

# **DEVELOPMENT OF STRATEGIC CONSULTANCY TO FARM MANAGERS - experiences from an action research approach**

**Mogens Lund**

Danish Institute of Agricultural and Fisheries Economics, Copenhagen

**Torben Ulf Larsen**

Danish Agricultural Advisory Centre, Aarhus

*A Danish action research approach to the development of strategic consultancy to farm managers is presented. The development principles adopted include separate investigations of the content and process of strategic consultancy resulting in the formulation of a development matrix and a procedure for knowledge transformations. The project activities were carried out by a self-organised team group with participants from both consultancy and research organisations. The produced knowledge and strategic tools have been tested in a number of farm cases by local consultants and the implemented evaluation programme indicates that the needs of farmers have been fulfilled and the local consultants have increased their strategic competences.*

**Key words:** Action research, strategic consultancy, process and content, development matrix, self-organisation, knowledge transformations, complex learning and consultancy processes.

## **1. Introduction**

The article presents a new action research approach for development of strategic consultancy to farm managers. The primary aim of the research and development activities carried out was to develop practising consultants' learning abilities so that their strategic competences can continually be improved. In an agricultural environment of increasing complexity and continues changes, it is presumed that business consultants need lifelong, self-organized learning in order to help farmers solving their changing strategic problems as previously noted by Cameron (1997). Therefore, although the following presentation is

based on experiences from a Danish project, the emphasis will be put on revealed development principles that are generally applicable in the search for improved strategic consultancy in agriculture.

### **1.1. Background and objectives**

During the last two decades we have in Denmark been working with the development of strategic consultancy to business farmers. The first strategic project was initiated in 1984 by the Danish Institute of Agricultural and Fisheries Economics (SJFI) and carried out in cooperation with a local agricultural consultancy centre at the Island of Bornholm. This project, called the Bornholmsproject, was mainly based on a traditional long-term planning approach.

In the late eighties the Danish Agricultural Advisory Centre (DAAC) started to develop it's own strategic consultancy tools to family farms. The first project was Modular Strategic Planning that was build up by a number of modules whereas the majority were considered optional (Christensen et al., 1990). In the nineties Modular Strategic Planning has been fundamentally changed by DAAC and systematically marketed to local consultancy centres situated all over in Denmark. In the later revisions major emphasis have been put on how to include the vision and overall objectives of the farm family into the strategic consultancy process and how to promote collaborative strategic work among local consultants.

Then, in 1996, we from SJFI and DAAC decided to initiate a joined project in order to improve the delivery of strategic decision support to Danish farm managers. Due to the increasing deregulation of the Danish farm economy and the more widespread introduction of user payments in agricultural consultancy organisations, the overall objective of the project was stated as the development of more market oriented strategic decision support to practical farm managers. The most important mean to achieve this end has been the adoption of an action research approach as explained in the following sections.

## **1.2. Outline of conceptual framework**

Our adopted basic framework is illustrated in figure 1. As indicated by the vertical axis in the figure we have made a rather sharp conceptual distinction between the process and the content of strategic consultancy. The former deals with working activities but it did not inform us about the likely outcomes of those activities. The latter describes the resulting outcomes without being very informative about the activities leading to those outcomes. To our knowledge few if any research initiatives have been taken before to investigate such content/process interrelationships although the need to do so has been addressed, see Douma & Schreuder (1998).

