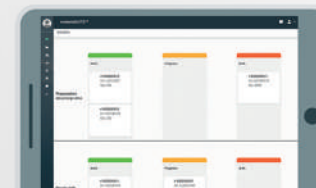
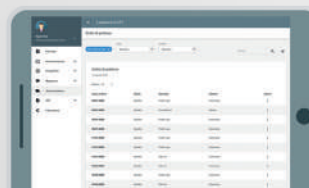
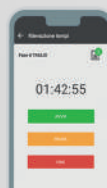
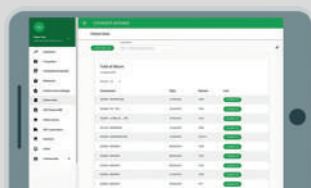
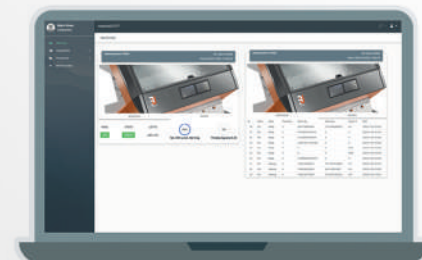
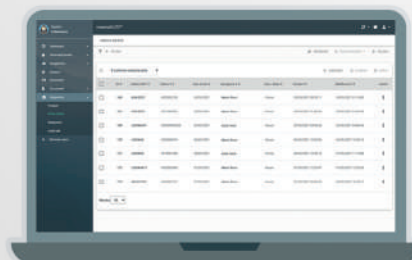
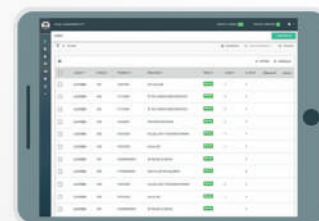
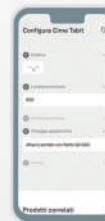


# materialSUITE™

TOWARDS TO THE **SMART** FACTORY



# materialSUITE™ for 4.0 Industry

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## Manufacturing Operation Management software to upgrade your industrial processes

Listening, analysis, management consulting, customization based on user experience, software development, test, simulations and final testing.

These phases define our method.

From the process automation phase to the development: together.

We define how to satisfy the real needs of the customer with the aim of developing a fully customised software based on the production system.

materialSUITE™ is a suite **MOM** for analyse, monitor and communicate on the shop floor



# The right software is a unique one.



Tailored software with dashboard and useful front-end interfaces capable to drive decisions with data.

The user experience is on the center. The mockup enables to analyze every single touchpoint meanwhile the User Experience Strategy test ensure to the final user the maximum accessibility and usability.

Simple, intuitive and configurable: we develop software to manage the production that everyone can use and understand.

- Tailored development
- User-side personalization
- Accessibility and usability



## MES

progress and traceability

pag. 4



## WMS

warehouse management

pag. 6



## SCH

scheduling

pag. 8



## MTM

methods time measurement

pag. 10



## TAILORED

pag. 14



# MES

## progress and traceability



Schedule the production, tracking, collect the manufacturing production data instantly and improve efficiency in your factory.

