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# Strategic Alliances in Application Service Provision

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## ABSTRACT

*Application Service Provision (ASP), which consists in deploying, managing and remotely hosting software applications through centrally located servers, is emerging as a new form of application outsourcing that is attracting many sectors. It is shown in this paper that the ASP model is highly based on the concept of strategic alliances, illustrating the idea with two cases, one of which was a failure because of inappropriate partnership management. The authors highlight the importance of focusing on alliances management instead of how to form them, by presenting a life cycle approach to alliances. The paper also relates the immaturity of the ASP market to the difficulty in measuring the success of strategic alliances formed in this context. This paper concludes by presenting predictions about the future of ASP.*

## INTRODUCTION

This paper aims to investigate strategic alliances in the context of the Application Service Provision (ASP) model. It starts by investigating the ASP market and its development, and the role of alliances in the context of the ASP model using illustrative cases. The paper provides a background drawn from the literature on strategic alliances and discusses the formation and management of alliances. Issues relevant to the development of the ASP market through strategic alliances are presented.

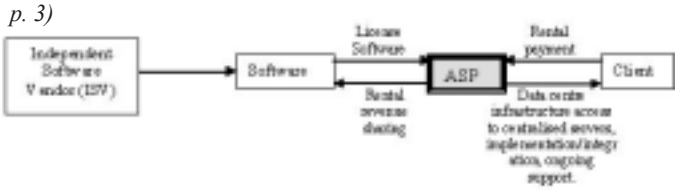
In recent years, more and more companies have entered into relationships through alliances. Corporations have often adopted structures that were large and centralised and based on hierarchical modes of communication. Such corporations used various methods for eliminating competitors, such as, mergers, price wars, and the weight of large advertising budgets (Alter & Hage, 1993). For several reasons, such as the pressure for the globalisation of business, organizations began focusing more on cooperating with others. In this context, Alter & Hage (1993, p. 2) argued that *"...many companies are developing structures that are smaller, decentralized, and based on strategies of cooperation and horizontal relationships."* Moreover, such relationships developed between organizations in the same product market niche, which led previously competing companies to collaborate, thus marking an important institutional change (Alter & Hage, 1993).

Developing alliances, *as a strategy*, has been adopted by organizations in different sectors, who have aimed to differentiate their products or enter markets more quickly. The Application Service Provision field, which is still in its developing stage, is widely taking advantage of strategies of partnering and forming alliances. In fact, as the new wave of delivering software-as-a-service began to take off, too many companies tried to exploit the opportunity of entering this embryonic market, leading to an excessive number of competitors. As a result, these companies found difficulties in making profits, and therefore adding value to their offering became indispensable. This led them to enter into strategic alliances as *leverage* for their business.

## THE APPLICATION SERVICE PROVISION MODEL

Application Service Providers (ASPs) have created a new form of outsourcing that can be seen as 'application outsourcing' (Cherry Tree & Co., 1999). In its simplest form the model consists of deploying, managing and remotely hosting software applications through centrally located servers (Cherry Tree & Co. 1999, p.3). Customers use the hosted applications through a 'rental' arrangement (see figure 1). This model represents a very new approach to software distribution and effectively results in the delivery of software as a *service*.

*Figure 1: The basic ASP model (source Cherry Tree & Co., 1999, p. 3)*




According to the ASP Industry Consortium (ASPIC), an ASP *"manages and delivers application capabilities to multiple entities from a data centre across a wide area network"* (in Cherry Tree & Co., 1999). As a result, the ASP model gives organizations the opportunity to focus on their core functions, without being distracted by issues such as systems management (Columbus, 2000).

There have been many stimuli to the emergence of the ASP model. Most notably, the small and medium sized enterprise (SME) segment of the market was virtually excluded from the enterprise applications market, largely due to their inability to afford them. The ASP model offers SMEs the possibility of leveraging these costs because of the economies of scale that ASP vendors can enjoy. In fact, based on the principle of *one-to-many*, the ASP model is believed to create enormous cost savings of the order of 20-50% (Miley, 2000). Furthermore, Miley (ibid.) argued that the *ubiquity* of the Internet, its integral and open standards, and the devaluation of computers led this media – the Internet – to revolutionise business practices, and delivering applications through the Internet is only a "natural".

