

Are you ready to drive your business forward?

**Business Presentation** 

**Certified Company** 



DNV-GL SO/IEC 27001

**Certified Partner** 



**Supporting Member** 



### **ABOUT US**

Know more about our history, mission, vision and values



#### **HISTORY**

AT4 Smart Services was born in 2017 with long-term and multisectoral knowledge and experience, thanks to the knowhow acquired by the hired staff, coming from a spin-off organized by a multinational company dedicated to the development of activities carried out on productivity, efficiency and reliability.



#### **MISSION**

Deliver an advanced digital management platform to drive the best in class of maintenance target with highest performance on reliability, productivity and efficiency.



#### **VISION**

Realizing high technology solutions based on deep learning, machine learning and artificial intelligence fully integrated in the Industrial digitalization 4.0 process.



#### INNOVATION

Through our commitment to continuously innovate, we unlock a new value everyday.



We know how to do our job and we are fearless in pursuit of reaching your goals.



#### PROFESSIONALISM CLIENT SATISFACTION

The reason we exist is the Client and the satisfaction of its needs.

**OUR CORE VALUES** 



### **ADVANCED**

Stands for

Digital management platform for the best-inclass maintenance concepts with highest performance on Reliability, Efficiency and Productivity

### **TECHNOLOGY**

Stands for

Solutions based on deep learning, machine learning and artificial intelligence fully integrated in the Industrial digitalization process to predict and prevent failures



Stands for

Industry 4.0



### **SMART**

Stands for

Productive solutions developed with userfriendly web and mobile applications integrated on industry processes

### **SERVICES**

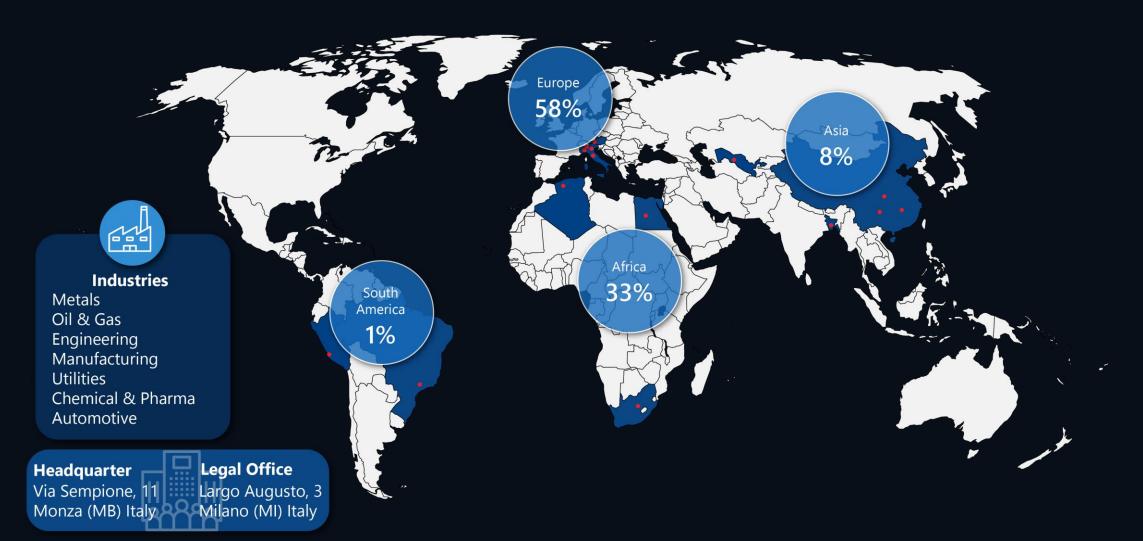
Stands for

High performances for the entire Asset Management value chain and the production process



### **OUR PROJECTS & LOCATIONS**

Wherever you are, we help you find the right way for operational excellence



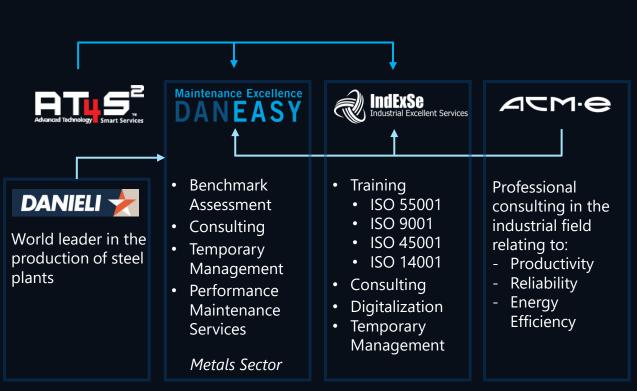


### **NETWORK & PARTNERSHIP**

Our success is based on stable partnerships and shared knowledge

#### **Group Companies**

AT4 Smart Services belongs to a network of companies, created to satisfy all needs and wishes of customers in various business sectors.



#### **Our Partners**

We work with Partners with an important level of technological competence and interested in innovating every day with our R&D department.

We develop a partnership of trust to increase our reliability and the satisfaction of our customers to the highest level.



