

MARKET ASSESSMENT GUIDELINE



The present guideline provides techniques for market identification which helps the reader to find the most attractive market for an invention. There are different strategies to benefit from an invention and this guideline will show some of these opportunities. Additionally the guide demonstrates some measurements for further increase of attractiveness of the invention to others.

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FROM RESEARCH PROJECT TO BUSINESS CONCEPT

Are you running a research project and planning to turn your ideas into practice? Then this training material will help you develop your current research project into a real business case. You will find advices for finding and selecting key markets for your technology as well as tools for choosing the right strategies for future commercialisation. Additionally, you will receive an introduction into internal valorisation processes to increase attractiveness and value of your business idea.

Later on in the process, additional financing is often needed for further development of your business. It is however difficult to attract an investors and to convince them to provide financing for new technologies. To overcome this difficulty, this training material will prepare you with information on how to present your research project in an optimal way for attracting potential investors. This includes particular knowledge concerning expectations investors might have for your presentation of the project as well as practical tips about how to write an attractive business plan.

In addition, you have the possibility to use the tools and checklists provided in the appendix which will support you in starting activities on your own.

1. IDENTIFYING, EVALUATING AND SELECTING KEY MARKETS

Already in an early development stage, you should start with identifying and evaluating different markets and select those being most suitable for your invention. This will allow for appropriate Intellectual Property (IP) to be secured. In the following steps, you will therefore be presented to tools and instruments which are helpful in finding (alternative) application areas and to get advices regarding selection criterion for a key market for the commercialisation of your technology.

1.1. How to identify potential markets



Use colleagues, experts and professionals!

In order to enhance your ability to think outside the initial application area for the invention, it is of high use to discuss your idea with other people around you. You can for instance ask your colleagues and friends whether they have ideas for other areas of use or development possibilities for your idea.

Also intermediaries like experts and professionals in certain fields may help you to gather new ideas and reconsider former suggestions through the supply of new information regarding your area of interest. An expert is in this case almost everyone who knows the area better than you and who can answer the questions you have regarding that field. Typically, an expert is employed by a company (e.g. a potential customer for your product/service/technology), a public research institute or an association. You can identify experts via company websites (e.g. through contacts in research and development or public relations), scientific conference agendas or through other experts.

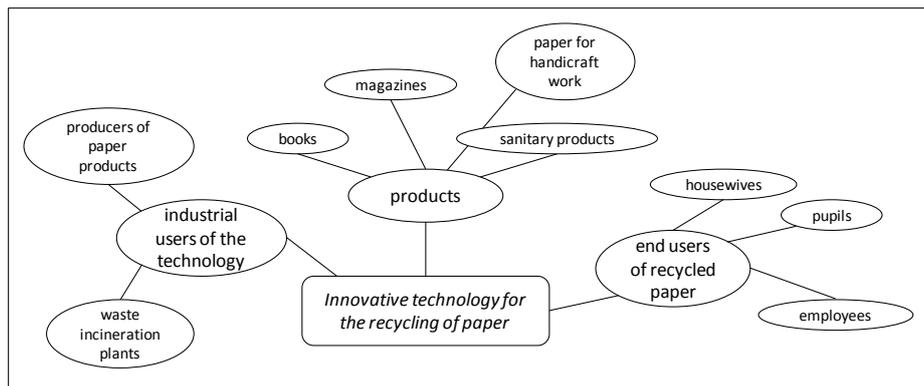


Use creativity techniques!

You can additionally use creativity techniques that allow you to generate new ideas on potential markets on which you could apply your technology. The following presented techniques are three of the most used ones in idea generation practice and you can also successfully combine them.

Brainstorming: Brainstorming is an unstructured approach to generate ideas, which aims to unlock creativity in teams and engage active participation from a broad group of participants. Brainstorming in groups results in more and better ideas compared to sole, independent working. Brainstorming in groups (6-10 people) will produce a large list of ideas for a certain (problem) areas for decision-making or planning.

Flipcharts can be used to capture all ideas generated with the emphasis on quantity of ideas, rather than quality. A spider diagram (see the example below) may be useful for this purpose, or the facilitator may also choose to create a long list of ideas on the flipchart.



There are some rules that need to be taken into account for a Brainstorming session:

- > Communicate clear objectives and guidelines!
- > Accept one idea at a time!
- > Build an informal, positive, non-threatening setting to encourage all group members to participate in a free-wheeling expression of ideas!
- > A time limit is useful, as creativity is often better harnessed when there is a time pressure to meet.
- > Encourage the group members to think of the wildest ideas; they often trigger others!
- > Accept expanding, improving, and combining ideas of others!
- > Do not allow instant evaluation of ideas, criticisms or remarks as it may distract from the purity of thoughts! It is all about idea generation!
- > Avoid wandering or side discussions!

