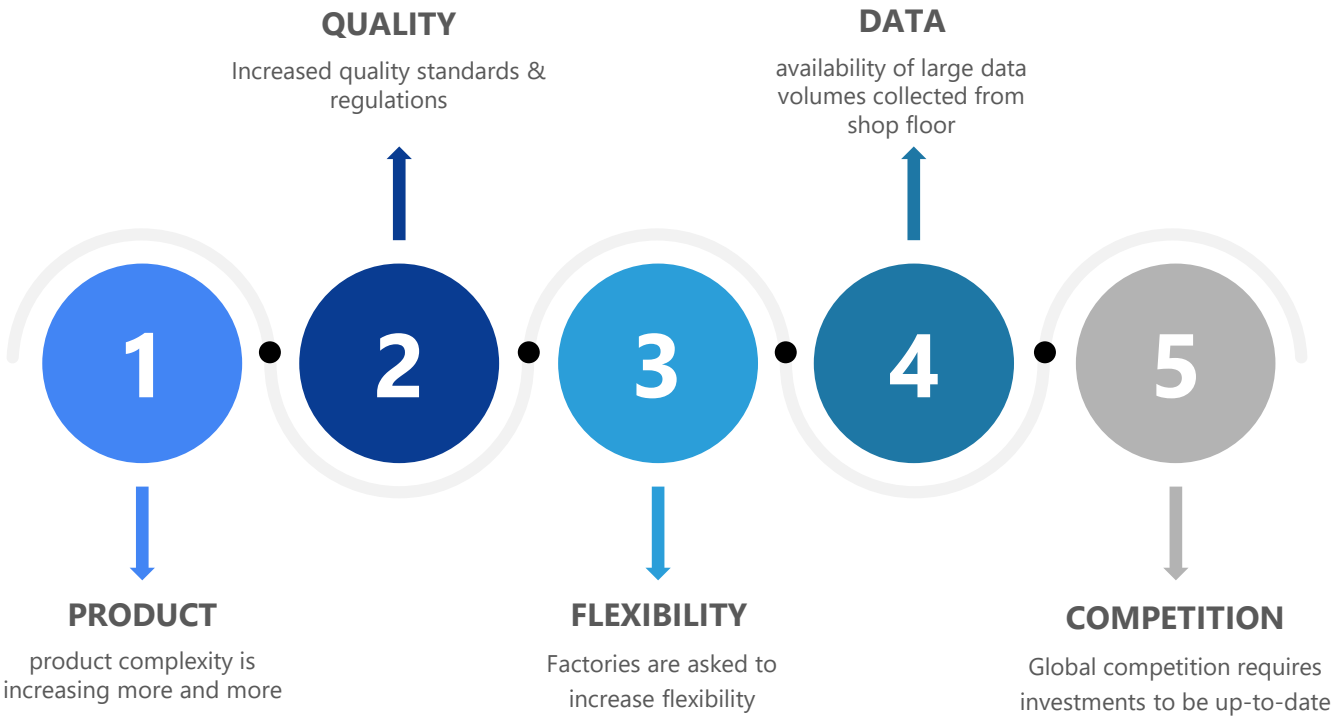
Factory digitalization in the cosmetic industry: the Davines Case

Process and Industry 4.0 – the challenges

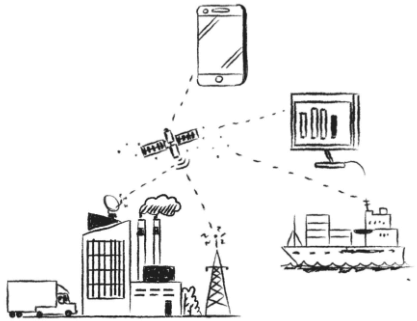


The « value proposition » of sedApta for industry 4.0

The industrial revolution 4.0 transforms the value chain in the company, thanks to an **increasing integration** of its ecosystem: customers, suppliers, subcontractors, partners... This implies a profound **redisgn of the business model and processes**.

There are many technologies to evolve towards Industry 4.0,
sedApta focuses on one important area:

The extreme connectivity



People & Processes

The **redefinition of standard processes** has become one of the most critical points in today's industrial context.

Technologies

The **integration of the most innovative technologies** characterizes our offers which break the barriers of silos in the organizations.

