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CUSTOMER STRATEGY IN SERVICES INDUSTRIES

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ABSTRACT

Services industries are diverse, and range from the full service-only dimension through to services that support a product. In almost all cases the service involves capturing, or engaging with, the customer. A Service Value Networks (SVNs) approach offers a new way to engage with the customer. This approach moves the existing business models into the near-real-time customer tracking environment.

This paper discusses complex doorways (elucidated by a SVNs approach) through which competitive new business approaches may be better understood, and developed, in line with customer drift, and/or customer changes in sentiment. The customer decision-making process to engage in a transaction process with the business, and the specific business-customer encounter pathways that ensue, contribute to the final customer engagement decision. The 'bricks' (off-line physical) business and to 'clicks' (on-line virtual) business both fit within the SVNs approach. This approach may be applied to tertiary institutions and student monitoring.

Keywords: Service value networks, competitive, strategy.

INTRODUCTION

Services industries are diverse, and range from the full service-only dimension, like an educational training program, or nursing, through to the services that support the purchase of a product, like a new car transaction. At the other extreme to services is the product or goods dominant arena like dog food, salt, or clothing [2]. The degree of servicing component required varies inversely in conjunction with the degree of product dominance, with various industries displaying differing levels. For example a fast food store offers both services and products, and both contribute to the customer's decision making [21].

The services arena captures a range of business solutions that fill a continuum displaying varying degrees of service and/or product component dominance. Levitt [14] suggested that there was no such thing as a service industry, but there were industries whose service components were greater, or less, than those of other industries. Levitt further suggested 'everybody was in service.'

In order for a service to be effective, the service will, at some stage capture, or engage with, the customer [7][9]. To deliver a customer satisfying outcome, and one that delivers a true value proposition, this engagement will likely deliver something that the customer perceives to be of value [10][11][13]. This completed business-customer solution may be via an off-line (physical transaction) or an on-line (virtual e-transaction) value proposition [4].

SERVICES INDUSTRIES STRATEGIC DELIVERY MODELS

Recent research by the Siegel [22] at US Sloan's School of Management indicated that all players in an industry benefit from aggregation or sharing of information, ideas, and knowledge. He suggested a wealth of knowledge may be garnished by combining organizational expertise. Aggregation analysis delivers relationships with greater combined competitiveness. It was further posited that it remained prudent for organizations, like the pharmacy industry, to consider their e-strategy, and to add aggregated information and knowledge capabilities into their competitive frameworks [22][27]. This supports emerging new business models involving multiple aggregations like e-pharmacies, and the empirically demonstrated service value networks (SVNs) approach.

Emerging technologies often deliver disruptive solutions that may radically change the status of competition in a services industry [1][5]. Such changes are often followed by changes in service business models. For example, the early railways service models consisted of the customer going to railway station, obtaining a railway travel ticket to a location, and travelling on that specific train. The train schedule was set by the railways management, and was subject to a host of potential delays. This model may be termed a low services integration model, and it exemplifies a rail network, with little or no computerized operations. This model constitutes the oldest and least value adding model. It represents the low service integration model.

The next level of customer engagement informed the customer of how the train scheduling and its inter-connectivity, was operating each day. This involved a degree of networked (and often computerized) operations, as shown in Figure 1. Here the railways business transporters (trains), were linked to the logistics systems and the railways network acted fairly harmoniously whilst providing greater levels of customer information, servicing, and customer perceived value. The management was also better able to monitor its performance. To move from the low service integration model up to this service supply chain integration model required the incorporation of new technologies and systems. This change was not incremental. It required new approaches, and greater sophistication, and it represented a disruptive transition [1][5].

