

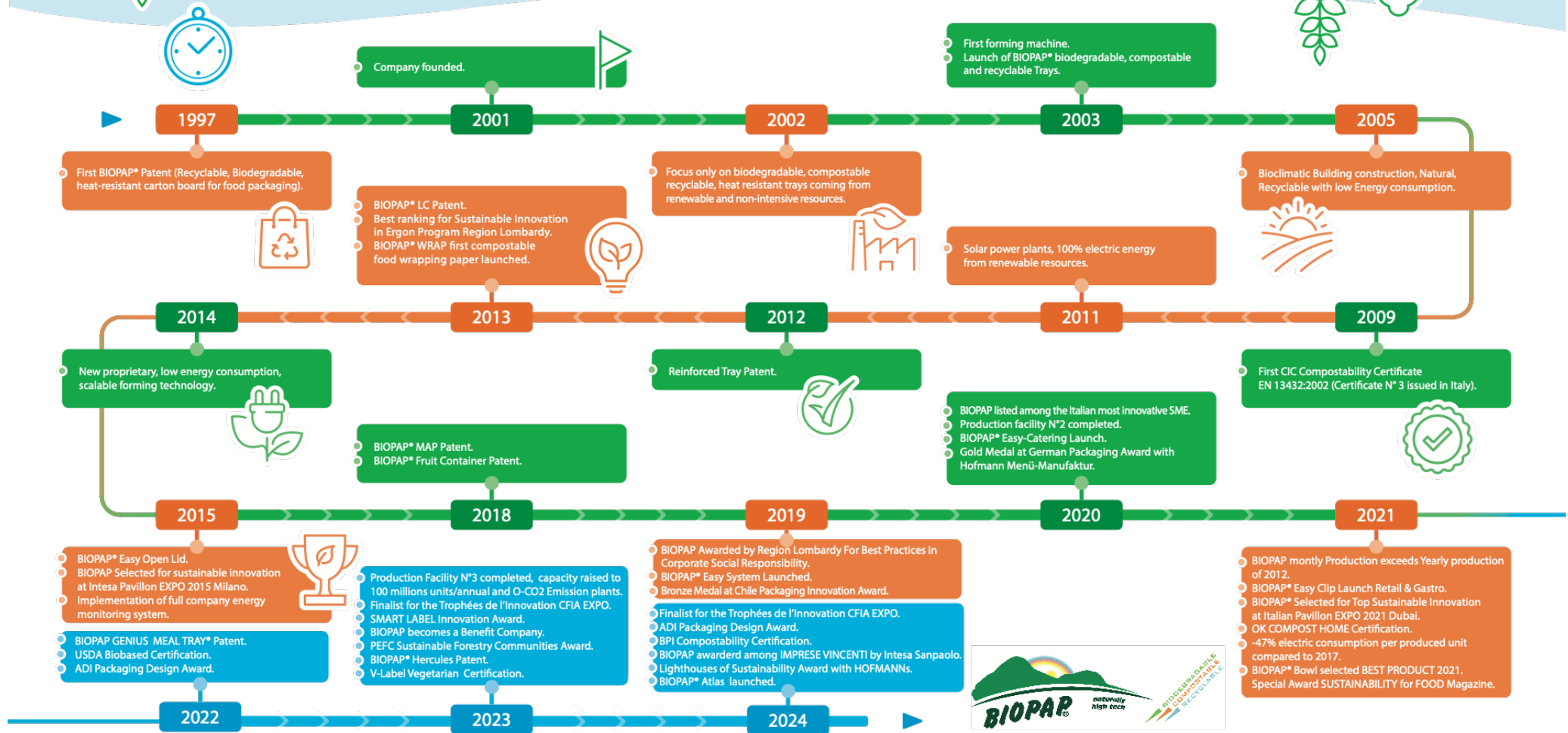
**The revolutionary self-supporting meal tray
system, versatile, hygienic, light, resistant
and compostable**

BIOPAP GENIUS MEAL TRAY®

Patented



Visionary Sustainability.

