

Managing the University IP Office



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*Regional Forum on the Role of Patents and the PCT in
research in Developing Countries*

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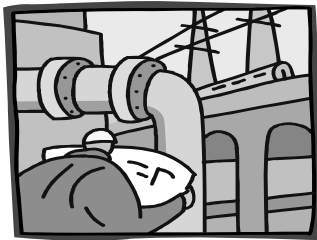


Agenda

- **Different IP/TT Office Models**
- Defining a model for a Tech Transfer Office
- Reaching the market through Entrepreneurship

The Challenge

- Knowledge transfer is stimulating communication between two very different cultures.

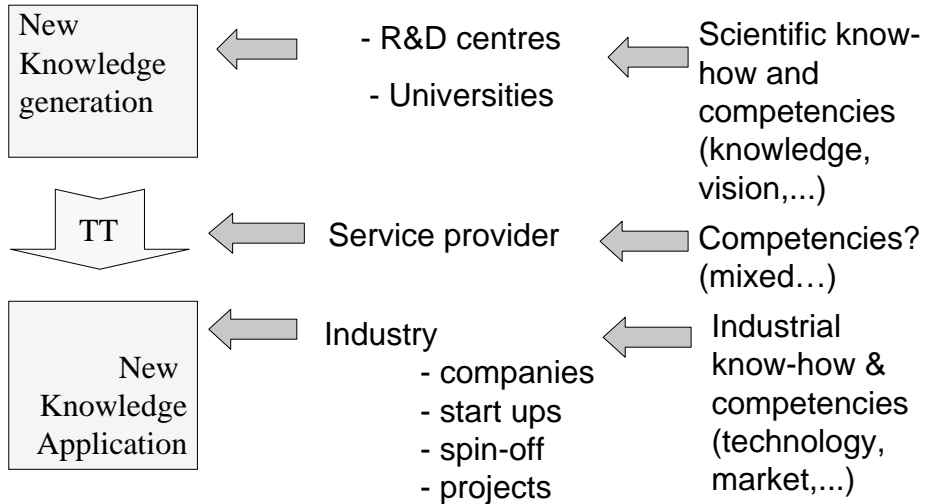


The Challenge

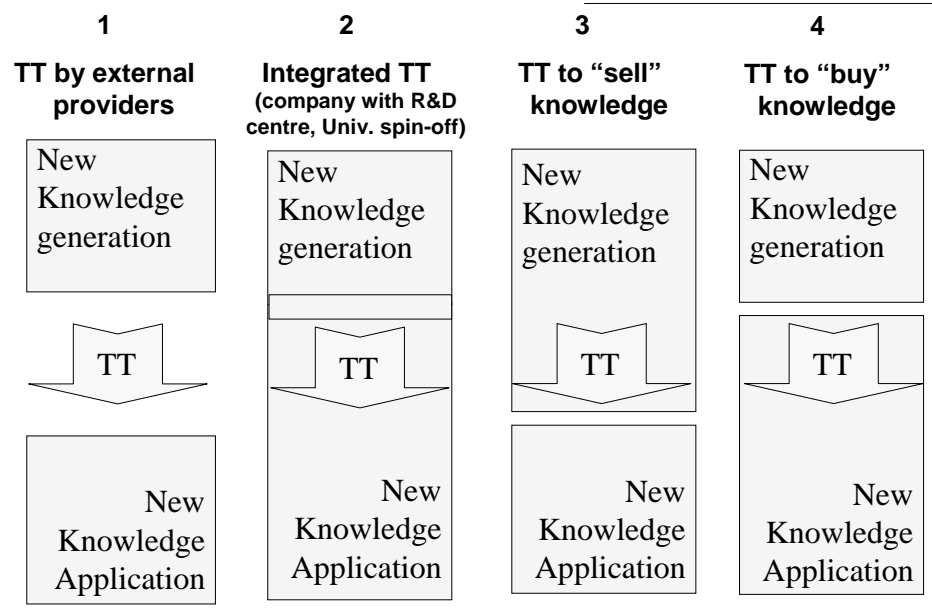
- The Technology Transfer Office (IP Office, Knowledge Transfer Office) provides this much needed support.



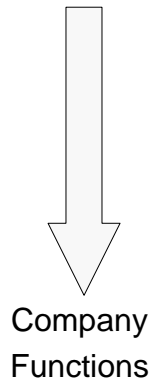
How to manage TT?



