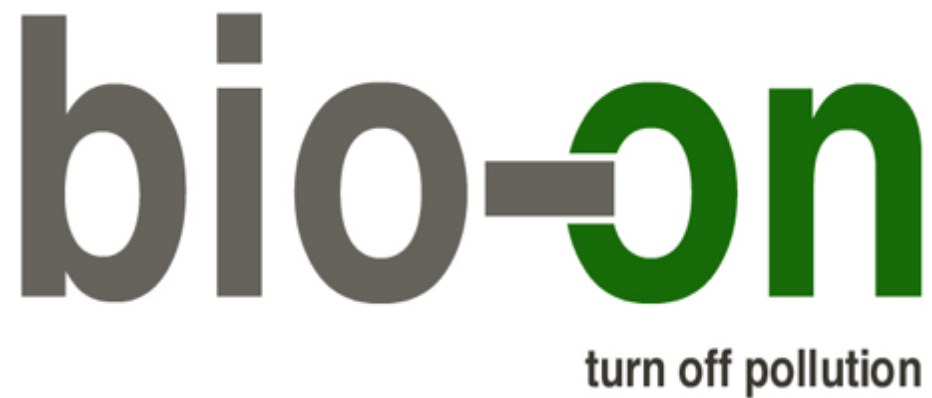




CHIMICA VERDE:
L'ITALIA ALL'AVANGUARDIA
CON LE INNOVAZIONI
E LA TECNOLOGIA

Bologna, 16 settembre 2016

WORLD ECONOMIC FORUM

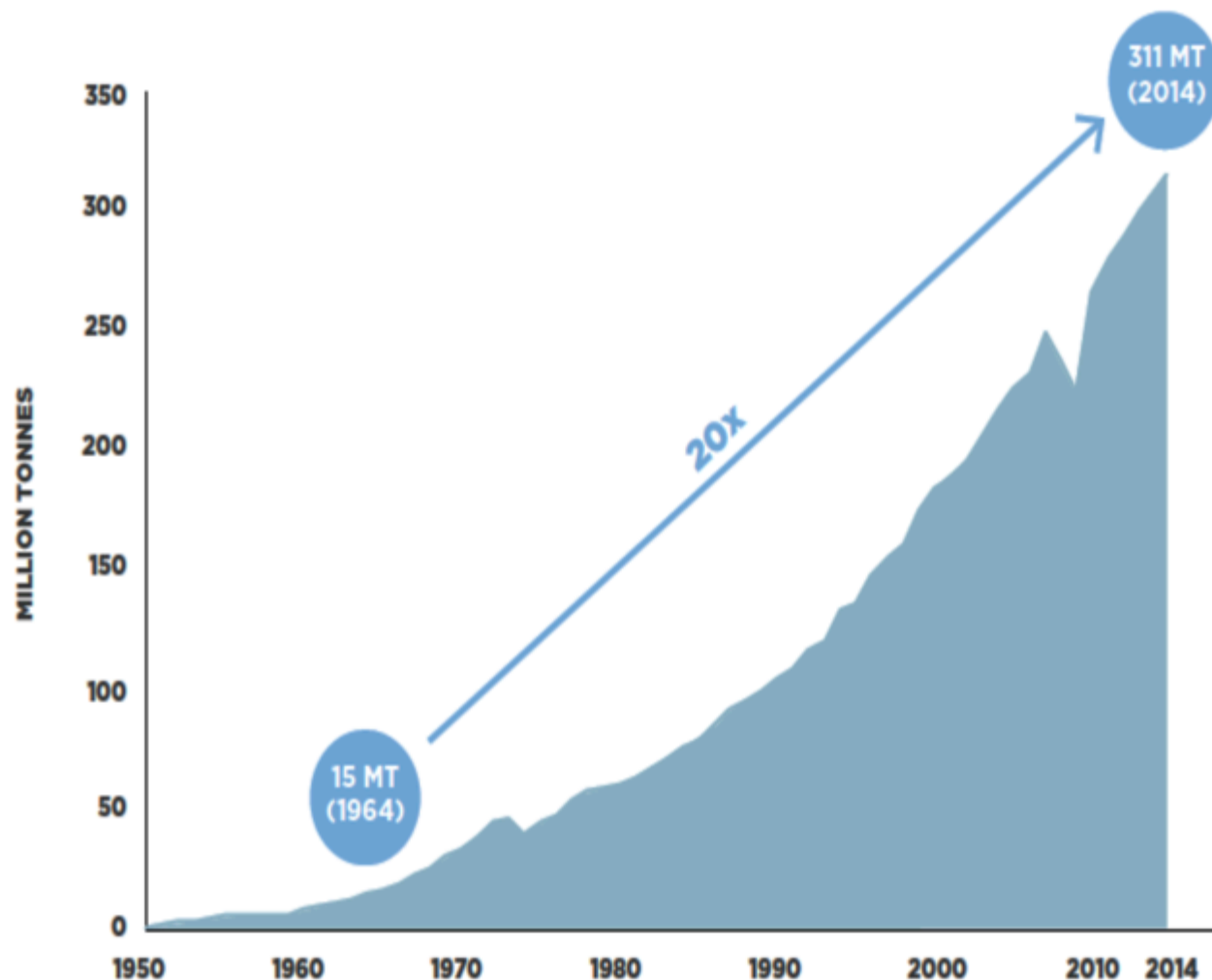


The New Plastics Economy
Rethinking the future of plastics

**World Economic Forum
COMMITTED TO
