



TECHNOLOGIA



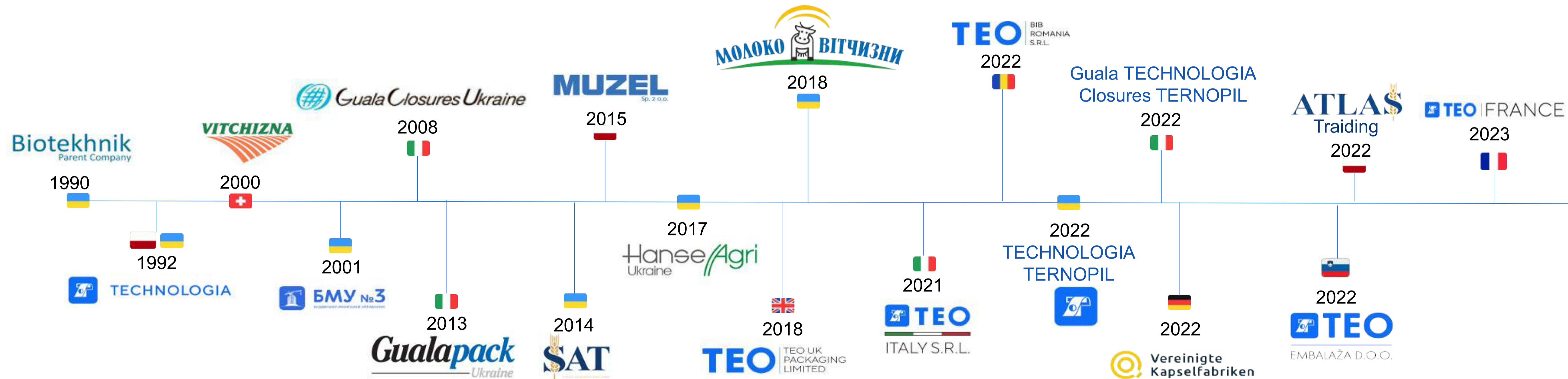
# SUSTAINABILITY REPORT

TECHNOLOGIA GROUP  
2023



TECNOLOGIA GROUP has a long and fruitful history within the packaging industry. It all started in 1990 with a single production line and now developed into the art of packaging with a powerful manufacturing facility in six countries.

By harnessing the synergies within our corporate family, we optimize experience, research, and development processes to offer increasingly better services and products.



# EUROPEAN FOOTPRINT

- Foundation date: 16th of May, 1990. Sumy, Ukraine.
- Since 2004 Joint Venture of Ukrainian and Polish capital.
- Total production area of 47,400 m<sup>2</sup>



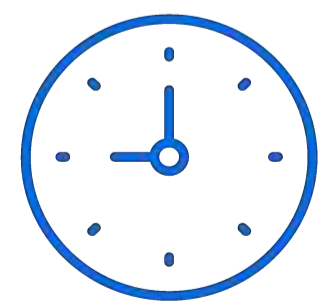
Direct sales invoicing



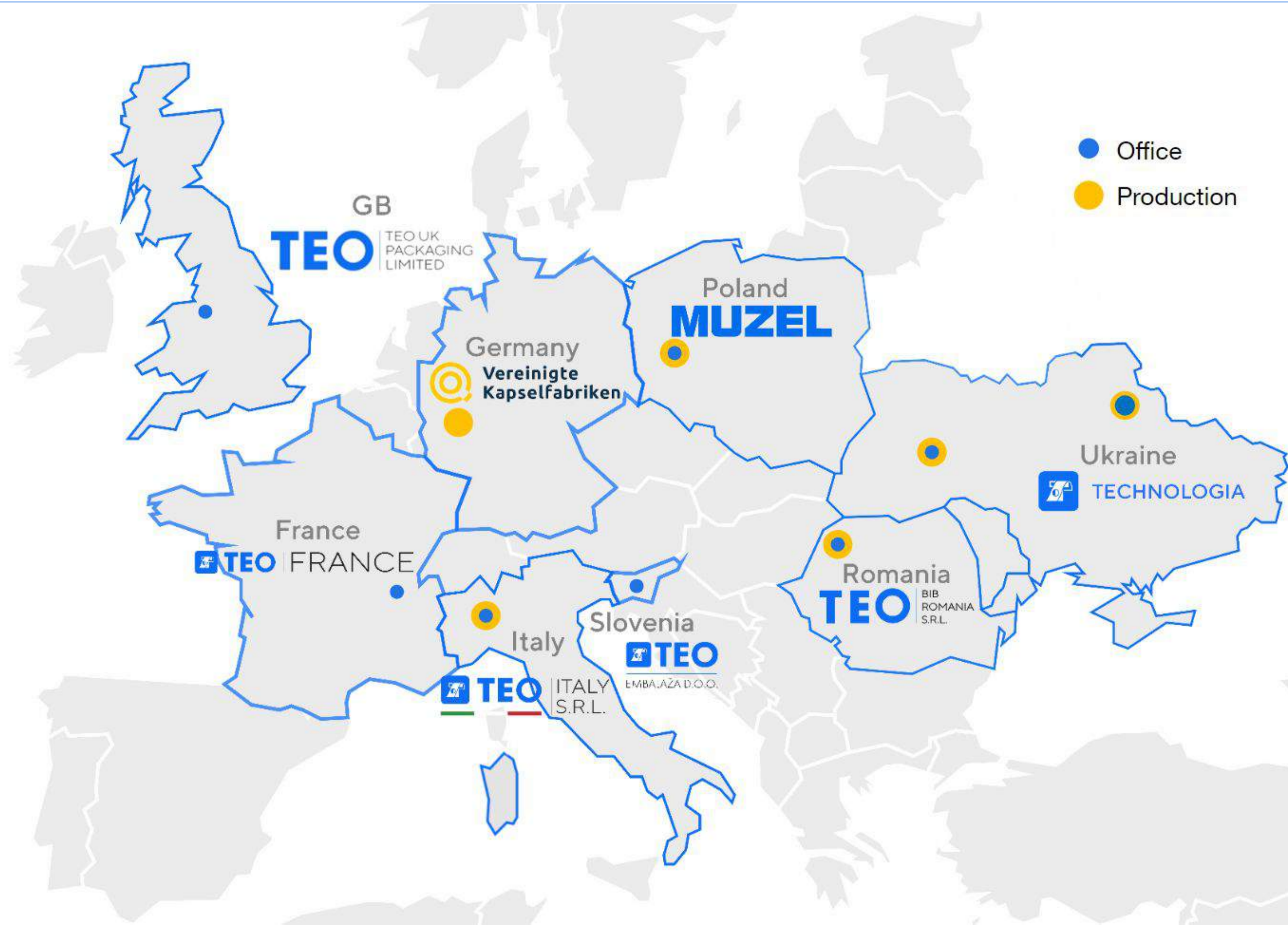
Local technical and customer services



Warehousing and EU custom clearance services



Short delivery lead times from the warehouse





**33 years** in packaging industry.

**24/7** production quality.

**47 400 m<sup>2</sup>** total production area.

more than **834** employees.

