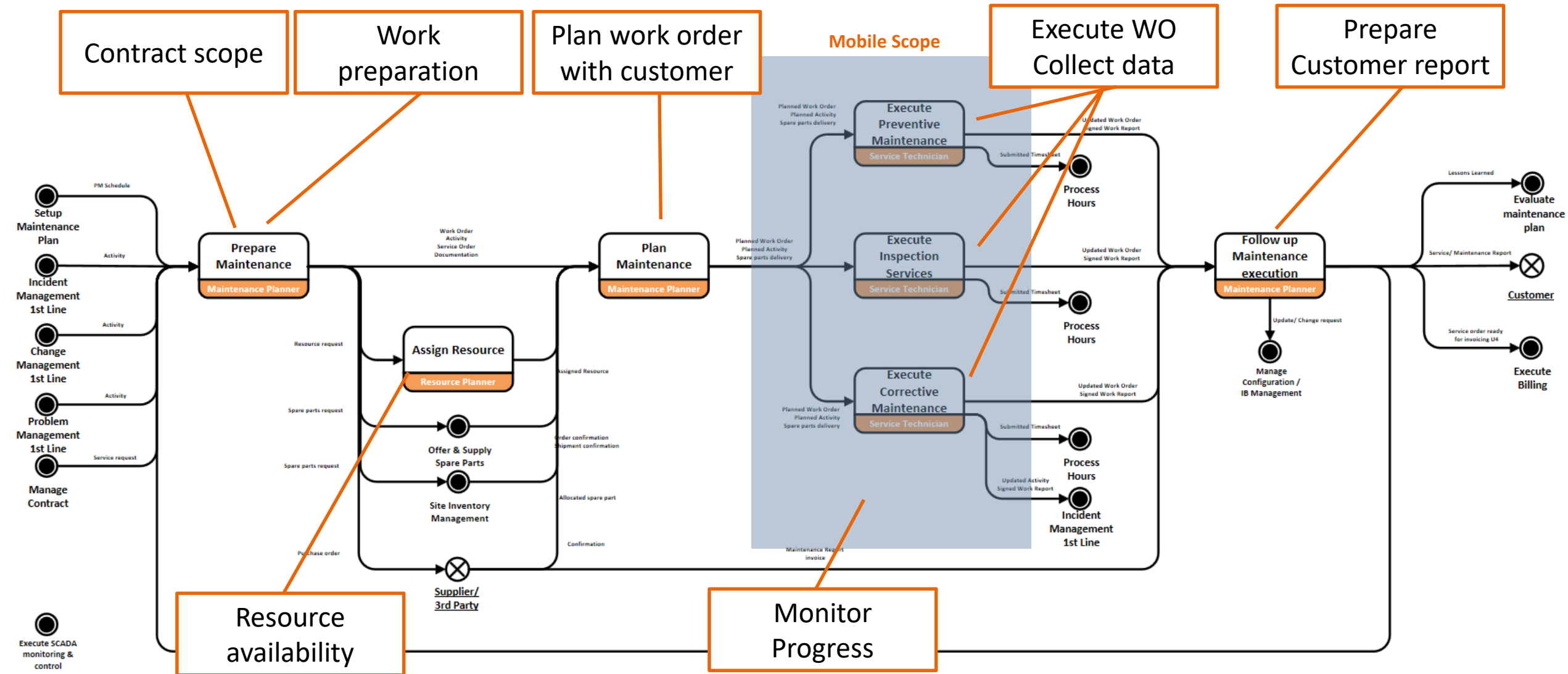
- > Having up-to-date information about ongoing service activities and history for all customers, assets and CI's
- > Ensuring that Services are delivered according to the customer agreements per asset
- > Manage the entire Asset life-cycle
- > Keeping track of all required resources
- > Building a knowledge base as a basis for continues improvement
- > Embracing the customer partnerships by sharing this knowledge



IBM Control Desk & Maximo Modules - Vanderlande Processes



Vanderlande Maintenance Process and Mobile Scope



Mobile platform categorization

- > Maximo embedded mobile solutions
- > Mobile platform independent workflow solutions
- > Custom/Tailor made mobile solutions

