

Twelfth Annual Conference
Pacific-Rim Real Estate Society (PRRES) Conference

The University of Auckland Business School, Auckland, New Zealand
Sunday 22 – Wednesday 25 January 2006

PUSHING THE BOUNDARIES
An exploration of the role of e-commerce
in the evolution of property management

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Keywords: property manager, intermediaries, e-commerce, exapt, adaptation, evolution.

Abstract:

Although previous academic research has gained insight into the effects of e-commerce on real estate intermediaries such as realtors and mortgage brokers; research that provides insight into the effects of e-commerce on professional property managers, or contributes to property management theory and practice, is scarce. The purpose of this paper is to initiate an exploration of the role of the professional property manager, in a world dominated by e-commerce. Through a review of relevant literature, qualitative research involving property management professionals based in New Zealand (NZ), and a quantitative analysis of a selection of NZ property management web sites this paper will present a contemporary perspective on the evolutionary relationship between e-commerce technology and professional property management in NZ. The findings challenge resource-based disintermediation

hypotheses, providing support for developmental and evolutionary theories; provide insight into the future of property management, and the role of knowledge management in that future; suggest foci for future research, and advocates the development of a New Zealand property investor database that can be accessed by all property academics, who choose to conduct research that has applied value to the property sector.

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Introduction

Although previous academic research has gained insight into the effects of e-commerce on real estate intermediaries such as realtors and mortgage brokers; research that provides insight into the effects of e-commerce on professional property managers, or contributes to property management theory and practice, is scarce. The purpose of this paper is to initiate an exploration of the role of the professional property manager, in a world dominated by e-commerce. Through a review of relevant literature, qualitative research involving property management professionals based in New Zealand (NZ), and a quantitative analysis of a selection of NZ property management web sites this paper will present a contemporary perspective on the evolutionary relationship between e-commerce technology and professional property management in NZ. In doing so it will show that professional property managers are exapting e-commerce technologies to serve the relationship between property

manager and property investor; such that industry knowledge—combined with technological ‘savvy’—is fast becoming the hallmark of the adaptive survivor. These survivors carry the challenge of a higher order: A greater degree of professionalism, a new standard of service.

Literature Review

In their treatise *The Coming Downsizing of Real Estate: Implications of Technology* (1997) Baen and Guttery conducted an exploration of the relationship between e-commerce¹ and the real estate industry, and presented predictions based on their findings. It was Baen and Guttery's (1997) supposition that the advent of e-commerce would result in vast changes to the foundations of the real estate industry, as it would enable an invasion of the informational domains so prized by industry insiders. This invasion would result in a reduction of the number of real estate intermediaries, reflecting their functional obsolescence in a world dominated by the virtual community of the internet—where buyers and sellers were hypothesised to meet and mate—without the assistance of mediatory agents (1997).

However, Muhanna and Wolf (2001) contest Baen and Guttery's "apocalyptic" hypothesis. Citing statistical data that contradicts the prediction of disintermediation², Muhanna and Wolf (2001) contend that Baen and Guttery have erroneously applied transaction cost theory to the relationship between the seller and the intermediary; neglecting the importance of the relationship between the intermediary and the ultimate buyer. Muhanna and Wolf (2001) argue that the fact that these mediatory relationships have endured, and even increased, evidences their continuing value within the structure of the industry. Although they do concede that the substance of each role has been reshaped by the introduction of e-commerce to the triad, particularly with regard to productivity and the level of professional service expected of, and offered by the intermediary (2001).

¹ E-commerce is defined (Oxford Online, 2005) as any form of commerce conducted using electronic media, but is usually taken to mean the Internet. E-commerce can involve comprehensive sales facilities online (this is where most research accumulates) or the introduction (matching) of seller and buyer online (as in the case of service organisations such as property management companies).