Added value to ERP

Our Supply Chain Planning, Scheduling and MES solutions are **fully integrated with ERPs**.

sedApta Suite - Demand Driven Manufacturing

sedaptasuite

sedApta software

Sales & Operation Planning

Demand Management
Improve sales forecast accuracy

Inventory Management
Optimize stock levels in the logistical-distribution chain

Order Promising
Finite capacity customer order dating

Resource & Supply Planning
Finite capacity production planning

Web Supply Engine
Suppliers and contractors collaborative management

Manufacturing Operations Management

Factory Scheduling
Production and resources scheduling and optimization

Shop Floor Monitor
Plant performances monitoring

Smart Asset Management
Maintenance management

Visual Management
Real-time performance management in 2D and 3D

Communication Manager I4.0
Data integration from industrial automations

sedApta hardware

Industrial PC Touch

Mobile Terminals

Industrial IOT

sedApta digital backbone

Orchestrator
Workflow tasks orchestration

Skillaware
Train and support workforce

Analytics
Measure your process performances

sedapta group

sedApta - Industry 4.0 Assessment

The adoption of **Industry 4.0 paradigms** and the use of **new technologies** can improve working conditions and create new business models aimed at **increasing productivity** and **improving the production quality** of plants.

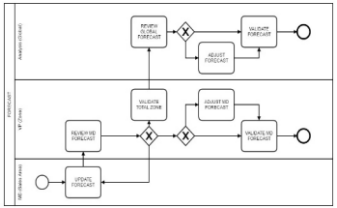
In this context, an overall and systematic assessment of the degree of digital maturity of a company is considered increasingly necessary. An effective Assessment process must be able to analyze the production environment, **identifying its weaknesses and areas for improvement**.

Powered by i2Lab industrial innovations

sedApta group

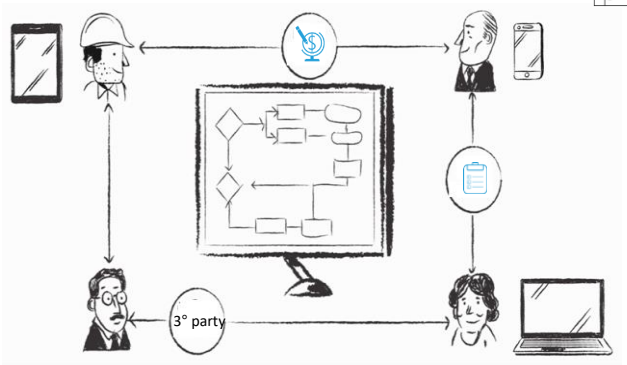
sedApta Orchestrated Approach

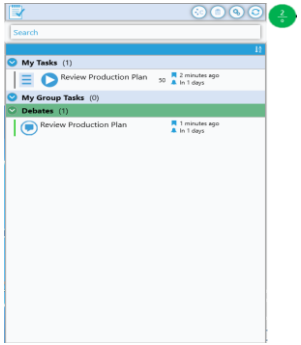
sedApta Orchestrator allows structured **process collaboration** between people, task and tools in real-time supported by contextual information and on-line **debate**.



PROCESS DEFINITION

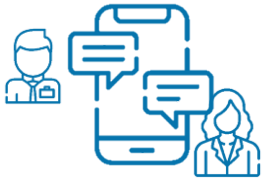
- ✓ Definition of business process & workflows
- ✓ Analytics template definition
- ✓ Integration outside the company (suppliers / customers)





PROCESS EXECUTION

- ✓ Automatic / Manual task execution
- ✓ Pc / tablet / Mobile support
- ✓ Analytics real time support
- ✓ Time deadline control & support



ON-LINE DEBATE

- ✓ Alarm generation in case of delays
- ✓ Instant messaging support
- ✓ Ad-hoc report generation

Case Study in cosmetics DAVINES

An overview of cosmetics industry

the cosmetic sector stands out for its **resilience** and **anti-cyclical** nature of this sector. To these characteristics are added creativity, inventiveness, the spirit of initiative, the **propensity for innovation** and the **search for new solutions** that distinguish the sector.

