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Analyzing the Internet-based Changes in the Finnish Residental Real Estate Market. Case: Igglo

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***Abstract* — This paper is about real estate industry in Finland, and the Internet-based changes that have turned a collection of static pictures and text into a more interactive search and decision making tool for home hunters. The novel e-services and marketing model of Igglo, a newcomer to the Finnish real estate industry, are described in detail. In addition, several US exemplars of innovative ways of offering real estate services are presented. Finally, different ways of providing real estate services are compared in order to judge whether the Internet is now ready to fulfill its promise of more efficient and nearly friction-free markets.**

***Keywords*: Residential real-estate agency, e-services, business model, marketing strategy**

I. INTRODUCTION

In 2004, there were 1366 companies in Finland operating in the real-estate brokerage business, employing nearly 3 700 people and producing an aggregated turnover of € 444 million [1]. Real estate agency belongs to the service industry, which is the biggest source of GDP in Finland, amounting to nearly 65 % of the GDP [2]. As many other service industries, the real estate agency has also undergone profound changes after the commercialization of the Internet a decade ago. However, the main motive for writing this paper was a recent newcomer to the real estate agency market, and the buzz that was caused by its innovative business model and web-services offered. In addition, surprisingly few studies have been conducted on the real estate agency business in Finland, a gap that this paper aims at filling from the point of view of electronic services.

There are only few industries where the whole supply chain has been moved to the digital environment. Most service industries complement their traditional personal service with an electronic service (so-called bricks-and-clicks approach). This is the case also in the real estate business. According to Rowley [3], the reasons why the Internet functions better as a complement than as a substitute for the traditional estate agency, are the following:

i) House purchase is a *significant commitment*, and purchasers are concerned to work with reliable intermediaries who bring experience and expertise to the process of purchase and sale of properties.

ii) Property-sellers often *need advice on selling their house*, and are prepared to pay for someone to manage the sale of their house including interacting with and negotiating with potential purchasers, organizing viewing, and liaising with or fulfilling the function of solicitors.

iii) Purchasers *need to view a property*, and both buyers and sellers need a localized support network to support this viewing process. [3]

Real estate agency is essentially an information-based intermediary role that focuses on bringing the sellers of property and buyers together [3]. Porter [4] has argued that the Internet presence should increase the power of both buyers and suppliers in an industry. However, even though the large Finnish residential real estate chains are already well-established on the Internet, this change has not been visible in the amount of commissions that the real-estate agents charge from their customers. The case company of this paper, Igglo, entered the market with a mission to bring sellers and buyers together in an unforeseen way, and by doing so, decrease the level of commissions charged from the customers.

The well-known service attributes – *intangibility*, *heterogeneity, simultaneous production and consumption,* and *perishability* – were defined twenty years ago [5]. Lately, the definition of services has, however, aroused new interest and fresh interpretations. Among others Vargo and Lush [6] questioned the viability of the service attributes and claimed that, instead, any economic exchange is fundamentally about service provision. According to their definition, services are the application of specialized competences (skills and knowledge) through deeds, processes and performances for the benefit of another entity or the entity itself (self-service) [6].

Electronic services (also called digital or online services) are defined as a benefit-providing object of transaction that can be characterized as an intangible process that is, at least partially, produced, marketed and consumed in a simultaneous interaction through electronic networks [7]. According to Grönroos et al. [8], e-services consist of the *content* of the service that can be divided into core, facilitating and supporting services, and of the *medium* of the service through which the consumer is in contact with

the service provider.

The goal of this paper is twofold. First, we analyze the Internet-based changes in the real-estate business, emphasizing the situation in Finland. We do that by comparing the e-services offered by the newcomer, Igglo, and by the main agency chains. Moreover, we present novel technology-enabled ways of helping buyers and sellers of real estate (especially apartments) to find each other. Our second goal is to analyze the traditional, the newly emerged, and also the envisaged future ways of delivering the service to the customers in the real estate market.

The data of this paper consist of a review of scientific journal and contemporary magazine articles, website analysis and an interview. This paper concentrates on the Finnish real estate industry sector, and in particular, in the Helsinki metropolitan area, complemented with a few exemplars of innovative foreign services.

The remainder of this paper is structured as follows. Section two presents a brief literature review on research in the real-estate industry and the Internet. In addition, the main features of the Finnish real-estate market are described and analyzed. In the third section, the case company, its website, and its marketing model are presented. Section four concentrates on analyzing the different ways of delivering the service to end-customers in the real estate market, taking a future perspective. Finally, section five concludes the paper and gives suggestions for further research.

