

Commercializing IPR: the license track

January 18th 2013

Today's purpose

- Give you an introduction to the basics of commercialization of IPR using license agreements
- Show you different arguments for selecting projects suitable for a license agreement and for forming a start-up company
- A practical introduction to what to consider from invention to agreement

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Christian has been part of the tto team since 2005. He has led well over 60 projects for private and public clients across Northern Europe.

He is specialized in business development and strategy, including building commercial partnerships, valuation, portfolio management and technology transfer.

Christian's main competencies are within medicinal technology, industrial biotechnology, and food science.



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Schedule

13:00-13:20

Why license agreements?

- What is a license agreement - from a commercial perspective?
- What are the benefits for the inventor/entrepreneur from making a license agreement?

13:20-14:00

How to identify a suitable case for a license agreement

- Versus making a spin-out
- Pragmatic and commercial arguments

14:10-14:30

Basics of making license deals

- Who would you license to, and how?
- Differences in valuing IPR in licensing and spin-outs
- Closing the deal

14:30-15:00

Discussion

Why license agreements?

What is a license agreement?

- From a commercial perspective :

A right granted to a licensee to use (commercially exploit) a technology or invention without owning it

Exclusivity vs. non-exclusivity: territorial, technical application, market/industry, time

Price: sign on fee, royalty, minimum fee

- All in all, it is a clever way to access technology if

You don't need to own it but you have to use it (the MP3 algorithm)

Licensor won't sell (university technology?!)

You have limited use for the technology (a local company or a narrow area of application)

You are unsure if the technology will work and you want to reflect that in what you pay for it (pharmaceutical compounds)

What are the benefits for the inventor/entrepreneur from making a license agreement?

- You don't have to take all the risk
Market, Scientific, Regulatory, Financial, etc.
- You can exploit your idea on a commercial scale globally from day one
Non-exclusive licenses in multiple geographies and areas of application
- In some cases, you can make more money on it
If commercial barriers are high, the right partner can have a greater chance of success than you do
- You can focus on other things than commercialization because the university tto will do much of the work...

Danish tech-transfer statistics show that licensing is much more predominant than spin-outs, although average deal size is fairly small (time lag issues re royalties)



	Indberettede opfindelser	Patentansøgninger	Udstedte patenter	Licens-, salgs- og optionsaftaler (inkl. software)	Samlet licensportefølje (ekskl. software)	Spinout virksomheder	Personale til teknologioverførsel (fuldtids årsværk)	Udgifter til kommercialisering (i 1.000 kr.)	Indtægter fra kommercialisering (i 1.000 kr.)	Forskningsaftaler med virksomheder
Aalborg Universitet	47	12	3	23	14	1	5,7	2.598	3.289	386
	62	33	5	8	21	2	16,0	7.234	2.707	336
	0	0	0	0	0	0	0	0	0	46
	103	60	23	20	12	2	14,5	14.063	12.155	832
	2	0	0	1	0	1	0,9	201	36	8
	58	12	3	26	79	0	8,0	4.470	4.421	306
	0	0	1	0	1	0	0,3	513	390	59
	21	14	3	18	10	1	6,0	2.981	1.495	180
	293	131	38	96	137	7	51,4	32.061	24.487	2.153
	6	4	4	0	3	0	2,0	4.110	42.016	9
ogelser	0	0	0	0	0	0	0,2	150		3
)	6	4	4	0	3	0	2,2	4.260	42.016	12
Region Hovedstaden (Tectra)	34	17	3	5	21	0	10,0	8.239	1.050	401
Region Midtjylland	22	14	0	4	8	1	0,2	518	38	199
Region Nordjylland (Aalborg Sygehus)	8	4	0	2	0	0	3,0	617	0	121
Region Syddanmark (Odense Universitets Hospital)	2	1	0	0	0	0	0	408	0	73
Sygehusforvaltninger (4)	66	36	3	11	29	1	13,2	9.783	1.088	794
I alt (14 institutioner)	365	171	45	107	169	8	66,8	46.104	67.591	2.959

Source: Styrelsen for Forskning og Innovation, Kommercialisering af forskningsresultater Statistik 2011

Note: To universiteter har ejerandele i den samme spinout virksomhed.

