

# *Development of a Comprehensive System for Municipal Real Property Classification*

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***Abstract:** In the last decades the organization and management of public sector institutions have become increasingly concerned with the issue of the efficient use of its resources. This paper explores the possibilities to use the multi-criteria analysis techniques for municipal real property management and the proposals regarding the indicators that will be employed in this respect. We propose a model designed so as to take into consideration the goals of the municipalities, contributing to an effective municipal real property management by the proposed optimization and standardization decision-making procedures.*

***Keywords:** municipal property management, multi-criteria analysis*

***JEL:** H82, C82.*

## **Introduction**

In the last decades the new system of values established in the private sector has had an important impact on the organization and management of public sector institutions, more and more concerned with the problem of the efficient use of public sector resources. The new governance of the public sector has drawn upon the approaches and techniques applied by corporate management, though it is not identical to them. Public institutions are oriented towards the rendition of public services which meet the needs of the citizens. In the conditions of budget restrictions, however, these institutions are forced to take into account what they are producing and at what a cost they are offering it to the public at large. The new governance is presented as a quasi-market management approach, which can be defined as a set of market-oriented approaches to the management of public sector institutions and resources.

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In this new context, public organizations aim to introduce competition and market discipline, which could encourage the more effective use of public resources and bring more benefits to society. Accordingly, “the new public management” requires a series of changes in both the organization of public institutions and the established model of their management. The changes needed in the approaches, methods, and actions undertaken in the management of public organizations have been studied by a number of researchers (see Farnham and Horton, 1996) stressing the need for changes such as: the use of strategic management as an approach to setting goals and formulating policies for their accomplishment; measurement of the results of the activities in terms of the criteria for economy, effectiveness and efficiency through a system of indicators; the setting of benchmarks and standards for the production and rendition of public services; the shift of the focus in the creation of public services from the supply side to the demand side.

A variant of the new public management concept which is known in academic literature as “public entrepreneurship” or the so called „entrepreneurship management”, developed by D. Osborne and T. Gaebler (1992), underlines that the assessment of the functioning of the administrative units and the allocation of budget funds should not be based on “the goals of the program” but on “results” regarding the introduction of the instruments of public programs and projects. The new public management is oriented towards the achievement of the goals of economy (the real reduction of costs, compared to their planned levels) and the effectiveness. In the context of the modern concept for public management *the management of municipal real property* has the following features: a) a change in the nature of management of municipal real property; b) an improved reporting of municipal real property as a productive asset which generates cash revenues; c) applying private sector practices to the management of municipal real property.

The creation of a strategic portfolio of municipal real property is a must for the well-functioning and development of municipal real property. This portfolio can be approached as a set of properties which are managed in a parallel and joint manner with the help of a single management mechanism. In this respect the emphasis is put on raising the quality of public services, encouraging local economic development, resolving key urban development issues, increasing revenues and optimizing costs in the municipal real property management. The management of the portfolio of municipal real property aims at a balance and optimal allocation of the resources among the types of property. It is closely linked to both strategic planning and the process of management decision making.

The model representing the process of management of the portfolio of municipal real property opens up the opportunity for optimizing the results of the portfolio as a whole, and not just of the separate properties. This model provides a general logical framework for the management of portfolio of municipal real property and assists local government in decision making process regarding the portfolio (the acquisition, management, and disposal of municipal real property).

In most decision making situations in the context of management of the portfolio of municipal real property more than one criterion is involved and, as a consequence, confusion can arise if there is no logical and well structured decision-making process in place. The multi-criteria analysis (MCA) constitutes a tool that can help to evaluate the relative importance of all criteria involved and to reflect on their importance during project management and decision making.

Based on these overall considerations, this paper discusses the general model of the management of a portfolio of municipal real property, the individual, specific and general indicators of the municipal real property classification system and the appropriateness of the employment of MCA in the municipal real property decision making, with the aim of finding the most convenient destinations of municipal assets that can be used for various purposes.

### **A general model for the management of a portfolio of municipal real property**

Municipal real property management is considered to be a highly organized and dynamically functioning system that encompasses a set of principles, rules, legislative framework, mechanisms and approaches, mechanisms for control and assessment, which are typical of a democracy. Municipal real property is used for raising revenues so its management improves the community's quality of life.

The changes taking place in the social and economic sphere in the different European countries often lead to a change in the approaches applied in municipal real property management, both with regard to practical management legislation, and with regard to the use of modern organizational and information systems and technologies. Thus municipal real property management is directly connected with the perfection of the public services offered to the local community. In the last years project portfolio management has been widespread in a number of branches and sectors in the industrialized countries. Just like many organizations, the local governments have adopted this approach to achieve an effective municipal real property management.

The creation of a portfolio of municipal real property requires grouping and enlargement of the property on the basis of a detailed system for the classification of municipal real property. The portfolio of municipal real property may be defined as a set of properties which are managed in a parallel and joint manner with the help of a single management mechanism. Thus, the management of the portfolio of this property should be considered as a reiterating process of the management of a set of integrated properties, as each property may be either closely related to the rest or relatively independent of them.

The link and the interaction between the municipal development strategy and the portfolio of municipal real property with regard to the implementation of this strategy find its expression in the following:

- The use of strategic management tools to raise the effectiveness of the management of the portfolio of municipal real property;

- The application of new methods and advanced techniques to improve the management of the portfolio of municipal real property due to the growing complexity of the implementation of the municipal strategy;
- The existence of a vision and an overall organizational framework for the application of methods and techniques to assess the management of the portfolio in the course of the implementation of the municipal strategy;
- Up-dating the municipal strategy for development depending on the degree of the successful implementation of the projects for municipal real property management;
- The management of the portfolio of municipal real property is a tool which helps convert the municipality's strategic plan into operations.

There is a hierarchical interdependence between the municipal strategy for development, the portfolio of municipal real property and the separate properties included in this portfolio. This interdependence generally reflects the role and importance of the management of the portfolio of municipal real property as:

- An instrument for the implementation of the municipal strategy for development;
- A process of the transformation into a the project form of the strategy for municipal real property management;
- A means of monitoring and control of the overall risk related to the municipal real property portfolio;
- An instrument for optimizing the allocation and the channelling of resources to the separate categories of municipal real property.

The portfolio of municipal real property should be considered in its overall integrity, as well as in its separate parts, so as to connect its development with the local development strategy. The manner of municipal real property management may affect the ability of local government to achieve its strategic goals. The size and character of the existing portfolio, the amount and category of the real property, the quality of the assets, the maintenance costs, etc. have an impact on the municipality's economic activities and can therefore contribute to its overall results.

