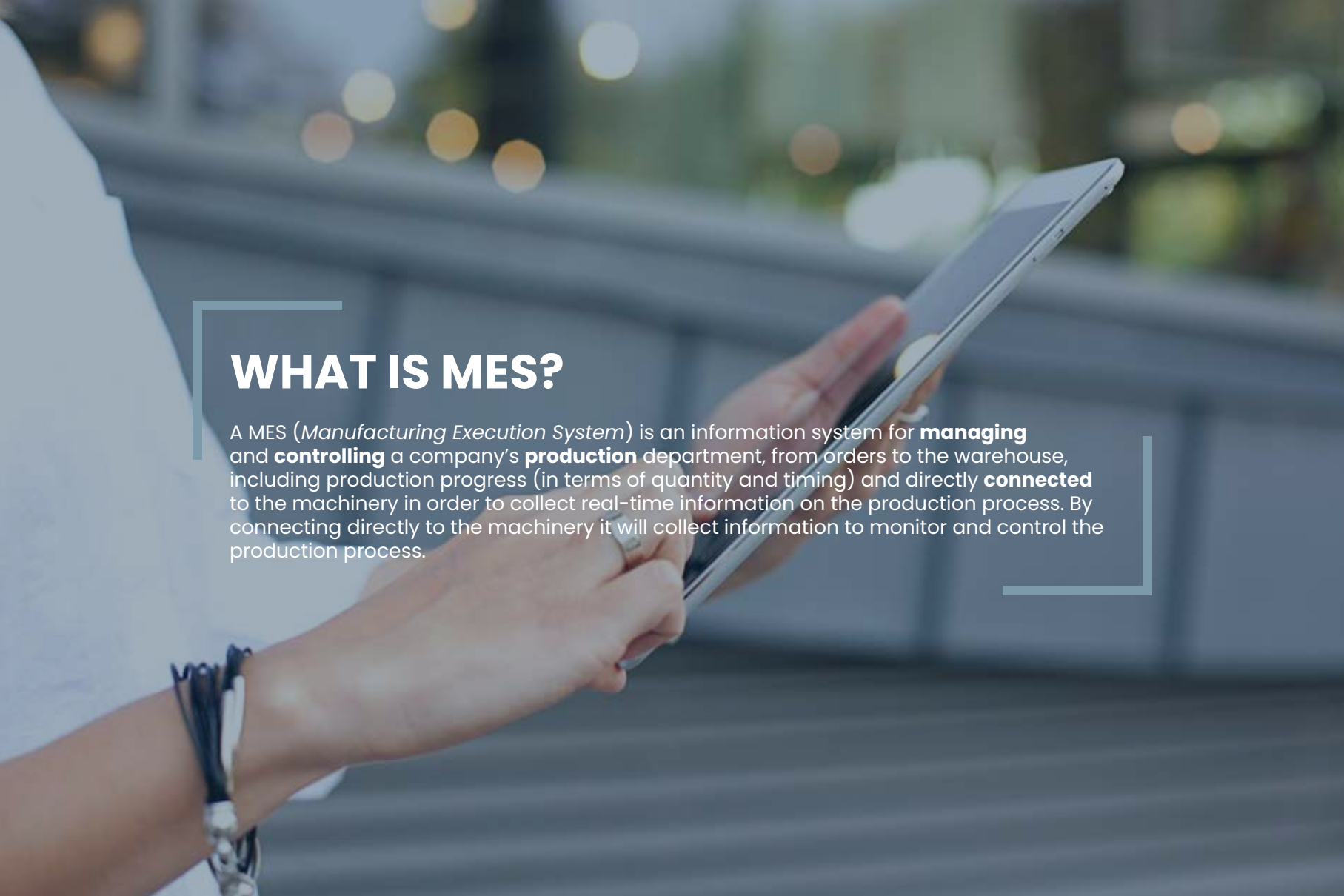


DIGITALIZE YOUR PRODUCTION DEPARTMENT WITH ADEMES!

ADeMES FOR INDUSTRY 4.0

A person's hands are holding a silver tablet, with a blurred background of city lights at night. The person is wearing a white shirt and a black and white braided bracelet. The text is overlaid on the left side of the image, framed by a light blue L-shaped graphic.