² "The removal of intermediaries in a supply chain" (Oxford Online, 2005)

One such intermediary role—that of the property manager—provides a window into the change catalysed by e-commerce, and into the new world of the intermediary. Accordingly this paper focuses on the role of the property manager in a world dominated by e-commerce. This role will be explored through a literature review covering research into the relationship between real estate intermediaries and e-commerce technologies, qualitative interviews with respected property management professionals based in New Zealand, and a quantitative analysis (based on a content-analytical framework) of property management websites. The findings presented evidence the way that e-commerce technology—rather than eliminating—is pushing the boundaries of the property manager, resulting in evolution on the front line; evolution that will bring into being, a new genre of property management professional.

According to Kummerow and Chan Lun (2005) the role of the property manager has traditionally focussed on the marketing of a given property to prospective tenants, the management of the physical real estate (land and buildings), the development and maintenance of positive tenant relationships, and the provision of accounting services to monitor income and expenditure on a given property. According to Leonie Freeman (Personal Communication³, April 22, 2005) this role, contemporarily, may also encompass facilities management (ensuring smooth functioning of facilities for the use of tenants) and advisory services (including property search, legal and taxation issues and analyses of rates of return). In addition, the role of the property manager is pervasively mediatory⁴.

³ Elucidated during a presentation to property students at Massey University, Albany Campus, April 22, 2005.

⁴ Note that this definition of property management excludes representation on behalf of the tenant, such as the management of Government leasing portfolios. This research focuses primarily on property management from the perspective of the investor-property manager relationship.

As an adjunct to this mediatory position, the property manager is uniquely positioned to acquire information on the real estate investments they service, from the owner⁵ and the tenants as well as from other industry insiders; and it is the property manager's responsibility to communicate, make decisions, and act upon this information. Hence, the property manager's role incorporates observation, analysis, reporting, decision-making, planning and implementation in support of a single goal: "the maximization [sic] of value" (Miller, 2000, p. 174). This maximisation of value requires more than obtaining the highest possible rental, focusing instead on sustainable, optimised return through quality tenancy and proactive, efficient, socially responsible property management.

In the light of this value-driven mandate it is understandable—and certainly advisable—that property managers investigate and assimilate e-commerce technologies that will assist them to achieve these directives. E-commerce technologies can be defined as those technologies that enable marketing, sales, communication, negotiation, financial transactions, contract closure, electronic data exchange, and information search, retrieval, storage and delivery via any electronic media such as computers (particularly those with high-speed Internet connectivity) (Baen & Guttery, 1997). Underlying these physical technologies is a range of software, some of which has been developed, specifically, to assist the property manager; for example, Rentmaster for residential properties and Vision Commercial Property Management (CPM)⁶ (Rentmaster, 2005; Vision 2005).

According to Kummerow and Chan Lun (2005) specialist software can, if implemented properly, lead to the development of a significant competitive advantage

⁵ The terms "owner" and "investor" are used interchangeably in this paper, as are the terms "tenant" and "consumer".

⁶ These property management systems were located by Internet search. The performance of these systems has not been tested by Massey University, they are offered as readily-available examples only.

for the property manager. They (2005) contend—based on analysis of case studies—that these systems can, not only improve an individual’s productivity (and reduce transaction costs); but can also accumulate proprietary information, that positively informs future management and investment decisions. As this information is proprietary, informational asymmetries arise where the property manager is more informed than other market actors allowing the property manager to exploit market inefficiencies revealed through insider knowledge (2005, p. 174-5). Interestingly, respected sociologist Anthony Giddens (1997, p. 526) theorised just such a situation, where e-commerce technologies would be seen to underpin the transition from collective industrialism to individualist control within “the information society”.

Giddens (1997, p. 527) contended that in this information society: “codified knowledge—systematic, coordinated information is society’s main strategic resource.” Thus, those who systematically collect and maintain databases of social and economic knowledge—such as professional property managers—become increasingly more powerful manipulators of both social and economic resources. While Smullyan (cited in Kummerow & Chan Lun, 2005) offers a caution that such information resources must show validity in order to be valuable, it is certainly arguable that property managers—in their role as intermediaries—operate in a unique position where the garnering and exploitation of valid data is possible, though by-no-means inevitable; dependent as it is on competencies in database and knowledge management.

