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Table of Contents

Book of Abstracts

1. The impact of physical, living environment and socio-economic environment factors on residential satisfaction 6
2. Interdisciplinary approaches towards sustainable solutions to the problems of interactions between psychological processes underlying human behaviour and built environment 7
3. Home ownership in Slovenia: Searching for an alternative theory on the excessive growth of the tenure 8
4. Exploring Policy Options to Combat Illegal Microapartments in Hong Kong 9
5. MultiMap as a method for strategic planning – tool and practical results 10
6. Urban Mentoring as a new polish management technique in participatory planning 11
7. Economic evaluation of the methods of compensation payment for agriculture production in the area dry flood waters detention reservoirs 12
8. Organisation and management of refugee campuses across Europe in the light of the refugee crisis 13
9. Prediction trends of property prices in different economic, social and cultural environments: case of Slovenia, Greece, France, Poland and Norway 14
10. Attachment and satisfaction of elderly people with their housing and living environment 15
11. Financing of real estate investments in Bulgaria – problems and opportunities for diversification 16
12. Lowry-like models and migration flows structured by age cohorts to evaluate the potential housing market 17
13. Characteristics to be brought from early design and construction to create value for User and Owner of buildings in the long user phase 18
14. Management with financial risk companies in the branch of real estate 19
15. Management of water infrastructure owned by the local community and the state 20
16. Energy retrofitting of heritage buildings 21
17. Access over ownership: the case of meeting facilities in Lyngby Knowledge City 22
18. Analysis of potential for deep renovation of residential buildings based on energy performance certificates 23
19. Perception of Slovene cities 24
20. Facilities documentation assessment by construction site managers 25
21. Deinstitutionalization and Age friendly Urban Transformations 26
22. The importance of integrating spatial plans in the real estate cadastre – experiences in Serbia and Slovenia 27
24. Formation and application of priority categories in the process of allocating social housing by the Housing fund of the Republic of Slovenia 29
25. Opportunities and challenges of a building land record in Slovenia 30
26. Protecting the environment and distribution of drinking water give us from year to year an increasingly bigger challenge of global significance 31
27. Design in architecture 32
28. Housing policy in Slovenia and solving the housing problems of young people 33
29. Regression modeling of impact factors on real estate value 34
30. Planning Capacity of Facilities for Seniors Dependent on a Help of Others in Slovenia 35
31. How do Real Estate (RE) and Facilities Management (FM) create value for owners and users of commercial and public sector buildings? 36
32. Land valuation in case of easement 37
33. Determinants of SME allocation in the suburban area – evidence of The Gdansk Metropolitan Area 38
34. Housing rights of seniors in the process of deinstitutionalization 39
35. Assessing Sociotechnical System under adaptable robotics in petroleum pipelines performance 40
36. Analysis of the impact of flood events on the real estate market in two case studies – Ljubljana, Slovenia, and Boulder, Colorado, USA 41
37. Sustainable Land Valuation Model within the Land Capture strategies in PPP for Transport Infrastructure 42
38. Spremljanje stanja stavbnega fonda za pripravo trajnostnih politik 43
39. Spatial Dispersion of Housing Units as an Important Factor Influencing Long-Term Care Operational Costs 44
40. Exploring Dominant Logics in FM and RE 45
41. Acquiring information from available data on buildings using artificial intelligence methods 46
42. The impact of energy efficient building on real estate value 47
43. Property management and means-end chain analysis 48
44. The influence of the legislation on the design and performance of a heating system in Slovenia, Norway and Kosovo 49
45. Innovative Eco Cyber Built Environment as a Building Block for a Sustainable Society 50
46. Modeling the Impact of Real Estate Taxation and Municipal Revenues on Dynamics of Internal Migration 51
47. Improving energy efficiency of existing buildings in Norway through regulatory and financial incentives 52
48. How far and how close are the Republic of Slovenia and the Republic of South Africa in relation
to the consumption of public finances 53
49. Assessment of mass real estate valuation from different groups of respondents from Slovenia 54
50. Regional center for waste treatment CERO Nova Gorica: The importance of awareness of the
public about the benefits and the planning of environmental projects 55
51. Information-management support in marketing of real estate - between theory and practice 56
52. Anticipation of Geohazards in Urbanistic Regulation 57
53. Increase of satisfaction of internal and external stakeholders in the company Mariborski
vodovod, PS, JSC 58
54. Indoor air problems in district heated houses 59
55. Facility service excellence – innovative patient environments 60
56. Valuation of real Estate Using Real Options 61
57. Demographic drivers of social infrastructure 62
58. Urban renewal densification: Improved sustainability of more speculative profit? 63
59. Albanian approach on Service Level Agreement within Facility Management based in European
standards 64
1. The impact of physical, living environment and socio-economic environment factors on residential satisfaction

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The purpose of this paper then is to investigate the impact of physical, living environment and socio-economic environment factors on residential satisfaction. We understand residential satisfaction as a complex term as its precise meaning depends on the place, time, and purpose of the assessment and on the value system of the assessor, involving an extensive range of people: architects, planners, sociologists, psychologists and urban geographers. Further we look closer to each variable within the eliminated factors regarding to demographic characteristics of the participants (age, family status, location of living, monthly expenses for resolving housing problem). 1,006 Slovene participants took part in the survey. The results showed that Slovenian participants express the highest satisfaction linked to physical factors, which may means that construction execution in Slovenia is good, exciting and architecturally appropriate. According to residential satisfaction and demographic characteristics they expressed a number of significant differences regard to where they live (location). On the other hand, the lower expressed satisfaction with the living environment factor (proximity of infrastructure) shows that it is necessary in this area would need more effort. We believed these factors are critical to an understanding of why one area turns into problem neighborhood while another does not, though they are both of the same urban planning type. From a practical point of view, we argue that this study can be used by the local authorities as a diagnostic tool to identify areas where specific improvements are needed and to pinpoint aspects of housing satisfaction that require attention.

Keywords: residential satisfaction, physical factors, living environment factors, socio-economic factors, neighbourhood, residential environment
2. Interdisciplinary approaches towards sustainable solutions to the problems of interactions between psychological processes underlying human behaviour and built environment

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In comparison of the relations between human and natural environments that have been a central focus of environmental psychology for many years, the interactions between psychological processes underlying human behaviour and built environment have just recently regained the research interest. In the paper, we first discuss the reasons of slower development of the human – built environment relations. Afterwards, we systematically review the impact that research of environmental stress, namely, poor housing and poor neighbourhood quality had on contemporary understanding of human – built environment relations. It is shown that substandard quality of the house, high noise, lack of natural light in the house, poorer physical quality urban neighbourhoods, living in a low-income neighbourhood etc. are linked to elevated physiological and psychological stress. Despite these evidences, there is still a gap between building designers and building users in modern industrialised societies, which might deepen the tenants’ unsatisfaction of specific behavioural needs and consequently lower their psychological well-being and health-risky behaviour. In order to prevent such processes, we suggest the initiation of various design approaches that promote well-being and healthy behaviour in buildings. We focus on social, biophilic as well as evidence-based design. We propose deeper psychological engagement in correlations with human behaviour, psychological well-being and society. We highlight the inclusion of psychologists in interdisciplinary research teams addressing the development of sustainable solutions to the issues of residential environments.

**Keywords:** sustainable solutions, psychological processes, human behaviour, built environment
3. Home ownership in Slovenia: Searching for an alternative theory on the excessive growth of the tenure

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Recent studies generally show growing levels of home ownership across Europe. However, a comparison of statistical data shows a stark difference in the size of the sector between the Western European (WE) countries and Central and Eastern European (CEE) countries. With the exception of Norway, all CEE countries have much higher home ownership levels than those of the WE countries. And while the development and growth of the tenure in WE countries has been well-debated in the scholarly literature and various theories advanced, its strong dominance in CEE has been barely examined. Due to a lack of a thorough academic discourse on the topic, there thus continues to be a void in the literature, which is manifested in the absence of a sound and valid explanation for the excessive growth of the tenure in the post-socialist countries. This paper attempts to contribute towards filling this gap. We depart from the hypothesis that the theories that have been previously developed to explain the growth of home ownership in WE countries (long-time capitalist economies) might not necessarily apply to situations in the CEE countries (previous communist, state-planned economies). We focus on, and utilise the case of Slovenia to investigate the nature and key developmental characteristics of the home ownership tenure in the country (90% of the total housing stock according to the 2011 census). We start by reviewing and examining the relevance of the home ownership theories that have been previously suggested in the literature by Western European scholars. In the second part of the paper, the discussion is orientated towards considering other possible theories, including country-specific explanations, which may have played a major (or significant role) and continue to be instrumental in the ever-growing preference for home ownership in Slovenia. The final aim of the paper is to lay a foundation for the advancement of some viable theoretical explanation that may help us to better understand the causes of the excessive growth of the tenure. Such knowledge may, in turn, be helpful in the formulation of policies to address the problem, intended to achieve a more appropriate tenure structure. It is also hoped that the theoretical framework thus developed would provide a useful premise for future academic discourses on the subject.

Keywords: home ownership, communist political system, housing policy, self-help construction, family house, Slovenia
4. Exploring Policy Options to Combat Illegal Microapartments in Hong Kong

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Building illegality can take more forms, including squatter settlements and illegal building extensions. Among different forms of building illegality, illegal microapartments (IMAs), which take the forms of unauthorized subdivided housing units, have recently aroused wide public concern in Hong Kong. On account of their unlawful nature, IMAs pose serious threats to the safety of the local communities by undermining structural stability and fire safety of the buildings. They may also adversely affect the natural lighting and ventilation for the building occupants. Fatal fires in buildings with IMAs in recent years have demonstrated the painful consequence of ignoring the issue in the city. Nonetheless, the problem of IMA has seldom attracted scholarly attention around the world. In light of the seriousness of the IMA problem in Hong Kong, this study aims to explore workable policy options to crack down on the problem. Policies or proposals in different jurisdictions to crack down on IMAs are reviewed. Then, a three-round policy Delphi study is carried out with an expert panel to identify and prioritize policy options for combating IMA in Hong Kong. Different measures ranging from increasing the frequency of building inspections and imposing heavier penalties on non-conforming owners to licensing microapartments for private renting are proposed or identified by the experts. Among these options, stricter enforcement is considered the most workable option. The results of the policy Delphi study are discussed and policy recommendations are made.

Keywords: private renting, building control, microapartments, policy Delphi, illegal housing, unauthorized building works, Hong Kong
5. **MultiMap as a method for strategic planning – tool and practical results**

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The objective of the paper is to present results and experience using multiMap method. This is a tool for mapping performance of building portfolios, such as technical condition of buildings, adaptability, usability etc. to as an input to strategic planning. MultiMap was developed in 1997 in cooperation with Oslo Municipality who at that time had a building portfolio of app 4 million m². The model has so far been used for strategic portfolio analysis of approximately 30 million m², mostly hospitals and buildings in the municipality sector. In addition, it has also been adapted to cover other types of infrastructure, such as roads and nautical installations along the total coastline of Norway. This paper presents findings real life projects, improvements and practical use of results and possible new areas to be developed.

The methodologies used in the model are both qualitative and quantitative research methods. A substantial part of getting information to the model is based on structural collection of data and knowledge already present in the actual organization. This gives quick and cost efficient access to information at required level of accuracy. The results and experience of the practical use show that the model is generic and can be implemented in other areas than buildings such as strategic development of urban areas. Practical outcome will be a better possibility to see buildings and space/areas between as an integrated facility management puzzle. The research is important to increase the understanding of value creation for owner’s and user’s perspective and consideration in early design phase.