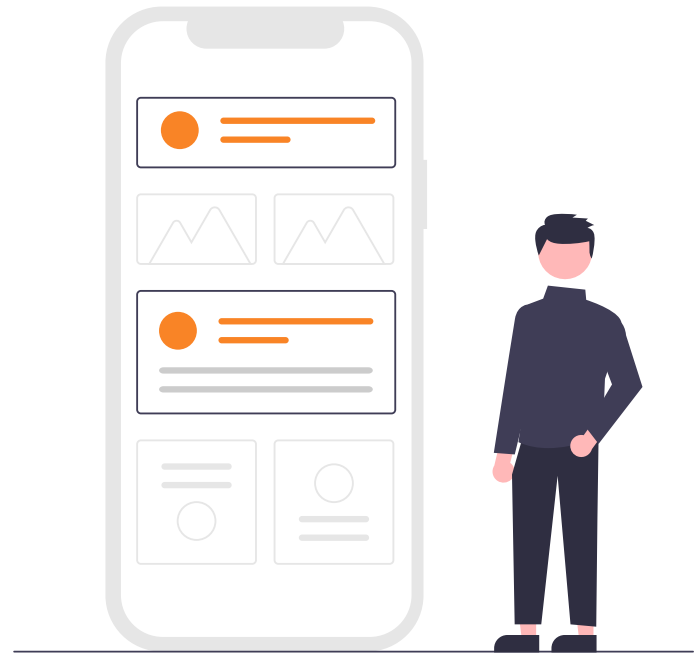
WHAT IS MES?

A MES (*Manufacturing Execution System*) is an information system for **managing** and **controlling** a company's **production** department, from orders to the warehouse, including production progress (in terms of quantity and timing) and directly **connected** to the machinery in order to collect real-time information on the production process. By connecting directly to the machinery it will collect information to monitor and control the production process.

WHY CAN TRIZETA MES BE DEFINED A MOM?

ADeMES is more than just a simple MES: in fact, due to its characteristics it can be defined as a MOM, a tool that is even more important for the **Transition 4.0** of companies as it increases the functions of the MES with the aim of making production processes **smart** and **improving** their **performance**.

The MOM generates production times for each order, digitally provides production specifications, monitors the progress of work, schedules workers' activities and manages non-conformities, all in a coordinated way across all departments in the company, from production to management, including the technical office and the warehouse. ADeMES can also include Trizeta's ADeWMS (a Warehouse Management System)



WHY CHOOSE ADeMES?

Developed by Trizeta, ADeMES is the right tool for companies that want a production **management** and **control** information system:



IN CLOUD

Available in cloud (public, private, on-premise)



EASY

Easy and quick to learn and use



CUSTOMIZABLE

Customizable and integrated to ERP

ADEMES MANAGES AND OPTIMIZES ALL COMPANY DEPARTMENTS, FROM PRODUCTION TO MANAGER OFFICE

The information flows through the **entire company structure**, from production to the technical department, up to the manager's smartphone or tablet.

In particular:



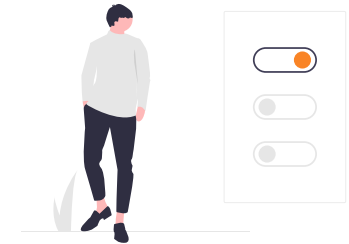
PRODUCTION

- **Intuitive, touchscreen** graphical user interface on PC, tablet or smartphone
- **Simplified** data entry: work done just in a few quick steps
- Tasks organized by **calendar** or job, interfaced with ERP or management system
- Access to **technical specifications** and production data
- **Chat** communication with the technical department
- **Non-conformities**, downtime and production waste management
- Check and edit **bill of materials** at production time



TECHNICAL OFFICE

- Accessible from **anywhere**
- Import of production orders from **ERP** and/or manual input
- Production **progress** monitoring
- Operators and Machine production **scheduling**
- Loading of **machinery specifications** through:
 - CAD or PDF technical drawings
 - Photographs taken directly from production
 - Detailed product data sheets
 - Processing video tutorials



HEAD OF OPERATIONS

- Checking the **OEE** (*Overall Equipment Effectiveness*) of machines and the performance of operators
- Visual access to the **summary** of all activities
- Production **progress** data
- **Waste monitoring** in terms of rejects, errors and downtime
- Management of **holiday** and leave requests sent by operators through ADeMES

WHAT DOES ADEMES GIVE YOU BETTER THAN OTHER MES?

