

CHIMICA VERDE:
L'ITALIA ALL'AVANGUARDIA
CON LE INNOVAZIONI
E LA TECNOLOGIA

Bologna, 16 settembre 2016

WORLD ECONOMIC FORUM

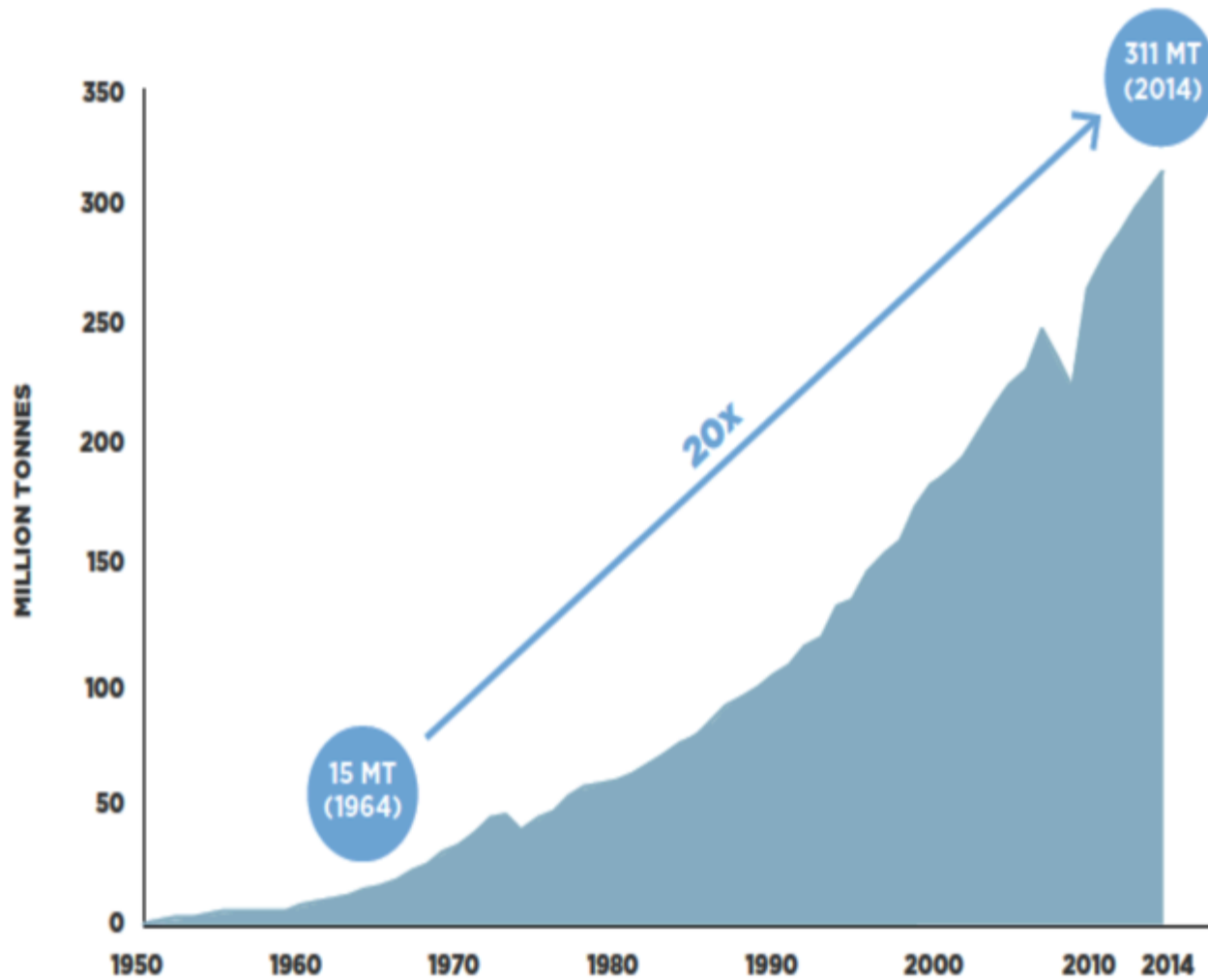
A blue curved line that starts at the top left, curves around the right side of the text, and ends at the bottom right, resembling a stylized 'C' or a partial circle.