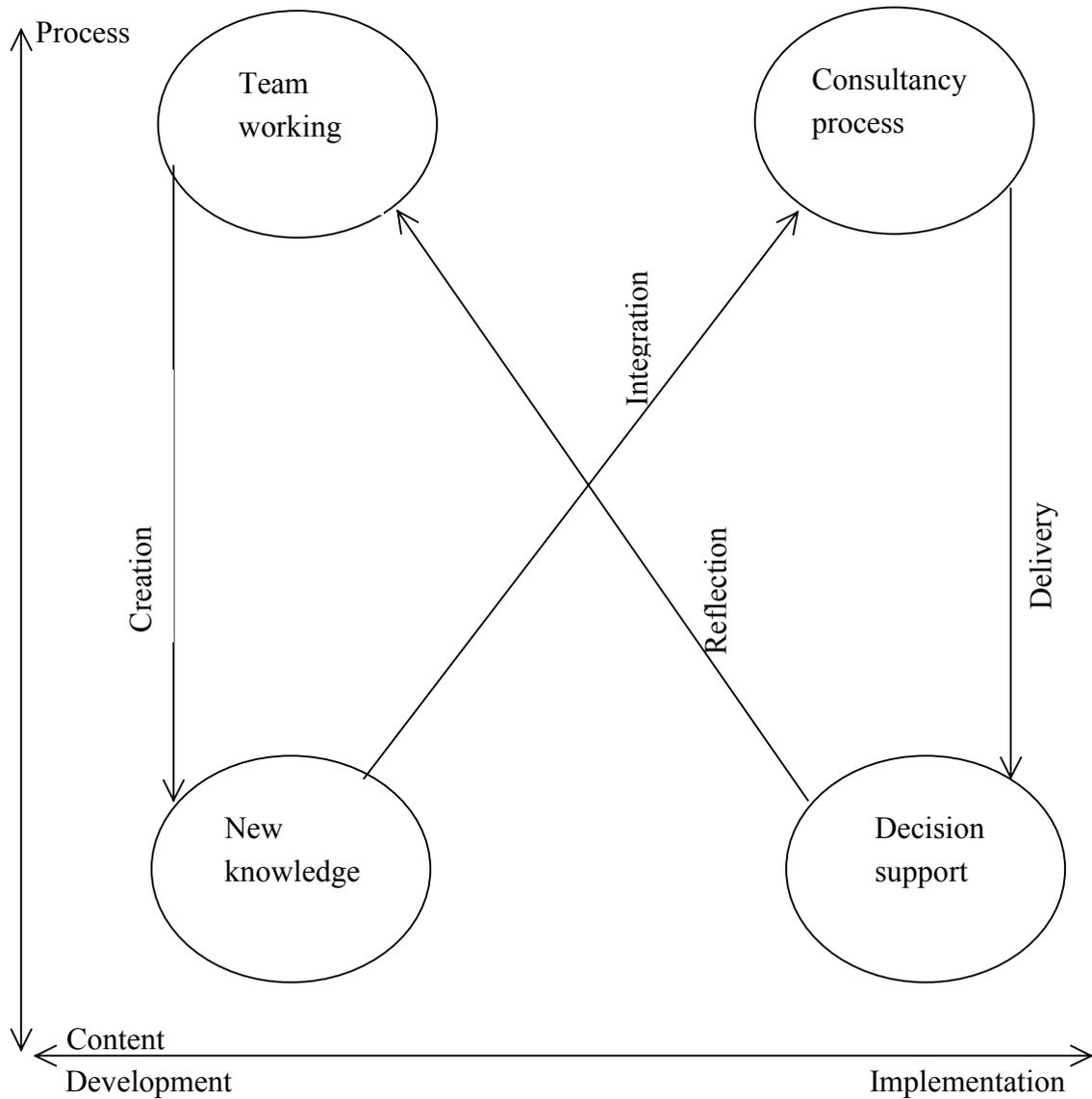
Team working and consultancy processes are the two working activities considered in this project. There are many different interpretations on team working and team groups, but here we have understood a team group as a number of individuals who have something in common and are able to be innovative. In order to facilitate innovations the established team group has consisted of members with different perspectives. Furthermore, we have adopted idea that the possibilities of innovations are depended on the organisational structure, Stacey (1993). Thus, the group has been rather self-organised by e.g. avoiding the formulation of clear operational objectives in advance and by lack of any formal authority in the group. The members of the team group and their respective roles in the project are described in the next section.

The consultancy processes contain the more or less experimental activities performed by business consultants in making improved strategic assistance to practical farm managers. The consultancy process has in our project been divided into the phases – “Understanding”, “Analyses” and “Decision support”. The three consulting phases are more explicitly revealed in part 3 of the article.

New knowledge and Decision support contain the content aspects of strategic consultancy. In section 2.1 we will fully explore the categories of new knowledge generated through this project, while the content of the delivered strategic decision support to the individual farm manager is described in section 3.3.

The second dimension in our conceptual framework is the distinction between development and implementation as shown on the horizontal axis in figure 1. This distinction allows us to discuss the problems associated with the implementation of new knowledge and tools in the context of strategic consultancy.