Enterprise Asset Management Systems



Information Security (Easynet group)



Hosting & Data Center



3D Modeling Systems



Networks & Infrastructure



Hosting & Data Center



### MAIN GROUP REFERENCES





















### **OUR BUSINESS IN A NUTSHELL**

Developed through our solid and deep competences acquired in the years





**Professional Consulting** 



**Digitalization Process** 



Systems' Integration



**MAIN BENEFITS** 



Cost savings



Safety and quality

\* \$1 = \$1(4 = c)<sup>2</sup> \* \$4(4 = c) = 2(3 = c)



Industry 4.0



Warehouse optimization



Productivity & Reliability improvement





Dynamic



Smart



Real knowledge





## PROFESSIONAL CONSULTING



### PROFESSIONAL CONSULTING – AREAS

## RE-ENGINEERING OF THE ORGANIZATION AND MAINTENANCE PROCESSES

- Maintenance re-engineering
- Process map, definition of responsibilities and roles
- Skills assessment
- Performance Management development
- Planning and Scheduling
- Logistics re-engineering (warehouses, purchases)
- Change Management
- ISO 55001 implementation

## IMPROVEMENT OF THE RELIABILITY AND AVAILABILITY OF THE PLANTS

- Equipment breakdown structure
- Asset criticality analysis
- Reliability Centered Maintenance (RCM)
- Failure Mode Effect and Criticality Analysis (FMECA)
- RAM performance simulations based on stochastic models
- Asset integrity review
- Risk Based Inspection (RBI)

## PREVENTIVE AND PREDICTIVE MAINTENANCE OPTIMIZATION

- Preventive, Predictive and Condition-based maintenance design
- Development of standard maintenance operating procedures
- Identification and preparation of law-driven Maintenance
- Drafting of preventive and predictive maintenance plans for assets and activities with security constraints
- Regulatory compliance assessment



### PROFESSIONAL CONSULTING – AREAS

### WAREHOUSE AND SPARE PARTS OPTIMIZATION

- Spare parts analysis and classification
- Inventory review and optimization
- Optimal stock level calculation
- Stock-out assessment and reduction
- Materials standardization
- Materials management processes and workflow design and implementation
- Warehouse automation design and implementation

### ENERGY EFFICIENCY IMPROVEMENT

- Detailed Energy Efficiency Audit
- Elaboration of the portfolio of improvement opportunities
- Feasibility study of the opportunities identified
- Technological scouting and qualification
- Installation of Energy Efficiency equipment
- Installation of energy monitoring systems

### TRAINING AND COACHING

- Training for Maintenance Managers
- Training for Maintenance Engineers
- Training for Maintenance Supervisors
- Specific training on technical topics
- Medium-long term support and tutoring
- Skills re-qualification
- ISO 9001, 45001 e 14001 training



### PROFESSIONAL CONSULTING MODEL

Continuous improvement process

#### **PROCESS FLOW**

Critical machines definition

Initial prevention study

- Work group selection
- Process flow design
- Collection of main system failures with PARETO analysis
- ABC analysis application
- Determination of criticality indexes on plants, machines and objects

- Application of FMECA methodology on critical machines
- Analysis of failure modes, primary causes and symptom detection
- Applied analysis with focus on the prevention of technical failure and safety/environmental incident

**Activities** plan

Plan Revision

Corrective

modelling

actions

Event classification and mapping

- PARETO event analysis:
  - States of risk, risky action
  - Near miss accident
  - Accident on people
  - Environmental accident
  - System failure
  - Anomalies on weak signals

- Activity plan revision:
- Frequencies, inspections, activities
- Implementation of operational procedures and control points

Control plan analysis and drafting

RCA event analysis:

- Criticalities mapping
- Control indicators determination
- Alarm set-point determination
- Corrective actions modelling
- Definition of algorithms for automatic variation of activity frequency
- Definition of algorithms for automatic variation of stock materials
- Definition of new points of verification and control