\*

**BRC Global Standard** for Packaging Materials

Status of an authorized economic operator (**AEO**)

**ecovadis**



New efficient cooling system cuts the energy consumption by **62 160 kWh** per month



Energy **savings up to 40%** (modern IGBT engine technologies and switch to led lighting)



In 2023 we recycled **60 ton** of aluminum through this process



**98%** reduction of solvents emission



On the way to gender equality – **33%** women hold managerial positions



Waste-free use of UV paints in production process



**PEOPLE + INNOVATION AND INVESTMENT + PLANET = SUSTAINABILITY**

TECHNOLOGIA JSC adheres to the policy of honest and open labor relations.

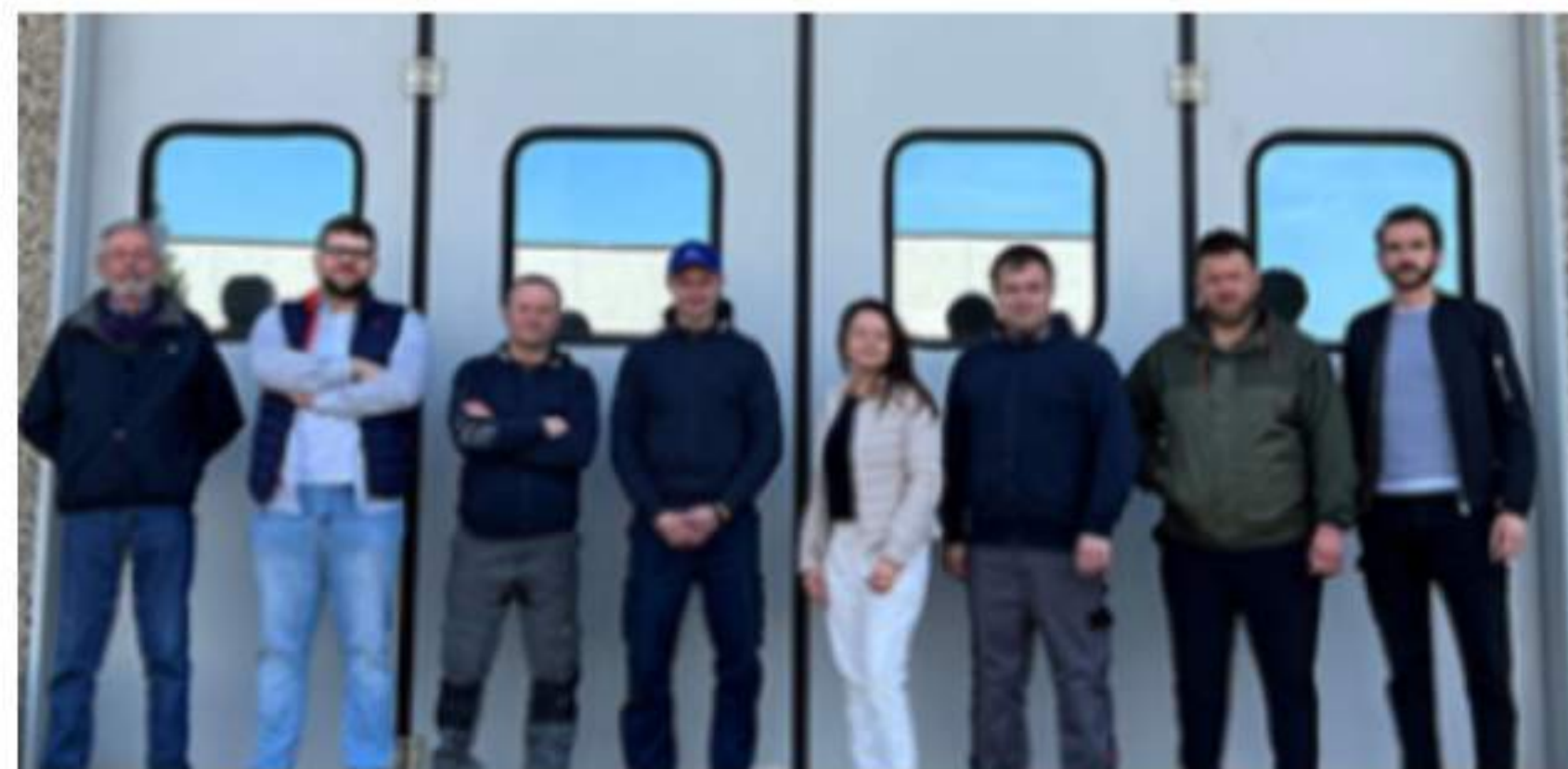
The company employs more than **845** employees, we value our employees, we strive to provide decent and safe working conditions, access to continuous lifelong learning as well as to improve the quality of life of people in Sumy and communities where we operate by promoting sustainable economic development and social support of local communities.