E-commerce technologies not only assist in the garnering of information but, through broadband connectivity, allow the rapid transfer of that information—24 hours a day—through multiple means. These means are mobile, and therefore free from the constraints of both place and time (Giddens, 1997; Kummerow and Chan

Lun, 2005). According to Lai (cited in Kummerow and Chan Lun, 2005), such connectivity brings competitive advantages to the property manager, such as constant accessibility and service personalisation. Quaddus and Achjari (2005) agree, and emphasise the juxtaposition of mobile technology with a constantly accessible website as a potentially lucrative information vortex.

This vortex provides a constant inflow of property data and—at the same time—attracts a constant inflow of database (sector-relevant consumer and investor) information. Thus even as the property manager fulfils the mandate to maximise value through service, valuable information is simultaneously harvested, becoming the very asset that moves the property manager into a relationship of power in the market place; and this can be done 24-hours-a-day and 7-days-a-week. It sounds simple, automatic and lucrative doesn't it? But e-commerce is a weapon with a double-edged blade, and it must be wielded with skill. Mass failure of the dot.com companies in the 1990's has prompted research into the elements of e-commerce that lead to failure. Meanwhile the continuing promise of lucrative returns provides the incentive for research into the drivers for e-commerce success.

Quaddus and Achjari (2005), utilising survey-based research (analysed through SEM⁷) on generalist e-businesses⁸ have isolated the irrational “illusion of automated success” as a pivotal precedent to the poor planning and information management that can lead a virtual organisation to actual insolvency. Quaddus and Achjari (2005) model e-commerce success as a balance between internal and external drivers (see Table 1), which must be managed effectively to produce the desired outcome. In the case of property management, the explicitly desired outcome is optimum economic value for investors (external drivers), while the implicitly desired

⁷ Structural Equation Modelling.

⁸ Important, these are businesses that transact online, as opposed to property-based sites that market online, but do not transact.

outcome is optimisation of market opportunity for property managers (internal drivers).

Table 1: Internal and External Drivers in E-Commerce (Quaddus & Achjari, 2005, p. 129)

Contribution to success	Locus of impact Internal	Locus of impact External
Driver	Cost leadership	Product Pricing
	Reputation	Time spent
	Market	Convenience
	Business Entry	External relationship
Impediment	Financial	Customer's expense
	Risks	Delivery Time
	Expertise	Transaction risk
		Access

According to Quaddus and Achjari (2005), if external and internal drivers are not carefully considered in website construction the “hit” will become a “miss” and the site visitor will rapidly “click” to a more proactive, competitor site. There is a market cost to the e-commerce consumer in the form of technologies that enable entry, as well as the investment of time (Quaddus & Achjari, 2005). With this cost, there is an expectation of return—and when this expectation is not met—the e-consumer can be unforgiving. Failing to consider *both* the site consumers’ expectations *and* the site owner’s expectations of the site reflects a pathological “IT myopia”, which can prove terminal under competitive conditions (Quaddus & Achjari, 2005).

Quaddus and Achjari’s (2005) framework concurs with, and extends, content-analytical research conducted by Henderson and Cowart (2002) on real estate websites in the United States. According to Henderson and Cowart (2002) property focused websites can be analysed through four basic categories that directly service the needs of the site owners and visitors:

- (1) User friendliness (which encompasses both external drivers and external impediments).
- (2) Information about the company (which encompasses both internal and external drivers).
- (3) Property sector information (which encompasses both internal and external drivers).
- (4) Augmented services (which encompasses both internal and external drivers).

According to Henderson and Cowart (2002, p. 376) increasing both the quality and the quantity of website content will “contribute to bridging the gap between brokers and customers constructing relationships in the anonymity of cyber space.” Henderson and Cowart’s (2002) research findings demonstrate that United States property-service websites are trailing behind property-sales websites in their capacity to service the market. They strongly advocate a reconceptualisation of property-service sites as communication and service technologies. In doing so, Henderson and Cowart (2002) call for a customised approach to property investment and management information that moves away from real estate driven “one-to-many information dissemination” and into the realms of service driven “one-to-one communication.”

