

Biobased value chains for sustainable and innovative products

Stefano Facco
Berlin
24/11/2015



Novamont: WHO WE ARE

WORLD'S LEADING
COMPANY IN THE SECTOR
OF **BIOPLASTICS AND
BIOCHEMICALS** FROM
RRM

1996: RESEARCH CENTRE
2014: **145 MIO/€**
TURNOVER
412 PEOPLE EMPLOYED

industry



25-YEAR R&D
EXPERIENCE
7.2% OF TURNOVER
20% OF EMPLOYEES
~ **1,000** PATENTS

R&D



HUMAN
CAPITAL



MORE THAN **250** TRAINING
PROGRAMMES SINCE
2000 IN COLLABORATION
WITH LEADING R&D
INSTITUTIONS

Our development model

bioeconomy as a factor of territorial regeneration, through the creation of **BIOREFINERIES INTEGRATED** in the local areas

Novamont's biorefinery integrated in the local area:

- ☞ Is primarily dedicated to the production of **high added-value products** (bioplastics, biochemicals)
- ☞ Makes use of different local raw materials (low-input crops, scraps, etc.), maintaining **local biodiversity**
- ☞ Uses **marginal lands** and **re-industrializes deindustrialized/no longer competitive sites**
- ☞ Integrates a wide and rising range of **low-impact technologies and plants**
- ☞ Is based on an **interdisciplinary approach** and **interconnection** with the world of farming, research, environment, consumers and with local institutions

Product from the integrated biorefinery represent solutions economically and environmentally sustainable in specific application sectors, with a view to **rethinking the overall system.**

