CISMOB
Interreg Europe

European Union
European Regional
Development Fund

CISMOB in Centro Region:

Mobility challenges
Policy learning platform

CIVITAS FORUM

Torres Vedras 28th September 2017

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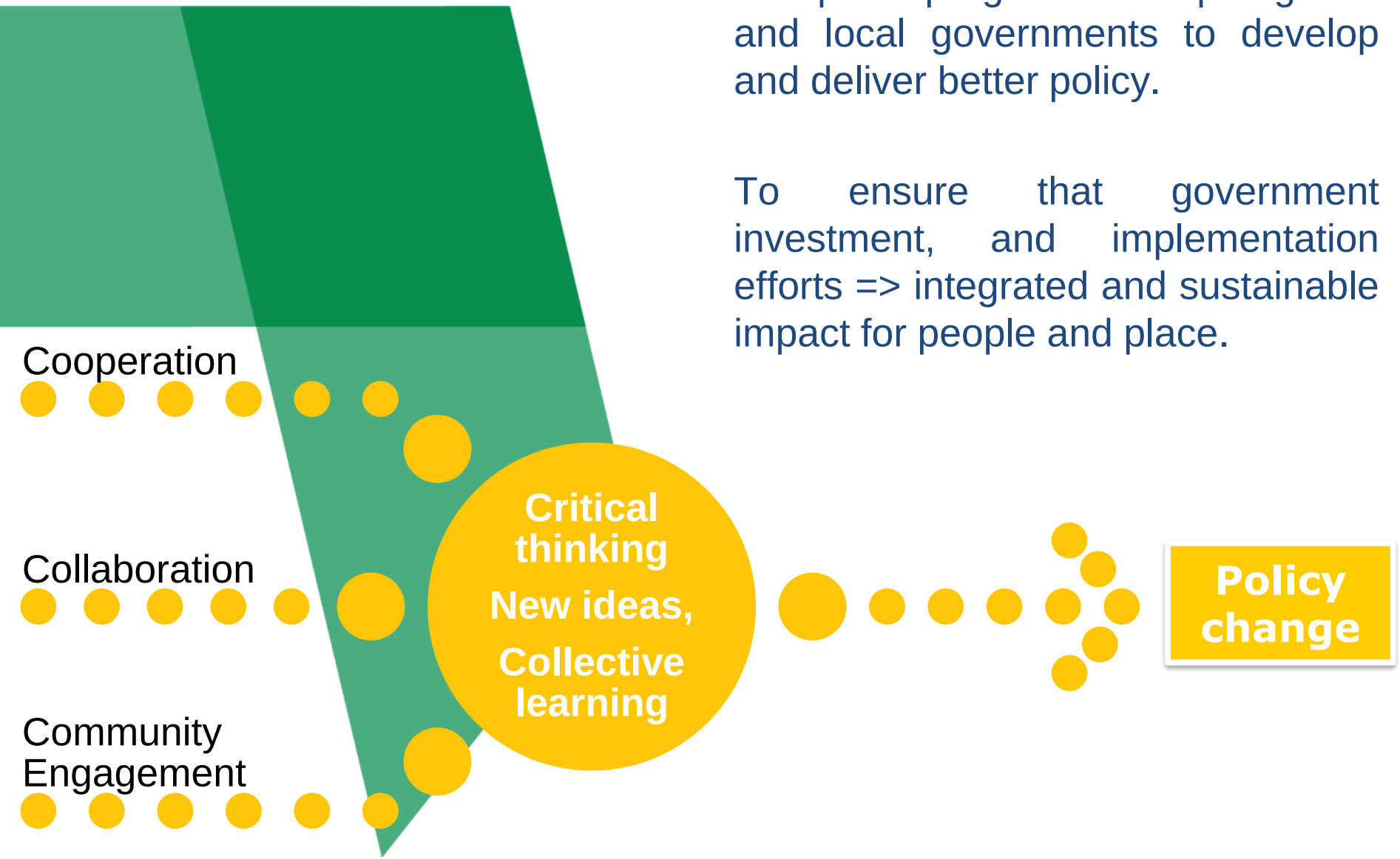
universidade
de aveiro

Outline

- **INTERREG EUROPE**
- **CISMOB objectives and main vision**
- **Policy Instruments**
- **Centro Region**
    - **Background and relative comparison**
    - **Brief SWOT analysis**
    - **Suggested measures to stakeholders**
    - **Group discussion**

What is Interreg Europe?



European program to help regional and local governments to develop and deliver better policy.

To ensure that government investment, and implementation efforts => integrated and sustainable impact for people and place.

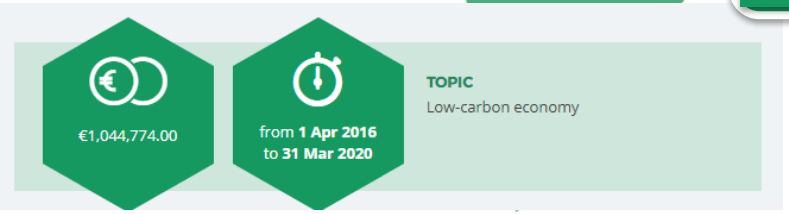
Inter-regional co-operation

Phase 1

- Share experience
- Set up- **stakeholder group;**
  Participate - **Policy Learning Platforms;**
  Action plan.

