European Commission

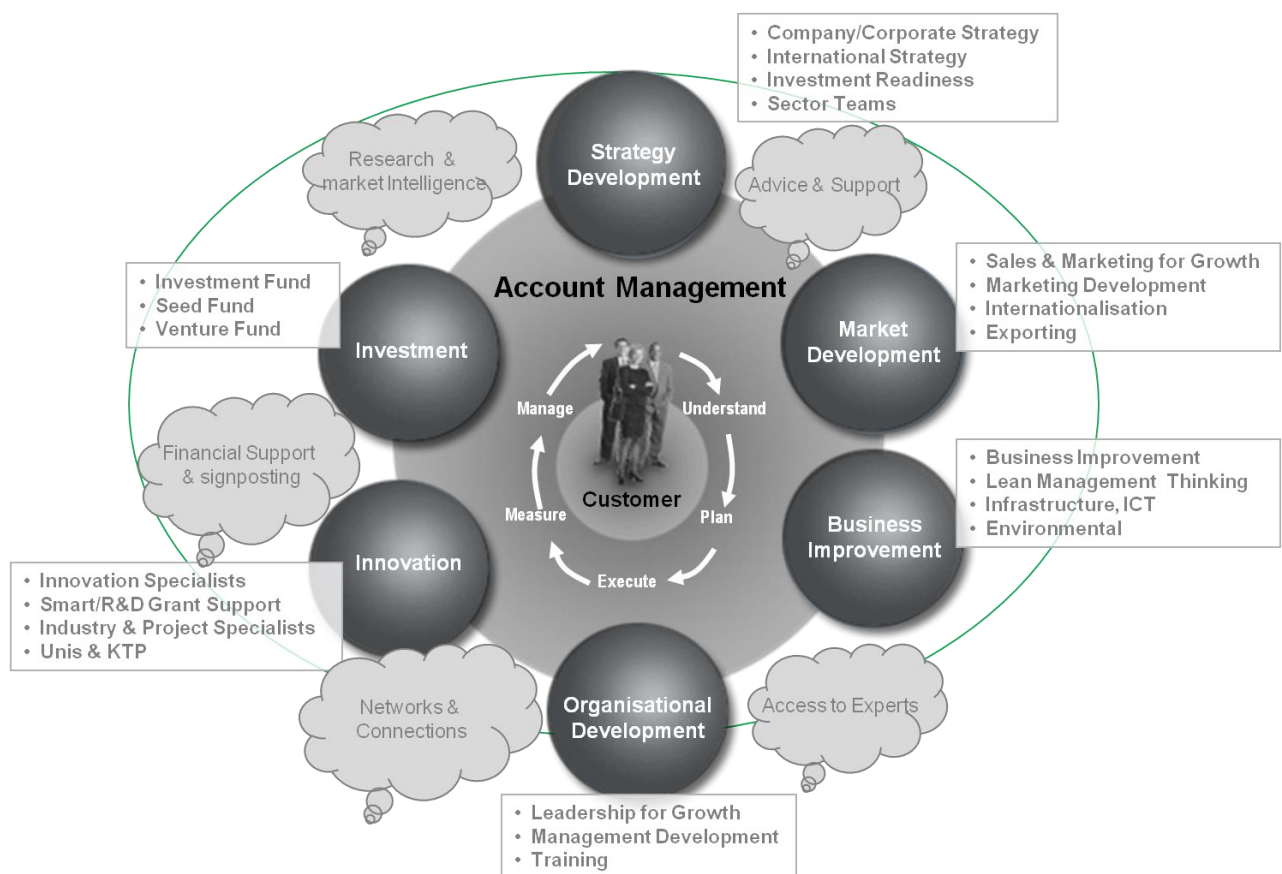# INNOWEST

Development of standardised innovation services through peer learning to efficiently increase innovation management capacity among SMEs

Design Option Paper

Disclaimer

The views expressed in this report are those of the authors and the project team.
They do not necessarily reflect the opinion or position of the European Commission and in no way commit the involved organisations.

Executive Summary

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1   Introduction

Through the call H2020-INNOSUP-2014-5 with the topic "Peer learning of innovation agencies", the European Commission wanted to provide incentives to national and regional innovation agencies for engaging in peer learning on all topics relevant for the design and delivery of innovation support programmes for SMEs. The expected impact is that the results of the peer learning are taken up by national and regional innovation support programmes.

