

ASTP Berlin May 31: Outsourcing

Jon Wulff Petersen, CEO of TTO A/S – a private consultancy

Jon Wulff Petersen, co-owner and CEO

- Ph.D. In Materials science
- Post doc University of Zürich
- Worked at CERN

- (Vice-)Director of MIC; DTU, 1992-02
- Deputy Director Risø National Lab. 2002-5
- CEO tto 2005-

- ASTP Vice President Program, 2003-8



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
 - Provide unique partnering opportunities
 - Bring in the commercial aspect early on and focus development efforts



The learning comes from several countries and systems

- 20+ university clients in various countries:
 - DK, N, S, A, CH, D

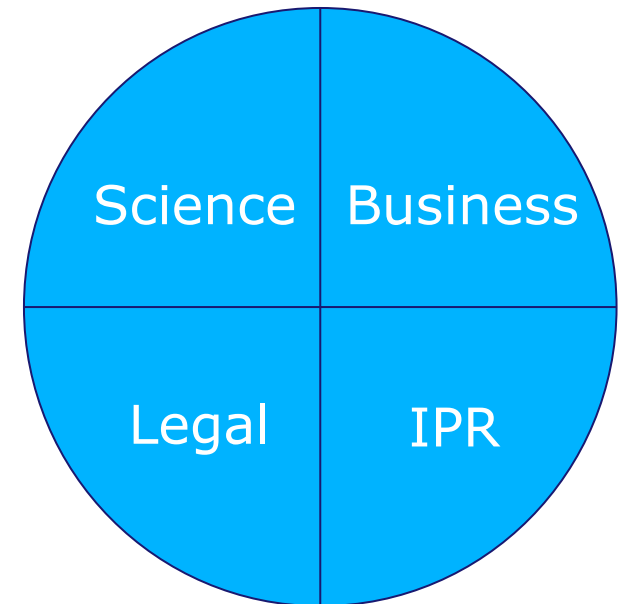
- Ownership structures on university inventions
 - Professor's Privilege: Sweden
 - Organisational Ownership: Austria, Denmark, Germany, Norway, Switzerland

- Organisational set-up for promoting technology transfer
 - Administrative functions who outsource assignments to external consultants
 - Full-service TTO's



We observe a spread in experience and focus

- They have 3 to 10 years experience
- Often smaller entities with ~5 employees, mainly focused on Legal and Scientific competencies
 - A tendency to grow over time with emphasis on business development competencies
- They facilitate a combination of scientific (U-I) collaboration and commercialisation of research (mostly licensing)
 - More emphasis on knowledge transfer than revenue generation
 - U-I collaborations are often the real cash-cows
 - Spin-out'ing is difficult for many in the current market

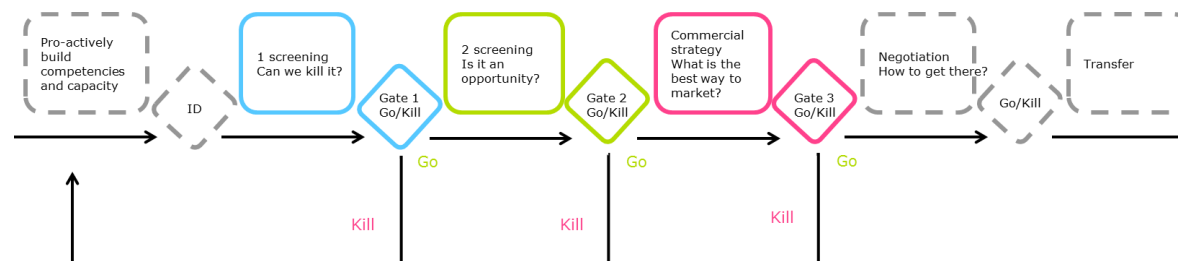
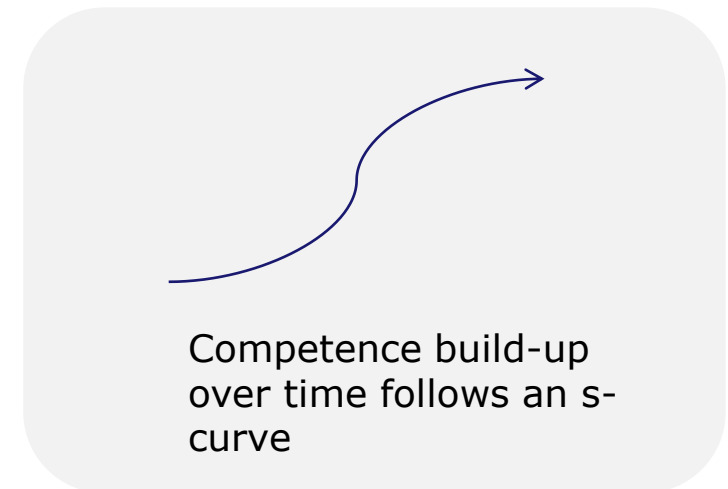


Prerequisites for successful technology transfer

Experience and good systems is everything!

