Universidade do Minho – Tech Transfer Office

Managing Intellectual Property: from invention disclosure to commercialisation

South Africa, May 2014

- Marta Catarino

TecMinho

University of Minho

Universidade do Minho

Location

Campus of Azurém (Guimarães)

Rectory (Braga)

Campus of Gualtar (Braga)

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University of Minho

Facts and figures:
- Founded in 1974
- 18800 students
- 1900 PhD students from 22 nationalities
- In 2012, 1270 documents in ISI WoS and >1500 in Scopus

The University of Minho is one of the most prestigious institutions of higher education in Portugal, and it has also gradually come to assert itself on the international scene.

According to the "Times Higher Education 100 Under 50 University Ranking 2013", UMinho ranks 76 of the world's top 100 universities under 50 years.

www.uminho.pt

- Areas of excellence
  - Textile (functional materials)
  - Agro-food (nutraceuticals, food processing)
  - Enviromental Engineering
  - IT (software, gaming, digital arts)
  - Tissue engineering
  - Medical devices
  - Nanomedicine and nanomaterials

University of Minho

Universidade do Minho

Innovation Ecossystem

R&D

TecMinho (TTO)

Spinpark (Incubator)

Avepark (S&T Park)

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Home | University | Study | Research | Live | Innovation & Entrepreneurship

- Innovation
- Entrepreneurship
- Technology Transfer
- Holdings
- TecMinho
- Spin Park
- Avepark

TecMinho

Industrial Property, Spin-off and Entrepreneurship.

More info

Avepark

Science and Technology Park.

More info

Share:

Innovation & Entrepreneurship

The University of Minho recognizes and supports knowledge valorization as a pivotal component of its mission.

Promoting the transfer of knowledge and technology to Society through partnerships with companies, licensing

Spin Park

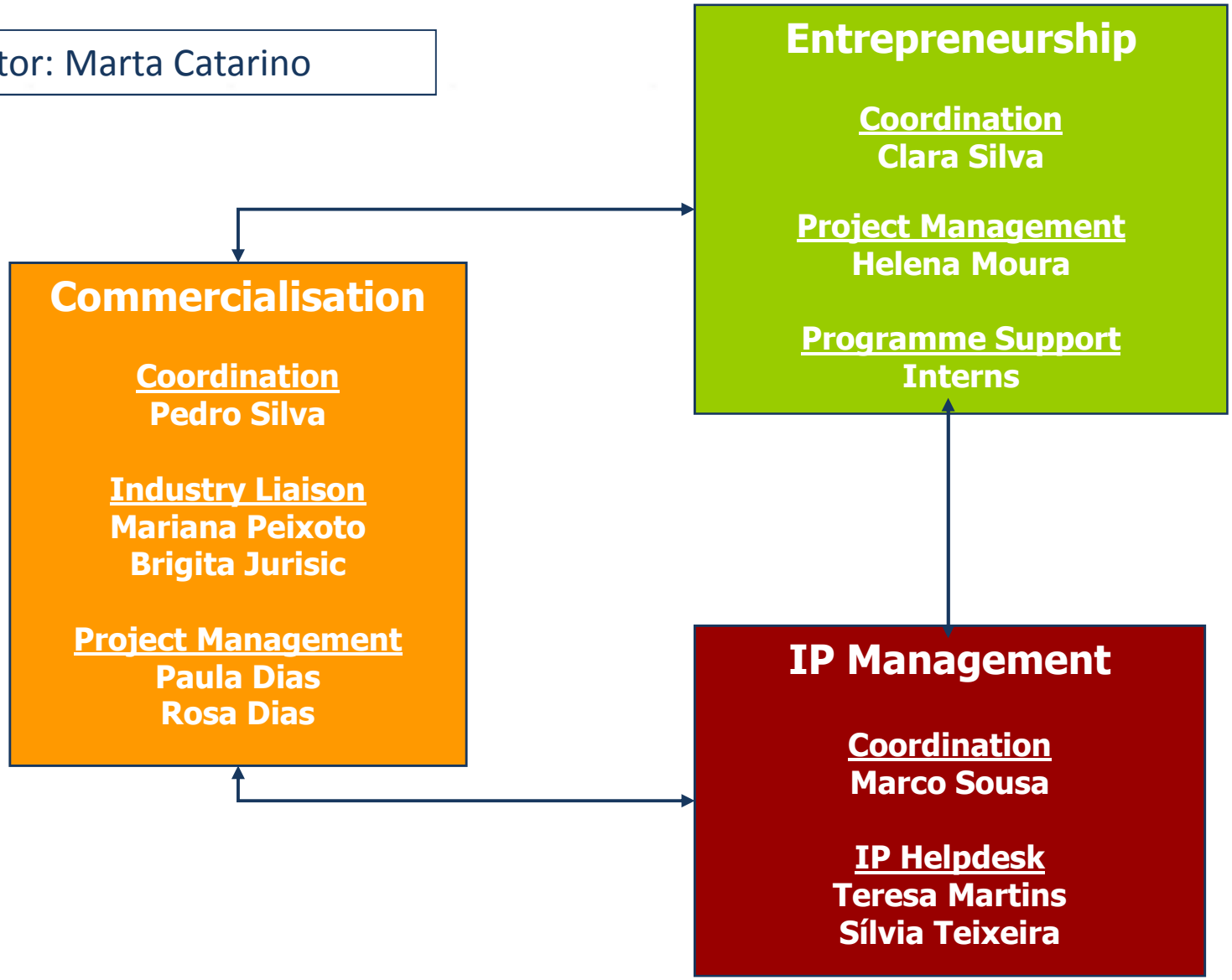
Technology-Based Incubation Centre.

