



METALMONT

HANDLING INNOVATION



Rice Seminar

Agritechnica Asia 2022, Bangkok May 26th

CEREAL AUTOMATION STORAGE SOLUTIONS FOR SUSTAINABLE RICE VALUE CHAINS

Mr. Iacopo MEGHINI (Metalmont CEO)

with the cooperation of Mr. Fabio ALFIERI (Sales) and Ms. Nicoleta AXENTI (Marketing)



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The importance of storage: the rice

Metalmont solutions

The Robot Automatic Levelling System

References

Wrap up



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How do we contribute to reduce the food loss & waste?

How to manage the storage of perishable and non-free flowing materials?

How to ensure people safety increasing product quality and operational efficiency?

How to remotely control and manage a stock of material?

How to optimize the Total Cost of Ownership, balancing capital investments with operating costs?

How to jump into a smart and 4.0 storage solution?



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SINCE **1985**
... A LONG HISTORY

4.500
INSTALLED PRODUCTS

OVER **60**
ACTIVE CUSTOMERS

30.000
OWN PROPERTY
DRAWINGS

10 YEARS
PEOPLE AVERAGE
EXPERTISE

18 COUNTRIES
WITH METALMONT
PRODUCTS

Metalmont specializes in **designing, manufacturing** and **marketing**, in Italy and abroad, of machines and solutions for handling and cleaning of cereals for storage facilities, **silos** and **flat warehouses**.

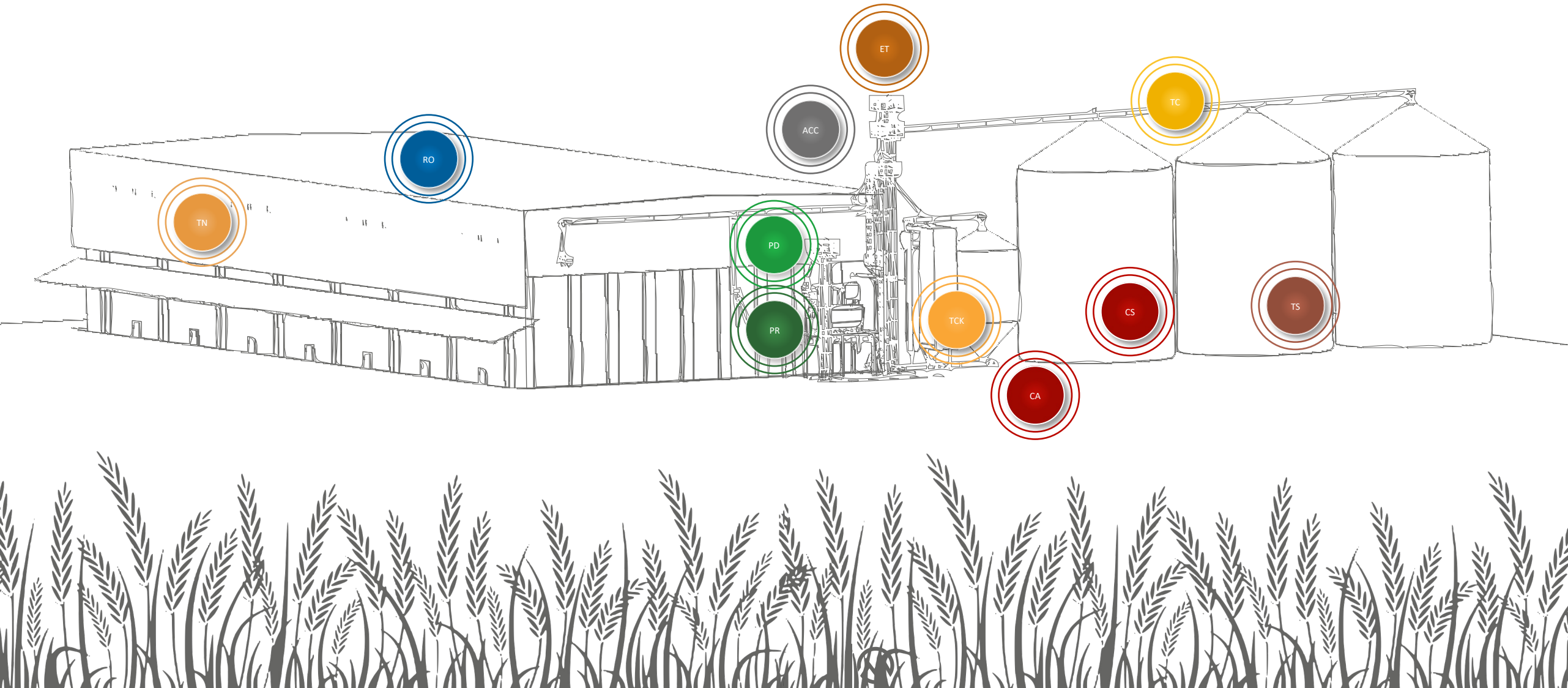
The company internally covers the entire **life cycle of the product**, from engineering to construction, from individual components to final assembly and on-site assistance