**Keywords**: building portfolios, property management, facilities management, multiMap, strategic analysis
6. Urban Mentoring as a new polish management technique in participatory planning

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A decade of experience in implementation of numerous urban modernization projects in Poland resulted in a lively debate on socialization of the planning process, in which the matter of the public space quality has become the center of gravity. In those years, transformation from the classic administrative model of „bureaucracy planning” to the model of „management planning” has not been complete. The socialist primacy of the public interest in planning has been replaced by a neoliberal, progressive privatization of the public space and of the urban functions, which in reality means dominance of strong private investors’ interests over the local community. The modern National Urban Policy adopted in Poland in 2015 introduces legal bases for corrective reforms of the system, allowing the next step – entering the next phase of building another participative model of city management. This important political decision aimed at introduction of the rules allowing realization of modern developmental concepts, i.e. SMART CITY, faces numerous barriers associated with too low competencies of building a social consensus based on modern urban planning knowledge. The article describes experience gained through implementation of the “Quo vadis Gdansk? The residents plan their city” project involving participatory, strategic planning for improvement of the public space quality in the districts Gdansk. The innovative technique of cooperation between the planners and the local community – urban mentoring – has been an answer to the major contemporary need for modern methods of cohering (balancing) the knowledge about cities. Finding the middle ground between the primacy of public good and the private capital gain allows development of a predictable and reliable situation, lowering of the investment risk, prevention of destructive speculative practices. Urban mentoring facilitates formation of the platforms of permanent and satisfactory compromise for all the parties involved, based on conciliatory cooperation of the urban planning process’ participants. A reflection on the possibilities of applying the results of planning using the above mentioned technique for creative cooperation of the public sector with the local entrepreneurs and with external private investors constitutes the summary.

Keywords: participatory planning, urban mentoring planning model, quality of urban public space
7. Economic evaluation of the methods of compensation payment for agriculture production in the area dry flood waters detention reservoirs

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After the implementation of the spatial plan planned construction of the dry detention reservoir for flood waters Brdnikova will the frequency and magnitude of flooding of agricultural land change. Economic consequences as is loss of income on arable and pasture land are expected. The aim of the research was to elaborate evaluation of the different methods of compensation payment, based on estimated economic impacts of floods, which will allow the investor to make transparent decision on selecting a proper system. We prepared three proposals for compensation schemes: (1) the land under permanent occupation (dams, levees, channels, etc.); (2) the land under temporary occupation during the construction of reservoirs; (3) the land in the area of occasional occupation (within retention spaces). Within the latter, we prepared four compensation types: (a) a single payment, (b) annuity, (c) the payment after the loss event; and (d) the purchase of land. The decision on the selection of the most appropriate form of compensation is multi-layered. Each of the systems brings both the investor and landowners certain obligations as well as benefits. Calculated single payment (82,000 - 140,000 EUR) is very favorable option and competitive to annuity for 40 years of land utilization (98,000 to 136,000 EUR). In addition, annuity allows the investor determine conditions for producers to obtain annuity to the fulfilment of certain agri-environmental conditions. The purchase of land is very suitable option for the investor but requires a lot of financial resources (710,000 EUR). Payments upon the occurrence of a loss event provides the most realistic assessment of the damage and may be during the four decades highly variable (from 21,000 to 140,000 EUR). It also brings additional obligations like restoration of agricultural land and also neglects drop in value of land in the property market. In the case of a decision for the annuity we suggest that the money for the annual annuity (2.500 - 3.500 EUR) is provided in form of a duty which should be paid by landowners whose land value has increased due to greater flood safety.

Keywords: agriculture land, compensation payment, detention reservoir, flood waters, economic impact
8. Organisation and management of refugee campuses across Europe in the light of the refugee crisis

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The purpose of the paper is to outline and examine the internationally recognised standards for refugee centres and compare as well as evaluate those focusing on the European refugee crisis. According to UNHCR, shelter is a vital survival mechanism in times of crisis or displacement. It is a key to restoring personal security, self-sufficiency and dignity. The key issue is to examine how were different European countries able to cope with such high numbers of refugees in a short period of time, and consequently the difference in their organisational and management techniques of refugee centres. This research paper will focus on theoretical approach, examining the already existing literature from this field, from newspaper articles, think thank organisations, scholarly work, to official governmental websites. The paper will present the differences in responses to European refugee crisis. The research paper is original as it is the first of this kind. It will also present and outline the so-called best practices.

Keywords: refugee crisis, refugee camps, UNHCR shelters/centres standards
9. Prediction trends of property prices in different economic, social and cultural environments: case of Slovenia, Greece, France, Poland and Norway

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Based on the current trend of real estate prices, we predicted trends of residential real estate prices with mathematical method VaR. The research based on residential real estates in the main cities of the different economic, social and cultural environments: Slovenia, France, Greece, Poland and Norway. In the case of Slovenia we investigating expected changes of real estate prices with the survey. Our research based on two questions: "Is it expected volatility of real estate prices in observable environments different?" and "Are the expectations of interviewees about real estate prices in Slovenia statistically different regarding to predicting real estate prices with the mathematical method VaR?" and two hypotheses: "The estimated volatility of house prices in selected environments is different. "and" Expectations of interviewees about real estate prices in Slovenia are statistically different as predicting real estate prices to the mathematical method VaR." The basis of the mathematical VaR method is a standard deviation, of which we can predict the movement of real estate prices. The basic set is represented by the data on the price of residential real estate in major cities of selected economic, social and cultural environments in the period from June 1995 to September 2012 for Slovenia, from December 2002 to June 2012 for Poland, from March 1999 to June 2012 for France, from March 1997 to June 2012 for Greece, and from March 1992 to September 2012 for Norway. In the case of Slovenia we used questionnaires to investigate the expectation of prices of real estates. In the research we used a survey compromised of 1210 interviewees who completed a questionnaire over the Internet. Data obtained, from the survey, was processed with statistical program SPSS. According to the calculations of VaR method is provided volatility of residential real estate in the observed environments different, but everywhere is negative, so we the first hypothesis confirmed. In the short-term it will the least decrease prices of residential real estate in Greece, in Athens and other cities, the most in Poland in Warsaw and in major cities. Even in the long term they will be reduced at least in Greece and Athens and other cities, the most in Poland in Warsaw and in major cities. The second hypothesis was unable to fully confirm. We confirmed it only in the case of long-term development of real estate prices. In the long term, the predictions about the development of real estate prices with VaR method differ the expectations of interviewees. The majority of interviewees expects a long-term stabilization of real estate prices, the method VaR predicted further decline. In the case of short-term development of real estate prices, the second hypotheses, we could not confirm. In the short-term, VaR method foresees a minor decrease of real estate prices, moreover, interviewees as well anticipate that the prices will decrease slightly.

Keywords: VaR, Real Estate, survey, Slovenia, Poland, Greece, Norway, France, prices of residential real estate
10. Attachment and satisfaction of elderly people with their housing and living environment

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The right to housing is a basic human right. Housing has many characteristics, both physical ones (size, infrastructure, etc.) as well as others that are more difficult to measure (location, access to services, friendly relations in the neighborhood, etc.; Mandič, 1999). Housing therefore makes possible the satisfaction of physical, psychological, and social needs. According to Björn Hårsman in John M. Quigley (1991), housing therefore has the status of the most complex asset, due to which it is impossible to encompass all of its meanings in relation to an individual, as Srna Mandič (2011) determines. Attention was already drawn to this by Peter Marcuse (1987, 232) with his definition that “housing is more than just housing.” Housing is therefore a “physical and social space that individuals control, in which they express their personal identity, privacy, and safety” (Saunders, 1990: 39). As such, it is referred to as a home. The relationship of individuals to their housing or home changes during their lives. It especially receives great importance during old age (Mandič 2011). From this perspective, we were interested to which extent the elderly in Slovenia are satisfied and attached to their housing and the living environment in which they live. For that reason, a survey was conducted among the elderly in Slovenia. Sample comprised 930 people aged 50 years and over. As we expected, the results showed that elderly people are very attached to their home or the home environment; they are satisfied with it. Nevertheless, there are some differences among the elderly, for example in relation to the different environments in which they live (urban vs. rural), according to different age groups (generations) of the elderly, according to type of housing unit they live in (house vs. apartment) and duration of stay. However, as shown by statistical analysis, these differences are negligible. Elderly people should therefore be able to stay in their home environment as long as possible. Living in one’s own home has many positive effects, especially in the well-being and physical and mental condition of elderly people. As stated by Jordana Maisel et al. (2008), studies have shown that independent living promotes successful aging by improving health, life satisfaction and increases self-esteem of older people, which may prolong transition of elderly people into institutional form of housing. Ageing at home and ageing in in place is therefore the most desirable form of residential living of the elderly.

Keywords: population ageing, housing, satisfaction, attachment to place, ageing in place, ageing at home
11. Financing of real estate investments in Bulgaria – problems and opportunities for diversification

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Firstly, the report sets out the factors that determine the effective financing of real estate investments. Particular attention is paid to the dynamics of deposits and loans in the banking system, since they are the main source of financing. The main idea of this report is that investors should overcome the traditional approach to financing real estate investments /own capital and mortgage bank loan/ and move towards using more sources of financing, i.e. financing diversification. It is indicated that the combination of more sources has a beneficial effect on the volume, cost and risk of financing. The process of diversification of financing is defined quantitatively through methods of mathematical modeling.

Keywords: investment, financing, diversification, mortgage loan, real estate, return on investment, cost of financing
12. Lowry-like models and migration flows structured by age cohorts to evaluate the potential housing market

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According to the European Commission’s Ageing Report 2015, the age structure of the EU population will change strongly in the coming decades, due to (a) the dynamics in fertility which is expected to remain below the natural replacement rate, (b) increasing life expectancy, and (c) intensive migration. Europe is ageing and these changes will influence European housing markets. Slovenia shares the fate of other EU Member States. While the natural replacement rate in EU regions and life expectancy can be forecasted with a small relative error of estimation, migrations are less predictable. With the awareness of the rapid ageing of the European population, our main study is focused on the changes of migration flows due to the rapid changing of age structures. The Gravity Model is widely used in the analysis of migration flows in the USA and other continents, but less in Europe. Lowry-like models are a special, dynamic interactive case of gravity models which particularly emphasize spatial indicators due to investments in industry and services, but are less appropriate for studying commuting and migration of older cohorts. We introduced an asymmetric approach and normalization to the gravity model to better understand significant indicators. Therefore we shall present the basic analysis of the indicators that influence the attractiveness and stickiness of regions in general, while a detailed analysis of attractors will be provided by an in-depth analysis of these indicators regarding age cohorts. Thus the EN_SIM method of migration developed by Drobne and Bogataj is applied separately on the age cohorts and later presented in the age structures. Spatial statistics is explored by a GIS tool for a more precise elaboration of the potential housing market. The final results of this analysis show how ageing affects the importance of Lowry’s main factors. The higher the average age of the population the lower Lowry’s main exponents of the gravity model.