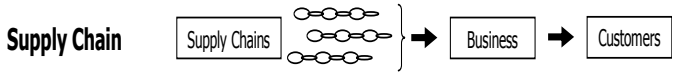

Figure 1: Supply Chain Interconnectivity

Next, many railways moved beyond supply chain models, targeting higher levels of responsive, customer demand-driven solutions, as shown in Figure 2, Here in response to the customer initiated action (labeled '1'), a business station assistant aiding a customer was able to search for, and to locate, responses to in-depth customer requests (labeled '2') – by tapping their well-integrated network information systems. Thus the best solutions for the customer were delivered. In addition, the customer-related railways database was gradually updated with each new customer request (and / or variation). Such additions, when assessed by railways management, could then be transcribed into load capacity changes (more transport carriages per train) or even new train schedules. Thus, the response capabilities of the railways moved beyond supply chain towards demand chains systems [6]. Sampson [20] suggested that service supply chains, when engaging with the customer via short-lived, customer generated, two-way communication channels (that generated business responses which were then relayed into customer service), were better termed demand chains. Engaging these demand chains was seen as an additional mechanism to deliver further enhanced customer perceived value.

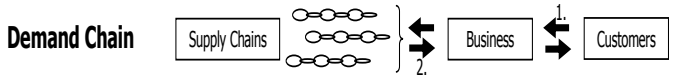

Figure 2: Demand Chain Interconnectivity

The value network, shown in Figure 3, was the next step in delivering customer value. Early value network approaches adopted a value chain approach. These targeted the real-time environment. Further streamlined efficiencies were deliverable. Timmers [24], like Porter [19], noted that the value chain was more than a series of discrete steps, and that technology offered new integrated solutions options. The railways moved down this pathway. The built flexibility into their intelligent, supply chain 'engines' [26], interconnected their high level logistics systems, and set about delivering efficient delivery systems that in some cases linked to on-line options [3]. Van Looy, Gemel and Dierdonck [25] considered the value chain as a 'value constellation', and proposed a more 'holistic view of the way innovation processes created value for the final customer.' Thus the value network approach to a customer request (labeled '1') was established This is shown as Figure 3. The railways too recognized this approach to be one that was capable of adding value, and set about incorporating other refinements to pick-up on a number of complex value chain relationships [23]. They sought to link strategy, management, investment, operations, marketing, service and the environment [8][16][19], and intangible assets like services [15], and customer segmentation [17] into their value network business model, adding aspects of these capabilities to their customer response kit (labeled '2').

Hence, the value network approach delivered added value solutions in addition to the: value; demand and service chains; and sources external to (and beyond) the supply chains. Higher levels of demand forecasting, accuracy, and faster higher quality servicing were delivered. Occasionally value adds to supplement customer satisfaction – like information guides to events, and rewards were also offered to innovate and trial additional business response capabilities.

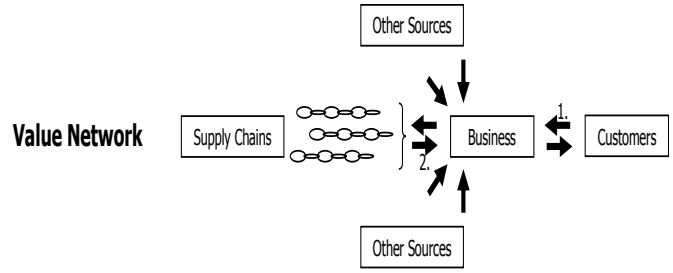

Figure 3: Value Network Interconnectivity

The next level of sophistication in customer engagement business modeling was customer relationship management (CRM). CRM delivered the methodologies, software and internet capabilities necessary to enable the business to manage its customer relationship in an organized way. Here the railways ran customer satisfaction surveys, and then used these as management assessment tools, to adjust their CRM business model incrementally over time. This approach better aligned the business to its customer sectors

The CRM gap analysis approach to improving the business to customer interaction did not deliver the tools to fully customerize or build consistent one-on-one relationships.

The complex CRM approach, shown in Figure 4, was harder to develop, and was not widespread in and across services industries. It aggregated and integrated the business value chain contributions from its input blocks of information (including immediate environmental sources) into a net business package (labeled '2') suitable to meet the customer request (labeled '1'). However, these CRM systems still adjusted for consumer shifts in incremental ways. In Australia, many services businesses still do not achieve this model. For example, across the industry the railways employs combinations of the services, demand and value approaches. QRail offer value adds like Dylan concert and how to get there, but as yet no Australian railways network offers combined on-line and off-line services that approach the CRM model.

