The Evolution of Knowledge Transfer @UNIBO

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Knowledge Transfer Office
THE EVOLUTION OF TECHNOLOGY TRANSFER

Technology Transfer
1.0
- Patent licensing
- Patent management

Technology Transfer 2.0
- Industry collaborations
- Materials Transfer
- Startup licensing
- Gap funding

Technology Transfer 3.0
- Technology Development
- Startup formation
- Business development
- Economic development
- Venture development

Technology Transfer 4.0
- Innovations
- Educational tools
- Training programmes
- Apps and software
- Copyrighted materials
- Clinical programmes

Technology Transfer 5.0
- Long-term use
- Industry collaborations
- Startup infrastructure
- Easy/quick licenses
- Non-STEM expansion

Pradhan, The evolution of technology transfer, 2016
Technology Transfer
1.0
Patent licensing
Patent management
Technology Transfer 2.0

Industry collaborations
Materials Transfer
Startup licensing
Gap funding

- Increasingly entrepreneurial faculties
- Emphasis on industry-sponsored research
- PoC funding addressing the Valley of Death
- Recognizing value of unpatented biological materials
- TT elevated to a more prominent position in the university infrastructure
- More robust startup programmes
- Universities start creating seed funds
- Marketing becomes an important and integral part of TT
Technology Transfer 4.0
- Innovations
- Educational tools
- Training programmes
- Apps and software
- Copyrighted materials
- Clinical programmes

- Focus on clinical translational research
- From inventions to innovations (including SSAH)
- Beyond traditional licensing approach
Technology Transfer 5.0
Long-term university-industry collaborations
Startup infrastructure
Easy/quick licenses
Non-STEM expansion

- More open innovation approach
- Increasingly complex projects
- Express licensing
- Use of technology portals
- Revised metrics
ALMA MATER STUDIORUM
UNIVERSITY OF BOLOGNA
UNIBO FACTS AND FIGURES

- Multi-campus
- 5 schools
- 32 departments
- 86,500 students
- 2,748 teaching and research staff
- 2,967 administrative and technical staff
- 219 degree programmes
- 71.9 million EUR funded by the European Union as part of H2020
- 29.1 M€ funded by sponsored research agreements
- 1261 PhD candidates
- 9,125 scientific publications (2017)
- 373 patent applications (147 patent families)
- 31 spin-off companies, 90 employees, 8.9 M€ revenues (2017)
WHAT HAS CHANGED.....

MAPPA STRATEGICA

RICERCA

A.1 Sostenere la ricerca di base e la ricerca applicata per affrontare le grandi sfide in un contesto internazionale
B.1 Promuovere la qualità dell’offerta formativa e investire in ambiti distintivi e multidisciplinari per l’Ateneo in relazione alle esigenze della persona e della società
A.2 Investire in ambiti distintivi e multidisciplinari per l’Ateneo sul piano nazionale e internazionale
B.2 Migliorare l’attrattività e rafforzare la dimensione internazionale dei contesti formativi
B.3 Potenziare i servizi a supporto degli studenti e sostenere le politiche di diritto allo studio

FORMAZIONE

TERZA MISSIONE

GOLETTI

Borse di studio e agevolazioni
Biblioteche, risorse digitali e sale studio
Orientamento e tutorato
Tirocini e Job Placement

Imprenditorialità

Studio e non solo
Solute e Assistenza
Certificati e richieste duplicati

Imprenditorialità

L’Università di Bologna sostenne e supporta la cultura dell’imprenditorialità, promuovendo e valorizzando saperi, competenze, idee creative e favorendo la nascita di imprese innovative.

L’Ateneo sostiene la nascita di spin-off e start-up offrendo servizi che agevolino e facilitino i processi di creazione di imprese.

L’Università svolge anche una importante funzione di integrazione di servizi e di networking consentendo alle spin-off accreditate di operare beneficiando di servizi, agevolazioni e sinergie ad hoc con partner industriali, commerciali, finanziari.

Spin-off

POC fund
Proof of concept

Industrial Relations, Third Mission and Communication
ORGANIZATION – CENTRAL ADMINISTRATION LEVEL

- Research and Technology Transfer Dept.
- Research and Third Mission Dept.
- Corporate Relations, Third Mission and Communication Dept.
### Third Mission Activities

<table>
<thead>
<tr>
<th>Category</th>
<th>Activities</th>
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<tbody>
<tr>
<td>University-Business</td>
<td>- strategies and tools for university-industry cooperation&lt;br&gt;- management of university-industry framework agreements&lt;br&gt;- promotion of funding tools for fostering collaboration with industry</td>
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<tr>
<td>Placement</td>
<td>- support graduates’ transition to work enhancing cooperation with industry&lt;br&gt;- students and graduates career management and professional development&lt;br&gt;- organization of university recruitment fairs and customized recruitment events</td>
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<tr>
<td>Protection</td>
<td>- IP protection and IP portfolio management&lt;br&gt;- IP legal and technical advice to university staff&lt;br&gt;- negotiation and technical advice on IP agreement</td>
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<tr>
<td>Exploitation</td>
<td>- licensing&lt;br&gt;- negotiation and technical advice on IP exploitation agreements&lt;br&gt;- legal and technical advice on IP exploitation items</td>
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<tr>
<td>Entrepreneurship</td>
<td>- develop tools to support inspiration and awareness raising&lt;br&gt;- facilitate access by industry to innovative R&amp;D ideas developed by university staff&lt;br&gt;- support pre-and incubation, acceleration services</td>
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<tr>
<td>Communication &amp; Brand Management</td>
<td>- institutional communication (university publications, web pages, social networks)&lt;br&gt;- coordinated identity and image of the university and its structures&lt;br&gt;- university brand management&lt;br&gt;- public engagement</td>
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ORGANIZATION – KTO LEVEL (2004-2016)

IP Protection

- IP Management in collaborative and sponsored research
- Contract negotiation and management
- Management of IP Portfolio

IP Exploitation

- Valorisation of IP
- Negotiation and management of licensing agreements
- Spin-off creation
IP Protection
- IP Management in collaborative and sponsored research
- Contract Negotiation and management
- Management of IP Portfolio

IP Exploitation Licensing
- Valorisation of IP
- Negotiation and management of licensing agreements

Entrepreneurship Spin-off/Start-up
- Strategies and models
- Management of internal regulations and procedures
- Coordination with incubator and external initiatives
RE-ORGANIZATION OF KTO PROTECTION/EXPLOITATION – WHY?

- TT has evolved to Third Mission or «engagement»: more professionalization/thematic specialization is required
- More sectorial/thematic links needed within the Third Mission Department (spin-offs, thematic incubators, thematic VCs, etc)
- PROGRESS-TT: an opportunity for international benchmark and exchange of best practices
- Desire to improve effectiveness in transfer of IP
- Enough critical mass available at KTO
KTO EVOLUTION

Horizontal structure (by processes)

Knowledge Transfer Manager

Patents
(Patent filing = end of the process)

IP Management

Prior-art search to select

Researchers = «clients»

«Passive» approach

Matrix structure

Business Development Manager

«Projects»
(Patent filing = beginning of the process)

Technology transfer

Prior-art search as business tool

Researchers = «partners»

Proactive approach (scouting)
EVOLUTION OF KT @UNIBO

Not only patents

More consolidated university-enterprise relationships

Entrepreneurship, spin-off, start-ups

University PoC funding

Clinical translational research

Concrete support to business development

SSAH
OPEN QUESTIONS

Awareness?
Strategies?
Priorities?
Resources?