A Strategic Path to Competitive Advantage for On-line, Small-to-Medium-Sized Enterprises within the Service Sector
by John Hamilton and Willem Selen

This paper develops a structured approach of translating the impact of the Internet as an enabling technology on business strategies, business model development and business infrastructure, and indicates a preferred approach of strategic progression. The strategic positioning matrix is developed to provide a framework whereby service-industry-related, small-to-medium-sized enterprises (SSME’s) in major metropolitan areas within Australia may reinvent themselves. It also allows individual players in the industry to distinguish themselves through strategy.

The paper also addresses foundation concepts of Internet-enabled competitive strategy, supply chain management, business models, customers, web services architecture-based IT strategy, and convergent business architecture. These Internet based concepts link both physical and virtual customer interactions.

Introduction
Services may target people or ‘things’, and they may result in tangible or intangible actions (Czinkota, Ronkainen, and Moffett, 2003). Services may be directed at:

- people’s bodies e.g. health care, restaurants, haircutting;
- goods and other physical possession e.g. vet care, freight transportation, equipment maintenance, landscaping;
- people’s minds e.g. education, theatre, museums, communications;
- intangible assets e.g. banking, legal services, insurance (Lovelock, 1996).

Many services now have an Internet or web presence. There have been many attempts to explain these Internet enabled service businesses in terms of business models and strategy. Some models embrace the full use of the Internet. Deloitte and Touche (2001), explain that without a direct and immediate impact on revenues, some entrepreneurial service businesses have trouble justifying the expenditure. Others, viewing a service industry operation as a “people” business, consider e-business a hindrance to relationships. Still others cite the idiosyncratic nature of service related transactions and portfolios, the difficulty of adapting off-the-shelf software to meet their specific requirements and the high cost of custom programming.

Some service models such as the real estate operation – closeyourdeal.com, have deployed the Internet to create a collaborative community that allows supply chain participants to jointly handle real estate transactions, in order to create a ‘one-stop’ shopping experience for customers. “With closeyourdeal.com, real estate agents, buyers, sellers, title and settlement companies, lenders, appraisers, inspectors, and attorneys can easily collaborate in a secure web environment” (www.closeyourdeal.com).

Orel P/L, offers several successful models. This company is an IBM connected Australian web design and management company. It provides portals for industry (www.Smartsearch.com.au), farming (www.FarmersInfo.com.au), and the building industry (www.ToBuild.com.au). Smartsearch is a dynamic search engine linking web sites across a variety of industries - automotive, aviation, building, farming, heavy machinery, marine, media design, motorcycle, technology and tools. It links connected businesses (and their associates) to hundreds of other industry web sites. This simplifies customer access to specific products, suppliers. and related
industry information. It adds value by connecting online customers to its database of non-online businesses, thereby allowing these services to be tapped. The Smartsearch web portal is also product-driven, and supply chain enabled, allowing searches for new and used products, spare parts, businesses, associated industry groups and even government organizations. Dealers, manufacturers and distributors list over 5 million line items. Smartsearch offers business the opportunity to gain maximum exposure to the Australian market. Your business can be more easily found on the Internet, by having your web site connected to hundreds of other Industry related sites. It can even manage on-line enquiries forms for businesses without a web site.

ToBuild is the building and construction industry portal. Product listings and services specific to the building, decorating, renovating and furnishing industries are located and are readily accessed by both buyers and sellers. This portal has industry specific databases and locating services for products and services related to the Australian building and renovating market. Consumers locate products and services via the on-line database. They complete their product purchase either by contacting the supplier direct, or by completing an on-line enquiry form, that is emailed to the supplier.

FarmersInfo is a new Internet portal for the Australian farming industry. It is a free service that enhances and it complements the magazine ‘Farmers Information and Buying Guides’. It provides up-to-date, comprehensive information. It allows farmers to access information on farmer groups, industry organizations, government news and developments as well as businesses dealing with farmers. It is both an information source and a product driven on-line directory housing millions of farm related products.

In real estate DoItYourself (www.diyhomesales.com.au) links deployment of the Internet and disintermediation of the middle-man (realtor) to a franchise business model. In this business model and related strategy, the seller is charged a very small commission fee to list a property with information, pictures, and a 3D virtual tour on diyhomesales’s web site. Diyhomesales subsequently helps the seller to establish a reasonable price for the property, place ads in traditional newspapers, and send out leaflets to people in the neighborhood. The seller pays the fee either when he sells his house or after nine months – whichever comes first. However, once he has paid, the company provides service for as long as it takes to sell the property. This low-cost portal model includes a franchising strategy, where franchisees are obligated to pay a certain percentage for every deal they close as well as for every new property they, themselves, list.

The above is a small sample of the many initiatives currently undertaken to create additional value in the on-line service related value chain.

