



A DIFFERENT TYPE OF TRANSPORT PLANNING

CONNECTING RURAL COMMUNITIES THROUGH SMART TRANSPORT AND MOBILITY

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About Us – Transport Planning

Vectos is an innovative provider of transport planning; flood risk, sustainable drainage and hydrology; and infrastructure design.

We specialise in gaining planning consent across the property development industry by providing an innovative approach to transport planning challenges.

Our projects range from small residential schemes to major mixed-use and infrastructure projects.

We advise local authorities, developers, retailers, operators, land owners and public sector bodies across the full range of land uses.



About Us – International Research

We also have a team specialising in international research and demonstration projects.

We collaborate with public and private sector partners from across the world, developing and testing new transport and mobility services, offering citizens better connectivity, such as those in rural areas.

Our research provides insight into social aspects of transport, the needs according to age and gender, and how safety, security and health can be integrated into design of services and public spaces.



PROJECT PARTNERS

Cities / Rural Areas /
Transport Consultancies /
Public Transport Authorities /
Universities / NGOs / Energy
Agencies / **Car Sharing
Operators** / EV
Manufacturers/ **Modellers**

PROJECT THEMES

MaaS / Carpooling / **Electric
Vehicles** / Automated
Vehilces / **Demand
Responsive Transit** /
Congestion Reduction
Strategies / **Sustainable
Urban Mobility** / Port Cities /
Efficient Transport Corridors /
Last Mile Journey Solutions /
Safe and Secure Transport



Location of International Project partners



SMARTA PROJECT - INTRODUCTION

SMARTA is delivering the following free services to support local authorities in improving rural transport connectivity.

Good Practices

Pilots

Workshops

Network of stakeholders

Recommendations

SMARTA Project Partners



The SMARTA project is assessing the challenges and needs of rural communities in providing cost-effective transport and mobility services.

Collates **good practices** that can be deployed across the UK and other countries:

- on-demand and shared mobility services
- use of new technologies and platforms
- new types of community-based transport systems
- cross-sector partnerships and good governance
- innovative funding models

The project consortium offers expertise to selected rural sites to **pilot**, promote and evaluate innovative solutions.

The project will build a **network of stakeholders** to share these good practices and help the design and implementation of new ones.

Two **workshops** will be organised to bring together stakeholders to review policy, practice and innovation in the sector

Findings of the research and the pilots will be converted into **recommendations** for the attention of policy makers

BADENOCH AND STRATHSPEY COMMUNITY TRANSPORT COMPANY

Services include

Registered bus routes

Community car share scheme

Community services

Group hire

Mobility scooter loan service

Income sources

Grants from Local Authority (assisted shopping trips) BIG Lottery funding (social inclusion) NHS (accessible transport to health) Transport Scotland Bus Investment Fund (mini bus)

Concessionary Fares on registered service paid directly by Scottish Government.

Fund raising and donations via events



Aviemore, 35 miles south of Inverness

Door to door, on demand services which fills gaps in public transport especially geared towards older people and those with mobility needs.

BSCTC is a registered charity (since 1999) with board of directors and small number of full and part-time staff.

8 volunteer telephonists help to run the booking system. 125 volunteer drivers for community car scheme receive non-profit making mileage rate, under car sharing legislation. Drivers lend their vehicles. Part-time paid mini bus drivers.

The Flexiroute software supports the operation of the service: this includes a passenger database and a trip booking system.

12,000 (single) trips made in the 2017-2018 financial year. 78% were for leisure/social, 13% for health, 7% for day-care, and 1% to public transport

<http://www.ct4u.co.uk/>

TEXELHOPPER ON DEMAND SERVICE

Partners involved

During the setting up phase, the PT user association, the tourist agency and 5 local taxi companies were involved as well the municipality and the Province.

Intelligent use of algorithm to allocate users to mini buses which learns from past usage (time/ day) and adapts it if demand is different.

