

Evaluation of BeBo (Beställargruppen Bostäder)

A strategic analysis

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Preface

This report describes the results of an evaluation of the strategy and activities of BeBo (Beställargruppen Bostäder) – a strategic innovation network of Swedish housing procurers encouraged and co-financed by the Swedish Energy Agency.

The project group wishes to thank the board, secretariat and members of BeBo for granting unrestricted access to all relevant material and for participating willingly in the evaluation process.

The evaluation has been funded by BeBo itself. The authors would like to emphasise that BeBo in no way has put hindrances to this independent evaluation of BeBo. The conclusions of this evaluation belong to the authors, and they are not necessarily shared by the board, secretariat or members of BeBo or the Swedish Energy Agency. It is our hope that the evaluation will stimulate the continuous development of BeBo.

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October 2009

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1. Introduction

1.1 Background

BeBo is an association of real estate owners and procurers of housing in Sweden established in 1989. The objective of BeBo is to improve energy efficiency and to provide better indoor climate and economy for owners and end-users. BeBo collaborates closely with the Swedish Energy Agency (S: Energimyndigheten). The secretariat of BeBo is located at the Swedish Construction Clients Forum.

1.2 Purpose and scope of evaluation

The objective is to evaluate the innovation strategy, organisation and activities of BeBo in order to reduce the energy consumption in the Swedish housing sector.

1.3 Reading instructions

This evaluation report is divided in four main parts. The first chapter introduces the evaluation. The second chapter describes the theoretical and methodological framework of the evaluation. The third chapter contains a description, analysis and description of BeBo's strategy and activities. The fourth chapter summarises the conclusions of the evaluation.

2. Framework for evaluation

This chapter presents the theoretical and methodological framework for the analysis and evaluation of BeBo's strategy.

2.1 Evaluation framework: What is a strategy?

According to Hambrick and Fredrickson (2005: 51) an abundance of frameworks for analysing strategic situation have been provided the last 30 years; however, what has been missing in the debate is guidance as to what the product of these frameworks should be – and more fundamental, what actually constitutes a strategy.

Arguing that a strategy has five basic elements, Hambrick and Fredrickson (2005) provide a framework for strategic design that provides answers to five questions:

- 1 Arenas: Where will we be active?
- 2 Vehicles: How will we get there?
- 3 Differentiators: How will we win in the marketplace?
- 4 Staging: What will be our speed and sequence of moves?
- 5 Economic logic: How will we obtain our returns?

This is illustrated accordingly:



Figure 1. The five major elements of strategy (Hambrick and Fredrickson, 2005: 54).

Hambrick and Fredrickson's (2005) main point of critique is that the use of specific strategic tools tends to draw the strategist toward:

"...narrow, piecemeal conceptions of strategy that match the narrow scope of the tools themselves. For example, strategists who are drawn to Porter's five-forces analysis tend to think of strategy as a matter of selecting industries and segments within them. Executives who dwell on "co-opetition" or other game-theoretic frameworks see their world as a set of choices about dealing with adversaries and allies." (Hambrick and Fredrickson, 2005: 51).

Rather, strategy should be seen as an integrated set of choices that stand apart from a catch-all conception of strategy as every important choice an executive faces. Strategy, in Hambrick and Fredrickson's (2005: 52) words addresses how a business intends to engage its environment, so choices about internal organisational arrangements are not part of strategy and neither are well-known concepts such a *mission* and *objectives*. These should rather be seen as standing apart from and guiding the strategy. Thus putting strategy in its place Hambrick and Fredrickson (2005: 53) provide the following illustration, which we use as basis for our evaluation of BeBo:

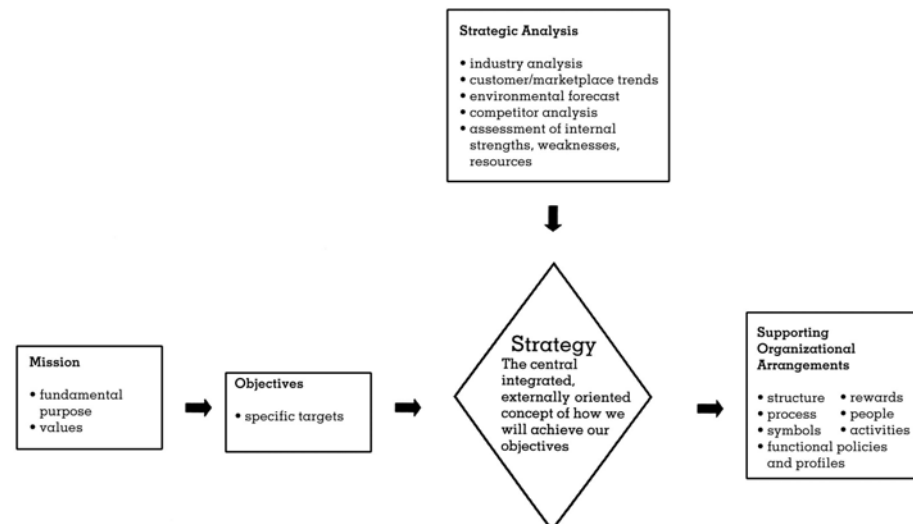


Figure 2. Putting strategy in its place (Hambrick and Fredrickson, 2005: 53).

Thus, making use of the two models as well as Hambrick and Fredrickson's (2005) general conception of strategy will enable us to discuss and assess BeBo's strategy and presence in the Swedish market from outside a specific delimited theoretical or economical perspective and instead focus on BeBo's strategy as an integrated, mutually reinforcing set of choices that are to form a coherent whole.

2.2 Data collection and generation

The research design is based on the principles of action research. The study involves a case study of a strategic innovation network – BeBo. Three groups of methods have been employed using various forms of documentation.

First, this study is based on an analysis of a range of documentary sources: Public policy documents, strategic policy documents of the organisation, minutes from member meetings and steering committee meetings 2001-2007, the internal and the external part of the website of the organisation as well as reports, articles and tools from various research and development projects initiated by BeBo.

Second, this evaluation draws on empirical inputs from a group interview with the BeBo secretariat conducted May 20 in Stockholm.

Third, the written documentary material along with the group interview has been further qualified by input from a future workshop (Jungk and Müllert, 1987; Apel, 2004) with BeBo board and stakeholders conducted June 24 in Stockholm.

Finally, a meeting held with members from the BeBo board and management in Stockholm September 3rd 2009 has been used for purposes of validation and verification of statements and conclusions drawn.

3. Description and analysis of BeBo's strategy

In this chapter BeBo's strategy is described and analysed from the point of Hambrick and Fredrickson's (2005) strategy model. First a brief introduction to BeBo is given.

3.1 Introduction to BeBo

BeBo (Beställargruppen Bostäder) is a procurement group for housing established in 1989 in collaboration between the Swedish Energy Agency (Energimyndigheten) and the largest Swedish residential property owners.

As of May 2009, BeBo has 20 members ranging from social housing associations to public authorities and professional organisations:

- AB Familjebostäder.
- AB Sigtunahem.
- AB Stockholmshem.
- AB Svenska Bostäder.
- Alingsåshem AB.
- Boverket.
- Byggherrarna.
- Eksta Bostads AB.
- Energimyndigheten.
- Fastighets AB Förvaltaren.
- Fastighetsägarna Stockholm.
- Gavlegårdarna AB.
- HSB:s Riksförbund.
- Hyresbostäder i Växjö AB.
- Riksbyggen.
- SABO.
- Signalisten.
- Uppsalahem AB.
- Vidingehem AB.
- ÖrebroBostäder AB.