The New Plastics Economy
Rethinking the future of plastics

World Economic Forum
COMMITTED TO
IMPROVING THE STATE
OF THE WORLD

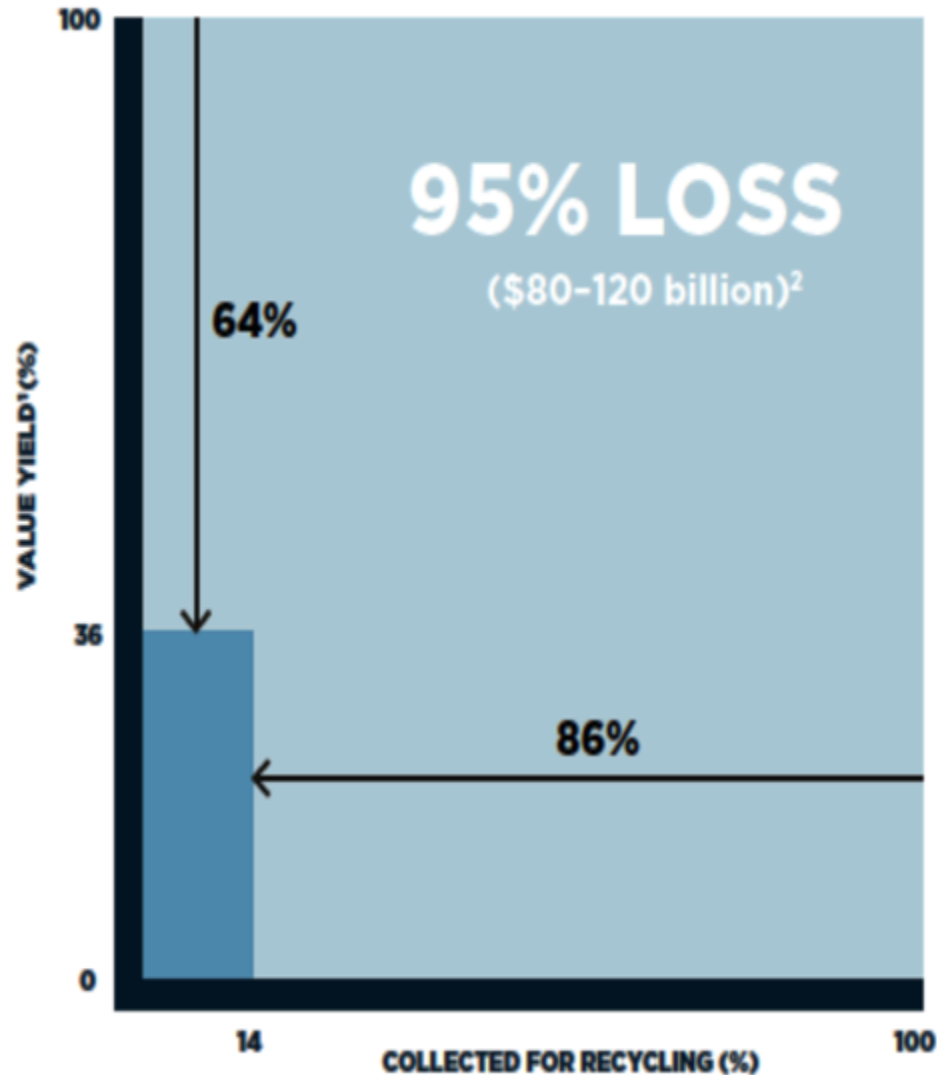
January 2016

GROWTH IN GLOBAL PLASTIC PRODUCTION 1950-2014

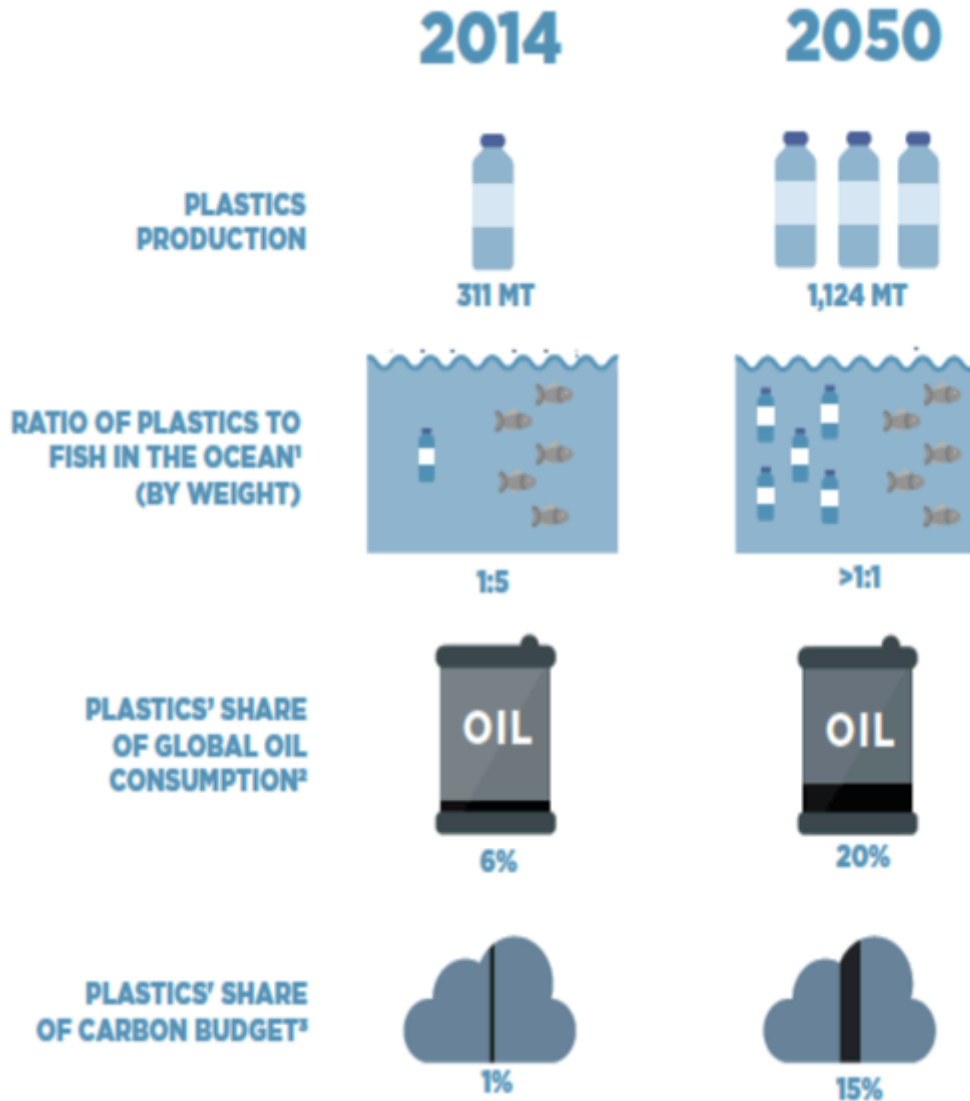


Note: Production from virgin petroleum-based feedstock only (does not include bio-based, greenhouse gas-based or recycled feedstock)
Source: PlasticsEurope, Plastics – the Facts 2013 (2013); PlasticsEurope, Plastics – the Facts 2015 (2015).

PLASTIC PACKAGING MATERIAL VALUE LOSS AFTER ONE USE CYCLE



FORECAST OF PLASTIC VOLUME GROWTH EXTERNALITIES AND OIL CONSUMPTION



ottobre

2008



**2008 MINERBIO
BOLOGNA**

Immagini raffiguranti
gli spazi dedicati al
laboratorio e impianto
pilota **prima della
ristrutturazione.**
(ex conigliera)

ottobre

2010



dal...2010.....
Immagini che
raffigurano l'attuale
stato di restauro degli
ambienti dedicati al
laboratorio e
impianto pilota.



