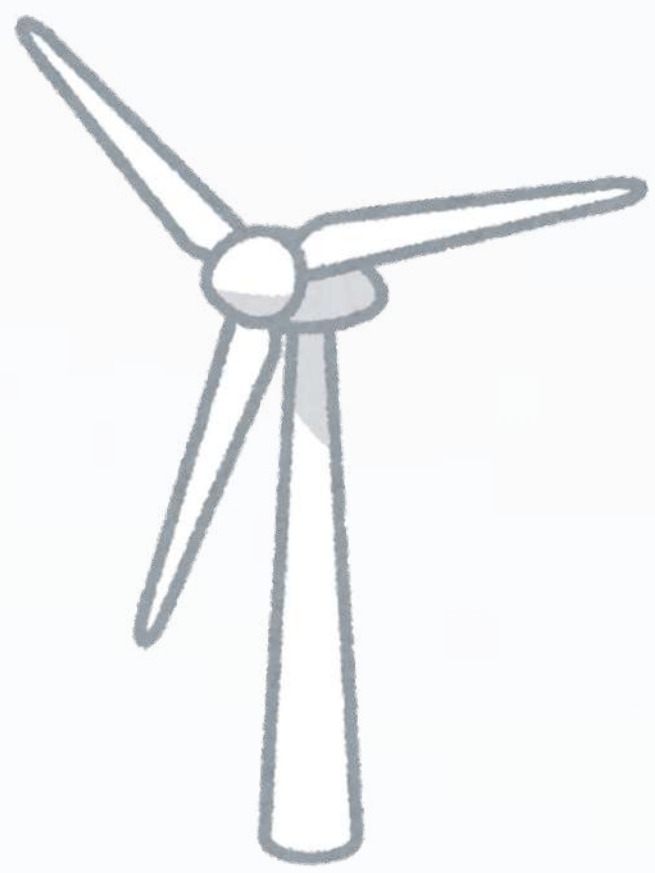




Digitizing Traceability In Offshore Wind Turbine Production



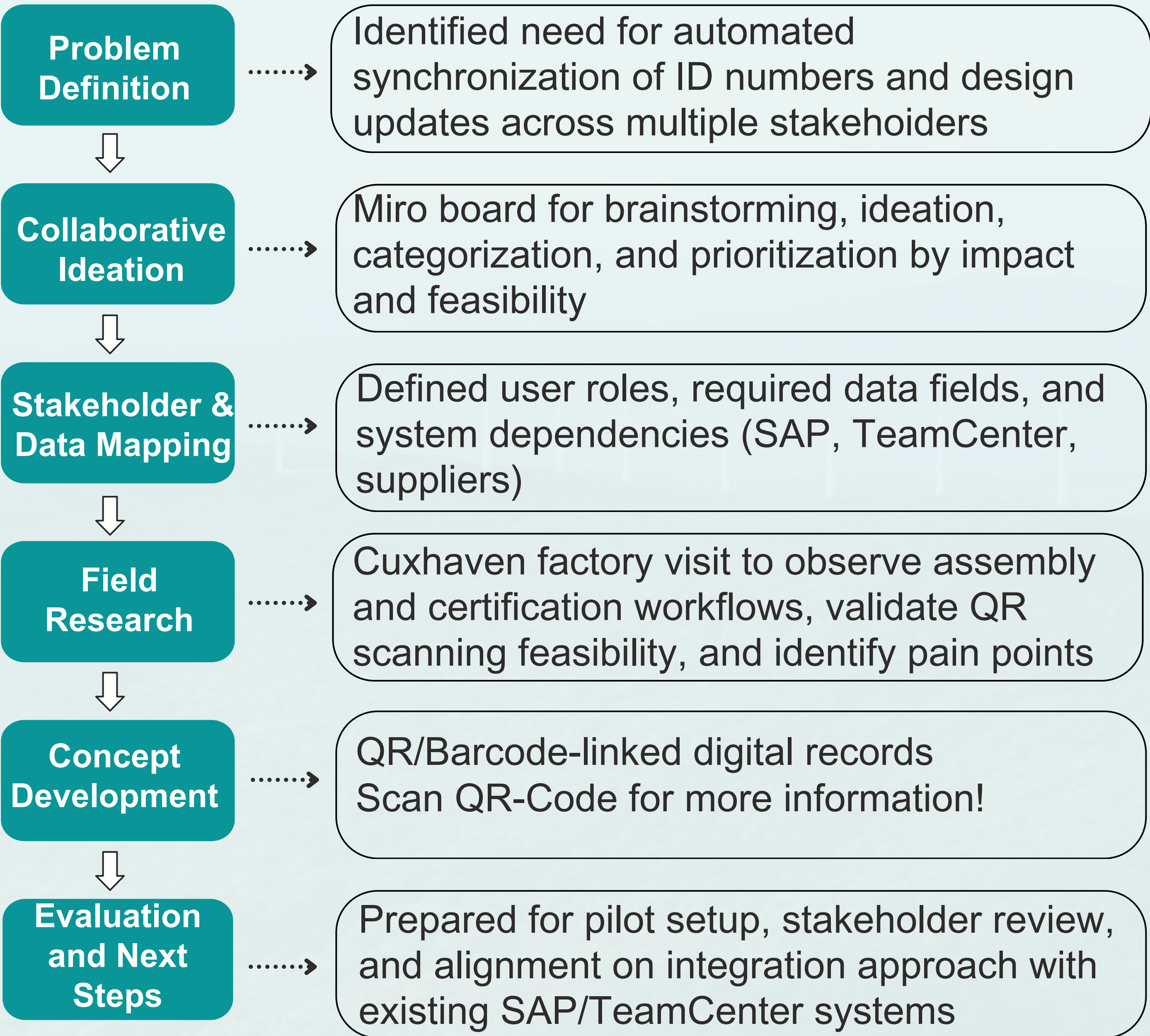
PROBLEM STATEMENT

In complex, multi-stakeholder production processes, limitations in current digital applications make it difficult to keep component identification codes and design updates aligned across all relevant systems. This lack of synchronization reduces traceability and slows certification. It also increases the risk of mismatched data between departments, leading to delays, rework, and potential non-compliance with quality standards. Without a centralized and automated update mechanism, critical information often remains siloed, making it harder to maintain accuracy across the entire product lifecycle.

OBJECTIVES

- **Automate synchronization** of component identification numbers and design updates
- Ensure alignment across digital systems to **improve traceability**
- **Reduce manual workload** and errors through process automation
- **Streamline certification workflows** for faster approvals

