

## MANAGEMENT OF PARTNERSHIP NETWORKS IN ELECTRICITY DISTRIBUTION BUSINESS

Harri SALOMÄKI

Vattenfall Verkko Oy – Finland

harri.salomaki@vattenfall.com

### ABSTRACT

*Electricity distribution companies in Finland are more and more focusing on their core-business and outsourcing their non-core functions. The benefits of using purchased services are already recognized in the distribution business, but to be able to achieve all these benefits, a functional partnership network of service providers must be build and the company has to be capable enough of managing it. This paper presents some findings and results of a study that was made in Vattenfall Nordic Distribution Finland in order to develop the management of its partnership network of contractors. A partners' scorecard was created and the meaning of social interaction highlighted. One can never outsource or purchase the management and steering of an outsourced or purchased function.*

### INTRODUCTION

Electricity distribution companies in Finland are increasingly outsourcing their functions and coordinating processes with partners. The electricity distribution business is strongly changing towards networked business model [1]. By using purchased services electricity distribution companies in Finland aim at focusing on core-business, cost savings, having better resources and getting the possibility to exploit the best practices and know-how in the industry [2]. In order to get the wanted results, although the benefits are clear, the new way of organizing distribution business processes together with partners requires new perspectives and tools to manage the whole partnership network. Traditional steering methods for in-house functions do not longer work. The electricity distribution companies in Finland see the lack of management systems and tools to measure the quality of the purchased services and to ensure parallel expectations and goals as risks [3]. In many cases, the management is based on a feeling or on just drifting from a situation to another. For example, finances, operative in-house processes and marketing budgets are under a tight control of company management but the partnership network management lacks systematic analyzes and actions [4].

Vattenfall Nordic Distribution Finland (later VDNF) is the second biggest electricity distribution company in Finland with its 387000 customers. The length of the electric line per customer is approximately 160 meters. The partnership

network of VDNF is unique in the electricity distribution business of Finland. VDNF is the pioneer company when observing the organizing of business with partnership networks. It can be said that VDNF has taken its actions deeper into the partnership network than any other electricity distribution company in Finland when comparing the scale and functions. For example, VDNF has outsourced all its electricity network construction, maintenance, services and fault repairing into totally open market. These functions and many others are purchased from the partnership network.

This paper presents some results of a study that was made in VDNF. The goal was to develop the management of VDNF's contractor partners and the partnership network that they form. The goal was approached by analyzing the prevailing management of the partnership network of VDNF and comparing it to the theories, existing models and experiments. Several internal and external interviews and benchmarking were also done to find the development needs and best practises.

The paper reveals good findings, experiments and practises of VDNF from which other electricity distribution companies can benefit. The found improvements aim at more systematic management. One result of the study presented in this paper is a partners' scorecard which brings an example of partial solutions to the lack of tools to ensure the quality of the purchased services. It also helps to ensure parallel expectations and goals of the partnership network.

The electricity distribution business has been focusing on how to build the partnership network. Now it is time to look forward and focus on the management which makes sure that the benefits originally pursued are actually reached. A successful management of the partnership network enables the planned development of the whole network, mutual processes and individual partnerships. It makes sure that the needed investments and inputs to the partnership network and to its central organization are obtained from each partnership.

### PARTNERSHIP NETWORK

The study focused on the VDNF's annual frame contract contractors and the partnership network that they form. The electricity distribution network of VDNF is divided into 25 geographical areas. Each area has one annual contractor.

Some annual contractors have several areas so the total number of annual contractors of VNDF is nine. The current contract period started in 2008 and it will last until February 2012. The annual contractor for each of the 25 contracting areas was chosen with tendering process. The contracts are unit-priced including network construction, planning, maintenance, service functions and fault repairing. VNDF orders these services with unit-prices for each area from the annual contractor of the concerning area. The fault repairing is not limited to certain areas. The annual contractor has a first-hand responsibility for the faults in its own area but they can also be called to other areas depending on the need. VNDF is committed to a certain order turnover per area per year. On the other hand, the contractors are committed to accept a certain level of orders and they must guarantee resources and performance level so that the ordered works are done.

All the work orders are delivered electrically through ERP-systems. The contractors receive thousands of work orders yearly. A large amount of these works are directly customer related, including for example new connections and meter installations. One can understand that the management and steering of this kind of an environment has a significant role to ensure the wanted results.

## DEVELOPING THE MANAGEMENT

The study stated that a successful partnership network management must cover three levels: management of individual partnerships, management of partnerships as a network and management of network surroundings. The most fundamental thing is to define a partnership network strategy that covers all these three management levels. The strategy and the objectives must come consistently from network vision to all the way down to individual partnership strategies created together with each partner. The partner must understand the long- and short-term objectives of the partnership for performance, development, learning and cooperation. The partner must know where they should succeed in order to reach the goals.