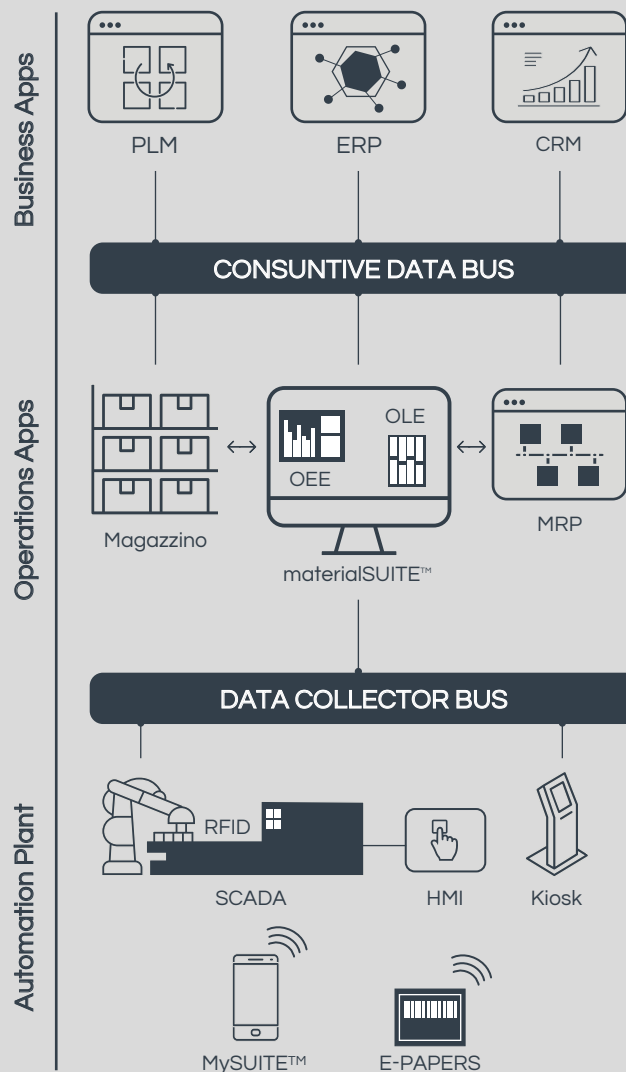
## Exchange data with all most of ERP

The data exchange in real time, as it happens between the business level and the operation level, allows to increase the serviceability of the entire shop floor.

Optimise the manufacturing process assume the logics of lean production, able to connect and quickly communicate to the business systems and the plants of your factory.

So it is important that ERP systems and MES systems are connected together.

- Better control throughout the entire chain production
- Improved production capacity
- Higher reactivity in the answer during unexpected events
- Service and maintenance cost-cuttings



# Fast and accurate production pouring

Manage efficiently and accurately the progresses with the different production processes within your organization or inside your company.

- Update in percentage finalisation of committed
- Decrease steel dished heads
- Self-managing of changing batches
- Right matching between time spent and estimated

Versamento della produzione						
BDL	Commessa	Operatore	Fase	Tempo trascorso	Quantità lavorata	Stato
25561	2019 C 0424	16	Prelievo lamiera	00:20:30	1 / 2	●
25560	2019 C 0424	24	Prelievo lamiera	01:40:10	1 / 3	●
26451	2019 C 0424	12	Smussatura	00:43:12	2 / 6	●
26472	2019 C 0424	14	Molatura	01:40:08	1 / 2	●
26473	2019 C 0424	20	Stamp. estru. assiem.	00:23:14	1 / 4	●
26478	2019 C 0424	22	Smussatura	00:52:10	1 / 5	●
27470	2019 C 0424	24	Molatura	01:20:23	1 / 3	●
27479	2019 C 0424	09	Prelievo lamiera	00:34:04	1 / 3	●

# Tracking and monitoring

The most frequently asked questions inside a production plant usually concern the status of orders or commissions, including the ability to respect or not the fixed delivery date.

For this reason, it is useful and basic to dispose of a MES software to monitoring in real time the production, becomes fundamental.

- Greater control over the undertaken activities
- Manufacturing performance improvement
- Timely update on orders /commissions / load resources
- Delivery enhancement

