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[Master in Management Program]

DEVELOPMENT OF INTERNET-BASED VALUE ADDED SERVICES IN HOUSING ESTATE BUSINESS IN RUSSIA

Master's Thesis by the 2nd year student

Concentration — Master in Management

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ЗАЯВЛЕНИЕ О САМОСТОЯТЕЛЬНОМ ХАРАКТЕРЕ ВЫПОЛНЕНИЯ ВЫПУСКНОЙ КВАЛИФИКАЦИОННОЙ РАБОТЫ

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АННОТАЦИЯ

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Описание цели, задач и основных результатов	Целью данного исследования является разработка интернет сервисов повышения ценности для Российского рынка жилищного строительства. Исследование представляет собой анализ Российского рынка жилищной недвижимости и использует триангуляцию методов для достижения результата. Для анализа качественных данных было проведено 7 интервью с руководителями региональных отделов строительных компаний из разных регионов России. Для анализа количественных данных был проведен опрос 128 жителей жилых комплексов Санкт-Петербурга. Для анализа результатов были использованы факторный анализ и описательная статистика, включая перекрестные табулирования и хи-квадрат тесты на значимость. Результатом данного исследования являются разработанные 19 интернет сервисов, которые могут быть предоставлены через онлайн платформы на рынке жилищной недвижимости. Кроме того, в данном исследовании был затронут вопрос монетизации онлайн-платформ на рынке жилищной недвижимости. В результате, были разработаны три бизнес-модели.
Ключевые слова	сервисы повышения ценности, интернет сервисы, монетизация онлайн платформ, бизнес модели, жилищная недвижимость, жилищное строительство

ABSTRACT

Master Student's Name	Aleksandr Mikhnevich
Master Thesis Title	Development of internet-based value added services in housing estate business in Russia
Faculty	Graduate School of Management
Main field of study	Management
Year	2016
Academic Advisor's Name	Johanna Pia Maria Frösén
Description of the goal, tasks and main results	The purpose of this research is to develop internet-based value added services for housing estate business in Russia. The research is a case study of Russian housing estate market utilising a triangulation of methods for better results. For the qualitative data analysis, 7 interviews with heads of regional departments of construction companies from different regions of Russia were conducted. For the quantitative data analysis, a survey of 128 inhabitants of Saint-Petersburg housing estates was held. Factor analysis and descriptive statistics including cross-tabulations and chi-square tests for significance were used to analyse the results. In this study, a list 19 value added services that can be provided through online platforms in housing estate market was developed. These services fall into three big groups: social networking services, compulsory and additional services. Additionally, the question of monetisation of online platforms in housing estate market was discussed and three business models were suggested.
Keywords	value added services, e-services, monetisation, business models, housing estate

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Introduction

Background

Nowadays customer-oriented industries have significantly changed. Currently, customers expect from the purchase more than just a product or service. They tend to become loyal if their expectation are met; to reach it companies usually offer their clients some additional things. These additional elements are called value added services. Such services have positive impact on the perceived value of the core product [van Riel et al., 2001, Gwinner et al., 2000]. Therefore as consumers tend to expect high quality of the core product and take this high quality largely for granted [Gwinner et al., 2000], value added services play a significant role in modern business. Another reason for value services introduction is the fact that physical products don't provide companies with competitive advantage, financial performance or market opportunities anymore [Oliva, Kallenberg, 2003; Gebauer, Fleisch, Friedli, 2005]. Also value added services help companies to deal with low or decreasing revenues from the core product [Ahn et al., 2011; Goyal, 2004]. So the better value added services the company offers the higher is the value of its core product from the customer perspective. Thus value added services is becoming one of the key competitive advantages for companies on different markets.

These changes started in 90-s when value added services were first introduced in telecommunication industry. Since then many different studies were conducted on the topic of value added services: Dowling (1991), Stoetzer (1992), Wittenbach (1995), Goyal (2004), Ulaga and Reinartz (2011) and many others.

All business fields and issues, including value added services, changed significantly with emergence of the Internet, for example, new e-business models appeared [Casadesus-Masanell, Ricart, 2009]. Also Internet-based value added services differ a lot from basic ones, which is very common for the majority of e-services based on traditional ones [Riedl, Leimeister, Krcmar, 2011].

All the mentioned changes have global character and affect almost all industries in all countries. Previous studies were conducted to identify peculiarities of different regions [Dowling, Witte, 1991; Stoetzer, 1991], nevertheless, Russian market have not been examined yet. The need in development of value added services is increasing in different business fields: foodservice [Wittenbach, 1995], internet telephony [Wang, 1999], next-generation networks [Whalley, 2008], health micro insurance [Pott, Holtz, 2014] and many others. Housing estate is not an exception as the changes affect this industry, too.

Key definitions:

Business model – a simplified description of a complex business, which allows to explore its structure, different elements' relationships and its response to the real world [Applegate, 2001].

Value Added Service – additional service, not a part of primary business activity, which creates additional value for the clients.

E-service is considered to be a service that is provided to the customers over electronic networks [Rust, Kannan, 2003].

Commoditisation – a process by which products tend to lose their uniqueness and respectively value for customers [Davenport, 2005].

Business-to-consumer (B2C, sometimes also called Business-to-Customer) describes activities of businesses serving end consumers with products and/or services [Nemat, 2011].

Consumer-to-consumer (C2C) (or citizen-to-citizen) electronic commerce involves the electronically facilitated transactions between consumers through some third party [Nemat, 2011].

Research problem

Despite the fact that the topic of value added services is rather new there are many different studies covering this topic. Researchers suggested different classification of value added services [Youngdahl, Loomba, 2000, Backhaus et al., 2010, Ulaga, Reinartz, 2011], identified their effect on customers' behaviour [Gwinner et al., 2000, van Riel et al., 2001] and analysed strategies of their development [Oliva, Kallenberg, 2003, Matthyssens, Vandenbempt, 2010].

The least studies field of value added services is the implementation issue, which implies studying particular examples of value added services provided in various business fields. There are several researches regarding implementation of value added services in such industries as internet telephony, foodservice, logistics and healthcare micro insurance. However, there is a limited number of researches in housing estate business field, especially regarding the issue of online services.

The topic of online value-added services in housing estate market in Russia is very significant. The housing estate business is different from other industries that sell real things:

purchasing a housing estate is very important decision customers as the price of the housing estate is very high. That makes customers to be very cautious and accurate; they discover all available information before the purchase. As value added services increase the perceived value of the core product [van Riel et al., 2001, Gwinner et al., 2000] it can be a strong method of attracting customers and motivating them to make a choice.

Currently, internet-based value added services started to develop in housing estate business as internet is one of the easiest ways to communicate with consumers. However, their development is still very slow, especially in Russia. It means that companies that will be the "first-movers" in internet-based value added services implementation can get a very strong competitive advantage on the market. Also there should be some special place for offering value added services tightly connected to a particular housing estate company to get all the benefits of such services implementation. Private online platform can be such special place for customers.

Therefore, the aim of this research is to identify the opportunities of internet-based value added services provided through online platforms in housing estate business in Russia. The research question and sub-questions are presented below.

Research question: What are the opportunities for development of online platforms in housing estate business in Russia?

Sub-questions:

- Is it relevant to develop private online platforms for value added services provision in housing estate business in Russia?
- What are the internet-based value added services that can be provided in housing estate business in Russia?
- What are the possible earnings logics through internet platform in housing estate business in Russia?

Organisation of the study

The research consists of four main parts. First chapter reviews theoretical background and consists of two main parts: the concept of business model and the concept of value added services. Value added services are the part of companies' business models, so the brief description of the business model concept is presented. Then the modern (online) business and revenue models are considered as they are the prerequisites to the issues of value added services

and are also necessary for answering the third sub-question of the study. The second part of the first chapter is devoted particularly to value added services as the central field of this study. Firstly, the definition of value added service and explanation of their effects are presented to give the overall understanding of the issue. Then different strategies of value added services provision are examined in order to clarify the direction of the future research. In addition, value added services are categorised in this part of the study to review the issue from different perspectives, which cam assist in the development of value added services. The second chapter of the research presents the brief description of methods that were used during the study and the reasoning behind their selection. In the third chapter the main findings of the study are discussed and described in details. This part is organized according to used methodology. The last chapter of the study represents theoretical contribution of this research, into the scientific field, managerial implications with practical recommendation to companies and limitations of the research. Future research directions are also suggested in this part.

Chapter 1. Theoretical Background

1.1. The concept of Business Model

1.1.1. Defining Business Model

There are many different approaches to definition of a business model. Some researchers assume that business model should follow a certain structure when describing any business. Three-dimensional models were described by Timmers (1998), Osterwalder, Pigneur (2002) and Cea-Esterualas (2013). Taking into consideration key differences and similarities among them, this study suggests three generic dimensions of business model: description of product and value proposed to consumers, a network of actors involved (it may include organisational architecture as well as market environment) and financial flows model (including revenue generation and financing). Other researchers [Applegate, 2001; Petrovic et al., 2001; Auer, Follack, 2002] view business model as a simplified description of a complex business without any certain structure in it. However, they set following requirements to this description. For example, it should allow to explore structure, different elements' relationships and response to the real world [Applegate, 2001]. Despite the fact, that the latter approach may be more relevant for practical implementation and description of particular company business model, a defined structure may be more helpful for comparison of different models or while creating general business models for whole industries. A synergy of both approaches was reached in the research of Shafer, Smith and Linder (2005). Researchers studied twelve different business models definitions [Timmers, 1998; Hamel, 2000; Afuah, Tucci, 2001; Amit, Zott, 2001; Weill, Vitale, 2001; Dubosson-Torbay et al., 2002; Magretta, 2002; Rayport, Jaworski, 2002; Van Der Vorst et al., 2002; Hoque, 2002; Chesbrough, 2003; Hedman, Kalling, 2003] and created an affinity diagram to compare them all. As the result of the analysis, four main components of a business model were determined, which can be very useful for comparison of particular cases or in practical use by companies (Figure 1). However, this approach is too detailed to be used in theoretical development of business models. As this study aims to develop business models for housing estate market in general, a broader perspective should be taken into consideration. A generalisation of business model components developed by Shafer et al. (2005) results in the already proposed definition of business model generic dimensions: description of product and value proposed to consumers, a network of actors involved and financial flows model.

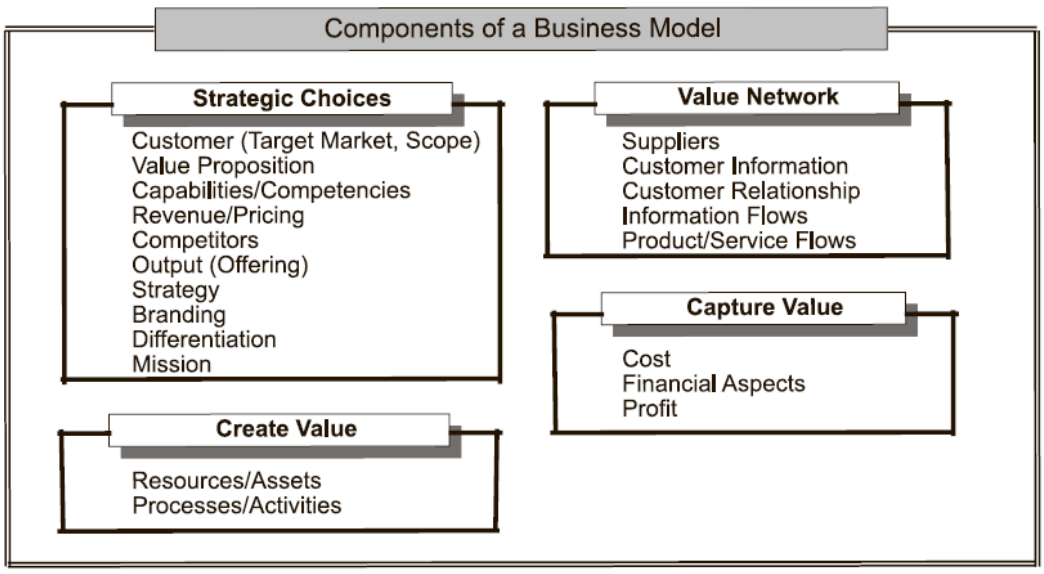

Figure 1. Components of Business Model

Source: Shafer et al., 2005

1.1.2. Internet Business Model

With the development of the internet and its' wide adoption in all spheres of life including business, new business models appeared. The key difference between online business models and traditional ones is that online business models are mainly focused on the issue of generating income on the Internet rather than on any other issues [Casadesus-Masanell, Ricart, 2009].

One of the broadest definitions of an online business model was suggested by Lyubareva et al. (2014). The main concept proposed by the researchers includes three elements, which remind generic dimensions suggested in this study. Three main components proposed by Lyubareva et al. (2014) are creation of value, value capture and value network. The first component includes three different areas [Lyubareva et al., 2014]:

- position of the company in the value chain, specifically original creation activity;
- market segmentation, namely, identifying whether the offered content is a mass market one or it attracts some special interest and market segments;
- conditions of the content exploitation defining its value: the way of consumption (online / offline), temporary access available only through content location, and multiple offerings, for instance, streaming or downloading, which indicates strategic choice of the offer diversification.

The second element of a business model is capturing value, which depicts the digital content revenue generation mechanisms and embraces four main types [Lyubareva et al., 2014]:

- revenue sources: subscription fee and pay per view;
- unearned revenue: selling sponsored links and advertising;
- public financing and donations;
- offering free content.

The third dimension of a business model is value network; it describes suppliers of the offered content and its distribution [Lyubareva et al., 2014]. Firstly, it refers to the first two elements of a business model value creation and value capture which manage the presence of external producers' and user-generated content; the latter includes reviews and self-produced content. Also value network dimension is about the distribution channels. This dimension controls the way of delivering the content, which can be distributed via multiple channels or not. For example, the content can be offered through different platforms or physical support. Summarising, this definition fits the generic dimensions suggested in this study, however makes stronger emphasis on online nature, therefore it will be used for the development of business models in further chapters.

