

# Virtual Organizing as a Strategy for the "Big Six" to Stay Competitive in a Global Market

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## Abstract

*The global auditing business is made up almost exclusively of the "big six" on the supply side; their customers are multinational companies. Trends toward virtualization can be identified in the competition between the "big six", as illustrated by a case study of one of the players, Coopers & Lybrand. It is clear that the other suppliers are also following this trend, thus possibly canceling out any competitive advantages. In addition to their activities in the global market, all of the "big six" companies also operate nationally. In this case their rivals are national companies which have competitive advantages over the "big six" in the national market, for example in terms of cost. The issue is to find out to what extent virtuality can be used by the "big six" to give them a competitive edge in the national market as well.*

## 1 Market Structure

The market for accounting and auditing is served by a very large number of small businesses specializing in local conditions. In most countries a large proportion of auditing services may only be offered by domestic companies which, in addition, are state-certified for this purpose. It is therefore difficult for companies in this industry to grow very large and develop their activities on an international scale. Nevertheless, some of the well-known firms in the industry offer their services worldwide and have grown to a considerable size.

When the number of multinational companies increased sharply at the beginning of this century, the demand for "one-stop" accounting and auditing services for several locations in various countries grew considerably. The suppliers in the field, which at the time were small and had only been operating within their own countries, began to cooperate with one another on an international level. In recent decades these cooperations have developed into internationally renowned networks of legally independent companies. The partners cooperating within these networks usually have the same name, extended according to their home country (in Germany, for example, Coopers &

Lybrand is called Coopers & Lybrand Deutsche Revision AG).

Today there are six of these networks (the "big six") which together carry out the audits for almost 100% of multinationals. They are (in alphabetical order):

- Arthur Andersen (AA)
- Coopers & Lybrand International (C&LI)
- Deloitte Touche Tohmatsu International (DTTI)
- Ernst & Young (E&Y)
- KPMG
- Price Waterhouse (PW)

They have expanded their fields of activity and offer a range of services besides accounting and auditing, including tax services, management consulting, financial advisory services, human resource consulting, entrepreneurial services, and much more (e.g. see Ernst & Young at <http://www.ey.com/us/usexpert.htm>). Many specialist areas have evolved through which the companies attempt to become differentiated, for example in the fields of electronic commerce, messaging technologies, enterprise networks, technology management (e.g. see KPMG at <http://www.us.kpmg.com/ssc/et/>).

The fact that the number of competitors is small means that the market for "multinational clients" is highly transparent. Because all six companies are also among the world's most renowned management consultants, they receive a considerable amount of coverage by the industry press, which regularly draws comparisons between the companies with regard to their competitive status and documents important contracts from the time they are awarded to their completion (e.g. see [1]; Table 1).

The primary services involving accounting and auditing can be summarized as follows:

- audits of financial statements, due-diligence studies, and other attestation services
- internal audit services, including operational audits and international support

- advice on accounting and internal control systems, including the implementation of accounting and financial reporting
- pronouncements
- reports for the Securities and Exchange Commission and other regulatory agencies

wise do not differentiate between a multitude of value activities for the purposes of analyzing the strategic advantages of coalitions (see [18], p. 324). The division into evolutionary stages is a useful adjunct for analyzing the effects of competition.

**Table 1: Accounting and auditing: the big six in numbers for 1994.**

1994	fee income (bn US\$)	personnel	market share (fortune 1000)	number of countries
Price Waterhouse	3.98	50'120	11.75	114
Coopers & Lybrand International	5.54	68'000	15.65	130
KPMG	6.10	72'700	16.65	123
Ernst & Young	6.02	66'520	19.35	121
Deloitte Touche Tohmatsu International	5.20	56'600	11.9	119
Arthur Andersen	6.74	72'720	15	74
others			9.7	
Sum	33.58	386'660	100	

However, with an annual growth of only 3%, the market for auditing has now reached maturity. The big six are therefore trying to step up their activities in the field of management consulting, which is showing an annual growth of approximately 20%. The auditors are thus starting to compete with the major players in the consultancy business. Such expansion of scope may well be conceivable as a strategy in a growing market, but it does entail a substantial risk (see [5]).