More info


TecMinho
Universidade do Minho
Campus de Azurém
Guimarães
20 ANOS
1990 - 2010

Partnering
Commercialising R&D results
Supporting Entrepreneurship

KTO Director: Marta Catarino



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The researcher is the heart of it

TecMinho supports researchers who wish to transfer their results

The interests of the researcher are essential

The key success factor is researcher trust

We try to generate enthusiasm in the researcher by

- Internal marketing
- University IP policy
- Employing high quality staff at the KTO

Facts and Figures

12 FTE at the TTO (Tech Transfer + Entrepreneurship)
- portfolio of >100 patents
- 41 spin-off companies
- self-sustained: 30% services; 30% grants; 30% projects; 10% royalties

In 2012:
- 200 meetings with researchers
- 150 meetings with companies
- 33 invention disclosures
- 23 priority patents
- 7 new licenses (>400K€ royalties)
- 6 new spin-offs

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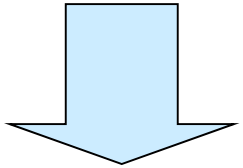
Best practice guides

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

Why knowledge transfer matters

- There is an increasing expectation on Research Institutions to contribute to the national economy through Knowledge Transfer.



3rd Mission

The Entrepreneurial University…

… is not the Industrialized University!

- Independence based on generating income
- Teaching and research are vital
- It is an error to design a production plant to maximise the by-product
- The value extracted from KT should be maximised but not at the expense of the prime mission

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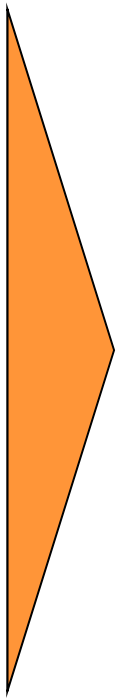
Expected results for Universities

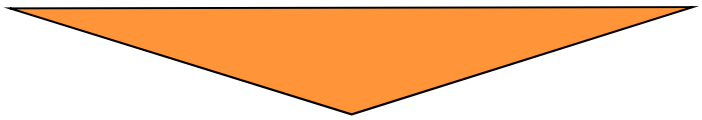
- Attract new and better students globally
- Recruit, Reward and Retain faculty
- Foster more industrial placements
- Foster new R&D projects
- Establish long-term partnerships with companies
- Set-up innovative companies
- Improve University image and reputation
- Generate income for research



Education

Research

Valorisation



Clear impact regionally, nationally and globally:
IMPACT not PROFIT

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Why is patenting essential in PROs?

Cannot rely on trade secrets.