Other *drivers* of the ASP model are as follows (Cherry Tree & Co., 1999):

- The shortage of IT experts, where some companies, especially the smaller, cannot afford to pay for IT experts on a long-term basis. ASPs offer access to skilled personnel at minimum cost;
- Improvement in application deployment time, reducing it from months to days or weeks;
- Access to latest technology and software;
- Minimising the total cost of ownership (TOC) of applications, as fixed costs shift from application users to the ASPs;
- More focus on core competencies, by eliminating non-core functions.

The size of the ASP market, as forecast by many analysts, is also an important sign of the importance of this business model. IDC, for

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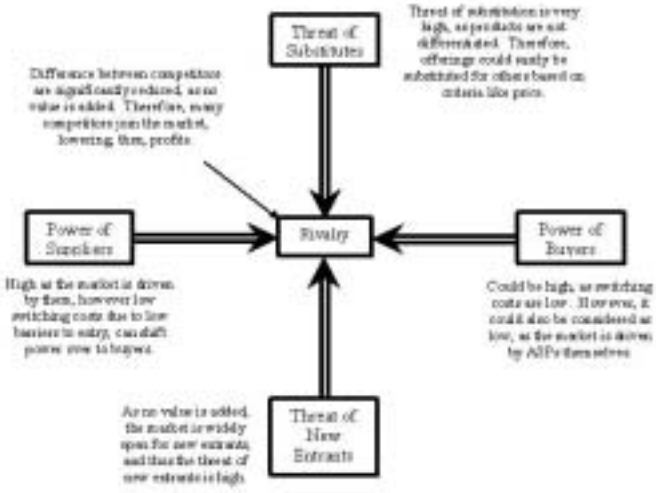
instance, expected the market to grow from US$ 300 million in 1999, to US$ 25 billion in 2004. (cited in Miley, 2000) Furthermore, IDC expect US enterprise ASP spending alone to grow to US$ 2.5 billion by 2004. Even if the ASP market is in continuous expansion, many issues still form a strong barrier to its development. Such issues are as follows:

- Security is a main concern for prospective customers causing ASP uptake to suffer. In fact the uncertainty of whether ASPs are capable of ensuring the security of proprietary information is emerging as a major factor inhibiting the deployment of the ASP business model. This issue is intensified when *mission critical* applications are to be supplied.
- Performance concerns, where many analysts argue that deploying existing applications, based on client/server architecture, on an ASP delivery presents significant degradation in performance, as these applications were not designed to be 'hosted'. Instead, Web-enabled applications of suitable architecture, can ensure optimal performance.

The original ASP model (see figure 1) presented many weaknesses. The model suffered lack of *product differentiation* (Porter, 1985), as different ASP vendors focused mainly on hosting applications. In fact, the similarity of offerings in the market-place was fuelled by low entry barriers (Cherry Tree & Co., 2000) and caused an explosion of similar services. According to the competitive forces model, illustrated in figure 2, it should be noticed that the ASP market is highly accessible; entry barriers are low. This left the market wide-open to new entrants. The high number of competitors made *profit* a difficult target to achieve. Consequently, many players in the ASP market felt the need for *differentiating* their product(s): *"...in order to build a sustainable company, additional value-added components need to be offered in order to build long-term, strategic relationships with customers",* Cherry Tree & Co. (2000, p.7). Thus, for ASPs, simply hosting and managing applications did (in general) not provide sustainable strategies. Instead, *"companies that ultimately build sustainable ASP related businesses will also offer a value-added component(s) to their service that is simultaneously difficult for competitors to replicate and customers to replace"* (Cherry Tree & Co. 2000, p.8).