A key problem of local government with regard to real estate property must be whether it has been correctly provided with financial resources and whether it ensures the value for money. To answer this question, we must take into consideration the following:

- Does the municipality own real estate property and does it plan to own real estate property, necessary for its future economic plans (when?);
- What is its portfolio of real estate property in terms of size, location, value, costs, quality and intensity of use (what?);
- How the real property should be managed (how?);
- Who must be in charge of the municipal real property management (who?)

The nature, value and quantity of municipal real property are determined by the strategic decisions, made in the process of strategic planning. Local governments are constantly faced with a number of alternative directions for their future strategy. In the choice of a direction and method for its achievement local government must take into account the risk, flexibility, abilities and expectations of the local community. It is necessary to assess whether the strategy will utilize its strengths and the opportunities provided by the environment. In addition, it is necessary to estimate to what extent the chosen strategy will overcome the weaknesses and dangers. The following must also be taken into consideration: how and whether the strategy may be financed considering the limited resources, and whether local government can cope with these problems at the necessary quality of rendering services. In order to implement the strategy, it must be acceptable by a wide range of stakeholders and meet certain requirements.

In the strategy development the municipal real property portfolio components have to meet a series of requirements such as: they have to be located in appropriate areas, be available in the appropriate quantity and quality with acceptable opportunity costs. Local government must strike a balance between the functional efficiency and the acceptable possession of municipal real property within its overall portfolio. Therefore, the strategy of the portfolio must be oriented towards the striking of such a balance, as the goal is to assist the current activities, while securing such a level of costs which are appropriate for the planned productivity and standards. Risks may be minimized through the planning and control of the portfolio of real estate property.

The management of the operational the portfolio of municipal real property has three aspects: strategy with regard to location, mix of real estate property and the planning of future resources of real estate property. The strategy with regard to location presupposes not only singling out municipal real property with a potential for return on investment or capital growth, but also the identification of the potential customers. The need for various resources of real estate property is determined not only by the possible type of use, but also by the size, quality and value. Some municipal properties are depreciated fast or their maintenance becomes expensive, others may not have the suitable location and as a result of acquisition or sale the form and character of the portfolio may change. Every real estate property is at a certain stage of its life cycle, which is different from the other assets in the portfolio. This is why every portfolio of municipal real property comprises a mixture of properties in terms of age, condition, and appropriate current activities. When real estate properties are replaced, the new properties must be acquired with a view to the foreseeable requirements by determining the current surplus or deficit. This outlines the need to integrate the strategy with regard to the portfolio of municipal real property in the process of strategic planning.

The model which represents the process of management of the portfolio of municipal real property opens up the opportunity for optimizing the results of the portfolio as a whole, and not just of the separate properties. This model provides a general logical framework for the management of portfolio of municipal real

property and assists local government in decision making with regard to the portfolio (the acquisition, management, and disposal of municipal real property).

### **Multi- criteria analysis - a tool for assessment of municipal real property**

In most decision making situations more than one criterion is involved and, as a consequence, confusion can arise if there is no logical and well structured decision-making process in place. The multi-criteria analysis (MCA) constitute a tool that can help evaluate the relative importance of all criteria involved and reflect on their importance during project management and decision making. MCA is a management tool aiming at supporting decision makers faced with making numerous and conflicting evaluations by deriving a way to come to a compromise. It can be used in order to help decision-makers to find the most appropriate, effective use of each municipal real property, in accordance with the classification criteria on the basis of functional purposes (*administration use, commercial, business / investment use, social use*), combined with the classification based on financial purposes, which defines the different financial purposes of each category of properties.

For each potential functional purpose (use) of the existing municipal real properties we propose individual, specific and general indicators which can be employed as the criteria for applying the MCA. The discussion below aims to offer a thoroughgoing image on the MCA features, the steps that have to be followed, the techniques which can be employed and the possibilities of ranking the alternatives in order to substantiate the MCA variant that offers the best response to the project objectives.

In general terms, MCA methods are employed in order to identify the most preferred option, to rank options, to get a shortlist of a limited number of options for subsequent assessment processes, or to distinguish between acceptable and unacceptable possibilities (Waterwiki, 2011). The decision-making team has to establish a clear set of targets and also measurable criteria so as to evaluate the possible actions and the degree in which the targets would be accomplished. Hence, the judgment of the decision-making team is crucial in the MCA “in terms of establishing targets and criteria, estimating relative importance weights and, to some extent, in judging the contribution of each option to each performance criterion” (Waterwiki, 2011, p. 1).

According to the EC agreed methodology, the MCA is commonly employed for formulating recommendations on budget re-allocations, best practice diffusion, getting feed-backs on the methods used for selection of projects and, thus, improving the project selection process (Sourcebook 2, 2009).

Besides facilitating the participatory approach, the MCA displays a series of other important **advantages**, such as (Department for Communities, 2009): openness and explicitness; the possibility of changing the inappropriate objectives and changes; the use of explicit scores and weights, developed by means of largely accepted techniques; the involvement of experts, using sub-contracts with the

decision-making team; enhancing the communication within a wider community; the provision of an audit trail, based on scores and weights.

In accordance with this decision making process, in order to perform a multi-criteria analysis several **steps** have to be followed (ESCAP, 2003), namely:

1. Identifying the problem to be addressed
2. Identifying the options for achieving the objectives
3. Identifying the criteria to be used to compare the options
4. Scoring the alternatives in relation to the criteria
5. Weighting the scores according to the weights assigned to the criteria
6. Evaluating the Alternatives
7. Ranking the Alternatives and Making a Recommendation.

As regards the **multi-criteria techniques**, they encompass a large family of methods of which 40 or more different approaches are distinguishable in the literature, from the highly sophisticated through to simple rating systems (Bana and Costa, 1990; Nijkamp et al, 1990).

The common rationale of these methods is to establish a broad framework for assessing the impact of making a choice, simplifying the decision into its constituent elements. In most cases the method requires developing a complete set of alternative solutions to a problem (the options), assessing all relevant performance information for criteria which judge the value or utility of the options, and ‘trading-off’ the relative significance of the criteria to resolve the problem.

The *choice* of which model is most appropriate depends on the problem to be solved and may be to some extent dependent on which model the decision maker is most comfortable with. The commonly used criteria for the selection of techniques are: “internal consistency and logical soundness; transparency, easy of use; data requirements not inconsistent with the importance of the issue being considered; realistic time and manpower resource requirements for the analysis process; ability to provide an audit trail, and software availability, where needed” (Department for Communities, 2009, p. 20).