The service should therefore be rather called “demand-influenced” than “on-demand”.



texelhopper



vectos



Texel, Northern Netherlands

On demand mini bus service (est 2012), flexible route. Reserve 30 mins in advance online/ by phone to set departure /arrival bus stop. 200+ pick up bus stops

More efficient than classic bus service which were slow covering the whole island

Travel with subscriptions, chip pin card or tickets

Island has population of 14,000 but in the summer attracts 900,000 tourists. The latter provide important source of revenue

Last mile and intermodal connections between ferry, train and (mini) bus for school children, commuters to mainland and tourists

Response to loss of rural bus services. Started as 2 year pilot with public subsidy but demand led to continuation. Operations sub contracted to local taxi company

www.texelhopper.nl

SOPOTNIKI – FREE TRANSPORT FOR OLDER PEOPLE IN RURAL AREAS

Partners involved

Employment Service of Slovenia
(referrals of potential volunteers)

Slovenian Philanthropy (referrals of
potential volunteers, trainings)

Funding sources

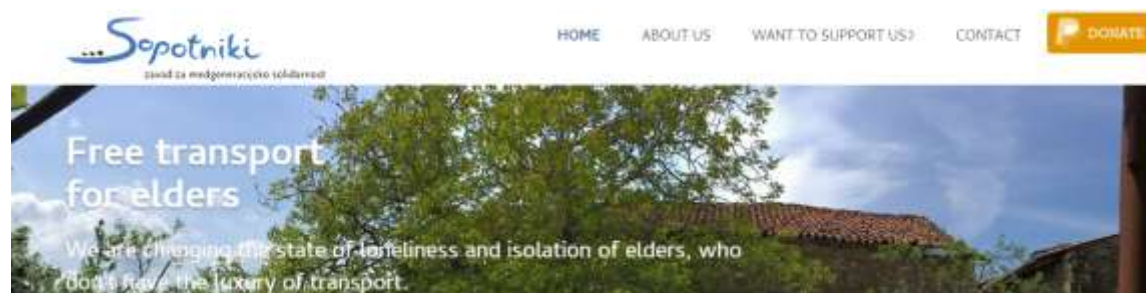
Donations from users (€0.11/KM on
longer routes)

Public funds, i.e. grants from
municipalities (80%)

Donations from private companies
and sponsorships

Local authorities provide vehicles

NGO status attracts local authority
funding and donations



Nine rural municipalities across Slovenia

Door to door, on demand service. NGO (est 2014) for provision of free transport by volunteers for the elderly in rural areas with poor public transport

Serves small urban centres surrounded by sparsely populated villages

Target users are older people and/or those with no car ownership. Main uses for healthcare, shopping and socialising

Supporting an active social life of the elderly in rural areas, prevention of social isolation and loneliness due to lack of mobility options

Bookings made by phone or email and journeys combined where possible

47 active volunteer drivers and 350 users. Expanded from 3 to 9 authorities

<http://www.sopotniki.org>

ESPRIT



Easily Distributed Personal Rapid Transit

EV, stackable, car sharing system

Last mile solutions e.g. business park, suburban areas

L category, electric vehicle with innovative coupling mechanism for easier and cheaper distribution

A road train of 8 ESPRIT cars can be charged from a single charging point

Prototype testing 2018 Glasgow (Hillington Business Park), Lyon, L'Hospitalet

Full operational fleets expected 2022

<https://www.youtube.com/watch?v=wnoIRz-swz4&feature=youtu.be>



Kanban type redistribution OPERATION



AV - COLLECTIVE TRANSPORT



First and last mile solution: Fixed or on demand routes. Deployed in 20 countries already.

AV trials with Easymile's EZ10 driverless shuttle in Oxfordshire

45 km/h top speed

Ramp for increased accessibility

12 passengers, one on board steward.

