



UNIVERSIDAD
POLITECNICA
DE VALENCIA



The Polytechnic City of Innovation

Committee n Industry, Research and Energy
Delegation to valencia
Valencia 25-November-2005

Ciudad Politécnica de la Innovación





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The Polytechnic City of Innovation

UNIVERSIDAD POLITÉCNICA DE VALENCIA

Scientific Park



FOCUS

We want to be an entrepreneurial university with a strong focus on the problems of the real world. We are building up a space where connecting university and industry, trying to generate knowledge-intensive activities.



KNOWLEDGE CAPITALIZATION

THE UPV EDUCATION ASSETS



The UPV is dedicated to advancing knowledge and educating students in science, technology, and other areas of scholarship that will best serve our society and our world in the 21st century.

KEY FIGURES 2004

37.855	Undergraduate and graduate students.
2.600	Faculty
1.705	Administration staff
58	Academic programs

€ 356 Million Gross Revenue

THE UPV INNOVATION ASSETS



We are convinced that university research is one of the mainsprings of growth in an economy increasingly defined by technology. Our commitment to innovation has led to a host of scientific break-through and technological advances.

KEY FIGURES 2004

2.862	Researchers and research staff
329	Research groups and labs
40	Scientific institutes
4.869	Research contracts and services

€ 38 Million Gross Revenue

The CPI: a knowledge-intensive area contributing to the regional development.



R&D&i:

- encourage research and interaction with corporate innovation

Economy structural change:

- promotion of technology-based enterprises and technological improvement of traditional industries
- promote entrepreneurship

Social cohesion:

- avoid a new inequality (between rich and poor in knowledge)
- contribute to a regional strategy to develop the knowledge society



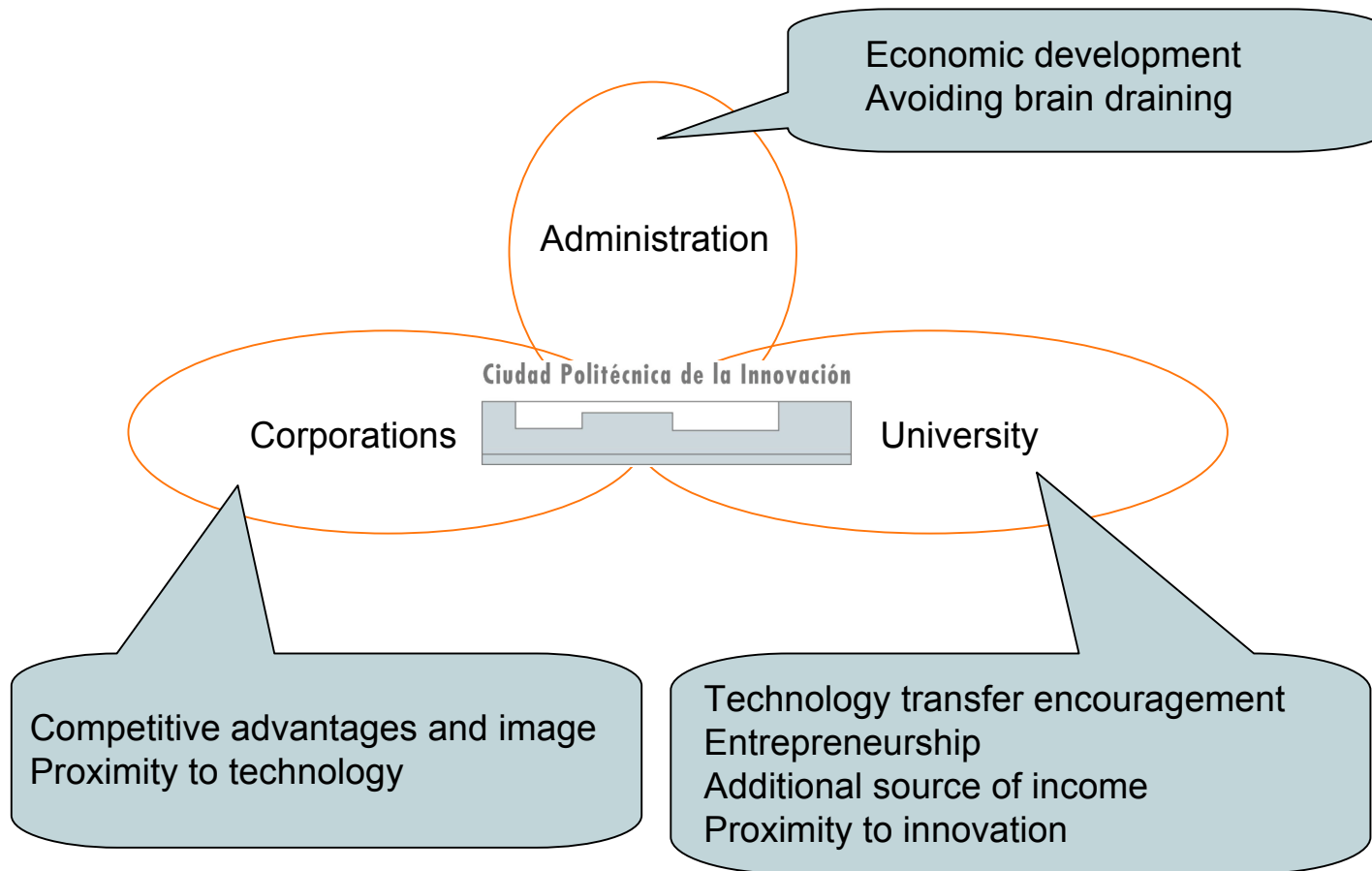
The CPI: a tool for regional development by an entrepreneurial university



