Intelligent Transport Systems in Emerging Markets Enhancing National Policies through Standards

The Latest Developments in Promoting Intelligent Transport Systems (ITS) in Cyprus

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Since the first feasibility study for the Introduction of ITS in Cyprus in 2008 – which was co-funded through the EU Transition Facility by 80% - a number of actions have been taken to introduce integrated telematic systems with the objective to:

- Collect, analyze and provide information to network users regarding the current conditions
- Improve co-operation between the responsible agencies
- Meet our obligations under the EU Directive 2010/40 which was transposed to Cyprus Legislation in November 2012.
Existing ITS Systems – Traffic Monitoring & Management

ITS Systems used for Traffic Management:

- Traffic Lights Management System SCOOT which manages approximately 90 major junctions in Cyprus since 1993. The control center is situated at the PWD Headquarters in Nicosia.

- Traffic Monitoring & Management System OMNIA-MISTIC was created under the project DIAVLOS in 2014 and funded by the EU Cross-boarder Co-operation Programme Greece – Cyprus 2007-2013 by 80%.

- The system collects and analyses traffic information from 120 devices installed in the primary roads of Nicosia and the interurban network. Traffic and incident information is available to the public and other interested agencies (police, Port Community, universities etc). The information is also disseminated through the webpage:
  
  www.traffic4cyprus.org.cy

- The above systems can be expanded to cover all Cyprus

- **Best Practice Project** - 1st European Territorial Co-operation conference – May 2014
The goal of PRODROMOS Project was to improve the co-operation between responsible agencies for the management of dangerous goods, oversize and/or overweight vehicles in Cyprus.

An intensive consultation process has taken place with the responsible agencies examining current procedures and practices.

Systems were being deployed on the motorway network to provide more accurate information regarding traffic conditions and incidents (as an expansion of the existing system created under DIAVLOS).

Co-operative systems were developed by our partners in the project – Cyprus Ports Authority and Cyprus University – for being able to exchange information regarding dangerous goods and their routes.

The project was co-funded by the EU Cross-borderer Co-operation Programme Greece – Cyprus 2007-2013 by 80%.

Transport & Logistics Award – Athens May 2015
DIAVLOS Sensors
Nicosia & Interurban Network
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Traffic and incident information is available to the public and other interested agencies (police, port Community, universities etc). The information is also disseminated through the webpage:

www.traffic4cyprus.org.cy

Data from that system is shared for research purposes and steps are under way to make that public for private web services developers.

- PROTOCOLS – DATEX II
Parking Management:

- A system for calculating the available parking spaces has been installed in 5 central parking areas of Nicosia under the project DIAVLOS. The information is available to road users via electronic signs on the road and the web application: www.traffic4cyprus.org.cy

- The data from DIAVLOS was made available for the development of a smart phone application by the Municipality of Nicosia

- It can be expanded to cover more parking areas in the whole of Cyprus.
eCall PROJECT:

- eCall is an initiative with the purpose to bring rapid assistance to motorists involved in a collision anywhere in the European Union.
- It’s introduction is managed by the Department of Electromechanical Services of MTCW and was complete in 2017.
- Cyprus Participated as Member State in the I-HeERO Project and achieved:
  - The upgrade of 2 Public Safety Answering Points (PSAPs) for e-calls to 112 & PSAP data integration and dissemination
  - The design for the implementation of eCall DGV with the usage of external sources of information (notably the PRODROMOS database)
  - studied the use of eCall on motorbikes.
Public Transport Telematics (€10m aprox):
- Automated Fare Collection System with the use of Smart Cards,
- Bus Fleet Management & Passenger Information

- The contract was signed with GMV Sistemas S.A. in May 2016 with implementation period of two years.
- The first year was used for:
  - the design and delivery of the central system software,
  - Creation of the primary and disaster and recovery central sites, plus a backup site,
  - Installation in laboratory and pilot buses,
  - Smartcard design,
  - Testing and placing orders for hardware
  - Integrating with third parties such as Petrol Providers, Solomou Square Passenger Information Systems
Existing ITS Systems – Public Transport

