INNOTRANS
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# Good Practice Handbook

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# Introduction

The INNOTRANS Project is examining best practice in INNOVATION in transport with the objective of improving policy instrument support in one of the fastest changing areas of modern life.

Advances in technology are impacting on every area of our lives and transport is no different. They are not only improving the systems we have, but are offering us new ways to travel. From power sources to the very way we travel any kind of change seems to be possible. The drive to reduce emissions has increased research into new power sources including electric vehicles to fuel cells. Data collection and digital technology is making it possible to run smart traffic systems and to connect data from different systems together. This means that Multimodal transport is becoming better, with ticketing in regions now covering a range of providers and better coordination between services. Mobility as a service is also starting to show up on our mobile devices, allowing us to book and summon transport at the touch of an app.

5G technology is being introduced and tested in many cities. The bandwidth of this technology makes it possible to connect wide ranges of systems. This will facilitate Connected and Autonomous vehicles which are being tested on our roads, dealing with increasingly complex traffic situations and retaining an accident record that is better than vehicles with human drivers. Smart roads are managing traffic – increasing capacity at peak times and controlling speed limits to keep traffic flowing and technology to direct and reroute vehicles through road closure congestion is being tested. Even better we can now transfer that data to travellers allowing more effective route planning for both speed and cost, potentially reducing congestion and emissions.

We are at a time of great change. Pressures on our transport systems are greater than ever. Our infrastructures are overcrowded, the demand for fast and personal transport has never been higher.

Right now it feels as if anything is possible. There has never been so much choice and there have never been so many different ways to improve what we have. The challenge for governments and regional authorities now is how to decide which technologies to encourage, what to install in their regions and where to look to ensure that they are ready for the future.

Working across five European regions INNOTRANS will make recommendations driven by innovation in practice and create action plans in conjunction with the regional authorities. In this publication we have recorded some of the most inspiring examples we have found.

# 1 MIDLANDS CONNECTED AND AUTONOMOUS VEHICLE CLUSTER (MCAV)


## Brief description of the practice

Connected and Autonomous Vehicles are one of the UK Government's key priorities. The market is estimated to be worth £51bn per year to the UK economy alone by 2030. There are multiple companies of all sizes growing in this space and little wider understanding of the potential of these developments. This clustering activity is intended to increase the opportunities for interaction with business, policy makers and investors.

In response to this need the MCAV cluster was set up to bring the major players together in the West Midlands – the centre of the CAV industry in the UK.

Driven by Conigital Ltd the MCAV cluster was the result of hard work by directors of the company who pulled together their contacts and launched the cluster with a major conference in 2017. The cluster creates opportunities using conferences and meetings as the basis for networking meetings. The Cluster runs three meetings a year, some as major conferences but the majority from technical specialist groups, attracting debate and cooperation from interested parties.

In 2018 the cluster began connecting more widely than the region and announced a connection with technology businesses in Cambridge, with the line "Cambridge thinks it, Birmingham does it."


A launch meeting included the Mayors of both cities and influential thinkers from around the industry. In the same time period the aim of the cluster responded to international interest by rebranding as ICAV (International) on a spoke and hub model.
This is privately funded. Conigital estimate the resources needed as about £80,000 in costs plus significant time valued at £150,000. The prime movers work in this space and have credibility with the potential cluster members. The Cluster is self-financing from membership and event income.

## Main result

Success of this cluster is evident in the growing membership and the fact that it is now self-supporting. The cluster has supported the growth of a number of successful development project bid consortia. Additional hubs are being set up in Manchester and London. As further evidence of the need and value of the practice is the international interest and the connected clusters being initiated in Portugal, Paris and Bucharest. The difficulties have mostly been resource based. Driven by management of a company there is conflict between the immediate needs of the business and those of the cluster.

