

Commercializing IPR: the license track

January 21st 2011

Today's purpose

Showing the differences in basic conditions between projects suitable for a license agreement and for forming a start-up company.

Give you an introduction to how you commercialize IPR using license agreements

Key areas to be addressed:

- How to choose between commercialization tracks, i.e. license deals and start-up companies
- How to make a strategy for commercializing IPR via license agreements
- How to evaluate an invention and prepare it for sale
- How to find and get into contact with licensees
- How to estimate the value of IPR
- How to negotiate and implement the deal

Approach:

- Practical introduction to the subject areas with case example
- Reflection on your own course cases

Schedule

13:00-13:30

Choosing between commercialization tracks

- Indicators for a license track
- Indicators for a start-up track

13:30-14:00

Commercialization of university IPR: Process and analysis

- How does the process work – & the timeline
- Models for analysis and building the value proposition

14:00-14:20

Coffee break – Afternoon tea

14:20-15:00

The Licensing track: Who to contact – and how?

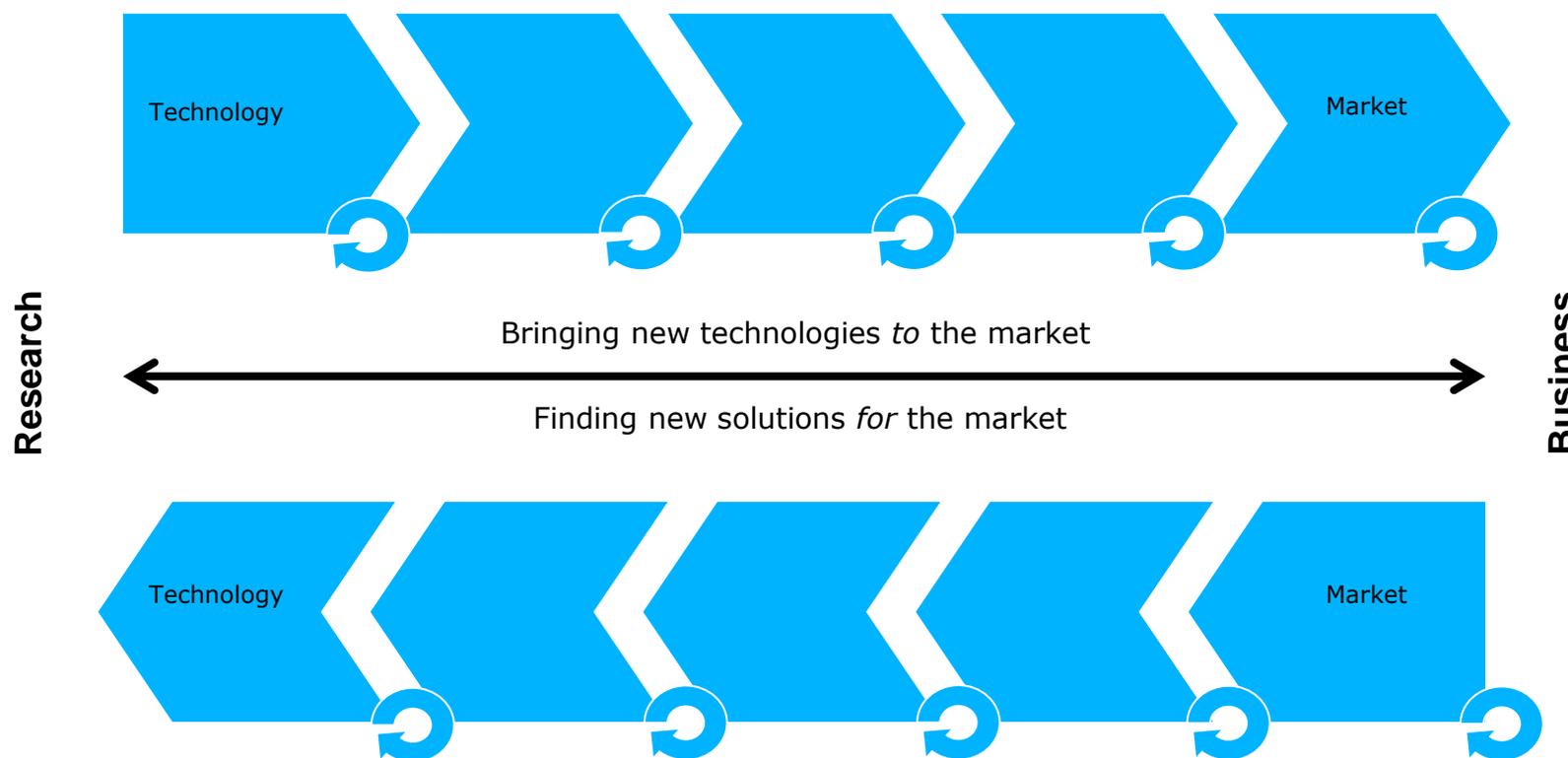
- How to find licensees and contact persons
- Preparing for the deal, including valuation

