

# INFORMATION TECHNOLOGY REQUIREMENTS IN AN OUTSOURCING PARTNERSHIP

*Marianne Kinnula*  
*M.Sc, SW Subcontracting Manager*  
*Nokia Corporation*  
[marianne.kinnula@oulu.fi](mailto:marianne.kinnula@oulu.fi)

*Veikko Seppänen*  
*Dr.Econ, Dr.Tech, Professor*  
*Oulu University*  
[veikko.seppanen@oulu.fi](mailto:veikko.seppanen@oulu.fi)

## **Abstract**

Outsourcing is widely used in today's competitive business environment. However, need for information technology arrangements between the companies is often forgotten or the amount of work underestimated. This paper describes experiences from a case study where two companies started working in an R&D outsourcing partnership relationship, and reports problems encountered and possible solutions to them.

## **Keywords**

Outsourcing, partnering, outsourcing partnership, information technology

## **INTRODUCTION**

Collaboration between companies is one of the major current trends. It has been ongoing for a while and seems that it's still growing. Today, companies tend to focus their operations on their core competencies and outsource large amounts of other functions that do not add value. It is generally seen that this trend is the result of ever-increasing competition that forces companies to find new ways to be more productive and competitive (Pralahad & Hamel, 1990; Quinn & Hilmer, 1994).

Outsourcing, or contracting out, as a practice is nothing new, although lately it has been given much interest both in academic literature and in popular business press literature. Prior to and during the Industrial Revolution, there have been well established practices of outsourcing both in private and governmental sectors. Oldest known examples date back to the Roman times, when tax collecting was contracted out. Corresponding examples can be found from eighteenth and nineteenth century England, USA, and Australia in various forms, including mail delivery, prison management, road maintenance, and operation of street lights, etc. (Domberger, 1998).

Citation: Kinnula, M., Seppänen, V. (2003) Information technology requirements in an outsourcing partnership. Proceedings of the Frontiers of e-Business Research 2003 conference, Tampere, Finland, September 2003.

However, from mid-nineteenth century, and during most of the twentieth century up until the last twenty years there was a downswing in contracting out, since large, vertically integrated enterprises were more suitable for the economic situation of those days, and internalization of transactions within organizations was the dominant trend. Outsourcing was seen more as a way to reduce costs and to temporarily access resources which were not needed all the time in the company, more like 'body hiring'. But in 1980s and 1990s it was seen that large enterprises are neither responsive enough nor more efficient than the cooperative networks of enterprises, which were able to specialize in different aspects of product development or production (Domberger, 2001).

What were the reasons then that the previously successful organizations were no more effective? Definite answers cannot be given but some analysis can be made. Economical changes in 1980's and 1990's were big. "Globalization, competition from low-wage developing countries, and advances in communications and information technology" (Domberger, 1998) are the most often referred factors.

New forms of organizations were created by academics in the late 1980s as an answer to these changes. Charles Handy's (1989) 'shamrock organization' and Davidow & Malone's (1992) 'virtual corporations' interviewed the idea of core activities performed in-house and the more peripheral activities bought from other organizations. (Domberger, 1998.)

After that, many different types of organizations have been created. These include strategic networks, alliances, multiple vendor contracts, joint ventures, different kind of spin-offs, consortia etc. (Venkatraman & Loh, 1994). In the same time interest in closer relationships has grown as the need for a portfolio of relationships has been understood – different kind of relationships are needed for different type of needs. This can be seen in the varying type of outsourcing relationships. Some of the relationships are not more than simple subcontracting relationships or buyer-supplier relationships, which have been common especially earlier. However, as the need for different type of relationships has been noticed, the amount of partnership type outsourcing relationships has grown rapidly. Many of those relationships, at least initially, are based on the need for cost savings but another important reason to enter into a partnering relationship is the possibility to tap into the knowledge of new technologies beyond the firm's boundaries (Lacity & Hirschheim, 1996; Kakabadse & Kakabadse, 2000). Other reasons include flexibility in allocating human resources, access to new markets, possibility to concentrate on company's core competences, increasing product or service quality, shortened time to-market, transferring fixed costs into variable costs, and enhancing competitive advantage (e.g. Tuten & Urban, 2001; Embleton & Wright, 1998; Kakabadse & Kakabadse, 2000). However, outsourcing is not only "contracting for skills, assets and resources, but contracting for results, where the quality of both parties' respective skills and resources is highly important to the final outcome" (Peisch, 1995). Very important difference between partnering type relationships compared to more simple and distant relationships (e.g. subcontracting or buyer-supplier relationship) is that partnering relationships are seen as deep, long-term relationships in which many traditional boundaries between companies are broken (Tuten & Urban, 2001; Kakabadse & Kakabadse, 2000).