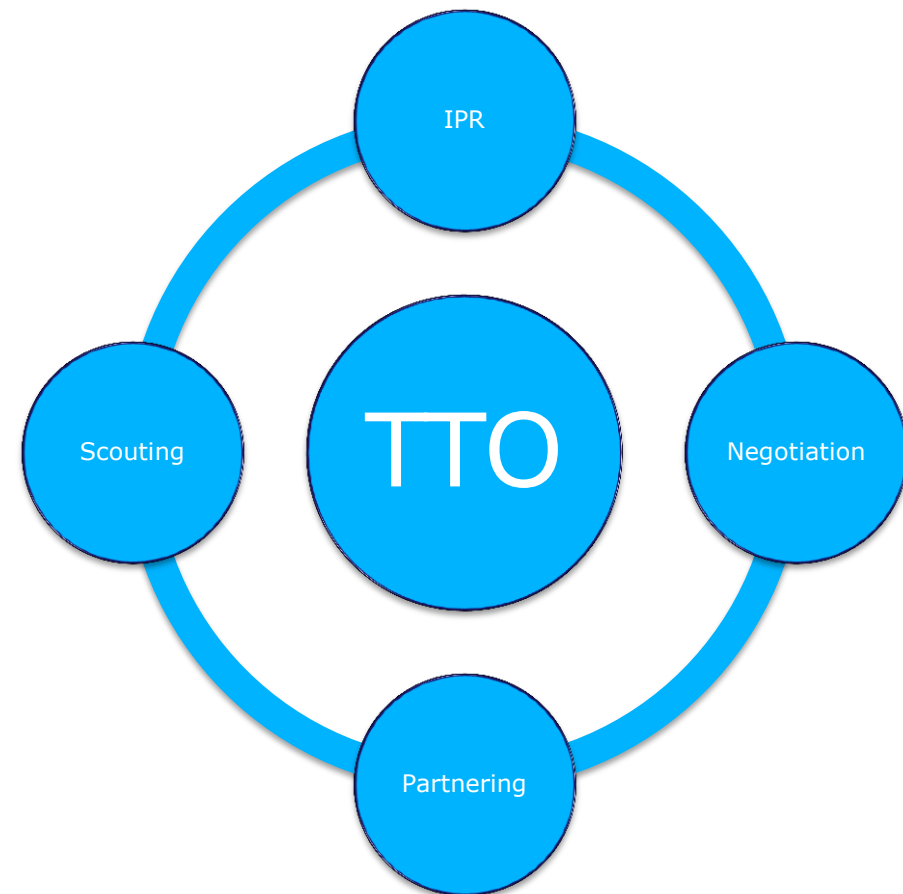
- It takes 5+(+) years before you reach take-off
 - You should have a clear mission for technology transfer and it should be reflected in how employees work
 - You have to attract the right employees and manage to keep them - and assure that experience is shared among staff
 - You need standardised and transparent work processes to leverage take-off
 - Project- and team-based
 - Spend your time and money on the projects that show progress - close down the other
 - Portfolio management is the ultimate goal

For a university to make money on technology transfer, it requires deal-flow, luck and experience



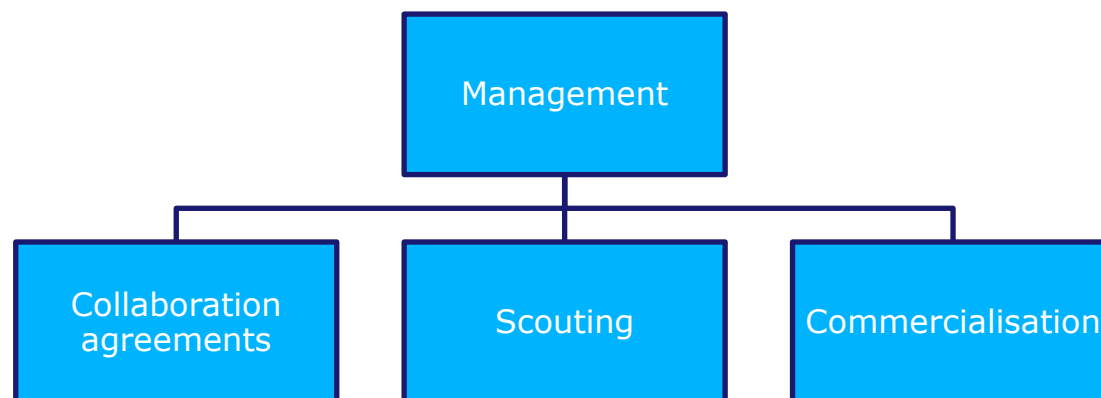
Two hypothetical solutions: (1)The network-based organisation

- A central project management function
- Often consisting of few legal (and scientific) employees
- Extensive network of trusted partners
- U-I collaborations often only speciality
- Pre-requisites:
 - Excellent project management skills
 - Very formalised work processes to handle partners



Two hypothetical solutions: (2) The full-service organisation

- Large organisation
- Diverse competencies among staff
- Small network of trusted partners for highly specialised functions
 - Often IPR
 - Industry specific assistance on high profile projects
- Pre-requisites:
 - Experienced management and staff
 - Frequent sparring among staff
 - Portfolio management thinking



The two organisational types have pro's and con's – we think

Network model

- Pro's:
 - Flexible model
 - Scientific fields
 - Types of assignments
 - Budget
- Con's
 - Difficult to manage partners
 - Prone towards knowledge dilution
 - Might require more tt-experience than one would think
 - End-state rather than start-state

