

FROM E-LEARNING AND ON-LINE EDUCATION TO THE DIGITALIZATION OF THE MAIN ACTIVITIES IN CURRENT SOCIETY

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Abstract: *The ON-LINE community, known as the family of invisible friends, is made up of members who interact mainly through the Internet using social networking sites, chat rooms, forums, e-mail, networking, etc. The members of this community can be grouped in the following categories - users, moderators and administrators of the facilities offered by the virtual environment. This ON-LINE community is permanently present in SMART CITY and e-SOCIETY. Smart ICT platforms are powerful tools that ensure access, processing, delivery and storage of information in large databases and ensure communication and development in all six dimensions of smart city (smart economy, smart people, smart mobility, smart environment, smart living and smart governemnet). The existing ITC performances in the smart-city, as well as those available in the e-Society contribute immensely to the increase of the productivity and quality of the public services used in administration, commerce, industry, education, health systems, etc. offering citizens an important step towards the transparency of the governing act, thus ensuring a significant increase in the quality of life. This article briefly presents the concepts of online community, smart city, e-Society and digitization as well as the context in which the online community must be formed, specialized and perfected to successfully use existing ITC platforms, in operation, maintenance and development, platforms which ensures the transition from the current society to e-Society and presents some facilities offered by them manly in special situations (see pandemic COVID). In today's context digitalization has a priority position in society through which all parties of a desired smart city could access knowledge, education, materialized services and goods and digital services and goods. Not only education has moved, even for a determined time frame, in the digital environment but even psychotherapy sessions.*

Key Words: *e-Learning, online comunity, online learning, smart city, e-Society*

Introduction

In this pandemic period the service that grew in digital space are the videoconference integrated and distributed platforms. Around this communication

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applications have been attached many other applications so that the outcome is a platform with many modules. So we find ourselves in front of platforms like Meet that have been integrated in eLearning platforms like Google Classroom and in front of platforms like Microsoft Teams that have integrated other modules to offer an advanced integrated system for eLearning. The last has been used intensively in last year in the University that we teach in and has been received with a great feedback from students, teachers and even ARACIS representatives that evaluated our institution.

1. E-learning, defining terms, benefits, economic efficiency

In the varied relief of computer science, where each point is identified by five dimensions, (space (3 dimensions), time (1 dimensional) and utilized technology (1 dimensional)), appeared the moment of passing the IT technical documentation from paper to magnetic support (magnetic tapes, floppy disks, CDs, etc.) [6]. This moment represents the beginning of the e-Learning concept.

In essence, e-Learning consists of the online learning process, at its own pace, using multimedia technologies for learning, improvement, and specialization in the field of user interest. Any platform intended for this process consists mainly of a database, a specific software for managing / querying this database and an IT technology suitable for this purpose. At present, almost all universities in the country and abroad offer platforms specific to the profile.

At the beginning, the documentation for e-Learning was organized on topics [1] (eg learning a programming language), and consisted of a textbook of topics, written on the principle of "programmed learning", ie each lesson was followed by a number of knowledge-fixing questions and you could not move on to the next lesson if you did not answer each question correctly, followed by a set of self-assessment tests and finally an online assessment test. For each topic there was a manual, a self-assessment test and a final assessment test, and all these digital materials were stored in a database. Later, within this e-Learning concept, an entire Education industry appeared with databases specific to the fields of pre-university education (high school, gymnasium), and university education (colleges, universities, including On-Line Colleges), and now almost every university / faculty has an e-Learning platform. Following this route, the concept of ONLINE community appeared, which has the following definition [2]: "a virtual community is defined as an aggregation of individuals or business partners who interact around a shared interest, where the interaction is at least partially supported or mediated by technology (or both) and guided by some protocols or norms".

There are currently an impressive number of e-learning systems in various fields such as: Community Colleges, On-Line Colleges, Colleges/ Universities, Middle and High School, Elementary Schools, Principals, Deans & Administrators, Online Education Service, Teachers and Trainers, Education Technology, Educational Associations, Dental/ Medical Colleges, Booksellers & Librarians, Adult Education Director and others.