II. Residential Real- Estate Market and the Internet

A. Previous research

According to Gwin [9], the previous literature on real estate brokerage and the Internet can be divided into two streams: research on the *direct benefits and costs* of the new technology and the Internet to agents, and research on the potential *indirect costs* of broker disintermediation. Among others Rowley [3] has studied the advantages of the Internet in real-estate agency. She lists these to be the following:

i) *Global, national and regional reach* which makes Internet particularly attractive for matching properties and customers in certain property categories or geographic areas.

ii) Customers can potentially access *a wide range of properties*, being sold by numerous estate agents, by consulting one of the websites that is supported by a consortium of real estate agencies (for example, www.asuntoverkko.com), or thought portals (e.g., www.oikotie.fi or www.etuovi.com in Finland).

iii) Potential for the *elimination of some or all of the significant costs* associated with real estate agents service delivery through offices (e.g., reductions in the number of telephone and personal enquiries received, reduction in the need to publish brochures, reduction in advertisements in print media, and ultimately the sale of some offices, leading to the release of capital and the elimination of the office running costs).

iv) Potential for innovative approaches to *depicting properties online*, using digital photography and virtual reality coupled with other high technology tools. Especially Google Earth has widened possibilities to show the environment of the property in a new way.

v) Potential for offering a range of *additional information and advice online*, and marketing related services, thereby acting as a one stop shop for all services associated with moving house. [3]

Moore [10] has stated: "*A better informed customer leads to a more productive agent which can save time and money for the real estate company*." However, if the potential buyer attempts to locate and purchase the property on his/her own, the broker is removed from the equation. Guttery et al. [11] as well as Tse and Webb [12] raised the question about the Internet's potential for enabling information sharing, and for bypassing the traditional broker. It is thus important to examine the buyer's search costs - if the costs are lower than the brokerage fee, it is likely that buyers will conduct the search themselves and will have no need for a broker. [9]

Zumpano et al. [13] found in their empirical study that the use of the Internet as a search tool reduces search costs even though broker intermediation is involved in finalizing the sale. Because the Internet increases the search intensity, buyers are able to inspect more homes without extending search duration. This is beneficial also to the agents, since they can concentrate on showing homes that have the highest probability of meeting their buyer's needs. Zumpano et al. [13] advise brokers to expand their web presence in order to insure their survival as an intermediary in real estate transactions. Gwin [9] developed a model to determine how much information brokers should supply on a website. The model examines the buyer's tradeoffs between hiring a broker and gathering information on his or her own; as the buyer's search costs increase, the real estate broker can provide more information on the Internet while still avoiding disintermediation.

There are conflicting views on what the ultimate effect of new technologies will be on the real estate field, some predict that they will lead to lower costs per transaction and need for fewer brokers [14], [15]; others argue that new technologies will increase the agents' revenue and net income. [16]. According to Miles [17], the Internet is prone to cut out middlemen and reduce margins, but Stanfill [18] states, nevertheless, that the best way to beat the Internet is to join it. Thus, it is widely agreed that despite the possible threats, the Internet presence is a necessity for real estate agents.

B. The Finnish Real-Estate Agency Industry

Year 2005 set a record for the real estate agents in

Finland, as measured by the amount and value of real-estate deals closed [19]. When analyzing the market with Porter's five forces framework [4], the *bargaining power of suppliers*, i.e. the sellers of property, has increased compared with the *power of buyers* due to the rising price levels and lack of properties for sale. The *substitute* for using brokers' services is that consumers sell and buy apartments on their own, or live on rent, which is difficult due to the insufficient supply of rental apartments. The *entry barriers* to the industry are low, and in addition to the few large agency chains, there are numerous small firms in the residential apartment broker business. Thus, the market is fragmented. All these factors should have contributed to lower commissions according to the five forces framework [4], but instead, the common fee charged from customers has stayed as high as 4,88 % even after the Internet has entered the field. According to Böös of Osuuspankkikeskus [20], the actual average fees charged are between three to four percent.

The main large real-estate agent chains in Finland are Huoneistokeskus and SKV (that announced their plans to merge in August 2006), Kiinteistömaailma and OP Kiinteistökeskus (OPKK), which all provide Internet services for home sellers and buyers. In addition, SKVL, the Finnish Real-Estate Agents Association represents over 400 small and medium-sized agents, and provides a common web service (www.asuntoverkko.com) for over 100 companies belonging to the association. More detailed information on these companies is provided in Appendix 1. There are also two portals, www.etuovi.com that shows the offering of over 1 300 real estate companies, and www.oikotie.fi that is a platform for sale by owner (FSBO) and broker advertisements. The large real estate agent chains have historically been tightly coupled with some banking group – this might be the reason why these chains do not belong to SKVL, and there is no association that represents the whole real estate field.