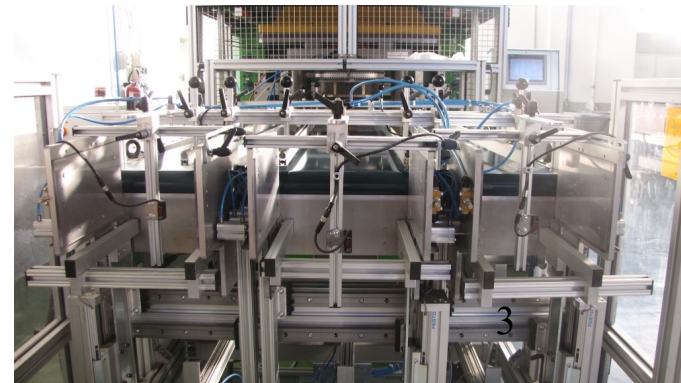


BIOPAP®: Our Values



SUSTAINABILITY and CIRCULARITY

- **SOCIETY AND THE ENVIRONMENT:** We are a Benefit Corporation
- **ONLY BIODEGRADABLE AND COMPOSTABLE PRODUCTS** to transform waste into valuable resources to preserve the environment and benefit agriculture
- **PAPER RECYCLABLE:** all our products – when clean – are paper recyclable
- **RENEWABLE RAW MATERIALS ONLY:** PEFC certified from non intensive production of European forests
- **ZERO WASTE:** 100% of trimmings are recycled into new packaging
- **ZERO EMISSIONS:** we are 100% energy self-sufficient and use only electricity from renewable sources
- **LOW ENERGY CONSUMPTION:** customized proprietary technologies to save energy
- **BIOCLIMATICITY:** headquarters built with natural materials to minimize energy use

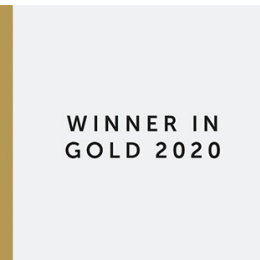


BIOPAP®: Our Experience



BIOPAP®: over 20 years of experience producing exclusively certified compostable food containers sold worldwide

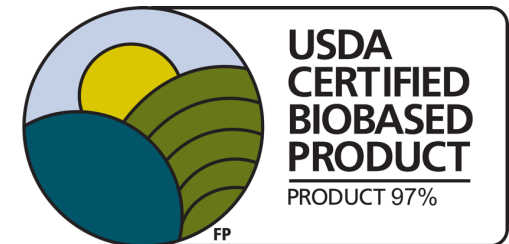
- Our complete systems – including food containers and heat-sealers – enable hot filling and transportation, Cook&Chill, and Cook&Freeze processes
- Food trays and containers are resistant both to freezing (-80°C) and to high temperatures (up to $+215^{\circ}\text{C}$), dual-ovenable (traditional or microwave oven)
- Heat-sealable with compostable films or easy-open hard lids (or clip-on options)
- Our integrated supply chain offers high-performance raw materials, innovative converting technologies, and partnerships with automated heat-sealing equipment manufacturers
- BIOPAP® containers are robust, practical, hygienic, with a pleasant, natural touch & feel. They do not require separation from food rests for disposal because they are cellulose based, certified compostable. They can also be printed on the outside to enhance product appeal to consumers and brand awareness.



Certified Supply Chain Security



- BIOPAP® products are made from cellulose sourced only from well managed certified European forests, ensuring both quality and compliance with the highest sustainability standards
- There are no risks of supply chain disruptions due to low geopolitical risk, source independence, and price stability in the medium to long term
- These natural raw materials come from non-food and non-intensive agriculture, coming from low populated, pristine environments
- The growth of our forests occurs naturally, preserving biodiversity without artificial irrigation, fertilizers, or pesticides
- 100% of the production is PEFC-certified from sustainably managed and renewable forests, and USDA bio-based certified





BIOPAP Genius Meal Tray®

The revolutionary system for efficiently preparing and delivering meals in health care facilities, schools, hospitals and canteens

