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CONSULTING PROJECTS IN LOGISTICS – VALUE ADDED IN FOCUS

Summary. With the growing global economy and an ongoing specialization, companies use the service of consultancies – this is also the case in the area of logistics or even in the wider area of supply chain management. Because consulting projects bear costs and other expenditures as well as some risks connected to information asymmetry between the consultant and his client, the author has developed a project model based on his experience both as consultant and as a client. The main aim of this model is to provide a tool to maximize the value added from consulting projects. This article provides an outline of this model.

Keywords: project management, consulting, supply chain, logistics

PROJEKTY DORADCZE W LOGISTYCE – ZE SZCZEGÓLNYM UWZGLĘDNIENIEM WARTOŚCI DODANEJ

Streszczenie. W toku ciągłego rozwoju gospodarki i coraz większego stopnia specjalizacji, przedsiębiorstwa korzystają z usług firm doradczych – tak też jest w obszarze logistyki, czy szeroko pojętego zarządzania łańcuchem dostaw. Ponieważ projekty doradcze wiążą się z kosztami i pewnym ryzykiem związanym z asymetrią informacyjną pomiędzy doradcą i jego klientem, autor opracował na podstawie swoich doświadczeń jako doradca i klient model projektu, który ma za zadanie maksymalizować wartość dla klienta. Niniejszy artykuł przedstawia zarys tego modelu.

Słowa kluczowe: zarządzanie projektami, konsulting, doradztwo, łańcuch dostaw, logistyka

1. Theoretical basics of Consulting Projects in Logistics

The economic growth and development of the whole world leads to economic systems which are more and more complex. Furthermore, these economic systems with a growing complexity are sustained through an increased level of technological and organisational solutions. To maintain these systems, a sheer amount of specialised knowledge is required. This knowledge is required in all functions of an enterprise. Consulting firms, which offered their services to companies for specific consulting projects,¹ started to emerge in the twenties of the last century. The area of logistics – or broadly speaking, supply chain management² – is no exception, and we can encounter a number of consultancies which offer different consulting products for all subareas of logistics.

However, the relation between the consultant and client is a relation of information asymmetry. In this case the consultant usually has an information advantage over his client. This means that typical challenges of a principal-agent relation, which are thoroughly described in various books and articles on the principal-agent theory³, are applicable. As both parties tend to favour a long term business relationship, for reasons of trust and reliability as well as transaction costs from both sides, each is looking for means of ensuring the smooth running of projects. One of these means is the consistent monitoring of the goals of a project, which begins – or should begin – with a joint base lining phase, and ends with a project hand over to the client or, after a certain time, ends when the results of the project yield their results.

The main reason why companies hire consultants is the lack of specialised knowledge which is required to operate and grow on the different markets of today. In this role, the consultant knows the newest trends on the market and also the methods developed at universities and other academic institutions. Additionally, he has the skills which allow the transfer of these methods, innovative procedures and products to the customer. These skills mainly involve the ability to communicate at various levels with the customers' employees – from top management to floor shop workers – and analytical skills combined with the ability to use IT tools.⁴

According to Osterloh and Frost value adding is "a process of continuous value creation along the value chain. The value adding is done through use of resources and key

¹ O'Mahoney J.: Management Consultancy. Oxford University Press, Oxford 2010.

² For more information on the differences: Weber J.: Logistik- und Supply Chain Controlling. Schäffer-Poeschel Verlag, Stuttgart 2002, p. 9.

³ For more information on the principal-agent theory: O'Reilly N.: Sponsorship Evaluation. Agency Theory, Performance Measurement, Expert Consultation, Case Studies, an a Process Model. VDM Verlag Dr. Müller, Saarbrücken 2009.

