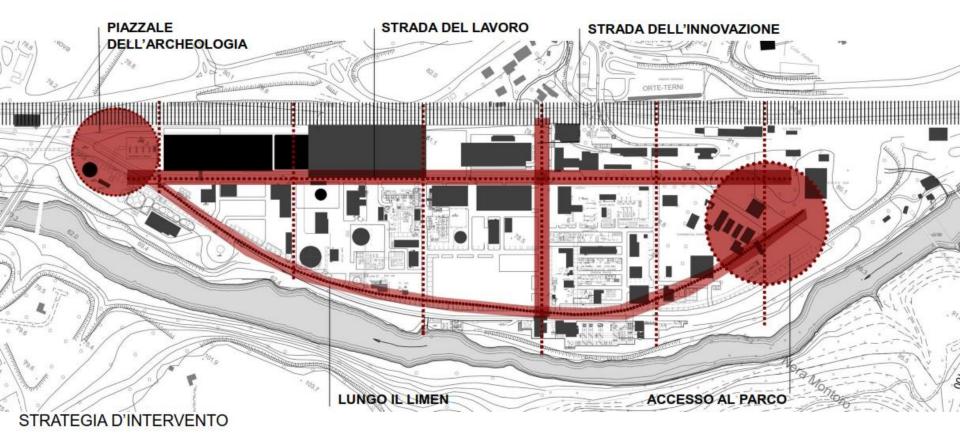
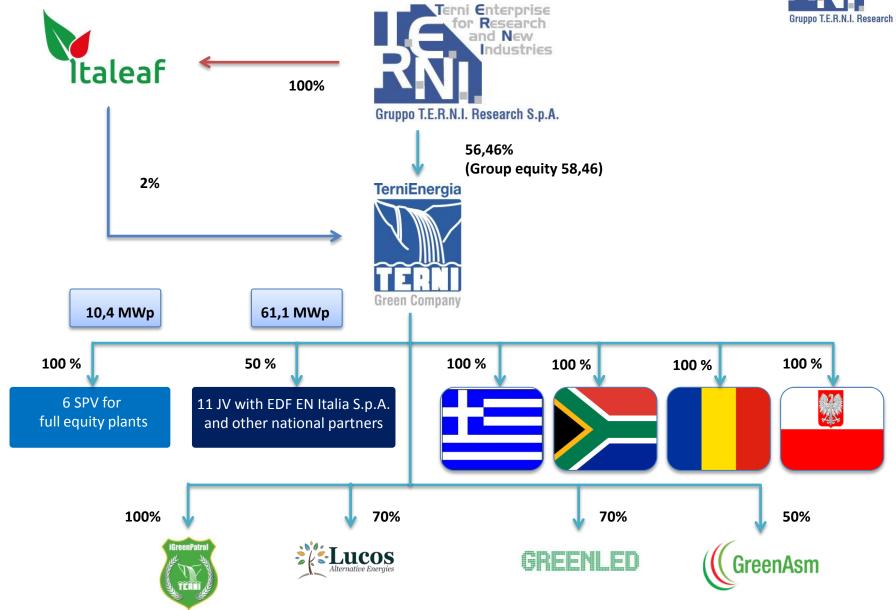
"Factory & Nature" Nera Montoro case between energy and landscape





Group structure





Nera Montoro: from chemistry to green industry



- Acquisition by Terni Research of NUOVA TIC, owner of the historic industrial site in Nera Montoro, from Yara Italy, the Italian subsidiary of Yara International ASA, a Norwegian company among the world's leading manufacturers of fertilizers (completed in June 2010)
- The agreement has resulted in the preservation and enhancement of human resources previously employed at
 the plant and the participation of trade unions elaboration and preparation of industrial revitalization plan of the
 production site in Nera Montoro in the direction of the green economy, with new initiatives production connoted
 by the absolute absence of environmental impact
- The operation has ensured the continuity of the industrial sector in a different production and maintenance of employment levels
- Following the agreement, Terni Research has transferred all operational activities of the two subsidiaries and TerniEnergia Italeaf at the industrial site in Nera Montoro
- Furthermore, the implementation of the activities envisaged in the business plan is leading to the seizure of approximately 13,000 sq.m. covered further expandable favorable terms than those of the market



Infrastructure / logistics

Distance from highway A1 (Orte): 5 Km

Presence of train station Nera Montoro

Rail siding

Potential for future development

Total area: 24 Ha

Covered area: 2.3 Ha

Storage volume: 7.000 m3

(expandable to 20,000 m3)

Nera Montoro: from chemistry to green industry



The situation post sale by Yara

















Thiessen polygons
Affected by the
reclamation

The project involved the removal of parts of the contaminated soil, up to a meter deep excavation

- 1. Asphalt restore
 - 2. Cement parts restoring
 - 3. Replacement land compromises with topsoil
- **→** Work in progress: 100%
- End of work: 3Q2012
- Total areas affected: 27,153 m2 (green areas, roads, plant and rack)
- **→** Land removed: 7,500 mc
- Asphalt restored: 3,000 sq.m.