One of the less studied matters in outsourcing is information technology requirements and problems that can be encountered when two companies work in a very close relationship.

Results from a case study are presented in this paper. Expectations and needs of the companies as well as the problems encountered are reported.

Empiria for this study comes from qualitative analysis of data of a case study where Nokia, a large telecommunications company sold part of its software product research and development business to another company and the said companies continued their collaboration in partnership mode within the same business area.

## **OUTSOURCING PARTNERSHIP – WHAT IT IS**

The terms and concepts used in outsourcing and partnering field are in a wide use but usually not very well defined. An outsourcing partnership is a relationship that has elements from both outsourcing and partnering and thus understanding of both terms is needed for definition of what an outsourcing partnership really means.

### **Outsourcing**

The term ‘outsourcing’ is often used as given and it is not defined what it really means. However, it is a very ambiguous term that is used in many different contexts and in many different meanings. The relationships described as outsourcing relationships differ from each other on the level of depth, being simple ‘subcontracting-type relationships’ or ‘outsourcing partnerships’ or anything between.

Couple of examples of the outsourcing definitions:

- Oxford English Dictionary (Oxford, 1993) gives for a word outsourcing a definition of “the obtaining of goods or contracting of work from sources outside a company or area”.
- Zhu et alii (2001) define outsourcing as “The process of transferring the responsibility for a specific business function from an employee group to a non-employee group.”
- Definition of Domberger (1998) is very similar, being “a process whereby activities traditionally carried out internally are contracted out to external providers” (Domberger, 1998)

The central point in these definitions, as well as in the others found from the literature, is that some business function(s) are performed by a third party. Zhu et alii (2001) and Domberger (1998) emphasize also the aspect of movement from in-house to external sourcing. Transferring of assets, in particular staff, is also one common aspect of outsourcing, even though it is not essential to it (Hancox & Hackney, 1999).

For the purpose of this research I have included in the definition of the word outsourcing all these aspects and define it as ‘The process of transferring the responsibility for a specific business function from an employee group to a non-employee group, including transfer of assets, such as personnel’.

## Partnering

Collaborative relationships started to gain attention in the late 1980's and early 1990's. At that time it was thought that partnering was just the latest bandwagon. However, as we know, concept of partnering is still in use. Earlier collaborative relationships were usually rather distant and included very little of actual collaborative work. However, need for different kind of relationships has been understood and currently they include e.g. strategic networks, alliances, multiple vendor contracts, joint ventures, different kind of spin-offs, consortia etc. (Venkatraman & Loh, 1994).

Ellram and Edis (1996) discuss paradigm shifts from traditional collaboration relationships to partnering relationships. Traditionally a collaboration relationship is coloured with suspicion and mistrust, opportunism, strictly guarded communication between parties, contracts for single projects, limited objectivity, retribution of mistakes, limitation of organizational access, involvement in project level only, blaming, and distance. This kind of traditional thinking is not beneficial to a partnering relationship. To get the relationship work, a major change in attitude is needed. In partnering relations mutual trust, shared goals and objectives, open and honest communication, long-term commitment, objective critique, creative and supportive atmosphere, organizational access and resource sharing, total company involvement in all levels, teamwork, and closeness form the basis for the relationship.

Other researchers are much on the same line of thinking. E.g. Domberger (1998) discusses partnering relationship as a manifestation of trust. The need for this kind of relationships wells from the demand of greater and closer co-operation, and an important element in the relationship is atmosphere of trust between the parties. Information sharing, open communication and attitude of working for common goals are all the tools for achieving that. Partnering works very much as a social conditioning process: if people behave as agreed, the formal contract need not be invoked. (Domberger, 1998.)

Even though partnering is nowadays a well-known and used form of co-operation, the literature does not offer one, clear definition of partnering or strategic partnership. Domberger (1998) states that "there are as many versions of partnering as there are partnering agreements."

However, partnering relationship has certain characteristics that are mentioned in most of the definitions (Table 1). It is considered a purposeful strategic relationship between two independent companies where the companies strive for common goals and mutual benefit. It includes commitment over a longer time period, mutual sharing of information, risk and reward sharing, honesty, and openness. It gives one or both partners some competitive advantage in the marketplace, possibly giving access to new technologies or markets or ability to provide a wider range of products/services. It can also be seen to include the aspect of core competence thinking.