## Ways to achieve global goals towards «a person is the greatest value»:

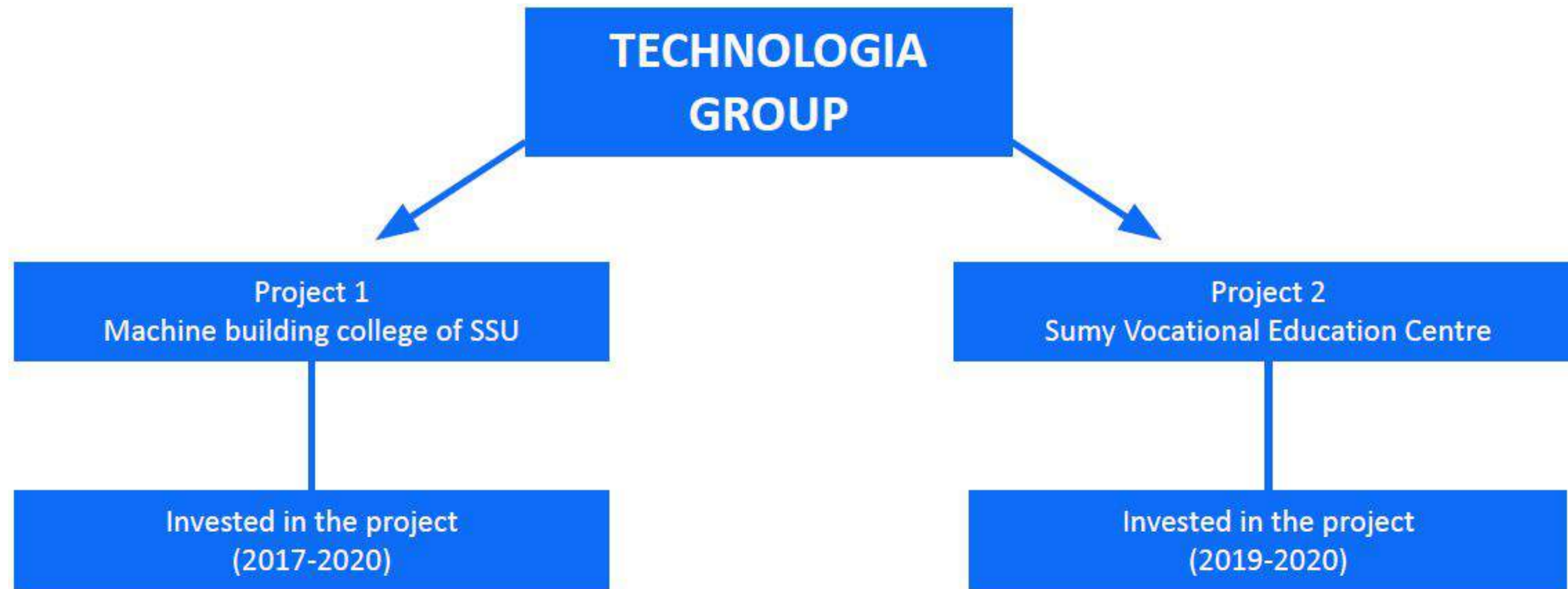
- The principle of dedication to a common cause, team spirit, openness, transparency and fair financial remuneration of employees. Competitive salary and its annual review. There are also other financial incentives: performance bonuses, annual bonus, free English language courses, additional monthly allowance for foreign language and an academic degree supplement.
- Provision of social guarantees, bonuses and benefits, in particular: additional vacation payments, medical assistance to employees or their family members, financial assistance to pay for recreation trips to children's summer camps, cash bonuses for employees for non-smoking.
- TECHNOLOGIA JSC has a separate flu and COVID-19 vaccination program for willing employees and their families.
- Ensuring equal access to professional self-realization for women and men. **In 2023, 77% of men and 23% of women work at the enterprise. Among them, 67% men and 33% women work in managerial positions.**
- Professional development of employees, various trainings, as well as a program to support young specialists. The company has a separate strategy for cooperation with educational institutions, which involves investing in dual education programs.
- Support of social projects and active participation in charity.



We constantly invest into education and advanced training of the staff, and into formation of professional practical skills of the young employees. Energetic and qualified personnel is the base for the successful development of our company.

TECHNOLOGIA GROUP invested **UAH 4,7 million** for the implementation of projects to create **dual education centres**.

We continuously educate, motivate and encourage our employees by maintaining a healthy work environment and cultural values.





TECHNOLOGIA JSC transforms and improves production with the aim of becoming more ecological and resistant to global challenges. Continuous search and implementation of new ecological solutions and technologies is carried out through investments in the development of production facilities:



- Investments in the development of production facilities, in technology, in R&D.
- Development and implementation of environmentally sustainable innovations in production.
- Increasing recycling of production waste.
- Reduced use of plastic.
- Cleaning air from solvents.
- Separate garbage collection in the office.
- Energy saving (LED lighting, automatic light on/off sensors).
- Social projects aimed at maintaining a clean environment.

Reducing atmospheric emissions, reducing the use of plastic, sorting, recycling and disposal of waste, as well as protecting biodiversity are our key areas for environmental protection. Systemic investments in the ecological modernization of the facilities of TECHNOLOGIA JSC ensure the reliability of production and the achievement of European environmental standards.

Installed in 2015



Our group of companies reduced air emissions by technological equipment due to the installation of a system for used air cleaning by the method of thermal oxidation (afterburning).

Cleaning system efficiency – 98%.

No CO<sub>2</sub> emissions are released into the atmosphere during the lamination process.

In the laminate production we use 2 tons of solvent per month, 0 grams of which are released into the atmosphere.



reduction of carbon footprint and solvent emissions



reduction of production waste technologia

# HEAT RECOVERY COMPRESSOR SYSTEM

Heat loss of about 100% until 2016

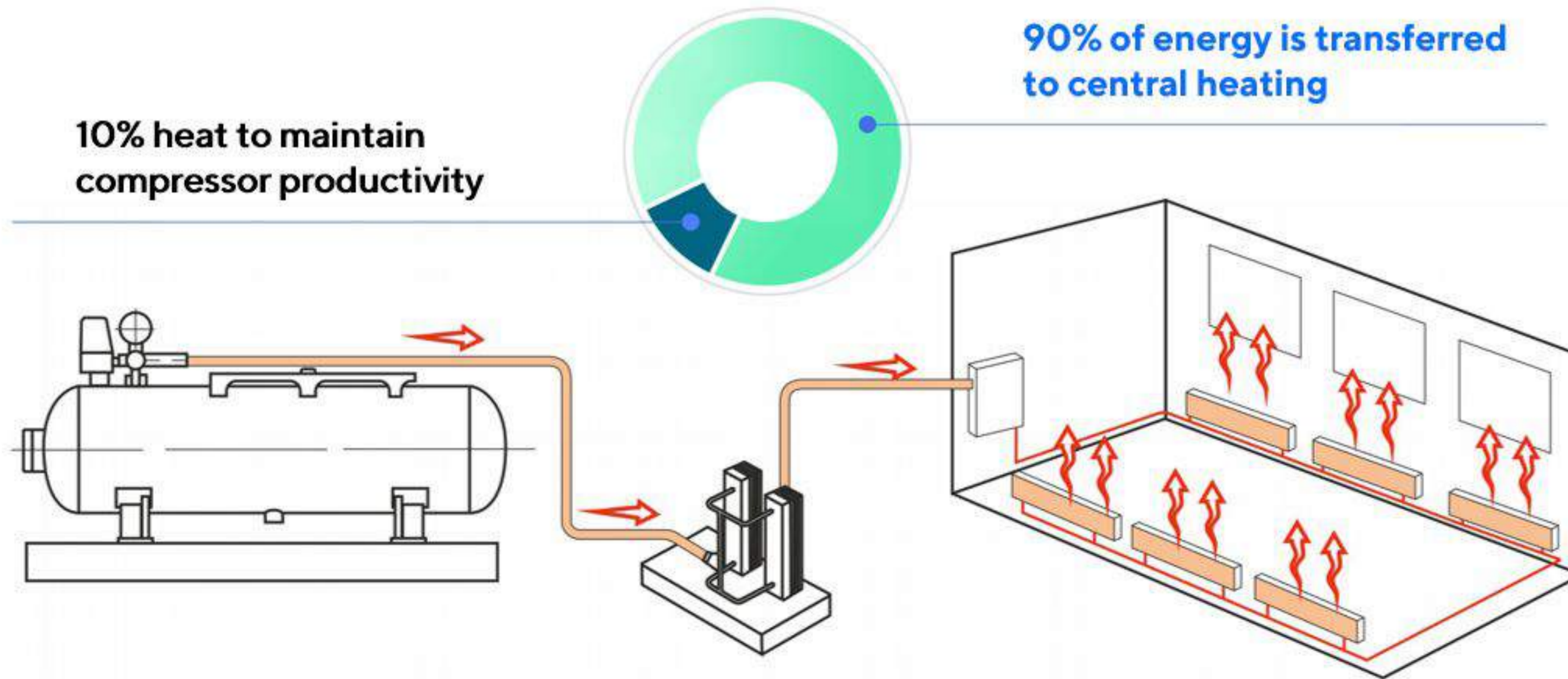
90% of the electricity generated by the compressor equipment is converted into heat for space heating

2016

2021

10% heat to maintain compressor productivity

90% of energy is transferred to central heating



The new efficient cooling system will reduce the temperature of the production premises, providing a reduction in energy consumption of approx. **62,160 kWh per month**.