Date di scadenza							
Codice	Commessa	Tipo articolo	Quantità	Registraz.	Assemblaggio	Saldatura	Cons.
1667	2019 0477	Elettroventola	17	05/08/2020	20/08/2020	26/08/2020	31/08/2020
1677	2019 0475	Pompa acqua	15	28/07/2020	05/08/2020	15/08/2020	25/08/2020
1669	2019 0473	Albero motore	24	26/07/2020	03/08/2020	10/08/2020	13/08/2020
1678	2019 0472	Quadro	30	04/07/2020	10/07/2020	20/07/2020	25/07/2020
1680	2019 0474	Quadro	15	02/07/2020	05/07/2020	15/07/2020	31/07/2020
1667	2019 0471	Pompa acqua	15	02/07/2020	05/07/2020	16/07/2020	01/08/2020
1665	2019 0470	Elettroventola	15	29/06/2020	03/07/2020	10/07/2020	15/07/2020
1673	2019 0469	Quadro	25	28/06/2020	29/06/2020	02/07/2020	10/07/2020



# WMS

## warehouse management



### Intralogistic after production

The WMS is a cargo handling management system within one or more productions plant equipped with storage facility and picking areas. The in-house efficiency activity represents for companies an important asset to remain competitive on the market, where, the lead time, grow increasingly from the handling operations of management.

Genera arrivo merce

+ GENERA

Mostra 5

Cerca:

<input type="checkbox"/>	Cod.	Descrizione	Qtà UMA	Qtà UMA residua	Stato	Ultim modifica	
<input type="checkbox"/>	3695	Salmonc affumicato preaff. Cadelmar	1090,000	624,00	<div></div>	16/03/2021	⋮
<input type="checkbox"/>	3630	Polipo per carpaccio 3KG	60,000	40,000	<div></div>	16/03/2021	⋮
<input type="checkbox"/>	2280	Tuttomare cartone assortito new	1344,00	1344,000	<div></div>	16/03/2021	⋮
<input type="checkbox"/>	2279	Polpo cotto sottovuoto tagliato	1008,00	336,000	<div></div>	16/03/2021	⋮
<input type="checkbox"/>	2278	Scubettata di salmonc affumicato	4,000	1,000	<div></div>	16/03/2021	⋮

< >

- Advanced algorithms of shelf storage and cargo bay
- Automatic user missions generation
- Cargo handling from in and out line production and picking
- Integrations for ERP ready-to-use or configurable

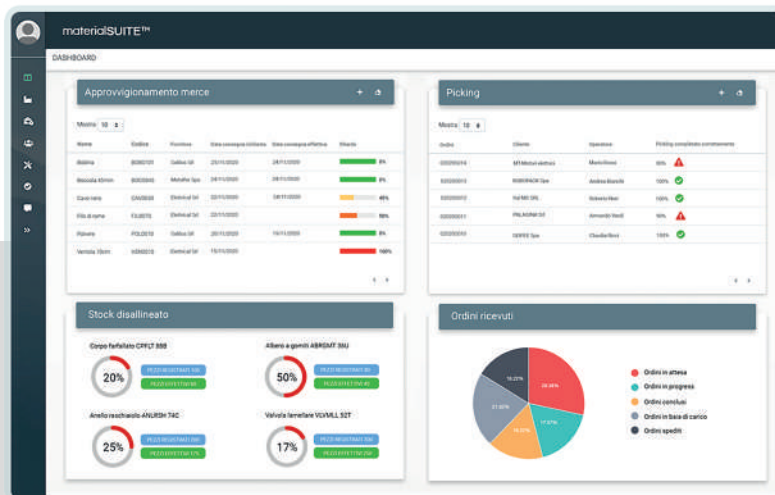
# Dashboards and KPI to support your decisions

A proper planning of productive business activities and material resources provide to rationalise time and production capacities: it's essential to know index of product turning for scheduling times and provisioning arrangements. In this way it is possible to place in warehouse the required amount of material, avoiding waste and reordering only once the stock limits set have been reached.

- Early detection of stock differences
- Picking's precision index

## Easy-to-use solution on complex warehouses

To support warehouse operators and supply chain manager in daily management activities, we have developed the interfaces of our software through visual management solutions using user experience studies, to make our solutions usable and intuitive.



