

## FROM INTELLECTUAL CAPITAL TO THE CUSTOMER CAPITAL MODEL IN THE PROCESS OF THE REAL ESTATE REVITALIZATION ON THE EXAMPLE OF THE CITY OF LODZ

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**Purpose:** The aim of the publication is to verify the practical application of the theoretical assumptions contained in the adopted customer capital model in the process of revitalization of selected post-industrial areas in the city of Lodz.

**Design/methodology/approach:** Due to the problems discussed in the article, the survey technique and the questionnaire interview method were selected for research. The methodological assumption of the article is a hypothesis that the internal customers' orientation towards values important for the capital of external customers - i.e. the internal structure of the organization - determines the success of the investment.

**Findings:** During the analysis it was noticed that all revitalization processes taking place in the selected areas were successful in investments based on the strategies of actions which were determined by values and needs important for the society.

**Research limitations/implications:** The methodological studies and the way they were carried out were extremely accurate in terms of obtaining reliable answers. On the other hand, there were cases in which, due to insignificant knowledge of the revitalization process in the selected area or a negative approach to the entity implementing the process, the respondents provided answers that did not correspond to the content of the questions.

**Practical implications:** On the basis of the results of the research, and hence the confirmed hypothesis, the company or partnership should make more frequent investments based on the needs of society and provide an opportunity for future consumers to participate in the process of 'product' creation.

**Social implications:** The conducted research confirms the importance of public participation in revitalization processes in order for them to achieve investment success, but also spatial and functional success.

**Originality/value:** In the article, the clients' capital is presented for the first time as a central element of the organization, being at the same time the foundation that connects the remaining capitals, which are in the scheme of intellectual capital.

**Keywords:** revitalization, customer capital, post-industrial real estate

## 1. Introduction

Due to the decreasing availability of free land intended for the construction of residential, commercial or public facilities, investors are reaching more and more willingly for the so-called revitalization activities. When making a decision regarding the selection of an appropriate function for a revitalized property, a broad economic analysis is important. It covers financial issues but also social aspects, which should correlate with the needs and expectations of the city residents in which the investment takes place. The analysis allows for a proper selection of the adaptive function of the real estate as well as matching the values important to the community with the revitalization program being created. In this way, an enterprise or a local government unit that undertakes the renovation activities can expect greater investment success.

In accordance with this course of thinking, a model of customer capital was developed, which belongs to the scheme of intellectual capital, which is the essence of the whole organization. The theory contained in the model places a strong emphasis on the relationship between the capital of internal clients, and hence the internal structure of a given enterprise, and the capital of external customers, understood as direct consumers of the goods or services provided. Investment activities based on this relationship have a visible effect in structural capital, which presents the internal segment of the business, which makes up the opinions and the reputation of the company, but also the assessments related to the good generated. The customer capital model assumes that investment activities that are guided by the discussed relationship determine the success of the project in almost every sector of services available on the market.

## 2. Research assumptions, methodology

The aim of the publication is an attempt to verify practical applications of the theoretical assumptions contained in the adopted model of customer capital, based on the main relationship between the capital of internal clients and the capital of external customers, as well as the result of this relationship in structural capital. The adopted hypothesis assumes that being guided with the values important for the capital of external clients by internal clients, i.e. the internal structure of the enterprise, determines the success of the investment. This is, therefore, the relationship between the two types of customer capital, the result of which can be seen in the structural capital, both from the perspective of the evaluation of the good produced, as well as from the perspective of the organization itself. The research area concerned revitalized facilities in Lodz – post-industrial real estate (residential – Priest's Mill, commercial – Manufaktura, public – Geyer's White Factory). The theory included in the model focuses on

revitalization activities that were carried out on three different functional areas of real estate over the last thirty years.

The structure of the number of conducted questionnaires and interviews is presented in Table 1.

