



Automated Product Certification System at Severstal named Sherlock

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Agenda



01 **Certification concept and prerequisites**

02 **Business value**

03 **Architecture**

04 **Implementation project details**

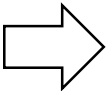
05 **System demo**

06 **Future plans**

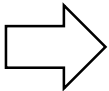
Certification concept and prerequisites for the automated product certification



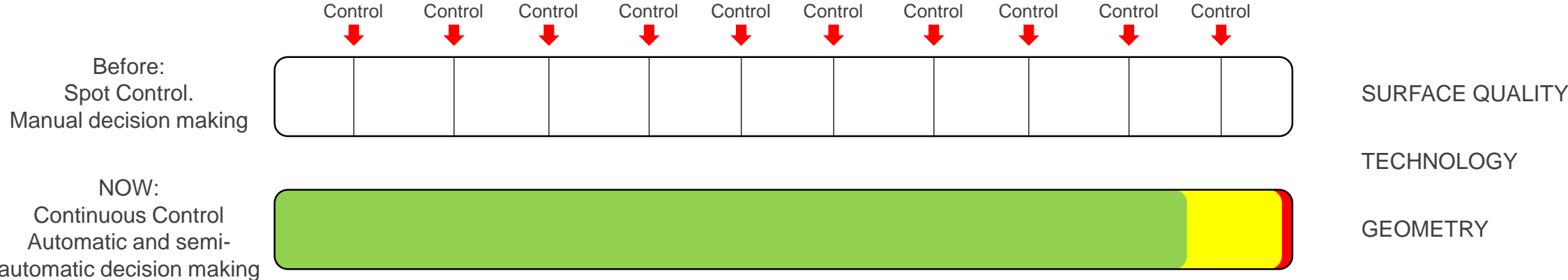
Collect and analyze:
- Order requirements
- Individual customer needs
- Technology requirements
- Certification rules



Collect and compare:
- Measuring systems data
- Inspection systems data
- Visual inspection