⁴ Walger G.: Idealtypen der Unternehmensberatung, [in:] Walger G. (ed.): Formen der Unternehmensberatung: Systemische Unternehmensberatung, Organisationsabwicklung, Expertenberatung und gutachterliche Beratungstätigkeit in Theorie und Praxis. Otto Schmidt, Köln 1995, s. 15-17.

competencies in the process of improving usefulness to the customer and competitiveness on the market".⁵ Werr and Linnarson stress that the most important aspect of value creation through business consulting is inter-organizational learning.⁶ Only through the transfer of knowledge and creation of common experience, through knowledge and the combined experience of the client and the consultant, is the client able to create innovations which form sustainable development for the company and thus long term value added.

According to Fischer, consultants in logistics projects add value to the customer by fulfilling the following roles:⁷

- Function of competition, partner and additional resources.
- Function of positioning of logistics and its value in customer's organisation.
- Function of integration of logistics in the organisation.
- Supporting function in rationalising investments and reengineering programmes.
- Supporting function in the choice of a technical logistics system.
- Pressure function on suppliers.
- Innovation function.
- Project manager function.

In theory, value adding through consulting projects in logistics is done mainly by the transfer of knowledge from the consultant to the client – in the form of project results. But additionally by the transfer of know-how and methodology, as well as the ability to get the right resources. This paradigm has been the basis for the empirical research presented in the next chapter.

2. Reasons of Consulting Projects in Logistics – Initial Results of a Survey

To further investigate and prove the theoretical basis of why companies employ consultants in the area of logistics, the author has decided to conduct a survey among 54 logistics and supply chain managers all over the world in the year 2012.⁸ The reasons why consultants are hired is clearly seen in figure 1, which shows the results of the mentioned

⁵ Osterloh M., Frost J.: Prozessmanagement als Kernkompetenz. Wie Sie Business Reengineering strategisch nutzen können. Gabler, Wiesbaden 2003, s. 8.

⁶ Werr A., Linnarsson H.: Management Consulting for Client Learning? [in:] Buono A.F. (ed.): Developing Knowledge and Value in Management Consulting. Bentley Collage, Greenwich 2002, p. 10-15.

⁷ Fischer J.-H.: Warum Logistikberatung, [in:] Breidentstein F., Hafemann M., Lukas A. (eds.): Consulting in Deutschland 2000. Jahrbuch f
ür Unternehmensberatung und Management. FAZ-Verlag, Frankfurt am Main 2000, s. A62-63.

⁸ This survey is part of the research done by the author for his Ph.D. thesis. The survey was conducted in mid 2012 and answered by 54 mangers. It consisted of 18 multiple choice questions with additional open spaces for individual answers. The managers were from companies ranging from 50 to 100 000 employees.

survey. An important reason is the lack of resources in the (potential) clients company, which can also be understood as the lack of right resources which are only temporarily required for a defined goal. Amongst the top 4 reasons is also the need of independent expertise. In this case the client seeks external help to rate his own solution or solutions. Nevertheless, this aim is sometimes biased as being only an "insurance", meaning that managers are hiring consultants to have their ideas backed, so nobody can blame them when something goes wrong. If things do go wrong, they can always say that the consultant, with his expertise, has confirmed or had even come up with that plan. This is often used when savings are required and they are to be done by laying off workers. And as a consequence, management consultancies are often said to be an institution which does what the manager, paying for their bills, wants them to do instead of doing what is good for the client's company as a whole.⁹



Fig. 1. Reasons why clients use consultancies in logistics
Rys. 1. Powody korzystania z usług doradczych w obszarze logistyki
Source: Author's own study based on research conducted among 54 persons holding managerial positions.

⁹ Steppan R.: Versager im Dreiteiler: wie Unternehmensberater die Wirtschaft ruinieren. Eichborn, Frankfurt am Main 2003, s. 56-58.

Nevertheless, companies are hiring consultancies to have their problems or challenges solved – which means that they bring added value to the clients. When we focus on supply chain management, the reasons shown in figure 2 are the aims of consulting projects. These are the results of the same survey mentioned above. As can be seen, the main goal of projects is the development of new solutions, but cost savings are also an important one. Complementary to the development of new solutions is the design of a growth strategy. And of course we have the need of external expertise, as already briefly presented. The building of logistics objects and employee training are very operative goals which are often the aftermath of previous conceptual projects. As can be seen, the main aims of logistics consulting projects can – or even have to – be quantified. This means these projects have an identifiable value added, and this value added can be traced back to the consultant.