#### **METHODS APPLIED**

RAM analysis - Reliability, Availability and Maintainability

**PARETO** analysis

ABC analysis

**FMECA** analysis

**Activities** Plan

PARETO analysis

RCA analysis Corrective actions modelling

Plan Revision

6



### PROFESSIONAL CONSULTING MODEL

WCM – World Class Manufacturing / Maintenance





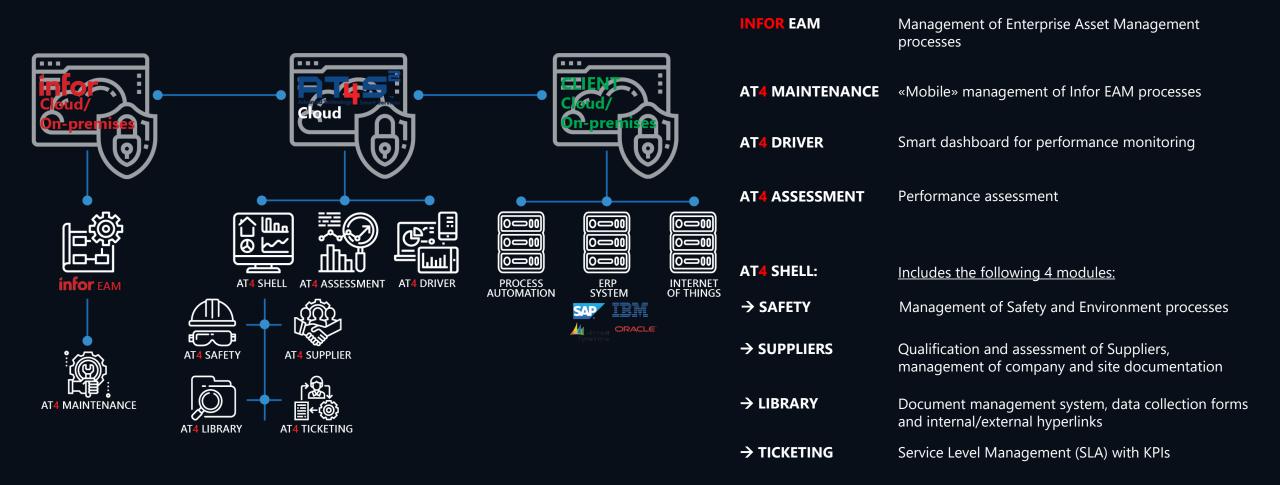


## DIGITALIZATION PROCESS



### DIGITALIZATION PROCESS

Always keep under control your efficiency, reliability and productivity





## Infor EAM

#### **Enterprise Asset Management**

Infor EAM is the top of the Enterprise Asset management software solutions for the management of corporate resources with integrated functionality and flexibility.

Integrated with the solutions of the AT4S2 platform, various systems and technological automation systems, Infor EAM is the basis for the implementation of continuous improvement processes and the implementation of a world-class Maintenance process.

Infor EAM manages the entire process of organizing resources: from purchase requests to purchase orders and performance reporting and recording, from spare parts inventory to safety stock management, from the skills of technicians to the skills of suppliers.





### Infor EAM

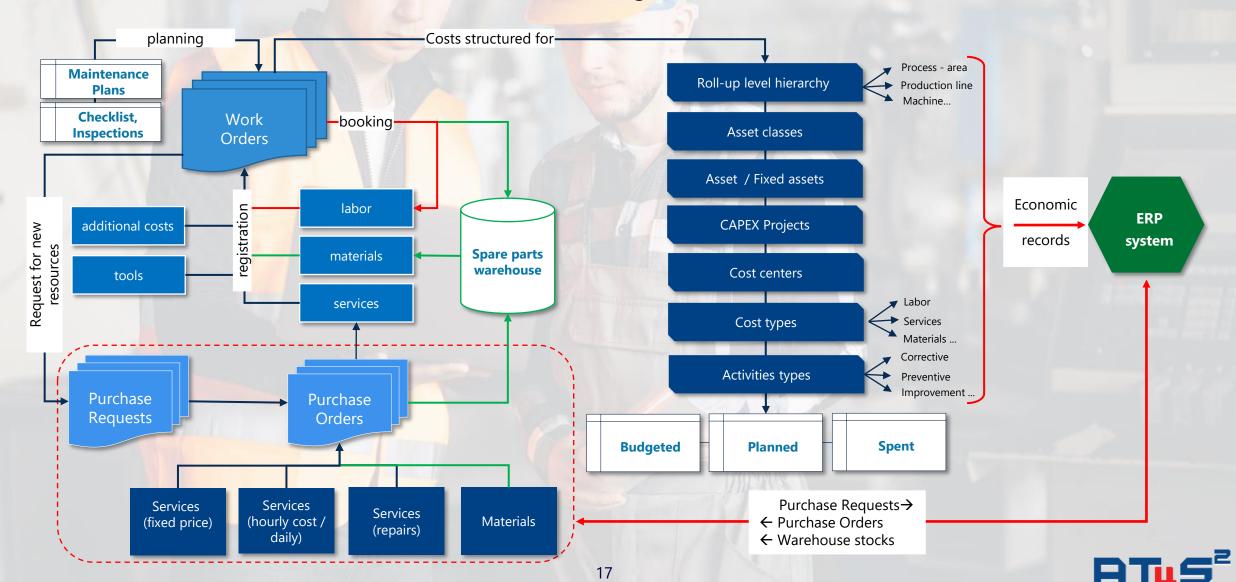
More than 30 years in leadership and innovation

#### **DataStream 7i** Rapier-R5 **Infor EAM** MP2 MP5 Infor 11.x EAM Character **Asset Tracking** 15,000 Web-based / Cloud Call Center RCM & Risk Mitigation based Linear Asset Multi Site Mobility Re-Envisioned Customers **Facilities Management Terminal Host** Management Multi-Language Worldwide Sustainability Alert Management GIS **ION Expansion Advanced Mobile** 1986 1990 MP2° 2000 Datastream 7i 2006 Infor EAM 2012-2020 bpenCAD( Open BIM SPEAR 4 **V**132 **▲**67 **V**5 **1**46

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### Infor EAM

Customizable flows in accordance with the current organization



### AT4 MAINTENANCE

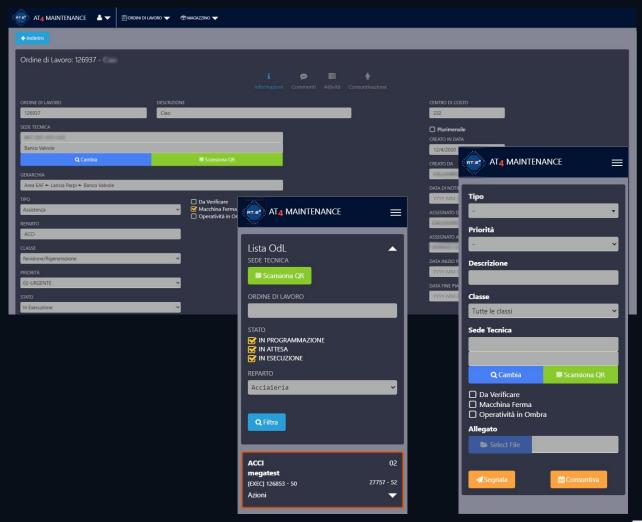
### Efficient mobile management of Infor EAM

AT4 MAINTENANCE is the web app developed ad-hoc by AT4S2 for the complete mobile management of the Infor EAM software processes.