**Table 1.**  
*The specificity of the division of applied research tools*

Place/type	Number of questionnaires	Number of interviews
Priest's Mill	60	7
Geyer's White Factory	30	8
Manufaktura	60	10

Source: own elaboration.

The theoretical part of the publication was created using the qualitative method in the form of secondary analysis of the existing data - a literature review of the subject. The empirical part was created based on the use of qualitative and quantitative methods: questionnaire technique (distributed to 150 people) and questionnaire interviews (25 people participated). The selection for the sample was random. The city of Lodz was deliberately chosen for research, as revitalization processes are carried out on a quite large scale there. Their effectiveness is to be the subject of benchmarking applied by other Polish cities (similar processes are carried out in Gdansk, however, on slightly smaller scale).

### **3. Real estate as the subject of the revitalization process activities**

An inherent issue in the subject of real estate is their use and the impact it has on the value of a given object. It is known that the condition of buildings, and in particular their quality, changes from the point of view of passing time. Broadly understood deterioration due to the aging of real estate, the materials and construction techniques used, the intensity of use or transformation in the environment are, among others, responsible for this situation. Construction practice precisely locates particular factors in consumption types, i.e. technical, functional and environmental wear, in order to indicate the source of deterioration of structure of the building (Lecomte, 2019).

The process of revitalization, guided by the good of buildings, as well as the chance to restore them for use for the environment, has become the main tool of the renewal program and ensuring their further functioning (Zaitseva et al., 2018). This is the first initiative of this type, which puts a strong emphasis on the cooperation of the local community with the city authorities and individual investors. Thus, the residents through the participatory structure have an impact on the nature and direction of activities related to the degraded facility. Thanks to the growing interest in revitalization and its popularization in practice, stakeholders are more likely to use the opportunity to restore a degraded property, but also to add modern attributes.

This way, the building gains new useful and economic values, important for both investors and the public. In addition, the revitalized object still has aesthetic features that are important for its attractiveness, as well as to commemorate the history and architectural style in which it was designed (Pan, and Song, 2017). To properly implement such projects, more and more often attention is paid to the efficiency and effectiveness of projects, derived from the proper identification of three variables: resource capabilities of the organization preparing and implementing the activities, an appropriate system of managing the work carried out and inclusion in the needs, ideas and preferences of local communities. For this reason, the need to implement an approach based on the concept of intellectual capital is increasingly emphasized. A proper diagnosis and its use is to contribute to the effectiveness of the revitalization processes carried out.

#### **4. Intellectual Capital – operationalization of the concept**

The term "intellectual capital" has many associations and sometimes the terms "intellectual property", "knowledge assets" or "intellectual assets" are used interchangeably. However, these concepts are not fully related. Intellectual capital is perceived as an intangible asset of an organization that is based on possessed knowledge. The concept of intellectual property is defined in legal terms and may constitute only a certain part of the value of intellectual capital (e.g. copyrights, trademarks). In turn, knowledge assets can be understood as a specific product resulting from human work. It is defined by formal procedures and can be analysed in the accounting and financial context, indicating the current value (Jarugowa, and Fijałkowska, 2002, pp. 57-58).

Improving the identification, creation, storage, dissemination and application of knowledge is essential for the development and improvement of organizational processes towards sustainable development, where intellectual capital is indispensable.

In the literature on the subject, many definitions of intellectual capital can be found, as in the case of knowledge and management.

In 1992, the team under the direction of L. Edvinsson presented applications in the field of identifying intellectual capital for the first time. They recognized that intellectual capital is a reflection of a hidden gap that determines the real value of the organization, taking into account both its financial and non-financial capital. Intellectual capital is knowledge that can be turned into a value that fills this gap (Mikuła, and Pietruszka-Ortyl, and Potocki, 2007, pp. 73-76).