17% of the global food is **WASTED**
in the retail and final consumption phase



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THE FIRST INSTALLATION
(Ukraine)



LEVELLING ROBOT ON SOYBEAN
(Saudi Arabia)



HANDLING OF COCOA BEANS
(Ivory Coast)



HIGH PERFORMANCE CEREAL CLEANING
(Italy)



40.000 tons STORAGE WAREHOUSE FULL AUTOMATION
(Russia)



BELT CONVEYOR IN FLAT WAREHOUSE
(Russia)



AUTOMATIC LEVELLING SYSTEM
(Romania)



SILOS MECHANIZATION AND HANDLING
(Russia)



ELEVATORS AND CONVEYORS
(Russia)



ELEVATORS
(Greece)



TELESCOPIC DISCHARGE CONVEYOR
(Danube river)



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Metalmont @ a glance

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THE ROBOT @ A GLANCE



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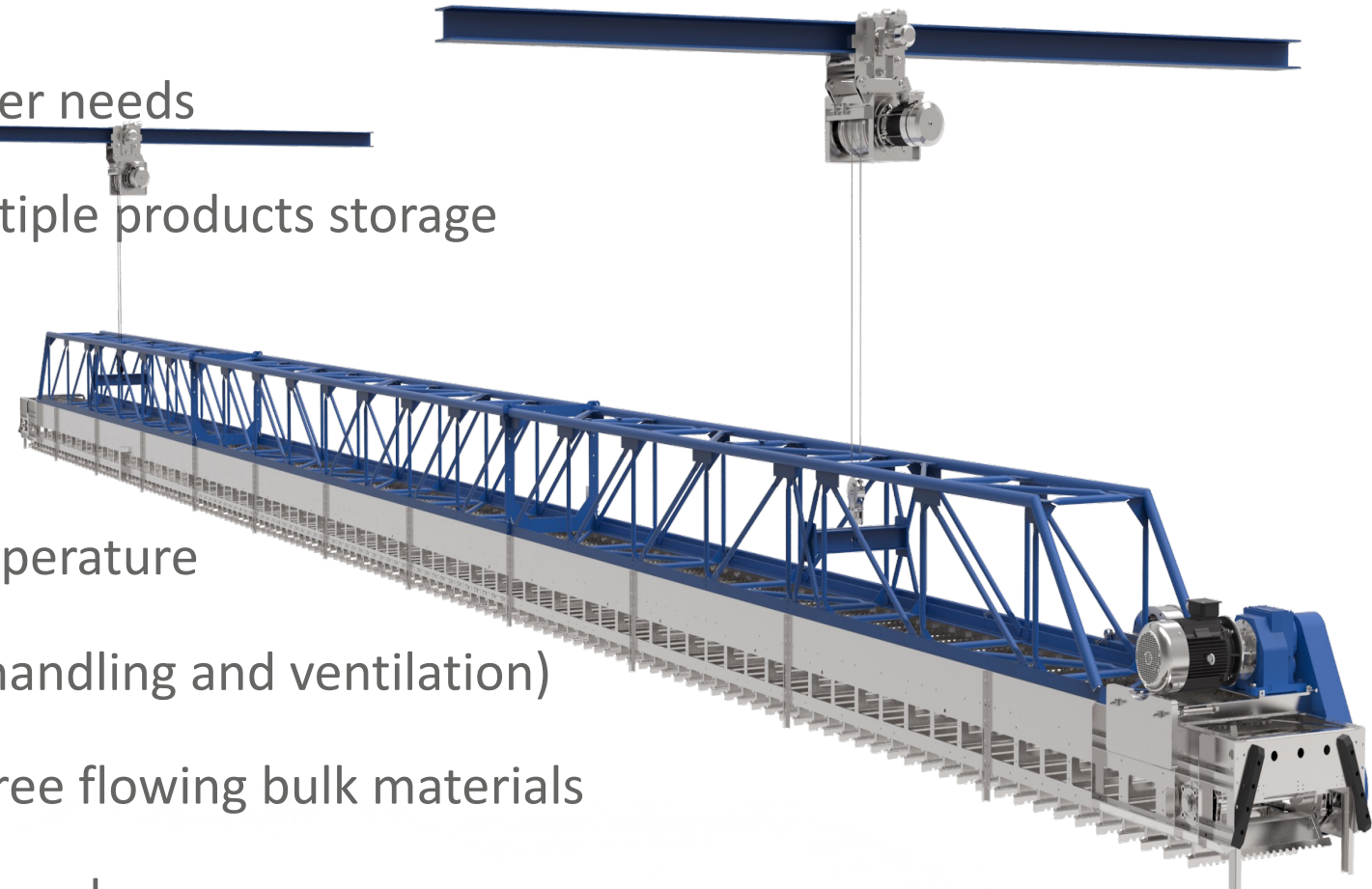
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The Metalmont Robot is basically a **reclaimer**, used for the **automatic loading, levelling** and **unloading** of flat warehouses, assuring continuous high flow rates.