The flexibility of use with any mobile device or web browser and the free customization in the use of the customer's custom fields make AT4 MAINTENANCE an indispensable tool to support the daily activities carried out directly in the field.

The main features are:

- Work Order Management
  - job assignment
  - change state
  - asset and resource management
  - manpower planning and accounting
  - comments, photographs and documents
  - final balance of materials and services
  - technical justifications
- Checklist management
- Materials management





### AT4 DRIVER

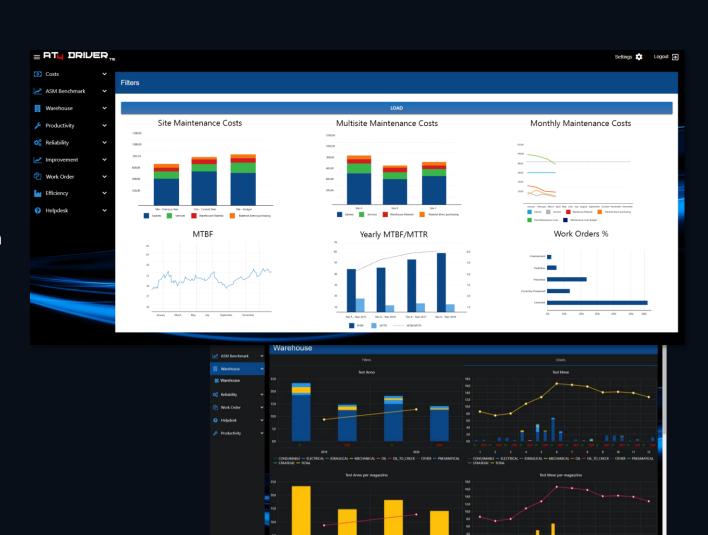
#### Smart Dashboard

### AT4 DRIVER is the heart and intelligence of the platform.

It is an intelligent dashboard that allows you to monitor each individual asset, technical family, functional hierarchy or cost center in real time:

- of general costs divided by type of activity and cost item (labor, materials and services)
- the value of the warehouses and the classes of materials
- of the reliability indices relating to the assets / production lines
- of work orders and their backlog
- productivity data
- security data
- of efficiency results

comparing production sites, states and regions through graphs, indicators and KPIs.





### **BEST IN CLASS MAINTENANCE SYSTEM**

Example of main parameters managed by AT4DRIVER

AREA	CATEGORY		AREA	CATEGORY	
WORK ORDERS & TICKETS	Status Category Classes Lead time			per type of work	Maintenance type Work type Account type Equipment tree level
	Backlog Pareto Analysis		COSTS		Category Asset - Criticality TCO - Total Cost of Ownershi
SAFETY	Global Safety Index IF - Frequency Index			Pareto analysis (only per multisite)	
	IG - Gravity Index Categorization Incident Causes Place Part of body Site  Mean time action follow up Preventive inspection Unsafe conditions		PRODUCTION PRODUCTIVITY	Cycle time Set-up time Downtime Overall Equipment Effectiveness (OEE) Quality production result	
				Traceability	Products Orders
				Raw material	Stock Consumption
QUALITY	Legal requirements Product requirements	PmP on time delivery Calibrations results on target	MAINTENANCE	Maintenance schedule compliance Maintenance planning compliance (result/planned) Maintenance overtime	
RELIABILITY	MTTR MTBF RPI - Reliability Performance Indicator (MTBF/MTTR)		PRODUCTIVITY	WO with registered costs WO opened on machine level Root cause analysis on WO breakdowns Planned maintenance work	
CONTINUOUS IMPROVEMENT	Activity & projects gant Training hours Suppliers evaluation Customer satisfaction			Inventory Rotation Index (IRI) Value	Products Orders Stock
					Consumption
EFFICIENCY	Maintenance cost on budget Productivity cost Energy vectors cost efficiency Maintenance productivity		WAREHOUSE	Stock out alarm Safety Stock Critical spares alarm Multiwarehouse management	1



### **BEST IN CLASS MAINTENANCE SYSTEM**

Example of Performance Indicators based on BS EN 15341 STANDARDS

#### **PRODUCTIVITY**

- Productivity Indicator/ total performance (Overall Equipment Effectiveness)
- Technical Downtime (TD)
- Process availability, line, machine
- Product quality



#### **PERSONNEL**

- Hours spent on training on hours worked
- Overtime work
- Staff Assessment

#### RELIABILITY

- Reliability Performance Indicator (RPI)
- Mean Time Between Failures (MTBF)
- Mean Time To Repair (MTTR)
- Compliance of the maintenance program



#### **EFFICIENCY**

- Scheduled maintenance on total maintenance
- Planning respect
- Total maintenance costs
- Energy Efficiency



#### **STOCK & SPARE PARTS**

- Stock value (YSV)
- Spare parts turnover index/warehouse (IRI)
- Spare parts with stockability indicators on spare parts total

#### **SAFETY**

- Global safety indexes
- Number of preventive safety inspections
- Number of detected unsafe conditions
- Average resolution time of an anomaly

#### **SUSTAINABILITY**

- Percentage in compliance with legal maintenance
- Percentage of maintenance plans that have been carried out
- Compliance with training plan



### **AT4 ASSESSMENT**

#### Assessment & Benchmark

AT4 ASSESSMENT is a tool developed to support evaluation processes, managerial and non-managerial, through self-assessment questionnaires with preconfigured checklists.