An important step in the MCA process is the *standardization procedure*, involving a transformation of the original data sets in order to allow for data aggregation as a part of in the decision making process. In the statistics context, standardization refers to the process of transforming the raw data into dimensionless measures (derived by various formulae) to create compatibility, similarity, uniformity for different variables. The final outcome from a MCA process is a prioritization of alternative courses of action or projects.

In the case of municipal real property **the need of applying standardization procedures** is determined by the fact that the decision makers involved in evaluation have to take into account many criteria implying the use of different variables, which are measured according to various scales. For instance, when estimating the value of a property, they have to deal with *heterogeneous* scales to model such diversified notions as location, date and mode of acquisition, surface, revenues, aesthetics, maintenance costs, etc. The final decision represents a prioritization of alternative courses of action or projects, based on the relative

performances on all the criteria involved in the decision making. It implies the need to compare the alternatives by bringing together all the criteria (variables) into one synthetic value per alternative and to rank them accordingly.

The multi-criteria analysis has a wide application in the public sector and can be used to solve problems and make decisions for the effective management of municipal real property. This analysis deals with the study of the alternative solutions for the allocation of public resources and is an integral part of the overall analysis of decision making, which includes: an assessment of the condition of the environment and goal setting, the selection of criteria and limitations of the decision, the determination of possible alternatives of decisions, the establishment of the dependence between the environment and the alternative actions, an assessment of the effects and costs related to every alternative, the choice of a preferred alternative and its practical implementation. A key aspect of the application of the multi-criteria analysis is the collection of a number of different in nature parameters for the compared alternatives.

It is necessary to study and analyze the consequences of the present multi-criteria and multi-parameter decisions made in the conditions of a certainty, risk and uncertainty. The conditions of certainty are characterized by certain conditions of the environment and known likelihood of their emergence. As a result the expected results are fully predictable of the implemented alternative decisions for action. Under such conditions the efforts are focused on the assessment of the results and effects of every alternative decision. Under the conditions of risk the conditions of the environment are known, but the exact likelihood of their emergence is unknown. This is why the combination of the conditions of the environment and the alternative decisions brings risks for the decision maker. Under the conditions of uncertainty not only is the likelihood of the different conditions of the environment unknown, but also the conditions themselves of the environment. This is why the possible decisions and their results are extremely uncertain.

The MCA requires a methodological framework for the resolving of problematic situations, which is to facilitate the description of the elements and processes of analysis and decision making. This framework includes: a network of criteria, on which the assessment and selection of a decision is based; a network of alternatives, among which the selection is to be made; a network of limitations, which restrict the acceptable alternatives; a mechanism for the assessment of alternatives by means of criteria; a way to compare the alternatives with regard to the preferences of the decision maker.

### **The system of indicators for assessment of municipal real property**

The projecting of the decisions in the public sector is a major starting point in the process of analysis and assessment of the effect. Setting measurable quantitative goals in the analysis of the alternatives is essential in the solution of multi-criteria problems. Each of the set goals has its own measure and its own quantitative gauge, which characterizes the level of achieving the goal. The indicator is defined as a quantitative measure of the achieved results or the

performance of goals formulated in advance. The indicator suggests drawing up generalized data which would provide the opportunity for assessment and for the subsequent making of management decisions. The indicator is a generalized feature identifying the basic aspects of a certain property and activity.

For the monitoring and assessment of municipal real property it is necessary to develop a system of special indicators. With the help of this system the program for the municipal real property management is implemented which has two key goals: to identify the opportunities for the maximal increase of the value or benefit gained from real property; to identify the potential problems of future tasks and activities which are to be laid down in an action plan.

Literature offers various options for systemizing basic groups of indicators which provide the information necessary for the managers to make effective decisions with regard to the municipal real property management. In the current context a classification has been chosen which systemizes the measures of municipal real property in three major groups of indicators – individual indicators, specific indicators and general indicators.

The formulation of the indicators of the economic analysis of municipal real property is made by category and type of properties. With regard to their physical features, municipal properties fall under the following headings: built-up land plots, non-built-up land plots and technical infrastructure. According to their purpose, properties are classified as public property – with an administrative and social purpose, and private property – with an investment purpose. Depending on the potential capability for management properties are: properties which are to be acquired; properties which have to be used to meet own needs; properties which have to be improved; properties for disposal. In terms of the demand for the property they could be assessed as sufficient or insufficient. From the point of view of the financial goals and management results they fall into: properties which bring costs and properties which generate revenues.

### **Individual indicators**

For the analysis and assessment of the effective management of municipal real property a system of individual indicators is used, which describes the parameters of the separate properties and the degree of effectiveness of their utilization. The individual indicators are directly related to the indicators for the financial analysis of the property, through which the financial results of municipal real property management are determined. The information that is arrived at and processed is used for the development of programs and for planning activities related to the effective municipal real property management.

**Ratio of use of building area** - gives information about the degree of utilization of the municipal fund of buildings and is used to assess the effectiveness in the utilization of the area of buildings. By this indicator the shortage or surplus of area of buildings is determined. This information is used for management decision making related to optimizing its utilization – the acquisition of additional area, the reconstruction of the available areas, their lease out.

**Useful area per 1 employee** - is an average value which reveals the provision of officials with useful area of buildings, expressed by useful area per one civil servant. This indicator is directly related to the staffing levels and the structure of the municipal administration. It is applied for the assessment of the working conditions of the officials in the buildings which are used for administrative purposes and for management decision making with a view to their reconstruction.

**Used area per 1 employee** - is a derivative of the “useful area per official” and is applied in assessing the utilization of the municipal area of buildings.

**Area for rendering services to 1 person** - represents an average value revealing the provision of the population with areas which are used for the purpose of rendering municipal services, measured in sq.m. per person. The capacity of the servicing area is directly related to the range of municipal services developed as of the moment and the number of the municipality’s population. This indicator is used to determine how effectively the property is used and whether its area effectively meets demands. This information gives information for management decision making related to new construction, the acquisition of a new property through purchase, reconstruction or expansion of the capacity of the available buildings.

**Accessibility** (the distance between the location of the property and the city center, parking lot, public transport, etc.) - is used to measure the physical and functional connection between the municipal real property and other properties. Accessibility is directly related to the radius of servicing and to the number of the population, its territorial concentration and the construction degree of the settlements outside the municipality. This indicator is used for management decision making with regard to new construction, determining the location of properties and their potential for development.