- the design and delivery of the central system,
- Creation of the primary and disaster and recovery central sites, plus a backup site, to TIER III standard
Existing ITS Systems – Public Transport

- Installation in more than 800 buses in seven PT Operators
Existing ITS Systems – Public Transport

For Payment:
- Uses Smartcards &
- Paper tickets for single trip
Integrating with third party systems - such as Solomou Square Passenger Information System through SIRI protocol.
An interactive webpage has been developed - [www.motionbuscard.org.cy](http://www.motionbuscard.org.cy) – providing information on services and offering OPEN DATA (Protocols Used SIRI, GTFS)
Public Transport Telematics:

- A Smart Phone Application has been developed – MOTION – for both Android and i-Phone offering PT Service Information and real-time information for bus arriving at stop.
CROCODILE PROJECT:

Seeing Beyond Borders:

- International “door to door” corridors supported by modern infomobility services are extremely important to Europe, but also to Cyprus.

- PRODROMOS & DIAVLOS open and expandable architecture allows the cooperation to exchange information and develop unified-seamless services on a corridor basis.

- Cyprus can participate confidently in corridors development projects

- Project CROCODILE wins freight award for smart use of data – May 2016

The Project CROCODILE was launched in 2013 to establish a transnational framework to collect and exchange data for putting into place concrete improvements for EU network users. It is co-financed by the European Union’s TEN-T programme.
National Access Point – State of Play for Cyprus - Initial State

Management Platform - OMNIA

- MISTIC
  - Data fusion
  - Map matching
  - FCD
- Storage
  - Map server with TMC
  - Parking Module
- CCTV Software & Recording

Integration

1. 2 Existing Bicycle Sensors
2. 98 Existing Traffic Sensors
3. 10 Parking Counters
4. 5 Existing CCTV
5. 3G GPRS
6. 3G GPRS
7. 3G GPRS
8. VPN Lines

Local Network

1. PWD Control Centre
   - 5 Desk Top PCs
2. Web adapted to Mobile
   - www.traffic4cyprus.org.cy
3. 3G GPRS
4. 19 Parking VMS

Tier II Site

Cyprus
**STEP2SMART** (€1.8m aprox):

Key Project Objectives include actions that will:
- improve management of traffic at key junctions and corridors,
- reduce environmental impact and
- promote public transport

- It will collect information from existing systems such as the Traffic Adaptive System Scoot but also environmental sensors
- Introduce Public Transport Telematics Systems and priority measures at traffic lights.
- It builds on existing systems (SCOOT, DIAVLOS, PRODROMOS, PT Telematics System, Air Quality Platform)

**Project Partners:**
- Public Works Department – MTCW
- The Department of Labour Inspection of the Ministry of Labour, Welfare and Social Insurance
- University of Cyprus
- Municipality of Chania – Crete
- Municipality of KOS

2+ years implementation period – by end of 2021.
The purpose of the new Projects for Cyprus is to increase existing capabilities by enhancing:

1. the traffic monitoring & management platform OMNIA –MISTIC of Swarco Mizar,
2. the safety and security of the Data Centres and of the Data,
3. the analytics of the system to give insides of the existing data and make forecasts,
4. the information sharing and publishing mechanism to third parties beyond the original scope.
National Access Point – Under New Projects Crocodile II & III and STEP2SMART - FUTURE STATE
Co-operation is Key to Successful Implementation of ITS

- The Public Works Department pursues close co-operation with all responsible agencies for the implementation and further development of the above projects.
- Important role will also have the private sector in using information from ITS systems deployed and developing services for wider public and/or specialised uses.

Look how ITS connects all stakeholders across the country to bring intelligence into mobility.
THANK YOU

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