## 2 Theoretical Background

The sometimes controversial concept of virtuality is based on general accounts of a new, entrepreneurial world, in which companies cooperate spontaneously in order to exploit temporary market opportunities (see [4]; [8]; [9]; [12]; [14]; [16]; [22]; [23]; [24]; [25]). As well as virtual enterprise being perceived as an institution, the functional approach is increasingly gaining acceptance. Thus the term virtual enterprise is not a distinct, clearly defined concept, but rather a way of describing a characteristic exhibited by many companies (see Figure 1). This characteristic will hereinafter be called "virtuality", a term defined as "... the ability of the organization to consistently obtain and coordinate critical competences through its design of value-adding business processes and governance mechanisms involving external and internal constituency to deliver differential, superior value in the marketplace" [30].

The structuring mechanism in Figure 1 is based on the simplified value chain model of Porter/Fuller, who like-

The two main features of virtuality are (1) interaction between legally independent companies to create a common value chain and (2) distributed, predominantly information-based processes, resulting in location-independence. Virtualization supports trends toward relocation, integration and concentration of business processes and can therefore be regarded as a strategy-supporting measure (see [10]).

The strategic aims of virtuality are often reached by establishing a business network which is supported by interorganizational systems. Such networks can be regarded as a type of coordination displaying some of the qualities of markets and some of hierarchies. This type of coordination originates largely from legal conditions which cannot be influenced. In spite of this, because the partner companies are free to define the form that the coordination will take, it will change over a period of time. In order to be able to take advantage of these types of coordination it is necessary to decide, depending on the situation, to what extent market or hierarchical elements are to be promoted. Coordination based purely on market elements is characterized by specialization of functions, efficiency pressure, opportunism and information islands, whereas hierarchical coordination is characterized by integration of functions, protection from market pressure, trust, and integration of information. In order to reduce the negative effects of opportunistic behavior and the disadvantages of information islands, a culture of confidence is built up within the network and information-spreading activities are discussed and implemented centrally. At the same time the partner firms concentrate on their local

(national) activity expose themselves to the pressure of competition within their regions (see [15]; [26]; [28]).

auditing and consultancy services to clients whose activities were increasingly being conducted on the international level. Since, in most countries, the law requires that annual

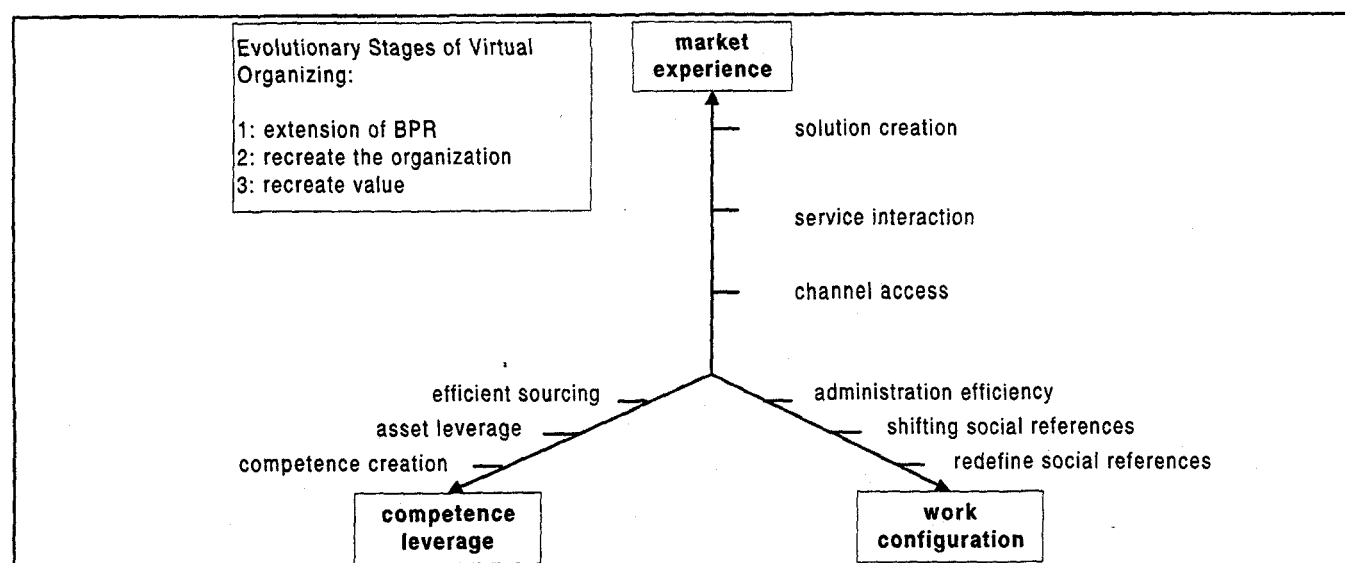


Figure 1: Dimensions and stages of virtual organizing [29].