The **67%** of **make-up** consumed in Europe is manufactured by Italian companies, at WW level it's about **55%**

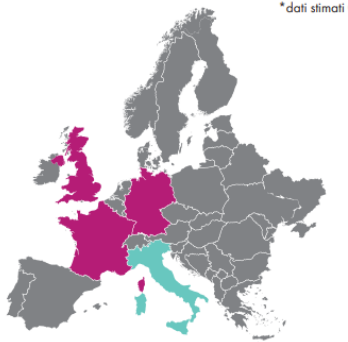
The **2020 Italian** turnover **10,5 bln**

The **economic system of the cosmetics industry** **33,2 bln**

Positive trade balance in export **2,3 bln**

Consumptions in Europe **67,8 bln**

*dati stimati Centro Studi



In Europe **Italy** it's the 4th economic system in cosmetics after **Germany**, **France** and **UK**

RESEARCH AND DEVELOPMENT

In **Italy the companies of Cosmetics invest** about **6% of income in Innovation and technology**, the research and development against an Italian average estimated about 3%

6%

The investment in research by the cosmetics industry **in Europe** is equal to **2,35 billion €**

2,35 bln

Source: report June 2021 from:

COSMETICA ITALIA
associazione nazionale imprese cosmetiche

HISTORY

Founded in Parma, Italy in 1983 by the **Bollati** Family, Davines Group started as a research laboratory, producing high-end hair care products for renowned cosmetic companies worldwide.

After a decade of honing our expertise, we began creating our own brand of Davines **hair care** products exclusively for salons, and in 1996 founded [comfort zone] **skin care** for premier spas.

The Group is now a **B Corp** and has an international presence in more than **80 countries** with a multicultural staff.
In addition to the main office in Parma - the Davines Village - it has offices in New York, London, Paris, Mexico City, Deventer (Netherlands), and Hong Kong.