Phase 2

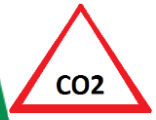
- **Monitor progress of the implementation**
- **Pilot actions may be supported**



Phase 1: April 2016 – March 2018
Phase 2: April 2018 – March 2020

General statement of the problem

- Congestion costs Europe about 1% of GDP;



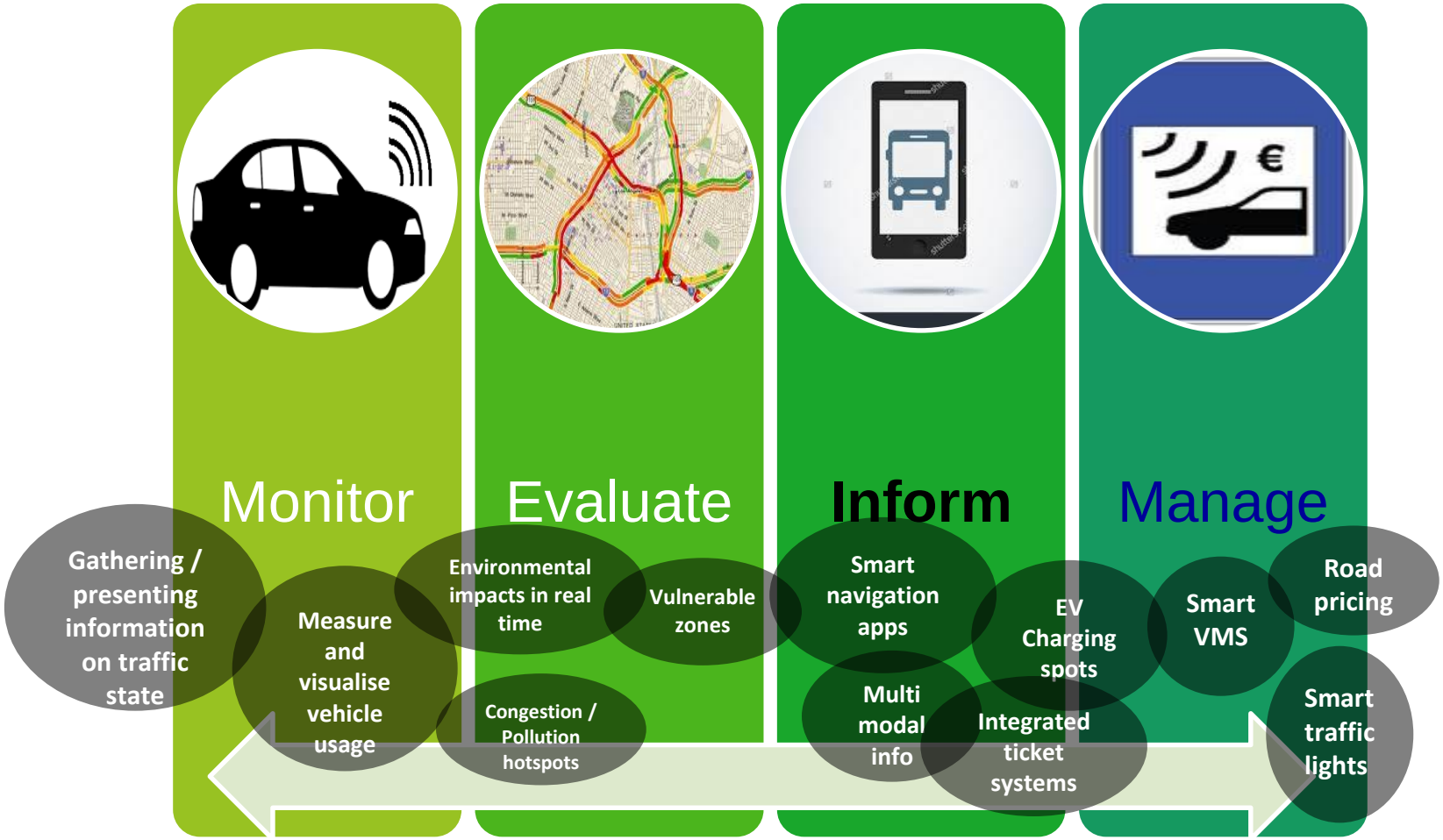
- More than 2/3 of transport-related GHG are from road transport;

- Air pollution: Costs to society ~ 2% of the GDP;

- External costs of noise (e.g., annoyance, health damage) > 0,35% of its GDP;

- Liquid hydrocarbon fuels are expected to remain predominant over the next decades.

Opportunity: ICT applications



Main vision

To promote innovative ways to reduce carbon footprint;
To increase the sustainability by improving the efficiency in the use of urban transport infrastructure through ICT.