Vanderlande Use Cases

- > Variety of use cases which slightly vary in information needs
 - Site Based Team
 - Support service provider
 - Third parties involved in maintenance
 - Customer technical departments
- > Fast changing information needs
- > Online and offline functionality
- > Managing large amounts of data,
 - 700.000 assets
 - 2-3 million spare parts
 - 120.000 items
 - Large workorder hierarchies (hundreds of child work orders)
 - Fast synchronization

Approach for selecting and implementing a Mobile platform

- > Starting point: knowledge based on Maximo Mobile and Tailor Made Standalone Mobile Solution
- > Market research
- > Desk study to define short list
- > Proof of Concept
 - **Proof of Technology**
 - Assessment out of the box functionality
 - **Build missing use cases**
 - Multiple go/no-go gates between phases
- > Pilot group covering two most important use cases (site based and support customer sites)

Proof of Technology

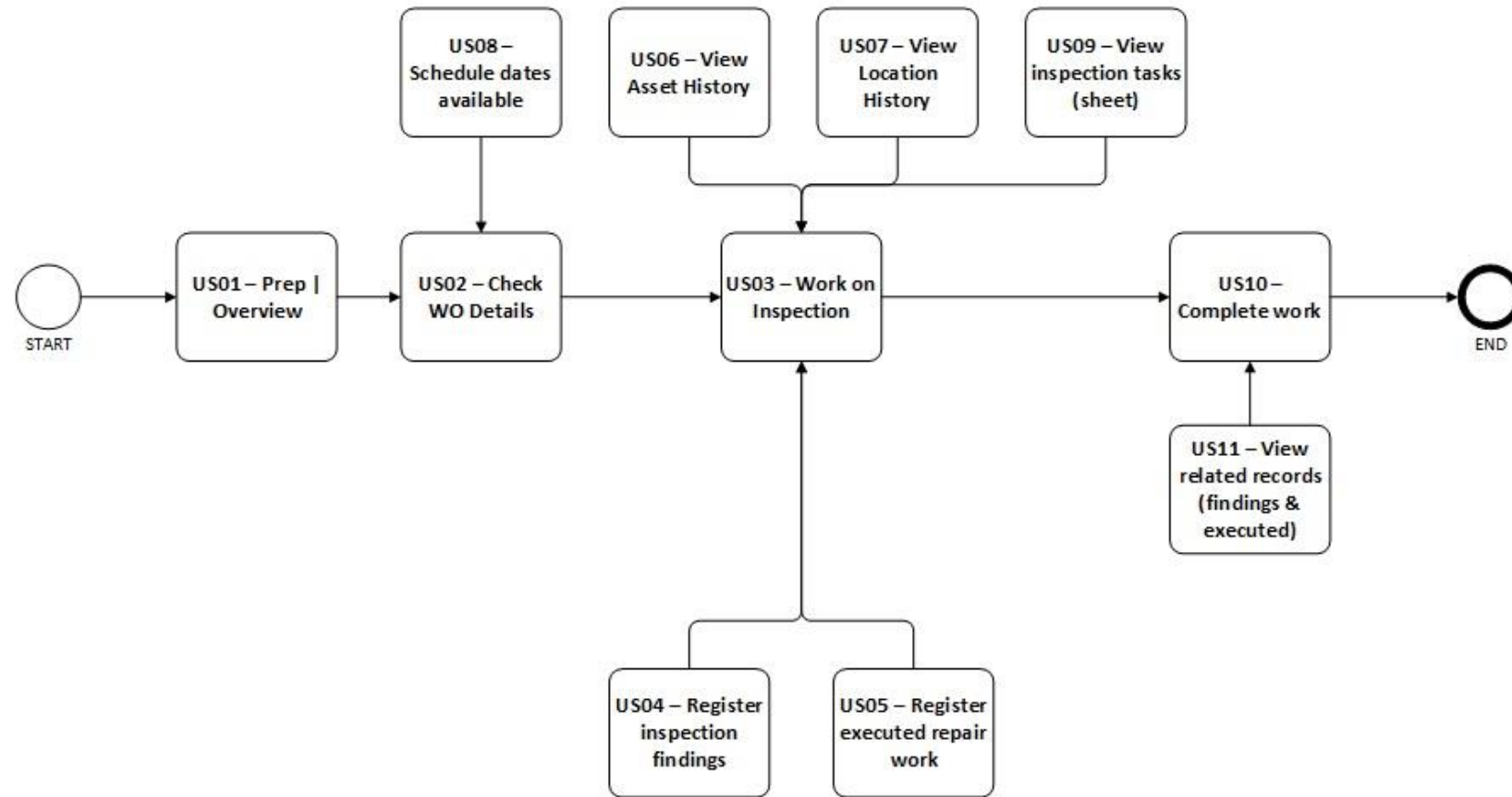
Goal: Demonstrate and prove the platform has the technical capabilities to serve as the mobile solution for maintenance management