When the strategy of the partnership network is the most fundamental thing in its management, putting the strategy into action with management tools is its biggest challenge. To overcome this challenge, visible and transparent management and social interaction play a key role.

Increasing the use of intentional social interaction with the partnership network has many benefits. The information flow improves and the objectives of the partnership become clearer. The interaction improves mutual understanding of another's business. It also improves the comprehension of the whole process, the whole partnership network and the meaning of the mutual end-customer. Many times the interaction is focusing on handling of operative basic

functions. The aspect of development and partnership should be remembered.

The partnership network expects punctual, transparent and expectable management. The partners want to know the next step earlier so that they know how to prepare, where to invest and how to focus their resources. A successful management knows the next step and communicates it to the partnership network. One practical example is the seasonal variation of work volumes and different schedules. The contractors have wished more transparency to the ordering of the projects, works and tasks, which is one aspect in the management of the partnership network in this business branch. To improve the situation VNDF has developed an annual clock, which defines the phases of the ordering process from the planning of project to the ordering and project execution on a time schedule. VNDF commits itself to the annual clock and it is presented to the contractors as a partnership promise. The contractors see this annual clock as an excellent step towards a better transparency. The focus on the building of the transparency will not be wasted because the contractors have indicated that the transparency of the management has an efficiency improving impact.

The old saying goes "when the cat is away the mice will play". The management must always be visible and in action to make sure that the network operates and its actions are consistent to reach the targets. Without visibility the management loses its power. Another perspective that is linked to the visibility of the management, by referring to the above mentioned saying, is that if the cat is out of sight and even if the mice are not playing, the cat's owner will start to wonder if the cat is doing its job. The visibility of the management is important not only towards the partnership network but also towards one's own organization.

## MEASURING

The study clarified that a crucial part of the management is a measuring or evaluating system that follows the functionality of the strategy and achieving of the objectives. The system should be able to measure the performance of the partnership network in different levels and it should work as a functional feedback system and as a strategic steering tool. Especially in business branches that are critical to society, such as electricity distribution, ensuring the quality and stable performance of purchased services is crucial.

The measuring system should set targets for example for costs, performance, quality and development, and the set targets must be measured and followed. This creates demands for IT-systems. The circle of measure, report and analyze, steer and manage and again measure must be continuous in order to succeed.

## PARTNERS' SCORECARD

VNDF has used a scorecard as a strategic management tool for its own personnel for a long time. VNDF's contractors are seen more and more as a team that operates in the same processes than the VNDF's own teams. In many cases, the contractors are a significant part of VNDF's processes so their actions should be ensured and developed like a part of VNDF's own organization. VNDF has good experiences of using the scorecard to manage and steer its own actions and teams, so to widen this thinking to the contractors within the study was a natural continuation. It was already written into the contracts that the contractors are obligated to take a scorecard in use.

The annual contractors' performance has been measured in VNDF since 2004, and from the beginning of 2005, the contractors have received monthly quality report about their performances in quality of work index, delivery date index and customer satisfaction index (CSI). The contractors' performance in this quality report has an effect on their tenders. Poor previous performance lifts the contractors' prices with two percents and good performance lowers their prices with two percents. So the quality is converted to money. In order to develop the operations and getting all the benefits from the partnerships, a scorecard was decided to define for the annual contractors.

The scorecard is build on the basis of the quality report but, defining a scorecard environment and taking development meters along, forces the contractors to focus on the meters and development. The scorecard is connected to a bonus which can be up to two percentages from the yearly turnover of each contracting area, depending on the performances in the meters of the scorecard.

The created scorecard has nine meters. The scorecard defines target levels for each meter. Five of the nine meters are hard statistic meters which are reported to the contractors every month in their own quality report. The report includes information of the contractor's own performances but also the average performance of the contractors and the best contractor's performance. All the data is presented in the report and the results are also readable per contractors work supervisor.

The first hard meter is called acceptance inspections. This meter measures the quality of contractors' works noticed in acceptance inspections. VNDF does several random acceptance inspections to different projects of different contractors. Every inspected project gets a grade between 5 and 0 according to the quality of work. The grade average is calculated and reported comparing to the defined target average in the scorecard.

Delivery date index is the name of the second hard meter.

The meter measures how well the contractor's projects and tasks are completed on the schedule. VNDF follows and compares the scheduled completion day and the actual completion day. The meter measures how many percentages of the works are completed on time and then compares it to the target levels.

The next two meters concern fault repairing. The fault repairing costs index meter follows the average costs per fault repairing order. The interruption time index measures the average customers' experienced interruption time in electricity delivery per fault. The data is received from the distribution management system and separated between low- and medium-voltage faults.

The last hard meter is the customer satisfaction index (CSI). VNDF conducts many kinds of customer surveys and the answers are picked from the questions that concern the actions of the annual contractors.

The four remaining meters are soft development project meters: accidents and close calls, development ideas and feedbacks, environmental management system and Vattenfall partnership. These meters are development projects of which completion is followed with the scorecard. The goal is to carry out these projects and fulfil their demands in schedule according to the definitions of the meters.