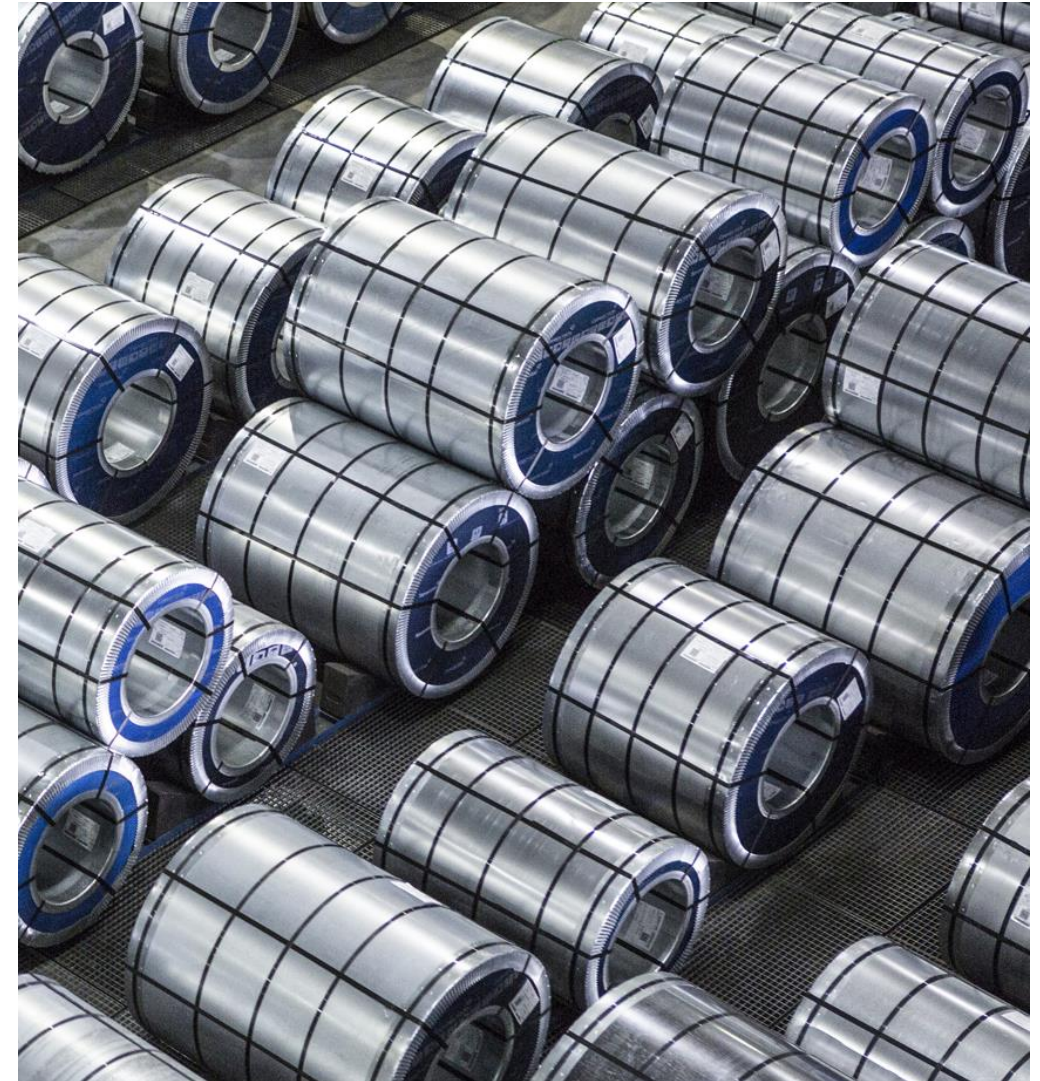
Make a decision



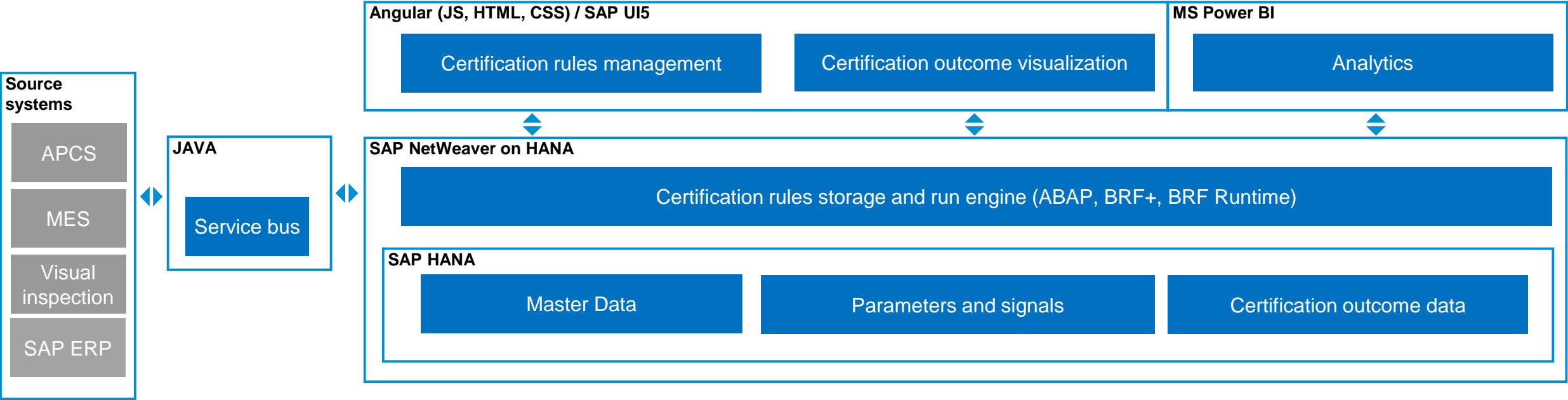


Business value

-  CSI and T2M KPI's improvement
-  Compliance with individual customer needs
-  Quick (1-2 minutes) certification decision
-  Automatic decision (80% of all products)
-  Optimized additional measures identification when needed (enhancement or reassignment)
-  Customer complaints reduction
-  Advanced root cause analysis
-  Quality trends analysis
-  More confident new products manufacturing