**Energy efficiency of building** - provides information about the share of the heated area within the overall area of the building. It is used to determine the level of energy consumption and for management decision making related to setting the opportunities to reduce budget expenditures on energy consumption.

**Ratio of energy efficiency (EMAS)** - the increased share of energy consumed from renewable energy sources, compared to the overall power supply provides information about the improved effectiveness of the buildings’ power supply. The assessment of the energy efficiency is made by comparing them with the EU standards for energy efficiency.

**Energy consumption per unit of area** - the value and the referential value of the indicator are estimated according to a methodology in compliance with the EU standards for energy efficiency. This indicator is used to determine the level of energy consumption per unit of area of a municipal building and to study the opportunities for decision making related to the reduction of energy consumption. This indicator is directly related to the physical condition and the level of technical development of the property. It is used to assess the operational and maintenance functions of the municipal properties.

**Operational costs on property per unit of area** - the operational costs are related to the managed municipal real property. This indicator is applied to municipal real property by type – housing and non-housing and, analyzed in time; it provides information about the trends in the dynamics of operational costs per unit of area. It is directly related to the technical condition of the municipal properties. It is used to assess the management and planning of operational costs.

**Maintenance costs on property per unit of area** - is applied to municipal real property by type – housing and non-housing and, analyzed in time, it provides information about the trends in the dynamics of maintenance costs per unit of area. It is directly related to the technical condition of the municipal properties. It is used to assess the management and planning of maintenance costs.

**Maintenance costs on property per person** - is applied to municipal real property by type – housing and non-housing and, analyzed in time, it provides information about the trends in the dynamics of maintenance costs per person. It is directly related to the utilization intensity of the municipal area of buildings. It is used for decision making with a view to optimizing the underutilized area.

**Costs on current repair works of property per unit of area** - is applied to municipal real property by type – housing and non-housing and, analyzed in time, it provides information about the trends in the dynamics of operational repair costs. It is directly related to the physical fitness and condition of the properties. It is used to assess the management and planning of the operational repair costs. The operational repair is the improvement and maintenance in order of the buildings, facilities and installations as well as internal reconstructions.

**Costs on overhaul of property per unit of area** - is applied to municipal real property by type – housing and non-housing and, analyzed in time, it provides information about the trends in the dynamics of overhaul costs. It is directly related to the physical fitness and condition of the properties. It is used to assess the management and planning functions of the overhaul costs. The overhaul is a partial repair or replacement of constructive elements, basic parts, facilities or installations in the buildings, as well as construction and assembly works, through which exploitation fitness is restored and the useful life span is improved or extended.

**Costs on reconstruction of property per unit of area** - is applied to municipal real property by type – housing and non-housing and, analyzed in time, it provides information about the trends in the dynamics of overhaul costs. It is directly related to the construction, physical fitness and condition of the properties. It is used to assess the management and planning of reconstruction costs. Reconstruction is the restoration of constructive elements, basic parts, facilities or installations and the construction of new such parts which increase the earthquake resistance of the buildings, their sustainability and useful life.

**Costs on the construction of property per unit of area** – it gives information about the necessary resources for the construction of municipal properties and the analysis of all aspects of the construction works, including their relevance and cost reduction. This indicator is applied to municipal real property constructed for administrative purposes and properties constructed for social

purposes. The information provided by the specific indicators is used to determine the shortage of municipal properties.

**Costs on the purchase of a property per unit of area** - is applied to municipal real property by type – properties purchased for administrative purposes and properties purchased for social purposes. The information provided by the specific indicators is used to determine the shortage of municipal properties.

**Revenues generated from sale of property per unit of area** - is applied to municipal real property by type – buildings and land, analyzed in time, and it provides information about the trends in the dynamics of sales-generated revenues. For management purposes a distinction should be made between the revenues generated through competition advantage and the revenues formed with property prices which have been set in regulations (for instance, in the sale of municipal flats).

**Revenues generated from rent of property per unit of area** - is applied to municipal real property by type – housing, non-housing, green areas, terrains rented for placing moveable objects. It gives information needed for the analysis of the amount of municipal rents, the purpose of which is to bring budget revenues (shops, commercial and advertising areas) and reveals the potential for the increase of the rent prices, compared to the market prices. Analyzed in time, this indicator provides information about the trends in the dynamics of rent-generated revenues. This indicator is used for effective decision making by managers with regard to letting out municipal real property for rent.

**Revenues generated by granting concessions per area unit** - is applied to municipal real property by type – for instance, properties used for the construction and exploitation of sports properties and facilities on regulated land plots – public or private municipal real property, properties used for the implementation of urban plans together with the entertainment and commercial properties on them. This indicator gives information about the analysis of the amount of concession-generated revenues which bring budget revenues and reveals the potential for an increase in revenues.

In the management of municipal real property a number of criteria and requirements must be taken into account such as accessibility energy efficiency, area needed for the rendering of public services, communication location of the properties through which the municipality renders public services. Above all municipal real property must provide suitable premises for conducting current activities. The size of the property and its utilization must be taken into consideration in this respect. Accessibility may be a relevant factor for some categories of real estate property. Consumers need good access for their vehicles or access for supplies may be required. Such considerations may be applied with a view to the routes for access to roads, to the routes for public transport, proximity to urban center etc.

At the same time the current management of property must be assessed with regard to the achievement of a goal related to various market criteria. For instance, when the terms of the lease agreement and the rate of lease of the

municipal real property do not meet the criteria of the portfolio, action may be taken to reconsider or change the lease agreement or for its termination. The market rates of lease may be pointed out for a specific property. The managers may determine criteria related to the range of possible difference in percent for the rent of a specific real estate property from market rates.

Also the knowledge of rent rates, the capital values (based on revenues generated from rent) of previous transactions may facilitate decision making with regard to acquisition, sale or financing. Such a study may reveal a previous interest of a third party to a specific real estate property. Such approaches may concern the plans for sale or may reveal the value of the asset, which would otherwise go unnoticed. The knowledge of, investment activities conducted near the real estate property may reveal the potential opportunities for public-private partnership, sale, creation of servitudes, etc.

Just like economic activities, a number financial criteria may be established such as the assessment of the productivity of municipal real property falling within the portfolio such as: rate of rent of the property in reconsideration, the possible rent in lease under better terms, the value in sale, the internal return on investment, management costs, economic productivity, risk, liquidity, etc. When such criteria are not met, decisions must be made based on the management or disposal of the real estate property.