Among other well-known approaches to intellectual capital, the following can be distinguished:

- by T. Stewart, who indicates that intellectual capital is the sum of everything that everyone in the company knows and what determines the competitive advantage (Stewart, 1997);
- by J.G. Roos, N.C. Roos, N.C. Dragonetti, L. Edvinsson who illustrate intellectual capital as the sum of structural and human capital, "thinking" and "non-thinking" assets (Roos et al., 1999);
- Organization for Economic Cooperation and Development (OECD) describes intellectual capital as the economic value of two categories of intangible assets of the enterprise: organizational (structural) capital and human capital (Jabłoński, 2009, pp. 57-59).

Analysing the multiplicity of approaches, it can be pointed out that each of them comes down as a consequence to describing something immaterial which is in the possession of every organization and constitutes its asset. This is clearly pointed out by A. Brooking describing intellectual capital as:

- market assets e.g. market position, company name, distribution channels,
- human assets e.g. knowledge and skills of people, assets protected by law,
- infrastructural assets, i.e. management philosophy, communication, information systems (Brooking, 1999, pp. 16-21).

Most of the approaches, specifying what intellectual capital is, are based on its three variables, i.e.

- employee – human capital includes the knowledge of individual employees, which affects the ability to meet customer needs (creating, transferring the use of knowledge, as well as developing the skills of employees),
- structural capital includes processes and systems existing in the company (creation of appropriate organizational structures supporting communication and creativity as well as management of protected knowledge (appropriate patents, certificates or licenses),
- market – relational capital covering the relationship with the customer, suppliers, partners, competitors, building a positive image and reputation of the company and the strength of its brands (Mercado-Salgado, and Gil-Monte, and Cernas Ortiz, 2016).

Correct identification, creation, storage, dissemination and application of collected knowledge from the process of appropriate intellectual capital management determines, as part of the revitalization, the development and improvement of organizational activities towards the so-called sustainable development. This, in turn, contributes to increasing the attractiveness of the region, which corresponds to the expectations of customers (Graeff Erpen et al., 2015).

The significance of the link between variables shaping intellectual capital and their impact on sustainable development was also reported by L.D. Nascimento and J.H. Sousa. In their discussion there emerges a conceptual model based on three theoretical proposals that show: mutual relations between intellectual capital and knowledge management and its dimensions;

the existence of a positive relationship between the dimensions of intellectual capital and the adoption of sustainable development and the presence of a positive relationship between the processes of knowledge management and the adoption of sustainable development (Nascimento, and Sousa, 2019).

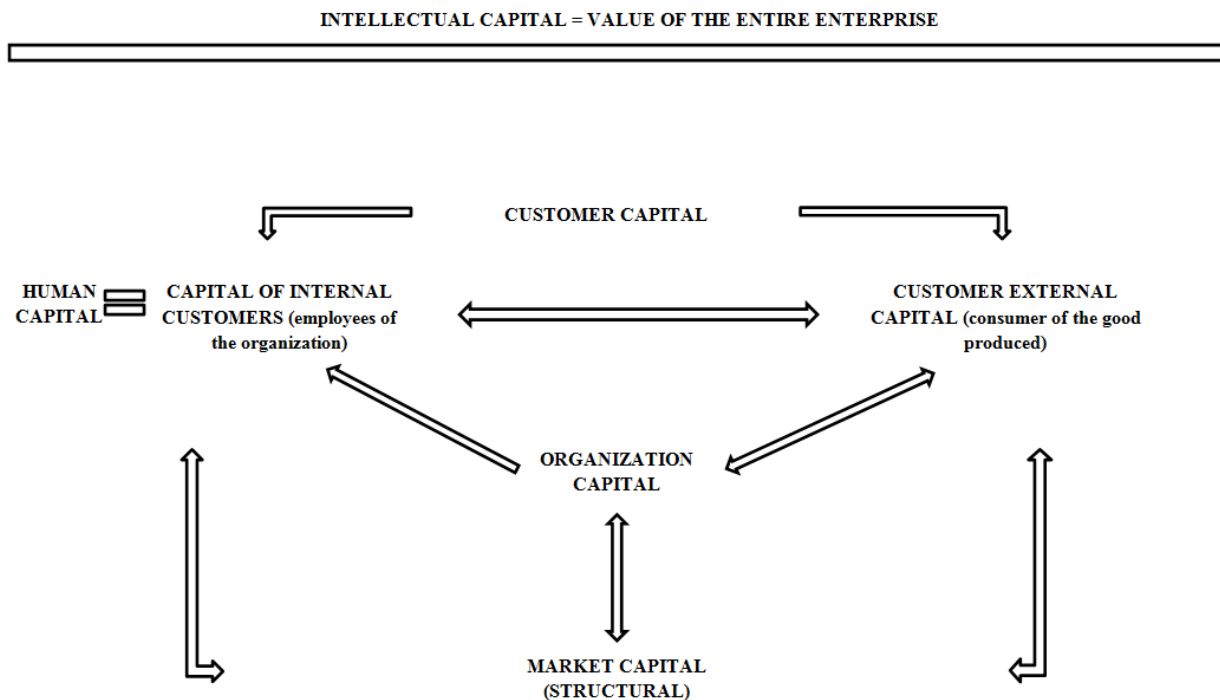
If the effect of improving practices in the field of sustainable development becomes the use of the Intellectual Capital concept, it should also be pointed out that it contributes to the improvement of the profitability of implemented activities also in the area of revitalization indicated here.