Service-industry-related, small-to-medium sized enterprises (SSME’s) in Australia display few signs of comprehensive, structured approaches, which translate the impact of the Internet (as an enabling technology) onto business strategies, business model development, business infrastructure and structured web design. This translation is based on the recent works of Porter (2001), Magretta (2002), Huang (2001), Hagel 3rd and Seely Brown (2001), and Robbins and Stylianou (2003). Hamilton and Selen, (2002c), established a demand chain management framework for the real estate industry using personalised web interfaces. They extended this further, integrating web site design features for one-on-one marketing into real estate (Hamilton and Selen, 2002a & 2002b), and through to establishing a strategic framework that addresses an Internet enabled strategy for conducting real estate transactions in the broadest sense in Australia (Hamilton and Selen, 2003). This strategy is readily adapted and applicable to other SSME’s. It allows a well scoped business model to be selected. When combined with an appropriate Internet strategy and business architecture, an on-line SSME in major metropolitan areas in Australia may
reinvent itself, or an individual player in the industry may distinguish themselves from other related SSME’s through strategy.

The foundation concepts of an on-line ‘end-to-end’ SSME business, Internet-enabled competitive strategy, business models, web services architecture-based IT strategy, and convergent business architecture (that combines physical and virtual customer interactions), are elucidated below.

FOUNDATION CONCEPTS

‘End-To End’ Business Solutions and Value Creation
Laseter, (1998) recognised businesses may adopt different strategies to their supplier development. He recognised conflicts existed between the price of supplies and cooperative client relationships, and that too much importance on price created risks with the client relationship, and vice versa. His matrix (Figure 1) offers an effective link between a commitment to lower prices and a commitment to a cooperative client relationship.

<table>
<thead>
<tr>
<th>Commitment to cooperative relationship</th>
<th>Trust Based Partnerships</th>
<th>Balanced Sourcing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High</strong></td>
<td>Supplier dominated</td>
<td>Uses supplier capabilities fully</td>
</tr>
<tr>
<td></td>
<td>Unclear rationale for improvement</td>
<td>Drives improvement at customer and supplier</td>
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<tr>
<td></td>
<td>Assumes congruence of supplier goals</td>
<td>Requires high capability customer</td>
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<td></td>
<td>Supplier may capture all of the value creation</td>
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<td><strong>Unleveraged Purchasing</strong></td>
<td></td>
<td>Adversarial</td>
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<tr>
<td><strong>Low</strong></td>
<td>Unmotivated, unstructured</td>
<td>Customer dominated</td>
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<td></td>
<td>Traditional ‘clerical’ mentality of purchasing</td>
<td>Requires purchasing clout</td>
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<td></td>
<td>‘Price taker’</td>
<td>Eliminates lethargy, but may cause resentment</td>
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<tr>
<td></td>
<td>Leaves lots of money on the table</td>
<td>Does not result in improvement</td>
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</table>

Source: Laseter, 1998

Figure 1 - Supplier Relationship Matrix

For example, the relationship focused customer does not engender the supplier to be stringently price conscious, whilst the price conscious customer, who does not readily perceive product value, may leave the supplier feeling abused, resentful and less focused on product quality.

SSME’s seek to position themselves between suppliers and customers. To do so they must add value to the relationship. They target high levels of collaboration between themselves, their customers, and their suppliers and seek to maximize the capabilities of each component of their supply chain, and to minimize overall ‘end-to-end’ risk. They aim for the ‘balanced sourcing’ quadrant (Laseter, 1998).

Many SSME ‘end-to-end’ management issues are related to time reductions (Finch, 2003). An on-line business approach assists these improvements. For example, rapid electronic fund transfers speed-up the ‘cash-to-cash’ cycle. If interconnected with a demand-chain driven, fully networked, supply-chain enabled, integrated, on-line e-business system, a faster, more flexible, efficient service may be provided. The utilization of the embedded ordering and office automation systems facilitates a more economical, ‘continuous’ replacement system, where small, frequent orders permit supply chain members to hold reduced inventory levels. In addition there is direct, quick, efficient interaction.
between suppliers, SSME’s, and customers. By analysing and connecting additional customers, appropriate SSME’s and appropriate suppliers, dedicated, service-related e-business sites like www.oracle.com, www.commerceone.com, www.salesforce.com, www.epiphany.com, www.peoplesoft.com, www.seibel.com, can provide additional value to the on-line service business system. Thus the web enabled SSME has several key competitive tools - time, flexibility, efficiency, cost, inventory, connectivity, customer analysis, and the like by which it may enhance its value creation and positioning – and each is related to its on-line presence via the Internet.

**Internet-Enabled Competitive Strategy**

Porter, (2001) evaluated the impact of the Internet as an enabling technology for establishing distinctive strategic positioning. He identified two underlying drivers of profitability that transcend any technology or type of business:

- **Industry structure**, which determines the profitability of the average competitor, and
- **Sustainable competitive advantage**, which allows a company to outperform the average competitor.