Table 1. Characteristics of a partnering relationship

Reference	Main conclusion
Mohr & Spekman, 1994	Partnership is a strategic relationship
Vilkamo & Keil, 2003,	Companies strive for mutual benefit, common goals

Mohr & Spekman, 1994	
Mohr & Spekman, 1994	Relationship has a purpose
Mohr & Spekman, 1994, Ellram & Hendrick, 1995	Relationship is between two independent companies
Mohr & Spekman, 1994	Relationship is motivated by gaining some competitive advantage in the marketplace
Vilkamo & Keil, 2003; Ellram & Hendrick, 1995	Commitment over a longer time period
Ellram & Hendrick, 1995; Powell 1987	Risk and reward sharing
Mytelka, 1991	Long-term objectives are more important than short-term achievements
Domberger, 1998	Relationship is open and honest
Vilkamo & Keil, 2003; Ellram & Hendrick, 1995	There is mutual sharing of information
Powell, 1987	Possible access to new technologies or markets
Powell, 1987	Ability to provide a wider range of products/services

In this paper Vilkamo's and Keil's (2003) definition of partnering relationship is used: "a long term, continuous and mutually beneficial vertical non-equity relationship where confidential information on future plans and visions are shared openly and proactively in order to help both companies to focus their resources to the right direction." It is also assumed that the partners have no ownership relation between each other, such as joint venture etc.

### **Outsourcing partnership**

'Outsourcing partnership' is, once again, a widely used term with no unambiguous definition. It is used rather freely in literature, with no explanations. Google search engine (<http://www.google.com>) found about 2.000 hits for the definite expression but no explicit definitions for it. However, implicitly it is possible to get the understanding of the use of the term: outsourcing partnership is a partnering relationship resulting from the outsourcing process, opposed to the other types of relationships that can be generated from the outsourcing process.

Thus, in this paper, outsourcing partnership is defined as 'a strategic partnering relationship resulting from the process of transferring the responsibility for a specific business function from an employee group to a non-employee group, including transfer of assets, such as personnel; strategic partnering relationship being a long term, continuous, and mutually beneficial vertical non-equity relationship where confidential information on future plans and visions is shared openly and proactively in order to help both companies to focus their resources to the right direction'.

## **THE CASE PRESENTATION**

In September 2001 Nokia sold (outsourced) part of its software product business in Finland to another Finnish company, TietoEnator. The sale affected five research and development sites

in Finland and 320 employees were transferred to TietoEnator. The companies continued collaboration in an outsourcing partnership relationship. Despite the sale and the resulting arrangements the R&D work had to continue just as it was before.

The outsourcing partnership caused big changes in information technology arrangements:

- There were more than 2500 software licenses from over 200 vendors used previously in the Nokia internal use that had to be checked, many of them re-negotiated. Some of them already had some option for the use in a collaborative environment but many of them either did not include collaboration options or flatly denied any collaborative use.
- About 700 personal computers were transferred from Nokia to TietoEnator. That affected e.g. applications, network connections, e-mail...
- More than 1000 applications had to be checked for the possibility to use in a collaborative environment and many of them needed major changes. However, they needed to be available for the users in the both companies at the same time.
- Network infrastructure needed to be built between Nokia and TietoEnator – employees' connections to Nokia's network were removed and replaced with new ones. Four new project networks were built and seven laboratories connected to them.
- Existing working environment from Nokia to TietoEnator project network was transferred as equal as possible

A major challenge in this process was how to do all this in such a way that project schedules and information security were not affected

### **How to make it possible**

An IT project was started as soon as the outsourcing partnership deal was confirmed between the companies. Network infrastructure building was started as soon as possible. The IT project included a project manager and some other members from Nokia information management as well as members (former Nokia employees, current TietoEnator employees) from every affected site. The members were chosen based on their experience and interest in IT matters. In addition to that, the project was supported by the Nokia employees who were responsible for the applications used in R&D. In total about 450 persons somehow worked for this IT project (both from Nokia and TietoEnator, as well as other collaborators such as e.g. HP).

As there were over 1000 applications in use in the environment, a practical way to check and create a solution for each of them was needed. That is why the applications were divided in three types: stand alone tools, collaborative tools, and tools used from Intranet (Figure 1). Management strategy and solution for each type was created. Stand alone tools were the ones installed on a single computer. Those usually did not create any problems and it was possible to continue using of them as before. Collaborative tools already had some possibility for the use in collaborative environment or the solution was possible to create and thus they did not cause big problems either. A usual solution was to add a server to the network for the replicated data, as well as some (usually two) firewalls. Tools used from Intranet were the most problematic ones. Use of them in a collaborative environment usually would have violated Nokia information security policy and that is why those tools generated a significant

amount of work and, for some of them, no solution was possible to find. The solutions for this type of applications usually included addition of several firewalls, or even changes for totally new tools.