In production, we use IGBT technology that allows the distribution of energy between machine motors during the production process. The energy produced by the motors during the braking phase is simultaneously recycled into other running machinery. **Electricity savings up to 30-40%**

**Complete transition to LED lighting.**

# SOLVENT RECOVERY SYSTEM

Joint project with EBRD

Started project in 2018  
2 workplaces

Total Investments:  
more than 5 000 000  
EUR

Amount of grant from  
FINTECC: ~ 400 000  
USD







A notable example of a company's dedication to sustainability is the implementation of a closed-loop water supply system for cooling equipment.

This approach significantly minimises water consumption, as water is pumped into the system once and requires minimal monthly top-ups to maintain pressure.

Furthermore, the company achieves substantial energy savings by utilising a friculer to cool the process water during the cooler autumn and winter months. This dual strategy not only conserves water but also reduces energy usage.

# SORTING PROCESS WASTE IN PRODUCTION



Stages of sorting process waste:

- Waste collection from production lines
- Packaging or shredding (if required)
- Transportation and temporary storage

Polyethylene waste



Combined plastic



Aluminium waste



Paper



PVC waste



Plastic containers





## Pyrolysis Boiler Implementation: Our New Step Towards Sustainable Manufacturing

Due to the high-temperature decomposition of fuel reaching up to 1200 °C, pyrolysis gases significantly enhance fuel combustion efficiency, enabling the boiler to achieve up to 90% efficiency even when using low-quality fuels.

This high-temperature gas generation process allows for a versatile range of solid fuels to be utilized, ranging from common firewood to diverse industrial waste such as car tires, railway sleepers, rubber, plastic, fabric, leatherette, bitumen, printing waste, OSB, chipboard, MDF, HDF and more. These fuels can be used in a 1:1 ratio with firewood or independently.

The boiler's design incorporates unique features that enable it to operate continuously for up to 12 hours on a single fuel load, boasting a high level of automation, equating to gas and liquid fuel boilers.



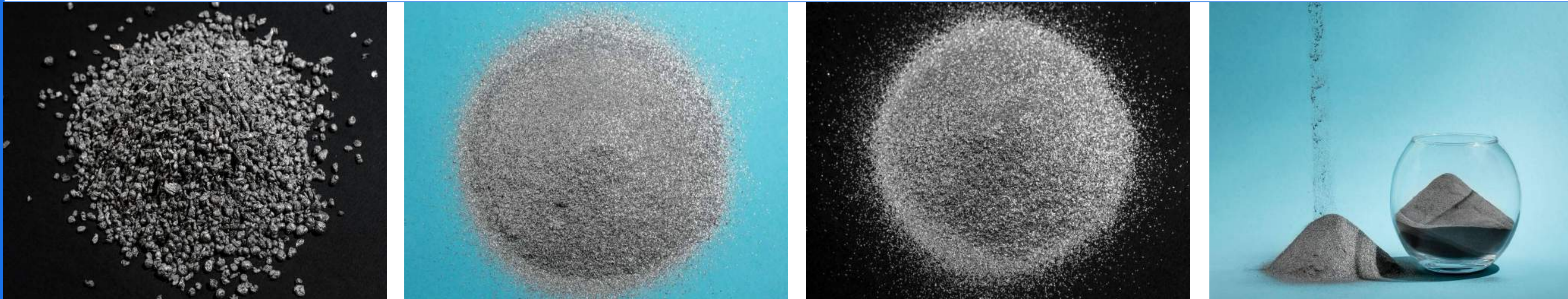
We recycled  
310 ton of PE film



Processing ALU waste into blocks started in 2018  
In 2023 we recycled 60 ton of aluminum through this process



# THE REPURPOSING PRODUCTION WASTE



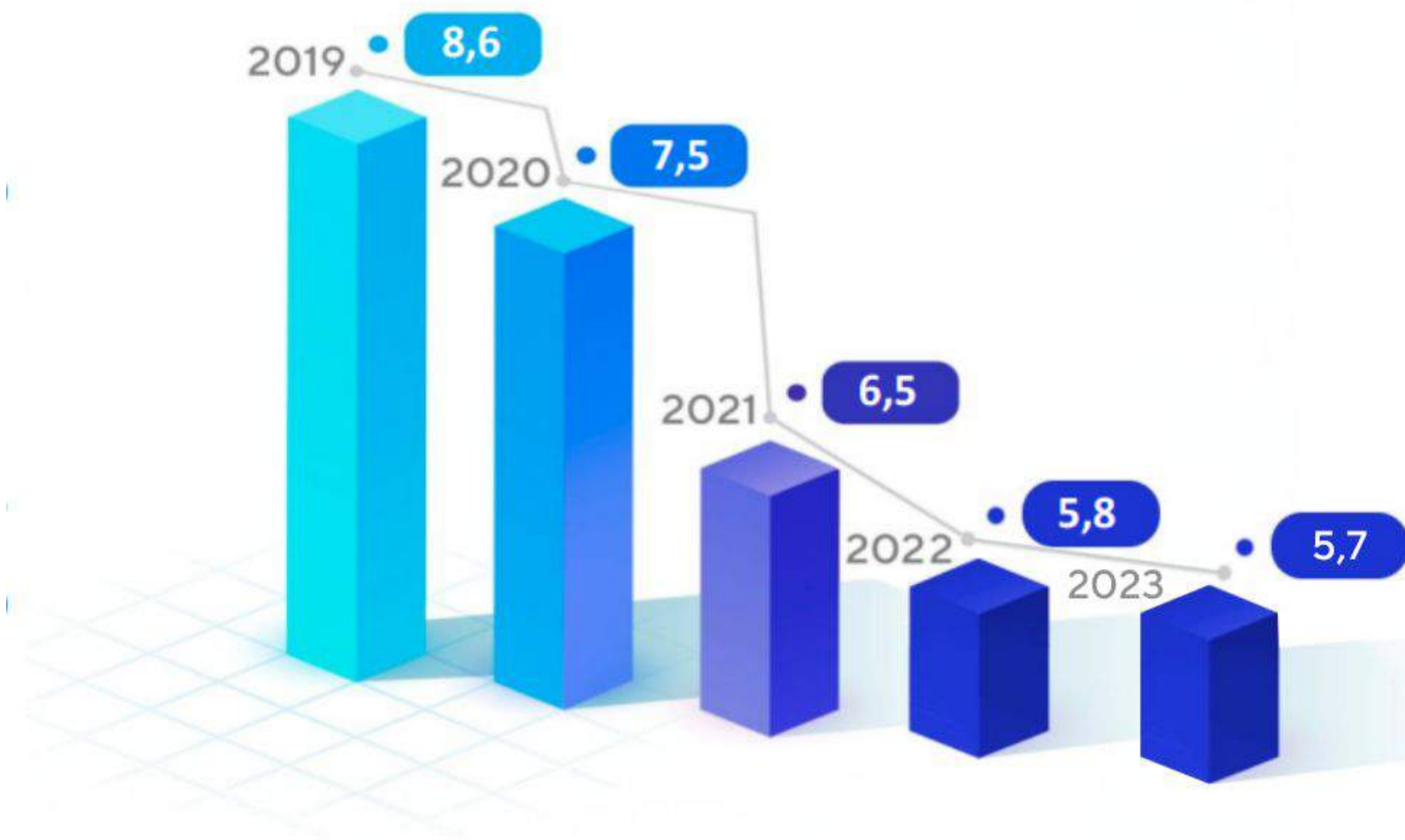
The **recycling of aluminium foil**, especially when it's a poly laminate type with layers of other materials, presents a distinctive challenge. However, when processed, it is converted into fine aluminium powder and granules. These by-products are valuable in various industrial applications, including the manufacturing of welding electrodes and in metal smelting. This recycling approach reduces waste and contributes to the efficient use of materials by giving discarded foil a new purpose and extending its life cycle.