In the light of these research recommendations, how are New Zealand (NZ) property management companies utilising their websites? The qualitative aspect of this research explores the relationship between the property manager and e-commerce technology based upon the foci, drivers and impediments outlined by Henderson and Cowart (2002) and Quaddus and Achjari (2005), while—on the same basis—the

quantitative component explores and compares the quality of a selection of—both dedicated and hybrid⁹—NZ property management websites. The findings allow us to explore the evolution of the professional property manager—from mediator to conduit, conduit to controller—and push the boundaries of what we understand to be the relationship between the people who serve, and the technologies that serve them.

⁹ Dedicated property management sites are those run by companies who specialise in property management. Hybrid sites are those that offer real estate sales, with property management as an added value service. The number of dedicated property managers operating in New Zealand, at a professional level, is very small.

1. Qualitative Component

Research Aim

The aim of this component of the research is to explore the relationship between the property manager and e-commerce technology.

Method

Sample

A stratified sample was selected, with interviewees nominated by their own company¹⁰. One interviewee withdrew from the study due to concerns regarding commercial sensitivity. Final interviewees represent a very high quality sample; therefore the qualitative data is biased toward excellence.

- | | | | |
|----|--------|---|---|
| 1. | Leslie | - | Specialist property management company (residential) |
| 2. | Toni | - | Specialist property management company (commercial) |
| 3. | Darryn | - | Hybrid ¹¹ property management company (residential) |
| 4. | Taylor | - | Hybrid property management company (residential and commercial) |

Interviews

Structured interviews, based on open-ended questions, were conducted at the premises of the interviewees. Participant approval of final quotations was obtained to ensure accurate representation of views.

¹⁰ In the interests of anonymity, pseudonyms have been provided.

¹¹ Hybrid property management companies are those that have evolved from a real estate sales base, as opposed to those that have been set up solely for property management purposes.

Results and Analysis

Analysis of the interviews was based upon the foci, drivers and impediments outlined by Henderson and Cowart (2002) and Quaddus and Achjari (2005).

A. Quaddus and Achjari (2005) – External Impediments (refer to Table 1): Customers expense, delivery time, transaction risk, access.

Interviewees exhibited a good understanding of, and response to, external impediments such as client expense and barriers to access—although it was generally accepted that these are being alleviated in NZ through the rapid adoption, and sophisticated use, of Internet technology in this society (a view supported by Hitwise, cited in NZ Marketing Magazine, 2004a; 2004b). Delivery time is not an entirely relevant construct for service-based sites. However, the findings suggest that efficiency (or timely delivery of service) is relevant, and the importance of this was highlighted in this study. Transaction risk—also an ambivalent construct on service-based sites—was subsumed by consideration of site security as these property management companies match online, but transact offline¹²; overall, site security was non-problematic. Client responses regarding these issues are included in Appendix One, Section A.

B. Quaddus and Achjari (2005) – External Drivers (refer to Table 1): Product pricing, time spent, convenience, external relationship Henderson and Cowart (2002) – User Friendliness

Understanding and response to external drivers was exhibited in most areas, with the exception of pricing (with value creation remaining salient). Time and

¹² Transacting online requires significant protection as client information such as credit card details can be used for fraudulent purposes. For an example of this see “Credit-card hacker hits 13,000 in NZ” (NZ Herald, June 22, 2005).

convenience were seen as related, through both site efficiency and process efficiency. Although relationship building was supported in the context of good online services and information resources, with offline support also highlighted as a key to transition from visitor—through conversion—to client; there appears to be a failure to fully utilise the website as a relationship mechanism. User friendliness was seen as a function of good site construction (good links and navigation). Importantly, some of the companies were proactive in site monitoring to detect performance failure, while others exhibited ambivalence. Client responses regarding these issues are included in Appendix One, Section B.