As with BELOK (Nilsson, 2006: 11) BeBo has since 2005 acted as a network under the auspices of Byggherrarna (Swedish Construction Clients Forum) and the Swedish Energy Authorities.

BeBo is instrumental in the collective Swedish efforts to reduce energy consumption in the built environment, and with the public funding (amounting to SEK 9 million in 2009), BeBo maintains an important role as a prolongation of the Swedish governmental production of what could be called public purpose, as discussed further below.

3.2 BeBo's mission

BeBo's basic mission is closely tied to the larger Swedish energy policy as promoted by the Swedish Energy Agency (Energimyndigheten), who sees as its fundamental purpose to contribute to a long-term sustainable development of society. To attain this, the Agency works towards an environmentally adapted energy system that utilises natural resources and results in de-

creasing emissions from climate impacting gases and other environmentally damaging materials.

According to Bertelsen (2007) this *inter alia* entails that the energy policy and vision for the Swedish government focuses on reducing the total energy consumption per heated area by 20 % from 1995 to 2020 and by 50 % from 1995 to 2050.

In this light BeBo can be seen as a 'first-order' materialisation of the Swedish national efforts to increase sustainability by reducing energy consumption in the housing sector, which plays a substantial role for the total energy consumption in Sweden.

Warfvinge et al. (2007) argues that the energy use in housing and services amounted to 154 TWh in 2003, representing approximately 38 % of Sweden's total final energy use. Out of this total, approximately 87 % (or 136 TWh) of the energy consumption in the housing and services sector is consumed by homes and premises. This consumption can be broken down accordingly:

- 93 TWh is used for heating and hot water.
- 18 TWh is used as household electricity.
- 25 TWh is consumed in the operation of the property (fastighetsel).

BeBo echoes the national statement by operating from the ambitious vision of reducing energy consumption by 50 % by stimulating innovation and development in the sector.

3.3 BeBo's objectives

BeBo is formally established as a collaborative arrangement between the Swedish Energy Agency and the largest housing property owners in Sweden. For purposes of this evaluation, we observe BeBo as a so-called governance network, which according to Torfing (2005: 307) can be defined as:

- 1 a relatively stable horizontal articulation of interdependent, but operationally autonomous actors, who
- 2 interact with one another through negotiations which
- 3 take place within a regulative, normative, cognitive and imaginary framework that is
- 4 self-regulating within limits set by external forces, and which
- 5 contributes to the production of public purpose, i.e. an expression of visions, values, plans, policies and regulations that are valid for, and directed towards the general public.

Introducing the notion of BeBo as a governance network is not done at random. In order to assess the strategic choices made by and about BeBo it is important to understand the larger institutionalised environment within which the organisation operates.

Arguing that BeBo basically can be understood as a governance network should not be confused with the notion that BeBo thus has to be seen as an instrumental prolongation of a governmental apparatus. Rather, we imply that BeBo mirrors or reflects a contemporary phenomenon based on the problematisation of the ability of centralised decision-making and coordination to effectively manage and safeguard public interests (Torfing, 2005: 306).

Rather, governance networks, as a means to facilitate collective decision-making and the coordination of action in and through negotiated interaction among a plurality of political actors, is seen as the most suitable response to the challenges posed by increasing societal fragmentation, complexity and dynamism (Ibid.: 306).

Thus, the term 'governance' does not denote the classical political science notion of *steering as government* (e.g. Dahl, 1961) embodying notions

of 'regulation', 'control' and 'sanctions' (Andersen and Thygesen, 2004: 10). Governance in this sense should rather be seen as something more and else than regulation. According to Andersen and Thygesen (2004: 9-11) steering in a governance perspective becomes a question about establishing an alternative to a judicial set of norms and the unilateral exercise of authority; it is about *interessement* and *enrolment* (Callon, 1986) – of mobilising the free action of resourceful actors within a framework that ensures conformity with the overall objectives of government (Torring, 2005: 307).

Objectives

BeBo conducts development projects with focus on energy efficiency and environmental questions. BeBo works in projects in which experts are linked in various project formations according to the specific task at hand.

BeBo has been in operation since 1989 and has completed a series of activities – especially revolving around technology procurement, which can be seen as the primary vehicle of strategic realisation (see also further below).

The prime objective of BeBo is, through the exercise of volume, buying power and 'collective procurement competencies', to occasion that energy efficient system-deliveries and products enter the market at an earlier stage than would be realisable if relying on free market forces alone. According to the BeBo website, milestones in this context are:

- Conduct investigations and measurements to identify potential.
- Test and demonstrate new solutions.
- Conduct feasibility studies as a basis for technology procurement.
- Implement technology procurement.
- Promote and introduce energy efficient technologies.
- Identify and disseminate experience.
- To function as sparring partner for the Swedish Energy Authority and other authorities within the group's competence.

It is within this context that the following analysis and evaluation of BeBo's strategy is carried out.

3.4 BeBo's strategy

A strategy can in Hambrick and Fredrickson's (2005: 53) words be seen as the central integrated, externally oriented concept of how an organisation will achieve its objectives. In Hambrick and Fredrickson's (2005) conceptualisation it consists of five elements as accounted for previously. Below we consider each of these in turn in relation to BeBo's operation.

Arenas

Hambrick and Fredrickson (2005: 53) argue that the most fundamental choices strategists make are those of where, or in what arenas, the business will be active and not least with how much emphasis. Questions in this respect are addressing topics such as:

- Which product categories?
- Which market segments?
- Which core technologies?
- Which geographical areas?
- Which value creation stages?

From the interviews conducted and the various documentary materials accessed as a part of this evaluation, the following characteristic of BeBo's arenas can be given:

- BeBo uses technology procurement to develop and disseminate new system-deliveries and products for reducing the energy consumption in the housing sector.
- BeBo relies on strong and close ties with authorities, research institutions and housing property owners in the development of new products.
- BeBo is entirely dependent on the input (intellectual as well as financial) provided by its groups of voluntary members.
- BeBo targets the Swedish market alone as its geographic scope. The arenas are highly specific – focussing predominantly on implementing new installation products and system-deliveries in the refurbishment of multi-dwelling properties owned by its members.
- BeBo's information responsibilities are towards their members rather than the nation as such, which is a matter for the Swedish energy authorities.

BeBo's main focus is on multi-dwelling houses and more so, on the existing building stock completed as a part of the 'Miljon-programmet' in the 1960s and 1970s. The market segment of single-family houses is not a part of BeBo. Recent years BeBo has shifted focus from developing small-scale products towards integrated technology-procurement financially supported by the Swedish Energy Agency with a focus on changing the buildings' internal energy system rather than the individual components.

Vehicles

Beyond deciding on the arenas in which the business will be active, the strategist also needs to decide how to get there. For Hambrick and Fredrickson (2005: 54) this entails that:

"Specifically, the means for attaining the needed presence in a particular product category, market segment, geographic area, or value-creation stage should be the result of deliberate strategic choice."

Vehicles in other words, designate how a company will get where it wants to be, e.g. through internal development, joint ventures, licensing or acquisitions.

As written previously, we conceptualise BeBo as a governance network, which *inter alia* implies that it can be understood as a: "...*relatively stable horizontal [articulation] of interdependent, but operationally autonomous actors*" according to Torfing (2005: 307). With this is meant that:

"...a number of public, semi-public and private actors [are articulated] who, on the one hand are dependent on one another's resources and capacities in order to get things done, and, on the other hand, are operationally autonomous in the sense that they are not commanded by superiors to act in a certain way" (Torfing: 2005: 307).