How to identify a suitable case for a license agreement

Pragmatic arguments

Spin-out

- It is your dream
- You have a team that can execute and that you trust
- The accumulated competence level and experience in your team is high
- You are financially independent and you are willing to take risk
- You thrive with uncertainty and highly versatile types of assignments
- You have connections among investors / business angels who show interest in your project

License

- You want to stay in your current position or role
- The invention is not core in what you do
- You and the team around you are not experts in the scientific field...
- You already have connections in industry that could you think could move the project forward
- You prefer to work in a stable environment where financial security is high
- Your family situation requires your attention
- You prefer to be the specialist in what you do

License versus start-up – commercial arguments

A start-up company may be appropriate if:

- There is a documented need in the market for your solution
- The market is generally attractive: high growth, high margins, market trends favor your solution
- Market entry by a new company is relatively easy with few significant barriers
- Competition can be beaten, e.g. via moving into a niche
- The marketplace is fragmented with a lot of small companies
- The technology could be disruptive and thereby change market dynamics
- 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
- 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 – commercial arguments

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 (consolidated)
- The technology is only a part of the picture
- There is a single patent
- The technology is near market and requires little further development and investment
- The technology fits an existing company's IPR/product portfolio (even dominated)
- Licensing is a common strategy within the industry sector

How to build the commercial arguments

Useful models for understanding how the external environment will affect your business

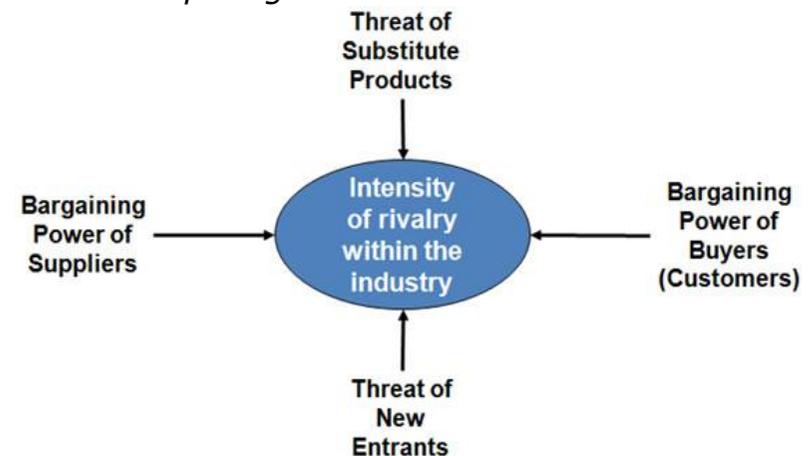
Macro environment – the PESTEL analysis:

Probably too rigorous to do the entire analysis, but if you think certain areas are important it provides a good framework