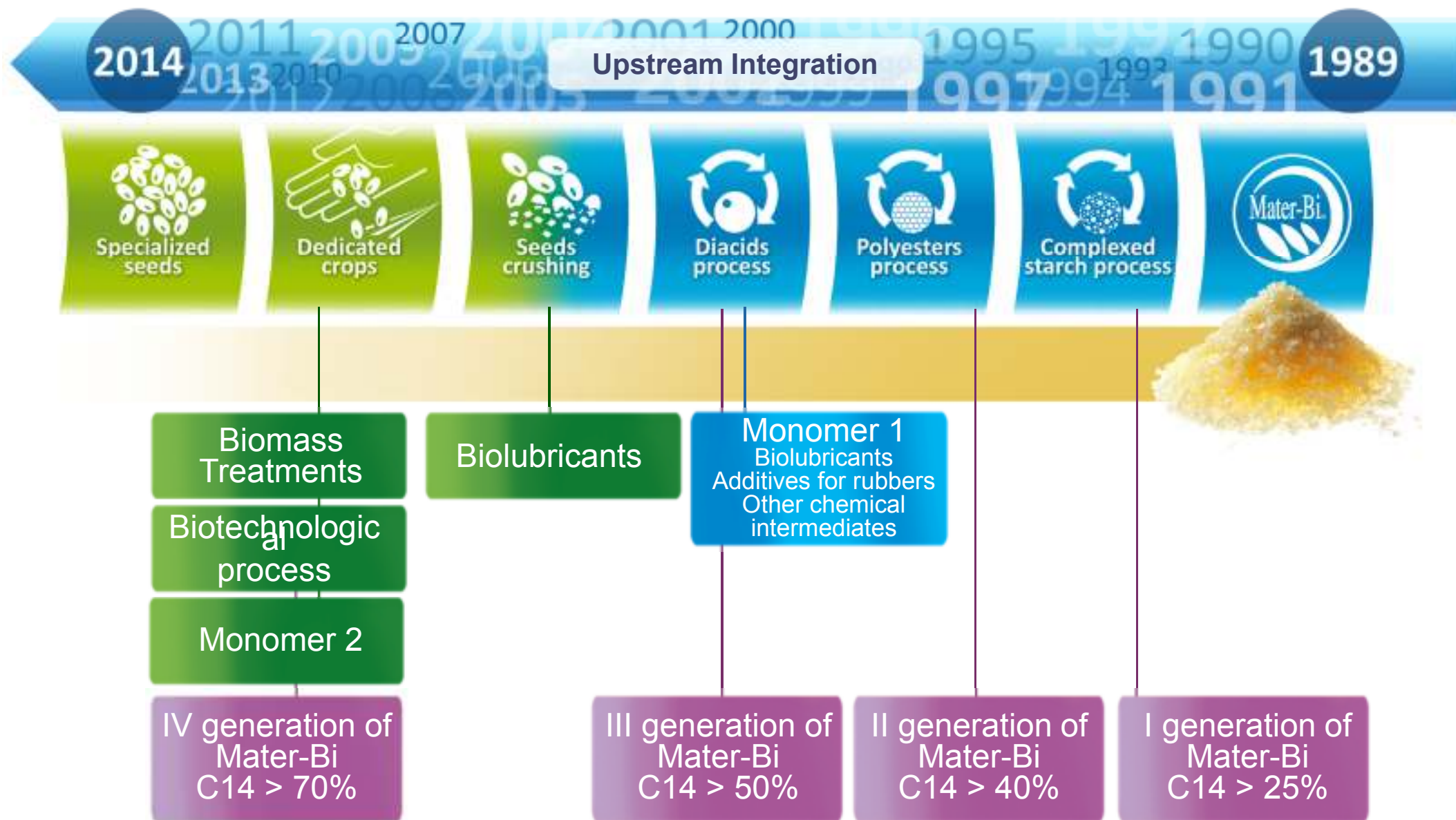
Where we started from

Innovative bioplastics

- based on renewable resources
- biodegradable and compostable according to the most important international standards
- for tailor-made applications where biodegradability and compostability present added value

