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OPEN DATA CONCEPT, ITS APPLICATION AND EXPERIENCES

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Abstract:

Creating a richer, more equitable and just society requires that governments work in a more transparent and responsible way - to maintain regular and meaningful communication with citizens. Open data is the means to achieve this goal. Open data is digital data available to the public. It has such technical and legal characteristics that anyone, at any time and everywhere can use, re-use and redistribute it. The focus in this paper is data that is easily accessed and used and distributed for free. It is structured for usability and computer analysis. Such data is called publicly available or open data. The paper deals with the basic concepts of Open data, where it is most used, the most important experiences and benefits in its use, how it impacts human lives, which foregoing preconditions have to be met in order to significantly increase the effects of open data, how influence is created with it and the challenges that arise in its use.

Keywords: open data, concept of open data, public data, open data usage experience, open source, open source hardware, open content, open access.

Introduction

"When we have all the information online, it will be great for mankind. It is a prerequisite for solving many of the problems faced by contemporary society." - Robert Cailliau[1]

Today, in modern society, data and information itself play a very important role and importance can be compared to the importance of

[1] Robert Cailliau - born on 26 January 1947, a Belgian computer engineer and computer scientist. He helped Tim Berners-Leeu to develop the World Wide Web.

energy or perhaps even more. Unlike energy, information can be transmitted in various ways, but the most popular way is certainly over the Internet. The Internet is an unprecedented phenomenon in the entire human history with the fastest growth. There is only one purpose of the Internet - the link between people around the world and exchange of information through it. As information is becoming more accessible to people, their "hunger" for information is getting bigger and bigger. So, the idea of free, useful information was born.

In the context of the Fourth Industrial Revolution (characterized by the fusion of the physical, digital and biological worlds (Schwab, 2015), data is at the heart of business intelligence and is increasingly considered to be the key to improving business intelligence of the public sector.

In the scientific sphere and in the software and hardware industry, for more than thirty years there has been a so-called "Open" movement that differentiates submembers such as open source[2] (Open Source Initiative, 2018), open source hardware[3] (Pearce, 2016), open access[4] (Pearce, 2016), (Suber, 2014) and open content[5] (Open Content, 2018a).

The focus in this paper is data that is easily accessed and used and distributed for free. It is structured for usability and computer analysis. The synonym for open data is publicly available or open data (OD). Under the main subtitle of the article, there are the basic concepts of OD, areas of its use, the most important experiences and benefits, its impact on human lives, previous preconditions that have to be met in order to significantly increase the impacts of OD, influence it creates and which challenges arise in its use.

In order to gain a complete view of the open data problem, the following basic chapters explain the basic concepts of OD. In the third

[2] In production and development, open source as a development model promotes universal access through a free product design license or plan and universal redistribution of that design or plan, including subsequent enhancements by anyone. (Open Source Initiative, 2018)

[3] Open source hardware (OSH) consists of physical artifacts of technology designed and offered by the open design movement. Both free and open-source software (FOSS), as well as open-source hardware is created by this open-source culture movement and applies a like concept to a variety of components. (Pearce, 2016)

[4] Open access (OA) refers to online research approaches that do not include all access restrictions (e.g. access / usage payments) and no usage restrictions (such as specific copyright and license restrictions). (Suber, 2014)

[5] Open content is a neologism that David Vilei described in 1998 as a creative work that others can copy or modify. The term comes from open source software which is a related concept in the software. (Open Content, 2018b)

chapter, the term OD is explained more closely. The fourth chapter outlines the principles that must be met by OD. The following chapter presents the application - the results and experiences achieved by regions. The sixth chapter discusses the influence of OD on human lives. The very act of changing the ways of doing business and applying the OD necessarily creates certain challenges. OD has a certain influence and how it is created. All of this is the content of the seventh chapter. The penultimate chapter deals with the arguments for and against the application of OD. At the end of the paper, a conclusion is made outlining the basic contributions of this paper and plans for future work.

Open Data Concept

The general objective of OD is to foster and strengthen the cooperation leading to the adoption and implementation of common principles, standards and good practices of open data from various sectors throughout the world.