Opera running entrusted to TerniEnergia from Italeaf SpA area owner, which has taken charge of the project approved by the Region of Umbria in April 2011

Investments: € 1,85 mln





The current situation

- **→** Facilities in place:
 - **→** Chemical-physical system (sewage metals, arsenic)
 - **➡** Biological treatment (removal of nitrites and nitrates, ammonia nitrogen)
- → 48 wells barrier
- **→** Treatment capacity: 65 m³/h

Development Project

- → Following the sharing of the institutions to enter into the Nera river water of a similar quality to those deep and / or drinking, was presented to the Region of Umbria a project to get the recognition of requirements from Table 2 for water.
- Time schedule: (= by 2013 (pending authorization AIA + VIA)
- Planned infrastructure: new section remediation (chemicalphysical and biological)
- Cost of Ownership: ← 2011-2021 € 13.5 million € 1.3 million / year

The three plants will be able to treat 100 m3 / h

4nvestments: € 10,5 mln



Strategic approach

- 1
- Resource recovery, pollution prevention, cleantech productiondevelopment
- Technological innovation and continuous environmental improvement

- 7
- Encourage clustering of industries in order to close the material cycles
- Managing the life cycle of products

- 3
- Integration in natural ecosystems
- Design and implementation of green/sustainable infrastructure and buildings

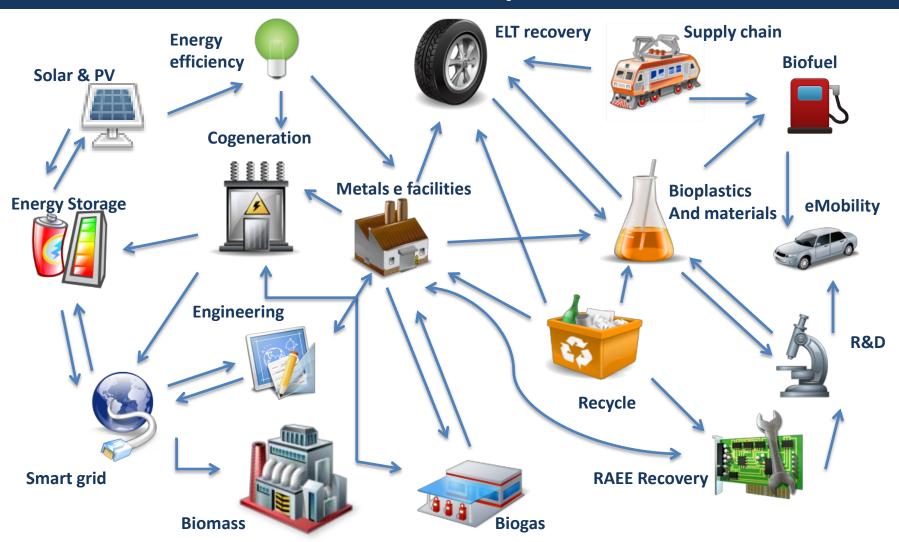
- 4
- Adoption of environmental management systems
- Continuous training of technicians and dematerialization of production

5

Participation of local communities



Industrial layout





The Group in figures

2012 Investments on the plant: € 13.3 million Direct staff: 176 **Indirect staff: 25** Cargo handling environmental Incoming: 66,000 tons / year Cargo handling environmental output: 50,000 tons / year Cargo handling and storage Metals: 10,000 tons / year



Interaction with the local community

Maintenance of a bank **Maintenance Post Office** Maintenance of first medical intervention point Renovation of canteen **Company kindergarten** Facilitation of the pipeline for new Alcantara power plant



Strategic Masterplan for the architectural and environmental and production regeneration area in Nera Montoro



- •The case of regeneration in Nera Montoro is unique in Europe.
- •Research program mandated by Terni Research at the Politecnico di Milano Department of Architecture and Planning.
- •Relationship between the principal axes, the way of work and the way of innovation, with the two head elements, the area of access to the park and the square of the industrial archeology.



Industry and landscape regeneration

•Inserting a thematic teaching that runs along the Nera River, enhancing the limit "between the factory and nature" through the arrangement of the soils and the use of platforms with metal frame and wooden planks that determine new walkable waterfronts and emphasize the visual and spatial relationship between industry and landscape. Among the actions planned, new flooring and placement of vertical totem, the construction of a tunnel of the sun, a new Research and Development Center with walk-on cover, the inclusion of some architectural volumes containing some new functions deemed necessary (guest quarters, new cafeteria, fitness area), redevelopment of the arches in front of the silo to by the removal of obsolete structures, the redesign of the square in line with the enhancement also figurative signs and traces of the historical memory of the place.









