



IP Valuation Basics for Academic Institutions

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Topics

- Why IP Valuation
- Basics on IP Valuation
- IP Valuation – Challenges for TISC s /TTOs
- Practical Approaches
- WIPO Survey
- Conclusions

Pillars of Institutional IP Eco System:

DONE!

**Legal
Framework**

DONE!

**IP
Management
infrastructur
e - TMOs
focus**

DONE!

**Human
Capital**

**Funding and Commercialization of
Research Outcomes**

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Funding and Commercialization of Research Outcomes - Increasing Challenge for Academic Institutions Worldwide

Context

- Increasing demand of Governments and society to justify and prove:

- Public Funding
- Value for Society
- Generation of Revenues
- Creation of Start ups

Private partners

- Fund Raising
- Contractual Relations

Challenge

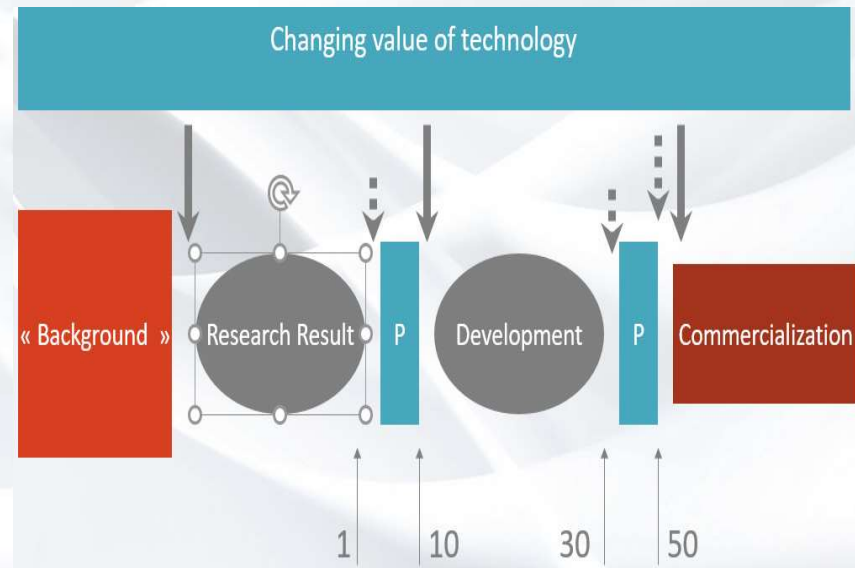
- IP Valuation - complex process, requires understanding of the context and influential factors;
- Lack of transparent IP markets;
- Scarcity of skilled valuers and universal success models;
- No practical IP valuation method;
- How to bridge the gap with investors;
- Early stage technologies – how to value so far from market?
- **Specific – how to manage combination of private and public value?**

What is True about IP Valuation

Definition

- Valuation - The process of identifying and measuring benefit and risk from an **intangible asset in a specific context**.
- **Projection of potential value that may be generated** – looking at the future.
- Challenge – identifying field of use, market, growth, economic life – time under projection, risk and potential benefit – as well changing value of the money over the time.
- Adverse correlation between:
 - Benefit
 - Risk

We can Increase the Value through IPR management



What is True about IP Valuation

Complex Process

- Volatile – value of the same asset changes depending of the **context** and **time to the market** :
 - Most intangibles are capable to generate more than one value stream **simultaneously**;
- Facing **uncertainties** – “Black Swan Theory”;
- Sectorial **customized approach**;
- **Subjective**.



What is True about IP Valuation

There is no “The Method” to apply – it is always a “Combination”

- **Qualitative Method** - rating and scoring factors with influence on the value – useful to identify an asset worth of investment.
- To calculate the monetary value of an asset - **Quantitative Method** by using different approaches.
- Academic institutions are regularly applying **Qualitative Method** in IPR management, based on **internally defined rating criteria**.
- **Quantitative** method – mostly in commercialization phase, by using internal adjusted methodologies and combination of resources;
- How to value human capital –important asset for boosting technologies?
- **New Context**: Valuation for public funding and value of research outcomes for society;
- Value of research outcomes– combination of private (return on investment) and public (benefit for society) considerations.
- **Policy adjustments and indicators** may help!

What is True about IP Valuation

Quantitative Method – always combination of approaches

- Cost
 - Market
 - Income
 - Discounted Cash Flow
 - Real Option
 - Relief from Royalty
 - Monte Carlo
 - Industrial Standard
 - “Rule of Thumb”
- **Cost Approach** - cost of creation and protection - important criteria for return on investment;
 - **Cost of Creation** – bad argument in negotiations;
 - **Market Approach** – to temper the situation for an early stage technologies and pricing for standard research services;
 - **Income method** – used in IP commercialization phase, often adapted through the use of internal software.
 - Academia rarely outsource valuation services in an early stage – too expensive!