- Lead time of suppliers measurement
- Inventory on-hand and average permanence of each reference



# SCH scheduling

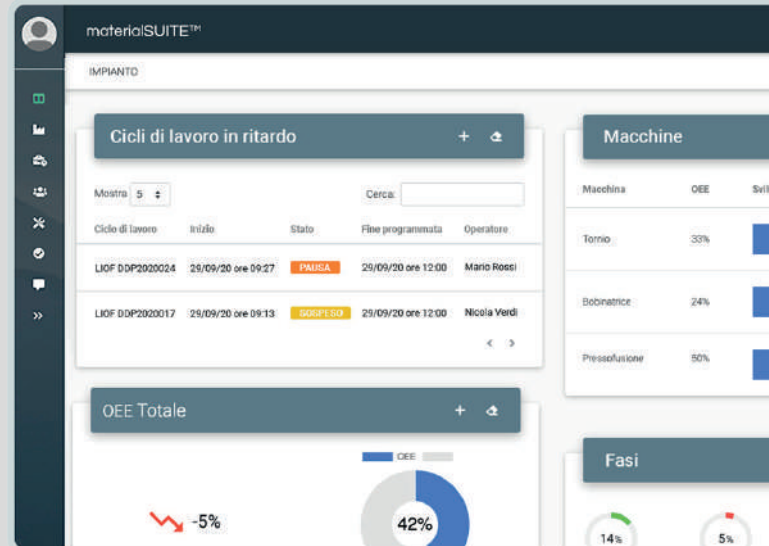
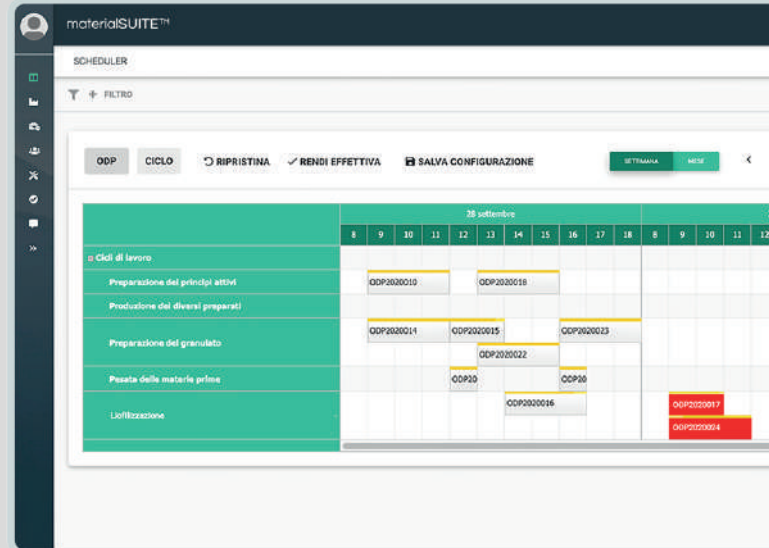


We connect APS and ERP systems.  
Program and schedule jobs: you will respect the deliveries and you will improve the services to your customers.

## Optimise production thanks to scheduler

Schedule the production means plans the operation by WMS and MES synchronizing. This allows to use algorithms that, according to raw materials supplying , determine the orders right sequence with the aim of minimise the production plan costs.

- Operational plan and push production plan formula
- Early identification times and criticality of the production
- Production cycle simulation
- Real time view about what is happening on the shop floor