It is designed to work with agricultural bulk materials such as **cereals, seeds, legumes, compound feed** and it's the perfect solution to deal with hard flowing materials as **soybean** or **rapeseed meals**.

1. **Customization**: operating logic based on user needs
2. **Versatility**: shed divided in sections for multiple products storage
3. **Effectiveness**: complete filling of volume
4. **Efficiency**: automated 24/7 workflow
5. **Thermometry**: control and mapping of temperature
6. **Synchronicity**: integrated mode (levelling, handling and ventilation)
7. **Unique solution**: for management of non-free flowing bulk materials
8. **Safety**: no need to have people inside the warehouse
9. **Qualification**: ATEX 22 and EAC certified
10. **Return on Investment**: flat warehouse vs silos

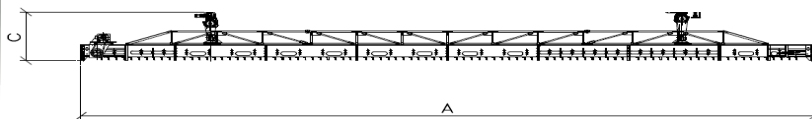


A FEASIBILITY STUDY ON PADDY RICE



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DIMENSIONS

width (A):	24 m	16 m	36 m
height (C):	2,2 m	2,2 m	2,5 m
working height:	0 ÷ 10 m	0 ÷ 11 m	0 ÷ 12 m

GENERAL DESIGN DATA

capacity (s.w. 0,6 t/m ³):	45 t/h	90 t/h	160 t/h
product:	paddy rice	paddy rice	paddy rice
runways:	according to the roof structure of the shed		
conveyor chain speed:	0,5 m/s	0,5 m/s	0,5 m/s
power of chain conveyor motor:	5,5 kW	7,5 kW	18,5 kW
power of motors for horizontal movement:	0,37 kW	0,37 kW	0,55 kW
power of motors for vertical movement:	2,2 kW	1,5 kW	4,0 kW
speed of horizontal movement– slow speed:	5 m/min	7 m/min	5 m/min
speed of horizontal movement – fast speed:	20 m/min	22 m/min	16 m/min
speed of vertical movement – slow speed:	1,0 m/min	1,2 m/min	1,0 m/min
speed of vertical movement– fast speed:	4,0 m/min	4,0 m/min	4,0 m/min
total weight (approx, excluding hoists):	4.500 kg	3.500 kg	8.800 kg

The technical specifications are based on installed Robots and may be subject to changes to fit user needs, local regulations, product improvement



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HOW DO WE CUSTOMIZE A ROBOT ON YOUR NEEDS?

Italy: the first Robot designed, produced and installed by Metalmont



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Customer: **Cimbria**
Year of start-up: **2008**
Model: **200 t/h**
Product: **Corn, animal feed (pellets)**



HOW DO WE CUSTOMIZE A ROBOT ON YOUR NEEDS?

Saudi Arabia: the Metalmont key reference on soybean meal for the animal feed industry



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Customer: **Ottevanger**
Year of start-up: **2017**
Model: **100 t/h**
Product: **Soybean meal**



HOW DO WE CUSTOMIZE A ROBOT ON YOUR NEEDS?