2. From smart city to the digitization of the main activities in today's society

If we analyze carefully and with a little humor the evolution, over time, of human society, we realize that the greatest invention made by man was neither fire, nor wheel, nor writing machines, nor gunpowder, it was the bureaucracy [3]. This invention has employed about 40% of the world's workforce. But careful, because due to technological development, we will soon find ourselves in a situation where the number of active people in the productive field will decrease significantly and the 40/60 balance is in great danger, because the bureaucracy will increase far beyond expectations. Of course, the clear evidence of the activities in the productive sphere is essential and in this context the equilibrium solution comes from the computerization / digitization on a large scale of the activities in all fields. In the varied relief of Informatics, this process of computerization / digitization has not started now, this process has been in full swing for a very long time, both worldwide and in our country. It is enough to give as an example the Census of the population, families, buildings, and houses in Romania in 1966, the first census in Romania and the second in Europe, made with the help of perforated cards and magnetic strips and discs for storing information.

Time has passed and today we are talking about digital platforms with high-performance technological support (hardware and software), close to all fields of activity within a smart city (see fig. No. 1).

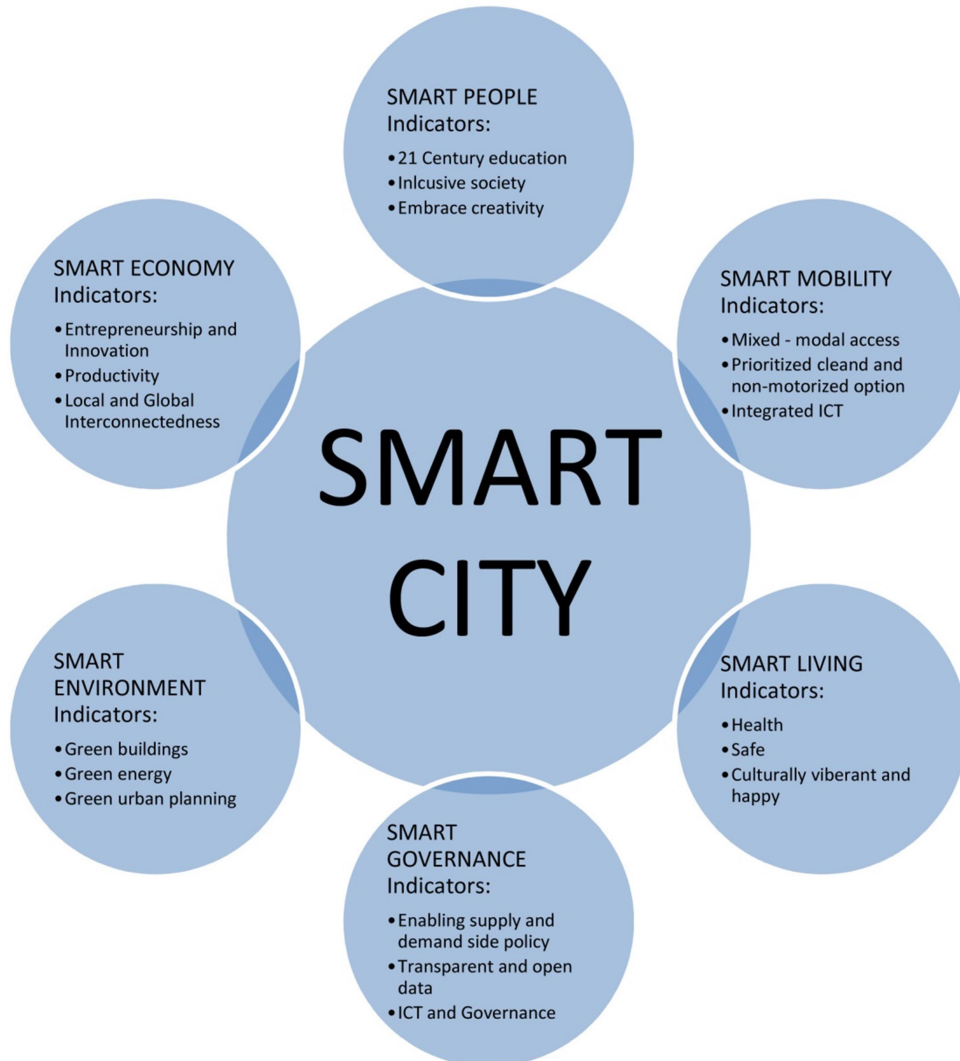


Fig. No.1. Smart City Model

Of course, for the use of these IT platforms, already in operation in almost all areas from education, health, transport, tourism, administration, etc., in online education, it is necessary to train staff in the realization and use of facilities offered by these new technologies.