This networked structure consisting of voluntary, inter-dependent yet operationally autonomous actors is the main vehicle for BeBo in reaching its chosen arenas.

Although, as stated above, BeBo's main information responsibilities are targeted at their members and not the general public as such, the objectives are focused on contributing to achieving the stipulated goal of reducing energy consumption in Sweden by as much as 50 % by 2050 (in comparison to the 1995 figures). Seeing that BeBo's members however represent approximately 70 % of the total Swedish population of flats in multi-dwelling properties, the overall vision should not from the outset be seen as un-attainable in terms of access to and coverage of market. It should be noted that the 70 % estimate de facto is rather insecure and that the actual ratio could be much lower. Furthermore, according to the Swedish Energy Agency, the 'Miljon-programmet' is not the only focus of BeBo, as other market segments very well could be targeted by the activities within the group.

According to the interviews conducted, there are no indications that the overall mission is sought realised by expanding the member base to cover the entire market. There are several reasons for this. One is externally conditioned, the other internally conditioned – a result of deliberate choice.

As for the first, expanding into the rest of the market would be extremely difficult and resource-consuming in that the remaining 30 % of the market is represented by a vast number of actors. Further market shares in the range of 10 or 15 % cannot be gained by the inclusion of just one or two additional members into the association. This is a fact that has been realised by the BeBo board and management, which the following quote from one of the interviews tells:

"It is a fine balance, who to include in BeBo. On the one hand we could have a small group who displays genuine interest in attending our meetings, and on the other hand we could have a large inactive member base. The main emphasis for us is that members actually attend the meetings."

At the subsequent workshop the contrasting view that "BeBo has too few members (15) to penetrate the market" was aired, and concerns as to how to reach the important single-family house market was also raised. As a BeBo board member expressed it:

"A recent governmental account documented that only 15 % of potential for energy savings in the housing sector is exploited. I think one of the reasons for this is due to the large ratio of single-family houses, as this market segment isn't a part of BeBo. Furthermore, we have a lot of housing co-operatives that aren't organised in HSB anymore. These two segments are lacking the competencies to implement new technologies."

And further:

"Then there is Fastighetsägarna and SABO who have quite different foci. Fastighetsägarna is a lobby organisation and is not interested in strict technical matters. It was the same thing with SABO a few years ago; however things have changed here – now they're a membership organisation aiming at providing service. Now it's easier to get ahead in SABO."

In a governance network perspective, questions of how to realise the overall mission of a 50 % energy reduction in the housing sector, thus poses BeBo with a dilemma. BeBo as a governance network is thus dependent on the voluntary participation of actors who are free to join and leave the network and are not subjected to hierarchical control. At the same time however, an expansion of the member-base with organisations pivotal for the realisation of the mission (i.e. primarily Fastighetsägarna) could result in the compromise of the public purpose aspect of the organisation and thus destabilise the very foundations of BeBo's operating principles. Within the group it has been suggested that BeBo introduces 'secondary-memberships' for companies and associations interested in becoming more close to BeBo (and the results provided) without necessarily contributing with financing for completion of new projects.

Differentiators

Differentiators designate processes and tools concerning how a firm will 'win' in the market place, i.e. in BeBo's case how market penetration of new products and technologies can be accomplished.

It is important to note that BeBo as such does not find itself in a competitive situation with other suppliers of energy saving technologies. If anything BeBo also promote the use of propriety system-deliveries developed by others – as long as it in some sense can contribute to the overall objective. This

is e.g. seen in the BeBo project entitled "Documentation of Signalistens's control and monitoring system (S: *Dokumentation av Signalistens styr- och övervakningssystem*)" (BeBo, 2008a). Here, various IT solutions are discussed with a view to how the use of control and monitoring systems can help reduce energy consumption and environmental impact.

BeBo's operation is focussed towards providing evidence (and best practice exemplars) on the benefits of implementing sustainable technology in existing buildings to reduce energy consumption. As such BeBo has to be able to differentiate own products promoted through the various projects that the organisation is involved in *vis-à-vis* less efficient products. Part of the efforts in this respect is the ability to be able to document the exact contributions of the new technologies, both in terms of energy savings and also economics advantages, i.e. to demonstrate that it can pay off to adopt energy efficient solutions in the existing housing market.

A further important differentiator for BeBo is the close ties that the organisation has with the Swedish Energy Agency. This kind of governmental support is very important in legitimising and facilitating the production of public purpose or goods. It thus provides BeBo with both legitimacy and credibility in the eyes of the public and the organisations that can be considered potential contributors to the network. Also in the eyes of the members of the BeBo board, the governmental financing in particular is recognised as a pivotal instrument in securing the scientific efforts and hence legitimacy.

Thus, the negotiated interaction between the network actors does not take place in what Torfing (2005: 307-308) would call an institutional vacuum. It rather proceeds within an relatively institutionalised framework that is shaped and reshaped in the course of action within the larger institutional environment as predicated by the Swedish Energy Agency.

Within this institutional environment BeBo attempts to regulate a particular policy field on basis of their own ideas, resources and dynamic interaction. Most notably in this respect are the attempts to conduct what could be called evidence-based product development hereby promoting transparency. The scientific and highly methodical approach of establishing baseline measurements, conducting energy balance calculations and using a standardised checklist when assessing the quality of the specific buildings in order to prioritise own efforts are strong differentiators for BeBo.

Staging

Where "*Choices of arenas, vehicles, and differentiators constitute what might be called the substance of a strategy – what executives plan to do*" according to Hambrick and Fredrickson (2005: 55), staging in essence entails the decisions on the speed and sequence of major moves to take in order to heighten the likelihood of success.

In order to accomplish the overall objective of contributing to the reduction of the energy consumption in the housing sector, BeBo's activities are, at the most overall level of observation, staged the following way (dotted line indicates a long-term perspective, full line is short to mid-term):

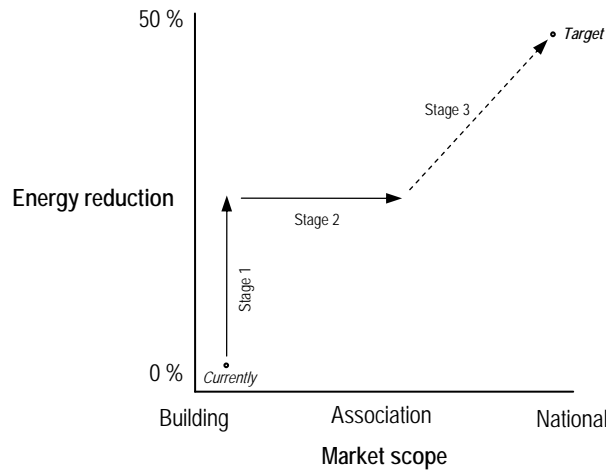


Figure 3. BeBo's overall strategic staging

The interviews and workshops conducted with the BeBo board and members – as well as the documentary material accessed, illustrate BeBo's overall strategic staging as a three-stage model.

Context) The point of departure for BeBo is that in order to realise the long-term goal of reducing the energy consumption by 50 %, efforts have to be directed towards reducing the energy consumption in the existing building stock – especially the multi-dwelling buildings completed in the 1960s and 1970s as part of the so-called 'Miljonprogrammet' (The Million Programme). As e.g. Ekelin and Isaksson (2006: 6) documents almost a fourth of the existing Swedish housing population were completed under this programme. Judging by today's standards these buildings are riddled with many inappropriate solutions when observed from a point of energy consumption. As an example, ¾ of all buildings were fitted with high-energy consuming mechanical ventilation systems, and also energy inefficient facades, windows (two-layer glass) and roofs are still prevailing in 50-75 % of all dwellings from that period (Ekelin and Isaksson, 2006: 7-8).