## Lessons learnt

Clusters are an observed phenomenon of successful businesses in area. The advantages of clusters in terms of productivity, speed of innovation and new businesses are well known. Since they were first identified many efforts have been made to establish new clusters to support growing or strategic industries in regions.
This cluster demonstrates some of the key success factors in cluster practice. It crosses Industry classifications, working within digital and Advanced Manufacturing industries. It is driven by actors within the cluster, developing and growing a network in which they have credibility.
The locality has assisted in this process. Like many clusters it is not confined by regional boundaries. In this new digital world boundaries are less important as working can take place in any part of Europe and, indeed, the results of this work will need to be standardised across the world. Internationalisation is the next phase as ICAV seeks to connect clusters.

### INSPIRED BY THE PROJECT

Even though in Greece we are not so advanced in the field of research of connected and autonomous vehicles, we are very much interested in the general idea of the cluster. The need of a cluster on innovation and on transport innovation in particular, was recognised during the stakeholder meeting held in Thessaloniki. Also, it was one of the conclusions derived from the personal interviews survey to local stakeholders ran in the frame of the INNOTRANS project. The same finding has arisen also through a survey ran by Green Mind - Interreg Mediterranean project, almost in parallel time with INNOTRANS, validating the need for a cluster that was identified already. Through this good practice coming from UK we hope to learn ways to develop successfully a cluster concerning the promotion of innovation in local entrepreneurship. We would like to understand the steps made, the actions taken to deal with the difficulties encountered, the arguments used, the mindset and the benefits/assets. The interaction with business, policy makers and investors that MCAV aims to achieve is crucial for the Region of Central Macedonia, so any advice and lessons learnt from it will help us on how to proceed.

***Transport Systems Research Group, Aristotle University of Thessaloniki, Greece***

# 2 UK CITE


## Brief description

UK CITE created a testbed for Connected and Autonomous Vehicles (CAV) in real world environments, culminating in trials of CAVs in Coventry City and motorways. CAVs offer the opportunity to improve safety on roads, enhance mobility and decrease environmental impacts all of which have positive economic benefits. Connecting the vehicles with the environment around them is one of the major challenges for regions. Particularly around vehicle to vehicle (V2V, to infrastructure (V2I) and to traffic data (V2X).

UK CITE assessed the functionality, safety and convenience offered by CAV. It also looked at the technologies from the perspective of technology maturity and cybersecurity. The project brought together partners and stakeholders from across the transport environment including local authorities, vehicle manufacturers, infrastructure and data contractors, and universities. This created a joined up environment with a number of the partners working closely and collaboratively for the first time to overcome the challenges and create a safe and effective real world environment.


Over a period of two years the project installed and demonstrated the effectiveness of connected vehicle technologies, culminating in a live demonstration of vehicles working autonomously in the centre of Coventry and the Motorways demonstrating validated benefits from the adoption of CAV technologies.
The project cost £5.46m of which £3.32m was funded by the UK government through INNOVATE UK.

## Main results

- Demonstrated safe and effective use of CAVs in a busy city centre environment
- Proof of concept that CAV can improve safety, mobility and have a positive effective on the environment
- Helped to create a more joined up environment in local traffic planning as the most significant players came together cooperatively and gained a better understanding of each other's problems and constraints
- The project has been extended for a further 8 years and given a wider brief to work over a greater area
- The difficulties are in the fact that urban and national roads have very different infrastructures at different states of readiness. Technology is changing so fast that technology envisaged and described when writing project is not suitable by end.

