e-trikala

1.1.1 Background

e-Trikala SA began as a Development Company of the MUNICIPALITY OF TRIKALA which was established in March 2008, while the ICT activity officially began at 2004 with the operation of the Information Society Office of the Directorate of the MUNICIPALITY OF TRIKALA.

The main objective of the Office, before being established as an SA, was the operation of a programming point, documentation and mediation for the MUNICIPALITY OF TRIKALA in the Operational Programmes "Information Society" and "Digital Convergence".

The actions of the Office were as follows:

- Monitoring and analysis of design opportunities and integration of project financing of the Organizations and Services of the Municipality
- Preparation and submission of project proposals.
- Operating as the contact point between the MUNICIPALITY OF TRIKALA which are the final project beneficiaries and the Prefecture of Thessaly.
- Monitoring of the implementation of the projects in the Municipality
- Preparation of the MUNICIPALITY OF TRIKALA and the organizations, which run ICT projects, for their effective operation upon receipt of the deliverables of projects to ensure the greatest use of their results.
- Syntax Action Plans on behalf of the MUNICIPALITY OF TRIKALA for the development of the Municipal strategy for e-Government, the National horizontal ICT actions monitoring ICT projects implemented in Europe and in other countries reflecting achievable goals that can be exploited within the OP.
- Search and capture innovative ICT actions
- Investigation for other sources of funding from National and European institutions, ICT projects. Identify projects that will improve the quality of life of the citizens and optimize the way in which the Municipality services and organizations function.

During the above operation period of e-Trikala, there were 18 proposals submitted and approved under the Information Society Funding programme and other Operational and European Funding Frameworks. All projects implemented were ICT projects and many of them were quite innovative. This effort led to giving to e-Trikala, the official designation "First electronic city in Greece". The first business operation plan for a digital city was designed from the very first time. Given the digital divide that exists in Greece, putting a brake on the operation of all ICT services, a specific section for special studies which designed and deployed the wireless broadband networks open space (wifi) to provide free wireless access for citizens.

After the success of the MUNICIPALITY OF TRIKALA wireless network consisting of thirty-seven (37) nodes, allowing free access to approximately 15,000 citizens e-Trikala proceeded in cooperation with other municipalities.

The success of the office led to the establishment of e-Trikala SA in March 2008 with main shareholder the MUNICIPALITY OF TRIKALA, in possession of 99% of the shares, while the remaining 1% is held by the Commercial Chamber of Trikala. The amount of capital incorporation of the company amounts to 500.000,00 €. The study and analysis of the current situation of ICT in Greece led to the identification and codification of specific problems and developmental gaps called to address and provide comprehensive contributory services.

In particular, the needs identified relate to:

- Further integration of ICT in the operation of enterprises with emphasis on SMEs.
- Increased safety in the use of new technologies.
- Expansion of the Public sector the digital business services .
- Stimulation of the exploitation of ICT in the public sector.
- Consolidation of the digital sector government business services.
- Exploitation of the potential of local ICT companies to strengthen local and regional economy
- Creation of a favorable environment for entrepreneurial activities that utilize ICT.
- Strengthening equal access for all citizens to the potential of new technologies (households broadband accessibility for the disabled, etc.).
- Enhancing the contribution of new technologies in educational process (e-Learning - Education digital content)
- Digital programs "Lifelong Learning."
- Securing the trust conditions and safety at the use of new technologies.
- Enhancing the contribution of new technologies in the daily life of citizens (portals, info kiosks, digital TV etc.).
- Increase efficiency and transparency in transactions between public sector and citizens.

Increase of the number of digital public services available to ensure the continued high quality and safe delivery of public sector digital services to citizens (authentication mechanism).

The design and planning of services which are provided by e-Trikala SA are :

- Supply of electronic services to the citizens of the city of Trikala subsequently provided and the expansion of the network and surrounding areas. Examples include: wireless and wired broadband connection, e-government, informationentertainment education, health services, tourism, special services and many others. The use of already materialized infrastructure will play an important role, as well as those found in the study and implementation phase. Furthermore, the company will provide the infrastructure to interested ISPs for access to end users, thereby developing and trading wholesale channel.

- Providing advisory services to entities interested in developing similar actions in other geographical areas. The leadership in implementing such a project at local level gives the opportunity to the company to provide its services either as a consultant or as a participant in any new effort corresponding or larger.

- Research and Development to produce innovative services in cooperation with universities and institutions of the market. These services will be addressed in similar activities, but it is also possible to create specialized applications depending on customer needs. This axis will be used as a feedback mechanism of the first shaft through the continuous enrichment with new services and applications, making it an updated and efficient. This activity will provide part of the financing by participating in subsidized research programs and generate revenue from the sale of products.

- Education-training of the personnel of the organizations which will adopt eTrikala business applications, which are divided into the following subcategories:
1. Training municipal personnel to use specific tools.
2. Training citizens to the new technologies.
3. Training of entrepreneurs in new technologies.
4. Publicity actions for broadband.

Technical support of the MUNICIPALITY OF TRIKALA, in integrated sustainable development issues, as well as design and implementation of development interventions.

1.1.2   The services

*   **The Free access Wi-Fi Network**
    Given the digital divide that exists in Greece, putting a brake on the operation of all ICT services, a wireless broadband open space network is important so as to provide free wireless access to the citizens and visitors of the city of Trikala.
    In 2008, the city of Trikala, had implemented the FIRST, open and free for use, wireless network in Greece.


More than thirty seven (37) nodes (WiFi Hotspots) are installed within the city area, allowing free access to approximately 15,000 citizens. The policy followed by the e-Trikala in the architecture of the network is free access to the worldwide web (www), electronic mail (e-mail), social media, modern online Communication services, file transfer (ftp), etc. Four (4) more nodes were installed in the city centre that offer more bandwidth in order to serve the extra demand for internet in the area.

Security issues were handled by not permitting access to illegal content sharing sites (such as torrent sites), online games and pornographic content focusing on the safety of minors. The system automatically excludes browsing in restricted sites with a warning on the screen, while new websites with indecent content are restricted via special software developed by e-Trikala on a 24-hour basis.