The open data is digital data, available to the public. It has such technical and legal characteristics that anyone, at any time and everywhere can use, re-use and redistribute it.

We are witnessing the great global revolutions, created under the influence of technology and digital media - with the help of data and information. This transformation has enormous potential to encourage governments, civil society organizations and the private sector to work more transparently, more accountably, more efficiently and more efficiently. It helps design, achieve, and evaluate the goals of sustainable development at a global level.

The OD concept speaks directly about the basic issues of ownership, responsibility and control. When opening data - publishing on public portals, legal and ethical issues appear as reasons for not publishing data research with the article. It is often the case that researchers do not agree to share data. Also, there is a fear that others may misuse or misread their data (Wouters, 2017).

In order to increase the efficiency of the use of OD, it is necessary to establish a legal and regulatory environment. Traditionally, there is a strong tendency in the OECD countries to use transparency and freedom of information as a legal basis for open government data (Ubaldi, 2013).

Creating a richer, more equitable and just society requires that governments work in a more transparent and responsible way - to maintain regular and meaningful communication with citizens. A global information revolution is underway to improve co-operation on key social

issues, enable public oversight of government activities, and stimulate innovation, sustainable economic development, efficient public policies and programs.

The central policies of open governments, strategies and action plans are of crucial importance for the OD policy to be activated (OECD, 2018).

Open Government Data (OGD) Policies, Programs and Open Government Initiatives have the potential to provide a range of economic, social and political benefits to governments (Ubaldi, 2013).

What goals can be achieved and where a proper use of OD can help?

The following are the goals that can be achieved by using open data correctly (International open data charter, 2018):

- OD allows governments, citizens and civil society organizations and the public sector to make decisions based on a greater amount of information. Efficient and timely access to information helps individuals and organizations to come up with new knowledge and innovative ideas that can bring social and economic benefits and improve the quality of life of people around the world.

- OD enables users to compare, combine, and use links between different data sets, tracking them through multiple programs and sectors. If it is possible to combine and compare data efficiently, it is possible to identify trends, social and economic problems and inequalities, and compare the progress made in public programs and services.

- OD can help governments, citizens and organizations to achieve better results in the field of public services in areas such as health, education, public security, environmental protection, human rights and natural disasters.

- OD can contribute to economic development and help create and strengthen new markets, businesses and jobs. These benefits are increased when a large number of civil society and private sector organizations adopt good OD practices and give up their own data.

- OD can improve the flow of information within and between governments, and make government decisions and making decision making more transparent. Greater transparency promotes responsibility and good governance, promotes public debate and helps fight corruption. OD offers opportunities for innovative political solutions based on evidence, economic benefits and social development for all citizens.

How OD goals are achieved?

Goals are achieved (International open data charter, 2018):

- OD helps create policy based on evidence. It encourages governments to use data in policy making and evidence-based decision making. It thus provides a better result of public policies, and lays the foundations for sustainable economic and social development;
- OD facilitates sectoral cooperation. It helps cooperation between governments, citizens and civil society organizations and the private sector in developing policies and providing better public services;
- OD allows tracking cash flows. It shows how well public money is spent, which encourages governments to prove they use public money in an effective way;
- OD improves the quality of management of natural resources. It increases awareness of the use of natural resources, spending on extraction revenues, and ways of carrying out transactions and managing land;
- OD enables tracking of results and effects. It helps evaluate the effects of public programs, which enables governments, civil society organizations and the private sector to respond more efficiently to the needs of local communities.
- OD promotes equal development, sustainable growth and growth through the creation and strengthening of markets, companies and workplaces;
- OD allows geo location data. It provides references for geo-spatial data and Earth observation data, which supports comparability, interoperability, and effective analysis.
- OD improves decision-making. It enables citizens to make decisions based on a greater amount of information, services and quality standards of services they should expect. When used in this way, OD is a key public good for helping citizens to establish values, discovering ideas, ideas and services that would create a better world for everyone.

We know that governments and other public sector organizations preserve a huge amount of data that may be of interest to citizens and that such data represents unused resources. If this information were to be opened, it could stimulate the construction of interconnected societies that would largely meet the needs of citizens. These societies would enable the expansion of innovation, fairness, transparency and prosperity while at the same time providing civic participation in public decision-making and government responsibility.