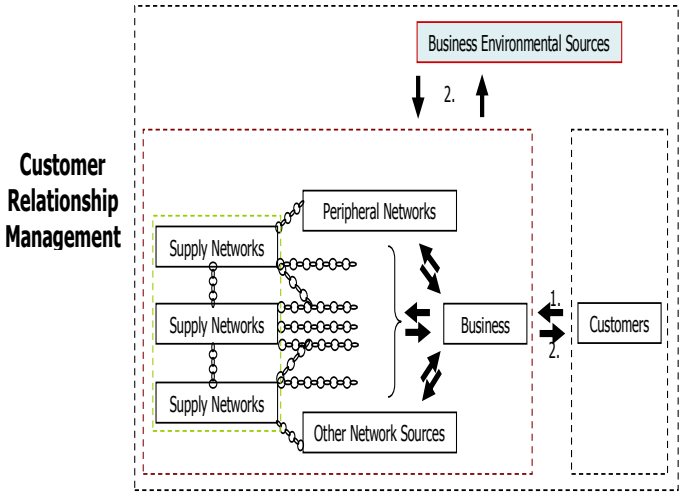

Figure 4: Customer Relationship Management

SERVICES VALUE NETWORKS

Now in its infancy, the industry-wide, environmentally-interactive service value networks (SVNs) approach captured the next level of disruptive services business integration. This model is shown in Figure 5. Here, in response to the customer request (labeled '1'), the business engages integrated, networked, intelligent, computational business and environmental solutions to intelligently deliver (labeled '2') its best customer solution. This solution may be delivered via a customer-serving staff person, or via a business representative connecting by phone, or via direct on-line customer engagement into the on-line business network. For example, in response to a customer generated request, the SVNs engage the business intelligence tools, possible solutions are assessed, and the software system delivers the best agile, dynamic, flexible, customerized business-customer encounter possible. This solution may offer 'elevated-services', and / or 'added-value' solutions. These highly complex 'living' networks are built into the complex, disruptive SVNs business model, and remain very different to the above CRM integration model.

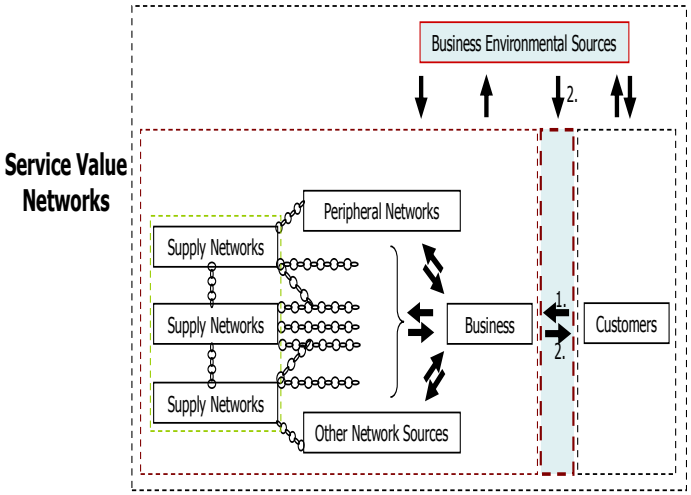

Figure 5: Service Value Networks Interconnectivity

This SVNs model is currently under commercial development by the author for the main customer focused arm of QRail, and is also under early development for a tertiary educational services provider.

Considering the railways, this SVNs approach seems to be a simple step from CRM. However, the SVNs appraoch builds a near-real-time, highly integrated business solution that is heavily dependent on the business intelligence and data collection and storage systems.

Previously, such broad data sourcing, and subsequent fuzzy logic / artificial intelligence sifting systems have been built on less focused approaches. They have not captured the environmental effectors appropriately, and have not had the capacity to deliver such a SVNs focused customer solution. For example, a CRM approach does not link all the bi-directionality between all the front-end business cells into its customer focused solutions set

Thus a new approach to data capture, data analysis and the construction of a near-real-time system is required, and this is delivered via a SVNs approach.