These drivers are related to Porter’s five forces model of competition, consisting of:

1. the intensity of rivalry among existing competitors
2. the barriers to entry for new competitors
3. the threat of substitute products or services
4. the bargaining power of suppliers, and
5. the bargaining power of buyers.

Figure 2 shows some negative (-) or positive (+) effects applicable to a specific on-line service industry. The bracketed sign indicates whether the relevant factor has a negative, or positive, effect on the competitiveness and profitability of this industry. Each specific service industry may exhibit different effects, and to different degrees.
Technological improvements in virtual 3-D tours, streaming video, and greater availability of low-cost broadband enhance the Internet communication processes between customer service representatives and customers. This can have a positive effect on profitability. Internet sellers can utilize these improvements, and then incorporate new ideas to generate additional differentiation avenues, shifting the buyers’ focus away from price. Porter suggests that, in general, Internet technologies will continue to erode profitability by shifting power to customers. Positive and negative effects on profitability as a result of the impact of the Internet on industry structure can be subsequently looked at for each of the five competitive forces, and will be revisited later in their translation for the services industry in Australia.

Porter argues that the second main driver of profitability is sustainable competitive advantage. He suggests that cost and price advantages are achieved through either improving ‘operational effectiveness’ or ‘strategic positioning’. ‘Operational effectiveness’ refers to ‘doing the same things your competitors do but doing them better’, where companies only gain advantages if ‘they are able to achieve and sustain higher levels of operational effectiveness than competitors’. Porter concludes that ‘the nature of Internet applications makes it more difficult to sustain operational advantages than ever’. As such, strategic positioning becomes all the more important, gaining cost advantages or price premiums by competing in a distinctive way. This requires a ‘strong focus on profitability rather than just growth, an ability to define a unique value proposition, and a willingness to make tough trade-offs in choosing what ‘not to do’...’. It involves the configuration of a ‘tailored’ value chain that enables a company to offer unique value. Porter goes on to say that ‘when it comes to reinforcing a distinctive strategy, tailoring activities, and enhancing fit, the Internet actually provides a better technological platform than previous generations of IT’. Companies ‘need to tailor their deployment of Internet technology to their particular strategies’. Six principles for establishing and maintaining a distinctive strategic positioning are put forward as:

1. start with the right goal, which is superior long-term return on investment
2. deliver a value proposition different from those that competitors offer
3. operate a distinctive value chain, performing either different activities than rivals or performing similar activities in different ways
4. abandon or forgo some product features, services, or activities in order to be unique at others, in other words looking at trade-offs
5. strategy defines how all elements of what a company does fit together; all a company’s activities must be mutually reinforcing
6. maintain continuity of direction, in order to develop unique skills and assets or build strong reputations with customers.

Value and Profitability
Without value, sales and market share don’t happen (Finch, 2003). As businesses become more and more connected through the Internet anyone can buy anything from anyone else. Price differentials begin to disappear, because everyone is aware of the best prices. Product quality differentials disappear because no-one with an inferior product survives. Customers know what products and services offer the best value, because they talk to each other via chat rooms, email and bulletin boards, and the like. Location too doesn’t matter, as the next service provider is only one click away.
Hence, the market consists of businesses with similar prices, and products, trying to differentiate themselves through whatever value attributes remain for differentiation. For many businesses this difference is their ‘service’ component, and the processes their customers must go through to obtain their desired outcomes.

**Business Modelling**
Current e-business models aim to ‘add value’ to the customer. They do so by drawing the customer into their respective solution. Each business model solution is focused on a specific area of customer demand. Current online e-business models include: storefronts (combining transaction processing, security, online payments and information storage); shopping carts (customer accumulates items as they shop online); shopping malls (broader selection of products and services are offered by a variety of vendors); auctions (customer as buyer); reverse auctions (customer as seller); portals (find almost anything at one site); buying in bulk; name your price or shopping bot (customers set purchase price); comparison pricing model (find lowest price); demand sensitive pricing (shop in groups, get group discounts); bartering (offering item in exchange for another); rebates (attract customers to the site); and free products and services (advertising-driven revenue) sites (Lawrence et al, 2000, 2001 & 2002; Deitel et al, 2001).

Many businesses, for example Barnes and Noble (books), GM (automotive), Circuit City (electronics) have chosen a combination model or ‘click and mortar’ business model where they maintain both a physical presence and an e-business solution. Other businesses integrate selections of on-line business models into their e-business model. Some incorporate customer models, value models and revenue models and the like. Others offer multiple value models, multiple revenue opportunities, and built-in mechanisms for winning, retaining and directing web site traffic (Novak and Hoffman, 2001).