- **The Fiber Optics Network (MAN)**

  For the proper operation of all the applications that have been implemented (or will be implemented) as well as the equipment used for the installation required for the functionally of a structured and distributed environment, installing a 48 km network of fiber optics interconnecting 50 Municipal bodies and public schools was deemed necessary. An expansion of 2,4Km was added with the CityMobil2 project, in 2016.
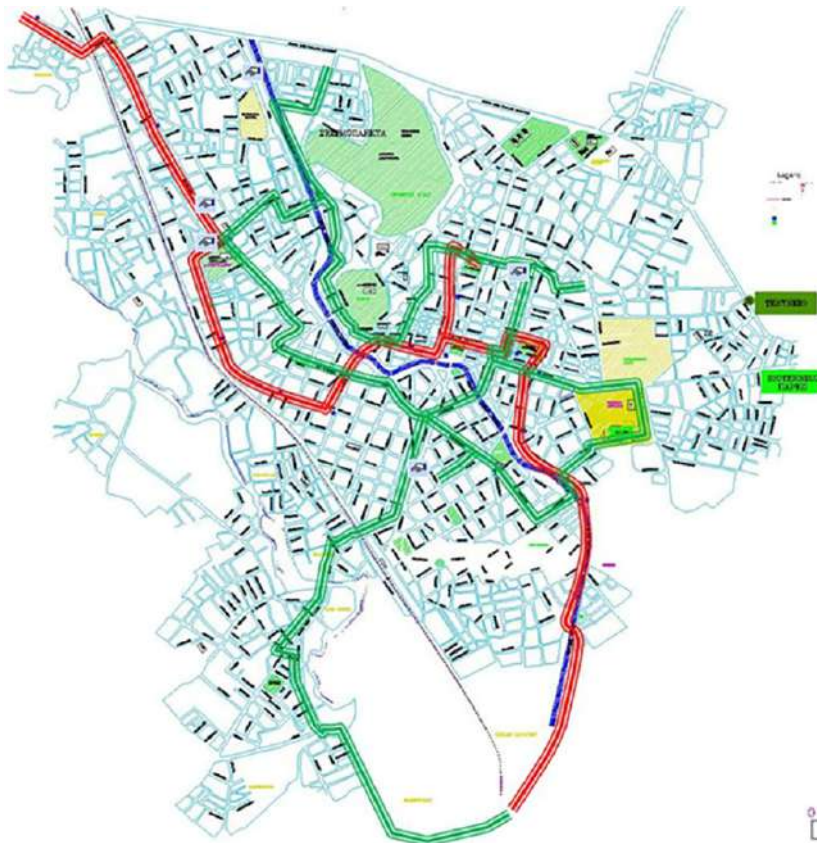
This led in changing the level in the Broadband Quality of Trikala, now incorporating this World city map, interconnecting all the Municipal and public services of the city of Trikala putting a really believable legacy to future Broadband thereof, capable of taking this intracompany communication for the coming decades. The automatic data transfer, voice and image is the cornerstone for the REMOTE SERVICES OF MUNICIPALITIES at each terminal point thereof likely to request service.

- **Complaints Service "Demosthenes"**

  The complaints service "Demosthenes" is an innovative service for recording and processing of daily operational problems of a municipality, through which every citizen can submit the request by calling toll free from fixed phone. It is important to mention that the "Demosthenes" is an interdepartmental program which monitors the evolution and restoration of each request individually, informing accordingly the applicant and the municipal departments involved in each case.

- **Geographical Systems information (GIS)**

  Since December 2008, a modern, integrated information system is implemented. The information system consists of informational GIS,urban GIS and geographic GIS,offering the ability to the user to search the general points and special interest, always through the Municipality website **www.trikalacity.gr**. Thus, citizens are free from bureaucracy, enjoy efficient service and information and minimize useless movements.

  One can explore the city remotely and look for points of general interest, as well as be informed of schedules and routes, make requests or obtain public documents and look for specific planning information such as objective values and building coefficients. One of the innovative factors of GIS, is the historical analysis of the name of every street and every city square,which occurs at an individual request of the user while also innovative on line information for the arrival of the bus – with seconds accuracy – through the intelligent transport system. Furthermore, a user friendly application environment, makes the tour even more exciting, as there are 3 city imaging options (simple map, hybrid or satellite) and many "buttons – tools" multipurposely. At the same time, the installation and configuration of the MUNICIPALITY OF TRIKALA intelligent transport system in cooperation with the company URBAN KTEL TRIKALON SA changes the level of informing the public that uses the media to attract new passengers, offering live updates for the actual arrival times of these through several systems.
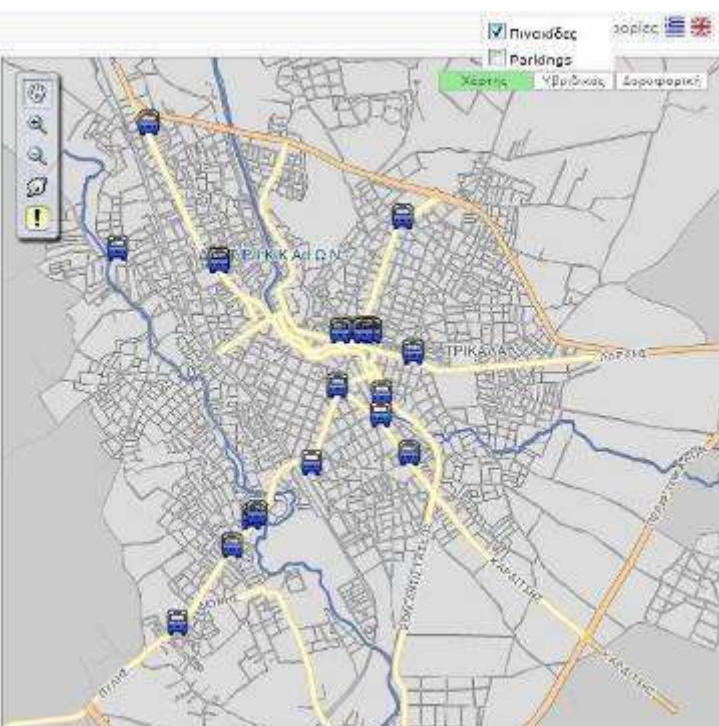
- **Electronic Services**

  The first attempt to provide these information services and electronic transactions with the municipality, was completed by launching the MUNICIPALITY OF TRIKALA website (www.trikalacity.gr) offering a rich and ever-timely opportunity for ELECTRONIC TRANSACTIONS, leading for Greece recently grouped together among other similar pages in 47 European Municipal websites held by the renowned Bocconi University, Italy. These transactions were created for the faster and better service of the citizens and for avoiding the constant visit to the City Hall saving time and simplifying all these processes with this innovative and comprehensive proposal implemented through internet.

  Moreover, by further developing the electronic services, citizens can now settle their financial obligations (if any) e.g fines and certified debts, through amicable and advanced technology that is up to all modern digital security standards and which is implemented in cooperation with Piraeus bank.

