CDT 21 Aprile 2022

1970

Fondation

Giuseppe Boscolo

1996

Change

Fulvio and Cristina Boscolo Take the Lead Giving a New Structure

2004

Expansion 1

Second structural expansion and new production department

2009

Expansion 2

New Logistic Facility and new operations site in Southern Italy

2015

Market

LMA Reaches Global Customers

2019

Value

R&D Department

Sheet Metal Partnership

New Plant

2020

Club Deal

new technological assets

2021...

Challenges

Additive Manufacturing

Drones

Composites

LMA: The Company

Pleased to meet you

We deliver world first class service in mechanical production for high demanding applications.

As a company rooted in its 50 plus years of experience in safety critical, large dimensions structural parts machining for **Aerospace market**, LMA enters new markets with renewed energy, fed by its people and the constant pursuit of innovation and excellence.

We are trusted as **Tier 1** supplier to major players in the Aerospace sector and we are expanding our value proposition with new investments and further partnerships, expecially with **Academics and Industrial sectors**.

We provides **high quality integrated solutions**: research & development, engineering and production, design & codesign, heat treatments, assembly and supply chain management.

We are driving **innovation** with several **R&D Projects**, to evolve its business model providing new products and services to its customers, to digitize and improve its workflow to increase its competitiveness, and to participate in major European Union Founded Programmes.

We decided to invest in the new internal **Research & Development** Department which, by actively collaborating with Universities, will enable the company to project itself into **new frontiers**, making it increasingly competitive.

LMA: In the World

Proud to be Partner

We constantly work to satisfy our customers and looking for new partnerships.

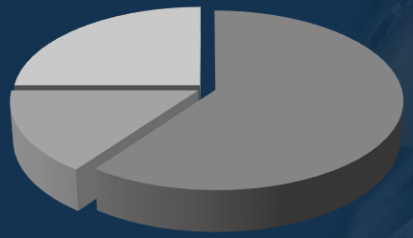
We are a company **very well structured** in terms of resources, processes and practices, but we are also characterized by the good **flexibility** that today's markets, and in particular our customers, demand from us.
Thanks to this twofold characteristic, we are absolutely capable of tackling ambitious production and engineering **challenges**.

We want create solid partnerships to offer to our clients integrated products and services, guaranteeing high technical, design, financial, production and delivery **performances**.
In this way, we are the solution to the design, codesign, engineering and production of our customers and stakeholders.

Thanks to our organizational style and structure, aimed to pursuing the requirements of Industry 4.0 and **Lean Manufacturing**, and to making production more efficient, we daily reconfirm the excellent **quality** of our integrated services, enhanced by versatile and competent resources, because **people** have always been our first added value.

LMA Numbers

PLATFORMS

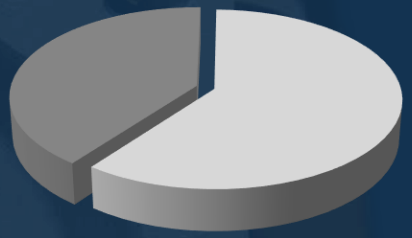


60% Fixed Wing

15% Helicopters

25% Space

MARKETS



60% Military

40% Civil

PEOPLE

110

29 ENGINEERS | 50 DIRECT

10 R&D | 11 PRODUCTION ENGINEERING | 10 QUALITY

25 WOMAN | 85 MAN

MAIN CUSTOMERS

LEONARDO, LOCKHEED MARTIN, IAI, AIRBUS, BOEING, APCO TECHNOLOGIES, sonaca GROUP, EMBRAER, OHB, SPIRIT AEROSYSTEMS, SAAB, PFW, MBDA, DASSAULT AVIATION, SUKHOI, ThalesAlenia Space, ATR, asco, Marshall