Stage 1) Thus, in order to realise the overall ambition of reducing the energy consumption to 50 % by 2050, BeBo's current focus is to upgrade the technical products and systems in specific buildings and housing associations put at disposal for inquiries by BeBo's own member associations. The specific objective for these local initiatives is *in first instance* to reduce energy consumption in the given housing association or building as much as it is financially feasible to do. Thus, the 50 % reduction is not a dogmatic absolute target, rather a beacon towards which efforts are directed.

Stage 2) The second stage of BeBo's overall strategic staging is the efforts directed towards creating a wider market awareness in relation to methods used, products and systems developed and results obtained. According to the interview conducted with the BeBo board and management, this activity is first and foremost directed towards the remaining BeBo members and only in second instance towards the wider community.

Stage 3) As a consequence of the primary focus on BeBo members, the third stage in the efforts to realise the 50 % energy consumption target is somewhat out of the hands of BeBo and perhaps more a focus for BeBo *in collaboration with* the Swedish Energy Agency. This being said, BeBo however do strive towards contributing to the objective. Thus, in order to realise the overall strategy, a dissemination strategy as well as an incentives strategy way is envisioned.

Dissemination strategy

According to the statements from the workshop conducted with the BeBo board, management and members, these two strategic areas (dissemination and incentives) at the same time represent problem areas that the association has to address if success has to be attained.

At the workshop held with leading members of BeBo, Wednesday 24th June, in the offices of the Swedish Construction Clients Forum in Stockholm, one of the recurrent and prominent themes in the discussion of BeBo's strategy was that of anonymity and dissemination of information. In critically examining BeBo on this topic (or rather dual topic) it was thus stated that:

- BeBo is anonymous.
- BeBo's results are relatively unknown among member associations.
- BeBo's visibility can be improved.
- BeBo is too unknown in wider circles. Weak brand.
- BeBo is unknown among many housing associations.
- BeBo has too few members (15) to penetrate the market.
- BeBo is not an association.
- BeBo has limited market shares.
- It is unclear how to become member.
- BeBo is not sufficiently attractive.
- Management is not always explicit with objectives.
- BeBo does not succeed as information 'hub.'
- BeBo has difficulties in reaching small property owners.

After identifying and elaborating on these problems, the workshop focussed on exploring the participants' and thereby BeBo's response to the perceived challenge. On the topic of dissemination, the following strategic staging of how to 'break the deadlock' was formulated (dotted line indicates a long-term perspective, full line is short to mid-term):

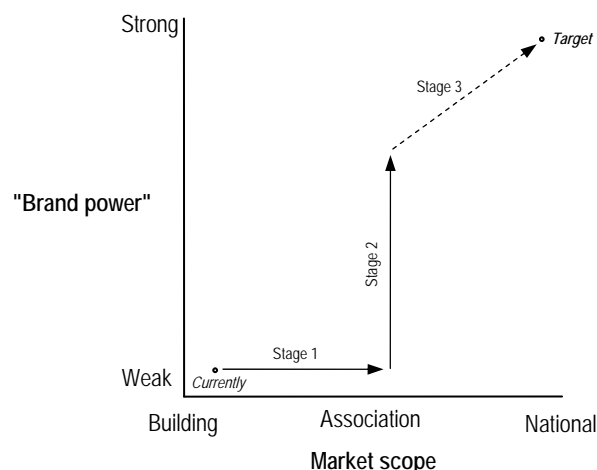


Figure 4. BeBo's dissemination strategy.

What we have here is an illustration of the proposed solutions to the problem.

Stage 1) The solution discussed addressed first and foremost the need for disseminating information on the potentials of energy saving internally in the BeBo group by means of exemplars and best practice-guidance.

Stage 2) This is seen as a means to strengthen specific results, products and solutions within the procurement group and hereby stimulate the adoption of new technologies with the group.

Stage 3) A strong technology adoption within the group is in the long-term seen as method to stimulate manufacturers and suppliers to market new solutions and substitute their old less energy-efficient solutions by using of the exercise of buying power (constituting a market pull strategy).

Incentives strategy

In addition to considerations on the dissemination of results as a strategic focus area in relation to the fulfilment of the overall objectives, also the need to focus on the development of new incentives was identified.

The rationale behind this thinking was on the most general level that the state hitherto has been unable to promote energy savings sufficiently leading to a situation in which specific incentives for energy savings are missing. It was thus argued that energy saving not always is a priority for member associations when refurbishment of the existing building stock is conducted. In specific it was seen as a problem that profitability accounts are missing, as such tools could be highly beneficial in 'persuading' housing associations to adopt energy efficient products.

As can be seen, two different problems were touched upon at the workshop; one pertaining to BeBo's operations in relation to the state/market (i.e. regulatory) level; the other located in the cross-section between BeBo and its member associations.

The first is partly perceived as an 'outside world problem' i.e. something that is partly out of the hands of BeBo. Thus the following statements from the workshop: "*Financial measures are too 'invisible' or insignificant*" and "*The state has been unable to promote energy savings sufficiently*" were themed as so-called market failures (cf. Nilsson, 2006: 10) implying the need for governmental or regulatory intervention to better the situation.

The second problem was perceived as a matter of if not personal reluctance on behalf of the individual building owner to implement energy saving technologies, then a combination of insufficient knowledge on how to do it (and with what benefit) and insufficient support from BeBo to the members.

In discussing how to improve on the current state of affairs, the following strategic staging was conceptualised (dotted line indicates a long-term perspective, full line is short to mid-term):

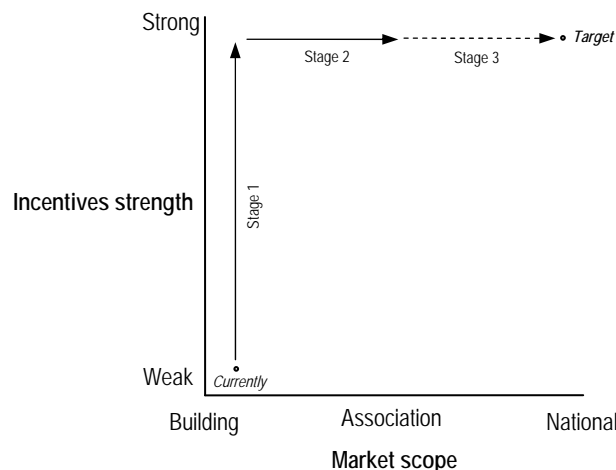


Figure 5. BeBo's incentives strategy.

As illustrated, we see that a strategic staging is envisioned that as its first move entails a focus on building strong incentives for the individual building owner. Prime vehicles in this respect are:

- Assess and compare through completed projects – across projects.
- BeBo should focus on well tested projects.
- More aids: tools, guides, etc.
- Do it with the members.
- Agreements between BeBo and members.
- Map and document driving forces in the membership companies to improve the establishment of projects that will result in improvements

Completed projects should thus be seen as 'showing the way ahead' for other companies to be inspired by and imitate. A stage two of the incentives strategy is to widen this knowledge to results of completed projects to other members of the BeBo association and introduce seminars and workshops for different actors.

In the third stage, it is envisioned that e.g. new agreements between tenants and owners can be experimented with and that voluntary agreements with property owners can be established. Especially the first issue, i.e. the development of new agreements between tenants and owners, is something that is seen as reliant on the regulatory sphere, as this would most certainly require legislative changes in the overall governance of the rental housing market in that the relationship between the tenants and owners is highly institutionalised and legislatively conditioned.