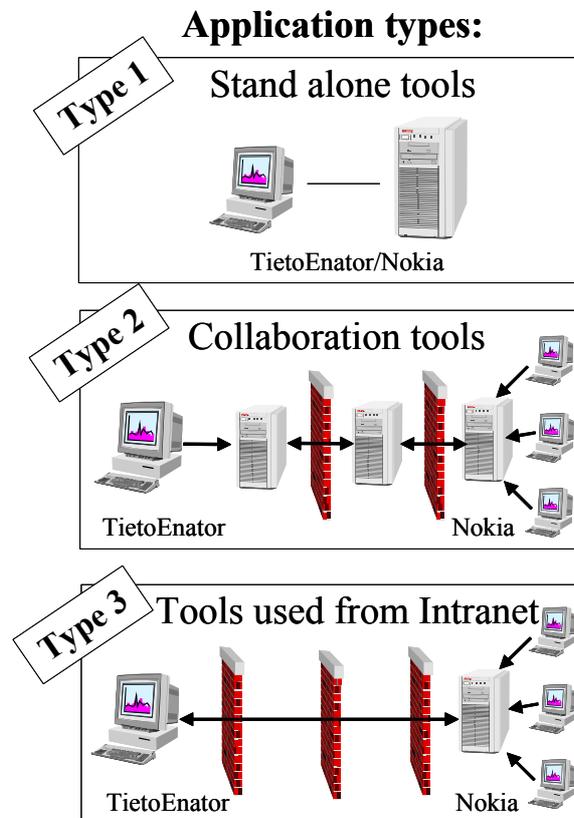


Figure 1. Choosing the management strategy for different applications

Building of the project network was a big job but it was rather straightforward work, once it was clear what the needs for the network were. In the beginning of the relationship the former Nokia employees still worked in the Nokia network but once the project network was ready and needed application solutions were found, former Nokia employees were transferred into TietoEnator project network. The transfer was concluded in phases (10-30 persons at a time) to make it easier to solve incoming problems. Each transfer took 3-7 days.

The project took 10,5 months of calendar time. Total work time used for this project was more than 6 manyears and even more, since all the efforts have not been logged.

### Problems encountered

The task was very complicated one in a very complicated environment and the need for careful planning was noticed in the beginning of the IT project. During the deal negotiations between the companies the management did not have a realistic enough view of how big a task this would be – how much time it would need and how much money it would cost.

Expectation of needed calendar time was 6 months when the project took 10.5 months. It also cost surprisingly much – e.g. the need of all the new servers in the project network was not understood.

Communication during the IT project was inadequate and caused needless interrupts during transfer of the employees from the Nokia network to the TietoEnator project network: when easily fixable problems appeared, the entire transfer process was interrupted. As a result, 2-4 workdays were lost every time from the transfer project. This could have been prevented with the help of even better planning of communication and using of one, clear contact point in every site.

Some working time was also lost from the R&D projects, because network was unstable during the transfer of employees, as well as were some tools, which did not have collaboration solution. Also, some systems automatically revoked access rights from the users. That caused unnecessary delays when the access rights had to be renewed. These could have been prevented with the more vigorous testing of tools in the new environment and checking of the systems in early enough phase in order to override revoking of the access rights.

Big amounts of data had to be moved from one server to another. Data ownership of different kind of databases and network disk shares was not always clear – sometimes no-one knew who had the authority to give permission to access, move or copy data, and this naturally caused unnecessary delays.

The tools used in the environment caused surprisingly much of work. With some tools, the only way to collaborate was by violating Nokia IT security policy, and finding acceptable solutions for these tools took time. In addition to that, with most of the tools it was not clear that collaborator was allowed to use the tool without a separate agreement. Thus, all the licenses needed to be checked and usually renegotiated. The negotiation process is long – takes often months – and experienced people are needed. The only way to prevent this kind of problems is to take collaborative needs into account even when a new tool is taken into company internal use and not intended for collaborative use.

## **CONCLUSIONS**

The basic IT requirements for an R&D outsourcing partnership relationship are rather simple:

- The environment needs to be stable – all the needed tools are available when needed, without interruptions
- Conflict between information flow and information security needs to be resolved – two companies need to work as one without risking IT security

A big R&D outsourcing partnership deal includes a surprising amount of IT work and is not to be underestimated. However, well planned is half done. In planning the crucial areas seem to be resourcing of the IT project, technical solutions for the infrastructure, understanding of

the amount of transferred applications and the type of them including possible solutions for the transfer, piloting the solutions, license negotiations, possible risks for the project, and, last but not least, communication to the affected parties. This can be used as a preliminary checklist for this type of a project.