- **e-Care**

One important field in which the MUNICIPALITY OF TRIKALA pioneered in all of Europe is the use of digital tools and applications to deliver WELFARE IN VULNERABLE SOCIAL GROUPS CHRONIC PATIENTS. Since the MUNICIPALITY OF TRIKALA heeds the specific needs of citizens, it created an integrated Tele-assistance network using telematics infrastructure for the provision of support services to vulnerable social groups (elderly, people with disabilities). The cases that can be monitored and served are those of subjects with chronic cardiac insufficiency, chronic pulmonary problems and hypertensive. By easy to use tools, a record of the current situation is made and the medical data or emergencies are sent via a telecommunications interface and transferred to the computer system of the Prefectural Hospital of Larisa or the respective individual doctor that monitors them. This project created an e-Care network using telematics infrastructure, operating in the MUNICIPALITY OF TRIKALA to provide support services to vulnerable groups (elderly, disabled, chronically ill, etc.). It is yet another project that the MUNICIPALITY OF TRIKALA has that shows its interest in strengthening the welfare and
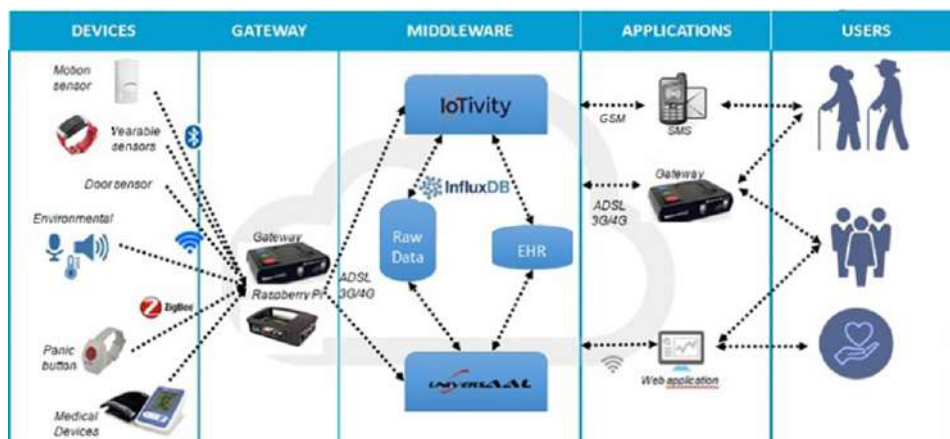
health of its citizens. The program aims to build on existing welfare activities carried out today in the municipality of Trikala and to extend them to new groups of citizens in order to:

- Complete the individual actions of the MUNICIPALITY OF TRIKALA relating to welfare issues.
- Support remotely a part of the citizens that belong to vulnerable groups.
- Increase the number of members of vulnerable groups supported by the MUNICIPALITY OF TRIKALA.
- Provide reliable support to vulnerable groups and efficient transmission of real emergency incidents to the Hospital.
- Increase the knowledge of citizens - members of vulnerable groups and the Municipality of Trikala's citizens in general in terms of welfare actions, but also in the benefits of tele-assistance.
- Export detailed conclusions on the welfare needs of the MUNICIPALITY OF TRIKALA.

As part of the successful operation of the program "e-Care", the MUNICIPALITY OF TRIKALA and e-Trikala have moved into the project implementation phase.

Specifically, the first phase involved the pilot operation of the program, creating a history of the elderly accommodated in the city's KAPI (Elderly Centers) and those included in the "Help at Home" program. Measurements were made regarding blood pressure, cardiogram and spiropetry. In the second phase, the program was incorporated in the General Hospital of Trikala in order to be monitored by doctors and to have an immediate response to potential incidents.

- **Touristic Applications**

The facility, enrichment by topical material and function of the Touristic Information Portal of Trikala is one of the latest systems installed in the municipality of Trikala, which is expected to maximize its usage through the Kallikratis plan. The Tourism portal is equipped with the latest technology and enables on-line room booking, Cultural events, city information. Furthermore, the application Guide is the latest application that was operated by the MUNICIPALITY OF TRIKALA, and which through PDAs connected to the wireless network of the city, guests receive on line information of touristic interest.

- **TOPSA (Local Plans for Employment adapted to the needs of local labor markets) and TOPEKO (Local social inclusion actions for vulnerable groups)**

Due to its involvement in TOPEKO and TOPSA programs as well as via the Social Economy Incubetor that the company operates the last 3 years, e-Trikala focuses on the implementation and support of many Social Cooperative Organizations

E-trikala S.A is the coordinator in two DPs:

1. Network of Incubators for Local Entrepreneurship and Social Economy Development
2. Network for the Promotion and Development of Local Culture.

The first DP implements the Act: "Incubators for Local Entrepreneurship Development and Social Economy" (TOPEKO) while the second implements the Act: "Strengthening Local Entrepreneurship, via the operation of Multipurpose Thematic-Commerce Organization in Trikala "(TOPSA).

E-Trikala is also a partner in a D.P concerning Employment in Tourism (Alter Tourism & Employment)». This D.P implements the Act: "Tourism Development & Employment: Partnerships & Synergies in Trikala " under Action 7: "Local employment plans, tailored to the needs of the local labor markets" (TOPSA) to reconstruct 2007-2013.

The measures supported by E-Trikala that these three Actions concern are the following:

1. Actions for the awareness of the beneficiaries.
2. Networking Actions at local, regional and national level.
3. Education and Training Actions.
4. Reporting Actions - Advisory Support of Beneficiaries (psycho-social and vocational counseling).
5. Development Studies.
6. Coordination and Management of Act

