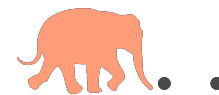


Licensing from Industry to Industry

Making your patent portfolio work for you!





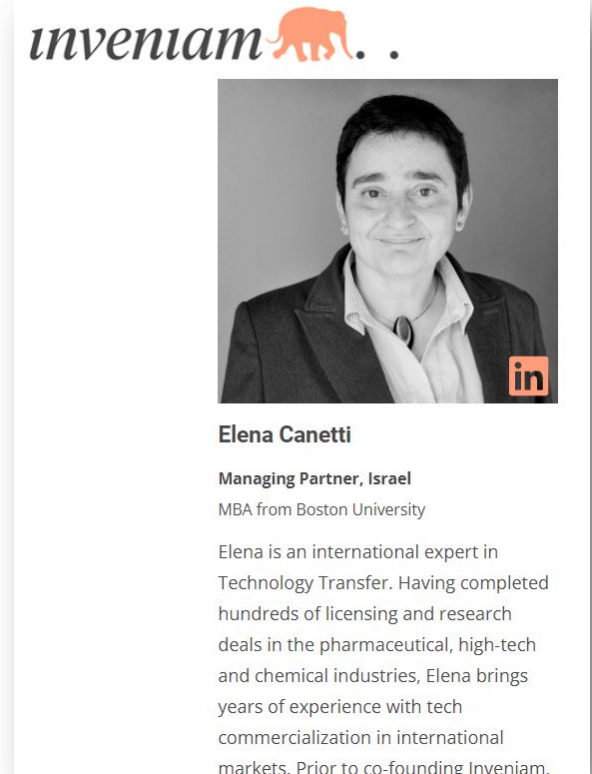
Monetization of IP Assets Index

- My Bio
- Tech Transfer as additional income source
- Licensing Intellectual Property
- Tech Transfer Business Models
- Evaluation of Technologies
 - VC Technology Assessment Criteria
 - QuickLook
 - Technology Readiness Level
- Commercialization of Technologies
- Valuation of Technologies

Elena Canetti

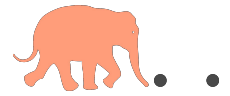
Bio

- Elena Canetti is a **Managing Partner at Inveniam Group**. Inveniam is a corporate finance and strategy advisory firm with offices in Spain, Israel and Mexico.
 - **Expert in Technology Transfer**, experienced in technology commercialization in international markets, has completed hundreds of license research deals to date
 - **Consultant to Latin American governments**, academic and research institutions in evaluation, valorization and commercialization of patent portfolios
 - **Frequent speaker and lecturer** on technology transfer issues, to large corporation and institutions, at conferences in US, Europe, Latin America and Asia.
- Past Experience
 - **VP Research Collaborations at Yissum** Research Development Company of the Hebrew University of Jerusalem, responsible for the business assessment of HUJI technologies and negotiation of research agreements with the industry.
 - **Materials and Technologies Licensing Officer**, responsible for IP marketing efforts, and licensing of HUJI technologies, to corporates, incubators and new co's funded by venture capital firms.
- Elena holds an MBA from the Boston University and a BFA from Tel Aviv University.