## Lessons learnt

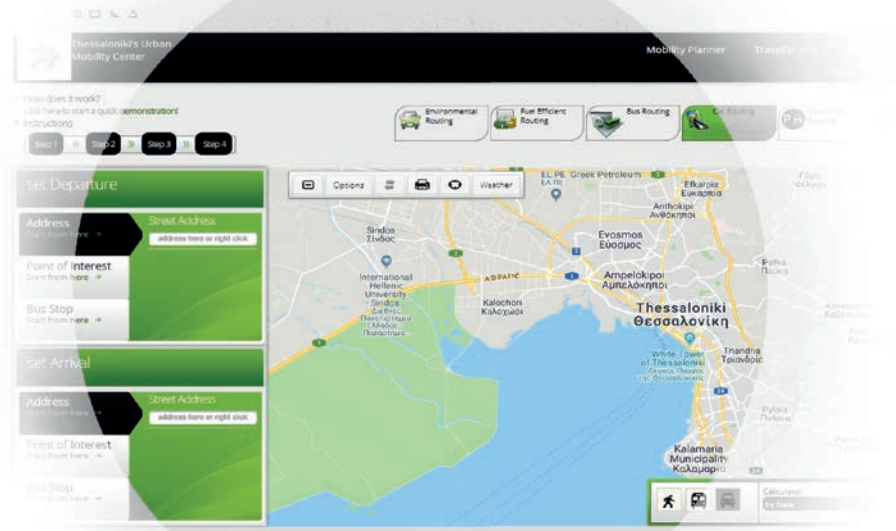
This is a good practice that should be considered in any and every major city in Europe. Whilst some of the technologies and experience are directly transferable, the learning from carrying out the project is arguably more important. Transport and planning for our connected future cites needs cost effective solutions that can be rolled out across the continent. The more that the major players in both national and local transport environments run this kind of project together the more they will understand the changes that are required both in their relationships and in the infrastructures that they are responsible for.

### INSPIRED BY THE PROJECT

The City of Prague is interested in autonomous mobility as a good example of transport innovation. The technology of satellite navigation in trams was tested in Prague this year. This technology can be used for anti-collision system that allows to stop the tram without driver intervention.
Although the conditions in the City of Prague are different from Coventry, we find the approche very inspiring. Data interconnected, cooperative and autonomous vehicles represent a significant and inevitable innovation not only for the automotive and telecommunications industries, but will significantly influence the shape and functioning of the entire transport system and the cities are the key player in this process.

***City of Prague, Czech Republic***

# 3 MOBITHESS THESSALONIKI'S URBAN MOBILITY CENTER




## Brief description

Thessaloniki's Urban Mobility Center provides traveler information for all transport modes while considering the local urban mobility needs and the environment. The Center is a unified effort among all the key actors of the city who deal with urban mobility, transport and environment. This online system aims to help citizens and visitors move around the city easily while avoiding the traffic congested areas. Additionally, it aims to raise environmental public awareness and promote public transportation and active transport modes (walking and cycling). At the same time, through intelligent traffic management and control in Thessaloniki's city center, the system aims to reduce the negative impacts of the gas pollutants.

**Services provided:**

- Best routes based on criteria defined by the user for all the available transport modes: the user can insert the data/preferences and the system provides him with all the relevant information. Alternative possible routes with public transport, multimodality, pedestrian routing, provision of the most environment-friendly and most cost efficient route in terms of fuel consumption to the driver.


- Information for: real time traffic conditions, daily air quality conditions of the city presented on a colour scale, points of interest, public transport timetables and stops
- Awareness raising: through special urban mobility training programs offered online, a new culture for urban mobility is formed in the city. Familiarisation with the concept of Sustainable Urban Mobility through provision of best practices, interactive games, quizzes, crosswords etc.
- The project was funded 50% from Iceland, Liechtenstein and Norway through the 'European Economic Association' and 50% by National Funds. The total amount needed for its fully development and set up was €2,916,854. Need to secure resources continuously for the project's maintenance is identified.

## Main results

The operation of the Urban Mobility Center is considered as an important and effective intervention of environment-friendly urban transport demand management. It integrates the existing city activities with the optimal traffic management as well as with the monitoring of air quality throughout the city center. Also, it provides real-time information and mobility solutions to citizens promoting alternative transport modes or fuel efficient routes with the view to affect their habits.
Mobithess requires resources for continuous maintenance, update and improvement in order to ensure provision of good quality services and accurate results. Moreover, the responsible stakeholders need to monitor the system's operation impacts while promoting and ensuring the acceptance of the users.