The Davines Group

2020 OVERVIEW

37
YEARS
IN BUSINESS

2
BRANDS
IN SKINCARE AND HAIRCARE

7
OFFICES
WORLDWIDE

PARMA
LONDON
NEW YORK
PARIS
DEVENTER
MEXICO CITY
HONG KONG

PRESENT IN **86**
COUNTRIES

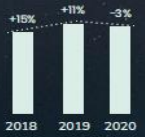
727
COLLEAGUES

OF **46**
NATIONALITIES

58
FORMULAS
DESIGNED

25.9
MILLION
PRODUCTS SOLD

€153
MILLION
TOTAL TURNOVER



117.4
B CORP
SCORE

TO BE THE BEST
FOR THE WORLD,
CREATORS OF GOOD LIFE
FOR ALL,
THROUGH BEAUTY,
ETHICS AND SUSTAINABILITY

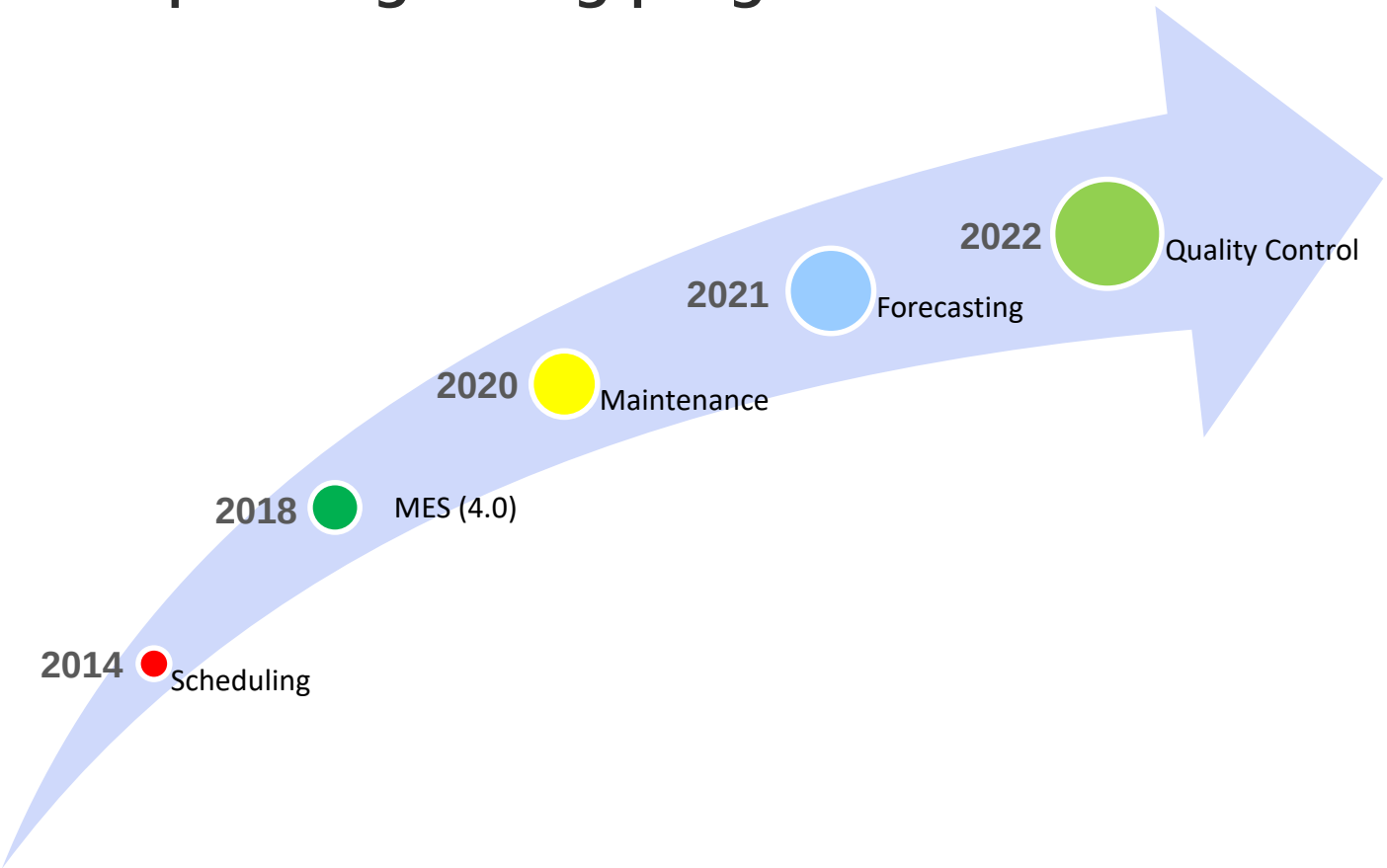
davines
sustainable beauty

Creates professional hair products, in which quality meets the utmost respect for the planet and its resources, using business as a force for good and promoting a regenerative model of Sustainable Beauty.

[comfort zone]
conscious skin science

Creates professional formulas and treatments for the face and body inspired by the "conscious" principle that encompasses the commitment to ensure efficacy and safety, through ingredients that respect people and the environment developed over 20 years of scientific research.