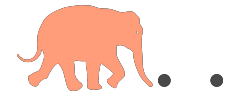
Tech Transfer

Additional Income Source



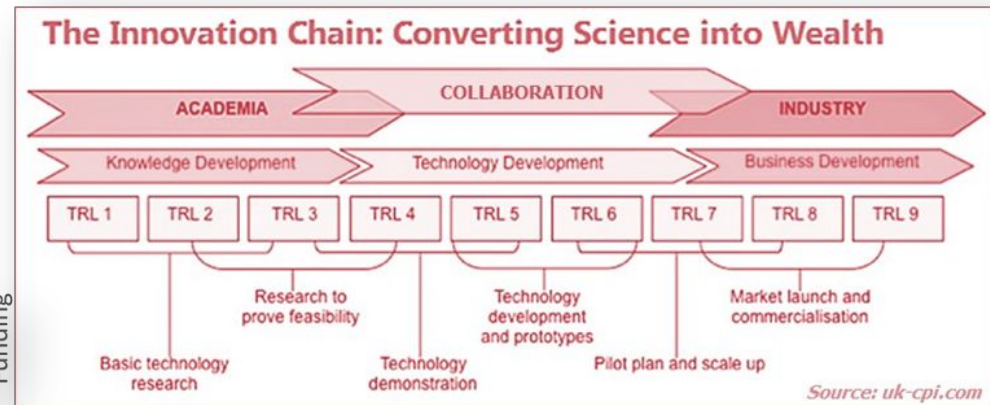
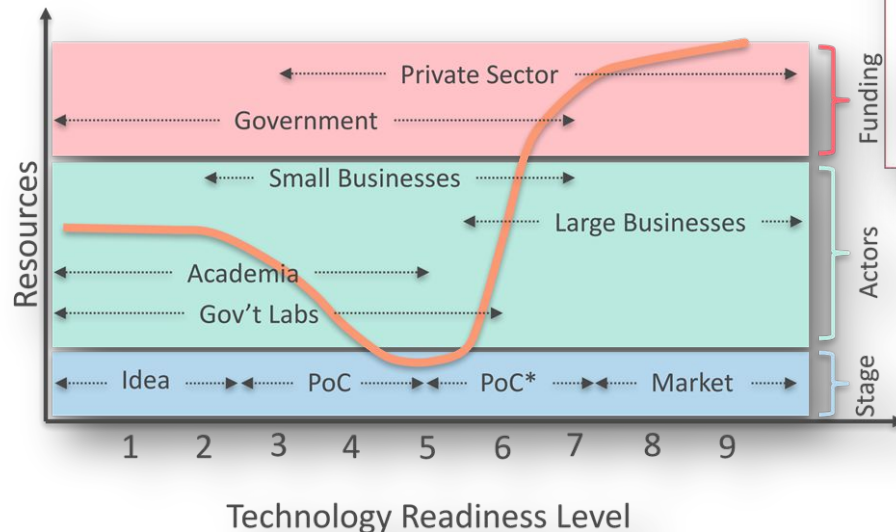
inveniam

Licensing Intellectual Property

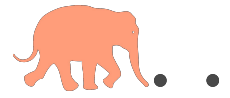


Closing Technology Development Gaps

- Corporations are eager to license technologies from Startups and SMEs to **accelerate their innovation cycle**.
- For Startups and SMEs, licensing of non core assets can constitute a very good **second source of revenues!**



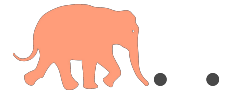
Technology Transfer



A true "Win-Win"

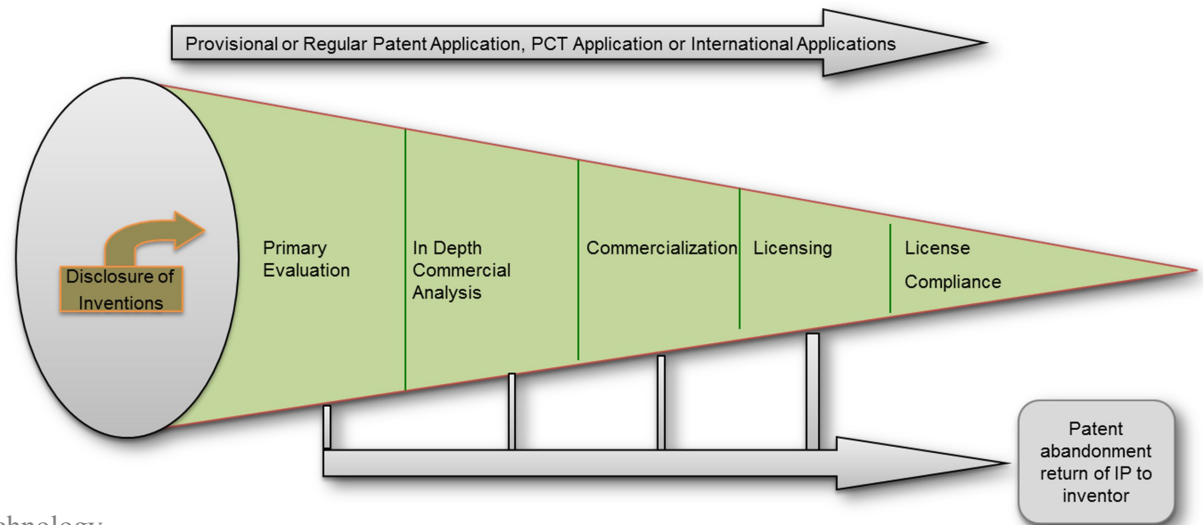
- Start ups and SMEs create patentable innovation of **high risk**
- SMEs are willing to give a license to **commercially exploit the patents**.
- Corporations are willing to develop a new technology to gain a **competitive advantage**
- When patent is granted, the patent protects the company **against competitors**.
- SMEs enjoy the benefits of earning **additional royalty revenues** from non core assets.
- Corporation earns **additional income** from selling new products, entering new markets, or reducing process or production costs.
- Corporation benefits from obtaining a **technology edge** that keeps it ahead of competitors.