Fig. 2. Project aims in logistics
Rys. 2. Cele projektów doradczych w logistyce
Source: Author's own study based on research conducted among 54 persons holding managerial positions.

As project management is a common and wide-spread practice in the economy of today, it has found its way into virtually every company, and has also been a huge interest in science, where a large amount of literature and articles have emerged¹⁰. Given this strong base, a number of methods have emerged, e.g. PRINCE2¹¹ which are also applied in real business life.

The base of all methods is a phased process approach in which the project is structured and executed. The author of this article favours this approach. This proposed approach to logistics consulting projects is divided into a base lining phase, which sets up the project, and the three main phases of the project which will be presented later in this article.

Project controlling can be viewed from two different angles. The first one is the "classical" project controlling required to run the project, which monitors the resources of the project – the budget, the employed personnel and time. The second angle is much more complex and not so easy to monitor – especially in consulting projects. It is the angle of project deliverables which are the main goals of the project. Even if a project has only a non-quantifiable goal like finding a logistics growth strategy or building a distribution centre, the management team of the client company has to expect these new institutions to reach some measurable goals, like total delivery project should have its own quantifiable goals. These goals do not have to be monetary – they can be also other key performance indicators which contribute to the well-being of a business venture. These were also the basics which led to the concept of the Balances Scorecard¹² used in strategic management.

The Consulting Project in Logistics Scorecard is a tool which helps to define and monitor a consulting project with a set of logistics KPI in four areas:¹³

- Financial indicators which are in focus of most consulting projects and especially of those which have the aim of reducing supply chain costs. The proposed indicators here are reduction of operational costs, reduction of investment costs, increase of turnover and reduction of costs coming from bad implementation of logistics processes or objects.
- 2. Time-based indicator as one of the main competitive advantages achieved through logistics is supplying the right material to customers as quickly and as timely as possible. The improvement of these indicators help the overall competitiveness of the company and can level lower their inventory carrying costs. The indicators could

¹⁰ For basics please refer to: Madauss B.J.: Handbuch Projektmanagement: mit Handlungsanleitungen für Industriebetriebe, Unternehmensberater und Behörden. Schäffer-Poeschel, Stuttgart 2000; Kerzner H.: Advanced Project Management. Wiley-Blackwell, Hoboken, Cambridge 2004.

¹¹ www.prince-officialsite.com/.

¹² Kaplan R., Norton D.: Strategiczna Karta Wyników. PWN, Warszawa 2002.

¹³ Based on authors research and experience, which has been gathered during the preparation of the PhD thesis.

be lead time reduction, building time reduction, reaction time reduction and freeing human resources for other tasks.

- 3. Quality indicators since customers are very sensitive towards the quality of logistics service, it is imperative that quality indicators are also monitored in the project. The requirement can be to sustain the current level of those indicators which will be the case in cost down projects or to improve them to gain a competitive advantage over the other companies on the market. Typical indicators here are the level of pick or dispatch errors (eg. wrong SKU, wrong quantity) and the percentage of orders delivered on time and of the right quality.
- 4. Quantifiable soft factors indicators the quality of a supply chain system is measured with indicators of soft factors. Soft factors are those factors and indicators which cannot be attributed to any of the previous areas and they describe and measure the subjective reception of the supply chain system by both customers and workers of the company. By monitoring these KPIs one can determine if a system goes into the right direction. Examples of such indicators are the satisfaction level of the logistics service of a company (measured in a CRM system) or the motivation and productivity of employees working in logistics.