Sarkar, et. al. (1996), described various types of online information brokers or cybermediaries. Key ones included: directories (including Yahoo and Excite); search engines (AltaVista, Infoseek); malls (BarklaySquare, Buckingham Gate); virtual resellers (Amazon, CDNow); financial intermediaries (Digicash); forums fan clubs, and user groups (virtual communities); evaluators (site reviewers); and virtual marketplaces (Covisint).

Today, a directory company like Yahoo also offers a search engine (www.google.com), personalized news services, free email, etc. It has diversified to such a point it is now considered a web site that acts as a gateway to information and services available on the Internet. This gateway is called a portal. In the USA today we have several portal models: horizontal portals where a wide range of services like search engines, directories, news, recruitment, personal information, shopping, etc., are offered (www.lycos.com); vertical portals where a single function like news or a specific industry sector is provided (www.chemdx.com); geographical portals which may adopt vertical or horizontal structures (www.countryweb.com); marketplace portals which may be geographical, horizontal, or vertical (www.marketsite.com); transport related (www.qantas.com); and media portals with voice or streaming media.

Portal models may exhibit several variations. Yahoo, for example, is a horizontal portal since it offers a range of services, but it has also developed a geographical portal for different countries, and in the USA, even for different cities (Chaffey, 2002).
The main portal models are vertical, horizontal, and geographical. Each in its own way tries to be a key gateway into its perceived realm of Internet expertise and service. Vertical portals provide in-depth drill-down systems to provide highly specific answers to complex questions. They do not attempt to cover the diverse and related area around their specific target fields. Yahoo, in contrast, does fit the “horizontal” portal model, as the vertical structure would make it far too big to manage effectively, and would restrict its ability to ‘spread out’ into new areas. As such, horizontal portals seek to provide some knowledge on a wide range of areas. Their drill-down facilities are limited and the user is generally referred to a highly specific vertical portal to complete their search. Other portal models also remain within their sphere of expertise and seek to maintain their competitive position. Consequently, there are gaps or niches that SSME’s can fill.

Current SSME web based business models are defined in terms of portals – vertical, horizontal and hybrids of vertical and horizontal (Hamilton and Selen, 2002c). When these models are viewed strategically they all have flaws. They do not adequately address the fragmented nature of this industry’s marketplace. They often fail to address points raised by Drucker (1994) concerning who is the customer, what areas add customer value, how funds are generated, what is the economic basis on which the customer gains value, and how the web business provides ‘value’ at an acceptable cost.

On-line SSME’s are often cash strapped and consequently seek to minimize their costs and maximize their returns. They rarely attempt to completely replace the old way of doing business. Consequently, new on-line business models remain variations of traditional ones, and are often attached to the generic value chain.

The online SSME business models work primarily due to their size; their niche, their advertising; and their charges connected to online partners, participants, or users. Unless they are regularly reviewed and update to continually match consumer demand, these models often encounter difficulties, because they are designed around weak assumptions concerning customer behaviour. They, like many other business models, are ‘solutions in search of a problem’ (Magretta, 2001).

When the early adopter, or the best executor in the networked economy (Mohammed et al, 2002; Porter, 2001) couple their successful web business model with an appropriate management supported, competitive strategy; a position of sustained, competitive advantage may arise. This is applicable to a range of web based businesses including storefronts and malls; auctions and reverse auctions; dynamic pricing, comparison, and bartering; billboard, brochure subscription; advertising and affiliate; B2B and ERP; (Lawrence et al, 2000, 2001 & 2002; Deitel et al, 2001).

Low cost strategies are not sustainable, as eventually the competitive advantage diminishes and the market becomes one of price minimisation with the less competitive operators failing. This strategy is reasonable if the goal is to remove competition, but this strategy can leave the survivors in such a weak financial position that they cannot then take advantage of the resultant situation. The ‘super’ portal – one that combines horizontal and vertical portals similar to a ‘Yahoo.com’ or ‘Amazon.com’ model - is yet another approach. Here everything relevant is provided, and the site becomes the customer or client entry point. The site hopefully captures the customers’ transaction before they proceed to another site. Such a site certainly has an
advantage – size, economies of scale, learning curve position, customer recognition and the like. However, does the site add customer value at an acceptable cost? Does the site maintain customer loyalty? This site requires highly sophisticated metrics to analyse its customer base and to manage its inventory.

Correctly targeted ‘niche’ portals have an opportunity within the Internet framework. These portals must focus on quality user experience. Customers today seek, and enjoy, social and sensual contact. They do not want to be disembodied from their physical environment. Hence the ‘niche’ services web site must align its structure, form, space usage, and function to meet its target customer base. Here it is paramount to establish an effective web presence where the ‘feel’ of the site, content and context dimensions, degree of "customer-isation", flow and connectedness, communication methods, and commerce activities can be leveraged to establish a competitive advantage (Hamilton and Selen, 2002a, 2002b & 2002c; Mohammed et al., 2002; Hofmann and Novak, 1996).