The Technology Transfer Process



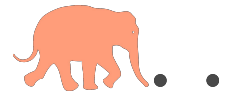
So Simple...is it really so??

- **Evaluate** inventions
- **Select** inventions to be patented
- **Identify** those companies that could be potential licensees
- **Contact** the most promising licensees
- **Negotiate** the terms of a license agreement
- **Monitor** license compliance

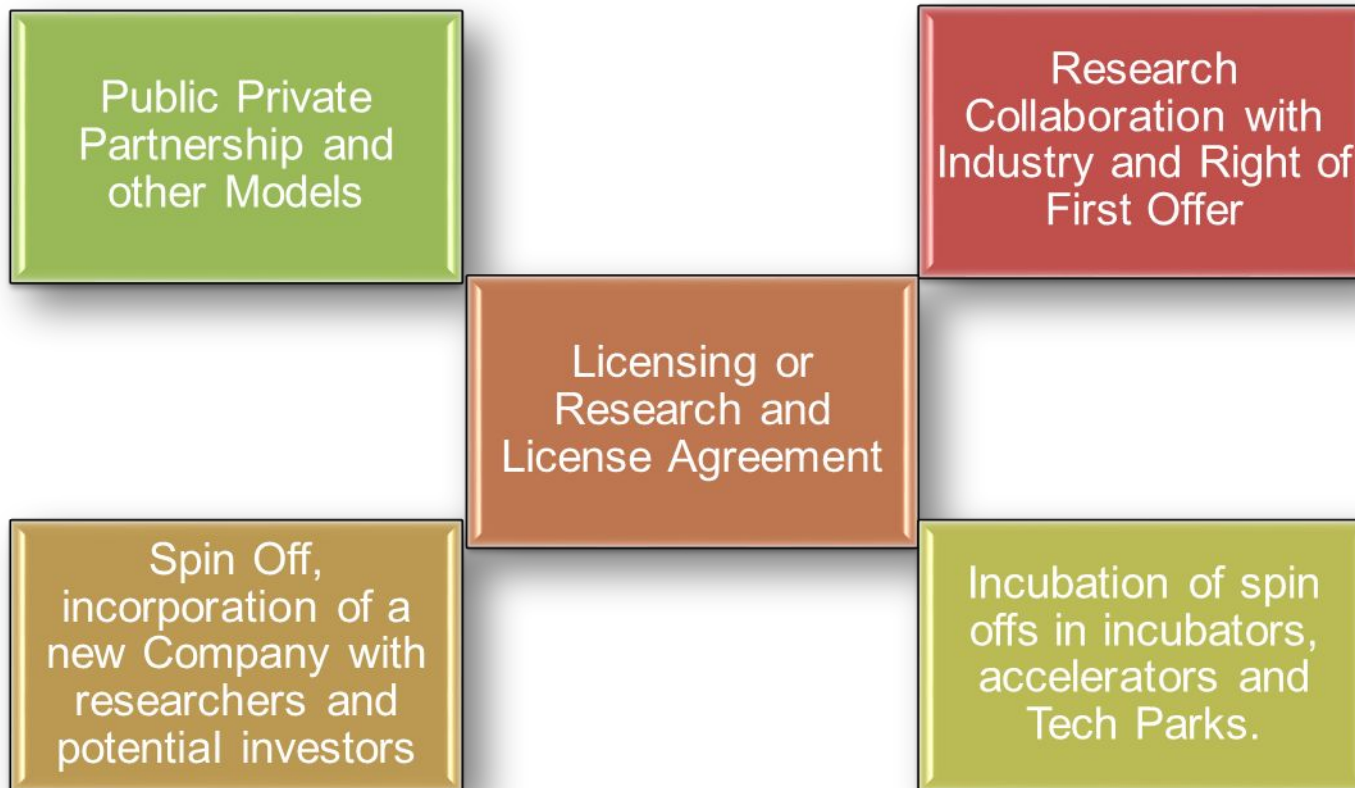


Jon Sandelin. An Operations Manual for a Technology Transfer Organization. Based on the Stanford Model (Sandelin, 2004)

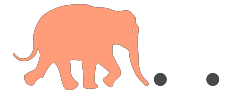
Tech Transfer Business Models



The Route to Commercialization



The Tech Transfer Process



Different stages...different agreements

Commercialization Stage

- CDA, Confidentiality Agreement, related to information exchanges between the parties. It protects both sides from disclosure of confidential information.

Contact with Potential Clients and Pre-evaluation