Consortium

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LP **University of Aveiro (UA)**

P2 **Stockholm University (SU)**

P3 **City of Águeda (CA)**

P4 **Intelligent Transport Systems Romania (ITS-R)**

P5 **Bucharest Metropolitan Transport Authority (BMTA)**

P6 **Extremadura Energy Agency (AGENEX)**

Achieving policy change

Exchange of experience events

4 international main events
- **3 Thematic seminars**
- **3 Building capacity workshops**

6 partners × 2 semesters = 12 Staff Exchange program

3 regions ×1* 4 semesters =12 Local Stakeholder meetings

Technical Documents

1 Baseline Assessment Report

3 regions ×3 semesters = 12 Technical papers

1 AGENDA entitled "ICT towards low carbon and sustainable mobility a multi-scale perspective"

5 Action plans ⇒ Policy changes

Policy Instruments

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ÁGUEDA
CÂMARA MUNICIPAL

PI1: **Operational Programme for the Centro Region – Centro 2020**

European Union
European Regional Development Fund

PI2: **Sustainable Mobility Strategy for the Municipality of Águeda**

its Romania

AMTB

PI3**: BMTA policy and strategic aims**

PI4: **Regional Operational Programme 2014 - 2020**

European Union
European Regional Development Fund

eae agencia extremeña de la energía

PI5: **Extremadura Operational Programme 2014 - 2020**

European Union
European Regional Development Fund

CISMOB international events

Smart cities: How Intelligent is transport?

Stockholm

SEP 2016

Explore targeted policy strategies to support the use of ICT and e-mobility

Cáceres

MAR 2017

Intelligent transport systems towards a low carbon mobility

Bucharest

OCT 2017

ITS

From science to policy and from policy to real world

Aveiro

FEV-MAR 2018

CENTRO REGION

MOBILITY CHALANGES AND POTENTIAL SUPPORTING MEASURES

- **Background and relative comparison among CISMOG regions**
- **Brief SWOT analyses**
- **Suggested measures to stakeholders**
- **Group discussion**

Background

Population: 2,3 M

Area: 28 405 km^2 – 31% PT

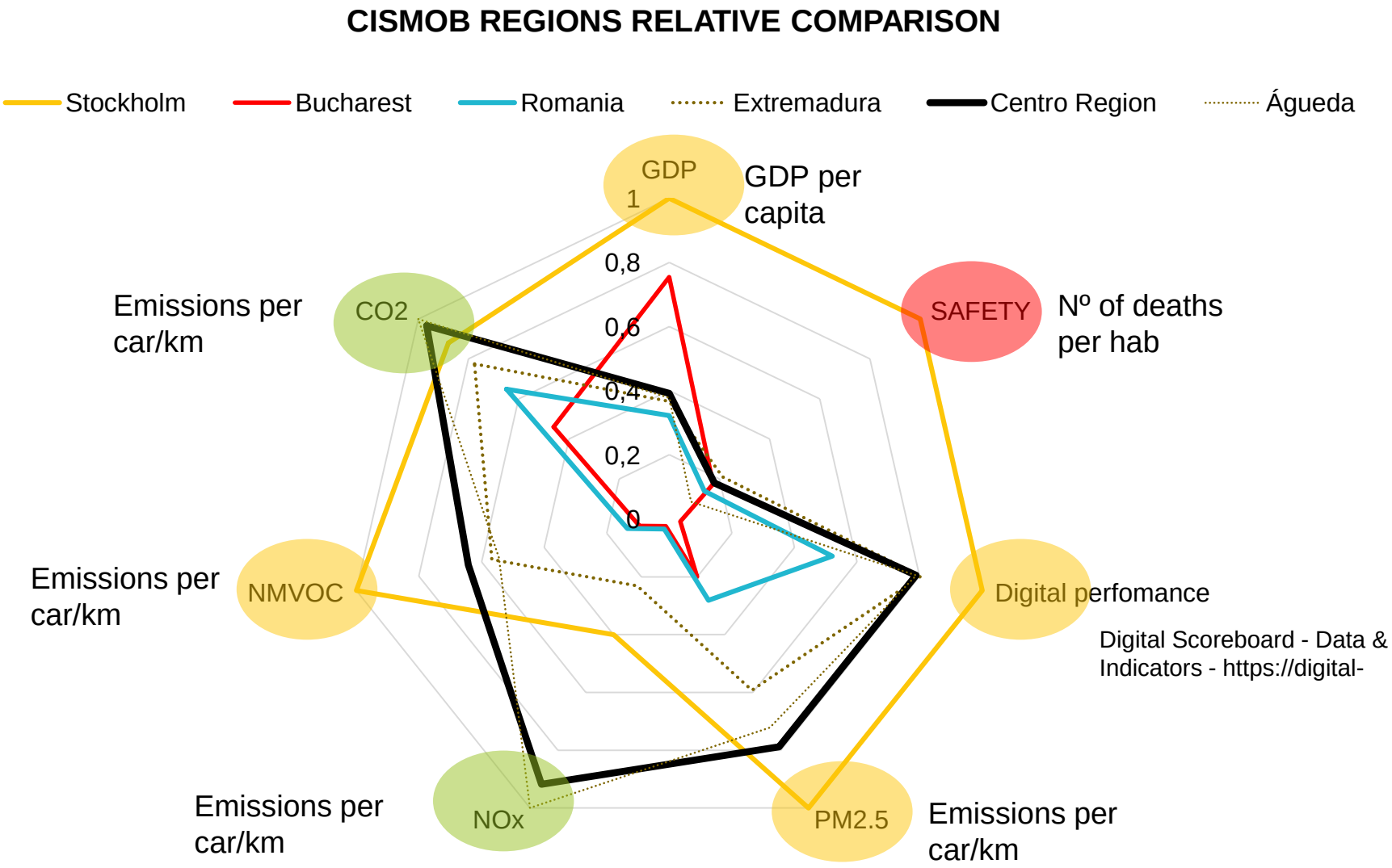
Density: 75 inhab/km^2

SUMP NUT III

Polycentric urban structure

Private car used in 70% of commuting trips – 62% PT

Background


CISMOB REGIONS RELATIVE COMPARISON
Stockholm
Bucharest
Romania
Extremadura
Centro Region
Águeda
GDP
1
0,8
0,6
0,4
0,2
0
GDP per capita
SAFETY
Nº of deaths per hab
Digital perfomance
Digital Scoreboard - Data & Indicators - https://digital-
PM2.5
Emissions per car/km
NOx
Emissions per car/km
NMVOC
Emissions per car/km
CO2
Emissions per car/km