The system is accessible from any device with a web browser.

In addition, ADeMES is integrated with **ADeAI**, the artificial intelligence system that supports activity scheduling based on specific production parameters: machine availability, operator availability, product type and control of machine changeover/setup times.

PRODUCTION

All production activities are carried out from smartphones, rugged Android tablets or from a PC equipped with a standard browser placed in a totem or near the processing machine.

QUICK START/STOP/PAUSE BUTTON ACTIVITY

The button enables quick start, pause and resume of the activity. This ensures real-time monitoring of the activities, without entering the times at the end of the day.

TYPE OF TIME WORKED

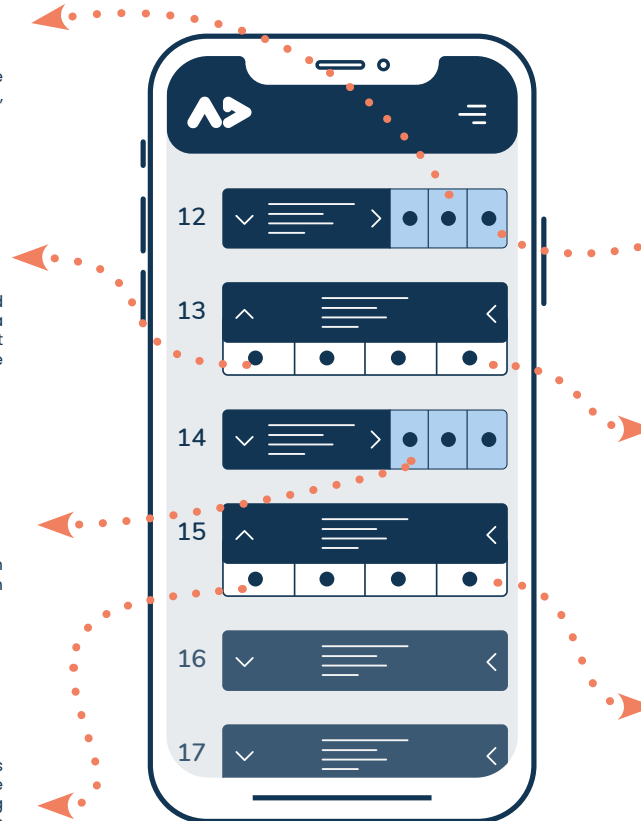
The operator matches one or more vouchers to each reported time record (e.g. "travel time"), differentiating the time of a job on the basis of what is to be recorded (e.g. the time spent on a trip may need to be charged differently from the time actually worked).

ESTIMATION EXECUTION TIMES

You can enter a provisional figure for the hours of each activity, so that you can then check if the work will have been done on time.

CHANGING OF WORKING HOURS

The operator enters, modifies and deletes working times manually. In particular, for activities that do not use the start and stop buttons, this function is the mode for entering working times. The times are managed without constraints, as in a paper report.



PHASE CLOSURE BUTTON

The operator can pause an activity but can also declare it closed: this does not prevent him from entering further times or carrying out other activities.

ADDING NOTES TO ACTIVITIES

Operators enter processing notes that are collected at the end of the work process (*reports, details, justifications for any delays in processing*). Each note shows the author and the time when it was entered and linked to the specific activity.

TEAM ACTIVITY MANAGEMENT

When the operator selects the "Task in team" flag, he starts the task time for the whole team and every action performed is automatically replicated for everyone. You can choose a team leader who enters everyone's times and tasks, but you can also prevent the rest of the team from changing the times, leaving this authority only to the team leader.

PROCESSING SPECIFICATIONS

ADeMES improves production management by eliminating paper documents that were previously mandatory in order to carry out activities, such as technical data sheets, reports on the use of materials and equipment, and vehicle data sheet management.

ATTACHED PHOTOS AND DOCS

Activities are connected to attachments (any type of document or photo) that can be consulted during processing. The file can be connected to the product to be manufactured, to the processing stage or to the customer. Operators can also create and download a real photo book of the different stages of processing which is very useful in the case of managing non-conformities or certification of the work carried out. A document can also be presented automatically when a particular stage is accessed.