Different TT models

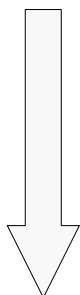


■ **Functions of a TTO office**



- Research information and financing
- Managing R&D information
- Context analysis – legal and market
- Managing industry relations
- Project Management
- Invention disclosure
- IP Portfolio management and evaluation
- Contract drafting and negotiation
- Identifying best exploitation route
- Knowledge Transfer Management
- Patent drafting and application
- Negotiating licensing terms
- Defining profit/equity

■ **Models**



Model	Emphasis	Legal status
Legal model	Ownership Policies Governance	Legal department of University
Administrative model	Administrative processes, relationship with research base, contract research	Dedicated dept. of University
Business model	Managing & commercialising IP, collaborative research, business development, spin-offs, seed capital	Subsidiary of University
Outsourcing	Bundling (gathering) IP	Independent company

- Different IP/TT Office Models
- **Defining a model for a Tech Transfer Office**
- Reaching the market through Entrepreneurship

- Values, resources and objectives
 - Audit and evaluate resources*
 - Culture/context
 - Relative weight of University Departments
 - Areas of scientific excellence
 - Previous experience in TT
 - Researcher attitude

* tangible and non-tangible

- Political, Environmental and Legal Context
 - *Consider:*
 - Available Financing structures, levels and opportunities
 - Governmental policies and strategies
 - Legal Context:
 - IP ownership and regulations
 - Regulations for the exploitation of R&D results
 - Economic Environment:
 - Labour market
 - Type of Industry

- Mission, Strategy & Objectives
 - Should be:*
 - Compatible with the University mission
 - Clearly defined, clearly defended, clearly communicated
 - Sufficiently explicit to provide directions for more detailed actions and procedures
 - Supported by all stakeholders
 - Periodically reviewed

■ Internal Objectives

What are the TTO office objectives?

- Generate research funding
- Encourage innovation in faculty, researchers and students
- *Reward, retain & recruit* faculty and students
- Create employment opportunities in S&T areas for graduates
- Facilitate the setting-up of spin-off companies

- What does the University expect from TT?
- Who is responsible for which objectives?
- What level of responsibility?
- How are TT processes structured and supported?
- What processes exist to identify and evaluate IP?
- What processes are in place for its exploitation?
- Who decides on how it should be exploited?
- Using which criteria?
- How are these processes controlled?


Main operational difference

Faculty service

- Raising awareness
- Each disclosure raises the same interest
- Researchers are key
- Happy researchers

Profit generation

- Focus on profit
- Pressure to concentrate on potentially profitable disclosures
- Professionalisation
- Few very happy researchers

- 
- A combination of both is possible (and desirable)


Main operational difference

Examples of Faculty service:

- Organize meetings between researchers & industry
- Recognize and disseminate the impact of research
- Active contribution to University seminars, courses, workshops.
- Publication of "how to" guides in industry relations
- Legal support in managing industry funding
- Allow enough freedom for researchers to get involved in industry relations