## Lessons learnt

This practice is a standalone urban mobility planning and management tool that can provide valuable guidance to local authorities and it can be used on a daily basis from citizens and visitors in urban environments as well. Strong cooperation among all involved stakeholders is needed. Thus, the basis of future cooperation and the establishment of good communication among them can be achieved. Furthermore, it results into a state-of-the-art mobility management system, providing advanced traveler information services while, also, employing the city with modern infrastructures and equipment. Finally, these services create data sets of traffic data which can be further used to update existing traffic models. Such projects enhance the know-how of a city and have the potential for further development and exploitation.

### INSPIRED BY THE PROJECT

This tool for urban mobility planning and management could help local authorities in South East of Romania. Since several local authorities in the Region are planning to invest in urban mobility using financial means from the Regional Operational Program/ERDF, the good practice has an important potential of impact on the traffic and mobility management at local level. The impact will be therefore even greater given the mix of means of transportation foreseen to be financed as part of these projects and the need to integrate these.

***South-East Regional Development Agency, Romania***

# 4 INTELLIGENT TRAFFIC MANAGEMENT SYSTEMS IN GALATI

## Brief description

Metropolitan video surveillance solution serves both the road area and public spaces in the city. Galati Municipality (Romania) has implemented the project named "Intelligent Traffic Management Systems to increase the fluency and safety of circulation and to prevent criminality", funded by 2014-2020 Regional Operational Programme, Priority Axis 1 „Promotion of technological transfer", according to the needs foreseen in the Integrated Sustainable Development Plan: lack of centralized tools to manage the public transport in Galati; big number of accidents; major delays in transit due to left turns, total delays caused by crossroads and pedestrians; low average movement speed; reducing the level of pollutant emissions or particles. The objective is to implement a metropolitan video surveillance solution serving both the road area and public spaces in the city, which will increase the safety of citizens and property in areas where the system is implemented.

The activities are consisting in the implementation of a traffic management system resulting in: reduce traffic accidents; better monitoring of traffic system with more efficient interventions; integrated management for operational cost; increase of the average speed


and decrease of transit delays; reduce delays due to left turnovers, total delays caused by intersections and those for pedestrians; reducing fuel consumption; reducing the level of pollutant or particulate emissions from road traffic; reducing the average annual noise. Total cost of the project is 4,045,167 EUR.

## Main results

It was set up a integrated system of traffic management and supervision metropolitan video. The system: assures the control of all functionalities through a graphic interface which is friendly and easy to use; allows to represent graphically the map of the monitored areas and to focus on webcams and interest areas; can automatically fire the alarm even if the operator does not notice an event; can be diagnosed and repaired remotely. One of key outcomes is reduction with 10% of crime in the area.

## Lessons learnt

In the context of developing Sustainable Urban Mobility Plans, Centres with integrated functions – for traffic and crime prevention – are essential. Due to similar characteristic and functions of cities, the project can be easily transferred to other regions in terms of collaboration between key actors and equipment used to improve the traffic management system. The funding source – the Regional Operational Program 2014-2020 has addressed the need and launched a call for proposals on this topic, the policy instrument representing also a GOOD PRACTICE to be transferred in other regions.

# 5 CAR SHARING IN PAID PARKING ZONES IN PRAGUE


## Brief description

The City of Prague is struggling with a long-term shortage of parking spaces. The initiative to launch this project came from the Czech Carsharing Association, representing all 4 of the car-sharing operators in the Czech Republic at the time. For these companies, access to Prague was problematic because of regulated parking in the central areas of the city. The City of Prague in cooperation with the Czech Carsharing Association prepared rules how to include carsharing in paid parking zones in Prague. The project's promising potential to reduce the city's car traffic has prompted the City of Prague to take it up. In Prague, car-sharing is now run by several private companies that are allowed, under certain conditions, to use the regulated parking spaces in the city.

Vehicles that are not currently booked (and not in use) are permitted unlimited parking (free of charge and for an unlimited period). Vehicles that are booked have to pay according to the regular visitor parking tariff.