## Short-time planning and scheduling

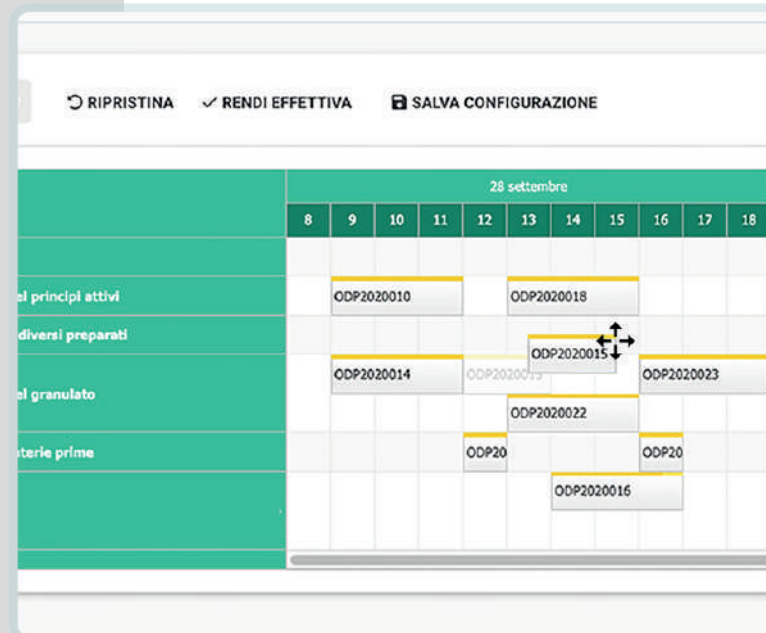
materialSUITE™ scheduler allows, thanks to its heuristic algorithms, to establish the right temporal sequence of jobs which can change from one day to a few weeks depending on the industrial sector of reference.

- Decrease of the required commitment to the planners
- Production efficiency increase
- Updating in few seconds
- Accurate estimation of delivery dates

### Which are the advantages given by the scheduler?

It ensures decision maker to save on the labour time (programming) minimising the period in which the resource is unused. Also, lets manage the priority thanks to the drag and drop function that allows the user to move the phases: once the start is fixed, the scheduler will recalculate automatically and drop-down the remain phases for concluding the process.

- Progressive improvement of production peaks
- Accuracy of lead time estimation for the commercial purpose
- Reduction in production time
- Right distribution of the external load supplier
- Optimization of machine times or manual work phases





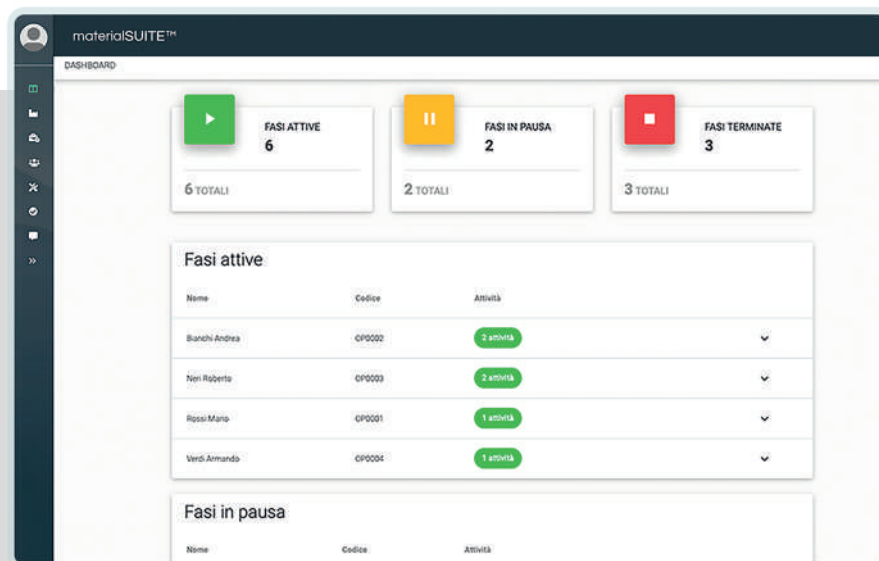
# MTM

## methods time measurement



### Measuring human tasks and operations

To know the production times and methods of its operators is essential for companies to have manual production steps. Thanks to the OLE measurement metric is possible to detect the production times, to act quickly where drawbacks are present.



