



Business Plan of EPC+ services

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1. SUMMARY

EPC+ aims at eliminating barriers for implementation of energy efficiency measures through standardization of technical measures and simplified financing. The service will be provided by SPINS (SME Partnerships for Innovative Energy Services). These SPINS can be organized in various types and can be structured differently (see therefore <http://epcplus.org/sme-partnerships-spins/#spin-requirements-and-organizational-tools>) .

All SPINs have a demand for a reasonable business plan that describes the process from the product idea up to a realization schedule. The target markets and how to reach them through standardized implementation, financing and simplified M&V is crucial for each business plan of EPC+services and is described in detail in this document. The main target sector is indeed SMEs, although other sectors like industry, the residential and the public sector may not be excluded to be suitable for the model.

Tools like Value Proposition Canvas, Business Model Canvas, SWOT-analysis are introduced and elaborated on a generic basis to help developing strategies, name players and define chances and risks of the product. Although target markets and clients can be divers in participating countries a template for further market analysis is included.

In the end it is highly recommended for each SPIN providing EPC+services to elaborate a concrete business plan for its specific situation, depending on the market structure, the technical offer and the accompanying performing capabilities of the SPIN, leading to certain business cases to be tested in the field as a pilot before rolled out on the large scale.

2. PRODUCT IDEA

Energy Performance Contracting (EPC) is generally looked upon favorably, but the implementation can be complicated and lengthy. The reason lies - among other things - in the procurement law provisions (EU-wide tendering) and long-term and complex contracts, which impede a real breakthrough in the spread of the EPC methodology in both the public and private sector. The other main barriers for the implementation of EPC in Small and Medium sized Enterprises (SME's) are:

- The transaction costs for procuring energy services are too high
- Investments and project sizes are too small
- It is difficult to obtain financing for such small projects (either because of the unwillingness of the financial institution or due to a lack of knowledge of the employees of the financial institution in assessing the techno-economic feasibility of the proposed project).
- High costs for guarantees, measurement and verification procedures.

The business model of EPC+ will deliver a solution to overcome these barriers through:

- The development and establishment of SPINs (SME Partnerships for Innovative Energy Services). A SPIN is an organized cluster of independent energy efficiency service providers, mainly SMEs, that jointly supply energy efficiency services and that have a structured long-term collaboration with some commonly agreed objectives. The types of SPINs are described in detail in chapter 4
- Simplified EPC models. Similar to existing energy performance contracting models standardized and simplified contracts will be used to reduce transaction costs and increase understanding of them. This will enable manageable project sizes that can be directly awarded or awarded with simple tendering procedures or pre-awarded services (according to procurement law) with special themes (e.g. LED lighting, pumps and electric motors, ventilation systems, cooling, consulting services and user motivation with no or low cost investments etc.) that can be easily handled by SMEs.
- Standardized technical measures and financing means. For avoiding complex and individual designs per project all applied measures will be standardized in their dimensioning/design, implementation and quality assurance. For the pre-financing an optional financing tool will be available for all clients.
- Simplified measurement and verification. As comprehensive measurement of savings in EPC-projects regularly increases their transaction costs simplified and still performance based methods for M&V are part of the business model. These are customized for each technical measure.

The process how to conclude with this project idea can be described best in the format of the Value Proposition Canvas (after A. Osterwalder), the content has been provided by the consortium members of EPC+.