As such, the staging of an incentives strategy in BeBo necessarily has to be able to provide input to the larger legislative environment at the same time as the individual building owner's and tenant's interest and personal engagement is preserved and used as basis for inputs to the former.

Economic logic

As for the topic of economic logic, Hambrick and Fredrickson (2005: 56) argue that this entails:

"...a clear idea of how profits will be generated – not just some profits, but profits above the firm's cost of capital."

Whilst we will not argue against this definition, the special character of BeBo's operation and activities are ill-suited to be analysed from this point of perspective.

BeBo is thus not established with a profit generating purpose in mind. Rather, the basic objective of BeBo is aimed at contributing to *the production of public purpose* within the energy political area. Thus, the different members of the network are engaged in political negotiations about how to identify and solve emerging policy problems and exploit new opportunities.

BeBo's activities are financed partly by the Swedish Energy Agency partly by the associations holding membership to the BeBo group. New projects are typically launched on initiative of members (either from the industry or academia), who forward specific project proposals to the BeBo board. The BeBo board and management in turn assess the proposals, and in case of acceptance, contribute with a part of the total financing needed to execute the project. The remaining part of the financing is provided by the applicant. The co-financing provided by BeBo does not amount to a fixed fraction irrespective of the type of size of application. Some projects are thus co-financed with as much as 85 % whereas other projects only receive 5-10 % of the total. The latter is typically the case in larger-scale refurbishment projects, where the implementation of new product or system-deliveries are tested, whereas a large percentage of co-financing often is given to 'pilot projects' or one-off accounts within specific themes/areas.

In order to realise the envisioned target of a 50 % reduction of energy consumption in the housing sector, the various BeBo members are instrumental in that they provide the physical setting (i.e. the buildings) without which the target would be considered unachievable. An example is the refurbishment of Orrholmen in Karlstad (cf. Isaksson, 2009: 54). Here the housing association Karlstad Bostad AB together with Karlstad University, received 10 % co-financing from BeBo to document the process and culture, which had led to the successful implementation of energy saving measures (BeBo, 2009: 1).

This financing system in which different financing rates are applied dependent on the specific project application and type is seen as a major strength in BeBo's operation principles. The reason is that it provides a large degree of flexibility and ensures that also not immediately commercially viable solutions and ideas can be developed and tested.

Thus, while BeBo organisation *per se* at the most general level operates within an economic logic of non-profit and trade promotion support, the procurement group's operations also rest on a logic of economies of scale and the exercise of volume and buying power as previously described.

The procurement group however does not promote or support *any* energy saving products and systems. A cornerstone in the operation of BeBo is thus that: "...the total energy profit gained has to be in reasonable proportion to the resources invested" (www.bebostad.se; own translation). This in essence entails that the measures or technical solutions promoted has to be cost-effective; however as it is also stated: "Since it is new technologies that are to be tested and evaluated, it is the long-term estimated costs that the energy gain must be considered against."

This idea about the cost-efficiency of new energy-saving technologies is a central element in the in BeBo's marketing efforts. The group thus attempts to reason with the potential market by means of economic arguments; i.e. to promote the notion that environmental concerns and economic rational behaviour are fully integrable notions.

Summarising the analytical findings

In the below figure 6, we have illustrated BeBo's strategy according to Hambrick and Fredrickson's (2005) strategy model. In the figure the main findings from the preceding analysis is summarised in bullet points according to the five elements of a strategy.

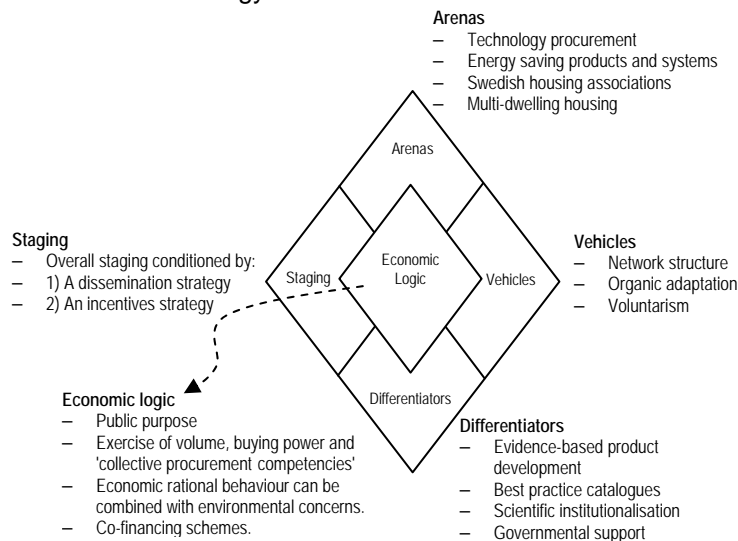


Figure 6. BeBo's strategy in summary.

Below we discuss in detail the quality of BeBo's strategy analysed above in relation to the overall mission and objectives of the procurement group.

3.5 Evaluation of BeBo's strategy

The overall criterion for the evaluation of BeBo's strategy is that of quality in the sense of consistency and appropriateness. Hambrick and Fredrickson (2005: 61-62) thus propose that it is insufficient to simply make five sets of choices regarding arenas, vehicles, differentiators, staging and economic logic. Thus, some strategies are clearly better than others, and to test the quality of the strategy the following key evaluation criteria can be applied:

Table 1. Testing the quality of a strategy (Hambrick and Fredrickson, 2005: 61).

Key evaluation criteria	
1.	Does your strategy fit with what's going on in the environment? Is there healthy profit potential where you're headed? Does your strategy align with the key success factors of your chosen environment?
2.	Does your strategy exploit your key resources? With your particular mix of resources, does this strategy give you a good head start on competitors? Can you pursue this strategy more economically than competitors?

-
3. **Will your envisioned differentiators be sustainable?**
Will competitors have difficulty matching you? If not, does your strategy explicitly include a ceaseless regimen of innovation and opportunity creation?
 4. **Are the elements of your strategy internally consistent?**
Have you made choices of arenas, vehicles, differentiators, staging, and economic logic? Do they all fit and mutually reinforce each other?
 5. **Do you have enough resources to pursue this strategy?**
Do you have the money, managerial time and talent, and other capabilities to do all you envision?
Are you sure you're not spreading your resources too thinly, only to be left with a collection of feeble positions?
 6. **Is your strategy implementable?**
Will your key constituencies allow you to pursue this strategy? Can your organization make it through the transition? Are you and your management team able and willing to lead the required changes?
-

We will consider each of these in turn below using the previous description and analysis of BeBo's strategy as input. The six key evaluation criteria in the above model are an extraction of the most powerful messages of a wealth of strategy-analysis tools that have been developed in the past 30 years, being such tools as industry analysis, technology cycles, value chains and core competencies (Hambrick and Fedrickson, 2005: 61).

Does BeBo's strategy fit with what's going on in the environment?

No doubt BeBo's strategy fits with what is going on in the environment as such. Echoing Nilsson's (2006: 9) statement:

"Energy efficiency has a prominent role in the Swedish energy policy and it is stated in official documents that government efforts should be directed towards accelerating technical development through, for example, technology procurement, support to market introduction, systems development and development of certification systems."