Moreover, the ASP market witnessed major changes with the emergence of different variations of the initial concept, classified as (Currie & Seltsikas, 2000; Lehman Brothers, 2000; Cherry Tree & Co., 2000): *Enterprise ASPs* where ISVs deployed their own ASP strategy, choosing to offer their services directly to their customers, accessing thus a wider segment; *ASP Enablers* who support the infrastructure through which ASPs deliver their offerings; *Pure Play ASPs* characterised by owning their delivered resources, and acting as a single point taking responsibility of all the requirements for delivering their resources; *Vertical ASPs*, targeting industry-specific applications and processes; *Horizontal ASPs* offering, mainly, collaborative applications such as email; and *Full Service Providers (FSP)* providing an end-to-end solution.

*Figure 2: Competitive forces for the ASP market initially*




The 'variations' cited above are, significantly, supported by the focus on leveraging partnerships to create differentiation, and thus raising barriers to entry (Columbus, 2000). Alliances are developed for the benefit of two partners or more. These benefits consist of acquiring skills and resources that are unlikely to be developed by a single organization. Thus, strategic alliances can be an important enabler for creating a differentiated product or service.

In general, we argue that the poor take-up of the ASP model has been aggravated by the lack of differentiated product offerings. To overcome this lacuna, many ASPs have entered into a set of partnerships and alliances that allow them to acquire additional skills and resources for differentiating themselves. Columbus (2000, p. 171) argued: *"In the business plans of many application service providers today there is a strong focus on leveraging partnerships to create differentiation."* However, as different ASPs have different backgrounds, and thus different skills, they need to partner with companies with different skills in order to bring additional resources, where according to Columbus (2000, p. 171): *"Many ASPs today are partnering for access to technology, while many others with strong technical expertise are partnering to get access to distribution channels."*

Moreover, partnerships are also becoming an important part of an ASPs strategy as the ASP market grows, where, according to Columbus (2000), customers' expectations concerning an ASPs performance will grow, and therefore partnerships will be adopted at an enormous pace in order to ensure the highest level of *performance*. However, such achievements cannot be guaranteed, as partnering has to be successful in order to bring advantages. Gartner Group (2001) forecast that 60% of ASPs created before 2001 will fail due to poorly developed business models, the ***wrong choice of partners***, an inability to execute high levels of service, and consolidation in the ASP market. This is indicative of recent progress in the ASP industry. What is emerging is an understanding (that is demonstrated in successful ASPs) that partnering issues are among the most important to the success of ASP.

Consequently, issues such as *choice* of partners and the *management* of alliances will play a major role in the on-going success of an ASP. As organizations from different sectors have deployed strategic alliances for many decades, the literature in this area could be a valuable source of information regarding the success and failure factors for alliance formation and management. Frameworks such as the *alliances life cycle*, discussed in the next section (see figure 3), could be of major use for alliance management.

Currently, the ASP market is full of both successful and unsuccessful alliances. We believe that the cases of Cable & Wireless and Pandesic, are good illustrations of successful and unsuccessful (respectively) ASP partnering arrangements. In both cases a former telco has transformed itself to becoming an ASP. Both cases implemented a full service provider strategy. Pandesic is in fact one of the first entrants to the ASP industry and has subsequently failed.

### Case Study: Cable & Wireless

Cable & Wireless, a telecommunication company, started in the late 1990s to expand its offering to exploit the Internet. It offered Internet access as an ISP and Web hosting. A further enlargement of its strategy led the company to enter the world of application service provision. In November 1999, Cable & Wireless announced a plan to form a global relationship with the Compaq Computer Corporation, and planned to commit a total of US$500 million for the relationship during a period of 5 years, with Compaq sharing revenues and providing a traditional supplier contract. According to Cable & Wireless (Cable & Wireless Press Release: http://www.cw.com), this relationship would position them as a leading application service provider,

targeting small and medium sized enterprises (SMEs), to provide them with complete end-to-end e-business solutions.