FIGURE 1. Adopted conceptual framework



Concerning the development strategy we have as previously mentioned adopted an action research approach, Lund (1999). The relevance of action research arises from evidence that although there is an increase in the production of scientific knowledge with respect to agriculture, there also is an increasing tendency that a smaller and smaller fraction is utilised in consultancy work to farmers. One reason may be that scientists are learned that the implementation of research results to practitioners is not a part of scientific inquiry. The tendency of modern agricultural research to produce fragmented knowledge thus rendering it less and less accessible for practical problem solving is well documented according to Cameron (1997).

One of the principal tasks of action research is to increase the intellectual skills of practitioners in order to facilitate knowledge transfer. Therefore, action research may also be seen as an approach to close the gap between theory and practice in the discipline of farm management and consultancy; a gap that has been so heavily criticised throughout the recent history, see e.g. Gray et al. (1999). In order to improve the transfer of new knowledge to the practitioners of strategic consultancy in primary agriculture we have in our project dealt with four types of knowledge transformations. In figure 1 these four kinds of transformations are shown as arrows labelled as Creation, Integration, Delivery and Reflection. The links and feedback mechanisms between the different transformation forms are described in more detail in section 2.2.

### **1.3. Participants in the project**

The established team group consists of two researchers from SJFI, four economic consultants from DAAC and two practising consultants from each of five different local centres. Between SJFI, DAAC and the local consultancy centres there are major differences in the tasks performed, methods adopted, leadership, shared culture and behavioural norms and in underlying paradigms on how to understand the world.

SJFI is a research institute under the Ministry of Food, Agriculture and Fisheries. The aim of the institute is to carry out research and give advice on agricultural and fisheries economics from a society as well as a firm business point of view.

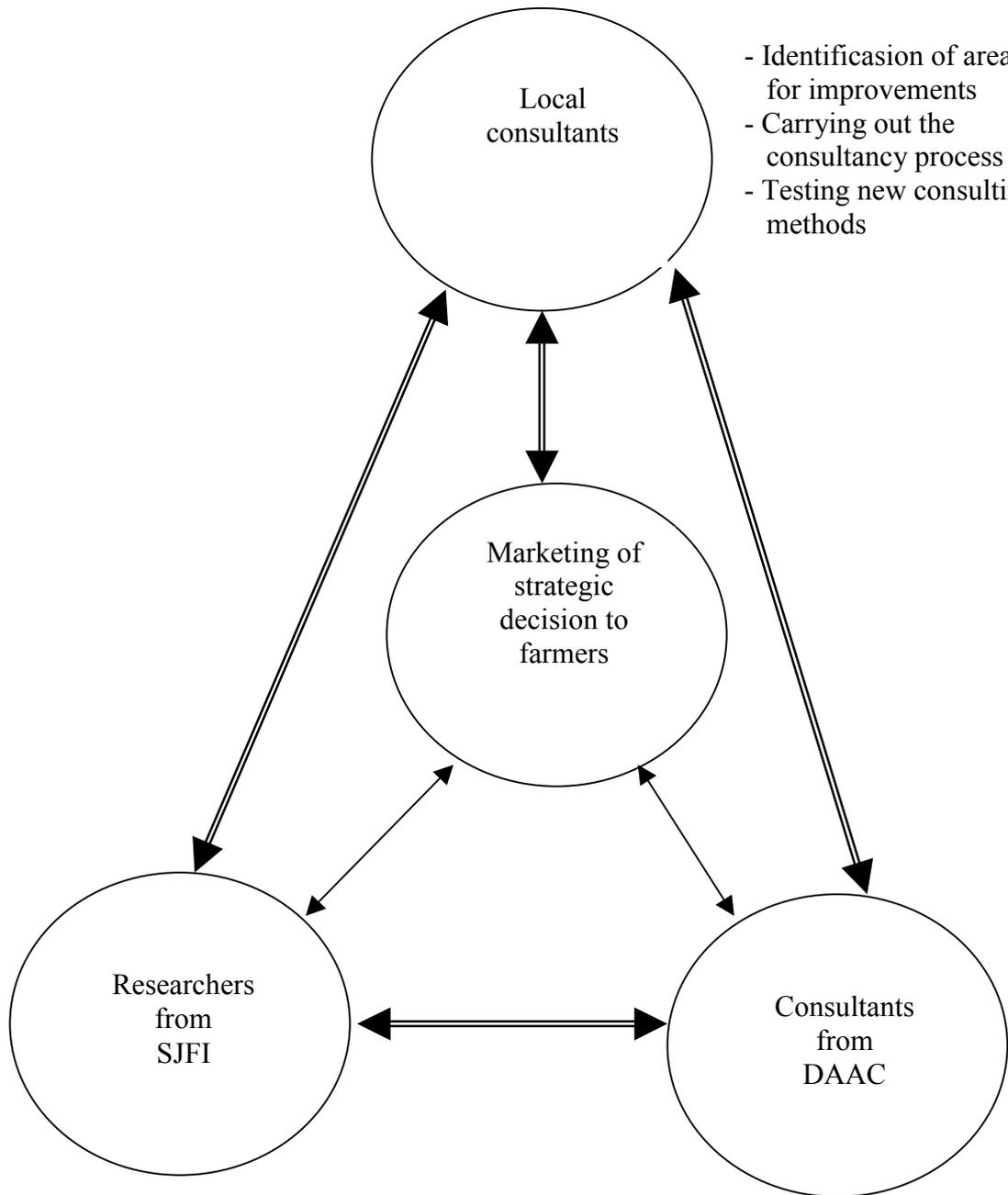
DAAC belongs under the Danish Farmers' Union and the Danish Family Farmers' Association. The primary task of DAAC is to communicate professional know-how to the local consultancy centres that are working directly with individual farmers. The local consultancy centres are owned by local farmers' unions and/or family farmers' associations. By this organisational structure a close contact to the farmers should be ensured. The consulting services delivered to the individual farmers are handled by specialized consultants each covering one specific field, e.g. plant production, cattle husbandry, farm economics and management. However, only economic consultants from five local centres were members of the team group.