Porter (2001) concludes that ‘no business model can be evaluated independent of business structure’. Hence, correct coupling of the physical services agency, the web presence, and the networked economy is a vital success factor.

**Web Services Architecture-Based IT Strategy**

The networked economy adapts new architecture such as Sun’s open network, Microsoft’s ‘dot net’, IBM’s WebSphere, or Oracle’s network services to form the framework of unique business solutions. Previously, many organisations have sought solution in ERP systems, but found these to be relatively inflexible, and slow to react to the dynamic and ever changing marketplace (Hagel 3rd and Seely Brown, 2001). Selen (2001), proposed a collaborative commerce framework for the services industry.

The modern on-line services model must be agile, flexible and able to react swiftly to environmental changes. An example of this architecture is illustrated in Figure 3. Deitel et al, (2001), and Hamilton and Selen, (2002c) have adopted this approach with on-line SSME’s.

Many models employ the above three-tier architecture consisting of the:

- **Client Tier**, or front-office customer interface where interactive application services are provided;
- **Middle Tier**, or business intelligence and knowledge management systems, where mission critical business functions and transactions are securely connected,
- **Data Tier**, or data repository of all relevant value chain information.

Each tier may be located on the same computer, or each tier may be located on a different physical, computer.

Hagel 3rd and Seely Brown (2001) suggest that, by starting at the edge where limitations of existing technology are most apparent and onerous, and by creating a shared technology with others in the service value chain, a niche service grid may be created where opportunities to exploit the revenue growth may develop. However, this is only part of the solution.
The web browser architecture provides the front-end tools to efficiently design a directed flow through the web site and to provide minimal load time, (Novak and Hoffman, 1999). The web server communication technology is built around ASP and incorporates web metrics tools. It is a key enabler of service value chain. For example, a SSME ‘dot com’ customer makes an enquiry by completing a form or input table, or via a wireless application protocol (WAP) device, seeking information regarding a service offered today. They may add the loan amount, the frequency of payment, the duration of the loan and acceptable interest rate ranges. The middle tier then sorts this information using its inbuilt business rules and calculations. The middle tier then queries the database (within the boundaries of its applied rules) for the answer(s) to the customer enquiry. The relevant information is extracted from the database, or on-sought from an external supply chain partner, i.e. a mortgage broker’s current and live database. This data is instantly passed back to the customer across the middle tier using the relevant software. Thus the customer obtains a current value added solution to this enquiry and now knows the cheapest loan solution for today.

The metrics tools come into play when a customer, having made an enquiry, either revisits the site, or drills down further, for example, to see which properties the customer is still in a position to purchase within their loan parameters. In both cases, movements and activities across the site are tracked. This information is collated, and added to the customer profile in the database. A ‘priorities’ list based on set rules is deduced (houses, flats, businesses, land, etc.), and the relevant searches are then offered via a quick choice pop-up menu. Once selected, the relevant information to the quick choice pop-up menu is retrieved from the database by the middle tier and transferred to the interface table format, and appropriately displayed. Again an enhanced value added position is achieved.

Business movements towards new models, new technologies, and new capabilities require considerable organisational, managerial, and skills set changes. The resulting new architectures, correctly applied, are more collaborative, agile, flexible, automated, and efficient, and as such offer advantages over the old architecture.
Convergent Business Architecture
When deploying the Internet to support or complement business activities, quite often the underlying physical and virtual architectures have been conceived and constructed independently. Huang (2001) recently pointed out that companies need to view their physical and virtual spaces as creating a single structure. The basic concepts of this unifying approach are detailed below, and will be applied to our strategic framework for the services industry at some later stage.

In designing such a convergent structure, four key challenges were identified:
- matching form to function
- visualizing the presence of others
- personalizing spaces, and
- choreographing connectivity.

As a first step toward creating a convergent architecture, Huang suggests to “de-compose” particular functions into their component activities. Once the individual activities are understood in detail, they can be allocated among physical and virtual spaces. The author states that “the best location for performing a given activity can then be determined by looking at such factors as transaction costs, richness of emotional experience, and potential for data gathering and learning”. Subsequently, priorities and hierarchies can be established among activities to determine desirable proximities and connections, and guide decisions on outsourcing activities to third parties.

The next challenge is connecting the people in the two spaces, making the boundary between the physical and the virtual as transparent as possible. Places should be established where people can go to see and be seen, both physically and virtually, as the hubs of convergent business architecture. The structural foundation of convergent architecture consists of data, not bricks. Spaces need to be constructed around a shared database to help personalize spaces to the activities and needs of various user groups.

The final challenge in creating a convergent business architecture is the design of the interfaces between the physical and virtual worlds. With the multitude of new interface devices, physical spaces could turn into dense fields of connectivity, creating the need for companies to carefully choreograph the use of many different interfaces to ensure users a coherent experience.