IMPROVING THE STATE
OF THE WORLD**

January 2016

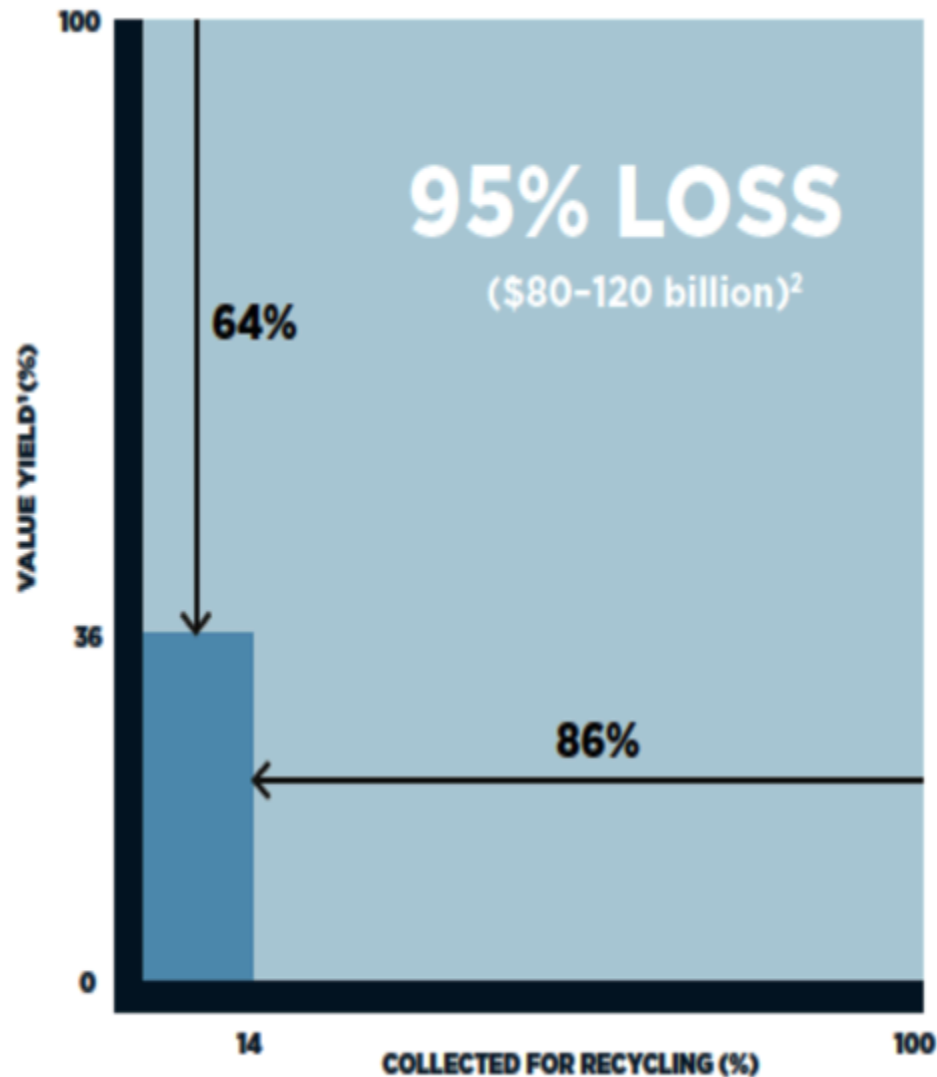
GROWTH IN GLOBAL PLASTIC PRODUCTION 1950-2014



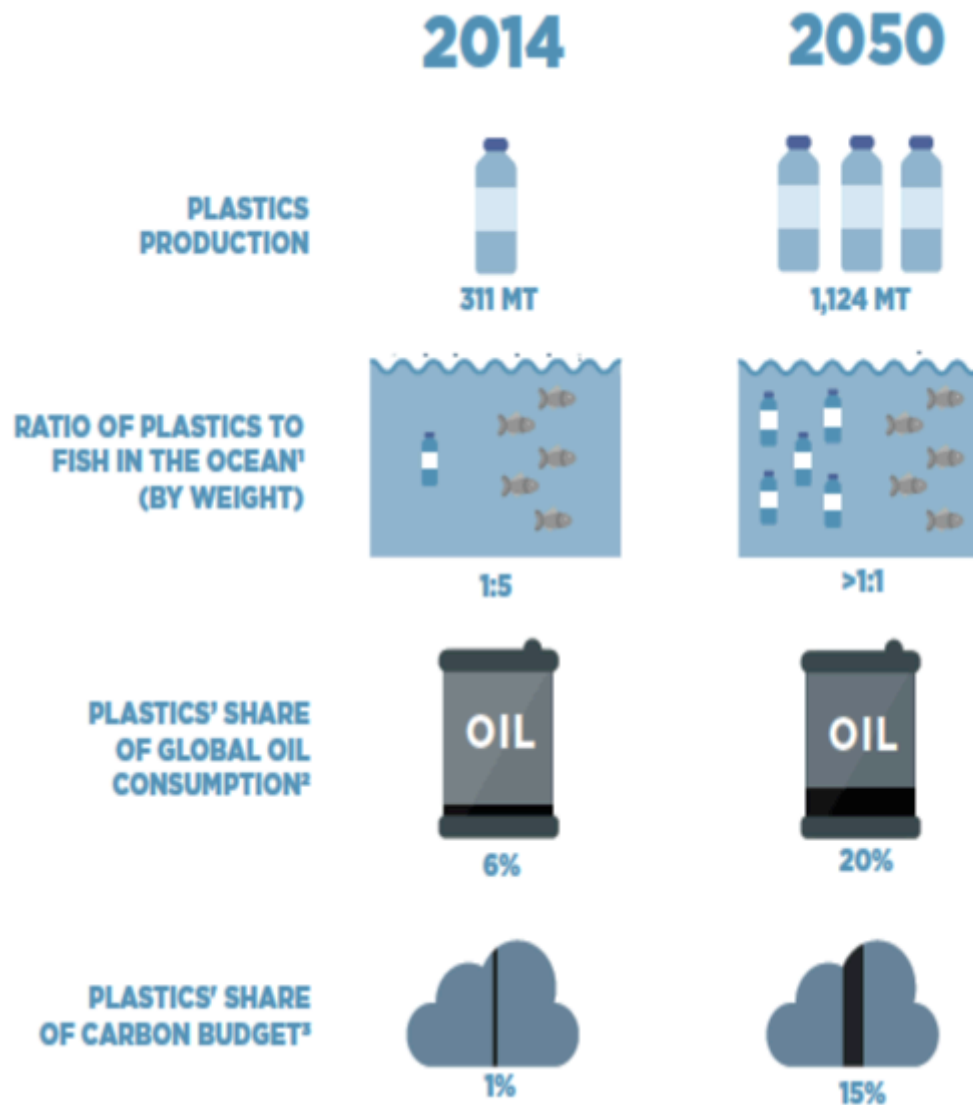
Note: Production from virgin petroleum-based feedstock only (does not include bio-based, greenhouse gas-based or recycled feedstock)