24
ottobre

2014

AjMItalia
MERCATO ALTERNATIVO DEL CAPITALE



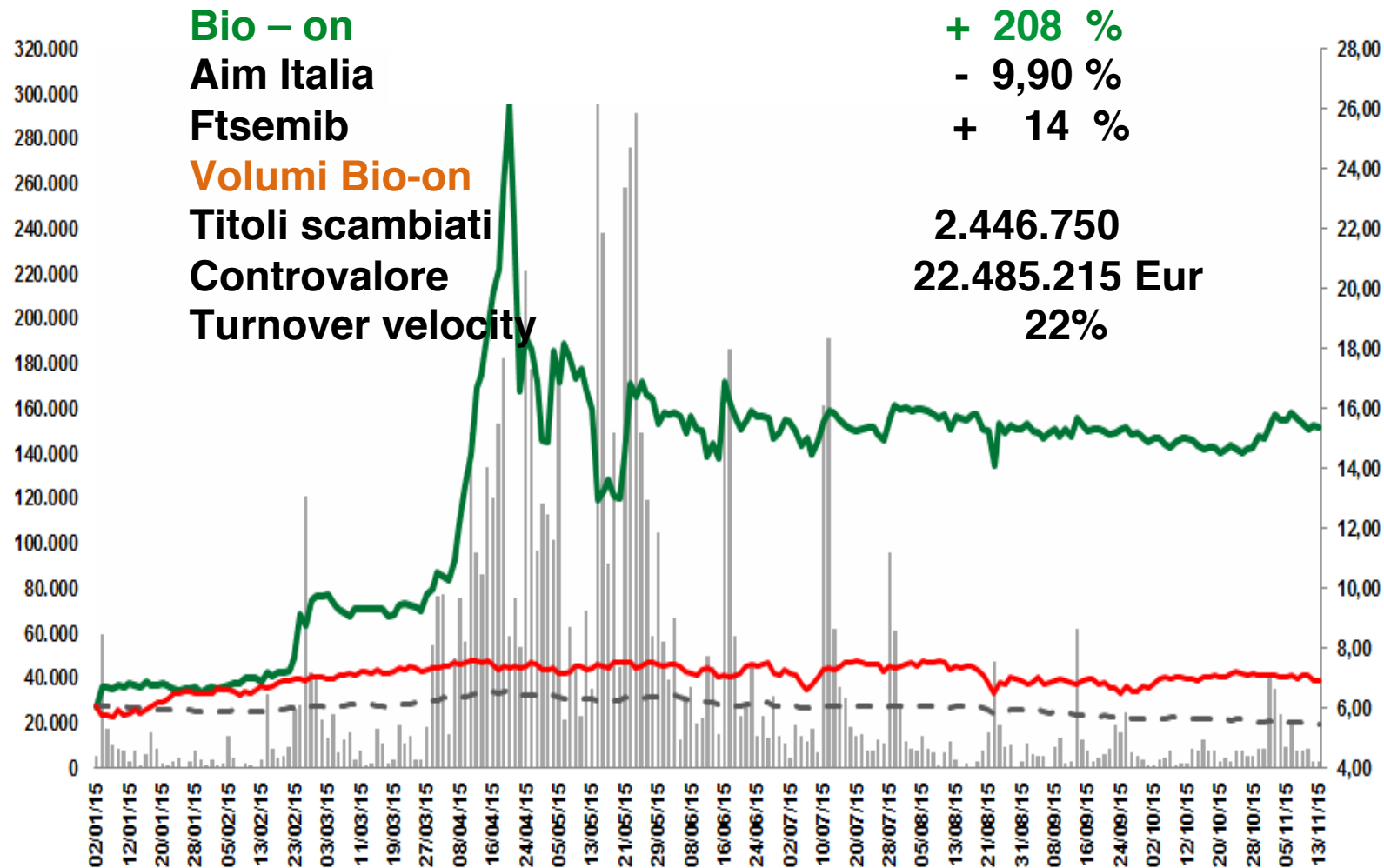
24
ottobre

2014

AJMItalia
MERCATO ALTERNATIVO DEL CAPITALE



Performance dall'1 gennaio 2015 ad oggi:

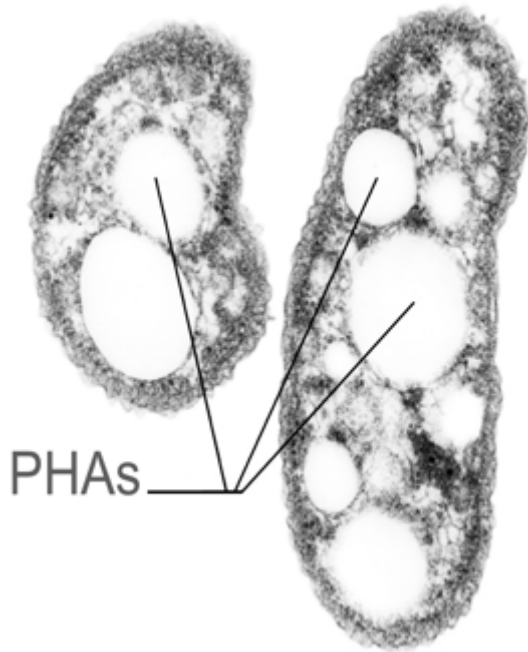


Capitalizzazione passata da 66.000.000 Eur a c.ca 200.000.000

Dal collocamento, considerando warrant e bonus share, chi ha investito 1.000 € ha ricavato circa 5.000 €