- C. Quaddus and Achjari (2005) – Internal drivers (refer to Table 1): Cost leadership, reputation, market, business entry**
- Henderson and Cowart (2002) – Information about the company, property sector information, augmented services.**

A good level of understanding, and response, to internal drivers was exhibited, though the approach was more integrated than previous research suggests (that is, the drivers and site outcomes—say, reputation, market share and provision of property sector information—are pervasively linked to each other, and to external drivers). Cost leadership was not addressed by any of the interviewees¹³. Reputation was closely linked to the provision of company and property sector information. Acquisition of market share was discussed with some companies experiencing significant growth from their websites, while others were failing to fully capitalise on growth potential. Websites were viewed as integral market entry tools for younger players, strong brand-building tools for maturing organisations, and with some

¹³ Their focus on service, rather than price, may reflect differentiation strategies rather than cost leadership strategies (see Porter, 1980) and may be cyclical depending on perceptions of environmental stability. Further research in this area is advocated.

ambivalence by organisations overwhelmed by growth potential (and seeking stability).

Company information was considered primarily in terms of providing a virtual presentation of the organisation—a projection of the company image. Market information flows were strongly outgoing, with the potential for collection of market, and even database information, appearing under-utilised. Enthusiasm was shown in most cases for the development of augmented services, which were linked to reputation, value leadership, market share and client convenience. Client responses regarding these issues are included in Appendix One, Section C.

**D. Quaddus and Achjari (2005) – Internal impediments (refer to Table 1):
Financial, risks, expertise.**

Interviewees evidenced a pragmatic approach to internal impediments. In general a cost benefit (or relative) approach was taken to site costs (financial), with the websites seen as representing good economic value. Competitors (risks, also see security discussed previously) were seen as non-threatening, and as a way to escalate service performance. Site development expertise was not lacking, although there were cautions against taking a “techo”¹⁴ approach and advocacy to remain focused on appropriate content. It was acknowledged that site development, from both construction and content perspectives, is a continuous evolutionary process of learning, development and implementation. Client responses regarding these issues are included in Appendix One, Section D.

¹⁴ An excessive use of ‘bells and whistles’ at the expense of site speed and innovative content.

E. Discussion

In general findings in this research supported the models proposed by Henderson and Cowart (2002) and Quaddus and Achjari (2005), with some differentiation in areas such as cost leadership and delivery. The findings also addressed a number of contentions raised in the literature review. For example, they contradict Baen and Guttery's (1997) disintermediation hypothesis, and support Muhanna and Wolf's (2001) contention that e-commerce reshapes the role of intermediaries. Interviews revealed that e-commerce technology is being exapted¹⁵ by property management professionals—as part of an adaptive strategy—that has propelled them into a co-evolutionary development cycle.

The findings also support Kummerow and Chan Lun's (2005) contentions that intermediaries would become the mediators of informational asymmetries, although strategic manipulation of information is not yet aggressive. In the future, the service-based/value added competitive edge may be dulled by saturation, or driven to the background by tight market conditions; to be replaced by more aggressive knowledge management strategies. Finally, Henderson and Cowart's (2002) contention that websites should be reconceptualised as communication mechanisms (rather than solely marketing tools) is advancing in New Zealand (though this is, as yet, unsophisticated). Greater sophistication in this area could initiate an information vortex, leading to the evolution of the property manager from service agent, to industry insider, to the enviable role of power broker.

¹⁵ The Darwinian concept of adaptation by selected survival is both ambiguous and intergenerational. Tattersall's (1998, p. 108) concept of exaptation describes the evolutionary process whereby an organism "originally shaped by natural selection to perform one function" is then subjected to new environmental pressures, which result in it being 'exapted' to perform a different function. This concept is both intra and inter generational.

2. Quantitative Component

Research Aim

To explore and compare the quality of a selection of property management websites in New Zealand.

Method

Sample

This study utilised a stratified sample, covering eight websites in total:

1. Four dedicated property management websites
2. Four hybrid property management websites

Procedure

The research methodology used was content analysis, which has been used to analyse websites since the early 1990's (McMillan, 2000). The genealogy of the particular method chosen began with Krippendorff (2004), was refined by McMillan (2000) for application to websites, and was customised for real estate websites by Henderson and Cowart (2002).