The development of new business models for housing estate market will be based on different business models categories suggested by other authors. With the increasing popularity of online business models many approaches to categorisation were undertaken by different authors. Hayes et al. (2005) provide business models categorisation that combines three different researches [Ticoll et al., 1998; Timmers, 1999; Kaplan, Sawhney, 1999]. Researchers suggested that electronic business models could be classified according to five different characteristics: the way of exhibiting the economic control degrees, functional and value chain integration, business and technical innovations. However, the model refers to organisational perspective rather than industry in general and does not provide the details behind factors mentioned; therefore, it will not be taken into consideration in this study.

Another approach to e-business models categorisation was created recently by Lyubareva et al. (2014). It relates to digital media and is based on empirical study of 34 cultural content websites. Authors found out that all internet media business models can be divided into three different classes: participative, distribution and editorial models. The first class of online business models assumes using sponsored links and advertising as the main revenue source. The content in this type of business model can be generated by users or by the company itself; also the self-produced content can be mixed with the content created by third-parties. Participative model is characterised by offering multiple ways of content exploitation like downloading and streaming. The most crucial factor for value creation in this model is users'

contributions. In this internet media business model the content is offered for free, however some revenues can be obtained from the end market by using advertising-based model. Advertising-based model assumes company to act on a multi-sided market providing customers with free-of-charge content and gaining profit from selling advertisers an access to the customers [Rochet, Tirole, 2006].

The second class of internet media business models is distribution model. This business model is characterised by focusing on a particular segment of the market by attracting attention of the special-interest users groups [Lyubareva et al., 2014]. Distribution model assumes developing a unique content inside the firm without any external parties, either professionals or users, and delivering it through different platforms and physical supports. The major part of revenues in this business model is received by offering the content for a charge, however, some content can be provided for free. Also some revenues can be gained by public funding and donations. Sponsored links and advertising are not widely used in distribution model because of high level of content specificity. This revenue generation mechanisms is usually used in the mass market with universal content offered to a great number of customers; on the specific market with unique content the application of sponsored links and advertising are rather limited.

The third class of internet media business models is editorial model. This business model is characterised by offering content from external professional for a charge; free content is almost never offered to users [Lyubareva et al., 2014]. In editorial business model there are two main ways of offering the content: for offline and for online (rental) consumption. Firstly, the content can be designed for offline usage; this type of selling the content assumes that the purchased piece of content can be used by the consumer forever. The second type of offering the content is rental system where a user gets access to a piece of information for a particular time period and where the level of access (permitted actions and amount of information, for instance) depends on the amount of payment. Editorial internet media business model is similar to a “merchant” mode of intermediation [Hagiu, 2007]. where a firm acts like an intermediary buying content from sellers and reselling it to the end customers.

Talking about online platform in housing estate market, the content generated is news about housing estate, therefore distribution and editorial models that are based on selling of the content do not fit. Participative model perfectly fits to the case; however, it suggests only advertisement as a revenue source. Therefore, a more detailed analysis of other ways of monetisation should be conducted.

1.1.3. Online earnings logics

Different studies on the earnings logics of internet platforms were examined to create a generic classification for further discussion with industry experts. Basing on the researches of Clemons (2009), Dasgupta (2013), Laudon and Traver (2007), Anderson (2009), Mounier (2011), Lyons (2012) the categorisation of online revenue models was developed (Figure 2).

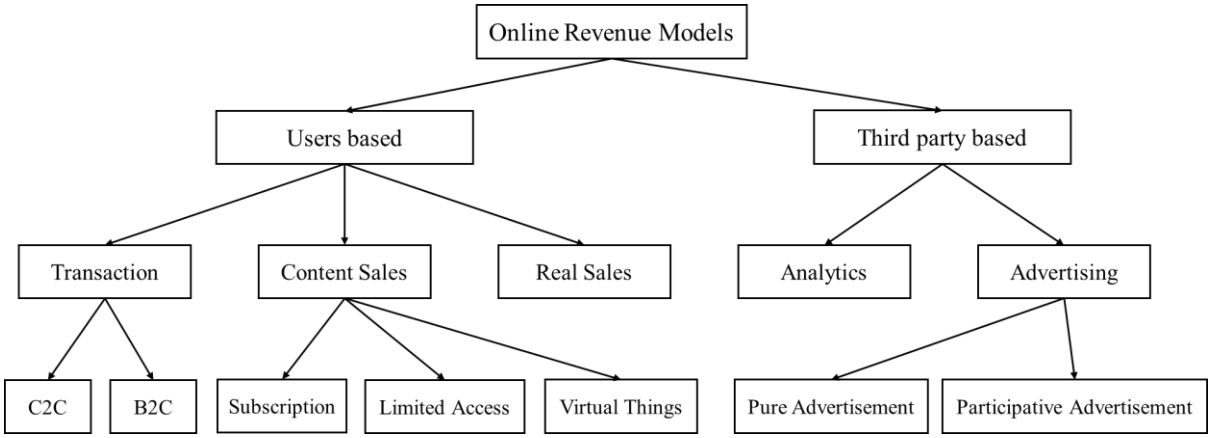

Figure 2. Online revenue models classification

First category, users based revenue models imply that profits are generated by users' payments. It does not necessarily mean that the use of such platforms is not provided for free, however, there are no other revenue sources apart from users. Transaction revenue model refers to the case, when the company provides its customers with a place for conducting transactions [Laudon, Traver, 2007]. It supposes that users pay money to broker (website), which brings buyers and service providers together [Lyons, 2012]. In this model, the company acts as a market place operator and gets a commission fee from the customers' transactions. There are two types of customers: sellers and buyers; the role is not fixed and the same customer can both sell and purchase goods or services. There are also two types of fees that can be applied on the market place operator's platform: fixed fee or percentage from the transaction [Dasgupta, 2013]. However, with the development of websites, utilising such model (eBay, Avito, Taobao) some companies started creating accounts on such websites to utilise them as a channel for sales. Websites reacted to this and developed special ways of interaction as well as special account types for corporate users (e.g. eBay). Taobao even tried to separate C2C and B2C segments by launching specialised platform for official sellers called Tmall. Therefore, in the categorisation provided in this study (Figure 2) transaction revenue models are divided on C2C and B2C.

Second type of online revenue models inside users based category is content sales revenue models. They include subscription, limited access and virtual things. Subscription revenue model refers to the case when company sells the access to the content to its users for a particular time period: usually day, month or year for a subscription fee [Dasgupta, 2013]. The access restrictions differ among different companies: each firm makes decision about users' rights (read, download, etc.) and sets the fee; the level of the charge can be different for different access options. Subscription revenue models can be utilised by general websites [Lyons, 2012] as well as social networks (e.g. Classmates, Stayfriends) [Dasgupta, 2013]. Clemons (2009) also studied this issue; the researcher calls it "experience and virtual community participation" and attributes it to pay-to-play online games, such as World of Warcraft. Additionally, subscription models include "merchant" models studied by Lyons (2012). The mechanism is the following: the user pays to the website to get access to the goods and services. All the products and services available on the website can be produced by the provider itself or procured from third parties. Summarising, subscription revenue models assume that the access to the platform is provided for a certain payment. Such revenue models may have a variety of interpretations, except providing any free-of-charge access. Limited access category of online revenue models supposes that users to pay money to provider (the website) for service/content, which becomes available only after the payment is done [Lyons, 2012]. Content and information are sold not through subscription, but by direct purchasing. Another example is "freemium" model suggested by Anderson (2009). This model implies that the software, web-content and services are provided to different types of users, including the basic one. This basic tier always provides user with a limited access, while the full access must be paid. According to "freemium" model only 1% of users shifts from the basic type and pays for the product or service. As the expenditures for the good production are low the shifted users' payments cover all the costs, while other users stay at the basic tier and use the product of service free-of-charge [Anderson, 2009]. Virtual things category generally refers to the gaming industry [Clemons, 2009]. It means selling virtual accessories enhancing gaming experience. Most of free-to-play online games utilise this revenue model (e.g. Dota 2, League of Legends).

The last type of users based online revenue models is real sales. This issue was studied by Clemons (2009) and Lyons (2012). The latter calls it manufactures (direct) revenue model, where users pay the provider for the product or service. Selling real things perfectly matches free-to-use internet platform concept, as companies are investing in internet services to attract customers to buy their goods or services. However, in this case, online platform is rather a distribution channel and does not generate any revenues by itself.

Second category, third party based revenue models. Models in this category assume that the customer is provided with product or service for free. The company can eliminate customers' payments because the advertisers become the source of revenues and profits are generated by third parties. First type in this category is analytics revenue models which are based on selling information gathered from online experience. For instance, information from Facebook or any other social network can be used for commercial purposes in background checks and evaluation of market trends. Such revenue models are relevant when the amount of users is huge and there are lots of diverse user information available [Clemons, 2009]. Second type of third party based revenue models category is advertising. Clemons (2009) suggested the idea, that online advertising does not meet current expectations of companies. The researcher states three main reasons of online advertisement failure:

1. The lack of consumers trust in advertising. It was defined that messages from rating services have more credibility among customers, while the influence of the commercial sources on the product perception is rather low [Ariely, 2008].
2. Reluctance to view advertising. To prove this Clemons (2009) describes a real-life example of television: advertisements are shown on all the major channels almost at the same time, so that viewers cannot avoid them by channel surfing. In case customers desired to watch advertisement it wouldn't be necessary to synchronize advertising on different networks.
3. Advertising is not necessary for customers. Customers act in a way as if the main part of information about offered products is obtained from two types of Internet sources: independent professional ratings and communities with user-generated ratings.

However, according to the results of the research, 13 of 15 (about 87%) popular social networks from different countries are using advertising as their source of revenue [Dasgupta, 2013]. First subcategory of advertising models is pure advertisement. This model is based on contacts with advertisers; third-party companies (advertisers) pay for access to company's clients, who have particular interests, which are demonstrated by their use of the offered products and services. Another example of pure advertisement was suggested by Lyons (2012). The researchers describes a payed-for-performance mechanism, where a third party pays to websites a commission to for performing a particular action that leads to getting a measurable outcome [Lyons, 2012]. The online platform (affiliate) places an affiliate link on its website, which includes an identification code that helps to track clicks and sales. The seller advertises and sells its products or services through such links and pays the commission to an affiliate.

The affiliate in this case acts as an intermediary between sellers and buyers. There are different terms of paying the commission depending on the actions; commission can be paid for clicks, landing, leads or sales. Affiliate revenue model is considered as a win-win solution for both the merchant and the partner company (affiliate) as both get measurable outcomes: the seller realizes his products or services and the affiliate company gets the revenue in a form of commission. One more possible variation inside this type of revenue models was described by Mounier (2011). It is one of the major models in the field of open access academic publications – the "author-pays" model. The authors usually bear all the publishing costs of their articles and books on their own without any external financing. The consumers usually get the content for free in open access as the all the expenditures were already covered by the author. "Author-pays" model can be considered as a type of advertisement, as the procedure is similar: authors pay to show their content to users. Second subcategory is participative advertisement. While it looks similar to pure advertisement, there is a difference: the website in this case is a consolidator of information about service-providers; their ranking is available to users. An advertisement is sold in order to provide an advertiser with a higher rank in the list. This means that only companies, participating in the ranking, can purchase an advertisement.

1.2. The concept of Value Added Services

1.2.1. Defining Value Added Service

Value added services (VAS) first appeared in the telecommunications industry in 90-s. More than twenty years ago, there was no precision in the use of this term. Stoetzer (1991) one of the first stated the definition for value added service: VAS is a telecommunication service that, firstly, combines the use of computers and telecommunications networks, and secondly, adds value (new functions) to the customer in comparison with the plain old telephone service. As value added services moved beyond one industry, in this study they are defined as following: VAS is an additional service, not a part of primary business activity that creates value for the customers.

Figure 3 is a graphical representation of four main problems of identifying VAS in borders of telecommunication industry [Stoetzer, 1991]. However, most of them are relevant for other business fields as well. Circle 1 represents the first problem of identifying VAS in borders of telecommunications – it was difficult to split up traditional telephone services from the new ones which added value to the simple voice transmission. The problem still exists: after some time of value added service implementation, it often gets tied up with the product in customers' perception [Oliva, Kallenberg, 2003]. The second issue (circle 2) is referred to a

need to distinguish telecommunication services offering from telecommunications network maintenance. Circle 3 represent the issue of excluding all different kinds of broadcast telecommunications from value added services. It worth mentioning that this border is very blurry, because in some cases broadcasting may work as a value added service. The author supposed that this border might vanish in the future. It may have disappeared in telecommunications; however, it still resides in general terms. Many of supportive and maintenance services provided by different companies in various industries may be considered to be value added services and separate activity at the same time.

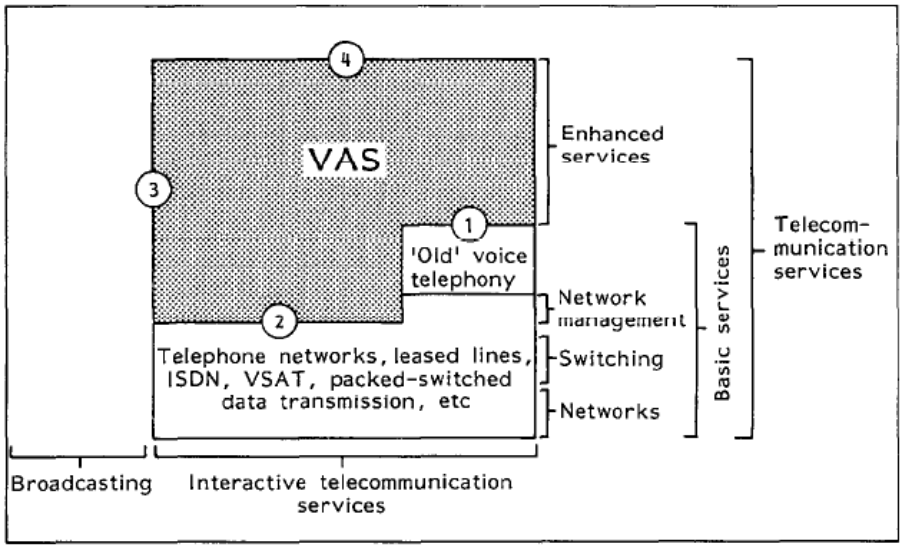

Figure 3. The boundaries of VAS in telecommunications

Source: Stoetzer, 1991

After the implementation of value added services in telecommunications, companies in other industries started the development of such services as well. The reason for interest in them was studied on pharmaceutics manufacturing market and it was found out that their implementation helps to build customer loyalty [Szeinbach et al., 1997]. Differences in politics, economics and history led to some differences in the development of value added services among different countries. Dowling, Witte (1991) analysed and compared the value added services market development, and the regulatory systems on the market in two different parts of the world: the USA and Europe. It was found out that despite different regulations in the sphere of VAS development and provision, finally markets of both countries turned to free competition. Moreover, after majority of players on the market implements value added services, they transform from a competitive advantage to a must-have competition instrument [Dowling, Witte, 1991]. Thus, only first-comers will be able to benefit from VAS implementation, others will be forced to implement them in order to stay competitive.