When the web services of the portals and the biggest real estate agents are analyzed using the e-service framework of Grönroos et al. [8], the following observations can be made. The *medium*, i.e. the user interface has a professional look, and the structure of the services is quite similar on different websites. Even though a well-functioning user interface is a necessity for a satisfying user experience, it does not provide a sustainable competitive advantage for the agency since the user interface is so easy to copy by competitors.

The *core service* of real estate brokers is to act as intermediaries between home sellers and home seekers, e.g. by posting for sale announcements in different media. Thus, an important determinant of their offering is the amount and quality of the announcements. *Facilitating services* are necessary for making the service accessible. Accordingly, good search engines and versatile search criteria are the most important facilitating features. Different ways of searching in the main real estate websites, and other service elements are listed in Appendix 2. The basic search criteria on most sites are the number of rooms, price range, size of the property, building year, property type, condition, special features and the like. Map search, possibility to have "my own site", and searching with a house code are also common service elements. Search for foreign property, mobile service integrated to web services, or services in different languages are much rarer elements.

Supporting services are value-adding components that are used to distinguish the service from competitors' offerings [8]. In real estate settings the sites can offer articles on housing price trends, hints on interior design, stories on agents' work etc. All analyzed websites offer supporting services to some extent, and two of them provide a link to affiliated sites, the content of which consist of purely supporting services (e.g. www.kotikissa.info).

In Finland, there are small and medium-sized real estate agents who still function as pure brick-and-mortar companies, but most agents use either the parallel or the synergy strategy [21] of the bricks-and-clicks approaches. The parallel strategy means that both channels work independently of each other, and thus the Internet channel is explicitly separate from and unrelated to the physical channels. The synergy strategy is a mixture of virtual and physical channels, explicitly linking the virtual and physical presence, and deploying the strengths and benefits of both channels. [21]. Since the real estate brokerage is "people business" [3], there have been no serious attempts to move the whole real estate process to the virtual world. However, the newcomer to the Finnish market has developed novel services and moved new phases of the real estate process to the Internet, in order to facilitate the finding of right buyers and sellers. We will describe this development next.

III. Case Description

In this research we follow the case study method [22]. Our interest lies in technology-enabled changes in the real estate process. A company is analyzed in depth, and other technology-savvy real estate companies are presented with less detail. The study can be described more as an exploratory [22] than confirmatory study since confirmatory study would need detailed analysis on more companies. The data of this paper consist of a review of scientific journal and contemporary magazine articles, analysis of company websites, discussion forums and blogs, and of an interview.

The case company, Igglo, is owned by Taivas Group, a marketing conglomerate that owns several companies in Finland. The resources of the mother and sister companies were used to plan and implement Igglo's website and marketing campaign. The web service was launched in February 2006, and by August 2006 Igglo claimed that it

was the third largest real-estate agent in the metropolitan area [23]. The new elements of the web service were made possible by a proprietary database of nearly 40 000 pictures of houses (excluding detached houses) in the Helsinki area. The marketing catchphrase is "Your home is already at Igglo". The launching of the website with new service elements triggered complaints from the competitors who felt that Igglo's activities were breaking, if not the law, at least the established, good practices in the field. The Competition Ombudsman ruled that there is nothing illegal with the way Igglo was conducting its business. In the following, Igglo's service elements – push turning into pull, information on the site (supporting services), user involvement, and versatile search functionalities (facilitating services) – are described in more detail.

A. Igglo's Internet service elements

As already mentioned, the large database of pictures is a prerequisite for the new service elements, the most novel of which is the push marketing turning into pull.

From push to pull

According to various sources [20], [24] the finding of home sellers, who are the paying parties in the real-estate contracts, can take up to two thirds of the agents' work time. In most real estate sites, the potential sellers are only offered an e-mail address of the agency to express the sale interest. Agents are usually the first callers if the owner places a for-sale-advertisement in the newspaper or on a website, and potential sellers have had no tool to test the demand for their apartment – until now.

With the *silent sale* service, prospective sellers can test the demand for their apartment, and the previously agent initiated contact (push) turns into a pull mode whereby the customer is the initiator of the sale. If there is demand for the apartment the customer service personnel contacts the prospective seller to see if s/he is serious about the sale. The other real-estate agents claim that they have offered similar service to their customers for years by providing the seller with potential buyers from their own data base. However, the visibility of interest is far greater in a website. During the first six months there were 3 800 silent sale announcements on Igglo's website [23].