### 3 Case study: Coopers & Lybrand

#### 3.1 The business

The international Coopers & Lybrand (C&L) organization is made up of legally independent companies and has branches in some 130 countries<sup>1</sup>. The individual companies were once listed under different names and some of them still are, but each firm bears either the label C&L or the name Coopers & Lybrand in full. The idea of forming cooperations came from the parent company in the US

accounts are audited by domestic companies, and the legal form required for practicing a profession did not allow the involvement of foreign companies, the acquisition or foundation of subsidiaries was out of the question in most cases. In addition, legal independence protects each individual company from bearing liability under warranty for losses incurred abroad. For a long time these companies were linked by cooperation agreements; all companies in the C&L organization have now become members of a Swiss law association (C&L International), which, however, has no operative function. The member companies are not linked on any legal basis. The main functions of

Table 2: Proportion of C&L business activities in Europe (1994).

1994	Worldwide	Europe	Europe in %
Fee income (in bn US\$)	5.54	2.65	47.8%
No. of countries with partners	130	40	30.8%
Total C&L companies	758	353	46.6%
Employees	68,360	30,260	44.3%

(Lybrand) and in Britain (Coopers), which, after its merger, looked for suitable partners in order to provide

the organization are to lay down international business policies and to issue binding policy statements. Laying down international business policies includes developing activities in new geographical locations and recruiting staff in those areas.

<sup>1</sup> This case study was produced by the Department of Information Management, University of Berne (Pascal Sieber) in February 1996. All rights are held by C&L Deutsche Revision AG and the Department of Information Management. All the data is based on interviews with Dr. Karl-Heinz Maul. Mr. Maul is a member of the executive board of C&L Deutsche Revision AG and is therefore a member of Coopers & Lybrand International.

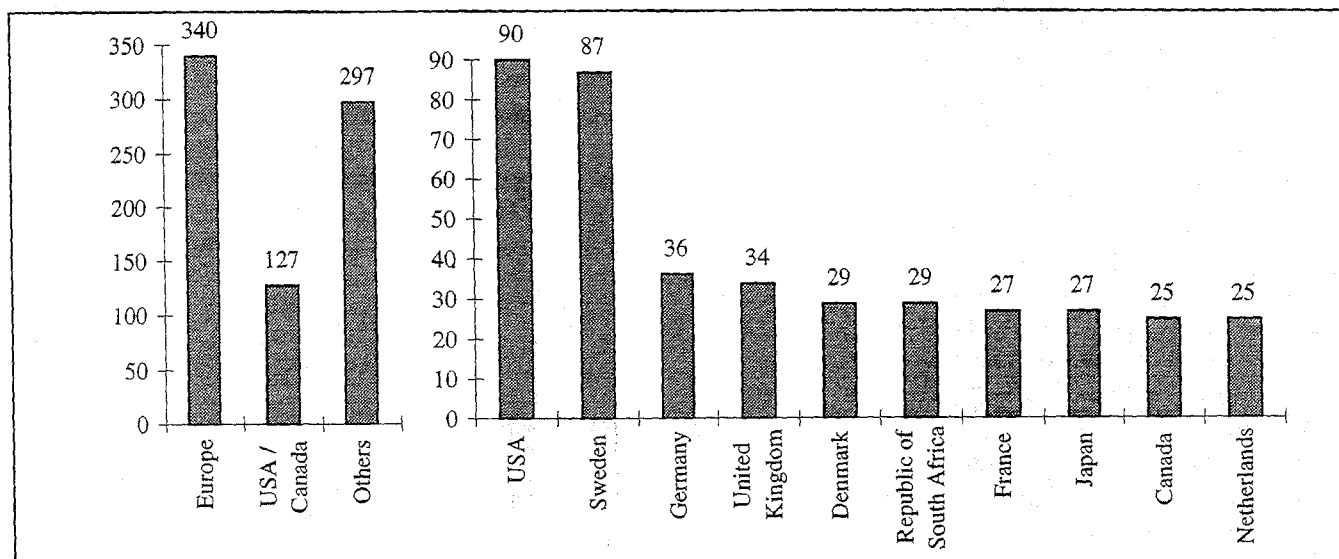
The international cooperation of C&L can only be guaranteed if all member companies operate in the same auditing and consultancy fields. Membership of C&L International thus requires each member company to offer

services in what is known as the core business. These services mainly include auditing of annual accounts and similar audits, tax consultancy and management consulting.