The importance of value added services is proved by survey of Amdocs company[1] in 2012. It conducted a survey among 120 communication executives aimed at discovering their thoughts on the value added services trends in Asia-Pacific market. The survey showed that the majority of the respondents consider value added services to be the key ones for companies. More than 60% of interviewed communication executives replied that such services are essential or very essential for their organisation. Over 70% of respondents from Australia and India considered value added services to be one of the key success factors for their business. In Thailand and Vietnam this number reached about 50%. There are several reasons underlying behind companies' decisions to attach value added services to their core products. Basing on several interviews, it was found out that offering value added services is thought to have a positive impact on the perceived value of the core product [van Riel et al., 2001]. The second reason of adding value added services to the core product is to deal with low or decreasing revenues from the latter [Ahn et al., 2011; Goyal, 2004]. Another important aspect is that consumers have come to expect high core product quality and to take this high quality largely for granted [Gwinner et al., 2000]. To deal with this issue, an implementation of value added services could be used, as they have a positive impact on perceived value of the product [Gwinner et al., 2000; van Riel et al., 2001]. According to several researches physical products don't provide companies with competitive advantage, financial performance or market opportunities anymore [Oliva, Kallenberg, 2003; Gebauer et al., 2005]. Nowadays products tend to lose their uniqueness and respectively value very fast; as a result, it becomes more and more difficult to fight commoditisation.

1.2.2. Strategies of providing Value Added Services

As many companies started to implement value added services, different strategies of VAS providing were developed. In this study, Matthyssens and Vandenbempt (2010) typology of service addition is adopted to housing estate market. Authors conducted the analysis of existing theoretical concepts and interviews with the manufacturing experts to identify four types of service addition strategies. The classification considers two dimensions for each service addition strategy type:

1. The level of embeddedness of the service into the core product. There are two contrary options: build-in services that are an integral part of the product and the additional services that are perceived by the customer as a separate from the core product part but still increasing its value [Oliva, Kallenberg, 2003];

[1] Amdocs – American company, market leader in customer experience software solutions and services.

2. The level of product customisation, which has two different options either standard or customised product.

These two dimensions compose a four-service addition strategies matrix: after sales service, service partner, value partner and solution partner. This typology of strategies is presented on Figure 4.

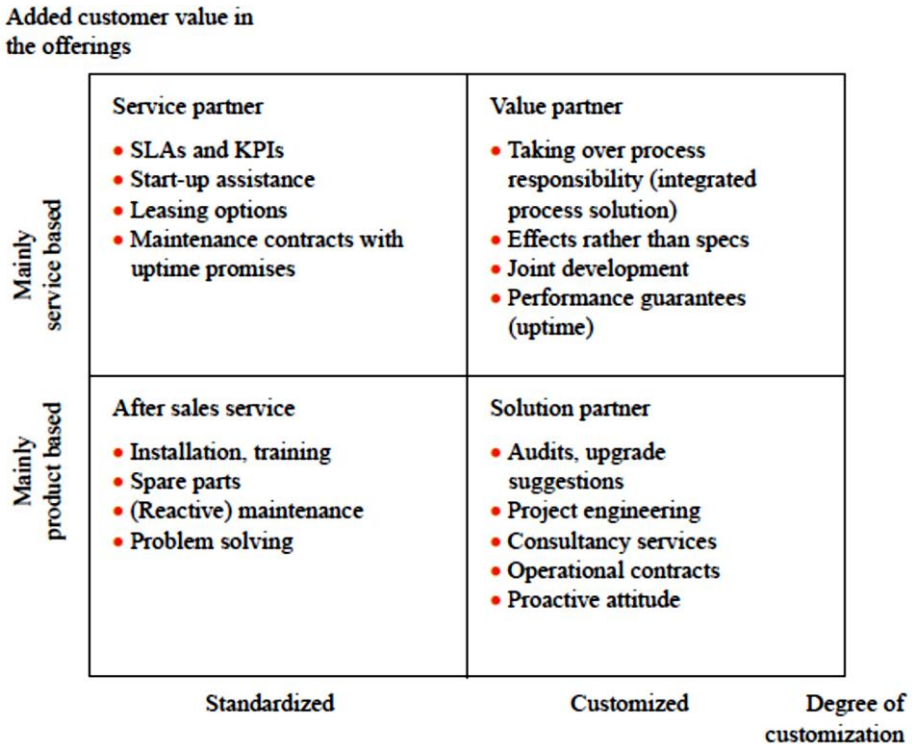

Figure 4. A typology of service strategies

Source: Matthyssens, Vandenbempt, 2010

The majority of manufacturers enter the market with the lower left quadrant strategy and use "after sales service" strategy, which is characterised by offering standardised product with build-in services. Related to housing estate market, "after sales service" strategy refers to general product-related services such as meter readings submission. There are two ways of changing the strategy and moving to another position of the matrix. Firstly, companies can become a "service partner" by changing the level of embeddedness of the service into the core product. The connection between product and services is decreased, separate services, not directly related to core product are offered. This shift is supported by the idea of decreasing physical products' value [Gebauer et al., 2005]. Secondly, companies can become "solution partners" by increasing the level of product customisation and making their offering more complex. In housing estate market conditions, the customisation of the apartments may take place. Companies with "value partner" strategy have pure integrated solutions characterised by

high level of customisation and offering separate services that add value to the core product. Despite the fact, that researchers consider it a separate dimension, it actually is a simple combination of previous two quadrants. Therefore, in this study, trajectories of moving from one type of service addition strategy to another are simplified from original ones presented on Figure 5.

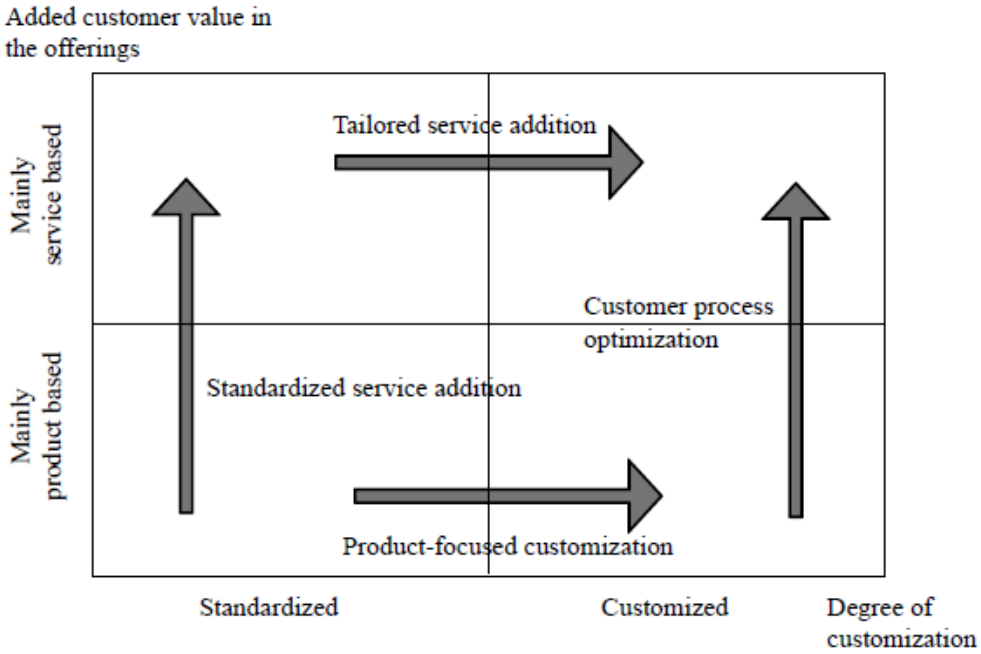

Figure 5. Trajectories of service addition

Source: Matthyssens, Vandenbempt, 2010

As the "value partner" strategy is considered to be a mix of "service partner" and "solution partner", companies can move from the left lower quadrant by changing both dimensions simultaneously or move step by step. Four trajectories described are grouped in two main directions:

1. Addition of services (standardised service addition trajectory). It can be followed by customisation (tailored service addition trajectory);
2. Customisation of the core product (product-focused customisation trajectory). It can be followed by addition of services (customer process optimisation trajectory).

From the Oliva's and Kallenberg's (2003) point of view after strengthening the product-related services and exploiting the installed base service market, there are two main paths for companies to follow either to focus on the customer relations or follow the route of offering process-centred services. Customer relations path is adopted in housing estate market for more than 10 years: companies are shifting from product orientation to customer orientation [Palm, 2011]. This is mostly related to after-purchase services in housing estate market, therefore these

services are provided by service company. Product-service strategies in turn are related to services offered by construction company and are usually implemented as a response to specific market needs [Matthyssens, Vandenbempt, 2010].

1.2.3. Value Added Services categorisation

Talking about value added services providing, there are not only different strategies of making such services available, but also different kinds of value added services. Various categorisations should be examined before the development. One of the oldest ones considers dividing value added services into two groups: generalised and narrow [Youngdahl, Loomba, 2000]. Generalised refer to all manufacturing-related services and can be oriented on product or on customer. Narrow value added services are focused only on customers and are often used to increase the level of consumers' satisfaction [Youngdahl, Loomba, 2000]. A study among manufacturers based on the information about willingness-to-pay for value added services issue showed that value added services can be beneficial for manufacturers [Backhaus et al., 2010]. Basing on this research, 3 main groups of value added services in terms of pricing were determined: no-price or free, costs covering (low price, no profit making from service providing) and beneficial. In this study, a special emphasis will be made on services generating revenues, as they can be a basis for development of revenue models for online platform. Another categorisation approach is based on the business process stage; value added services can be divided into 3 groups: installation, training and maintenance [Ulaga, Reinartz, 2011]. This business-specific categorisation differs among all business fields, but still there is an overall explanation for these VAS groups. Installation services imply services that have a direct connection with the supplier's core product, so the value acquires from the common definition of service that is perceived as a promise to perform something on behalf of the consumer. The most common example of installation service is warranty this service implies the producer's liability to repair or replace defective good within a specific time period that is contractually agreed-on before the purchase. Training services is teaching customers to use goods in order to make them able to perform troubleshooting and simple maintenance tasks themselves. For example, ERP-systems producers always teach their customers how to use the systems; as a result users understand how the system works and become able to fix small problems without the help of the ERP-system producer. In such case both the client and seller saves time and money as the latter hasn't wait for the help with minor problems and the former doesn't have to deal with such. The last type of VAS maintenance refers to services rendered during the period of good usage, for example the company provides customers with the hotline, so they can call and ask any question about the good utilizing.

Stoetzer (1991) believes that technological factors have a great impact on the further development of the value added services market. Emerging technologies are helping to create new value added services. Talking about technological effect on value added services, there are several different definitions of e-service, but most frequently e-service is considered to be a service that is provided to the customers over electronic networks [Rust, Kannan, 2003]. According to Baida, Gordijn and Omelayenko (2004) in business literature e-service is usually understood as an internet-based "copy" of the traditional service. Overall, there are five key areas of difference between e-services and general ones that are covered by existing researches: the costs structure, the degree of outsourcing, the speed of development, the availability of transparent feedback and the continuous improvement [Riedl, Leimeister, Krcmar, 2011].

1. The costs structure of services

According to Evans and Wurster (2000), the cost of electronic services provision is marginal as they can be easily scaled [Menor et al., 2002]. However, at the same time the cost of development and application of e-services is fixed and rather high, unlike general services, which are usually labour intensive on all stages [Whinston, Choi, Stahl, 1997; Bakos, 1998]. This means that because of high initial investments needed, companies may stay aside of the development of internet-based services. Nevertheless, their nature brings more benefits after the development stage in comparison with general services [Menor et al., 2002].

2. The degree of outsourcing

There is no need to locate services near the consumers as they can be easily delivered from remote locations [Miles, 2005]. Moreover, technical frameworks used to create all kinds of e-services are highly standardised, it allows to outsource components from different providers and then easily integrate them [Champion, Ferris, Newcomer, Orchard, 2002; Beisiegel et al., 2005]. Mentioned advantages of e-services create opportunities for outsourcing of these services. However, it may result in complex value networks, which can be very hard to manage because of a number of different actors working together [Vanhaverbeke, Cloodt, 2006].

3. The speed of development of new services

Electronic services can be easily replicated; therefore, the only way to stay successful in competition is constant innovations approach [Porter, 2001; Hipp, Grupp, 2005; Evans, Wurster, 2000]. Except the high level of launching costs, other enetry barriers on e-services market are very low because of high degree of service scalability, global availability of

information and high level of remote accessibility to services, which leads to a great need of rapid advances in e-services to gain success [Menor at al., 2002]. In addition, impetuous technological development increases customers' expectations and needs; to meet them companies get involved in continuous innovations.

4. The availability of transparent service feedback

As services assume interaction between service and its consumer, the transparency of such interactions is determined by the electronic nature of the service. All steps of such connections in electronic services can be monitored, gathered, recorded and then used to analyse and predict consumers' needs [Riedl, Böhmann, Rosemann, Krcmar, 2008].

5. The continuous improvement of services

Morris (2006) and O'Reilly (2007) consider that electronic services no longer require much time to be fixed and changed, they can reside in perpetual beta phase (continuous improvement). For instance, there are many online applications that are continuously updated. Also e-services don't have any local differences anymore as updated versions are delivered globally and instantly for all users.

There are also many different typologies of service innovations created by different authors. One of the most common and frequently used classifications is one created by Edvardsson and Olsson (1996) and supported then by Essen and Conrick (2008). They suggested three main areas that influence service innovation in a way that it becomes more complex and multidimensional: service concept, service process and service system. The authors consider service concept to be a "prototype for service, covering needs of the customer and the design of service" [Essen, Conrick, 2008]. Other researchers believe that service concept refers to a detailed description of consumer needs and the way the company is going to provide the service; it specifies the domain of clients' needs and the service offer to meet this domain [Goldstein et al., 2002]. Service process is about the way of how the service is designed and produced; it is a chain(s) of parallel and sequential activities which are conducted to produce the service. Service system refers to resources used in the service process for service concept creation: company's staff, physical and technical environment [Edvardsson, Olsson, 1996].