15:00-15:30

The deal

- Negotiation
- Closing
- Technology transfer, Follow-up, Maintenance

tto a/s, a catalyst for making money on new technology



tto a/s

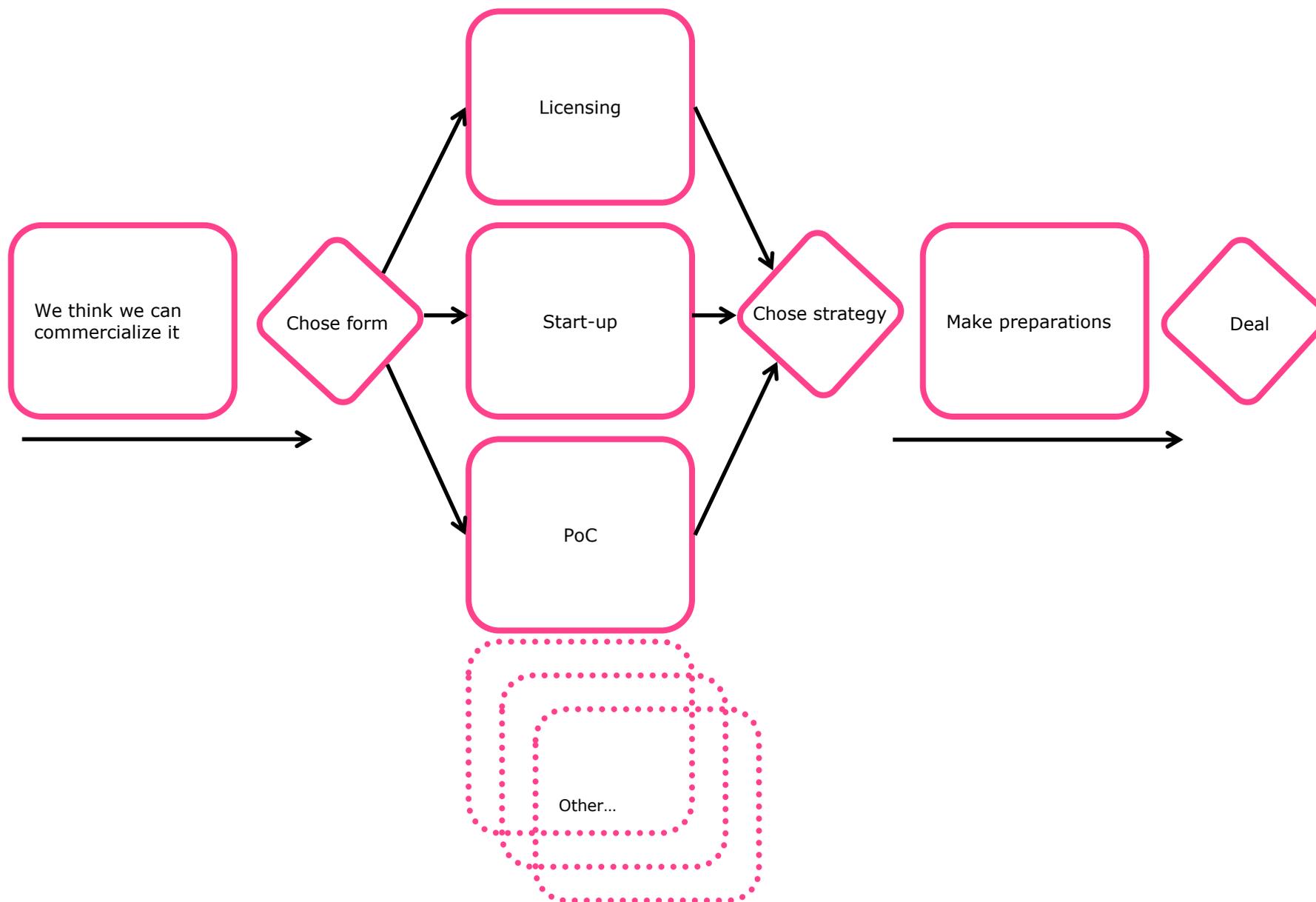
- tto a/s is a consultancy company specialized in commercialization of emerging technologies
- We have a strong focus within the areas of clean technologies and life science
- We create value for our customers by;
 - Commercialize new technologies – create economic value in the market
 - Build strategic partnerships for collaboration, sales and licensing
 - Systematically discover new business opportunities
 - Assist in technology transactions with due diligence and valuation
- We have solid experience with technology driven business development from working with European companies and universities
- We have a track-record of more than 100 tech transfer projects
- To strengthen technological and IPR competencies, tto a/s partnered with Plougmann & Vingtoft in 2008
- For more information, please visit: www.tto.dk

Recap of earlier lecture on license agreements

- What is a license agreement?
- How are they normally structured?
- What are the pro's and con's of using license agreements as tools for commercialization?