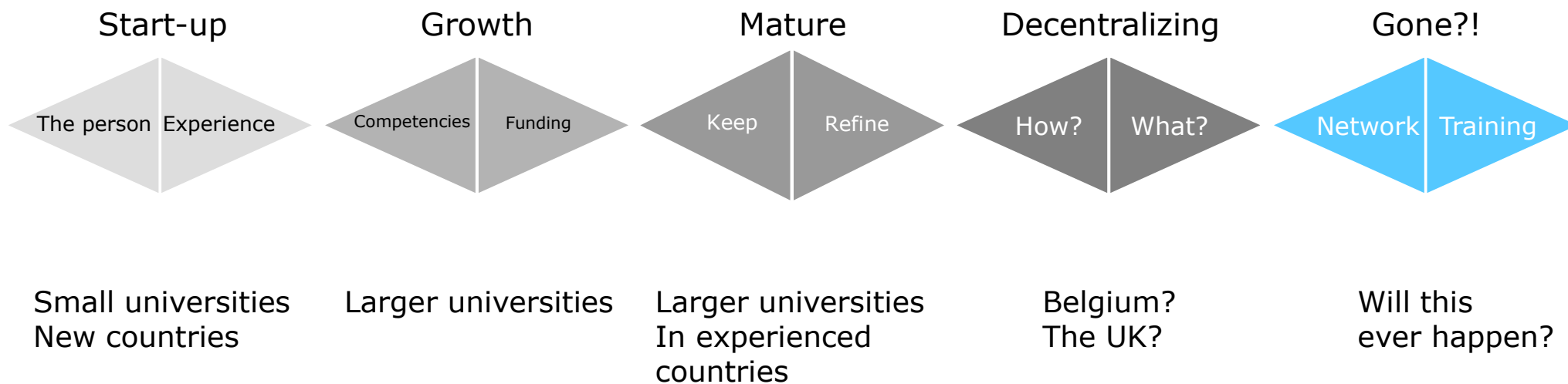
Full-service model

- Pro's
 - Speedy organisation
 - Excellent for knowledge build-up
 - Can create synergies between assignments
- Con's
 - Inflexible
 - Requires years of experience among key employees – must keep them
 - Mission has to be crystal clear
 - Requires backing from university management

Essential competencies for the TTO – according to our clients

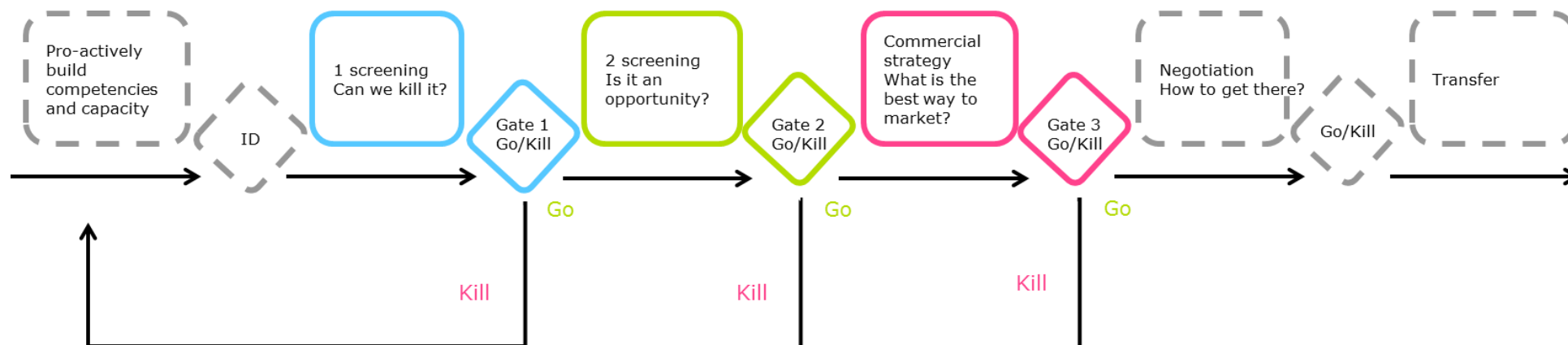
- **Must have**
 - **Legal services** – can not be outsourced, except for tough license negotiations
 - **Commercialisation services**
 - **Commercial strategy** – at least in core scientific fields
 - **Partnering** – as above
 - **Negotiation** – because it is fun!
- **Often outsourced**
 - IPR services – reasonably specialised and traditionally outsourced
 - Scouting – often a goal but resources are lacking

The "life-cycle" of tech trans offices



Technology transfer has a "value chain"

Scouting → Screening → Commercialization → Deal making



The need for/usefulness of consultants varies across position in “life cycle” and “value chain”

	Start-up	Growth	Mature	Decentralize	Gone
Scouting	XXX	XX	X		
Prescreening	XX	X	X	X	XX
Patents	XXX	XXX	XX	XXX	XXX
Commercialization	XX	X	X	X	XX
Deal making	XXX	XXX	XX	XXX	XXX

- Some needs may disappear over the life cycle
- Others may reappear
- Some are always there

How to organize your tech trans operation – get help

- The way you optimize your specific tech transfer operation is:
 - Non-trivial
 - Cannot be copied from someone else
 - Is going to make a huge difference

- You should look at your system from time to time – no matter where you are in the life cycle – you can always improve

- Consultants see many ways of organizing tech trans
- They see what works – and what not
- They are unbiased when they look at your specific choice of organization

In conclusion: Why – what - how

Why?

- Capacity limitations – variable costs
- Special competencies
- You learn something

What?

- Depends on structure of your office
- System development!

How?

- Work with them – learn from it – make them obsolete

This is what we all should have in common:

Striving to make ourselves obsolete!