- **Christmas Theme Park:**

E-Trikala has been organizing a Christmas Theme Park for the last 5 years. The Christmas Park is located in the center of the city of Trikala and has become a major touristic attraction during the Christmas period, since more that 900.000 people visit it annual. Major site events e.g music concerts, thetre and art shows are held during that period under the supervision and organization of the company.
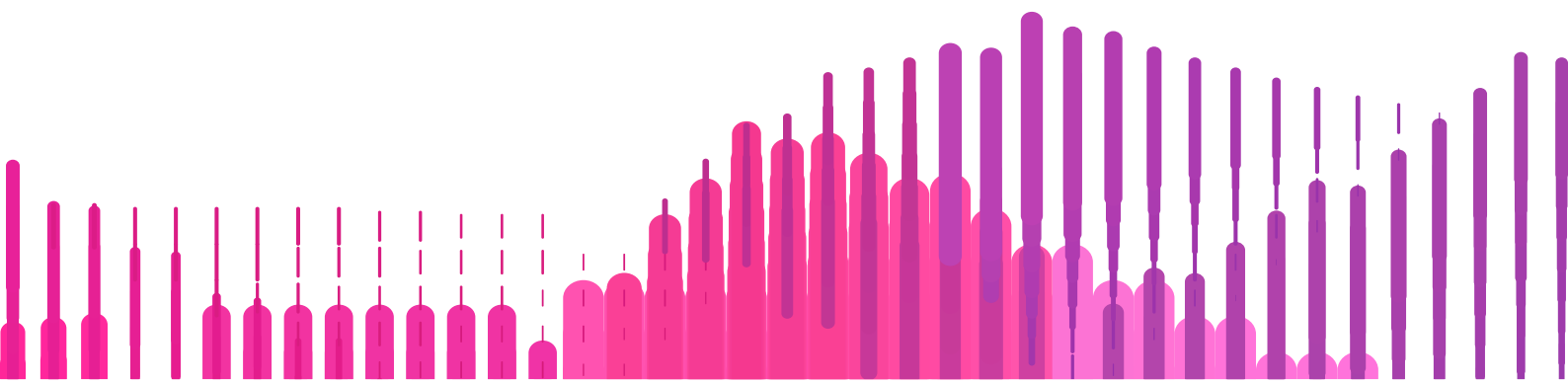
1.1.3 European Digital Programs Implementation

1. **Renewing Health** (http://www.renewinghealth.eu/en/)
   It is the largest e-health pilot program at a European level. The project focused in exploring the context in which patients took vital measurements at home and send them via telemetry to the doctor or the hospital. A total of approximately 500 patients across Thessaly used the services of the program (diabetes, COPD patients, patients with chronic heart disease).

2. **ISISEMD** (http://www.isisemd.eu/)
   The program is designed to create 'smart homes' for the elderly people with mild dementia. The aim was to help both the people with dementia and the carers of their family environment. It was successfully tested in 20 cases in the wider area of Trikala, where it recorded the problems and good practices. It is a technological solution applicable either for every household or health and social structures of the Region.

3. **INDEPENDENT** (http://www.independent-project.eu/)
   This program implemented tele-sessions and extended electronic health records usage for people with mild dementia and mild depression by qualified psychologists. This available technology solution can be used for any kind of psychological support without age restriction. In this case, approximately 300 patients and carers in the wider region of Trikala benefited from this program, by means of remote sessions from home or via the KAPI.

4. **ELDER-SPACES** (http://www.elderspaces.eu/)
   The aim of the project was the active participation of people over 55 in social networks (eg Facebook, Twitter, etc.) The program presented a new social network via a software platform (www.elderspaces.com), which is entirely designed to meet the needs of people over 55. In Trikala, about 100 people have used this software platform and the results were properly exploited by the consortium and the EU. Through the platform, these people became more active in the digital age, qualitatively upgraded their daily lives and prevented their isolation with any unpleasant psychological effects.

5. **MOMENTUM** (http://telemedicine-momentum.eu/)
   The program aimed in providing health services and high quality care across Europe. This thematic network developed a European platform with the participation of several parties. Some specific objectives of the program was the sharing of knowledge and experiences from everyday application technique telemedicine as good practices, the creation of a structured plan for the use of certain services, the creation of a viable telemedicine network to help European countries on a national and local level and the creationof a policy recommendations quide.

6. **SUSTAINS (**http://www.sustainsproject.eu/**)**

This program has developed an Electronic Medical Record. Each citizen is a potential user of the system and is able to monitor electronically the Record, with elements such as examinations, diagnoses, medication list, arranging appointments, asking questions in health personnel, etc. The tool is ready to be used according to the needs of the region, the municipalities, local communities, social structures or any other interested party

7. **UnitedForHealth (**http://united4health.eu/**)**

It is basically the continuation of the Renewing Health project with a focus on diabetes type 2. A total of 70 diabetic patients of the wider region of Thessaly takes measurements at home and does not need to move to an institution or hospital, but via telemetry sends the exam to the doctor

8. **SmartCare (**http://pilotsmartcare.eu/home/**)**

This program aims to set common functional specifications to better provide comprehensive care for the elderly. A pilot program, which over time will have a positive health impact on all European regions.

9. **Citymobil2 (**http://www.citymobil2.eu/en/**)**

CityMobil-2 is an innovative and educational project of the European Union, aiming to investigate the "vehicle without a driver" capabilities in an urban environment with real traffic conditions. The city of Trikala is one of five European cities that would "accommodate" the pivotal movement of automated vehicles (buses) without a driver, but it is the first city to have the tests done in real conditions in the city center for a period of six months. In other European cities, the movement of automated vehicles was in "closed" controlled environment (exhibition centers, ports, piers, etc.) and for a much shorter period of time (three months). The Grand Experiment began on September 1, 2015 and run until February 29, 2016 (http://www.citymobil2.eu/en/City-activities/Large-Scale-Demonstration/Trikala/). From the first day of the test circulation of the automated vehicle, the impact of the pioneer project was very large, which was accompanied by numerous posts in Greek and world media. In addition to e-Trikala AE, 43 organisations from the EU are involved in CityMobil-2, including Universities (University of Rome, University of Southampton, University of Leeds), Research Institutes (Institute of Communication Systems and the NTUA , Institut National de Recherche en Informatique et Automatique, Institute of Studies for the integration of Systems, German Aerospace Centre, Swiss Federal Institute of Technology Lausanne, Spanish National Institute for Aerospace Technology, etc.), and Bodies of Local Government. On the official website of the project (www.citymobil2.eu), you can draw more information about its objectives, the who's and the stage which is now is.

10. **TEAM (**https://www.collaborative-team.eu/**)**

The program analyzes the mobility of public transport, car, and bus. The aim is to optimize their coexistence, to reduce travel time, reduce pollutants and generally to improve the movement of citizens. The pilot program is expected to provide solutions at a local level, by having as users the inhabitants of the wider area of the city of Trikala. This may be a Regional management tool to solve local transportation problems.

11. **MyWay (**http://myway-project.eu/**)**

It is a similar program aiming to optimize the mobility of pedestrians, vehicles, bicycles and their combination. It promotes ecological movement and exercise, suggesting the respective optimum ecological path or combination of instruments. Expected to be tested within the wider region of Trikala, constituting standard use of the Region.

12. **PRISSM (**http://www.prissm-eu.com/index.php/en/**)**

Coordinated by EETAA the aim is to educate employees of the public sector in integrated of the public organizations via an electronic platform.

13. **SABER (**http://www.project-saber.eu/cms/**)**

The aim is to explore the cycle of all necessary steps from the analysis of requirements to the satellite Internet installation in any part of Europe.