3. Base lining phase

Every consulting project in the supply chain area is preceded by actions which enable a project's execution. This phase – called by the author phase 0 – begins when the client has the need for a consulting project. The client therefore sets the aims of the project and some of the quality goals. In the next step he has to choose a consultant. This can happen via a tender or a request directly to a preferred consultant¹⁴. After the consultant has seen the goals and aims of the project, he prepares his project scope, proceeding, project plan, team members and commercial issues (fees and conditions like coverage of travelling costs). The next step is a negotiation phase where the project scope, team and commercial issues are detailed. This leads to the final composition of the team. Also, the joint team of the client and consultancy is defined where each position in the consultant team should have its counterpart in the clients organisation, eg. project manager from the consultancy and project manager from the client. It is advisable to specify the availability of all team members and support staff from the clients' organisation to ensure a project proceeding without any setbacks and major issues.

¹⁴ According to a survey amongst 54 supply chain and logistics professionals consultant for 46% of consulting projects are chosen via a frame contract or directly by the deciding person from his or her budget.

Team composition and project organisational structure are very important elements of the frame of the project. When choosing the team members, not only their knowledge and experience play a role, but also the right matching of characters, because all negative frictions between team members will have a negative influence on the project work and therefore affect quality and profitability. This means a smart and effective human resource management is one of the key success factors of a consultancy. Nevertheless, the team members are sometimes also a result of the requirements of the client, who asks for specific consultants whom he has been working with and who know the client's organisation. After all details are agreed upon, a contract is signed and the next phase begins.

The first substantial phase of a project is the base lining phase, which constitutes the base of the future success of the project. To achieve this, all project team members from the consultant's and client's side, including sponsors, take part in a kick-off meeting. In this meeting there is an introduction round to get to know all project members. This is important as people tend to cooperate better if they know each other. At this point, usually only the project managers have been introduced. Furthermore, a joint project plan and project schedule is made. As well, milestones are defined which mark the end of the major project parts. It is important to draw up a realistic project schedule: otherwise, people will get demotivated if they are not able to reach the goals. Moving milestones, which will also affect sponsors, who as senior officers have a tight schedule, is very difficult and causes even more work.

A major part of the base lining - and sometimes also of the whole project - is the gathering and analysis of data. There are two main sources of data: digitalized and nondigitalized data. The first type can be identified and accessed with ERP and WMS systems, but they are often complemented by data stored locally - especially in the form of spreadsheets. Non-digitalized data can be on paper, e.g. bills, reports, blueprints, but usually these are in the form of the knowledge of experts within the client's organisation. An important factor to be looked at while gathering logistics data is time. On one hand, it is good to conduct an analysis over a long time period, but on the other hand, such an analysis can be difficult due to the sheer volume of this data, which cannot be handled by the computers available. When concentrating on a given time period, the time period has to be chosen in the right way, so that it takes into consideration the seasonality of the given business. For logistics projects, not only movement data is required, but also data concerning the inventory of a business. Also, in this case, a representative date has to be taken to define the inventory for analysis. The kind of consulting project (network design, conceptual planning, detail planning) defines the detail of the data. As for network planning, only global data like number of order lines, number of transports and number of pallet places are required. For the design of warehouses or distribution centres, information on order line level

(product type with dimensions and weight and appropriate loading unit), as well as loading unit details are required. This data is required to define the throughput and storage requirements of the designed objects and its functional areas (goods reception, storage, picking, packaging, dispatch and value added). The quality of the data is of the utmost importance and the following frequently encountered errors have to be corrected:

- Not fitting units, e.g. kilograms and grams in the same field without distinction.
- Data which don't belonging to the analysed time period often combined with missing date from the analysed time period.
- False data format, eg. date.
- Missing important information, eg. fill grade of load units.
- False data.

An experienced consultant can identify the majority of corrupt data with simple plausibility checks, for instance by checking the volume of stored goods according to data with the physical capacity of the present warehouse or calculation of theoretical density of the analysed products. When corrupt or missing data is identified by the consultant, he informs the client and the client either corrects the data – which should be the case – or they both agree on artificially generated data based on the experience of the client's employees and the consultant. The process of data validation brings value to the customer because he is often not aware of the data quality in his system. Additionally, data validation can lead to a better KPI set that will be reported by the logistics department or its sub departments. The process of data correction should be documented step by step, so that other team members, or even other people working with this data, are aware of its sources.