- (a) The research aim was formulated.
- (b) The sample was selected.
- (c) The primary units of measurement were identified:

Context unit – Which describes the body of material surrounding the coding unit was defined as: The property management website, or the property management section of the website.

Coding units – The smallest segment of content counted and scored in the content analysis. The coding units were broken into groups based on the findings of Henderson and Cowart (2002) and Quaddus and Achjari (2005).

- (d) Two expert judges¹⁶ with both research and property sector expertise were selected and trained. They coded the content under controlled conditions.
- (e) The researcher interpreted the data.

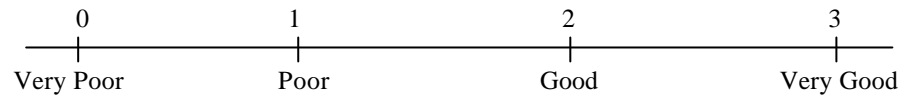
Results and Analysis

Table two displays the raw scores received for each component, a site mean score for each coding unit, a sector mean score for each coding unit group, and a grand mean for each site.

¹⁶ The researcher did not act as a judge, both judges were competent internet users and conducted their analysis simultaneously via networked servers.

Table 2: Comparative raw scores of content analysis, along with section means (per Henderson & Cowart, 2002; Quaddus & Achjari, 2005), and grand means for each site.

SCORE VALUES



	Coding Unit		Component	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Sector Mean
1.	User Friendly	a.	Download Speed	3	3	3	3	1	2	3	3	
		b.	Effectiveness of Links	1	2	2	3	3	2	2	3	
		c.	Site Search Engine	1	0	3	3	1	2	2	2	
		d.	Ease of Navigation	1	3	2	3	0	2	2	3	
	User Friendly Mean Score			1.5	2	2.5	3	1.25	2	2.25	2.75	2.16
2.	Information about the Company (Intermediary)	a.	Photographs of Property Management Personnel	1	3	3	3	0	0	0	2	
		b.	Information on the experience and qualifications of property management personnel	0	2	1	2	0	0	0	2	
		c.	Description of a comprehensive range of property management services	1	2	2	2	0	1	1	1	
		d.	Information on properties this company currently manages	0	3	0	1	0	2	0	0	
		e.	Simple email contact link to the property management personnel	1	3	3	3	2	2	2	3	
	Information About the Company (Intermediary) Mean Score			0.6	2.6	1.8	2.2	0.4	1	0.6	1.6	1.35

	Coding Unit		Component	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Sector Mean
3.	Information about property investment	a.	Search facility covering properties available for investment	3	2	2	0	2	0	2	2	
		b.	Search facility for tenants wanting to locate properties	2	1	2	2	1	2	2	1	
		c.	Current property sector information (research)	2	0	2	2	2	0	1	2	
		d.	Current economic information	1	1	1	1	2	0	1	1	
		e.	Links to important property information sites	0	0	1	2	2	0	0	3	
	Information About Property Investment Mean Score			1.6	0.8	1.6	1.4	1.8	0.4	1.2	1.8	1.33
4.	Augmented Services	a.	On site services (or tools)	0	3	2	2	1	0	0	2	
		b.	Templates of industry forms	0	2	2	1	1	1	0	1	
		c.	Legal and compliance information	2	3	2	1	1	0	0	2	
		d.	Simple registration system	3	3	3	3	1	2	2	3	
	Augmented Services Mean Score			1.25	2.75	2.25	1.75	1	0.75	0.5	2	1.53
	SITE GRAND MEAN			1.24	2.04	2.04	2.09	1.11	1.04	1.14	2.04	1.59

A. Raw Scores

The raw scores evidence a wide variation in performance, both intra-site and inter-site, revealing inconsistent quality across most coding units.