BIOPAP GENIUS Meal Tray®



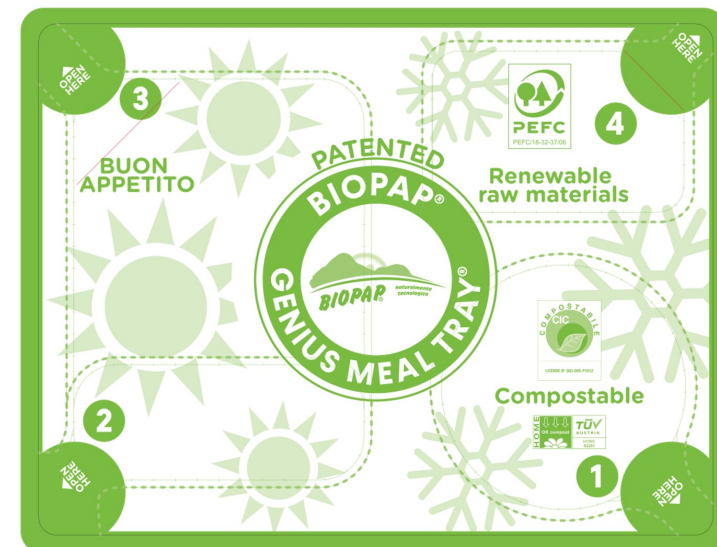
- The heart of GENIUS is the self-supporting, lightweight structure with separated, sealed food compartments
- GENIUS can withstand extreme temperatures – from freezing to heating – is made of renewable raw materials and is fully compostable
- It eliminates the heavy tray for meal transportation and service, and the need to wash it after use
- It is hygienic: the food is sealed with an easy-open heat-sealed lid, separated for each course.



BIOPAP GENIUS Meal Tray® FLOW



- Streamline the operation in food preparation with light yet stiff meal tray that can be directly filled with the courses and sealed in the central kitchen
- Operating with Cook & Chill or Cook & Freeze process with optimal working time and process flow



BIOPAP GENIUS Meal Tray® FLOW



- GENIUS is directly blast chilled, stored and then picked according to demand, reducing food waste.
- Picked GENIUS Meal trays are filled in insulated shuttles for chilled transport to the Hospital



BIOPAP GENIUS Meal Tray® FLOW



- Being Heat and Cold resistant, it is directly placed into double flow re-heating trolleys for docking and reheating with full time remote control
- Shuttle trolleys containing GENIUS Meal Trays are picked-up by care personnel at the right time, at the right place, at the right Temperature and delivered to patients, with separate hot and cold sections



BIOPAP GENIUS Meal Tray® FLOW



- Patients and users can open each meal course separately as desired
- After the service, GENIUS is collected, stacked and disposed without separation with food rests into bio-waste