Of Coopers & Lybrand International's total 1994 turn-

met by Coopers & Lybrand management consultants. The client applies to the Coopers & Lybrand partner in his own country (Lead Adviser or Lead Partner; see Figure 3).

If it appears that auditing cannot be performed without a situational analysis of the client's subsidiaries, C&L



**Figure 2: Number of C&L business units in the most important countries in 1994.**

over (see Table 1), 51% comes from auditing activities, 17% from management consulting, 16% from tax consultancy and 16% from other activities. In Germany the share of auditing revenue is even higher, at 66%, but this figure is on its way down - in favor of management consulting.

A large proportion of Coopers & Lybrand's business activities are apportionable to Europe (see Table 2).

The Coopers & Lybrand network covers large areas of the industrialized world. In addition to the countries named in Figure 2 there are 355 other C&L business units in countries such as Malaysia, India, Brazil, Zaire and Angola.

### 3.2 The Lead Adviser Principle

C&L companies cooperate with one another to enable individual C&L partner companies to offer clients a worldwide service. The aim of this cooperation is to be able to offer the client country-specific expertise from a single source - "one-stop shopping". Not only are auditing services carried out by representatives of the client's own country (as required by law), but consultancy services are also handled in this way. A team of C&L-consultants is put together for each project and may consist of members from different international member firms as required. The auditing process often reveals client needs which can be

partners (advisers) based in the same locations as the client's partners are called in. In this way the client can be offered the benefits of the global company through local experts. Every multinational company must come to grips with the local conditions of its target markets. Auditing and consulting, for example in cases of corporate merger projects, demands a particularly thorough knowledge of the local legal requirements. The Lead Adviser Principle is therefore ideal for C&L. The features of the Lead Adviser (or Lead Partner) Principle can be summarized as follows.

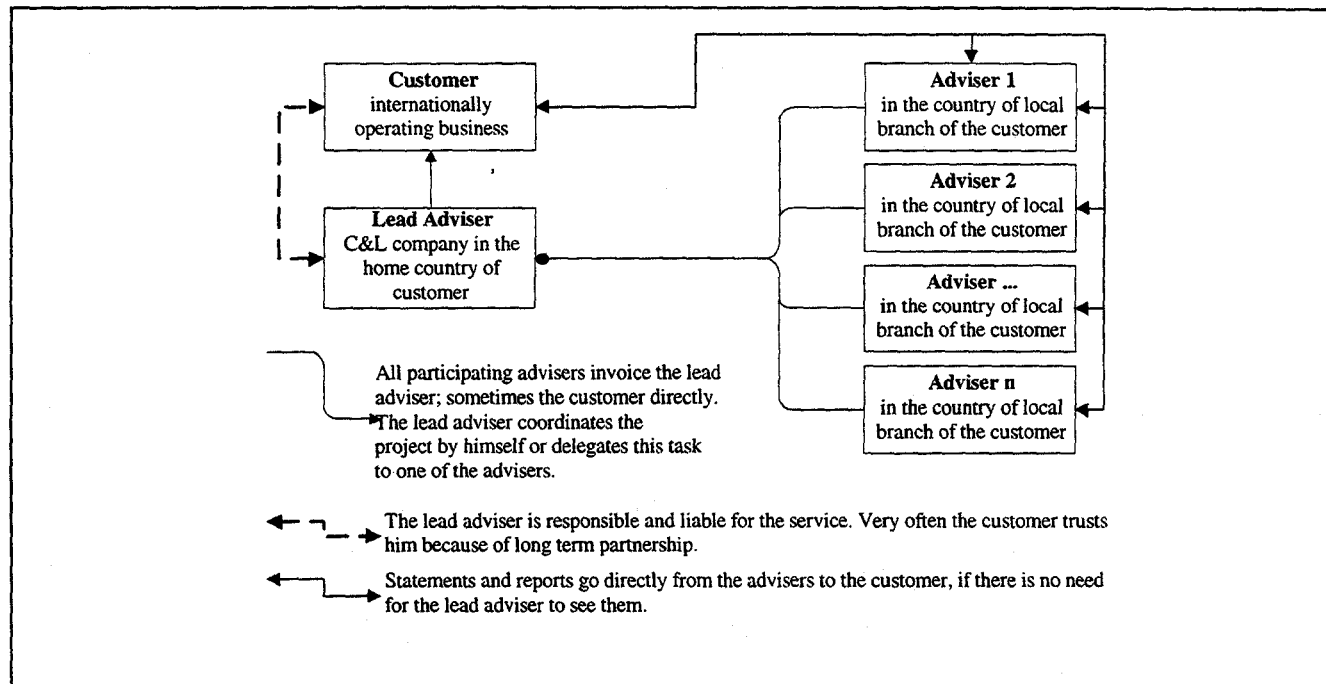
The Lead Adviser is in the vicinity of the client and often establishes the initial contact. The client regards him as a confidant. Very often the lead adviser does not work on the project himself, but is responsible to the customer for ensuring that suitable resources from within the C&L network will be called upon in order to provide the service. To pre-empt issues of liability in the event of conflict, contracts are negotiated with the client. These may include individual advisers, or all advisers and the lead adviser, depending on the client's circumstances. Since there are no legal obligations between C&L partnerships, issues of liability cannot be passed on to the national companies (unless otherwise provided for in the contract). The lead adviser always takes over the function of project manager with regard to the customer.