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

AIMItalia
MERCATO ALTERNATIVO DEL CAPITALE



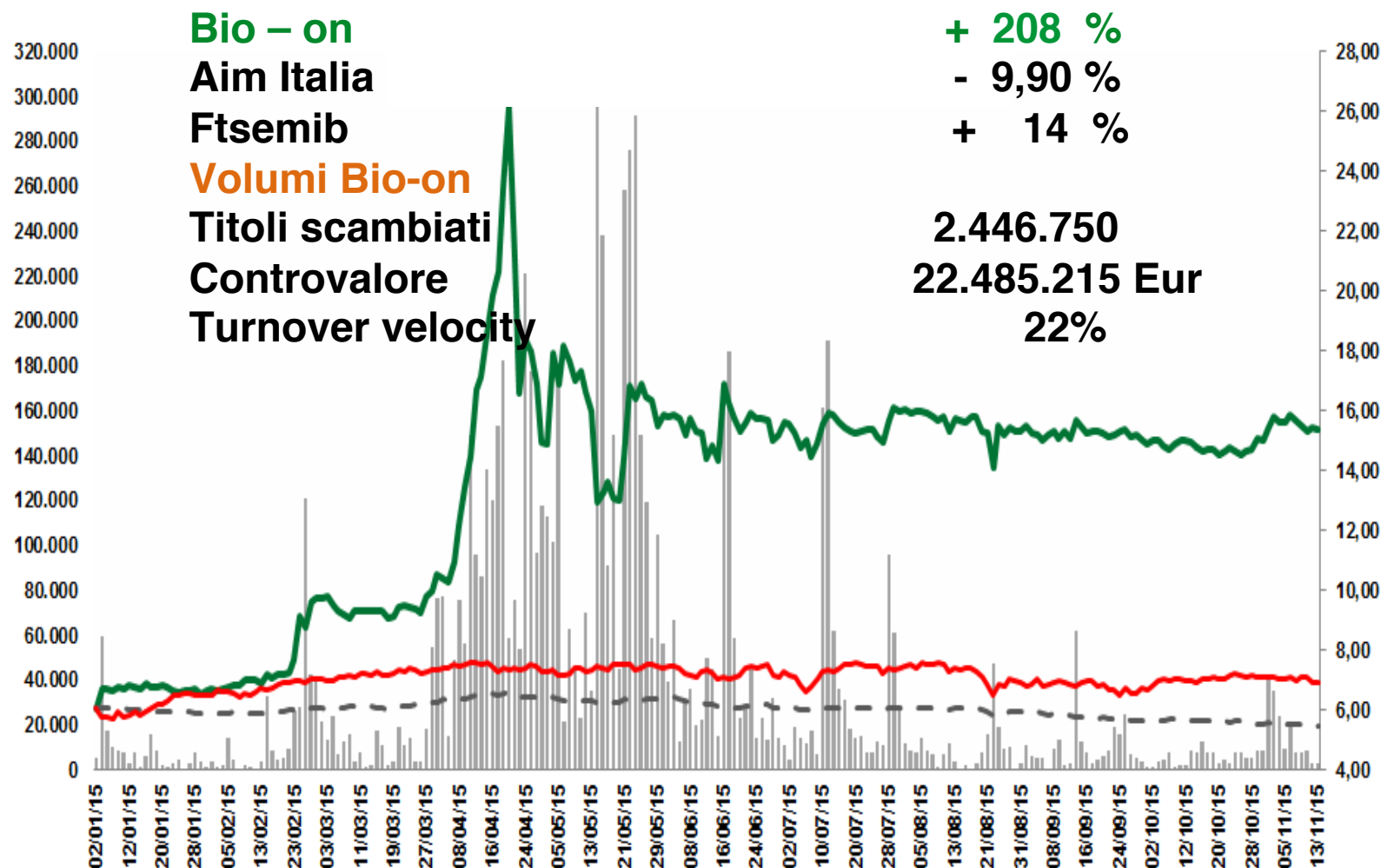
24
ottobre

2014

AIMItalia
MERCATO ALTERNATIVO DEL CAPITALE



Performance dall'1 gennaio 2015 ad oggi:

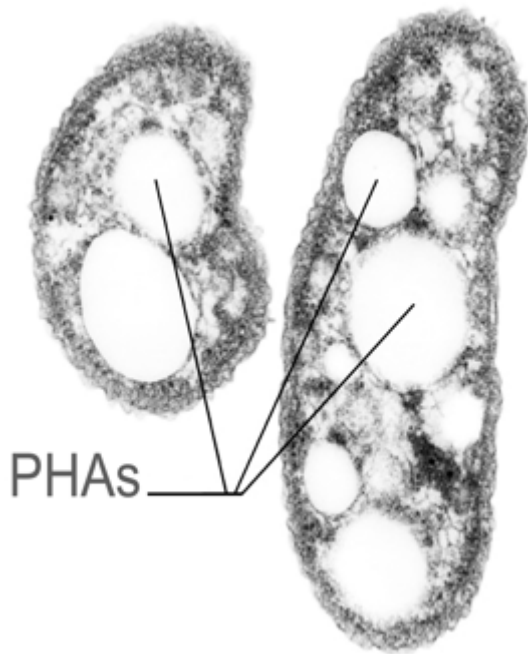


Capitalizzazione passata da 66.000.000 Eur a c.ca 200.000.000

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

IP Business model

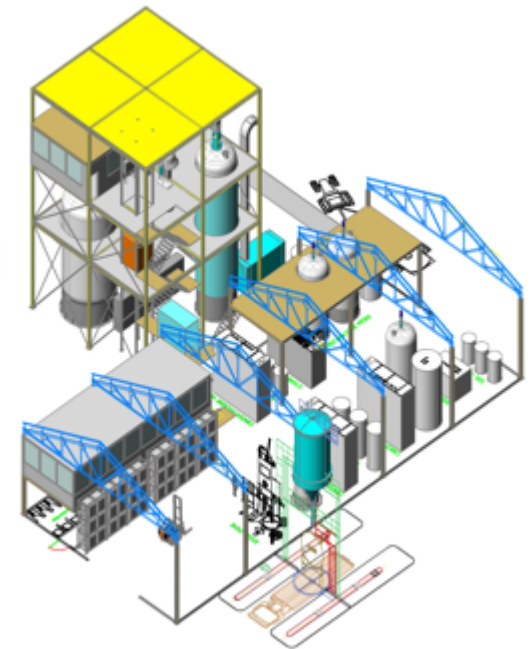
**Ricerca
Tecnologica**



**Prodotti
Innovativi**

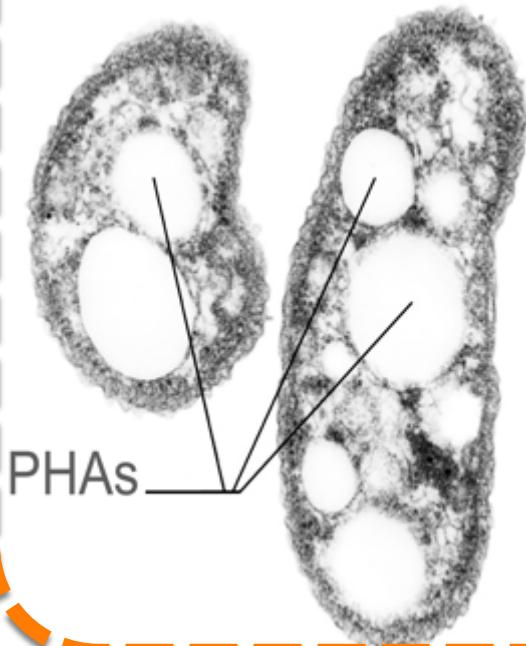


**Licenze
Impianti**



IP Business model

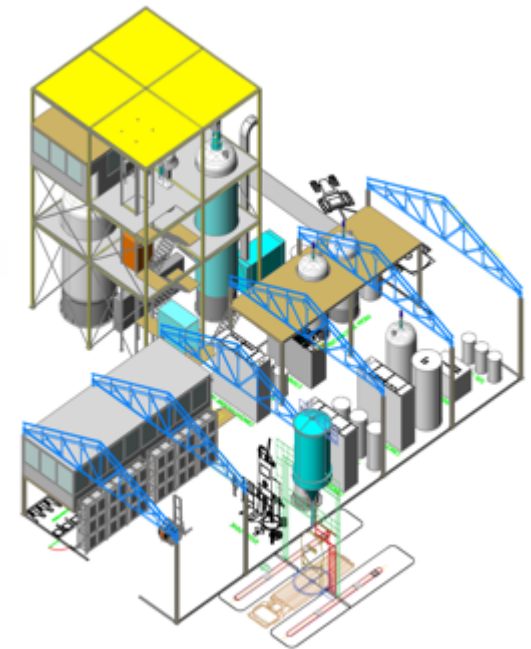