Strengths

Road network

Bike sharing

New transport on demand

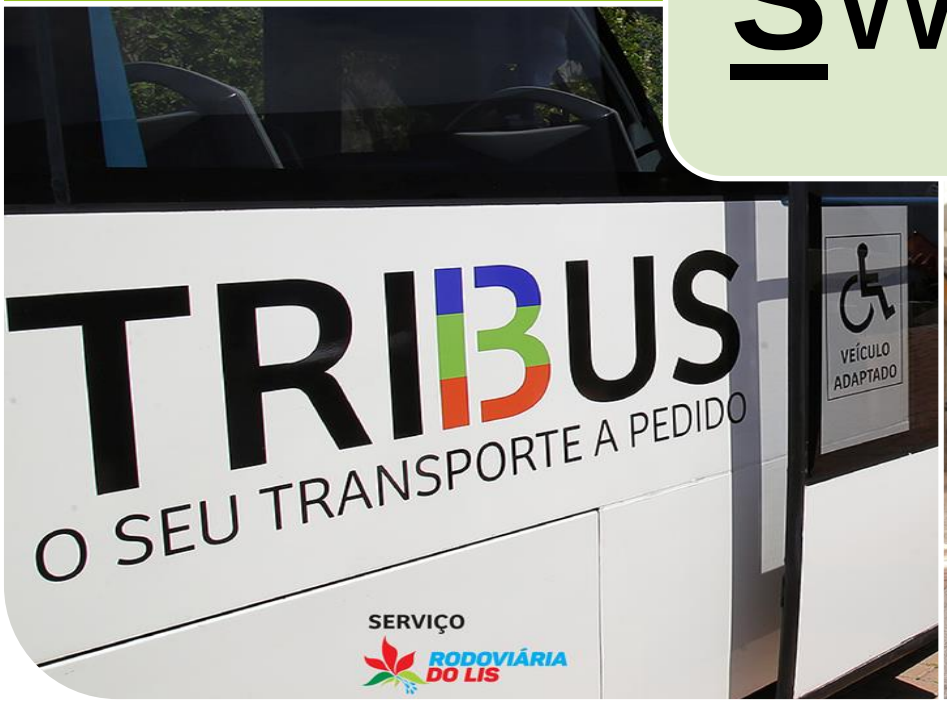
Good **primary** rail connections

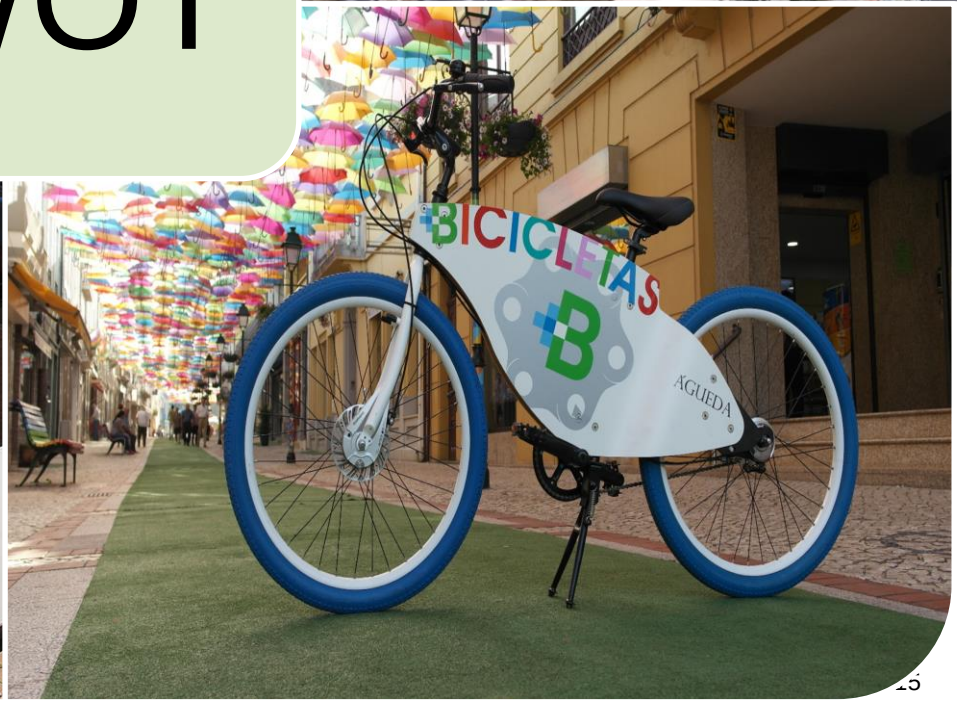
SUMPs

Research units

Bicycle industry cluster (Portugal is the biggest exporter in the EU)