PRODUCT DATA SHEETS

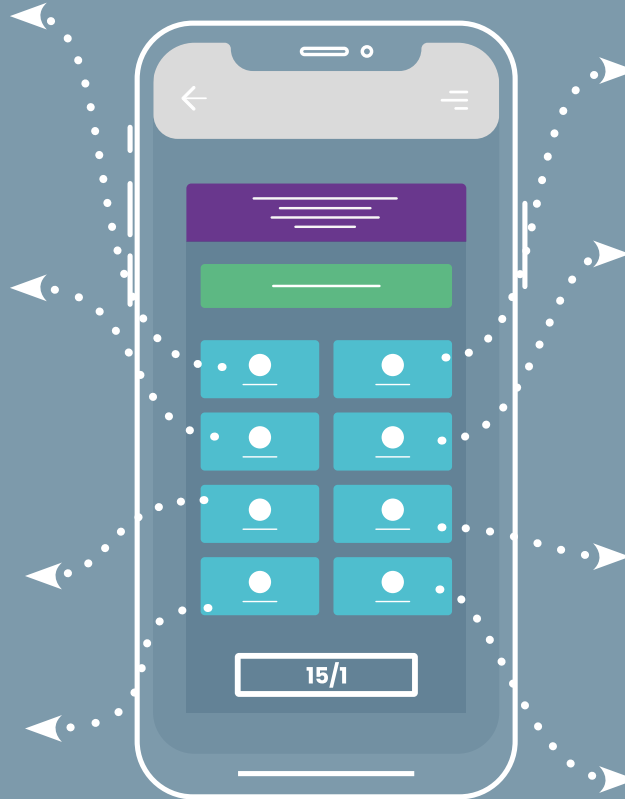
Each article has its own data sheet visible through a special ADeMES button: it is customized and completes the information needed for production, avoiding the use of paper attachments.

EQUIPMENT MANAGEMENT

A planned activity is associated with the equipment to be used and its status: the office in charge guarantees continuous monitoring.

PRODUCTS USED IN THE PHASES

Products used within an activity are reported by declaring the quantities used in order to be able to work. Consequently, the product can be added to the customer report. The reporting of these products allows the relevant office to carry out stock unloading.



VEHICLES MANAGEMENT

Within ADeMES, the operator indicates the vehicle used for transport. Routine checks (*lights, oil, fuel tank, etc.*) can also be carried out to indicate any anomalies and ensure constant monitoring and maintenance.

BILL OF MATERIALS

Imported from the ERP, the BOM of the product is provided for consultation to production and allows the parts required for the different processes to be displayed. As the BOM is populated automatically, there is no need to supplement it with attached paper sheets: the system will read the BOM directly from the company ERP.

DEFINITION OF SUB-ACTIVITIES AND RELATED ACTIVITIES

The operator declares the activities actually carried out and, as part of a planned activity, specifies further preparatory or related activities to be carried out.

PRODUCT WASTE MEASUREMENT

For each work phase, the operator sets differentiated types of waste, specifying the reason why the parts were discarded.

PROCESSING DATA COLLECTION

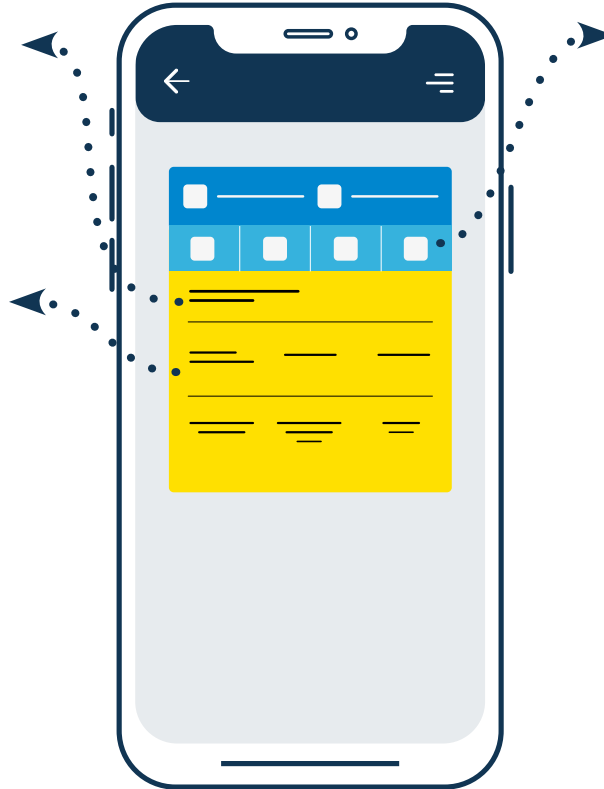
ADeMES offers several ways of collecting production data, both operator and machine times and quantities of semi-finished or finished products. Several counting modes are available to adapt to your company's needs.