SALES

25 M€

+3%

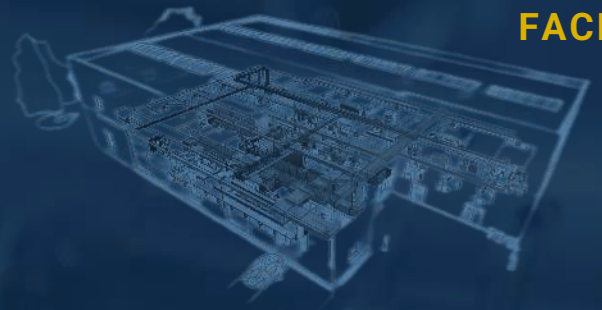
GROWTH VS 2019

15 M€

Invested over last 5 yrs

Funding Program 500 k€

LMA Production



FACILITIES

25.000 m² SHOP FLOOR

1.700 WAREHOUSE

300 ASSEMBLY

2.000 OFFICE

21.000 PRODUCTION

ADDITIVE MANUFACTURING

AM MACHINES 5

2 FDM

2 CFF

DLP 1

CAPABILITY

25k

PARTS PRODUCED PER YEAR

5.500

WORK ORDERS

MACHINING

23 MILLING MACHINES

FIVE AXIS 11

9 THREE AXIS

MULTI PALLET 3

We deliver industrialization, engineering and production services of critical structural parts for aerospace market.

Our **activities** spread from conventional machining to additive manufacturing and special processes.

OUR EXCELLENCE

HOW WE WORK

What sets us apart is our ability to offer highly verticalized production processes through the **value** we place on our **resources**. First, our people, going to the mastership of CAD-CAM, methods, quality control, high precision machining and a strong innovative contribution from a growing R&D department.

Vision, Mission & Ethics

Everyday in LMA

We challenge ourselves to be better, to redefine what is possible.

Performance, quality, innovation, responsibility, opportunity and vision. We firmly believe that the way things are done can make the difference.

For us, success it’s a continuous journey made of perseverance, talent, passion and is fueled by our ethics and mission.

We are committed to be **leader** in our services by putting the customer at the heart of our business.

We don’t want to wait for the future: we want to forge our own destiny by leveraging on ingenuity, **empowerment** of our people and the strive towards the market needs.

We pursues and align ourself with the principles of **Business Ethics**: the excellence of our technology is combined with ethics criteria and commitments, starting with sustainability, financial and social responsibility, legality rating, business continuity management, CSR, ESG and "Profit Purpose" models.

Partnerships

Proud to be connected

Memberships & Partnerships

We continually seek new contexts, whether strictly design and production, or institutional and academics, which to enhance the value of ideas, the intensity of principles, the quality of processes and the effectiveness of practices.

Our memberships of associations, sector corporations and institutions in our target market enable us to always keep our corporate and social network proactive.

We also operate highly qualified supplier for our core business and with **Universities** and **Research Centers** for **new projects**.

Relationships

We maintain long-standing relationships and are always facilitating new ones, even outside our core business.

Openness to other networks and other realities, both **social** and productive, ensure that our industrial activity is always sustainably **interconnected** with the rest of the world.

L'idea

Step to..

La **collaborazione pluriennale** con il Politecnico di Torino nell'accompagnare giovani studenti nei loro percorsi di tesi e tirocini curriculari ha da sempre rivestito un ruolo fondamentale nello sviluppo delle strategie di crescita aziendali.

L'inserimento di neolaureati, selezionati attraverso percorsi progettuali pre assunzione, si è rivelato un ottimo **investimento** nel promuovere **idee innovative** che hanno consentito all'azienda di consolidare il suo posizionamento di mercato.

LMA, da quando ha iniziato a collaborare con i team studenteschi, ha intuito come il processo virtuoso innescato potesse esprimere maggiormente il suo **potenziale** attraverso l'attivazione di collaborazioni focalizzate e strutturate.

L’obbiettivo

How to..

L’obbiettivo dell’iniziativa è favorire lo scambio di **idee innovative** e **metodologie** tra il mondo accademico e l’azienda per arricchire l’**offerta formativa** con elementi chiave legati al mondo del lavoro e trasferire in modo efficace **nuove competenze** all’interno dell’azienda.

Portare la formazione accademica in «**officina**» consente di dare nuovi **stimoli**, nuove **risorse** e nuove **competenze** agli studenti, ma al contempo favorisce iniziative di formazione per il personale coinvolto, stimolando **nuove iniziative** aziendali.

2021 — Drone
Development of a prototype drone

2022 — Additive
Metal technology acquisition

2023 — Innovation Hub
Technology Experience Park

2025 — Composite
Production of composite parts

Looking Forward

Step to

LMA's strategic objective is to grow the company in terms of turnover and **human resources**, as well as to diversify its market. The company intends to achieve these objectives by investing in **new technologies**, allowing greater verticalization of the processes it offers, changing the business model by including **proprietary products** in the company's value proposition, and continuing to **digitize** company processes.

On a technological level, the company is exploring the world of **composites** and **additive manufacturing** of techno-polymeric and metallic materials.