SWOT





SWOT

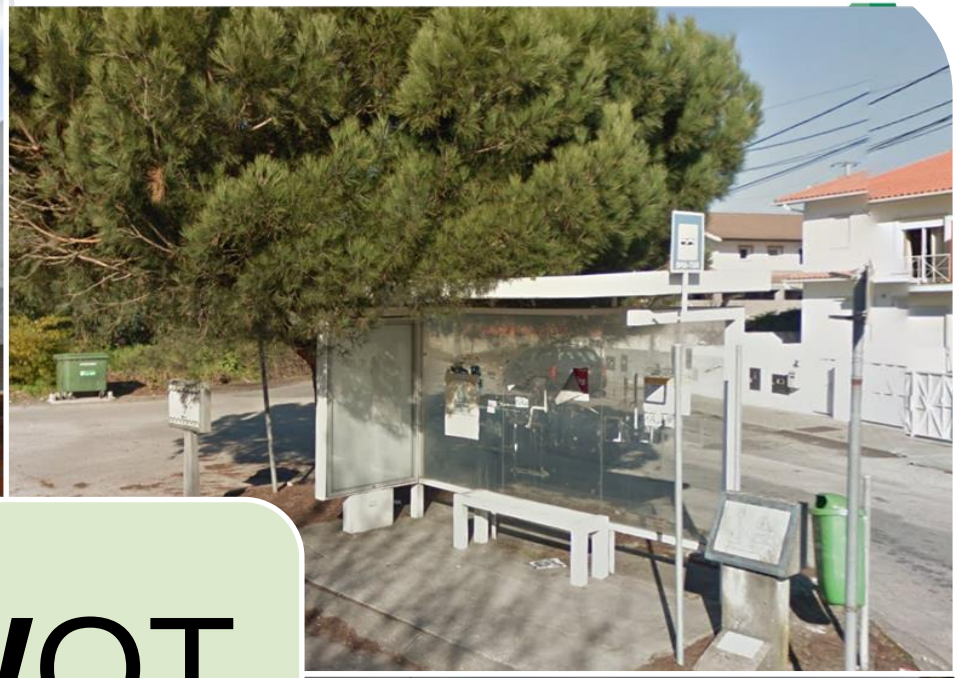
Opportunities

High Potential for modal transfer

High qualified staff research Institutions (urban planning, transport and environment, ICT)

Regional Policy Framework committed to CO2 reduction

CENTRO 2020



SWOT

Weakness

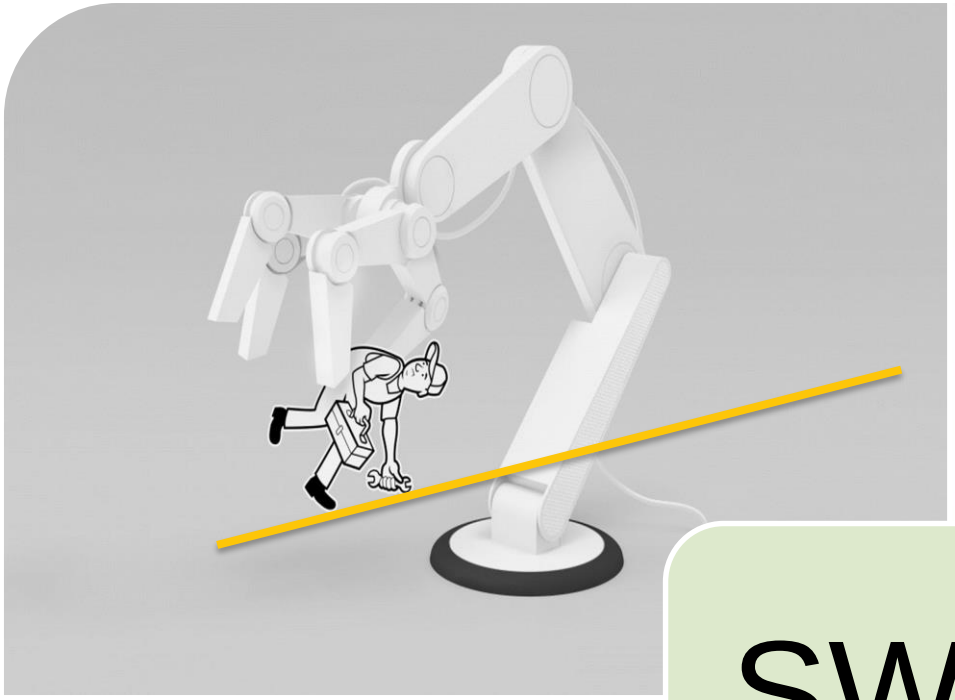
Urban sprawl – Poor urban planning in suburban areas