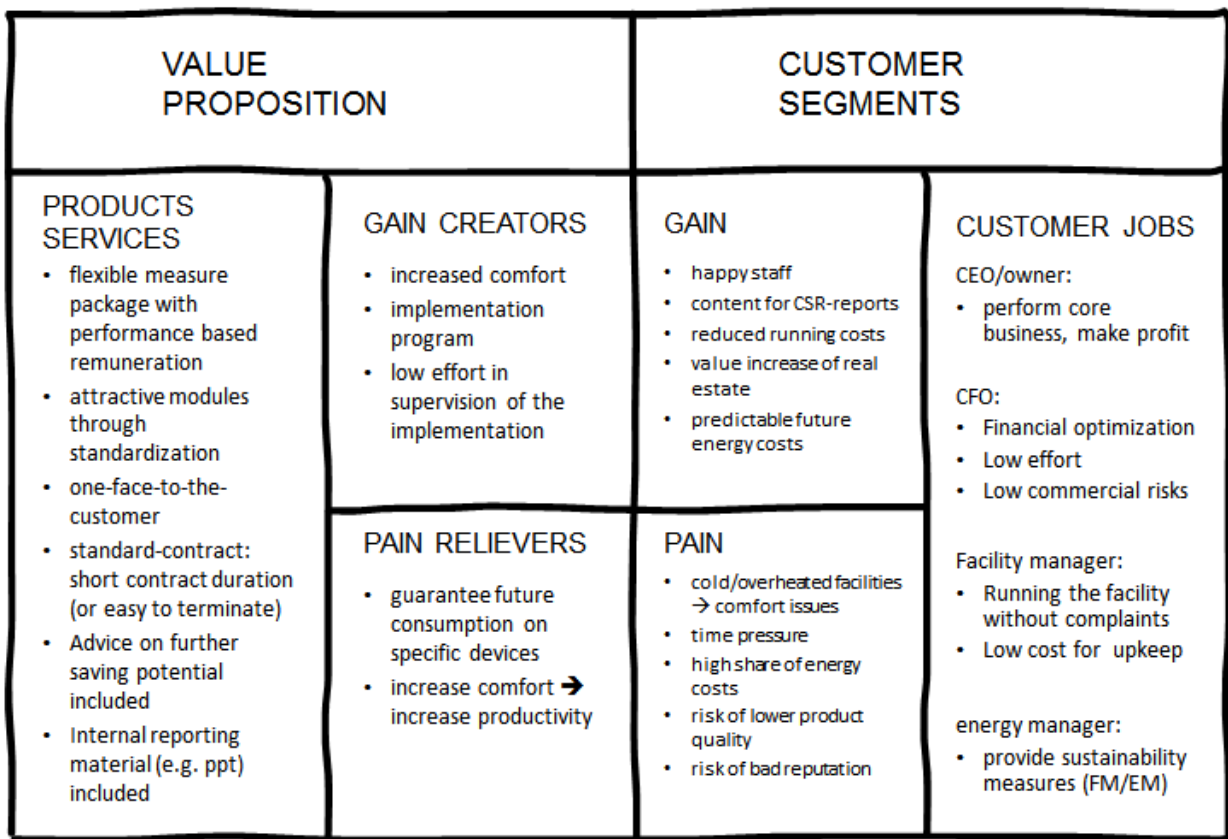


Figure 1: Value Proposition Canvas

The systematic of this canvas is to describe the typical jobs to be done by the client and bit by bit answering the resulting questions of what would help them to ease their life. The result is a collection of features of the to-be-developed service: the value proposition (to the left of the canvas)

2.1. BUSINESS MODEL CANVAS OF EPC+ SERVICES

The business model canvas after A. Osterwalder is most suitable to picture business models for a first impression and to adjust certain components of a business model. Key fields of this canvas are 1. The Value Proposition and 2. The Customer Segment, while the fields 3. Relation, 4.Channels and 5. Revenue define the relationships between fields 1 and 2. The field 6. Service through SPINS defines, how the value proposition will be crafted – which is explained on one hand in chapter 4 and on the other hand in [“Organisational tools for SME Partnerships for Innovative Energy Services”](http://epcplus.org/upload/ue/wp2/D2.2_Development-of-organisational-tools_2015-08-14.pdf)¹.

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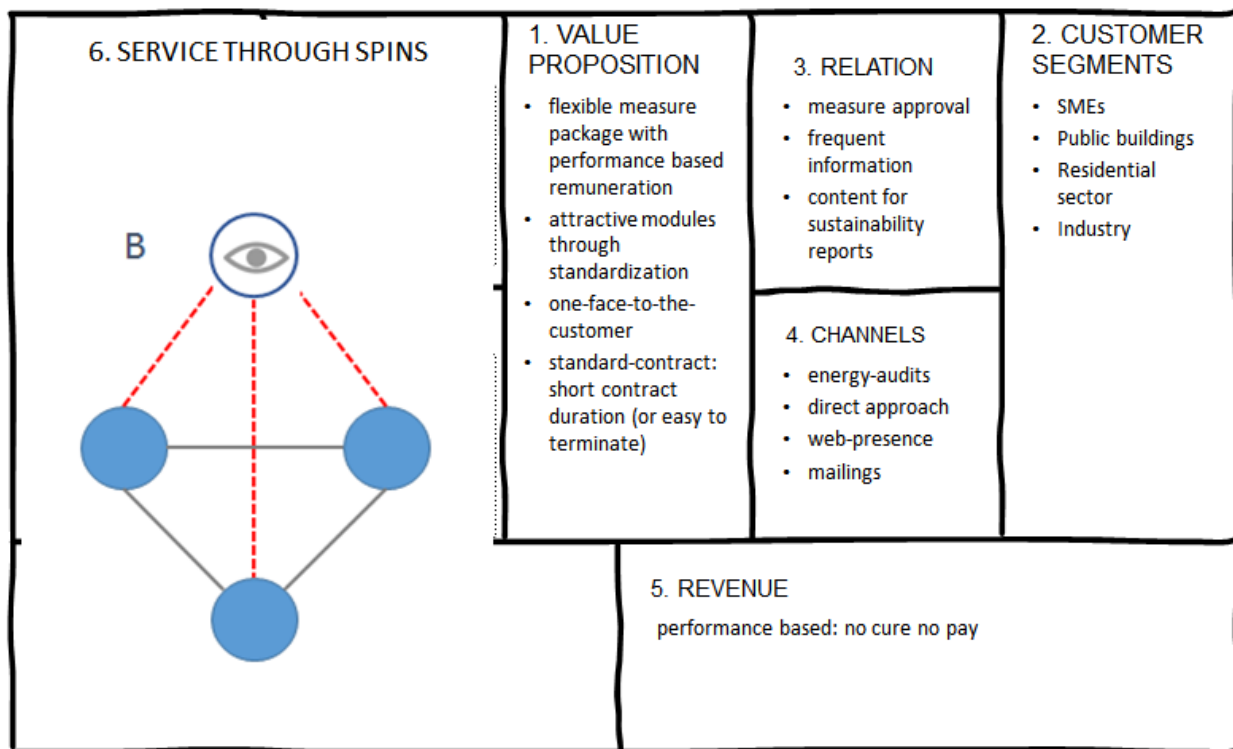