With another service element – *earmarking* – the prospective buyer marks those streets, houses or apartments that s/he is interested in, and s/he will be notified if the apartment comes to the market for sale. The main difference with the traditional system is that the interest is transparent, all the users of the web service are aware of the interest, not just the agent. The whole web service concept was born with the idea of earmarking – the process was first tried out in an offline environment, (with letters left to the owners of the houses that were of interest to the prospective buyer) and was then implemented digitally. During the first six months there were 15 000 earmarkings on Igglo's website [23].

If the buyer and seller find each other based on the silent sale and earmarking services, the commission charged by Igglo is 1,85 %. According to a survey conducted in May 2006 [25], most of the sellers expected to learn about the interest towards their apartment (64 % of 300 respondents), and the market-value of their apartment (13 %) when they use silent sale announcement. When asked about the likelihood of having Igglo to broker the transaction, 48 % of the respondents (N = 347) answered that it is very likely or likely that they would sell with the help of Igglo. [25]

When asked about earmarking, 42 % of the respondents (N = 340) expected to be notified when the earmarked target came for sale. When asked whether the respondents (N = 417) would buy the earmarked apartment if the seller had a contract with Igglo, 44 % of respondents answered that it was very likely or likely that they would use Igglo as an agent [25]. According to Igglo's managing director, Mr. Ranin, 90 % of their deals were struck with the 1,85 % commission by August 2006 [26]. Thus supply and demand seem to meet, even though many competitors have labeled silent sale and earmarking as nothing more than just marketing gimmicks.

Information on the website

One of the most important pieces of information that both sellers and buyers are interested in is the price level of apartments. It is possible for buyers and sellers to follow the price requests from the newspaper and website advertisements. This has been made easier by Igglo that has collected ask prices of apartments to the website. In addition, there is also a graph of the average price level of the area (data provided by the Statistics Finland). The actual bid prices are submitted by different real estate agents to the Statistics Finland, and released six months after that deals have taken place. Real estate agents are thus owners of very important information that is only partially revealed in the form of price requests in sale advertisements.

Pictures are one of the most important features that add value to customers on a real estate agent website. In addition to pictures taken from apartments, there are also pictures taken outside the houses and above from the air to give an overview of the area. On the website, there are also links to the town planning office to make it easy to check what changes are to be expected in the area. In addition, links to nearby houses can be found. Originally, there were also additional descriptions that were based on Mosaic's geo-demographic profiles but they were removed because of complaints from some users [27]. Other supporting services include frequently asked questions, presentations, and information on how to conduct a housing deal.

User involvement

The web service encourages the registered users to take part in the content creation by asking them to supply stories about the houses and the area, to enrich the descriptions of the houses and to submit pictures of the houses. The service is implemented so that the users can choose from pre-determined attributes to describe the apartment, house and

area. It is also possible to ask questions from the prospective seller or the landlord. The user involvement feature has earned the case company the name "the first Finnish web 2.0 company". Even though one of the basic characteristics of services is the interaction between the service provider and the customer (and in e-services this interaction is implemented electronically), the traditional roles are modified in Igglo's service since more power is in the hands of the customers. Although there is a disclaimer on the user submitted content, opening the service requires trust between Igglo and the users. In August 2006, the user generated content was scarce on the website, less than what the company had expected [27].

Search functionality

Igglo provides several ways of searching on its website, but the competitors offer versatile functions as well, as can be seen in Appendix 2. The original idea of the site was for the search engine to interpret free-format text-fields, however, it proved to be problematic [27], and at the moment the advanced search is implemented with predetermined attributes of apartments and houses.

The more traditional search attributes implemented on the website are: town, area or the name of the street, price range, number of rooms, condition of the apartment, construction year, and type of the property. Recently, new search categories were added to the service: the most wanted (in nr. of earmarking), the most visited, the most offered (in nr. of silent sales), the most expensive, the least expensive, the most expensive per square meter, the least expensive by square meter, best ads (based on the ratings of Igglo's site visitors), and the most pictures and questions answered. In addition, a map-based search is possible.

Figure 1 summarizes the main elements of Igglo's website. When the user inputs, for example, a street address on the website, the service presents pictures of the houses on the street. When the user chooses a house, the house specific information is presented, i.e. information on recent price requests of the apartments in the house and in the area, supply (sale or silent sale), demand (earmarking), and interest in apartments for rent.