Coming to the question of new VAS development, the first approach was proposed by Johnson and Menor (1997). The researchers proposed a basic model of new services development, which is presented in a form of a process cycle. Johnson's and Menor's model

includes four process phases: design, analysis, development, and launch. Later this model was improved by adding 13 detailed tasks on different phases of process cycle and 3 internal key-success factors: organisational environment, people (teams) and instruments. The renewed model is presented on Figure 6; it underlines complexity and nonlinearity of the new service development with the help of an ongoing cycle.

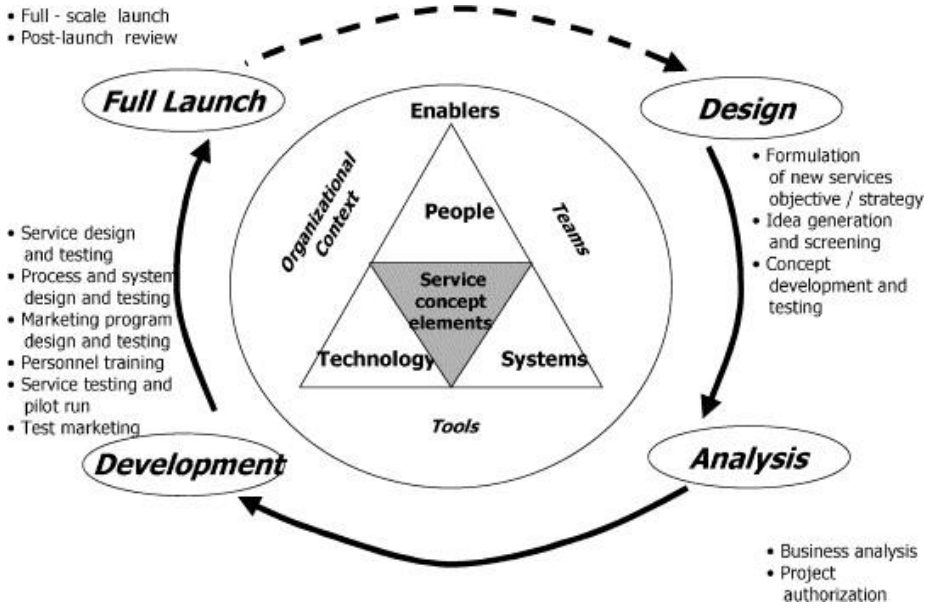

Figure 6. New service development process cycle

Source: Johnson et al., 2000

Despite the fact that internet-based services differ from general ones, this model has no contradictions to nature of e-services, especially reversed cost structure, so it is considered as suitable for development of new e-services.

1.2.4. Value Added Services in different industries

In this part, different studies will be examined to find best practices in other industries. Basing on that, industry experts will be interviewed on the topic of transferability of these services to housing estate business.

Pott and Holtz (2013) state the need of value added services in health micro insurance and describes the main of them. Overall, the article combines already existing value added services and suggests some new to be implemented by insurance companies. In addition, authors examine the popularity of services among clients and the costs of implementation. The popularity of VAS was observed in the study. However, researchers used not an absolute scale, but a comparative to each other; therefore, it is not relevant to housing estate field. The costs

analysis was also conducted in comparative way and does not contain exact figures, therefore it is not representative. That is why these parts of the article will not be considered in this research. Totally, researchers mentioned 10 value added services in health micro insurance: health education, health camp, health check-ups, in-person consultation, remote consultation (dial-a-doctor, technology enabled diagnostics), low-cost medicines, low-cost clinics, low-cost diagnostics and emergency medical assistance. Health education service refers to the education of clients for disease prevention and health promotion, for instance, customers are educated in fields of hygiene and nutrition. Health camps are the most common of preventative value added services in this field. During health check-ups clients are checked for health risks or illnesses like hypertension, for example. In-person consultation is an appointment with medical professional, who examines the patient in real-time and gives him recommendations. This service usually is limited in number of visits to control costs and focused at out of pocket expenditures reduction and facilitating access to primary medical care. Dial-a-Doctor is a type of remote consultation that means contacting healthcare professional presented by a nurse or a doctor by a telephone call. This service is usually considered to be low-cost and convenient way for patients to get preliminary diagnosis or medical recommendation. Dial-a-Doctor service often leads to personal consultation. Another type of remote consultation is technology enabled diagnostics. This value added service implies sending basic diagnostic information like pulse, blood pressure or electrocardiography results to the doctor by electronic means. The aim of this service is providing patient with diagnosis and recommendations about the treatment remotely with the help of medical assistant and modern technologies. Additionally, companies in this business field provide customers with quality medical care and diagnostics at a discount. This value added service is focused at out of pocket expenditures reduction and facilitating access to primary medical care. Next service is emergency medical assistance. This service utilizes satellite navigation system (GPS) and dispatching centre for incoming calls for providing quick access to medical care in case of emergent situation. Emergency medical assistance service offers ambulance transportation to appropriate healthcare institution for patients with serious diseases or injures. This research suggests that half of healthcare micro insurance industry value added services could be transferred to housing estate business. Mostly they refer to general consultations, but three of them are different: health education can be realised in form of seminars (webinars in terms of online service) and low-cost supplies can be also provided through website. More detailed these services will be described and shaped during the interview with industry experts.

Another case is related to intelligence transportation systems. Martinez-Torres et al. (2010) conducted an analysis of a broad number of VAS used in the industry to relate them to the bigger groups. The analysis showed that there are three main regions of services: region 1 is safety and security, region 2 relates to information services and region 3 is about transportation systems management, which is related to the communication with the authorities. During the interview, housing estate services will be viewed from the same perspective as well.

Wittenbach (1995) describes value added services for foodservice industry. Additionally, value added services in steel, packaging, transportation and material-handling industries are covered in his research. Value added services provided by metal distributors have included processes and options. Processes include blanking, cutting to length, sawing, shearing, and slitting. All these mean shaping a product to the customer. On the internet platform, this can be a customizable design for the users. Options provided by metal distributors as value added services include bar coding and identification marking, skid-packing, interleaving, exterior bundle protection, electronic data exchange, facsimile processing, client assistance about issues connected to products themselves, or alternative grades and materials. Referring to housing estate, the final product is the apartment. Therefore, its customisation seems possible only for shared construction. However, this issue will be discussed deeper during interviews with industry experts.

End-users in the packaging field have related value added services to graphic capabilities of the distributor and the availability for environmental assistance. Distributors are responding to the environmental needs of end users providing services that assist with reducing sources, recyclability and recycled content, and alternative recycling techniques. These services may be partly realised through social networking functions, such as news or group decision-making. The latter way needs to be reviewed during interviews.

In the transportation carrier industry, there are many questions posed with regard to value added services and what should be considered as minimum standards for carrier performance. According to Carlos Fallas, vice-president of sales for Con-Way Transportation Services, the only value added services are those perceived by the end-user [Wittenbach, 1995]. Transportation carriers can add value by decreasing costs or increasing sales and by product enhancement. The traditional value added services in the transportation industry have included: "kitting", product rework, and repackaging. According to [Bradley, 1993], carriers add value in hidden ways, which have included: expansion of market penetration, assisting in avoiding capital costs, inventory costs, cycle time and administrative costs reduction and offering just-

in-time delivery. In an interview with [Bradley, 1993], Bill Elston, president and chief executive of the Unit Cos, stated that hidden value added services are not genuinely value added in nature but are "value enhancers". In the same interview, Bob Baker, CEO of Skyway Freight Systems, stated value is added for the end-users in two ways: an effective information system and assistance with inventory management. The information system offered to the end-users has included preparing bills of lading, conducting audits, and paying freight bills. In regard to inventory management, Skyway Freight Systems has offered assistance in monitoring the flow of products from the distributor to the end-user [Wittenbach, 1995].

In the material-handling industry, value added services have included providing assistance in doing routine maintenance and simple repairs promptly either in-house or at the dealership. Extensive training programs in the areas of new equipment, state-of-the-art electronics, and safety are value added services considered beneficial by both the end-user and the final customer (customer to the end-user) [Avery, 1993]. Talking about housing estate, this can relate to group already mentioned group decision-making process about repairs etc.

Finally, value added services offered in foodservice industry include: product cutting, product specialist, food show, nutritional analysis, custom computerisation and software, operational consulting, menu and recipe writing, sanitation certification and registered dietitian [Wittenbach, 1995]. Some of these value added services are very similar to services in other industries and can be replicated the same way: for example, product specialist, nutritional analysis, registered dietitian and operational consulting remind different types of consulting; product cutting, menu and recipe writing are similar to customisation services in other industries.

Summarising, all mentioned value added services in different industries will be further discussed with industry experts to analyse the possibility of transferring these services to housing estate business.

1.3. State Information System description

The idea of governmental internet-platform in housing estate service industry firstly appeared about 4 years ago. The plans were to launch it over the whole country until 2013, however the website was created only in 2014, and now, in 2016, it is still in beta-test. State information system “Gosuslugi” aims to provide a high-quality service for Russian citizens through offering nine core functions, five of them are still in development. There are two main groups of the functions: those that can be used only by authorised users and those that can be

used without registration. Before describing the functions it worth noting the registration process, which is quite complicated. Firstly, a person needs to register his account, fill in several forms with information about different documents. Secondly, the platform checks the information; this process can last from several minutes to several days. Only after inputted information is confirmed the person has to confirm his identity. There are three ways of confirmation: order a postal letter (it comes approximately after two weeks), visit a postal office or use E-key. The last way is used very rarely because not so many people in Russia have such key, so only first two ways remain for the majority. When the process of registration is clear, the functions of State information system can be described. There are nine functions: online payment for the communal services, find on map, check service company license, send an application, send meter readings, learn about subsidies and privileges, check the arrears, learn about major home repairs and learn about the activities and domestic services.

1. Online payment for the communal services

To pay for the communal services online after the registration the user needs to add a special billing account for every bill issuer. After all information is verified, the user can start paying the communal services through the platform. At present there are only two service providers of water and other supplies, it means that despite the availability of the function not all users can use it. However, electricity and gas payments are available for all users.

2. Find on map

This function gives user an opportunity to search on map and view general information about housing estate, service companies, resource suppliers, and local governments.

3. Send meter readings

To use this function the user needs to do the same actions as in function 1 – online payment for the communal services. Then the user can input meter readings online. It should be noted that this page of the portal doesn't work in some browsers, Google Chrome, for instance; moreover, it crashes the work of the browser and the user needs to reload it through task manager.

4. Learn about subsidies and privileges

In this section, the user can find out information about the possibility of providing subsidies and privileges to pay for housing and communal services. This part of the portal can be used without authorisation by filling in a special form.

Despite the fact, that 60% of the functions are not available for users now, people are starting to use this platform. This platform may have a significant effect on the market. Basically, this project is exactly what companies in housing estate have started to create: an internet platform that provides additional services from news to bills payment. As this project is free-to-use and offers kind of the same but on governmental level, it should be very interesting for people. On the other hand, because of complicated registration procedure and long development time, people may start using substitutes before the platform will become fully functional.

Chapter 2. Methodology

2.1. Methodology justification

Talking about methodology, this research is a case study of Russian housing estate market. It utilises both survey and interview methods to reach broad, generalizable results of analysis as well as depth understanding within a single investigation. An interview of industry experts is used to understand the commercial actors' perspective and investigate the professional outlook at current market state and co-existence of private platforms with governmental portal in order to answer the first research sub-question (Is it relevant to develop private online platforms for value added services provision in housing estate business in Russia?). The format of interviews will be different depending on goals. First interviews were structured, because such format is good at comparability of the results [Kothari, 2004]. Second interviews were unstructured, because it best helps to explore a topic in depth [Kothari, 2004]. In addition, basing on the analysis of previous studies, experts will be asked about the transferability of value added services to housing estate market in order to answer the second research sub-question (What are the internet-based value added services that can be provided in housing estate business in Russia?) and possible ways of monetisation to answer the third sub-question (What are the possible earnings logics through internet platform in housing estate business in Russia?). To avoid the lack of generalizability a survey method is used as a part of triangulation [J. Zivkovic]. A cluster sampling technique is used to select information-rich group of people that will best enable to answer the research questions. In this study, inhabitants of some YIT housing estates in Saint-Petersburg, where the simple online platform function was implemented (meter readings submission), were surveyed. As it can be seen from Table 1, relative weaknesses of the pure qualitative case study are compensated by strengths of the survey method and vice versa.

Table 1. Relative strengths of case study and survey methods

	Case Study	Survey
Controllability	Low	Medium
Deductability	Low	Medium
Repeatability	Low	Medium
Generalisability	Low	High
Discoverability (explorability)	High	Medium
Representability (potential model complexity)	High	Medium

Source: Gable, 1994

In this study, research questions will be analysed from multiple perspectives with the use of different methods to increase the validity of the results. This approach is called triangulation and brings certain benefits such as "increasing confidence in research data, creating innovative ways of understanding a phenomenon, revealing unique findings, challenging or integrating theories, and providing a clearer understanding of the problem" [Thurmond, 2001]. Mentioned benefits are mostly supported by diversity of analysed data. Guion, Diehl, McDonald (2001) identified five methods of data triangulation, two of them will be used in this study. Data triangulation means the use of different data sources. In this study, data triangulation will be used during the analysis of interview results – viewpoints of different people will be compared. Methodological triangulation refers to the use of multiple qualitative and/or quantitative methods. In this study, to answer the first research question (Is it relevant to develop private online platforms for value added services provision in housing estate business in Russia?) results from the survey and interviews will be compared. If findings observed are similar, we can draw a conclusion about the validity of the results.