CHOOSING BETWEEN COMMERCIALIZATION TRACKS

Different commercial strategies – many ways to Rome



License versus start-up

Licensing may be appropriate if:

- There are significant barriers to a new company entering the market
- The marketplace comprises a small number of large companies
- It is a niche technology
- There is a single patent
- The technology is near market and requires little further development and investment
- A company is linked with the research either as a sponsor or interested observer
- The technology fits an existing company's IPR/product portfolio
- Licensing is a common strategy within the industry sector

License versus start-up

A start-up company may be appropriate if:

- Entry to the market by a new company is relatively easy with few significant barriers
- The marketplace is fragmented with a lot of small companies
- The technology has many applications
- There is a portfolio of patents
- Further investment is required in the technology and associated infrastructure in order to reach the market
- There is a group of founders motivated to start a company
- It is likely that investment funds can be raised for a company
- There is a financial exit route for investors, including the university

License versus start-up

Venture Capitalists think about:

- Disruptive technologies
- 1 B\$ markets
- Sales price > 25 x costs (or at least many)
- Market > 25 x investment

Licensees (can) have:

- NIH (not invented here) syndrome
- Difficulties handling too disruptive technologies
- Exclusive access to market – “owning” the customer
- Ability to bring it to market

DK experience: License or start-up

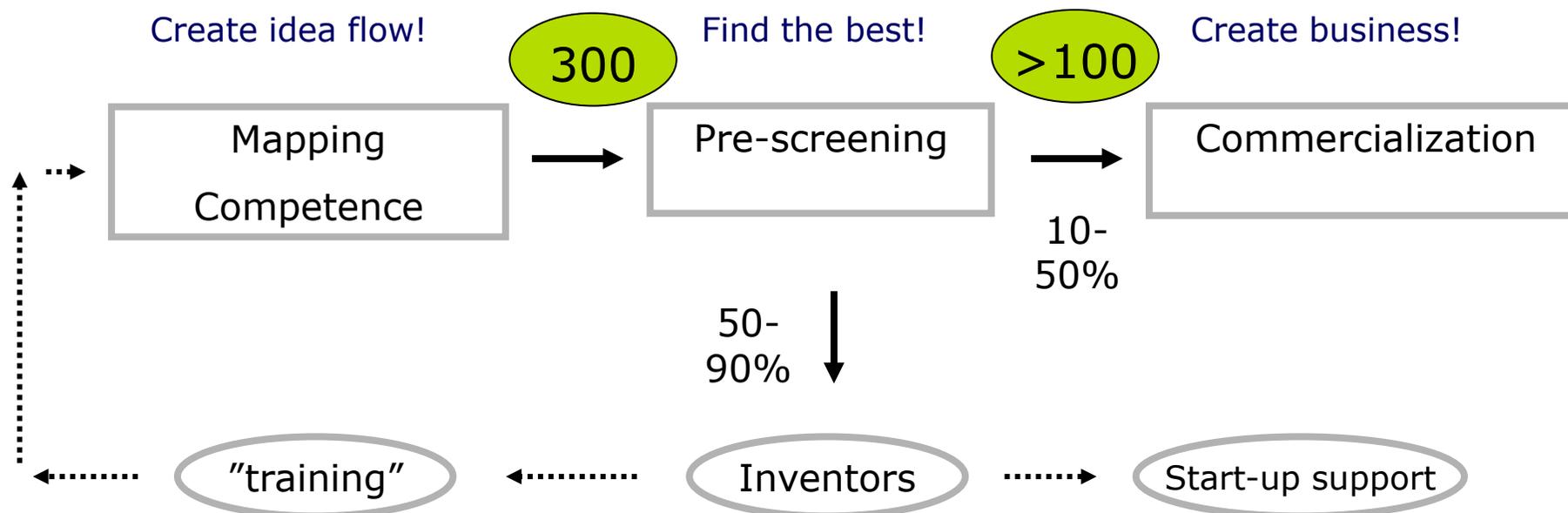
- Emphasis on start-ups – political reasons
- Support for start-ups
- Only Proof-of-Concept money for licensing
- Start-ups are not successful
 - IPR can get lost