By applying individual indicators information is obtained on the intensity of the use of the properties, their accessibility, costs on maintenance and repair works, the revenues generated from the management and disposal of real estate property, etc. This information is used to prepare a forecast of capital expenditures, the spending, the growth of rent, the changes in the yield and the general return on investment.

### **Specific indicators**

The maintenance of municipal real property must meet certain standards which ensure the rendering of municipal services. The definite norms and standards provide for the application of specific indicators for the assessment of municipal real property, classified by functions - administrative, housing, educational, social, health, commercial, etc, as a potential depending on the municipality's needs for property. These indicators help assess the capacity of the properties which ensure the rendering of services at a specific standard in compliance with the needs for services of the various groups of the population.

**Housing area per occupant** – it represents an average value and is related to the allocation of areas within a definite regulatory unit – a settlement or a residential area. The housing area per occupant is in reverse relationship to the construction intensity. Hence it is dependent on the other technical and economic indicators for the development and construction of land plots – construction density and number of floors. Unlike the latter, this indicator has a mostly social relevance as it reflects the living conditions within the respective territory. This indicator is used for the assessment and satisfaction of the population with housing area,

compared to the relative legally based values for a given planning period and provides information about the planning of residential territories. Depending on the number of occupants, the area of the housing territories within the settlements in the municipality is set in the regulatory plan in compliance with certain regulations – the minimal and maximal housing area expressed in sq.m./occupant.

**Municipal housing per consumer unit** – it reveals the quantitative ratio between the number of consumer units and the number of municipal housing and measures the degree of quantitative satisfaction of housing needs. This indicator provides information about the shortage of free resources of municipal housing, compared to the needs of the consumer units. When analyzed in its dynamics and when the values of the ratio of the intensive renovation of municipal properties is taken into account, this indicator provides information about the effective management effects with a view to optimizing the use (utility) of the municipal housing fund.

**Housing rooms per occupant** – it reveals the quantitative ratio between the number of occupants and the number of rooms in the municipal flats and measures the degree of quantitative satisfaction of housing needs. This indicator provides information about the correspondence between the structure of needs and the structure of housing. The information given by this indicator should be analyzed together with the one provided by the municipal housing per consumer unit indicator.

**Occupancy of municipal housing** – it reflects the relationship between the structure of the municipal housing fund in terms of the number of rooms in the flat. In terms of the “occupant – room” relationship, flats may be classified as: under-occupied flats, normally occupied flats and overly occupied flats. This classification allows for determining the satisfaction of housing needs and the living conditions.

**Vacancy rate of municipal housing** - is a derivative of the occupancy of municipal flats indicator, in compliance with the adopted classification of flats. This indicator gives information about the degree of utilization of the free resources of municipal flats. The available reserves of non-inhabited flats should be assessed according to the criteria for physical condition, and also opportunities should be sought for the effective utilization of the free properties.

**Places in kindergartens per 100 children** – it shows the provision of children belonging to the respective age bracket with places in the in municipal kindergartens. This indicator measures the level of development of the material base of the municipal kindergartens in terms of their concentration. What has a direct impact on these kindergartens is the serviced demographic mass falling under the respective category of children as an absolute number and growth, density, territorial distribution. The number of children who have not been admitted determines the shortage of places in the kindergartens. This indicator gives information for management decision making on the provision of additional properties intended for kindergartens with an optimal capacity and an optimal accessibility radius.

**Area of municipal kindergarten per child** – it reveals the absolute size of the construction degree of the material base of the municipal kindergartens expressed in sq. m. The existent construction degree is directly related to the so far developed range of services in the field of social care. The necessary area of a terrain intended for the respective kindergarten, is determined in minimal regulatory values expressed in sq.m. / child. Compared to the regulatory value, this information allows for assessing the area as sufficient or insufficient. The following measures may be applied as approaches to the provision of additional areas: new construction, reconstruction and expansion of the capacity of the buildings in place and the purchase of suitable properties.

**Area of municipal school per student** – it reveals the provision of students with schooling area expressed in sq.m. The construction degree of municipal schools is directly related to the absolute number and growth of the students falling under the respective age bracket, their density and territorial distribution. The uneven distribution of students results in an uneven utilization of the material base. The necessary area of land intended for the respective school is determined in minimal regulatory values expressed in sq.m. / student according to the capacity of the school expressed in number of classrooms. This indicator provides information for decision making on new construction, the reconstruction and expansion of the available schools and priority spheres for intervention such as the optimization of the school network.

**Hospital beds in municipal hospitals per 1000 residents** – it describes the satisfaction of the municipality's population with healthcare services expressed as the number of beds municipal hospitals per 1000 municipal residents. The number of beds determines the necessary area of land for municipal hospital by minimal and maximal values expressed in sq.m. / bed. The provision of the municipality's population with hospital bed is directly related to the demographic development. This indicator provides information for making alternative management decisions such as the reconstruction and upgrading of the hospital base, the expansion of the available base, etc.

**Places in municipal social care centers per 1000 occupants** – it reveals the provision of the occupants falling under the respective age bracket (orphans, old people, people with disorders) with places in municipal social care establishments. The capacity these establishments is directly related to the absolute number and age structure of their occupants as well as to their territorial differentiation. The degree of provision of the population with places in municipal social care establishments provides information for management decision making on the construction of new social care establishments with an optimal capacity and accessibility radius.

**Area of municipal social care establishment per occupant** – it reveals the provision of the different categories of occupants with area for the rendering of social services by type, expressed in sq.m. What has a direct effect on the construction degree of the network of social care establishments is the municipal population's age structure and its territorial distribution. The necessary area of land

for the separate categories of social care establishments is set in minimal and maximal regulatory values expressed in sq.m. / occupant. The construction degree of the of social care network assessed as sufficient or insufficient provides information about management decision making on the new construction of social care homes, the reconstruction of available municipal buildings or their multifunctional utilization.

**Municipal sports facilities per 100 sq.m. of territory** – it provides information about the territorial differentiation, the concentration of municipal sports facilities and the radius of servicing the separate facilities. This indicator is directly related to the density and territorial distribution of the population. The construction degree of the sports facilities provides information for management decision making on the construction of new facilities when taking into consideration their optimal radius of accessibility.