From a technical perspective this means a sophisticated linking of the Central Information System (CIS) that manages the controlled parking in the city, and the car-sharing operators' information systems, which send information about which vehicles are booked and which are not in real time via an application program interface (API). The parking verification proceeds via automated monitoring, deploying modified vehicles equipped with a camera/scanning system.
The operation of car-sharing services works on a free-market basis, it has been necessary to cover only the provision of the CIS technical link to the tune of 100,000 CZK. (Approx. 3,900EUR) Adjustments of booking systems of the respective car-sharing service providers were covered by providers.

## Main results

The ability to pick up and return vehicles in paid parking zones helps protect the environment by reducing emissions and reducing the need for extra parking spaces. One modern shared car in effective use can equate to as many as 10 private cars. Users who need a car only occasionally have at their disposal a diverse car-sharing fleet and can save a lot of trouble and money.

## Lessons learnt

Car-sharing is a modern approach to the use of vehicles that saves the need to own them. To some extent, the system saves parking spaces in the street network, as drivers share these vehicles with one another. In this respect, each vehicle spends more time in motion and in use by more drivers. In practice, each registered car-sharing user can find and book a vehicle anywhere in Prague directly via http://mapa.ceskycarsharing.cz/or via their provider's application.

### INSPIRED BY THE PROJECT

In Coventry we already have the ability to monitor use of parking spaces with AppyParking. At present this allows us to monitor spaces and share empty space data with drivers to reduce congestion. We are looking for ways to develop from this to use the technology to further reduce congestion. This car sharing practice has the potential for us to encourage reduced car use, more multi passenger journeys or reserving bays at times for specific vehicles such as deliveries.

***Coventry University Enterprises Ltd, United Kingdom***

# 6 APPY PARKING – REAL-TIME BAY SENSOR SYSTEM

## Brief description

Appy Parking is a new technology creating wide area networks to monitor and show parking space useage allowing better use and less congestion.
Congestion is a major issue in European cities. It slows transport systems, contributes to Carbon emissions and causes frustration amongst drivers. A number of European studies have suggested that drivers searching for parking spaces in urban areas contribute between 8 and 30% to congestion. On street parking is considered to be one of the worst contributors as vehicles manoeuvring and parking add to the congestion and pollution.
In order to better understand and potentially reduce the problem Coventry City Council took part in a project to develop a new parking system which combines real time vehicle sensors placed in each on street space with an app that drivers can use to identify free parking spaces.


The project fitted sensors to on street parking spaces and connected them to a central system. Software was developed to allow drivers to identify free spaces in the city in real time. This took the form of a SmartPhone app which is marketed in both Android and iPhone versions.
The practice has enabled the council to understand parking demands and patterns, identify areas of over and under-utilisation of parking spaces and will permit the development of more flexible pricing to improve the use pf parking zones and deliver more customers to neighbouring businesses.
Funding of £150,000 was provided by the UK Department for Transport through the C-ITS programme. 654 surface sensors with two base stations were fitted and configured by NWAVE.

## Main results

Preliminary analysis has been possible and a much better understanding of street parking patterns is available. The system has not yet been advertised to the public, but there are already almost 200 users regularly searching for spaces in the city.
A major vehicle manufacturer has taken an interest in the practice and is developing integrated systems to work with the vehicle's AI so that autonomous vehicles will be able to use the data to park effectively.

## Lessons learnt

On street parking is a challenge in many European cities. This is a practice that can be easily transferred to any city with congestion and on street parking. It is already being adopted across the UK with sensors fitted in more cities including London.
The Company provides an open API that can be connected to any other parking management system allowing drivers to pay on use and authorities to monitor street use in real time. The information gained is particularly valuable for planning and matching parking requirements to provision. This has significant potential to reduce vehicle movements in congested city centres.
At a cost of around £20 per parking bay with a sensor battery life of 5-7 years this is a low cost solution with realistic potential in any European city.

### INSPIRED BY THE PROJECT

The challenges of street parking are present in different cities of the South East Region Development Region, as well as in many European cities. This is important for any city with congestion. Major cities in the South East Region will embrace the technology and the moment is good since many cities have engaged in doing major investments with the help of EU cohesion funds.