- > 2 day visit
- > Installation and Maximo interoperability, mobile device setup and version compatibility
- > Capabilities bulk loading and load concepts (performance and scalability)
 - Preloading of (master) data (<60 minutes)
 - Incremental loads of supporting data (<5 minutes)
 - Load/sync of work order and assignments (<5 minutes)
- > Ability to cover multiple use cases (site based vs. support technician)
- > Flexibility of data loads (identification of which data of which sites to load for a person/role)
 - Partitioning and subscription to partitions
- > Ability to switch online/offline

Build missing use cases

- > User stories methodology to describe requirements and features
- > Basic out of the box app used as a starting point to create specifications of user stories
- > Development effort estimation of described user stories
- > Four two week sprints, each sprint followed by test session and sharing findings
- > One additional rework sprint to finalize for pilot

Vanderlande User Stories overview (1)



Vanderlande User Stories overview (2)

- > 01 – Preparation | Overview
- > 02 – Execution WO Details
- > 03 – Execution – Work on Inspection
- > 04 - Execution – Register Inspection Findings
- > 05 – Execution – Register executed work
- > 06 – Execution – View Asset History
- > 07 – Execution – View Location History
- > 08 – Execution – Schedule Dates
- > 09 – Execution – Show inspection tasks
- > 10 – Execution – Complete Work
- > 11 – Execution – Related Records
- > 12 – Execution – Prepare and execute corrective maintenance
- > 13 – Execution – Emergency Quick Report

User Story 03: Execution | Execute Work on Inspection

Process

- > Execute Work (on an inspection parent work order and the children on this parent WO)

As a (Role)

- > Site based or support technician

I want to (What)

- > I want to indicate that I start work on a particular work order or that I have worked on one or more inspections (child WO's) on that WO.

So that (Why)

- > I can report back my work to Vanderlande and the customer including the progress I make on the inspections

Rationale

- > Have insight in the WO's that are being worked on and which work has been initiated

User Story 03: Execution | Execute Work on Inspection

Specifications

- > *Tapping on the Status section in the DETAILS tab must allow the user to select the appropriate status from a list of statuses in the “Select Status” dialog for the parent WO*
- > *Clicking the Check mark in the next dialog (“Confirm Info”) must confirm the status change*
- > *Do not allow filling out Actuals info when WO is still in APPR*

The screenshot shows a mobile application interface for confirming a status change. At the top, a status bar displays various icons and the time 16:07. Below this is a blue header bar with a back arrow, the title 'Confirm Info', and a checkmark icon. Under the title, it says 'Changing Status for 3489'. The main content area has a light blue background and contains two rows of information: 'From: APPR' and 'To: INPRG'. Below this, there are two rows of date and time information: 'Start Date' with the value '08-05-18' and a calendar icon, and 'Start Time' with the value '16:01' and a clock icon. At the bottom of the screen is a black navigation bar with three white icons: a triangle, a circle, and a square.