IP Business model

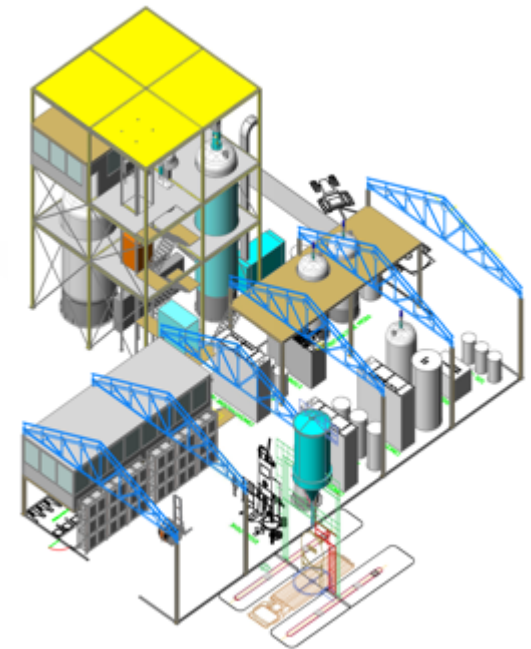
**Ricerca
Tecnologica**



**Prodotti
Innovativi**

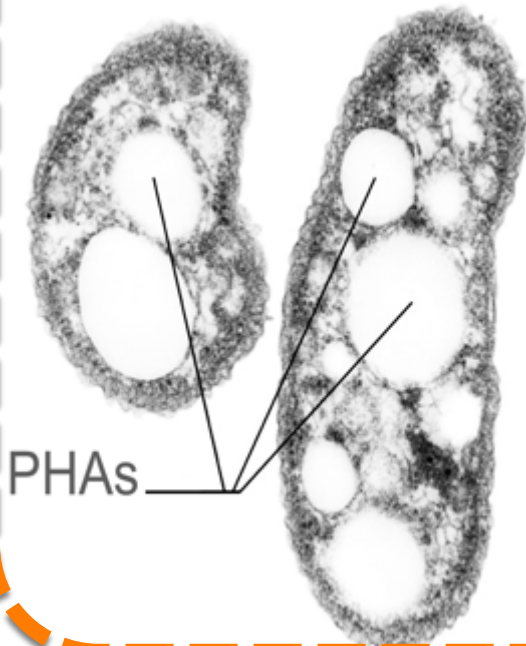


**Licenze
Impianti**



IP Business model

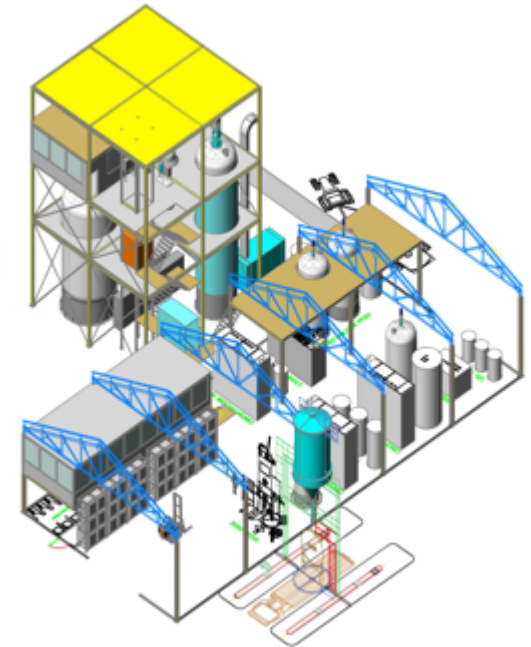
**Ricerca
Tecnologica**



**Prodotti
Innovativi**

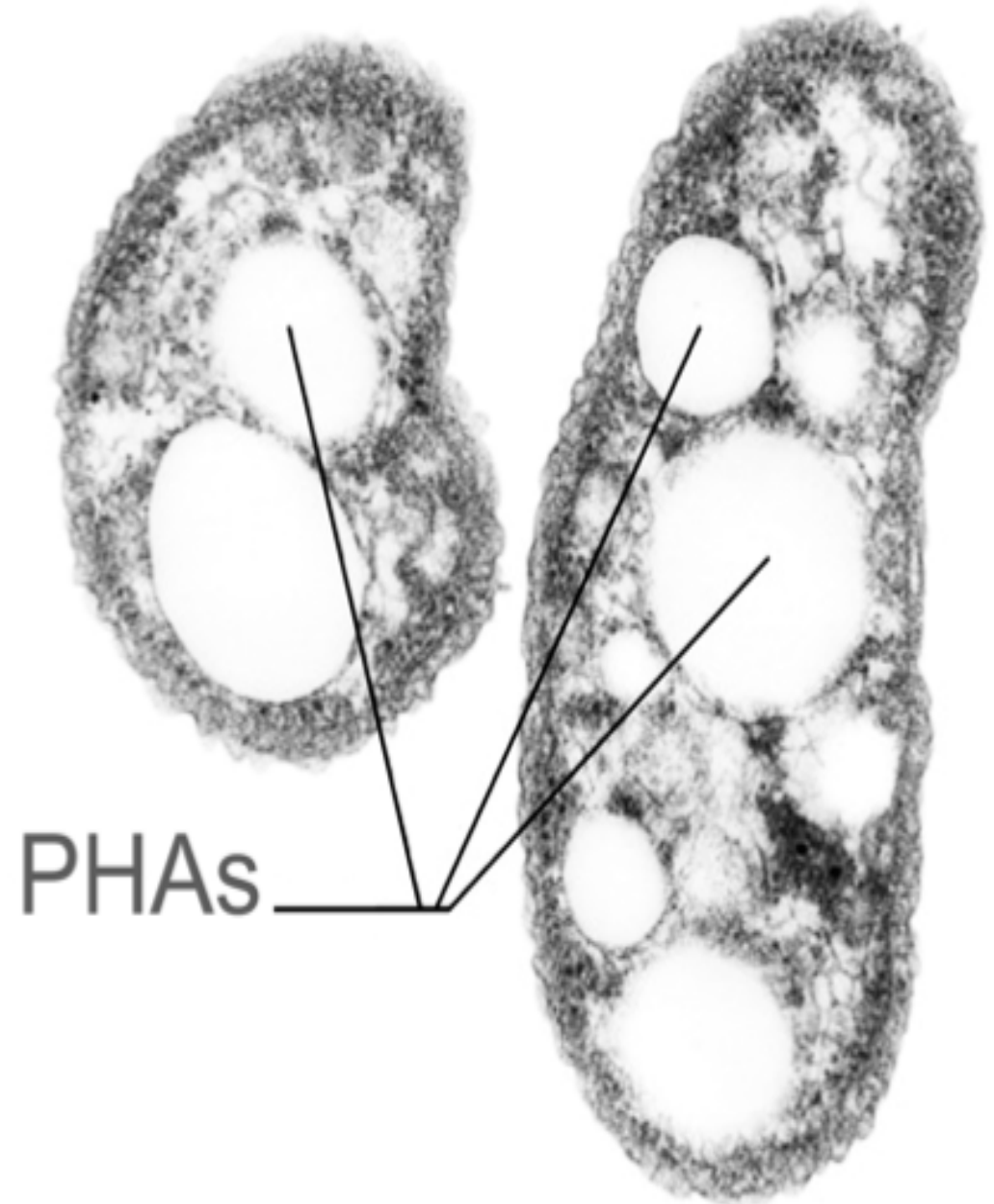


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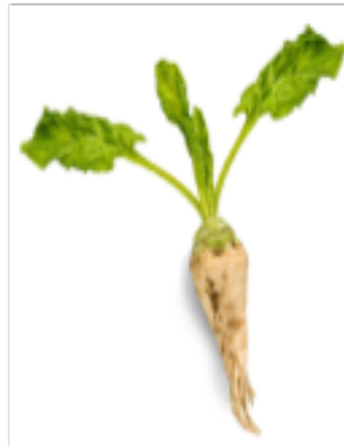