So let us follow the six principles that will be the basis for accessing the data and for publishing and using the data (International open data charter, 2018). These principles prescribe that data should be:

- open in principle,
- timely and comprehensive,
- affordable and usable,
- comparable and interoperable,
- for improved management and greater citizen engagement, and
- for inclusive development and innovation

What is OD?

According to one of the definitions, OD is such data that is freely available, accessible, machine-readable and available in open formats.

OD is publicly available data that can be universal and easy to access, used and distributed for free. It is structured for usability and computer analysis. The openness of data exists on the continuum, although much of the information we are discussing here may not be strictly open in the descriptive sense; it can still be delusional, used by third parties, and capable of widespread transformation (Young & Verhulst, 2016, p.5).

The openness of data is applied to all components of the research process, not just for the outcomes of the research. OD must be embedded in the research process from start to finish. Such changes will probably affect the entire research cycle and its organization from the establishment of research to its publication. In researching the system as a whole, this shift from OD can also lead to the emergence of new disciplines, raise the quality and impact of research, and open new ways of publishing (Wouters, 2017).

Principles that open data must satisfy

On 7 and 8th January 2007, in Sevastopol, California, 30 advocates of open governments met to develop a set of principles of open government data. The aim was to achieve understanding why government open data is important for democracy (DNA Doe Project, 2018).

State data shall be considered open if published in a manner consistent with the following principles:

- Complete: All public information is available and does not fall under the applicable privacy, security or privilege limits.

- Essential: Data is collected at source, with the highest degree of granularity, not in aggregate or modified forms.
- Timely: Data is available as soon as possible to maintain data value.
- Affordable: Data is available to the widest range of users for the widest range of uses.
- Machine readable / processed: Data is reasonably structured to allow automatic processing.
- Non-discriminatory: data is available to everyone without registration.
- No ownership: data is available in a form that no one has exclusive control of.
- No license: Data is not subject to any copyright, patent, trademark or business secrecy policy. A reasonable limit of privacy, security, and privilege may be allowed.

Why do institutions open data?

Public institutions collect and produce a large amount of different data, and by ensuring its availability in the form of OD (without compromising trust or privacy) it becomes accessible to a wider range of users.

Institutions not only provide higher levels of public work, but also provide citizens and businesses with new opportunities to generate new value from data - whether it is a new application, business model, visualization, mapping, research project, etc.

Through open data, the state encourages the development of creative business and knowledge economy, but also receives valuable feedback, which can be used to improve data quality, better understanding of user needs, better formulation and implementation of public policies.

Application and experience by regions

OD at the international level

Countries around the world found long ago that OD promotes economic growth, makes public administration more efficient and more economical, provides better services to citizens, ensures transparency and reduces corruption.

The European Union, among the first, recognized the importance of opening up data to the public authorities, and in 2003 adopted the

Directive on Re-Use of Public Sector Information, which was upgraded in 2013 (Lampoltshammer et al, 2017).

The first portal (OD) was set up by the United States of America in May 2009, and today there are close to 200,000 open data sets in it. The European Union established its Open Data Portal in 2015 (the portal automatically collects data sets from the Portal of the member states. The Republic of Serbia also submits certain data sets to the mentioned portal).

The European Commission estimates that data opening will create a market worth 40 billion euros annually, while the total value for the EU economy will reach 200 billion euros. That is why data at the international level has been referred to as "new oil" for a long time, and OD has been identified as one of the key factors for achieving the goals of sustainable development and the digital transformation of society. A significant level of political support for opening up data at the international level is dealt with in the Open Government Partnership Initiative (Serbia's membership since 2012), as well as in the International Open Data Charter.

Countries' Data Campaign progress can be tracked across a number of international rankings, such as the Global Open Data Index or the Open Data Barometer.

Below you will find the results of the application of OD in different countries in the world. The outcomes are presented by sectors where the methodology was applied and the effects of impacts implemented.

Brazil: Open Transparency Portal, Outcome: Government Enhancement, Sector: Public, Impact: Facing Corruption and Transparency.