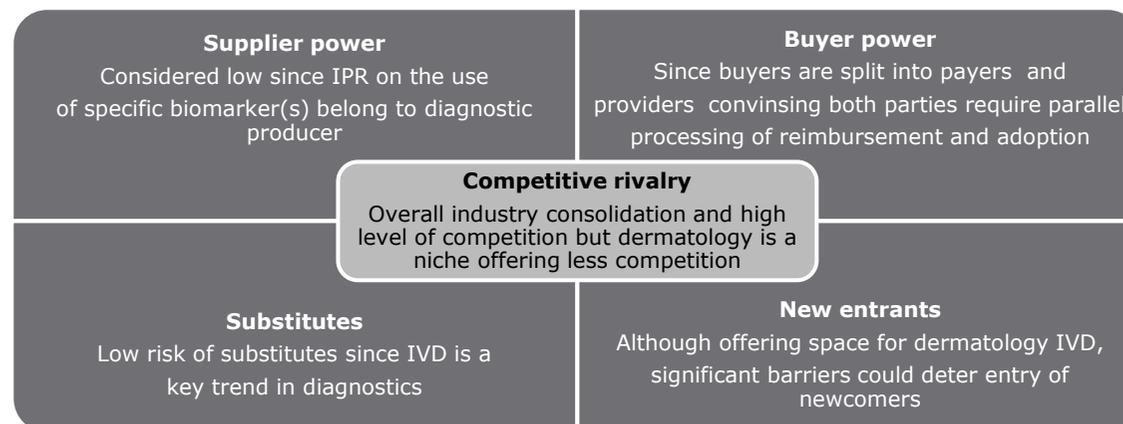


Industry analysis - Porter's 5-forces:

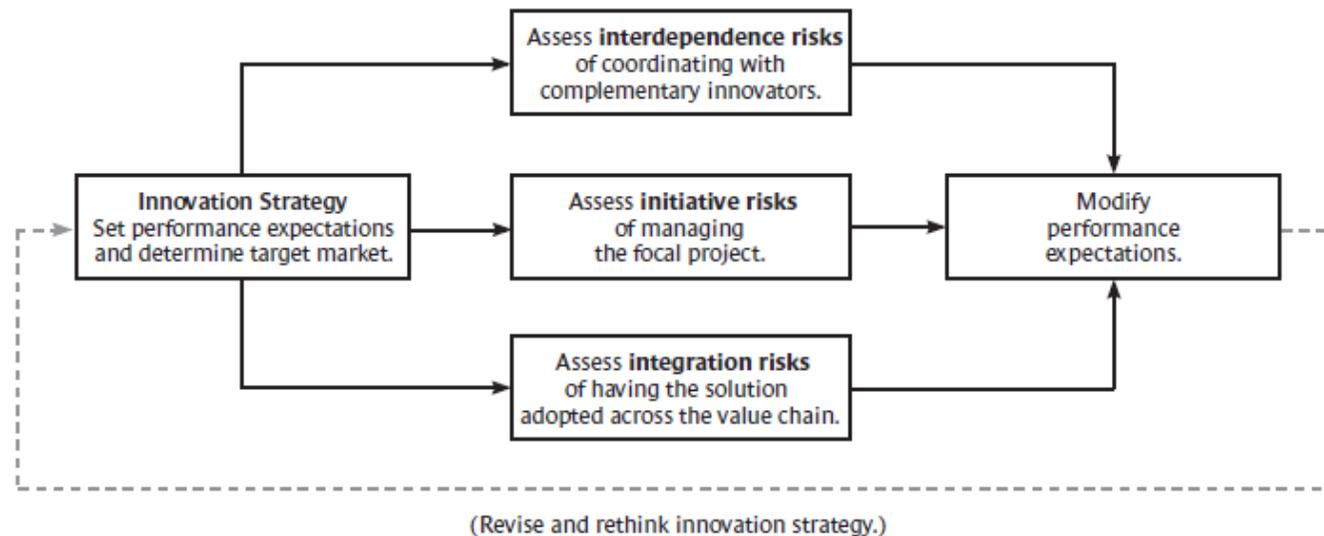
Although a classic, it is a very fruitful model for gaining understanding about the industry you will be competing in



5-forces example from a molecular diagnostics company we worked for



The Innovation Ecosystem Model is a fairly new model for understanding how to get your innovation to market