2007
bio-on
riscopre
il PHA

poliestere
naturale
riserva
di energia

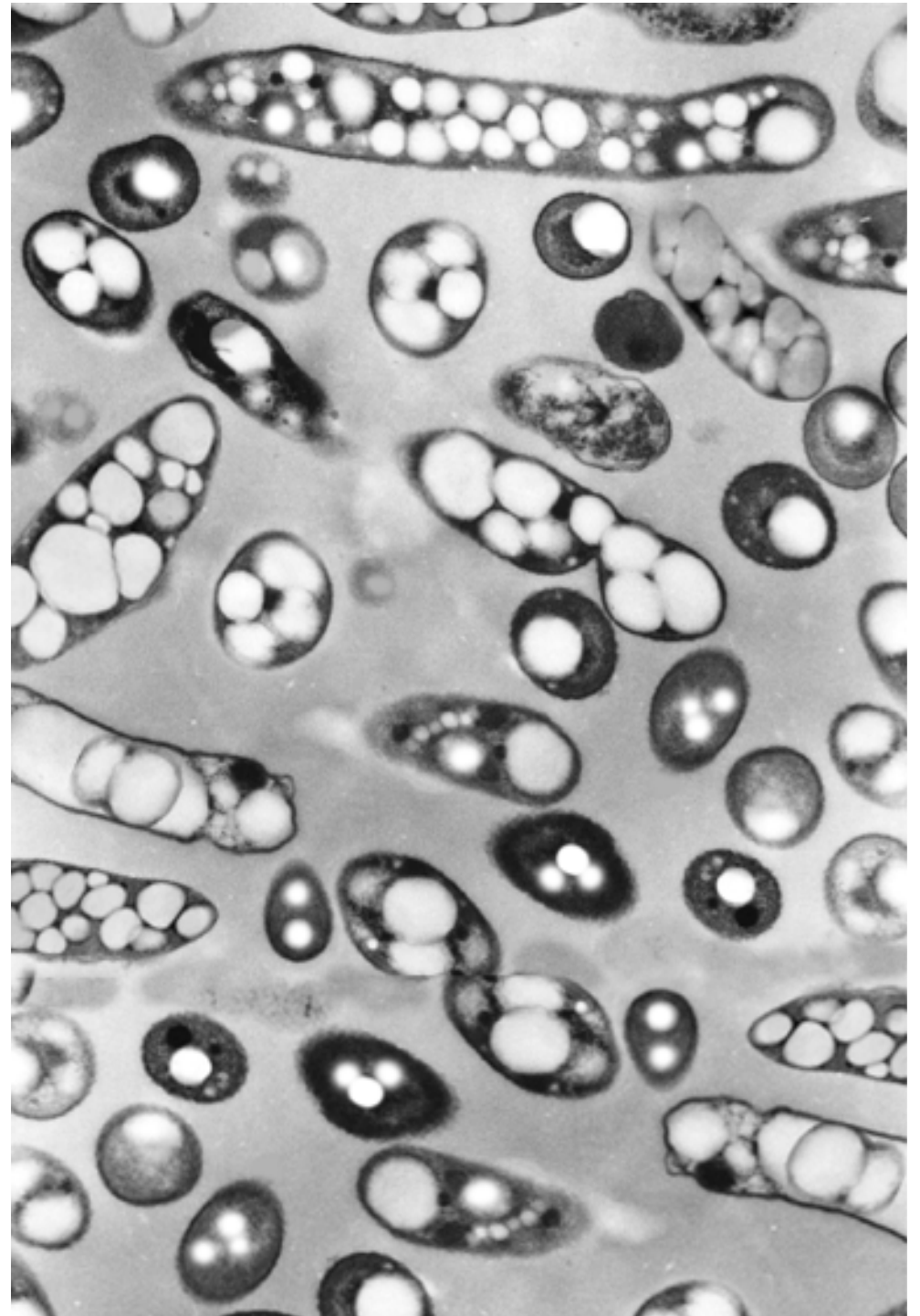


....dal melasso
di barbabietola,
canna da zucchero,
scarto delle patate
glicerolo



attraverso la
fermentazione...

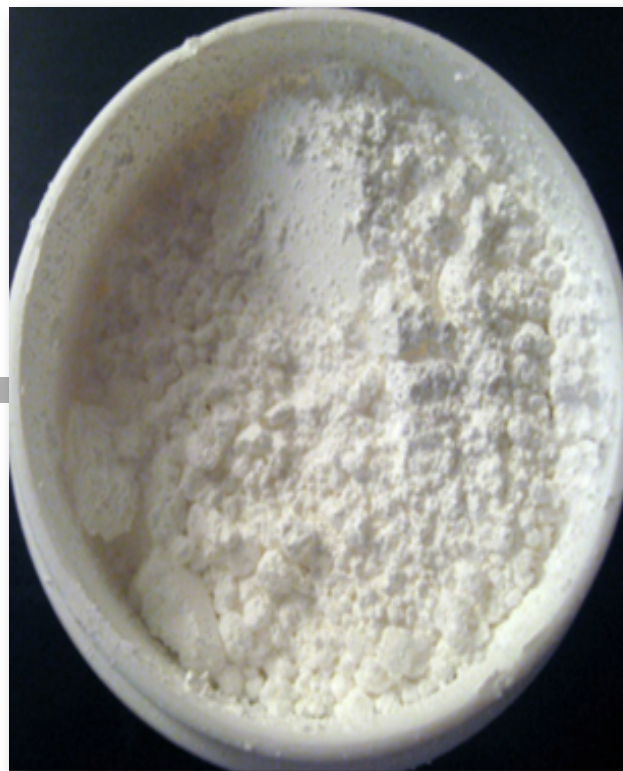
i batteri
si nutrono
di scarti agricoli



estrazione
naturale
senza solventi



essiccazione,
pellet,



bio-on
turn off pollution

impianti
PHAs



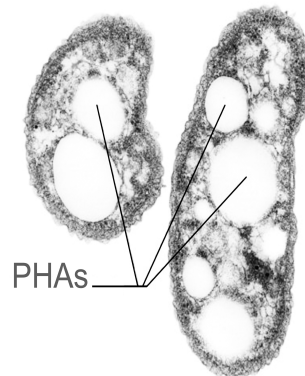
fattori chiave

Utilizziamo materiali di scarto agricoli.
NO FOOD

bio-on
turn off pollution

Possiamo sostituire anche plastiche costose

OGM FREE
nessuna modifica genetica



Il PHAs è un prodotto Piattaforma da cui Ricavare molte bio plastiche

minerv

ORGANIC SOLVENT FREE
non utilizziamo solventi per estrarre bio polimeri

100% BIODEGRADABILE
Il nostro è un prodotto Biodegradabile in compost e acqua

2010



PHAs per sostituire tutte le plastiche come PP, PE, PC, PS.....