### 3.3 Aspects of virtual work configuration

C&L International as an economic unit is a largely informal network of specialized participants which are legally independent, yet economically interdependent. The connections between the organizations are based on a common business understanding and pursue the collective aim of reaping competitive advantages by working together. However, if the partners do not abide by the terms

there has been an apparent tendency to extend this principle of flat hierarchies to the organization of the national companies. This year, for example, STG Coopers & Lybrand Switzerland made their business units, which were organized as profit centers, into independent companies which coordinate their activities through a holding company (shifting social references: see Figure 1).

### 3.4 Aspects of virtual market experience



**Figure 3: The Lead Adviser Principle at C&L International.**

that are agreed at the general meeting of C&L International, they face sanctions which may result in their exclusion. Such sanctions are decided collectively and not on the basis of partnership contracts. The timescale of these cooperative arrangements (virtual projects) depends on the tasks. For this reason the temporary nature of cooperation in virtual teams becomes particularly apparent: C&L partners who work together on a project go their separate ways after fulfilling their tasks, often to join up again in other projects. The composition of the project teams depends on the contract and the type of cooperation invariably relates to the project (administration efficiency: see Figure 1).

The basic idea of coordinating the network in a joint and polycentric way reinforces the attempt largely to dispense with the institutionalization of central functions, so that a common network arrangement can operate, irrespective of time and location, on the basis of a virtual team of managers from the partner companies involved.

The national companies thus have a lot of freedom in the way they structure their economic activities. Recently

Cooperation agreements allow each C&L company to serve multinational customers. This would not be possible for the individual companies without access to all the other companies in the background (channel access: see Figure 1). Moreover, this horizontal partnership enables the individual companies to combine their local knowledge into a single package which meets the customer's requirements (service interaction: see Figure 1). At C&L the consultancy and auditing activities are tailored to individual customers. These services are developed by C&L International and are carried out without preliminary services. Consequently, no suppliers are integrated in the network. Vertical partner integration only takes place within C&L International. However, horizontal partner integration occurs in projects where specific expertise from different countries is required. In order to be able to offer local expertise to customers' subsidiaries, advisers from the corresponding locations are consulted as required. At the customer's request, this can also cover rival partner companies if necessary. Ideally, the customer can put together the services he requires from standard components ac-

according to the modular principle (see [15], S. 257ff.). The products of C&L International are not mass-produced, but are individual solutions in every case. The quality assurance standards and the internal standards (e.g. for business appraisal) can almost be regarded as "modules" (solution creation: see Figure 1).

### 3.5 Aspects of virtual competence leverage

In the main, the projects are carried out exclusively by C&L network partners. These differ from one another in their knowledge of local conditions and are therefore able

worked systems, such as collective network coordination, reducing redundant functions, or joint use of functions (asset leverage: see Figure 1) (see [21], p. 209ff.). By using consistent standard software, C&L partners are able to exchange relevant data and information for the coordination of projects.