Summarising, using interviews together with survey helps to get in-depth results, which are statistically relevant and generalizable, what is not possible using a single-strategy study. This increases validity and utility of the findings. [Guion, Diehl, McDonald, 2001]

2.2. Interview

In this study, seven experts from different regions of Russia were interviewed. As YIT company has experience of online platform implementation on foreign markets and starting the development for Russian market, the majority of the interviewees are heads of YIT Russian regional departments. Additionally, an executive director of "Severstroy" construction company that is not involved in online platform development was interviewed to get another perspective on this issue in order to avoid misleading. Respondents were interviewed in person, by telephone and internet (with the use of skype); their names, interview dates and tools, companies and regions of operation are presented in the Table 2.

Table 2. Interview timetable

Name	**Company**	**Region**	**Interview tool**	**First interview date & time**	**Second interview date & time**
Alla Vinnik	YIT	Saint-Petersburg	Face-to-Face	03/06/2015 09:30-10:30	13/06/2015 11:00-11:30
Vadim Morozov	YIT	Moscow	Skype	03/06/2015 11:00-12:00	13/06/2015 10:00-10:30
Andrey Chernoivanov	YIT	Rostov region	Skype	05/06/2015 09:30-10:30	13/06/2015 10:30-11:00
Dmitriy Zaharov	YIT	Moscow region	Skype	05/06/2015 11:00-12:00	13/06/2015 13:00-13:30
German Malyshev	YIT	Republic of Tatarstan	Skype	08/06/2015 10:00-11:00	14/06/2015 10:30-11:00
Oleg Shapovalov	YIT	Sverdlovsk region, Tyumen region	Telephone	08/06/2015 15:00-15:30	14/06/2015 11:00-11:30
Igor Petrov	Severstroy	Republic of Komi	Skype	10/06/2015 11:00-12:00	14/06/2015 12:30-13:00

The format of first interviews was a structured interview divided into two main parts. The first part was mostly focused on the discussion of State Information System development and how it affected the market. The list of guiding questions for the first part is presented below:

1. Do you have previous experience of housing estate online platforms use? If yes, what do you feel about it? Was the functional clear for you?
2. Do you know about any online platforms developed by your competitors? If yes, what services do they provide through it?
3. Do you know about State Information System? How is development going in your region? Have you already reported to it?

4. How do you think, will this platform have a success on Russian market? Why?
5. How do you think, can/should private platforms compete with State Information System?
6. What are the key factors for development of private platforms?

The second part was devoted to the discussion of value added services transferability from other industries. The guideline questions for the second part are presented below:

1. Companies in the healthcare industries provide healthcare education for its clients. Do you see any opportunities for some kind of education in housing estate business? How do you think, can it be realised through internet platform?
2. Additionally, many various consultations are provided in healthcare industry. What are the possible ways for online consultations in your business? Are your customers interested in it?
3. Is there an opportunity to provide your buyers with low-cost supplies (for example for apartments finishing)? Will they be interested in this?
4. Companies in the intelligence transportation systems industry make a strong emphasis on making their customers feel safe and secure. Are there any opportunities to make your customers feel safe through some services provided on online platform?
5. Metal distributors provide a wide range of opportunities to customise final product. Can some customisation be done in housing estate? Is there a way to connect it with online platform?
6. In transportation carriers industry, one of the important services for customers is ability to check the current state information. What do you think a replication of this service in housing estate business can be?
7. One of services that can be provided through online platform is group decision-making (for example about some repairs or cleaning issues). Are there any barriers in implementation of this feature?
8. Do you have any additional suggestions of services that can be provided through housing estate online platform?

Second interviews with experts were conducted to discuss the monetisation possibilities in a format of unstructured interview. As a guideline for this discussion a classification of online revenue models suggested in this study (Figure 2) was used.

Talking about interview analysis, it generally refers to qualitative data analysis. The use of computer packages is recommended only in case of collection of lots of interview data (more than 40 interviews) [Adams et al., 2007]. As the data collected during interviews in this study is not large in volumes, it will be managed by traditional means. One of the methods that will be used is "quote-research". This technique means the use of quotes from interview as illustrative or confirming examples [Folkestad, 2008]. Particularly, it will be used for presenting current market state as well as to form a list of services that can be transferred to housing estate business. Second method that will be used is cross-case analysis as a part of comparative research tool. This technique enhances generalisability of the results [Miles, Huberman, 1994]; therefore, it will be used for identifying whether State Information System creates threats or opportunities for development of private platforms. Additionally, this tool will be used to compare experts' opinion on different transferable services suggested by others.

2.3. Survey

To identify customers' perspective, whether people are interested in private online platforms or not as well as develop value added services for such platforms, the survey was conducted. A cluster sampling technique was used to select information-rich group of people. It means that the population was divided into discrete groups prior to sampling. The criteria for cluster selection were geographical area and experience/understanding of online platforms in housing estate market. As YIT company already started development of value added services and implemented a simple online function (meter readings submission) for some of housing estates in Saint-Petersburg, inhabitants of these housing estates were chosen for the survey.

The survey consists of 1 open-ended question and 14 multiple-choice questions (7 with binary outcomes and 7 with categorical outcomes). Respondents were asked to identify their interest in particular features from the pre-determined list of social networking functions. Additionally, they were asked on their intentions to use features similar to those provided by State Information System. Finally, respondents were given an opportunity to give some feedback about the platform or suggest services they would like to see. A survey form with the list of questions is presented in the Appendix 1. The survey was conducted online through the YIT website in mentioned housing estate. All inhabitants were invited to participate in survey by three ways: in a news section on a website, by e-mail and by paper-based posters on the entrances. Overall, 128 responses were collected in the time period from 15th of June, 2015 to 30th of July, 2015. A final sample included respondents of various ages and income levels, the distribution of respondents by age (Figure 7) and income (Figure 8) is presented below.

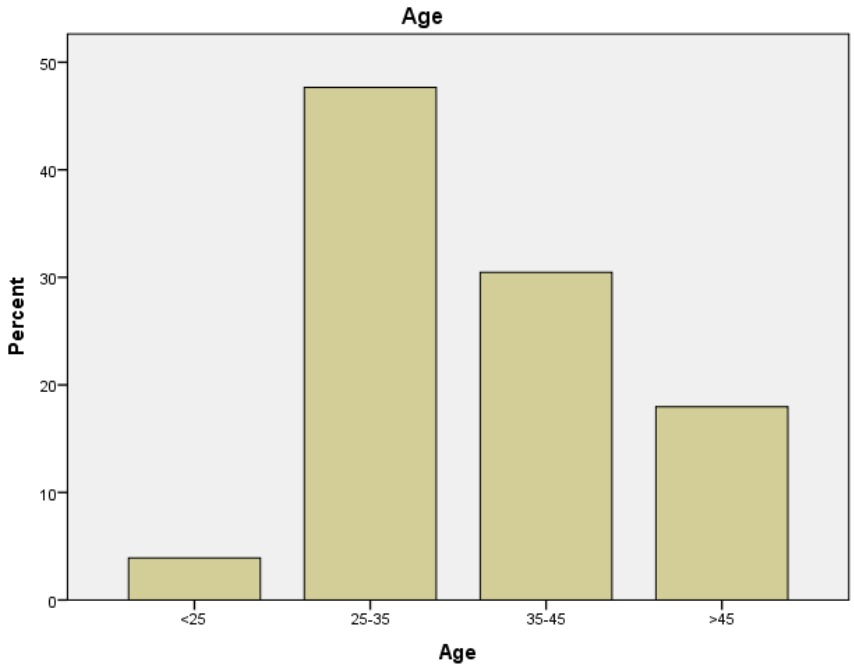

Figure 7. Respondents' distribution by age

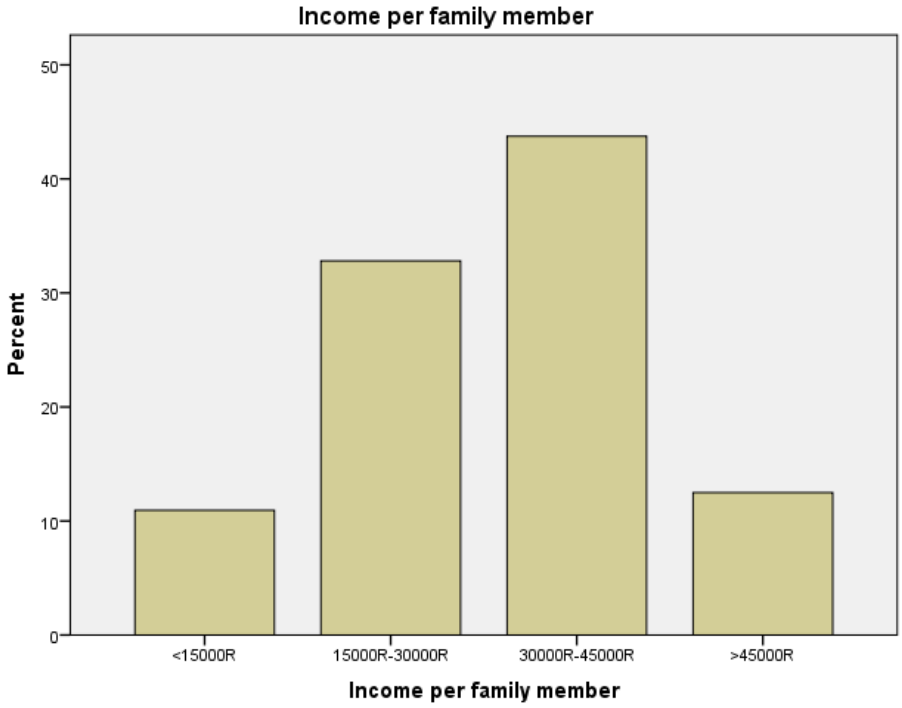

Figure 8. Respondents' distribution by income per family member

For the analysis of survey data, different statistical approaches to quantitative data analysis are used. First, for the binary data, a factor analysis was conducted to investigate pattern of correlations within a set of social networking functions. Despite the fact that principal components analysis (PCA) is the default method of extraction in many popular statistical software packages, it is considered to be insufficient by many scientists and suitable only as

data reduction method [Costello, Osborne, 2005]. Jensen (1983) suggests that there is almost no difference in the results or in any theoretical or practical conclusions of principal components analysis and principal axis factoring (PAF). However, the comparison of accuracy of these two methods by Snook and Gorsuch (1989) showed that PAF produced accurate estimates of the nonzero factor loadings, especially when the number of variables was small. For that reason, this method of factor analysis was chosen in this study. As for the rotation technique, some authors say that it depends on a correlation between components: an orthogonal rotation (e.g. varimax) is used when there is no correlation and the oblique rotation (e.g. promax) is used in other cases [Lewis-Beck et al., 2003]. However, the comparative study of performance of these two methods by Finch (2006) showed that two approaches are equally able to recover the underlying factor structure, regardless of the correlations among the factors. Nevertheless, the oblique method is preferable for identifying simple structure when it is present [Finch, 2006]. Therefore, promax rotation technique was selected in this study. Assessing the practical significance and factor loadings of variables, different researchers have different opinions on this topic. As common magnitudes in the social sciences are low to moderate loadings of .40 to .70 [Costello, Osborne, 2005], this study refers to Stevens (1992) suggestion of using a cut-off of 0.4, irrespective of sample size. To estimate whether the factors identified are reliable, reliability analysis was conducted. Cronbach's alphas calculated are indicators of internal consistency among variables attributed to each of the factors. It shows how closely related a set of items are as a group. A coefficient of .70 or higher is considered acceptable, while an alpha of 0.5 indicates an absence of unidimensional scale [Lee, Cadogan, 2013]. Additionally, for multiple-choice responses, descriptive statistics will be used. Particularly, emphasis will be made on cross tabulations, as they present the results of the entire group of respondents as well as results from sub-groups of survey respondents. Cross tabulations enable to examine relationships between two or more variables. However, to ensure that correlation is not only visual, chi-square tests will be conducted for significance assessment. In this study, the confidence interval is considered to be 95% (alpha=0.05).

Chapter 3. Findings

3.1. Interview

Basing on the analysis of the first part of the interview, experts' opinion on the topic of State Information System development was collected. One of the experts believes that as the platform is governmental and united it will have a great success: "State Information System is obligatory for companies, therefore they will not have enough resources to support private platforms as well. Moreover, as it is governmental project, it will be similar for all people will all required functions. I'm not sure that people need something else" [expert A]. Others at the same time treat the same points as a problem. "A great amount of information makes platform complicated. This is definitely negative point from the final user perspective" [expert B]. Moreover, "a big internet platform cannot provide its users with immediate responses from support" [expert C]. Experts highlight that response time is important: "Users do not like to wait a long time to get their problems solved" [expert G]. Therefore, it provides an opportunity for existence of companies' online platforms and can be one of the strongest competitive advantages. Additionally, one of the experts faced similar situation in his region: "There was a case of similar governmental project and it had no success – people simply refused to use it" [expert D]. Overall, the majority is not sure about the future of the State Information System, especially taking into consideration the fact that the creation started several years ago and is still in progress: "I doubt that it (State Information System) will be able to compete with well-developed private platforms" [expert E].

Talking about the development of private online platforms, experts highlight there are some difficulties, which slow down the process of the development. First, implementation of governmental portal obliged companies to report necessary data on it. Therefore, some experts stay resistant to development of private online platforms as it means replication of all procedures related to it. "I will have company website, State Information System, second governmental project "reforma zhkh" and online portal: all about the same. State Information System is very poorly organised, it requires lots of information. But I will be responsible for all 4 resources" [expert D]. Another point is that housing estate market in Russia is divided into two main segments. The first one is construction industry – this part of the market relates to all construction companies that are selling housing estate to customers. The second one is a service industry – this segment relates to the post-purchase house maintenance. "Our business ends right after the construction. We do not provide house maintenance like many other construction companies; third-party service company is responsible for it" [expert E]. Therefore, if we divide

value added services on the ones that are provided before the purchase is conducted (pre-purchase) and the ones that are provided after the purchase (post-purchase), the latter ones are realised not by the particular housing estate seller, but by the service companies. Talking about online platforms, even some of pre-purchase value added services, provided by construction company, may be presented on the internet platform of service company.