**Polymeric waste** is incorporated into sand-polymer mixtures to produce paving slabs, curbs, and manhole covers. This approach not only enhances the mechanical properties and longevity of these products but also contributes to environmental sustainability by recycling plastic waste. The polymeric materials in the mixture improve the flexibility, strength, and resistance to weathering of the final product, making it a more resilient and eco-friendly option for infrastructure.



Over the past 4 years, there has been a **25% reduction in waste** due to technical innovation, production planning, KPI analysis and professional development.

Average percentage



This plastic-free foil capsule is 100% recyclable and reflects our dedication to reducing plastic waste. Let's work together to build a world where business and the planet are in harmony!



Made of mono-material



Simplicity & ease of recycling



Creation of any design



Unlimited recyclability



\*The mono-material capsules fully comply with the food contact materials Regulation 1935/2004.



Replacement of fossil fuels and raw materials



Sustainable forestry



Without land-use changes



Without food competition



~ -0.8 Kg CO<sub>2</sub> eq/Kg vs  
+ 1.9 Kg CO<sub>2</sub> eq/Kg Standard LDPE  
2,7 Kg CO<sub>2</sub> eq/Kg PE économie





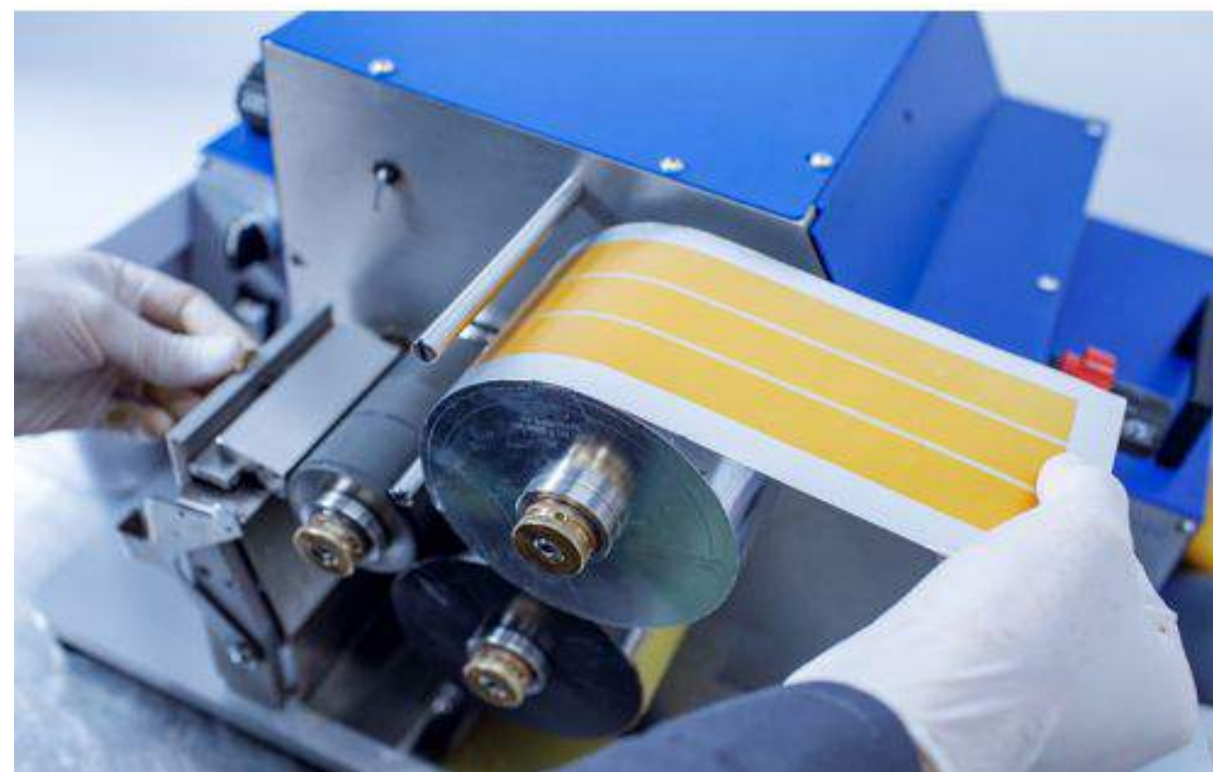
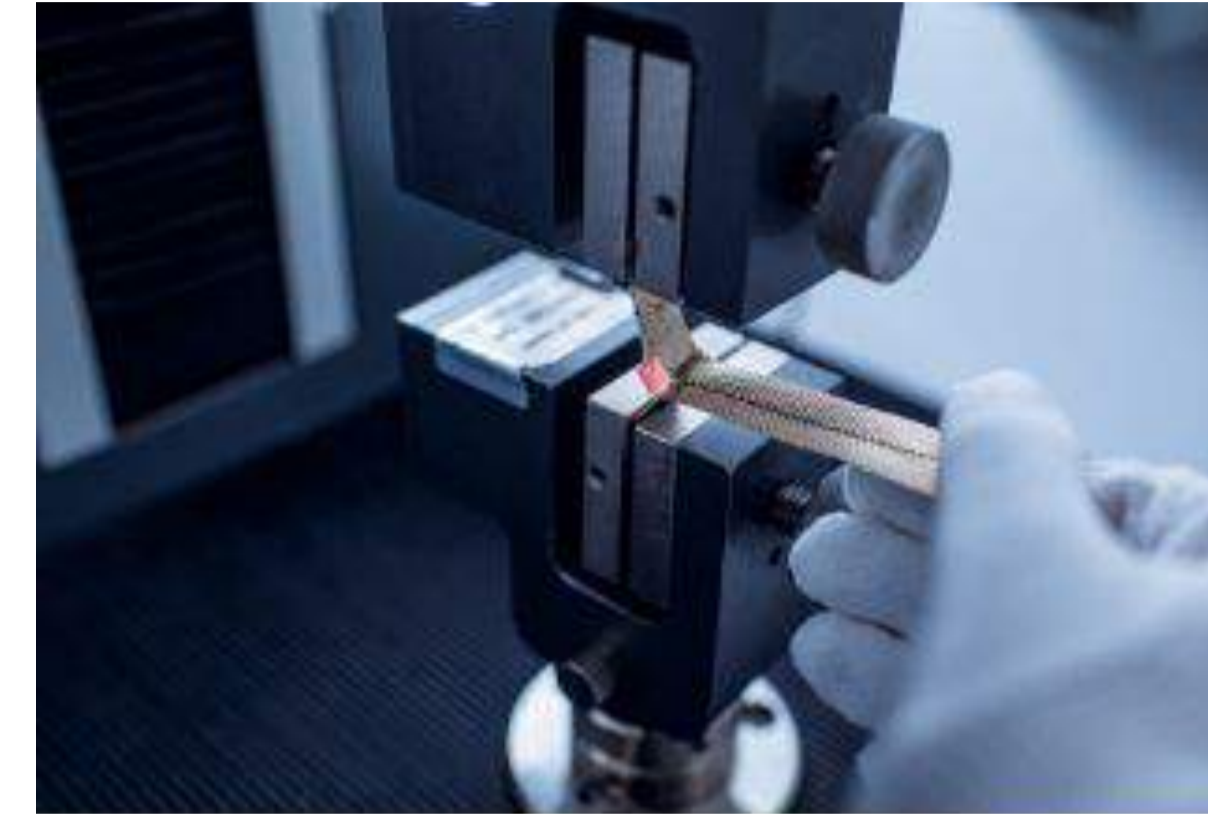
## T-TAP REVOLVER

