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DIGITAL LITERACY OF LOCAL GOVERNMENT EMPLOYEES AS A NECESSARY FACTOR IN THE IMPLEMENTATION AND DEVELOPMENT OF SUSTAINABLE MOBILITY PROJECTS: CASE OF CROATIA

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Abstract: Digital literacy has become a key work ability and skill in modern public administrations, while digitalisation and the green economy are development priorities in the European Union. The hypotheses are focused on the necessity of a satisfactory level of digital literacy among local government employees, as a prerequisite for launching and implementing sustainable mobility projects that are often mostly funded by EU funds. Digital literacy was assessed through a survey that was conducted among employees of local self-government units in Croatia. Desktop analysis methods were used, i.e. a comprehensive literature re-view and case studies in combination with the survey method. The results of the research confirm the hypothesis that the majority of employees of local self-government units in Croatia have a satisfactory level of digital literacy, which is related to the introduction and monitoring of sustainable mobility in local self-government units.

Keywords: Digital literacy; Local government units; Sustainable mobility; European Union projects

1. Introduction

A sustainable transport system is the one that enables the basic needs of individuals and societies to access transport services in a safe way, bearing in mind the health of people and ecosystems and equality within and between different generations. At the same time, the system is expected to be affordable, efficient to operate, offer a choice of modes of transport, support a vital economy, limit emissions of harmful substances into the environment, limit the consumption of renewable sources, and minimize noise.

On the other hand, modern informatization and networking at all levels necessarily requires knowledge of digital technologies in everyday work and life in general, and information literacy is becoming a key work ability and skill in modern public rights. Digitalization and the green economy are development priorities at all levels - globally, at the level of the European Union and in the Republic of Croatia.

Considering that the development and strengthening of sustainable mobility in the Republic of Croatia is largely dependent on the availability of public funds and especially funds from the European Union, in this research proved that the level of

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digital literacy and the level of knowledge of using computer tools in local self-government units in the Republic of Croatia is a basic precondition for ensuring investments in development steps in sustainable mobility. Since European Union funds are a key source of funding for sustainable mobility in the Republic of Croatia, demanding application and work procedures for such projects, require a high level of knowledge and mastery of information and communication tools.

2. Theoretical framework

2.1 Digital and green literacy

Information literacy is based on mastering information literacy, more precisely, information (digital) literacy (Kaparias et al., 2012). "Although finding information is only one of the skills that make information literacy, this step is still necessary for the transition to quality analysis and processing of information" (Kaparias. et al., 2012).

Simply put, in order to get the required information in today's world, it is necessary to be computer literate, to have solid knowledge of new (digital) technologies, to be able to use them without limitation and to take full ad-vantage of them (Figure 1).

In addition to the concept of digital literacy (Bawden, 2001); (Belshaw, 2012); (Covello, 2010); (Gilster, 1997); (Eshet-Alkalai a&nd Amichai-Hamburger, 2004), the term digital competence is often used in the literature, mostly in European documents related to education policy (Ala-Mutka, 2011); (European Commission/EACEA/Eurydice, 2012); (Ferrari, 2012); (Ferrari, 2013), and the term is also used by authors from Scandinavian countries (Krumsvik, 2008). Although these two terms are used as synonyms (Calvani et al., 2010), some scholars define digital literacy more generally, as a term that is more comprehensive than the term digital competence.

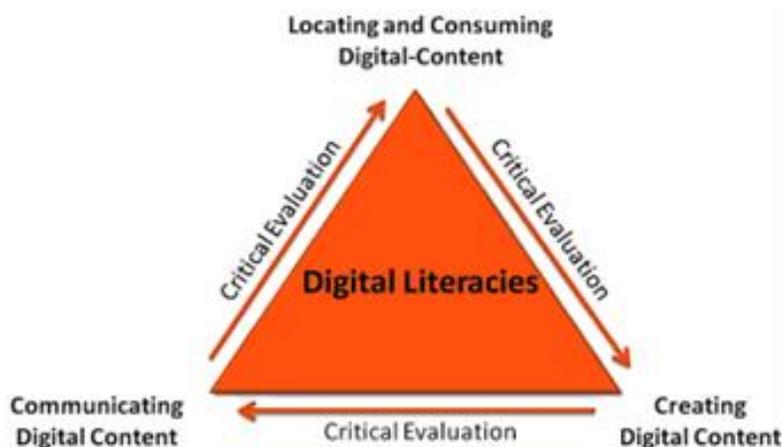


Figure 1. Digital literacy practices involve the ability to locate and consume, create, and communicate digital content, while simultaneously employing a process of critical evaluation
Adapted from Spires & Bartlett (2012)

Thus, for example, according to one explanation, digital literacy is a basic information and communication knowledge and digital literacy is the basis for acquiring digital competencies that are more specific

and related to a particular context (16. ECDL Foundation, 2015). Some non european countries have introduced digital education at univeristies through official programmes at state level in order to prepare future

employees for digital economy (Devetyarova et al., 2020).

Just as there are several different terms that describe the level of knowledge in the use of the various technologies that are the subject of this scientific research, so there are several related literacy that are associated with digital literacy. The field of action of digital literacy includes several intertwined literacy (Covello, 2010), namely: Information literacy - which refers to finding and locating sources of information, assessing the authenticity of sources, analysis and synthesis of materials, ethical and legal use and citation of sources, specifications topic and precise formulation of research questions; Computer literacy - which is an understanding of the use of computers and application software for practical purposes; Media literacy - which represents a series of communication competencies that include the ability to access, analyse, evaluate and exchange information of various formats; Communication literacy - which refers to effective communication between individuals, but also within groups, with the use of the Internet and other communication tools; Visual literacy - is the ability to "read", interpret and understand the information presented in pictorial or graphic form, transforming textual information into pictorial or graphic form in which way it facilitates communication; Technological literacy - which refers to computer skills and computer skills to improve learning, productivity and various achievements.