How does the process work – & the timeline

COMMERCIALIZATION OF UNIVERSITY IPR: PROCESS AND ANALYSIS

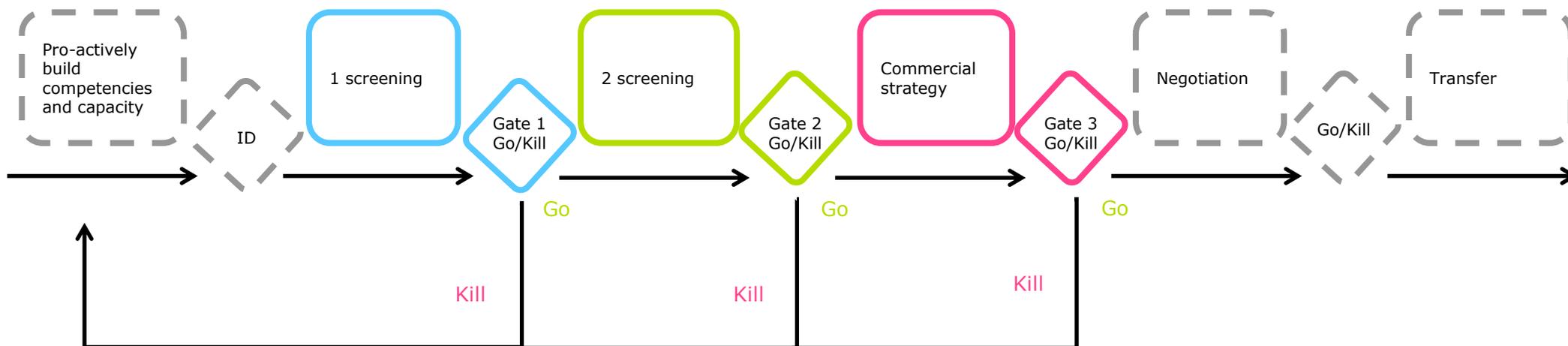
The commercialization process is challenging

- Commercialization starts with the university
 - First right of refusal (Y/N):
 - Yes \Rightarrow University drives process
 - No \Rightarrow You drive the process



The extended tech transfer process is a stage-gate process

- Analyze
- Reduce risk

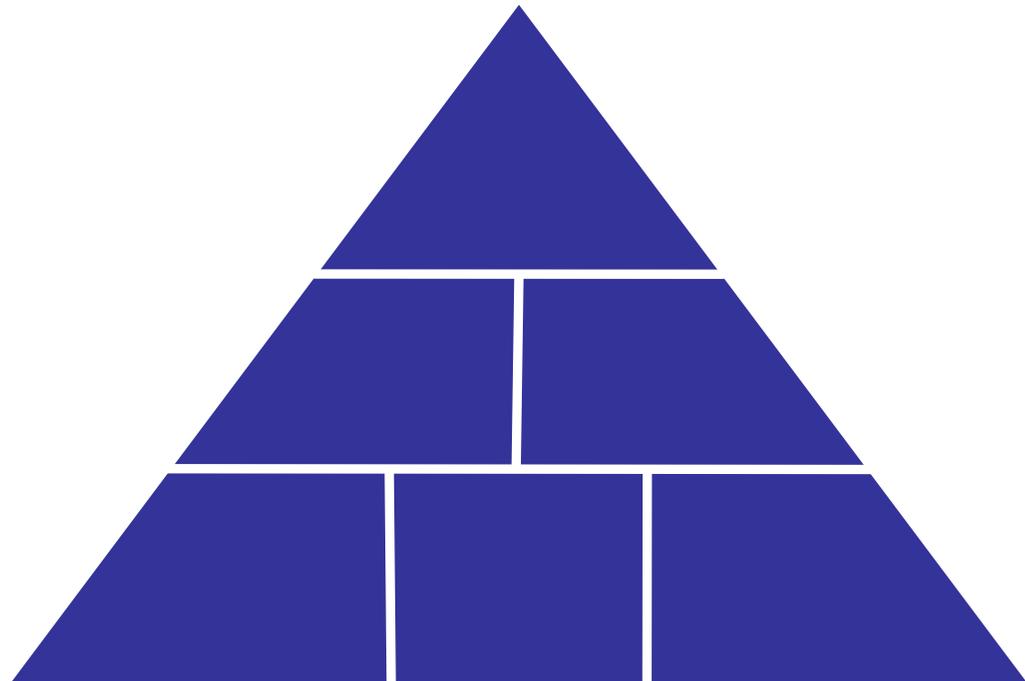


Useful models for evaluating your case

COMMERCIALIZATION OF UNIVERSITY IPR: PROCESS AND ANALYSIS

The first challenge is to understand the potential and formulate a value proposition

- The TTO triangle concept for the analysis
- The NABC model for the value proposition



An invention from the real world – Upssala University

The technology is a detector used for measuring beam position and dose in radiation therapy in cancer patients

The invention comes out of high energy particle physics from CERN, Switzerland. The lead researcher works on the Large Hadron Colider where he develops detectors used for measuring particles in the accelerator.