Figure 2: Business Model Canvas of EPC+services

2.2. THE TECHNICAL OFFER: WHICH MEASURES ARE TO BE IMPLEMENTED

The choice of technical measures is crucial for the whole value proposition, as it has to be customized to the specific needs of the target group(s) of the SPIN. Moreover to fit into the EPC+ service-scheme the measures have to be

- Standardisable, to minimize transaction costs of design, preparation and supervision
- Approvable, to measure the performance with an acceptable effort
- Suitable for the increase of demand side energy efficiency in a facility

A range of measures have been considered to be suitable for these preferences (making no claim to be exhaustive) and have been elaborated into a so-called “toolbox” of typical EPC+ measures. The measures are split in two types: measures that are solely demand side energy efficiency measures and measures that increase the renewable energy production within a facility and thereby reducing the overall-demand for energy-input.

Measures for energy efficiency:

1. indoor lights: LED lights + control system
2. hydraulic adjustment of heating system
3. modernization of heating pumps
4. modernization of electrical motors
5. energy efficient ventilation and/or cooling
6. HVAC systems

7. Managing and metering systems for buildings
8. Renovation/replacement of heating boilers
9. Energy-efficient windows
10. Steam boiler blowdown

Renewable energy measures:

1. Solar DHW
2. Biomass heating systems
3. CHP
4. PV-panels
5. Wind-power
6. heatpumps

These measures are described in the “EPC+ Toolbox: Description of Standardised Energy-Efficiency-Measures”.

The implementation of the measures always follows a dedicated standardised process, which should be followed to reach these impacts:

- optimization of effort: for acquisition, communication with the client, administration
- transparency towards the client: at certain milestones the client receives further information about the status of the project and the measures
- one-face-to-the-customer: following this process eases the project-management for the client and thereby reduces his effort

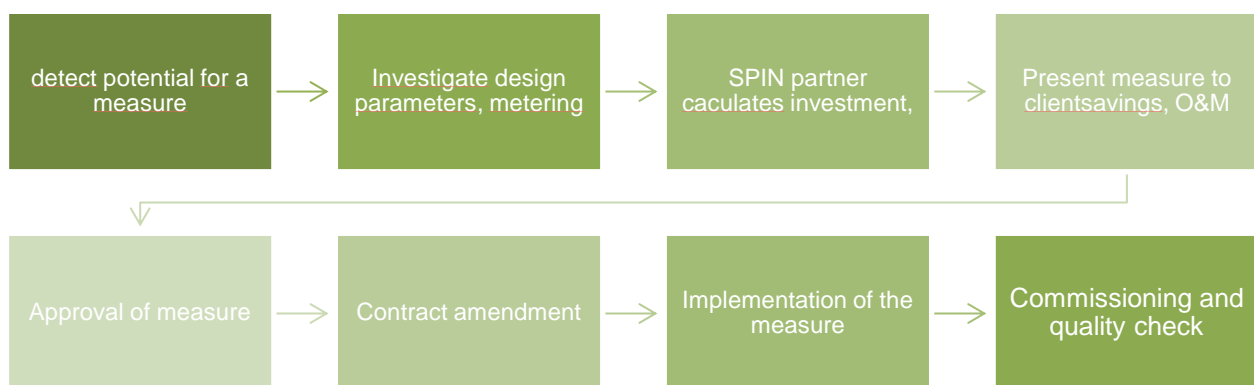


Figure 3: Process of implementation of EPC+ measures

A more detailed visualization of this process with dedication of tasks to the involved actors is the service blueprint that can be found in the annex of this document: *Figure 7: Service Blueprint for the*

Implementation of EPC+measures. The service blueprint also shows horizon lines that give an indication of the area of influence and transparency of the process – and also lacks of transparency to be taken care of.