Must publish without delay to participate in worldwide open science network

Cannot exploit directly inventions, must licence

Most inventions are early stage and need improvements to become economically attractive.

Patenting is essential to reconcile publication with innovation

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Why is patenting essential in PROs?

Patents do not protect discoveries and ideas, but they do protect the investment in the development of applications.

Even if the University may not consider patents a priority…

… the companies the University wants to collaborate with surely will!

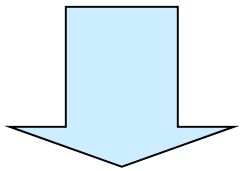
Why is patenting essential in PROs?

Tech Transfer Tools in PROs:

Tool 1: licensing

Tool 2: spin-off creation

Tool 3: PRO/Industry Collaboration



Whichever tool,
IP management is essential!

When do companies
pay money for new ideas?

THEY DON’T

Cannot sell ideas

How to convert an idea into a property, your property

- Ideas are free for all to use
- Must place the idea in a “vessel”
  - Convert it into intellectual property
- Governments have created a variety of forms of intellectual property
- In some cases, use of more than one form is appropriate

Types of Intellectual Property

- Patents
  - Utility (technology), design and plant
- Plant variety
- Trade secret
- Copyright
- Semiconductor mask work
- Trademark/service mark

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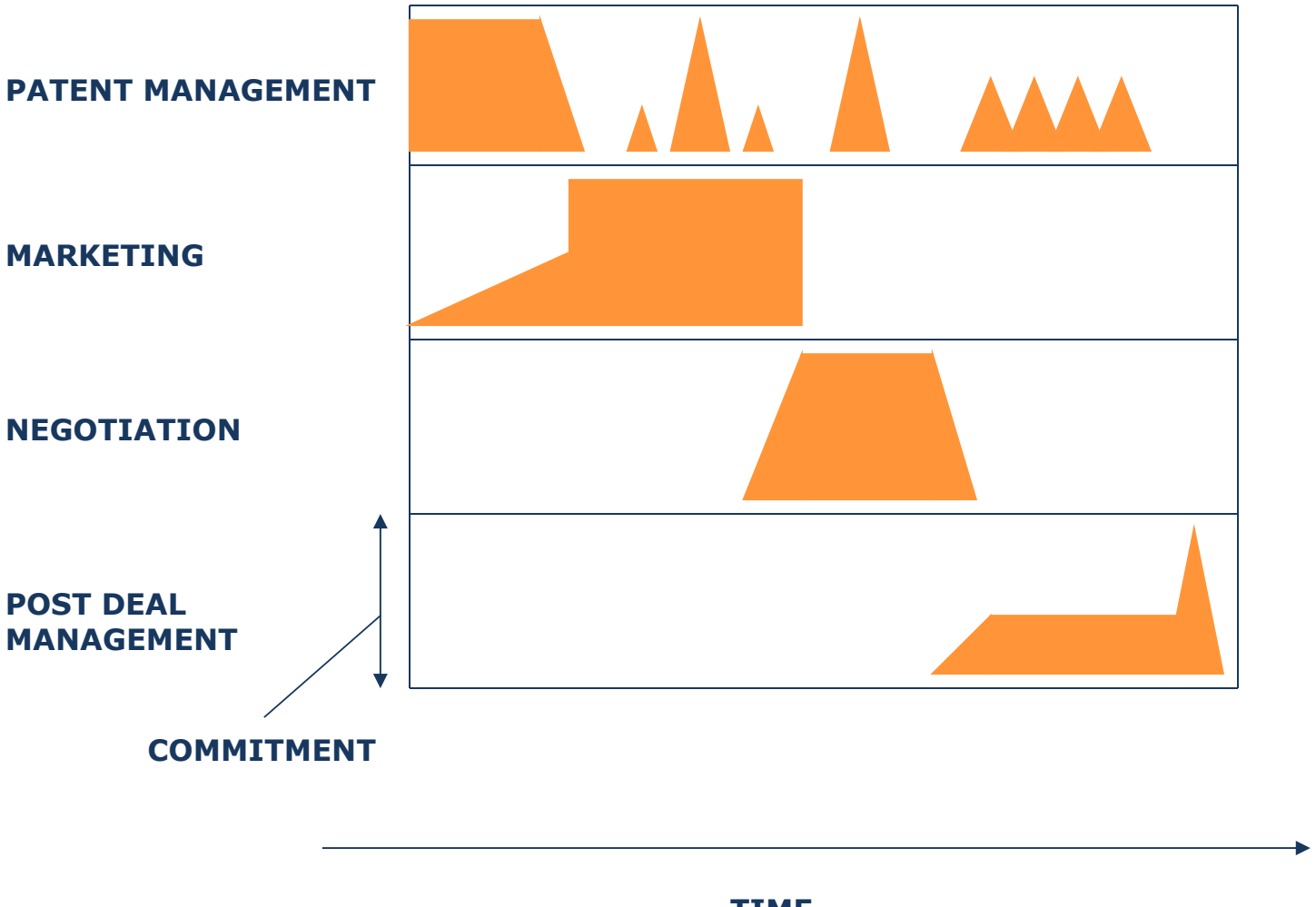
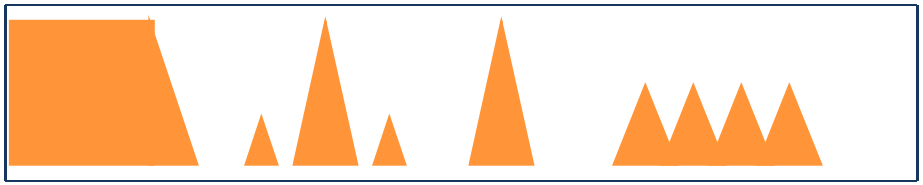
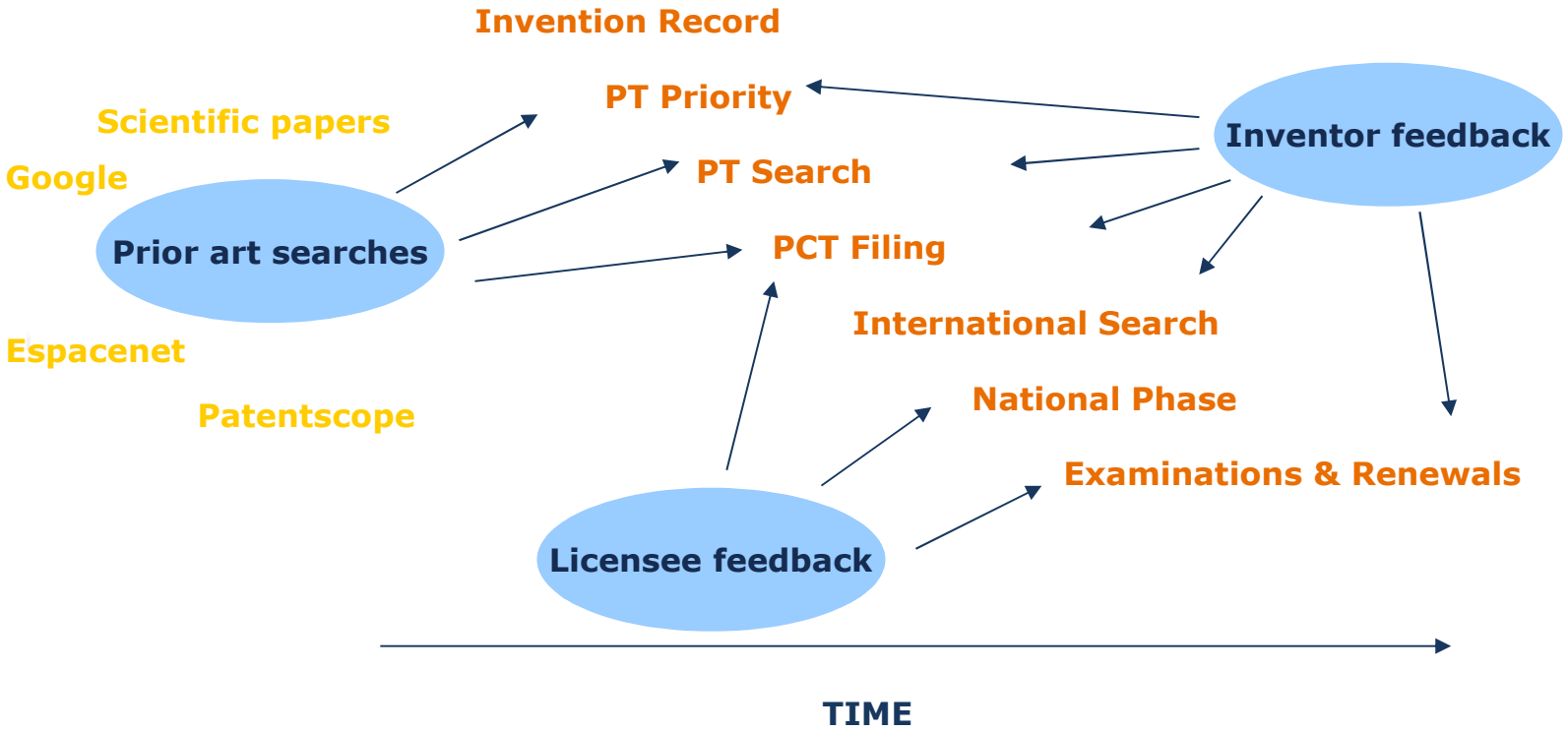
Licensing Activity Timeline