14. **DIGITAL CITIES (**http://www.digital-cities.eu/**)**

Digital Cities is a three-year project that focuses on the problem of the low ICT adoption by European local authorities in non-metropolitan areas, geographically isolated areas and other areas of social exclusion.

15. **NET-EUCEN (**http://www.net-eucen.org/**)**

The NET-EUCEN project intends to create, animate and manage a network of experienced organizations covering the whole supply chain of the service for users (S4U), belonging to several European countries (23 subjects from 16 European Countries), to share the experiences and knowledge on ICT initiatives and services for the wide User Domain, gained mainly during participation in funded project such as the IST and the eTEN programme more oriented to develop and test services for users.

16. **iHeERO (**http://iheero.eu/**)**

I_HeERO, ("I" for "Infrastructure") is aimed at the preparation of the PSAP in Member States for the deployment of eCall based on 112 as reference implementations. It addresses explicitly the PSAP element of the eCall roll-out and will enable the PSAP to install hardware and software solutions that fit the necessary requirements within each Member State.

17. Den CUPID:

DEN-CuPID was a Strategic Partnership (SP) between SMEs, academic institutions and local authorities' associations, aiming primarily at improving transversal competencies, such as entrepreneurship and managerial skills, and at enhancing knowledge in the field of cultural management. It envisages the optimization of local capacities in designing and implementing projects based on the local cultural endowment, as well as the ability to involve financial and innovative funding tools, for the accomplishment of these projects.

The project had a duration of two years and run under the auspices of the State Scholarships Foundation (IKY), the Hellenic National Agency of the Erasmus+ programme. During the duration of the project 4 Educational Workshops in four different European countries took place, whereas the educational material gathered by the partners can now be accessed by an on line educational platform.

Link: **https://den-cupid.eu/el**

18. ACTIVAGE:

ACTIVAGE is an initiative that's aims to create 7.000 ¨Smart Homes¨ as it focuses in meeting the challenges posed by the ageing of the population via solutions entailing the use of the Internet of Things in 9 different Pilot sites in 7 different European Countries.

The Pilot site of CitiesNet S.A, a Municipal Company of the cities of Central Greece (Veroia, Volos, Grevena, Ioannina, Karditsa, Katerini, Kozani, Lamia, Larissa and Trikala), aims in deploying 150 Smart Houses in 2018 and 2019 for the elderly that are beneficiaries of the "Help at Home" social care program in all 10 Municipalities that are members of CitiesNet, in cooperation with E-trikala S.A and Municipality of Trikala.

Link: **http://dccg.gr/ & http://www.activageproject.eu/**
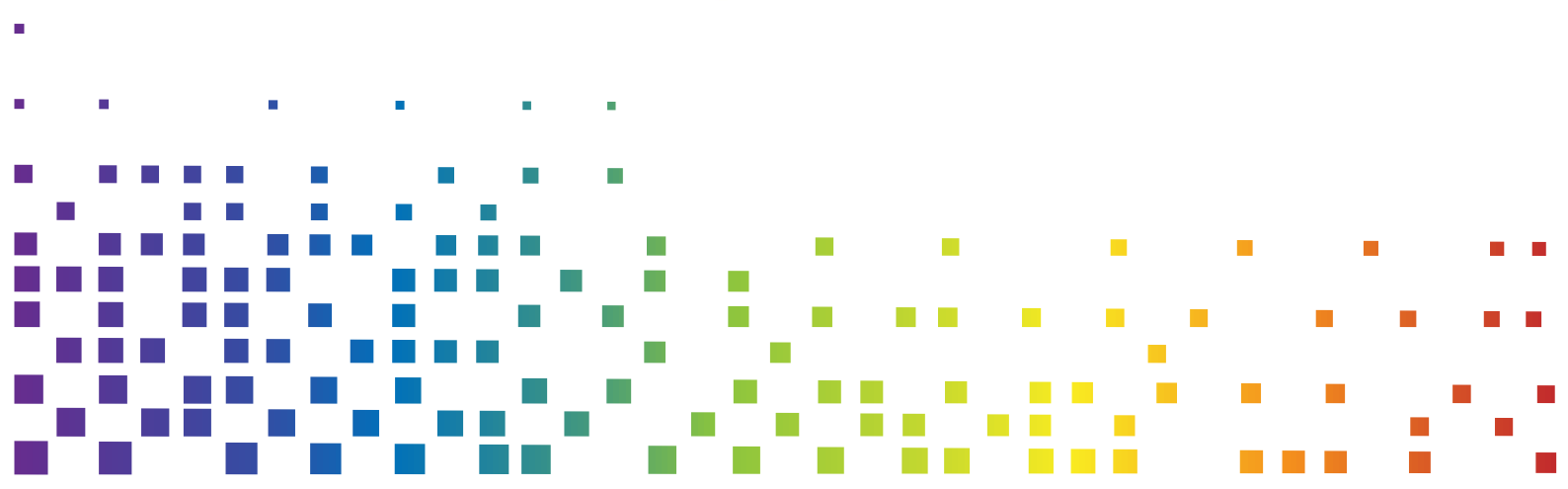
19. Accommodation and assistance to asylum seekers and refugees in Trikala:

Ever since 2017 E-Trikala is collaborating with UNCHR in a project titled "Accommodation and Assistance to Asylum seekers and Refugees" (Project ESTIA) in order to maintain the operation of 432 reception places for asylum seekers and refugees referred by UNHCR for accommodation through the rental of 70 private apartments and/or houses in the city of Trikala. At the same time, E-Trikala also provides comprehensive assistance (including psychosocial support, interpretation, transportation arrangements and refferals/accompaniment to medical/legal aid actors) to approximately 500 persons of concern to UNHCR (PoC) expected to be accommodated within the duration of the project (on the assumption of a small turn-over).

20. ELVITEN

ELVITEN is a project working to make the use of Electric Light Vehicles (EL-Vs) in cities a more attractive option to conventionally-fueled alternatives. It is co-funded by the European Union's Horizon 2020 programme.

The project will organise extended demonstrations of EL-Vs in Italy (Rome, Bari and Genoa), Germany (Berlin), Greece (Trikala) and Spain (Málaga). The vehicles will be made available for shared use by citizens, city visitors and light goods delivery staff. The use of these vehicles will be supported via services for booking and charging/parking. There will also be apps to collect points and earn rewards.

