REGIONE PIEMONTE

ENVIRONMENT PARK

SCIENCE AND TECHNOLOGY PARK FOR THE ENVIRONMENT

Massimo DA VIA'

www.envipark.com

aspect
Promotion of Eco Companies

Lausanne, October 30 2007

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EnviPark: What it is

Basic concept

Real estate

Applied research and technology transfer

Environment Park represents today an original experience among the **European Technology and Science Parks** thanks to the ability to combine technological innovation and eco-efficiency, hosting several companies and Research Institutes operating both in the **Environmental Protection** and the **ICT fields**.

EP is a research and innovation centre : a space in which SMEs, Research Bodies and start up companies share services and equipments, join for new initiatives and develop new projects

EP is an eco site : high investment in renewable, consume reduction and pollution prevention technologies

The company

The project has been possible thanks to a very strong co-operation among local authorities and business associations.

Finpiemonte	28,79%
Municipality of Turin	11,20%
Province of Turin	11,20%
Turin Chamber of Commerce	13,71%
AAM	13,55%
AMIAT	13,70%
SMAT	3,23%
AEM - IRIDE	3,23%
Industrial Association of Turin	1,24%
University of Turin	0,15%

The realization of the Science and Technology Park has been co-financed through EU Funds ERDF CEE 2081/93 – Action 3.1 "*Technology Parks - obj. 2*" and the EU "*RE-Start Thermie*"

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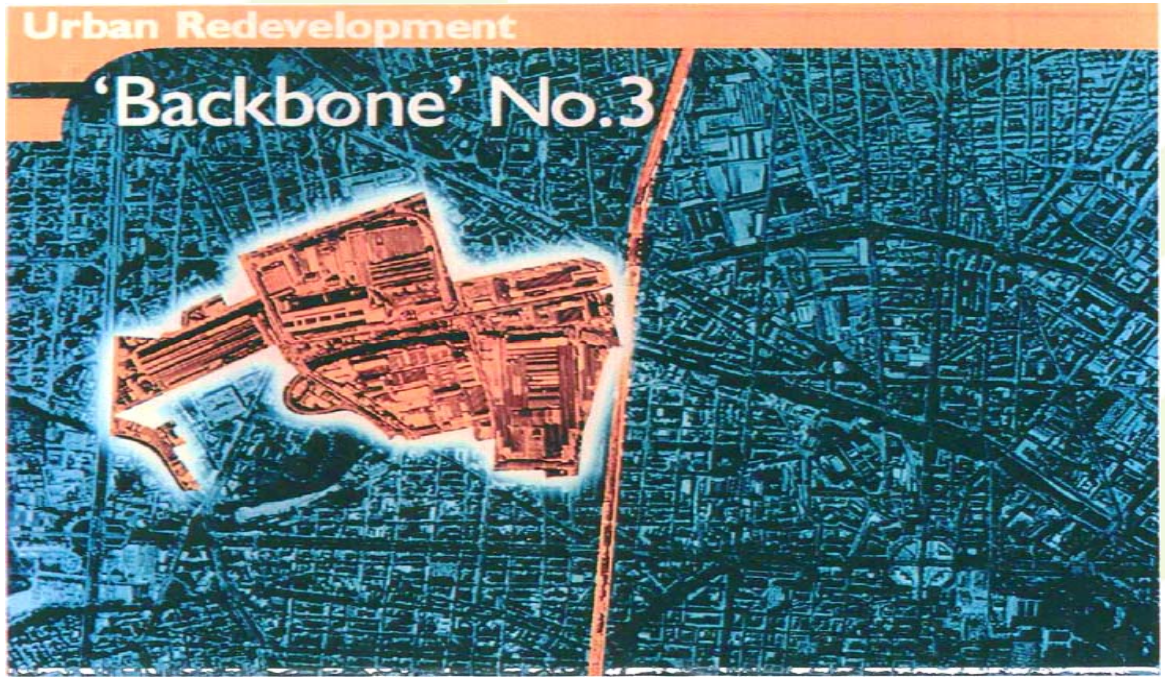
The urban transformation

Backbone 3 area

about 1.500.000 sqm

Main abandoned industrial estates:

- Former FIAT steelworks
- Michelin plants
- Mechanical industries



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Environment Park – site remediation

- Operations:
- Risk analisys to optimise the intervention
- Clean up of asbestos dusts with a innovative technology
- Removal of polluted soil
- Disposal in authorised landfill

