

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 Technology Transfer 3.0 **Industry** collaborations Materials Transfer Startup licensing Gap funding

Technology Development Startup formation **Business development** Economic development Venture development

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

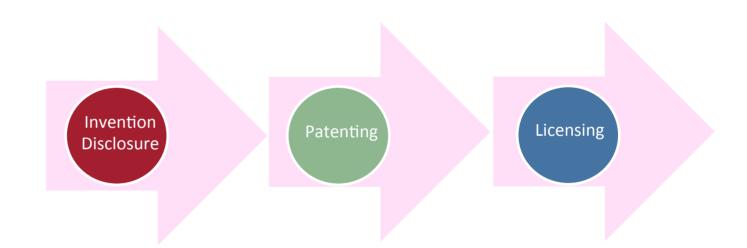
Clinical programmes

Technology 7

Long-term u industry colla Startup infra Easy/quic Non-STEM 6

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 researc
- PoC funding addressing the Valley of Dea
- Recognizing value of unpatented biologic materials

Technology Transfer 3.0

Technology Development
Startup formation
Business development
Economic development
Venture development

- TT elevated to a more prominent position 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 universityindustry 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
- o 29,1 M€ funded by sponsored research agreements
- 1261 PhD candidates
- 9.125 scientific publications (2017)
- 373 patent applications (147 patent families)
- o 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

A.2 Investire in ambiti distintivi e multidisciplinari per l'Ateneo sul piano nazionale e internazionale

FORMAZIONE

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

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

TERZA MISSIONE

C.1 Promuovere lo sviluppo culturale e l'innovazione economico-sociale

C.2 Potenziare i rapporti con i molteplici interlocutori a livello

Borse di studio e agevolazioni

Biblioteche, risorse digitali e sale studio

Orientamento e tutorato

Tirocini e Job Placement

Imprenditorialità

Studio e non solo

Salute e Assistenza

Certificati e richiesta duplicati

ALMACUBE **EMPOWERING** INNOVATORS



Imprenditorialità

L'Università di Bologna sostiene e supporta la cultura dell'imprenditoria zione e valorizzare saperi, competenze, idee creative e favorire la nascita di imprese in

L'Alma Mater sostiene la nascita di spin-off e start-up offrendo servizi che agevolino e facilitino i processi di crea imprese.

L'Università svolge anche una importante funzione di integrazione di sistema e di di networking consentendo up accreditate di operare beneficiando di **servizi, agevolazioni** e di **sinergie** ad hoc con **partner** industriali, commerciali, finanziari.

Spin-off







Industrial Relations, Third Mission and Communication

ORGANIZATION – CENTRAL ADMINISTRATION LEVEL



esearch Dept.



Research and Technology Transfer Dept.



Research and Third Mission Dept.



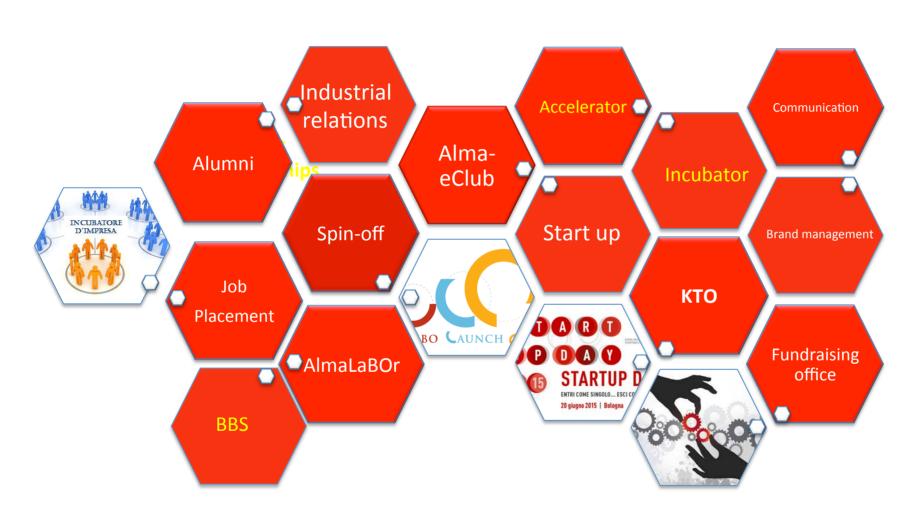
Corporate
Relations, Third
Mission and
Communication
Dept.