The field of action of digital literacy is quite wide, and for the purposes of this re-search the focus is only on the part related to information and computer literacy and as discussed below, on green and environmental literacy, which is a key part of education for sustainable development. Although the term itself appeared in professional literature as early as the 1960s, there are still several synonyms. Thus, the English literature cites the terms green literacy, environmental literacy, green

information literacy, greening literacy, ecological literacy, Critical Ecological Literacy (CEL), and related terms such as environmental education, Environmental Adult Education (EAE), Civic ecology, Environmental ignorance, environmental illiteracy and many others. Some authors also state the differences between the mentioned terms. Croatian translations most often mention environmental literacy, green literacy, eco-literacy, education for sustainable development (ESD) and the like. In the continuation of the paper, the term green literacy is used. Green literacy is part of information literacy, and was defined only in the early 1990s as the ability to understand the impact of human decisions and actions on the environment through raising awareness of sustainable development and encouraging critical thinking. It can also be seen as a set of conventional skills extended to include sustainable thinking.

The authors of this paper believe that employees in local self-government units as decision makers in which direction and how their city or local self-government unit will develop must be aware that the task of sustainable development, but also green literacy, is changing the behaviour of individuals and all institutions, as well as changing trends and repairing damage. It is necessary for green literacy to know environmental procedures and to transform them into everyday behaviour. Charles E. Roth (Roth, 1992), one of the first theorists of green literacy, says that it is basically the ability to observe and interpret the "relative health" of ecological systems, and then take appropriate measures to maintain, restore or improve the health of these systems.

2.2 Urban and sustainable mobility

The tendency of the EU development goes in the direction of urban and sustainable mobility, so for this reason the above concepts are theoretically explained in this part of the paper, and an analysis of the

available literature dealing with this issue is performed. The scientific community studies mobility from several aspects, and the definitions of mobility depend on it. Most authors agree on the basic generalized definition of urban mobility which says that mobility in an urban environment is a movement and that the task of mobility is to provide access to desired destinations using different means of transport (Kuhlke, 2008). Urban mobility is the movement of people between different sources and destinations, in different periods of time, using different means of transport and ways of traveling, and in order to achieve different goals (Brčić & Ševrović 2012). The movement of persons can be divided according to the purpose of movement, according to the time distribution of movement, according to the choice of the mode of travel, according to the length of movement or according to the spatial characteristics of movement. Urban movements by purpose can be divided into obligatory and voluntary. Obligatory trips include pendular trips (trips that connect the house and the place of work), professional trips (related to the workplace) and distribution trips (trips for the purpose of distributing movement). Voluntary trips are usually personal trips (to places of commercial activities, cultural events and recreation) and tourist trips (historical, sports and/or similar motives) (Brčić & Ševrović 2012). Travel by intention or purpose of travel, as a function of the activity undertaken by an individual, can be condensed to going to and from work, shopping, social activities, recreation, education, business movements and travel due to health needs. In terms of time distribution of travel, we distinguish between trips during daily peak loads (mainly departures and arrivals from work), then trips related to shopping or social activities, which are highlighted between daily peak loads and during late afternoon and night hours. The third characteristic of passenger movement is the choice of the mode of travel and the appropriate means of transport, or

their combinations. Travels are also characterized by the length of the trip. The length of the trip or the distance travelled depends on the number of inhabitants, the density of housing, the area of the city and the attractions. Finally, the spatial distribution of travel defines mobility depending on the spatial urban structure, as well as on the spatial characteristics of the transport system.

According to Gillis et al. (Gillis et al., 2016), mobility involves the movement and transport, of both persons and cargo, in the area of an urban agglomeration. Mobility includes all modes of transport relevant to urban transport (motorized and non-motorized, public and private modes of transport), such as: ships, helicopters, trains, light rail, subway, trolleybuses, cable cars, trams and buses, various types of cars, motorcycles, mopeds, bicycles, electric bicycles and hiking. Mobility includes all relevant structures; from decision makers, through service providers to the end users themselves. Kuhlke (Kuhlke, 2008) divides mobility into several categories, thus distinguishing between physical movement in urban space (travel for work, entertainment or other purposes), physical movement of objects (packages, containers), imaginary mobility (memories, books, and movies), visual mobility (virtual atlases like Google Earth, etc.) and communication mobility (letters, video conferencing, e-mails, etc.).

According to Casey and associates, mobility is defined by the time and cost associated with travel. Mobility is higher when average travel times, travel time variances and travel costs are lower (Casey et al., 2002). According to Costa and associates, mobility is an individual trait that allows travel in spatial area. It is limited by the dimensions of the urban space and under the influence of complex activities carried out in that space. Mobility can also be affected by an individual's characteristics, such as age, gender and income, as well as the

characteristics of the urban environment and the availability of transport services (Costa et al., 2005).

According to Brčić et al. (Brčić & Šoštarić, 2012), total mobility is related to a person and represents the total number of trips within the observed area, regardless of the mode of travel and purpose of travel, which is usually observed in one day. Population mobility is often expressed as the number of trips in the observed period per capita. Possible terms are: "mobility rate" which expresses the number of journeys per person per day, "total length of mobility" which expresses the number of travelled kilometres per person per unit of time and "total mobility time" expressed as the number of hours spent on the journey per person per unit time.

Mobility is often expressed as the number of kilometres travelled by a vehicle, which is an even more complex derivative. Also, Brčić et al. (Brčić & Šoštarić, 2012) divides urban mobility, as physical movement in urban space into three categories, namely public city transport, individual transport and freight transport. At the same time, public urban transport is in the function of enabling mobility for all social categories of residents. Its efficiency is based on transporting a large number of people and acceptable economic rationality. It includes subsystems such as taxis, paratransit, trams, buses, trolleybuses, LRT, metro, ferries and the like. Individual mobility includes any mode of movement where that movement is a product of personal choice of the way in which movement is used.