6-3-5 Method: The 6-3-5 method is another brainstorming technique that generates and develops ideas by asking up to 6 participants to write 3 ideas on separate cards or pieces of paper within 5 minutes. These cards or paper are then passed along to other participants for further refinement or additional ideas. Participants are encouraged to draw on others' ideas for inspiration, thus stimulating the creative process. The procedure of using this technique is as follows.

1. A problem statement is shared with a team of 6 participants arranged around a circular table.
2. Several blank cards or pieces of paper are handed out to each participant with the instruction to generate 3 ideas (one per card) within five minutes.
3. Each participant writes 3 ideas related to the problem statement.

4. After the five minute first round participants pass the cards with written ideas to the person on their left.
5. The participants read all ideas passed to them, further develop the ideas, or add additional ideas to the previously recorded idea.
6. After 5 minutes, the second round is started, using the process as outlined in steps 4-5 above.
7. This process continues until each participant receives back his or her own card written during round one.
8. Lastly, all ideas are clustered and recorded. The chart is dated and saved for the next action step.

Also for the 6-3-5 Method are some rules to consider:

- > No verbal communication until a round is completed!
- > The focus of the modifications during the passing of ideas should be on advancing the ideas, not on negative criticism!

After a few rounds of 6-3-5 sessions, traditional brainstorming may be implemented to structure and further develop the results.

Analogies: The aim of this creativity technique is to find analogies between your idea/invented technology and other areas (e.g. the nature). An example for an analogy is the parallel between anaesthesia and snakes. Many snakes use venom to paralyze and desensitize their prey before eating it. Creating an analogy is useful in divergent exploration. People look at two unrelated things - one thing from the problem and something from an unrelated world. They find the relation between them and tease a new idea from the comparison.

The procedure of the method is as follows:

1. *State your challenge:* Identify the problem or topic you would want to generate the ideas for with the analogies method, e.g. "In what market to sell product X?".
2. *Choose a parallel or distant field:* The greater the distance to the parallel field is from your challenge, the greater is your chance of producing new ideas. A business analogy to a business challenge is too close - analogies from television or cookery more likely to stimulate creative thought. Biology is another fertile field for analogies. Possible objects of producing analogies are the structure of certain elements (form, colour, material, physical state), the relation between such elements, the function of your technology/ products/service as well as the environment of the system you are searching an analogy for.
3. *Generate a list of items* (people, situations, objects, actions, places, etc.) that is "like it" in some way or list the images that you associate with your chosen field. Then choose one or more particularly rich and interesting ones. This will allow you to describe the analogy in as much detail as possible.
4. *Look for similarities and connections* between the two components for your analogy. Do not think of looking for connections as something arduous or feel as though you were forcing yourself to swallow something unpleasant for your own good. Think easy and let your thoughts come and go as they wish.
5. *Determine any insights or potential solutions* that the analogy yields.

The analogy technique can be implemented by an individual as well as a group of people. When choosing to apply the method in a group, it is useful to compose the work group of experts from different fields of

work/disciplines (e.g. technicians, doctors, biologists). This will help the group to identify similar structures/functions in a different field of knowledge.



Conduct market studies!

When you collected enough ideas for potential application areas, it is time to get to know more about the related markets through market studies. Their aim is to gather relevant information from various sources to transform them into knowledge. Information of relevance is e.g. interests, needs and problems of potential customers, operational requirements and status quo of available products (infrastructure, competition, etc.) as well as purchasing processes.

Sources

Conducting market studies implies the usage of different sources. These may be non-public (e.g. commercial studies, unpublished studies, company secrets) or public sources. Regarding public sources, you can gather information from both primary and secondary sources. Primary information steams directly from the original source (i.e. persons like experts) while a secondary source is a document or recording that relates or discusses information originally presented elsewhere (e.g. websites, reports, brochures of associations, scientific papers, and official statistics).

The provision with secondary sources enables a quick orientation regarding the field of research and important market players may easily identified through for instance tables of content and attachments. However, they probably do not provide you with the exact information you need, the durability of the information is often not determined, and information may be incorrect or difficult to evaluate in terms of quality. To get answers to your individual questions, you should thus also use primary sources for gathering of information on potential markets, i.e. interview experts and other relevant people to receive the exact information you are searching for. For these interviews it is advisable to develop a small questionnaire.