B. User Friendliness

Individual mean scores on *user friendliness* evidence a reasonably high degree of competency on most sites, with one performing as an exemplar and three close to achieving this status. Search engines rated 0 or 1 were absent or dysfunctional, with judges making the comment that dysfunctional engines downloaded too many retrievals overwhelming the site visitor. Engines rated 3 were swift and precise. Sector mean shows a good level of competence, with room for further development.

C. Information about the (property management) company

Individual mean scores on *information about the company* evidence some poor performance; with only one company close to becoming an exemplar. Judges noted an over-reliance on email links requiring visitors to ask for basic personnel and property management services information. Judges also noted that on some sites a great deal of information was provided about personnel that did not support their industry competence; judges exhibited a strong preference for concise evidence of **property management** expertise. The low sector mean score may indicate an over-reliance on general “research” information (as opposed to company personnel and skills information) to encourage perceptions of competency.

D. Information about property investment

Surprisingly individual site means evidence a low level of competence in this area. Property sector information was generally good, but the mean scores were “pulled down” by accessibility issues. Judges commented that information tended to be embedded in general marketing information (including newsletters), or difficult to locate—particularly on hybrid sites. In addition, judges noted that sites that attempted to “hold us on site” by not providing *links to important property information sites* were less impressive than those that offered comprehensive and relevant links (this supports Quaddus and Achjari, 2005). Overall, the sector mean score evidences a low level of competence in the *information about property investment* coding unit, and leads to the recommendation that website content developers focus on accessible, concise economic information that is relevant to property investment and property management decisions (rather than general sales information). In addition they should look to provide a comprehensive range of relevant links that encourage return visits to their own site—supporting a positive rapport through visitor satisfaction.

E. Augmented Services

Individual site mean scores on *augmented services* evidenced variability in competence across sites with some achieving very well, and one almost acting as an exemplar. Judges noted that the sites providing good augmented services invoked a more comprehensive and satisfying experience, through the enjoyment of interactive services such as investment return calculators and exchange rate converters. Sites that provided relevant templates, as well as legal and compliance information particularly impressed judges. These comments support Quaddus and Achjari’s (2005) and Henderson and Cowart’s (2002) contentions that these are valuable contributions to

website content. Most websites requested database information through a simple registration system, further research is recommended into how this information is stored, managed.

F. Site Grand Means

Site grand means reveal that, while some websites are “good”, all require further development to reach their potential as business units. In addition, it should be noted that many sites perform at, or close to, poor. Quaddus and Achjari’s (2005) research suggests that “poor” sites may be impediments to these businesses as they fail to positively differentiate the business from web-enabled competitors; and, by comparison, may be enhancing the positive differentiation strategies of their competitors. Companies should analyse their sites (or better yet have a focus group of client companies analyse their sites) to illuminate areas of significant weakness and allow prioritisation of website content development projects¹⁷.

G. Discussion

Although this research did not focus primarily on comparison between dedicated and hybrid companies this information (outlined in Table 3) is of interest. Findings suggest that hybrid sites provide more comprehensive property investment information, primarily due to their property sales search facilities. However our judges noted problems with user friendliness on hybrid sites due, primarily, to the size and complexity of the sites, and a tendency to focus on introduction of salespeople at the expense of introducing property management personnel. Further research is suggested into the potential to run linked, but independent, property management sites

¹⁷ Within 10 days of conducting this research three of the websites had undergone significant redevelopment.

—rather than integrated sites—to see whether this would enhance the site experience for investors and tenants seeking property management services.

Table 3: Comparative means – dedicated property management companies versus hybrid property management companies

Coding Unit	Dedicated Property Management Sites	Hybrid Property Management Sites
User friendly	2.5	1.9
Information about the company (intermediary)	1.85	0.85
Information about property investment	1.4	1.55
Augmented Services	1.81	1.25
Grand Mean	1.89	1.39

Comparison between residential and commercial property-focused websites is also of interest, and supports the findings of Henderson and Cowart (2002); that residential property sites performed better than commercial property sites. While qualitative interviews revealed that commercial sites generally serviced “high net worth clients” and did not focus on trolling for new business it could be argued that such clients deserve absolute excellence in performance, and that this would enhance their property management experience. It could also be argued, however, that commercial clients are serviced through membership access to enhanced web-based services that could not be fully reviewed by our judges. Further research is suggested, that taps commercial investor databases, to explore their specific drivers and impediments and ensures that commercial websites are performing to level that these investors require.