Profit generation

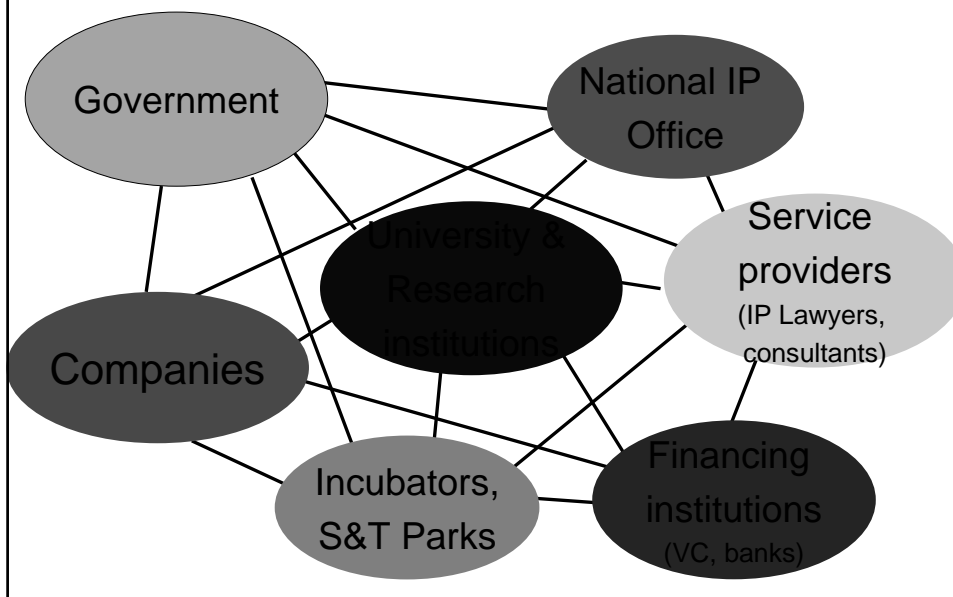
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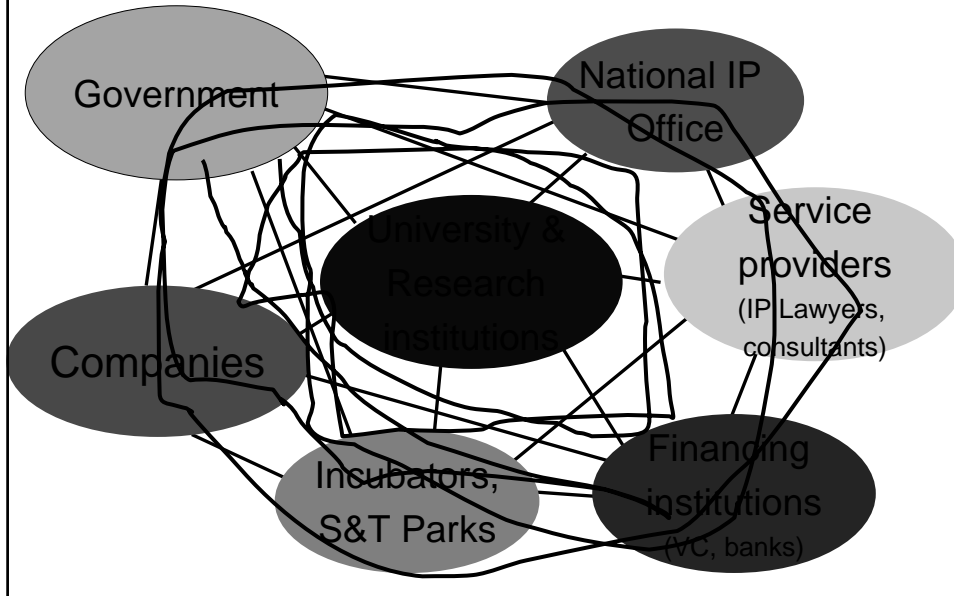
How to start? (the Research side)

- Know the rules of the game:
 - internal context,
 - external context,
 - Mission, strategy and objectives
- Know what you have to offer
- Know who the clients are and what are their needs
- Identify (and involve) who can support: financing schemes, governmental support, development funding, industrial associations, chambers of commerce, banks...

Who must be involved?



Who must be involved?



*Innovation
Ecosystem:*
All stakeholders
are implicated

Remarks on the regional level

Importance of structuring partnerships at regional level (top-down approach), as adequate framework for bottom-up long-term partnerships

Importance of measuring outcomes of strategic partnerships in the regional context (cost-effectiveness)

Design new partnerships or cooperation models inspired in the best practices available, but always addressing the specific regional situation (it is not possible to create "Silicon Valleys" everywhere!)

Back to research context...

Screening & Evaluation

Is it feasible?
Is there a market?
Is the researcher committed?

Is it feasible?
Will it be too expensive?
Does it have other applications?

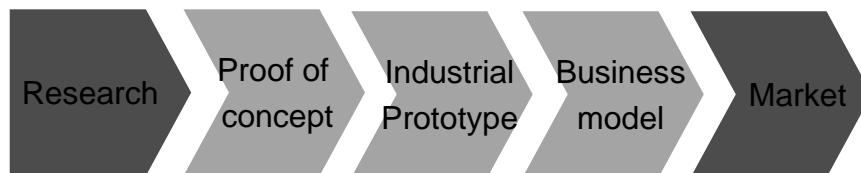
Do we have a team?
Is the business model sound?
Have companies expressed interest?

IP Protection & Management

Do we own it?
Is it patentable?
Can IP be enforced?