- MTA Material Transfer Agreements, related to exchanges of materials, protects the IP rights and know how of the University on the materials developed by its researchers

Evaluation Stage, Joint Development, Option to License

- Service Agreements and Sponsored Research Agreements
- Option to License Agreement and MOUs

Negotiation Stage, and definitive License Agreement

- License Agreement or Research and License Agreement, related to the legal, financial and IP terms and conditions governing the relationship between the parties.

The Best Route to Commercialization . .

Evaluation of Technologies

In order to establish which is the **best Tech Transfer mechanism**, first, it is necessary to **evaluate the Technology**.

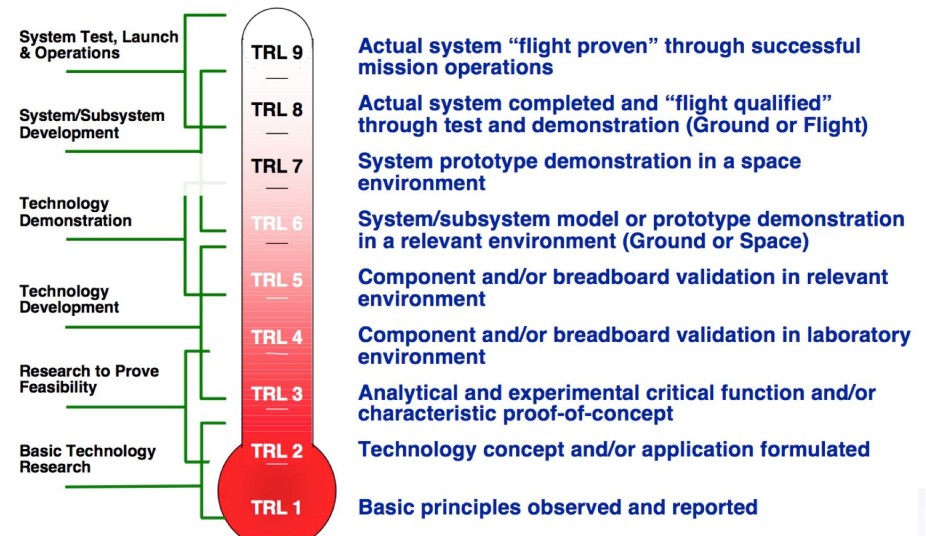
- Each technology must be evaluated according to different parameters, stage of development, potential market, breadth of potential applications, etc.
- Technology evaluation is performed using several methods, among others, Quicklook, TRLs and Venture Capital Technology Assessment Criteria.