What IP Valuation and Value is NOT

Valuation is NOT determining the value of **EQUIVALENT** assets

Value is not the **PRICE** of IP and technology

Value is not the **COST** of development

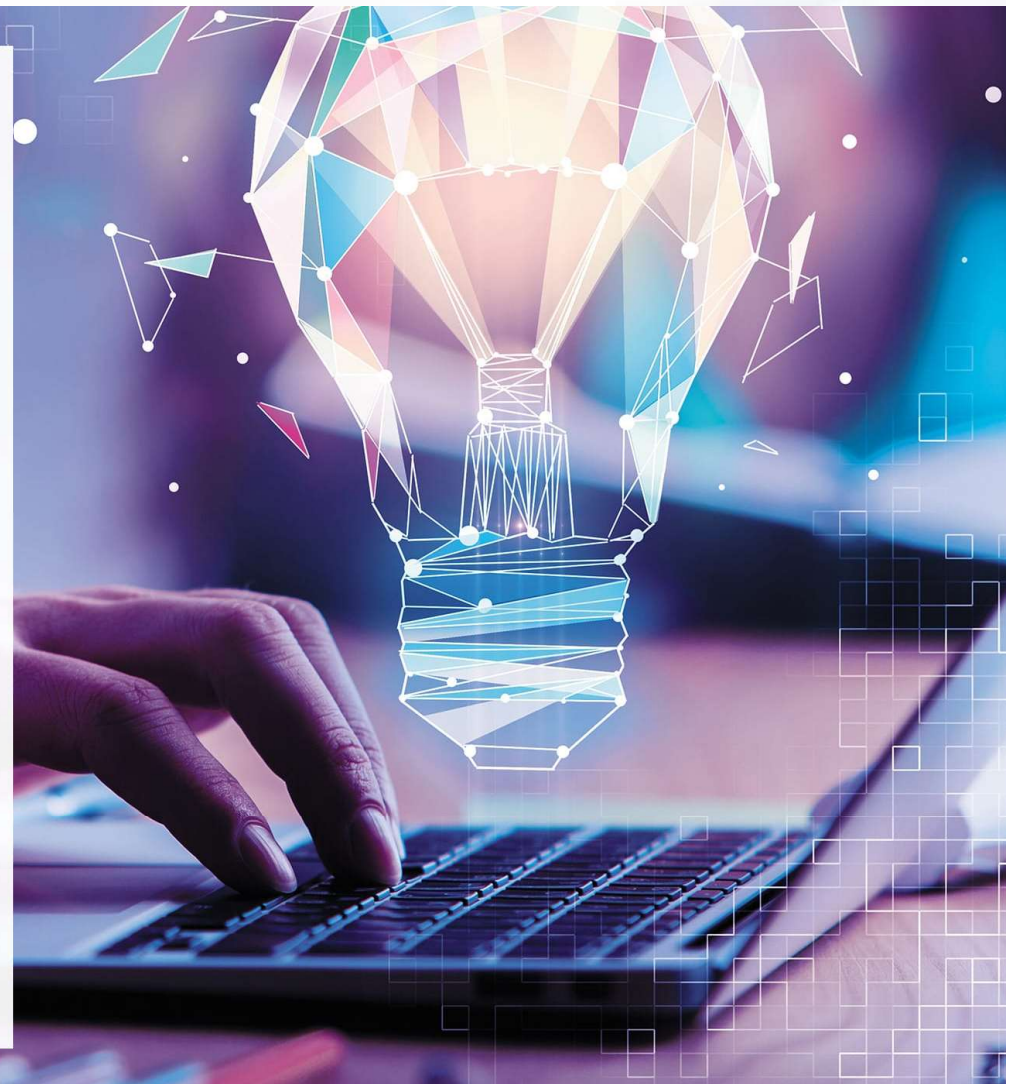
Valuation is not **ACCOUNTING CALCULATION**

Value is not a **PRECISE** figure

Valuation is not an **OBJECTIVE** estimation

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IP Valuation – Challenges for TISCs /TTOs

- **Challenge** – **Making balance** between the essential objective of academic institutions – dissemination and use of knowledge and generation of revenues;
- **Challenge** Managing **different expectations of inventor and investor / buyer:**
 - **Asymmetric knowledge and information about technology and market;**
 - TTO needs to make valuation even before market is identified;
 - Important role of company – knowledge regarding potential use and market;
 - Inventor – know how that attracts partners, need to be involved;
 - **Dual role** - keep the industrial partner on board for further development and commercialization and representing interest of university and inventor.