A partnership for a growing program



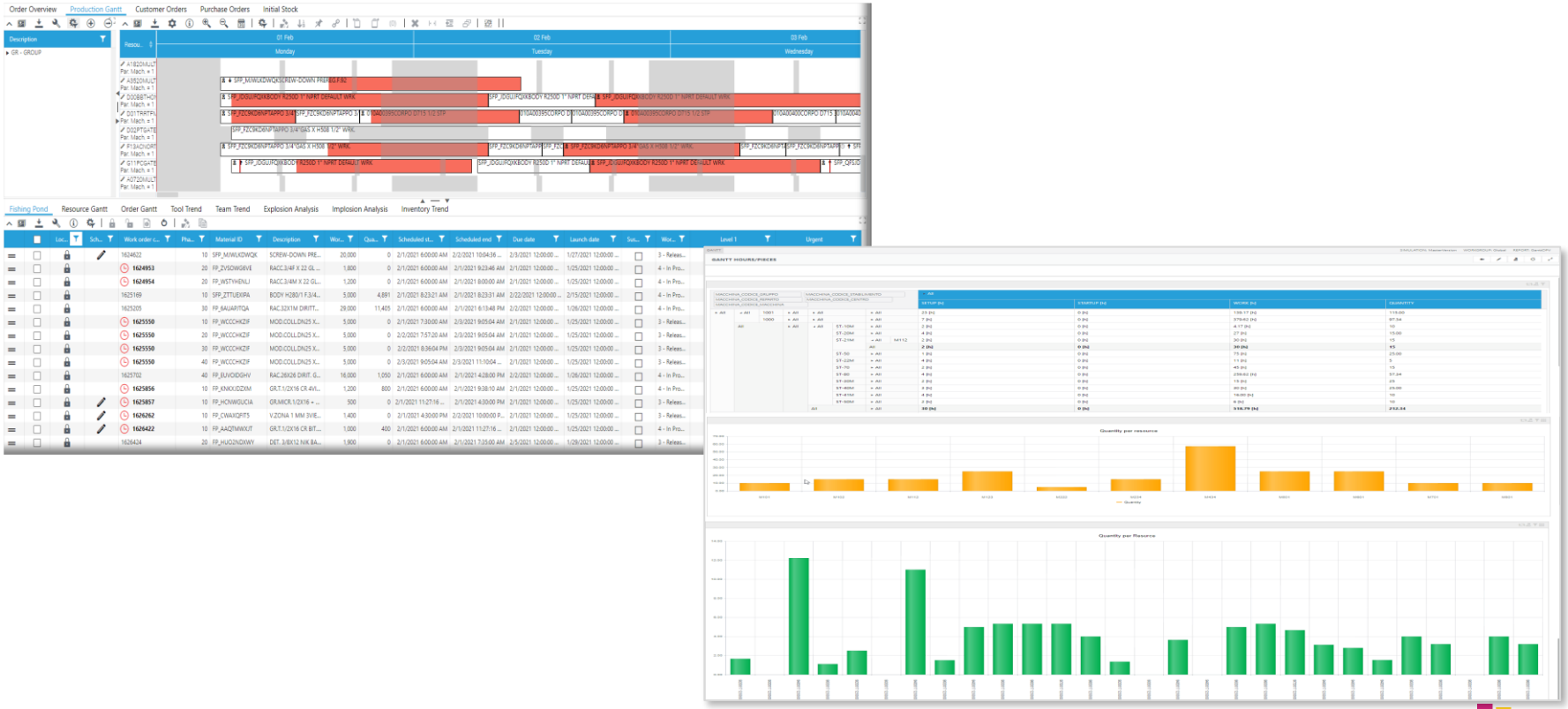
Scheduling Project

Starting of the project: 2014

- The project started in 2014 after a long software selection
- The first step was a deep analysis focused on our planning process (production and packaging)
- The second step was the data integration between SAGE X3 (our ERP system) and Factory Scheduler
- A short phase of training and system modelling close the project
- During the years we changed some data models and some analysis, adding also more users as players of the system
- Main Objectives are:
    - schedule either production and packaging together
    - optimize the production sequence, considering the resources capacity and the materials
    - simplify the activity otherwise depending by skills of different operators

Scheduling Project

Factory Scheduler User Interface



Scheduling Project

- Improved order promising accuracy within the desired delivery week
- Decrease in overall inventory
- Reduction of late orders
- Increase in productivity
- -10% less Average Out Of Stock in the 5 years after vs 5 years before
- Setup time reduction
- -1 FTE on scheduling process

MES (4.0) Project

Starting of the project: 2018

- The project started in 2018 after a software selection
- The first step was the integration of the production machines, building a bidirectional communication, in order to sent a production plan and setpoints to the Shop Floor and get from it the runtime data and process variables.
- The second step was the configuration of the user interface for operators
- In 2020 it started the integration of the packaging machines
- The automatic acquisition of all the production states and variables allows to build a set of integrated reports to analise the Overall Equipment Effectiveness and plant productivity
- Main Objectives are:
    - To integrate the machines (4.0)
    - To manage the recipe directly on the touch-screen panel
    - To understand losses deployment and identify improvement actions