The project seeks to make users more familiar and facilitate them to use EL-Vs instead of ICE vehicles for their private transport and for light urban deliveries. Via its long demonstrations it will collect real vehicles usage data, traces from dedicated ICT tools and users' opinions after real trips. Finally, it will generate detailed guidelines and business models for service providers, Planning Authorities and manufacturers in order to make EL-Vs more integrated in the transport and electricity networks.

Link: ELVITEN http://www.elviten-project.eu

21. CITIES-4-PEOPLE

Cities-4-People brings together different groups of people to co-create sustainable solutions to the local challenges of urban mobility. The program runs in five pilot areas: Trikala, Istanbul, Budapest, Hamburg and Oxforshire. The aim is to implement and further promote the best solutions with the active involvement of citizens in the innovation chain of local ecosystems of mobility. The main objectives of the program are:

Enhancing mobility communities with innovative co-operation tools

Design of sustainable demand-based urban mobility solutions

Promoting the effectiveness of civic-oriented mobility (POTM)

Contribute to the creation of new standards for assessing the social impact of new transport interventions

This will create "Mobility Communities" involving citizens, representatives of local authorities, transport providers, innovation specialists, etc. and Citizen Mobility Labs and appropriate tools to enhance community creativity. Co-creation activities will be designed to co-create sustainable mobility interventions, along with civil-design testing and evaluation of mobility interventions.


22. ΔΕΣΜΟΣ

Smart Interconnected Infrastructures for Security and Protection

The proposal aims to create a framework that, through the exploitation of smart, interconnected infrastructures and the use of mobile and computing applications, will provide a secure environment for citizens, with an emphasis on tourist- visitors. It will be based on a platform for participatory cooperation between people and infrastructures, which will implement a framework for the protection of tourists through timely reporting of occurrences, adaptation of interconnected infrastructures in emergency situations and support for assistance through the enhancement of volunteer actions and local authorities through the use of ICT.

The project aspires to provide a framework for protection and security, which will support:

·   Immediate, timely and targeted notification in case of need, while sending the necessary data for help (eg allergies, medical condition) with respect to privacy.

·   The anonymous reporting of dangerous incidents by citizens with pluralism techniques and anonymity protection, with particular emphasis on events related to tourism (such as thefts).

·   Adaptation and preparation of infrastructures to respond to security and safety needs with state awareness.
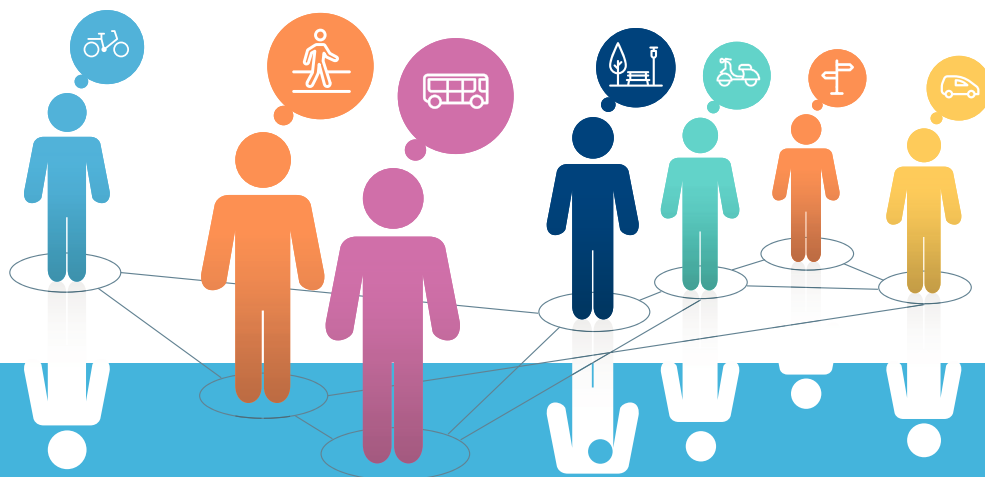
23. AVINT

Automated (or autonomous) driving will bring a tremendous change in tomorrow's transport networks. This will have positive impacts in urban mobility, in terms of transport safety and efficiency and environmental impact.

In AVINT, the partners, having the practical knowhow from a similar pilot – CityMobil 2 - the only one in Greece so far, will go one step further. AVINT will study the urban transport context in Trikala and will implement a bus line supported by automated buses (3 buses of 10 passenger each) in a full integration mode with the city transport network. The specific bus line will provide a viable service for the city interconnecting the city center with the ΤΕΦΑΑ university campus. To accomplish this AVINT will perform all the necessary steps: feasibility study, implementation study, infrastructure adaptation, renting and adaptation of 3 automated buses in order to organise a 6-month pilot. The pilot results will be thoroughly analysed with regard to their impact on the Trikala traffic, on the life of the citizens. AVINT will also examine the system expansion in the City of Trikala and will provide a Roadmap to overcome the main implementation barriers of automated driving in Greece by providing also practical examples of foreseen implementation in other Greek cities.

1.1.4 Networks participation

By utilizing the Internationalization of its applications through the World Conference Broadband Cities 2008, which was held in Trikala in October 2008, e-trikala was invited and actively participated in NON PROFIT global organizations so as to exchange expertise, prescribe the Digital Future applications and networks and board in consultation for the participation of municipalities in the digital world.

Such initiaves are:

- A Global Network of Digital Cities, based in New York which evaluates municipal projects of Digital Applications. Trikala was among the 21 most intelligent communities in the world (Smart21), for three consecutive years, from 2009 to 2011, according to ICF International Network (https://www.intelligentcommunity.org/)

- INEC. The main purpose of this structure is to promote the conjuring of the Municipalities already featuring or planning to obtain digital infrastructures so as to accomplish their efficient exploitation. At the beginning and in order to explore the Municipalities potentials, a proposal was submitted at the Ministry of National Economy and Finance for the program that is titled: «Creation and Implementation of a Management System for Digital Technologies that aim to the remote assistance of citizens».

- MAJOR CITIES OF EUROPE – IT USERS GROUP Since the 10th of February 2009 and after an invitation from Mr. Giorgo Prister who is the president of the network, Trikala city is a member of the European Network " "Major Cities of Europe – IT Users Group". This is a high standards network, as far as the effective performance and function of the local authorities in relation to the usage of new technology is concerned (www.majorcities.eu). This network consists of both European and non European Municipalities and also cooperates with large IT companies and research institutes.
  http://www.majorcities.eu/staticsite/staticsite.php?menuid=157&topmenu=157

- GLOBAL CITIES DIALOGUE The major topics that concern this network is the promotion of digital technology and broad banding as well as the struggle to achieve digital section and cooperation among the Municipalities worldwide..   http://www.globalcitiesdialogue.com/

- Initiatives creating the first digital Community in Greece: By initiative of the MUNICIPALITY OF TRIKALA, an inter-municipal company was established that consisted 10 Municipalities located at the Central Greece. The main purpose of this company was to promote a joint management of the New Digital Era.   This inter-municipal attempt became a company named – Cities NET S.A. www.dccg.gr) that became a good example and urged more Municipalities around Greece (Iraklion, Patra, Kavala) to establish similar initiatives so as to be able to offer digital services to their citizens.   . .