Description: A tool designed to increase fiscal transparency.

Through the open state budget information, the Brazilian federal government has made improvements over the past decade. The Transparent Portal is now one of the country's primary anticorruption tools, registering the average age of visitors, with 900,000 unique visitors per month registered. Local authorities around Brazil and the other three Latin American countries have modelled similar initiatives of financial transparency.

Slovakia: Open Contracting Projects Sector: Public, Impact: Facing Corruption and Transparency,

Description: In January 2011, Slovakia introduced an unprecedented regime in the area of OD, requesting that all public procurement documents be linked (including revenues and contracts) on the Internet and condition the importance of public contracts and their publication. There were more than two million contracts published on the Internet,

and these reforms had a dramatic impact on corruption and were equally important for business climate and perception of corruption.

Indonesia: Kaval Pemilu; Sector: Politics and Elections; Impact: Facing Corruption and Transparency;

Description: A platform launched immediately after the controversial presidential elections in Indonesia in 2014. Kaval Pemilu's organizers teamed up with more than 700 volunteers to compare official voices with the original voting and digitization tables, often handwritten, making data readable and accessible.

Assembled in a mere two days, with a total budget of just $54, the platform enabled citizen participation in monitoring the election results, increased public trust in official tallies, and helped ease an important democratic transition.

Tanzania: Shule's Education Open Data Dashboard; Outcome: Empowerment of Citizens Sector: Education Impact: Social Mobilization

Description: Two recently established portals provide the public with more data on average grades and other information related to the performance of the schools in Tanzania. Educational Open Data Dashboard is a project that was established by the Tanzania Open Data Initiative; Shule was led by Arnold Minde, a developer, entrepreneur, and enthusiast of open data. Despite the challenges posed by low penetration rates in Tanzania, these locations slowly change the way citizens access information and make decisions. They encourage citizens to seek greater responsibility from their school system and public officials.

Great Britain: UK Survey; Outcome: Creating Opportunities Sector: Geographic Services; Impact: economic growth.

Description: Data from Ordnance Surveys, mapping by British agencies, essentially supports any UK industry or activity that uses a map: urban planning, real estate development, ecological science, communal services, retail and more. Ordnance Survey is essential for selection and, in spite of launching its Ordnance Survey OpenData platform in 2010, it uses a model of mixed prices, with some open data and some paid data. The expected Ordnance Survey OpenData products were delivered between 13 million pound net with a jump to 28.5 million pound increase in the GDP over the first 5 years.

The United States is one of the most advanced countries in the application of OD. Below you will find a few examples of OD and benefits received from different business areas in the country.

United States of America: OD about the government has changed the way the notion of citizenship is understood. It is a movement with its principles that has its own development in the United States, its history of

movement, applications for transparency and civic engagement, short legal history, data quality, prioritization, case studies and paradox in transparency.

United States of America: Business Atlas in New York; Sector: Business; Impact: Economic Growth

Description: Developed by the Mayor and Data Analysis Office (MODA), Business Atlas is a platform designed to mitigate market research differences between small and large enterprises in New York. The tool enables small businesses to access high-quality data on economic conditions in the given region to help them decide where to set up a new business or to expand the existing.

United States of America: NOAA: Opening of global weather data in cooperation with companies; Sector: Time; Impact: economic growth.

Description: Opening time data through NOAA has significantly reduced economic and human costs associated with weather conditions and damage through forecasts; enabled the development of a multi-billion financial industries that deliver weather forecasts based on weather conditions depending on seasonal data records; and catalyzed the growing industry in $ millions of tools and applications derived from NOAA data in real-time.

United States of America: Opening GPS data for civil use; Sector: Geographic Services; Impact: economic growth;

Description: Throughout the past 20 years, the Global Positioning System (GPS) technology has led to the expansion of commercial applications across the industry and sectors, including agriculture, construction, transportation, aviation and especially increasing use of portable devices for everyday life. Due to various system shutdowns, it is estimated that the losses amounted to $ 96 billion. In addition to creating new efficiency and reducing operating costs, the adoption of GPS technology has improved security, response time and quality of life, and plenty of other benefits.