- Rationalisation of production methods and processing times allocation
- Precise definition of production costs via measurement of work with timekeeping
- Better logistic management
- More time control and identifying potential weaknesses of production

## Real time monitoring

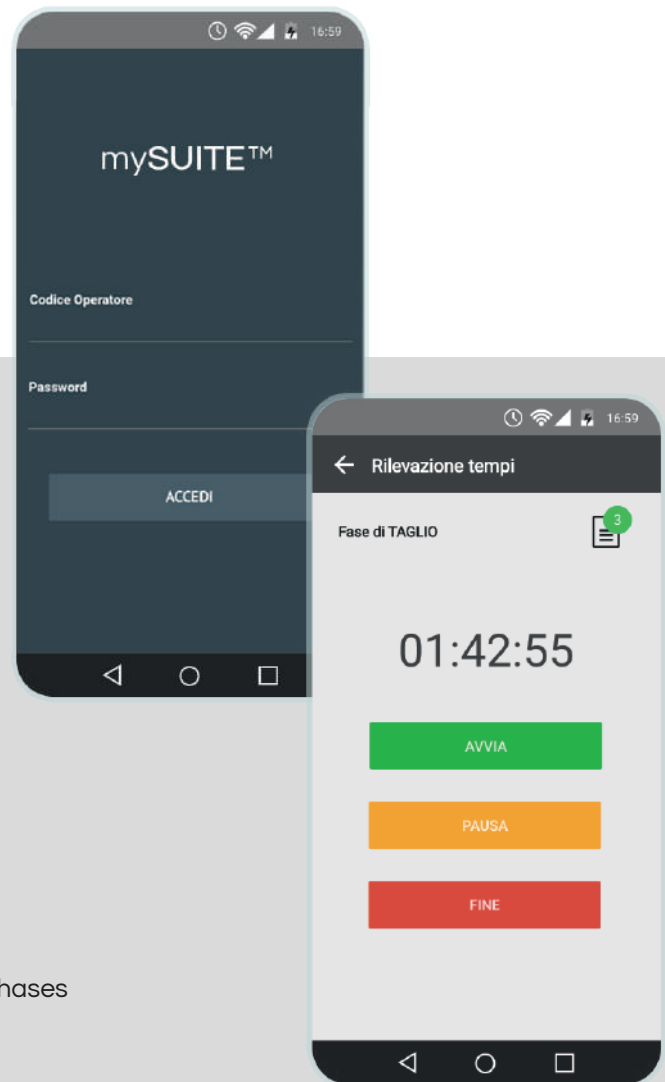
mySUITE™ is the mobile Android app to help end user to register work time in progress.

- Fast and better communication between operators
- Cost and waste reduction
- Identification and time-management issues of manual work
- Data collection on the efficiency of your production

## Mobile measurement benefits

mySUITE™ is an indispensable tool to diagnose and prevent any critical points in manual production step. You can also monitor additional KPIs such as workforce availability, performances and quality of the work making the company competitive and digitalized.

- Efficient people management
- Production process optimisation
- OLE metric improvement
- Prevention of possible critical points in the manual work phases