As such, a symbiosis between the content of the information provided through the Internet and the physical context in which that content is accessed, can be established. This will be increasingly relevant for SSME setting, where both virtual aspects such as information gathering and smart service or product related searches have to be closely coordinated with physical dimensions such as product or service delivery.

The Strategic Positioning Matrix and the On-line Service Industry
SSME’s participate in a variety of on-line and off-line activities, on-line activities may include displays of services, while off-line activities may include document sourcing and mailing to the prospective customer. A successful on-line activity does not just happen, and many dimensions of information are to be considered. The authors have developed six classification groups for the continuum representing the services industry. These classification groups have been compared based on ten key comparison factors. A SSME Classification Matrix is presented in Figure 4.
<table>
<thead>
<tr>
<th>Comparison Factors</th>
<th>Web Format / Target Market</th>
<th>SSME Classification Factors</th>
<th>Services</th>
<th>Demand</th>
<th>On-Line Customerization</th>
<th>Off-Line Customerization</th>
<th>Brand Sharing</th>
<th>Database Driven</th>
<th>Metrics Incorporated</th>
<th>Business Intelligence</th>
<th>Knowledge Management</th>
<th>Customerization Level</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>One→Few</td>
<td>Low</td>
<td>Low→Medium</td>
<td>High</td>
<td>High</td>
<td>Medium</td>
<td>Medium</td>
<td>Low</td>
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<td></td>
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<td>Several</td>
<td>Low→Medium</td>
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Figure 4 - Classification Matrix for Service Industry SSME's

Services include user interactions with the SSME's web site. They are grouped based on degree of contact and user interaction. The mix of direct customer interaction and back-office processes (with little customer contact) varies. Demand includes the requirement for services by the user and the ability of the web site to deliver these services. On-line customerization includes the degree of on-line service interactions with the customer. Here various levels of interactivity may ensue from select ‘flash’ site to request on-line interactive video conference, while off-line customerization like mailing sales, legal and financial documents involves little customer contact. These areas can be refined using various levels of back-office activities combined with labour and technology. Brand sharing is a measure of the degree of connectivity to other web sites, and of the degree of sharing of information between these sites. Database driven is a measure of the degree of database support for the SSME’s web site. Information may be static of fixed, like static images or dynamic where feedback, image rotation and flash movies, capture user interaction and demand, through to multiple data storage and to interlinked supply chain data warehouses. Metrics incorporated moves from basic ISP data, to use of customized tools, to interpretation and evaluation tools, to
site modification tools, to demand chain driven one-on-one tools. Business intelligence moves from no intelligence gathering, to surveys, hit rates, site paths, page impressions/1000 hits, sales/1000 hits, user skills, country analysis, etc. Here the web site is used as prime intelligence gathering tool. Knowledge management is the back office web site management required to ensure 24/7/365 connectivity of an appropriate standard, quality and ease of user movement (or ‘flowability’). This includes web site design, maintenance, upgrade, associated database design and structure and connectivity. Customization level is a measure of the degree of ‘customer centric’ activities the web site displays. This moves from the static site that merely tells about services and requests you visit the relevant services agent to the use of customer visitation information to modify a site via a customized ‘pop-up menu’ saying ‘Welcome again XXXX”, through to a site that physically changes depending on the previous user interaction, through to a site that modifies the site based on previous and current user interactions, through to a site that tracks the user dynamically, adds this information to its knowledge base on the user, and offers most likely solutions based on user paths, and associated data.

The classification groups become increasingly complex, and more expensive to maintain and operate. Features of less complex classification groups are absorbed into the next (and more complex) classification group.

The Niche classification group is a basic site that provides static, non-interactive information for the user. This site contains static images and text, and requires the user to interact with SSME customer services personnel via phone, fax or direct contact. Typically these sites use basic HTML coding and sometimes basic templates. They tend to remain static and unchanged for long periods and are generally owned by unskilled individuals, who rely on others for web assistance. They are typically related to service-industry-related, small, local enterprises (SSLE’s).

Niche Extension sites are more developed. While still static in nature, they may provide some designer built communications, such as email comments, or animated room or house walk-throughs. These sites again use basic HTML or templates for site design, and may incorporate image roll overs, video capture, and the like. These sites are typical of SSLE’s.

The Mass group represents a larger, often state-wide service. It incorporates interactive features related to SSME’s such as service time/cost calculators, and sometimes some transaction facilities. These sites are typically franchises that are loosely linked under a ‘state-wide’ company banner. They have full time web site management and incorporate complex programming to link databases, web sites, security, transactions, and quality. Figure 2 earlier, illustrated one such typical software design structure. This site has multiple user channels. These sites typify SLE’s or service-industry-related, small-to-medium-sized, local enterprises (SSMLE’s).