- Research groups organization
- Creation of a technological base with commercializing possibilities
- Organizational mechanisms to transfer research results outside the university by means of protected intellectual property
- Capability of creating enterprises in the university
- Integration of academy and enterprise elements into new operating units, such as joint research centers



The CPI: a knowledge-intensive area with shared regional competitive advantages.



**The CPI: a knowledge-intensive area
on a campus opened to the region.**



CPI

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The Polytechnic City of Innovation (CPI) Core competitive values & rationale



**CROSS-
DISCIPLINARITY**

**KNOWLEDGE
SHARING**

INNOVATION

CO-OPERATION

**R+D+I
INTEGRATION**

70% executed

Business
Incubator by Q2
2006

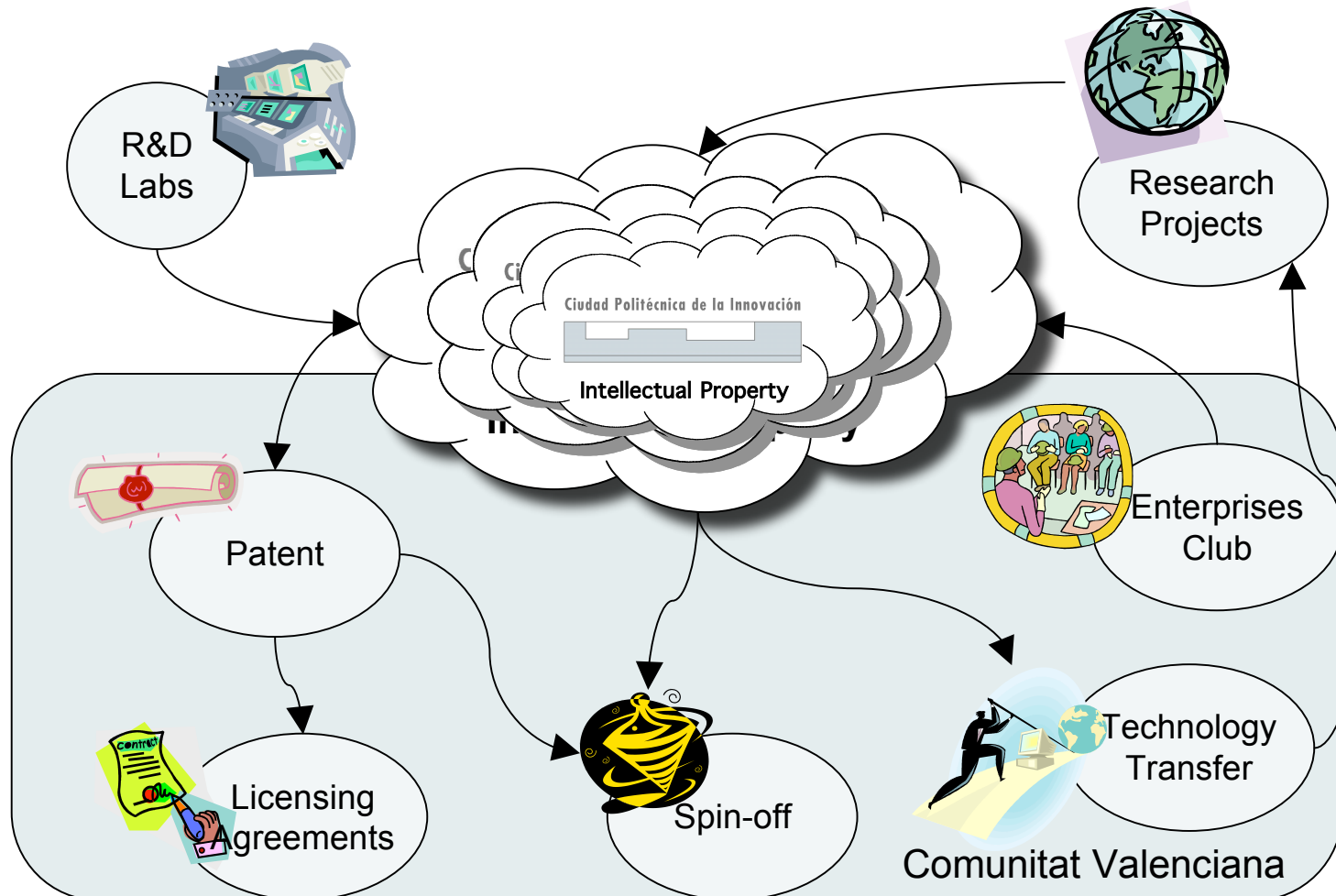
Corporate R&D
Labs by Q1 2008

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The CPI serving society

Our model: creating value to our industry through the mobilization of our know-how



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Our model: creating value to our industry
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Success Stories

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Technology Transfer Success Story: Vacuum Cooker



Problem / Opportunity:

New cooking method more respectful with food texture, that protects the nutritional and organoleptic properties. Development of new cooking techniques.

Technology / Process:

Analysis of the behavior of food under vacuum conditions.
Development of the first vacuum cooker prototype.

Creation of value by the technology:

For the company:

Research agreement with the CPI for R&D. Vacuum cooker patent (Gastrovac).

For the restaurants:

Introduction of dishes based on new cooking techniques in their menus.
Preferential supply of various vacuum cookers by the company.

For the CPI:

Improvement of our research on nutrition and food.
Agreement for additional research on vacuum cooking.



Technology Transfer Success Story: Beer Microbiologic Control



Problem / Opportunity:

Development of immunological methods for beer microbiologic control improving speed, confidence and sensitivity of traditional techniques.

Technology / Process:

Production and utilization of monoclonal antibodies to detect microorganisms in beer.

Creation of value by the technology:

For the breweries:

Microbiological control speed up.

Alternative for throughput increase during high demand seasons.

For the customers:

Better beer quality.

Increased beer availability.



Technology Transfer Success Story: Artificial Vision for Citrics



Problem / Opportunity:

Development of a control system to set the amount of wax to be sprayed as a function of the number of oranges flowing on the conveyor belt.