SMART BUSINESS NETWORKS

One final all-encompassing, business-customer interaction level is yet to be attempted, and that is the smart business networks (SBNs) model (shown in Figure 6). This model is really an extension, or broadening, of the SVNs model. Here, in response to customer demands (labeled '1'), the business or industry, seeks to incorporate an even wider range of business contributing sources, so that it may deliver optimal customer aligned solutions for both itself and its networks, and its customers, and it seeks these solutions under economically acceptable conditions to the business (labeled '2').

The CRM, SVNs and SBMs approaches each draw on new and additional knowledge blocks, which are built on strategically deployed communications and information systems. Thus, each offers a new means to further develop competitive advantage through additional intelligence, and improved software deployment. As these models become more complex, and they are more skillfully used by management, they also become less easy to copy, hence the strategic effects of Porter's (Porter [19] new entrants is often significantly reduced. Provided the business moves in line with changes in its environmental and customer shifts or innovative changes, the business may also be a position where it more likely to retain a sustainable competitive advantage. This does not necessarily secure its business position – as new innovations by a competitor, or the advent of new technologies may institute a major change in customer focus. Thus, a contingent SVNs scenarios set analysis on competitors, technologies, innovation and customer drift is also modeled, monitored, and continually fed back to management. For example, new internet protocol like IPV6, new WEB2 tools, key software upgrades/rewrites, mobile, e-business/e-commerce, 5G systems, and the like may necessitate SVN upgrades, or redesign. However once built a SVNs business model is quite agile, and is generally readily changeable [1][5][11].

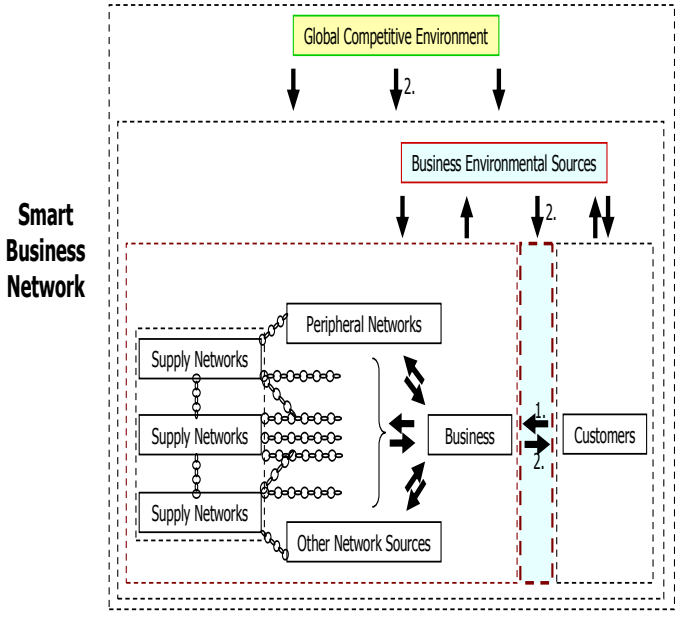

Figure 6: Smart Business Networks Interconnectivity

THE SERVICES VALUE NETWORKS APPROACH

A commonality for the different levels of business integration still exists, in that to enable an exchange to occur, all business and

customer interaction systems funnel into a final front-end business-customer encounter (or the contact divide between the business and the customer).

Understanding the business-customer encounter and its complex interaction pathways (or channels) allows the business to utilize its bi-directional sourcing and transfer systems to enhance its delivered customer specific solutions. This procedure [10][11] allows parameters relevant to the front-end business-customer encounter interface to be captured, sifted, and sorted. Ultimately premium quality business solutions are delivered to the customer under the interacting environmental conditions that prevail at the time. This SVNs generic model developed using structural equation modeling, is depicted in Figure 7, and is explained using a railways SVNs model.