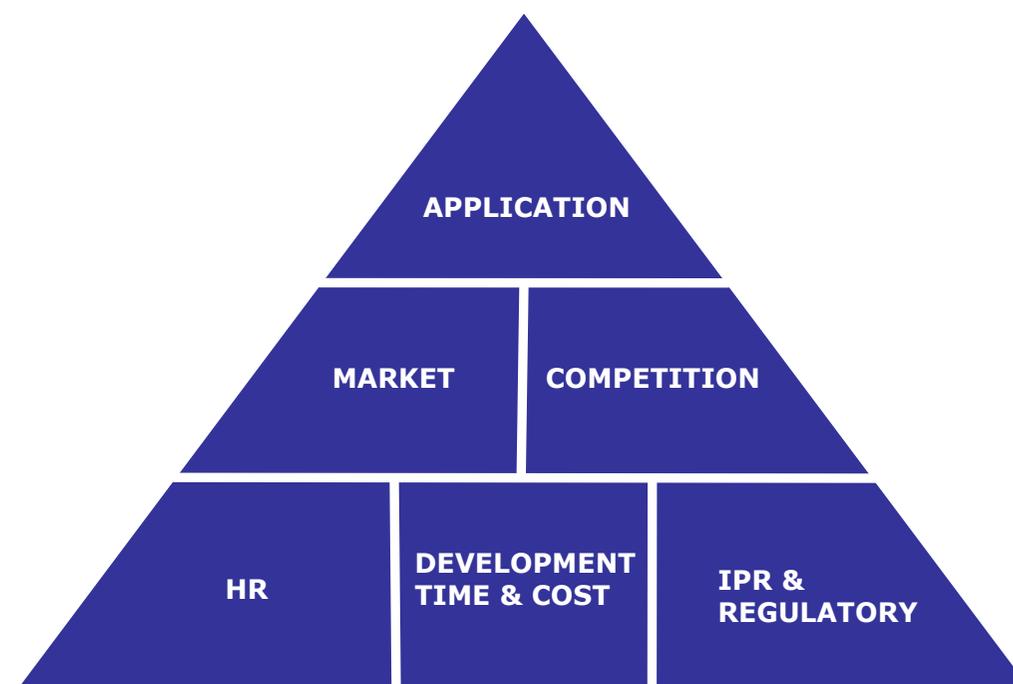
The principle has been adopted for medical devices and is now being developed to a stage where it can be commercialized.

The TTO triangle

The TTO commercialization triangle contains the factors that we regard as important for the successful commercialization of new technology.

The triangle has been developed and tested on a basis of more than 100 projects and has proven to be a robust framework.

TTO combines a deep understanding of both technology and markets to apply relevant parameters that suit the individual technology.



Application is about the end users perspective

Is there more than one application of the technology (platform)?

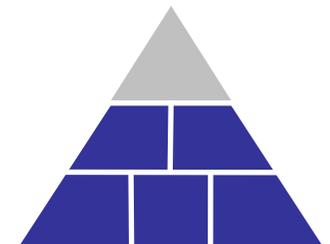
Can we define the end user need in terms of specific characteristics of the solution?

What is the end user need situation:

- I. Clear need, poor solution today
- II. Clear need, no solution today
- III. Possible need, but end-user unclear/uncertain

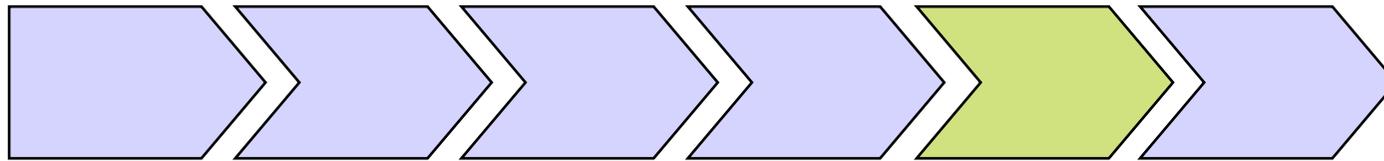
What is the end user willing to pay?

A bad solution in the market is better than no solution – shorter path to market!



Market analysis is superficial and focused on value chain

How would the technology fit the existing value chain?



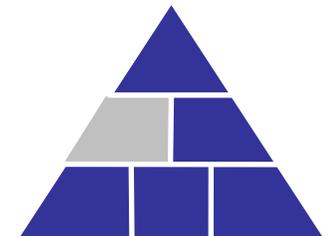
Buyer of technology

- Who "owns" these customers today?
- Are they interested?
- What market size are we looking into (roughly)?