Technology / Process:

Development of vision algorithms to estimate the amount of fruit.

Study and selection of the appropriate hardware.

System integration in the production line, including sprayers control.

Creation of value by the technology:

For the company:

Availability of a more efficient technique to spray wax..

For the customers:

Lower costs, due to a more efficient use of wax, elimination of orange skin damages and elimination of orange discards due to faulty wax treatments.



Spin-off Success Story:

NTDA Energía

2002



Expertise:

Advanced Ceramics & Renewable Energy

Technology / Process:

First Spanish company specializing in the development of Solid Oxide Fuel Cells
Integration of hydrogen and cogeneration/wind energy systems

Strong shareholder base

- Leading scientists in advanced materials
- Spain's largest energy group (Iberdrola)
- Regional Government of Valencia (agreement reached)
- Leading ceramic manufacturer (Keraben-Gres de Nules)

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Spin-off Success Story: Energesis Ingeniería

2005



Expertise:

Geothermal Energy.

Leading scientists in energy engineering

Technology / Process:

Use of heat pumps combined with ground (geothermal) heat exchangers

Applications:

Air-conditioning

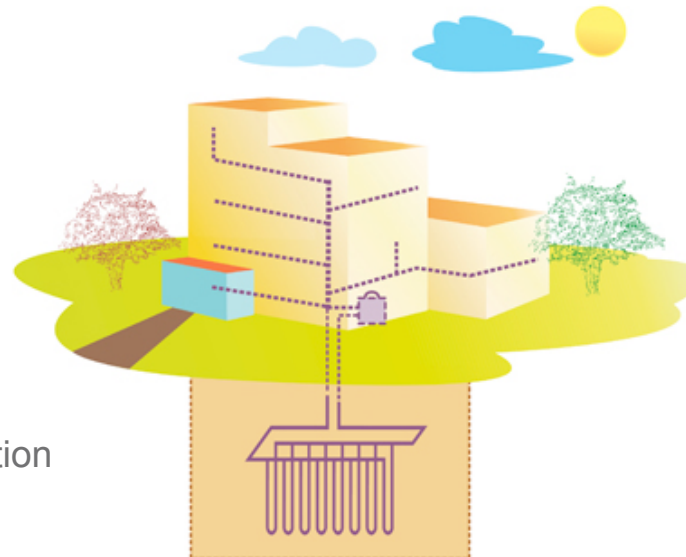
Domestic hot water

Swimming-pool water conditioning

Advantages of the technology:

Energy saving due to high efficiency

Low noise, healthy, architectural integration



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Spin-off Success Story: NGARO Intelligent Solutions

2005



Expertise:

Thermal vision
Infrared image processing



Technology / Process:

Use of infrared cameras to detect and track heat sources
Detection algorithms

Applications:

Early fire automatic detection
Security in open/large areas
Fault detection in industrial facilities



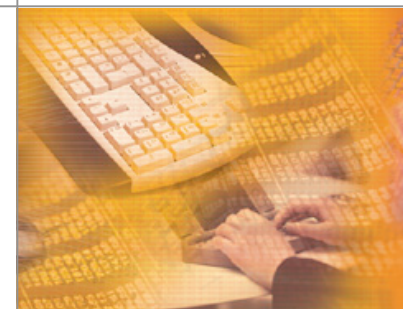
Advantages of the technology:

Automatic detection and tracking
Broad areas coverage with a few cameras



Patent Licensing Success Story:

Removal of nitrates in water 2005



Patent:

Catalyst for treatment of water with nitrates

Applications:

Reduction of the amount of nitrates in water

Advantage:

No subproducts

Licensed to:

Grupo Aguas de Valencia

Creation of value by the technology:

For the CPI: validation tests will be externally funded

For the company: availability of a novel environment-friendly technique and commercialization rights