**Municipal sports area per resident** – it reveals the provision of the municipality's population with sports area, expressed in sq.m. / resident. The area of the territories intended for sports in the settlements and in the municipal territory outside the towns is determined on the basis of the number of the population in minimal and maximal regulatory values, expressed in sq.m. / resident.

**Municipal commercial area per 1000 residents** – it provides information about the provision of the municipal population with commercial area expressed in sq.m. / 1000 residents. The development of the commercial network, which provides for services for which there is frequent demand, is directly related to the municipality's population. This indicator provides information for management decision making on the construction of new commercial properties and expanding the capacity of the available ones.

**Commercial municipal properties located on 100 sq.m. of territory** – it gives information about the degree of territorial concentration and the construction degree of the commercial properties. On the location of these properties the number of the population and its territorial distribution has an impact. This indicator provides information for management decision making on the construction of new commercial properties, and their distribution in observing the radius of servicing.

**Municipal greenery area per resident** - depending on the type of green areas this indicator provides information for decision making with regard to the form of their management – acquisition of new areas through alienation, the construction of new areas or the expansion of the existent ones. The areas of public greenery are determined depending on the size of the settlements within the municipality through the minimal regulatory value expressed in sq.m./resident.

**Ratio of intensive renewal of property** – it represents the ratio between the overall area of the properties acquired by the municipality (sq.m.) and the overall area of the sold properties (кв.м.), expressed in an absolute number. This indicator may be rendered also by the ratio between the number of acquired properties and the number of sold properties expressed in an absolute number. This indicator is applied to the municipal properties by type – non-housing, housing,

green and advertising areas. It provides information about the ratio between the size and area of the acquired and the sold municipal real property.

**Ratio of leased property** – it represents the ratio between the overall area of the leased out municipal properties and the area of all properties, expressed by an absolute number. This indicator may also be rendered by the ratio between the number of leased out properties and the number of all properties expressed in an absolute number. This indicator is applied to the municipal properties by type – non-housing, housing, green and advertising areas. It provides information about the share of the leased out property in the overall municipal real property.

**Ratio of use of property for own needs** – it represents the ratio between the overall area of municipal properties used to meet own needs and the overall area of all municipal properties expressed in an absolute number. This indicator can also be rendered as the ratio between the number of and the number of all municipal properties expressed by an absolute number. This indicator is applied to municipal real property by type. It is used to assess the need for property with a view to rendering the range of municipal services.

The specific indicators which represent average values are measured per territorial unit or per capita. The specific indicators measured on a per area basis provide information about the degree of construction and the capacity of the municipal properties which ensure the rendering of services. The specific indicators measured on per capita basis provide information about the degree of provision and satisfaction of the population with the respective municipal services. These indicators are used also in making a comparative analysis of regions and settlements on the territory of the municipality. When they are measured in their dynamics, they allow for the tracing of the trends in the development of municipal real property.

#### **General indicators**

The correct measurement of municipal real property requires the existence of not only the specific indicators, but also the respective qualitative standards which determine the degree of spatial organization of the properties within a definite planning period.

Identifying the variation from the regulatory values and the shortage of property are the basis for the assessment of the necessary property in terms of the range and type of rendered services, as well as the prediction of needs for ownership for the rendering of public services. We must take into account the impact of demographic such as the overall number of the population, its structure in terms of age and sex, consumer units and their structure. The needs for services are to be assessed by surveys and analyses of the demographic condition and on this basis strategies for development on the respective fields must be drafted (education, social services, sport, etc.)

In determining the purpose of properties, the necessary area and the urban planning regime and building up of the land lots general indicators are used, in which the regulatory values are determined.

The general technical and economic indicators serve the need to make an analysis of the effective use of municipal real property, and are also used as a tool for raising this efficiency by setting regulatory values which must be secured in the acquisition of new territories or in the development of already acquired ones. These regulatory values are set in the municipality's urban development plan in a certain planning period. The quantitative standards help determine the values of the area components of the settlement.

The calculation of the general indicators is made through the collection of information about the physical features of the municipal properties – their type, location, frontages, area, status under the regulatory plan, and others. This information is processed and thus the values of the indicators are determined as of the moment. The analysis is carried out by comparing the report values with the regulatory values of the indicators. The identified deviations from the regulatory values provide the basis for the formation of assessments and managerial decision making with regard to programming the municipal real property.

**Density of building up of regulated land lot** – it represents the ratio of the sum total of the built-up areas under the basic and additional building in against the area of the regulated land plot. The size of the built-up area is the area measured along the external limits of the building. It depends on the category of the settlement, the manner and nature of building in, the functions and types of the buildings and their location within the territory. According to the category, purpose and functions of the regulated land plots regulatory values are set in the regulatory plan – the maximal construction density. The construction density increases with the greater construction intensity, which reveals its dependence on the other technical and economic features – free non-built-up area, average number of floors and ratio of construction intensity. The correct determination of the size of the built-up area is essential, because it determines the size of the free non-built-up area and the density of occupancy. The construction density depends on the overall size of the built-up area and on the three dimensions of the buildings (length, width and height). The values of the construction density change depending on the size of the buildings and on the distance at which they are located. Factors that have a significant impact on the construction density are the sharing of various functions, the imposition of free area over a built-up area and vice versa. This is how the real size of the net territory is reduced, as a result of which the building density changes, but at the same time territories within the urban planning territory are spared.

**Intensity of building up of regulated land lot** - it represents the ratio between the unfolded built-up area and the area of the regulated land plot and is measured in an absolute number. According to the category, purpose and functions of the regulated land plots regulatory values are set in the regulatory plan – the maximal construction density. Due to its synthesizing nature, the ratio of construction intensity is considered to be the best criterion for the technical and economic assessment of the regulatory plans. This ratio determines the admissible loading of the territories which are to be built in. The factors on which this ratio is

dependent and the specific nature of the determination and use of this indicator largely determine the conditions for construction. The ratio of construction intensity considerably grows when the size of the buildings is bigger, given the same distance of construction. The values of this indicator increase when the number of floors increase and the distance between the buildings decreases.

**Absorption of regulated land lot** – it represents the ratio between the sum total of all buildings and the area of the land plot. The construction regime determines the rules for the admissible construction of the regulated land plots and the regulations for the parameters for the construction and location of the buildings. The level of acquisition of the land plots is directly related to the other technical and economic indicators – construction density, construction intensity and number of floors. This indicator measures the efficient use of the territory, the opportunity for the rational ratio between the built-up and non-built-up parts of the properties and for the organization of the free land. This is why the values of the indicator are subject to research, regulation and management. The level of acquisition of the land plots is highly sensitive to the changes in the territorial conditions, for instance the high degree of urbanization. The analysis should take into consideration different factors such as the loss of land, the overpopulation of the territory, the increased traffic, etc.