Feel free to contact me or my colleague, Christian Schmock

Jon Wulff Petersen

CEO

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Background slides

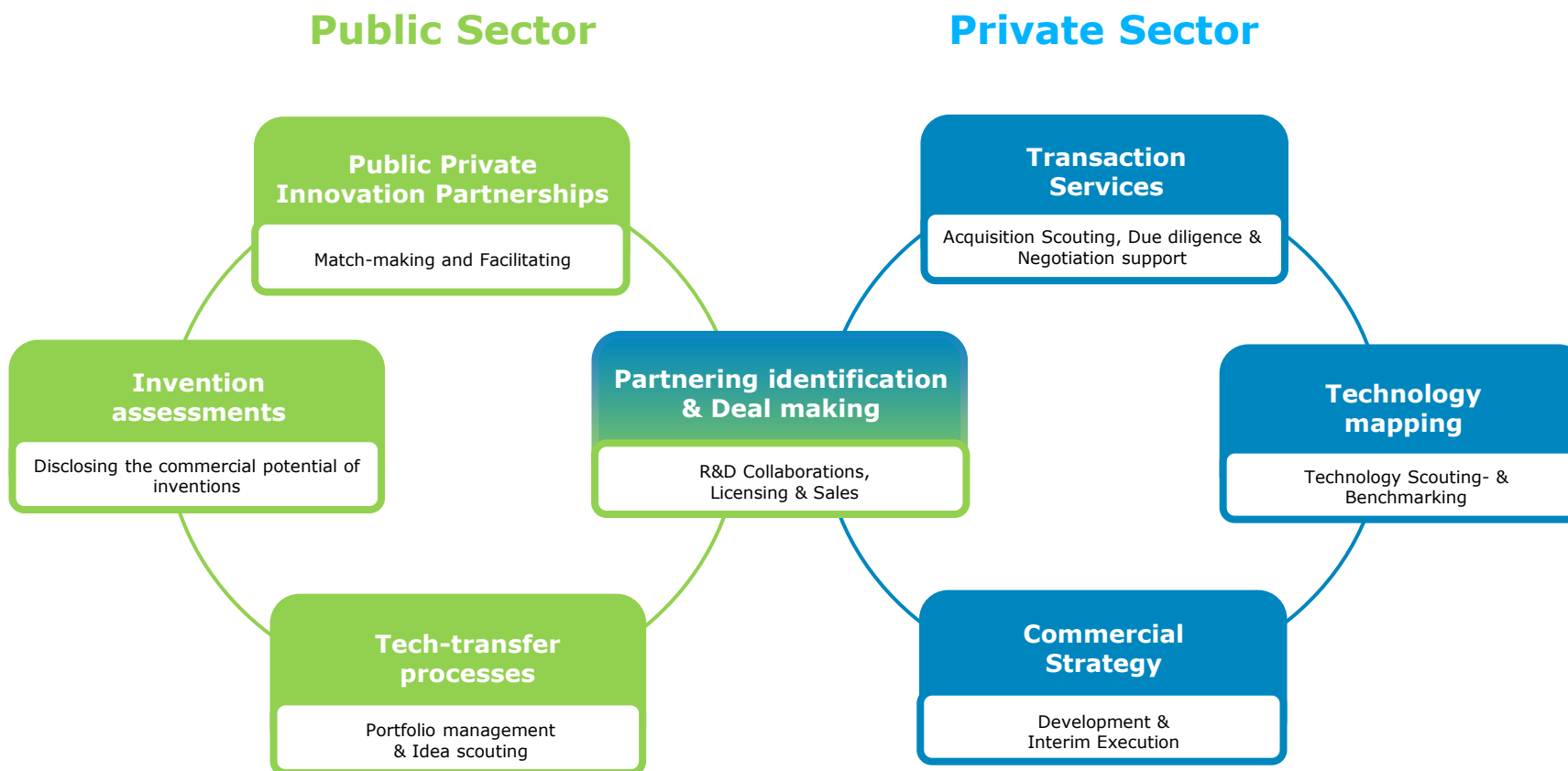
tto a/s is a consultancy company specialized in new technologies

- 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
P&V was founded in 1967 and is one of the leading European firms offering intellectual property consulting within patents and other intellectual property rights