As seen in figure 2 the concerted primary task of the team group was marketing of strategic decision support to farmers. Compared to traditional consultancy services, e.g. bookkeeping, strategic consultancy is dealing with much more complex and uncertain business economic issues. Thus, to be successful, development and marketing of strategic consultancy to farmers requires a complete different set of roles among the participating individuals in the team group.

## **2. Development of new consultancy methods**

The solid arrow in figure 2 between the local consultants and the marketing of strategic decision support illustrates the important role assigned to these consultants in the working activities carried out during the project. It should be noted that no practical farmers have been directly involved in the development activities carried out. The role of the participating farmers have exclusively been to provide a realistic setting for testing and evaluating the developed knowledge and strategic consulting tools. We have not asked farmers about the needs for strategic development because we firmly believe that these needs should be addressed in the community of practice that deals professionally with strategy formulation; and this community of practice is in primary agriculture found among the local consultants.

**FIGURE 2. Involved participants in the development and marketing of strategic consultancy**



- Identification of areas for improvements
- Carrying out the consultancy process
- Testing new consulting methods

- Construction of the overall framework
- Development of new knowledge
- Implementation of an evaluation programme

- Coordination of the team work
- Improvements of existing tools
- Communication of the results to other centres

Therefore, the local economic consultants were given the main responsibility to identify relevant needs for improving existing strategic consultancy practices, whereas the development of new knowledge and improved strategic tools were shared between researchers from SJFI and consultants from DAAC. In what follows we will describe how the division of roles among the team group members lead to strategic innovations and changing patterns of consulting behaviour.

## 2.1. The development matrix

The content of the strategic consultancy developed through the project work carried out can most comprehensively be explained as a development matrix. The development matrix is shown in figure 3.

FIGURE 3. The development matrix

Working tasks	Knowledge themes				
	Business values	Business sector analysis	Management	Image	Marketing
Investments in buildings					
Generational change					
Partnership					
Service check					

At the beginning of the project it was revealed that the ordinary strategic working tasks performed by the local consultants were (see the left-side column):

- Investments in farm buildings

- Generational change
- Partnership
- Service check

From discussions in the team group it soon becomes clear for us at DAAC and SJFI that the local consultants need a lot of expert methods to deliver high quality consultancy to the farmer with respect to issues such as building investments, partnerships etc.; and clear that performing such expert consultancy in itself is very time-consuming for the consultant. Thus, as an integrated part of the project there have been developed a number of analytical tools to improve the speed and efficiency in the routine work of carrying out the above ordinary consultancy tasks:

*Investments in farm buildings.* Spreadsheet models and simple checklists are developed and used to answer questions such as: What kinds of calculations have to be made by the consultant in order to evaluate the investment as a positive or negative contribution to the total farm profit in the long run? How will the cash flow be after the investment and what are the associated risks?