Keywords: Lowry-like model, age cohorts, housing market
13. Characteristics to be brought from early design and construction to create value for User and Owner of buildings in the long user phase

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The objective of the paper is to present parts of the findings from research project “Oscar – Value for User and Owner of Buildings”. The main intention of Oscar is to develop competences, methods and analysis tools for optimizing building design to contribute to value creation for owner and end-user throughout lifetime. This paper presents Oscar project’s findings regarding how users of Hospitals, Offices and University buildings perceive value and which design elements can contribute to higher value creation for users. The methodology is based on both qualitative and quantitative research methods. Different approaches such as literature review, case studies, questionnaire interviews, survey and workshops has been applied for collecting data through several work groups, master – and bachelor thesis. The research has its focused on three main types of building; Hospitals, Offices and University buildings. The results reveal that although value is known to be a personal perception, there are certain functional and emotional elements and design criteria that can be decisive in whether users are satisfied with the buildings or not. The research also shows the potential for improvements in different processes during the project like user involvement, regulations and decision-making. The results of the studies will contribute to better understanding of user value and what should be taken into consideration in design phase in order to increase value creation in projects. The research is important to increase the understanding of value creation for owner’s and user’s perspective and consideration in early design phase.

Keywords: value creation, competence, lifetime, early design phase
14. Management with financial risk companies in the branch of real estate

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Nowadays, in most Slovenian companies the management board does not ensure a suitable procedure for risk monitoring that every company has to face during its operations. Also, many companies from industry of real estate and construction have not yet adopted adequate measures to manage these risks and have not established an effective organizational system regarding internal control for all areas of business operations. And this despite the fact that the financial crisis that took place in Slovenia in year 2008, really affected mainly industry, construction and real estate. But without the development of the construction industry in the future, there will not be the development in the transport sector, which would allow the construction of new roads and railway lines, and therefore also the real estate market will not grow. The real estate market will not be calmed down, at least until there will be available not sold apartments and other real estates, that were built before the economic crisis. According to the slow bankruptcy procedures, in which they found themselves investors of dwellings, we can expect that this situation will continue for another few years. Since the financial risks are those that can certainly be associated with the greatest potential losses of a company, one of the aims in this article is to demonstrate how real estate companies should manage financial risks, including market and credit risks. Also, an important purpose of this article is to present in a practical way how executives should relate to financial risks, as well as how to measure and manage them. The goal is also to produce an analysis of the possible policy areas concerning the company’s financial risk management, which may be generally applied by every Slovenian corporation. The latter must elaborate a detailed analysis tailored to its type of business operations and its exposure to specific types of risks. For each type of financial risk, we first give a description and effects of the specific risk, followed by the priority and the level of debt, also emphasizing possible procedures for managing each risk. Moreover, in this article we discover that the recommended measures for managing a company’s risks, such as: equity, foreign exchange, liquidity, interest rates and credit risks are the backbone of the management board to take decisions and to involve in the process certain individuals or organizational units whose task is to apply sectorial policies concerning financial risks that various companies are exposed to. Nonetheless, the individuals in charge of a company’s risk management can refer to this chart overview, which displays specific types of financial risks caused by inefficient risk management, and an examination of practical approaches for containing these risks.

Keywords: financial risk management, market risk, credit risk, internal controls
15. **Management of water infrastructure owned by the local community and the state**

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The conflict of interest, which arises from the transfer of water infrastructure in the ownership of local communities, in certain levels of decision-making grows into an unenviable situation. This situation stands out both in terms of uncontrolled spending of allocated funds as well as the relationship between the owner and operator of public infrastructure. The first to react is the state, which causes this situation with the adopted legislation and at the same time limits resources for local communities, which depend on the appropriate consumption per capita. When adopting the law, which is the reason for the transfer of water supply infrastructure, no one was thinking that it would be necessary to separate the legal and accounting aspects of public infrastructure. Public services function on the principles of efficiency, quality, and most importantly, cost. This is required from the public infrastructure manager by the state, the owner, and by the most important factor in the chain - the user. Most managers of public infrastructure fights for the full power, but local communities generally do not practise it, since the force upon the management of cash flow is too strong. The fact is that managers of public infrastructure would spend the money with purpose; how it is spent in the hands of local government, it is only a matter of the current situation. In communal services we therefore establish that these resources are used to some extent unintentionally, but the manager of public infrastructure is obliged to pay the rent for it to the local community. We do not claim that this is happening everywhere, as the functioning in this area depends on the current local authorities. We know that this way major economic damage is caused to the public infrastructure. The current situation requires immediate action by the Government of the Republic of Slovenia, ministries and the Court of Auditors.

**Keywords:** public service, public service providers, local community, water treatment levy, public infrastructure
16. Energy retrofitting of heritage buildings

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In the forthcoming years energy retrofitting of existing buildings will be one of the main tasks in EU and also in Slovenia. Energy retrofitting of heritage buildings requires a special approach because they are usually submitted to a set of protective measures. These rules inevitably restrict the use of viable energy retrofitting measures. This is understandable, because potentially, we can achieve good energy performance of buildings by using modern building materials, technologies and integral control systems but can at the same time irreparably alter the appearance of a heritage building. Building restoration process is a cross-disciplinary task involving a series of professionals from various fields. This paper investigates the effects of various energy efficiency measures on energy performance of cultural heritage buildings. The goal of the study is to carry out a systematic and comprehensive overview of the efficient implementation of energy retrofitting measures in heritage buildings with respect to historical value, efficiency and sustainability. The measures are divided into three main groups, e.g. interventions into the building tissue, mechanical equipment and operation control. Special attention is given to new methodical approaches that began to evolve in the recent years. The results show that the debate about energy retrofitting of heritage buildings in the recent years has intensified. This is also reflected in the number of published studies dealing with his issue. Heritage buildings undoubtedly present a large potential for reduction of energy use. Some studied cases prove that although protected, heritage buildings can achieve good energy efficiency levels. For a realistic energy retrofitting non-invasive and discrete energy efficiency measures are most often recommended. Even though sometimes not optimal, these measures still offer substantial energy use reductions and ensure sustainable building operation. Ultimately, the goal of the building preservation should not merely be about conserving but rather a restoration that supports a quality, contemporaneous living conditions through buildings' function and also financially sustainable operation.

Keywords: heritage buildings, energy retrofit, energy efficiency, user comfort, control systems, methodological approach
17. **Access over ownership: the case of meeting facilities in Lyngby Knowledge City**

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Collaborative Consumption, access economy or the sharing economy are all terms describing the new fast growing business built on the sharing of resources and promoting access over ownership. It is a paradigm shift that has made it to the Times magazine list of the “10 ideas that will change the world”. Within this overall paradigm, shared space, is also gaining grounds. The purpose of the study is to investigate the attitude towards shared space in an urban context with a particular focus on meeting facilities. To what degree is there an interest in sharing meeting facilities within a city or a municipality? The Lyngby-Taarbæk City of Knowledge is used as case, as this strategic collaboration on municipal level includes a vision of sharing facilities to stimulate regional development. The attitude towards shared space in the Lyngby-Taarbæk City of Knowledge is studied in a three-step qualitative research process. The first survey investigates the City of Knowledge’s members attitude towards shared space in general with questions like, what are you most likely to share with others? And what would you like to gain access to? A workshop further explored motivations and practical needs. The second survey investigates in particular the attitude towards shared meeting facilities. The Brinkø Typology of Shared Use of Space and Facilities is used as the theoretical frame of the study (Brinkø et al 2015). This study show that the members of the Lyngby-Taarbæk City of Knowledge collaboration are very positive towards the concept of shared space, but more reluctant about sharing own facilities. A majority of the informants are often using externally owned facilities for meetings and events, and they prefer professional meeting facilities to schools, universities and sports facilities. This point to the need for buildings owners/operators to develop relevant service concepts, if a shared space strategy, should increase the use rate of existing buildings. The study show that in the Lyngby-Taarbæk City of Knowledge there is a positive attitude towards shared space as concept and as local strategy for gaining access to e.g. meeting facilities. The survey also demonstrates the member’s experience of barriers, which suggest that there are practical barriers to overcome before access is more important than ownership, not only in theory, but also in practice.

**Keywords:** Facilities Management, property management, space management, shared space, sharing economy
18. **Analysis of potential for deep renovation of residential buildings based on energy performance certificates**

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In 2015 Slovenia adopted two main strategic documents - one in the field of nearly zero energy buildings (nZEB) and the other in the field of energy renovation of existing buildings. Action plan for nearly zero energy buildings gives the national technical definition of nZEB, the necessary steps for promotion of early nZEBs in new buildings and in renovation as well as intermediate targets for nZEBs before the end of the year 2020 (2018 for public buildings), when nZEB shall become obligatory. According to Long term strategy for (energy) renovation of existing buildings by 2030 almost 26 million m² of building floor area has to be substantially renovated (i.e. 1.3 – 1.7 million m² annually), one third of that in nZEB standard. Following to the Directive 2010/31/EU and the national Energy Act the buildings, when sold or rented out, are obliged to obtain an energy performance certificate (EPC), which gives the information on its energy performance and lists recommendations to increase the building’s energy efficiency by the implementation of cost effective and technically feasible renovation measures. In the period 2013-2015, in Slovenia over 28,000 EPCs were issued (77% of them for residential buildings) and linked to the national real-estate registry. When the building is sold it is most likely that the new owner will implement comprehensive renovation works (i.e. improved thermal envelope, substantial refurbishment of installations, increase of the share of renewable energy sources). Deep renovation of existing buildings thus leads to significant improvement of building energy performance, at least in line with the building codes, but also beyond, in line with nZEB criteria. Specific situations, like protection of building heritage, previous partial renovation or inability to use renewables due to local energy supply policy, decrease the potential for deep (energy) renovation of existing building stock. The paper initially explains the vocabulary of EU legislation; i.e. the expressions such as comprehensive, deep and cost-optimal (energy) renovation as well as nZEB renovation of existing buildings are explained in technical terms. Further on the technical potential for deep renovation of the building stock is investigated based on the recommended measures in energy performance certificates (thermal envelope, energy systems, renewables), and based on the building envelope age and energy performance indicators. Finally, the model of the national building stock was prepared to enable the analysis of (a) potential for deep renovation of the existing building stock, expressed by final and primary energy savings as well as reduction of CO₂ emission and (b) feasibility of the nationally committed targets on deep and nZEB renovation.

**Keywords:** deep renovation, energy performance certificate, recommended measures, nearly zero energy building, building stock, energy savings
19. Perception of Slovene cities

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In last decades, many cities reached a significant level of development. They began to compete among each other, so we consider them as a complex product, which has a certain value and is comparable with competitive products – other cities. Threatened as a product a city can compete in the market and becomes a matter of marketing. Cities compound of different kinds of capitals what gives them the power to compete and to gain a certain market position, all with a main purpose – inviting investors, high qualified human resources, relevant residents, entrepreneurs, financial capital, tourists and all others that contributes to city's power, image and reputation. City management realized that a long-term sustainability depends on creating a strong, sustainable and lasting city brand, based on well planned branding. Branding process creates a strong platform for establishing a unique city position on competitive market of cities. Each city has its own perceptual dimensions that influence the city perception in eyes of its stakeholders. The more these perceptions are unique and differential the stronger is the position of the city. We can treat a city as a pattern of relationships among groups of people, space of production and physical shapes. Everything depends on numerous decisions and numerous potential conflicts. Cities differ on basis how we perceive them meaning (a) what are values connected to cities, (b) attributes we can ascribe to cities and (c) how a typical visual city personality profile look like. My research, based on methodology Brand perception study, focuses on five Slovene cities and bases on relevant and quantity reliable sum of values, attributes and personality images– tangible and intangible characteristics that a stakeholder can ascribe to researched brand in comparison with competitive brands. I researched city brands of Ljubljana, Maribor, Celje, Koper and Nova Gorica. Respondents deliver their answers on basis of their knowledge about researched cities and their brands. Qualitative research shows significant differences among cities and their brands. Results told me that cities that have a more clear focus and are more communicating– did more for their assertion and identification reach a higher degree of perception and have therefore a clearer market position. On basis of my research, all the analysis and potential synthesis, I can sum up that »qualitative elements of city perception significantly influences city brand perception«. Conclusions are on one hand a scientific proof how qualitative elements influence city brand position and on the other hand, results are a clear base of city management that they direct their efforts to the points where changes, upgrades and corrections have to be done.