Quicklook Technology Commercialization Assessments

- ▶ Research snapshot
- ▶ Quick **GO/ NO GO** evaluation of an opportunity
 - Determine whether to put more time, money, or effort into a technology

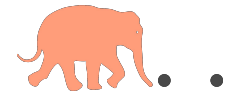


NASA/DOD **Technology** Readiness Level

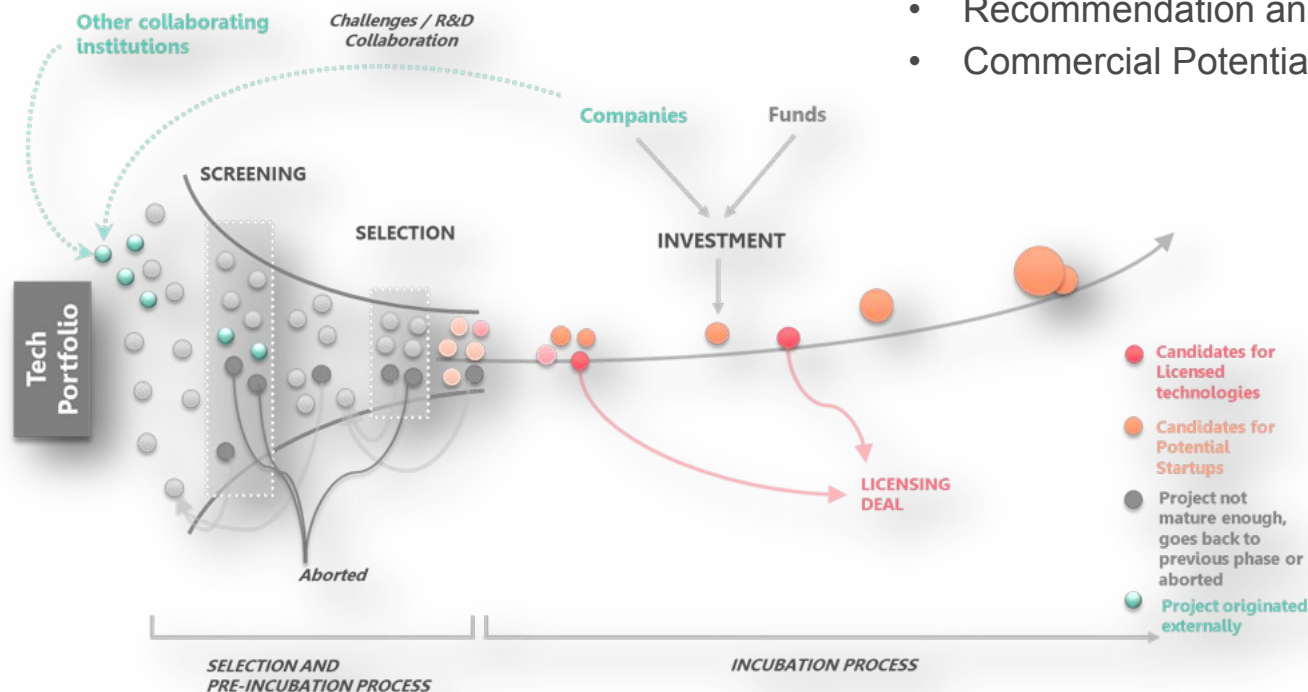


Venture Capital

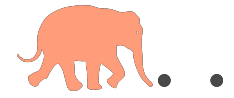
Technology Assessment Criteria



- Technology Description
- Potential Benefits
- Potential Commercial Markets
- Development Status
- IP Assessment
- Competing Technologies and Competitors
- SWOT Analysis
- Recommendation and Next Steps
- Commercial Potential Rating