*Generational change.* Many new problems may arise when the old farmer wants to transfer the farm to his son. What are the goals of the father and his son? How can they cooperate after the sale? Is there any possibility of tax savings in organising the transfer? These questions are answered by the development of systematic checklists, case examples, interpretations of laws and public regulations etc.

*Partnership.* Economies of size and risk reductions can be realised by the individual farmer if he cooperate with other farmers. There are many approaches to cooperate about agricultural production and the obtained benefits should be compared to the potential loss of independency of the participating individuals. Checklists and proposals for contractual arrangements have been developed to improve the evaluations of alternative farm partnerships.

*Service check.* Benchmarking on past realized farm results may be an excellent introduction to the consultancy process, see Lund and Ørum (1997). Information concerning the break-

even point for the price of the farm's most important products, e.g. milk price or price on slaughter pigs, will be of significant interest to many farmers. Spreadsheet models and checklists have been developed and used as a diagnostic tool: Where are the strong and weak points in the existing operation of the farm business?

This, however, is only the one side of the coin. As the other side the team group has furthermore dealt with what is called knowledge themes in figure 3. As indicated in the horizontal row the new knowledge themes identified and prioritised by the local consultants were:

- Business values
- Business sector analysis
- Management
- Image
- Marketing

Therefore, in making decisions concerning major strategic business changes, the farmer and his consultant are supposed to consider these new knowledge themes with the same importance as the analyses of the ordinary strategic working tasks. It should be recognized that these themes by nature are highly qualitative. Of course, if the farmer e.g. makes new investments in building capacity, he should be aware of the expected financial consequences. However, in taken important investment decisions the farmer also has to be aware of:

*Business values.* How will the investment fit into the overall vision and mission of the farmer and his family? What is the desirable future of the family? And which requirements in the environment will the farmer fulfil through his business activities? Through dialogue with the farm family the consultant may help to create a mental picture of the future position and posture of the farm business and the preferred way of farming life.

*Business sector analysis.* The span of time will typically be 20 to 30 years in making building investments. By making a business sector analysis the farmer and his consultant can consider the strategic developments in e.g. technology, market outlets and law

regulations. Perhaps it is not possible to predict with any certainty, but the farmer and his consultant might ask “What if” questions.

*Management.* Is the farmer capable to manage the greater production volume? Can he get the right working force? Therefore, the farmer has to discuss management issues like salary, working load, organisation, division of responsibilities and social culture with his consultant in order to attract and keep the right people.

*Image.* Especially when the animal production increases, neighbours often will put more focus on the farm operation and ask if the farmer is acting properly in the local community? And how do the bank and other business partners react? These questions should be answered as part of creating and maintaining a favourable image of the farm business.

*Marketing.* How should the increased production volume be sold? Who should it be sold to? And how might the marketing risks be avoided? If the farmer is using product differentiation it might be important to make proper contracts to sustain a higher price.

## **2.2. Knowledge transformations**

During the project we have realized how development, implementation and learning are entwined. Retrospective, we now see clearly that the key to close the gap between development and implementation of strategic decision support to farmers and thereby promoting the learning abilities of local consultants has been the inclusion of tacit knowledge, Nonaka (1991). A characteristic trait of tacit knowledge is the problem or impossibility of explaining in words what happens when a skill is executed. We just do it. Tacit knowledge is embedded in the working routines of consultants, researchers and all other people and shows itself as skills or know-how that is very difficult to communicate. The nature of explicit knowledge, however, is well known. It is all the information, very often expressed in quantitative terms, that e.g. local economic consultants communicate clearly, for example through bookkeeping, tax calculations and budget plans.

In order to enhance the likelihood of the new knowledge generated to be expressed in new

strategic actions and changing patterns of behaviour among the local consultants we have more or less consciously dealt with four different forms of transformations as indicated in figure 1:

*Creation.* Knowledge transformation from explicit to explicit where new knowledge is made explicit and combined with existing knowledge. This transformation is reflected in the development matrix shown in figure 3 where the team group has identified and investigated some new knowledge themes (horizontal axis) that is supposed to be combined with the knowledge embedded in the ordinary consultancy tasks (vertical axis).