It is possible to move, in terms of mobility, by using a personal vehicle, walking, using a bicycle and a motorcycle. Cargo mobility is a product of the needs of the inhabitants of the urban form for existential needs, and the city is, as a rule, the centre of production and consumption. According to Rashidy et al. (Rashidy et al., 2014), urban mobility can have two dimensions. The first dimension of mobility refers to the user's perspective and

describes the possibility of moving from one place (source) to another place (destination) using the appropriate mode of transport. The second dimension views mobility from the infra-structure level, where mobility is defined as the ability of the transport system to provide access to work, education, health services, trade and the like, where users can reach their destinations by a suitable means of transport with a satisfactory level of service. Therefore, Rashidy et al. (Rashidy et al., 2014) define mobility as a measure of the efficiency of the transport system in connecting spatially separated locations, where mobility is used as a key indicator of the success of the functionality of the transport system (Rashidy et al., 2014). Gudmundsson et al. (Gudmundsson, 2003) define the difference between mobility and transport. Mobility is a broader concept than transport because it refers not only to actual movement, but also to the potential of movement, i.e. to the spatial, economic and social context of movement. Therefore, the notion of mobility is by analogy a more comprehensive notion than transport. It defines mobility as the ability to access a desired destination with relative ease, within a reasonable time, at a reasonable cost and the desired mode of transport (Gudmundsson, 2003). Litman defines mobility as the movement of persons and cargo, where mobility is dimensioned by passenger or tonne-kilometres and the number of trips. Mobility as a movement is not an end in itself, but mobility is a means to an end. Litman believes that any increase in the number of trips, passenger or tonne-kilometres and the speed of travel or transport contributes positively to mobility (Gudmundsson, 2003).

Kaparias and associates (Kaparias et al., 2012) define mobility as a key element of the transport system, i.e. as the ability of the transport system to provide access to work, recreation, trade and intermodal transfer points, as well as areas of other purposes. Mobility expresses ease of movement in general, at the level of the entire urban

agglomeration or on appropriate, predefined routes that connect specific pairs of sources and destinations, regardless of the type of transport used by the user. Kaparias (Kaparias et al., 2012) believes that mobility can be represented by a variety of indicators, but basic mobility indicators are reduced to the average travel time to the desired destination expressed in a unit of time, normalized by distance and weighted by factors depending on the goal of mobility assessment. In this regard, we must note that the right to the adequate, quality and safe mobility is one of the fundamental rights of the citizens of the European Union. Such mobility ensures equal economic and social opportunities, but also access to other elements of quality of life.

Sustainable development, i.e. development that meets the needs of today, without compromising the needs of future generations, includes sustainable mobility as a key factor. Sustainable mobility is defined as mobility that meets the needs of society to move freely, access, communicate, trade and establish relationships without sacrificing other important human or environmental requirements (Vashisth et al., 2018).

Some of the basic principles of sustainable mobility are (Vashisth et al., 2018):

- Preservation of the natural environment, with a functional ecosystem needed to sustain life, but also to meet the needs of the community related to recreation, enjoyment of nature and a number of practical circumstances. The basic thinking about transportation planning is that the environment should not be degraded by transportation activities. Thus, for example, in a less explicit but no less significant way, transport policy decisions on land use affect the environment. In this case, the applied transport strategies are: To reduce the need for travel, as a strategy to reduce air and noise pollution, and to reduce the need for land, related to the construction of roads and parking lots; Encourage the use of public and non-motorized transport to reduce greenhouse gas emissions and develop

energy sources and transport technologies that reduce carbon emissions.

- Getting to know the traffic demand of the population means that people who travel, regardless of the means of transport, care about travel time, reliability, costs, coverage of the infrastructure network, comfort, safety and protection. The transport strategy should be planned according to the needs of users, especially those who are unable to travel due to costs, age or reduced mobility. It is important to consider the reasons for the trip. Road planning is often geared to user needs, but there must be support for travel for leisure, sports, health, education, shopping, and social purposes. The transport strategies applied are to enable the choice of appropriate modes of transport, ensuring passengers safety, reliability, convenience and connectivity; improve integrated passenger transport to improve transport efficiency and supply; enable fair investment in the various elements of the transport system, depending on the diversity of user needs and the purpose of the journey.

Analysis of secondary data sources through the research it is found that skills and knowledge used in digital literacy in the field of urban and sustainable mobility are extremely important because digital business conditions require participants in local government units, to have the knowledge in the application of modern technology and various digital tools, among the other area, in the mobility management as an important challenge for urban areas and local self-government. The importance of this digital knowledge is in creating awareness among employees in local self-government units that the future development of their local self-government unit is in the direction of sustainable mobility and creating preconditions for employees in local self-government units to have sufficient capacity and computer skills to access EU funds. The importance of such awareness and development of society in the direction of sustainable mobility is that urban mobility is exposed to many challenges, of which traffic

congestion is one of the most difficult ones, and the social cost of traffic congestion is very high (estimated at 270 billion in the EU). Euros per year (Smith, 2021). In regions with a high level of traffic congestion, by achieving the free flow of traffic, worker productivity could increase by as much as 30% (Hartgen et al., 2009).

Given that traffic congestion in the EU often occurs within and around urban sub-areas, this problem affects the majority of EU residents. Many European cities have poor air quality and regularly exceed the limits for the protection of human health set by the Air Quality Directive (Direktiva 2008/50/EZ). As many as 96% of EU citizens living in urban areas are exposed to levels of air pollutants that the World Health Organization (WHO) considers harmful to health. In 2013, the European Commission (Commission) estimated that the total health costs caused by air pollution amount to several hundred billion euros a year. Pollution also negatively affects biodiversity. Road transport is one of the main causes of air pollution (European Court of Editors, 2018) and greenhouse gas emissions. It is the largest source of nitrogen oxide emissions (NO and NO₂) and the second largest source of carbon monoxide and particulate matter emissions. Urban areas are the source of 23% of CO₂ emissions from transport. In addition to air pollution and CO₂ emissions, traffic is also responsible for noise pollution. Given the impact of urban mobility on economic growth and the environment, the EU promotes sustainable urban mobility. These include the development of strategies to encourage cleaner and more sustainable modes of transport, such as walking, cycling or public transport, and new models of car use and ownership (COM, 2013).