New Zealand: *Christchurch Earthquake, GIS Clusters, Sector: Emergency Services, Influence: Data Engagement*;

Description: In February 2011, Christchurch was hit by a severe earthquake that killed 185 people and caused significant disturbances and damage to the major parts of the city that had previously been degraded by an earthquake. In response to the earthquake, volunteers and officials of the recovery agencies used open data, open source tools, trusted data with trusted information, and converted materials for the development of various products and services needed to successfully respond to emerging conditions, including a web application for

emergency information that made 70,000 visits in the first 48 hours after the earthquake, among others.

Influence of open data on human lives

OD improves the work of many governments around the world. In many cases, OD projects have impacts on multiple areas at the same time. The impact on people's lives is often indirect (and somewhat subtle). Changes are reflected in decision-making or other social, political and economic factors.

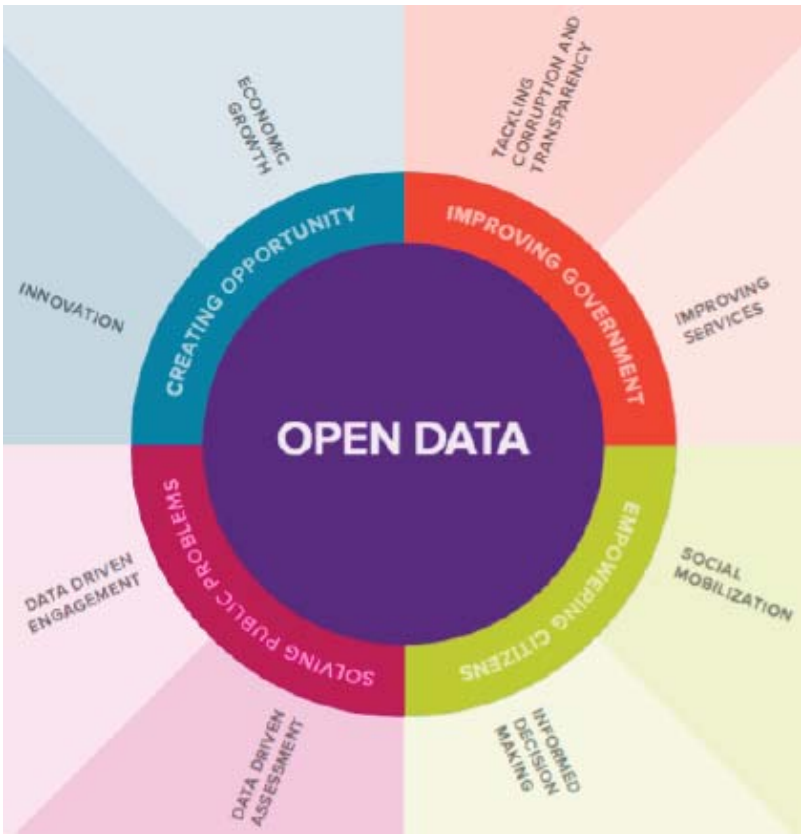

Figure 1 – The open data taxonomy[6] of impact (Young & Verhulst, 2016, p.15)
Рис. 1 – Открытые данные таксономии[6] воздействия
Слика 1 – Отворени подаци – таксономија[6] утицаја

[6] Taxonomy (in general) is practice and science about the classification of things or concepts, including the principles that are the basis of such classification. Specific taxonomies include Content.

Figure 1 lists the ways in which OD has an impact on people's lives, and they are:

- Creating a more responsible government, especially by helping to combat corruption and by introducing transparency in business, increasing accountability (especially budgeting),
- A government becomes more efficient, in particular through the strengthening of the public service and allocation of resources,
- Citizens are strengthened to take control of their lives and demand change by being enabled to make more effective decisions and by new forms of social mobilization, facilitating new ways of communication and access to information.
- OD creates new economic opportunities for citizens and organizations.
- In the end, the effect of OD is obvious in the way it helps solve major public problems, many of which seem almost irrelevant. Although most of these problems are not fully resolved, we finally see ways to improve. Through OD, citizens and policy makers can analyze social issues in new ways and engage in new forms of evaluation and data-based engagement. OD has created significant impacts during public health crises and other emergency situations.