When all parties agree on the data, the "backbone" of every logistics project can be created: the material flow diagram. The essence of the material flow diagram is visualisation of the physical interdependencies and the physical flow of material through the elements of the logistics system. Because logistics consulting projects can address different levels of logistics (from strategic network design to single material handling equipment optimisation), the details of material flow diagram can – and should – also vary. The top level has the least detail: the single points will represent whole logistics objects (eg. distributions centres) or even their groups (suppliers, plants, customers) for strategy projects. The middle level having areas of logistics in an object, like goods reception or picking area for conceptual projects. And finally, single points of the material flow system, like rotary tables from conveyor systems, for detail planning and implementation. The material flow diagram is made for a specified time period, which also depends on the level and kind of project, year, day and hour being the common time periods used. In the later ones, there is usually an average and peak day or hour shown. An exemplary material flow diagram is shown in fig. 3.



- Fig. 3. Exemplary material flow diagram. Example from a conceptual design of a distribution centre project. Time unit: day
- Rys. 3. Przykładowa mapa przepływu towarów. Przykład z projektu koncepcyjnego centrum dystrybucji. Jednostka czasu: dzień

Source: Author's own study in an advisory project.

The next step in the base lining phase is determining the current state and cost of the logistics system which is to be improved. In this phase it is very important that consultants work closely with other departments from the client's organisation – especially with experts in controlling and accounting, as they know the figures which should be monitored, their composition and location in the organisation management systems. The cost structure for a company's supply chain is important in a cost optimisation project, but as well in other projects, because the numbers will be used to evaluate and quantify alternatives – eg.

the cost of employees will impact the choice between a manual and an automated solution and therefore determine the level of automation of a logistics system. The following logistics costs should be taken into consideration during the base lining phase:¹⁵

- 1. Human resources costs
 - a. Total cost of blue collar workers (salary, training costs, bonuses, hiring costs).
 - b. Total cost of white collar workers (salary, training costs, bonuses, hiring costs).
 - c. Total cost of temporary workers.
 - d. Other costs of human resources management (eg. percentage of human resources department cost).
- 2. Cost of fixed logistics assets
 - a. Buildings and grounds
 - Amortisation and financial costs (interest).
 - Rent.
 - Energy, water, etc. costs.
 - Land tax.
 - Refurbishment, cleaning and security costs.
 - Insurance.
 - b. Equipment in building (HVAC, racks, stacker cranes, etc.)
 - Amortisation and financial costs (interest).
 - Rent.
 - Energy costs.
 - Service costs.
 - Insurance.
 - c. Vehicles (Forklift trucks, road trucks, trailers, automated guided vehicles, etc.)
 - Amortisation and financial costs (interest).
 - Rent.
 - Energy and fuel costs.
 - Service costs.
 - Insurance.
 - Road tax, etc.
 - d. Load units, bins and packaging
 - Acquisition of packaging and bins.
 - Rent.

¹⁵ The list is a result of extensive work of the author and his colleagues during various projects and its application has met positive feedback from the customers. For more theoretical background please see Gollwitzer M., Karl R.: Logistikcontrolling. Langen/Müller, Bremen 1997.

- Empties management systems administration cost.
- Road tax, etc.
- e. Information technology costs
 - Software licence costs.
 - Amortisation and financial costs (interest) for hardware.
 - Rent.
 - Leased circuit costs.
 - Service costs.
- 3. Inventory costs
 - a. Capital costs from frozen liquid assets materials, semi-finished goods, products (percentage from average inventory level).
 - b. Scrapping costs for materials, semi-finished goods, products which cannot be used anymore.
- 4. External costs
 - a. External logistics service provider costs (warehousing, operating a distribution centre etc.).
 - b. External transport costs (road, rail, air and sea freight).
 - c. Logistics and supply chain consulting costs.