User Story 03: Execution | Execute Inspection on Children

Specifications of new “CHILDREN” tab (to handle progress on inspections on Children)

- > *New tab to the right of DETAIL and to the left of TASK tab*
- > *This tab must show all Work Order that are Children of the inspection work order (parent)*
- > *Relationship to use: SHOWINSPASSET*
 - *Relation on Object WORKORDER, Child Object WORKORDER, Clause “(parent=:wonum or (wonum = :wonum and (route is null or (route is not null and routestopid is not null)))) and istask=:no and siteid=:siteid and (assetnum is not null or location is not null)*
- > *Include fields below in given order*
- > *Label “Work Order”: Show Work Order (WONUM)*
- > *Label “Seq”: Show sequence number (SEQUENCENUM)*
- > *Label “Asset”: Show Asset tag (ASSETTAG) followed by the description (ASSET.DESCRPTION)*
- > *Label “Location”: Show Location followed by the the description (LOCATION.DESCRPTION)*

User Story 03: Execution | Execute Inspection on Children

Specifications “CHILDREN” tab (2)

- > *User must be able to indicate that they either Performed or Skipped the Child inspection WO*
- > *Interloc to provide an easy way for users to set Performed or Skipped*
 - *Possible approach: Mimic the way the OOTB completion of Tasks on TASKS tab is done: Tapping once sets Completion, tapping twice sets Cancelation*
 - *Important: Minimum of number of clicks involved for the user*
 - *Performed and Skipped refer back to WORKORDER attributes PERFORMED and SKIPPED, respectively*
- > *When setting a Child WO to Skipped, a way must be provided to provide a Skip Reason (WORKORDER.VISKIPREASON)*
 - *Interloc to come up with a proposal to set this Skipped Reason easily, e.g. show menu with “Set Skipped Reason” when tapping the Work Order number*
 - *Important: Minimum of number of clicks involved*
 - *Skipped Reason uses domain VISKIPREASON with fixed values ‘ASSET IN USE’, ‘NOTIME’, ‘INCORRECT’*

User Story 03: Execution | Execute Inspection on Children

Specifications “CHILDREN” tab (3)

- > *When tapping Work Order section on Child, show menu that allows:*
 - *“View Inspection Sheet” (refer to User Story 09)*
 - *“Enter/Modify Skip Reason” (only if Child WO was marked as Skipped, refer to previous sheet)*
 - *“Register Inspection Findings”(refer to User Story 04)*
 - *“Register Executed Work” (refer to User Story 05)*
 - *“View History for Asset” (refer to User Story 06)*
 - *“View History for Location” (refer to User Story 07)*
- > *Sorting order for Child WO’s on this tab*
 - > *Show unfinished Child WO’s first (then Performed, then Skipped), then sort by Sequence number*
 - > *When a user has completed a Child WO (i.e. indicated they have Performed or Skipped it), it should ideally move to its new place in the order. To prevent confusion or mistakes (e.g. user tapped a Child WO by mistake and wants to correct this) reordering should not take place until the user leaves the tab for another tab and then returns to the CHILDREN tab*
 - > *Interloc is invited to present alternatives to requested behavior that can equally meet the Vanderlande expectations*

User Story 03: Execution | Execute Inspection on Children

Mock-up CHILDREN tab

Work Order Details
3491

DETAIL TASK HAZARD ACTUAL DOC

☐ Check pump operation.
Task 10

☐ Check pump float switch.
Task 20

☒ Check seal and housing for leaks.
Task 30

☒ Inspect impeller for wear
Task 40

☐ Record amperage and voltage with motor operating.
Task 50

☐ Inspect main disconnect and all electrical.
Task 60

+

<i>View Inspection Sheet</i>
<i>Enter/Modify Skip Reason</i>
<i>Register Inspection Findings</i>
<i>Register Executed Work</i>
<i>View History for Asset</i>
<i>View History for Location</i>

Current status / Demonstration

- > December 2018 - successful pilot in live environment with key account site based customer and support contracts
- > January 2019 - started with world wide implementation mobile application
- > Currently +/- 80 users
- > Good performance, no complaints from the field
- > Hardly any issues, very stable application
- > Implementation of improvements / change requests

VANDERLANDE

MACS

 **interloc**
mobility. cloud. maximo.®