The European Union has in different programmes supported mutual policy learning and exchange of "good practices". However, the transfer of good practices in SME innovation support, the enhancement of existing and the establishment of new innovation support programmes for SMEs remains slow. And SMEs benefiting from support programmes still often remain dissatisfied with the services received.[1]

The INNOWEST project has used peer learning under "Twinning Advanced"[2] to exchange common challenges and experiences from new and existing innovation services. This has resulted in this Design Option Paper (DOP)[3] which presents options, guidelines and implementation alternatives that three EEN - Enterprise Europe Network partners in three regions would recommend to other innovation support service agencies. In particular, the DOP address EEN partners in Europe, primarily in Sweden, Germany and the UK (Scotland)

The first part of the DOP contains a background on and description of the challenge addressed by the DOP. This part outlines the need for a governmental intervention, state the rational for addressing the challenge and give contextual information for the solution or approach presented.

The second part is followed by a description, evaluation and analysis of related measures that have been studied and an overall guide to the applicability of the document including e.g. target audience, contextual requirements (experiences or current schemes that helps, commitments politically, legally and economically to make the effort feasible etc).

The discussion is confirmed by examples (charts, tables and pictures). The objective is to have as much as possible of the critical DOP recommendations validated through practical experiments/pilot initiatives. Hence, the DOP contain information on which aspects have been tested and give a description of the validation/verification procedures used and the results of those procedures.

The DOP include the (estimated) costs and other resource needs of the initiatives.

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[1] European Commission, 2013. INNOSUP 2014-5: peer learning of innovation agencies
https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/298-innosup-5-2014.html.

[2] Twinning Advanced
https://ec.europa.eu/easme/sites/easme-site/files/Paper-Twinning-advanced-methodology.pdf

[3] Inno Partnering Forum
https://ec.europa.eu/easme/sites/easme-site/files/Paper-Twinning-advanced-methodology.pdf

The goal of the project is not to strive for completeness. That would be impossible. The project is too limited and the subject too broad. Given the resource constraint, the analysis remains therefore exploratory. The project partners would like deliver a number of methods, tools and ideas for further debate, study and evaluation, as they believe the challenges for their client SMEs deserve this further attention.

2　　　Challenge

It is generally recognised that lack of innovation management capacity is one of the most important barriers to create economic impact (competitiveness, growth and jobs) from innovation activities in SMEs. Specific services enhancing innovation management capacity for specific SME needs are often not available as a result of lack of offers, unaffordable market price, and poor quality. In addition, many SMEs are not willing to invest time and resources in developing their internal innovation systems. The lack of innovation management capacity among Swedish SMEs might very well be the main reason why certain government support schemes to Swedish innovative SMEs do not indicate any statistically significant effects of the number of employees, labour productivity, the share of highly skilled workers, or the proportion of researchers in the firm[4]. This situation can also be observed in Germany and the UK.

The challenge addressed in this DOP by the three EEN partners is to increase the innovation capacity among SMEs and to remove the obstacles hindering the transfer of good practices in SME innovation support institutions.

The three EEN partners are all involved in the coordination and support action "Enhancing the innovation management capacity of SMEs by the Enterprise Europe Network" (EIMC/KAM)[5]. From 2014 until the end of 2016, a large number of SMEs across Europe are and will be involved in the process of receiving a seven-day service package that includes an innovation management capacity assessment, a gap analysis and the provision of targeted services to address recognised gaps. The assessments are based on the methodologies that comply with the definition of innovation management, such as CEN technical specification CEN/TS 16555-1, including the IMP3rove methodology.

However, the different assessment tools are just showing the gaps but not systematically recommending an action plan. When presenting the outcome of an innovation assessment for an SME, it is apparent that we need to go further in our support than just make obvious what is missing. From the assessments, we have observed that certain needs or gaps are more common than others and we have also realised that SMEs in most cases know what to do, but that they lack an external part that triggers the improvement process.

3　　　Approach

The approach used for peer learning under Twinning Advanced between the three partners was to:

1. Address common gaps and SME needs
2. Share our experiences on how we meet these needs (including SME support structures)

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[4] Tillväxtanalys PM 2014:16, Assessment of Vinnova's programmes in Sweden "Vinn Nu" and "Forska och Väx" between 2006 and 2010

[5] Support packages for innovative SMEs http://een.ec.europa.eu/content/support-packages-innovative-smes

3. Exchange of experience from working with innovation assessment tools
4. Exchange information about practices, tools and methods implemented after an innovation assessment
5. Propose new initiatives and support schemes to satisfy SME needs
6. Dissemination of the DOP to regional and national authorities and to EEN partners and similar organisations

During two workshops we exchanged information about 16 tools and methods that we had been working with to increase the innovation capacity for SMEs, including e.g. methods on how to establish an innovation strategy or an innovation culture in an SME, how to manage the innovation life cycle processes from idea generation to prototype, or how to set up a budget for innovation activities. The tools/methods were presented addressing e.g. the target group, the framework conditions and organisations within which they work, and the processes under which they operate.