2004 2010 2017 2018

RD MISSION ACTIVITIES

| /ERSITY-BUSINESS LABORATION | ✓ strategies and tools for university-industry cooperation ✓ management of university-industry framework agreements ✓ promotion of funding tools for fostering collaboration with industry |
|--------------------------------|--|
| PLACEMENT | ✓ support graduates' transition to work enhancing cooperation with industry ✓ students and graduates career management and professional development ✓ organization of university recruitment fairs and customized recruitment events |
| ROTECTION | ✓ IP protection and IP portfolio management ✓ IP legal and technical advice to university staff ✓ negotiation and technical advice on IP agreement |
| EXPLOITATION | ✓ licensing ✓ negotiation and technical advice on IP exploitation agreements ✓ legal and technical advice on IP exploitation items |
| REPRENEURSHIP | ✓ develop tools to support inspiration and awareness raising ✓ facilitate access by industry to innovative R&D ideas developed by university staff ✓ support pre-and incubation, acceleration services |
| MUNICATION & ND MANAGEMENT | ✓ institutional communication (university publications, web pages, social netwoks) ✓ coordinated identity and image of the university and its structures ✓ university brand management ✓ public engagement |
| 1 | |

RD MISSION ACTIVITIES





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

ORGANIZATION - KTO LEVEL (2016-2017)

IP Protection

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

IP Exploitation Licensing

- Valorisation of IP
- Negotiation and management of licensing agreements

Entrepreneurship Spin-off/Start-up

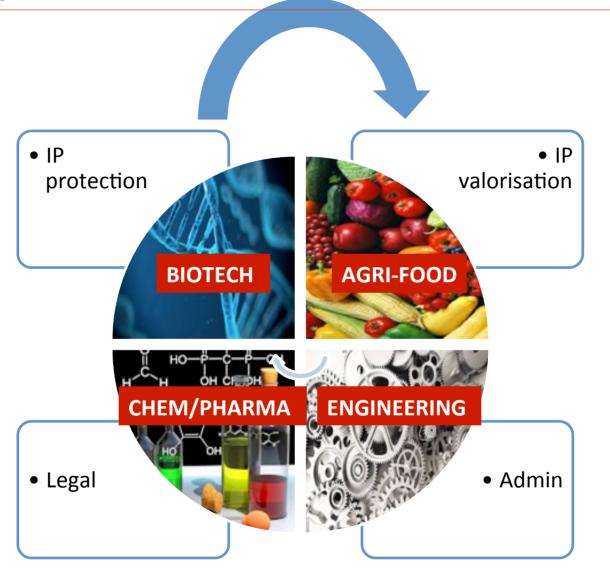
- Strategies and models
- Management of internal regulations and procedures
- Coordination with incubator and external initiatives

RE-ORGANIZATION OF KTO PROTECTION/EXPLOITATION – WHY?

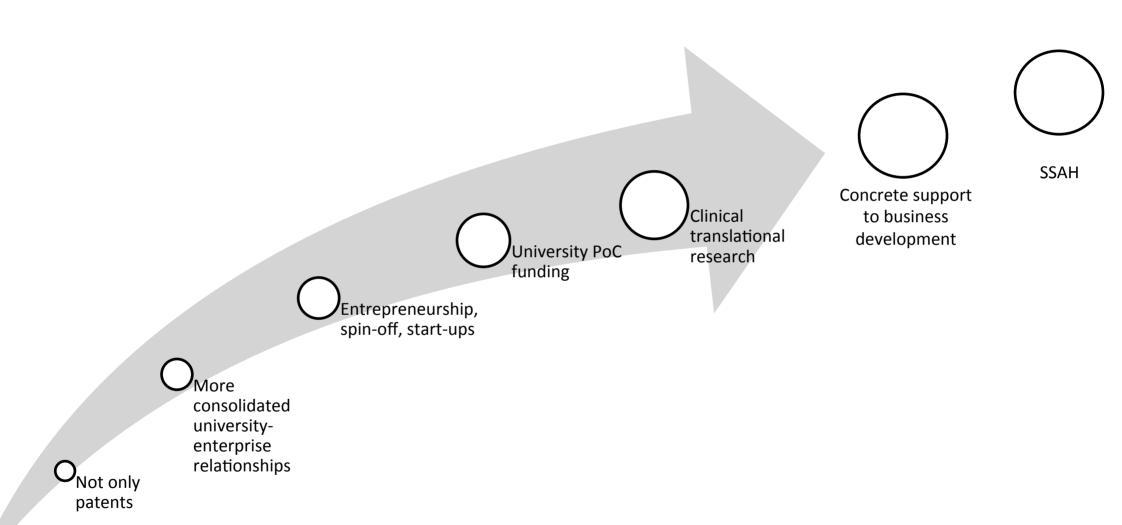
- TT has evolved to Third Mission or «engagement»: more professionalization/ thematic specialization is required
- More sectorial/thematic links needed within the Third Mission Department (spin-offs, thematic incubators, thematic VCs, etc)
- PROGRESS-TT: an opportunity for international benchmark and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

KTO EVOLUTION

| Horizontal structure (by processes) | Matrix structure |
|---|--|
| Knowledge Transfer Manager | Business Development Manager |
| Patents (Patent filing = end of the process) | «Projects» (Patent filing = beginning of the process) |
| IP Management | Technology transfer |
| Prior-art search to select | Prior-art search as business tool |
| Researchers = «clients» | Researchers = «partners» |
| «Passive» approach | Proactive approach (scouting) |



EVOLUTION OF KT @UNIBO



OPEN QUESTIONS

Awareness?
Strategies?
Priorities?
Resources?



ARTEC - Industrial Relationships, Third Mission and Communications Division

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