### 3.6 Summary

The three areas of virtualization can be summarized on the basis of the model presented at the beginning (see Figure 4). Analysis of the competition reveals that similar

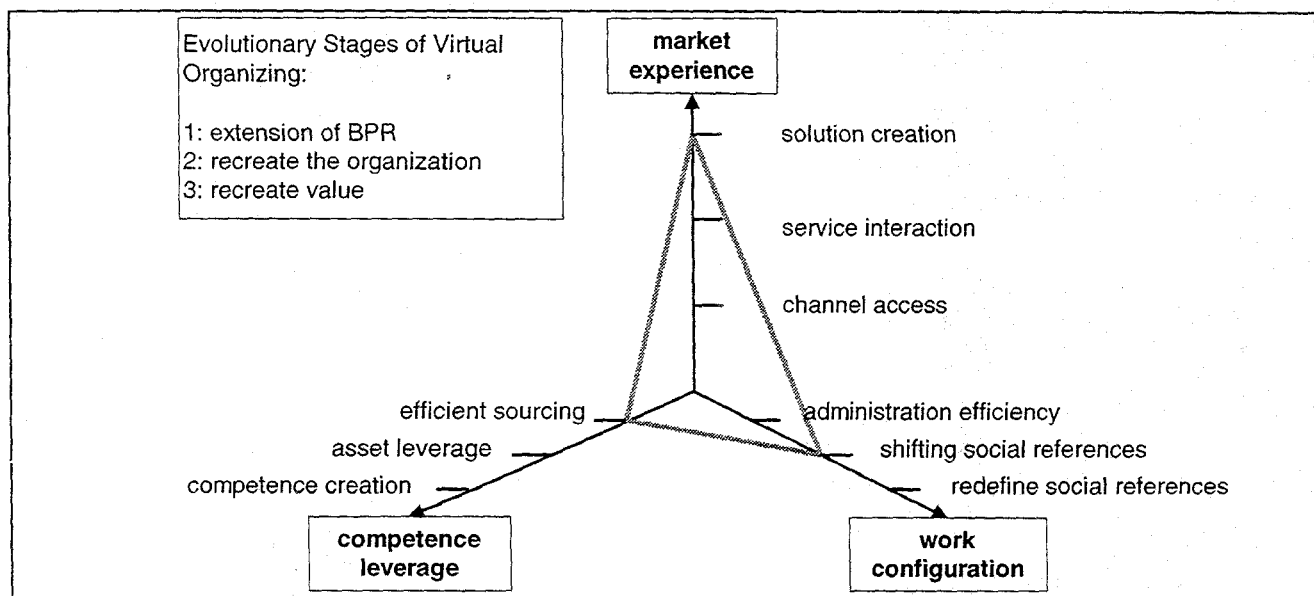


Figure 4: C&Ls' adoption of virtual organization.

to contribute their specific services in a better and more efficient way than other suppliers. Synergetic utilization of the partners' own core competences (see [19]) results in an optimized value chain within C&L International for each project (efficient sourcing: see Figure 1). Crucial competitive advantages can be realized on this basis. The result is a product for which only equivalent imitations and substitutes - which also come from a network of companies - exist on the relevant target market. Local suppliers of auditing services are therefore unable to service the sector comprising "multinational clients", and consequently C&L is able to demand higher prices for its services. If C&L's hourly auditing fee at partner level in Germany is between 400 DM and 500 DM, the price charged by companies operating exclusively in the local area could be lower by up to 250 DM. The network therefore has considerable resources and expertise. For a year or so C&L International has been trying to support the accumulation and transfer of knowledge by selective use of efficient information and communication technologies. Various possibilities are opened up by (internationally) net-

structures are also shown by the other five large auditing corporations operating world-wide.

The case study shows that, as far as possible, the work configuration follows the flat hierarchy principle both within the national companies and, to a much greater degree, at international level. This leads to greater legal and economic independence of the partner companies (shifting social references). The auditing processes have been standardized by C&L International and descriptions of best practices are available to all partners (administration efficiency). Until now, there have only been a few cases at C&L in which people have worked for the company at their own risk, e.g. under an agency contract. This would however offer another option for virtualizing the work configuration, which could lead to a reduction in staff and plant costs (i.e. premises) (redesign social references).