The identification of logistics costs is for the majority of companies a value itself – especially on a strategic level, because these costs can be benchmarked to costs of other companies in the industry. Most certainly, consultants should be able to provide these costs as consultants should maintain a benchmark table for logistics costs in each industry. Another way to facilitate decisions is an internal benchmark between plants and sites within one company. This kind of benchmarking is an important management tool, yet it puts additional emphasis on properly base lining, because corrupted data can lead to distorted results and thus distorted conclusions, which can have serious long term repercussions. This means that cost identification and assessment should be done with the highest care and precision – especially, when different sites, plants or logistics units are compared within a project.

4. Project Phases

After the finalization of the base lining phase of the project, the second phase (of a supply chain consulting project) commences: the alternatives creation phase. The base for this phase is a commonly accepted data base, which is very often prepared in the preceding base lining phase. However, due to the ongoing process of gathering additional data, it can be also attributed to this phase.

Building upon the material flow diagram and collected data, an ABC analysis¹⁶ of material and/or products, within the analysed area or company, is made. This analysis allows the attribution of each product, on the SKU level or product family level (depending on the level of the project), to one of the three main categories. This classification enables one to cluster the products, and thus propose a different solution for each cluster. Since only one dimension is usually not enough, a second dimension is added (eg. importance of a material on production – JIT/JIS/warehouse,¹⁷ material volume, size or weight, special required conditions like tempered goods, chemical storage or a combination of those). The two dimensional analysis enables the creation of a data matrix, which can be used to determine the optimal storage and picking or distribution method for each matrix cluster.¹⁸

An important point for setting the base for further evaluation of alternatives is agreeing on common assumptions. These assumptions tend to substantially influence the outcome of the analysis, hence they should be agreed upon between all participating parties the financial ones especially, including the financial and controlling departments of the customer. Another assumption is the growth of the clients business. This is done with the marketing and sales or business development department and consists of a plan for the future years. The span of the forecast also determines the planning horizon, as the planned supply chain solution should not only cover the current needs of a business but should also account for growth or adjustment to future developments. However, the growth pattern should not be too optimistic or too pessimistic, as a bad forecast can lead to additional unplanned and high costs. This can result from a logistics system that is too restricted, which will have to be expanded by distress measures or, on the other hand, from costs due to having an over-sized logistics system. Last but not least, specifications for the logistics systems have to come from the logistics strategy. This strategy can be given by the management, but also by the client of logistic services - in the case of inbound supply chains: production and manufacturing. These requirements vary from the type of projects, but can be a FIFOprinciple storage¹⁹, 24-hour delivery service, just-in-sequence delivery to manufacturing line, batch tracing, etc.).

The next step is usually to agree on potentials in the logistics project. However, is step is sometimes already made in the base lining phase. With the data collected and – more importantly – the experience of the consultant, he can estimate the cost reduction potential in the different areas of the supply chain, which can be achieved via better processes and more effective logistics structures or negotiations with suppliers. It is important to get the information and acceptance from the key players in the supply chain organisation of

¹⁶ Nebl T: Produktionswirtschaft. Oldenbourg Wirtschaftsverlag, Oldenburg 2010, s. 415-418.

¹⁷ Martin H.: Transport- und Lagersysteme. Vieweg, Wiesbaden 2006, s. 310-312.

¹⁸ Schietinger J.: Das Optimale Distributionslager. Management Circle, Eschborn 2007, s. 26-28.

¹⁹ Ibidem.

the customer - especially the supply chain or logistics manager - as this will be the person who will have to support all actions.

The core of the second phase – identification and assessment of alternatives – is setting up viable alternatives for the material flows within the scope of the project. As for strategic network design projects, this could be different transports modes (air, sea, rail, road or combined freight) or make-or-buy decisions. As for optimisation or design of new logistics objects projects, the area of interest are different picking, storage and packaging systems and technologies. The first step is to have considered all alternatives (brainstorming, where all thinkable alternatives for each material flow in scope are mentioned). This is followed by narrowing the alternatives to the viable ones. In the narrowing step, the knowledge and experience of the consultant plays an important role as he has to know the solutions in the particular industry (both technical and organisational) and, on the other hand, to know which solutions can be applied in the particular case. This is the main value added by the consultant in this phase – his experience and knowledge allows the team to pursue only those alternatives which are viable – and thus saves time and money for the customer because the team does not have to further evaluate other options.