Keywords: perception, city brand, values, attributes, personality images, city brand position
20. Facilities documentation assessment by construction site managers

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Facilities construction is influenced by numerous factors, which increase its complexity. Therefore, for in time delivery of a facility project it is necessary to gain insight into construction site experience for construction phase related to facilities documentation. This paper analyses factors, which have impact on the valuation of the completeness and accuracy of the facilities documentation, and forecasts that valuation, depending on those factors. That can lead to acceptance of conclusions and decisions about facilities documentation improvement. Construction site managers filled out a questionnaire on 114 construction sites. First, the general regression neural network (GRNN) from the DTREG predictive software was applied for modeling the questionnaire data. 26 predictor variables were chosen to build a model for obtaining most accurate predicting of the target variable: completeness and accuracy of the facilities documentation. The importance for every predictor from these 26 was also computed. Then, one-way ANOVA was used to assess how construction managers with different knowledge about the sustainability concept assessed facilities documentation adequacy. Findings and results are the following: the predicting of target variable using the general regression neural network from the DTREG predictive software was very accurate, considering that the data are real. The mean absolute percentage error (MAPE) of the model is around 2% (MAPE=1.962). The coefficient of determination R2 for the model, which gives the global fit of the model, is around 94% (R2 =0.938). The software reported the 16 most important variables (factors) for the predicting of the target variable. Some of them are: size of the construction company, suitability of facilities locations, knowledge about sustainability for facilities, care for changes in the facilities documentation etc. Furthermore, one way ANOVA revealed that construction project managers who are well informed about the sustainability concept assessed facilities documentation as highly adequately prepared, while their counterparts who are not informed about sustainability concept evaluated the facilities documentation adequacy as average. Motivation to learn more on sustainability in construction was not related to documentation adequacy. It is concluded that it is necessary to strengthen the quality of the facilities design phase. Strengthening the knowledge base of the facilities design is a necessity in delivering high quality facility documentation. The paper results can be used for improvement of the completeness and accuracy of facilities documentation.

Keywords: facilities design, construction site managers, construction phase, documentation assessment, general regression neural network, DTREG software.
21. Deinstitutionalization and Age friendly Urban Transformations

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The deinstitutionalization of the long-term care is the main direction outlined in the recent European documents. In recent years, how best to finance livelihood, housing and long-term care for elderly had become highly topical issues. The key issue in the financing debate is how far people should fund their own living and lodging expenses and how far they should be publicly funded. To respond to this challenge, the Commission and Member States set out a number of recommendations and acts but not much has been done on the question of how to support the changes of urban structures, which are influenced by population aging. How Slovenia can follow this direction is discussed in this paper. This article provides an answer to the question: (a) what kind of housing do the seniors in Slovenia prefer after a substantial decrease of their functional capacities, i.e. when they already need long-term care services, (b) what are the possible solutions and (c) how to finance them. We found that the construction of housing for seniors can be developed in different types of structures and that there is a substantial gap between the needs and the availabilities of housing arrangements in Slovenia, which also increases the rigidity of the Slovenian housing market and reduces land rent in comparison with USA and Western Europe. Seniors using long-term care services provided by municipalities in their own homes, living outside the main Slovenian central places, were included in the survey. To identify the preferred structure of the built environment for seniors we organized 3 groups of interviews with assisted living inhabitants from three Slovenian municipalities and evaluated the percentages of each desired type of housing and care. The available financial sources have been analyzed and the way how to realize the wishes of seniors have been evaluated and structure of possible sources presented. The study could give different results in the case of metropolitan areas, e.g. for the case of Ljubljana or even for Maribor, but the general directions stay the same.

Keywords: housing for seniors, assisted living housing facilities, ageing in place, homecare
22. The importance of integrating spatial plans in the real estate cadastre – experiences in Serbia and Slovenia

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One of the strategic objectives in all of the countries is balanced sustainable spatial development following planning and realization programs in this field. Any interventions in the space have to be implemented in line with the legislation and planning regulations. One of the most important conditions for realization of spatial planning regulations is clarification and determination of property rights related to the land and real estate in general at the location of the foreseen spatial intervention. The Real Estate Cadastre, as a unique register of real estates and property rights in Serbia, is the fundamental information infrastructure for the transparent and correct realization of spatial planning documents. In Slovenia, this crucial information infrastructure is separated into the cadastres (the Land Cadastre and Building Cadastre) and the Real Estate Registry. In both countries, modern alphanumerical and graphical databases of cadastral institutions with guaranteed data quality, integrated into the GIS environment might provide significant progress in spatial planning and spatial development of every town and municipality. This paper presents the importance of harmonized spatial plans and real estate cadastral data in the process of spatial interventions for the case of allocation infrastructure objects and land consolidation. Potential solutions and challenges are given in the conclusion, based on Serbian and Slovenian experiences.

Keywords: Spatial Plans, Real Estate Cadastre, Data Harmonization; Legislation, Land Consolidation, Infrastructure projects
23. Development and adaptability of a sustainability assessment method for buildings – the OPEN HOUSE case

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Assessment methods for buildings have gone through many stages of development, becoming more and more complex and involving a broad array of indicators to cover various aspects of sustainability. Practical use of these methods and especially converging of indicators with the aim of wider usability and comparability have also had an influence on development of international sustainability standards within CEN/TC/350. The primary aspects include environmental, social and economic performance, technical characteristics and functionality. This scheme may be enhanced by integrating for example process and site qualities. The paper presents part of the related work done within the FP7 OPEN HOUSE project (http://www.openhouse-fp7.eu/). Although a number of assessment methods (among other LEED, BREEAM, DGNB) are in widespread use and internationally recognised they may contain certain aspects or assume specific input data or procedures particular to a certain geographical area. The FP7 OPEN HOUSE project aimed to merge existing methodologies for sustainability assessment of buildings towards a common view. A total of 560 indicators from most prominent assessment methods were identified in the first step, followed by an extensive selection process which gave the final set of 56 selected indicators (30 of them nominated as the “core” indicators) most suitable for the new method. One of the most important tasks was to evaluate the applicability of the indicators in EU Member States due to their different legal frameworks, climate conditions, status quo of the building stock and construction tradition. The key was to find answers to the following questions for each country: (1) are there all needed data available to define (either numerical or descriptive) indicator values, for example does a construction products declarations database exist; (2) is there a method (already in practical use or at least foreseen in regulations) available to analyse a particular indicator; (3) are there comparative values available determining the minimum (defined in regulations) and average quality, and the target value of a particular indicator. Answering the above questions using the scale from 1 to 3 national experts evaluated the acceptability and relevance of each indicator in their national contexts thus defining the path for the final protocol of selection criteria for the OPEN HOUSE method and for the concluding weighting of the indicators. The work described in the paper concluded with an identification of sustainability indicators that need additional effort to be adapted to the specific national conditions in terms of methods and tools, data sets and ranking criteria. The analysis confirmed that the core indicators exhibit a substantially high level of common acceptability in participating countries.

Keywords: buildings, sustainability, assessment method, indicators, ranking.
24. Formation and application of priority categories in the process of allocating social housing by the Housing fund of the Republic of Slovenia

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This paper presents the process of selection of housing renters and buyers conducted by The Housing Fund of the Republic of Slovenia. The flats, which were acquired by the Fund with the purchase or own investment, are rented and sold via public tender. Through major projects and programs the Fund aims at offering housing to balance supply and demand in the housing market, giving priority focuses on selected target groups. The demand for the offered flats is generally much greater than the supply, so the Fund receives much attention from both the interested public and the media. The most frequent questions raised by the concerned public are the following: what are the requirements for an individual to buy or rent an apartment through the Fund, and how the priority ranking is taken into account when there are more people interested in buying or renting a given flat. Consequently, all tender procedures are comprehensively presented to the concerned public in print and online media; the emphasis is on transparent presentation, with the aim to ensure a common understanding of the tender provisions among the interested public. In particular, the Fund publishes the criteria and rules for establishing the priority ranking of applicants in advance and specifies the procedures for the allocation of the housing flats. The aim of this article is to show the development of ranking priority criteria and ranks through time. We also describe the process of random selection of applicants that is performed in cases where there are more applicants placed in the same rank with highest priority. The process of selecting renters and buyers of flats is based on years of experience gained in the Fund’s public tenders and well supported by IT solutions. As such it represents a stable, transparent and reliable selection method of buyers and renters on the basis of the provisions of each tender. The selection process serves as an example of good practice and has been accepted as an established way of allocating housing to interested applicants. The evaluation of the process from the buyers’ perspective is also presented.

Keywords: housing, The Housing Fund of the Republic of Slovenia, allocation of housing, priority categories, buying housing flats, renting housing flats.
25. Opportunities and challenges of a building land record in Slovenia

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Building land falls into a special category of land, which is most related with human existence and human activities and therefore requires special treatment. Irrespective of the fact that building land represents one of our biggest national assets and one of the biggest development potentials, today it still does not have a regulated management system, in which an essential part would be represented by the building land record. In this article the purpose is to examine with the help of relevant references, the role of the building land record within the whole system regarding spatial topics in Slovenia. We will evaluate the current state on different aspects connected with spatial topics and suggest practical contributions for future developments or research in this field. Relating with the nature of our research, we have used the case study approach, which is a qualitative research method with which we build on the core assumption that there are important phenomena or processes that cannot be measured quantitatively. Implementation of a new building land record could be used in several processes and procedures, especially it would be valuable in the system of spatial planning for the introduction of objectives, criteria, methods and measures with the help of which we implement spatial and land policy. Moreover another valuable contribution would be the assessment and evaluation of spatial capacities for development. Furthermore it could serve its function of financial and time evaluation of planned investment intentions and hence contribute to greater security and transparency of investments. Yet another positive impact would be more efficient functioning of several spatial authorities or institutions and this could even result in substantial financial savings. Establishing such a record would be important, however we must emphasize that for a successful implementation of such a project it is also necessary to establish the appropriate legal and institutional framework. As a consequence of the complexity and the high number of various stakeholders involved, the process of establishing such a record could become very time consuming and expensive. Nevertheless, the benefits of the building land record overwhelm the potential obstacles and point out the fact that such a solution is desirable. At the same time we need to focus on harmonizing all content and implementation steps with municipalities. The proposed record will be under the jurisdiction of municipalities and therefore constructive cooperation between the state and municipalities is a necessary precondition in order to provide a comprehensive and quality solution.