Our commitment to sustainability fuels innovation in creating eco-friendly products and technologies that anticipate trends and provide innovative solutions.

As part of this, in 2023 we started developing a new tap that meets the **EU Single-Use Plastics Directive 2019/904**, and ensures the opening indicator remains attached to packaging closure to improve recyclability and prevent environmental leakage.



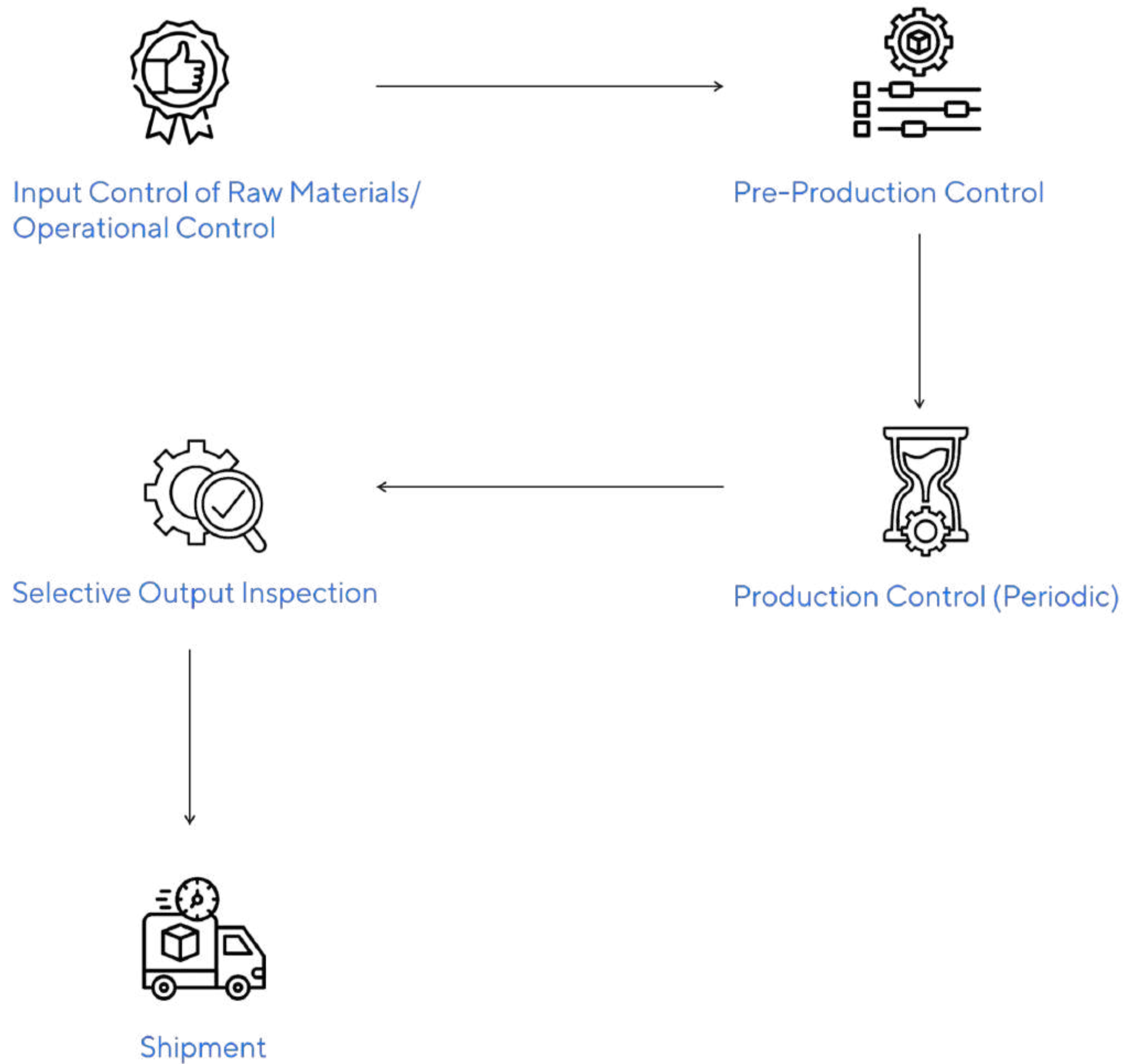
- Waste-free use of UV inks in printing process
- Color LAB
- Ink selection and preparation – less ink and time needed to set up equipment for new production run