Combining the concept of Intellectual Capital with the process of revitalization, it is necessary to point to one of its components determining the project of implemented changes – relational capital as a variable shaping relations between the organization, local government and the local community being the main beneficiary of changes.

## **5. Customer capital model in the real estate revitalization process**

According to many theoreticians who deal with the field of investment strategies as well as the subject of economics, an increasingly common claim is the perception of customers as an essential element that allows achieving all the goals that organizations aspire to (Hossain et al., 2016; Hasan, and Jha, 2019; Caputa, 2015; Tomczyk, 2012; Żak, 2013). Shaping customer relations, including referring to their needs and preferences, allows enterprises to develop their competences, broaden their horizons, even long-distance ones, and more importantly, they are conducive to achieving success, recognition and, naturally, financial profit. It is the capital of clients that accompanies investments from the very beginning, through its maturity on the market until the end. It is important to define the needs of recipients so that the products or services delivered to them are the most satisfying for them (Foley, 2011). An example illustrating the effectiveness of this concept of operation is the subject of real estate, related to the sale, construction and adaptation of revitalized objects for new functions. The system in which the company operates, specializing in one of the options mentioned above, is guided primarily by the impulse of demand delivered to the real estate market, that is exactly the needs and significant values, characteristics and expectations, coming directly from potential customers. There are organizations that place greater emphasis on the benefit of, for example, building a chain of single-family houses with poor construction when there is not much demand for this type of building. In this case, the minimization of costs and the short construction time become a priority. As a result, the investor does not incorporate consumers' needs to the actual effect of the finished project. Automatically, supply does not adequately satisfy the demand for a given good, and thus the enterprise loses the invested capital, and, more simply, the investment fails.

Customer capital included in the economic aspect is a kind of impulse of demand, supported by expectations and requirements of both consumers and employees. On the other hand, an enterprise is considered as supplier who is supposed to receive this signal and transform it into a good that will be able to satisfy the specific needs of its clients. As a result, it brings consumer and employee satisfaction, in the form of various benefits, located in structural (market) capital, as well as in organizational capital. The total value of the company, constituting intellectual capital in terms of customer capital as the central element was depicted in the model in Figure 1:



**Figure 1.** Customer capital model: the central element in the company. Source: own elaboration based on the conceptualization of A. Jażdżyk.