Hence, BeBo is very much in line with government intentions as formulated in the most recent energy bill as well as in the Swedish Energy Agency's report 'Swedish Energy Research 2009' (Swedish Energy Agency, 2009). Here it reads that:

"The Swedish Energy Agency's vision for the built environment is that, in future, all energy should be used efficiently, and should be supplied from sustainable sources [...] There is a substantial need for renovation and improvement of residential buildings constructed during the 1960s and 1970s, and it is essential to develop and spread the use of energy efficient designs for ventilation, insulation, windows and lighting etc."

BeBo's current predominant emphasis on the development and testing of new energy saving technologies are in other words highly aligned with the environment. However, at the same time it is also evident that an increasing amount of the household energy is consumed by domestic appliances and equipment – and that this consumption to large extent is predicated on consumer behavioural parameters (cf. Gram-Hansen, 2008; Jensen et al., 2009) that are not effectively addressed within the current BeBo projects.

BeBo is therefore recommended to include an additional extended focus on behavioural aspects of consumption and a dual focus on technology and behaviour could be instrumental in realising the objectives relating to a 50 % energy consumption by 2050. Behavioural studies need however not only address user and consumer issues. Studies relating to the professional practices of 1) designing, 2) constructing and 3) operating technical solutions could also be a focus area for BeBo. Such design and engineering practices

are not very well understood, and with the current institutional embedding, BeBo is in a position where their competencies and network could be activated in a truly interdisciplinary fashion that is not covered by others.

The strategy of BeBo is very well aligned with what is going on in the environment, but BeBo should consider including an additional multi-level focus on behavioural aspects of energy consumption.

Summarising conclusion on sustainability of the strategy

Summarising the findings on the first evaluation criteria, the following statements were proposed and discussed:

Sustainability of the strategy



- Highly relevant focus – will only become more important in the coming years. Great strength that BeBo has 20 years of experience to build on.
- Driving forces matches BeBo's constitution as governance network.
- A strength that there is an acknowledgement of needs for an incentives and information strategy.

Figure 7. Sustainability of BeBo's strategy.

In essence, it is concluded that BeBo's strategy, here assessed at the most general level in relation to the wider environmental (i.e. contextual) embeddedness, can be considered highly sustainable.

Thus, the very basic focus is highly relevant, and with the current political climate in Sweden as well as in the rest of Europe, BeBo's 'market niche' will continue to be on the political agenda for years to come.

Further accentuating BeBo's strategic sustainability is the fact that BeBo is in possession of 20 years of experiences within the field. BeBo has taken the transition from innovation network, focussing on strict product-technical issues, to governmentally endorsed governance network considering system-deliveries and wider societal concerns that up until now have been in an institutional vacuum, i.e. unaddressed by other actors in the sector, due to their complex and cross-cutting character. BeBo's constitution as a governance network, thus facilitates the realisation of the governmental targets of reducing energy consumption in Sweden in general, by lifting an important task that hitherto have been difficult to realise.

BeBo is however facing a challenge regarding the dissemination of new technologies (whether as products or system-deliveries). The question for BeBo is here how to ensure that the technologies being procured reaches a large enough part of the market to actually have effect vis-à-vis the overall target of contributing to a 50 % energy reduction in Sweden by 2050. The BeBo board and management is however aware of this situation and have acted by highlighting and pursuing two different strategic moves. These relate to a general dissemination of results as well as creating incentives. The

evaluators see this awareness of problems, as well as will to improve, as a strength of the network.

Does BeBo's strategy exploit their key resources?


BeBo's key resources are easily identifiable; it is the participating members, whether acting in the role of building owners or resource pool members. A further key resource is found in the association's close tie to the academic environment – not least the technical departments at e.g. KTH, Lund University and Karlstad University. These institutions are highly instrumental for BeBo's operations, which to great extent is dependent on the scientific legitimisation and validation that is provided by these institutions.

BeBo should however consider, whether to expand this institutional 'resource pool' with competencies from other scientific fields, not least pertaining behavioural topics, as this could act as a lever for the development of new projects and applications, that otherwise would not be considered as relevant (or at all) for BeBo. Currently the Division of Building Services Engineering at the Department of Energy and Environment at Chalmers University of Technology, having competencies also on topics of perceptual factors and demand satisfaction, is being enrolled into BeBo, which is seen as a highly relevant addition to BeBo.

The close collaboration with academic institutions is highly instrumental in BeBo's operations; however BeBo should consider to expand this institutional 'resource pool' with competencies from other scientific fields.

Summarising conclusion on key resources

On the topic of whether BeBo's strategy makes use of the competencies possessed within the association, the following conclusions were drawn:



Key resources

- Good interplay with and exploitation of key resources especially in the academic world.
- Consider expanding the resource pool into other academic areas.
- Unexploited potential concerning alternative voluntary regulation structures and member involvement procedures.

Figure 8. Exploitation/utilisation of key resources.

In summary, the analysis have given rise to the identification of two success factors as well as a single potential improvement measure that could be considered from implementation in BeBo.

First, the analysis of the written material as well as the interviews conducted bears witness of a very close and strongly developed operationalised collaboration between BeBo and a number of academic institutions in Sweden. This organisational set-up is deemed highly instrumental and beneficial

for BeBo's operation. The academic embedding permeates all levels of BeBo's operation. Most notably, it provides and ensures a degree of consistency across BeBo's projects that is an example for imitation. Thus, the typical demonstration project according to BeBo's coordinator consists of the following phases:

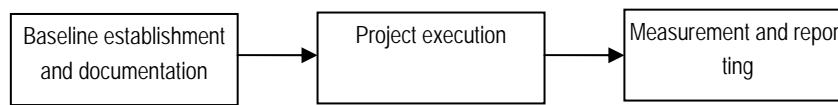


Figure 9. The three phases in BeBo's projects.

The key issue in this respect is that *the same methods are used in every project*. Whilst this might sound trivial, it by no means is so. Experiences from a variety of Danish development programmes completed from the 1990s onwards thus lack the consistency that characterises BeBo's projects. A wide variety of different methods, measurement techniques and indeed measurement variables have been applied within one and the same overall programme. This could be seen as an example of a situation where 'what' is measured, and 'how' is measured, changes from project to project, making it highly problematic to assess results both relatively to one another and in relation to a certain baseline. The BeBo approach on the other hand provides a basis for exploring and documenting results comparatively – and even more important in relation to the overall national target of a 50 % energy reduction.

BeBo should however consider whether to expand their academic resource pool into other areas, to provide a more multifaceted understanding of the challenges posed by attaining the 50 % vision.

Along these lines, there is an unexploited potential within the group as such for utilising a wider range of voluntary regulatory instruments and member involvement procedures that true to the overall governance network structure can support the vision. An example hereof discussed could be a voluntary 'Kyoto Protocol' signed by all members keeping them morally obliged to work towards these national energy reduction requirements.

Will BeBo's envisioned differentiators be sustainable?

The recent focus on system-deliveries rather than just products is a differentiator and a focus which is highly specific for BeBo and is not maintained by other actors in the sector. This is thus a strong justification for BeBo's continued operation as this is a hitherto rather unexplored and problem-riddled area as no other single actor can or have the opportunity or competencies to lift alone.

By utilising their buying power and purchasing volume, BeBo can effectively assume the role of proactive change agents – would they be willing to enforce or meet their own statement that the results have to be measured in a long-term perspective. Experiences from the Danish development (most recently with Building Lab DK) thus show that when working on changing not only the product but more so the process of construction a considerable delay must be calculated with from the initial idea and preliminary testing to a full-fledged business model is operational (Vind and Thomassen, 2009).

By utilising their buying power and purchasing volume, BeBo can effectively assume the role of proactive change agent.