Approaches

When contacting those persons you identified as relevant interview partners, you should mind the following:

- > Try, try, try! At least one out of ten experts provides information.
- > You should know what you want to ask and prepare accordingly!

During the interview you should also consider that...

- ...you will not get an answer to a question you do not ask!
- ...it is not about science, but about the market!
- ...courtesy is essential, even if it is sometimes difficult!
- ...you should remain goal oriented! (If the contact person is unreachable: Is there someone else at the same institution who could probably help you?)
- ...it is necessary to understand the answer you receive!

To facilitate that your questions are going to be answered, you can use text modules like "to get an idea", "as a rough estimate", "I've heard that", "sizes/numbers". With caution, you can also use provocation like "Is it true that...?", "Could it be that...?" or "It cannot be true that..., right?".

Make also sure that you have background material ready in case you are asked to send a description of your idea to the interview partner. You should additionally continuously work on your interview guide and include modifications in your questions.

To be able to analyse your interviews at a later point of time, keep in mind to document them adequately, i.e. prepare a file/paper with contact details about the interviewed persons (e.g. name, telephone number, e-mail, address, profession) and the results of your conversation with them (i.e. note in case of a failed contact, information received in case of a successful contact). For this purpose, a template for the documentation of telephone interviews is provided in appendix 1.

1.2. Evaluation and selection criteria

When you have identified suitable application areas for your business idea, the next step is to evaluate them and decide on the one(s) to choose for implementation. The following questions will force you to rethink and evaluate the identified application area(s) in order to make a selection.



What is the current situation of the market and the market's potential?

In order to select a market for your invention, you should be able to describe the current situation of the potential market, including actors and their market share, location, current size, trends etc. You should have some initial estimates of market size, in terms of number of customers, the number of units and the total sales in Euros. When preparing the analysis, note the difference between an existing market and an entirely new market. If you are bringing out an improved version of a product that is already available on the market (such as a more effective toothpaste) these figures will be fairly easy to get hold of. You will find data in the trade publications, or receive them from public authorities or trade associations. Check your data for plausibility.

Furthermore, you need to find out whether there exist opportunities for growth and if the market could be divided into segments and target groups. You should further think about the following aspects:

- > Is your location a crucial factor in terms of proximity to the market and suppliers?
- > To find out the markets potential, it is important to know how mature the market already is, i.e. how likely it is that the market will grow in the future. What factors will affect the future development of the market? Ideally, you should forecast the growth of the market over the next five years, using the rates for the past five years for comparison.
- > Are there possible threats (e.g. through changes in laws or strong competitors) and how do you propose to overcome them?
- > Does the market offer any special opportunities that you intend to take advantage of?



Who are your competitors?

Anyone offering something in a market will have to face competitors. If you want to challenge the competition successfully, you will need to find out who the most important suppliers in the market are, what their market share is, how they operate, and what their strengths and weaknesses are. In addition, you will have to try and estimate whether - and how quickly and at what cost - another supplier with a similar product could enter the market, and what effect that would have on the success of your business. Name your competitors specifically, and describe why and how your company will be better.

Take existing or potential direct competitors into account, but also think about substitutes. Substitutes are products that provide the same or similar customer benefits in a different fashion, i.e. that the customer views as alternatives. Examples for substitutes are eyeglasses versus contact lens, sugar versus artificial sweeteners. Products being substitutes to each other may, however, also come from absolute different industries. It is thus important to be creative and think from your customer's point of view.



What segment of the market are you planning to target?

Your business idea will not be of equal interest to all customers of the market, because they do not all have the same needs. Therefore, you will have to identify those customers within the total market who will benefit most from your product or service, can best be reached by you, and are ready to pay for it. The aim is thus not to serve all customer segments, but to concentrate on those parts of the market that promise the greatest profit, now and in the future. Various criteria are useful in reaching a decision here:

- > Size of the segment,
- > Growth of the segment,
- > Match between product and customer needs in a segment,
- > Potential for differentiating your own product against competing products.

2. SELECTING A COMMERCIALISATION STRATEGY

After identifying and selecting a key market, you should start thinking about your goal you would like to achieve with your invention. Would you like to establish a company or sell your business idea as soon as possible? To identify and select a beneficial commercialisation strategy for your technology, you need to know the possibilities from which you may choose. The main strategies for transferring a specific technology to industry are described in the following.