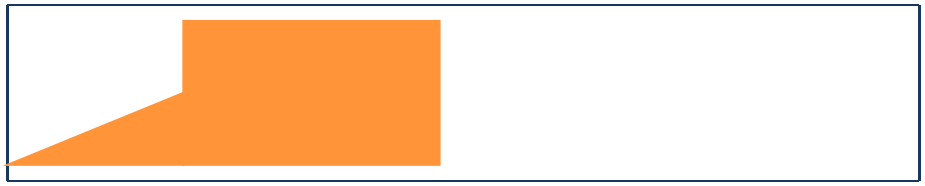
Patent Management

PATENT MANAGEMENT





MARKETING



Informal Soundings (Voice of the Customer)

Confidential Discussions

Market Research (Focus Groups)

Marketing Plan + implementation

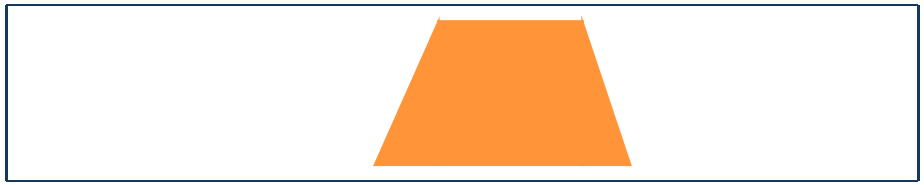
Confidentiality Agreements

Confidential Meetings

TIME

Negotiation

NEGOTIATION



Draft Terms

Agree Price

Licence/Option/Material Sales Agreement

Iterations

Signatures

Database Entry

TIME

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Post-deal Management

POST DEAL MANAGEMENT

Chase Reports

Chase Payments

Check Progress

Create New Sales

Renegotiate!

TIME

Disclosure form

An IP Policy is not only about ownership and revenue. Must include how it is managed (documents, timing, responsibilities…).

One of the most important tools: a disclosure form.

The disclosure form is the document the researcher uses to inform the University IP Office (or person) that a new invention may have arisen from research.

Disclosure form

Should include:

- What was invented
- By whom? (Are you sure…?)
- What funding? (any strings attached?)
- How do you know it is new? Did YOU disclose it?
- Information for commercial potential assessment (any leads? What is the problem being addressed? Who can be interested?)

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Disclosure form

INVENTION DISCLOSURE FORM

Please insert the Technology Acronym

1. DESCRIPTIVE TITLE OF THE TECHNOLOGY

2. INVENTORS

Name	University/Dept. (or company)	Position	% Contribution	Tel.	e-mail
			%		
			%		
			%		
			%		

Were there any other contributors to the IP, providing support such as in-kind support (provision of equipment, transfer of materials...)?

Yes ☐ No ☐

If yes, please provide details.