Mass Extension sites are improvements on the mass sites. Here both local and state-wide services are available. Interactive features are incorporated, including complex site sorting for a service or a feature, or a business via such fields as dollar amount value, and/or service, and/or availability, and/or location. Here one tends to find service-
industry-related, small-to-medium-sized enterprises SSME web sites.

The Customize classification group is a State or National horizontal or vertical portal, typical of a service-industry-related, medium-sized enterprise (SME). It does all that is required of such a site. It can list, grade, modify, compare, and even prioritise services information based on customer requests. It can file customer information and recall it upon request (or sometimes via metrics information) for the next user visit. It has 7/24/365 full time staff, deep databases, data warehouses, redundancy, an intranet between its key contributors (or members), a supply chain extranet with its alliance members like banking and insurance institutions, legal firms, its affiliated associations such as the Services Institute of Australia.

One-on-one classification site is a unique, service-industry-related, innovative, medium-sized enterprise (SIME). It is an advanced-features full portal for the relevant service industry. It is a hybrid of the horizontal and vertical portal model. It tracks customers, recalls customer activities, replaces the standard web presence (or interface) with a customized web site based on previous (and current) activities, adds value to previous models by making suggestions, by providing information on relevant activities (for example, modes of travel, cost, and transportation times to an activity or service), emergency services hospitals, police, shops, bus routes, etc data. It incorporates alliances, cross organisation data mining, interlinked data warehouses, government and institutional databases, etc. These researchers are currently working to develop a new tracking method that will greatly enhance current tracking tool data. Thus this one-on-one classification group will move closer to becoming a reality.

The Australian services industry is gradually adopting the Internet as a means of adding value to their off-line operations. Heim and Sinha [Heim and Sinha, 2000], developed an electronic services product-process matrix for the electronic food industry. They argued that this product-process matrix encompassed a strategic fit between the delivery process, and the respective market existing for e-services. Their product framework delineated service content (and market segments), while their process framework delineated delivery technology flexibility (and complexity). This framework formed the basis on which the authors developed a strategic positioning approach for web-enabled service industry models.

Heim and Sinha’s product structure considered only static or dynamic content. Furthermore, Heim and Sinha’s process structure does not adequately describe the degrees of flexibility and complexity that apply within the services industry. Current modelling suggests a third classification - agile content, which must be included to describe the web site response to customer demands. These issues have been addressed in the development of an on-line strategic positioning matrix for the services industry, particularly SSME’s. This is displayed in Figure 5.
### Web site’s increasing interactivity with the customer

<table>
<thead>
<tr>
<th>Web Format/Target Market</th>
<th>Static</th>
<th>Dynamic</th>
<th>Agile</th>
</tr>
</thead>
<tbody>
<tr>
<td>e-Business Infrastructure</td>
<td>Niche</td>
<td>Niche</td>
<td>Customized</td>
</tr>
<tr>
<td>Niche Extension</td>
<td>Mass</td>
<td>Mass</td>
<td></td>
</tr>
<tr>
<td>Individual, or SSLE</td>
<td>Boutique, or SLE</td>
<td>Local Mall, or SSMLE</td>
<td>National Franchise, or SSME</td>
</tr>
<tr>
<td>Traditional Portal, or SME</td>
<td>Active Hybrid Portal or SIME</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Adapted from Hamilton and Selen, 2003

**Figure 5 - Strategic Positioning Matrix for the on-line services industry**

The *individual* web site model is a static, single operator, small site, with a small sample of local properties. It is usually template built. The *boutique* web site is a static, site consisting of a small team of local or niche services individuals. The *local mall* is a dynamic site where local services operators, or individuals, band together to share a site, and increase market reach, or where an organisation seeks to establish a local mall of services from a variety of sources. The *national franchise* model is the dynamic site of major services firm. It normally displays a company portal image as its State or National presence. The *major alliances* model seeks alliances with many of the above minor and major services sites, and displays their data either directly, or by co-hosting, or by reference links to the respective sites. The *traditional portal* model is a true horizontal or vertical model for the SSME. It provides multiple complex searches – either broad or in-depth; comparisons; and related data including government, legal, financial and other associated contacts and news items. It tracks customers using tools like Webtrends or NetRaker. It further analyses this data using tools like Precise Software Solutions, and then provides intelligent responses to the user’s site paths, demands, requests, etc. The *active hybrid portal* represents the final level of
interactivity. Here, the aim is to provide a full service one-on-one active dynamic customer centric web site – a full demand chain driven, supply chain supported web site utilising intelligent expert systems to respond to customer related activities.