The biggest urban transformation in Turin

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Envipark today

Company's structure

Real estate

Applied research and technology transfer

About 30,000 sqm available

95% of the surface rented - service contracts with variable duration

About 60 firms/organizations settled in the Park

About 500 people working in the Park (80% graduated)

20 new business started in the Park since 1999

Offered services:

- Electric power
- ICT services
- Cleaning and surveillance
- Maintenance
- Restaurant - Cafeteria
- Meeting and conference rooms
- Turn-key design solutions for settlements

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EP: the eco-site

- Energies Equipment and energy management plan has been sustained through « RE-Start Thermie » EU programme
- Buildings and equipment has been designed according to Bio Architectural standards, implementing technologies and solution dedicated to energy saving, renewable energies productions and efficiency in water management system
- Key factor: **integration of different technical solution according to local environmental "energy opportunities"**

Envipark : the eco site

Largest green roof in Italy (24.000 sqm)

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Envipark : the eco site

Heating and cooling using biomasses

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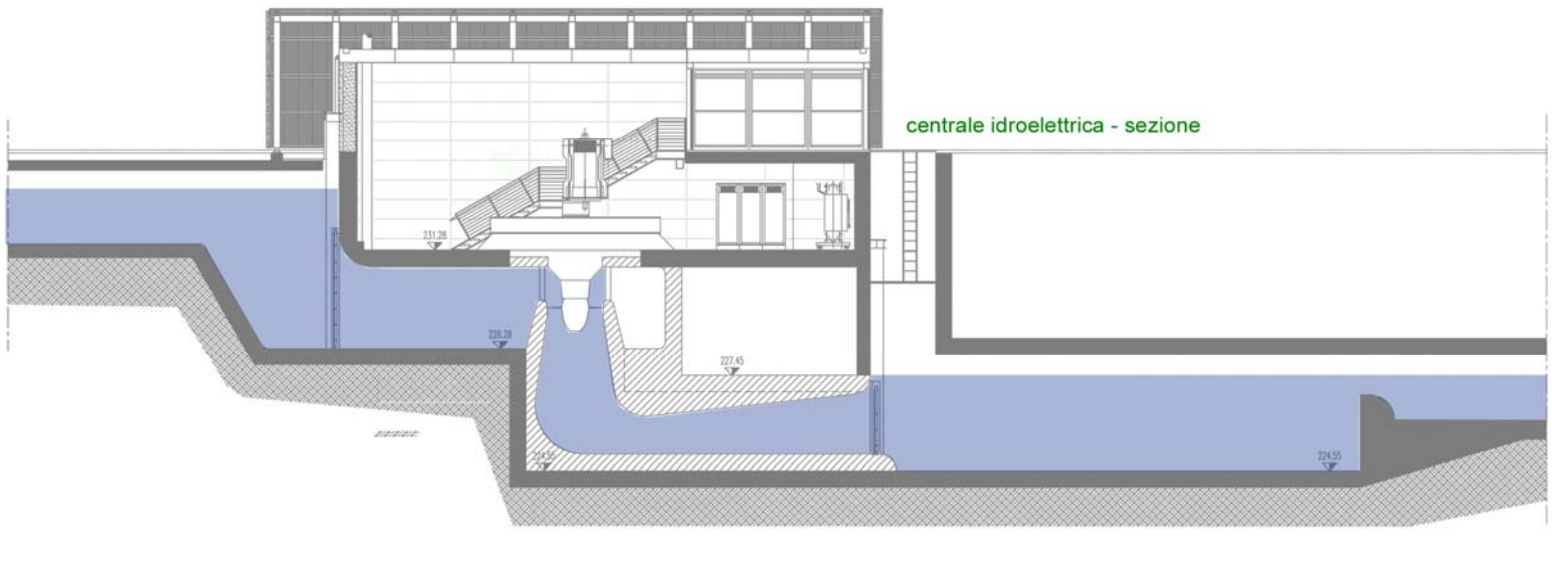
Envipark : the eco site

Photovoltaic sail for hydrogen production

Envipark : the eco site



Hydro-electric power station

Envipark : the eco site

Services Centre: entirely built up following eco-architecture criteria

"Test site" for SB new materials and techniques

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Envipark : Technology Transfer

HYSYLAB
HYdrogen SYstem LABoratory

CLEAN NT LAB
NANO-TECNOLOGIE PER L'AMBIENTE

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- EP "open labs": all the activities of the labs are carried out in co-operation with Technical Universities and regional SMEs;
- in labs companies can find information, equipment, technicians and opportunities to be involved in national and international R&D networks and projects.
- Labs provide high tech tests and prototype samples to industrial companies optimizing the investment in equipment and training of experts and reducing research costs for SMEs.