**-12,6 %**

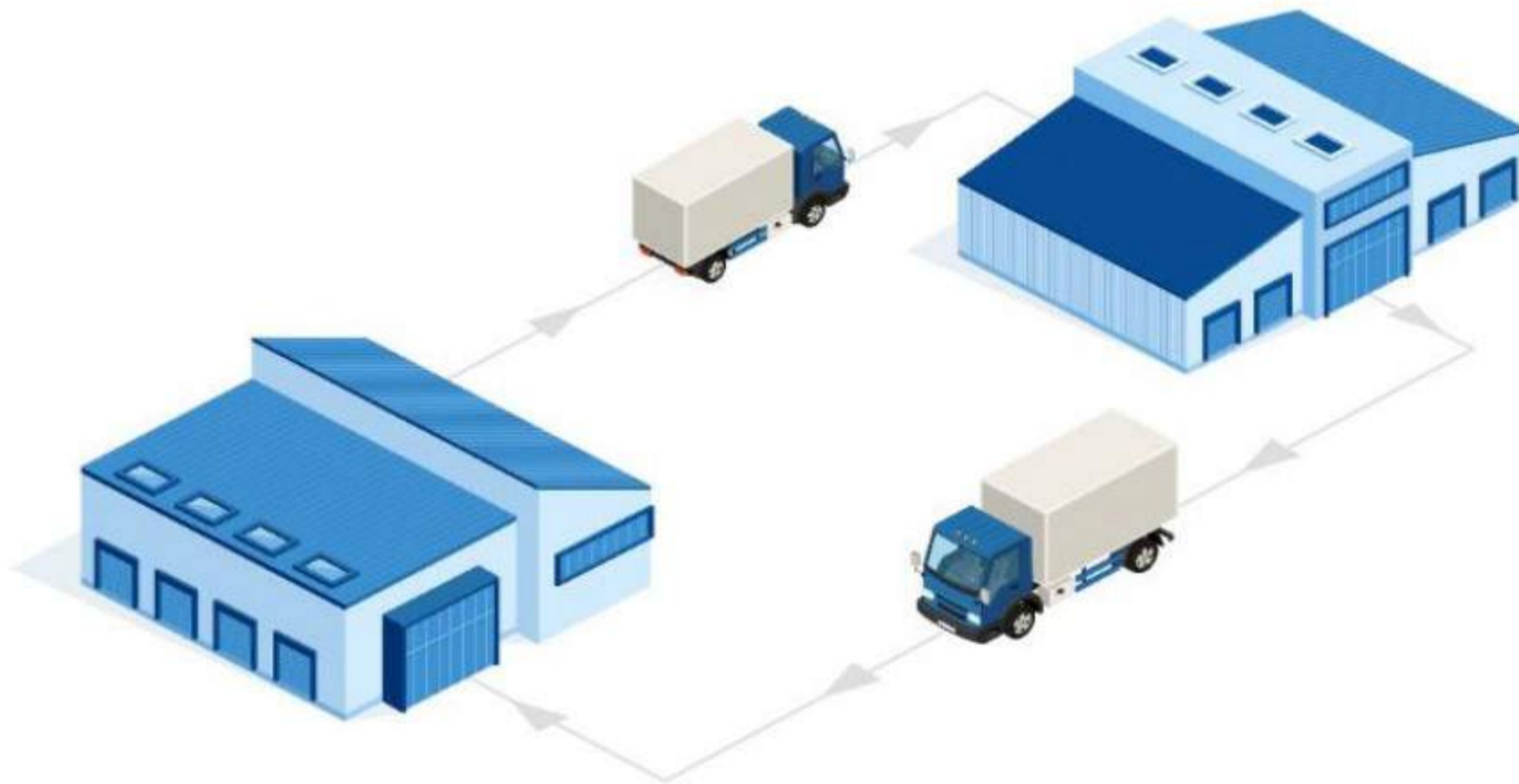
less time and ink wasted on equipment setup

# PRODUCTION QUALITY — 24/7



# RETURNABLE PACKAGING

We support returnable packaging programs aimed at reducing waste



# ECO-FRIENDLINESS OF FLEXIBLE PACKAGING

During the entire life cycle (from production to disposal), packaging leaves a much smaller carbon footprint. Less plastic, less water, less energy, less packaging weight, less trucks.



The product in Bag-in-box packaging has advantages during transportation and storage.

Thanks to its rectangular shape, the filled product takes up less space and fits perfectly on the pallet. Empty packaging is delivered flat. There is no need to use chemicals to wash the returnable packaging again. The result is lower production and labor costs.

# RECYCLABLE

You can **already** order a package consisting **only** of PE. We are currently testing in production a **PA-free barrier structure** that is **96% PE**.



Bag-in-box packaging — solution that protects the environment

Single bags  
for hand filling machines



3.0 liters  
7 200 pcs.

Bags in WEB for automatic  
and semi-automatic  
filling machines



3.0 liters  
8 400 pcs.

Reduce the cost of transportation and storage.

About 7 200 empty single bags can be stockpiled on the one pallet.

About 237 600 empty single bags can be placed in one truck.

About 8 400 empty bags in WEB can be stockpiled on the one pallet.

About 277 200 empty bags in WEB can be placed in one truck.

## THE AIM OF THE FOUNDATION

We focus our support on the refurbishment of the children's health facilities and purchase of medical equipment, financial support for orphanages and other social programs.



## OUR PROGRAMS



Medicine



Education, culture,  
art and sport



Orphanages



Support people  
with disabilities



Community  
Association



Targeted support



Charity foundation «Business for the city» was founded by the initiative of TECHNOLOGIA GROUP

## THE AIM OF THE FOUNDATION

- To provide hospitals with personal protective equipment for medical staff;
- Restore and build oxygen systems;
- Supply medical equipment: ventilators, medications, and anything else that may be urgently needed to counteract the spread and treatment of patients with COVID-19 infection.