AUTOMATIC COUNTER

The operator uses a piece counter which automatically transfers the semi-finished or finished product; he can also make a reversal at the touch of a button.

UNLOADING OF RAW MATERIALS

Through ADeMES, the operator declares which components are loaded into the machine for working (raw materials and/or semi-finished products with the relative batches/records loaded into the machine to perform the working phases). If you want to track the entire production lot and lots of raw materials as well as semi-finished products, the machine loading allows you to define in the phase which materials are used and with which lots. In addition, the operator selects the materials and lots available in a particular warehouse.



FINISHED OR SEMI-FINISHED PRODUCT DEPOSITS FROM THE PRODUCTION STAGE

The operator makes deposits of finished or semi-finished products from ADeMES at the production stage, declaring the number of compliant pieces produced. The production deposit shows the pieces produced in the warehouse.

CUSTOMER REPORT

The device generates an intervention report to be signed by the customer, summarising the work, the time and activities carried out, as well as the products used and the people involved. Thanks to this tool, the paper report is eliminated for all interventions at the customer's premises.



DEFINITION OF COSTS AND STATISTICS

The main purpose of ADeMES is to value the recorded costs: machine, operator and material costs. A precise costing viewpoint for accurate production control.

COST OF OPERATIONS

ADeMES defines remuneration by contract type and maintenance of historical remuneration, and consequently valorises labour costs.

COST OF PRODUCTS

ADeMES also determines the standard costs of products, so that it can add value to the final product and get a first indicator of the cost of machining. This cost is recorded both for products loaded on the machine for machining and for those listed in the bill of materials, but also for those declared in the report and in the planned activities.

PLANT DEFINITION

ADeMES presents a mapping of the machines in the plant and the planning follows the scheduling of the machines. The machines are associated with the machining phases and these with the operators, defining limits for scheduling purposes. Machines can also be declared temporarily out of service by highlighting this fact in the schedule, so that maintenance work can be rescheduled.

DEFINITION OF MAINTENANCE TIMES

Thanks to this function of ADeMES, you will have a more correct planning of maintenance that affects the scheduling of orders.

COST OF MACHINERY

The *back office* defines the business costs for machinery according to its use.

HOURLY PHASE COST

The cost of the stage is added to the cost of the operators and machines, calculating a company cost per hour even if there is no machinery connected.



MANAGEMENT, CONTROL AND OPTIMIZATION OF ACTIVITIES

ADeMES does not just count the finished product: it also allows you to make deposits per pallet or loading unit, unload raw materials when they are loaded into the machine and manage the customer's signature during delivery and installation.

DOWNTIME JUSTIFICATION

The operator declares a work interruption and, for each work phase, defines the different reasons for the interruption: in this way the inefficiency times are collected and the reasons are analysed, allowing a subsequent improvement.

QUALITY CONTROL SHEET

The operator accessing ADeMES can define, for each phase, a list of controls to be surveyed or copy the last values surveyed and, if necessary, make changes. When analyzing the data, cross-referencing the control sheet with the incidents and product non-conformities will reveal the conditions in which certain machine parameters have led to work stoppages or product non-conformities so as to be able to optimize the situation and/or predict certain results.



ACTIVITIES CALENDAR

With a calendar with bi-weekly visibility, but unlimited scheduling, the different activities to be carried out are introduced and organized and the required resources are assigned to them, monitoring workloads. This eliminates the need for excel sheets for coordinating tasks, and the calendar is fully integrated with the MES so that tasks can be assigned directly.

STATISTICAL GROUPS OF PHASES

In addition to defining phases, ADeMES also sets up groupings ("phase types") to generate statistical data. Machines and operators are associated with each phase. In addition, a list of phases is defined for each product, so that the relevant phases are created for each production order for a particular product.

INTEGRATIONS AND INTERCONNECTIONS

ADeMES can connect to the company's ERP with a bi-directional dialogue to extend its functionality, including real-time information exchange between the office and production.