Do we have enough information?
Do we need to reduce to practice?
How to draft the application?

What countries/regions?
Are NDAs in place with every contact?
Do agreements secure IP?



Marketing

What can we make public?
Is it too early?

How to present information?
What tools to use for marketing?
How should the clients be reached?

How to approach the client?
What information is needed?

Business Dev.

What are the markets?
What is our segment? How to target it?
Where and how to reach possible partners?

Licensing or spin-off?
Exclusive or non-exclusive licenses?
Does the business plan make sense?

Deal making

How much is the IP worth?
What is the value proposition?
How to negotiate?

What are the licensing terms?
What is the impact in future research?

Intellectual Property Policy

- A clear (and reasonable) IP Policy is vital to the establishment of an effective Tech Transfer activity within the University.

- It allows
 - To define ownership (University? Researchers? What about students?)
 - To motivate researchers by providing incentives
 - To clarify interinstitutional collaboration
 - To facilitate understanding by industry of the ways of University...

Invention disclosure

- If the TTOffice is to manage the IP Portfolio, it must know what the University is doing.

- Is there a clear process for disclosing new inventions that might be patented?
 - Is this information centralised?
 - Meetings with Research Centre Directors?
 - Visits to all researchers?
 - Internal “call for papers”?

- The disclosure has 2 objectives:
 - **Internal:** Identify technologies/know-how from the University in order to know what can be transferred to industry
 - **External:** communicate to industry what the University has to offer – Technology Marketing

- **Internal:** Identify technologies/know-how from the University to transfer to industry – who is doing what? Is it new? Does it have advantages? Can it be applied and by whom? Can it be patented?
- **External:** communicate to industry what the University has to offer – who can be interested in this know-how? How can it be applied? What are the expected results? What is the roadmap to bring it to market?

Invention disclosure



- If the previous questions can't be answered (in some way), it's not an invention disclosure
- The less resources you have, the earlier in the research process you have to work on
- Scientifically valuable and patentable results may not be commercially relevant
- Lack of market kills the business
- Industrial validation by companies asap!
- Protect IP whenever possible

Some Best Practices

- Invention pipeline
 - Identify most promising scientific areas
 - Thorough and timely Disclosure to enable IP protection
- Clearly defined IP Policy
 - Who owns the technology? Which rights?
- Investment in support to research and TT
 - Professional team and professional management of processes
- Internal delimitation of responsibilities



**Best practice guides (in english) available
in our website: www.tecminho.uminho.pt**

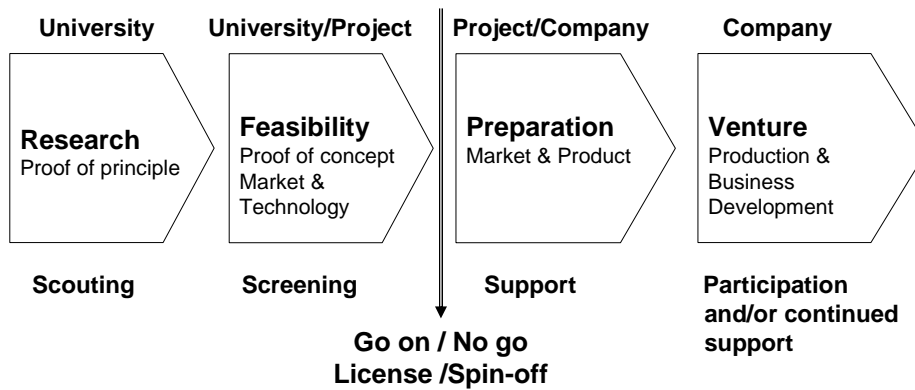
- Different IP/TT Office Models
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- **Reaching the market through Entrepreneurship**

- 3 levels of Academic Entrepreneurship
 - Entrepreneurship - a subject itself
 - Training and supporting entrepreneurship - starting new businesses → spin-offs
 - The entrepreneurial university - creation and maintenance of an enterprising culture

- Entrepreneurship activities are carried out following 3 axis:
 - Raising Awareness
 - Training and Coaching
 - Direct support



■ Phases of spin-off creation



Entrepreneurship is
about people:
Awareness and motivation
is essential!