The configuration of AT4 ASSESSMENT is focused on 3 main areas:

Analysis of maintenance processes

(in accordance with ISO 55001)

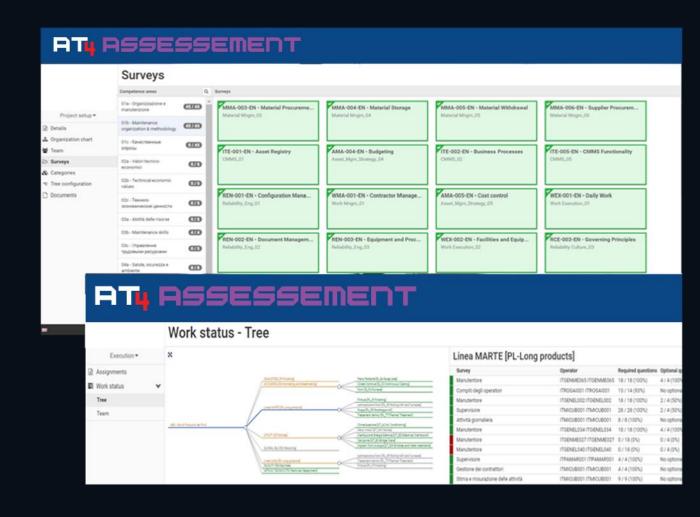
Performance Analysis

(in compliance with UNI EN 15341)

Analysis of the skills of Maintenance personnel

(in compliance with UNI EN 15628)

It consists of two main parts: a central web application that can be accessed via an Internet browser and a mobile application for installation on mobile devices, such as smartphones and tablets, which can be easily used while working.





### PERFORMANCE ASSESSMENT



#### **QUALITATIVE ANALYSIS**

#### **12 areas of self-assessment** and site survey:

- Asset management strategy
- Enterprise Asset Management System (EAM)
- Human resources management
- Materials management and warehouse
- Performance management
- Planning and scheduling management
- Culture of reliability
- Reliability engineering methods
- Execution of works
- Work management
- Health, Safety and Environment
- Ability of maintenance personnel



#### **BENCHMARK ANALYSIS**

#### **44 benchmark indicators**, divided into 3 groups:

- Economical
  - Total Maintenance Cost/ Revenues
  - Total Maintenance Cost/Quantity of Output
  - •
- Organizational
  - % of hours planned vs hours worked
  - % of worked hours per maintenance types
  - •
- <u>Technical</u>
  - Plant availability
  - MTTR, MTBF,
  - •

## OUALIFICATION O

### QUALIFICATION OF MAINTENANCE PERSONNEL

**3 professional figures** for personnel qualification in relation to the tasks to be carried out in the context of the maintenance of plants, infrastructures and production systems.

- Maintenance manager
- Maintenance supervisor and maintenance engineer
- Maintenance specialist

UNI EN 15341

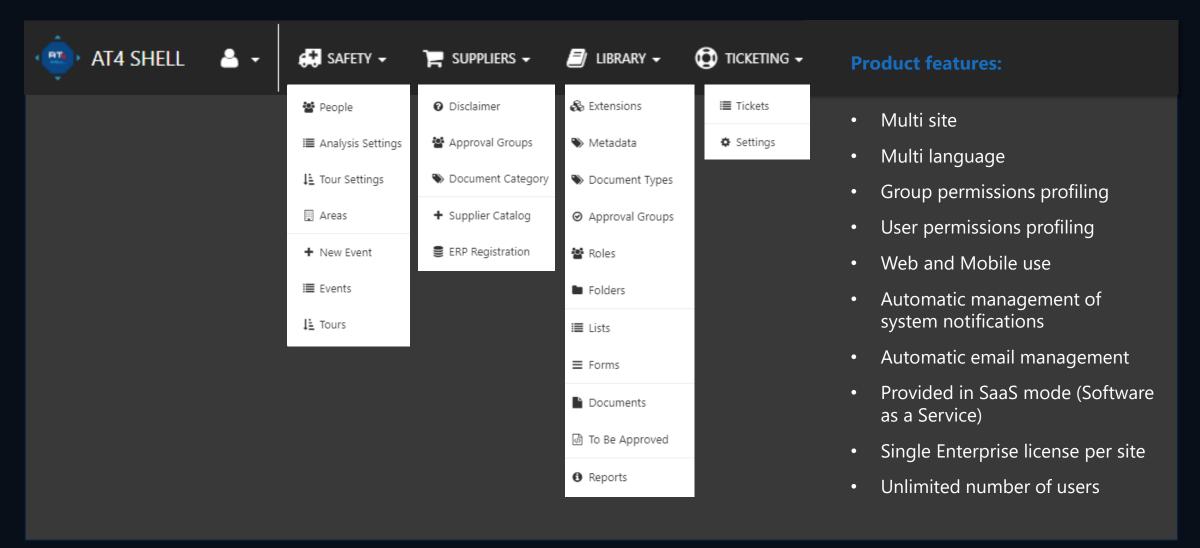
UNI EN 15628

ISO 55001



### **AT4 SHELL**

A program designed for the efficiency of the main business processes in compliance with ISO standards



### AT4 SHELL – SAFETY

Operating module for the complete safety management

SAFETY is a module included in the AT4 SHELL application designed and developed for the complete management of workers' health and safety and environmental protection in accordance with ISO 45001 and 14001 standards.