The interaction of the online community with the ITC platforms in the smart city are presented schematically in fig. Nr. 2, and the members of this community can be grouped in Developers, Users, Moderators and Administrators of these platforms.

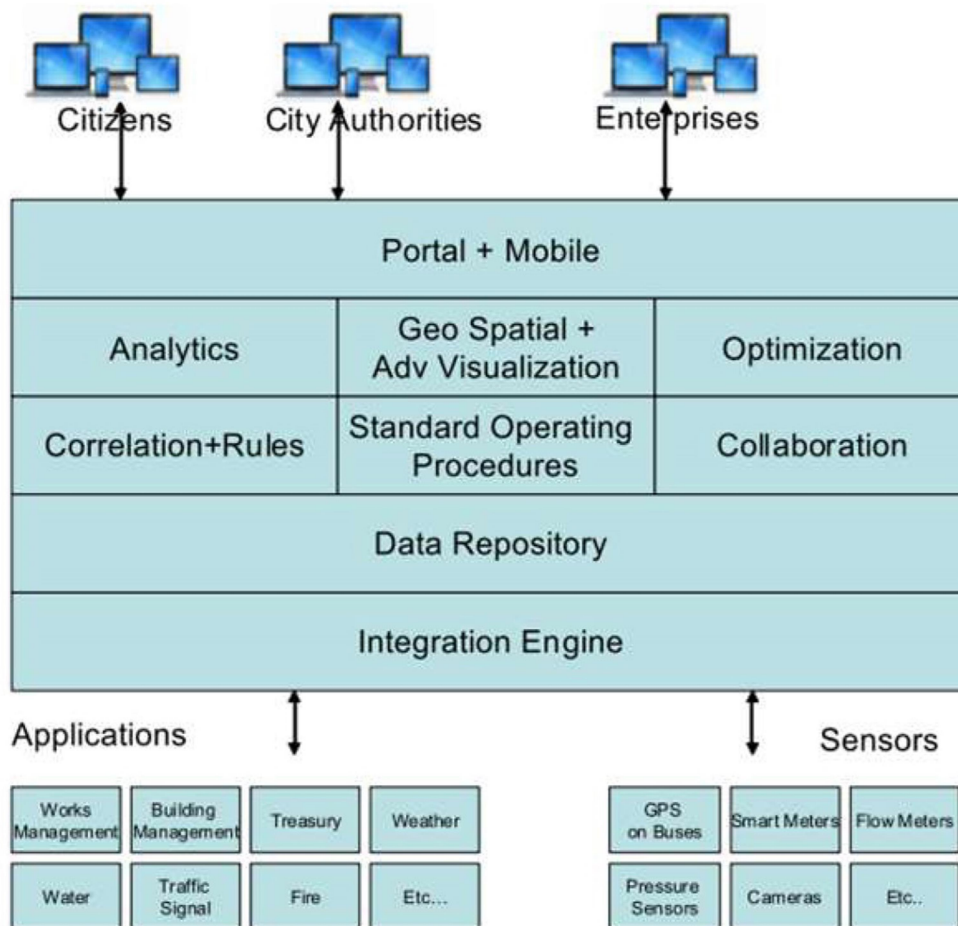


Fig No 2: Microsoft “CityNext” Aims to Build 'Smart Cities' [source [4]]

This online community existing in the broader concept of e-Society (see fig. No. 3 and No. 4) is found not only in the population of Smart City[7], the community is in fact spread throughout the country, both in urban and in rural areas), and worldwide. The training of the digital competences of the members of this community is done both in the national pre-university education process (for users), the university education (developers, users, moderators, administrators) and through the periodic training, specialization and improvement courses.

For the design, realization, implementation and operation of such platforms [8], [9] it is necessary to have a specialized staff in the field of hardware and software, trained and perfected staff and specialized through special technical courses at the technical and computer university level management.