Once the environment is up and stable it needs only maintenance if the basic underlying solutions have been made carefully and needs had been comprehensively mapped out when establishing the relationship. For this, having an IT specialist present already in agreement negotiations makes a big difference and would have been helpful in this case also. The decision to use transferred employees as project resources from different sites was successful. They helped in communication and also were able to inform of the problems as soon as they appeared.

Network infrastructure building is easy, difficulties lie in getting the applications work in the collaboration environment. Another difficult part is to keep working environments (including applications) stable during transfer so that the employees are able to continue their work as usual. Careful piloting of all the application solutions before taking into use is a big help.

Work amount of checking and re-negotiating of licenses should not be overlooked. All the licensing terms, conditions, and agreements have to be checked before transfer, as well as the real need of the application and its licence. Negotiations take calendar time and a lot of work, and proper assistance is needed (e.g. legal support).

Communication to those who are affected by the change is important. People whose daily work revolves around changes do not always remember that the change is always a shock to those who are at the receiving end. Well planned communication lessens the unnecessary delays due to lack of information.

Key to a successful transfer process as well as further co-operation seem to be – not surprisingly – good planning and communication of the plans and work progress.

## **REFERENCES**

- Davidow, W.H. & Malone, M.S. 1992. *The Virtual Corporation*. New York, Harper Business.
- Domberger, S. 1998. *The Contracting Organization – A Strategic guide to Outsourcing*. Oxford: Oxford University Press.
- Ellram, L.M. & Edis, O.R.V. 1996. A Case Study of Successful Partnering Implementation. *International Journal of Purchasing and Materials*, Fall, 20-28.
- Ellram, L.M. & Hendrick, T.E. 1995. Partnering Characteristics: A Dyadic Perspective. *Journal of Business Logistics*, Vol. 16, No. 1, 41-64.
- Embleton, P.R. & Wright, P.C. 1998. A practical guide to successful outsourcing. *Empowerment in Organizations*, Vol. 6, No. 3, 94-106.

- Hancox, M. & Hackney, R. 1999. Information Technology Outsourcing: Conceptualizing Practice in the Public and Private Sector. Proceedings of the 32nd Hawaii International Conference on System Sciences.
- Handy, C. (1989). The Age of Unreason. Boston: Harvard Business School Press.
- Kakabadse, N. & Kakabadse, A.. 2000. Critical review – Outsourcing: a paradigm shift. Journal of Management Development, Vol. 19, No. 8, 668-728.
- Lacity, M.C. & Hirschheim, R. 1996. Information Systems Outsourcing – Myths, Metaphors and Realities. Chichester: John Wiley & Sons.
- Mohr, J. & Spekman, R. 1994. Characteristics of partnership success: Partnership attributes, communication behaviour, and conflict resolution techniques. Strategic Management Journal, Vol. 15, 135-152.
- Mytelka, Lynn (1991). “Strategic Partnerships; States, Firms and Competition”. London: Printer Publishers.
- Oxford English Dictionary, 1993. <http://dictionary.oed.com>, 19.12.2003.
- Peisch, R. 1995. When outsourcing goes awry. Harvard Business Review, Vol. 73, No. 3, May-June, 24-30.
- Powell, W. 1987. Hybrid organizational arrangement: New form or transitional development. California Management Review, Vol. 30, No. 1, 67-87.
- Pralahad, C. K. & Hamel, G. 1990. The Core Competence of the Corporation. Harvard Business Review. Vol. 68, No. 3, May-June, 79-91.
- Quinn, J.B. & Hilmer, F.G. 1994. Strategic Outsourcing. Sloan Management Review, Summer, 43-55.
- Tuten, T.L. & Urban, D.J. 2001. An Expanded Model of Business-to-Business Partnership Formation and Success. Industrial Marketing Management, No. 30, 149-164.
- Venkatraman, N. & Loh, L. 1994. The shifting logic of the IS organization: from technical portfolio to relationship portfolio. Information Strategy, Vol. 10, No. 2, 5-11.
- Vilkamo, T. & Keil, T. 2003. Strategic technology partnering in high-velocity environments – lessons from a case study. Technovation, Vol. 23, No. 3, 193-204.
- Zhu, Z., Hsu, K. & Lillie, J. 2001. Outsourcing – a strategic move: the process and the ingredients for success. Management decision, Vol. 39, No. 5, 373-378.