2.3. FINANCING OF EPC+SERVICES

As an added value to increase the implementation probability of the measures, standardized, pre-negotiated financial modules have to be at hand by the SPIN. The options for financing of the investment are:

1. Customer's financing: if the client is willing and able to finance the investment by himself, either using its own capital or customer's credit from a financial institution (e.g. bank); the technical offer can concentrate on the technical and performance issues.
2. Third Party Financing – Financing of part or all of the investment, from a third party with the payback of both the investor and the contractor of the SPIN being based on the energy performance. The sources of financing may include one of the following, or a mixture of them: A traditional financial institution (i.e. a bank) or other financial sources (i.e. venture capitals, crowd-funding)
3. SPIN Member Financing – Financing of part or all of the investment, from a member of the SPIN with the payback of both the investor and the contractor of the SPIN being based on the energy performance. The sources of financing may include: Supply of the equipment without advance payment, Own funds, Traditional Bank loan
4. Revolving Funds – Financing of part or all of the investment, from available revolving national funds (i.e. Greenfunds, Energy Efficiency funds, ESCO funds etc.) with the payback of both the financier and the energy service of the SPIN being based on the energy performance.
5. National subsidies – Financing of part or all of the investment, from available national subsidies with the payback of both the financier and the energy service of the SPIN being based on the energy performance.

The respective financing offer (apart from client's own financing) should be highly standardized, concise, preferably unnegotiable and only flexible regarding its amount (but still attractive) – considering that the aimed loan volume represents only a minor volume for financing institutions (i.e. microcredit). Moreover from a selling point of view discussions about the financing would draw the attention too much away from the technical measures and their performance and unnecessarily increase transaction costs.

Still the financing offer always has to be optional for the client and represents a supporting feature of EPC+ services, not a mandatory one. In addition mixtures of the various financing types should be possible on the client's choice (e.g. 30% customer's financing, 60% third party financing, 10% subsidies)

3. TARGETED MARKETS AND CLIENT'S NEEDS

The market segments targeted by EPC+ services are spread over several types of clients, although they all have similarities regarding the client's needs and the job to be done through the service.

For local adaptations of the business plan it is recommended to research/estimate figures for the size of the several market segments. A detailed template for marketing analysis can be found in *Annex 2* of this document.

3.1. SME (SMALL AND MEDIUM SIZED ENTERPRISES)

The main reason for the limited penetration of Energy Performance Contracting (EPC) and the provision of energy services in small and medium sized enterprises is that although they are generally looked upon as favorable, their implementation can often be complicated and lengthy. The reason lies - among other things - in the long-term and complex contracts, which impede a real breakthrough in the spread of the EPC methodology, particularly because of high transaction costs. Thereby the EPC+ service will target exactly these obstacles by

- simplifying the approval of performance
- thereby avoiding long contract-periods
- standardizing technical measures, thereby reducing design costs
- offering optional financingmodules

Performance based alternatives for SMEs are hardly available in terms of demand side energy efficiency, except models of pay-as-you-save, that feature lower security for planning and impedes comparability of offers compared to EPC+services with a performance guarantee.

Thereby EPC+services can fill the gap between pure installation without performance based remuneration and standard EPC, (see also Figure 6: Positioning of EPC+services in the Energy Efficiency Market, page 13)

3.2. PUBLIC SECTOR

The public sector can be considered to be already covered by models of standard EPC, delivering high levels of performance based energy services. Still standard EPC is only available for a relatively small group of public facilities due to boundaries of economics: e.g. the minimum size of EPC projects is considered to be approx. 100.000€² of yearly energy costs (for single buildings as well as for a pool of facilities) because of

- high effort for customized design,
- high effort and long-term preparation for public procurement
- yearly approval of savings (including baseline adaptations)
- high risk surcharges due to unforeseeable expenses

Therefore EPC+ services could deliver high performance for smaller projects (<100.000€) by standardized technical solutions and still serving public clients the long-term security of sustainable savings.

3.3. RESIDENTIAL SECTOR

Private clients are deemed to serve the market with energy efficiency potentials that are too small for EPC+ services, but a reduction of interfaces would foster the development of projects in this market segment. This could be solved by addressing

- social housing companies,

² May vary from country to country

- facility managers or
- other real estate owners, who have living quarters in their portfolio.