Keywords: building land record, land policy, building land, public sector, spatial information system, spatial stakeholders, municipalities.
26. Protecting the environment and distribution of drinking water give us from year to year an increasingly bigger challenge of global significance

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The importance of drinking water is insignificant in our environment, as long as the system works and crystal clean and safe water is flowing taps and is suitable for consumption. Alarm occurs in case of loss, because only then we realize how important factor in our life is water. We have to follow the objective for water conservation and saving the only strategic asset, which is an indispensable product of our everyday lives. In the view of the positive and innovative focus of any good company with a development vision that their management of business processes is so effective that leads to employee and service users’ satisfaction, the activities in the field of sustainable development of enterprises and its operations are limitless. The system must be continuously improved and developed. This is achieved by our positive attitude towards the activities of the drinking water supply and the environment and society, and through judicious business decisions, we follow the principle of sustainable development. Systematic monitoring of key indicators, which are affected by external factors, which vary from moment to moment, even independently of human activity and mood, as well as in the management of drinking water supply, the main role is played by the will of the nature, which allows us to effectively manage processes, continuous improvement and transfer of good practices between undertakings which have as a priority the sustainable development and protection of human health. Drinking water supply has become a critical element of modern society, which, because of greed can exhaust quality natural water resources to such extend that will threaten future generations. Quantities of quality drinking water are lost in the stage of meeting the individual needs of modern society, filling swimming pools, water spills and unawareness of the society that water supplies are not limitless. It would also be in the light of sustainable development to consider how to protect water resources, as the highest quality and rich water resources are located right on the best agricultural land. And because the agricultural ministry encourages intensive farming, while not thinking even about the threat to water resources nor the threat to future generations, it is for the companies involved, on the one hand to try to meet the needs of users, on the other hand, the protection of a natural resource, to find the right bus for the sustainable development of the whole activity and protection of the environment and public health.

Keywords: drinking water, water resources, human health, natural resources, process management, risk analysis
27. Design in architecture

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It is hard to answer the ever-present questions, such as: what is art and is architecture art? Mainly because there is no empirical apparatus that would either rebut or prove anything concerning this matter. I will define my statement regarding the present position of architecture and its correspondence with art using some structured thoughts. Architecture is a creative profession consisting of a creative part – planning concepts, conceptual parameters of the project – and a more designer part that technically enhances the creative part and, if all goes well, enables its realization later on. There are many creative professions. Including art, design and numerous others. Planning concepts is a common characteristic of all creative professions. This involves abstract forming of ideas and principles that are later materialized in one way or another (or they are not materialized). It is wrong to believe that artists and other creative persons form their ideas independently of all external and internal circumstances. Our body transforms impulses from various situations into experiences, feelings and all other physical and psychological perceptions on the basis of already experienced impulses, current situation, and chemical composition of our body and brain. When we say that the artist had an idea, we don't believe that this idea came out of nowhere but that it is merely a mixture of already experienced and stored interpretations, which stimulate and form ideas upon further reflection on a specific problem. This means that both ideas and creativity don't exist in the way most people interpret them. But creativity is still not art. Contemporary art reflects the world we are living in, comments on it and is supposed to a be some sort of a mirror image of the society. Therefore it has a different responsibility towards the user, viewer or anyone else than architecture or other creative professions. Latter have actual users and functions, so they in turn bear much more practical responsibility. Architecture literary constructs the society and that is why it is articulated as a profession within it. But sadly it often becomes a tool of the system, which is something the art is supposed to be free of.

Keywords: built environment, architecture, design
28. Housing policy in Slovenia and solving the housing problems of young people

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Dealing with housing problems largely depends on housing policy, where the objectives are aimed at different areas, which depends on the current situation in the housing market, demographic characteristics and needs of the population, but the current housing situation of young people shows that housing policy Slovenia lags behind housing policy in the countries of the European Union. If it is before independence was considered that the role of government supply and is thus itself solve housing issues, after independence, during the transition period the state's role in supporting change, which increased the risk in the housing sector. For an individual, purchasing an apartment can represent a major challenge and an important financial decision. Due to the unfavorable situation of young people it becomes a greater challenge, when young people decide to purchase an apartment or a house, because the latter is interwoven with higher risks. The task of the state is that, like other basic human rights, the principle of the right to housing be included in its legal order, thereby explicit responsibility of government in providing housing supply. From the latter, therefore, that it is the State that protects the human right to housing, which in terms of the law of housing policy and practice mean that the state should take the necessary measures to exercise the right to housing. The lag in the development of housing policy and changed role of the state is reflected in the housing markets, which favor young people less and less, and consequently, this means that the strength of a trend that the transition time from their parents in a private apartment extends and thus prolong their youth. In the study of the problem, I was mostly interested in the functioning of the housing policy in terms of how to help young people to solve the housing problem and the present inadequate state's role in regulating housing policy. For this purpose the present article depicts the results of a survey on the housing situation of young people in Slovenia, which was done to the purpose of my master thesis. The analysis pointed out a continuation of the prolonged coexistence of young people in the same household with their parents and that a rental represents acceptable solution to the housing problem.

**Keywords:** young, extended youth, housing policy, ownership, tenancy.
29. Regression modeling of impact factors on real estate value

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The value of real estate depends on many factors, as for example on the size and usability of the real estate, its energy efficiency, its physical condition, but it also depends on economic factors and real estate market conditions. The primary objective of this study is to discuss a possibility of modeling of different influential factors for calculating the percentage adjustments in market approach to real estate valuation. We focus on modeling of physical and functional characteristics of real estate. Our aim is to discuss whether it is possible to individually appraise a real estate using statistical models. As a case study we developed a regression model in which we quantified the impact of various factors on the real estate value. The aim of the regression model was not only to calculate the adjustments in market comparison approach to real estate valuation, but above all to help in understanding of the market reactions to the change of individual influential factors. The developed regression model explains the impact of various factors, such as the size of the real estate, impact of its usability (functionality), energy efficiency, and condition of real estate and age of the real estate. It helps understanding the market reactions to the change of individual factors, but also improves objectivity of adjustments in market comparison approach to real estate valuation.

Keywords: real estate market, impact factors, real estate value, regression model, market comparison approach
30. Planning Capacity of Facilities for Seniors Dependent on a Help of Others in Slovenia

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In accordance with the "Operational Programme for the implementation of the European Cohesion Policy for the period 2014–2020", as a key area Slovenia identified Promoting the availability of affordable, sustainable and high-quality services, including health and social services of general interest also for old and very old inhabitants. These services include the long-term care. The key issue which until now has not been answered is how to develop a quantitative model for measuring the quality of social care services for the elderly, and how to plan the facilities for needs of seniors which will be available in accordance with the demand.

As stated in the Operational Programme, Slovenia does not have a compact system for regulation of long-term care. Services and rights are arising from the different existing systems - health, pension and disability insurance as well as from the social welfare system. Given the demographic structure and projections developed by European Commission and presented in The Ageing Report 2015, there is a need for reform that will enable the establishment of a uniform system of high-quality community-based services for ageing in place and for those that will need institution forms of care. Slovenia is preparing new legislation in the field of long-term care (LTC), which will have to take into consideration also a different type of facilities where LTC services will be provided. This will require the development of model for projections of needs and eligibility for integrated health and social services, LTC, monitoring of recipients of services and funds for LTC, and coordinating the development of integrated community-based services, as required in Operational Programme for the implementation of the European cohesion policy for the period 2014–2020 (European Commission, 2014). In the paper, we shall develop a model for measuring the quality of the system of LTC, for which even the OECD documents state that has not yet been developed and show how the optimal policy requires the dynamics of providing facilities for seniors. A more objective measuring instrument, based on an actuarial - mathematical methods will be presented. Thus, the objective of the paper is to present how to develop an actuarial model for determining the quality of care in different types of facilities in the system of LTC. The paper will also present the proposal for the model of collecting and processing data in the system of statistical research relevant for the whole country, to better forecast the long-term needs of facilities for seniors with declining functional capacities.

Keywords: facilities for seniors, housing, long-term care, multiple decrements model, financing facilities, assisted living.
31. How do Real Estate (RE) and Facilities Management (FM) create value for owners and users of commercial and public sector buildings?

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The research project Oscar “Value for owners and users of buildings” funded by the Norwegian Research Council, was established in 2014. Oscar will continue until December 2017. 22 project partners from academia, private enterprises and public sector organizations in Norway, Slovenia, and Germany conduct the research. The basis for Oscar is an assumption about clear connections between the design and operation of buildings and values for owners and users. The life cycle aspect is essential both as an input in early phase planning, and during the following phases, including the user phase. The data presented in this paper were collected in Norway in 2015 through a national online survey answered by 837 respondents. The sample gives a good picture of Norwegian owners’ and even users on tactical level (customer) perspectives on RE and FM in private enterprises, hybrid organisations and public administrations. The data has been analysed among others through descriptive statistics, exploratory factor analysis and OLS regression. Findings and results are the following. Based on the factor analysis 7 composite variables (constructs) were established: Obstacles, Environment and LCC, Usability, Image, Financials, Adaptability, and FM. Based on the seven constructs, six hypotheses were derived and tested. Based on testing of the hypotheses we can conclude that obstacles and financials have little or no effect on buildings’ perceived usability. The most important factors for buildings’ perceived usability are measures promoting environment and LCC, FM, the building’s adaptability and measures that improve the organisation’s image.

Keywords: Oscar project, facilities management, statistical analysis
Purpose of research was to analyse the impact of easement on land value. To this end, relevant legal regulations in the Republic of Slovenia, and the existing valuation methods of easement on land, were analysed. Owing to inadequate data on real estate market operation, the impacts on land market value of easement were objectivised using a survey of potential real estate buyers in the Republic of Slovenia. For better objectivity of survey results, interviews with 203 inhabitants from all the statistic regions of the Republic of Slovenia were conducted. By structure of surveyees as to gender, education, status and place of residence, the sample obtained is representative of the Republic of Slovenia. On a hypothetical land specimen it was established how the surveyees assessed the land value decrease depending on the extent and situation of land encumbered by easement, and the monthly easement compensation amount. Analysis results of statistically characteristic differences between the groups of surveyees showed that there existed statistically characteristic differences (p > 0.05) concerning land value decrease between the responses of groups divided as to gender and age, education and property status, whilst there existed no statistically characteristic differences between the responses of groups divided as to place of residence (p < 0.05).

**Keywords:** land valuation, easement, impact of easement on land value, survey of potential land buyers
33. **Determinants of SME allocation in the suburban area – evidence of The Gdansk Metropolitan Area**

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Housing is stimulating the development of SMEs (small and medium enterprises) in the suburbs. The multidisciplinary research in the urban and economic fields carried out by the authors confirms this trend. The purpose of this paper is to present the multidisciplinary results of the research on the determinants of the SME allocation in suburban areas of Gdansk, Gdynia and Sopot (Metropolitan Area Gdansk – Gdynia - Sopot – MAGGS. It is a paradigm that some regions have a more entrepreneurial attitude than others. A lot of researchers attach great significance to regional factors of the SMEs’ growth and development. Many scientists find considerable differences in entrepreneurial attitudes between the regions within one country, between the centers and the peripheries within one region or between the cities and the rural areas. The Authors’ goal is to broaden the existing research in this area. In the paper they present the results of their study concerning the differences in entrepreneurial attitudes between suburban areas and the central cities within one metropolitan area. To identify the research problem, a two-pronged research in the fields of urban planning and economic research were adopted. The Metropolitan Area Gdansk – Gdynia - Sopot (MAGGS), consisting of three central cities and 31 towns with adjacent municipalities, was the subject of the research. The municipalities with the highest suburbanization rate were singled out on the basis of the migration balance and building activity. Subsequently, the business entities in those areas were identified with their business activity measured by the location quotient (LQ). The results of the classification of the units within the MAGGS (cities, town village communities, village communities) according to the migration rate and the construction activity index indicated 7 communities with the highest intensity of the suburbanization process. Our analysis of the LQ in all units within the MAGGS (cities, town village community, village communities) and in its core cities allowed identification of the communities with the highest SME activity. The location determinants of the SMEs in suburban areas were identified using a questionnaire. The survey was conducted in 276 selected enterprises located in the selected communities. The study has been extended to the analysis of architectural and urban planning. The results confirmed that in more than 80% of the parcels, which include economic activity, there is also residential function. Our study confirms that the communes characterized by the highest intensity of the suburbanization processes present higher business activity than other communes. According to our results, it is not only determined by financial factors, but also by social and spatial reasons.