Prices for AVs are falling

New housing developments should consider future proofing for AV access



VIRTUAL MOBILITY - DRONE DELIVERIES

Amazon PrimeAir first UK drone trial delivery Dec 2016

Vehicle Technology and Aviation Bill will make drone deliveries possible

60 mph top speed

Sense and avoid technology

Google's air drone delivery service 'Project Wing' in development

Delivery of medical supplies believed to be early delivery types



VERTICAL SPATIAL PLANNING - 3D MOBILITY

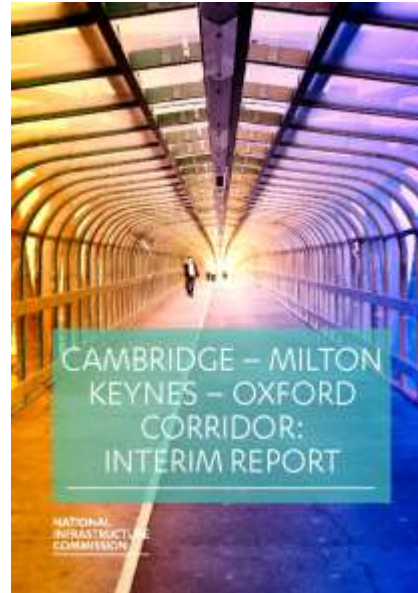
Milton Keynes

Cambridge-Milton Keynes-Oxford Growth Arc identified by National Infrastructure Commission as possible development area

Delivering up to 1m homes and improved transport connections

Need for future facing smart mobility solutions inter urban and last mile

Milton Keynes leading in CAV, 5G due in 2019 and has ambitions for passenger and freight drones



SOCIALCAR PROJECT – *RIDEMYROUTE* APP

Public transport + carpooling =
SocialCar

Developed and tested a smartphone
app providing intermodal trip-
planning combining PT with
carpooling

TAM Surveys in Edinburgh, Brussels,
Zagreb et al showed a 36% intention
to use the app.

Real life trials showed 19% trips
involved CP

Most popular amongst younger and
lower income groups

Adding possible PT options to every
carpool offer substantially increases
travel options, and the odds of a
match.



THE GROWING DEMAND FOR SHARING – GENERATIONAL

Wealth of research proves younger generation less interested in ownership

Convenience is key

Linked to technological advances

Mobility is being rapidly transformed by an increasingly digital society

Time and cost no longer sole factors in mobility choice



Millennials

Most connected generation- social networks, sharing platforms

Shared mobility 'for me'.

24% likely to use carpool

65% prefer a new smart phone over a new car

Insites 2015



Baby Boomers

Value privacy

Personalised mobility, owned 'by me'

5% likely to carpool

Insites 2015

PARLINGTON, EAST OF LEEDS

Internalisation of trips
through innovative
design of new
developments



Vectos is preparing a **sustainable masterplan** for a proposed new settlement comprising homes, employment, education, healthcare and retail.

Mobility strategy focusses on the **internalisation of trips** with various key facilities on the site, reducing the need to travel. This reduces pressure on highway network and provides for economic and social growth within the local rural area.

The approach to sustainable mobility is to adopt a general **hierarchy for travel choice** in this order: local living, virtual mobility, active travel, shared travel and finally single occupancy vehicles.

Key features

- community concierge
- investment in local bus services
- high speed broadband
- communal work hub
- autonomous shuttles-ready
- last mile cycling corridors connecting with transport hubs

SMARTA PROJECT – GET INVOLVED

SMARTA is delivering the following free services to support local authorities in improving rural transport connectivity.

Good Practices

Pilots

Workshops

Network of stakeholders

Recommendations

Members of the Rural Services Network, Rural England, other local authorities, transport providers are invited to join.

For more information please contact paul.curtis@vectos.co.uk



Review **good practices** deployed in rural communities around the world to help bring forward and justify investment. [Share your own as well.](#)

- on-demand and shared mobility services
- use of new technologies and platforms
- new types of community-based transport systems
- cross-sector partnerships and good governance
- innovative funding models

Access evaluation results of the SMARTA **pilots**, (social, environmental, accessibility indicators...).

Join the **network of stakeholders** to liaise with peers and help design and implement new services.

Register interest in attending **workshops** to review common challenges and develop solutions such as new funding models

Contribute to the research which will be converted into **recommendations** for the attention of policy makers

THANKS FOR YOUR ATTENTION

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