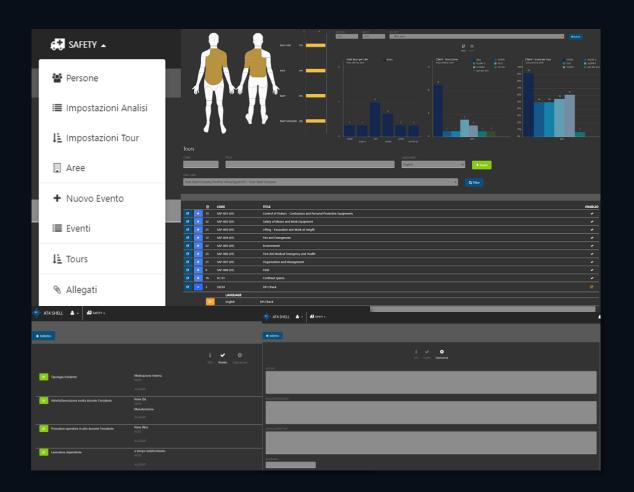
It allows the recording, classification and monitoring of the trend of the main events: Unsafe Condition, Unsafe Act, Near Miss, Accident, Training and Environmental Event (Environmental); their analysis, approval, definition of corrective actions and their follow-up.

It allows the total management of the preventive inspection rounds through check-lists, RCA analysis, their approval and the follow-up of corrective actions.

It is possible to set activity schedules and manage the distribution of PPE to individual workers.

All documentation is linked and managed in the LIBRARY module.

The segregation of information is carried out per person by area / site.





### AT4 SHELL – SAFETY

Complete safety and environmental management in accordance with ISO 45001 and 14001

#### **SYSTEM FUNCTIONALITY:**

• **RISK ANALYSIS:** preventive e **INSPECTION TOURS;** creation, planning and management of checklists with weights and scores on the results, information material and execution procedures

• **EVENTS ANALYSIS:** creation and management of checklists with weights and scores on the results

creation and management of events completed of classification, compilation and approval flows, in-depth investigation analysis, recommended and corrective actions, automatic reports, digital signatures of acceptance divided into:

- → Unsafe Condition
- → Unsafe Act
- → Near Miss
- → Accident
- → Environmental

• **TRAINING:** planning and management of meetings, participants, topics, agreed actions, attendance signing, learning test, degree of satisfaction

• **GEOGRAPHICAL AREAS:** internal and external, complete management of the registry structure by company

• **DOCUMENT SYSTEM:** complete document management with release tracking, approval flows, data collection template creation, folder master data creation, metadata association with document types

• SMART DASHBOARD: statistics Analysis, events, frequencies, types, classifications, places, body parts, type of activity carried out

• **REPORTS:** automatic and manual management of alerts, status changes, action requests and closing reports

• **PPE:** management of PPE with deadlines and certifications

### AT4 SHELL – SUPPLIERS

Qualification, evaluation and management of suppliers

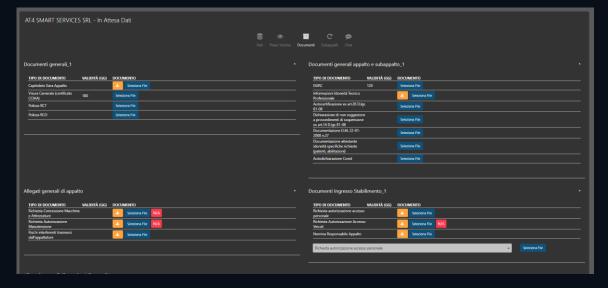
SUPPLIERS is a module included in the AT4 SHELL application designed and developed for the complete management of Suppliers, qualification documents and operational management of construction sites.

SUPPLIERS allows the total management of the <u>qualification</u> and evaluation process of suppliers, their classification and the management of the documents necessary to perform the various types of services provided.

The management of deadlines is completely automated, and the profiling of users and approvals allows a flexible sharing / distribution of all activities.

A portal dedicated to the "reception" allows you to efficiently manage the entry of external staff by checking the adequacy and approval of the required documentation.







### AT4 SHELL – SUPPLIERS

Complete management of SUPPLIERS and DOCUMENTAL parts

#### **SYSTEM FUNCTIONALITY:**

• APPROVAL GROUPS: creation and management of APPROVAL GROUPS according to the various types of documents and data

• **DOCUMENT GROUPS:** creation and management of DOCUMENT GROUPS according to the various types of service offered. For each document group, according to the type of service, it is possible to define:

- Disclaimers
- Documents of view and acceptance by the supplier
- Mandatory documents to be uploaded by the supplier, with downloadable sample document
- Expiration time of the document itself, the mandatory attributes and the obligation to upload depending on the type of service
- Data collection forms with preset fields for entering text, values, files, compulsory menus and anything else necessary for data tabulation
- Obligation of the document for subcontracts
- Subcontractor files with mandatory data and documents
- SUPPLIERS: management of the SUPPLIER Qualification and Evaluation process according to type of service provided
- **INTERNAL CHAT:** management of direct communication with the supplier through a dedicated "CHAT"
- **RECEPTION PORTAL:** direct display at the reception of qualified companies and personnel authorized to enter the construction site/offices
- **DEADLINES MANAGEMENT:** completely automatic through emails and alarms sent to the supplier and the manager



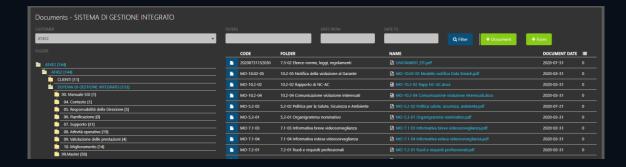
### AT4 SHELL – LIBRARY

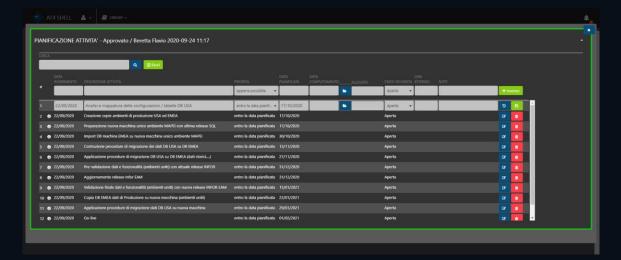
#### Document management system

LIBRARY is a module included in the AT4 SHELL application designed and developed for complete <u>document</u> <u>management</u>.

#### System features:

- · Creating folders, uploading documents with attributes,
- Creation and management of data collection forms with fields, and context menus, internal / external hyperlinks.
- Complete management of permissions for single user / group, management of document "versioning" and definition of approval flows.
- Alarm management on the expiry date of the document or data forms
- Customizable work-flow of the approval process for each document / folder







### AT4 SHELL - LIBRARY

Document management system

#### **SYSTEM FUNCTIONALITY:**

METADATA: creation and management of METADATA to be assigned to specific DOCUMENTS

• **DOCUMENT TYPES:** management of the classification of DOCUMENTS, assignment of METADATA for each document

• APPROVAL GROUPS: creation and management of document APPROVAL GROUPS according to the various document types

• **ROLES:** creation of ROLES, read and write permissions for each role and user assignment

• **SEGREGATION:** Segregation carried out at the site and single folder level

• **FOLDERS:** creation and management of SYSTEM FOLDERS, assignment of ROLES to the folder

• **LISTS:** creation and management of LISTS to be used in the MODULES menus

• **MODULES:** creation of specific data collection MODULES with field configuration: text, numeric, date, check box, upload file, predefined list, hyperlink, symbols, mandatory field and language and instruction list

• DOCUMENTS: loading and management of DOCUMENTS, MODULES, INTERNAL LINKS and EXTERNAL LINKS, free

search for name, type and metadata

IN APPROVAL: management of the approval flow of the various documents and forms loaded

• **REPORT:** creation of print reports and Excel export of the pre-selected document lists in the various folders

and their associated metadata



### AT4 SHELL – TICKETING

A module for the complete management of the Service Level Agreement

TICKETING is a module that allows the customer a single point of contact (SPOC) for any type of request or communication.

By registering the "Ticket", AT4 Smart Services undertakes to provide customer support and / or to contact the customer directly for further clarifications.

Each ticket entered is taken over by an operator, who activates the specialists for the resolution of the problem highlighted. These activities guide the customer in managing the problem, diagnose and reproduce the problem and, if necessary, activate specialist external services and manage the escalation of the problem itself.

Specific indicators of the service level (SLA) determine in real time the respect of the contract times for the various criticalities, the availability of the applications and the status of the hours dedicated to the contractually foreseen improvements (evolutionary maintenance).







### AT4 SHELL – TICKETING (service level examples)

Severity Level	Description	Take in charge max time	Resolution or workaround max time
<b>Level 1</b> (System Failure)	Serious problem that causes the inability to use the media systems causes a catastrophic event  Infrastructure blocked Inability to access the system	<b>1 h</b> (calculated on 8h / day)	<b>24 h</b> (calculated on 24h / day)
Level 2 (Application error)	<ul> <li>Problem on an application / connection between systems that:</li> <li>Prevents the correct execution of the program functions</li> <li>Application / connection blocked</li> </ul>	<b>2 h</b> (calculated on 8h / day)	<b>48 h</b> (calculated on 24h / day)
	<ul> <li>Problem on an application / connection between systems that:</li> <li>It does not result in significant and immediate dysfunction</li> <li>It slows down but does not prevent operation</li> <li>Minor application error</li> </ul>	<b>8 h</b> (calculated on 8h / day)	<b>40 h</b> (calculated on 8h / day)
<b>Level 4</b> (Improvement)	<ul> <li>Improvement / modification:</li> <li>On existing applications, adding functionality</li> <li>Request for technical / training support</li> <li>New environments configurations</li> </ul>	<b>24 h</b> (calculated on 8h / day)	Estimate formulated according to the specific request (calculated on 8h / day)
<b>Level 5</b> (Access request)	<ul> <li>Request access to new users</li> <li>Change of permissions to existing users</li> <li>Configuration / reconfiguration of existing features</li> </ul>	<b>24 h</b> (calculated on 8h / day)	Estimate formulated according to the specific request (calculated on 8h / day)

#### **Performance Indicators**

AT4 Smart Services guarantees compliance with various indicators / targets, such as:

- LS (service level indicator): percentage calculated annually on all tickets taken over in the predefined time (value defined in "max taking charge time") on the total of open tickets
- IA (Maximum annual unavailability): calculated on «severity levels 1, 2 and 3»





## SYSTEMS INTEGRATION



### PERFECTLY INTEGRATED SOLUTIONS

Safe and effective communication flows

Interconnection with external systems can be implemented through dedicated middleware systems or the interchange of XML/ SOAP flows, through different transport systems (http/ https/ sftp/ ...) or through REST calls on http.