METHODOLOGY & APPROACH



CHALLENGES

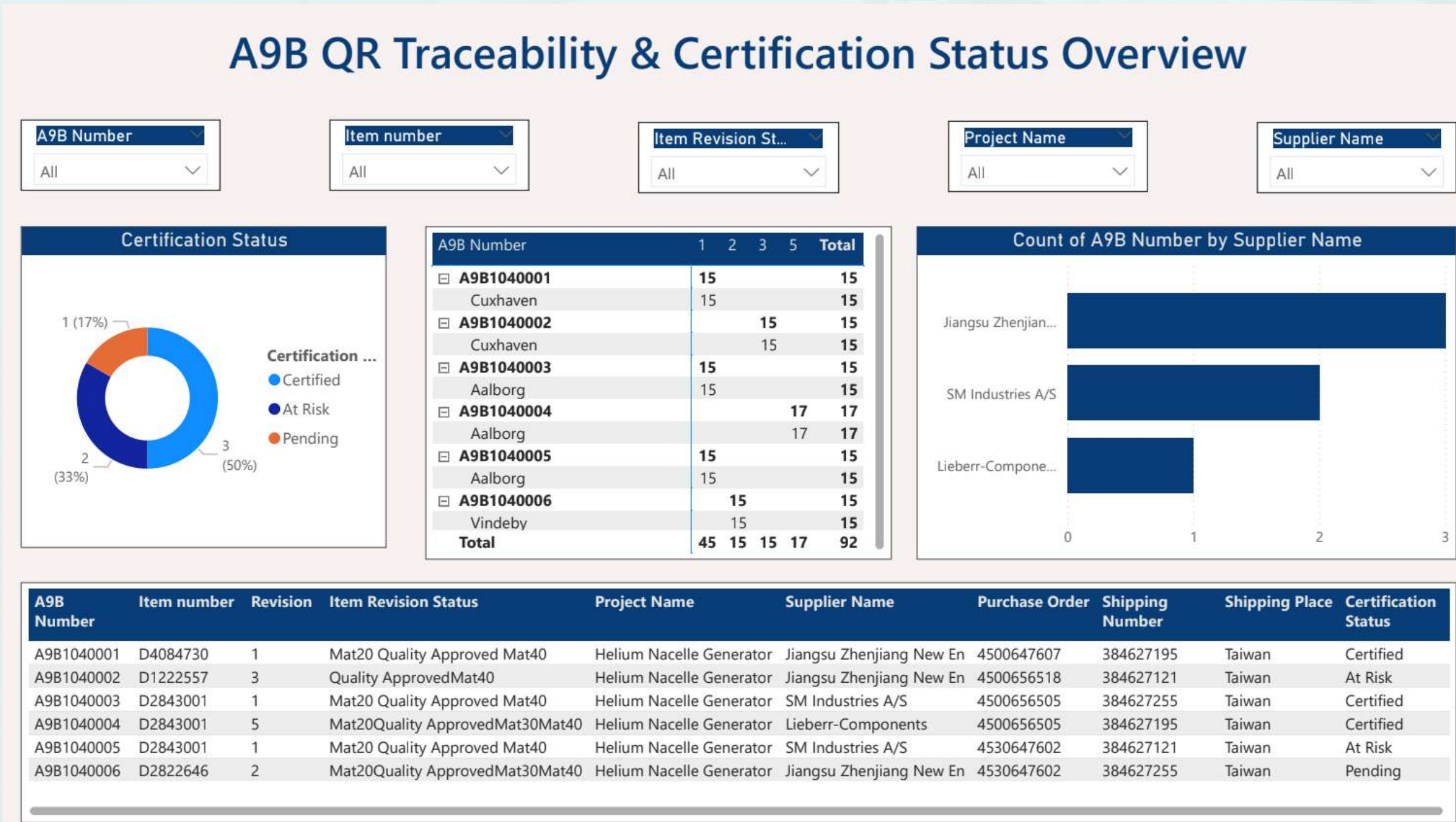
- Limited access to tools and product data
- Siloed communication causing misaligned updates
- Gaps in process knowledge among team members

HOW WE OVERCAME CHALLENGES

- Built knowledge by studying documentation and reference materials
- Held focused team discussions and asked direct, practical questions
- Conducted a field visit to SG Cuxhaven to better understand workflows and terminology
- Improved clarity as the project advanced and new insights emerged

PROPOSED SOLUTION

- Creation of a new procedure within the PLM@SGRE involving product traceability
- A **QR code system** is proposed, replacing component labelling with just identification codes
- Directly **linked** to a **web dashboard** that displays all relevant details
- Dashboard retrieves **real-time data** from SAP/TeamCenter
- Information is displayed in abstracted format for different teams
- Access to dashboard depending on role and responsibilities in team structure
- Updates are **seamlessly synchronized** across all teams through the centralized dashboard system
- Microsoft-based authentication to ensure **secure access**



SCAN TO
VIEW DEMO

CONCLUSION & FUTURE STEPS

The QR-based system ensures accurate and traceable component IDs and design updates across platforms. QR-linked records and a central dashboard reduce manual work, enhance coordination, and ensure real-time traceability. Future Steps: Develop a cross-platform interface to scan QR codes, view data and approve changes on-site.

TEAM

Team Members	Task Area
Giovanna Pani	Product Owner
Payal Pagere	Scrum Master
Binson Joseph	Developer
Vinuth Kumar	Developer
Hamza Sajjad	Developer
Sabah Lotia	Developer