**Ricerca
Tecnologica**



**Prodotti
Innovativi**

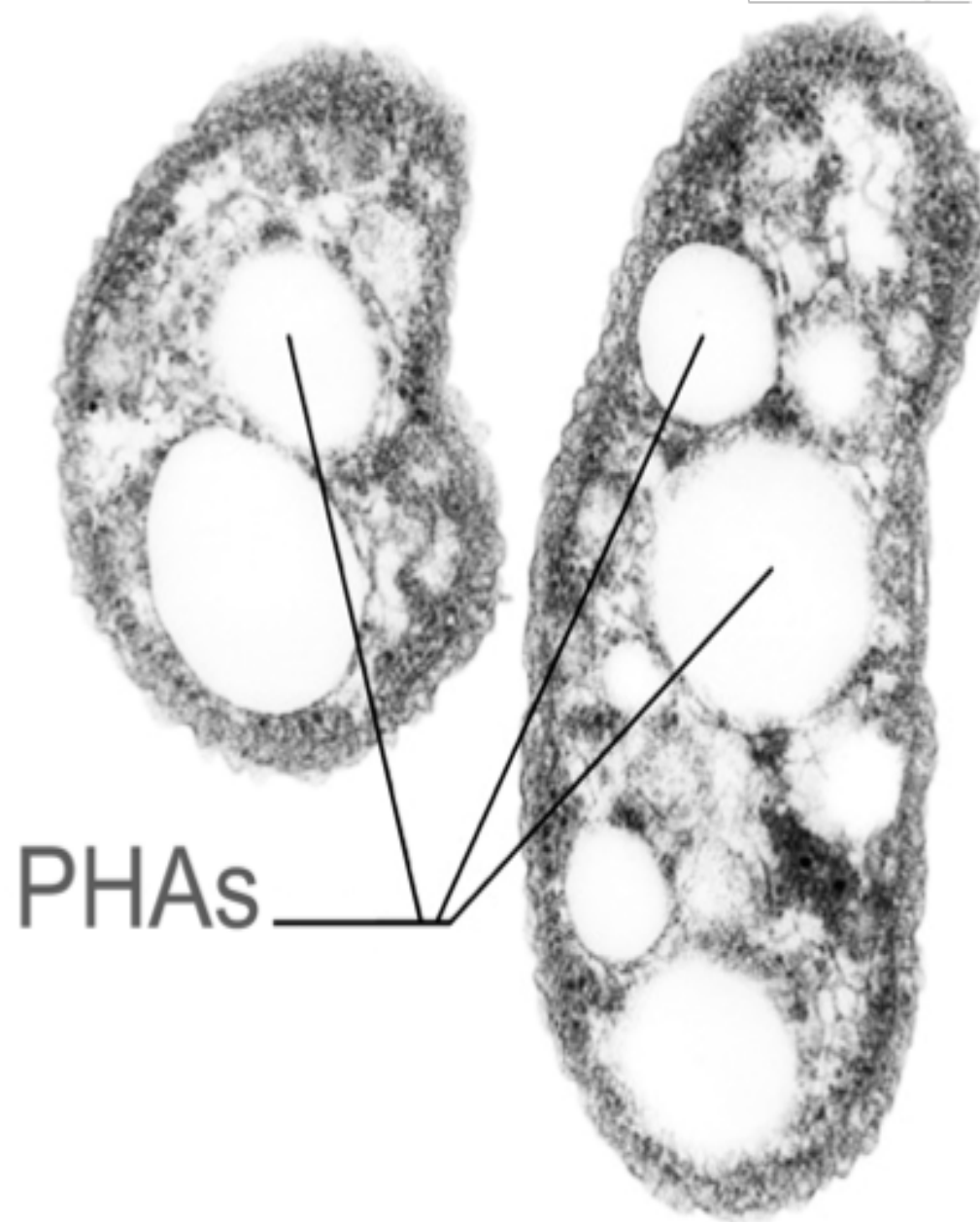


**Licenze
Impianti**

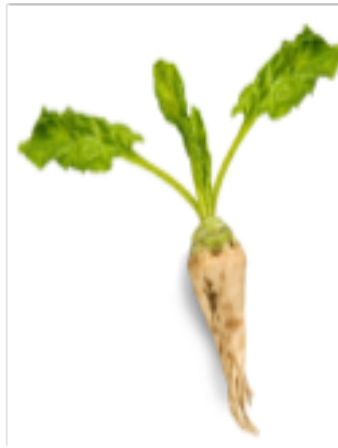


2007
bio-on
riscopre
il PHA

poliestere
naturale
riserva
di energia

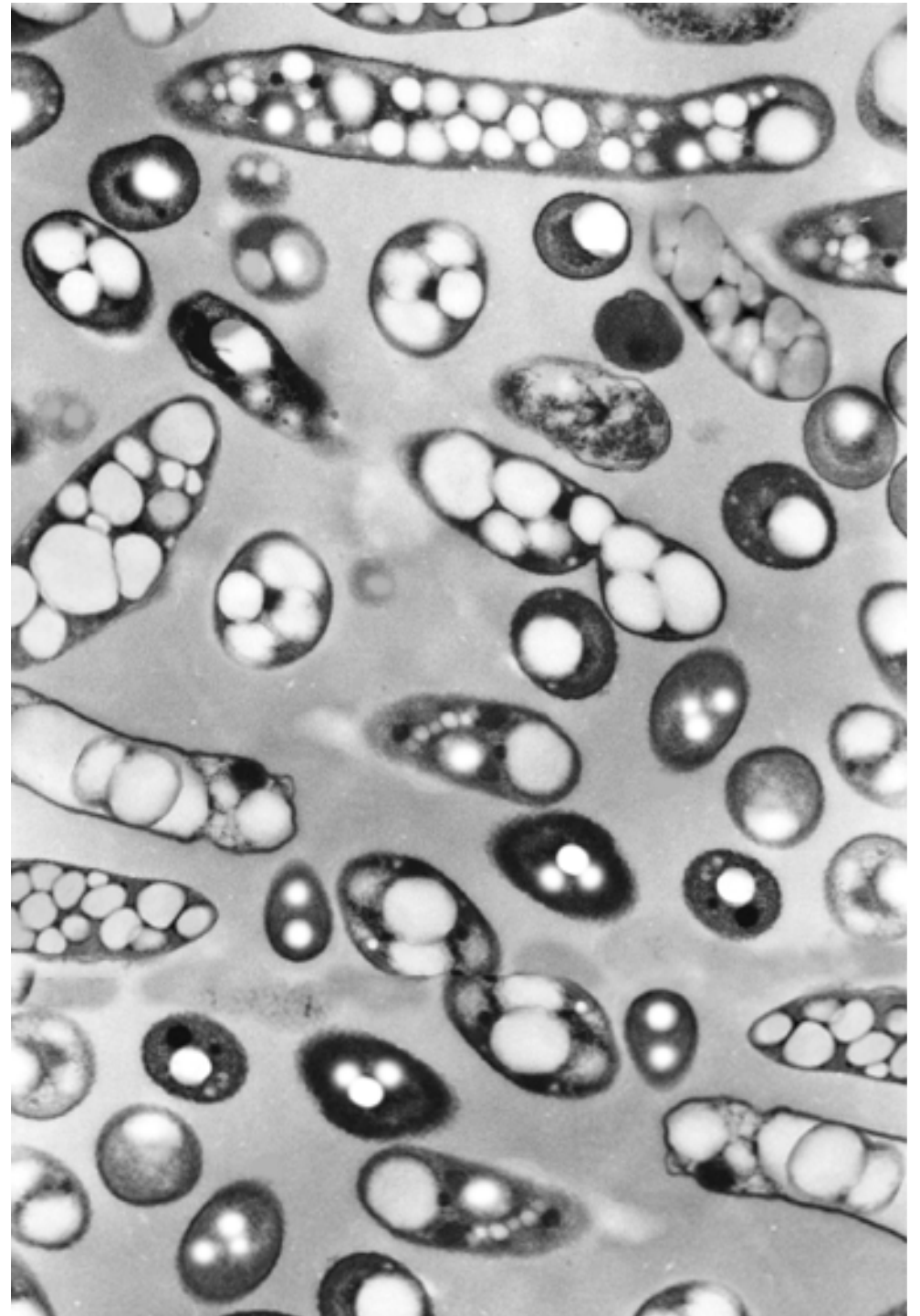


....dal melasso
di barbabietola,
canna da zucchero,
scarto delle patate
glicerolo



attraverso la
fermentazione...