Services we offer

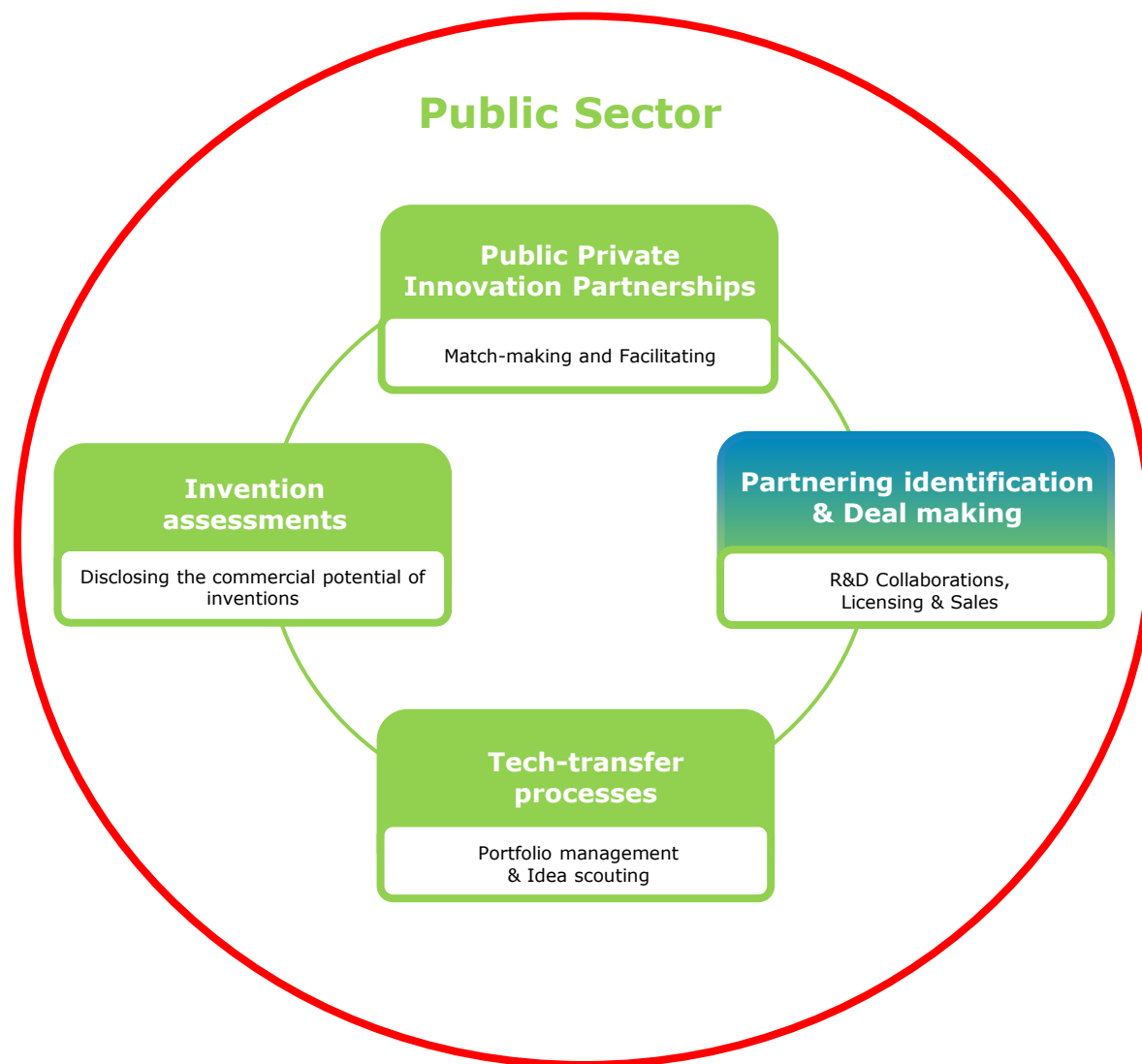


Our team consist of consultants and analysts specialized in business- and science

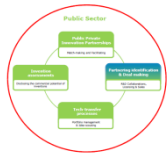
- Our people have a diverse background and we build teams of specialists and generalists - all to understand the commercial value of technology
- The tto-team consists of consultants and analysts specialised within the areas of:

Biochemistry Biology Innovation Management
Business Economics Medtech
Physics Chemical Engineering
Medicine Food Engineering
Product innovation Pharmaceutical Sciences
Entrepreneurship Renewable energy technologies

Services we offer

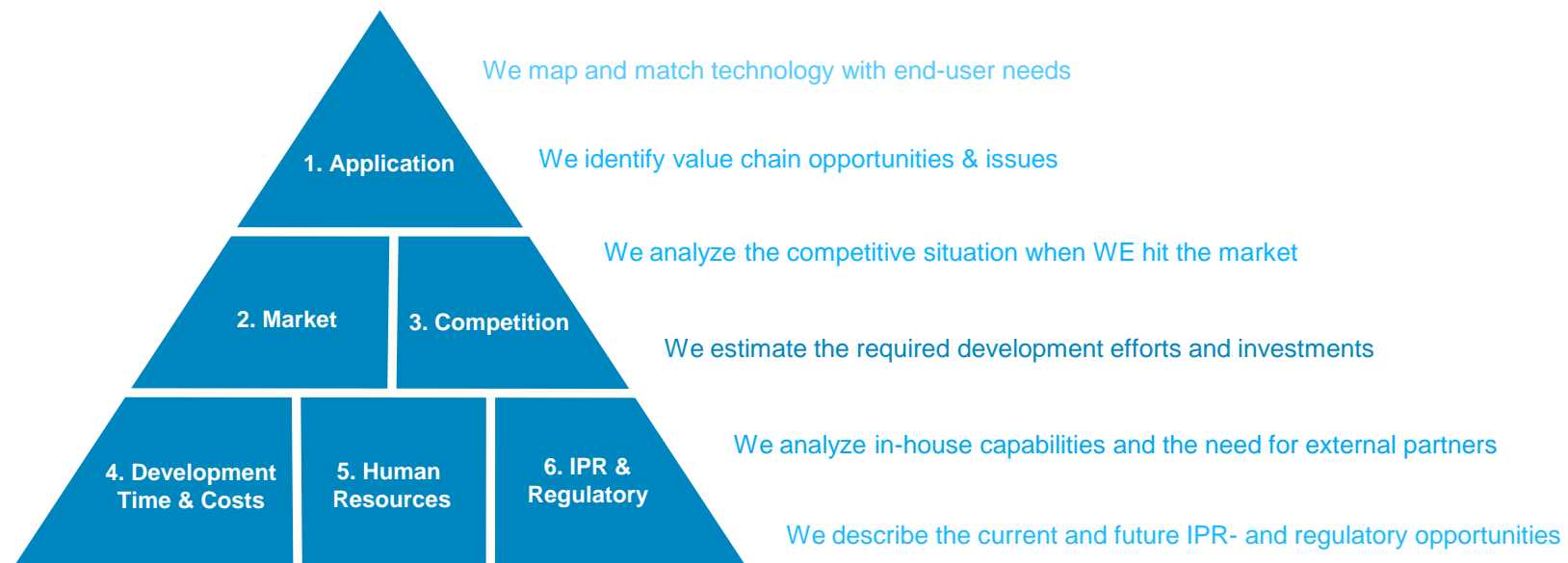


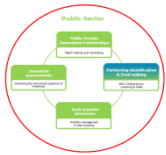
- Universities
- Technology Transfer Offices
- Other Institutions