**Greenery of regulated land lot** – it represents the ratio between the area covered by natural green areas and the area of the property. According to the category, purpose and functions of the regulated land plots regulatory values are set in the regulatory plan – the minimal area of green areas (in percent). The area of green areas covers part of the non-built-up area and depends on the requirements with regard to the quality of the residential building.

**Free yard area** – it measures the difference between the area of regulated land plot and built-up area of building, measured in square meters. According to the category, purpose and functions of the regulated land plots regulatory values are set in the regulatory plan – the minimal area of free yards.

**Share of free inbuilt-up regulated land lot** – it represents the ratio between overall area of free non-built-up land plots and the overall area of the land plots. This indicator can also be expressed by the ratio between the number of free non-built-up land plots and the number of all the land plots expressed. The territory or the regulatory zone includes two types of land plots: built-up and non-built-up ones (free). The former are subject to reconstruction and functional improvement, while the latter – to research and planning, development and construction. The correct ratio between the built-up and the free area provides for the rational use of the territory, the optimal construction intensity and the normal processes within it. Being an integral part of the net territory, the size of the free area is dependent on the other technical and economic indicators: built-up area, the number of floors in the buildings and the construction intensity. This indicator is used to determine the size of the available resources of municipal land plots. Such information is used by managers for making alternative decisions: for the rendering of public services, leasing out, management, granting concessions, etc.

**Share of unoccupied non-housing buildings** – it represents the ratio between the overall area of free non-housing municipal buildings and the overall area of non-housing buildings. This indicator can also be rendered by the ratio between the number of free non-housing buildings and the number of all non-housing buildings. This indicator provides information about the degree of non-occupancy of the municipal non-housing buildings. Such information serves the need for managerial decision making with regard to the use of the available resources of non-housing buildings. Two approaches may be applied: retention and use to meet own needs, leasing out, disposal by applying various mechanisms and granting concession.

**Share of ownership of a definite level of building** – it represents the ratio between the area of a separate level (floor) of a building and the unfolded area of the building. This indicator is used in case there are different types of ownership of the building and provides information about the size of the municipal real property.

**Share of ownership of a facility in buildings** – it represents the ratio between area of an object in a building and the area of shared parts of the building. This indicator provides information about the size of ownership over the respective ideal parts of the shared parts of the building.

**Share of ownership of a property in land lot** – it represents the ratio between the size of the construction right of an object in a building and the area of land plot. This indicator provides information about the size of ownership over the respective part of the land plot.

**Share of ownership of a building in land lot** – it represents the ratio between the size of the construction right of a building and the area of land plot. This indicator is used in case there is more than one building located on the land plot.

**Number of floors in building** – it represents the ratio between unfolded built-up area of the building and the built-up area, measured in number of floors. The number of floors is in a direct or indirect relation to the physical and geographic and social and economic conditions and the construction and technological conditions of the weather. The number of floors – real or average, is among the factors determining the correct use and rational construction on the territory. It is directly dependent on the other technical and economic requirements for construction – construction density, and density of occupancy in terms of their quantitative and qualitative measures.

**Physical suitability of property** – it represents the ratio between the useful life span of the property since the year of its construction and its useful life span determined by the regulations for the useful life span of the property. On the basis of legally-determined values, the useful life span of the properties are set depending on the specific features of their construction. The year of construction and the type of construction largely determine the condition of the properties. According to these criteria municipal properties may be classified as falling under three major groups: physically unfit properties subject to replacement; physically fit properties subject to renovation; physically fit properties. The physical condition

of the properties depends on their exploitation and repair in the course of time. This indicator provides information for managerial decision making with a view to: sale and removal (tearing down) of the properties which are in a bad physical condition; the retention and use of the properties which are in a fairly good physical condition to meet own needs; an estimation of the funds needed to ensure the short and long-term sustainability of the properties.

**Share of properties with technical public planning and utilities** – it represents the ratio between the overall area of properties provided with technical amenities and the overall area of all properties. This indicator can also be rendered through the ratio number of properties provided with technical amenities and the total number of all properties. The technical provision of municipal properties with amenities is determined by the availability of the basic technical installations: electricity, water supply, sewerage, heating, which must comply with the regulatory requirements. Depending on the level of technical provision of the properties with the needed facilities, they may be assessed according to the different degree of provision – properties which have the elements of technical installation in place and properties which are not provided with amenities. This indicator provides information about the level of technical provision with amenities and serves to identify the needs for their improvement.

**Share of properties with facilities** – it represents the ratio between overall area of properties with facilities and the overall area of all properties. This indicator can also be rendered through the number of properties with facilities and the number of all properties. The additional provision of technical amenities of the municipal buildings includes: lifts, network for collection of household waste, telecommunications, fire warning, air conditioning, security, etc. Depending on the degree of construction of the additional technical systems, the properties may be separated and assessed in different groups. This indicator provides information necessary to identify the need for the construction of additional infrastructure elements which are relevant for the normal functioning of the municipal buildings.

The indicators for the building up of the separate types of territories, urban development zones and separate terrains and properties are defined in the special legislation of the EU countries regulating the urban development and building up of the territory. They are basically technical indicators through which the municipal urban development plan is implemented. We must point out the resultant secondary obtaining of these indicators for a given period in the plan. They are obtained on the basis of the structure and size of the separate properties adopted for a specific period. What is more, the capacity of the properties must be in line with the needs in compliance with the separate indicators.

The general indicators are used to meet the needs for the programming of municipal real property and in this context they are of greatest significance in its management. To perform the municipal activities it is essential that the respective properties are ensured. Because the municipal real property is not homogeneous in nature, certain physical and space characteristics of the properties must be taken into consideration such as the size, quantity, quality, category, form, location, age

and condition. The increase of the useful life of the properties and their depreciation has an impact on the quality of the rendered public services. In addition, the longer the usage of the properties, the greater the costs on their maintenance and repair. The construction of buildings has an impact on both the opportunities for their reconstruction and the physical wear and tear of the properties, considering the past useful life. The indicators pertaining to the scope of the terrain, the relation between its area and the overall built-up area, the floors and the size of the unoccupied properties provide data for decision making on new construction and the expansion of existing properties.

It may be summarized that the structuring of the indicators for the monitoring and assessment of municipal allows the information generated from them to be used for surveys, conclusions, and the development of a strategy for the management of the portfolio of municipal real property.