Drivers

- What is driving this market in our favor?
- Which threats do we see? Will the market vanish due to known circumstances?

Detector: System integrators promote innovation – complex commercialization



Which competition are we looking into –
when we hit the market

Present solutions

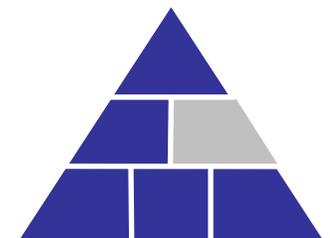
Ideally, present solutions are poor and hold little potential for improvement

Future solutions

I. We have reasons to believe no other solution is underway

II. We have reasons to believe that we are looking at fierce competition, but the specific end-user needs will be better served with our solution

III. We have no special capabilities



Detector: Current solutions are imprecise on dose and can't measure position,
and they have reached the mature stage

HR & IPR/regulatory

Human resources

The researchers have unique skills, have experience with tech transfer, and are enthusiastic about following the project through

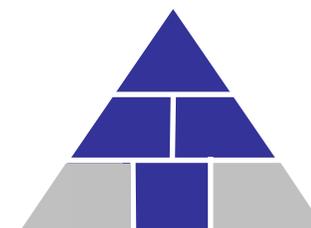
IPR

Can the technology be protected? And how is the IPR landscape?

Regulatory

The regulatory system has taken the necessary steps to open the market

Detector: Patient safety drives regulation. The researcher is a world leader and IP is in place.

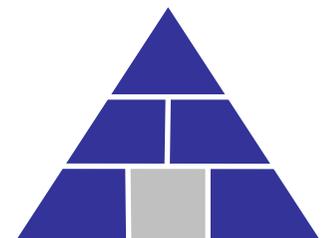


Development time and costs

Required development

- The required development before the buyer will invest is limited and the funds are available (from buyer or other sources e.g. PoC)
- The time scale is shorter or comparable to the time horizon for competing methods
- For VC's: The costs associated with taking the product to market is at least 25 times smaller than the market

Detector: The PoC funding is in place, but funding for demonstrator is very costly and not in place



The value proposition model

Developed at SRI International, www.sri.com

Simple framework that analyze 4 parameters and summarize them in a value proposition;

- Need
- Approach
- Benefit
- Competition

In tto's opinion it is a good way of summarizing the results from the evaluation

Furthermore, it is useful in presenting the invention to outsiders as well as introducing the invention to team members

Value proposition

Describing the value proposition needs input in relation to four areas (sri.com);

- Need
 - Identify the marketplace **N**eed for your product or service
- Approach
 - Define the “golden nugget” or the unique advantage of your **A**pproach
- Benefit
 - Outline the **B**enefits to the customer, partners in the market ecosystem
- Competition
 - Pinpoint the **C**ompetition and systematically compare your approach to competitive products or services

Example of a value proposition - The detector

A value proposition for the detector could be;

In state of the art radio therapy, the trend is to combine dosimetry and imaging. The reason is that combining the two will improve accuracy in both treatment planning and the treatment itself, thereby improving patient safety and treatment efficacy.

To serve end-user need, a solution should reduce time spent with both planning and treatment. It should be compatible with existing equipment in relation to the physical space, soft-ware and hard-ware and the work-flow for both physicists and physicians.

The only solution that currently deliver combined measurement are the aSi flat panels. State of the art solutions have several downsides where end-users explicitly look for improvements.

The invention from Uppsala university build on a unique principle that can register single particles, possess a higher signal processing capability and has two memory cells.

Thereby, the Uppsala invention significantly improves accuracy compared to existing solutions while also having a long-term potential for delivering real-time data as needed in the 4D regime.

To conclude, the Uppsala invention follows overall trends in radiotherapy treatment, while having the potential to deliver improvements on key parameters explicitly requested by the end-users.

How to find licensees and contact persons

THE LICENSE TRACK: WHO TO CONTACT – AND HOW?