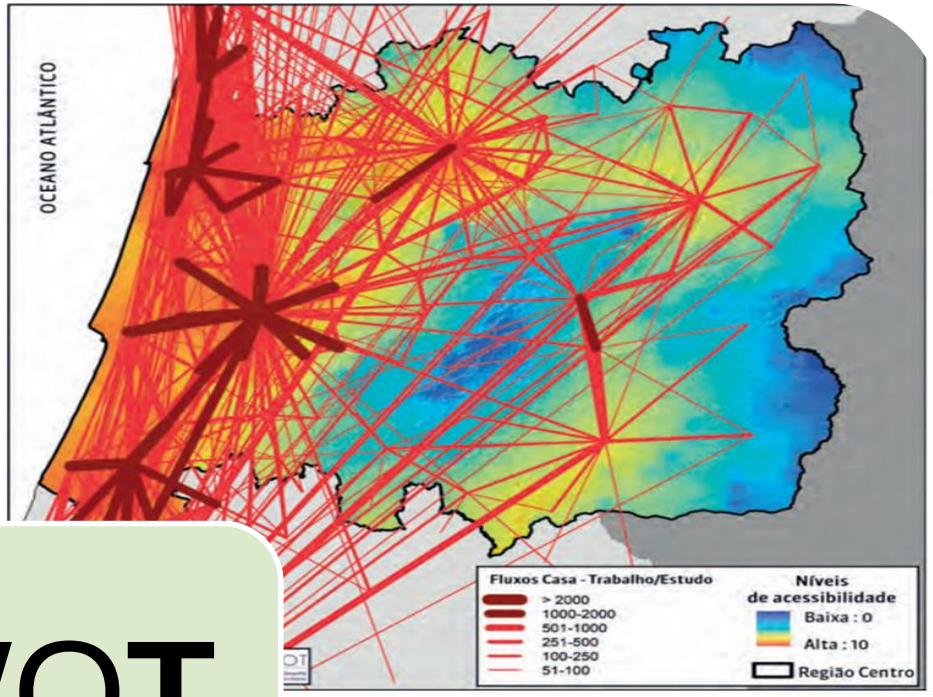
Lack of intermodal physical and soft platforms, Integrated ticket systems

Inefficient road pricing schemes

Road safety

Regional (INTER NUT III) strategic planning





SWOT

Threats

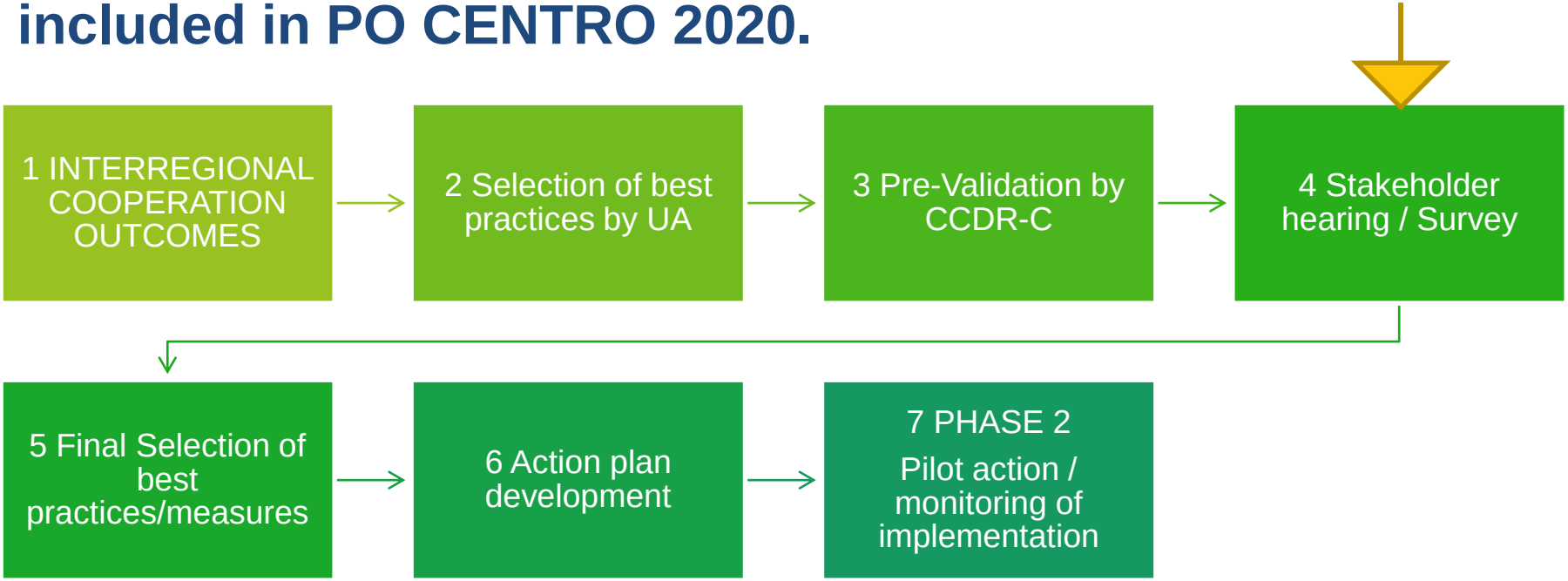
Critical thinking / Population ageing in several areas

Territorial dispersion - Low density - desertification

Lack of integrated regional planning

New potencial mesures for AP

CISMOB regional process for selection new areas to be included in PO CENTRO 2020.



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Areas for potential intervention

1 – Smart and Connected Mobility
2 – Corridor management
3 – ICT - Electric / shared Mobility
4 – Real-Time Transit Information Systems
5 – Assistive Technology

Smart and Connected Mobility

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Motivation:

Anticipate new requirements on 5G networks, including ITS applications.