With the aim of diversifying the product portfolio, there are numerous **research projects** aimed to defining **proprietary products** for both the Aerospace and Biomedical sectors.

Digitalization continues based on the principles of **Lean Manufacturing**, concentrating efforts and projects on the creation of a **paperless** system in all its factory processes.

Project R&D Department

R&D

Since 2019 we believe in contamination and our team is the expression of this creed: multydisciplinar team working on Engineering and Technology applications as well as Software Development and Data Analysis.

The R&D Department supports and enables innovation projects, both about the core business and new products and services. It trains new resources to increase the company's know-how and build relations with key research partners.

8 Full time R&D Engineers

2 Engineering Thesis Projects

Our **mission** is to activate and support research and development of methodological, process and technological innovations aimed at improving LMA operational performance.

Product Design & Development

Design CATIA V5-V6 | PFMEA | Project Management
Simulation ANSYS | Prototyping | Industrialization

SW Developement & Data Analysis

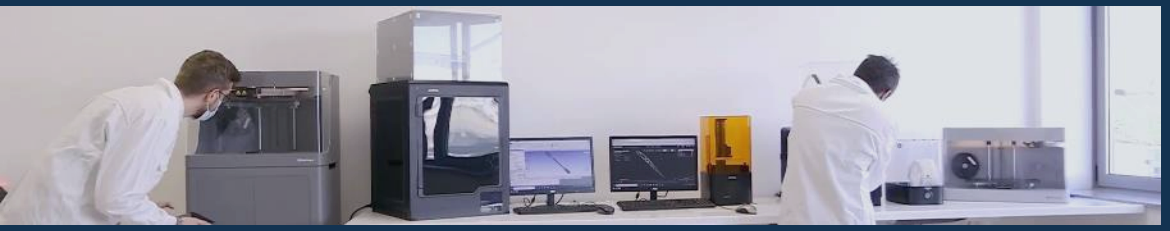
Dashboards GRAFANA | Cloud Architecture
Database Oracle SQL, SQL Server | Data Analysis
Web Applications APEX, React, Electron | IoT
Machine Learning

Systems Design & Integration

Mechatronic Systems | Electronic Boards
Prototyping | PCB

R&D Strategy

Overview



Technological transfer - our projects are always aimed at introducing cutting-edge technologies in the industrial sector, such as Additive Manufacturing**,** innovative power systems base on hydrogen and composite technologies.

Products & Services - our team is able to develop products and software from requirements identification to industrialization and aftermarket support. The aim is to explore core business and side market to identify business opportunity also selling R&D activities.