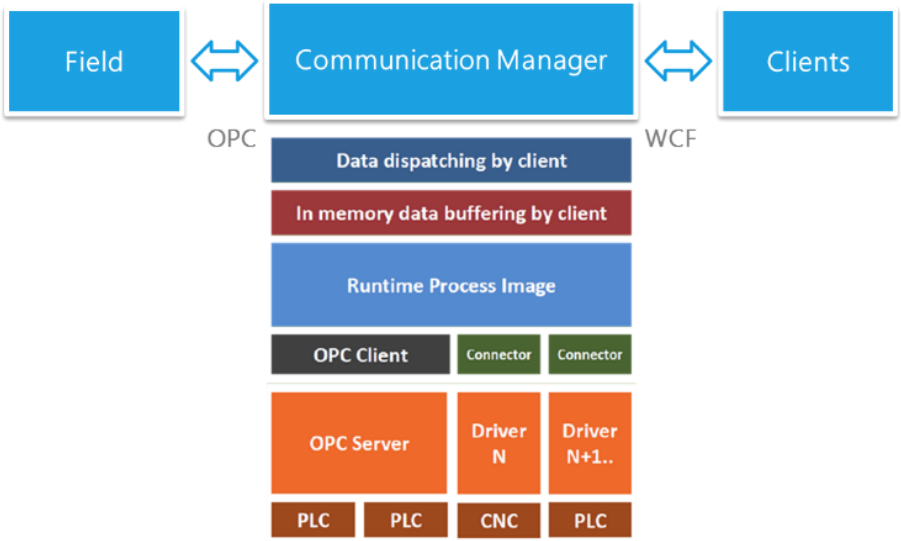
MES (4.0) – Connectivity

Communication Manager is the sedApta Suite component that provides a communication bus for all system clients, which can thus exchange information by sending and receiving messages from / to the Communication Manager.

The service refers to messages (tags) and event notifications, and it is based on a subscription system. Each client must in fact subscribe to a list of tags (pieces of information), so that the client will be informed at runtime of any changes made to these tags.

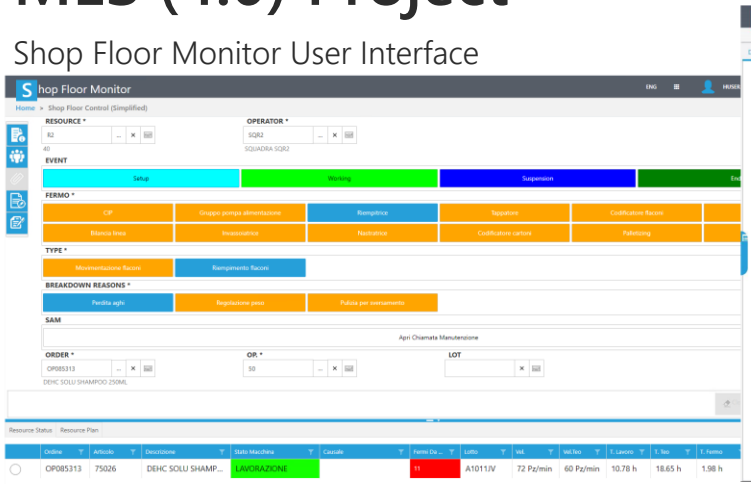
Communication on the Shop Floor takes place via:

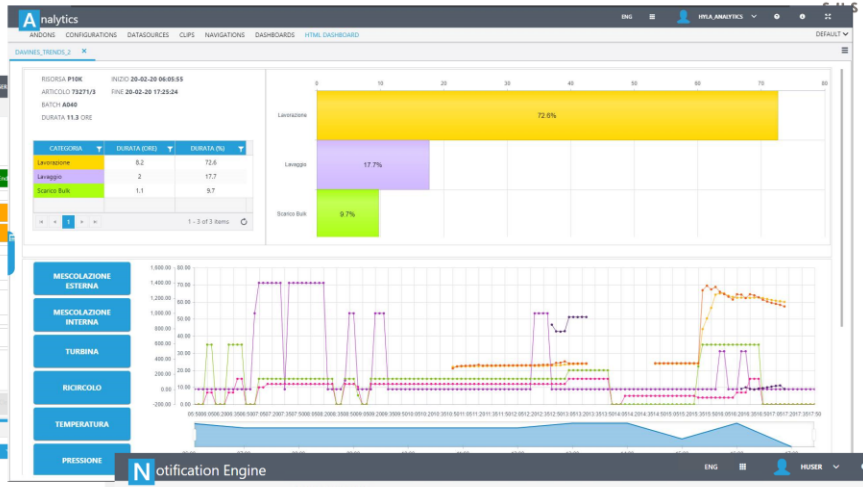
- Standard OPC
- Communication Manager Connectors capable of interfacing with the drivers of different devices / manufacturers (e.g. PLC, CNC, etc ....)