R. Adner, Harvard Business Review 2006

The advantage of the model is that

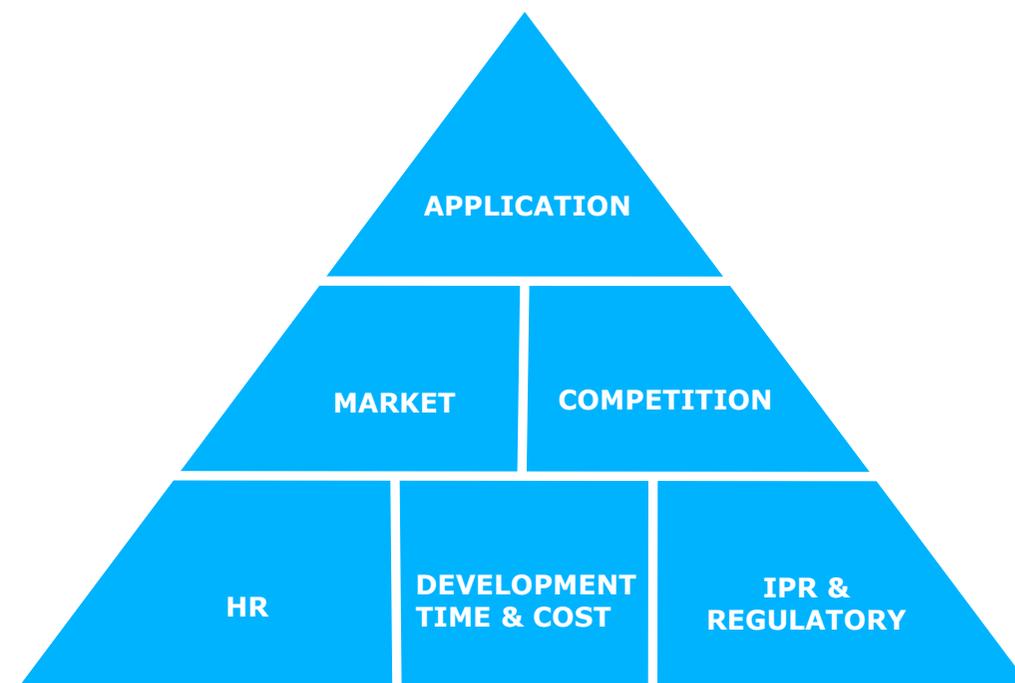
- It's specific focus is innovation
- It helps you understand the interdependencies between you and the environment in order to get your product on the market
- You can quantify the risks and thereby assess chance of being successful – including use different scenarios in order to evaluate if different partnership models will increase likelihood of success

At tto, we developed a model to help us understand if an invention is commercially viable and how we get it to market

When we evaluate a new technology we focus on assessing the right elements in the right order to support the commercialization of the project

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

The model is qualitative, which means that we combine desk research with interviews, since the latter often gives us a head start and helps us build the hypotheses



We often summarize the finding in a value proposition

- Developed at SRI International, www.sri.com
- Simple framework that analyze 4 parameters and summarize them in a value proposition;

Need

- Identify the marketplace **N**eed for your product or service

Approach

- Define the “golden nugget” or the unique advantage of your Approach

Benefit

- Outline the Benefits to the customer, partners in the market ecosystem

Competition

- Pinpoint the Competition and systematically compare your approach to competitive products or services
- In our opinion it is a good way of summarizing the results from the evaluation – it resembles important parts of what you have in the elevator pitch...
- Thus, it is useful in presenting the invention to outsiders as well as introducing the invention to team members

Example of a value proposition – radiotherapy invention

- 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 and physical space, software and hardware and the workflow for both physicists and physicians.
- The exists only solution that currently deliver combined measurement. However, this solutions have several downsides where end-users explicitly look for improvements.
- The invention build on a unique principle that can register single particles, has higher signal processing capability and two memory cells.
- Thereby, it 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.

Who would you license to and how?