Towards a handbook of environmental objectives

Low Carbon emission

Zero Waste

Development of renewable energy sources

Local and sustainable materials

Energy efficiency

Sustainable water management

Natural habitat and biodiversity

Culture and local heritage

Sustainability and economic development

Quality of life and well-being







Target: green & sustainable seed start up



talents training Location and events Mentors incubator investors

Stages of development

Startup/Seed Stage **Early Stage**

Growth Stage

Expansion Stage

Later Stage

Exit

growth investments start-up

+66% Early stage

> Fonte Rapporto AIFI 1H2012

ecosystem





industrial sectors











Storage Cogeneration Smart grid













Recycle

Bioplastics

Biomass

R&D

RAEE















ELT

Metals **Facilities**

Biogas Engineering E-mobility

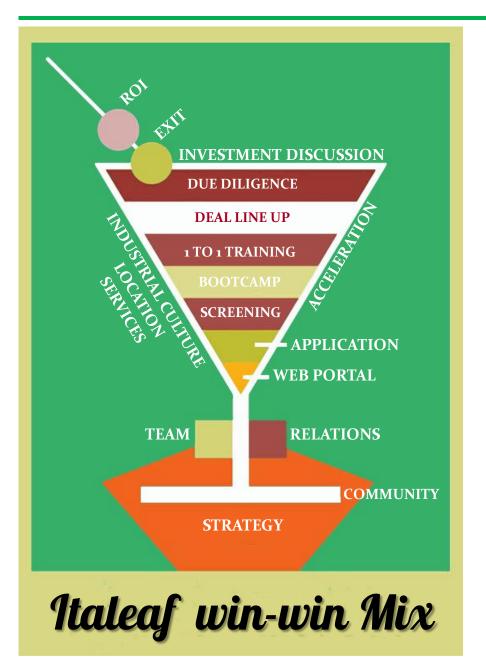
Supply chain



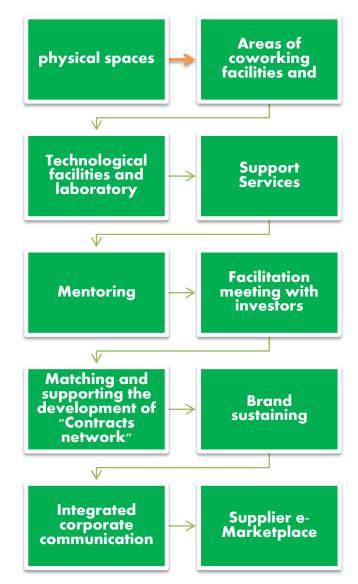
A road map to repeatability and regeneration





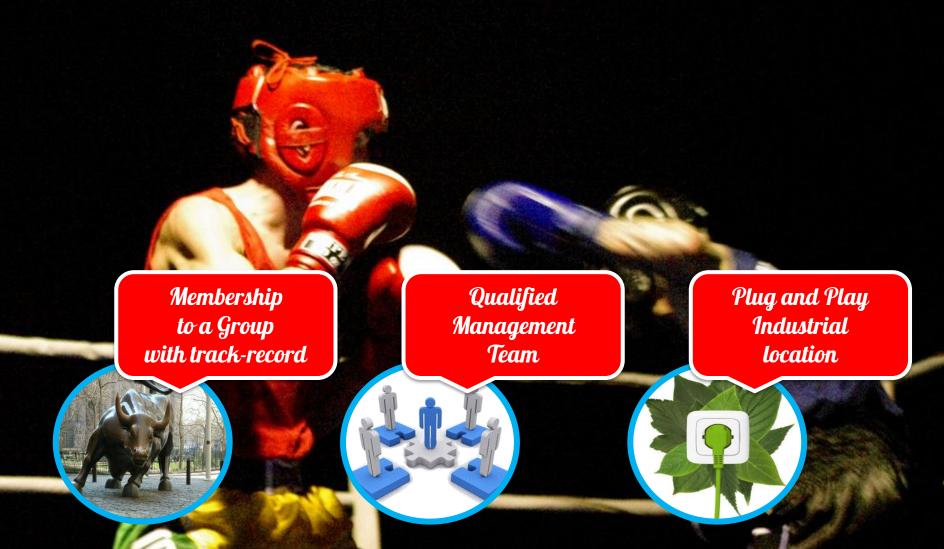


Business model





Key strenght







Federico Zacaglioni

Head of corporate communication zacaglioni@terniricerca.it