Starting from the relationship with Compaq, the objectives of Cable & Wireless were to offer a complete end-to-end integrated solution including application hosting, network connectiv-ity, and eBusiness consulting (ibid). The next major step that Cable & Wireless achieved was its strategic alliance with Microsoft in June 2000. Within this relationship, Microsoft provides *"marketing, product and support professionals as well as making available the facilities and staff of the Microsoft Partner Solutions Center (MPSC) labs for development of future services, products and testing"* (Cable & Wireless, 2000). By doing so, Cable & Wireless based a range of new services on the Windows platform, featuring initially Microsoft Windows 2000, Microsoft Office 2000, and Microsoft Exchange with integrated messaging and collaboration tools.

In May 2001, following the implement-ation of the first phases of its ASP strategy, Cable & Wireless acquired Digital Island, a leading provider of managed Internet services for business customers. Digital Island supplies integrated managed hosting, content delivery and intelligent network services. This enhanced Cable & Wireless' capabilities. Digital Island planned to add new services to those offered by Cable & Wireless such as 'content delivery'. Through this partner Cable & Wireless' hosting capabilities were increased with additional nine hosting centres worldwide (previously managed by Digital Island). The Digital Island deal also gave Cable & Wireless access to a very strong customer base (including Microsoft, Cisco, and Sony).

Cable & Wireless set up a wholly owned subsidiary, a-Services, to manage its ASP offerings. The aim has been to evolve to being a Full Service Provider (FSP). a-Services is still relatively new and although there is uncertainty about its long-term success, most interesting is how Cable & Wireless aggregated resources from best of breed suppliers. The case provides a good example of how ASPs can *complement* their skills through partnering and acquisition. These are 'skills' that are not found internally but are critical to the development of the business.

### Case Study: Pandesic

Pandesic is an ASP that specialised in Business-to-Consumer e-Commerce. The company was launched in 1997 as a joint venture between Intel and SAP. Pandesic was launched during the golden era of the dot-com explosion, when there were tremendous expectations about profits that could be realised. As its main strategy, Pandesic focused on enabling the emerging e-tailers and retailers that wanted to have fast access to the dot-com market. However, the investment community had high expectations of Pandesic. It has been an important illustration of a failure in the ASP industry. When it announced its closure, it had recorded estimated losses of around $US20 million per year. The causes of such a failure were not clear, and many analysts (such as IDC) remained confused. It was clear however that its founders – Intel and SAP – were deeply involved.

Pandesic specialised in Business-to-Consumer e-Commerce but started off by targeting SAP's existing customers. These were mainly large corporations that were not interested in the consumer-oriented services that Pandesic offered. Additionally, according to IDC, Pandesic did make attempts to shift its strategy toward Business-to-Business opportunities. With hindsight, Pandesic's failure appears to be strongly linked to its 'inappropriate' strategy, but most notable is that Intel and SAP occupied all six board seats at Pandesic (IDC). As a result (ibid.), blame for Pandesic's failure was directed to both parents – Intel and SAP. The parents were 'accused' of playing a *"laissez-faire"* role, and doing very little to help Pandesic to develop and update its strategy. What was needed was a shift to the more profitable Business-to-Business e-Commerce. Although strictly speaking Pandesic did not enter into a strategic alliance, it illustrates that failures can result from poor partnerships management.

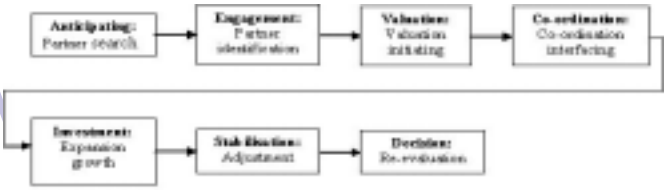
## STRATEGIC ALLIANCES

Mockler (1999, p. 1) defines strategic alliances as *"associations important to alliance partners and formed to further their common interests."* This is a situation where two companies or more forge an agreement to leverage combined resources, knowledge, and capabilities in order to achieve, enhance, or maintain competitive advantage for each participant (PriceWaterHouseCoopers, 2000; Spekman et al, 1998; Clarke-Hill et al, 1998). Strategic alliances can be found in different forms (Mockler, 1999): franchising and licensing agreements, partnership contracts, equity investments in new or existing joint ventures and consortia.