Architecture





Implementation project details



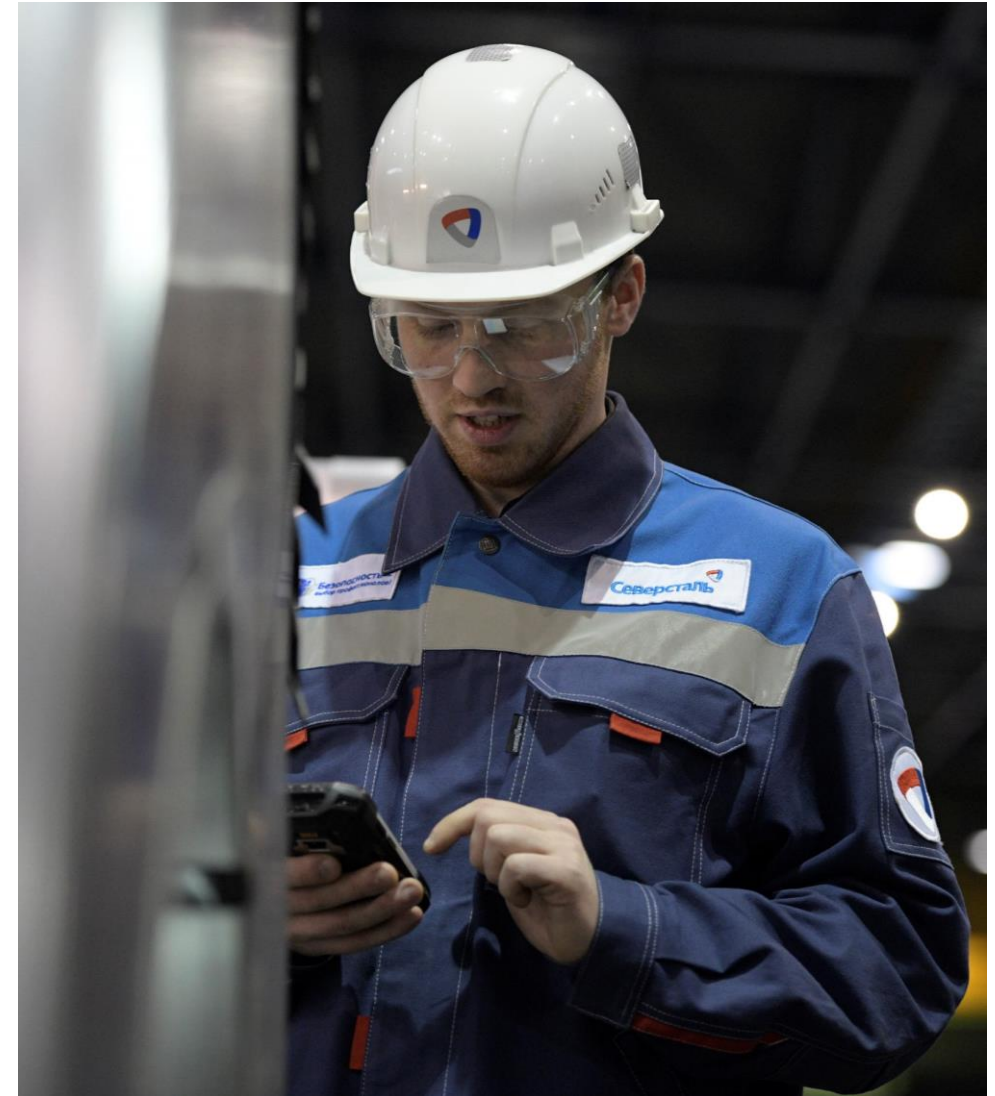
The project have been started in 2016 with non-SAP “Box” solution. We understood what we really want and realized that the Box solution is not agile enough. Moreover we encountered performance and support issues



In 2018 we’ve decided to reimplement automated product certification system with SAP technologies as a Custom Development project. We’ve tried different SAP technologies and finally decided to use a mix of SAP and non-SAP technologies










Currently we are on a roll-out phase and plan to finish in 2022





Future plans for the system and concept development

-  Roll out for all shops
-  New inspection and measuring systems implementation and integration
-  Incorporation of complaints history into Sherlock on a product and order details level
-  Transition from certification decision support to comprehensive decision making
-  Integration as a feedback loop to Technology master data and Materials informatics systems
-  Advanced genealogy history analysis and manufacturing process online adjustment based on prediction
-  Sherlock's data set as a source for many Data Science models





Severstal

Thank you for
attention