Summarising conclusion on sustainability of differentiators

On the topic of whether BeBo's envisioned differentiators will be sustainable, the following conclusions have been drawn:



Sustainability of differentiators

- Correct and relevant choice to focus on 'systems' rather than products.
- BeBo as change agent qua strong differentiators.
- Ownership to 'stray' problems.

Figure 10. Sustainability of differentiators.

BeBo fulfils an important function as change agent in the Swedish energy policy within the area of the built environment due to their strong differentiators. BeBo focusing on building-systems rather than just isolated products is a highly relevant area to venture into. This particular area can be seen as hitherto 'abandoned' and taking responsibility for the development hereof positions BeBo in a role, where we can say that they take ownership for 'problems without owners.'

This is in essence what differentiates BeBo, at the most general level, from other actors in the Swedish construction sector, and the reason why BeBo also in the long term will play an important role in the innovation and commercialisation processes as also Nilsson (2005: 20) argues is the case with BeBo's 'sister-organisation' BELOK.

Are the elements of BeBo's strategy internally consistent?

A further central key criterion to observe is the question of whether the elements of BeBo's strategy are internally consistent. That is, do choices relating to arenas, vehicles, differentiators, staging, and economic logic all fit and mutually reinforce each other?

From the preceding description and analysis of BeBo's strategy it is concluded that there is a good match between the different elements. The networked structure of the association provides a highly beneficial fit with the economic logic under which BeBo operates. Although critique was raised during the future workshop that BeBo's constitution was unclear and that BeBo could not be seen as an association *per se* (indicating that a firmer institutionalisation of the association would be beneficial), it is nevertheless concluded that current organisation setup indeed is very well suited to realise the long-term overall objectives.

From a resource-based point of view, it could however be discussed whether a more formal relationship with BELOK under the auspices of e.g. Byggherrarna or Fastighetsägarna could help level the further dissemination of results and practices and thereby facilitate the accomplishment of the 50 % target by 2050. This could however compromise the cornerstone of BeBo's operation, namely the production of public purpose, so careful considerations have to be made on this subject on the assessment of the further development of BeBo's operations.

On a similar note, BeBo's dissemination of results takes place through the professional press, at meetings and through the BeBo website. However, as

argued by a workshop-participant, only people actively engaged in BeBo or actively seeking out energy savings will visit the site to obtain information. If a wider audience is to be addressed, information should be available through other channels as well – e.g. in collaboration with Fastighetsägarna (to target the private housing market segment), BELOK (to capitalise on synergies between the commercial building segment and the housing segment), or a third alternative e.g. an energy portal that covers the entire market.

There is a good match between the different elements of BeBo's strategy. The networked structure of the association provides a highly beneficial fit with the economic logic under which BeBo operates.

Summarising conclusion on the consistency of BeBo's strategy

On the wider topic of the more overall consistency of BeBo's strategy, the following conclusions have been drawn:

Consistency of the strategy



- The different elements of BeBo's strategy are internally consistent.
- The different initiatives support the association's overall governance network structure.

Figure 11. Internal consistency of BeBo's strategy.

Based on the analysis, it is concluded that the different current measures and initiatives taken within BeBo fully support and underpin the overall governance network structure of the association. This should be understood in the sense that there are no internally undermining, destabilising or contradictory elements in the strategy.

However, at the same time it is concluded that an increasing focus towards 'system-deliveries' might require additional funding to realise, as this represents a high risk arena compared to a more low risk product focus. The reason for this is primarily found in the uncertainties surrounding complex systems compared to more standardised commodity products (cf. Hobday, 1998; Gann and Salter, 2000; Davies, et al., 2009), the reason for which being that it is more difficult to make *ex ante* assessments of the potential impact of systems on the energy consumption. However; as the analysis is based on the fundamental premise that BEBo's role is related to the 'production of public purpose' BeBo can be argued to be in a position where the association has to be risk prone. As it however also is concluded, the increased degree of complexity might put stress on, and challenge, the competencies of the existing resource pool, why it is suggested that BeBo will have to extend its professional and academic scope.

Do BeBo have enough resources to pursue this strategy?

Speaking of the coherence of BeBo's strategy from a resource-based perspective brings us to the next topic, namely whether or not BeBo has sufficient resources to pursue their strategy. Hambrick and Fredrickson (2005) make this a question of *i.a.* money, managerial time and talent, and other capabilities.

With the 'costume and respirator' project (S: *Ny kostym och respirator*) an important shift in the direction and practice of BeBo was marked towards the procurement of 'system-deliveries' rather than isolated products. According to an interview conducted with a board member, this shift also had the side-effect that quite a few spin-off projects began to emerge as a consequence of the more holistic (or less delimited) perspective. This can be seen as an expansion of BeBo's arenas in comparison with previous practice, and a focus area that might very well require additional resources and funding to be dealt with. It might thus be anticipated that funding are earmarked for the establishment and completion of a remarked higher number of pre-projects that can shed additional light on the potential benefits of addressing these unexpectedly arising spin-off projects. Thus, in order to be able to capitalise on spin-off projects resources have to be present.

Increased focus on system-deliveries can be seen as an expansion of BeBo's arenas in comparison with previous practice. This will potentially require additional resources and funding to be dealt with.

Summarising conclusions on resource accessibility

Summarising conclusions on the topic of accessibility or adequacy of resources, the following conclusion are drawn.

Availability of resources



- Are existing initiatives supplemented with new focus areas (e.g. behavioural studies) additional resources can be necessary.
- Current focus on 'systems' can trigger a need for additional resources for pilot-projects or documentation of spin-off projects.

Figure 12. Resource accessibility.

As argued above, an increased focus on system-deliveries however entails that BeBo indeed will be willing to enforce or meet their own statement that the results have to be measured in a long-term perspective. Furthermore, this also requires BeBo to be willing to take the financial risk that follows from launching an increasing amount of pilot-projects.

Furthermore, if BeBo are to focus more on behavioural aspects in *supplement* to, rather than in *substitution* of, the predominant focus on technical

issues, additional funding should be set aside to accomplish this objective as well, including attracting new competencies to BeBo, as discussed above.

Is BeBo's strategy implementable?

Finally, on the topic of whether the strategy is implementable, it is our firm belief that BeBo is able to lift the task of, if not reducing the energy consumption in the housing sector by 50 % *per se*, then contributing to the general development towards a more energy-efficient sector. Considerations as laid out above however have to be taken into account. Especially, concerns of how to penetrate the private property market have to be scrutinised the coming years.

It is our firm belief that BeBo will be able to lift the task of contributing to the general development towards a more energy-efficient sector.

Summarising findings on implementation

Finally, conclusions as to whether BeBo's strategy is implementable are presented below in figure.