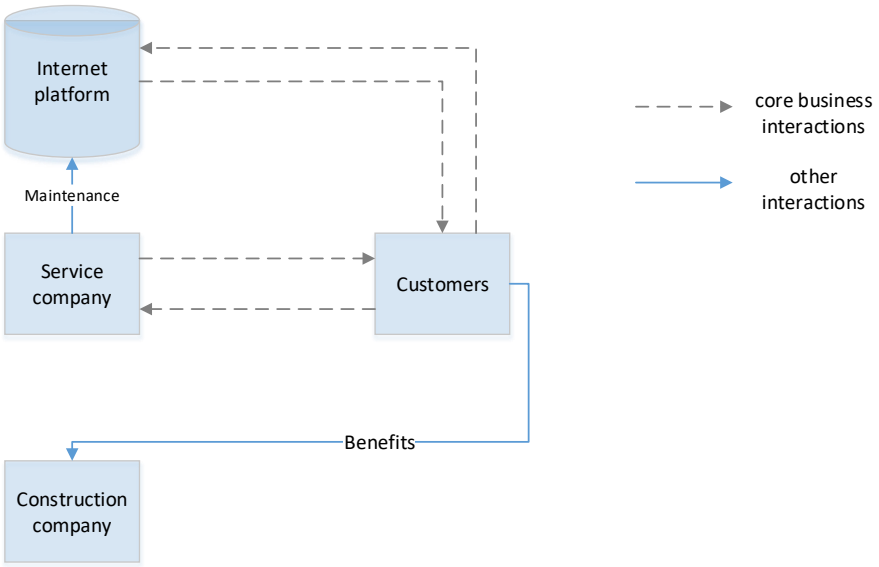

Figure 9. VAS realisation in housing estate business in Russia

Service companies operate their main business through direct communication with customers (Figure 9); and implementation of internet platform may facilitate and enhance this interaction. Therefore, investing in development and maintenance of such platforms may sound reasonable for them. However, there are few benefits in providing superior service. “According to Russian law, in case the construction company is not providing housing maintenance, a service company is being selected by inhabitants or during an open tender. As in new housing estates only few inhabitants are presented at the end of construction, in most cases service company is being selected by open tender. Therefore, the main focus of service companies is to fit tender requirements rather than provide superior service at higher price” [expert E]. This results in fact, that the only parties, who are interested in value added services, are customers (to receive better service) and construction company (to increase customers’ loyalty and sales). In case, if service company is a part of construction company, there’s in-house cooperation and control. “It is an often case in our region, when construction company takes the responsibility for further housing maintenance” [expert F]. However, if the service company is independent from construction company, how the latter can be sure that the former will spend enough money and efforts on internet platform maintenance, while getting almost no benefits from it?

Therefore, the majority of experts agreed that if an online platform will be generating revenue flows to cover its costs, the development makes sense. “I think about such online platform in a positive way, especially if it will be able to generate some revenues” [expert B]. “In case if this platform can bring revenue and payback, construction companies will be ready to invest money in that” [expert E]. “I don’t see the point in development of private platforms. In my opinion it will never payback” [expert A]. Basing on the analysis of different online earnings models provided in previous parts, an online platform will be considered as an independent business model; therefore, the ways of how this platform can finance itself will be suggested later.

Second part of the interview was devoted to investigation of value added services replication from other industries. Overall, the following industries were examined in this study: healthcare micro insurance, intelligence transportation systems, foodservice, metal distribution, packaging, material-handling and transportation. Talking about healthcare industry three key value added services were identified: healthcare education, consultations and access to low-cost supplies. As for the education, there are different opinions. Some experts believe, that “there are not much things to educate people in this business” [expert G]. Other experts at the same time supported the idea of customers’ education. “We can explain them the process and answer main questions about purchasing the housing estate from our company” [expert C]. “It is important to explain to customers all the specifics of housing estate selection to help them make right decision. This will be beneficial for both sides” [expert B]. “Educating online is not only possible and convenient nowadays; it also provides a great opportunity to attract people from different regions” [expert E]. There are many opportunities to replicate consulting services through online platform as well: “Online consultation can be realised in many different ways. It may vary from simple “FAQ” page on the website or call-back button up to fully integrated online chat with professional consultant” [expert F]. As for low-cost supplies, there are certain limitations on implementation of this service. “Definitely customers will be interested in purchasing some materials with the discount, especially the ones who are purchasing apartments for finishing. However, as one of the leading construction companies, we have some requirements to the size of corporate partners and quality of their products. I won’t say that this option is not viable, but it needs to be assessed individually by every company” [expert A]. Referring to intelligence transportation systems industry and services aimed at increasing customers’ safety, experts suggested various ways of realisation. “People feel safe after buying a housing estate if nothing goes wrong. However, sometimes they face problems and may not be aware of how to fix them. A useful online service would be an ability to make an appointment of plumber or locksmith on website. Imagine a timetable, where a user can choose appropriate

date and time of visit" [expert D]. "We are placing video cameras for security reasons in many housing estates. They include video intercom, elevator cameras and outdoor cameras. I think that we can provide people with the access to online translation from these cameras in personal account. I think especially people with cars would appreciate this function, when they can ensure that everything is ok anytime anywhere" [expert E]. Referring to customisation issue inspired by metal distributors experts suggest the following service. "The trend of customisation appears in many different industries, housing estate is not an exception. Some construction companies provide people with opportunity to customise finishing of the apartments or even the layout during the construction phase. As for online features, I think an application can be developed, where a customer can view different options – the one like IKEA has" [expert A]. "I think a good idea is to let people customise the interface of online platform to meet their needs" [expert B]. Transportation industry service for transfer is customers' ability to check the current status of delivery. "We can post news on online platform to keep customers informed" [expert G]. "For customers purchasing housing estate in shared construction, we can post news of the status of construction processing. Additionally, some photos of construction may be available for them" [expert D]. Talking about group decision-making, "if inhabitants' identities are verified in online platform, there are no barriers in use of this service" [expert B]. "Online voting is a good opportunity, as generally people are not willing to participate in all residents meetings. In our region, we tested similar function: inhabitants were voting for or against the installation of special trash cans for batteries. We managed to get relatively high rate of involvement, I think it is good result" [expert A].

A list of all suggested services with their description is presented in the Table 3.

Table 3. List of transferred value added services

Value added service	**Description of VAS in housing estate**
Housing estate acquisition webinar	Users can register for the webinar. Before the beginning, they will receive the notification with the link to the webinar. All users can view the video in real time and ask questions in chat.
Remote consultation (online chat)	Online chat is organised for consultations with sales department of construction company.

“Call-back” feature	“Call back” feature is available for all users to request a call from the sales department of construction company.
Access to low-cost supplies	This service can include different ways of providing access to low-cost supplies. It can be advertisement about special offers or fully working online mall for users.
On-site application for plumber or locksmith	Users can request a visit of plumber or locksmith from their personal account. They can choose appropriate date and time of visit from available.
Online video from cameras in personal account	Users can view the video from video intercom, elevator cameras and outdoor cameras.
Customisable design for the users	Users can customize the interface of the online platform. This can include change of buttons places, colours and themes.
Finishing of apartments for shared construction	Buyers can use the online application to choose finishing from the options available. Additionally, the can view, how this finishing will look like.
Layout change for shared construction	Buyers can use the online application to choose possible layout changes.
Construction status online	Buyers, participating in shared construction can view the status of construction processing. Additionally, they can view photos of construction and receive news about it.
Group decision-making (voting)	Users can participate in decision making through voting. Housing company places the voting in the network, available for users for certain period of time. The results of voting are available for all voted users.

During second interviews, experts were asked to express their opinion on possible monetisation ways of online platforms in housing estate market. As for third party based revenue models, analytics models are barely suitable for online platforms in housing estate as “…the amount of users is limited by housing estate size” [respondent B]. Advertisement models

value is enhanced by the specifics of housing estate online platforms: "…users can be easily targeted by geographical region, as all of them are assigned to a particular housing estate they live in. As geographical location is defined, many local advertisers may be interested in advertisement placement among particular users (for example laundry operating nearby)" [respondent C]. "In my opinion, advertisement is one of the strongest revenue sources for such online platforms. A social networking element of the platform (including communities of interest) provides an opportunity to add interests as a targeting filter. This can increase the price of advertisement by providing different advertisement filters. However, to implement those, users should be motivated in filling their personal profiles" [respondent G]. "Construction companies, selling apartments for finishing, can benefit most from selling advertisement places to hardware stores" [respondent A].

Basing on the advertisement revenue source, the first business model suggested is Promotional model (Figure 10). As a service company is getting revenues from advertisers for providing access to inhabitants, main actors are service company, advertisers and inhabitants. This model will mostly fit companies with big amount of users on the platform with high attendance, because this increases advertisement price. "A provision of access to platform not only for inhabitants, but also for those, who intent to purchase a housing estate will help to raise an attendance rate" [respondent D].

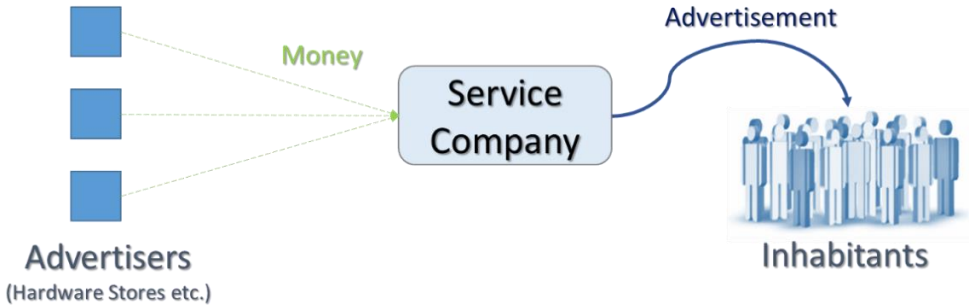

Figure 10. The mechanism of promotional business model

Referring to user based revenue models, selling real things through online platforms in housing estate market can refer to selling of already described construction services: finishing of apartment and layout changes. These services should be sold while the construction is going, therefore only customers, who are participating in shared construction, can afford them. Therefore, "this can be not only a revenue source, but also a strong incentive to participate in shared construction" [respondent A]. Nevertheless, only companies with strong brand, which consumers have relatively high initial expectations of the value added service quality, can sell the product and the service simultaneously [Zhang et al., 2014]. Companies, which consumers

have relatively low expectations, should decrease the degree of information asymmetry to sell the service and product together. In other cases, the service will be sold during the product life cycle, and this does not fit to the mentioned construction services [Zhang et al., 2014].

The second business model, basing selling of construction services is Construction model (Figure 11). A service company receives a fixed commission or a percentage from the revenue earned on additional construction services from construction company for providing it with clients. There are three main actors: construction company, service company and customers. “A user can select a particular service (finishing or layout change) and a variant of customisation through online application on the platform” [respondent E]. “It is especially important to ensure that the selection procedure is simple and well visualised” [respondent B]. It should be noted, that this business model fits only to construction companies selling apartments in shared construction. Therefore, such model suits most to companies with reliable brand and high quality of construction.

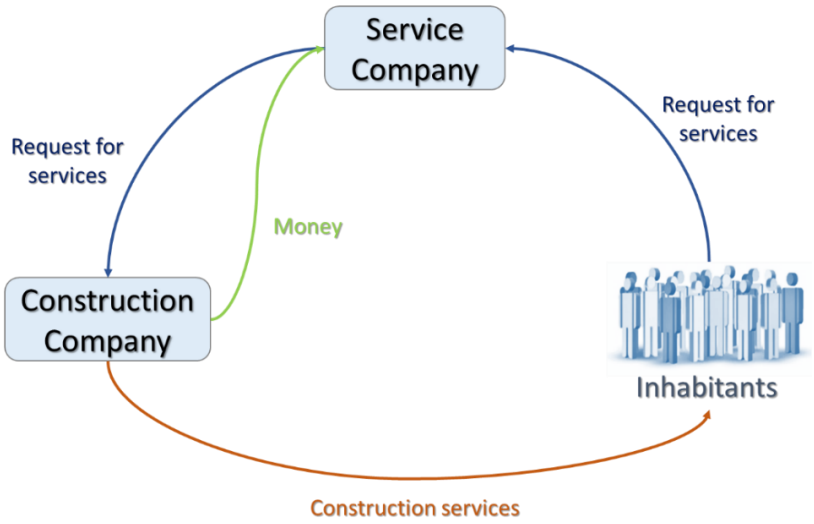

Figure 11. The mechanism of construction business model

As for content sales revenue models types, “subscription model is not relevant, because State Information System is realised on free basis. People wouldn’t pay for a platform, when there’s free alternative” [respondent D]. “No one would pay for such platform in Russia” [respondent A]. As for direct purchase models, they may be implemented. However, “fresh news and information about housing estate are one of the core reasons to use the platform: users should not be charged for this” [respondent F]. At the same time, experts were unable to suggest possible content for charging under direct purchase model. Virtual things selling is the main way of earning revenue in free-to-play gaming industry [Clemons, 2009] and “it is not applicable for online platforms in housing estate” [respondent E].

Referring to transaction models in housing estate, “C2C models are not applicable, because the amount of users is limited by housing estate size. There are various websites providing such functions for much higher amount of people. Online platforms in housing estate can not provide any advantages” [respondent B]. The most evident way of getting commission fee from B2C segment is connected with communal services payments. However, “introduction of additional fee might be a significant threat for the online platform: it will make the platform less attractive in comparison with the common payment methods. As a result, inhabitants’ interest in using the online platform can decrease a lot” [respondent C]. “I don’t see the point in creating a general B2C marketplace on online platforms in housing estate – the amount of potential customers is not big. Instead of that, a strong point of such platforms may be utilised – all users are living in the same place. This may be very good for the logistics issue” [respondent E]. “Group purchases can be organised through such platform. There should be some discount for purchasing goods in a bulk” [respondent G]. “Vendors can offer their goods or services on online platform. The description of the deal should contain the price, terms of purchase, time period and amount of users needed to get discount” [respondent D]. Amount of users left should be updated in real time. If a user wants to purchase a good, he pays for it to the service company account. If the required amount of purchases is met before the end of period, service company conducts a purchase and then users receive their goods. If the required amount of purchases is not met, service company returns money back to the users. “This way of organizing deals is possible only if users trust the intermediary, which collects money. In case of housing estate online platforms, the trust is built on a construction company brand” [respondent A].

The third business model is Vending model, which is based on a group deals procedure described above (Figure 12). Main actors are service company, its vendors and inhabitants. Service company can receive a revenue in different ways. One variant is a commission fee from the goods/services sold through the platform. Other way is taking a one-time payment for the deal placement on the website. The latter variant “mostly fit to small partners, when a service company can’t be sure that users would like offered product” [respondent B]. A third way is to collect a monthly payment for access to deals placement. This way can be offered after some time of successful business model utilisation for partners, intending to offer several deals per month.