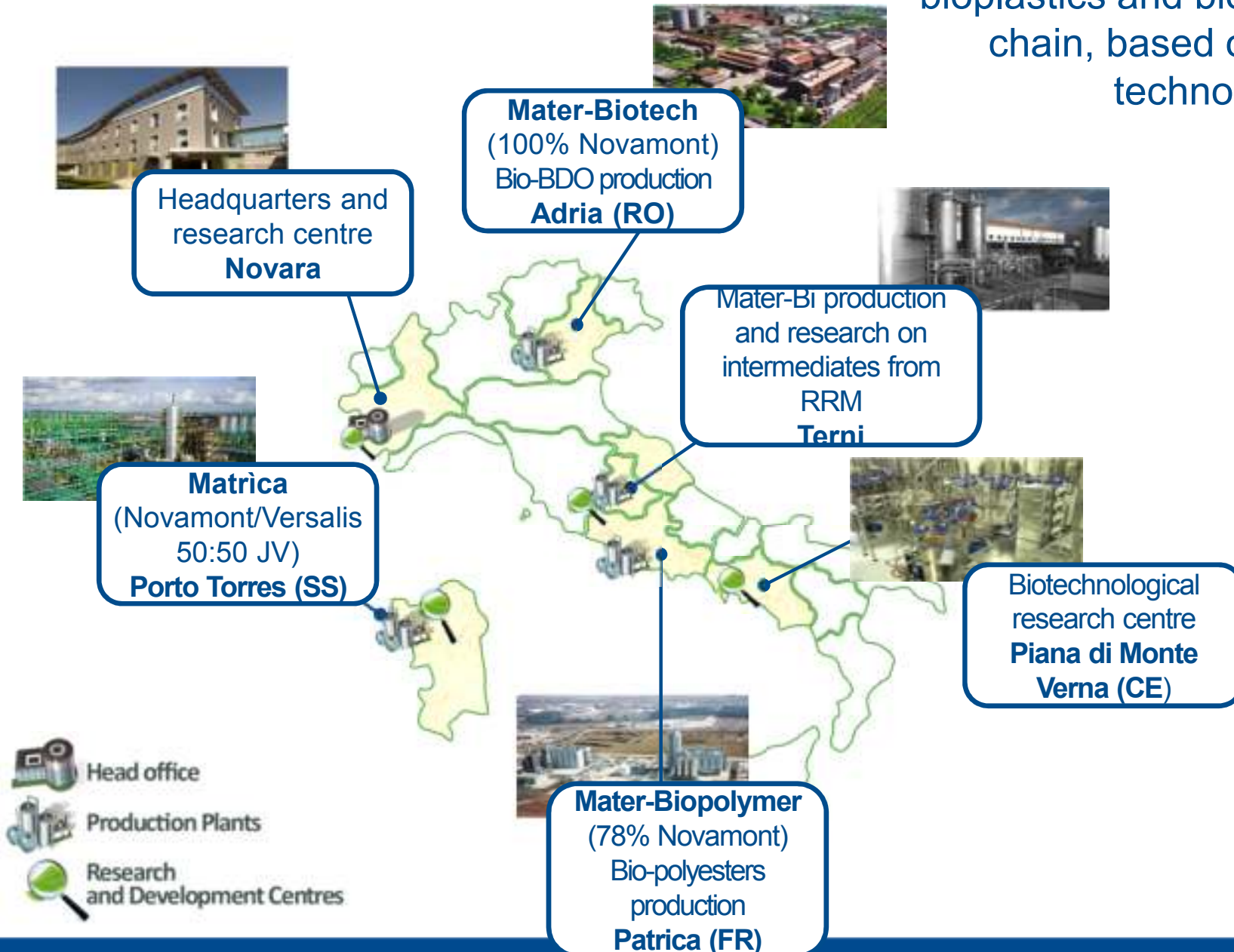


technologies and development scheme



Novamont's network

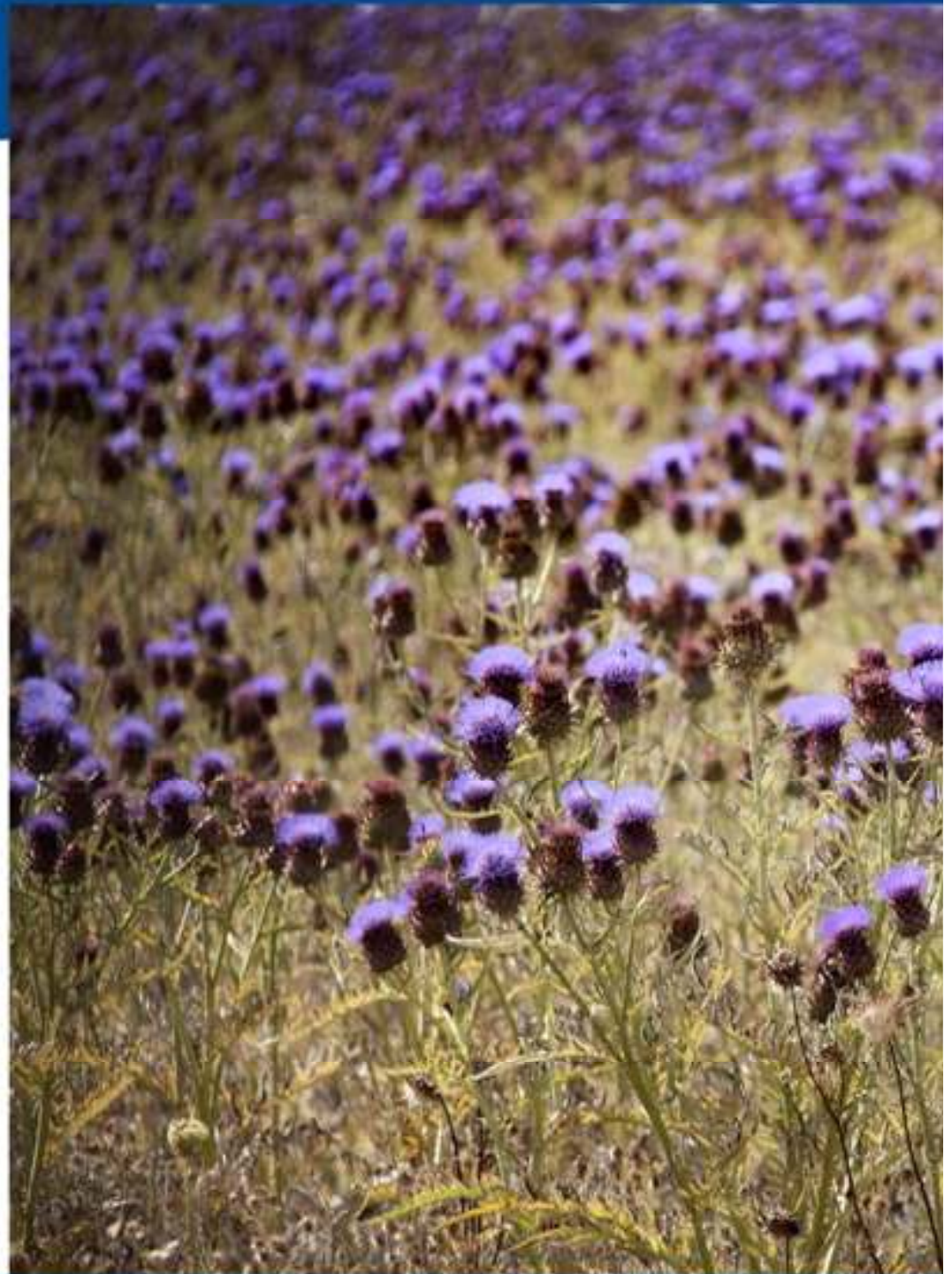
Network of sites related to the bioplastics and biochemicals value chain, based on Novamont technologies