The concept, based on the significant importance of customer capital in the course of investment, is extremely crucial in the already mentioned property revitalization process. However, in order for the entire process to be successful, the appropriate building adaptation option must be selected. Therefore, a very important element of this activity are potential clients, i.e. the social aspect of a given city in which revitalization is to take place. The needs and expectations of people concerning a particular type of property allow organizations to undertake work in the area of the revitalized building, precisely specify the values relevant to them and the nature of the object's adaptation, so that it is positively welcomed by the public, and that it is profitable and brings profit from investment.

## 6. Applications of the customer capital model in the process of real estate revitalization in Lodz - results of own research

The aim of the conducted research was to diagnose the occurrence of relations between the capital of internal clients and external clients in housing real estate (Priests's Mill), which determines the success of the investment. The empirical material was collected using a quantitative method in the form of a questionnaire survey and a questionnaire interview. The data were collected in the first half of 2019. The questions asked, which were the basis of the above-mentioned techniques, were prepared on the basis of a previously made case study, which was the renewal process at the family-owned housing estate at Priest's Mill. Due to the small area in which the revitalization of residential real estate took place in 2012-2014, qualitative research was considered more valuable. Therefore, there is a small range referring to the group surveyed. The main assumption of the research was to obtain information from people who currently live in revitalized family homes. Both the interview and the survey were based on similar questions. In the presented material, the authors selected only a few empirical data indicating the existence of specific dependencies in the assumed customer model.

The key to the study, as well as the hypothesis contained in it, was the combination of three questions that directly indicated the occurrence of a relationship resulting from the customer capital model. In this case, the participation process was thoroughly analysed as it was recognized as the source in which an important relationship takes place. The questions included in the questionnaire interview and also the survey concerned housing conditions both before and after the revitalization. The research showed that before the renovation activities, the living conditions of the residents were at the level of two to three points on a scale from zero to five.

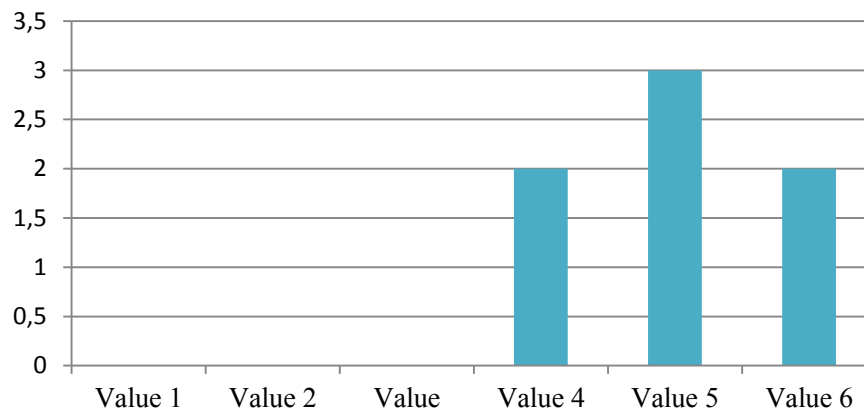


**Figure 2.** Opinion on: "Did the inhabitants of revitalized family homes have the influence on the decisions related to the process at the stage of creating a revitalization program strategy?". Source: own elaboration.

As can be seen from the chart, the local community was an active participant during the process of revitalization of selected objects at Priest's Mill. Thus, in accordance with the assumption of the customer capital model, inhabitants of the revitalized real estate constitute both the capital of internal clients, i.e. persons who contribute to the production of a given good, as well as the capital of external customers, and thus direct consumers.

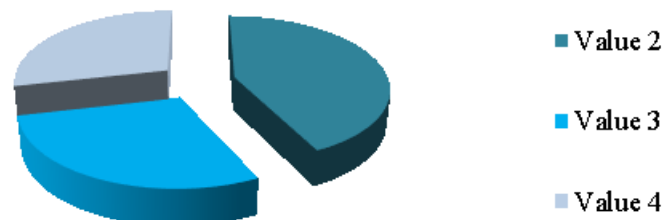


The question referring to satisfying expectations regarding revitalization was unanimously answered positively by the respondents. The respondents were also asked to indicate the level of fulfilled expectations on a scale from 1 to 6 (with 1 being none – 6 meeting expectations in maximum). The level of the assessment of the expectations regarding the process of revitalization of family homes has been presented in the chart below:



**Figure 3.** Assessment of residents regarding expectations that have been met after the revitalization process at Priest's Mill. Source: own elaboration.