Table 4: Comparative means – residential property management companies versus commercial property management companies.

Coding Unit	Residential Property Management Sites Group Mean	Commercial Property Management Sites Group Mean
User Friendly	2.35	1.83
Information About the Company (Intermediary)	1.44	1.2
Information About Property Investment	1.36	1.27
Augmented Services	1.6	1.42
Grand Mean	1.69	1.43

Limitations of this Study

In making the above recommendation for research utilising investor samples, it must be acknowledged that this was attempted in the early stages of this research. However, access to investor databases proved deeply problematic. The lack of investor input is noted as a limitation of this study, which relies on previous academic research on generalist e-businesses and real estate companies; both of which explored overseas samples. The inability to accumulate a large investor sample has silenced a valuable voice. It is suggested that a property investor database be set up in New Zealand and made available to all property academics conducting research that has applied value to the property sector.

Reliability and Validity

The limitations stated are made less formidable by the triangulated and cross-disciplinary approach taken in this research. Quantitatively, high intercoder reliability¹⁸ has been achieved through review of previous research literature, and the exploitation of considerable property industry expertise¹⁹. Due to the dynamic nature of websites, and the complexity of hypertext, absolute replication of the findings on these websites is unlikely—however, the coding units are evidencing stability. Nevertheless, the suggestion is made for further research to enhance the relevance and weighting of those coding units.

While construct validity is supported by Quaddus and Achjari's (2005) previous research, it is suggested that research utilising property investor samples—as well as property manager samples—will improve the construct validity of the coding units. The coding units have good face validity, however of more importance is their hypothesis validity (see Weber, 1985). This research is informed by, and supports, previous findings that underpin “what the researcher expected to find”. Had the findings of this research not supported previous findings, hypothesis validity would have been compromised.

¹⁸ Krippendorff (2004, p. 131) suggests that intercoder reliability can be manipulated by the researcher through the resolution of coding disagreement between judges prior to analysis, which subverts the accuracy of reliability estimates. In this instance, no such disagreements were registered. Reliability was supported through careful literature review, pilot tests, careful selection of expert judges, training and environment controls (such as working simultaneously on networked computers). Nevertheless, the high reliability should be considered within the context of an innately qualitative study.

¹⁹ The inclusion of industry insiders as the ultimate purveyors of expertise is an innately anthropological approach and acknowledges the importance of the knowledge base within the ‘property management tribe’.

Summary of all findings and recommendations

- This study supports, and extends the findings of Henderson and Cowart (2002) and Quaddus and Achjari (2005) in their delineation of foci, drivers and impediments to success in the use of e-commerce websites.
- There is a growing level of e-commerce competence in the property management companies interviewed, where property managers were enthusiastically pursuing the development of their websites.
- This study contradicted the hypothesis of disintermediation in the property management sector, supporting instead the contention that they are exapting e-commerce technology—as part of an adaptive strategy—that has propelled them into an evolutionary cycle.
- While property managers are beginning to reconceptualise websites as communication mechanisms, evidence suggests that information gathering has yet to evolve into aggressive knowledge management beginning; this is a pivotal point in their evolution toward power brokerage within the sector.
- At website level, property management companies are advised to conduct site surveys to prioritise areas of weakness, and continue the development of their sites to fully capitalise on those sites as business units.
- Further research is advocated into: The evolution of knowledge management (both cultural and systemic) in the property sector; the efficacy of independent property management websites, compared to integrated property management pages within hybrid real estate sites; the range, construct validity, and relationships between the drivers and impediments to e-commerce success from a property management perspective.

- This research should initiate the development of an investor database that can be accessed by all property academics, who choose to conduct research that has applied value to the property sector.

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