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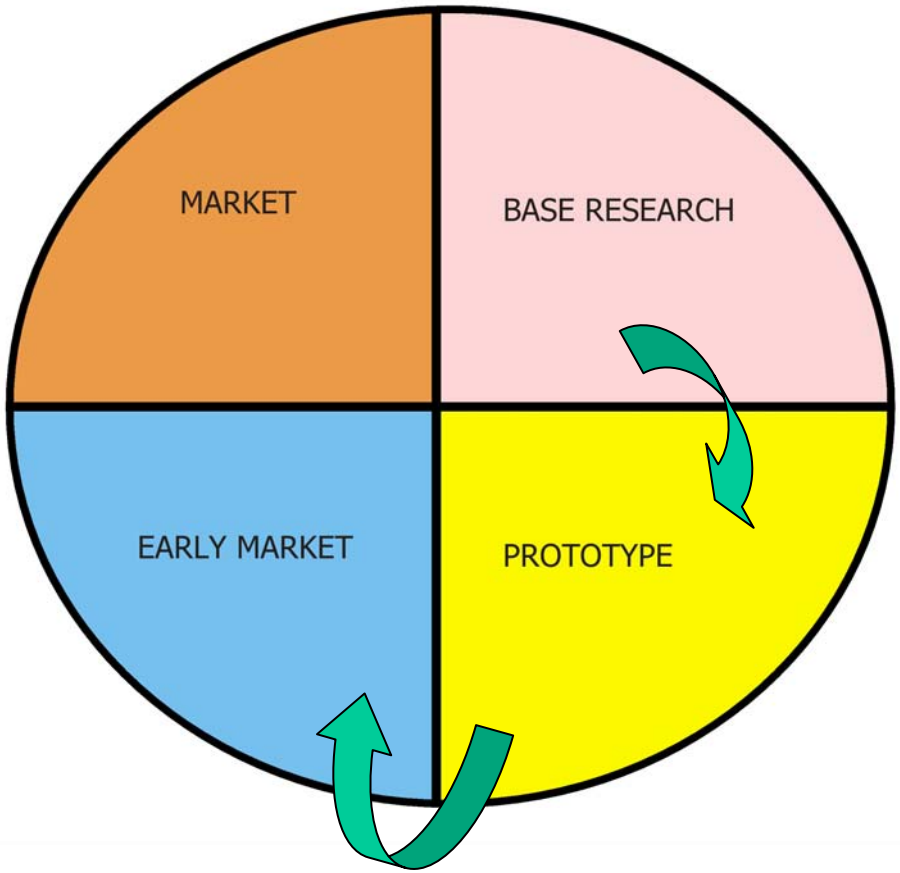
Wheel of innovation: EP's position



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Sustainable building centre

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"Branch" of EP operating in Research and Dissemination of principles of sustainable building

Activities:

– Innovative design and integration of RES in building

–scouting and test of innovative technologies and materials,

–market technical survey and price analysis of SB materials (i.e. *Regione Piemonte* official SB pricelist),

–training and dissemination,

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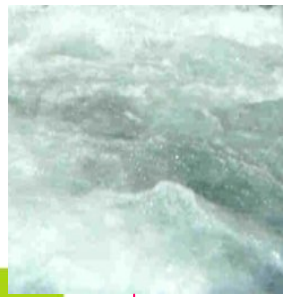
HYSYLAB

HYdrogen SYstem LABoratory

Hydrogen research and development laboratory

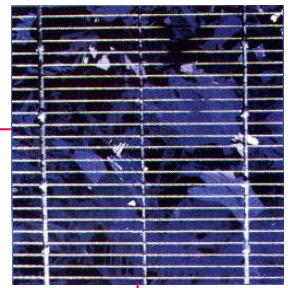
The laboratory tests the hydrogen production systems according to the various sources of renewable energies: photovoltaic, biogas and wind power.