Thus, if the local self-government unit does not have an appropriate level of digital literacy, all participants will lack timely automation of all business processes and digital business transformation, and preconditions will not be created for sustainable development of local self-

government units and access to European structural and investment funds, which local self-government units will develop in the direction of o-state and urban mobility.

2.3 Strategic planning framework for the development of urban mobility

Achieving urban and regional mobility is one of the most important goals of the EU member states. As a successful transition to a more sustainable form of urban and regional mobility remains a major challenge for cities across the Union. Local and regional authorities need support to address the adverse economic, environmental and social consequences associated with today's mobility models. The Europe 2020 Strategy for Smart and Sustainable Growth emphasized the importance of a modernized and sustainable European transport system for the future development of the Union and emphasized the need to address urban and suburban aspects of transport. At the same time, a significant change in the approach to mobility is needed to ensure that European urban areas and regions develop in a more sustainable direction and that the EU's objectives of a competitive European transport system in which resources are used efficiently are met.

Unfortunately, there are significant differences across the European Union: there is a growing "gap between urban and regional mobility" between several advanced European cities and regions and the majority that lags behind them. In order to reduce these disparities and achieve systematic improvements in the transport sector, joint efforts of public actors at all levels of government are needed, as well as private sector participation in the areas of urban logistics, smarter regulation of access to cities and road billing, harmonized introduction of urban intelligent transport systems, increasing safety on city roads, etc., for which there must be an initiative by public participants.

Transport policy has been one of the EU's common policies for more than 30 years. With the opening of transport markets and the creation of a trans-European transport network, the "sustainable mobility" model will become even more important - especially given the steady increase in greenhouse gas emissions from the transport sector, which threatens to jeopardize the European Union's efforts to achieve their climate goals. European transport policy faces many sustainability challenges. The transport sector accounts for approximately a quarter of total human greenhouse gas emissions from the EU. Furthermore, transport is the only sector in the EU whose greenhouse gas emissions have increased since 1990. Therefore, the 2011 White Paper entitled "A Roadmap to a Single European Transport Area - Towards a Competitive and Efficient Transport System" (European Commission, 2011) recommended reducing 20% of emissions in transport (excluding international maritime transport) between 2008 and 2030, and a reduction of at least 60% between 1990 and 2050. These targets are reiterated in the "European Strategy for Low Emission Mobility" (European Environment Agency, 2018) as well as in communication "Clean Planet for All" (COM, 2018). Finally, the Graz Declaration on Clean, Safe and Affordable Mobility (Council of the European Union, 2018), develops additional priorities for implementation. In a joint statement on 30 October 2018, EU Transport and Environment Ministers recognized clean, safe and affordable mobility as a key priority of EU transport policy. At the level of the European Union, the key strategic documents for the field of transport policy - urban and regional mobility are (EUR-Lex, 2011): Action Plan on Urban Mobility (COM, 2009), Transport White Paper (European Commission, 2011) and Urban Mobility Package (European Commission, 2013), while in the Republic of Croatia, it is The Transport Development Strategy of the Republic of Croatia for the period from 2014

to 2030 document (Ministry of the Sea, 2017). The Transport Development Strategy of the Republic of Croatia cannot confirm how feasible a project is or how much it is harmonized with local and regional transport needs because its character is such that it does not refer to projects, but only identifies measures and objectives. For this purpose, it is necessary to prepare lower-level strategic documents that must be harmonized with the Strategy, but also analyses in more detail the needs of a particular area, and based on them, identify traffic problems and opportunities to improve the transport system. As functional regions are areas of intensive transport connections - it is logical that the mentioned strategic document is prepared precisely to cover the functional region, so the strategic document at the regional level is the first step in the preparation of urban and regional mobility projects.

Lower level strategic documents are the Master Plan (so-called Masterplan) of transport development, i.e. mobility. This document is a "bridge" between The Transport Development Strategy (Ministry of the Sea, 2017) and the projects themselves. The masterplan identifies problems and opportunities for improving the transport system and sets the framework for possible solutions. Which solution will be optimal (which projects will be prepared) is developed based on the results of the Masterplan in further studies (feasibility study, feasibility study, cost-benefit analysis (CBA), etc.). Such a Masterplan has the role of a "transport development strategy of the region" and provides a direct strategic basis for all future transport projects, significantly speeds up the preparation of transport projects within the scope of the Masterplan and increases the likelihood of their financing from EU funds. Regional strategic projects are also input data for the national Strategy, which guarantees the representation of the interests and needs of local and regional units at the national level.

The traffic model is a computer simulation of the movement of people and goods in the traffic network within a predetermined spatial scope. The purpose of the traffic model is to collect all relevant data and research into a single database (traffic model). Based on the available data set of the current situation, the analysis of the traffic system is approached, after which further development can be adequately planned for a certain period of time. The transport model helps to make decisions in solving and predicting traffic problems and is necessary in identifying the impact of the development program determined by strategic documents (which is also the Masterplan). Therefore, the development of the Masterplan should be preceded by the development of a traffic model, and the same traffic model should test the identified measures upon completion of the development of the Masterplan. In this way, the Masterplan becomes a proven comprehensive plan of the region in question. The regional transport model must be interoperable with the national one. Equally, it is important to note that such a traffic model would have to be delivered to the customer along with the software and the associated license, in order to serve as a permanent tool in traffic planning.