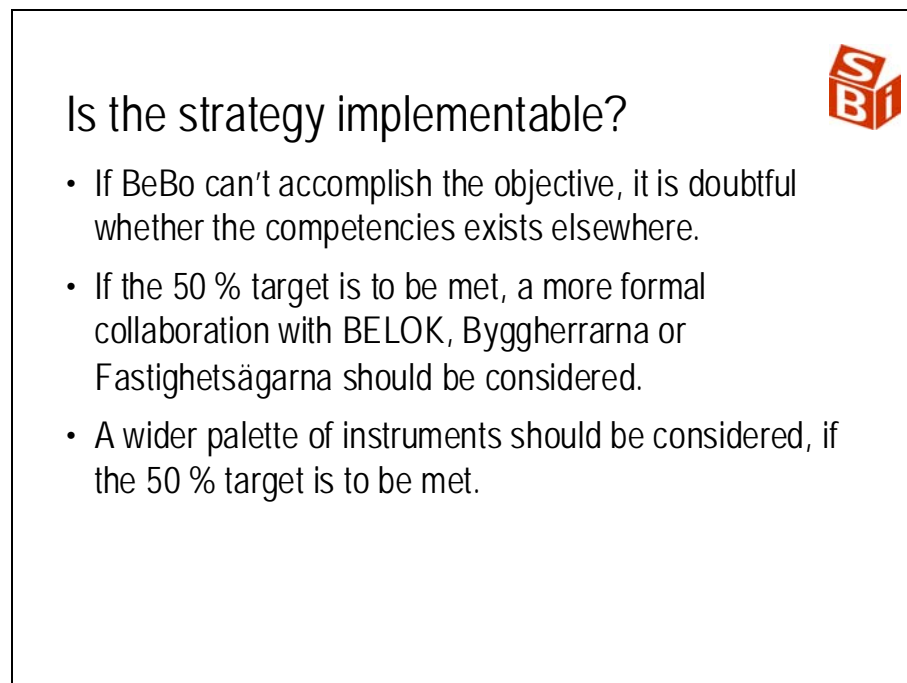


Figure 13. Is BeBo's strategy implementable?

It is concluded that if the 50 % target is to be taken at face value, BeBo might want to consider how to market their solution to a wider group of actors. A more formalised cooperation or coordination with e.g. BELOK, Byggherrarna or Fastighetsägarna could be considered especially on the topic of a more effective and concerted dissemination strategy. The establishment of a common Energy portal under the auspices the Swedish Energy Authority could constitute the lever in this transition.

Furthermore, success of implementation is highly dependent on BeBo's ability to handle a 'threefold' pressure that is placed on them due to the particular role they play. It is thus argued that BeBo assumes a function in the Swedish energy policy that potentially can be seen as invading or rather hollowing out the unicentric regulatory role of the state (i.e. the Swedish Energy Authority) and shift formal power towards the BeBo network. This is a situation that both BeBo and the Swedish Energy Authority have to be aware of and develop measures to be able to handle. From governmental side, considerations thus have to be made as to develop new regulatory governance structures that can cope with this loss of sovereign power without compro-

misising the overall strategic objectives. A second source of potential pressure comes from the group of companies and housing associations not being members BeBo, who can risk being sidelined and subjected to regulation based on special interests that only will be of favour to a few selected actors within the market. Third, the companies being members of BeBo also have to accept the common agenda and give up on some of their decision-making autonomy in order to empower the BeBo network as such to lift the task.

Empowerment is also the key issue in the discussion of how BeBo, as a network of autonomous actors, will be able to act collectively as a change agent in the intersection of energy policy and housing. For this to happen, it is not sufficient just to have a number of individual actors participating closely in the various BeBo meetings and projects. The real challenge lies in the ability of BeBo to enrol not only the few; the frontrunners or change agents of the individual companies, but to extend the specific results, technologies, procedures etc. to the local project managers.

Change thus has to make sense for both the community as well as the individual, and BeBo might need to consider how to reach the operational levels in the various member-organisations.

4. Conclusions

This chapter summarises on an overall level the conclusions from the description and analysis of BeBo's strategic choices as follows:

The strategy of BeBo is very well aligned with what is going on in the environment, but BeBo should consider including an *additional* multi-level focus on behavioural aspects of energy consumption.

The close collaboration with academic institutions is highly instrumental in BeBo's operations; however BeBo should consider to expand this institutional 'resource pool' with competencies from other scientific fields.

By utilising their buying power and purchasing volume, BeBo can effectively assume the role of proactive change agent; however it is still too early to assess the empirical effects hereof.

There is a good match between the different elements of BeBo's strategy. The networked structure of the association provides a highly beneficial fit with the economic logic under which BeBo operates.

Increased focus on system-deliveries can be seen as an expansion of BeBo's arenas in comparison with previous practice. This will potentially require additional resources and funding to be dealt with.

It is our firm belief that BeBo will be able to lift the task of contributing to the general development towards a more energy-efficient sector.

References

Andersen, N.Å. and Thygesen, N.T. (2004) Styringsteknologier i den selvudsatte organisation, *GRUS*, **25**(73), 8-29.

Apel, H. (2004) The Future Workshop, *International Expert Meeting on Theory and Practice of Peace Education*, Feldafing (Munich), February 9-11 2004, retrieved from www June 29 2009 at: http://www.die-bonn.de/esprid/dokumente/doc-2004/apel04_02.pdf

BeBo (2009) Utvärdering av Orrholmen. Dokumentation av process och företagskultur som har lett till att åtgärderna blev genomförda, *Bilaga 8. Beslut 2009_3 Utvärdering Orrholmen*, Stockholm: BeBo.

Bertelsen, N.H. (2007) *Evaluation of Belok 2007*, Hørsholm: Danish Building Research Institute.

Boverket (2003) Flerbostadshusens förnyelse. Behov och förutsättningar. Underlagsrapport till Bättre koll på underhåll, Stockholm: KTH.

Callon, M. (1986) Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay, In: Law, J. (Ed.) *Power, action and belief: a new sociology of knowledge?*, London: Routledge, 196-223.

Dahl, R.A. (1961) *Who governs? Democracy and power in an American city*, New Haven: Yale University Press.

Davies A., Gann D. and T. Douglas (2009). Innovation in megaprojects: Systems integration at London Heathrow Terminal 5, *California Management Review*, **51**(2), 101-125.

Ekelin, S. and Isaksson, H. (2006) Ny kostym och respirator? En förstudie om bedömda potentialer och behovet av insatser för energieffektivisering inom rekordarens byggnation, *BeBo Förstudie 2006-09-13*, Stockholm: BeBo.

Gann, D.M., Salter, A.J. (2000). Innovation in project-based, service-enhanced firms: the construction of complex products and systems, *Research Policy*, **29**, 955-972.

Gram-Hanssen, K. (2008) Energy in Homes: An Historical Approach to Understanding New Routines, In: *The Culture of Energy*, Newcastle: Cambridge Scholars Publishing, 180-199.

Hobday M. (1998). Product complexity, innovation and industrial organisation, *Research Policy*, **26**, 689-710.

Isaksson, H. (2009) Renovering gav resultat, *Energi & Miljö*, **80**(3): 54.

Jensen, J.O., Gram-Hanssen, K., Røpke, I. and Christensen, T.H. (2009) Household's use of information and communication technologies - a future challenge for energy savings? *Proceedings of ECEEE Summer Studies*

2009. *Act! Innovate! Deliver! Reducing energy demand sustainably*, Ile Saint-Denis.

Jungk, R. and Müllert, N. (1987) *Future workshops: How to create desirable futures*, London: Institute for Social Inventions.

Nilsson, L.J. (2006) *Evaluation of BELOK (Procurement group for commercial building) (Sweden) within the framework of the AID-EE project*, Energy Intelligence for Europe: AID-EE.

Swedish Energy Agency (2009) *Swedish Energy Research 2009*, Eskilstuna: Swedish Energy Agency.

Torring, J. (2005) Governance network theory: towards a second generation, *European Political Science*, **4**, 305-315.

Vind, B. and Thomassen, M.A. (Eds.) (2009) *Byggeriets Innovation – Innovation af byggeriet I teori og praksis*, København: Dansk Arkitektur Center og Realdania.

Warfvinge, C., Isaksson H., and Ekelin S. (2007) *Förslag 1. BeBo-projekt. Industrialiserad energieffektivisering av industriellt producerade flerbostadshus*, Utkast till projektbeskrivning, Juni 2007, Stockholm: BeBo.