Water H_2O



Solar power

Photovoltaic



Hydrogen H_2

electrolysis

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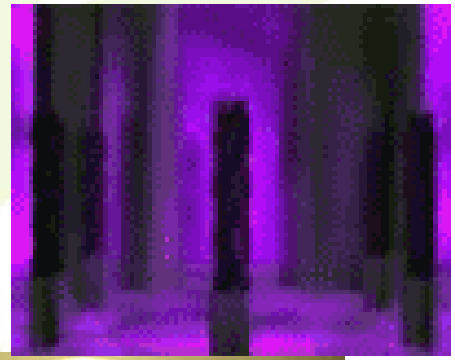
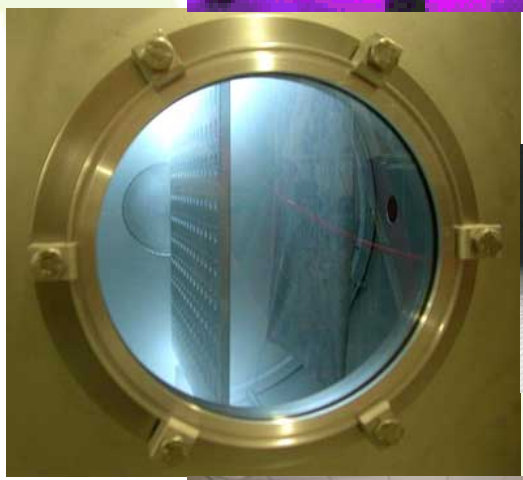
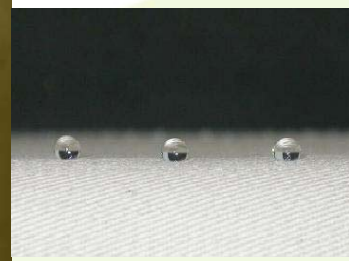
Mission

The laboratory tests, analyses and improve the PVD (Physical Vapour Deposition) process for functional and decorative coating and surface treatment in many industrial sector

This new technology reduce the environmental impact due to galvanic process.







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Tech Transfer activities

Period 2001-2006, indicators:

- About 1.300 enterprises contacted (80% SMEs from Piedmont)
- More than 200 technology audit
- 65 feasibility studies for innovative products or processes
- 160 technology tests
- 26 prototypes or pre-serial product developed

A TT project: HysyVision

The project, would give an answer to following questions:

- Could H_2 be a chance for regional industrial system development?
- Are SMEs informed about H_2 next market opportunities?
- Is there a possibility that some SMEs can switch their (or a part of their) production to H_2 systems and/or components production?
- How to start and support a "H_2 Productive Chain" in Piedmont?

HysyVision: goals

The initiative aims to:

- Consolidate the system of SMEs ascribable to hydrogen sector;
- Qualify technological supply in components sector, by bearing out it with major international industrial players;
- Create a cluster of hydrogen-specialized enterprises and research centres that could compete at international level;
- Develop technologies and systems through “pilot” projects worked out by collaboration among project partners and enterprises.

HysyVision: activities scheme

1) Technology foresight

check out of promising H2 technologies and products

→ Identification of Industrial sectors to be involved in HysyVision

2) Technology Scouting

Systematization of outputs from academic researches

→ Exploitation of researches' outputs in industrial scope

3) Industrial Scouting

Selection of enterprises able to offer competences and know how

→ Selection and first contact with a sample of Regional SMEs potentially interested in the project (about 500)

4) Technology Audit

Check up of the interest, know how and competences of SME's

→ Audit at enterprises , about 100

5) TT - Check Up

Test out the technical potential of implementation of product/technology in the SME

→ About 30 internal technical Check Up

HysyVision

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HysyVision: activities scheme

6) Feasibility studies

Technical and economical product analysis

→ About 15 Studies

7) Integrated Productive Chain

Design of projects/products to be developed by a cluster of SMEs with integrated competences

→ About 10 projects

8) Demonstrative products

Realization of pilot system and prototype

→ # 7 tests "H_2 technological adjustment" of employable components/accessories in hydrogen clusters

4 realization of full integrated H_2 system prototype

And promotional, technical seminars and other dissemination activities

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Promoted by Regione Piemonte and Chambers of Commerce

HySyRider

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An H_2 scooter "Made in Piedmont"

EP: Development perspective

The operational model

Envipark works mainly with existing firms, fostering innovation and technology transfer paths

- Empowerment of the present main activities: hydrogen, plasma technologies, eco-efficiency in building...
- Other fields of the activities: renewable energy technologies (Plasma based deposition of PV materials, H2 from biomasses, solar cooling)
- Enlargement of EP operative area through international partnerships
- Improvement of the present methodologies for technology transfer

Thanks

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