Examples of Awareness Activities



Examples of Awareness Activities

- Society in general
 - Seminars and awareness sessions
 - Ideas competition (InventUMinho) for groups of students + teacher from Secondary Schools

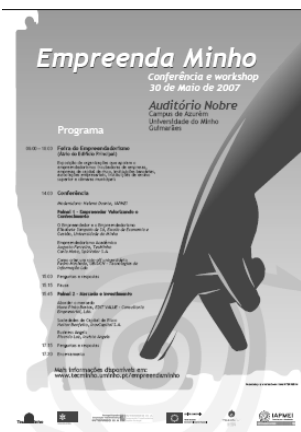


Examples of Awareness Activities

- Graduate students
 - Seminars and awareness sessions
 - Project Based Learning including evaluating market potential of technologies and pre-Business Plan to start companies
 - Campus companies

Training and Coaching

- Graduate students and post-grads
 - Seminars and awareness sessions
 - PhD curricula including Entrepreneurship topics + elaboration of a BP for the commercialisation of the results of the PhD programme



- Graduate students and post-grads

Technology Commercialisation Programme:

5 month course where teams of researchers + business students elaborate a plan for the commercialisation of R&D results

(Friday afternoons + Saturday morning)



- Entrepreneurs must have a link to the University of Minho:
 - teaching staff;
 - researchers;
 - under-graduation and post-graduation
 - students;
 - recent graduates;
 - technical personnel.

UMinho Spin-offs (May 2004 until Sept. 2008)

Spin-off	Field	Spin-off	Field
BIOTEMPO	Biotechnology	ACUTUS	Physics
SIMBIENTE	Environment	SINERGEO	Geology
ULTRAVISIOGRAPH	Medical devices	GEOS	Geology
CPC	Biotechnology	ARBORVALUE	Biology
UBISIGN	ICT	BIOTEKNICS	Biology
VINALIA	Biotechnology	SAR	Automation
BYZYMO	Biotechnology	DNAMIMICS	Biotechnology
EDIT VALUE	Business Management	EDS	Polymer
WIDECOLOUR	Physics	ESI	Mechanics
PMINNOVATION	Business Management	PURMEDIDA	Polymer
TECNOWAVE	Civil Engineering	EXVA	Video Analysis
MICROPOLIS	Polymer Engineering	SPECTRALBLUE	Communications
GLYCONSTRUCT	Biotechnology	X-TREME MATERIALS	New materials
SOMATICA	Physics	KEEP SOLUTIONS	Informatics
		MEINTEGRA	Sociology

UMinho Spin-offs

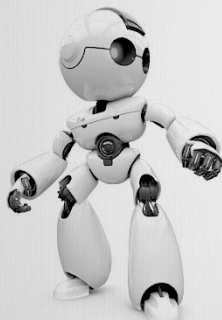


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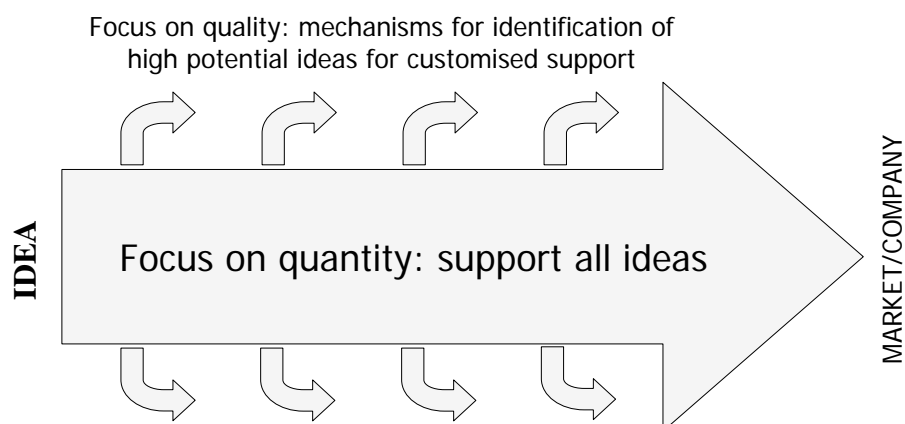
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Material Didático e Científico

An entrepreneurial University

- Establishing an entrepreneurial culture
- Rewarding entrepreneurship
- Getting connected to the market
- Supporting potential entrepreneurs
- Implementing a dual approach towards knowledge valorisation

The dual approach



- Thank you very much for your attention!
- Je vous remercie de votre patience!

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