The reasons why strategic alliances are formed are several; a common view is that *"firms need to concentrate on core competencies, to outsource more activities and use outside partners as sources of complementary knowledge and competence"* (Nooteboom 1999, p. 43). Further-more, strategic alliances are a way of establishing a set of enablers that help companies penetrate or expand in new or existing markets (Mockler, 1999). According to Nooteboom (1999), alliances serve a variety of additional purposes including the spread of fixed costs, circumvention of entry barriers, and speed to market.

As a general classification, Lorange and Roos (1993) suggested two types of alliances: offensive alliances and defensive alliances. The former category has as objectives, creating or penetrating new markets, or defining or setting new standards. In this case, companies form alliances in order to strengthen themselves for an offensive action. The second category – defensive alliances – has as objectives strengthening and protecting existing positions of partners.

*Figure 3: Alliances life cycle (source: Spekman et al., 1998)*




The development of strategic alliances, and the increasing interest in them has been enormous in recent years, due to many drivers such as globalisation, the increase in competition, and shortening product life cycles (Sulej, 1998; Büchel, 2000; Hwang & Burgers, 1997). Globalisation, is one of the major drivers. As organizations aim to globalise their businesses, the scopes of their projects increase, and therefore the development of strategic alliances becomes very important in order to spread the risks involved (Sulej, 1998), or to use them as a source of learning (Inkpen, 2000). The rapid development of technology is also an important driver for the adoption of strategic alliances (Sulej, 1998). As technology is developing at a rapid pace, organizations are unable to provide all the resources and skills necessary for their business. Therefore strategic alliances gained high importance as a solution for gaining access to skills and knowledge (Büchel, 2000).

Partnerships and strategic alliances are very important for the development of today's businesses in creating value for all partners. Spekman et al (1998, p. 758) argued: *"Value is created through synergy as the partners achieve mutually beneficial gains that neither would have been able to achieve individually."*

However, even if the concept of strategic alliances seems to bring many benefits, it is still argued that cooperation between organizations could be difficult to manage. On this, Mockler (1999, p. 6) argued: *"The essential concept of sharing control and management on a continuing basis is what makes managing strategic alliances such a critical, difficult and demanding task."* As a result, many failures of alliances in different industries were recorded, which led research interest to shift to a focus on alliance management. In this context, some research attempted to investigate the whole lifecycle of alliances, as a means of analysing the development and management of an alliance.

Spekman et al (1998), for instance, described the life cycle of an alliance as containing 7 stages, as illustrated in figure 3. Although it is inconceivable to separate these different stages, as it is hard to establish when each stage starts or ends (Spekman et al, 1998), the diagram illustrated in figure 3 describes the key activities involved in the lifecycle of an alliance.

- *Anticipating:* at this stage, the organization starts considering the need for an alliance;
- *Engagement:* in the next stage, having identified the partner, the different partners start building their mutual expectations from the alliance;
- *Valuation:* at this stage, each partner in the alliance start valuing the different assets and resources offered by the other. During this stage, terms and conditions are defined, contribution of each partner is evaluated, and the benefits are identified;
- *Co-ordinating:* at this stage, the partners involved in the alliance start collaborating. According to Spekman et al (1998, p.762), the focus during this stage is on *"the integration/co-ordination of complementary business activities so that the alliance can leverage the anticipated gains derived from the alliance."*
- *Investment:* during this stage, investment from partners is achieved for the future development of the alliance. It is at this stage that *"assets are formally committed and resources are dedicated to the alliance's mission."* (Spekman et al 1998, p. 762)
- *Stabilisation:* this is the maturing stage of the alliance. At this step, the alliance is already put on work, and therefore measurement and comparison of the objectives initially stated against the performance currently delivered, are possible;
- *Decision:* finally, this final stage concerns the re-evaluation of the alliance, and thus the decision of whether to keep going on the current situation with the current partners, or plan future changes.