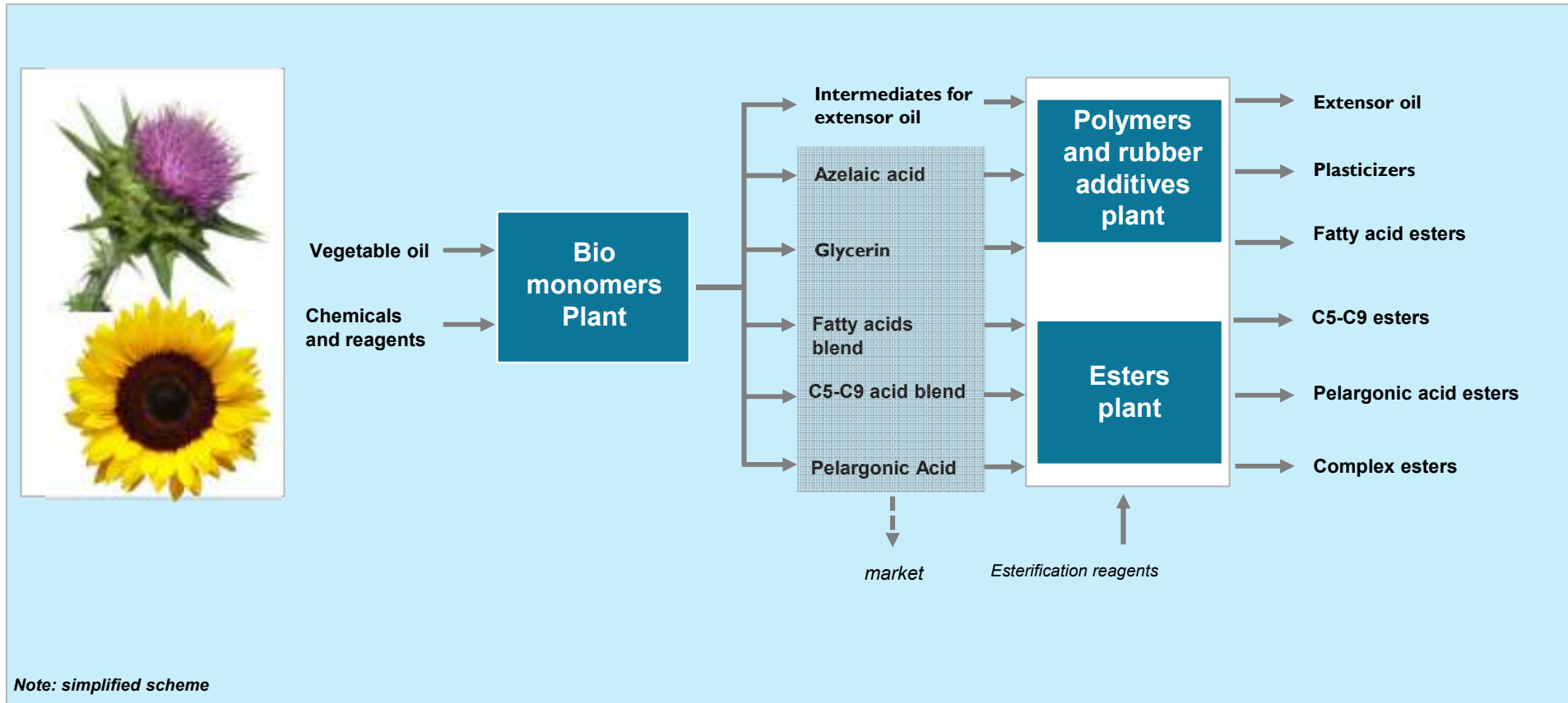
THE INNOVATION INDUSTRY...