How to find licensees and contact persons

How to find partners

- You can use events to promote your technology
 - No one has succeeded convincingly
 - IPTEC in Nice/Cannes
 - ASTP & AUTM
 - Exhibitions like BIO, etc.
 - National events is an option
- You can use promotional web-sites
 - The existing examples are not yet convincing
 - Techtrans.dk – national platform
- You can use networks
 - Innovation Relay Centres
 - National platforms – DK Network for Tech Trans
- In the end it is a contact sport that requires preparation
 - People-to-people

How to find licensees and contact persons

How to find partners

- In tto, we use data mining
 - IPR
 - Scientific literature
 - Market reports
 - Consult with the researchers
- The potential partners are then evaluated
 - Technical/scientific fit
 - Commercial fit
 - Organizational fit
 - Strategic fit
- Once we know why we want to contact them, we get on the phone or meet them

In the Detector case, we did all of the above

How to find licensees and contact persons

Who to contact

- You want to get an internal sponsor
 - And as high up in the system as possible
- You want to be in dialogue with the decision makers, or at least know who they are and if they are informed about your offer
- Business development is often the place to go.
 - Although research could be more accessible to you, it might not be the right place to be (only as sponsors)
- It is important that you go for more than one partner.
 - It is time consuming
 - It can be used as a negotiation tool
 - Success rates can be low

In the Detector project, we are dealing with multiple partners. We are targeting both people from R&D and BD.

How to find licensees and contact persons

How to contact potential licensees

- You want to address their needs and communicate specifically to them
 - Short and concise
 - Make it non-confidential – at least in the beginning
 - Don't make it too technical unless you know they can use the information
 - Show them that you understand their market and need
- Understand their evaluation process and assure that they have the information they need. But sign a CDA, NDA, etc. if necessary!

We are using a business opportunity in the Detector project. Once interest is shown by a partner, we sign an NDA and meet with them.

Preparing for the deal, including valuation

THE LICENSE TRACK: WHO TO CONTACT – AND HOW?

Preparing for the deal, including valuation

Valuation – what is it?

- A “gestimate” of the value of your project, not the overall market
- Not an exact science!
- Potentially a time-consuming and not very value adding tool, unless you or your partners really need the information

Preparing for the deal, including valuation

How is it done?

You basically have three methods:

- Build a business model
 - This is a very good model
 - It is a lot of work
 - Future net cash flows, discounting etc.
- Work by analogy – license agreement
 - This is fairly straightforward – although lawyers like to make it look very complicated
 - Statistics is around to give you guidelines
 - Model agreements available (e.g. Lambert)
- Shouting competition
 - Loosing model

Preparing for the deal, including valuation

How is it done?

- Build a business model
 - Cost based models
 - Not very convincing to a buyer
 - Useful for finding ownership shares
 - Market based models
 - Discounted cash flow, Net Present Value
 - Can be customized to the buyer
 - Option based models
 - Excellent when uncertainty is high
 - Encompasses multiple scenarios

In the detector project this is first relevant once we know exactly what the demonstrator should do and how the innovation could fit the value chain. Until then, we just stick to the fact that the market is large and there is a clear need.

Preparing for the deal, including valuation

What is the importance of making your own valuation?

- Although it is basically qualified guessing, it is still better than no numbers
- In negotiations, it is key to have arguments
- It is your main way of building confidence when you are under pressure
- It forces you to think;
 - About the partners' fit
 - About your strategy
 - About the smartest way of building up value in your project

Applying the above to your cases

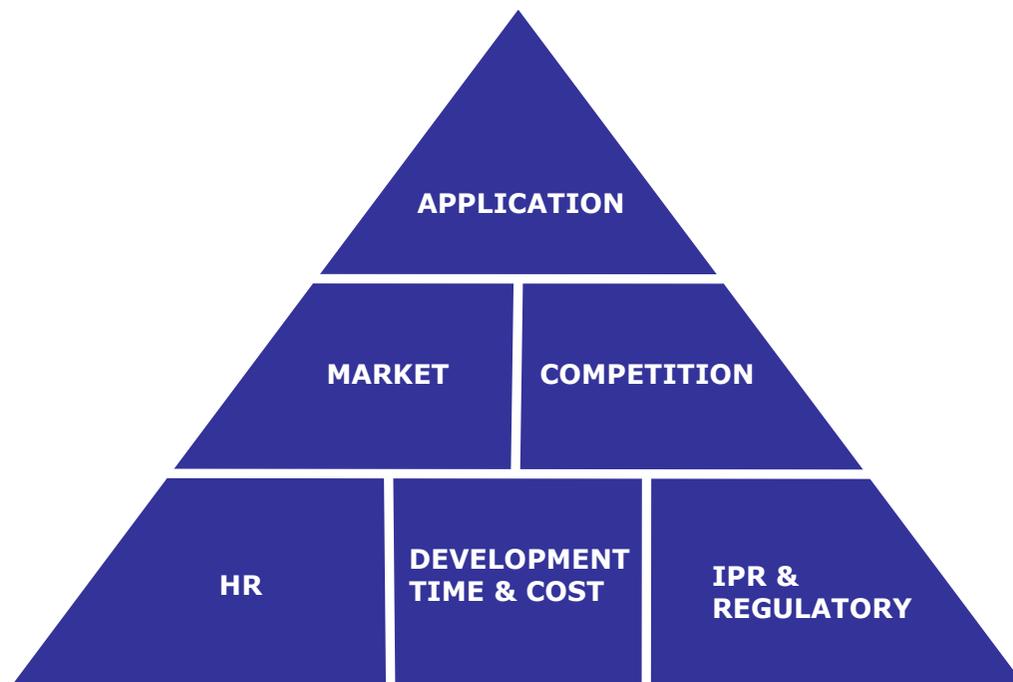
CASE WORK

Applying the above to your cases

We recommend that you in your groups soon

- Sketch the main parameters/ issues you need to resolve in the strategic analysis
- Initiate thoughts of your value proposition
- What could your commercial track be?