As mentioned above, Gartner Group (2001) predicted that poor 'choice of partners' is one of the main causes of failure (and imminent failure) for many ASPs. According to the alliances life cycle diagram in figure 3, this problem fits in the very early stage of the life cycle (anticipating stage), which is about the formation stage of the alliance. However, for the remaining 40% of ASPs, the substantive issues will be more about managing alliances than about forming them, and therefore the objective would be the achievement of a successful partnership. According to the diagram in figure 3, in order for an alliance to be successful it should progress successfully through *all* the 7 stages described. Moreover, the success is further enhanced if the *'decision'* stage closes the loop and goes back to the *'anticipating'* stage; in this case, the partnering firms decide that the alliance is still needed, and is still seen as successful.

However, it is very unlikely that partners' objectives stay static during the life of the alliance, where Spekman et al (1998, p. 766) argue that *"partners' strategic intent is likely to change over time and the objectives and expectations that guide early stage alliances are very much likely to differ in later stage alliances."* As a result, the assessment and measurement of the success of any given alliance becomes a hard task to achieve. This is especially true in the context of the ASP model. The *highly dynamic* character of the ASP model makes the strategic intent of partners difficult to predict. Pandesic suffered precisely this problem, as the strategic intent of the joint venture changed over time, and what the company was offering became inappropriate for the target market. Thus the joint venture had to *shift* its strategy. Being unable to do so, Pandesic failed as a result of inappropriate partnership management resulting from the parents – Intel and SAP.

Such high dynamics of the ASP model could be due to its immaturity. Neither service providers nor customers are certain about the appropriate (successful) elements and drivers of model. Thus, at a more mature stage, the model may become more stable, with better-predicted strategic intents. Such stabilisation would certainly lead to a better base for assessing partnership success.

At present, cases of alliances in the ASP market that are considered successful do exist such as in the case of Cable & Wireless cited earlier. In such cases, the life cycle approach, as described in figure 3, is appropriate. Looking at each stage, at how the alliance is managed, how is it considered by the partnering firms, or in other words why is considered to be successful demonstrates a good mix of success criteria.

## CONCLUSION

The ASP market is still in its embryonic stage. This could lead to less attractiveness from the customer's perspective. However, we argued that the future of the ASP market is likely to be a positive one, where the delivery of applications as a service will form a major means of software distribution (Jaruzelski et al, 2000).

Strategic alliances in the ASP model are a key part of the strategy. With current developments in the industry it is inconceivable that a single company could perform well in all of the activities required by this new business model. A major prediction that researchers and practitioners in the ASP field increasingly share is that the ASP market will go through major consolidation. Jaruzelski et al (2000) predict that, because ASPs will find difficulties in making profit and differentiating their offerings, the ASP market will see two major trends:

*Consolidation*, taking place mainly between ISVs and ASPs with infrastructure; [according to Jaruzelski et al (2000), ASPs with infrastructure are the best positioned to gain success in the market, as they can offer customers one-stop-shopping from multiple vendors, and as they have the required technical skills. Furthermore, it will be difficult for such ASPs to develop the appropriate economy of scale needed for covering their infrastructure, a major consolidation will take place in this fragmented market; and *Verticalisation,* where as seen above in the description of the different variations of ASPs, vertical ASPs have a strong focus on offering differentiation, by developing appropriate skills for a precise vertical market. This could, become a major differentiator between different players, helping them, thus, to raise barriers to entry.

The validity of these predictions is still uncertain. The market is still maturing and is highly dynamic. It is becoming clear, however, that strategic alliances are critical as large-scale aggregation of skills and resources is necessary for the successful functioning of an ASP business.

This paper has attempted to forge a link between strategic alliances and the ASP business model. It has shown how important strategic alliances are for the development and sustainability of such a model. This has essentially been a position paper but further research could develop a more critical approach, in order to produce frameworks and guidelines for the effective development and management of alliances that ASPs could employ.

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