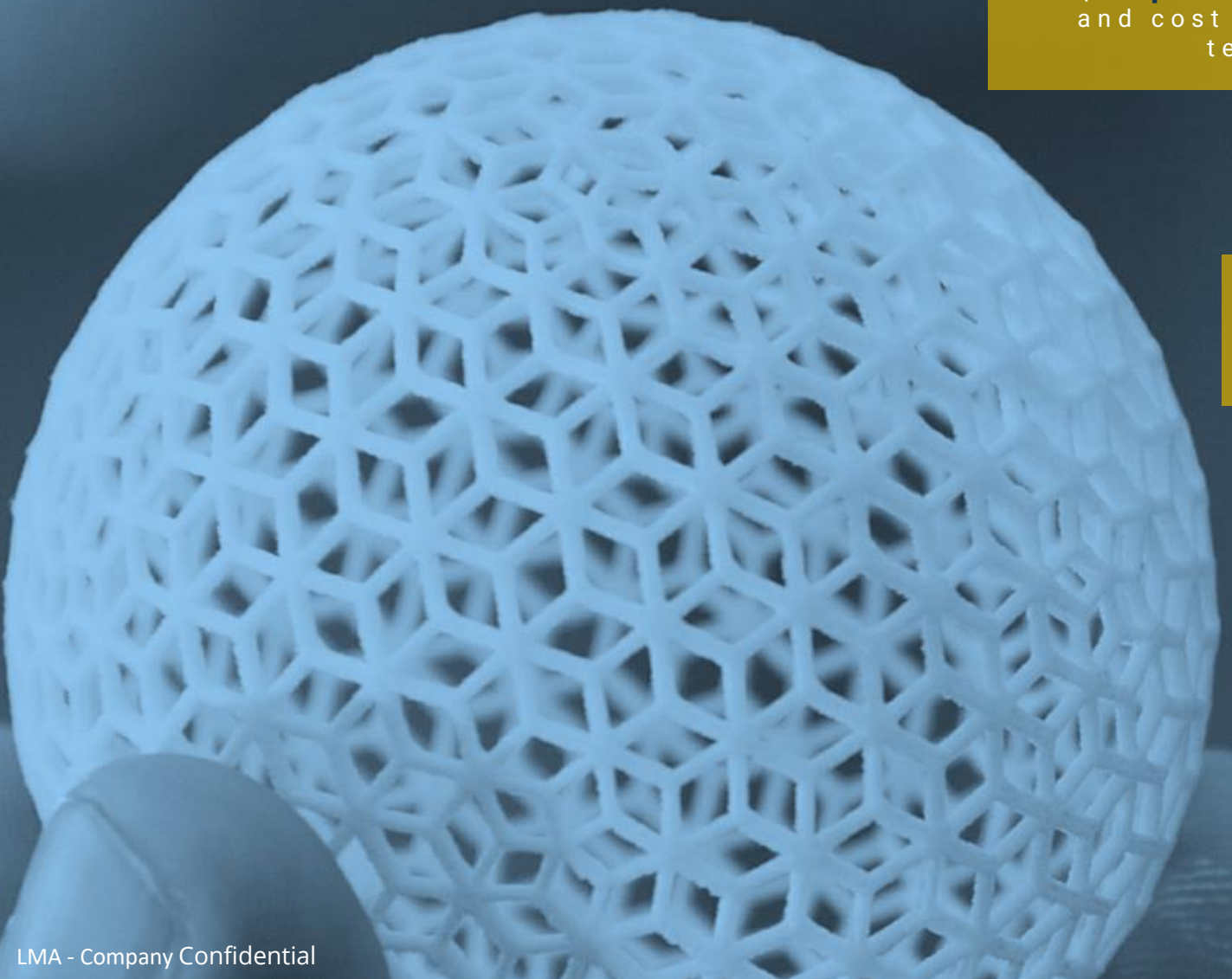
Processes Digitalisation – R&D support core processes working on their optimization. One of the main goal for the next years will be the evolution of the 4.0 custom layer of interconnection developed by LMA and their side application for planning and maintenance.

Founding Programs & Grants - we are constantly looking for fundings promoted by Europe or National government to promote self sustaining of R&D activity.

Innovation Is Creativity With A Job To Do

Additive Manufacturing

What we offer



Rapid **prototyping** and cost effective technology

Functional Parts for toolings, spare parts and final products

Re-engineering of existing parts and metal replacement

Co-engineering of production processes and new parts

Parts **optimization** to reduce weight and improve performances

Integration and assembly with traditional components

Engineering

Design Freedom & FEA

Additive Manufacturing enables unprecedented **design freedom**, allowing the design of very complex shapes with no extra cost.

Our experience gained in Design for Additive Manufacturing and the first class performance of our 3D printers are key success factors to deliver parts with a high level of **customization**, characterized by very **complex external shapes** and **internal paths**.

We can obtain extremely detailed parts with a **high accuracy** even when printing small features such as thread up to M5 holes and 1/8" gas, with no post process required to reach dimensional accuracy.

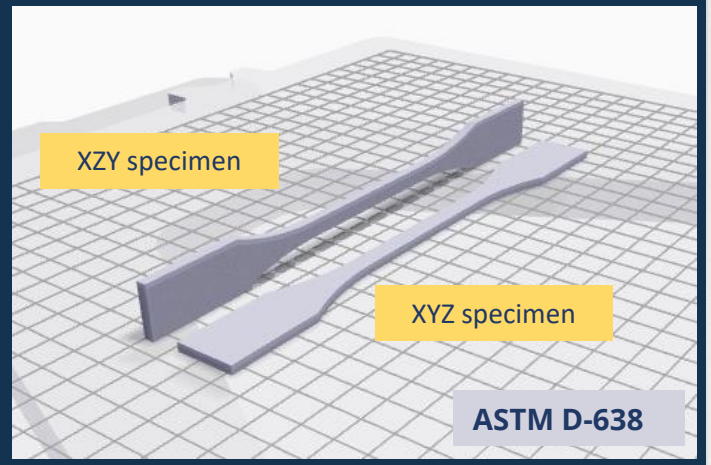
In the production of critical components that must be resistant to structural loads, it is possible to optimize and validate the design phase with FEA (**Finite Element Analysis**), which make it possible to **simulate** the behavior of the component under **operating conditions** and cut prototype testing times.