3. TECHNOLOGY (ORIGIN)

Source of funding (FCT, UE, IDEIA, etc.)	Program (specific program, PhD thesis...)	Funding period	Ref./acronym if available

Is there any contract that regulates IP rights?
Please detail (***if possible please attach a copy***).

4. OBJECT OF INVENTION

Please provide in attach patent draft (see annex 1), including at least Summary ("Resumo") & State-of-the-art ("Antecedentes da invenção").

4.1. How will your invention be used? Is it a stand-alone equipment, will it be integrated in other equipments, is it a product by itself? Is it a platform that will allow multiple products?

4.2. What will your invention be used for? What are the possible applications? Are there any other uses for your invention?

4.3. What is the current stage of development of the technology? Do you have a working prototype? What are the most recent developments? Please detail.

5. NOVELTY OF THE INVENTION

5.1. To identify the state-of-the-art of the technology (patent draft), have you done any searching for published literature (including patents), and if so where?

5.2. Have you published or presented to somebody, verbally, electronically or in writing, anything relevant to the invention, and if so when and what? Please tell us about abstracts, web pages and presentations as well as any published articles.

5.3. Do you have any plans to publish the work? If so, what is the timescale and where will the publication take place? If a draft paper exists please provide a copy.

Early-stage Assessment

- Invention Disclosure is the starting point

  - often focused problem solving has taken place and the invention is an outcome of that problem solving

- The inventor needs to recognize that the invention has value
- The inventor must be willing to share the invention to reinforce the value assessment and to decide the appropriate next steps

  - researcher's trust is key

- The inventor's effort must be recognized and supported

  - monetary incentives, peer recognition, career enhancement

Early-stage Assessment

4 types of assessment

- Patentability: ownership, novelty, prior art, scope, “patent around”, enforceability, secret know-how, FTO, costs…
- Technical: proof-of-concept, prototype, industry support, funding…
- Market: value proposition, clients, market, suppliers, competitors, funding...
- Commercial/business: price, costs, margins, differentiation, distribution, improvements, investment…

