

Skip to sidebar Skip to main content Spaces Analytics Create Help 0 Digital Transformation of MEMS Analytics SPACE SHORTCUTS DIGITMEMS Use Cases Digitalization at BST T&R DIGITMEMS Search PAGE TREE Digital Transformation Strategy Organization & PMO Training & Documentation Projects Solution Architecture IT Infrastructure Software Catalog IT Action Fields Databases owned by NE-SE engineering Technology Stack Used Tools at NE-SE Network Security Zones Cloud Native Landscape Engineering Processes Development Environment Link Collection ConfigureSpace tools IT Infrastructure Save for later Watch Share Pages DIGITMEMS Home Solution Architecture Analytics Created by Buhmann Alexander (AE/NE-SE CE-MEMS), last modified on 2022, Feb 16 Current Version V 19 Page Info Disclaimer: this page is still in preparation. 1. Introduction To allow our people to shape our digital transformation, we also need an information technology (IT) infrastructure that allows and supports this. We at NESE thus have defined a first draft of our required IT infrastructure: Automated processes Process Modelling Workflow automation Data storage Engineering Version control Tools & IDEs Engineering Apps Computation We distinguish between four fields: Data storage Computation Automated processes Engineering It is important that the IT reference architecture is flexible and allows the change of different technologies. Microservice based design. 2. Main Topics We have identified 4 major topics that are relevant for the digital transformation at NE-SE, which are described in the following. A more detailed overview can be found in IT Action Fields, where the different technologies, contact persons, etc. are described. 2.1. Data Storage One important aspect is that the data is stored in a useable, structured way. This includes different kinds of databases and also technologies such as hdfs. Sometimes, it is necessary that not only the data is available but also that we can do computations on a large amount of data. This leads to solutions such as Hadoop(TM) or Spark(TM). 2.2. Computation Another important aspect is the computation. We need this for the calculation with the data, which is typically called data science, but also do designs such as the System & MEMS design as part of our model based systems engineering (MBSE) approach. This part will even grow more strongly in the future. 2.3. Process automation Currently, every engineer has to do many manual steps. Setting up his development environment, getting necessary input, doing the main design tasks, filling out reports, providing documentation and giving his artefacts to the next colleague. Several of these tasks can be automated, allowing him to focus on the main task. Currently, the tasks can be clustered into two fields: process automation and infrastructure maintenance. 2.4. Engineering tools The last big topic are the engineering tools that help the engineer during his work. Version control, Tools & IDEs and Engineering apps. 3. NE-SE IT Infrastructure 3.1. Current IT Infrastructure //tbd 3.2. A Future IT Infrastructure The future IT infrastructure is still in discussion. Thus, this is only a first draft focusing on the Engineering Applications. NESE_DB LIMIT DB EHB_DB STAGES DB ... SCDB LCP: OutSystems or PowerApp Data storage: CI solution File shares Data Storage: custom solution Data storage & computation: RB analytics platform Compute: custom solution 9 8 7 6 5 4 3 2 1 Rack Spacer Spacer Spacer Source controle: CI SVN socialcoding Process automation: CI/CD pipeline socialcoding CI VM AWX Compute: CI or Azure VM VM Bandwidth, latency Custom solution: source controle SVN ETL1 Visualization: Tableau or PowerBI 4. Additional Information Challenges for defining an IT-infrastructure. Like Be the first to like this No labels Edit Labels Â© Robert Bosch GmbH Docupedia 7.19.11.0 Powered by Atlassian Confluence and Scroll Viewport Node: doc-P-SIOVM4410 Docupedia Community Support Legal