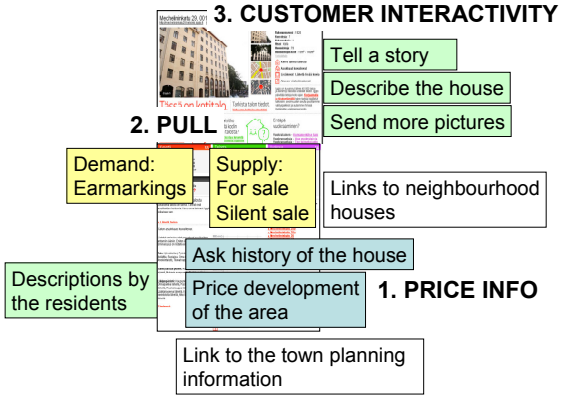

Figure 1: Case company web-service.

B. Analysis of Igglo's Marketing Model

In general, a business model refers to the ways of creating value for customers, and to the ways a business turns market opportunities into profit through sets of actors, activities and collaboration [28]. Timmers [29] describes a business model as an architecture for product, service and information flows including the description of business actors and their roles, potential benefits for business actors, and the sources of revenues. The combination of a business model and marketing strategy is called the marketing model [29]. Igglo's marketing model elements are discussed next.

Igglo's *value proposition* can be summarized in three main points: lower commissions, more transparent information, and finding the right buyer and thereby the best price for each seller. Its *revenue model* is based on commissions paid by the seller of the apartment. The commission is 1,85 % + the costs of documentation for the *basic service*, in case both the seller and buyer connect through the web service. The *efficient marketing service* charges a 2,85 % commission, including advertisements in newspapers and brochures. The most comprehensive service, the *value service* costs 3,85 % and it includes staging and cleaning of the apartment. The service offering is thus differentiated to meet the varied needs of the customer base.

Igglo's *competitive advantage* is based on the picture database that has made the new services - silent sale and earmarking - possible. The real estate process is clearly divided into the self-service phase and into a traditional agent's role. Because the previous push model of finding sellers has been transformed, at least partly, into a pull model, there is time and cost savings that the case company has chosen to pass on partly to the customers in the form of lower commissions. A customer satisfaction survey conducted among Igglo's customers in spring 2006 [25] found that the company was perceived as above expectations by 33 %, the same as expected by 53 % and below expectations by 14 % of the respondents (N = 858). 15 % of the respondents were very satisfied with the service and 44% were fairly satisfied. However, there were only 72 deal concluded by May 2006 when the survey was conducted, thus the respondents most likely answered to the question: "Are you satisfied with the Igglo's web services" when they were asked about their overall satisfaction with Igglo. Dabholkar and Overby [30] examined the concept of service quality linking it more to the service process, whereas customer satisfaction is more dependent on the outcome of the service encounter. The outcome of the real estate process, i.e. success in selling or buying a suitable apartment is likely to be more important than the process of how the sale is conducted [31]. Igglo will face a further test of the viability of its business model when a well-functioning web service is combined with the traditional real estate process in a larger scale as the company expands geographically.

Igglo is an unusual real estate company in the sense that its roots are in the marketing field (Taivas Group). The launching of the web service was a text-book case of how to attract attention. The first press release came out only after the site was already up and running. Competitors' angry reactions made reporters write even more on the new service. Three months after the launch of the service, 55 % of Southern Finns recognized Igglo's name either spontaneously or when helped [25] According to Igglo's managing director, Mr. Ranin, their services are a prime example of Rogers' [32] innovation diffusion; Igglo's name is already familiar to the *early adopters*, and the next group of users will be the *early majority*. Igglo is thus claiming that it has successfully jumped over the "death valley" The *brand awareness* is based on the fame of the founders and their previous successful innovations of other companies belonging to the Taivas group (most notably Sulake and Habbo Hotel).

Igglo's Internet service is being developed constantly, which is possible since the service is coded in-house. In addition, in order to gain photos of the next areas of expansion (cities of Turku, Tampere and Lahti) there is a photograph competition titled "the best and the most horrible picture of my living quarters". Pictures of the capital region, and some other cities are also objects in the competition. Igglo aims at starting a new program with a commercial TV-channel in which the sellers committing themselves into signing a contract will have their homes staged for sale. Moreover, Igglo has joined a group headed by MIT that studies the real-estate industry.

In financial terms, during Igglo's first six months there were 1 000 brokerage deals signed, 400 deals concluded, 3 800 silent sale announcements, and 15 000 earmarkings. There were over 1 500 000 visitors to the website, and almost 50 agents hired in the capital region and six in Turku [23].