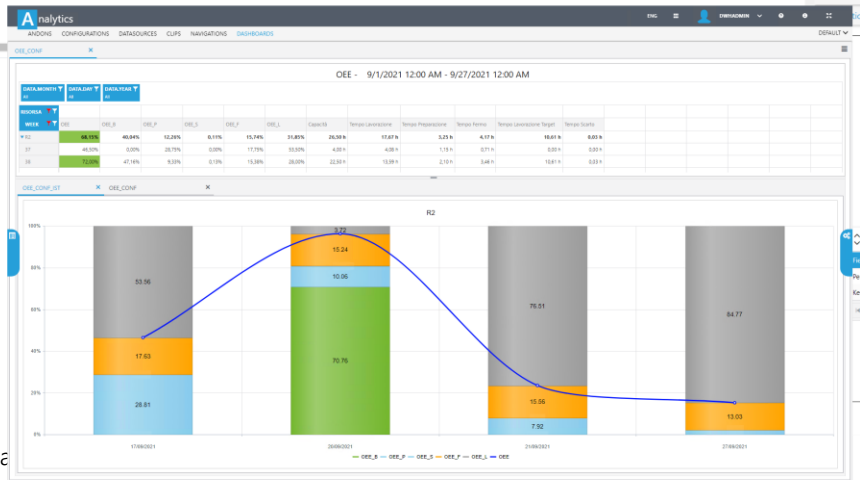


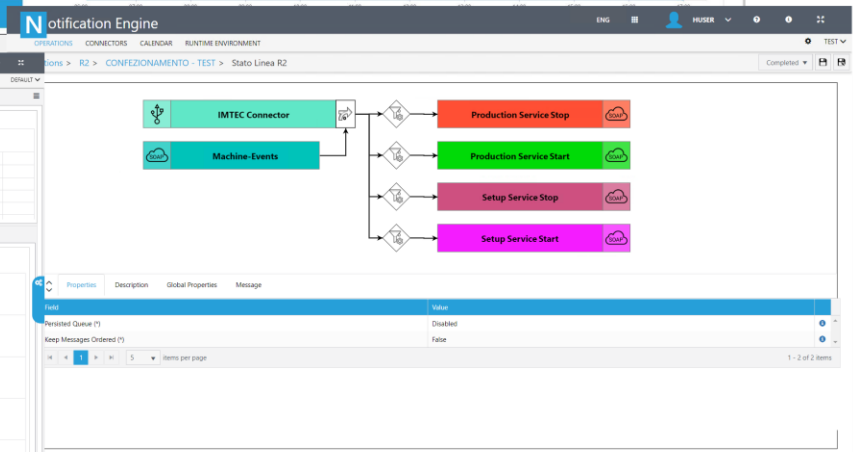
MES (4.0) Project

Shop Floor Monitor User Interface









MES (4.0) Project

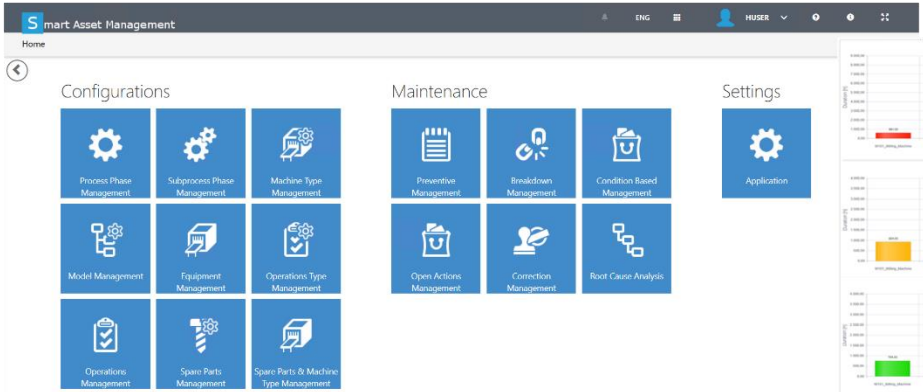
- Reduction of paper in the department
- Reduction of waste
- Reduction of downtime
- NPS Improvement
- Amortization/Tax Credit on about 3 Milion € investiment
- OEE increasing: + 10%