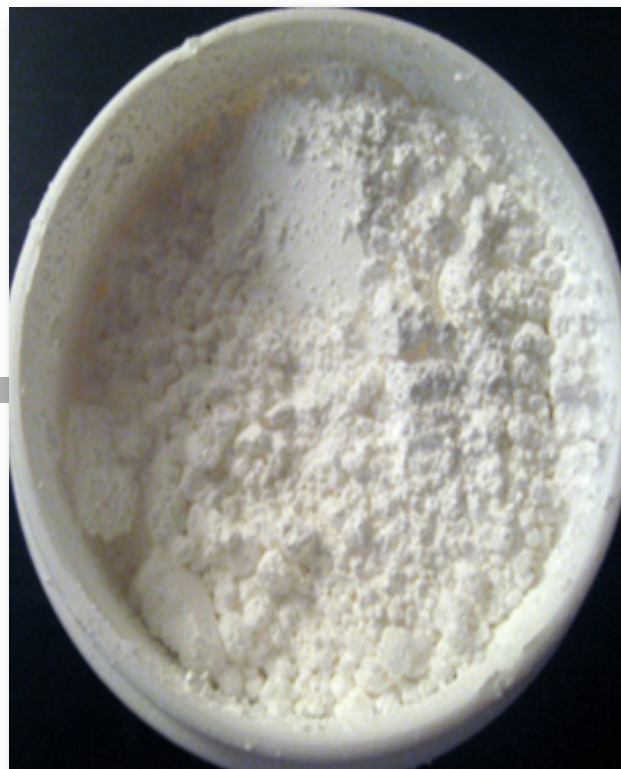
i batteri
si nutrono
di scarti agricoli



estrazione
naturale
senza solventi



essiccazione,
pellet,



bio-on
turn off pollution

impianti
PHAs



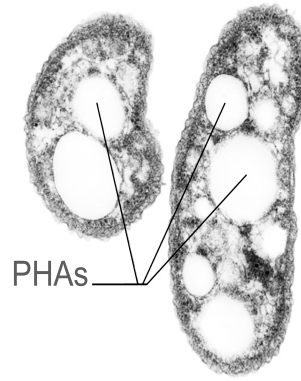
fattori chiave

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



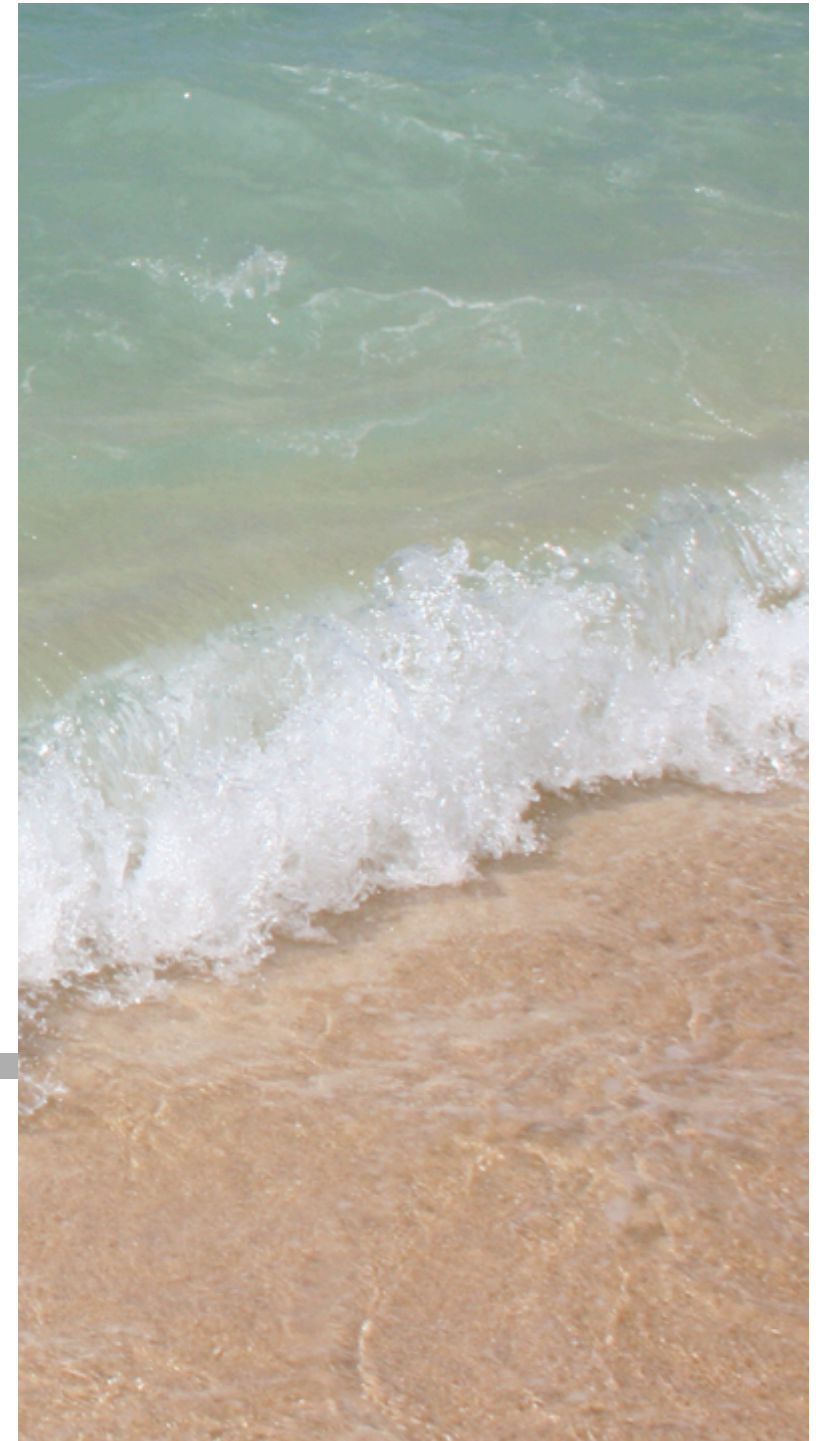
PHAs per sostituire
tutte le plastiche
come PP, PE, PC, PS.....