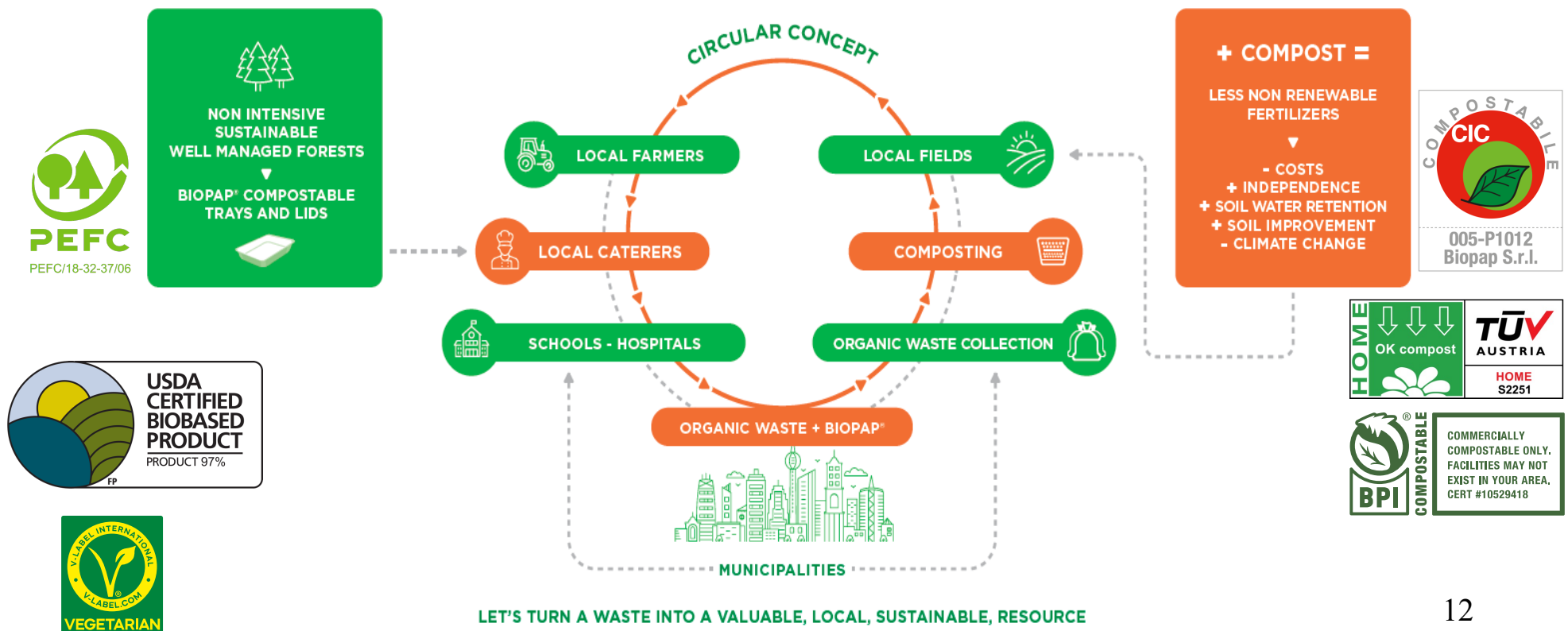


BIOPAP GENIUS Meal Tray® FLOW



- Shuttle trolleys remain clean
- No more tray washing, zero heat, detergents, water and meal set-up and collection time consumption
- Bio-waste is then turned into Bio-gas and compost to be used in local agriculture

BIOPAP® SUSTAINABLE CIRCULAR CONCEPT



BIOPAP GENIUS Meal Tray®



- BIOPAP GENIUS Meal Tray® system includes:
 - BIOPAP Genius Meal Tray® single components (Trays & Lid)
 - Heat-sealing Machine with handling and sealing tools
 - Double-flow Shuttle system



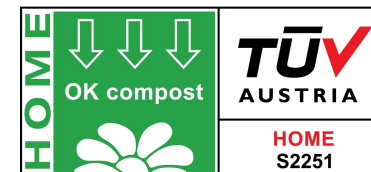
BIOPAP GENIUS Meal Tray®



Certified for home and industrial composting



- GENIUS is certified for both industrial and domestic composting and is disposed of directly along with food residues
- Genius and food rests are collected as Bio-waste, transported to local Composting facility and transformed into Bio-gas and Compost
- Compost becomes a valuable resource for the local agriculture, replacing CO₂-emission chemical fertilizers, contributing to improved soil fertility, water retention, fighting climate change and desertification



• BIOPAP® LCA BENEFITS

- A recent LCA study made by InnovHub on BIOPAP LC catering containers **has shown a reduction of 2/3 of the CO2 emissions compared to PP catering trays.**
- The replacement of the PP tray with the new BIOPAP® LC tray solution will allow a saving of 46,6 KgCO2 emissions per 1.000 units. Considering an annual distribution of 40.000.000 units the saving would correspond to 1.864.000 KgCO2/year. As far as CO2 emissions are concerned, this value corresponds approximately to the average CO2 emissions of 287 Italian person/year or 239 EU persons/year (Italian average: 6.500 KgCO2 per capita, EU27 average 7.800 KgCO2 per capita^[ii]), respectively, or those of 1000 average new passenger cars/year^[ii] (assuming a distance of 15.000 km/year).
- If we take into consideration the average absorption of a forest in a year, it would be possible to calculate the necessary surface that would be needed to absorb the CO₂ saved (about 1.864 tons). Starting from REGES^[iii] data which indicates that one hectare of fir or larch forest is capable of fixing 24 t of CO₂ in a year, it appears that a surface area of 78 ha would be needed to absorb the carbon dioxide avoided with the use of BIOPAP® LC tray. This area can be compared to the total area of around 110 football pitches.