The authors are of the opinion that the role of participants in local self-government units is to have the best insight into the situation in their local self-government units related to transport policy and the complete functionality of their region and to create awareness of local self-government development in the direction of sustainable mobility, to recognize the need for drafting strategic documents and projects for access to European funds, and as an important prerequisite to be able to access these funds at all. Authors believe that this is the knowledge related to digital literacy, which was researched through a questionnaire and is the subject of this research.

The importance of such thinking and approach is also justified by the fact that sustainable urban mobility is one of the main challenges facing EU cities. The problems that need to be overcome are also evident from the fact that road traffic is one of the main causes of air pollution and greenhouse gas emissions in urban areas and the social cost of traffic congestion is approximately 270 billion euros each year. In 2013, the European Commission adopted the Urban Mobility Package (European Commission, 2013), and provided more funding for clean urban transport - approximately € 13 billion for the period 2014-2020 - to make such transport more sustainable (COM, 2020). The main source of EU funding for urban mobility is the European Structural and Investment Funds (ESI Funds), from which € 16.3 billion was allocated for this purpose in the period 2014-2020. In addition, € 200 million has been allocated from the Connecting Europe Facility (CEF) in the transport sector to a number of major EU cities.

The main source of EU funding for urban mobility is two of the five European Structural and Investment (ESI) funds, namely the European Regional Development Fund (ERDF) and the Cohesion Fund (CF). Other available funds are Horizon 2020 in the field of research and innovation and the Connecting Europe Facility (CEF) in the transport sector. The amount available for urban mobility from the ESI Funds has increased from € 11.2 billion in the 2007-2013 programming period to € 16.3 billion in the 2014-2020 period. This primarily includes financial resources for net urban transport (2007-2013 € 8.1 billion; 2014-2020 € 12.8 billion), but also smart transport systems, cycle paths and multi-modal transport (European Court of Auditors, 2020). Projects that receive funds from ESI funds are co-financed by national funds.

As an EU member, Croatia is taking a number of actions to reduce emissions from transport. About 120 charging stations for

electric vehicles were built, and the purchase of almost 3,000 energy-efficient, electric and hybrid vehicles was co-financed. Among other things, ecological driving courses are conducted, which achieves significant savings in fuel consumption. It is planned to continue and expand measures to encourage the use of efficient vehicles, alternative fuels in transport, the development of infrastructure for alternative fuels and the promotion of intelligent and integrated transport systems in cities.

Green mobility is included in The Transport Development Strategy of the Republic of Croatia 2017-2030. (Ministry of the Sea, 2017), as one of the specific goals. Moreover, it is a specific goal in the field of public transport, i.e. SC5 - Improving technical requirements in road design with an emphasis on more economical technical solutions, safety standards, green mobility and integration of zero-emission modes of transport.

3. Research methods

The topic was designed as a case study according to Yin (Yin, 2014). Research methods of desktop analysis were used, i.e. a comprehensive literature review in combination with a survey method. The research was conducted at the level of all local self-government units in the Republic of Croatia. The aim was to understand the level of digital literacy of participants in local self-government units in the Republic of Croatia. Through a questionnaire, public administration employees assessed the level of their own skills in using computers, laptops, smartphones and tablets, then the ability to participate in social net-works Facebook, Twitter, Instagram and Linked, and finally assessed their skills in using the Internet in searching, summarizing, retrieving, analysing and using data, all in order to gain insight into the real state of knowledge levels, which are needed as a prerequisite to be able to access EU funds related to urban and sustainable mobility.

The paper gives a comprehensive overview of secondary data sources related to digital and green literacy, as well as urban and sustainable mobility, and analyses the strategic and planning framework for the development of urban mobility and the main financial sources of EU funds for urban and sustainable mobility projects in the EU, as well as in the Republic of Croatia.

Quantitative analysis of the questionnaire was done according to the types of criteria from Vierros et al. (Vierros et al, 2006). Through the questionnaire, the participants were first structured hierarchically, and through all local self-government units in the Republic of Croatia (Narodne novine, 2020). The survey included all local self-government units in the Republic of Croatia, according to rule of 100% coverage. Thereafter, the participants were divided into groups according to Vierros et al. (Vierros et al., 2006) in a way that mutual exclusivity is respected by the unique inclusion of groups in the structure.

The data collection process was launched in September 2020, and was completed by October 2020. The target groups of the survey included employees from all local self-government units in the Republic of Croatia. According to the Law on Local and Regional Self-Government in the Republic of Croatia, local self-government units are municipalities and cities. The Republic of Croatia has 21 units of regional self-government: 20 counties and the City of Zagreb, which simultaneously holds the status of a city and a county. In the Republic of Croatia, a total of 555 local self-government units have been established, namely 428 municipalities and 127 cities, as well as 20 regional self-government units, i.e. counties. The City of Zagreb, as the capital of the Republic of Croatia, has a special status of a city and county, so that in the Republic of Croatia there are a total of 576 units of local and regional self-government.

The survey questionnaire was sent by e-mail to all local self-government units - 555 of them, and regional self-government units were not included in the analysis. Questionnaires were sent to the e-mail addresses of representative bodies in local self-government units that are in a position to make a decision on the accession of a local self-government unit to projects financed from EU funds.