*Integration.* Knowledge transformation from explicit to tacit where new knowledge is internalised into cognitive and practical skills. Supervision of local consultants by researchers from SJFI and consultants from DAAC was one important way to facilitate this knowledge integration in the project. Another important integration approach has been the use of workshops, one held for each of the considered knowledge themes, where the team group was exposed to different tasks oriented and psycho-social training experiments.

*Delivery.* Knowledge transformation from tacit to tacit where individuals through practice adapt and share tacit knowledge. In our project this was supposed to happen through the consultancy process described in part 3 of the article where the local consultants through their own working experiences with farmers and colleagues learn to share tacit knowledge.

*Reflection.* Knowledge transformation from tacit to explicit where tacit knowledge is articulated into explicit statements such as obtained experiences, other ideas, new hypotheses, etc. In the project this transformation process has been triggered by dialogue and collective interpretation in the team group. Therefore, during the whole project period there have been held regular team group meetings, three to four times each year.

The “circle” is then completed because the knowledge expressed by some participants will be shared with the other members of the team group. Actually, the transformation process is not a circle, since the new sharing of knowledge in the group does not take place at the original starting point. At each meeting new knowledge is created and this again starts in

principle a new learning process. Thus, a spiral is a better metaphor for this model, Stæte (2001).

The inclusion of tacit knowledge makes it possible to indicate the difference between simple learning and the more complex learning that was supposed to take place through our project. Learning by experiences is the simple kind of learning whereas complex learning in addition involves questioning the mental models that are guiding the pattern of behaviour and actions implemented, see Lund (1997). These mental models can indeed be looked upon as tacit knowledge that we all somehow occupy in our brains in order to understand the world and make deliberated choices.

### **3. The consultancy process**

The consultancy process performed by the local consultants basically contains three steps of equal importance. First, the objectives and needs of the farmer must be revealed. In our opinion this step has been paid to little attention by consultants although there is no doubt that it is an important activity in order to increase the relevance of strategic consultancy to farmers. When this process is finished, the results are written into a consultancy contract agreed by the farmer and the consultant. Secondly, the consultant should complete a number of calculations and evaluations of the considered strategic alternatives. Third, the results of the analyses must be written into a decision report that is supposed to be discussed with the farmer. The report has to be short, thus only containing the most important information and should furthermore be easy accessible for the farmer.

#### **3.1 Understanding**

When the farmer reveals a need or opportunity for some strategic changes of his farm business, he is expected to contact his economic consultant in order to discuss the actual possibilities. At the first meeting between the farmer and the economic consultant, which is supposed to take place on the farm, it is important that the consultant is well prepared and e.g. knows the budget, the financial situation and the efficiency level in production. Furthermore, the consultant has to take time to listened to the farmer's ideas and objectives

and ask questions like why and how. The main purpose is to reflect on the farmer's strategic opportunities – which as examples could be increases in the production by investments in buildings, equipment and so on or that of selling the farm to the next generation. The farmer's expectations concerning prices, agricultural laws, the markets and employees must also be revealed at this first meeting. Furthermore, the main assumptions required for the quantitative analyses should be decided by the farmer in collaboration with his consultant.

Many different strategic aspects may be discussed with the farmer and his family. When the discussion is completed the economic consultant has to write an agreement telling what has been agreed upon. In the agreement it is generally stated:

- What kind of analyses the farmer expects in the completed decision report
- The expected price for the work carried out by the consultant, and the
- Deadline for completing the decision report.

Although some participating economic consultants have been very reluctant to make such a written agreement, most of the consultants and nearly all farmers involved see a written contract as a convenient instrument to document the agreements made by the two parts. In most cases the economic consultant writes the agreement after the first meeting, sign it and send it by mail to the farmer. The farmer does not sign the report as it is more aimed at an informal confirmation of what has been agreed upon.

### **3.2. Analysis**

The analyses and evaluations made by the consultant are primarily based on the information obtained from the first meeting with the farmer. This second consultancy phase can be divided into some quantitative and qualitative tasks. The quantitative analyses consist of traditional investment calculations, break-even analyses for critical parameters and pay-back period, preparations of financial budgets, analysis of labor demand for the investment and so on. In order to make these calculations less time-consuming several spreadsheet programs have been developed. These computer models include standard

norms for prices and production efficiency etc., which can eventually be changed to fit the unique farm situation. Furthermore, the most relevant breakeven points are calculated automatically - all together implying that the consultant can make all the necessary calculations and budget plans within one hour or less. By reducing the calculation work in this way the consultant has much more available time for evaluations and time for discussions with the farmer.