The scorecards are visually built and traffic lights and trend arrows show the overall development quite easily. All the scorecards are handled in a web-interface where the contractors can log in and always see their up-to-date scorecard status.

The partners' scorecard described here was the first one created within the study. Now in 2011 the scorecard is in use for the third year. The soft meters change every year and some changes is also done within the hard meters. The results are encouraging, because for example just by following and reporting the fault repairing times have shortened and the costs decreased.

The scorecard defines the target levels of the meters but it does not say how the contractors must reach them. The contractors have free hands to define the developing actions by themselves but they are discussed together with VNDF. The scorecard defines like guiding frames of the partnership. The purpose of the scorecard is to innovatively develop the processes and encourage the contractors to find new solutions that benefit the partnership mutually.

## MANAGEMENT SYSTEM

The study clarified and sharpened the VNDF's partnership network management. Naturally, the contracts and the

competitive settlement among the partners define the frames for the management system but the base of the management is the partnership network strategy. This strategy and partnership network level objectives are discussed in an arranged yearly partnership network day where all the contractors gather with VDNF. Then the individual partnership strategy and objectives are discussed in a yearly management meetings between the managers of VDNF and the concerning contractor. These set the base for the partners' scorecard and the objectives in it.

The partners' scorecard is discussed individually with each contractor three times a year in so called navigation meetings. The purpose of the meeting is to navigate through the contractor's scorecard, performances and state of the mutual partnership. The performance level of the meters is analyzed and the strategic goals behind the meters are discussed. The contractor delivers a report to VDNF, which includes a clarification of the current state of the meters and a scheduled plan how and by what actions the performances in the hard meters will be improved and the development project meters carried through.

The follow-up of the wanted development in the meters, according to the monthly quality reports, is also done in the monthly operational meetings between VDNF's project executors and contractor's work supervisors.

Even though the navigation is carried out individually with every contractor it can be used to manage the whole partnership network. When all the contractors determine the reasons behind their performances, VDNF gets a quite covering picture of all the factors that influence certain things. That information can be used to develop the actions as a whole. The measuring of many contractors also enables a quite large and versatile comparison. VDNF can discover the best and worst practices and so develop the whole partnership network.

The management system of VDNF includes also other functions like information and lecture days for contractors about new operation models on objectives. Also different development projects are run together with the contractors. The main thing is that the management perspectives cover the three management levels and that the objectives from top to down are in line with the strategy.

## DISCUSSIONS

The partnership networks are a growing part of the electricity distribution business. A new way of organizing distribution business processes together with partners really requires new perspectives and tools to manage the whole partnership network. The management of the partnership network should be considered already when planning and building it. The truth is that one can never totally purchase

the management and steering of an external function. One must ensure the functional management system and have enough needed resources to execute it.

The described partners' scorecard and the management system are VDNF's (Vattenfall Nordic Distribution Finland) solution to ensure the quality of the purchased services and to ensure parallel expectations and goals of the partnership network in this business. VDNF has reached excellent results. The performances in many meters and the understanding of the objectives of VDNF have improved significantly. The contractors see the partners' scorecard as a tool for themselves as well.

The partners' scorecard as a management tool covers quite many success factors of the partnership network management. The scorecard crystallizes the strategy and the objectives of the partnership, measures the success of the strategy and improves interaction when mutually evaluated. The scorecard builds transparency to the management when the contractors know what is expected, and the performances are systematically analyzed. It also improves the visibility of the management. With the help of the scorecard the performances of the partnership network and the completed management actions are easy to communicate within one's own organization.

To conclude, the fact is that the management must be customized to every partner and to every situation. A certain level of systematic actions builds the base but a skilful management includes recognizing of the situation and adjusting to it. The management does not need to be engineered science with sophisticated tools; simple can also be beautiful and functional. Knowing and recognizing the crucial points enables development towards success.

## REFERENCES

- [1] P. Trygg, J. Toivonen, P. Järventausta 2007, "Changes in business models of electricity distribution", *International Energy Journal*. vol. 8(4), 243-248.
- [2] S. Viljainen, K. Tahvanainen, A. Aminoff, P. Trygg, I. Lappeteläinen, P. Järventausta, J. Partanen 2009, "Service purchasing in electricity distribution network sector", *Proceedings of CIRED 200, Prague*.
- [3] P. Trygg, A. Aminoff, K. Tahvanainen, I. Lappeteläinen, S. Viljainen, J. Partanen, and P. Järventausta 2009, "Questionnaire survey of services and outsourcing in Finnish distribution companies", *Proceedings of CIRED 2009, Prague*.
- [4] K. Kankkunen, E. Matikainen, L. Lehtinen 2005. *Mittareilla menestykseen: Sokkolennosta hallittuun nousuun*, Talentum Media Oy, Helsinki, Finland.