New initiatives were proposed based on the consideration that government financial grants to SMEs would create better economic impact (competitiveness, growth and jobs) if their innovation management capacity could be increased as a result of received innovation support from EEN or similar SME-support organisations.

4 Evaluation and analysis

4.1 SME support structures and political environments

Swerea IVF (Sweden)

Swerea IVF's support to SMEs originates from several regional, national and/or EU funded projects. The projects involve many different SME support actors and Swerea IVF often acts as coordinator. In some project the role of Swerea IVF's SME support team is as experts, while in other projects the roll is more of key account managers creating first contact and acting as generalists that have the skill to signpost to the right internal and/or external experts.

Industrial Dynamics is a good example of such a regional SME support project managed by Swerea IVF and financed by the regional authority, where 15 organisations in the region of Västra Götaland representing research institutes, science parks, universities, and regional development centres work together to coordinate their SME support and all use a common CRM tool (Customer Relation Management) to helps them cooperate. The network consists of both key account managers and experts that know each other well. No matter who gets a question from a company, it will always be forwarded to and taken care of by the best expert (or a tailor-made team of experts), including external experts/actors if necessary. Company needs and interest prevail (not what the providers can offer) and SMEs control and decide what problems to solve. Bureaucracy is kept to a minimum. Only persons with good communication skills, experience in working with SMEs and who are good listeners are the main contacts (most often a key account managers). The 15 network partners cooperate to serve the companies as good as possible. They do not only represent their own organisation when contacting a company, but the entire network's knowledge, competence and resources. Consequently, learning about each other's organisations is important.
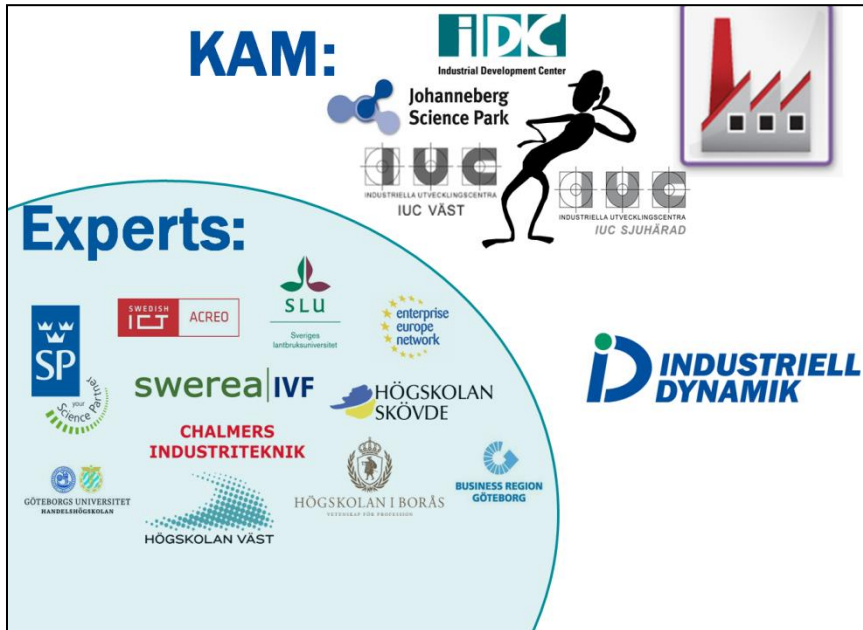
Scottish Enterprise (UK)

Scottish Enterprise's first contacts with companies are through approx 100 Account Managers that create relationships based on trust and assess company needs. For companies subject to support, the Account Managers set up and manage an account team consisting of about 2-3 experts from different departments, e.g. ITC, EEN, etc. The team gives advice and support for free and signpost tasks to external experts, if needed. The account team can also provide funds to support the cost of external expertise.