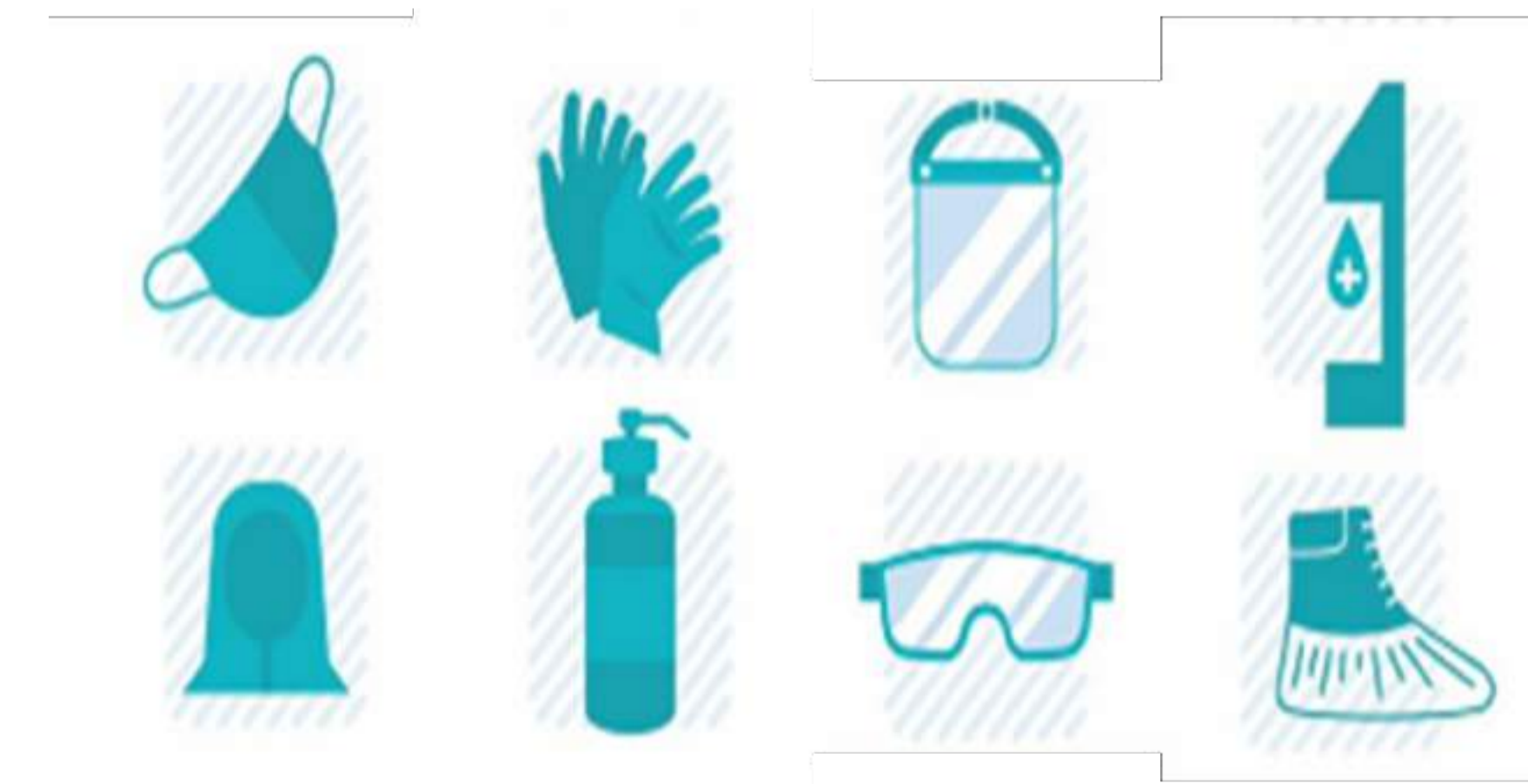
## THE MAIN ACHIEVEMENTS



1656 meters of oxygen systems were built and renewed



Purchased ventilators  
Purchased 2 tons of medical oxygen

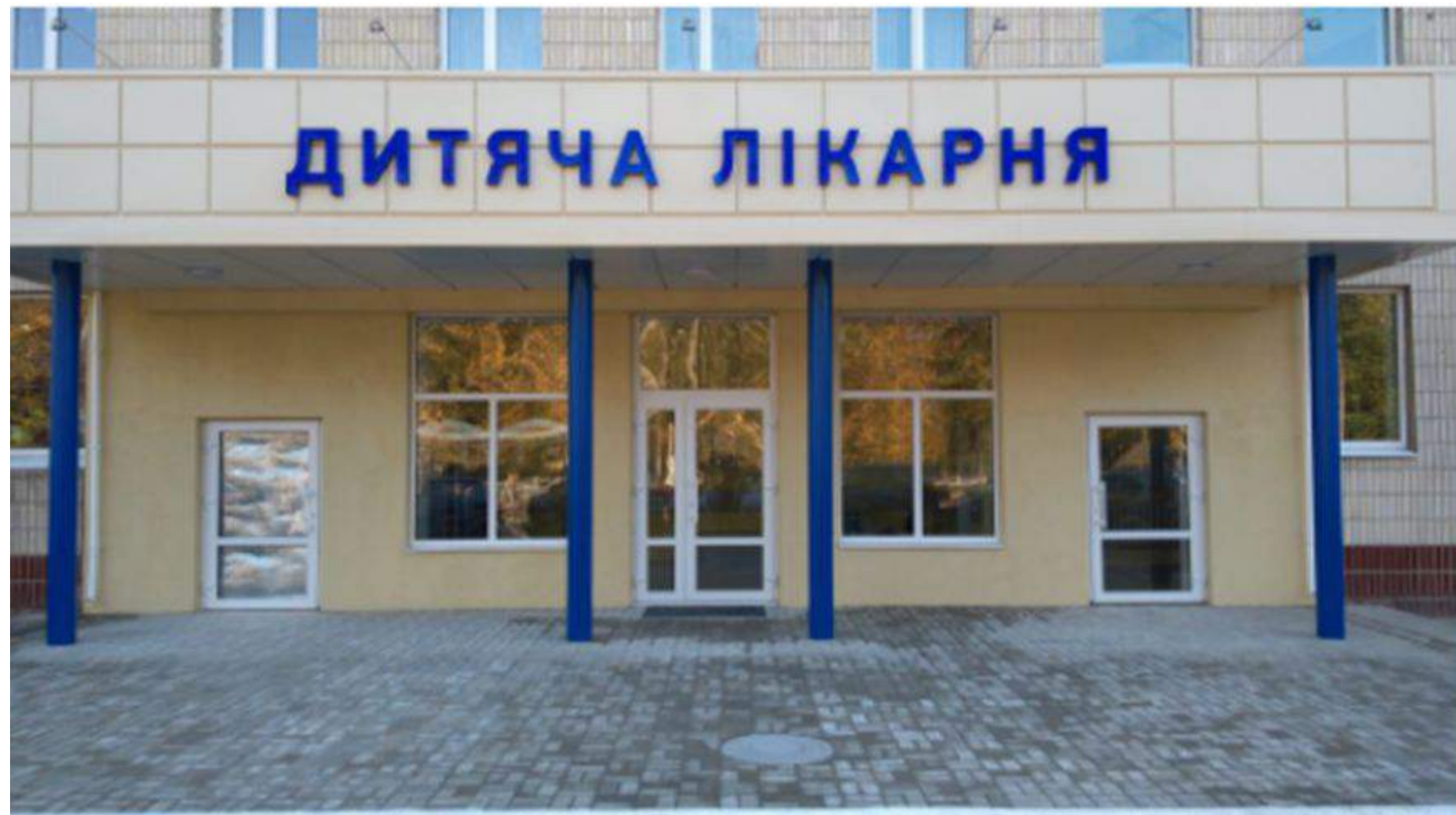


Medicines and remedies are delivered

## New Surgical Department at Children's Hospital



## New Emergency Department at Children's Hospital



# PROJECT "GREEN PLANET"

Group of companies TECHNOLOGIA annually plants trees as a part of ecological activities. Our employees put their contribution in landscaping by participating in the project "Green planet".





# TECHNOLOGIA JSC

cares and shares responsibility  
for future generations



Empowering responsible supply chains

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