IP Valuation – Challenges for TISCs / TTOs

- **Challenge** – Methodologies used by businesses are of little use for academic institutions as they **often need to value technology before even the market is defined;**
- **Challenge** – Early stage technology
 - How to value – support of inventor and the team is necessary;
 - Technology often needs incubation and usually there are limited resources for further investment and development;
 - **There is a need for development of more criteria and methodologies to value an early stage technologies.**

Practical Approaches

- Focus and approach depends often on the organization of TTO:
 - IP Hub – managing portfolio of number of different departments, centralized – act as technology broker, general knowledge and competences. Main focus on identifying an assets that can generate benefit;
 - TTO focused on one broad technology area – more specific knowledge is available internally regarding technology and potential users and markets. Focus on the best commercialization options for specific technologies;
 - **Essential – receiving more information from inventor regarding potential markets and competitors – than having details regarding technological aspects.**
- Mission – dissemination of research results or generation of revenues?

Approaches of TISCs / TTOs

- Experience of technology manager – important, as well as his intuition for markets as projection of **pay offs requires industry partners which may not exist at the time of investment or strategic decision;**
- Faced with challenges – **TTOs often develop their own adjusted methodologies and tools, such as:**
- **Internal commercial data** – bases, information regarding commercial deals and due diligence done internally or in the Network;
- **Data** – bases for external information for potential users about existing assets, user friendly contract formulas (“click and go”) and sometimes conditions for selling IP.

TISC / TTO Approaches

- Internal methodologies – such as detailed audit and inventory of all existing resources and revenues generated – including prices of consultancy fees. Data are used as a base for valuation;
- Scored based approach – organizational criteria for identification of technology that can be commercialized or incubated and further developed.

Examples of Scoring Criteria

- **Internally developed ranking criteria, such as “8 leading factors”:**
 - **Suitability for Suggested Application**
 - **Cost**
 - **Development Status**
 - **Exploitation Rights**
 - **Degree of Novelty**
 - **Marketing Interest of Partner**
 - **Quality of Technology Information**
 - **Sociability of Technology Provider**
- **Or**
 - **Patentability**
 - **Patent Strength**
 - **Status of Invention**
 - **Market Situation**
 - **Inventor’s History – Supportive or not in the process of transfer?**
 - **Additional Services for the Partner (potential for continuation of collaboration)**
 - **To whom shall invention be licensed**

Internally Developed Tools

Internally developed tools

- **Software:**
 - **Simulation tool** - based on the idea of “ Monte Carlo” income method simulating the value of the same technology in relation to different applications, solutions and business models – selecting cases with the highest potential value for further exploration;
 - **Selection tool** – based on proprietary algorithm selects technologies from portfolio that can be well commercialized – stages based on defined criteria for elimination - recent expiring date, committed, important for public interest, co – owned etc. Once selected the rest of portfolio can be analyzed based on commercial criteria – multiple field of use, geographical application, economic life of the patent and finally applied more fine tuned criteria;
 - **Management tool** for important intangible assets that by national laws are not recognized and protected - technical services, capabilities etc.

IP Valuation Practices in European Academic Institutions – WIPO /EC JRC Survey

- Survey with 25 biggest European research institutions
 - Contrary to businesses IP valuation mostly at commercialization phase (only 30% at the time of protection);
 - 53 %relaying on internal valuation resources, 33% combine internal and external and only 13% outsourcing;
 - Internally developed methodologies – depending on research objective;
 - Frequent application of qualitative method;
 - Use of internally developed software and data bases for quantitative valuation;
 - Development of startups – solution for IP commercialization of an early stage technologies, licensing for more mature assets.

IP Valuation Practices in European Academic Institutions – WIPO /EC JRC Survey

Use of commercial search tools and data bases

- Search tools/databases (e.g., EPO-PATSTAT, QPAT-Orbit, Thomson Delphion, used to assess freedom of operation;
- Websites such as marketsearch.com and reportlinker.com and databases such as Thomson Innovation, Dianeconsulting, Avention / onesource and business-insight.com.
- Royalty rates – compared with data from Public Relations Association (IPRA), Edgar (upwork.com), royaltysource.com, etc.

Conclusions

- IP valuation in academic institutions is not the same as in businesses;
- Challenging position of TISCs / TTOs – between inventors and investors;
- Valuation of an early stage technologies would need more criteria to be developed and adopted by academic institutions;
- Approaches defer in relation to core mission and objectives – dissemination of technology or generation revenues;
- There is a need for clarification of inter – relation of those objectives;
- Public funders of R&D may try to measure social returns on their technology investments and adjust criteria for funding;
- Social rates of return may include criteria of costs and benefits to the rest of the economy (particularly taxpayers and industry partners that co-invest in the technology);
- Development of adjusted public policies and strategies which will incentivize knowledge transfer and commercialization;
- National and regional TTO Networks – very important KT infrastructure for promoting collaboration, sharing data and best practices.



Thank you!

Olga Spasic

Head

Technology Transfer Section

IP for Innovators Department

olga.spasic@wipo.int

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