Robert
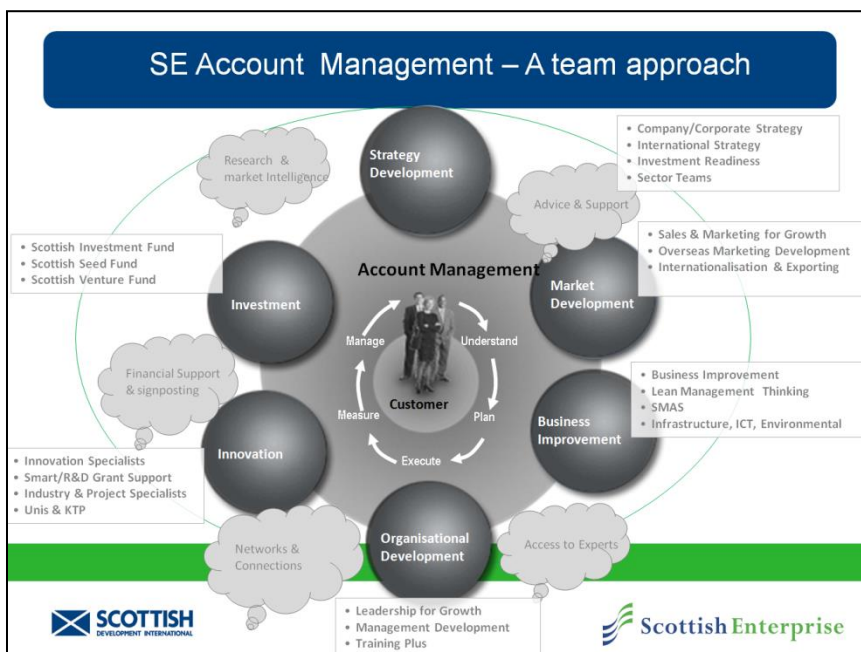
Steinbeis-Europa-Zentrum (Germany)

4.2   Innovation assessment tools

There are several innovation assessment tools available on the market. Swerea IVF uses both the IMP3rove[6] and the Innovation Health Check[7] tools. Scottish Enterprise only uses IMP3rove tool and Steinbeis-Europa-Zentrum only uses the SEZ assessment tool?

All three tools have the same objective and consist of about 50 questions. The differences are mainly in the way the surveys are performed and presented. The IMP3rove tool is generally suggested for assessing larger companies, while the Innovation Health Check is for assessing smaller companies and start-ups.

More experiences from using IMP3rove and the Innovation Health Check???

Steinbeis-Europa-Zentrum have developed their own method to assess a company's innovation capacity. After a fist short introduction they send a self assessment questionnaire to the company. The questionnaire is divided in two parts. The first part consists of 20 general questions about their business, how they see themselves compared to their competitors, etc. The second part of the questionnaire consists of 20 questions dealing with innovation. Preferably more than one person at the company fills in the questionnaire.

The results, web-diagrams, etc of the self assessment are then presented at the first meeting with the company and form the basis for further discussions. The meeting starts with a presentation of innovation in general followed by a discussion about the company's vision, production life cycle, proof of concept, etc.

With these facts in mind, the team (SEZ's experts and the persons representing the company) make a first SWOT analysis to address internal issues only. This could include a trend analyses and further discussion regarding market possibilities, technology readiness, project portfolio issues, etc. The team then go back to the SWOT analysis to complete it by addressing the company's possibilities, risks, threats, etc. This is as far as one can go in one day.

The meeting ends and the SEZ experts then assess the outcome from the discussions and propose an action plan, which is presented at the second meeting along with recommendations. SEZ then provide 3-5 days of coaching with their own experts to assist in the implementation of the actions. The company is then followed-up by SEZ's normal support structure after the seven days support, including assistance in getting funding support, e.g. via innovation vouchers (200-7000€).

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[6] IMP3rove: https://www.improve-innovation.eu

[7] Innovation Health Check : https://www.enterprise-ireland.com/en/Productivity/Company-Competitiveness-Health-Check

4.3   Outcome of innovation capacity assessments among SMEs

Innovation capacity assessments generally focus on five main areas: 1) Innovation strategy, 2) Organisation and culture, 3) the Innovation process from idea generation to launching, 4) Support functions, and 5) Innovation results. Innovation assessments since 2014 show that SMEs, inter alia:

- Focus more on product development and technology solutions rather on customer needs
- Work more with continuous improvements rather than with radical innovation
- Lack an innovation strategy or vision

But also that:

- The assessment tools encourage good discussions
- Many company needs are similar
- Companies need to have their daily working processes under control before they set up an innovation management system.
- Timing is important. Companies must be willing and have both the capability and the capacity to absorb new knowledge on innovation management.