Addressing these clients would make it necessary to adopt the technical package of EPC+ services, but can have a promising perspective for a large market as the technical solutions can be similar between the various clients – a high grade of standardisation is possible.

3.4. INDUSTRY AND OTHER LARGE COMPANIES

Industry (and other large companies) is an important target sector for EPC+ services considering the EED-framework: for most industry-complexes energy audits had/have to be performed and thereby the structure of a facility's energy consumption, energy-efficiency-potentials and concrete energy efficiency measures is already visible through the energy audit reports.

Taking advantage of these existing energy-audits, that often already contain measures of the EPC+toolbox, will open potentials for EPC+ services as standardised implementation models are assumed to be appreciated by energy managers because of the high security of effectiveness of the measures (also see Figure 1: Value Proposition Canvas).

Particularly the ENEE (Energy Efficiency Network Europe) targets these clients, especially those who have to deal with subsidiaries in more than one European country.

4. PROVIDERS OF THE SERVICE

4.1. SPINS

EPC+ services are being offered by SPINs. A SPIN (SME Partnerships for Innovative Energy Services) is an organized cluster of independent companies, mainly SMEs, that jointly supply energy efficiency services and that have a structured long-term collaboration with commonly agreed rules and objectives.

SPINs can have different structures and different strengths of interrelations between the parties. This insight is based on the Cynefin framework developed by Cynthia Kurtz and David Snowden.

A SPIN could be managed by one partner with a number of subcontractors without interactions between the subcontractors. It could be a dynamic interactive network without much control by one actor or it could be a collaborative network of SMEs with strong connections between all partners.

Depending on a) the market situation and b) the offered services, 3 types of SPINs are possible:



SPIN observer, co-ordinator, leader, ...
(often also a SPIN member or partner)



SPIN partner, member, subcontractor, ...

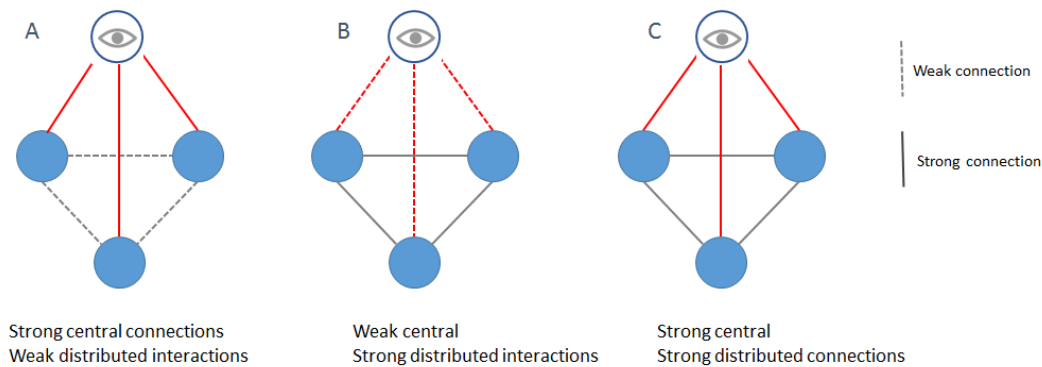


Figure4: SPIN Types

4.2. SETTING UP A SPIN

For the setting up of a SPIN some preparatory research should be undertaken. This includes an individual market analysis (which service to be offered to which customer group) and decision making process on the most appropriate type of SPIN. The type of SPIN will also have a strong impact on the partner selection, creation and management of the SPIN

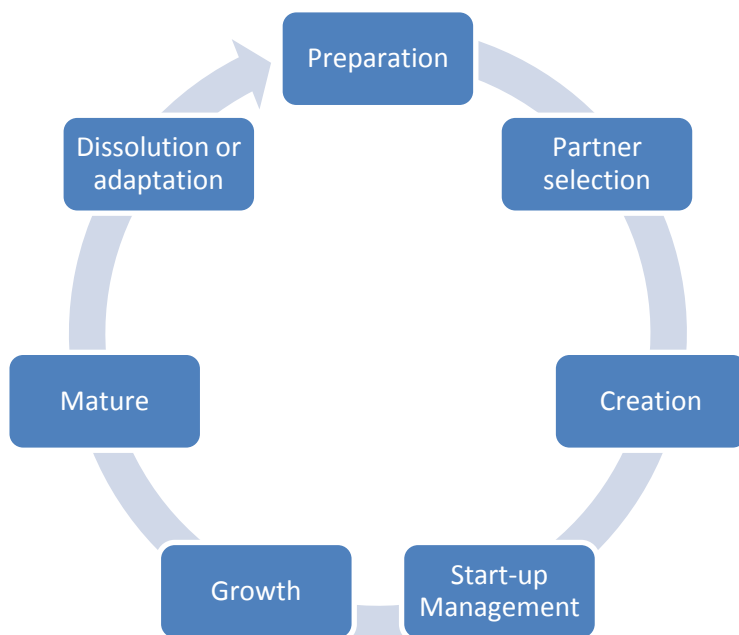


Figure 5: Setting Up a SPIN

More details about SPINs and the different types are described in the document [“Organisational tools for SME Partnerships for Innovative Energy Services”³](#) and [Final status report of the establishing of SPINs](#). This report shows the process how EPC+ partners set-up their SIPINs.