**Keywords:** entrepreneurship, SME, suburban area, regional development, polish suburbanisation, Poland

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1ST CONFERENCE OF INTERDISCIPLINARY RESEARCH ON REAL ESTATE
34. Housing rights of seniors in the process of deinstitutionalization

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The primary need of human beings is housing. It involves shelter for survival and protection of the human dignity, simply a place to live in the home. Housing provides a privacy and overall a sense of personal space. The adequate and an appropriate housing forms the core of housing rights. When older person loose his/her functional capacities the adequacy of home is reduced and when lives his/her home and goes to the institutional care, some important dimensions of these rights are lost. It is estimated that in the EU around 1 million aged people live in long-term care institutions where they are segregated from their communities. Such institutions were originally created to provide care, food and shelter, but by now evidence has shown that they cannot ensure person-centered services and appropriate support according to the needs of an individual aged person. Ensuring the rights of seniors with declining functional capacities to integrity and independency is substantially reduced when they move from community-based homecare to the institutional long-term care. In its recent documents the European Union recommends to Slovenia to start the process of deinstitutionalization of residential nursing homes and to develop community base services for senior citizens. The paper will explore if any international, European or national sources of law already oblige Slovenia to conduct deinstitutionalization. In this respect special emphasis will be on the human rights issues. European Social Charter and in the European Charter of Fundamental Rights entail rights of elderly persons to choose their lifestyle freely and to lead independent lives. On the other hand, the Slovenian Constitution does not provide for special article on rights of seniors. We believe that special consideration should be made for elderly with declining functional capacities, and thus depended on help of others, when their human rights are at the stake, also in the context of right to appropriate housing (Article 78 Slovenian Constitution). This right belongs to the catalogue of social rights, which do not operate on the basis of universally recognized minimum standards and therefore their vagueness and flexibility could affect their effectiveness. However, due to vulnerability of seniors with declining functional capacities unsuitable housing conditions could result also in breach of their civil rights, such as personality and privacy rights. Therefore the absence of proper actions of the state could result in the breach of states binding constitutional commitments

Keywords: housing rights, human rights, older citizens, ageing, accessibility, deinstitutionalization
35. **Assessing Sociotechnical System under adaptable robotics in petroleum pipelines performance**

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This research paper investigates sociotechnical impact in facilities maintenance and the process of measuring performance in petroleum pipeline (PP) maintenance in the oil and gas (O&G) industry. The paper is written using the findings of an extant literature review carried out as part of a PhD study. The paper reviews the impact of sociotechnical system (STS) in PP maintenance in the O&G industry. The paper discusses, in-depth, sociotechnical influence on PP maintenance performance and operators’ trust. The findings highlight sociotechnical behaviour, impact of extended lay-off period of performance and operators’ trust in PP maintenance. The damages caused by total reliance on automation, and impacts of lay-off skill in place of automation in PP maintenance and monitoring. Also, the findings highlight workplace performance and operators’ trust within PP network. This paper identifies performance measurement (PM) as a comprehensive instrument for reengineering facilities maintenance and managerial decision-making in the O&G industry. Performance measurement is a quality assurance concept for effective maintenance actions, which ensures that PP maintenance is well managed and maintained. Based on the findings of this study, the paper develops key performance indicators (KPIs) and performance measurement framework (PMF) as a way forward that will assist PP maintenance managers to oversee operators’ performance.

**Keywords:** key performance indicators, oil and gas, performance measurement, performance measurement framework, petroleum pipelines, sociotechnical system
36. **Analysis of the impact of flood events on the real estate market in two case studies – Ljubljana, Slovenia, and Boulder, Colorado, USA**

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The purpose of this paper is to determine if and how flood events can affect the value of properties. The study was based on two case studies. The first case study is Boulder, Colorado, USA. In this case we examined the impact of a flood event that occurred in September 2013. The second case study is Ljubljana, Slovenia. We examined the impact of a flood event from September 2010. The methodology used for the purpose of this research was the method of comparison of the mean prices of properties which had been flooded and the mean prices of properties which had not been flooded. We have found that floods have an impact on the real estate market, but the impact of the flood event which occurred in Boulder, Colorado, in 2013 was different than the impact of the 2010 flood event in Ljubljana. For the case study of Ljubljana, the study on the influence was further supported by a survey among residents of SW Ljubljana. The survey was sent through organization Civil Initiative for Flood Protection of South Western part of Ljubljana which is active in the field of promoting the implementation of measures and finding the solutions for reducing flood risk in this part of Ljubljana. In the case study of Boulder, Colorado, we did not find a significant impact of a flood event on the value of properties in the flooded area. Furthermore, the prices inside the flood plain tended to stay above the prices outside the floodplain. Nevertheless, we found that the flood event affected the real estate market. After the 2013 flood event the number of property sales decreased markedly. In the case study of Ljubljana, Slovenia, we found that the property values outside the floodplain are constantly on average by 10.6% higher than inside the floodplain. Therefore, we can conclude that floods in this area have a constant impact on the real estate market. This was further confirmed by the surveys where the residents of the floodplain area underestimated the value of their property almost twice the actual mean value.

**Key words:** floods, Ljubljana, Boulder, real estate, property value, mean prices
37. **Sustainable Land Valuation Model within the Land Capture strategies in PPP for Transport Infrastructure**

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Value capture seeks to generate revenue by extracting a portion of the gains in the value of land and property that result from improvements to transportation networks. The objective of this paper is to present a framework by which to include life period land valuation in the land value capture for the assessment and revenue models for Public Private Partnership type of investments for transport infrastructure. In this way additional private profit is identified, which attracts landlords to join the project. Land valuation for expropriation is a useful method, which can be evaluated through the life period of the infrastructure. The Value capture strategies are identified and respective policies are evaluated. Periodically market value assessment of land within the Value Capture model is designed, by which the private partners could be attracted. In the paper a new assessment model is presented. Capturing land value and widening the internalisation of external positive impacts enhances the perspective of project assessment and PPP financing models. This model may be used by public and private sector parties involved in PPP arrangements for transport infrastructure to improve the basis of project evaluation and project finance.

**Keywords** public private partnerships, land value capture, material investment, value assessment
38. Spremljanje stanja stavbnega fonda za pripravo trajnostnih politik

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Ključne besede: stavbni fond, spremljanje prenov, energetska izkaznica stavbe, model stavbnega fondu, Tabula, Episcope, podatkovne baze, trajnostna gradnja
39. **Spatial Dispersion of Housing Units as an Important Factor Influencing Long-Term Care Operational Costs**

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Over 90% of adults age 65+ would prefer to age in place. The new technologies also those for improving urban facilities can be enablers. For example the new care-giving technologies, like smart phones, websites and tablets, help those who care for older adults to provide services in the most effective way. European Semesters support this idea in Long Term Care (LTC) strategic plans of member states, but how to improve the living of the elderly in the properly built environment, using innovative facilities at sustainable financing is still under investigation. Especially the spatial dispersion of housing should be considered in planning the built environment and other facilities for seniors, because logistical costs are increasing by increasing dispersion of homes in functional regions, where services are provided. The facilities managers and medical care institutions who are offering housing, health care and other services for the elderly should consider the cost dependent on transport of items, workload of nurses and other service providers and transport of seniors in the case of daily programs. Feasible routing and scheduling are essential for an acceptable trade-off between logistical costs and housing in services for improving satisfaction of seniors. In this study we simulated and optimized home healthcare routing and scheduling to describe the necessary workforce and service time requirements and therefore to forecast the impact of spatial dispersion of clients on total costs of services. We have modeled the tours of the care-giving personnel as a multiple Traveling Salesman Problem with prescribed time windows. The solutions are given for various scenarios for increasing spatial dispersion of seniors in home care. The data of a Care Center in one of Hungarian municipalities was used to create reference values. Then we have simulated the changing density of clients in the functional area and studied the influence of dispersion on costs of services at different service level described by the time windows of services. The tool which enable to study and evaluate the outputs of different scenarios might help professionals to be prepared in advance for the coming changes caused by the growing number of seniors who may need help in keeping their independence as long as possible when the density of households in the functional area is changing.

**Keywords:** housing, long-term care, service scheduling, routing, spatial dispersion, functional region
40. Exploring Dominant Logics in FM and RE

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The influence is well established of conventional wisdom of dominant groups (aka dominant logics [DLs], discourses, modes of thought, paradigms) in enabling various forms of formal organizations and less formal institutions. In the world of services management Vargo and Lush have contrasted the DLs of production and services. Coenen and von Felten have made the case for the latter. Tucker and Roper have analysed the competency grids of the three major professional bodies claiming a stake in FM. Production logic, much of it inherited from the world of real estate, dominates all three schemes. Practice, viz the successful management of patient environments, the successful creation of agile, and productive, workplaces, the views of the FM industry and some of its clients, evidences the need for the service logic.

Keywords: Dominant Logics, FM Competencies, FM Outcomes
41. Acquiring information from available data on buildings using artificial intelligence methods

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Machine learning based on data from existing databases is becoming an important support in creating, restoring and managing databases and knowledge bases in various areas of expertise. Decision models that can assist in multicriteria decision-making are based on large datasets from which entirely new knowledge can be gain with the help of artificial intelligence. Machine learning using data mining in databases can with the assistance of knowledge bases (ontologies) contribute to the efficient management of information, including the management of buildings and other constructions. In the Republic of Slovenia over a million buildings are registered. Databases on existing buildings are being developed and maintained by GURS through the so-called Building cadastre. We found that the existing databases are a great potential for further information modeling for the purposes of building knowledge management. Some information is generalized, which means that the results obtained on their basis do not represent the best outcome. Therefore, it makes sense to upgrade and to complete existing databases. With artificial intelligence we can for example determine the properties of individual elements of a single building, observe parameters correlations, which affect the energy consumption, or determine the link between the outside temperature and the energy consumption. If particular building data are missing or differ significantly, their value can be assessed through other parameters that become known on the basis of big data.

The authors will present cases, problems and solutions related to existing data on buildings. We will demonstrate how the details that accurately describe the building contribute to further information modeling. We will use information integration of elements of the building and thermal energy consumption and present the results of the acquisition of knowledge obtained on the basis of data mining using decision trees. The obtained energy models of buildings will be compared with the actual measured data and based on the findings guidelines for improvement will be presented. At the same time, we will demonstrate that we can to obtain missing information for a building with the help of meta description of the knowledge about buildings. Along with the proposed methodology of enrichment of the meaning of data we were also developing professional terminology and multifaceted view of the building and thereby contribute to the strengthening of systematic teamwork.