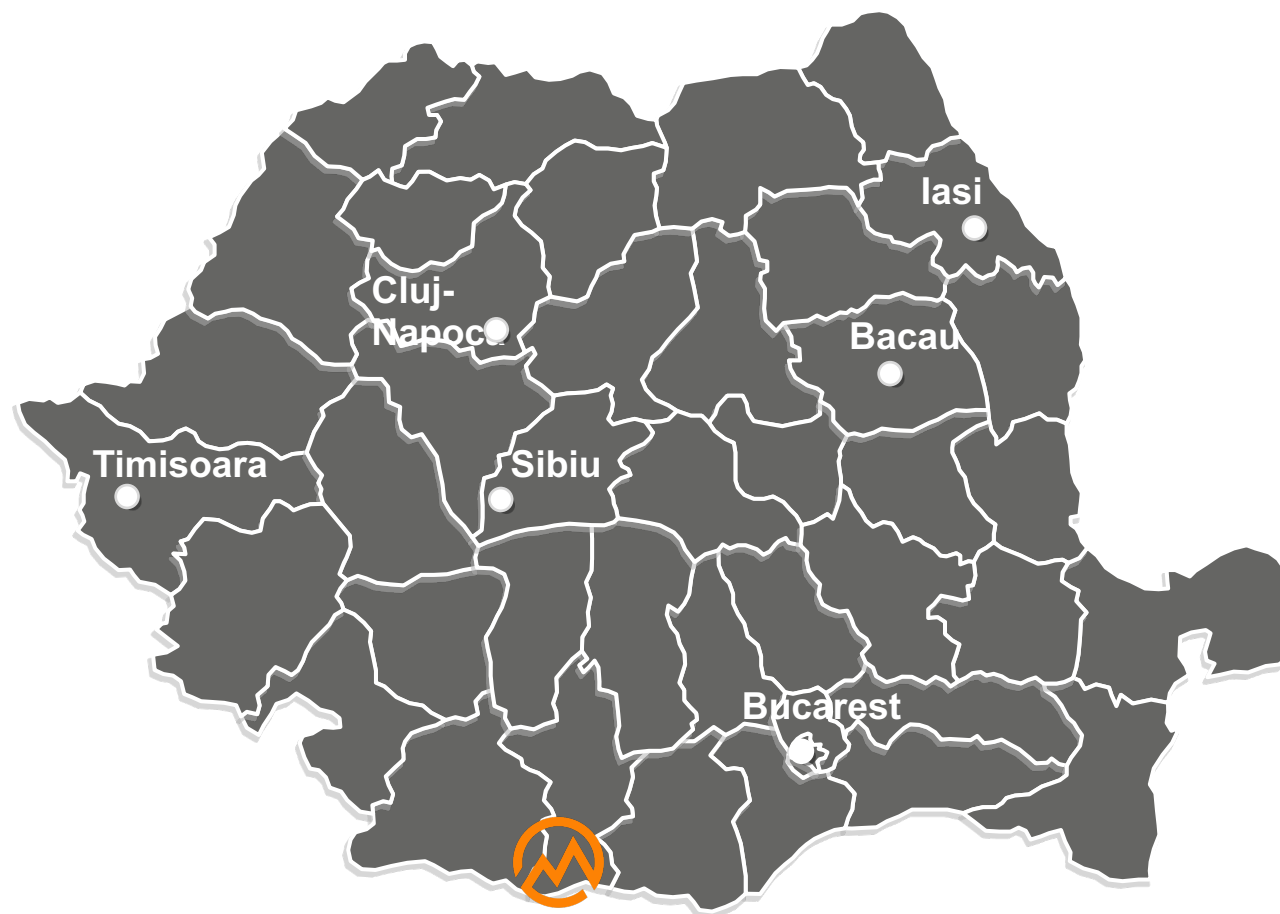
Romania: the widest turnkey project...from design to commissioning (automation, handling, cleaning)



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Customer: **S.C. Eurosiloz**
Year of start-up: **2014**
Model: **120 t/h**
Product: **Corn, rapeseed**



HOW DO WE CUSTOMIZE A ROBOT ON YOUR NEEDS?