***South-East Regional Development Agency, Romania***

# 7 IN MOTION CHARGING ELECTRIC BUS


## Brief description

In recent years, the City of Prague Transport Co. (DPP) had been intensively monitoring and testing various electric options to find suitable charging technologies. The efforts in developing electric mobility aim to take advantage to the maximum possible extent of synergies that stem from Prague having an extensive tram and underground train network. This allows for synergies in terms of power infrastructure, joint procurement of energy and more.

In 2017, a dynamic battery charging project was initiated in Prosecká street, with overhead trolley wires fitted along a 1,5 km steep climb/descent. Furthermore, this included a charging tract with a stationary galvanic separator, where the vehicle is charged during breaks in operation. The stretch in question is typical of Prague conditions. The Palmovka – Letňany route is run in dependent traction mode (trolley-powered) for only 10-15% of the route, the rest battery-powered.


Given the successful trial, the DPP has agreed to prepare the follow-up stage, to ensure zero-emission operation on bus route 140. The project comprises a combination of dynamic charging (the vehicle charges on the move from the trolley line) and static charging (the vehicle is charged at the terminus during its scheduled breaks and in the depot). The overhead power lines will be installed along some 30 to 40% of the route, particularly on hilly sections (incl. the stretch in Prosecká street). The technology to be used will be 2-pole charging at 750 V DC. The project is now going on to the next stage with the full electrification of bus route 140, The investment in the follow-up stage, comes to some 492 million CZK, including the cost of infrastructure and vehicle procurement.

## Main results

Bus routes in Prague are served exclusively by conventional diesel buses. The long-term goal of the City of Prague is to reduce the negative impact of transport. The first stage trial operation verified the viability of the dynamic-charging concept, with findings brought forward to the follow-up phase and vehicles (e.g. to raise the charging current, improved ride parameters up slopes without trolley lines, the night charging and charge balancing of the batteries at the depot, etc.).

## Lessons learnt

The main benefit is zero-emission operation, as well as reduced noise pollution compared to a conventional fuelled engine bus.
Another advantage comes by way of significantly lower demands on the infrastructure. There is no need to implement power lines along the entire route, but only in certain sections, typically in hilly terrain. There is no need to implement complex overhead constructions at intersections, in depots etc. The vehicles are no longer dependent on following trolley wires, but can be flexibly deployed on different types of routes. The system also exhibits greater reliability, because it allows for operative responses to emergencies or diversions.
This technology is well utilizable e.g. in cities with existing trolleybus lines. Moreover, this method allows for the electrification of long routes operated at short intervals, often in hilly terrain, where the technology of purely static charging has its limits, due to battery capacity and weight and their charging speed.

### INSPIRED BY THE PROJECT

In the UK we do not have a history or the infrastructure for overhead electric road vehicles. This means that we need to find other ways of providing electricity for charging public transport. The use of the City as a test bed for autonomous vehicles is also an opportunity as many of these new vehicles are likely to be electric. We hope to learn ways in which we can provide on street charging for road vehicles, possibly using different on street induction systems. The lessons learnt from this practice will help to inform future decisions on how we develop this.

***Coventry University Enterprises Ltd, United Kingdom***

# 8 CYCLOCOUNTERS


## Brief description

Due to the hilly terrain and unfavourable winter climate, cycling in Prague has long been underrated. Now, with the emphasis on ecological modes of city transport its importance is growing; although it can be said that compared to other European cities its potential is still not fully appreciated.

Automatic CycloCounters are intended to further assist cycling around Prague to develop. In 2018 there were 27 CycloCounters on Prague's backbone network of cycle paths. They are situated at key cycling traffic points and on recreational routes. They show how cycling in Prague is growing in the respective locations, namely how many cyclists have travelled through the given places in specific directions at selected time intervals.