Keywords: databases, buildings, database mining, knowledge bases, machine learning
42. The impact of energy efficient building on real estate value

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Energy efficient building is increasingly gaining on popularity during last years. Low energy houses and passive houses are quite commonly built, particularly among prefabricated timber-frame buildings. But also houses with clay block walling systems can easily reach low energy and passive standards. However, costs of energy efficient building are still very high. The present research is based on analysis of building costs of energy efficient building opposed to the costs of building, made according to regulations and current building standards. A special focus is given to prefabricated timber-frame macro-panel buildings. We defined the main parameters of the building, which have the greatest influence on the energy efficiency of the envelope. Variable parameters under issue are the composition of the external walls, floor slab, roof assembly and the quality of the windows. In the second part of the article the impact on the real estate value is studied. We pay special attention to the income approach and study how lower the running costs (caould) impact the value of the property.

Key words: real estate value, energy efficient building, building costs, running costs, cost approach, income approach.
43. **Property management and means-end chain analysis**

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The means-end chain analysis is a powerful tool for studying consumer behavior in order to develop effective marketing strategies. That is why this research tool is very interesting to property management theory and practice. The problem is that the modern property management usually is global business while means-end chain analysis should be adapted to local cultural and value characteristics. To develop a universal system of means-end chain analysis for the property management is a serious challenge. The report proposes an approach for adapting the classic means-end chain analysis in the field of modern property management. The approach has been tested on a limited group of students and the results are presented in the report.

**Key words:** means-end chain analyses, marketing strategy, property management
44. The influence of the legislation on the design and performance of a heating system in Slovenia, Norway and Kosovo

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The purpose of this paper is presentation of simplified method for energy performance estimation, designed in Kosovo for the evaluation of buildings, due to very high heat consumption and as an opportunity for Energy Efficiency improvements. The method is studied on the model of Pristina Hospital in Pristina in Kosovo, which was replicated in two other countries, in Ljubljana, Slovenia and Oslo, Norway. The comparison in three countries was prepared to see the similarities and differences, based on outdoor and indoor environmental conditions, cultural background, legislation and response. The results of method are evaluated with Slovenian and Norwegian calculations.

Keywords: energy performance, outside temperature, heating, consumption, comfort
45. **Innovative Eco Cyber Built Environment as a Building Block for a Sustainable Society**

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The author reminds about knowledge, that humans in order to survive, grow, and evolve creates goods, movable and immovable good. In order for humans to create those goods they extract energetics and material sources from the nature and returns back ballast waste, and emissions when those goods are being created and used. By doing that the nature, environment, and human race are damaged. The author also explains us how the innovation is the source of creations and building in general. Innovative creation and building in general of human goods elucidates as eco cyber process model, which is formed by synchronic gyroscopic management of energetics-spiritual-material factors: humans energy-knowledge and art-sustainable production, all with a common goal to integrative building of sustainable society of triade of social, economic, and environment well being. In context of creative eco cyber process model introduces the model of innovative immovable built environment called innovative stable sustainable construction, which is formed by holistic, innovative integral process of investment idea, law-financial environment, planning and design, construction, operation and maintenance, rehabilitation or degradation of built object-built environment at the end of the object’s life cycle. This could also be understood for an innovative movable built environment. Innovative built environment of eco cyber immanence, an all containing energetics-spiritual-material and cultural good and therefore an essential block of sustainable society is therefore an important geopolitical planning and operating technological tool of politics, as seen from the model of synchronic gyroscopic management of structural components of a country. Finally the author means that the development of innovative built environment and with that also the future natural and cultural heritage depends of the development and implementation of eco cybernetic science. The science that examines technical systems, sociotechnical systems, and social systems, focused into understanding and awareness of the meaning of importance of global protection of the nature, environment, and sustainable society of civilization. So, depending on “eco cybernetic science” and synchronic “eco cybernetic law”. The tool for generating eco cybernetic genetic of built environment and with that to build desired innovative sustainable society of stability, safety, and peace in the world. And, the tool for politics to enable them to globally intervene with a goal to timely globally rail the lives and work of people into a progressive, innovative, eco cybernetic building of human goods. To build a new eco cybernetic sustainable society’s order. To build a common sense, fair, as well a moderate consumerism. All in the shadow of supremacy of the nature’s environment’s finality, and politics will. By doing so to reduce the upcoming galloping entropy of our planet, which will in opposite case soon cause a tragically complication of the civilization

**Keywords:** human goods, built environment, sustainable society, eco cybernetic law, new eco cybernetic social order.
46. **Modeling the Impact of Real Estate Taxation and Municipal Revenues on Dynamics of Internal Migration**

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Among the factors that influence changes of internal and international migration flows are also property taxation and consequently the municipalities’ revenues. What would be the impact of changed tax policy - proposed in the newly discussed Slovenian legislation - on attractiveness of Slovenian municipalities is important to know when we are forecasting a housing market. In this paper the influence of taxation and municipalities’ revenue on the generation of inter-municipality migration flows was studied using normalized, extended gravity model, where many economic and environmental factors have been considered, but taxation and municipalities’ revenues have been additionally exposed and tax model have been embedded in the gravity system. The factors, previously analyzed by Drobne and Bogataj, like population size, distance, employment, gross personal income, housing area, and the average price per square meter of apartments and houses have been additionally analyzed regarding different taxation policies and municipalities’ revenues. We have evaluated how taxation rate influence capitalization rate and together with housing rent influence the price per square meter of housing units. Furthermore, for the special case study the simulation model has been developed for simulate the behavior of flows to City Municipality of Ljubljana (MOL, capital of Slovenia) in case of changing tax rates as a percentage of market value of the real estate. The normalized and extended spatial interaction model (EN_SIM) has been developed for this purpose and the regression analysis for the log-linear transformation of the gravity model is given. Local self-government can use such gravity approach for forecasting the changes of in-flow in any municipality in Slovenia in case of changed fiscal policies, for improving spatial planning, especially for planning transport infrastructure, different other facilities, and housing supply and demand. The implementation of EN_SIM models with embedded property taxation as a decision variable not known in the Slovenian or foreign literature yet. The results provide some important empirical contributions and insight to the behavior of migration flows under the taxation dynamics. While the general formula of in-flows and out-flows have been developed, the detail study is given only for the changes of in-flows.

**Keywords:** housing rent, market value of real estate, gravity model, migration, taxation, urban growth
47. Improving energy efficiency of existing buildings in Norway through regulatory and financial incentives

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Existing residential buildings make up more than 60% of the total building stock in the Nordic countries, therefore this sector constitutes a large potential for the total reduction of energy use. Energy efficiency (EE) and limiting energy demand is a key element in Norwegian government energy strategy, with an aim to reduce energy consumption in all buildings, both new and existing, significantly by 2020. Both energy efficiency as well as emission reductions targets have been combined in order to realize Norway’s climate policy. Norwegian goal is that residential and other buildings meet future needs through regulations, which should help to ensure that buildings would have lower energy demand and be more effective. By improving the energy efficiency of existing buildings with renovation activities in Norway, there is a realistic possibility in Norway to achieve 50% of energy savings, relative to current energy use. However, in Norway, energy efficiency in buildings still tips toward new builds. Even though efficient building technology is readily available, there is low demand for energy efficient renovations and they are not currently standard practice. As shown in the case-studies presented, specific instruments have been successfully implemented, where EU regulatory and financial instruments and other measures are being put into place or adapted with the aim of stimulating energy efficiency related measures. Therefore, the Article presented will focus mainly on the existing barriers and drivers for EE measures in existing buildings in Norway through the issue of enabling required frameworks, institutional arrangements and coordination associated with implementing successful EE policies and programs by regulatory and market incentives on the basis of best practice scenarios of national governments in EU. The analysis and comparison of the both regulatory provisions as well as financing schemes on EU and Norwegian national level will provide identification of the most significant barriers and drivers for reducing energy use in existing residential buildings in Norway. This will form the conceptual base for the recommendations of energy efficiency measures with the greatest potential, which should help to ensure efficient energy use in existing residential buildings as well as Norway’s climate policy goals. In this respect, the presented Article is unique in providing a comprehensive review for comparative analysis of Norwegian EE renovation’s concepts on the basis of benchmarking Norwegian national and EU case studies.

Keywords: energy efficiency in buildings, EU legislation, Norwegian regulatory provisions, financial mechanisms
48. How far and how close are the Republic of Slovenia and the Republic of South Africa in relation to the consumption of public finances

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In the use of public funds anywhere in the world there is a possibility to conduct contrary to the moral and ethical principles. It is particularly problematic that the public everywhere accepts the use of contacts and alliances as a daily tool for faster achievement of objectives. Such rooted practice is very difficult to eliminate, so it is important to highlight the fact that morals and ethics form the basis for individual performance, where corruption simply cannot exist. Individuals with a strong sense of morality and ethics will avoid such actions and at the same time condemn them. The aim of creating a moral-ethical conscious society can be achieved through continuous education. This is not a short-term process, but in long terms it certainly leads to reduction in acts of corruption. In dealing with corruption in the public sector despite the on-going reconstruction of the Public Procurement Act should this law be thoroughly renewed toward a higher standard of ethical behaviour at all levels. Changes in the procurement process are necessary in order to ensure greater transparency, as the current situation allows political interference, which results in nepotism. According to the results of the study we come to the conclusion that in both countries, corruption is widespread and occurs in different forms and only change in legislation could help improve relations and restore confidence in the construction sector. Actions that reflect the situation in both countries, according to publications of other researches is present everywhere wherever they manage public finances, and we can say that this is a global problem. Why always the same questions arise and similar answers are given? Public and private sectors should be necessarily combined, and proactive stance against corruption should be established in the direction of detection and reporting.

Keywords: corruption, the construction sector, public funds, morality, ethics and integrity
49. Assessment of mass real estate valuation from different groups of respondents from Slovenia

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The research analyses the mass valuation of real estate in Slovenia. The topic is addressed in depth through the socio-psychological aspects of the individual and their dissatisfaction with the procedural, operational function, and the results of the mass appraisal. Examination of the interaction between the individual and their environment is placed at the forefront of research. Overall, it results from the fact that the issue of property valuation and perceptions of real estate are inherently connected with people, their mental and social environment and behavior. The thesis will compare the attitude towards the valuation, the public response to the mass valuation of real estate, the views of individuals and their relationship to the built and social environment in general.

Keywords: mass real estate valuation, attitude towards mass real estate valuation, human and environment interaction
50. Regional center for waste treatment CERO Nova Gorica: The importance of awareness of the public about the benefits and the planning of environmental projects

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In the period of increased disposal of waste and abuse of natural resources our biggest priority should be the care for social and natural environment. For a conscious waste treatment a high level of education and public awareness are significant. The aim of this research is to investigate how information about efficiency, work and maintenance of the regional center for waste treatment affects the opinion of individuals. The main scope was to investigate whether a better awareness of residents affects their conviction about reasonableness of construction of an environmental project. The method of meta-analysis or systematic review of literature, which has been applied to online databases and scientific magazines, were used as principal methods. Another method was the factor analysis, conducted with a questionnaire answered by 60 people. It was noted there were many surveys that considered the problem from the Natural Sciences point of view (they are dealing with the influence of waste on the environment, the meaning of technical improvement and potential development of transport logistics). On the other hand, there is lack of literature concerning the psychological view of the problem. Furthermore, the basic hypothesis with the questionnaire method and the supplementary interview method were partially rejected. It was observed that in average the residents have a common opinion (regardless their distance from the Center) – they agree with the construction of the Regional center for waste treatment. The impact of public still cannot be excluded. The survey shows a very low awareness of public about the recent condition of the Center. The legal procedures the Municipality took are too loose considering the seriousness of the situation: the center was operating despite the inspection ban and without an environmental permit. Therefore, the people were too late and too poorly informed to properly and timely exercise their rights regarding the construction of the Regional center for waste treatment. It is necessary to conduct further surveys on influence that the awareness of the public has on implementation of the routine technical inspections and corrections (changing of filters, testing of waste water and air emissions) on the existing environmental projects such as RCERO.