IV. Real estate Agent Processes

According to Wofford and Clauretie [33], the real estate agent's work includes five process phases: *listing the property*, *prospecting for buyers*, *servicing*, *negotiation and agreement*, and *closing*. Since finding the paying customer, i.e. the seller, is so crucial, we add a new phase – *prospecting for sellers* as the commencing phase. In this section, these six process phases are deliberated as we compare the traditional way and Igglo's novel way of conducting the real estate business. In addition, we present some future scenarios.

A. Traditional Way

Traditional real estate agents spend a lot of time in advertising and keeping a close eye on FSBO advertisements in order to *prospect for sellers* that would be willing to sign a contract with them. Thus, in relation to the sellers, the agents are commonly the ones taking initiative and pushing their offering to sellers. After the seller and the agent have signed a contract for the sale of the apartment, the agent uses different channels to *list the propert:* the agent's website, portal websites, newspapers and direct mail.

Prospecting potential *buyers*, on the other hand, is less work for agents since buyers are active seekers of information in the traditional mode, too. Efficient search tools, good-quality pictures, virtual tours and information on the neighborhood (schools, parks, shops) increase the value of the agents' website. In the *service* phase, a broker tour in the apartment is arranged in order to make high-touch evaluation [31] possible, and the necessary documentation is provided. In the *negotiation* phase, the help of the agents is needed especially in gaining price information on the area, and in conducting negotiations on behalf of the customers. In the *closing* stage, the official deal is signed, and the agent is often present providing the necessary legal documentation.

B. Igglo's Way

Igglo's service elements were already examined in detail in the previous section. The four most important differences when compared to the traditional way of doing business are: push turned into the pull mode (*prospecting for sellers*), versatile offering of information on the site (*listing*), users as content-creators, and more search options (*prospecting for buyers*). When the supply and demand meet, Igglo's customer service personnel contact the silent seller to inform her/him that there is an interest in the market. After that, the three last phases of the real-estate process do not differ greatly from the traditional way of conducting business. However, new services are introduced, e.g. house value calculator and different levels of brokerage commissions with different levels of services. The trend of providing other than just the basic service, thus customizing the offering for the needs of the customers, is likely to increase in the future.

C. Technology Enabled Future Way

In the future, *prospecting sellers* with the pull mode is likely to become more common. An indication of the fact that the pull mode concept might be universally appealing is that www.redfin.com, an online Seattle brokerage is interested in applying for an U.S. patent of taking photos of houses in Seattle region [34]. User involvement in planning and implementing services is increasingly important. Since, especially the younger generations are used to sharing their photos, favorite links, music, films and thoughts (e.g. www.flickr.com, http://del.icio.us) it is likely that this customer base is willing to be more involved in customer processes, including the content creation in websites. There are few technological and human prerequisites for this development: a broadband connection, and proliferation of digital cameras. The user-generated content is used when *listing* the information of the apartment on websites.

In the future, it is likely that buyers will be offered better

and more versatile search engines and options. Especially in the United States various searches that combine information from different databases (so-called mashups) are increasingly common. For example, www.propertyshark.com combines census information with maps and allows searching among others with the following criteria: single men availability, toxic sites, or recent sales. Google Earth is often used as the map platform (for example www.earthpoint.us), but other map information is also used (for example www.geniusrealty.com) on which other applications are built on. Thus both *the listing* and *the prospecting for buyers*- phases are influenced by these developments. Buyers have been active previously, but an even more active role of buyers is encouraged by e.g. www.reply.com that offers a possibility for a prospective buyer to scan houses in the US market, and to send an offer to prospective sellers through reply.com that charges a fee for the service. Reply.com expects a response rate of 20 to 25 % from the sellers. Redfin.com, on the other hand, will implement a similar service in Seattle and San Francisco by the end of the 2006 but their response rate expectations are closer to 5 % [35]. Reply.com has implemented its service without pictures of actual houses (using air photos), but redfin.com is likely to use photograph of actual houses.

The traditional task for the real estate agent's *servicing phase* - showing a round in the apartment - is already divided into the online and offline elements. Usually the preliminary screening is done on the Internet, and only those apartments that fulfill the buyers' specifications will be seen on the spot. Various 3D-model and virtual reality presentations might someday improve these phases even further, although it seems difficult to believe that the home buyers would be willing to buy an apartment without seeing it first in person. Even a more agile and flexible way of serving customers is to operate from a van like the agents of www.geniusrealty.com in Boise, Idaho do. The company has equipped its van with a high-speed Internet access, wireless communication, and faxing, copying and printing capabilities. When a customer calls with a request to see a house, the agents try to be at the house for sale within minutes with all the necessary information to strike a deal. The company also offers other technology- enabled service features on its website, e.g. Internet live chat and push to talk. In addition, the valuation of homes in monetary terms is a vital feature in real estate sites even though calculators are often accused of lack of accuracy. However, in the US market, using the valuation calculator on www.zillow.com site, to "zestimate", has made the site the eighth most popular real estate site according to ComScore Networks [36].