To achieve better impacts and achieve goals, it is necessary to have (Young & Verhulst, 2016, pp.17-20):

- partnership - joint cooperation,
- public infrastructure,
- the existence of clear open data policies, including well-defined performance indicators, and
- a well-defined problem

What are the Challenges with Opening up Data? How is impact generated?

The success of each OD project also depends on the obstacles and challenges it faces. In the broader sense, four challenges have been identified, which are most often repeated in the analysed case studies (Young & Verhulst, 2016, pp.20-23):

- Readiness: It may not be surprising that countries or regions with overall low technical and human capacity or readiness often represent unacceptable environments for open data projects. Lack of technical capacity may be manifested with several variables, including low Internet penetration rate, broad digital divide or general weak technical literacy. Low technical capacities did not necessarily result in the complete "non-

squeamish" of a project. Instead, it is often a lack of potential for the project which makes it less successful than it could otherwise be.

- Responsiveness - Availability: Success is also limited when projects fail to respond to feedback and user needs. As we have seen in the previous section, the most successful projects solve a clear and well-defined need.

- Risks: The big challenge is the compromise between OD potential and the risk of privacy and security breaches. These risks are inherent in each OD project - by its nature, greater transparency exists in tensions with privacy and security.

- Allocation of resources: In the end, inadequate resource allocation is one of the most common reasons for limited success or complete failure of the project.

Some of the recommendations for the future use of OD are: the definition of key areas that OD can add value to, encouraging cooperation between sectors (especially between government, private sector and civil society), and treating data as a vital resource of public infrastructure in the 21st century.

Arguments for and against OD

Like any idea since the beginning of mankind, the concept of OD also has arguments for and against it - the debate is still ongoing. Unlike other discussions in which the arguments are categorically stated, in this discussion the arguments are changed depending on the type of information being discussed.

The main arguments in the name of OD are as follows:

- Public money is used to finance work, so it should be universally available. - The main objective of this argument is focused on Open Data in the government. The idea is that if taxpayers are paying for data collection, they also need to use free data**.**

- Facts cannot be legally protected.

- Opening up data helps to combat "data rotation" and ensures that scientific-research data is preserved over time.

- "Data belongs to the human race". Typical examples are genomes, organisms, medical sciences and environmental data after the Arusha Convention.

- Research sponsors do not get full value unless the data is available freely.

- Restrictions on reusing data create anti- communion/ poor connections.
- Data is needed for the smooth running of communal human activities and it represents an important factor in socio-economic development (health care, education, economic productivity, etc.).
- In scientific research, the rate of detection is accelerated by better data access.

The arguments against putting all available data as OD include the following:

- State funding cannot be used to duplicate or disprove private sector activities,
- Governments must be responsible for the efficient use of the taxpayer's money: If public funds are used to aggregate data and if data is made commercial (private) only for a small number of users, those users should pay the government for data charges,
- One of the serious issues with open data is "re-identification". This is a situation where someone can identify a person from a depersonalized data set,
- OD creates the possibility of inequality in the use of information. It gives everyone the opportunity for business or civic projects. Different market players have different levels of readiness to use OD. Large companies that have teams for processing such data have the ability to be even bigger, while small businesses cannot spend money for data analysis,
- Revenue generated by disclosure of data enables non-profit organizations to fund other activities,
- The government provides specific legitimacy to certain organizations to recover costs (NIST in the United States and the United Kingdom Abolition Survey),
- Privacy concerns may require that data access is limited to specific users or data subgroups,
- Collecting, "cleaning", managing and disseminating data are usually work and / or cost processes - whoever this service is provided from, they should receive fair compensation for providing these services,
- Sponsors do not get full value unless their data is used appropriately - sometimes it requires quality management, dissemination and branding that can best be achieved by charging fees to users,
- Frequently targeted end-users cannot use data without further processing (analysis, application, etc.) - if anyone has access to data, none of them can encourage the investment in processing needed to

make the useful data useful (typical examples are biologically, medical and ecological data).