In general, there are also several areas that should be improved among many SMEs, including in particular: innovation culture, structured idea generation, idea management, internal communication, use of knowledge from earlier projects, service and business model innovation, design thinking, measurement of innovation results, external cooperation, and innovation budget planning.

4.4   Methods and practices for increasing the innovation capacity among SMEs

The three partners identified over 25 methods and practices on how to increase the innovation capacity among SMEs. We selected 16 out of these and experiences and knowledge were shared and documented.

Scottish Enterprise

1. Deeper innovation workshops

As part of that Deeper Innovation strategy Scottish Enterprise (SE) has moved beyond working with companies at an individual level and is now running a programme of group activity to address some common issues that have been identified including:

- In most cases companies having no real innovation strategy in place;

- Real challenges with creating a true innovation culture across the business;

- Lack of true understanding of product and market lifecycles, their mutual linkages and the effect on competitiveness;

- The need for medium to long term innovation planning and an appreciation of the issues that need to be taken account of;

- How to run an open innovation programme and how to be part of one run by a large company;

- Developing and delivering effective action plans.

By invitation only, a group of between 15 and 20 companies are pulled together and SE deliver to them on a group basis a series of up to 6 workshops at about 6 week intervals covering the above and other issues. The workshops are:

1) Innovation strategy
2) Create an innovation cycle
3) Life-cycle and business modelling
4) Future trends and scenario planning
5) Open Innovation
6) Action planning

All of the companies are well known to SE, have completed or will shortly complete an IMP3rove assessment and are supported by an SE Innovation Specialist.

The format of each workshop is for the company delegates, drawn from appropriate senior management representatives, to gather, complete with their SE Innovation Specialist a location early evening for dinner during which there are introductory presentation/speech from whoever is leading the following days' activity along side possibly appropriate guest speakers sourced by SE. The aim is to encourage some initial discussion and networking prior to the full workshop, which will take place at the same venue, the following day. That will start, for planning purposes, at 9.00 am and it is anticipated that it would finish at about 4.00 pm including the usual breaks.

There is no requirement for the consultants to follow-up with attending companies after the workshop to help develop action plans etc that will be done by the SE Innovation Specialists.

It is anticipated that the audience will be made up of approximately 20 company representatives, 8 Innovation Specialists, 2 SE Innovation Managers, and 2 Steering Group members.

2. Innovation strategy template

This is a guide and template to be used by the expert and/or the company to document the company's innovation strategy. It is based on a series of questions that has to be answered.

Steve

3. Innovation Eco System

A tool to analyse a company's external and internal relationships

Steve

4. Guide and template for a new product development project

New product development projects often touch on many areas of business and require a diverse set of skills from marketing through to finance and design. Successful projects require careful up front planning in order to ensure that as much consideration as possible has been given to the challenges that lie ahead.

For smaller businesses this planning is critical;

   a) It highlights all of the challenges that required to be addressed

   b) It demonstrates to potential supporters of the project a degree of credibility by demonstrating that the project has been properly researched.

Often many businesses do not have all the resources in house to complete their projects. In order to secure these resources a plan such as this is invariably always asked for. The guide and template is the first step along that road. Completing the template will ensure that the high level issues have been considered. In the future, a more detailed plan will likely be required to further the business through securing funds and support.

These requirements are derived from the marketing and customer requirements and their purpose is to define the product in enough detail to allow engineering design to be carried out.

For a full document including guide and template, see Annex 1.

Swerea IVF

5. Vision workshop

This specific workshop focuses on investigating the soft values behind the people and the organisation in order to create a common vision for the company. The approach is to find a persons´ passions and inspirations and what drives them, what is common and what is not. They create personas for which the company is today, who they dream to become and what they could become. After this they start to build an action plan to achieve this.

Thomas

6. Design thinking

This is a presentation that de-mystifies "design thinking" and explains how one could use the working method from designers, primarily in the processes of idea generation and product/innovation development. The presentation is a short teaser on how companies can use design thinking to better understand their clients and their client's clients and how to involve a designer in this endeavour. The presentation objective is that it will lead to further support and collaboration.