Regarding the *negotiation phase*, the price request of an apartment is naturally an important reference point, but often even more important are the actual bid prices of apartments in the neighborhood. At the moment in Finland, the public information is only average price information based on zip-codes. However, the Housing Fund of Finland is planning to host a free service that offers apartment bid prices of the 15 biggest cities for the general public. The service will be implemented as a map application with mean price information on the street level [37]. This transparency will improve the position of the buyer, and help sellers to set their price requests at a more realistic level. Realistic price information is important, especially during swings in economy since changes in economic activity is reflected in housing prices very quickly [37].

In the future, efficiency could be added to the negotiation phase if tools that already exist, e.g. web-based video and audio conferencing, were used. When examining the international development, we found that www.redfin.com has added a possibility to make an offer electronically for an apartment even though the customer had not previously seen the apartment [38]. The method might be suitable for buying a holiday home or an apartment on the other side of the country.

In Finland, the *closing* phase could be implemented electronically thanks to the country's advanced e-banking infrastructure. An apartment sale is a stock trade, and it could thus be carried out with the help of digital signatures, and electronic bank transfers. The Finnish Ministry of Justice has made plans to build an electronic system to enable the closing of property deals, which are legally even more complicated than apartment deals. The driving force behind this plan is the considerable cost savings accrued [39].

Based on the above discussion, Figure 2 sums up the three ways of conducting real-estate agency business - the traditional way, the way launched by Igglo, and the possible future way.

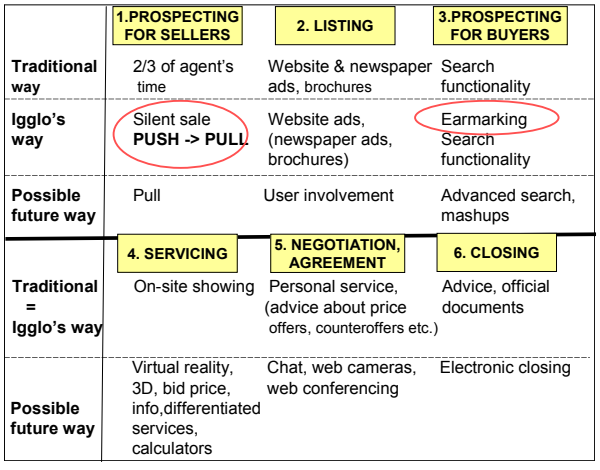

Figure 2: Three ways of conducting real-estate business.

V. CONCLUSIONS

The focus of this paper has been in the real estate industry in Finland, and the Internet-based changes that have turned a collection of static pictures and text into a

more interactive search and decision-making tool for home hunters. The novel e-services and marketing model of Igglo, a newcomer to the Finnish real estate industry, were described in detail. In addition, several US exemplars of innovative ways of offering real estate services were presented.

It seems that, at least in Finland and US, the Internet is about to change the processes of real estate business. The real estate industry is an information-rich service industry– and the information that was previously owned by agents is now openly presented in websites. Additionally, the amount of information on the websites is manifold; a good example of this is Igglo's proprietary picture database that has made services like silent sale and earmarking possible. The silent sale service presents a clear change in thought – the sellers that have previously stayed passive have now a possibility to initiate the selling process by silently "test-selling" their apartments. This means that the push mode has turned into pull. Other innovations include that the users serve as content creators, they are offered more search options and more versatile price and other information on the websites. The innovative real estate agents emphasize lower commissions and well functioning web services in their marketing campaigns. At the same time, they also provide customers with traditional services in order to offer something for everybody – and usually at a lower price than traditional brokers.

Real estate sector is a "hot" at the moment in Finland – economy is growing, interest rates are low, and apartment prices have risen for years - and new entrepreneurs have untapped the possibilities of the Internet. The Internet has brought efficiency gains since agents can concentrate on the productive phases of broker's role. However, the Internet might also present threats if sites that combine map applications and other databases to FSBO-housing information (e.g. www.housingmaps.com) become common also in Finland. Self-confident sellers will cut out the middlemen and sell their homes by themselves. Another example of an innovative service that gives sellers and buyers an option to act on their own is www.reply.com. Reply.com is being paid to deliver bids to the owners of apartments by potential buyers, but the company is not involved in the actual broking of apartments itself. In general, although a customer decided to employ a real estate agent, there is pressure towards lower commissions since customers carry out activities that previously belonged to the agent, and start questioning what the agent is doing for his / her fee.