- Collaborations with other Institutions The Company has established formal collaborations with the following Institutions and Organizations:

1.	Α.Π.Θ. - Aristoteleio University of Thessaloniki	9.	Municipality of Ioannina
2.	Ε.Μ.Π. - National Technical University of Athens	10.	Municipality of Thermis
3.	ITS Hellas	11.	Municipality of Stireon
4.	I.C.F (U.S.A.)	12.	Municipality of Agrinio
5.	Hebar (Bulgaria)	13.	Municipality of Lagada
6.	Municipality of Rhodos	14.	Municipality of Axioupolis
7.	Municipality of Katerini	15.	Technopolis- Thessaloniki
8.	Municipality of Volos		
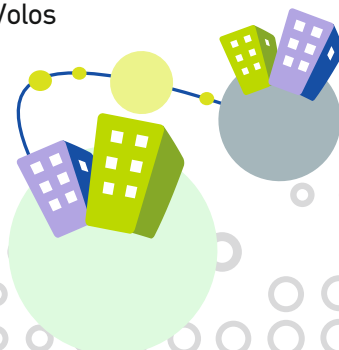
CitiesNet

ΨΗΦΙΑΚΕΣ ΠΟΛΕΙΣ ΚΕΝΤΡΙΚΗΣ ΕΛΛΑΔΟΣ Α.Ε.

1.1.5 Company's Organization and Operation

The Development Company of MUNICIPALITY OF TRIKALA Development S.A OTA «E-Trikala S.A", is managed by the Board of Directors (BoD), which is elected by the General Meeting (AGM) of shareholders in accordance with the provisions of applicable laws and regulations. The Board, which is composed of nine (9) members, has the task of supervising the company as well as the policy and strategy making. Senior rank is the Chairman of the Board and his/her composition is completed by the CEO and the Boards members.

The person responsible of the daily operation of the company is the CEO, who is a person of high experience and acceptance. He is responsible for the proper functioning of the company and the recommendation of the company's organizational structure according to specific needs. He is also assisted in his duties by an executive team with defined roles and working field for each member. They form the management team of the company and lead in turns the various departments of the company. The CEO is responsible and directly linked and controlled by the company's Board .

To be more specific the CEO co-operates directly with:

1. The Department of Secretarial and Administrative Support of the company. This department deals with bureaucratic issues relating to all departments of the company. By absorbing the procedural aspects of the company the rest of the departments can focus to the actual work of the company in relation to their thematic responsibilities.

2. The Legal Department: This Department is responsible for the legal protection of the company and its compliance with the regulations at all levels of operation. It is also responsible to adapt the company's management processes in accordance with the current legislation. The Legal Support can be provided either via permanent personnel and / or via a freelancer, which has been the case during the company's first session, due to the management and financial viability.

3. Freelancers. Due to the highly progressive nature of the company's working environment such as the high-tech applications and the economical requirements for rational management, it is constantly aiming to a continuous cooperation with the mostly qualified entities in key sectors (whether they belong to the private sector or are a research organization), that the company already implements or is planning to implement. Apart from the fields of technological applications, the company's external partners can be specialized scientists in fields where the company has a relative or total inability to respond, in relation to its existing personnel. Via these external partnerships, the company aims to have a continuous contact with any technological developments as well as to accomplish an effective management of any arising issues. The company's main task, in terms of the physical object -from the application of services to its beneficiaries- is carried out by the production department. This department's divisions and work description is explained below.

- Department of Appliance: This division is responsible for the implementation of the physical object of all the services and the projects that serve the company's objectives and are directed towards the citizens and businesses in the Trikala region. The department monitors the compliance of the conditions that serve the needs of its applications. During the incorporation period this segment consisted of existing applications - programs which are: the Demosthenes program, the program for the operation of the wireless network in the city, the tele-assistance program and e-KEP. Every new project that is implemented by the company will be a part of the Department of Appliance as well as of the other existing ones.
- Department of Planning, Development and Quality Control. This section is responsible for the evaluation of the projects and services implemented in terms of physical object, effectiveness and company viability, which is related to the company's feasibility when taking into consideration the social character of the services implemented.   At the same time, it is responsible for the continous search for new services in line with the requirements laid out in the sector of technologies and broadband services so as to meet the increasing needs that will arise for recipients - customers. Each search can be completed either by the department or in collaboration with external partners that are specialized in the search fields. Furthermore, the department is responsible for the company's evaluation, in all its functions depending on specific criteria, such as the rational management of resources (man-made or not), the economic viability and growth, the expansion of services and the development of strategic partnerships with independent actors. All these criteria must comply with the guidelines that are set by the company through the Directors General Assemblies. Finally, the department is also a recommendation authority responsible for promoting the company's   and its departments topics for discussion both to the Board and to the General Manager of the company (for issues that can be resolved directly).


- Department of Communication & Marketing: This department is responsible for promoting the company and its services in the market and society in general. Given the originality that characterizes most of the applications that are already implemented and those that are either planned or are in the planning stage, the need for a organized and effective promotion towards the existing users as well as the potential future ones is of great importance as it will define their acceptance and success in total. At the same time, the department needs to plan and adopt the mostly effective methods that will create the bridge between the broadband services and the implementation environment that is characterized by a significant lag and unresponsiveness.
- Technical Department. This department is responsible for the management control of the company's projects and services. Each project implemented by the company is monitored by this special section to ascertain that both the implementation and application schedules as well as the economic parameters are respected.   At the same time, the accounting department of the company that collaborates with this department carries out the necessary procedures so as to ensure the accounting integrity of the service offered.
- Accountant's Office. The volume of business on the financial monitoring of projects being implemented as well as of the services and products being offered demands the operation of this separate department that refers directly to the CEO of the company.