How to find licensees (I)

- In tto, we use data mining
 - Patent databases
 - Scientific literature
 - Market reports
 - Market analyses
 - Consult with the researchers

- The potential partners are then evaluated
 - Technical/scientific fit
 - Commercial fit, e.g. value chain analysis, ecosystem analysis
 - Organizational fit
 - Strategic fit

- You need to build the argumentation and information package that will persuade them why this is a good idea

How to find licensees (II)

- You can use events to promote your technology
 - IPTEC in Nice/Cannes
 - Exhibitions and trade-fairs like BIO, BIO-Europe, Medica
 - National events is also an option

- You can use promotional web-sites
 - The existing examples are not yet convincing

- You can use networks
 - Innovation Centers, industry organizations

- But in the end it is a contact sport which requires preparation
 - People-to-people
 - Non-confidential and confidential information packages

A note on how to estimate the value of your IPR (I)

Valuation – what is it?

- A “gestimate” of the value of your project, not the overall market
- Mainly a tool for identifying and addressing risks associated to a project
- Potentially a time-consuming and not very value adding tool, unless you or your partners really need the information

What is the importance of making your own valuation?

- Although it is basically qualified guessing, it is still better than no numbers
- It makes you appreciate the concept of risk
- 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

A note on how to estimate the value of your IPR (II)

There are a couple of well known methods:

- 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/investor
 - Option based models
 - Excellent when uncertainty is high
 - Encompasses multiple scenarios

- Work by analogy – deal comparables
 - This is fairly straightforward
 - Statistics is around to give you guidelines, although the good case can be hard to find data on
 - But you do not get the underlying understanding value of your innovation
 - Model agreements available (e.g. Lambert)

Closing the deal

It requires expertise, experience and luck

- Negotiation strategy with clear roles and responsibilities
- Legal understanding re venue, agreement structure
- Business sense re valuation, deal structure, incentives
- Scientific expertise to assure the relevant goals for the project are built into the scientific development plan

All in all, this is why license agreements are well covered by the university TTO and why universities still make relatively many of them.

If you have been given permission to commercialize the invention without the involvement of the university TTO, there are two extremes

1. You do everything yourself – and the licensee has the upper-hand throughout the process
2. You use experts for areas where you are not comfortable – can be costly if the negotiation process is long

In your groups – spend 10 minutes to evaluate if you are going to make a spin-out or aim for a license agreement

- Prepare for a 2 minute introduction with key arguments for your strategy

Feel free to contact me if you have any questions!

<http://www.tto.eu/>

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tto a/s is a consultancy company specialized in new technologies

- tto a/s specializes in new technologies, patentable research and inventions that are characterised by being in a transition phase from early stage development to the market
- With a track record of more than 150 projects, we have solid experience in bringing new technologies to the market



- tto a/s was incorporated in 2004, and to strengthen technological and IPR competencies, tto a/s partnered with Plougmann & Vingtoft in June 2008

We operate within a unique liaison between research and business

- Working with both research- and commercial clients we;
 - Understand the “click” between a unique technological capability and a market opportunity
 - Bring in the commercial aspect early on and focus development efforts