<mark>Thomas/Heleen</mark>
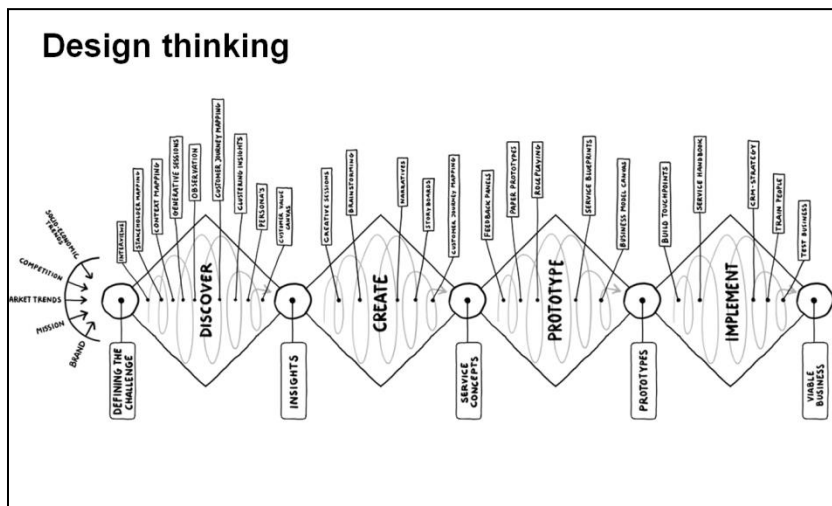
7. Value creation forum

This concept could be used in order to pitch ideas, to evaluate how and if one should continue with a project or not and make sure that what is developed is connected to potential sales. This concept is developed by Stanford Research Institute and focuses on NABC[8] (Need, Approach, Benefit per cost and Competition) combined with different roles.

<mark>Thomas</mark>

8. Peer-learning and knowledge sharing

This is a method to match companies that have weaknesses in a certain area with companies having strengths in that same area. A meeting with follow-up actions is organised with the companies in order for them to learn from each other. The communication should not be unidirectional. Ultimately, both companies should learn from each other and the company receiving information should also be able to present a practice that they are proud of, which should be within an area that the other company would like to be better at. One example where this method was used was with one company with skills in knowledge management (and how to secure knowledge within the organisation and not with individuals) with one company with knowledge in quality control.

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[8] NABC - SRI International Best Practice: goo.gl/DpAVQQ

9. Innovation project portfolio

To manage a company's idea and project portfolio efficiently it is important to develop a project overview that is documented and visualised in a way that the company is comfortable with and that can feed into the innovation strategy. This is a compilation of several ways on how ideas and project portfolios can be presented for SMEs in order for them to find the method it they like to proceed with, alone or with the assistance of a coach.
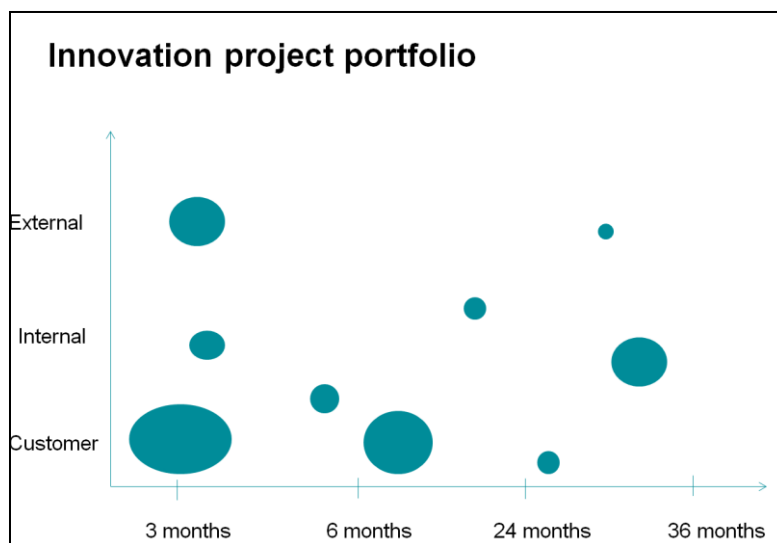
10. Engagement tool

11. MakExperience – radical idea generation

Swerea IVF has developed a process that can improve an organisation's skills and understanding for radical idea generation. The process is built up around an opportunity analysis and a structured workshop where different competences and backgrounds are combined, e.g. by mixing idea generators from both the engineering and the entertainment sector. The objective is to position the idea generators in a mode of fantasy and from there produce radical ideas that in a later stage can be realised. The lesson learned is a new way of