The strategic positioning matrix shows the SSME’s continuum sorted into six classification groups based on the web site’s increasing interactiveness with the customer. This information is modelled against increasingly complex web models. The web site models and their respective ‘fit’ within each classification group can be determined based on:

- the scale of services – is a measure of the degree of web site contact involving the user.
- the scope of services – from simple service listing to a complex set of services and service related datasets like tours in a price range, travel insurance, local transport and shopping close to relevant accommodation.
- the amount of on-line customerization – from a simple email address through to a full 24/7/365 on-line customer support service linked into the database structures.
- the amount of off-line customerization – from complete sets of detailed, hard copy service purchase documents through to full on-line services requiring little back office (or customer service personnel) direct service.
- brand sharing – here a basic site like www.farmersinfo.com.au can also be incorporated into a large alliance site like www.smartsearch.com.au.
- database driven site – from no database like the self service real estate site diyhomesale.com.au or the hot air balloon company hotair.com.au, through to a highly complex chain of data warehouses incorporated into a site like www.amazon.com.
- metrics incorporated – from a simple hit rate counter through to complete set of interactive customer tracking system.
- business intelligence and knowledge management – in complex sites like yahoo.com, expert software systems analyse the incoming data, compare it against the knowledge management database systems and other business intelligence data feeds, and then attempts to deliver what the user requires.
- level of unique customerization – moves from simple to complex depending on the above information feeds, tracking tools, the strength of the data warehouses, the levels of metrics support, business intelligence, and knowledge management; as well as the ability of the software programming to modify the web site and deliver specific user requirements.

A desirable/appropriate strategic path is thus established for the various scoping possibilities within the services industry. Progression along the strategic path, or to the right of the path depends on the market served and the inherent cost structure of the web site model pursued. As services related organisations increase in size, form and function, they must gain increased market share, or control their costs and grow their revenue streams. To ensure their on-line business model is financially sustainable, they should strategically grow their web site. This involves offering more on-line features, thereby satisfying the needs of more customers, and providing greater
customer responsiveness by the SSME. A move down the diagonal, or strategic path, is imperative. Usually, moving off the diagonal includes opportunity costs (for either customer or SSME). For example, a boutique web site may find it impossible for now to move towards increased customization, without changing its strategic focus to increase market share, which in turn may change the nature of the business. On the other hand, large franchises that move from mass extension to lesser forms of customer interactiveness for cost cutting reasons, may find themselves losing competitive advantage and hence market share.

To upgrade its web site the SSME should move to the right and down along the strategic path. This move to a new, more complex target cell implies a new dimension of complexity will arise. This SSME will need to review many of its previous web site parameters. Parameters such as site cost, ability to scale, extra staff and customer support, new resources requirements, more complex software, additional hardware, number of transactions, mode of transactions, level of security, and the like, will all require careful consideration. The agile, one-on-one active hybrid portal model aims to meet demands of the customer in the most effective way, while maintaining a competitive level of efficiency. This requires substantial investment in human resources, information technology, innovation, and creativity.

It is still to be seen whether the multitude of web site models currently in place and in development will continue to successfully co-exist in services industry. Some SSME’s may choose to differentiate themselves and move well away from the target path accepting both the associated additional costs and marginal sales increases, others may opt for cost reductions to remain competitive, and may scale back (reduce) their service offerings, whilst still others may select to re-scope and create a larger web presence. This may require a move down the strategic path diagonal to a more dominant player position in the marketplace. This dominant player approach may necessitate detailed (and often costly) reconfiguration of the existing on-line SSME business model. The most dominant player offers an agile, effective (full customization, and ‘end-to-end’ solutions), efficient (lower cost structure per transaction, and hence lower commissions), complex, and interactive global presence.

In each case – differentiation, cost scaling, re-scoping or agile customization, the strategic positioning matrix offers a framework for on-line SSME’s to distinguish themselves through strategy.

**Conclusion**

This paper developed a structured approach for translating the impact of the Internet as an enabling technology on ‘end-to-end’ business strategies for SSME’s in Australia, and discussed impacts on business model development and business infrastructure, as well as value creation, on-line business models, web services architecture-based IT strategy, and convergent business architecture that combines physical and virtual customer interactions. A strategic positioning matrix resulted, which indicated a “preferred” strategic path of progression along dimensions of interactiveness with customers. The flexibility/complexity and innovation of the SSME web site environment both supports and complements customer
interaction and/or transactions. This is an important first step in allowing SSME’s within the services industry in Australia to reinvent themselves thorough strategy. It also develops a strategy whereby individual SSME players may distinguish themselves through strategy. Furthermore, it raised the question whether the multitude of SSME web site models currently in place, and in development, will continue to co-exist, or whether the more advanced and complex approaches, suggested within the strategic positioning matrix, will eventually allow the larger players in the services marketplace, to reconfigure their sites, and to reposition their model(s), by offering increased effectiveness (customization), and greater efficiency (lower cost structure per transaction, and hence lower commissions), thereby becoming the dominant services operators for the SSME’s across Australia.

References