Conclusion

Collaboration and data exchange between people and nations are very important for the further development of the human species. The open concept of data is an idea that accelerates development, while reducing costs and efforts. In the documentary entitled "Steve Jobs: Lost Interview" (Cringely & Sen, 2012), to the question about designers in the Apple's building (Why are there so few of them?), Jobs responds that program developers are like stones in the polishing drum. When they hit each other, they get polished and eventually the drum walls get polished. It is the same with people and ideas - when they collide with each other, they exchange ideas and eventually get extraordinary products. The OD concept is like a grinding drum, it helps ideas to reach people.

The contribution in this paper is the accentuation of public data, i.e. that which is easily accessed and used and transmitted further for free. Open data is structured for processing, utilization and computer analysis. The paper presents the basic concepts of OD, areas where it is used most and the most important experiences and benefits of its use. It has been pointed out how OD affects people's lives, and it has been emphasized that the preconditions must be met in order to significantly increase the effects of OD and how influence is created with it. Furthermore, there are some specific challenges that arise in its use.

In the research related to the material in this paper, the authors had some difficulties. Namely, there is no structured approach to open data research in government and educational institutions, but it is the privilege of large companies such as Amazon, Google, Facebook, and Microsoft, for example. Although open access to data is a growing trend, practical research is limited to journals that have free access and open licensing for academic publications, and there is scarcity in material associated with open data problems.

In the coming period, our work will be focused on the state of affairs in the field of OD in Serbia, as well as on the examples of its application in specific fields, such as medicine / public health in the world as well as in Serbia.

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КОНЦЕПЦИЯ ОТКРЫТОЙ ДАТЫ, ЕГО ПРИМЕНЕНИЕ И ОПЫТ

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ЯЗЫК СТАТЬИ: английский

Резюме:

Создание более богатого, более справедливого и справедливого общества требует от правительств более прозрачной и ответственной работы - поддержания регулярного и значимого общения с гражданами. Открытые данные являются средством для достижения этой цели. Открытые данные - это цифровые данные, доступные для общественности. Они обладают такими техническими и юридическими характеристиками, что каждый может в любое время и в любом месте использовать их, повторно использовать и распространять их. Основное внимание в этом документе уделяется данным, которые легко доступны, используются и распространяются бесплатно. Они структурированы для удобства использования и компьютерного анализа. Такие данные называются общедоступными или открытыми данными. В статье рассматриваются основные концепции открытых данных, где они наиболее часто используются, наиболее важный опыт и преимущества их использования, как они влияют на человеческую жизнь, которым должны соответствовать вышеизложенные предварительные условия для значительного усиления воздействия открытых данных, как они создаются. влияние на них и проблемы, возникающие при их использовании.

Ключевые слова: открытые данные, концепт открытых данных, публичные данные, практика применения системы открытых данных, открытый код, открытое аппаратное обеспечение, открытое содержание, открытый доступ.

КОНЦЕПТ OPEN DATA, ЊЕГОВА ПРИМЕНА И ИСКУСТВА

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ОБЛАСТ: информатика
ВРСТА ЧЛАНКА: стручни рад
ЈЕЗИК ЧЛАНКА: енглески

Сажетак:

Стварање богатијег, равноправнијег и праведнијег друштва захтева да владе раде на транспарентнији и одговорнији начин – да одржавају редовну и значајну комуникацију са грађанима. Отворени подаци, који су дигитални и доступни јавности, јесу средство да се тај циљ достигне. Они имају такве техничке и правне карактеристике да сваки човек, у сваком тренутку и свуда, може да их користи и пре расподељује. Подаци којима се лако приступа и бесплатно се користе и дистрибуирају структурирани су за употребљивост и компјутерску анализу, а називају се јавно доступни или отворени подаци. У раду су изложени основни концепти Open Data и дати одговори на питања: где се највише користе, каква су искуства и користи при њиховој употреби, какав је њихов утицај на живот људи, који се предуслови морају испунити да би се знатно повећали утицаји отворених података, како се остварује утицај помоћу њих и који се изазови јављају при њиховом коришћењу.

Кључне речи: отворени подаци, концепт отворених података, јавни подаци, искуства у коришћењу отворених података, отворени код, хардвер отвореног кода, отворени садржај, отворени приступ.

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