Patenting and licensing

You are not forced to implement your business idea on your own, but you can allow other people to develop and use it. To do this, your idea usually needs to be patented, i.e. you need to have the exclusive rights for your invention granted by a national government. You can then give permission (licence) to someone else to develop and use the patented idea in return for a modest fee and royalties from a successful product. For the patenting and licensing process, different actors can provide you with help in form of information and practical support for a patent application. There exist both private organisations and public technology transfer offices (in particularly at universities) that offer different services for researchers, often without charges.

Contract research

If you invented a technology, another strategy is to find an industrial partner that is willing to fund your future research in return for a contract. You would then conduct research and a contract is setting rules e.g. on confidentiality and on how to proceed with upcoming research results. This strategy is especially useful, when your technology needs to be further improved and is currently not ready for the key market. Additionally, such close contacts with the industry are helpful in supporting the implementation of your business idea at a later point of time.

EU projects

Another way to receive funding for the continued development of your technology is the participation in projects of the European Union. There are several programmes financing research and development. A practical guide to EU funding and a database with current calls for proposals are published on the European Commission's website (<http://ec.europa.eu/grants> and <http://cordis.europa.eu/eu-funding-guide>). If you find a programme suiting your technology, you should make sure to have sufficient support in writing the proposal (e.g. in form of people experienced in applying for EU projects). Even industrial and/or academic partners are beneficial in terms of references to practical and theoretical issues.

Start-up activities

Finally, you can also decide to become an entrepreneur and establish a company based on your business idea. With this commercialisation strategy you will self drive your idea forward and may benefit from a successful introduction of your product, service or technology to the market and/or a later sale of the company. Nevertheless, you will have more responsibilities as you need to decide on e.g. the type of company, the company's organisation and strategy as well as its financing. You will find additional information on how to attract investors in a later chapter of this guideline.

In case you are interested in establishing a company, but do not want to manage it on your own, you have additionally the possibility to contact organisations that manage start-up companies on a professional basis. They provide persons for the management positions and in return claim a certain amount of money or share of the company. In that case, you will still have the possibility to influence the company's future e.g. by leading the research and development division of the company and you may profit from future earnings through your shares.

Your choice of one of the strategies depends to a high degree on the development level of your product, service or technology and your own future plans. However, you should thoroughly think about selecting a suitable commercialisation strategy, as it will be crucial for the realization of your business idea.

3. INCREASING ATTRACTIVENESS AND VALUE THROUGH INTERNAL VALORISATION

Before proceeding with a certain commercialisation strategy or asking potential investors for financial support, you can on your own increase the attractiveness and value of your invention through internal valorisation. For example by developing a prototype, potential partners may much more easily be persuaded of your business idea. In the following, you will get an overview about the main internal valorisation possibilities.



Conduct market research!

As already stated above, it is important that you know your key market. In order to present external parties (like potential investors or strategic partners) your target group's characteristics and needs as well as proof that this group is interested in buying your product/service/technology, it is useful to conduct market research. This implies not only research on the market conditions and future trends, but also contact with potential customers and users.

You can conduct market research e.g. with the help of a questionnaire containing the main points you would like to know about your future target group, e.g. price level, special needs, age, gender, profession,

location. With this you can interview potential customers, experts, users etc. The more people you ask the better, as you need to know as much as possible about your target group.



Develop a prototype!

For external parties, your invention will be much easier to understand and more attractive when you show them a prototype. A prototype is a model serving as a typical example for the product in mind. Often, prototypes are built out of wood, modelling clay or another material, which is easy to shape. The development of a prototype may also reinforce your seriousness regarding the implementation of your invention when presenting your business idea to external parties.

Furthermore, you can use a prototype to identify which design options will not work, or where further development and testing is necessary. It may e.g. be used to simulate the design, aesthetics, materials and functionality of your developed product. Thus, start as early as possible with the development of a prototype!



Test your product, service or technology!

To make sure that your business idea is really working and to show this to external parties, you should test it as soon as possible. Depending on your invented product, service or technology, perform tests that reflect the reality as much as possible! Examples are clinical tests, product design tests, production trials, test of your service with a number of people, and further tests in the laboratory.

Keep in mind to document every test you conduct and analyse it thoroughly. The preparation of graphics will further help external parties to understand your test results. The more you show that your business idea will probably work in practice, the better! In addition, testing is also important to identify weaknesses and potential risks in order to develop mitigating actions.



If you can think of other possibilities to increase the attractiveness/value of your invention: Put them into action!