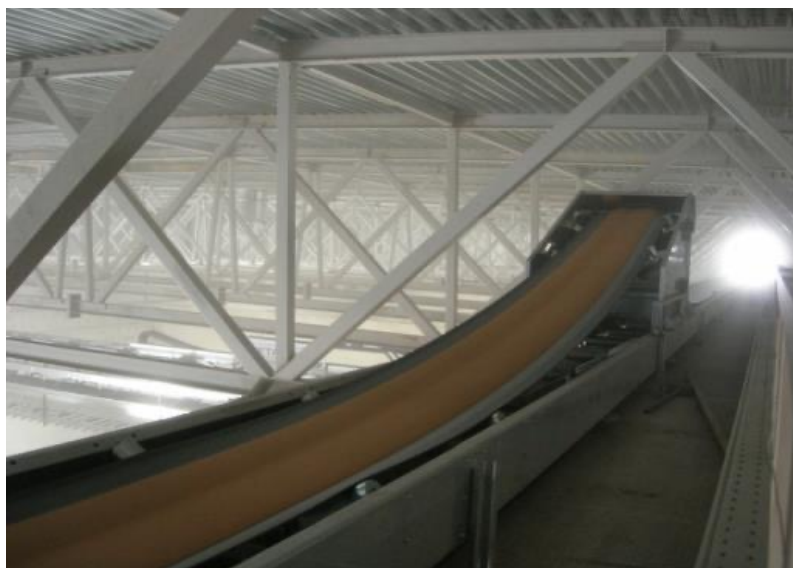
Russia: one of the first fully automated flat storage warehouses in Russia



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Customer: **LLC Avrora**
Year of start-up: **2014**
Model: **200 t/h**
Product: **Corn, rapeseed**



HOW DO WE CUSTOMIZE A ROBOT ON YOUR NEEDS?

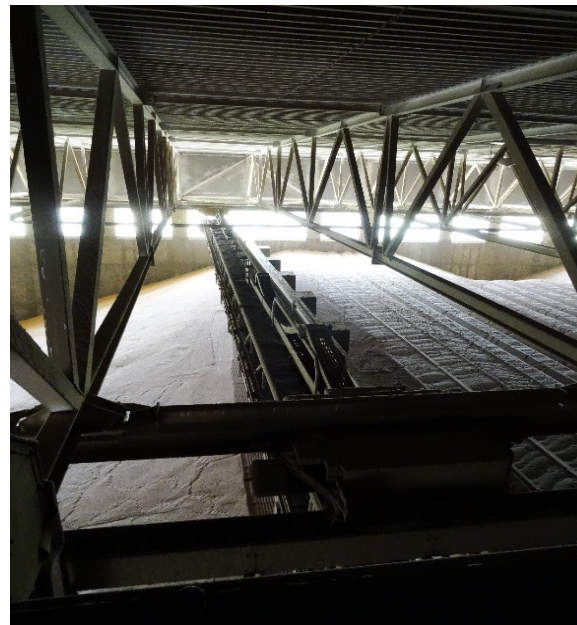
Russia: the latest, widest and most complex project realized by Metalmont



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Customer: **OOO Agroelevator**
Year of start-up: **2018**
Model: **200 t/h**
Product: **Wheat, sunflower seeds**





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«To know how to do: the art of crafting lies in our DNA. We have always worked with ductile materials such as steel and iron, and our expertise, meaning the ability to master both the technique and the materials, is the key factor that identifies our company. Every day, we strive for innovation through the thorough engineering of our processes, the constant upgrade of our plants and equipment, and the improvement of our range of machines and solutions for grains handling and cleaning systems, used in storage and processing facilities for farm produce in bulk. Two other values lead our growth and development process: uncompromised safety, with no shortcuts allowed, and the trust we pass on to our collaborators, our customers and all our suppliers with a sense of responsibility and awareness, always respecting our role».

Iacopo Meghini
Metalmont – CEO

Thank you



Metalmont s.r.l.

Via G. Marconi 92
31020 Revine Lago (TV)
Italy

www.metalmont.it/en/
[Youtube page](#)
sales@metalmont.it

Iacopo Meghini (CEO)
iacopo.meghini@metalmont.it

Fabio Alfieri (Sales)
fabio.alfieri@metalmont.it

Nicoleta Axenti (Marketing)
nicoleta.axenti@metalmont.it

In order to improve the product and to comply with the regulations, the technical specifications, the appearance and the equipment described in this document may be subject to change without notice