WAREHOUSE TRANSACTIONS FOR ERP

The system automatically tracks warehouse transactions according to events: this tracking and the adjustment made by any changes allow the ERP system to keep stock, inventory and also keeps product costs under control.



CONNECTED TO ADEWMS

When used in connection with ADeWMS, ADeMES notifies warehouse operators of movements required for the next production operation: the control panel will provide warnings so that movements for supplying the production warehouse and preparing materials (*e.g. the unloading of products stored for processing*) can be organized in good time. The dashboard provides graphs to monitor production and the situation of materials in the warehouse.



MANUAL ORDER ENTRY

Using this function, *back office* staff can view and edit orders read from ERP and put into production, and can define new orders outside ERP: as a result, production can be managed even without being integrated into the management system.



MESSAGES

Through the use of messages, the *back office* enters communications with the individual operator or group. The operator receiving the communication can view statistics on the reading rate and replies received.



HOLIDAY AND LEAVE MANAGEMENT

Employees make requests for holidays and leave through ADeMES. If the *back office* approves, delivery times automatically appear in the calendar and help planning by highlighting any tasks previously allocated to that employee at times when he or she will be absent.



INTEGRATIONS

ADeMES does not just count the finished product: it also allows you to make deposits per pallet or loading unit, unload raw materials when they are loaded into the machine and manage the customer's signature during delivery and installation.

ETL TECHNOLOGY FOR INTERCONNECTION WITH ERP

The **full and complete real-time integration** of production data from ADeMES with the company's ERP system allows the manager to be more proactive in how to plan production, manage raw materials and components and optimization

*ADeMES is already integrated with the main ERPs such as:
Zucchetti AHR – Infinity – Fluentis – Arca EVolution –
Onda – Navision – Sap R3 – Sap business one*

All brands mentioned are the property of their rightful owners.



INTEGRATION WITH SCHEDULING SOFTWARE

ADeMES, in addition to being an ERP interface for production orders, is able to receive planning and scheduling information from the main softwares on the market, automatically allowing the creation of the calendar for the execution of work phases.

PRECONFIGURED MODULES FOR CONNECTION TO 4.0 MACHINES

The connection of ADeMES to plants, transmission protocols and company information systems has been developed using a modular system that allows a new machine to be connected by developing the module that implements the specific communication protocol.

OPC UA – MT-CONNECT – others

REQUEST A DEMO OF ADEMES

and find out how you can reduce waste in terms of reduced rejects, errors, downtime and unnecessary handling, achieving real savings and complete control of production.



*Scan the code to make an
appointment for a demo*

TRIZETA

Trizeta supports companies that want to optimize and control their business processes and increase productivity.

Trizeta is a software house that since 2012 has been developing in-house technological solutions to automate industrial processes and support companies at every stage of their Transition 4.0, from conception to implementation of IT projects.

Trizeta promotes the success of its customers through the implementation of specific solutions and the consolidated experience of its staff. From the **ADeMES** enterprise control and management system to the **ADeWMS** warehouse system, via remote consulting through **ADeGO** augmented reality, Trizeta offers all the cutting-edge tools and services to bring companies into the heart of Industry 4.0.

The fields of competence are grouped into:

- **Applications** – Trizeta designs and implements application solutions aimed at meeting the needs of the company's core business;
- **Technologies** – Trizeta optimises the use of innovative technologies, creating solutions capable of guaranteeing customers maximum efficiency and operational flexibility.



NATALE ZARAMELLA

CEO of Trizeta & Innovation Manager

Natale Zaramella, CEO of Trizeta, is also an **Innovation Manager** on the Unioncamere national list. The Innovation Manager is a figure recognised at national level also by the Ministry of Economic Development to identify the person who drives and supports companies towards technological innovation processes, providing them with procedures, identifying business processes and experimenting with different solutions to determine the optimal way to achieve the set results.



Auhtor of the book *"The Digital Transformation: A Small Guide for 4.0 Entrepreneurs"*, in addition to carrying out Trizeta's activities, he offers consultancy in the field of IT Management and Innovation, analysing the IT and technological situation of companies in order to provide complete and professional support for the 4.0 transition.



LEARN MORE ...

...book your demo now!



INTEGRATED SOLUTIONS

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