The analysis of the obtained results in the first part shows that a total of 303 answers were received by e-mail, there were 263 respondents at the municipal level and 40 cities, which is a satisfactory, i.e. representative number of answers in relation to the total number of local self-government units of 54.6%. Looking at the age structure, it can be concluded that the largest number of respondents is between 31 and 40 years old (102 of them), then between 41 and 50 years old (80 of them), less than 30 (58 of them), and 51 to 60 (of 50) and more than 60 years (13 of them), and the following are professional qualifications: VSS (152), SSS (76), VŠS (56), SPEC. PROFESSIONS (13), MAG. KNOWN. (4) and DR.SC., and given that these are mostly highly educated middle-aged employees who are in the most productive age and this can be cited as a significant advantage in their consideration of the needs for green and sustainable mobility projects funded from EU funds. Geographically, the largest number of respondents are from Varaždin County (27), then Zagreb County (25), Karlovac County (24), Krapina-Zagorje County (22), Split-Dalmatia County (23), Sisak-Moslavina County and Dubrovnik-Neretva County. (20), Istria (18), Brod-Posavina and Osijek-Baranja (16), Međimurje and Vukovar-Srijem (15), Virovitica-Podravina (12), Zadar (10), Primorje-Gorski Kotar (8), Požega Slavonian (6), Bjelovar-Bilogora, City of Zagreb and Koprivnica-Križevci (4), while no response was received from Lika-Senj County, so it can be concluded that the entire area was covered through the answers to the survey RH.

The main focus in the survey questionnaire was placed as previously stated on the skill of using computers, laptops, smartphones and tablets, then the skill of participating on social networks Facebook, Twitter, Instagram and Linked, and the skill of using the Internet in searching areas, summarizing, retrieving, analysing, and using data. The results of the research are analysed further in the paper.

4. Analysis of results and discussion

Achieving a sustainable urban and regional mobility and is one of the most important goals of EU member states and the Republic of Croatia, for which reason the European Structural and Investment Funds (ESI Funds) were established. In order to access these funds, in addition to recognizing the need for the development of local self-government units in this direction, certain digital knowledge and computer skills are needed. Whether there are capacities in local self-government units that possess the digital knowledge and skills needed to develop the necessary documents, plans and strategies for accessing the European Structural and Investment Funds and using these funds to develop sustainable mobility.

The starting points of the research were related to research questions that participants in local self-government units assess their own skills in using computers, laptops, smartphones and tablets, their ability to participate in social networks Facebook, Twitter, Instagram and Linked, and the ability to use the Internet in searching areas summarizing, retrieving, analysing, and using data, which are according to the opinion of the authors, the knowledge and skills extremely important for planning urban and sustainable mobility.

In this regard, the following hypotheses have been set:

H1: Satisfactory level of knowledge and skills in the use of technical equipment

(computers, laptops, smartphones and by most employees of local self-government units is an important prerequisite for gaining knowledge about EU-funded projects and thus to launch and implementation of a sustainable mobility project.

H2: Insufficient level of skills of participation in social networks of local government employees reduces their success in obtaining information on EU-funded projects related to investments in sustainable mobility, as well as their success in project

implementation and communicating results project with the general public.

H3: Having the skills to use the Internet in the areas of searching, summarizing, retrieving, analysing and using data by most local government employees is an important prerequisite for accessing EU-funded projects to develop a sustainable mobility project.

The results of the research collected by the survey are presented and explained below (Table 1).

Table 1. Skills in using computers, laptops, smartphones and tablets according to the obtained results)

ASSESSMENT OF SKILL OF USING OF TECHNICAL EQUIPMENT				
GRADE	COMPUTERS	LAPTOP	SMARTPHONES	TABLETS
1	0	1	1	5
2	0	1	3	11
3	38	36	37	46
4	125	127	116	115
5	140	138	146	126

In the literature dealing with this issue, there To the question asked in the questionnaire to the participants in the local self-government units, to assess their knowledge and skills, 303 of them answered that they have an excellent computer skills 140 (46.3%), then 125 of them (41.2%) very good and 38 (12.5%) good, no one gave themselves grade 2 (sufficient) or 1 (insufficient); furthermore, with a laptop, most of them 138 (45.54%) have an excellent skills, 127 of them (41.90%) very good skills, 36 of them (11.88) have good skills and 1 (0.34%) graded themselves with grade 2 (sufficient)

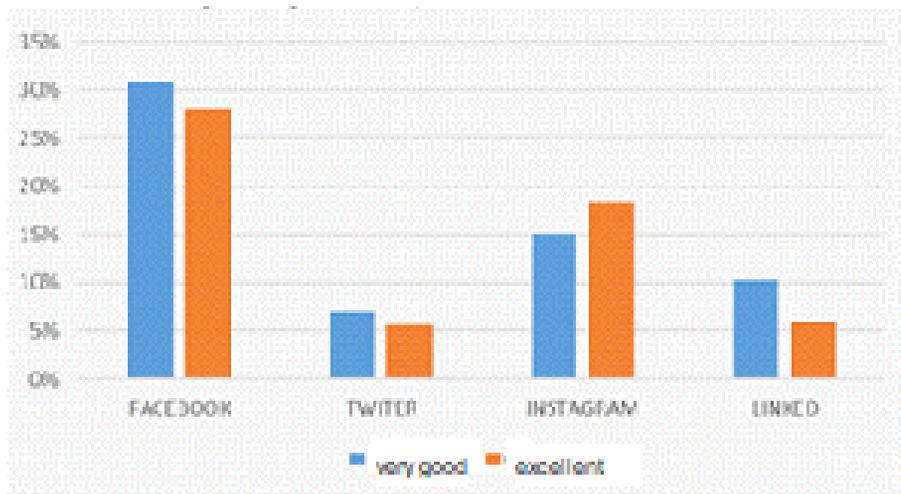
for 1 (0.34%) sad that his skills are very bad (grade 1). Further with a smartphone, most of them 146 (48.18%) are claiming to have an excellent skills,, then 116 of them (38.28%) very good skills, 37 of them (12.21 %) have good, skills and 3 (0.99%) have barley satisfactory (grade 2)and 1 (0.34) has bad skills. When asked about the tablet skills, the most of them 126 (41.58%) have an excellent skills, 115 of them (37, 95%) very good skills, 46 of them (15.18%) have good, 11 (3.64%) sufficient skills and 5 (1.65%) have insufficient skills (Table 2).