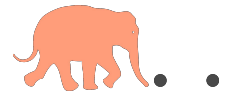
VC Technology Assessment



Main Criteria

- ✓ **Technology Description**
 - Describe technical attributes of the invention in language a non-expert understands:
- ✓ **Benefits of the Technology,**
 - Describe benefits, not just features, and the problems that the technology can solve.
- ✓ **Potential Commercial Markets**
 - Feedback you got in the various markets investigated.
- ✓ **Market Interest & Market Requirements**
 - Level of interest you found in your interviews in this market.
- ✓ **Development Status**
 - Status of the technology in terms of it's readiness for the market.
- ✓ **IP Assessment**
 - Describe the ownership structure of the IP, what sort of protection currently exists, etc.
- ✓ **Competing Technologies and Competitors**
 - Describe how market problems are currently being dealt with, and what solution is considered to be the 'state of the art.'
- ✓ **SWOT Analysis**
 - Describe the main challenges and opportunities

Quicklook Methodology



Quick GO / NO GO decision

Quicklook Results

do not replace exhaustive research, they may provide an early indication of **probable commercial interest** in an idea, invention, or area of research.

May give the organization sufficient information to make a **'go/no go' decision** to proceed to the next stage in the commercialization process.

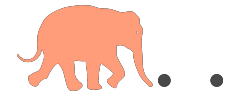
Quicklook Technology Commercialization Assessments

- ▶ Research snapshot
- ▶ Quick **GO/ NO GO** evaluation of an opportunity
 - Determine whether to put more time, money, or effort into a technology



- Methodology to get an **early assessment** of the potential commercial interest in a technology
- **Feedback from the marketplace** on commercial benefits of the technology.
- Non starter – will not succeed
- Suggests changes required in current technology to achieve success

Technology Readiness Level: TRL



Measuring Technology Maturity

Invented by NASA to assist in new technology development process and to provide a communication tool between technologists and managers

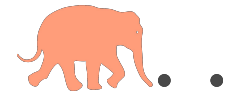
TRLs are a uni-dimensional scale used to provide a measure of technology maturity

Provides repeatable system for measuring a technology's maturity

"Snap shot" of program maturity at a given time

Level 1	Lowest level of technology readiness. Research begins to be translated into applied research and development.
Level 2	Invention begins. Once basic principles are observed, practical applications can be invented.
Level 3	Active research and development is initiated. This includes analytical studies and laboratory studies to physically validate analytical predictions of separate elements of the technology.
Level 4	Basic technological components are integrated to establish that they will work together. This is relatively "low fidelity" compared to the eventual system.
Level 5	Fidelity of breadboard technology increases significantly. The basic technological components are integrated with reasonably realistic supporting elements so it can be tested in a simulated environment.
Level 6	Representative model or prototype system, which is well beyond that of TRL5, is tested in a relevant environment. Represents a major step up in a technology's demonstrated readiness.
Level 7	Prototype near or at planned operational system. Represents a major step up from TRL6, requiring demonstration of an actual system prototype in an operational environment
Level 8	Technology proven to work in its final form and under expected conditions. In most cases, this TRL represents the end of true system development.
Level 9	Actual application of the technology in its final form and under mission conditions, such as those encountered in operational test and evaluation.

Commercial Potential



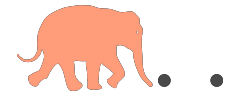
Ranking Technology Portfolio

The rating summarizes the relative attractiveness of the technology. Scores are subjective

Factor	Weight	Score
Market Potential	25%	(1-3)
Market Maturity	15%	
Technology Development	40%	
Competitors/Patents	20%	

- **Market Potential:** A low score if the research findings point towards a small market, or high barriers to entry
- **Market Maturity:** The more a technology has to break in a market the more difficult or more costly.
- **Technology Development:** A low stage of development indicates a technology without a serious working prototype or at a theoretical stage.
- **Competitors:** This rating is an indication of the level of competition. Low scores would be given if dominant companies with better or very well accepted products exists in the same market the technology addresses it will be more difficult to sustain a competitive advantage over time.
- **Patents:** If there are a great many recent patents in the same technology area it is an indication that there is a great deal of activity and also a warning signal that the technology may not be sustainable over time. The patent strength is also a factor.

Technology Commercialization



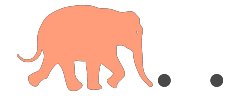
How to market a Technology?