beverage



automotive



medical



aviation



food pack



fibers



electronics

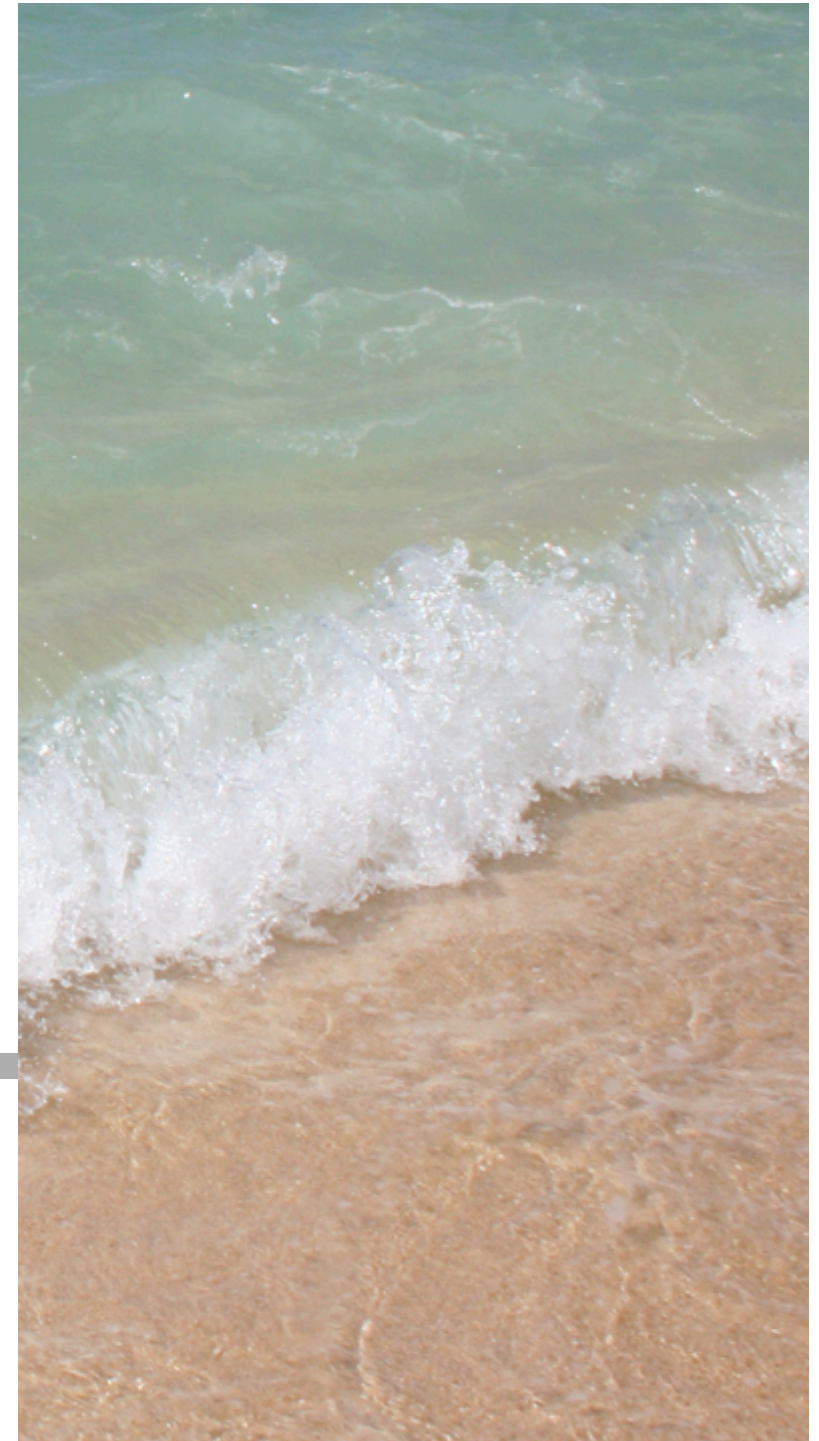


farma pack



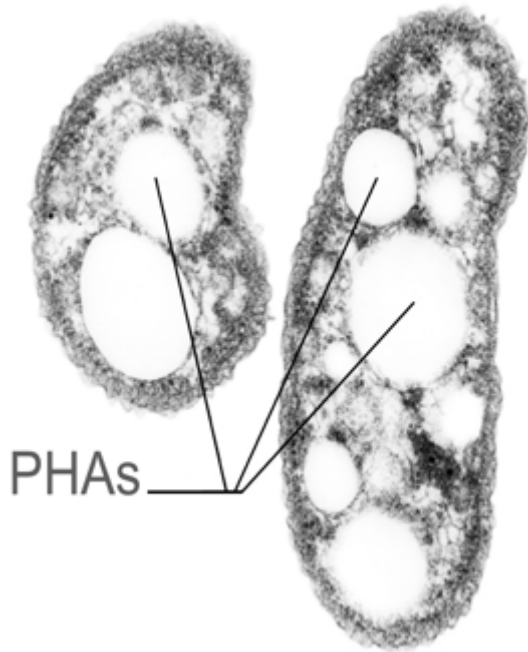
100%

biodegradabile in natura
compost-water-ocean



IP Business model

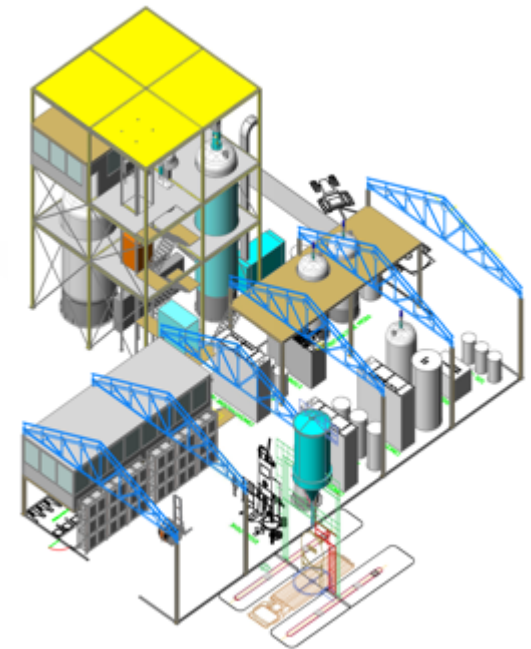
**Ricerca
Tecnologica**



**Prodotti
Innovativi**



**Licenze
Impianti**