e-trikala

1.1.6   Organizational Chart

Presented below is the organizational structure of the company, under which the efficient operations and optimal management of the company «e- Trikala SA" is ensured. (organizational chart).
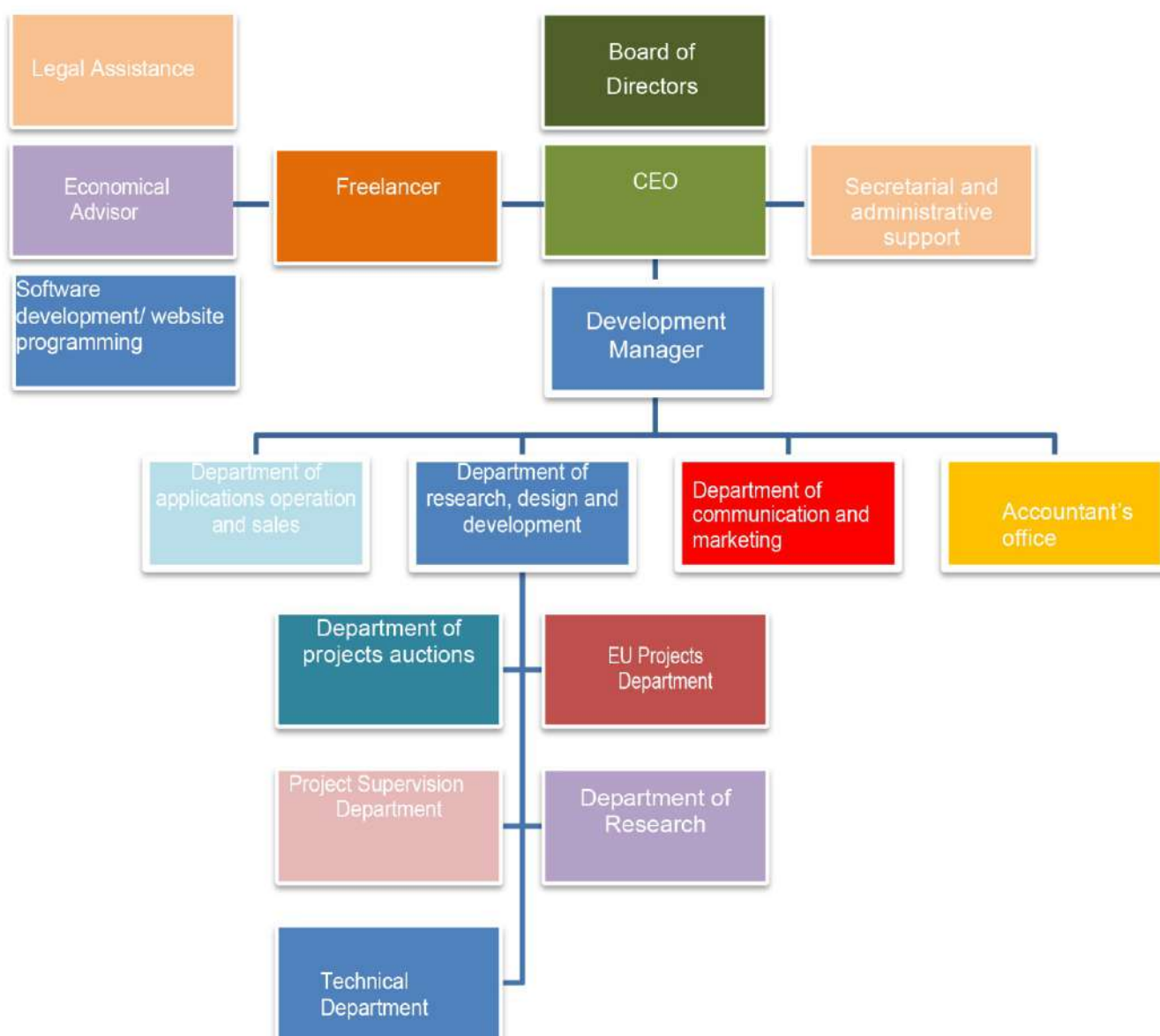
1.1.7   Publications

A recent award for e-Trikala as well as the MUNICIPALITY OF TRIKALA has been the company's inclusion in the 50 most dynamic organizations of Greece according to the European Research Ranking. (www.researchranking.org)

Through the years and due to many novel European programs Implementation E-trikala has been involved in many scientific publications an conferences. Some of them are mentioned below:

1. **Publications in Books:**

Achieving Effective Integrated E-Care Beyond the Silos**,** *Chapter title*: INTERGRATING SOCIAL AND HEALTH SERVICES IN GREECE: Implementation of three pilot CIP-PSP-ICT-programs (ISISEMD,INDEPENDENT, RENEWING HEALTH**)**

2. **Publications in peer review scientific journals and abstracts in conferences:**

· Dafoulas G.E. , Bargiota A. Long-Term Telemonitoring of Patients with DMT2: Results of the RENEWING HEALTH Cluster 2 Multicenter Randomized Pragmatic Trial, Association's 75th Scientific Sessions Abstract Book, the June 2015 supplement to the journal DIABETES.

· Af Mavrodi,G.E. Dafoulas et al.Cost-utility analysis of long-term telemonitoring of DMT2 patients among different EU health systems: the Renewing Health multicenter trial. Paris, ATTD 2015

· N. Kerenidi, E. Stafyla, G.E. Dafoulas et al.Short-term telemonitoring program after hospital discharge for COPD exacerbation: Greek pilot of the Renewing Health multicenter randomized trial. European Respiratory Society International Conference, 2015

· G.E. Dafoulas et al. "Long term telemonitoring of patients with DMT2: Preliminary Results of the Greek pilot of the RENEWING HEALTH multicenter andomized trial" 7th International Conference on Advanced Technologies & Treatments for Diabetes-2014 Diabetes Technology and Therapeutics,vol.16, Supplement 1, pp. A26.

· Dafoulas G.E., Fissas K., Tsatsos A., Tomaras P.(2014) A Qualitative Case Study to Evaluate the Organizational Aspects of a Telehealth Service Introduction in a Greek Hospital. In: Jordanova M. and Lievens F.(eds). Global Telemedicine and eHealth Updates: Knowledge Resources, Vol. 6. Luxembourg: ISfTeH.

· Gregory Giamouzis, Dimos Mastrogiannis, Konstantinos Koutrakis,George Karayannis, Charalambos Parisis,Chris Rountas,Elias Adreanides, George E. Dafoulas "Telemonitoring in Chronic Heart Failure: A Systematic Review,"Cardiology Research and Practice, vol. 2012

· Anelia Mitseva, Carrie Beth Peterson, Christina Karamberi, et al., "Gerontechnology: Providing a Helping Hand When Caring for Cognitively Impaired Older Adults— Intermediate Results from a Controlled Study on the Satisfaction and Acceptance of Informal Caregivers," Current Gerontology and Geriatrics Research, vol. 2012, Article ID 401705, 19 pages, 2012.

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