6 or 7 P's Marketing Mix

- **Product:** Your value proposition
- **Place:** Why your customers will believe you (Potential licensees...)
- **Promotion:** How your customers will find you
- **Price:** What kind of price you can get
- **People:** Who will persuade your customers
- **Process:** How you will deliver the service



Product:



The Value Proposition

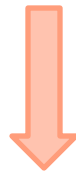
Product Definition and Value Proposition

We have to define our technologies from the POV of their applications (products) and perform a **FAB analysis** (Features and Benefits analysis)

The Features and Benefits Analysis allows to convert:

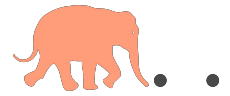


Value Proposition is the proposition which connects the product's attributes (FEATURES) with the creation of value for users (BENEFITS)



It is the key to attracting potential licensee's attention

Price:



Determining the Right Technology Price

For the Licensor company, the technology price is the collection of payments received from the corporate Licensee:

- ✓ License fees and Milestone payments
- ✓ Royalties and Sublicense consideration
- ✓ Minimum Annual Maintenance Fee

For the Licensee the technology price is:

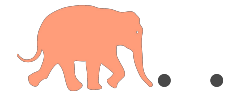
The future stream of revenue from selling the product at the market's price,
Discounting the risk of the licensee's investment.

Other many issues affect Product Price:

- Technology Risk: advancing from TRL4 to TRL 7....
- Market Risks such as Monopoly pricing, Competing Products, Price expectations
- Influence of heavy R&D expenditure...
- Regulatory Risk, Strict Regulations ...

The Price is determined by the market! So, importance of Technology Valuation

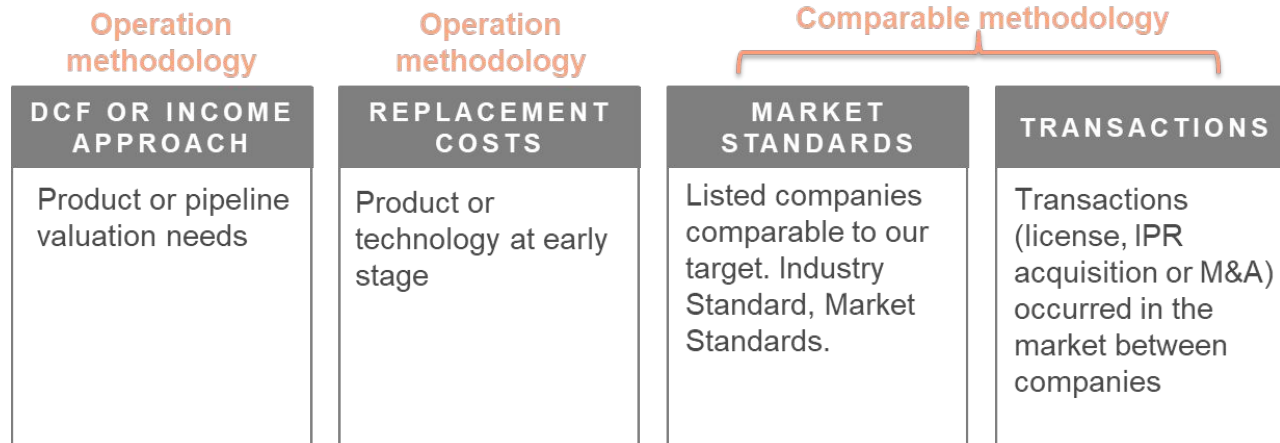
Price:



Technology Valuation

Mix of Operation and Market Methodologies

- Basic **DCF calculation**, determination of cash flows in development and market phase
 - Application of Discount Rates for risk adjusted **NPV Valuation**
 - Develop assumptions for **future market potential**, bottom and top down approaches
- Analysis of **comparable licensing** or IPR acquisition transactions
- **Deal Structuring process**, product value, handover time point, preferred milestones payments and royalties mix, negotiation