Considering the railways for example, electronic mapping of trains and their availability, e-ticketing, customer requirements, and quality of service all contribute to the final outcome of winning satisfied transported numbers, and delivering maximum positive customer perception solutions. Such a solution involves the development of targeted, price acceptable, innovative service/product solutions.

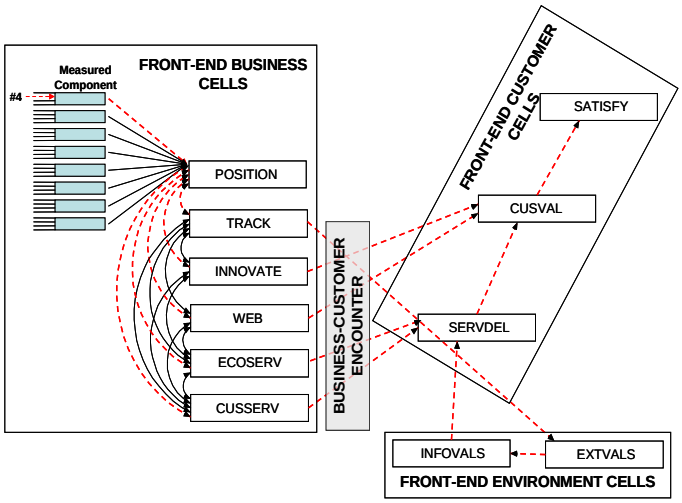

Figure 7: SVNs Empirically Derived Model [11]

This SVNs empirically derived solution captures the operational front-end business cells that house: (1) the executive and management front-end strategic positioning (POSITION), (2) the marketing front-end customer targeting (TRACK), (3) the railways innovative opportunities and inclusions (INNOVATE), (4) the intelligent communicative, web and mobile technologies (WEB), (5) the railways economic imperatives (ECOSERV), and (6) the railways services and products offered (CUSSERV). These six operational front-end business cells engage with each customer via a business-customer encounter, and deliver a measured level of customer perceived: (1) servicing (SERVDEL), (2) value (CUSVAL) and (3) satisfaction (SATISFY). This business-customer encounter is also influenced by external environmental factors which are also captured as: (1) local business generated interactors (INFOVALS) or as (2) customer externally sources interactors (EXTVALS).

Each front-end business, customer, and environmental cell block, is built on literature-grounded, empirical, and carefully defined measurement interactors, which are drawn onto their appropriate front-end cell block using factor procedures. The unique services-industry-specific, structural equation model solution presents a series of interaction options. Adjusting an interactor creates a knock-on effect across the system. For example, increasing the influence of the second position interactor creates a network of business effects (shown as dotted lines in Figure 7) that ultimately affect the customer. With some service industry solutions, environmental effects are also detected as a result of such interactor changes. These effects channelling across the business-customer encounter interface to the customer, may then be optimized, and thus a new potentially improved, business model is deliverable.

Considering the railways, these fully integrated SVNs systems build on: (1) existing railways networked back-end logistics solutions, (2) other communications efficiencies, and (3) a detailed assessment of the competitive environment. Thus, genuine threats to the existing, and planned, railways business structures may be incorporated. The railways may use its website to offer e-tickets, and other value adds (like special entertainment and sporting events), to its customers, as a virtual shop front, and as part of its SVNs customer solution set. The e-ticket system may be collaboratively linked to station entry/locality-transport/exit system, and may deliver a customerized (or individual choice) selection. Customer recognition on a later follow-up (or revisit) may be sued to match past transaction to the customer. The business may suggest that if the customer wants the same outcome as last time just press a button – thereby saving the customer time and effort.

Numerous other value additions are being developed including price differentiation for those working in short shifts outside peak travel times, elderly ex train convenience pick-ups to desired localities and returns, shopping centre location servicing, commercialization facilities, late night travel systems and the like. Thus, customer connectivity via bricks (physical contact with station persons) or clicks (internet or virtual station ticketing to normal destinations or to special event) may be jointly captured in this SVNs system, thereby reducing the divide between off-line and on-line customer solutions.