In the qualitative analyses the consultant is supposed to compare the alternatives with the farmer's values and stated objectives. SWOT-analyses seem to be very useful in making these evaluations. The evaluation also includes judgments of e.g. the expected market situation, environment rules and other legislation of agriculture that may affect the farmer's strategic actions. Furthermore, the evaluation should include considerations of the management skills of the farmer. In order to do all these evaluations the consultant needs not only skills to deal with financial matters and quantitative calculations but should also have competences to include the more qualitative strategic aspects.

### **3.3. Decision support**

When the consultant has finished the analysis work, his recommendations have to be communicated to the farmer. This third step in the consultancy process can also be divided into two sub-steps. First, the consultant is expected to complete a written decision report. Secondly, the consultant should have a final meeting with the farmer in order to discuss the formulated recommendations. The content of the decision report to the farmer is divided into five parts:

*Conclusion.* The consultant's recommendations are assumed to be most important to the farmer and are therefore stated at the very beginning of the report. On the other hand it is assumed that the farmer is not specific interested in how the calculations have been carried out by the consultant; but if the farmer asks, the consultant will of course send all the requested calculation materials to him.

*Description.* This part contains a short description of the evaluated strategic alternatives

and demarcates the performed analyses in relationship to eventually other strategic issues not considered in the report.

*Assumptions.* They are in the report divided into general assumptions, e.g. interest rates and inflation, and on the other hand farm or even alternative unique assumptions, e.g. yield levels and the expected technical efficiency.

*Results.* Only key results from the economic calculations are presented and evaluated in the text. These key results are furthermore supplemented with both a sensitivity analysis and a strategic risk analysis. The strategic risk analysis evaluates the consequences of alternative assumptions that might eventually be fulfilled.

*What is going to happen next?* Here the consultant points out specific issues in the report that the farmer should be aware of, e.g. deadlines for the application of financial support to investments. Furthermore, this last section in the report should prepare the farmer to the dialogue with his consultant that always has to take place. In fact, the final report has no decision value without a follow-up discussion with the farmer.

#### **4. Conclusion and perspectives**

The most important conclusion that can be obtained from this article is that the development of strategic consultancy to farmers not necessarily is the consequence of some a priori master plan. Instead it is shown that strategic developments may come about as a large number of independently started initiatives that are built into a major reinforcing movement. Actually, when this project was started in 1996, either us from SJFI or from DAAC had any particular awareness of or professional experiences working with action research methodologies. In fact, we all have an educational background in the traditional economic paradigm. Thus, either our conceptual distinction between process and content in strategic consultancy nor the inclusion tacit knowledge in our procedure for knowledge transformations were decided in any a priori way by reading pertinent literature and/or by any kind of rational planning, but emerge largely upon dialogue, experiments and collective reflection in the team group. Same lack of a priori rational plan in the context of

development of farm management and agribusiness education is described in Cameron (1997).

So far the obtained results from our project have only been extensively communicated to other consultancy and research communities although this should be considered as an important step. In the future special emphasis will be put on the communication to all the local consultancy centres in Denmark by taking the following initiatives:

- At DAAC there will be an updated website ([www.lr.dk](http://www.lr.dk)) containing a complete description of the project and its content. On this website it will also be possible to download all the developed strategic tools and written documents.
- Members from the team group have already and will in the future continue to visit interested local consultancy centres and present the obtained results.
- The local centres are offered 3 to 4 hours courses with focus on specific themes from the project, e.g. investment planning or business values.
- The results are presented and discussed in teaching courses and at general meetings for consultants.
- In monthly leaflets from DAAC the project will be mentioned.

Furthermore, an evaluation programme has been designed and carried out as an integrated part of the whole project, Pedersen & Jacobsen (2001). The evaluation programme consisted of qualitative interviews of the participating farmers and the local consultants. In total was 11 farmers and 6 consultants interviewed by two researchers who have not participated in any of the other project activities carried out. Results obtained through the evaluation programme indicate that the farmers in general have been satisfied with the received strategic decision support. Even more interesting is it that the local consultants have appreciated to take part in the development efforts right from the start and that they have emphasised the importance of being together with people that can provide new perspectives into their working routines.