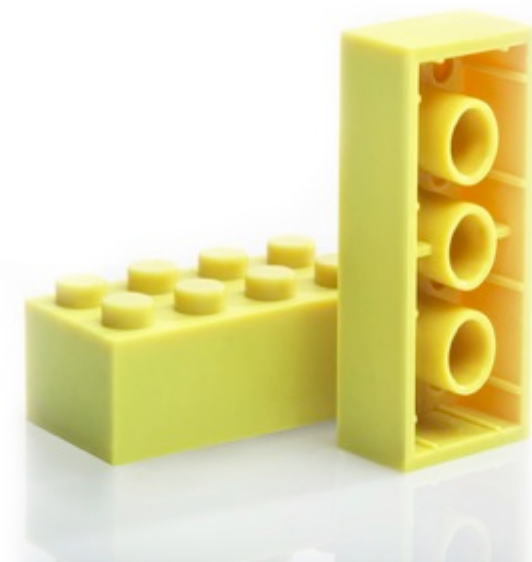
design:
Philippe
Starck
miss
sissi

bio-on
son of polster

FLOS



Dicembre 2015 – Minerv Supertoys per giocattoli sicuri







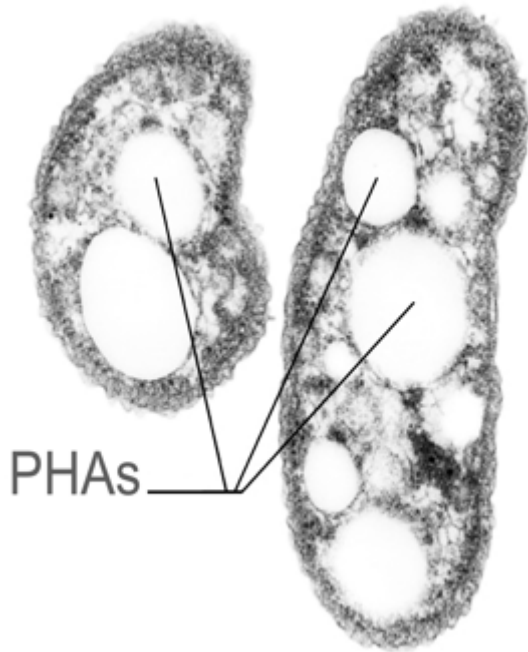






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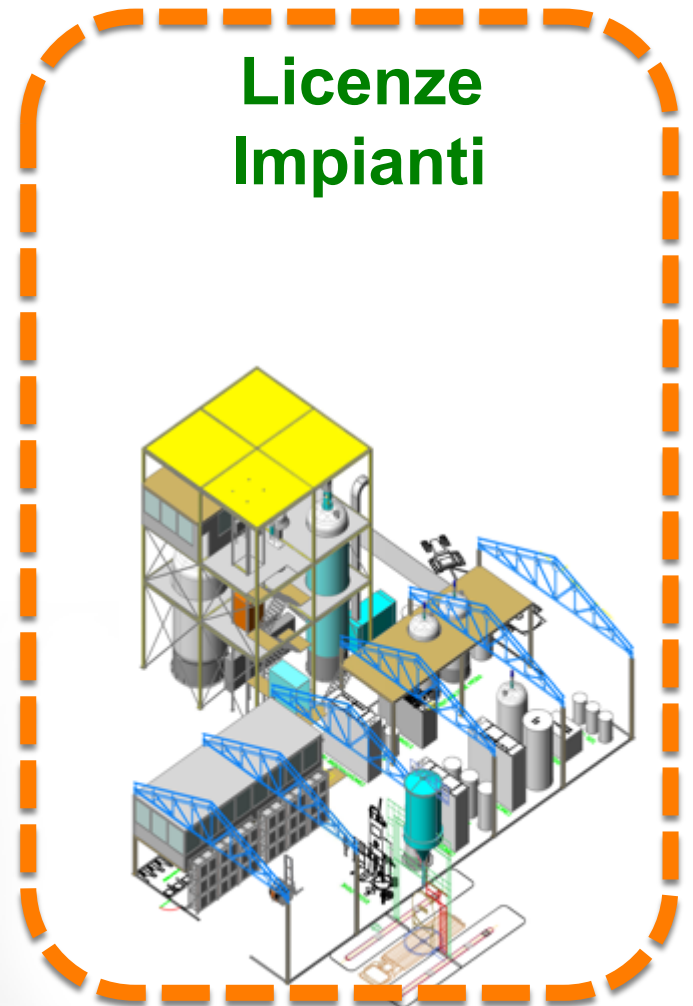
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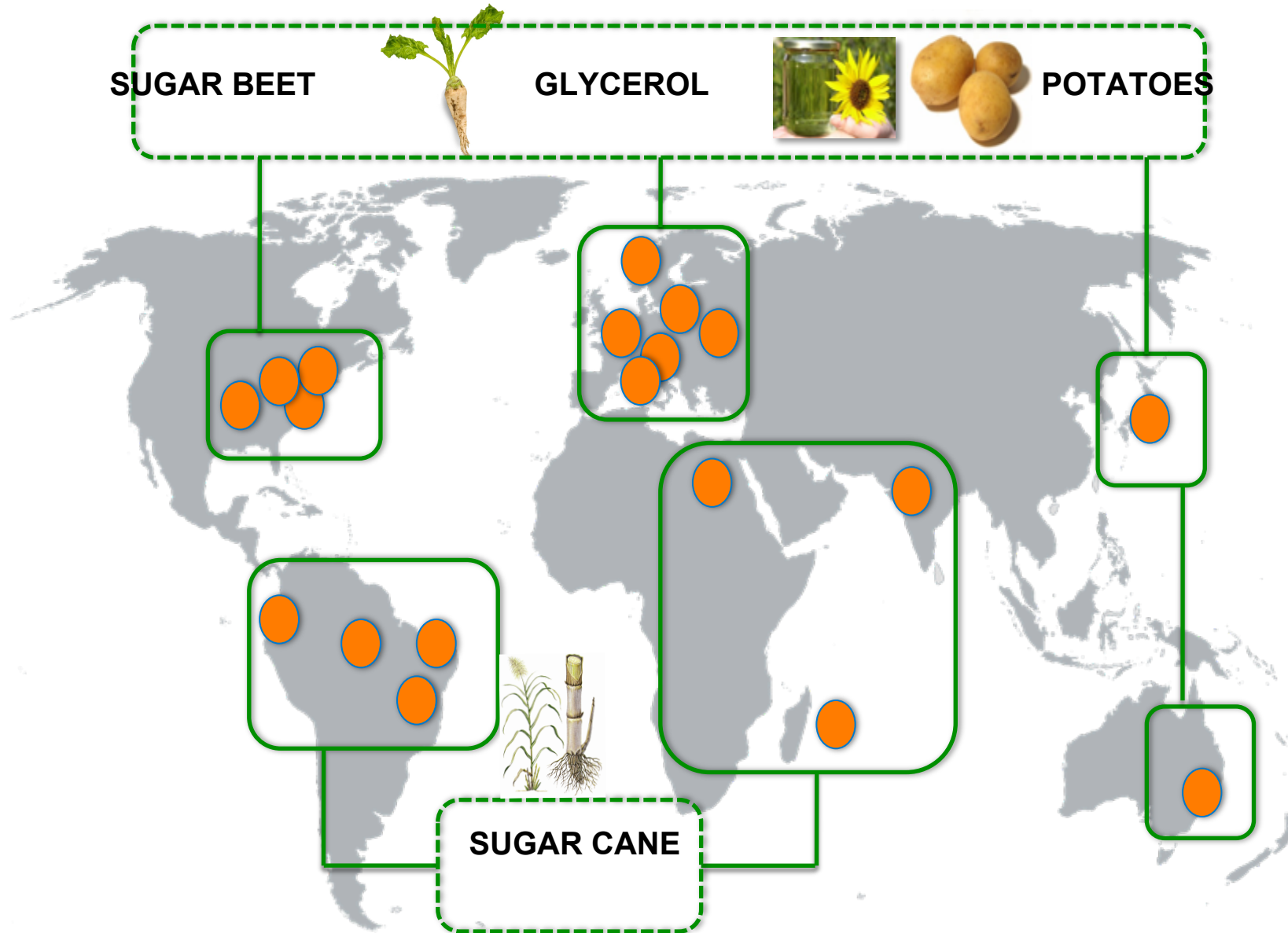