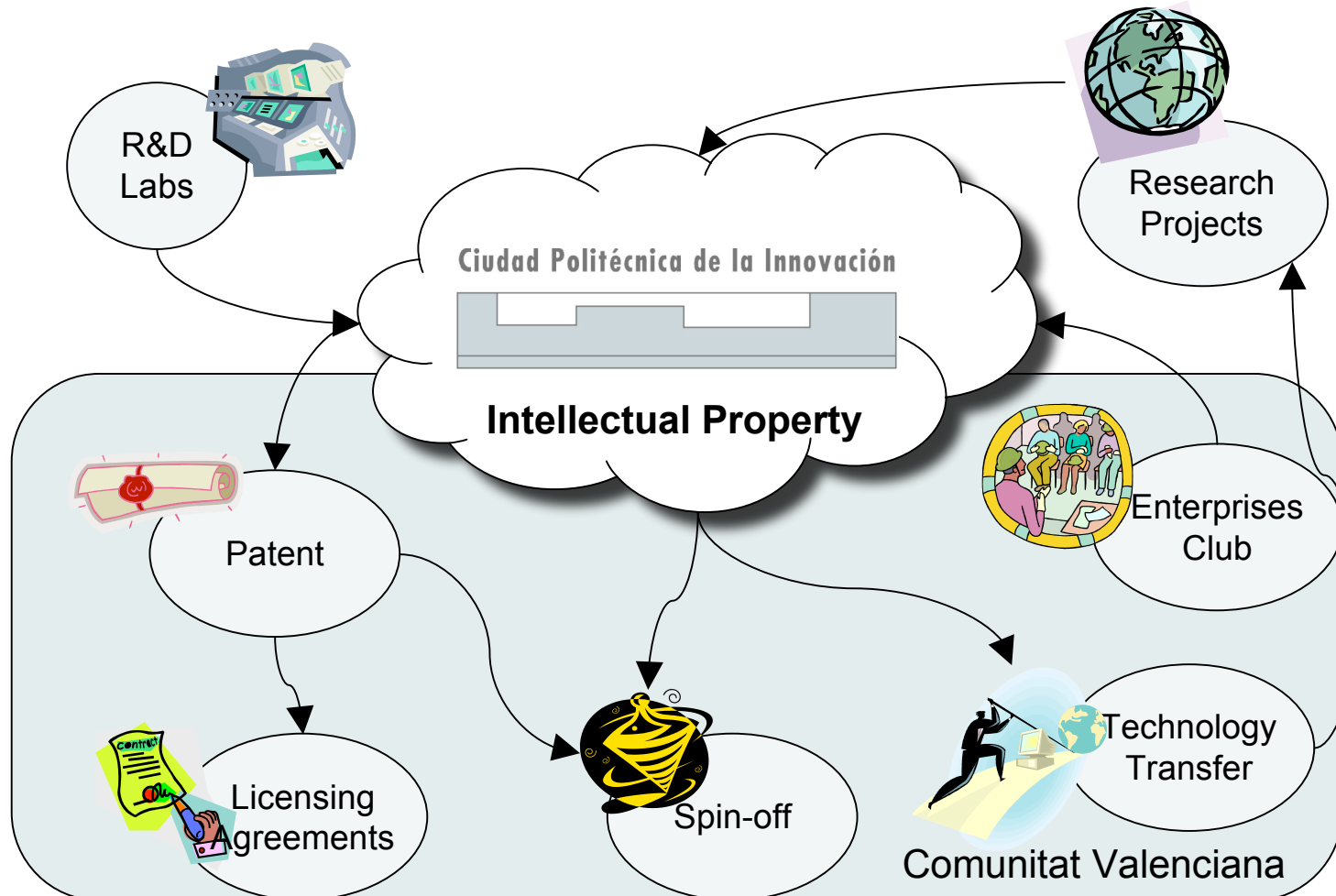
For the customers: better water quality and reduction of water pollution

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The CPI serving society

Our model: creating value to our industry through the mobilization of our know-how





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Our path to the future through Innovation

The Polytechnic City of Innovation