The outside appearance of the SPIN towards the client will always be one-face-to-the-customer as far as possible. This means that the client has one contact point over the whole project duration to reduce interface-contradictions for the client.

5. COMPETITORS, THREATS AND RISKS

EPC+ services target at an uncovered niche at the market. Still there are various competing offers on the market, that have to be taken into account in promoting the EPC+ service by communicating it's differences and USPs towards those competing offers.

Broadly speaking the competitor's range starts at pure installation of equipment without performance measurement and ends with standard EPC. In between there is a lack of available offers reducing the performance risk of customers and still affordable regarding transaction costs.

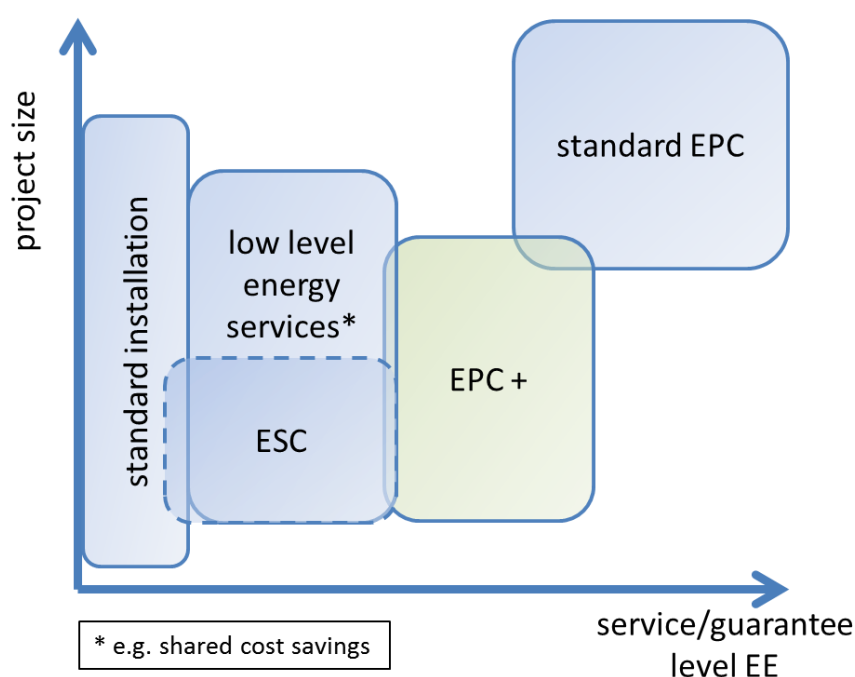


Figure 6: Positioning of EPC+ services in the Energy Efficiency Market

5.1. SWOT-ANALYSIS OF EPC+ SERVICES

SWOT-analyses have been produced in all participating EPC+ partner countries within the SPINs. Thereby the circumstances for EPC+ services have been explored on two stages: the first stage (Table 1: SWOT-

³http://epcplus.org/upload/ue/wp2/D2.2_Development-of-organisational-tools_2015-08-14.pdf

analysis of EPC+services) focuses on strengths, weaknesses, opportunities and threats of the SPIN as a whole -towards the outer world (clients, competitors, regulatory framework,...), while the second stage (Table 2: SWOT within the SPINs) targets the inner relations of the SPINs. This is particularly important for the necessary agreements and contracts within the SPINs and with clients, as well as for the choice of service level and offered technologies:

Table 1: SWOT-analysis of EPC+services

| | |
|--|---|
| <p>Strengths</p> <ul style="list-style-type: none"> ▪ Simple, low-cost, standardized energy service packages with EPC are more attractive to clients when compared to complex and more expensive solutions ▪ The solutions proposed will be low-cost and may be funded with own funding by the enterprises ▪ Available expertise and technical tools ▪ Network with energy SMEs (partners) and clients ▪ No financial and legal barriers ▪ Innovative scheme (guaranteed results, several funding options, selection of measures by client), so little competitive rivalry for this particular scheme ▪ SPINs can share their pool of contacts/clients ▪ Compilation of technologies is flexible due to the needs of the client | <p>Weaknesses</p> <ul style="list-style-type: none"> ▪ It may be difficult to demonstrate to clients the added value of the offered service (compared to the available ones) ▪ Low level of trust in this type of investment on the part of banks ▪ The investments might be too small for banks ▪ An energy audit company typically has difficult access to reliable cost estimates of energy saving investments. Having this information could increase considerably its competitive position. This latest information is usually available at an engineering construction company but for them it is not advantageous to share this know-how as the information sharing requires their expertise time and there is also the risk that the energy audit company could use afterwards this information to compete with the engineering company itself. As a consequence, in absence of a solid SPIN-framework (e.g. rules about the role of each partner in the SPIN), the sharing know-how between partners will be limited. |
| <p>Opportunities</p> <ul style="list-style-type: none"> ▪ Clients can be attracted, if the service is marketed properly, emphasizing on its innovative aspects (see above), to differentiate it from cheaper services ▪ Large number of potential clients who could be interested in the service ▪ Mandatory audits: potential measures are already named and identified | <p>Threats</p> <ul style="list-style-type: none"> ▪ Arising competitors after the first projects due to lack of legal restrictions ▪ Utility services might target this market segment due to the national implementations of the EED ▪ In case of ESCO-financing the issue of ownership of equipment can create difficulties → clients could tend to avoid this by not signing the contract |

Table 2: SWOT within the SPINs

| | |
|---|---|
| <p>Strengths</p> <ul style="list-style-type: none"> ▪ SPIN-partners' areas of expertise complement each others and are not competitive ▪ more turnover and lower sales costs as partners in a network have access to different clients and can easily introduce other SPIN partners at their clients ▪ quick and efficient startup of projects, smoother collaboration, more know-how transfer and less project risks as partners in a long term network – in contrast with the conventional ad hoc collaboration forms – have a long term collaboration and know and trust each other and as the collaboration and transactions are agreed in the network contracts; | <p>Weaknesses</p> <ul style="list-style-type: none"> ▪ Upfront costs of projects have to be balanced fair ▪ The transfer of sales opportunities between partners of a SPIN would increase the overall sales and turnover of the partners of the SPIN. However, the transfer of a sales opportunity from one partner to another partner creates also a cost for the first partner (e.g. time spent for communication of the 'lead') and creates even the risk that the client will be taken over by the other partners, while it does not generate immediately an advantage. In absence of a solid SPIN-framework (e.g. rules about sales commission), a lot of sales opportunities will not be transferred between the partners of the SPIN. ▪ Another motivational problem is the fact that experts working in a network belong to different companies and will possibly not have a sufficient 'group' feeling when collaborating with other experts of the network, which can weaken further the trust and smooth collaboration within the network. |
| <p>Opportunities</p> <ul style="list-style-type: none"> ▪ Platform for exchange with other SPINs or SPIN-partners ▪ Linking of various energy services | <p>Threats</p> <ul style="list-style-type: none"> ▪ Individual interests of SPIN-members may overweight the SPINs aims ▪ Because of 'egoistic' free rider behavior listed above (e.g. some partners that do not transfer sales opportunities or knowhow), other partners will feel unfairly treated and tensions and mistrust will start to grow. This can result in the collapse of the network or even open conflicts between previously collaborating network partners. |

6. REALISATION SCHEDULE

Building up a running EPC+ service consumes resources, especially in finding and fortifying a functioning SPIN, harmonizing the chosen technical measures among each other, adjusting the necessary organisational tools and implementing the first pilot projects. Thereby a certain share of upfront costs emerges, which constitute the investment into the business model. To secure a return on this investment a solid number of profitable projects have to be executed.

Thereby each SPIN should aim for developing a decent number of pilot projects as a start for creating trust and self-confidence into the product and then go for spreading out the service to a broader number of clients for

- securing interest of the SPIN-members into the product “EPC+”
- for raising attention on the clients side in the added value of performance based services
- for re-financing the upfront costs of setting up the business

In all markets at least 2 projects should be implemented by each SPIN as pilot projects with a timeframe of one year. For creating a proper market position in the second stage the number of roll-out-projects after the pilot projects should be 5-10 times higher, depending on the average project size each SPIN is able to create with its portfolio of measures.

ANNEX 1

The service blueprint also shows horizon lines that give an indication of the area of influence and transparency of the process – and also lacks of transparency to be taken care of.