AREAS FOR FUTURE RESEARCH

Thus far the empirically modeled and tested SVNs approach has identified key front-end cells and their measurement interactors, within the pharmacy industry [11]. This SVNs model is now being developed for the railways, and also for a tertiary institution in Australia. The fully-operational management solution is being generated, prior to the complete SVNs solution. Testing to date clearly shows different services industries, applying SVNs approaches may show alternate, different strength, and differing combinations of business-customer encounter pathways. Thus, SVNs do offer a next stage in retaining longer-term competitiveness, and in moving more in-sync with both the customer, and immediate environment and in a near-real-time manner.

The SVNs approach is also under development for the tertiary education sector – particularly as applied to universities and to their student monitoring processes. For example, in analysing international and domestic student intakes currently Australian universities survey measure student entry and exit, and use this data to build a perceived satisfaction measure. Other externalities – like business perceived deliverables, environmental considerations and governmental inputs, may also be captured. The SVNs approach delivers a dynamic solution, which may be built into management approaches, allowing for a near-real-time analysis of the competing business, customer and environmental parameters. Hence, by engaging a SVNs approach at the tertiary level, additional competitive approaches across management, marketing, innovation, communications, and services are released. This in turn may deliver new pathways to tertiary institution strategic positioning – but it remains up to the tertiary institution as to how it selects to absorb and adapt to such SVNs generated competitive information.

CONCLUSIONS

The SVN approach to customer strategy, developed for the pharmacy industry, and being rolled out in the railways services industry, likely has application across most services and products industries.

This SVNs research opens new doorways through which competitive new business approaches may be better understood and developed in line with customer drift or customer changes in sentiment.

It highlights the extremely complex nature of the customer decision-making process, and the considerable encounter pathways that contribute to the final customer decision to engage in a transaction with the business.

Discussion herein shows why SVNs are important to business, and shows how this SVNs approach may better align the business to the customer – delivering a smart business solution!

Management understanding of how strategic direction, targeting, economic reward, and enhanced value-adding solution sets indirectly affect the business-customer encounter shows new pathways to enhancing business performance (capabilities and delivery).

Management may target enhancing customer perception of its offerings by personally targeting individual customers with specific customerized solutions, and hopefully will derive greater customer perceived satisfaction with their offering.

Within the Australian railways industry, new SVNs solutions are currently being developed – delivering improved outcomes like: targeted elevated service offerings; increased customer satisfaction; and minimal business inefficiencies, and greater customer perceived satisfaction measures.

REFERENCES

[1] Christensen, C. and Anthony, S. (2004) "Cheaper, Faster, Easier: Disruption in the Service Sector", *Strategy and Innovation*, Vol. 2, No. 1, pp. 56-65.

[2] Czinkota, M., Ronkainen, I. and Moffett, M. (2005) *International Business* (7th ed.), Thompson South-Western, Mason. OH.

[3] Docherty, M. (2001) "Managing the Supply Chain: i to I", Logistics Inc., Newsletter 1, 1-4, June 10 2003, http://www.ilogistics.com.

[4] Dowling, G. and Uncles, M. (1997) "Do Customer Loyalty Programs Really Work", *Sloan Management Review*, Vol. 38, No. 4, pp. 71-82.

[5] Evans, N. (2002) *Business Agility: Strategies for Gaining Competitive Advantage Through Mobile Business Solutions*. Prentice-Hall, Upper Saddle River, NJ.

[6] Frohlich, M. and Westbrook, R. (2002) "Demand chain management in manufacturing and services: web-based integration, drivers, and performance", *Journal of Operations Management*, Vol. 20, No. 6, pp. 729-745.

[7] Ganesh, J., Arnold, M., and Reynolds, K. (2000) "Understanding the Customer Base of Service Providers: An Examination of the Differences Between Switchers and Stayers", *Journal of Marketing*, Vol. 64, No. 3, pp. 65-87.