When the choice of alternatives has been narrowed to the viable ones, each alternative should be rated by quality and quantity, which means costs and possible revenues. While the first part is a subjective matter, which can be made objective by a quality decision matrix with all participants having weighted votes, the second part consists of the core work during the second phase of a consulting project. This requires specific analytical skills as well as a vast data base with benchmarks, costs of various solutions, productivity indexes, etc. Nevertheless, every alternative should be appropriately visualized so that all team members understand it. A visualisation of an alternative for a distribution centre concept is shown in fig. 4.

In the case that the company is dealing with an outsourcing project, the list of alternatives will be a list of potential logistics service providers made up from the consultant's lists, with additional proposals from the customers (or rejection of some proposed LSPs due to bad experience in the past). In these kind of projects, along with preparation of the list of potential bidders, a request for quotation is prepared which contains the material flow prepared in the base lining phase.²⁰

²⁰ On logistics outscourcing see also Müller-Dauppert B.: Logistik Outscourcing. Ausschreibung – Vergabe – Controlling. Heinrich Vogel, Darmstadt 2009.



Fig. 4. Visualisation of an alternative used in a distribution centre of a retailer. Example from a consulting project for design of a new distribution centre for retail

Rys. 4. Wizualizacja jednego z alternatywnych rozwiązań stosowanych w centrum dystrybucji dla handlu detalicznego. Przykład z projektu centrum dystrybucji handlu detalicznego Source: Author's own study in an advisory project.

The matrix depicted above is used to assess the qualitative and non-measurable aspects of each alternative (eg. process quality, process reliability, sustainability, impact on environment, etc.). In connection with the results of the quantitative assessment, a two dimensional decision matrix can be made to facilitate the decision about which alternative is to be chosen. The final choice based on this cost-benefit matrix is done by the customer. This is also the first thing done in phase 3 - choice of alternative. The choice of the alternative is the easiest and fastest part though. The more sophisticated and time consuming part is to bring the decision to the organisation of the customer, which usually has a complex decision structure – especially when it comes to investments. Generally speaking, the bigger the project (and thus the investment or budget), the higher and wider in the hierarchies one must go to get approval. The communication aspect of the project (often referred as project marketing) is thus an important part of the project.



Fig. 5. Model of a consulting project in logistics Rys. 5. Model projektu doradczego w obszarze logistyki Source: Author's own study based on professional experiences.

Although the alternatives have been detailed in phase 2, in phase 3 they usually have to be even more detailed. The most common decision basis is the financial aspect and business case incorporating all developed alternatives. All relevant decision points and data has to be properly visualized. Another thing to remember, and which will be the basis for the implementation, is the schedule for the chosen alternative (or all viable alternatives if implementation time is a key factor). This schedule should take into consideration realistic implementation times (eg. building time, including weather), availability of resources (which can vary according to the market situation) and – what is often forgotten – time for decisions, as well as permit issuing. An overly ambitious schedule can lead to time pressure and thus yield inferior project results. The final presentation of the project plan is usually a presentation in front of a decision board consisting of sponsors and other management members interested in the project. This presentation is also an important part of the documentation and should be prepared accordingly, as it will definitely be used in the client's organisation repeatedly.

The core project can – and from the point of view of the consultant, even should – generate further projects. These projects can be implementation projects based on concepts developed in the core project, dwelling more into more detail (eg. concept planning of a distribution centre as a result of a network design project, change management, coaching and training in the client's organisation, or projects in areas which have been identified in the projects on the project interfaces.)