thinking when developing new products, services, processes or business models rather than finding the right idea.
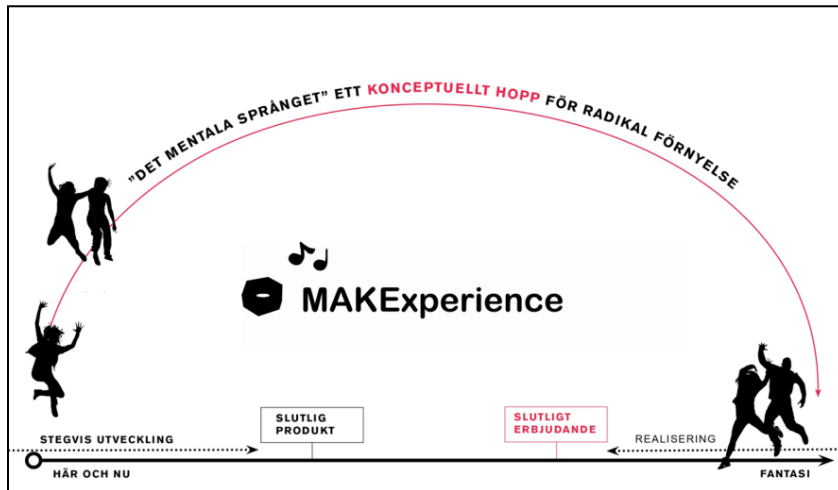
Steinbeis-Europa-Zentrum

12. Open Innovation

13. IPR Support

14. Road mapping

15. Innovation partnership

16. Self diagnostic tool

5   New initiatives

==All are welcome with ideas on what measures, programmes, etc that should be implemented to increase the innovation capacity in SMEs==

Several aspects on improving SME's innovation capacity were discussed during the course of the project and we have identified the following areas and suggestions for new initiatives:

1. Combine EEN's innovation services under EIMC[9] with SME support services under national and regional SME support programmes.

As evident from this project, there is no obvious support structure under EEN to handle or implement actions as a result of an innovation assessment in SMEs.

Combining EEN's innovation services (EIMC) with regional and national SME support services should include both network structures and working methods. There are significant synergies to coordinate these services, particularly when identifying and motivating companies that have the potential to increase their competitiveness and their ability to change.

Companies that have been subject for EIMC services might want to have a more solid foundation to stand on before they engage in innovation management. If so, they can be motivated to go into a regional entry programs with the objective to get their normal processes in order first, and then later, be offered to take the next step to embark on innovation management through EIMC. Working methods for company contacts, signposting and coaching should also be combined to the extent possible.

2. Make it possible for companies work together in common seminars and workshops to learn about innovation from coaches and from each other

Many SMEs have limited development resources and limited time to spend on innovation. Consequently, they don't have a systematic and holistic approach to manage innovation. Take-up measures must be flexible and in accordance with SMEs' current situation.

As a start, we propose regional and national initiatives that could support pilot projects involving 4-6 SMEs. The objective would be to develop an entry program for these companies to increase their competitiveness based on their own conditions, to provide the possibility to interact with other companies, and to support the management to make conscious choices. The companies would meet regularly, and in between the meetings be given different tasks and coaching. Innovation support services would be included as an integrated support service and working practices and coaching would be developed and evaluated. The methodology would be documented as guidelines for coaches and programmes for workshops. The entry program would have to be adapted to different standardised assessment tools and different funding schemes where services are already financed via national, regional or EU programmes, or if the companies pay fully or partially.

The objectives would be to give the participating companies an increased understanding of innovation management in general, and of the potential of non-technological innovation in particular. The workshops would increase their knowledge on how a holistic approach can start and how to maintain a strategic, sustainable, systematic work on innovation management in the long run. Workshops would be developed around the same principles as the Deeper Innovation Workshops presented by Scottish Enterprise on page 10

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[9] EIMC: Enhancing Innovation Management Capacities of SMEs

3. **Develop the role and the skills of the key account manager to encourage companies to begin a journey of change.**

Many SMEs lack the ability to change, even though they know they should. Despite the fact that many companies have received substantial support services, they often don't take the next step to implement measures given to them to improve or renew their business.

The role of a key account manager is sometimes undefined, complex and difficult. They can be generalists or experts, or both. They signpost company needs to experts only, or they sometimes also implement actions as an expert, etc.

We propose a program to develop and structure the role of key account managers and to increase their skills in motivating companies to start implement improvement actions on regular basis. A key account manger representing a SME support service organisation is often responsible for the first contact with a company and to match their needs with the right support experts. They can also be responsible to follow-up actions, such as actions suggested and discussed after an innovation capacity assessment. If so, they need to suggest with or without the help of an expert, the most important methods and practices available for increasing the innovation capacity, and be able to present these as teasers for reluctant and unmotivated companies.