The services provided by C&L are highly specific and involve a large degree of cooperation with the customers (solution creation). The partner companies produce the services by cooperating in virtual teams (service interac-

tion). C&L International's organizational structure secures access to the customer segment (channel access). Most recently, all six companies have also been offering their services via the Internet. This can be regarded as an additional channel for sales, which is available anywhere in the world and which supports the interaction between the client and the company. At Coopers & Lybrand, a software tool for locating experts is currently being set up. KPMG offers a product called "Virtual Office" which enables inquirers, via the Internet, to find out about the company's range of services and to contact the experts directly. Arthur Andersen even offers the option of having one's own company assessed on-line, for example. The client fills in a form and within a few seconds his company is assessed by comparison with other companies in the same industry. Similar services are also provided by Ernst & Young's online Business Consultant (see also [11], p. 182ff.).

At C&L, virtualization along the competence leverage dimension is still in its early stages. It is true that cooperation in virtual teams leads to efficient sourcing with associated cost benefits, and, thanks to world-wide collaboration, each company avoids the cost of researching markets other than its own local ones (asset leverage). However, plans to rationalize the service - i.e. to take it beyond the simple exchange of know-how - only exist in part. The other big five companies have also been tackling this issue recently (Price Waterhouse's Knowledge View, Arthur Anderson's AA-Net). Theoretical observations have been available for quite some time, but it is only thanks to technological development that they are receiving renewed attention (see e.g. [3]; [13]; [20]; [27]).

### 3.7 The Influence of IT

For the time being, the latest information technology is not being broadly implemented by C&L. Of course, every company uses office applications such as word processing tools, and standards for the exchange of data are being discussed on an international basis. However, the coordination of projects is not supported by IT. Lotus Notes has recently been installed at C&L Deutsche Revision AG, but entry of the relevant data into Lotus Notes databases is not yet complete. Joint applications, e.g. for simulating business situations in consultancy or for use in joint project planning, are not yet available. The managers responsible intend to use this instrument for more efficient project management and to provide access to more transparent data about specialists in the network, and about current and completed projects.

Briefly, it can be said that the structure of C&L International has long been supported only by telephone and fax. The use of groupware and eventually Internet as a

wide area network provides the opportunity to rationalize many processes.

## 4 Aspects of Competition

### 4.1 Global Advantage

The aspects of virtuality described in the preceding sections are based on the network structure, which must be regarded as a short-term condition for the virtual projects. However, these aspects also constitute the network, since significant elements - such as the trust-based culture - only come into being through work on projects. If a specific change is to be made to the network structure to improve competitive ability, then it is important to bear in mind that the structure will be influenced not only by the democratic decision by C&L International, but also (possibly to a greater extent) by the way in which projects are organized. This shows that the organization of the network - unlike in a company run on hierarchical principles - is characterized by its great variety of interests. It is therefore clear that the connection between the aspects of virtuality and the success of the companies involved cannot be established on the basis of a standard reference, such as return on investment. The effects of virtualization on competition are therefore explained by argument in the following, using C&L International as a case study (see [17]).

#### Uncertainty

Because of standard practices which can be implemented within the C&L International network, such as offering Core Business, the risk of mistakes is reduced for activities in which companies cooperate. If mistakes nevertheless occur with respect to the customer, the companies' legal independence also means they are protected against the transfer of obligations under guarantee. This does not mean that mutual responsibility cannot be exercised within a network, merely that there is a greater degree of freedom as regards the exchange of services. This helps to reduce uncertainty. However, because there are no managerial authorities that go beyond the limits of the partner company, the risk that jobs will be done badly still remains - albeit to a lesser degree.

#### Flexibility

On the one hand, the network increases flexibility since the individual partner companies, being of a manageable size, are able to respond very quickly to new market requirements. As partners in the network they also have rapid access to a range of expertise which they would otherwise not be able to acquire in such a short time. On the other hand, the partner companies confine their activities to cooperation within the network, to avoid losing their partners' confidence. Therefore they are not free in

their choice of cooperating partner, and in this respect flexibility is restricted.

### **Costs**

Opportunities for mutual financing in the network are limited, however. A financial holding (hierarchy) would, for example, enable temporary cash flow problems to be bridged more cost-effectively than is the case in the C&L network. This has a negative impact on flexibility and costs.

The temporary nature of the cooperations within the network provides safeguards against high fixed staffing costs and results in lower overall costs. The costs for coordination required to maintain the organization have at least to be covered by this. The fact that no contracts are concluded within the stable C&L International network prior to cooperation means that costs are reduced (there are no contracts to be negotiated or executed) and reduces the lead time for the cooperation. This enables the companies to respond to customers' wishes more quickly and also with greater flexibility.

