Interview Summary: Participant B

Professional Background

Participant B works as a Maintenance Engineer at the Swedish Transport Administration (a government agency), with approximately 1.5 years in the current role. The interviewees background includes 16 years as an electrician, specifically working on submarines, followed by many years as an electrical technician focusing on complex systems like tunnels and movable bridges. The current role emphasizes fieldwork to ensure in-house knowledge about its infrastructure, focusing on preventive maintenance, corrective maintenance, and reinvestment planning within the electrical domain.

Understanding of Digital Product Passports (DPP)

Is not previously familiar with the concept of DPPs. After a brief explanation during the interview, participant B understood the goal of promoting circular economy practices and product traceability via digital identifiers such as QR codes or NFC tags. However, the interviewee found the concept somewhat foreign and emphasized that the work place currently relies heavily on internal standards rather than external digital tracking mechanisms.

Potential and Impact of DPP in Industry

The interviewee sees some potential in using DPPs for large-scale infrastructure projects, especially for managing large inventories like lighting in tunnels. For example, with systems such as Förbifart Stockholm involving thousands of luminaires, a DPP system could assist in planning replacements before reaching the end-of-life stage, rather than reacting to failures. Having predictive systems would help manage complex maintenance schedules and prevent large-scale disruptions.

Current Integration Practices and Data Tracking

At the interviewees workplace, product data management primarily references internal technical documents (TV documents) that define requirements for infrastructure components like lighting fixtures. Selection of products is largely based on whether they meet these standards, with cost being a significant determining factor. Supplier origin or material composition is not a main focus during procurement.

Participant B uses the EAM system, IBM Maximo, as their daily asset management tool to create and manage work orders. However, most detailed product information (e.g., schematics, product sheets) is accessed through an integrated system called " Chaos."

Data Formats and Transformation

Described that technical data is tied to components through Maximo, with clickable links leading to Chaos for associated schematics and product documentation. There is no

advanced integration of external sustainability or carbon footprint data into their current systems.

Enterprise Asset Management Systems (EAM/CMMS Usage)
IBM Maximo is the primary tool for managing assets and maintenance activities. Data is available at the component level, but points out limitations, particularly the lack of automatic warnings for frequently recurring maintenance issues or components reaching the end of their lifecycle.

Security and Data Sharing Concerns
There are no major security concerns regarding maintenance data itself. However, operational systems, especially those controlling tunnels, are protected from external access. There is no confidential or sensitive data linked to product components like luminaires.

API and Future Integration Needs
Participant B was not familiar with APIs or semantic technologies. However, mentioned that Maximo is linked internally to Chaos for document access. There is no broader external data integration into Maximo through APIs at present.

Interoperability and Semantic Technologies
Also was not familiar with ontologies or Semantic Web technologies. However, acknowledged that it was recently decided to explore these technologies at their workplace, although the interviewee had no direct experience with their implementation.

Data Validation and Consistency
Highlighted issues with missing or incomplete data in Maximo. Particularly, there is no systematic warning for repetitive issues with the same component, leading to a reliance on manual monitoring to detect unusual maintenance patterns.

Customization and Standardization Challenges
The work operations are highly structured around internal documentation. New technologies like DPPs would need to be fully implemented and standardized within the work places official working procedures before being widely accepted or useful.

Use of QR Codes and Mobile Access
Some of the newer lighting fixtures installed five years ago (e.g., Signify/Philips products) already include QR codes for retrieving product data. Has personally, used these codes to identify and reorder components and sees clear benefits in having maintenance instructions

and fault reporting capabilities available through mobile scanning at the worksite, particularly to streamline workflows and reduce time spent retrieving information.

Implementation Challenges

Major challenges include:

- Lack of automated lifecycle warnings and predictive maintenance alerts.

- Heavy reliance on internal documentation rather than dynamic data.

- Potential difficulties in integrating new systems into existing rigid frameworks.

- Practical challenges such as scanning QR codes installed at heights requiring special equipment.

Opportunities for Feedback Loops

The interviewee expressed that having automatic data collection and access (e.g., via QR codes linked to Maximo) could greatly improve operational efficiency. Particularly in large installations like tunnels, early warnings and real-time updates would help manage asset lifecycles more proactively.

Outlook and Recommendations

Participant B sees value in systems that can:

- Predict component end-of-life before failure occurs.

- Enable mobile access to maintenance instructions and component data.

- Facilitate fault reporting and historical tracking via QR code scanning.

- Support phased replacements rather than waiting for mass failures. While initially skeptical about DPPs, the interviewee recognized their potential if properly integrated into existing systems and workflows, particularly for large infrastructure projects.