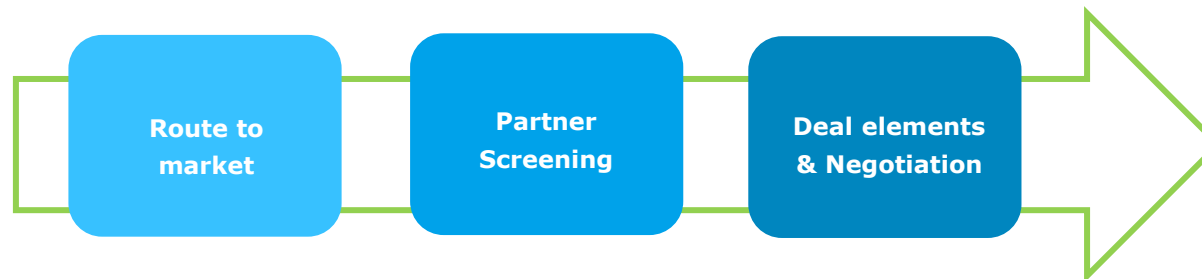
Invention Assessment

- When the Tech transfer office receives an invention disclosure and is under time pressure or is uncertain about the invention in question TTO can perform invention assessments
- We disclose the commercial potential of an invention and make a decision on whether to continue the commercialization process
- The TTO-commercialization triangle contains the factors that we regard as important for the successful commercialization of new technology:





Partner Identification and Deal Making

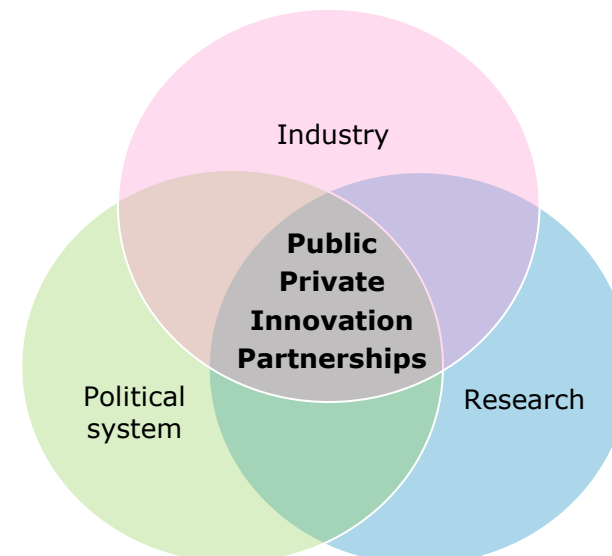


- Based on an Invention Assessment, we assess the combined commercial potential of the technology and identify the most profitable route to market
- We analyse global selections of markets and companies that have the right technological, organizational and market set-up to become a qualified R&D-, licensing- or sales partner
 - The screening is based on a selection of criteria that reflect the commercial fit to the invention in question, e.g. geographical target markets, value chain position, product pipe-line, financial situation, etc.
- Further we arrange and facilitate meetings with potential collaboration partners – on top executive level, and facilitate the negotiation process.



Public Private Innovation Partnerships

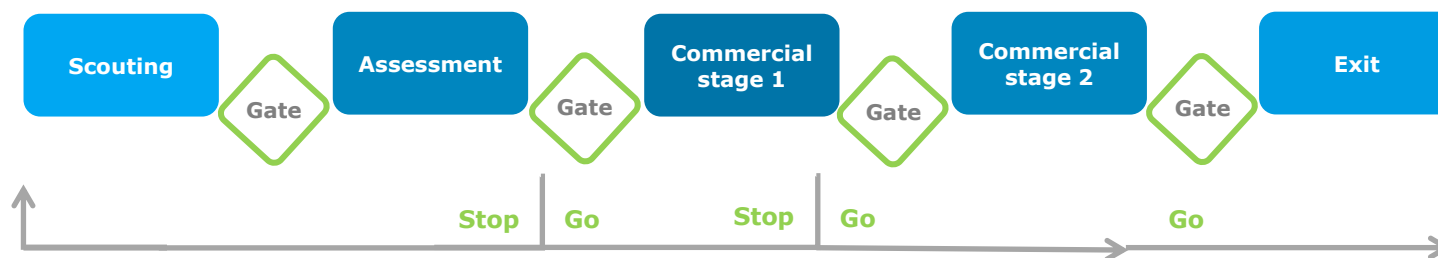
- Working with both research- and business clients, we understand the game between technological and market capabilities to mediate public private innovation partnerships
- The projects we are engaged in are related to life science or cleantech on municipal -as well as regional levels
- We take a neutral and facilitating position during the process and contribute with:
 - Turning high-level strategies into tactical activities
 - Cluster analysis and need identification
 - Identification of explicit collaboration opportunities
 - Identification of relevant partners