AT4S2 platform can also collect data directly from the field (through IoT architectures) by communicating with existing sensors or equipment or systems chosen for projects needs and placed on different equipment according to the study problems, simulating and monitoring their operation, either individually and related to other variables of a logical process.

**SYSTEMS OF** Middleware **AUTOMATION/** systems loT **INFOR EAM AT4 SHELL AT4 DRIVER** LIBRARY **AT4 SHELL AT4 SHELL SUPPLIERS** SAFETY

ORACLE!

**ERP** 

systems

Cloud and onpremises installation

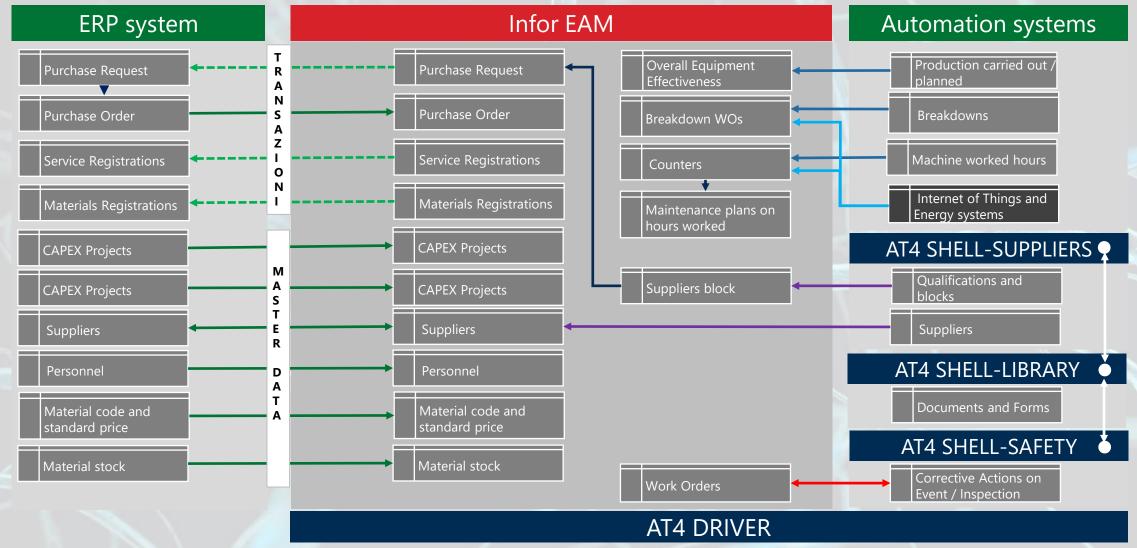
Cloud installation

Client installation



### INTERCONNECTIONS BETWEEN SYSTEMS

Example of interconnected data





### MAIN BENEFITS

The real added value for our Clients





















#### **COST SAVINGS**

- Better budget's management
- Better expenses' management
- Optimization of productivity
- Optimization of "make or buy" decision process
- Reduction of energy consumptions
- Lost time reduction
- Lead time reduction



#### **SAFETY AND QUALITY**

- Online global safety results: global index, incident, safety preventive actions
- Quality and legal traceability: legal requirements, product requirements, on time delivery
- Reduction of safety risk and incidents



#### WAREHOUSE OPTIMIZED

- Online inventory value
- Online Inventory rotation Index (for total warehouse and single spares)
- Stock-out management
- Multi warehouse management
- Critical spare management



#### **CONTINUOUS IMPROVEMENT**

- Failures reductions, growth of productivity
- Optimization of maintenance policies/strategy
- Continuous cost reduction due to lack of quality (zerodefects strategy)
- Continuous cost reduction due to noncompliance







### **CUSTOMER VALUE**

We give you a smart solution, tailored to your needs



#### **DYNAMIC**

Dynamic business process management is an approach designed to allow business processes to adjust quickly to changing business needs. dynamic BPM, processes are designed to be highly adaptable, allowing participants to make rapid process adjustments at any time with low latency. The approach is used by organizations seeking to maintain and increase process efficiencies in fast-changing, chaotic business environments.



#### **REAL KNOWLEDGE**

We have joined in a coherent and productive way the real experience of our team, the designs and processes for our services, our files of documents and our plans for future activities and we have created AT4S<sup>2</sup> and related services.

We are sure to have the know how, expertise and power for become a fundamental supplier for your business grown.



#### **SMART**

We love to indicate our concept of smart service as something of "user friendly" but at the same time this need to be really a full service. Everyday our team work to improve this concept, we love to provide our solution as easy to understand and use in day by day work. Your business can be also complicated, our mission is to give you a perfect control in an easy but useful way.





# Drive Your Business Forward







Thank you for your attention