Key words: environment, environmental projects, waste, waste treatment, public awareness, environmental construction, legal procedures
51. Information-management support in marketing of real estate - between theory and practice

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Area of the real estates is an important economic industry and that’s why high-quality, complete and interconnected data of the properties are key to the effective work of different user groups. In the last decade were in Slovenia established the most critical databases required for the management and marketing of real estate and were in accordance with the Digital Agenda 2020 computerized. In practice, however, the diversity of the same type of data in different databases brings during user confusion and complicates operations. The solution is seen in the creation of a single database with key information about real estate. Such a multifunctional base of useful information to e-commerce enable a fast and easy access to information, greater transparency in the real estate market, a better balance of information between market participants as well as fast, efficient and quality business and real estate management. The analysis sources revealed that the idea of a common database is not new. However, in 2008, established a register of real estate does not eliminate the discrepancy between actual and registered state of the property, identified in the case study, the interviewees' answers and reports of institutions using data on real estate for the creation and management of social, spatial and fiscal policies and statistics, and therefore does not meet the needs of and user requirements. The solution is necessary and possible through the establishment of new higher quality database on real estate or revising and updating data in the existing database. Since the current database is not fully justify its application, the question arises whether is easier, faster and more economical to repair and update the data in the existing database or build a new one.

Keywords: real estate, real estate marketing, information management support, a single database, real estate register, register of real estate market
52. **Anticipation of Geohazards in Urbanistic Regulation**

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The article deals with themes that are tied to ensuring safety as an inherent theme of public benefit, through planning regulation. In the particular sense, safety is tied to the quality of construction of any particular building. In the general sense safety is tied to the recognition of spatial properties and adequate referencing with concrete stipulation of requirements and conditions in planning documents. These are ultimately technically defined norms that deal with risk management as well as professional and political responsibility. The article deals with geohazards and safety of construction, which should be responded to in urban planning regulation.

**Key words:** public benefit, public safety, geohazards, planning regulation
53. Increase of satisfaction of internal and external stakeholders in the company Mariborski vodovod, PS, JSC

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All too often "sustainability" appears as a result of concrete situations, which we have identified with a specific process and in which we strive to get to the planned changes. This process should include building up lasting relationships between people and between people and their environment. The foundation on which we build the sustainable development, is the ability to adapt and take into account together with the high degree of understanding the feedback. The sustainability report was made in 2015 and shows a comparison with previous years. For an easier presentation we have compared indicators calculated for some areas with the Slovenian average. The sustainability report is a pilot report. We will supplement and expanded the set of indicators for the year 2016. The sustainability report will become part of the annual report and will be delivered each year. The company started to realize that sustainable development is not only a farce but a gradual shift to the synergy of employees to the environment and people. We tend to restore the natural resources faster than they are consumed. The results of the research and comparisons that have been made, show that the path to assimilation is still long. Sustainable development requires that human activities consume natural resources with less, or at least the same rate as they are restored. We know that the problem is global and specific impacts cannot be solved at the level of companies, local communities and not in the country, because we are dependent on the decision of the European Union and the United Nations. The emphasis is on adapting to the society in the dense of global environmental changes, sustainability of the society and other fields of sustainable development. The sustainability reporting includes all relevant aspects of the economic, environmental and social practices of companies in the environment in which it operates. In the selection of the content, the vital points are: relevance, stakeholder involvement and sustainable context. In delivering the content we have tried to achieve balance, comparability, transparency, accuracy, clarity and reliability of the data. On the basis of the matrix of key stakeholders and the sustainable development strategy, we have identified significant areas of interest. We have chosen the ones with the greatest impact on the sustainable footprint.

Keywords: sustainable development, natural resources, law, energy, waste
54. **Indoor air problems in district heated houses**

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Because of increasing prices of heavy oil and other supply with heavy oil problems, district heating system had problems to offer enough heat to cover heat demand in Prishtina. Lack of heat offered by district heating system in Prishtina “Termokos” was main driving force for establishing a cogeneration (CHP) system in Kosovo. After installing cogeneration system, citizens in Prishtina had more than enough heat during heating season. But, in the second year it was noticed a problem mainly with young people living in those houses (apartments). There were some cases that children had problems with throat. The purpose of this paper is researching of problems with children throat appeared after having so much heat in their living spaces. Analyses where done in a thermodynamically aspect, and were related to air humidity in living areas. Because of having excessive heat and because of old heating system and especially non-functional valves on heating bodies, in order to have inside temperature between comfort limits, citizens used to open their windows. Very cold air comes inside and mixes with air inside room. From thermodynamics we know that mixing of two masses of air with different temperatures, gives us a new mixture with humidity lower than humidity of hotter air and higher than humidity of colder air so this caused dry air inside the heated spaces. It happened that relative humidity of air not just has fallen under 40%, but in some cases it happened that measured relative air humidity also dropped under 20%. In this paper we are going to present our researches about this problem and results of those researches. The methodology and tools are a result of literature review study, case study and questionnaire.

**Keywords**: Air humidity, living room, cogeneration system, CHP, fresh air.
55. Facility service excellence – innovative patient environments

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The paper is motivated by the overarching proposition that a systematic approach to FM can yield benefits. This approach focuses on the translation of user needs into buildings and services. The benefits could be achieved through enabling cross service interaction, better resource utilization, greater support for professional carers and most importantly an enhanced patient environment. Different research methods are used from the focus of aiming for research results with almost the same rigour as evidence-based research. A nested design where the forthcoming VAT-reform constitutes a natural experiment for the hospitals’ top management sourcing decisions concerning buildings, maintenance of buildings, infrastructures and provision of non-medical services. Some first project results in innovations in non-medical services that enhances patient environments, experience and treatments will be presented, based on the literature study and interviews with medical stakeholder group, as a first step of the research. The research is important to increase the understanding of influences of facility service design on efficiency, effectiveness and enhancement.

Keywords: facility service, innovation, management, user involvement
56. Valuation of real Estate Using Real Options

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The research paper is the result of research, study, and analysis of real estate appraisals done by certified appraisers, court experts, court appraisers, and real estate experts in Slovenia during the crisis in 2008-2014. Theory and practice recommends standard approaches, ways, and methods of real estate appraisal, which were found to have shortcomings during the crisis. The theory recommends real options valuation as a method that potentially produces better results, so real estate valuation experts were included into the research. In the theoretical part, the individual valuation methods were illustrated with practical examples. In the empirical part, we examined the actual practice of real estate appraisers and valuers: whether they were familiar with individual valuation methods, whether they used them, and whether they knew how to take advantage of them and identify their shortcomings during times of crisis. The emphasis was on real options valuation, which, according to the respondents, can reduce risk in real estate appraisals during times of crisis, and makes it possible to take the best investment decisions. The practice of valuers and appraisers in Slovenia confirms the positive effects of the method and their need for professional training for the use of the method.

Key words: valuation, real estate, real options, market value, real estate valuation methods, highest and best use analysis, option valuation models.
57. Demographic drivers of social infrastructure

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Ageing of population requires certain dynamics in development of age friendly environment. In the next 45 year, 30% of the built environment will need to be modified for the use of people with declining functional capacities. These dynamics will pressure the public finances for investment in hospitals, schools and other public buildings. In this paper we analyse The Ageing Report 2015, giving projections of needed structure of social infrastructure in some European countries. The paper presents the differences between northern and southern countries as well as the differences between east and west. The list of recommendations how to develop and managing private-public partnerships and the needed financial instruments will be presented in this paper with the final goal to achieve suitable social infrastructure in the framework of limited public financial sources.

Keywords: social infrastructure, public private partnership (PPP), demographic changes, ageing report, long-term care (LTC), education
58. Urban renewal densification: Improved sustainability of more speculative profit?

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In Slovenia, many 1960s housing estates, laid out on 'garden city' principles, have large areas of now badly maintained public 'green' space. The questions posed are: Could such areas, currently under threat from unregulated private occupancy, be used for co-financing housing renewal and the revitalization of these housing estates? Could increasing housing density offer a sustainable approach to urban regeneration, and a tool for improving the quality of such housing environments or would such an increase in density merely exacerbate the present decline? Would existing residents be in favor of such increase in density, or would they object to change even if for the better? As there had been no empirical research, nor any official national strategy in Slovenia, for the revitalization and improvement of housing quality in these estates, the City and the Housing Fund of Ljubljana had co-financed a pilot research project in the Savsko Housing estate, to explore these issues. This paper presents the Urban Design aspects of the project results. The introduction sets out the theoretical background, followed by explanation of the research methodology, presentation of the field survey results and summery of research findings. The major findings are then discussed, focusing on residents' attitudes towards urban renewal proposals for the potential revitalization of their neighborhoods. Attitudes were found to be generally negative, notwithstanding the improved housing standards possible with infill developments. It is clear that this reaction is partly due to the current inappropriate planning system and resulting low confidence in the local authority. This indicates the urgent need for local authority town planning and housing departments in Slovenia to adopt radical measures to overhaul their community planning interface and approaches.

Keywords: urban renewal, densification, housing estate revitalization, community planning, Ljubljana: Savsko Housing estate
59. Albanian approach on Service Level Agreement within Facility Management based in European standards

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Considering the fact that Albania is a development country, still in the process of approval and implementation of many European legal frames and strategies, its very important to adapt the European practice in Facility Management as well, including Service Level Agreement, Key Performance Indicator and Benchmarking. Investigation of the Service Level Agreement is important as it emphasizes the importance to creating profitable arrangements for both the service provider and the customer. The methods used for the thesis includes the qualitative and quantitative research methods, descriptive, interpretive and comparative method. In the thesis the historical method has been used as well, analysis of performance or historical evolution of the Facility Management to conclude how it has effected in relations between individuals or organizations, and the other state reforms in the Facility Management market, relying on international experiences, and use of it in Albania. The hypothesis of this study is: „The implementation of the Service Level Agreement or other performance indicators has concrete impact on the service provided”. From this main hypothesis deduced some research questions which are: 1/ What does provide the Service Level Agreement in the catering food services/ resident facilities? 2/ Are there similarities in the criteria set out in the Facility Management in Albania and the International level? While the concept of managing facilities and services supporting it within the organization might be new in Albania, the practice of facility management is not totally new. Nevertheless, the term facility management is not recognized widely, only few approaches have been made particularly in the construction field and property management. There might be some weaknesses in adopting the questionnaire format, however, the results from the questionnaire were found to be informative and useful. Overall, the findings of the research have contributed to the development of a secure and detailed theoretical basis for arranging Facility Management support that has not been addressed in the past. In conclusion, in Albania, no encouraging developments in the field of facility management has been made, specific theories and methods to underpin Facility Management practice are rare and its position in regard to its potential contributions to organizational and business support remains unclear.

Keywords: Facility Management, Service Level Agreement, Performance, Hospitals, Residential
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