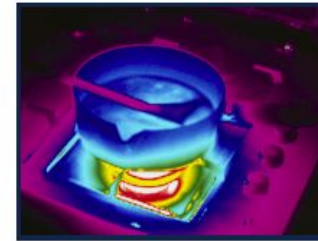
Combination of different valuation methods...since there is no right method: including operation methods, mixed (VC method) and market methods in order to provide the right valuation of the project or of the company

Promotion:

Technology Summary Offer

1. Title
2. Technology Overview
3. Applications
4. Competitive Advantage
5. Unique features and benefits
6. Technology Description
7. Inventors information
8. Stage of Development
9. Patent Status
10. Market

Oxford eco-pan revolutionises cooking efficiency



Oxford's groundbreaking cooking pan technology utilises uniquely designed vertical fins to capture and absorb heat energy. This technology leads to an efficient, fast and even cooking process.

Tests of initial versions of Oxford's cooking pans on gas stoves have shown that they can heat food 40% faster than conventional pans in some instances. Foods also cook more evenly because they heat up from the side and not just the bottom of the pan.

With proven improved cooking times and reduced energy use together with a striking visual impact, this is an opportunity for a highly marketable product.

Cooking pans, as used in kitchens around the world, are generally simple vessels whose designs have not changed much over many years. Researchers at the University of Oxford have recognised however that such pans, particularly when used on gas stoves, allow a large proportion of heat energy from the heat source to dissipate into the surrounding atmosphere, rather than being used to cook food.

TECH TRANSFER UNIVERSITY OF MICHIGAN

[Welcome](#) - [All Technologies](#) - [Browse by Category](#)

A Small Molecular Compound for Arthritis and Bone Erosion Treat

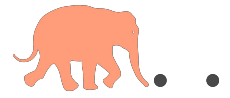
Technology #7656

Unmet Medical Need: Bone damage is a devastating disease outcome for many millions of patients with arthritis or other bone-destroying conditions. Despite the advent of biologic agents, treating erosive bone damage remains a challenging endeavor. Currently used biologic agents and other modern drugs are very expensive, have significant side effects, and most of them can only be administered parenterally. The proposed solution offers a potent and specific treatment modality. To the best of our knowledge, it is the first to address both immune and osteoclast (OC) dysregulation with a unified therapeutic approach.

The solution proposed here has several innovative and unique advantages over existing drugs:

- A novel target and a well-mapped binding site;
- A well-characterized lead: [Small size (MW 330 Da); pM-range *in vitro* effects; modestly orally available, but with strong effect *in vivo* at mg/Kg-range dosing, twice weekly by gavage]
- The target-mediated pathway has been validated *in vitro* in both human and mouse cell systems, as well as in mouse pre-clinical models.
- Dual effect on inflammation and bone damage
- Different from established or emerging treatment modalities which all target nonspecific, 'downstream' mechanisms, the approach proposed here targets an 'upstream' highly specific molecular

Promotion:



Marketing Campaigns Tips

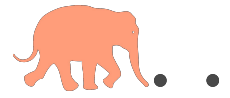
How to reach potential licensees: classic business development

- Sending of non confidential information packages, sales calls
- Conference calls
- Signature of NDAs and MTAs
- Sending of confidential information package
- Study negative responses, collect feedback both negative or positive

Main Tips

- **Target the right audience:** gunshot or rifle approach
- Identify and **Contact the right person** in the organization
- Deliver the right industry **specific message**
- **Focus on benefits** specific to industry
- Know your **Technology's Value Proposition** and communicate it in a concise, clear manner!

Licensing to International Players



Technology Brokers

- Tech Brokers can **assist you with your tech transfer** strategy
 - Tech brokers can help you define the applications and products and define the target market!
 - Tech Brokers can do for you the market research: market potential, competitive technologies patents and products, identifying key players (potential partners) and other research.
- Tech Brokers can **be very effective** when:
 - The technology has reached a good stage of development, usually above TRL 5 or 6, minimum TRL 4.
- Tech Brokers **do not necessarily know more than you do** ... but they might just have more resources, established processes and better contacts

Thank you!

Elena Canetti
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