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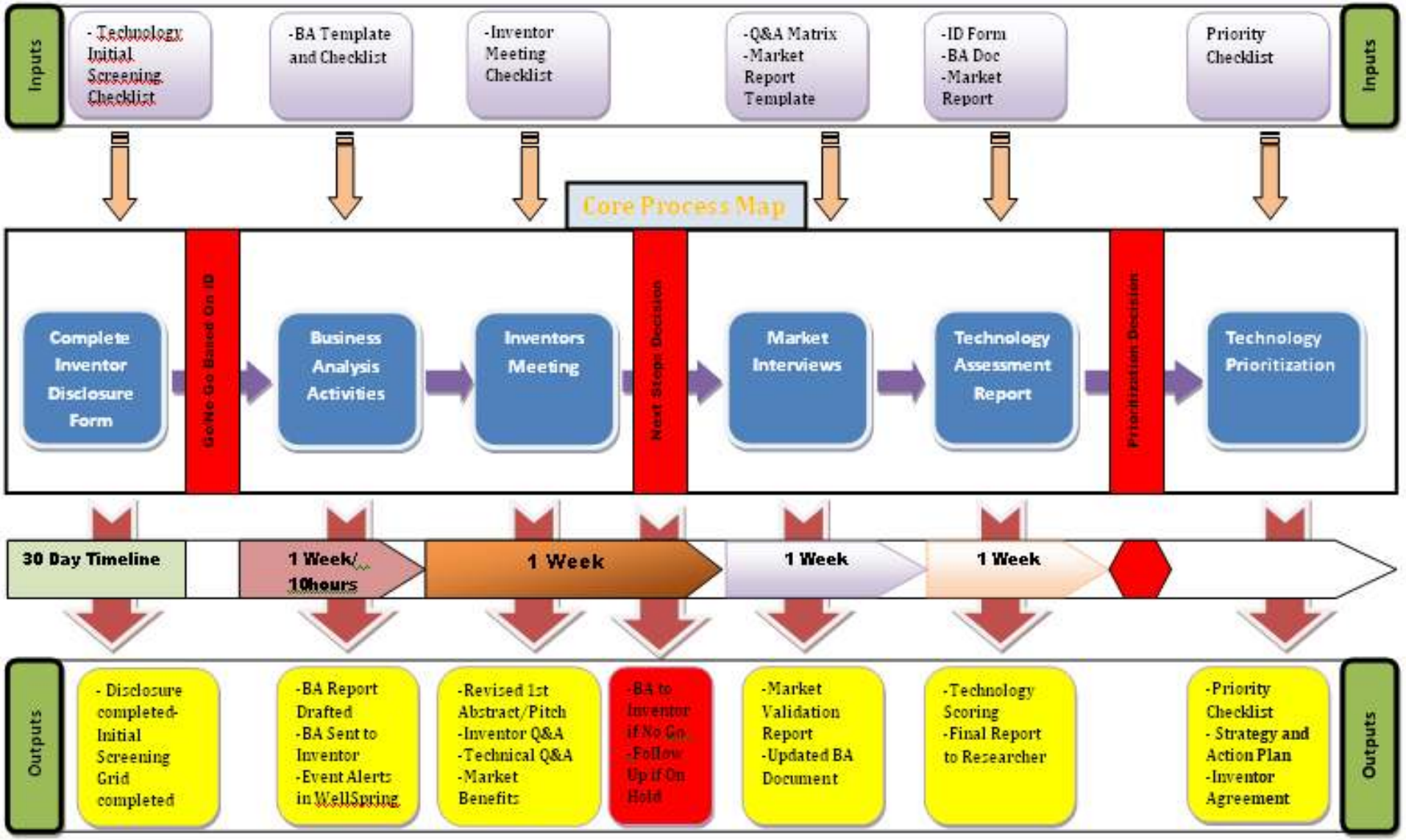
Inputs
- Technology Initial Screening Checklist
-BA Template and Checklist
-Inventor Meeting Checklist
-Q&A Matrix -Market Report Template
-ID Form -BA Doc -Market Report
Priority Checklist
Inputs
Core Process Map
Complete Inventor Disclosure Form
Go/No Go Based On ID
Business Analysis Activities
Inventors Meeting
Next Steps Decision
Market Interviews
Technology Assessment Report
Prioritization Decision
Technology Prioritization
30 Day Timeline
1 Week/ 10hours
1 Week
1 Week
1 Week
Outputs
- Disclosure completed- Initial Screening Grid completed
-BA Report Drafted -BA Sent to Inventor -Event Alerts in WellSpring
-Revised 1st Abstract/Pitch -Inventor Q&A -Technical Q&A -Market Benefits
-BA to Inventor if No Go. -Follow Up if On Hold
-Market Validation Report -Updated BA Document
-Technology Scoring -Final Report to Researcher
-Priority Checklist - Strategy and Action Plan -Inventor Agreement
Outputs

Early-stage Assessment

Why?

- Early-stage decision-making
- Allocating limited resources to promising projects
- Transparency in TTO-researcher communication
- Evidencing effort to the administration

It costs just as much money
to develop and patent a worthless idea
as a valuable one

Choose a valuable one and focus on it

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The Technology Transfer Process

- **Research** (creation of the idea)
- **Invention disclosure (**submitted to TTO)
- **Intellectual Property (IP) assessment** (protection, technical and commercial feasibility)
- **IP protection** (initially a provisional patent application and then further prosecution)
- **Marketing** and **Proof of Concept**
- **Option** then **License** (to an Existing Company or Start-Up)
- **Product and Market Development**
- **Commercial Sales** (by Licensee/Sublicensee)
- **Revenue to CU** (royalty, milestone payments, equity)
- **Revenue distribution** (inventors, their labs, Campus and System)

The role of the TTO

- Work with researchers to identify and assess IP
- Work with researchers to secure IP rights through research contracts, Material Transfer Agreements and related agreements
- Decide to protect, license, release to public or return IP to inventor
- Supervise obtaining legal protection, negotiate, execute and manage licenses and distribute net receipts [inventor(s) named on a patent receive X% of the revenue derived from the patent]
- Conduct government compliance

Interface da Universidade do Minho

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