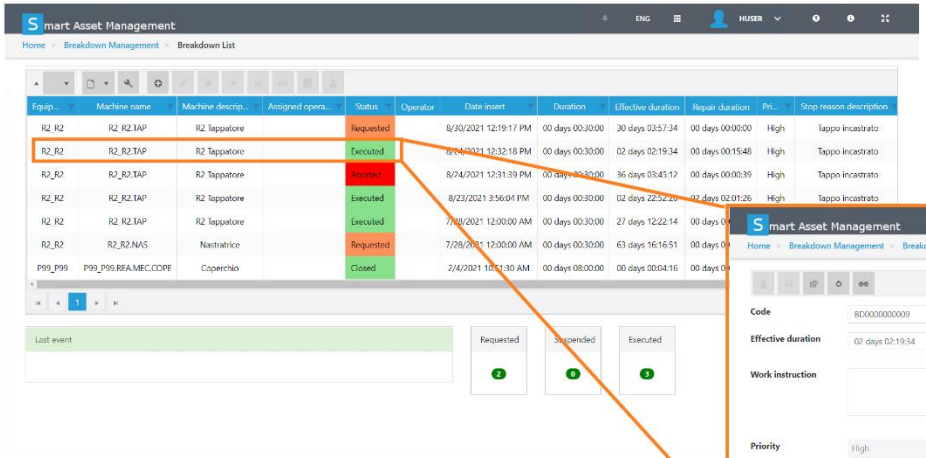
Maintenance Project

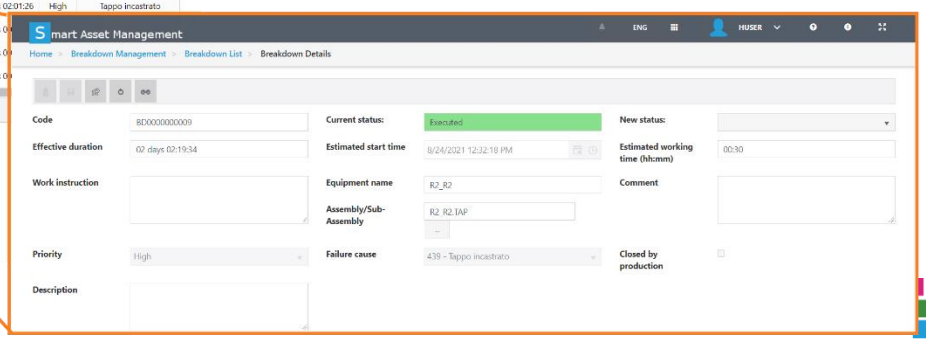
Starting of the project: 2020

- The project started in 2020
- The scope was to assist the Maintenance Team in their daily work, helping them to plan and trace all the maintenance activities.
- It also supports Conditional Maintenance, as well as Corrective Maintenance
- The built-in integration with the Factory Scheduler and with the Shop Floor Monitor allows both the planner to have visibility of the maintenance plan and production to automatically trigger breakdown notifications to the maintenance manager
- Main Objectives are:
    - To integrate the data collection with maintenance declarations
    - To minimize corrective maintenance

Maintenance Project







Maintenance Project

Before

- No maintenance measure, no indicators
- No preventive maintenance (no tools to plan)

After

- Indicators available
- Preventive maintenance planned
- Increased reliability of production plans thanks to Integrated maintenance with scheduling

Demand Management Project

Starting of the project: 2021

- The project started in 2021 as a prototype focused on Forecast Collaboration
- We are actually on the testing phase, with the goal to start officially on the 1° week of January
- We inserted every DAVINES Country in the prototype
- Main Objectives are:
  - To increase the reliability of the Mathematical Forecast
  - To integrate Mathematical Forecast with the sensations of the Sales Team
  - To reach the consensus forecast
  - To manage the phase-in/phase-out of the products

Quality Control Project

Starting of the project: 2022

- The project is planned for early 2022
- It will be strictly connected with the Shop Floor Monitor project, because people will use the same applications
- Main Objectives
  - To build a complete Quality Control Process
  - To create automatically certifications

Why sedApta ?

Different projects – different reasons

SCHEDULING (2014): Software selection, many parameters compared (by K-users and ICT) with competitors (all of them new suppliers)

MES (2018): the big doubt (!?) Is it better to marry the supplier of the Scheduler (sedApta) or WMS (Other)? We chose sedApta for the ability with it had conducted the scheduling project and solved the various requests to customize / configure the product

EQUIPMENT MAINTENANCE (2020): no doubt, sedApta for sure, due to deep integrations with Scheduling and MES

DEMAND (2021): a new big Software Selection - 2 years, 2 competitors tested on statistical module with real time series - collaborative module was decisive in the choice because the expectation of sedApta good service as customize / configure the product

sedApta group
smart manufacturing made easy

Thank you

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