...MEETS THE AGRICULTURAL SECTOR



Matrìca production cycle From oil to chemicals



BIOMONOMERS PLANT: VEGETABLE OIL FEEDSTOCK. PRODUCTION CAPACITY: 35'000 TON/Y

ESTERS PLANT: PRODUCTS FOR SPECIALTY APPLICATIONS: 2 INDIPENDENT AND FLEXIBLE PRODUCTION LINES

ADDIVES PLANT: ADDITIVES FOR RUBBERS AND POLYMERIC PLASTICIZERS

RAW MATERIALS AND USES FROM THISTLE



OIL AND PROTEIC FLOUR FOR ANIMAL FEED



FEEDSTOCK WITH VALUE ADDED FOR PRODUCTS AND ENERGY



ROOTS (ORGANIC SUBSTANCE)



Positive impact along the whole value chain

- PRIVILEGED PRIVATE INDUSTRIAL INVESTMENTS IN WORLD PREMIER PLANTS (3 FLAGSHIPS) (MORE THAN 500 MIO ALREADY INVESTED). NEW PLANTS TO BE STARTED BETWEEN 2015 AND 2016;
- PRIVILEGED PRIVATE INVESTMENTS IN R&D (AROUND 200 MIO EURO) TRIGGERING MULTIDISCIPLINARY PROJECTS WITH UNIVERSITIES AND PRIMARY RESEARCH CENTRES;
- START-UP OF SPECIFIC AND LOW IMPACT AGRICULTURAL VALUE CHAINS, NOT COMPETING WITH FOOD PRODUCTION;
- REVITALIZATION OF DOWNSTREAM VALUE CHAINS;
- REINDUSTRIALIZATION OF 6 DEINDUSTRIALIZED SITES, FOR A TOTAL OF MORE THAN 1.500 EMPLOYEES: TERNI, PIANA DI MONTE VERNA (CE), PATRICA (FR), PORTO TORRES (SS), NOVARA, ADRIA (RO);
- NEW PROCESSES AND BIOPRODUCTS AT EU LEVEL: AZELAIC ACID, PELARGONIC ACID , THEIR DERIVATIVES, NEW OIL EXTENDERS FOR RUBBER AND PLASTICIZERS, BIOBUTANEDIOL, STARCH-BASED AND VEGETABLE OIL BASED BIOPLASTICS
- A VIRTUOUS CHAIN OF HIGH QUALITY COMPOST WITH EXTRAORDINARY CASES OF EXCELLENCE (MILAN CHAMPION IN QUANTITY AND QUALITY OF ORGANIC WASTE)

Thank you for your attention!

« The challenge of our millennium is in the balance between the technical means that humanity possesses and the wisdom in how we will make use of them »

Umberto Colombo