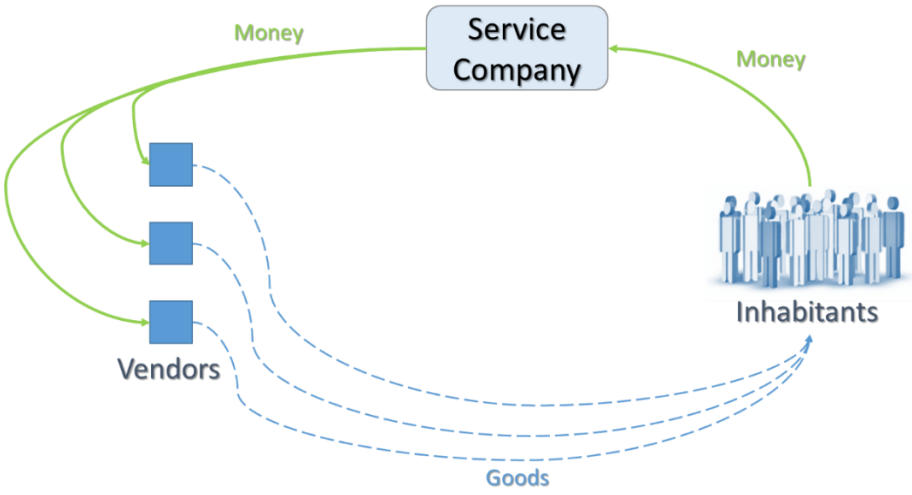

Figure 12. The mechanism of vending business model

3.2. Survey

A survey is aimed to identify possible directions of platform development as well as services that can be provided through it. A list of questions is presented in the Appendix 1. This study suggests investigated whether people would like to see an online platform in the format of social network with certain features and additional functions. First, a description of Housing Social Network (HSN) with its possible functions was introduced to respondents. Basing on the answers, only 6% of respondents would not like to use such online platform. The amount of people interested in Housing Social Network among people of different age is presented below (Figure 13).

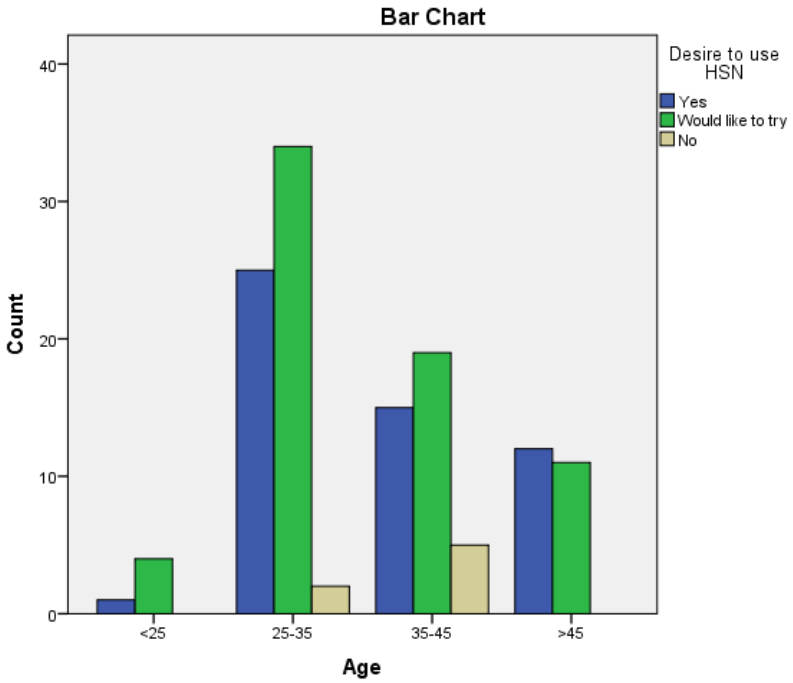

Figure 13. Interest in HSN basing on age

To identify desired social networking functional, the list of functions was developed first and respondents were asked to choose what functions they find important. The functions included in the initial list: communication with neighbours, communication with housing company, sending applications to housing company, getting news about housing estate, receiving special offers from partners, creation of communities of interests, order of additional services. In addition, respondents could add functions they need if there were no such in the list. However, they made no suggestions. The interest in functions among respondents is presented on Figure 14; functions are presented on horizontal axis and the percentage of respondents who are interested in the particular function on vertical axis.

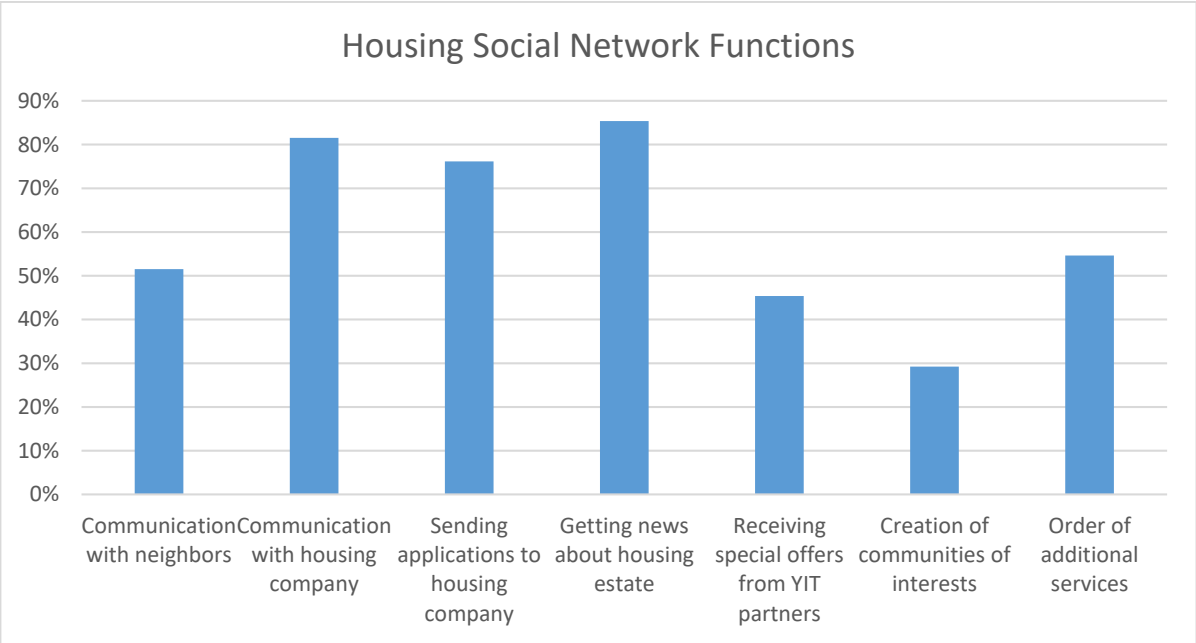

Figure 14. Housing Social Network Functions

To investigate the pattern of correlations within a set of social networking functions a factor analysis was conducted. After the first iteration, one of the functions (receiving special offers) received same loadings for both factors. Moreover, these loadings barely matched the cut-off threshold of 0.4. As such offers are supposed to be provided by third-party companies and are not generated directly by service company or by other users, it is reasonable that it should be excluded from factor analysis. A second iteration of factor analysis was conducted after the exclusion of receiving special offers function. The similarity of pattern loadings and structure loadings among all variables indicate that two factors are not correlated with each other [Finch, 2006]. Distribution of functions among two factors as well as pattern loadings are presented in pattern matrix (Table 4). The first factor refers to company-related services such as receiving news, communicating with service company, sending applications and ordering additional services. The second factor refers to fully social features such as communication with

other users (neighbours in this case) and creation of communities of interest. Referring to factor loadings among variables, all services met the cut-off threshold of 0.4 described in methodology part.

Table 4. Pattern Matrix for factor analysis of social networking functions

Pattern Matrix[a]

	Factor	
	1	2
News feed	.404	.062
Communications with neighbours	.072	.669
Communications with housing company	.501	.227
Sending applications to housing company	.894	-.183
Creation of communities of interest	.002	.500
Order of additional services	.548	.077

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

To estimate whether the factors identified are reliable, a reliability analysis was conducted. Cronbach's alphas were calculated as measures of internal consistency among variables attributed to each of the factors. As it has been already described in methodology chapter, an alpha value bigger than 0.7 is considered sufficient. Tables 6 and 7 represent the results of reliability analysis of company-related services included in the first factor (Table 5) and fully social services included in the second factor (Table 6).

Table 5. Reliability analysis of company-related services

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.766	.774	4

Table 6. Reliability analysis of fully social services

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.713	.714	2

Basing on cross-tabulations of people's interest to different functions, it was found out that the percentage of people interested in receiving special offers increases with the age and has no correlation with the income level (Figure 15). The correlation proved to be significant by chi-square tests, as the p-value is less than 0.05 (Table 7).

Table 7. Significance of correlation between age and interest in special offers

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	12.787[a]	3	.005
Likelihood Ratio	14.799	3	.002
Linear-by-Linear Association	12.073	1	.001
N of Valid Cases	128		

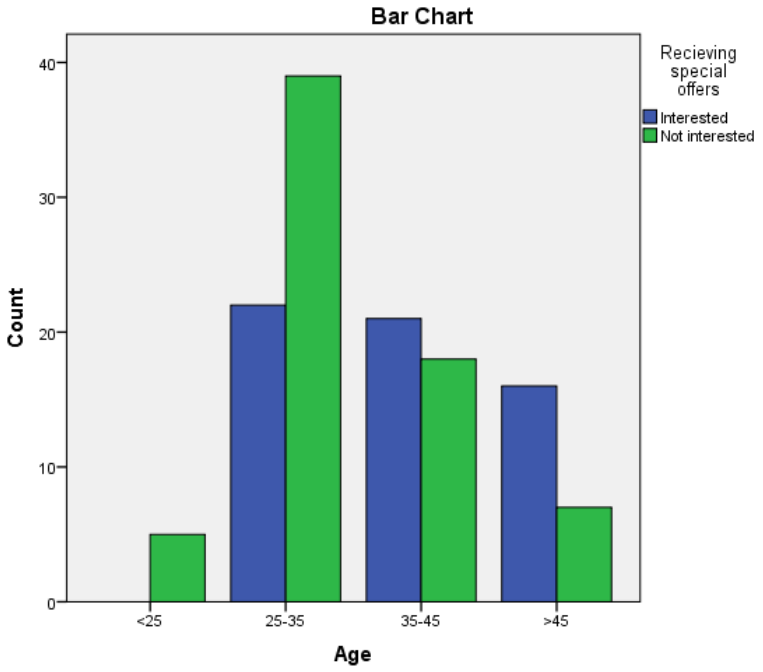

Figure 15. Interest in special offers according to age

However, the situation is contrary with the interest in order of additional services: it grows with income level and has no correlation with the age (Figure 16). The correlation proved

to be significant by chi-square tests, as the p-value is less than 0.05 (Table 8). This needs to be taken into consideration by companies implementing such services on their online platform. Depending on the price segment of housing estates companies can make emphasis on different services.

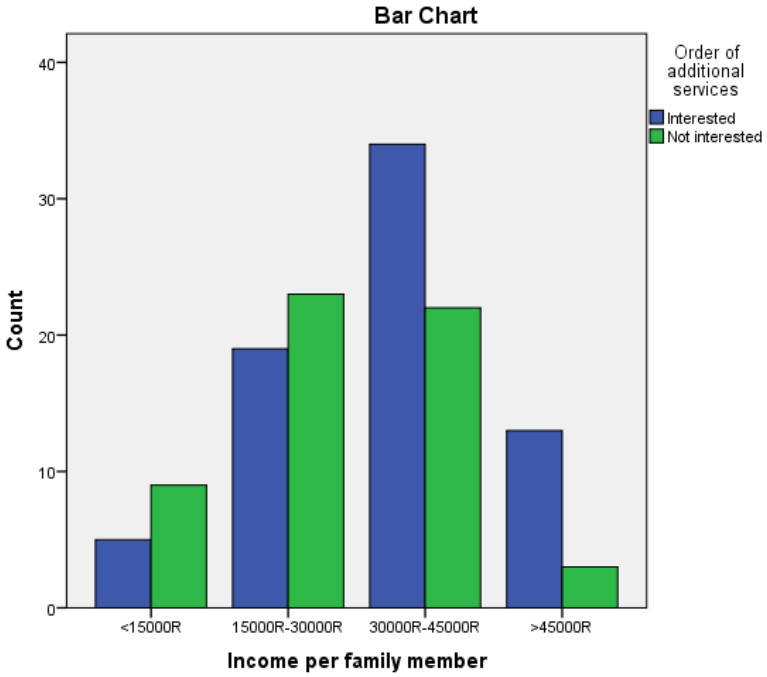

Figure 16. Interest in additional services according to income

Table 8. Significance of correlation between income and interest in additional services

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	8.921[a]	3	.030
Likelihood Ratio	9.336	3	.025
Linear-by-Linear Association	8.573	1	.003
N of Valid Cases	128		

However, the interest in Housing Social Network does not necessarily mean that customers would prefer private platform to governmental one. To investigate this issue deeply and identify possible ways of co-existence with State Information System, additional analyses were conducted. The one way of platform development is to supplement governmental project, another is to compete with it, offering the same functions and adding new ones. To define, should the platform compete or supplement the governmental one, respondents were asked about the key functions of State Information System – meter readings submission and communal payment. There were two types of questions. First type was supposed to identify,

how people are reporting meter readings and paying for communal services now; if there is a popularity in use of online services or not. Second type of questions was designed to find out if there is a need in providing such services through the online platform. The majority (almost 90%) of respondents report meter reading online, most of them (66%) use YIT website for that. Talking about communal services payments more than a half of respondents (62%) are already paying online and more than 80% of respondents would like to have an ability pay through online platform. Basing on these, we can make a conclusion that people are ready to use internet for such activity and would like to have such functions on Housing Social Network. However, this does not mean that they will prefer it to governmental platform; therefore, an analysis of cross-tabulations was conducted. It was found out that people who want to pay for communal services through online platform are also willing to report meter readings the same way (Figure 17). This correlation was found significant by chi-square tests, as the p-value is less than 0.05 (Table 9).

