

EPC COMPANY FOR ASSET DIGITAL TWIN AND MAINTENANCE PROCEDURE

OFFER

Cluster Reply and Infinity Reply

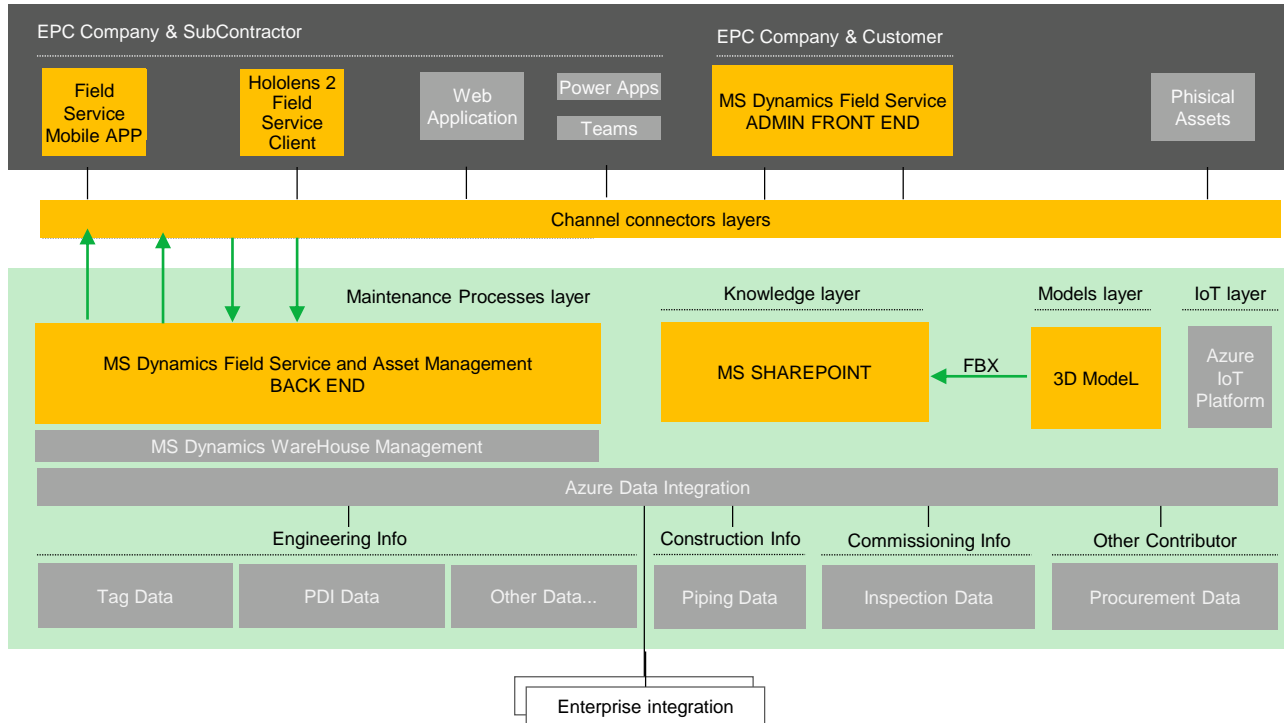


OFFER TARGET

- EPC Company Asset Digital Twin system based on Microsoft Field Service technology
- Hololens viewer to integrate the maintenance process on the field
- Check access to digital documentation useful for the technician to carry out maintenance activities with AR support.
- Check access and visualization of 3D assets contextual to the maintained objects.
- Ordinary and Preventive Maintenance processes
- Design and validate a process workflow to support EPC Company Maintenance Operations
- Collect further requirements to complete overall solution design for an EPC Company

ARCHITECTURE PROPOSAL

Physical Component POC



NOTE

Architecture Proposal in order to have a structure scalable and clonable.



USER STORY 1

We define user needs in term of situation, motivation and benefits

User Personas

USER PROFILE



Maintenance Supervisor

GOAL



Monitor plant maintenance progress, schedule maintenance interventions, makes time and costs more efficient

Point Of View Needs

SITUAZION

WHEN

Every morning during the meeting on the scheduling of interventions, the user checks the progresses and plans maintenance activities.

MOTIVATION (NEEDS)

WHAT

- Check system status through control dashboard (IoT data collection in the future)
- Verify incoming support ticket from the field
- Check maintenance plans
- Maintenance scheduling (ordinary, preventive, predictive (in the future))

BENEFITS (KPI)

WHY

- Speed up checks
- Increase Response Quality
- Control over the entire maintenance cycle
- Optimization of resources in the field (cost saving)



USER STORY 2

We define user needs in term of situation, motivation and benefits

User Personas

PROFILE



Maintenance Operator

GOAL



Execute and finalize the Work order by accessing all the information available

Point Of View Needs

SITUATION

WHEN

Every day, during the plant maintenance work shift

MOTIVATION (NEEDS)

WHAT

- Know the TAGs to be checked during the shift
- Access information related to the maintenance (documents, 3D models, drawings, etc.)
- Use both mobile devices or HoloLens (hands free device)
- Add multimedia information to the inspection
- Finalize the intervention

BENEFITS (KPI)

WHY

- Speed up checks
- Increase inspection quality (less rework)
- Smart tools usage
- No paper sheet needed

POC OVERVIEW

EPC COMPANY MAINTENANCE SOLUTION CONSISTS OF THREE MAIN COMPONENTS:

BACK OFFICE ADMIN CONSOLE



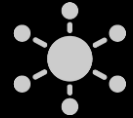
1. Define and manage EPC Company Maintenance Asset based on standard MS FS Asset capabilities
2. Collect and show EPC Company Asset info, link and documentation
3. Collect EPC Company Asset 3D Model (link to a fbx file extract from Caxperts)
4. Associate Asset to a Maintenance Standard Procedure with step and check to be done
5. Define Maintenance Plan for the Asset and generate automatic Work Order (preventive maintenance) based on:
 - Fixed Plan

DEVICES APP



1. Executes procedures in the fields with HoloLens2 mixed reality headset.
2. Manage assigned WorkOrder Booking by logged user.
3. Display Maintenance Procedure for a specific asset supported by textual instructions, images, video, pdf and fbx 3D Model (with attached metadata)
4. Open Request on the fields on retrieved issue.

CONTROL ROOM APP



1. Verify overall schedule, bookings and asset status through interactive dashboards.
2. Schedule Work Order generated and associate (booking) to right subcontractors
3. Verify Maintenance Plan
4. Generate Work Order Manually (ordinary maintenance)
 - Based on issue retrieved from the field during maintenance activities
 - Based on issue received from other channel or personas