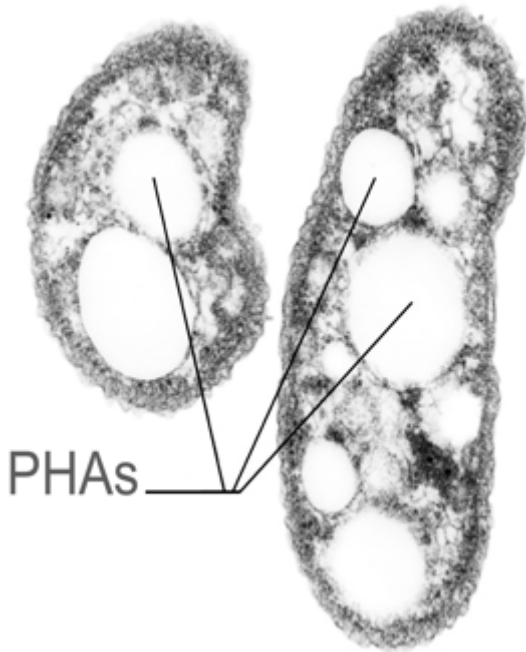
100%

biodegradabile in natura
compost-water-ocean



IP Business model

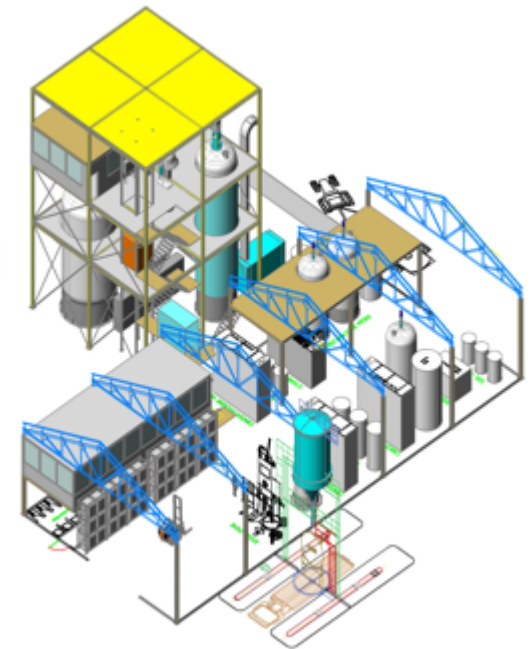
**Ricerca
Tecnologica**



**Prodotti
Innovativi**



**Licenze
Impianti**



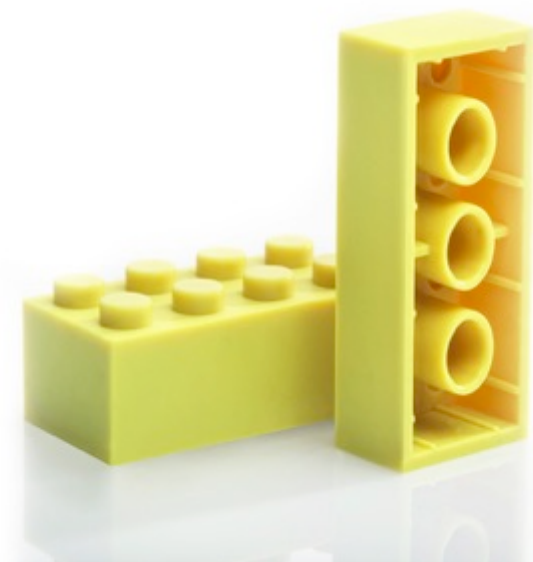


design:
Philippe
Starck
miss
sissi

bio-on
turn off pollution



Dicembre 2015 – Minerv Supertoys per giocattoli sicuri







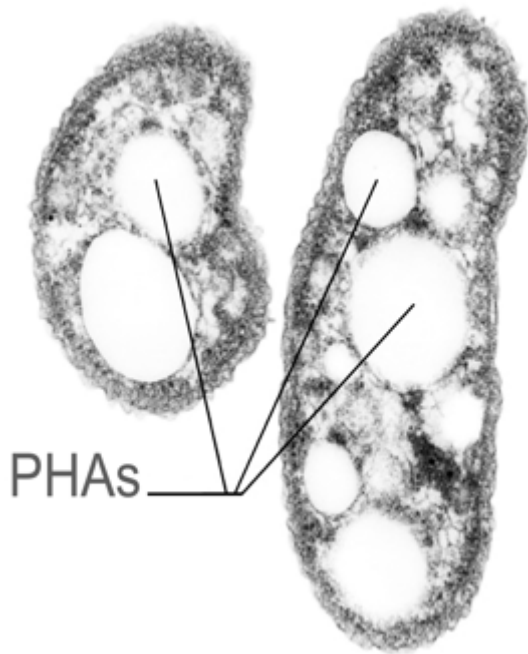






IP Business model

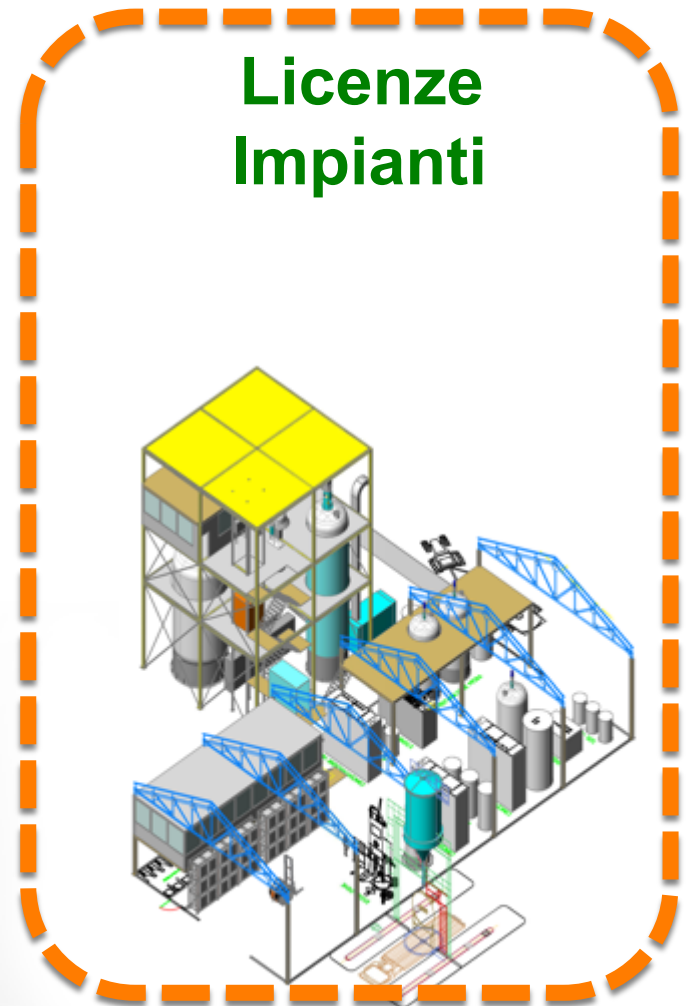
Ricerca Tecnologica



Prodotti Innovativi

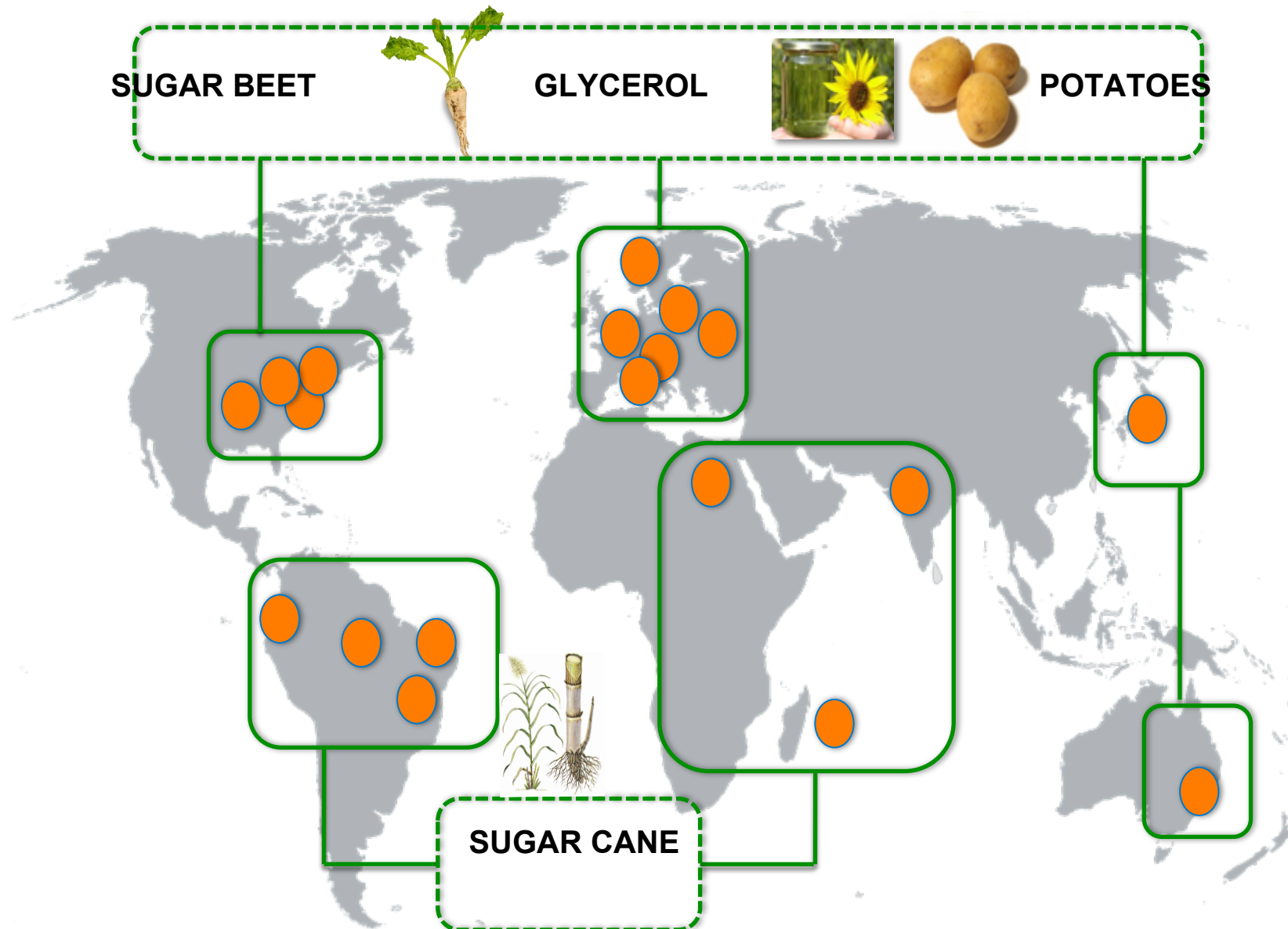


Licenze Impianti



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



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

Revolution in food packaging. The milk can of the future.

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 **Tampere University of Technology Finland**, one of the most important centres in the world for the use of paper and plastic for food packaging. A joint project launched in 2012, this collaboration has led to the development of the first time tetrapak type containers made of a combination of paper and a biopolymer developed by **Bio-on**. The new containers are made of **Minerv PHA** (Extrusion Coating) of the **Minerv PHA** turn off pollution.

To achieve this extraordinary outcome, researchers at the two laboratories replaced the polyethylene contained in current packaging, maintaining all of its impermeability, and for the first time in history created a material that is **totally naturally biodegradable and of renewable origin that can be easily and safely recycled**.

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 **Plamapas** with paper without using films, but instead using a biopolymer directly onto the paper using an extrusion process.

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 **Bio-on Kuusipalo from 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 **Marco Astori**, S.p.A. Chairman. Together we demonstrated that it is possible to develop new functionalities in the use of PHAs biopolymers in food packaging.

[illegible]

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

14 aprile 2016

Rivoluzione nel packaging alimentare. Il cartone del latte diventa bio.



TAMPERE
UNIVERSITY OF
TECHNOLOGY



life after plastic....

RE
VO
LU
TI
ON
BIO ON