Applying the above to your cases



The NABC Model

- Need
 - Identify the marketplace **N**eed for your product or service
- Approach
 - Define the “golden nugget” or the unique advantage of your **A**pproach
- Benefit
 - Outline the **B**enefits to the customer, partners in the market ecosystem
- Competition
 - Pinpoint the **C**ompetition and systematically compare your approach to competitive products or services

THE DEAL

Preparation is everything

Understand your value proposition

Understand the situation of the licensee

Be prepared to explain him how it fits his business

Bring business case with numbers - preferentially

Establish win-win situation

The invention will improve the business of the licensee

You want to share the net profit

You want to work with them to make them successful

You will enjoy the largest financial benefit after the licensee

The negotiation itself

Create relaxed atmosphere

Understand their key issues

Achieve partial agreements – identify difficult issues

Be tough on the essential issues

If you give way on one issue – demand compensation on another issue

Make sure you have written minutes (term sheet)

Leave contract writing to professionals - based on the term sheet

Follow-up

Implementation of the technology transfer

Monitoring the deal

Collecting financials

Today's Top News

1. **Pfizer, Theraclone ink \$632 R&D deal for cancer, infectious disease**

By Maureen Martino

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Seattle-based biotech Theraclone has signed a deal with Pfizer in which the company will use its I-STAR platform technology to help the Big Pharma identify monoclonal antibodies against up to four undisclosed targets--two for infectious disease and two for cancer. I-STAR can quickly test tens of thousands of antibodies to find those with the most biologic activity, according to Theraclone's release

Pfizer gets exclusive rights to therapeutic antibodies discovered in the course of the deal. Theraclone could earn up to \$632 million in research funding and milestone payments, though the companies did not disclose details on the financial structure of the deal. However, interim CEO Steven Gillis tells the *New York Times* that up to \$252 million of the money could be earned before drugs resulting from the collaboration enter Phase II trials. Pfizer is responsible for preclinical and clinical development of the antibodies.

"This collaboration with Pfizer, and the recent published success of I-STAR to identify unique antibodies against novel targets in HIV and influenza, increase confidence in Theraclone's approach to search the human immune repertoire to isolate rare and powerful human antibodies that may be of use in the treatment of multiple diseases," noted Gillis in a statement.

Pfizer's senior vice president and head of biotherapeutics research, Jose-Carlos Gutiérrez-Ramos, told the *New York Times* that the Theraclone deal fits in with the company's mission to boost its investment in biotech.

3. Ironwood, Protagonist ink peptide discovery deal

By Liz Jones Hollis

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Ironwood Pharmaceuticals ([\\$IRWD](#)), [2009 Fierce 15 company](#), and Protagonist Therapeutics will work together to discover novel peptides for potential development by Ironwood. Under the terms of the agreement, Protagonist will use its DRP technology platform to design peptides against targets identified by Ironwood, which has the right to advance such peptides through preclinical and clinical development, as well as potential commercialization. Ironwood also has made an upfront payment to Protagonist and will fund full-time equivalents for Protagonist's drug discovery activities during the collaboration period.

"This collaboration is a validation of Protagonist's innovative drug discovery technology platform, designed to exploit DRPs as therapeutic agents," says Dinesh Patel, Ph.D., president and CEO of Protagonist. "We have found an ideal partner in Ironwood given their experience with linaclotide, an oral peptide that recently completed the efficacy portion of its Phase 3 program."

[Last November](#), Ironwood and partner Forest Laboratories ([\\$FRX](#)) took another big step toward a new drug application for [linaclotide](#) with the announcement that the drug had successfully cleared its second late-stage trial hurdle for irritable bowel syndrome with constipation. The partners are looking to file an NDA for the drug this year.

Protagonist is backed by what *Xconomy* calls "an unusual set of biotech investors from Australia" and Lilly Ventures. It has raised about \$18 million since it was founded in 2006 and was built to make small-molecule and peptide drugs. Not many companies have created big franchises around peptide drugs, but as *Xconomy* notes, Amylin Pharmaceuticals is an exception.

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