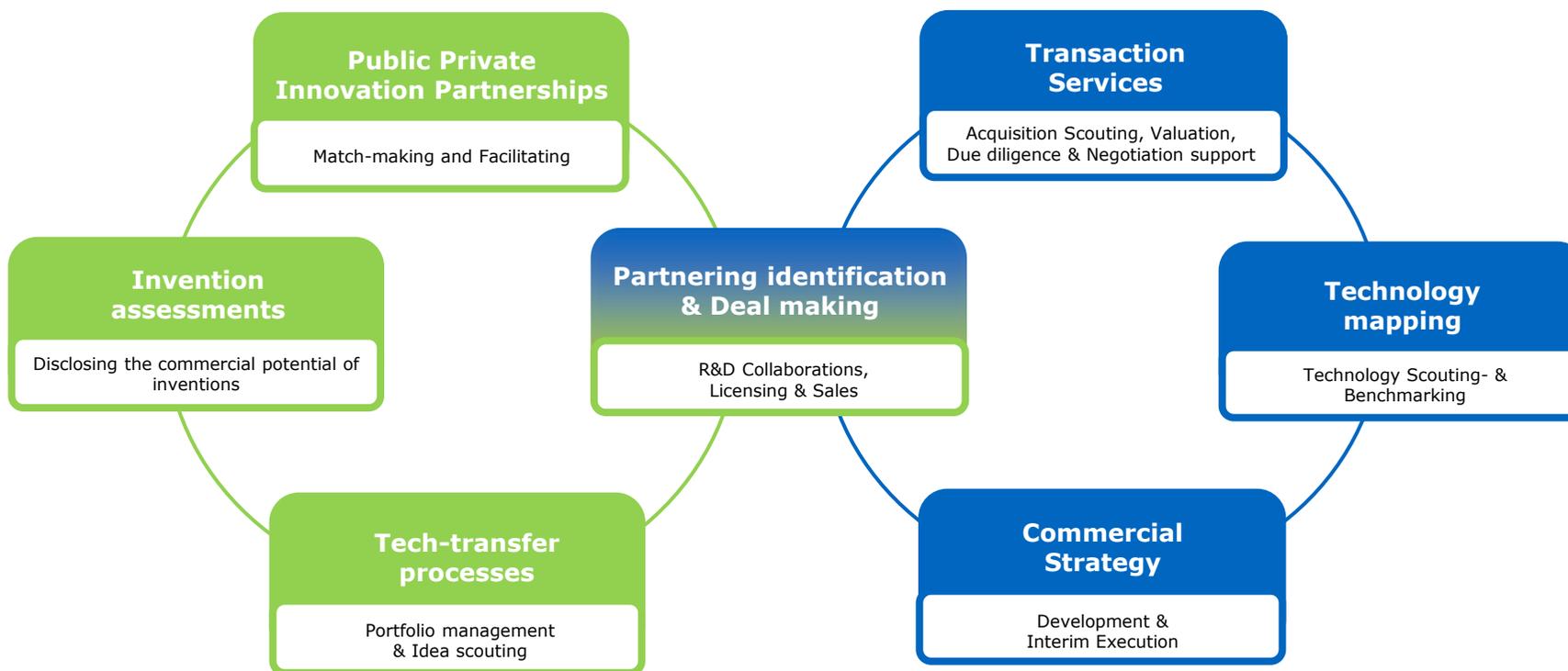


Public Sector Services

Universities, TTO's, Public Institutions

Private Sector Services

Industrial companies, Investors, Start-ups



Application is about the end users perspective

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

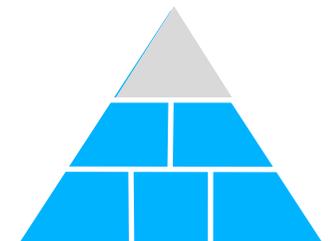
Can we define the end user need in terms of specific characteristics of the solution?

What is the end user's 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 focused on value chain

Porter's five forces

How would the technology fit the existing value chain?

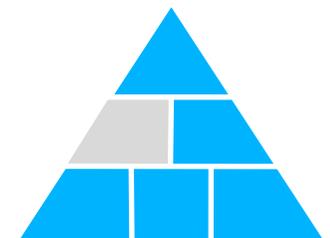


Who are our buyers?

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

What are the drivers?

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



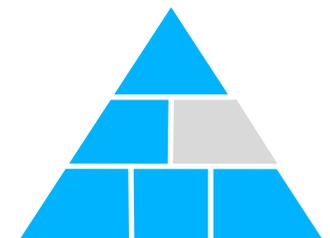
Which competition are we looking into - when WE hit the market

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



HR & IPR/regulatory

Human resources

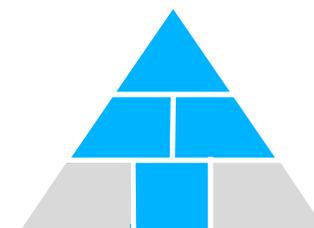
The researchers have unique skills, have experience with technology transfer, and they are enthusiastic about following the project through

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



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