### **Balanced score card**

The major goal of the assessment of municipal properties is the determination of the degree of the accomplishment of the objectives related to the respective service, which is the degree of the overlapping of the planned objectives and the actual results of the set of properties. The so called balanced map for the assessment of the rendition of a service must be developed with regard with all services supplied by the municipality (Kaplan, Norton, 1996). This method is the major instrument to realize a system of balanced indicators for the assessment of the overall life cycle of both the separate projects (municipal properties), and the set of properties belonging to the portfolio of municipal real property.

This balanced scorecard for assessment provides a simplified, intuitive and well-structured approach to managerial information. It consists of four fields, each of which represents a particular aspect of the rendition of a specific municipal service.

This balanced scorecard for assessment comprises the following elements: financial indicators, indicators for customer satisfaction, internal project indicators and indicators of performance. The method based on the application of the balanced map for assessment is oriented toward to municipal real property portfolio, revealing how each property:

- Adds value to the results;
- Ensures benefits;
- Contributes to improving performance in specific areas;
- Provides opportunities for the creation of models from the best practices in the management of the municipal real property portfolio.

With a view to the accomplishment of its strategic goals, local government must be able to assess their performance with regard to a benchmark selected in advance to compare the achieved results. If such comparison models based on the so-called good practices are established, they could be used as a basis for continual assessment of performance, and, in particular, as a target plan for the improvement of effectiveness.

The system of balanced indicators serves the following purposes: a) to assess the degree to which the municipality achieves its strategic goals with regard to a specific service; b) to assess the utility rate of the services rendered by the separate municipal properties belonging to the portfolio for the meeting of specific needs; c) overall assessment of the properties in terms of their utility measured through their contribution to the general results; d) assessment of the quality and competence of management at the level of property and portfolio of properties and the identification of the means for raising the quality and competence.

The system of balanced indicators in the scorecard should ensure indicators for each of the following four aspects which have their specific features.

**1) *Financial indicators***

They are used to measure the economic consequences of actions which have already been taken. They are measured within the framework of the concrete budgets for municipal services: estimating the discrepancy between the planned and actual indicators; comparing the spending on a municipal service with the standards in the same area or the expenditure level of similar municipal services; the evaluation of the value added to municipal services. For instance, the following may be deemed appropriate as indicators: absolute and relative profitability, return on investment, level of excess expenditure, etc.

**2) *Customer-related indicators***

They are related to the measurement of customer satisfaction, the level of compliance of the service with customer requirements. In this respect they include the assessment of the so called “economic added value”, which reveals strategic rather than financial benefits.

**3) *Indicators targeted at internal organizational processes***

These indicators are targeted at clarifying the requirements for the use of resources (for instance, the average time needed to perform a task compared to the overall time, result per employee, use of assets), for the provision of indicators measuring the comparability of the different projects, the assessment of the share of the projects which have been successfully completed (within the envisaged time limit, budget and quality). Also they include the indicators of the project risk, the quality of the projects, the satisfaction of team members, and others.

**4) *Performance indicators***

They are targeted at the assessment of the performance of the service, for instance, the number, cost per unit of services.

One of the principles connected with the application of the balanced scorecard for assessment, suggests paying more attention to the cause and effect relation between the indicators. In the development of a balanced scorecard specific for the portfolio of municipal properties, the following recommendations must be taken into account: a) the balanced indicators must arise directly from the

strategic goals and must be adaptable to change; b) the selection of indicators must take account of the past, present or future operational and strategic goals; c) the system of balanced indicators must be consistent both within every category of property and within the overall portfolio of properties; d) the indicators must allow aggregation to the point of reaching a generalized single indicator, through which the general effectiveness of each property and the portfolio of properties can be assessed.

An important element of local financial policy is the available system for the management of municipal services which gives a full and fair picture of the invested resources, measures the efficiency of their use, and provides opportunities for the assessment of the effects achieved by the rendition of services.

The system for the management of municipal services must include the indicators for the measurement and assessment of each one of the three stages of the rendition of a service – need/demand (for instance, households that have to be serviced, roads that have to be maintained, streets that have to be cleaned), invested resources (general funding), results (for instance, repaired streets, collected household waste, supplied water, constructed sewerage), as well as indicators to measure their ratio.

The indicators for the efficiency and effectiveness of municipal services comprise a set of ratios which represent the financial state of the services:

- Efficiency = result / needs (it measures the degree to which certain goals, results or products specified in advance have been realized).
- Effectiveness = results / resources (it measures the degree to which resources are transformed into results / products).
- Correlation between efficiency and effectiveness = effectiveness x (resources / needs).

Higher effectiveness is achieved through raising labor productivity, the introduction of new methods and labor organization, the introduction of contemporary equipment and facilities which is invariably connected with achieving better results and reaching the set goals, that is, with raising efficiency. The increase of the ratio between the input resources /needs and/or the effectiveness leads to an increase of efficiency (the ratio results/needs) if the other component of the equation is not decreased. The increased effectiveness may enhance efficiency; the ratio between the input resources /needs remains unchanged.

The managers of the units for services often face the challenge of boosting efficiency in the conditions of growing needs, which results from a growing population or the territorial expansion of the region which is being serviced. Unless the resources are invested at a rate which exceeds the growth rate of such needs, that is, unless this rate corresponds to the growth of effectiveness, efficiency cannot be boosted. Therefore even though the ratio between the resources / needs cannot measure the performance, the directors of the respective units must observe and use this ratio.

### Concluding remarks

In order to improve the monitoring of properties, in accordance to different purposes and also to support the decision making procedures of the municipality bodies that deal with municipal real property management, appropriate tools have to be developed to classify municipal properties and to evaluate the economic performance of properties. They need to be based on a comprehensive system of indicators and criteria for municipal real property, adapted to the strategic goals of the administrative authorities.

The present proposals for the evaluation of the economic performance of municipal properties are both based on the previous MCA technique and are aiming to satisfy diverse objectives of the municipal management:

- They provide the management bodies the necessary synthetic information regarding property costs and revenues;
- They allow the assessment costs for the municipal budget and external costs;
- They enable the individual assessment of the economic performance of municipal properties for single evaluation and group comparison, as well. Thus, the method can be used both for individual evaluation of properties, and for comparisons between properties when the selection is necessary for sale/renovation/usage change, etc.
- They create a benchmarking system in order to compare the economic performance of different municipal real property entities.

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