

Use of Big Data for socio-economic growth of local communities

At the base of this study there are some modalities of digital adoption and governance in our society (New Digital Deal), highlighting the impacts that it can determine in terms of welfare for the community as this approach is implemented within public bodies and private companies.

The term New Digital Deal recalls what was created by US President Roosevelt to establish a reform plan, with the aim of reviving the country from the financial collapse that hit the United States in 1929 with the collapse of the Wall Street Stock Exchange. He proposed a reorganization of social resources between new government roles and new collaborations. This report was based on the creation of an innovative type of intervention, showing the need to overcome the attachment to the traditional model.

Therefore it is possible to affirm that a Digital New Deal, similarly, can help to make the company more involved, attentive to individual growth but also focused on the sustainability of the community by creating a collective benefit.

The present study analyzes the phenomenon of digitalization that is revolutionizing society and the global economy and that opens up scenarios of significant opportunities for the socio-economic development of our communities if properly governed, vice versa, if we do not deal carefully with all the innovations introduced by new technologies in organizational, economic, financial and social terms we will be forced to witness dramatic social and economic gaps in the country.

It is important to emphasize that it becomes increasingly essential to establish a new digital reality in which private subjects, who more than any other acquire citizens' data through different sensors, manage to share the information received between them in order to improve the services provided by consumers, while at the same time the public authority should protect individuals by guaranteeing their privacy rights for the most sensitive data.

The aim of the thesis is to describe the enabling role of new technologies and how, through these, it will be possible to access new data sources, producing new information in real time which in turn will allow us to design new processes that will contribute to affecting the quality of social well-being.

A big role is played by big data, together with data analysis and artificial intelligence, which represent an important innovation tool for almost all areas of application.

The term big data refers to a series of numerical data that is so large and complex that traditional processing systems are unsuitable for dealing with them.

Everything is developed around the collection, evaluation, transfer, sharing and research of information. The availability of huge amounts of data and the possibility of applying artificial intelligence algorithms to automatically extract information in real time, constitutes an incredible scenario innovation that enables new business and service processes unimaginable until recently.

"Tim City Forecast is able to show and forecast the flows of people in the territory, through the use of the mobile radio network."

It is possible to equate mobile hardware devices, used to input data to a computer, process them and receive them in output, to sensors that receive data on the distribution of the population and their dynamism of movement in the territory in which they are located.

The data that can be obtained, thanks to mobile terminals, is of great advantage for Public Administrations as regards mobility management, movement flows and traffic.

Thanks to the evolution and spread of mobile devices, it is possible to use data that will be analyzed through advanced statistical formulas.

Through the mobile devices, Tim, one national telecommunication operator, has the possibility to take advantage of the information deriving from it, managing to create a mapping of the population on the territory thanks to the connection between the different devices. Subsequently the data will be analyzed through support statistics and updated systematically to determine the variations in density.

In addition, Tim City Forecast, which is the TIM Big Data application platform, provides for the grouping of data bases that come from network systems: anonymously, in compliance with users' personal information and their processing through an application dashboard.

The offer that derives from Tim can be available in two different profiles: the first, called Visual Insight, allows you to go to detect attendance both in typical days and in days in which particular events or events take place in the period under consideration.

There is a specific section for reporting purposes which can be accessed through the menu divided into: dynamic, daily, weekly or monthly report. The investigation can be done through Tim users and roaming, from which foreign users will be detected and divided by nationality. The second profile, Data Pipe, provides data relating to the movements and attendance of users, in a continuous, updated and anonymous way, based on the devices in certain selected territories.

The mobile terminals, manifested in areas subjected to verification, are detected through statistical techniques, in an area of 150 m² in pixels, and the data collection is updated every 15 minutes. Then we proceed to the geo location of the pixels using GPS coordinates.

Moving on to the real emblematic case of the study in question, I was given the opportunity, by Olivetti and the Province of Brescia, to have an experiment to use this tool, to access the "TIM BIG DATA VALUE - Data Visual Insights" site in which it was possible to download useful data for the calculations shown in the graphs through various processes.

Two weekends were compared: from Friday 4 January 2019 to Sunday 6 January 2019 and from Friday 8 February 2019 to Sunday 10 February 2019.

The February period was considered to be able to compare the days in which an event is present, in this case the International Festival of Lights, and any weekend.

The place taken into consideration is the Municipality of Brescia, where for three years now it has been possible to see a successful combination of Brescia Castle and light-art, an event that took place from February 8th to 16th in 2019 February.

It is important to specify the time of the event, decisive for the comparison made: on February 8th the festival started at 7.30 pm and ended at 24.00, while from February 9th to February 16th it started at 6.00 pm: 30 and finished at 24:00.

By comparing the graphs a divergence emerged in the treated time.

In conclusion, from this example it is possible to understand how new technologies are enabling completely new data production scenarios compared to the past.

Specifically, the real-time availability of Big Data is a key factor in redefining business processes. All this will be amplified by the fact that thanks to the introduction of the 5G service, which will require a complete redesign of the current network infrastructure, a greater connection speed will be possible compared to the previous model.

Clearly the mere presence of such technologies is not sufficient to guarantee the desired revolution, but a synergistic collaboration between the public sector and the private sector will be necessary.