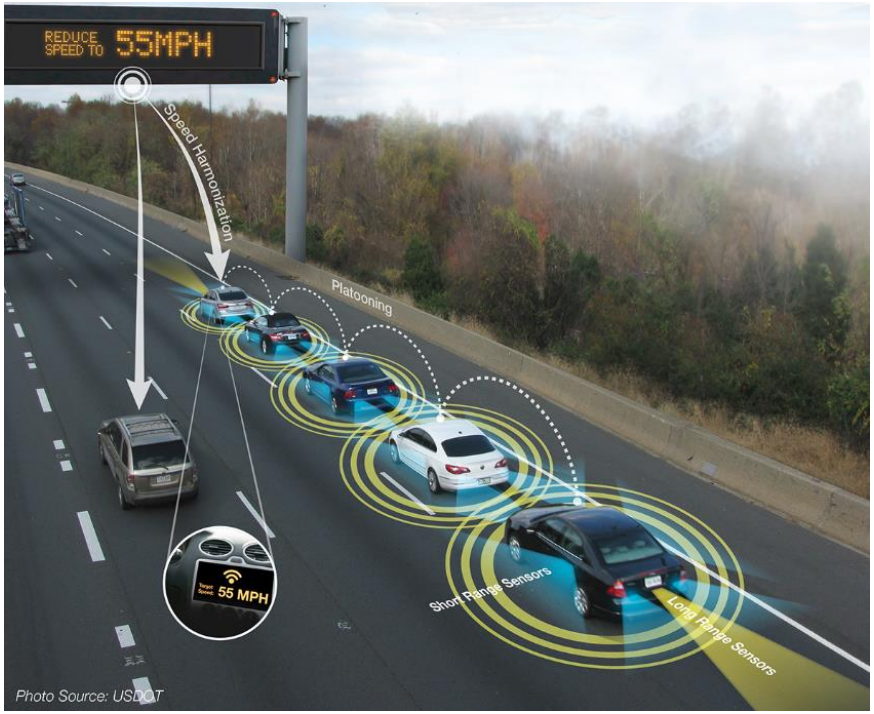
Accommodate the short term Market penetration of connected and automated vehicles (CAVs) and Cooperative Intelligent transport systems (CAVs).

1.Smart and Connected Mobility

1.1 Support the **creation of centers / research platforms arena** for inclusion of early prototypes of 5G technology. **Support test sites for the development and construction of intelligent mobility prototypes** - understanding the requests that **transport systems will in put into 5G networks**

BEST practice:

https://www.ericsson.com/en/industries/intelligent-transport-systems



Smart and Connected Mobility

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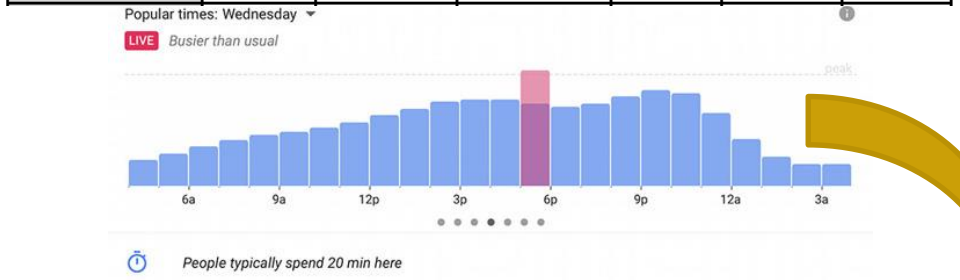
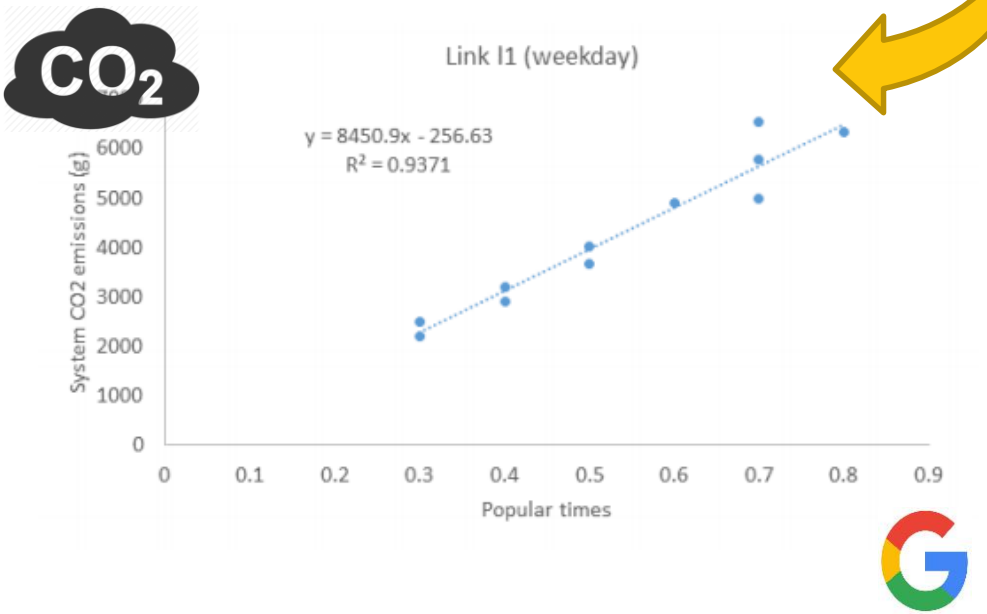
1.2 Supporting **connected mobility plans** for **CENTRO Region**