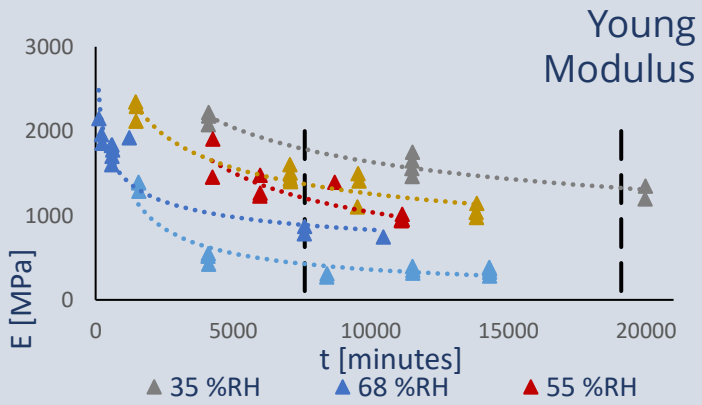
Engineering

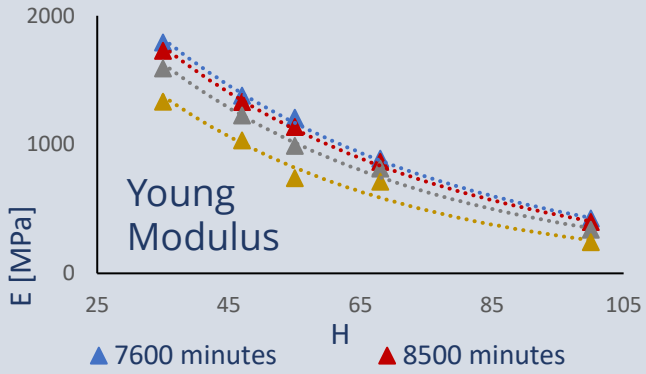
Materials

Internal process for **material characterization** and identification of **parameters** that have an influence on **mechanical properties** during and after **manufacturing processes**.

Identification of suitable **surface treatment** to improve mechanical properties