The third of the questions most relevant to the subject of the study concerned the assessment of cooperation between the city authorities and the society of the Priest's Mill housing estate.

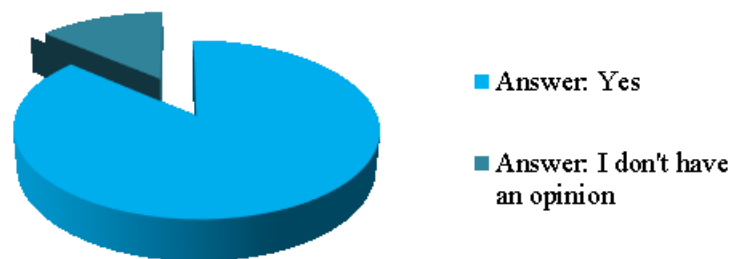


**Figure 4.** Assessment of cooperation between the city authorities and the Priest's Mill community (scale 1-5). Source: own elaboration.

The research showed that the residents of Priest's Mill believe that cooperation with the municipal authorities was at the level of 2-4. Therefore, its form was not fully satisfactory and it required to definitely improve the communication process and real participation.

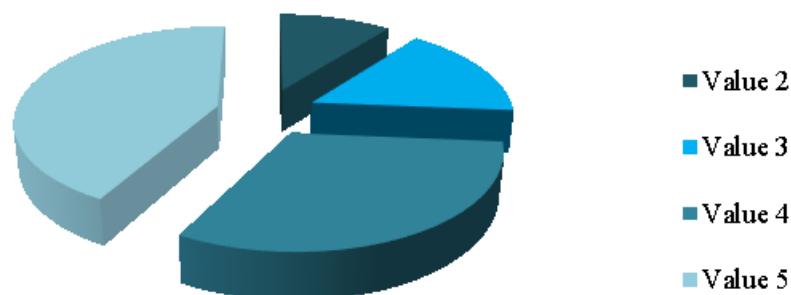
The next research related to the commercial real estate i.e. the Manufaktura Shopping Centre was based on a case study, surveys distributed in the complex and interviews. The questions that respondents had to answer consisted in particular of issues related to consumer needs and expectations of commercial real estate, as well as public opinion on the real investment success that Manufaktura achieved. The aim of this part of the research was to show whether in the process of revitalization of post-industrial properties as well as during the functioning of the current Manufaktura there is a relation between the capital of internal clients and external clients. It was assumed that due to the period of the commercial complex

development, the investor was not guided, in particular, by the process of participation at each stage of investment activities. Therefore, the main source of information are opinions and consumer assessments corresponding to the implemented project. The questionnaire consisted of nine main questions, supplemented with two additional ones, indicating an assessment of meeting the expectations of a resident of Lodz after the creation of a shopping complex and a position regarding the implementation of assumptions concerning the improvement of the quality of life of the city's society. The respondents were people who were indigenous inhabitants of Lodz. Due to the years in which the investment was implemented, the questions were addressed to the age group of thirty and above. As in the case of the study regarding the family homes estate at Priest's Mill, the most relevant in the survey were questions that were to indicate whether the discussed relation between the types of client capital took place both during the revitalization and after its completion.



**Figure 5.** Opinion on meeting respondents' expectations regarding the revitalization process of the Izrael Poznański factory complex. Source: own elaboration.

Next question was related to the determination of the degree of expectations realized on a scale including scores from 1 to 5.