LIFE CYCLE ASSESSMENT OF BIOPAP® LC PAPER BASED TRAY

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Report number: RPT-
Innovhub SSI srl, May 2023

Il Laboratorio si assume la responsabilità di tutte le informazioni contenute nel Rapporto di Prova, ad eccezione di quelle fornite dal Cliente. I risultati si riferiscono esclusivamente al campione sottoposto a prova. Quando il campionamento non è effettuato dal Laboratorio, i risultati si riferiscono al campione così come ricevuto. Laddove applicabile, il residuo del campione viene conservato per tre mesi dalla data di emissione del Rapporto di Prova. La riproduzione parziale del presente Rapporto di Prova è ammessa solo dopo autorizzazione scritta del Responsabile del Laboratorio.

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BIOPAP GENIUS Meal Tray®

Advantages



SAVING IN FOOD PREPARATION

- Cook&Chill optimizes working time and reduces food waste
- No more need for satellite kitchens (free space can be used for additional diagnostics & care)
- Only the necessary food is produced (unlike Cook&Serve)
- Storage of meals is also possible for later use

SAVING IN SERVICE

- Less time spent serving food to users
- Consistent food quality thanks to trolley at correct temperature
- 100% hygienic conditions of food from cooking to eating
- Easier and faster service and collection at the end of service/meal
- No need to wash tray/dishes or separate food from plates
- Saves time, water, energy and dishwashing products

SAVING IN DISPOSAL

- Immediate disposal of the entire tray and food rest in one movement
- Fully compostable: meal tray and food rest go in local composting facilities to produce fertilizers and improve soil performance fighting climate change & desertification

Genius® with Ergoserve®: Weight Reduction



- BIOPAP Genius weighs less than 100 gr compared to 2500 gr of a traditional hard tray
- Corresponding weight for 24 trays in Ergoserve trolleys are:
 - 2,4 Kg for Genius
 - 60 Kg for traditional trays
- Assuming 4 people serving and collecting trays for 2 meals a day for 220 working days this correspond to:
 - Genius: 2.112 Kg/year per trolley
 - Other trays: 52.800 Kg/year per trolley
- Translating into:
50 tons less carried load /year +
25 tons less pushed load /year

TOTAL: carrying 75 tons less /year per person

BIOPAP GENIUS Meal Tray® Recap



- Revolutionary, self-supporting tray, lightweight, practical, and resistant
- For the first time, a single container for food containment, cooling or freezing, transportation, heating, serving, consumption, and disposal
- Absolute hygiene and safety from food preparation to the meal: each course is individually sealed and protected
- It enables Cook & Chill and Cook & Freeze, eliminating satellite kitchens and tray setup: it can be placed directly in double-flow heating trolleys for refrigerated transport to the destination, maintaining separate temperatures, with subsequent reconditioning
- Maximum user convenience: the user chooses the desired consumption sequence
- Compostable along with food residues: no need for separation and final cleaning/washing
- A virtuous example of a circular economy: easy to dispose of in composting with beneficial effects for the environment and agriculture



GREEN SMART LABEL Award at HOST Milan Fair 2023



- GENIUS has been awarded the important **GREEN SMART LABEL** prize for technological and socio-environmental innovations and eco-sustainable products promoted by HOST Milan Fair 2023
- The judging panel of the HOST Innovation Award, promoted by FieraMilano, POLI.design del Politecnico di Milano and the Industrial Design Association has chosen BIOPAP®'s innovative and ecological catering solution



BIOPAP GENIUS Meal Tray®

Thank You!

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