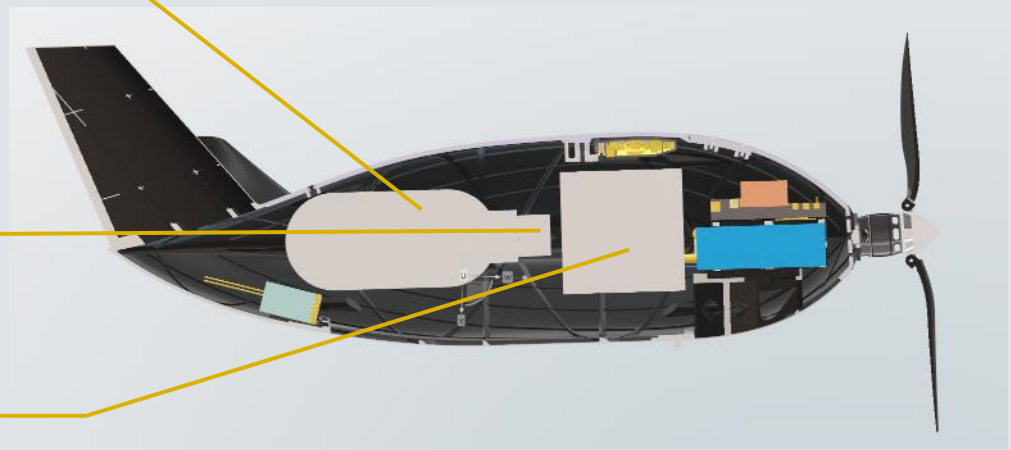
Drone Project

Overview Characteristics

Bombola 0.5l
Lunghezza: 190 mm
Diametro: 80 mm
Peso: 420 g

Regolatore
Altezza: 28 mm
Diametro: 32 mm
Peso: 100 g

Fuel Cell
Dimensioni:
100x100x100 mm
Peso: 500 g



Tecnologia
Additive Manufacturing

Sistema Propulsivo
Elica Traente

Superficie Alare
0.29 m^2

Lunghezza
0.6 m

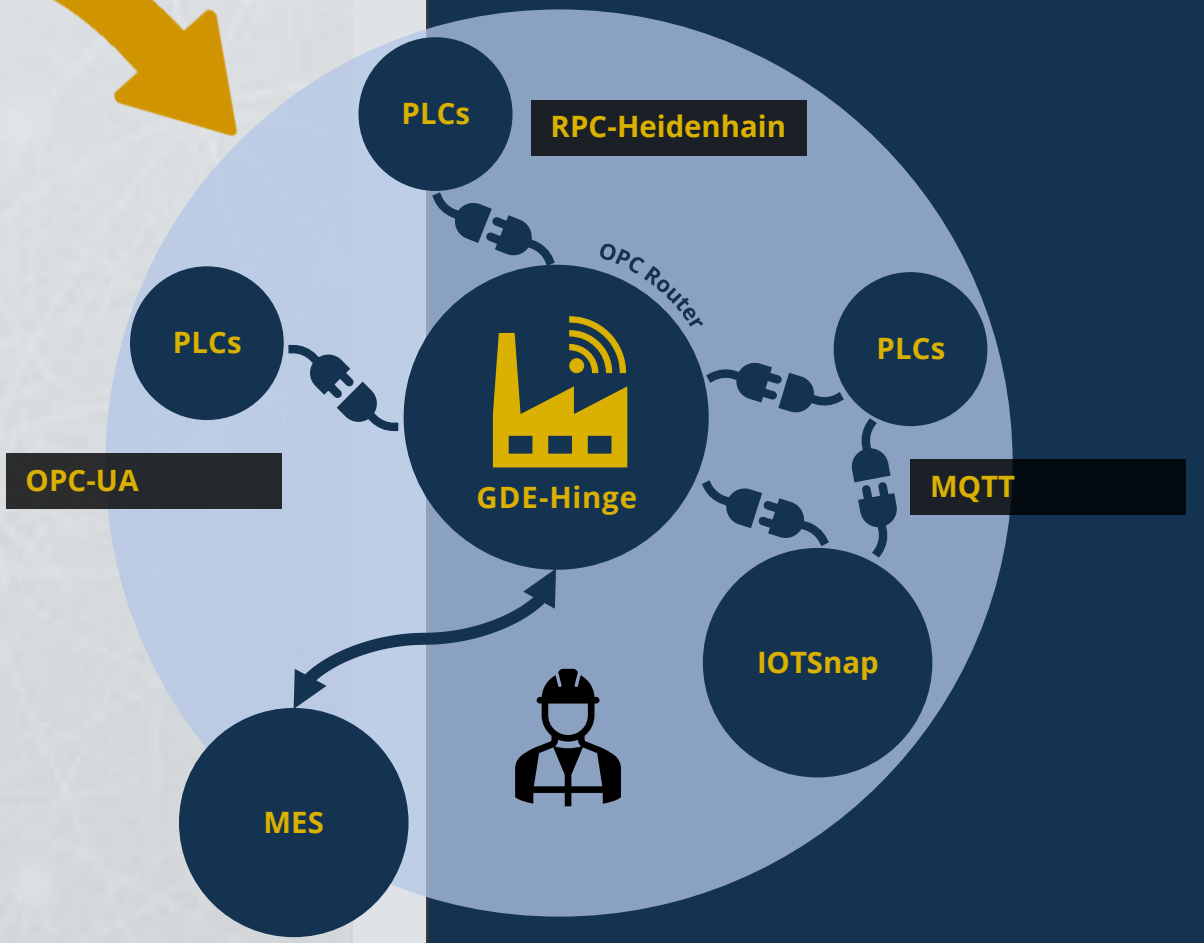
Configurazione
Tuttala

Velocità Crociera
25 m/s

Apertura Alare
1.3 m

GDE Digital

Overview



Si vuole implementare un **flusso produttivo** incentrato sui **dati**, che consenta un'**interfaccia automatica** tra i centri di lavoro e i sistemi informatici di fabbrica (MES e ERP) attraverso una **piattaforma IoT** che raccolga i dati dal campo (*physical layer*) e li convogli secondo logiche prestabilite e tramite protocolli industriali standard (OPC/UA e MQTT) verso i database di ERP, MES e il PLM proprietario NEST.

Vantaggi

- Interfaccia con il MES migliorata
- Eliminazione dell'intervento umano nei rilevamenti dei tempi macchina per ogni fase
- Incremento del livello di automazione di processo
- Dashboarding avanzato

Thank you

www.lmasrl.com

lma@lmasrl.it