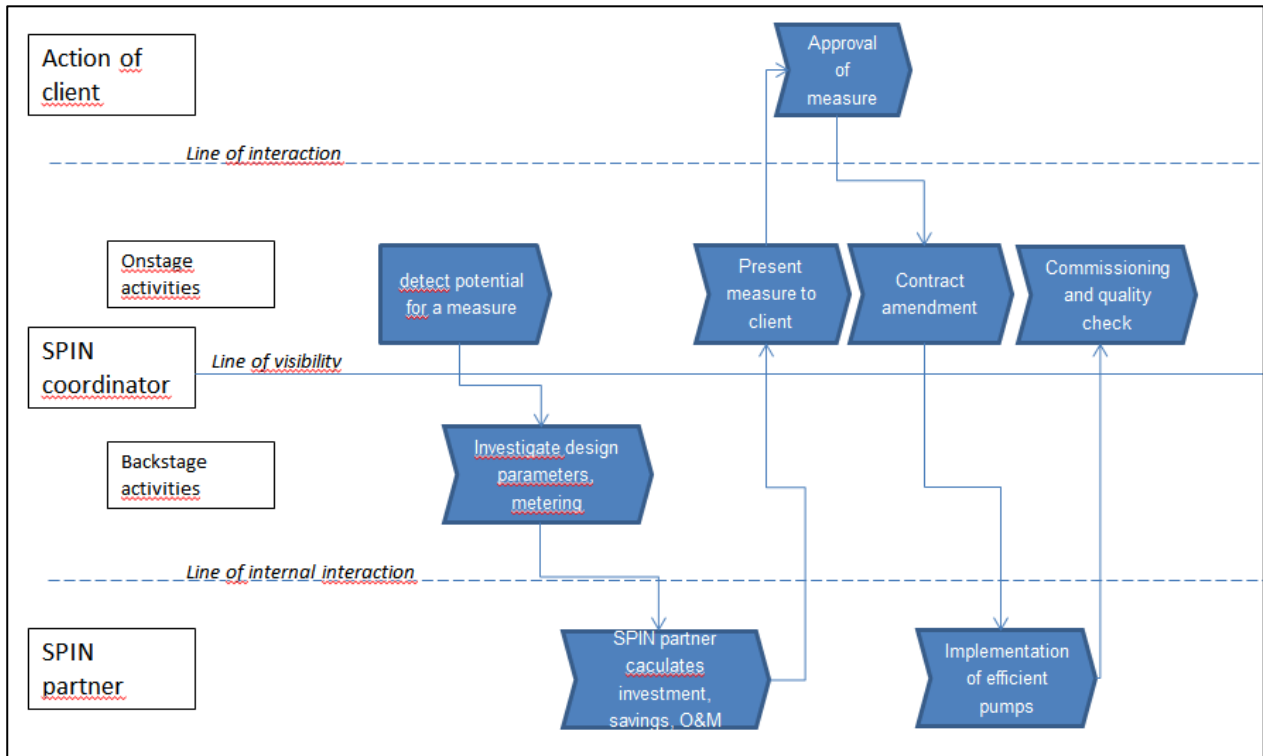


Figure 7: Service Blueprint for the Implementation of EPC+measures

ANNEX 2

Template for Market Analysis

Market Analysis

<< This section covers market research and competitor analysis. You must show that you have done the market research to justify the projections made in your business plan. It must demonstrate that there is a viable market and that you can beat the competition in the market for sales. >>

Target Market

<< The market to which you are planning to sell the product or service. Analyse the segments of this market as follows:

- Size of each market segment
- Is the segment growing or declining?
- Characteristics of potential customers in each segment >>

Total Market Valuation

<< Show the total potential value of the market for this type of product or service, in all the targeted markets, domestic and international. >>

Target Company revenue

<< These figures are the basis for the sales figures in your financial projections and must be based on realistic assessments. Include average deal size, length of sales cycle, recurring revenues>>

Market Trends

<< Analyse what is happening in the market:

- Recent changes
- Future predictions
- Drivers such as demographic changes, economic and legislative factors
- Implications for your product or service
- Your plans to meet future demands and changes in the market >>

Profile of Competitors

<<Analysis of your competitors in the market:

- What are the competing products and services?
- Profile of key players (company size, turnover, profitability etc) and their market share
- Advantages and disadvantages of the competitors' offerings >>

Competitive Advantage

<< This is your assessment of why potential customers will choose to buy your product in place of those profiled above. Advantages may include:

- Unique features
- Price
- New technologies or systems
- Better value to customers in terms of efficiency or ROI or cost/benefit ratios
- Greater compatibility with existing systems
- Include any independent validation or case studies >>

Benefits to Clients

<< This is what your product or service provides to potential customers in terms of their own business goals. Does your product or service enable them to:

- Increase sales
- Increase efficiencies
- Save money?
- Save time?
- Maximise resources?
- Reduce errors?
- Reduce downtime?
- Improve Customer Service, reduce churn, increase loyalty

What will buying your product or service actually do for the customer? >>