Table 2. The skills of participating in the social networks Facebook, Twitter, Instagram and Linked results

ASSESSMENT OF SKILL OF USING OF SOCIAL NETWORKS				
GRADES	FACEBOOK	TWITTER	INSTAGRAM	LINKED
1	36	171	101	158
2	40	66	57	58
3	49	28	43	38
4	93	21	46	31
5	85	17	56	18

When 303 participants in local self-government units were asked to assess their skills of participation in social networks: Facebook, Twitter, Instagram and Linked, they gave answers that most of them use Facebook (93.69%) very good, then 85 (28.05%) excellent, and 49 (16.17%) good, 40 (13.20%) were rated with sufficient and 36 (11.88%) with insufficient; then with Twitter- most of them 171 (56.44%) have insufficient skills, then 66 of them (21.78%) satisfactory, 28 of them (9.24%) good, 21

(6.93%) very good and 17 (5.61%) excellent skills; with Instagram: most of them 101 (33.33%) have insufficient skills, then 57 of them (18.81%) satisfactorily, 56 of them (18.48%) have an excellent skills, 46 (15.18) very good and 43 (14.19%) good skills; and finally with Linked most of them 158 (52.15%) have insufficient skills, 58 of them (19.14) satisfactorily, 38 of them (12.54%) good skills, 31 (10.23%) satisfactory and 18 (5.94%) excellent skills (Graph 1).



Graph 1. Assessing the skill of using social networks

When 303 participants in local self-government units were asked to assess their skills in using the Internet in the areas of searching, compressing, downloading, analysing and using data, 176 of them (58.09%) answered that their skills in data searching are excellent, 109 (35.97%) very good, 16 (5.28%) good, 2 (0.66%) satisfactory, and none of them said that their skills are insufficient; then 139 of them (45.87%) summarize the data very good, 124 (40.92%) excellent, 34 (11.22%) good, 6 (1.98%) satisfactory, and none of them said

that their skills are insufficient. Further, 161 of 303 participants (53.14%) download the data excellently, 115 (37.95%) very good, 21 (6.93%) good, 6 (1.98%) satisfactory, and no one insufficient. Regarding analysing of data, 157 participants, 51.82% analyses the data very good, 110 (36.30%) excellent, 32 (10.56%) good, 3 (0.99%) satisfactory, and 1 (0.34%) insufficient. Finally, 139 participants (45.87%) use the data excellently, 134 (44.22%) very good, 26 (8.58%) good, 4 (1.32%) satisfactory, and no one insufficiently (Table 3).

Table 3. Internet skills in the areas of search, summarizing, downloading, analysing and using data according to results

ASSESSMENT OF INTERNET SKILLS					
grades	searching	compressing	downloading	analysing	using
1	0	0	0	1	0
2	2	6	6	3	4
3	16	34	21	32	26
4	109	139	115	157	134
5	176	124	161	110	139

Analysing the obtained results on the questionnaire asked to the employees in the local self-government units to assess their skills in using computers, laptops, smartphones and tablets, where the offered answers were excellent, very good, good, and satisfactory and insufficient, the great majority of them, gave the answer that they use the mentioned technical equipment excellently or very good. Most of them use 46.3% of computers, then 41.2% very good, 12.5% good, and there were no answer marked as satisfactory or insufficiently, from which it can be concluded that most of them employees approximately 87.5% in local self-government units have sufficient knowledge and manage computers independently. Most of them are using a laptop, 45.5% use it excellently, 41.9% of them very good, 11.8% good, satisfactory 0.34% and insufficiently also 0.34%, from which it can be concluded that most of, 86.4%, employees in local self-government units have sufficient knowledge and know how to use a laptop independently. With smartphones, 48.2% of them are using it excellently, then 38.3% of them are very good, 12.2% are good, 0.99% are satisfactory and 0.34% have insufficient skills, from which it can be concluded that the largest part of the staff approx. 86.5% in local self-government units have sufficient knowledge and know how to use smartphones on their own. 41.6% of employees of local and regional self-government units also use tablets excellently, followed by 38% very good, 15.2% good, 3.64% satisfactory and 1.65% insufficiently, from which it can be

concluded that most employees approx. 79.6% in local self-government units have sufficient knowledge and know how to use smartphones independently, but to a lesser extent than with other technical equipment (computers, laptops and smartphones).

Based on the obtained analysis, it can be concluded that most employees of local self-government units have sufficient knowledge and skills in the use of technical equipment (computers, laptops, smartphones and tablets). 87.5% of employees in local self-government units have enough knowledge to use computers completely independently, 86.4% of employees in local self-government units have enough knowledge to use a laptop completely independently, 86.5% of employees in local self-government units have enough knowledge to use smartphones completely independently and to a lesser extent 79.6% of employees in local self-government units have enough knowledge to use tablets independently.

Analysing the obtained results on the questionnaire asked to employees in local self-government units to assess their skill of participating in social networks Facebook, Twitter, Instagram and Linked, where the offered answers were excellent, very good, good, satisfactory and insufficiently, the great majority of them gave the answer that they skills in using mentioned social networks is either insufficient or satisfactorily, except with Facebook. A maximum of 30.7% of employees use Facebook very good, followed by 28.1% excellent, 16.2% good, 13.1% satisfactory, and 11.8% insufficiently, from which it can

be concluded that most employees in local self-government units, approximately 58.8% have a solid skill of participating in the social network Facebook, while a smaller part of employees in local self-government units have a weaker skill of participating in the social network Facebook.

With Twitter, most employees use 56.4% insufficiently, followed by 21.8% satisfactory, 9.2% good, 6.3% very good, and 5.6% excellent, from which it can be concluded that most employees in local self-government units, approximately 78.2% do not have the skill of participating in the Twitter social network, while a smaller part of employees in local self-government units have the skill of participating in the Twitter social network.