Tech-Transfer Processes: Portfolio Management & Idea Scouting

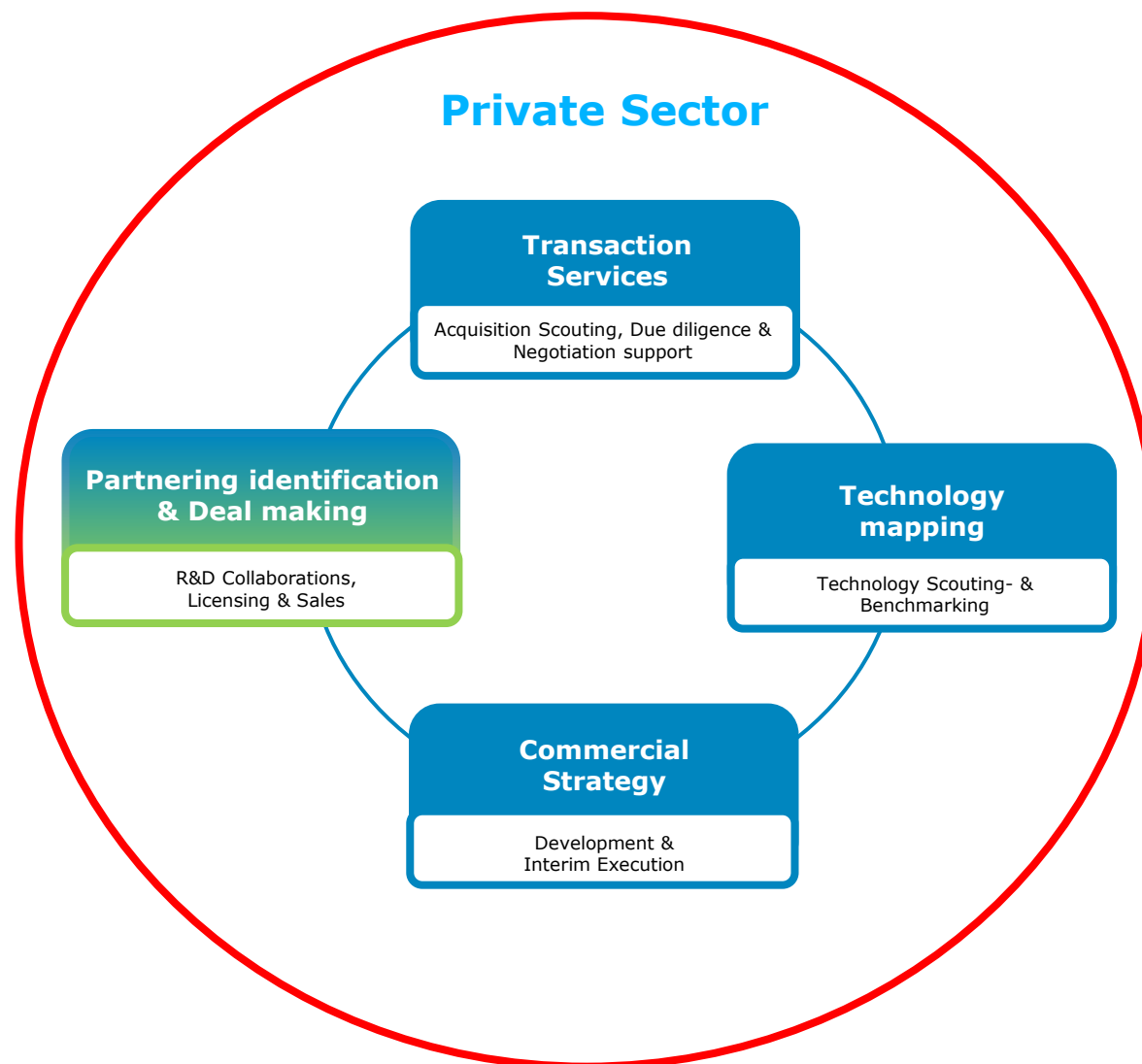
- Working with more than 25 Tech transfer offices in six different countries we contribute with best-case experiences and assist in improving tech-transfer processes:
 - Implement portfolio management approaches to the current tech-transfer process
 - Assist in improving the idea scouting process
- Our goal is to facilitate a system that focuses on transparency in case handling, facilitation of team work, improved decision making and execution on individual projects

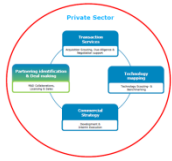


- Working with idea scouting processes, our goal is to identify high potential research groups and to spur the interest for commercialization and collaborations with the industry

Services we offer

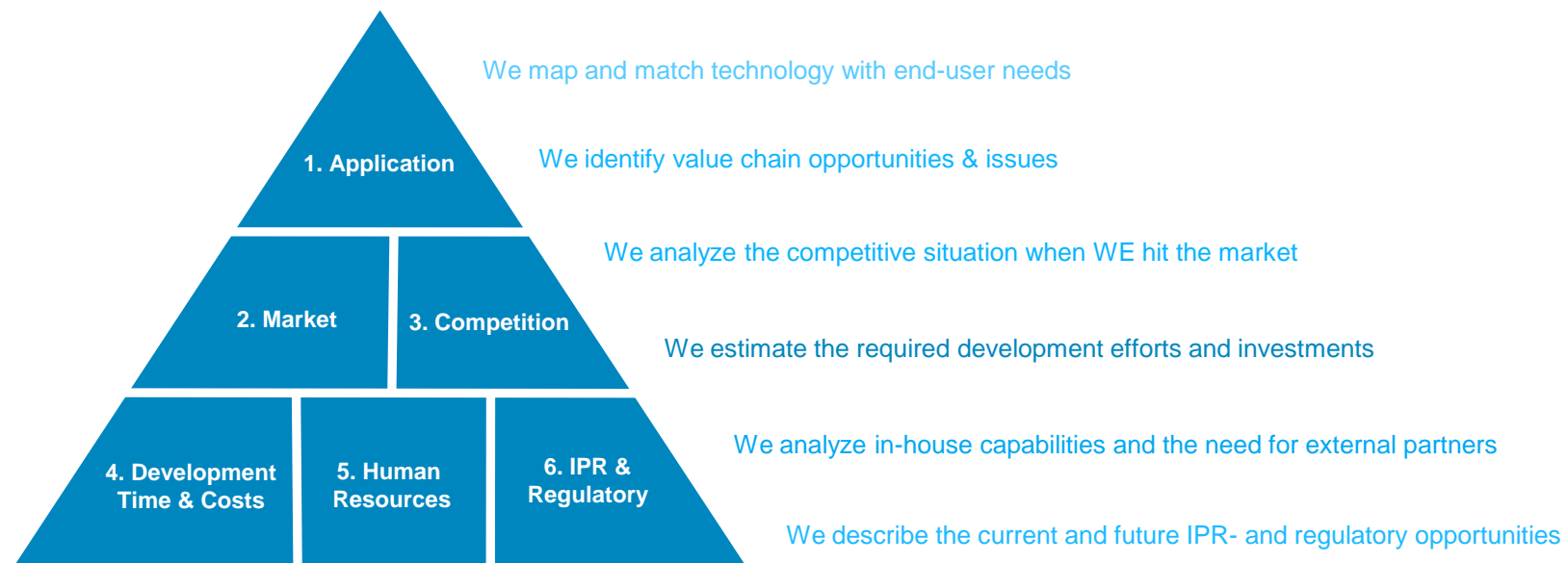
- Industrial companies
- Investors
- Start-ups