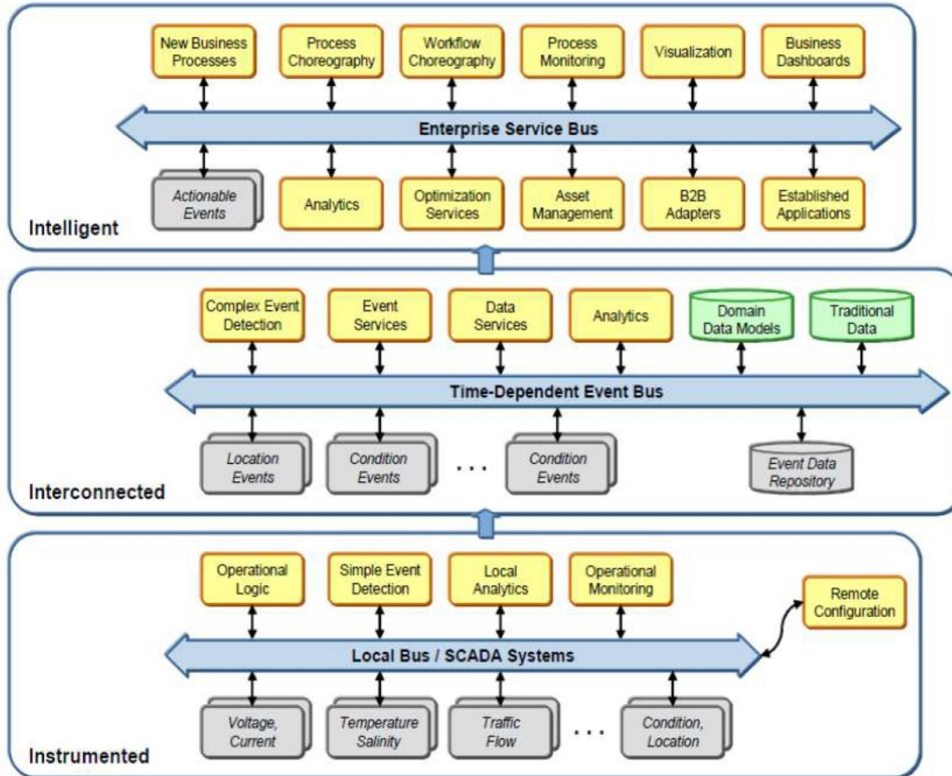


Fig. No.3 - The architecture of a Smart ICT Platform

2. Training, specialization, and improvement of the online community members in pre-university education and in higher education as a result of online education.

The preparation of the online community for the use of these IT platforms and technologies is done through special training, specialization, and improvement courses specific to each field of activity, widely using the facilities offered by e-Learning and online education[5]. In all bad and a good, namely, a real use in acquiring basic knowledge was represented by online education, because every pupil / student, regardless of urban or rural environment, had to connect and use such platforms. It should also be noted that in addition to the large mass of students, a large part of the parents of these students were involved in this online education process. They have taken important steps in acquiring the digital skills needed to use these IT platforms specific to online education, imposed by the pandemic period.

The topic of training and specialization of the IT community must be approached for each field of activity (education, health, economy, transportation,

administration, etc.) on the two distinct groups of staff, namely: IT specialists and IT users.

The training of IT specialists is done through university courses (software and hardware), focused on the study, analysis, design and implementation of these new IT platforms and technologies for each field of activity.

The topics and documentation related to this training process for IT specialists can be consulted in the curricula of the IT and Economic Informatics faculties by accessing the available study platforms [8], [9]. The process of continuous training and improvement is a permanent challenge for the preparation of the wide mass of users through training-improvement courses, specialization organized on request according to the specifics of the field and platform used.

3. Conclusion

The advancement of IT technology is always a great competition for the community in general and for the online community in particular.

IT platforms available in administration, (Ghiseul.ro, ici.gov.ro, anaf.ro, etc), in health (platforms appeared during the pandemic we are going through), in education (online education) and in various industrial branches both nationally and worldwide ensure the beginning of a broad process of digitization of activities in society. In this sense, we must welcome initiatives to establish the Authority for the Digitization of Romania (ADR), an institution recently created in 2020, an institution that aims to digitize on a large scale all activities in the administrative and governmental area.

Among the main advantages of digitization, we can list:

- Direct communication between local public administration and citizens;
- Ensuring a unique online platform for communication and automation of public administration works;
- The 7/24 accessible platform, from any place, the platform that ensures the reduction and optimization of the operational costs within the public institutions;
- Fully contributes to reducing congestion and pollution in urban transport, and users can submit and issue documents online, thus avoiding congestion at counters, etc.

The digital competencies necessary for the use of facilities of these online platforms by the members of the online community are acquired within the pre-university and university education process, according to a well-specified curriculum. Having acquired these basic digital skills, the training and improvement of users of a platform is achieved by accessing the facilities of e-Learning platforms and ensuring access to the documentation presented in the Guide (Manual) for the presentation and use of the specific platform. The

popularization of these forms of continuous learning represents the real social challenge of the stage we are going through.

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