[8] Hamilton, J. (2004) "Service Value Networks: Value, Performance and Strategy for the Services Industry", *Journal of Systems Science and Systems Engineering*, Vol. 13, No. 4, pp.469-489.

[9] Hamilton, J. (2005) "Service Value Networks: a New Approach to Performance and the Delivery of Services", *The E-*

Business Review, Vol. 5, No. 1, pp. 66-71.
[10] Hamilton, J. (2006) "Business-customer alignment in the Australian pharmaceutical industry", *International Journal of E-Business*, Vol. 4, No. 5, pp. 401-420.
[11] Hamilton, J. (2007) "Delivering Service Value Networks: Smart Business", *36th Western Decision Sciences Institute Meeting*, Denver, pp. 227-232.
[12] Hanson, W. and Kalyanan, K. (2007) *Internet Marketing and E-Commerce*, Thompson South-Western, Mason, OH.
[13] Jones, T. (1996) "Why Satisfied Customers Defect", *Journal of Management in Engineering*, Vol. 12, No. 6, pp. 11.
[14] Levitt, T. (1972) "Production line approach to service", *Harvard Business Review*, Vol. 50, No. 5, pp. 42-52.
[15] Low, J. (2000) "The value creation index", *Journal of Intellectual Capital*, Vol. 1, No. 2, pp. 252-262.
[16] McLarty, R. (2003) "The attitudes of British managers in small and medium sized enterprises to the implementation of the value chain concept", *International Journal of Management*, Vol. 20, No. 4, pp. 430-442.
[17] Peters, L. (1997) "IT enabled marketing: a framework for value creation in customer relationships", *Journal of Marketing Practice*, Vol. 3, No. 4, pp. 213-229.
[18] Peters, T. (1994) *The Pursuit of Wow*. Random House, New York, NY.
[19] Porter, M. (2001) "Strategy and the Internet", *Harvard Business Review*, Vol. 79, No. 3, pp. 63-78.
[20] Sampson, S. (2000) "Customer-supplier duality and bidirectional supply chains in service organizations", *International Journal of Service Industry Management*, Vol. 11, No. 2, pp. 348-364.
[21] Shostack, G. (1981) How to design a service, *Marketing of Services*, American Marketing Association, Chicago, Il.
[22] Siegel, M. (2002) "Seizing the opportunity: Exploiting web aggregation", Center for Information Systems Research, Sloan School of Management Pub., WP No. 330, pp. 1-14.
[23] Slywotzky, A. and Morrison, D. (1997) *The Profit Zone: How Strategic Business Design will Lead you to Tomorrow's Profits*, John Wiley and Sons, Chichester.
[24] Timmers, P. (1999) *Electronic Commerce: Strategies and Models for Business-to-Business Trading*, John Wiley & Sons, Ltd, Singapore.
[25] Van Looy, B., Gemel, P. and Van Dierdonck, R. (2003) *Services Management* (2nd ed.), Pearson. Education, Upper Saddle River, NJ.
[26] Vermijmeren, M. (2003) "Software architecture in supply chain management", *Computers in Industry*, Vol. 53, No. 1, pp. 165-178.
[27] Zain, M., Kassim, N. and Mokhtar, E. (2003) "Use of information technology and information systems for organizational agility", *Singapore Management Review*, Vol. 25, No. 1, pp. 69-83.

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John Hamilton, PhD (Macquarie Graduate School of Management, Macquarie University, Sydney, Australia) is the Director of E-Business at James Cook University. He researches competitiveness, innovation and the strategic futures. His SVNs concepts offer highly flexible business solutions, and near-real-time, agile business-to-customer solutions to most services industries and to strategic marketspaces. They further engage 'customerization' options.

John Hamilton has extensive business, management, consulting, and research experience, and remains a highly active researcher across both off-line and on-line environments. His current specializations include: strategic innovation; strategic web-based instruments; QFD; business competitiveness; strategic positioning; strategic e-marketing; logistics; service value networks; industry-wide future technologies and solutions; and the performance, value and alignment of customer-business interface