Whether the project has been a success or not is very difficult to measure by any objective criteria, but we have already received sufficient positive feedbacks to decide that the principles developed through the project should be used in the creation of new development

groups. Therefore, DAAC is planning to establish a number of such groups with participants from local consultancy centres and research institutes. Action research, self-organisation, knowledge transformations and learning will be some of the main features of these development groups.

## References

Camaeron, D., *An Action Learning Approach To Farm Management And Agribusiness Education*. Journal of International Farm Management, Vol. 2, No. 1, 1997: p. 9-22.

Christensen, J.; S. Rasmussen; P. E. Stryg & D. E. Pedersen (ed.), *Managing Long-Term Developments of the Farm Firm - Strategic Planning and Management*, Wissenschaftsverlag Vauk Kiel, KG, 1990.

Douma, S. & H. Schreuder, *Economic Approaches to Organizations*, 2. ed., Prentice Hall Europe, 1998.

Gafsi, M., *A management approach to change on farms*, Agricultural Systems, No. 61, pp. 179-189, 1990.

Gray, D.; E. Kemp; J. Gardner; N. Rogers & K. McCosh, *Problem Solving By Farm Management Consultant In A Deregulated Environment*, Journal of International Farm Management, Vol. 2, No. 2, pp. 113-126, 1999.

Lund, M., *Learning approaches in Strategic Management*. In "Learning in Farmers' Decision Making". Ed. by B. Öhlmer and D. Lunnerad. Report nr. 116. Department of Economics, Swedish University of Agricultural Sciences, Sweden, 10 pp., 1997.

Lund, M., *Rådgivning i strategisk planlægning inden for landbruget (Strategic Consultation in agriculture)*, report no. 94, Danish Institute of Agricultural and Fisheries Economics, 1999.

Lund, M. & J. E. Ørum, *Computerised Efficiency Analysis In farm Business Advice*, Farm Management, Vol. 9, No. 10, pp 506-514, 1997.

Malcolm, L. R., *Fifty Years of Farm Management in Australia: Survey and Review*, Review of Marketing and Agricultural Economics, Vol. 58, No. 1, pp. 24-55, 1990.

Nonaka, I., *The knowledge-creating company*, Harvard Business Review, Nov.-Dec., pp. 96-104, 1991.

Pedersen, D. E. & B. H. Jacobsen, *Erfaringer med udvikling af strategiske beslutningsgrundlag til landmænd (Experiences with development of strategic decision support to farmers)*. Report published in cooperation between the Danish Institute of Agricultural and Fisheries Economics and The Danish Advisory Service, 2001.

Rumelt, R. P.; D. Schendel & D. J. Teece, *Strategic Management And Economics*, Strategic Management Journal, Vol. 12, pp. 5-29, 1991.

Schein, E. H., *Process Consultation*, Vol. 1 & 2, Addison-Wesley Publishing Company, 1988.

Stacey, R. D., *Strategic Management And Organisational Dynamics*, Pitman Publishing, London, 1993.

Stræte, E. P., *Why are organisational changes so difficult? A discussion of organisational knowledge creation*, in “*The Food Sector in Transition – Nordic Research*” ed. by S. O. Borgen, NILF-NJF report 2001-2, Oslo, 2001.

### **Biographical sketch**

*Mogens Lund* received his Ph.D. in agricultural economics in 1987 from the Danish

Veterinary and Agricultural University (KVL). He is working as a senior researcher at the Danish Institute of Agricultural and Fisheries Economics and employed as an appointed economic lecturer at KVL. His research activities include farm business and chains management, strategic consultancy, risk modelling and efficiency analyses. A complete curriculum vitae including references can be found at the web-site [www.sjfi.dk](http://www.sjfi.dk).

*Torben Ulf Larsen* graduated as cand. oecon. from the University of Aarhus in 1978. He has worked in different industrial firms and public institutions before he in 1983 was employed as a consultant in the Department for Farm Management and Accounting at The Danish Agricultural Advisory Centre in Aarhus. He has developed several consulting tools for strategic planning and benchmarking and been the coordinator of the project described in the article since last year.