# MTM

## methods time measurement



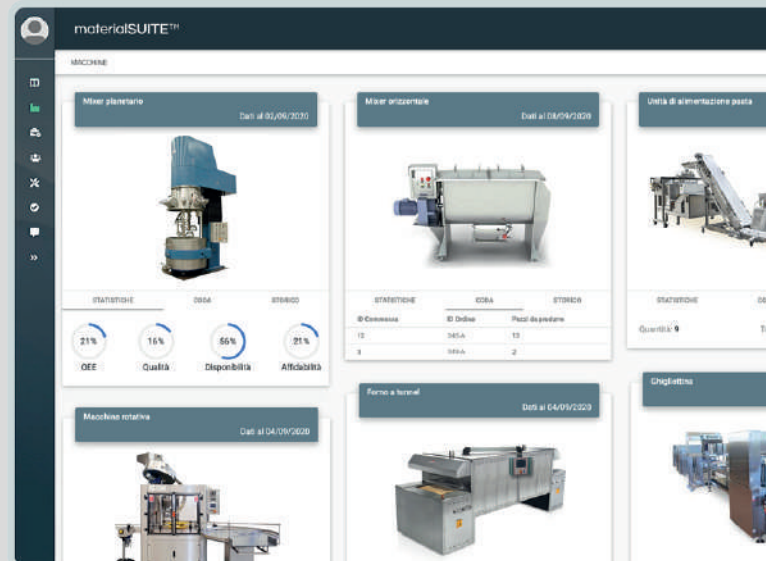
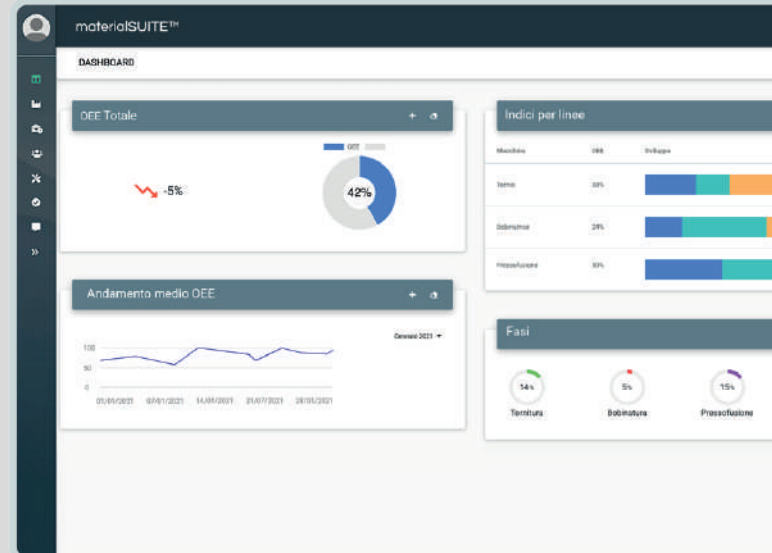
### Machine run times detection

Measure and control production times instantly in order to derive the duration values of the work phases and production cycles.

Make the production measuring times is one of the most important phase on the shop floor.

materialSUITE™ algorithmic rules have the purpose to calculate the OEE index and identify the interferences that causes problems to the production limiting losses related to inactivity.

- Improvement of productive drivers
- Identify causes of the down time
- Visibility of the production channel
- Calculate the real production capacity of plants



# Connection between software and machinery to optimise the remote control process

Via data stories from HMI, PLC or SCADA system, through standard protocols integrated in the suite such as l'OPC-UA, the MES module can show KPI of each machine: this allows the focus on specific phases providing statics like availability, quantity reliability thanks to the analysis of machine states.

- Minimization of costs and reduction of waste to streamline production
- Connection and digitisation of machinery 4.0
- Measurement of consumption and resources engaged in the production process
- Damage inspection of the machine in compliance with process parameters

## Benefits for the decision maker and 4.0 opportunities

Optimise the production through machine time detection allows a correct predictive maintenance. The Industry 4.0 gives the opportunity for the transformation into an interconnected smart factory machinery, two-way communication and remote configuration are the main factors for the industrial digitalization.

- Identification and management of the actual processing times
- Decreasing of communication times between production departments

Tempi macchina						Gen
Macchina	Tempo trascorso	Fasi eseguite	Tempo set up	Tempo fermi	Tempi Scarto	
Bordatrice	148:14:54	45	00:20:30	00:10:30	00:01:56	
Fresatrice	152:20:34	334	01:20:10	00:20:08	00:40:07	
Sabbiatrice	172:45:36	125	01:13:12	00:13:45	00:34:40	
Tornio	156:12:08	80	01:20:08	00:15:09	00:54:04	
Forno	145:17:56	12	00:56:14	00:14:10	00:32:10	
Robot assemblaggio	135:51:02	234	00:52:10	00:10:13	00:45:53	
Forno vernice	124:23:06	165	01:20:23	00:25:26	00:40:20	
Levigatrice	152:17:16	16	01:34:04	00:13:07	00:25:10	
Mostra 10						



# TAILORED

Share your needs, we will make the right software for you



## Product Configurator

The product configurator software allows to create the most competitive budget thanks to the commercial final offer, by using the considerable amount of data and informations present in the material**SUITE™** silos.