Localization of the decision-making process to the C&L partners avoids the need for lengthy official channels. This results in shorter throughput times and lower costs.

A consequence of electronic networking via Lotus Notes is that communication costs are lower compared to the cost of using the telephone or traveling. There is also the option of synchronous and asynchronous communication, which results in time savings.

Expertise required on a short-term basis can be accessed more quickly via databases, which at present contain mostly metaknowledge (e.g. a description of the capacities and expertise of individual departments or persons). In this way the C&L partners can respond to their customers' demands even more quickly. The investment in this communication and information infrastructure are of course far from negligible, which means that higher overall costs will result.

### **Innovation**

In the case in hand, the suppliers (C&L partners) are very highly integrated in the value chain. This means that new product ideas can be dispersed more quickly and access to the sales market is secured for all partners throughout the world. A partner working alone would not be able to look after multinational clients.

### **Time**

Since it is no longer necessary to employ a locally available team for each project, because persons can work independently in different locations, throughput times are potentially shorter.

## **4.2 Local Disadvantage?**

The hourly auditing fees of the big six companies are significantly higher than those of the small local suppliers. This is mainly because of the higher overhead costs involved in image building, maintaining partnerships, and the IT infrastructure. This puts them at a competitive disadvantage compared to local suppliers in the segments comprising "medium and large companies with local and restricted international activity". Price is increasingly becoming the most important selling point in these segments, as the processes are standardized and the pressure on prices in the clients' own markets have an impact on auditing. This competitive disadvantage means that even the big six are reducing their auditing rates, sometimes below their internal costs. This indicates the importance of the local markets to the big six - not so much because of the auditing fees generated in this segment, but more because of the potential for acquiring clients for consultancy as this is often a consequence of auditing. The auditors therefore take advantage of their reputation and their knowledge of their clients. The requirements for management consulting are however quite different from those for auditing, which means that these two services cannot be carried out by the same person. The big six have therefore set up separate departments dedicated to consulting. There is an increasing trend for these departments to become legally independent companies. The growth of 20% in consulting services is mainly due to the increasing demand in IT consulting. However, this business is also coming under pressure from IT companies (system houses). The market volume is therefore claimed simultaneously by the big six, management consultants and IT companies (see [5]).

The big six are at an advantage compared to their competitors, in that they already have experience of cooperation between decentralized teams. Because they can apply the virtual company model (which has hitherto been used in auditing for legal reasons) to management consulting, they can overcome their price disadvantages. At the moment it appears that auditing companies are also beginning to form more efficient structures locally: C&L Switzerland, for example, has been forming its business units into legally independent companies, indicating a trend toward adapting virtual organization to fields other than international auditing services.

The local disadvantage of the big six in the auditing business may therefore be offset by virtualization in the dimension of market competence and work configuration in consulting. In addition, virtualization is being expedited for the following five reasons:

1. To secure market shares in management consulting the big six have to improve their expertise in IT consult-



ing. To have credibility, and so that they themselves can benefit from the potential for rationalization, they use the technologies themselves (see [2]).

2. To be competitive in management consulting they adopt the Lead Adviser Principle in this business area.
3. Consulting still suffers from a shortage of qualified employees. The big six obtain a good image on the employment market through news items about their use of technology (see [6]).
4. Competence leverage in the services area can only be achieved by using the latest technologies, which even today are not yet fully developed. Obtaining them at an early stage is clearly regarded as an advantage.
5. The effect of marketing must not be underestimated. Auditors are not allowed to advertise, but they can still gain media coverage in the form of news items about their use of technology.

## 5 Conclusions

The case study of Coopers & Lybrand and the observation of their competitors shows that the principles of virtual organizing, especially in a competitive area, can lead to competitive advantages in the creation of specific, non-standardized services. In the case in hand, they also provide an elegant solution to the problem arising as a result of basic legal conditions (see also [7]).

When supplying standardized services where the demand is constant, these principles tend to result in higher costs and thus competitive disadvantages. In the auditing market, the big six counter this disadvantage by entering the price war in the local markets. They offer their services at prices which may not cover their prime costs, but this approach does however give them considerable advantages in terms of acquiring customers for management consulting.

This competitive advantage prevails, and so the big six will virtualize their structures further. Opportunities for this are in work configuration and in the field of competence leverage (see Figure 1), in which the intensive use of technology can be expected to have a rationalizing effect on their service.

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