6 Annex - documentation of tools and practices

6.1 New Product Development Plan

This document has been prepared as a guide to outlining a project plan for a new product development project.

New product development projects often touch on many areas of business and require a diverse set of skills from marketing through to finance and design. Successful projects require careful up front planning in order to ensure that as much consideration as possible has been given to the challenges that lie ahead. For smaller businesses this planning is critical:

- It highlights all of the challenges that required to be addressed
- It demonstrates to potential supporters of the project a degree of credibility by demonstrating that the project has been properly researched.

Often many businesses do not have all the resources in house to complete their projects. In order to secure these resources a plan such as this is invariably always asked for. This document is the first step along that road. Completing this document will ensure that the high level issues have been considered. In the future a future more detailed plan will likely be required to further the business through securing funds and support.

This document describes how the product will work, its functional requirements. These requirements are derived from the marketing and customer requirements and their purpose is to define the product in enough detail to allow engineering design to be carried out.

Template: New Product Development Plan

Project Summary

Explain what the product is supposed to do at a high level
This description should not be technical and it should be written in the style that you would
use to describe the product to a potential customer.

The project must be compatible with the strategic direction of your business, describe how
this project will contribute to the business growth.

Block diagram of the system- If the explanation of the product can be simplified by a diagram
this should be added, but again this is not a technical schematic, it is an aid to clarify what
benefits the product will give a customer.

Project Name

1. Introduction

2. In what sense is the product innovative?

3. Planned start and end dates

4. Why are you embarking on this project?

5. What technical problems are likely to be encountered during the project, and what impact, if any, will the proposed product/process research have?

6. Product/Process Development Activity

7. Project Costs

Include a description of what is included under each heading in your estimates of the project costs. All costs should be exclusive of VAT.

External costs should be covered by quote from supplier but if there are internal costs these need to be explained in this section. Notional costs, and contributions in kind, are not eligible for funding support; all costs included in the estimate must actually be incurred and paid for (defrayed) by the applicant.

8. What impact, if any, will grant assistance have on your project?

You must demonstrate that a grant is essential for you to proceed with the project.

Explain why you are seeking financial assistance and how it would affect the project. For example, you might otherwise not carry out the project at all, or you might have to do it on a much smaller scale (you should say how much smaller), or over a longer period (say how much longer). This should demonstrate what funding support would enable to happen that would not have happened otherwise.

9. Intellectual Property

Is there any part of the product that is worth protecting?

Is there any aspect to the product or offering that has been patented before? Useful information on patents / trademarks / copyright can be found at www.ipo.gov.uk

You must provide evidence that you are entitled to use the intellectual property involved in your project (for example, a copy of a patent in your name, a licensing agreement or details of your own patent search). Alternatively, you must disclose sufficient technical details that will allow Scottish Enterprise to evaluate prior art.

If you have applied for a patent, please enclose a copy of the application.

Full confidentiality will be maintained and this does NOT constitute public disclosure.

You should state how you intend to protect any intellectual property that is generated as a result of the project. You should note that any intellectual property (e.g. patent, copyright) generated must be owned by the business that receives support.

10. Finance

If you are a business, explain your business criteria for deciding how to use existing internal funds, indicating competing claims on your resources from other projects. If appropriate, give details of your business's spending on R&D over the past two years. State whether the project has been approved by the company board and the degree of priority attached to the project.

*Show how you will fund the project. List those private or public sources of financial assistance you have approached in connection with the project e.g. development agencies, banks, venture capital companies and corporate venturers, and describe what happened. **Statements of financial support for the project must be backed by written evidence (e.g. a copy of a loan agreement or a bank overdraft facility).***

How much money will be required to develop the product up to the point that it can be sold? Consider; design fees, materials, testing fees, promotional material, prototypes, capital equipment.

What are the ongoing costs once that product is on the market place both direct costs and indirect costs?

An important financial metric for many business, especially small and start-up businesses, is the time to break even.

There are three basic financial metrics; the cost to develop, the unit cost and the unit profit.

Using these figures and the sales volume and time to break even can be calculated. For most new products this has to be between 6 and 18 months.

The project plan should include a cash-flow projection which highlights project costs flowing through the business.

11. People

What is motivating the people on the team to participate on the project?

List the skills and experience of the people that are on the project team. Selling the team of a project, especially a small company or start-up project, is probable one of the most important steps in the early stage of the project.

Also include area where you do not have experience. Identify how you intend to resolve this as time progresses, either through hiring in or sub-contracting out.