**Licenze
Impianti**



TOMORROW

PLANT LICENSES *(future targets)*



200 KTPY planned

**DAL 2016 PRESENTAZIONE DI NUOVI BREVETTI
E NUOVI PRODOTTI SU AREE DI MERCATO
PREMIUM E AD ALTISSIMA SPECIALIZZAZIONE
E REDDITIVITA'.**

COSMETICA

SMART PACKAGING

bio-on
turn off pollution

16 maggio 2016 presentato nuovo Ww patent per risolvere problema MICRO BEATS





PRESS RELEASE

Bio-on S.p.A.

Revolution in food packaging. The milk carton goes bio

Researchers at Bio-on and the University of Tampere (Finland) have created the first material to team paper and bioplastic designed for the food packaging of the future. It will also be the only biodegradable material

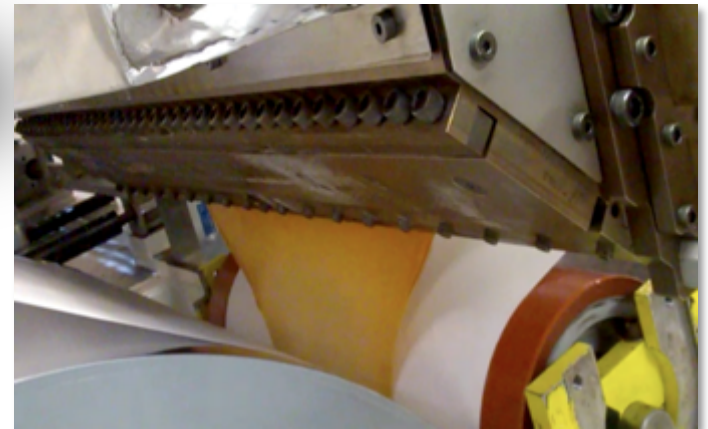
BOLOGNA Italy - TAMPERE Finland, 16 April 2016 – Imagine a future, very near now, in which cartons for milk, fruit juice and many other foodstuffs will be 100% biodegradable. Bio-on today announces a major result achieved with its new collaboration with the University of Tampere, one of the most important centres in the world. The joint project launched in 2015, aims to develop specific, eco-sustainable and, for the first time, fully biodegradable formulations, in order to make packaging with paper without using films, but instead coating the paper directly onto the paper using an extrusion process. The Minerv PHA Extrusion Coating project, launched by Bio-on at the end of 2015, aims to develop specific, eco-sustainable and, for the first time, fully biodegradable formulations, in order to make packaging with paper without using films, but instead coating the paper directly onto the paper using an extrusion process.



TAMPERE UNIVERSITY OF TECHNOLOGY

Rivoluzione nel packaging alimentare. Il cartone del latte diventa bio

I ricercatori Bio-on e dell'Università di Tampere (Finlandia) hanno realizzato il primo materiale che unisce carta e bioplastica pensato per il packaging alimentare del futuro. Ed è l'unico biodegradabile



"We are extremely pleased to present this important product created out of the collaboration with the Tampere University of Technology Finland, which has made the highest number of technological developments in the history of food packaging in the food & beverage sector," explains Bio-on S.p.A. Chairman Merco Astori. "Together we demonstrated that it is possible to develop new functionalities in the use of PHAs biopolymers in dozens of products. The important result obtained from the collaboration with the University of Tampere, Finland, is the development of a totally eco-sustainable and, for the first time, fully biodegradable formulation, in order to make packaging with paper without using films, but instead coating the paper directly onto the paper using an extrusion process. This is a great scientific achievement, as Prof. Kuusipalo of Tampere University of Technology Finland explains: "I have been able to create materials with an eco-sustainable and, for over 20 years, the high PHAs made by Bio-on are the only ones in the world that are totally eco-sustainable. Being able to do this with the packaging sector is enjoying great success, as the performance never achieved by other biopolymers. Bio-on is very versatile and can develop products with different characteristics and development in the completely natural products will put us at the cutting edge of Bio-on."

Per raggiungere questo straordinario risultato i ricercatori dei due laboratori hanno sostituito il polietilene contenuto negli attuali imballaggi, mantenendo tutte le caratteristiche di impermeabilità, e per la prima volta

life after plastic....

RE
VO
LU
TI
ON
BIO ON

