

Integration of Digital Calibration Certificates (DCCs) and Digital Calibration Requests (DCRs) at Novo Nordisk

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Strategic goals:

- Remove manual transfer of data
- Have FAIR and relevant data for decision-making

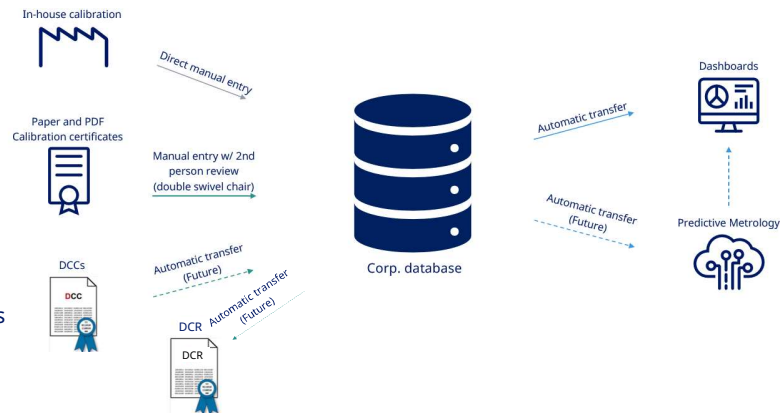
WHY

20.000 supplier calibrations a year

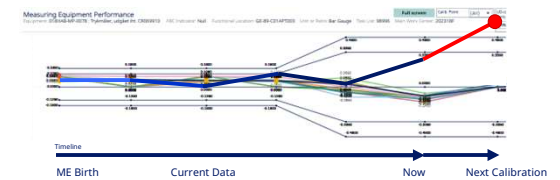
Current status:

- Manual data transfer from IT system supplier: 25 minutes
- Manual data transfer from calibration certificate to NN IT: 20 minutes

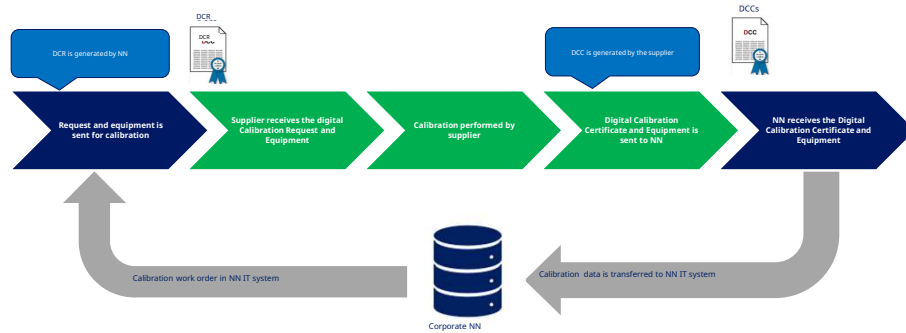
- **Pilots** for implementation of DCC and DCR



- Trending on calibration data
- Transparent data insight via the dashboard below
- Machine Learning under development to trend on data including metadata, and classify between equipment exhibiting systematic drift or not



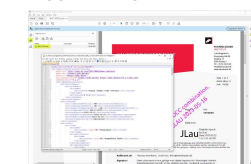
Pilot



DCC pilot

- Embedding XML files to the PDF as an attachment
- Data integrity verification use of Adobe AATL program
- Clear and unambiguous data path - ALCOA++ PRINCIPLES
- DCC middleware tool

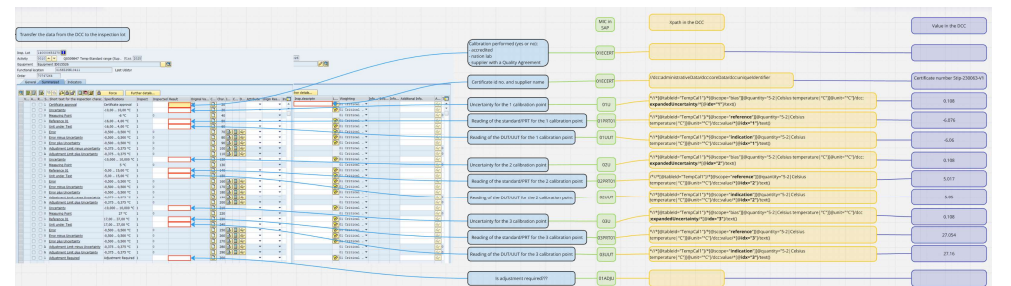
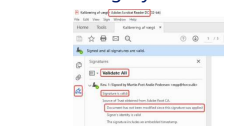
PDF file with an attached DCC XML file



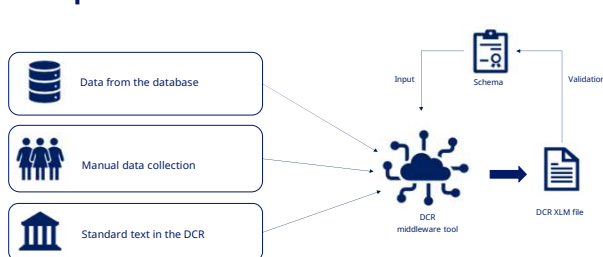
DCC XML file



Data integrity verification



DCR pilot



DCR test case

- DFM NMI of Denmark is creating the schema
- Novo Nordisk generates a DCR based on DFM schema
- Danish Technological Institute is testing if they can read the DCR XML file