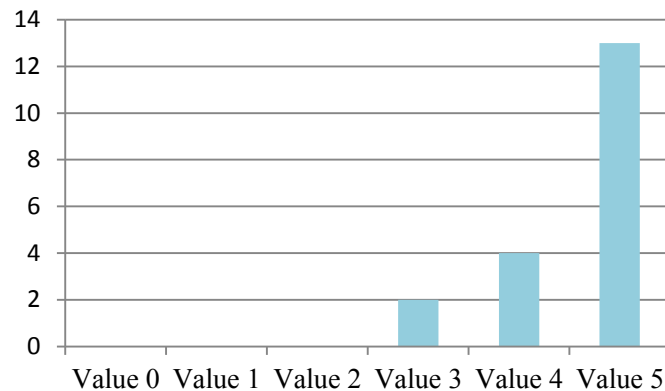


**Figure 6.** Assessment of the degree of meeting the respondents' expectations regarding the revitalization process of the current Manufaktura. Source: own elaboration.

Referring to mentioned (from selected results) statements of respondents, it can be assumed that the Manufaktura Shopping Centre project is an example of a real estate that in its revitalization strategy was guided by the expectations of potential customers. It is also important that the investment assumptions of the project met the expectations of the local community, for example, through the economic analysis of the city of Lodz and the potential beneficiaries regarding their needs and values, which were then taken into account when creating the

investment strategy and revitalization program. Therefore, it is also noticeable that there is a relationship that follows the assumptions of the customer capital model.

The final stage of the research was the revitalized object of the public estate: Geyer's White Factory. The method of questionnaire technique, distributed type, has been enriched with one open question, being at the same time an opportunity to comment on the effectiveness of the idea of creating a textile museum in the city of Lodz.



**Figure 7.** Consumer assessment of the current cultural offer of the Central Museum of Textiles in Lodz. Source: own elaboration.

The analysis suggests that the main assumption of the museum's creation was to provide an area that would consolidate historical awareness about the large textile industry that took place in the 21st century and the 20th century in Poland. It is above all a cultural centre created for society and based on their curiosity about the subject of textile. For this reason, knowing the attitude of the internal clients 'capital, the research is to be used to analyse the external clients' perspective, taking into account the assessment and opinions regarding issues related to the museum's activities.

## 7. Summary

On the basis of the conducted research, one can observe the diversification of the revitalization process in each of the selected properties. The case study method indicates that the strategy of conduct closest to the relevant Revitalization Act took place during the process regarding the Priest's Mill housing estate. On the other hand, the remaining investments showed only some elements proving the activities based on the assumptions of revitalization. Based on the research methods used, including distributed questionnaires and questionnaire interviews, the following conclusions were found:

The process of revitalization, related to each chosen real estate, i.e. residential real estate – Priest's Mill; a commercial real estate – Manufaktura, a public real estate – Geyer's White Factory, have been successful in both the economic and social sectors. The reason for success in the Priest's Mill housing estate was the reference of the investment strategy to the expectations and needs of the residents of revitalized family homes during the consultations in the preparatory period, as well as talks between the city authorities and the Priest's Mill community. The Manufaktura Shopping Centre was successful according to an economic analysis carried out by a company that undertook revitalization works in the industrial complex of Izrael Poznański. This analysis was closely related to the research of needs and values relevant to potential consumers. The White Factory of Ludwik Geyer, which is now the Central Museum of Textiles in Lodz, is the first revitalized facility on a national scale having in its strategy a change of adaptive function from industrial to a museum. The facility management defined, as its main goal, providing Polish citizens with a place that will allow them to gain or deepen their knowledge in the field of textile history. The real estate revitalization process was an investment in the historical and cultural aspect, addressed to the public.

On the basis of the conducted research, it can be concluded that the customer capital model finds its application in the process of real estate revitalization, both conducted by an individual investor, as well as in cooperation with the local government unit and from the initiative of the city authorities. The relationship, taking place in each of the discussed cases, between the capital of internal clients and the capital of external clients, conditioned the investment success in the eyes of the public, concerning the entity implementing the investment and the product it created.

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