Most employees use Instagram insufficiently, followed by 18.8% satisfactorily, 18.5% excellently, 15.2% very good, and 14.2% good, from which it can be concluded that approximately 52.1% of employees in local self-government units do not have the skill of participating in the Instagram social network, while a smaller part of employees in local self-government units have the skill of participating in the Instagram social network.

With LinkedIn, the most employees - 52.2% of them, have insufficient skills, 19.1% of them satisfactorily, 12.5% good, 10.2% very good, and 5.9% excellent, from which it can be concluded that the largest part, about 71.3% of employees in local self-government units do not have the skill of participating in the LinkedIn social network, while a smaller part of employees in local self-government units possess the skill of participating in the LinkedIn social network.

Based on the obtained analysis, it can be concluded that the statement that if they do not have the skills to participate in social networks, employees of local self-government units will have problems in obtaining information on projects financed from EU funds. In local and regional self-government units, 78.2% of employees do

not have the skill of participating in the social network Twitter, 52.1% do not have the skill of participating in the social network Instagram and 71.3% do not have the skill of participating in the social network LinkedIn.

Analysing the obtained results on the questionnaire asked to employees in local self-government units to assess their skills of searching, compressing, retrieving, analysing and using data obtained via the Internet, it was shown that 58.1% of employees search data excellently, then 35% very good, 5.3% good, 0.66% satisfactory, and no answer was received marked as insufficiently, from which it can be concluded that the great majority of employees, approximately 93.1%, in local self-government units have sufficient knowledge and skills to search data using the internet. Regarding the skill of summarizing the data, 45.9% of employees answered very good, 40.9% of them excellent, 11.2% good, 2% satisfactory, no answer was received marked as insufficiently, from which it can be concluded that the vast majority of employees approx. 8%, in local self-government units have enough knowledge and skills to summarize the obtained data via the Internet. Regarding the skill of downloading the data, 53.1% of employees have an excellent skills, 38% of them very good, 7% good, 2% satisfactory, no answer was received marked as insufficiently, from which it can be concluded that the vast majority of employees approx. 91.1% in the local government units possesses enough knowledge and skills to download data using the Internet. 51.8% of employees can analyse the data very good, 36.3% excellent, 10.6% good, 0.99% satisfactory, and 0.3% insufficiently, from which it can be concluded that the great majority of employees approximately 88.1% in local self-government units he has enough knowledge and skills to analyse the obtained data using the Internet. The skill of using the data: 45.9% of employees answered excellently, 44.2% very good, 8.6% good,

1.3% satisfactory, no answer was received marked as insufficiently, from which it can be concluded that the great majority, about 90.1% of employees in local self-government units, have sufficient knowledge and skills to use data obtained via the Internet.

Based on the obtained analysis, it can be concluded that most employees of local self-government units have the skill of using the Internet in the areas of searching, summarizing, downloading, analysing and using data, which is a prerequisite for joining EU-funded projects. In local and regional self-government units, 93.1% of employees have sufficient knowledge and skills to search for data via the Internet, 86.8% of employees in local self-government units have sufficient knowledge and skills to summarize data obtained via the Internet, 91.1% of employees have enough knowledge and skills to download data via the Internet, 88.1% of employees in local government units have enough knowledge and skills to analyse the data obtained via the Internet and 90.1% of employees in local government units have enough knowledge and skills to use of the data obtained via the Internet.

Based on previously conducted research, it can be concluded that employees in local self-government units are sufficiently digitally literate and the potential of participants to obtain funds from EU funds and introduce sustainable mobility in all local self-government units has been determined.

5. Conclusions and recommendations

Sustainable mobility is one of the main challenges that are cities and local governments in the EU facing and is an important topic for many EU citizens. There are strong links between sustainable urban mobility and economic growth and reduced environmental pollution. The main sources

of EU funding for urban mobility are the European Structural and Investment Funds (ESI Funds). The EU invests significant financial resources to help cities and local governments to improve mobility and make it more sustainable, and also helps Member States and cities to use funding more efficiently and effectively in meeting relevant challenges, especially in the context of urban-green mobility communication. In order to access these funds, in addition to the awareness that the city or local self-government unit, needs development in the direction of sustainability and green mobility, digital knowledge and skills of employees in local self-government units, who will access European structural and investment funds. Member States and their cities and local governments are responsible for managing urban mobility in a sustainable way.

Digital literacy and the possibility of digital communication and satisfactory knowledge and skills in the use of technical equipment used in their workplaces, this primarily refers to desktop computers, although knowledge in the use of laptops, smartphones and tablets, as well as basic knowledge of social networks and skills of searching, summarizing, retrieving, analysing and using data of employees in local self-government units have a very large impact on the intensive development of sustainable mobility and are a prerequisite for access to strategic projects and programs related to sustainable and green mobility.

As a limiting factor of this research it should be stated that the participants filled in the survey questionnaire at the workplace and for this reason most likely rated their skills better than they are, and therefore the authors would recommend that it would be good to conduct an objective assessment of digital literacy by impartial examiners in the form of exams, as this is an important factor that significantly affects the receipt of funding from EU funds for projects related to sustainable and green mobility.

Based on the data obtained through this scientific research, we can recommend that it is necessary to continue investing in knowledge and skills, including digital knowledge, skills and digital literacy of employees in local self-government units, because only in this way local self-government units will progress in all sectors and thus in the sector of urban mobility and sustainable development, which will ultimately contribute to the sustainable development of local self-government units and the well-being of the people and the

pleasant living environment of the area in which they live. Confirmation of such thinking and results obtained through this research is a plan for sustainable mobility in the direction of implementation and development of autonomous vehicles that will be controlled through applications that will greatly benefit the sustainability of public transport and all participants will have to have a satisfactory level of digital literacy in order to be able to participate in the implementation of these services at all.

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