**The counters´ functions:**

- Monitoring over the long term
- Monitoring the effectiveness of new cycling measures
- Showing the demand for new infrastructure
- Motivating more frequent cycling

The automatic counters use components such as measuring units similar to those for automobile traffic, but are modified so as to tally people or bicycles. Sensors record individual users and even their direction of movement, and relay this to the processing centre. The data from the devices serves to track the development of cycling traffic, while also being publicly available on the City Data Platform run by the city company – ICT Operator (https://golemio.cz). The annual data-gathering cost for the CycloCounters now in operation is 944,000 CZK (around 36,300 EUR).

## Main results

The CycloCounters give a detailed overview of cycling traffic 24 hours a day, through the seasons, as well as how traffic density changes during the day or week. Changes in traffic levels at individual counters can often be related to new cycling infrastructure or, conversely, to roadblocks further down the route. A comparison of the traffic on waterfront showed that 35% of cyclists here use the roadway, thereby justifying the need for appropriate road-sharing measures.

## Lessons learnt

Bicycle transport in the city brings undisputed advantages: it is an emission-free and exercise-rich activity beneficial to human health.
Getting data on cycling traffic levels in Prague helps the city to manage and anticipate more effectively how cyclists move around the city. The city has a better understanding of the cycling traffic data, and is thus better able to meet cyclists' needs, which in turn serves to improve city transit for car-drivers, pedestrians and public transport passengers.
CycloCounters can be sited wherever the city is considering investments into new measures. Based on the cycling traffic data, the infrastructure gets modified to suit, e.g. by setting up bicycle racks or cycle lanes. The information from the CycloCounters makes it possible to gauge whether, say, a new cycle lane or cycle path will bring more cyclists to the given location or even notably alter the routes taken by cyclists making their way around the city.

### INSPIRED BY THE PROJECT

CycloCounters Project concerns the use of automatic counters for monitoring cycling traffic levels and it could be transferred as part of the "Pesos project" of the Municipality of Pescara, whose goal is a "lighter" mobility, made up of bicycles, shared cars and collective transport, ecological and avant-garde. Car-sharing, car-pooling, bike sharing implementation are already underway as local projects, therefore the automatic monitoring provided by the Project CycloCounters can be of inspiration for an useful tool for monitoring.

***Abruzzo Region, Italy***

# 9 AUGMENTED REALITY APPLICATIONS IN LOGISTICS DOMAIN


## Brief description

Augmented reality is used to introduce a system of tracking and checking logistics information with a series of control commands.
Augmented Reality Applications in Logistics Domain (ARALD) is a system that allows the integration of augmented reality, the voice command system and a system of barcode readers or image detectors integrated into a wearable glove. Through such equipment, the logistics operator performs operations in a secure manner, with double control (both through the barcode and visual) drastically reducing errors and working „hands free". The project began life in Abruzzo region in Italy.
The research was co-financed under the Regional Operational Program - F.E.S.R. Abruzzo 2007-2013 („Activity1.1.1. Support for the realization of Industrial Research and / or Experimental Development projects for companies aggregated with further Innovation Hubs - Line B), worth EU 200,000 of costs.


## Main results

The Project has an intended double impact: both to improve the logistic information systems and their interoperability, and to optimize the activities related to the maintenance of the planned and unplanned handling equipment in terms of effectiveness and efficiency.

## Lessons learnt

The practice allows savings in terms of time, money and increased security for operators who can operate „hands free". In terms of potential impact and transferability, it can be said that ARALD Project is a positive sign of interaction for research and development in order to favour the implementation of integrated and smart transport-related systems.
ARALD Project can be useful for the private sector, but also to public authorities dealing with transport in Europe because by facilitating the integration of smart technology in logistics, which become more time efficient, it contributes to the reduction of the impact of private traffic.

CONTENS

The INNOTRANS project is co-financed by the European Union through the European Regional Development Fund (ERDF) under the Interreg Europe territorial cooperation framework. The project's international partners are the United Kingdom, Italy, Greece, the Czech Republic, and Romania. The project aims to establish an action plan with specific projects to be implemented in each region. The project is scheduled over five years, with a completion date of 31 December 2021.

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