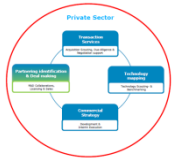




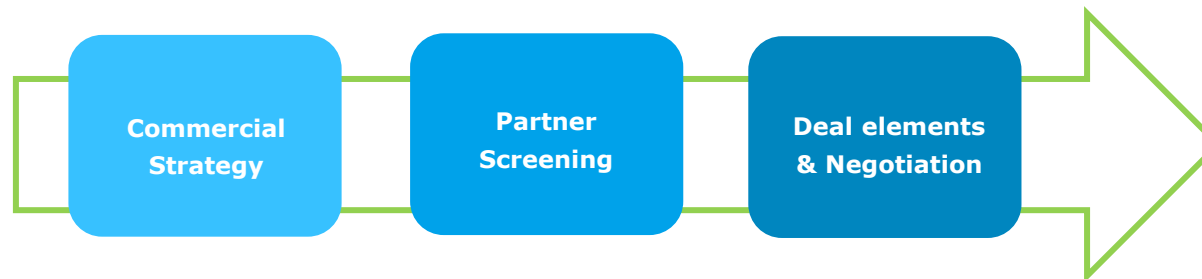
Commercial strategy

- Our goal is to assist in building a commercial strategy that takes into account the specific end-user needs and provides insights into your issues and directions to overcome them
- Based on the assessment we identify the most profitable route to market and formulate explicit action plans for the commercialization of the technology
- We assess the combined commercial potential of a project by looking at the following six areas:

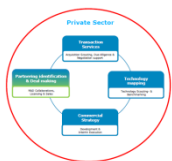




Partner Identification and Deal Making

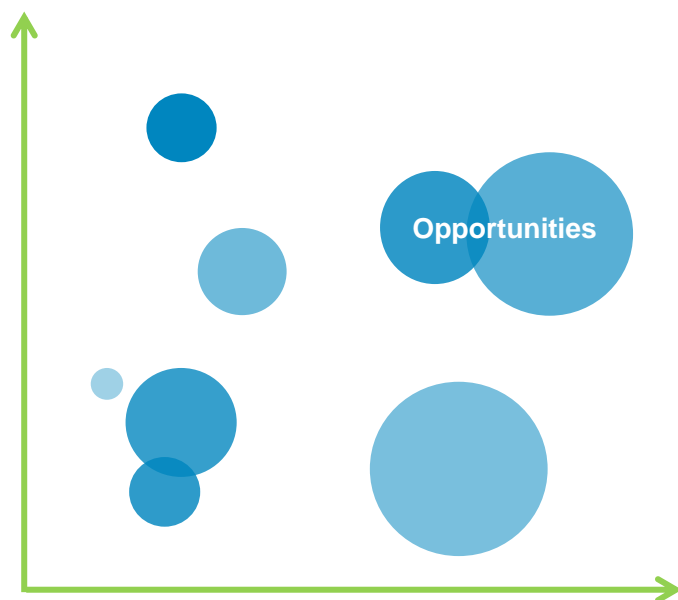


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- Further we arrange and facilitate meetings with potential collaboration partners – on top executive level, and facilitate the negotiation process.



Technology Mapping, Scouting and Benchmarking

- Operating within a unique liaison between research and business we provide insight into the potential of new technological fields and decision making processes



Technology mapping looks into:

- Competing technologies or fields
- Where the most efficient investments should be made

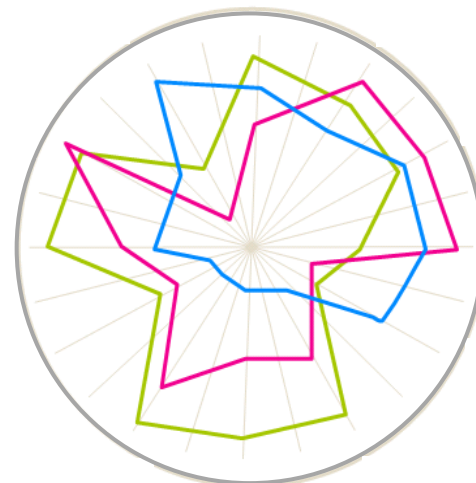
Technology Sourcing & Benchmarking looks into:

- Benchmarking of current and available technologies to solve an issue
- Customer's position relative to competitors



Transaction services: Acquisition scouting, Due Diligence & Negotiation

- An investor's interest is first and foremost to make sure that the investment is an informed one
- A vendor's interest is first and foremost in highlighting the company value
- We offer transaction services for both vendors and buyers of new technologies and contribute with:
 - Reducing risks
 - Increasing bargaining positions by providing a neutral perspective of company assets and competencies
 - Enabling objective comparison of opportunities and feed it directly into an investors decision making process



- Case technology
- Competitor technology I
- Competitor technology II