5. Summary

In the first chapter the article shows an outline of how to organise and execute consulting projects in the area of logistics. Due to numerous factors and stake holders, these projects tend to be complex and have to incorporate all possible parties and institutions in an effective way. Therefore, the proposed project is organised with a core team on the consultant's side that is mirrored by the customer, ensuring high transparency for the customer, team development and substantial knowledge transfer. Knowledge transfer is one of the key benefits and therefore also of real value for the customer. Through this transfer, future projects can be handled either alone or in a shorter time period, which saves external consulting costs as well as internal resources. Another important point is the use of the consultants expertise, knowledge and experience to focus on viable solutions, thus achieving the same results as already shown: increasing the effectiveness of the company's own resources. Additional value can be added by the organisation of the project into phases as shown in figure 5. Clear milestones in each phase allow for better monitoring of the project, thus allowing the consultant to turn towards the real needs of the client.

In summary, the core value added through consulting projects in logistics for the client is a smooth execution of the project, ensuring the best possible use of internal and external resources. Additional value adding is done by using the consultants' experience and knowledge of the current state-of-the-art solutions in order to introduce innovative logistics processes and possible product innovations in logistics, which will also benefit the final customer. Other important elements of the project is knowledge transfer from the consultant to the employing organisation, as well as a base line and benchmark of his logistics processes and institutions which were focused on during the project.

Bibliography

- Fischer J.-H.: Warum Logistikberatung, [in:] Breidentstein F., Hafemann M., Lukas A. (eds.): Consulting in Deutschland 2000. Jahrbuch f
 ür Unternehmensberatung und Management. FAZ-Verlag, Frankfurt am Main 2000.
- 2. Gollwitzer M., Karl R.: Logistikcontrolling. Langen/Müller, Bremen 1997.
- 3. Kaplan R., Norton D.: Strategiczna Karta Wyników. PWN, Warszawa 2002.
- 4. Kerzner H.: Advanced Project Management. Wiley-Blackwell, Hoboken, Cambridge 2004.
- 5. Madauss B.J.: Handbuch Projektmanagement: mit Handlungsanleitungen für Industriebetriebe, Unternehmensberater und Behörden. Schäffer-Poeschel, Stuttgart 2000.
- 6. Martin H.: Transport- und Lagersysteme. Vieweg, Wiesbaden 2006.
- Müller-Dauppert B.: Logistik Outscourcing. Ausschreibung Vergabe Controlling. Heinrich Vogel, Darmstadt 2009.
- 8. Nebl T.: Produktionswirtschaft. Oldenbourg Wirtschaftsverlag, Oldenburg 2010.
- O'Reilly N.: Sponsorship Evaluation. Agency Theory, Performance Measurement, Expert Consultation, Case Studies, an a Process Model. VDM Verlag Dr. Müller, Saarbrücken 2009.
- 10. O'Mahoney J.: Management Consultancy. Oxford University Press, Oxford 2010.
- 11. Osterloh M., Frost J.: Prozessmanagement als Kernkompetenz. Wie Sie Business Reengineering strategisch nutzen können. Gabler, Wiesbaden 2003.
- 12. Schietinger J.: Das Optimale Distributionslager. Management Circle, Eschborn 2007.
- 13. Steppan R.: Versager im Dreiteiler: wie Unternehmensberater die Wirtschaft ruinieren. Eichborn, Frankfurt am Main 2003.
- Walger G.: Idealtypen der Unternehmensberatung, [in:] Walger G. (ed.): Formen der Unternehmensberatung: Systemische Unternehmensberatung, Organisationsabwicklung, Expertenberatung und gutachterliche Beratungstätigkeit in Theorie und Praxis. Otto Schmidt, Köln 1995.
- Werr A., Linnarsson H.: Management Consulting for Client Learning? [in:] Buono A.F. (ed.): Developing Knowledge and Value in Management Consulting. Bentley Collage, Greenwich 2002.
- 16. Weber J.: Logistik- und Supply Chain Controlling. Schäffer-Poeschel Verlag, Stuttgart 2002.