In the real estate industry the service can be divided into online and offline phases. Online services focus on providing comprehensive and rich information to the customers with easy to use and attractive user interface. The purpose of offline services is to offer elements that are lacking online, most importantly on-site viewings (thereby providing high-touch information to aid buyers in their decision-making), personal advice on price negotiation and help in arranging e.g. a staging or pre- sale home inspection. Since changes in online services impact offline services, future research could include examination on how the service quality and customer satisfaction are, on one hand, linked to service process and outcome, and on the other hand, to online and offline services. It would be managerially important to find out which aspects of the real estate services, online or offline, influence the customers' perceived value and satisfaction, and how.

It is somewhat difficult to draw straight parallels from real estate industry to the popular e-service industries because of the particularities in each industry. Electronic banking and stock trading have a virtual delivery mode, and in auctions (like eBay) the value of the purchase is rarely as high as the value of an apartment. However, some generalizations can be made.

User involvement in planning and implementing services will be increasingly important. It is also likely that the advertising revenues from the website will increasingly supplement commission revenues. In addition, new revenue models will be created, or old ones employed again – there might be an ample supply of good ideas to draw from in the archives of previous dot.com companies. Internet might now be able to deliver the promise that was made in the dot.com years: "*Internet-based electronic markets leverage information technology to match buyers and sellers with increased effectiveness and lower transactions costs,*" and therefore lead to "*more efficient, 'friction-free' markets*" [44].

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APPENDIX 1: FINANCIAL INFORMATION ON THE MAIN COMPETITORS

	Total sales	Growth-%	Employees	Nr of deals	Bank affiliation
Huoneistokeskus	65,5 mln	14 %	580	13.800	Nordea bank
Kiinteistömaailma	53,5 mln	20 %	650	14.000	Sampo bank
SKV	29,6 mln	21 %	310	10.000	
OP-Kiinteistökeskus	N/A	20 %	450	16.000	local cooperative banks

- Huoneistokeskus was founded in 1953. It has concentrated on big cities and expensive houses and property deals. Approximately 600 professionals work for Huoneistokeskus in more than 70 offices throughout Finland. In addition to buying and selling property and residences, they also broker rental flats and provide a premises evaluation service. Sponsor capital and Nordea are the main owners.
- Kiinteistömaailma was established in 1990. According to Kiinteistömaailma, it is the fastest expanding real estate agency in Finland. Kiinteistömaailma has sales outlets in 52 regions in Finland and personnel of over 600 professionals. Kiinteistömaailma functions on a franchise principle, and the sales outlets are owned by local, independent entrepreneurs. Sampo Bank owns the central office of the whole chain.
- Op-kiinteistökeskus is a fairly traditional real estate agency that is owned by the local cooperative banks. It functions in cities, but has been especially successful in the countryside and in smaller cities.
- SKV used to be owned by savings banks. Sponsor capital is nowadays the main owner. In August 2006, SKV and Huoneistokeskus announced their plans to merge.
- SKVL was founded in 1946 and the members are 400 SME's that are responsible for about 40 % of the real-estate deals.

APPENDIX 2: SEARCH ELEMENTS OF THE MAIN REAL ESTATE COMPANIES

Search and service elements	Huoneisto-keskus	SKV	Kiinteistö-maailma	OPKK	Asunto-verkko	Etuovi	Oikotie	Igglo
Map search	x	x	x	x	x			x
Seller information							x (in some cases)	
Type of property	x	x	x	x	x	x	x	x
Ownership structure		x			x	x	x	x
Number of rooms	x	x	x	x	x	x	x	x
Price range	x	x	x	x	x	x	x	x
Size	x	x	x	x	x	x	x	x
Building year	x	x	x	x	x	x		x
Characteristics of apartment or house	x	x	x	x	x	x		x
Condition		x			x	x		
Availability		x			x	x		
Extra conditions	x	x	x	x	x	x	x	x
Save search	x	x		x		x		x
Search with a code	x	x	x	x	x	x	x	
Search by showing day	x	x	x	x	x	x		
"My own site"(registration)	x	x	x			x		x
Country						x		
Region	x	x	x	x	x	x	x	x
Region in detail	x	x	x	x	x	x	x	x
Other search criteria	x	x	x	x	x			x
Availability					x	x		
Mobile service			x				x	
Several language	x							
Number of all property	4 000	3454	6583	7430	2582	50 800	40 261	1500 (incl. houses)
Number of apartments	3 269	1619	4 333	4454	1 696	30 598	23 594	350 (for sale)

Source: Real estate websites as of 10 September 2006