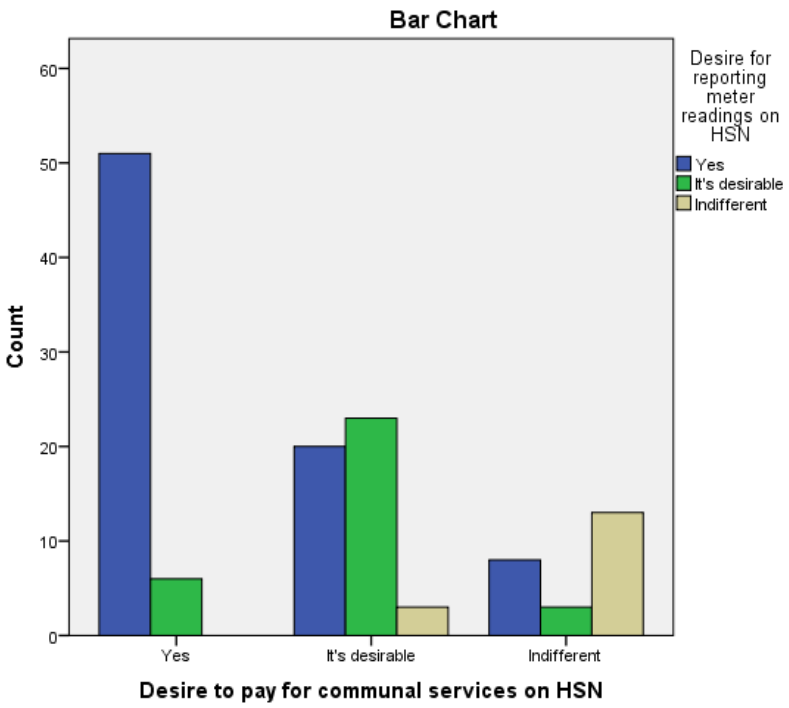

Figure 17. Desire to pay for communal services compared to meter readings reporting

Table 9. Significance test of desires correlation

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	71.705[a]	4	.000
Likelihood Ratio	63.584	4	.000
Linear-by-Linear Association	46.091	1	.000
N of Valid Cases	127		

There was no correlation identified between ways people pay for communal services and report meter readings. Moreover, even the correlation between how people report meter readings (and pay for communal services) now their desire to do it through online platform was found insignificant. At the same time, the existence of strong relationship between desires to use online platform for meter readings submission and communal services payments means that people would like use one website consolidating various features instead of many specialised platforms. This supports the idea of competition with State Information System through provision of many functions.

The final list of survey-based value added services with their description is presented in the Table 10.

Table 10. Value added services created with the help of survey

Value added service	**Description**
Social network services	
Communication with neighbours	Communication with other users is an integral part of any social network. As the main users of the platform are inhabitants – communication with neighbours is essential function. Users can send personal messages to other users of the platform or create group chats.
Communication with housing company	Users can send messages and receive replies from housing company in their personal account.
Sending applications to housing company	Users can send applications to housing company through the platform. Additionally, they can check the status of application processing.
Getting news about housing estate	The news feed contains important news related to the housing estate. Additionally, users can see news from communities they participate in.
Creation of communities of interests	Users can create communities of interests. Posts of such communities will be shown in the news feed.

State Information System replication (Compulsory functions)	
Online payment for the communal services	Users can pay for the communal services from their personal accounts.
Send meter readings	Users can report meter readings from their personal accounts. Additionally, they receive notification during the period if they have not reported readings yet.
Check the arrears	Users can check their history of payments. Additionally, they receive notifications if they have arrears.
Send applications	This have been already described in social net functions
Learn about future repairs	This should be presented in the news section, that have been already described in social net functions

Chapter 4. Discussion

4.1 Theoretical contribution

This study contributes to the topic of value added services in housing estate market that can be provided online. This research suggests the list of 19 different value added services that can be provided through the housing company's online portal.

Firstly, in this study value added services are divided into three main groups: social networking services, compulsory services (replicating functional of State Information System) and additional services (replicated from other industries). This division can be considered as classification of value added services provided through online platforms in housing estate market (Appendix 2) by the nature of services. Thus this study complements theoretical field of value added services categorization also studied by such researchers as Youngdahl and Loomba (2000), Backhaus et al. (2010), Riedl et al. (2011) with a new classification of value added services.

Also, talking about social networking functions, basing on factor analysis two major groups of services were identified: company related and fully social services. Company related group implies communication between customer and company and includes such services as ordering additional services and sending applications to service company. Fully social services group intends communication among inhabitants and includes such services as communication with neighbours and creation of communities of interest. This division also refers to value added services classification and appears as the second level of suggested classification.

Secondly, this research contributes to the field of online earnings logics. In this study new online revenue models classification was suggested. This categorisation is more pervasive than previously developed because it unites different online earnings logics suggested by other researchers: Clemons (2009), Dasgupta (2013), Laudon and Traver (2007), Anderson (2009), Mounier (2011) and Lyons (2012). Therefore, this study complements theoretical field of online earnings logics classifications with new categorization of Internet revenue models.

The third contribution of this study is the conclusion that people are interested in consolidation of different online services on one website. This outcome was found significant due to chi-square tests basing on the analysis of cross tabulations of respondents' desire to pay for communal services and report meter readings through online platforms. This consolidation trend with respect to value added services is new for the studied field. Previous researchers

studied value added services separately; therefore this new trend addresses a new topic of different value added services coexistence for further researches.

Finally, this study also contributes to the theoretical field of online business models. Besides the justification of advertisement model use in housing estate industry, this research also suggests two newly developed business models particularly for housing estate industry: construction and vending business models.

4.2 Managerial implications

Firstly, this study suggests that the format of private online platforms in housing estate business should be a social network with additional features. However, despite the implementation of social network format, companies should spend enough resources on support and communication with inhabitants. This recommendation is supported by the results of interviews with experts: they highlight that high quality of support and fast response rate can help to attract inhabitants from State Information System to private platforms. Moreover, simple and user-friendly registration procedure can be very strong competitive advantages for commercial online platforms in housing estate business.

Secondly, as users are interested in consolidation of different online services on one platform, private online platforms should include all governmental functions. However, such functions as find on map, check service company license and learn about subsidies and privileges, can be excluded as they relate to pure governmental information support. Overall, in this research a list of 19 value added services was developed (Appendix 2). Referring to the previous analysis of value added services development, the implementation of value added services brings benefits only to pioneers in this field: after some time all companies in the market will have to develop them to stay competitive. Russian housing estate market is just starting to develop value added services, therefore using this study as a guideline for development of value added services can help companies to save time and money on the research and focus on the implementation. However, on the other hand this means that during time some of the developed services will become obsolete. Therefore, the value of pure implementation of mentioned services will be decreasing over time. Nevertheless, services developed in this study still can be used as a benchmark for creation of new services.

Finally, 3 business models were suggested in this research: promotional, construction and vending models. Suggested business models can be utilized by construction companies to gain revenues from private online platforms.

Promotional business model is based on getting revenues from advertisers for providing access to inhabitants. In housing estate industry this model is attractive because it provides a very high level of advertisement targeting as every user is assigned to particular housing estate. As geographical location is defined, many local advertisers will be interested in placing advertisements among particular users, for example laundry operating nearby. Also social networking element of the online platform – communities of interest can be another targeting filter. As the advertisement price is highly correlated with the ability of a company to sustain high conversion rate, precise targeting of online platforms in housing estate business will make this earnings model very profitable. This model mostly fits companies with big amount of users on the platform with high attendance rate. Promotional business model is not recommended to single houses with small amount of inhabitants especially in the beginning of platform utilization as the number of users is very low to attract advertisers despite good targeting.

The second (construction) business model based on selling additional construction services, so this model is tightly connected to such value added services as finishing or layout change. This model can help to attract new customers to shared construction; however, it is suitable only for companies with well-known reliable brand and high quality of construction. For small construction companies with low position on the market this business model is not beneficial as such additional services don't matter if customers don't trust the company and don't want to participate in shared construction. Thus, construction business model helps to increase attractiveness of the company, but not to create it.

The last business model suggested in this study is vending model. This model is based on group deals when third companies offer their products through the platform with a discount. The main point is that certain amount of products should be purchased in order to make the deal. This business model can be used from the very beginning of online platform utilisation as it can help to attract people to the platform. Users would share information about such deals among neighbours and invite them to the platform. However, if there are not so many users there is a possibility that some group deals will not be realized because of lack of buyers. So the platform provider should pay attention to the amount of purchases necessary for the deal. Also vending business model can be used on popular online platforms with many active users to participate in groups deals.

4.3 Limitations and future research

Firstly, in this study sample for customer survey was created by cluster sampling technique, and included only inhabitants of YIT housing estates. Such sample was used in the survey because these people were familiar with online platforms as such system was already implemented in their housing estates. In terms of this research, respondents' knowledge of the platform was significant for reaching the research goals of creating value added services for housing estate industry, as these people are aware of online portal, have better understanding of its potential and can provide more information. However, used sample is not representative regarding the issue of new users' adoption of online platform.

Secondly, all the respondents of the customer survey are citizens of Saint-Petersburg, so the results are relevant only for big cities. Therefore consumers' interest in utilisation of online portal might be different in smaller cities of Russia. Additionally, differences in the life-style of people from big and small cities can lead to lower interest in some value added services provided through online platform in the latter.

Future studies can observe the issue of new users' adoption by enlarging the customer survey sample and including respondents from different housing estates who might be absolutely unfamiliar with online platforms. Customers from smaller (compared to Saint-Petersburg) cities of Russia can be surveyed in order to identify their interests in value added services and to compare the outcomes with the results of this research. This will help to generalize conclusions for the whole Russian market of housing estate.

Also, only 7 experts from 2 construction companies were interviewed and qualitative analysis of the results of these interviews was conducted. Future researches can conduct surveys among construction companies and use quantitative analysis in order to understand general attitude to value added services issue on the housing estate market.

This research was focused on value added services and does not take into account any companies' features. Therefore, further researches can concentrate on this issue and define if any characteristics of the construction company influence value added services issue.

Finally, the list of value added services developed for online platforms in housing estate industry can be used as a base for further researches regarding new value added services development for other industries. Additionally, as value added services are getting obsolete after a big number of companies implement them, the results of this research can be used as a background for further development of new services in housing estate business.

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Appendix 1. Survey form

1. What is your age?
    - less than 25
    - 25-35
    - 35-45
    - more than 45
2. What is your income level per family member?
    - less than 15,000 rub/month
    - 15,000-30,000 rub/month
    - 30,000-45,000 rub/month
    - more than 45,000 rub/month
3. How do you report meter readings?
    - Paper-based
    - YIT website
    - Other on-line services
4. How do you pay for communal services?
    - With cash in bank or ATM
    - By credit card in ATM or terminal
    - From bank account
    - Online services (by credit card)

Housing Social Network is an online portal where you can chat with your neighbours, discuss interesting topics in special communities, receive actual news, contact the service company and get access to other interesting features.

5. Would you like to use Housing Social Network?
    - Yes
    - Would like to try
    - No
6. Do you want to report meter readings through HSN?
    - Yes
    - It's desirable
    - No
7. Do you want to pay for communal services on HSN?
    - Yes

- It's desirable
- No

The next section is aimed to identify the preferable functions of Housing Social Network.

8. Is communication with neighbours important for you on HSN?
    - Yes
    - No
9. Would you like to participate in creation of communities of interest on HSN?
    - Yes
    - No
10. Are you interested in communication with housing company on HSN?
    - Yes
    - No
11. Would you like to send applications to housing company and check their status through HSN?
    - Yes
    - No
12. Are you interested in receiving actual news about housing estate on HSN?
    - Yes
    - No
13. Would you like to receive special offers from company partners on HSN?
    - Yes
    - No
14. Are you interested in order of additional services through HSN?
    - Yes
    - No
15. What else would you like to see on Housing Social Network?

Appendix 2. Final list of value added services

Value added service	Description
Social network services	
Communication with neighbours	Communication with other users is an integral part of any social network. As the main users of the platform are inhabitants – communication with neighbours is essential function. Users can send personal messages to other users of the platform or create group chats.
Communication with housing company	Users can send messages and receive replies from housing company in their personal account.
Sending applications to housing company	Users can send applications to housing company through the platform. Additionally, they can check the status of application processing.
Getting news about housing estate	The news feed contains important news related to the housing estate. Additionally, users can see news from communities they participate in.
Creation of communities of interests	Users can create communities of interests. Posts of such communities will be shown in the news feed.
Group decision making (voting)	Users can participate in decision making through voting. Housing company places the voting in the network, available for users for certain period of time. The results of voting are available for all voted users.
State Information System replication (Compulsory functions)	
Online payment for the communal services	Users can pay for the communal services from their personal accounts.
Send meter readings	Users can report meter readings from their personal accounts. Additionally, they receive notification during the period if they haven't reported readings yet.

Check the arrears	Users can check their history of payments. Additionally, they receive notifications if they have arrears.
Send applications	This have been already described in social net functions
Learn about future repairs	This should be presented in the news section, that have been already described in social net functions
Additional services	
Housing estate acquisition webinar	Users can register for the webinar. Before the beginning, they will receive the notification with the link to the webinar. All users can view the video in real time and ask questions in chat.
Remote consultation (online chat)	Online chat is organised for consultations with sales department of construction company.
“Call-back” feature	“Call back” feature is available for all users to request a call from the sales department of construction company.
Access to low-cost supplies	This service can include different ways of providing access to low-cost supplies. It can be advertisement about special offers or fully working online mall for users.
On-site application for plumber or locksmith	Users can request a visit of plumber or locksmith from their personal account. They can choose appropriate date and time of visit from available.
Online video from cameras in personal account	Users can view the video from video intercom, elevator cameras and outdoor cameras.
Customisable design for the users	Users can customize the interface of the online platform. This can include change of buttons places, colours and themes.

Finishing of apartments for shared construction	Buyers can use the online application to choose finishing from the options available. Additionally, the can view, how this finishing will look like.
Layout change for shared construction	Buyers can use the online application to choose possible layout changes.
Construction status online	Buyers, participating in shared construction can view the status of construction processing. Additionally, they can view photos of construction and receive news about it.