The architecture feature consists to collecting a considerable amount of data, by crossing features and values, creating multiple combinations of production.

Additionally, a product configurator allows to estimate times and productive costs, drawing on production data collected from other modules such as MES, MTM and connection machines.

- Generation of an higher number of interested lead
- Demand supplier offers, easy management
- Automatic generation of online estimates
- Saving and optimizing the time spent in creating and estimate

The screenshot displays the TEmosys™ software interface for product configuration. The left sidebar contains a navigation menu with options: Produzione, Andamento economico, Clienti, Margini economici, Agenti, Storico prodotti, Dati tecnici, RDO, and DMS. The main area is titled 'Preventivi' and shows a configuration for 'ITEM 1' (Norma non definita) and 'ITEM 2' (TD 1500 - 6). The configuration includes various fields for material type, quantity, dimensions (sp. minimo, H Colonna, Diametro, Diametro del fondo, Diametro del disco), and other specifications. A summary table at the top right shows 'TOTALE' (€ 4827.99) and 'MARGINE' (31.04 %, € 1499.00). The bottom right corner shows 'N° lastre' (1).

# Document Management System (DMS)

Document Management System (DMS) allows to store, organise, manage and share the dossier to improve the business process thanks to the delation of information flows on paper, thus saving time and errors.

Thanks to the user friendly interface, in according to the customer's needs, DMS can accommodate different file extensions, starting from the text formats, moving onto images and reaching the 3D formats.

- Higher data transfer speed in the exchange
- Reduction of costs and waste to streamline production
- Rapid exploration of documentation through advanced searches
- Data collection on production efficiency

The screenshot displays the 'Safe Nest' Document Management System interface. The left sidebar shows the user 'Amministratore' and a navigation menu with options: Amministrazione, Aziende, Commesse, Archivio liste, Archivio modelli, Categorie modelli, and Archivio lista documenti. The main content area is titled 'Commesse' and shows details for 'Commissa 20-001'. On the left of the main form is a list of 'LISTA' items (LISTA 1 to LISTA 5) with status indicators. The main form contains several sections: 'Interacci antincendio' with a 'Nome' field; 'Tipo impresa' with 'Nome' and 'Impresa edile' fields; 'Tipo di opera' with 'Nome' and 'Altro' fields; 'Stato lista' with a 'Pronta' status; 'Fornitore' with 'Fornitore 1'; 'Data inserimento' with '01/10/2020'; and 'Allegati' with two PDF files: 'Lista documenti da allegare.pdf' and 'Guida alla compilazione.pdf', both uploaded by 'Amministratore' on '01/10/2020'. At the bottom, there is a 'DOCUMENTI' section showing a document 'PIN\_2\_2\_2018CERT\_REI' with the note 'AL COLLAUDO 10/11/2020'. A 'Note' field is also present at the very bottom.

Nome	Interacci antincendio

Tipo impresa	Nome	Impresa edile	Dettaglio

Tipo di opera	Nome	Altro	Dettaglio	Collaudo

Stato lista	Pronta

Fornitore	Fornitore 1

Data inserimento	01/10/2020

Allegati	Lista documenti da allegare.pdf	Guida alla compilazione.pdf
	Caricato da Amministratore il 01/10/2020	Caricato da Amministratore il 01/10/2020

DOCUMENTI
PIN_2_2_2018CERT_REI AL COLLAUDO 10/11/2020

Note :



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