- identification of investment priorities to support connected and automated mobility
- identification of congestion and pollution critical hotspots, vulnerable areas based on ***crowdsourcing information,*** innovative environmental sensors and development of holistic assessment plans for responding to the questions: **What (to minimize)? Why? When? Where? And how?**

Table 15: Damage costs of main pollutants from transport, in € per tonne (2010)

	$PM_{2.5}$			NO_x	NMVOC	SO_2
Country	Rural	Suburban	Urban			
Austria	37766	67839	215079	17285	2025	12659
Belgium	34788	60407	207647	10927	3228	13622
Bulgaria	34862	65635	212875	14454	756	12598
Croatia	31649	61539	208779	15149	1819	12317





Smart and Connected Mobility

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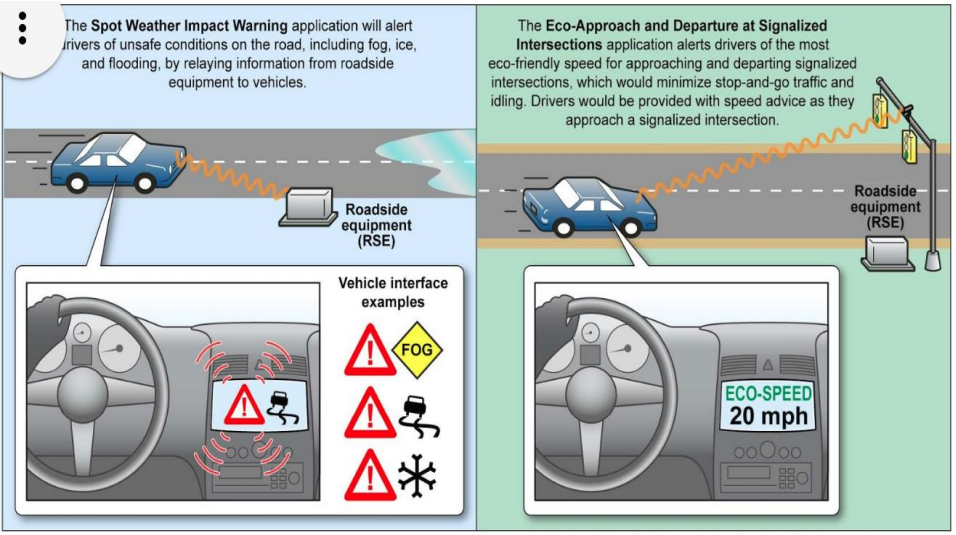
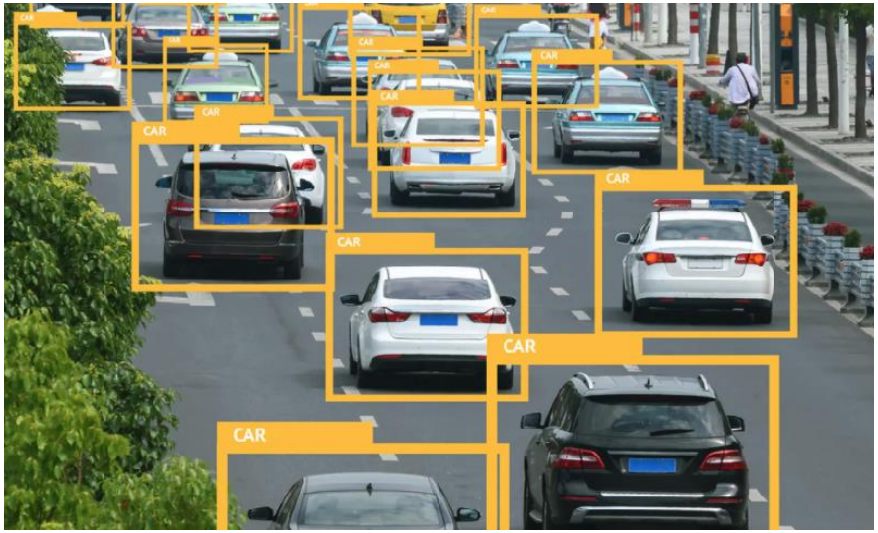
1.3 Support for development of **strategic plans** to determine necessary **investments** on **infrastructures and vertical/horizontal signalization** to accommodate **CAVs**





2. Corridor Management

Motivation:

Geographic location + polycentric network of medium-sized cities => High demand Interregional – intercity traffic

Traffic diversion from tolled motorways to regional roads (with no tolls) => important negative externalities (safety, congestion, pollution, GHG)

Poor coordination between inter-urban transport and urban transport services => use of public transport on interregional travel less attractive.

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2 Corridor management

2.1 Supporting of **strategic plans /pilot experience** to minimize traffic-related costs associated with traffic road flows (e.g., **variable message systems, dynamic and intelligent toll systems**, public transport **smart pricing,** efficient logistic platforms and traffic control systems).

2 Corridor management

2.2 Intelligent regional Public transport

Supporting the creation of intelligent and integrated **intermodal travel planning** and **smart/integrated ticket** systems. New **synergies between regional/national and local operators** (win-2-win) for both users and operators.

Sveriges största biljettsamarbete

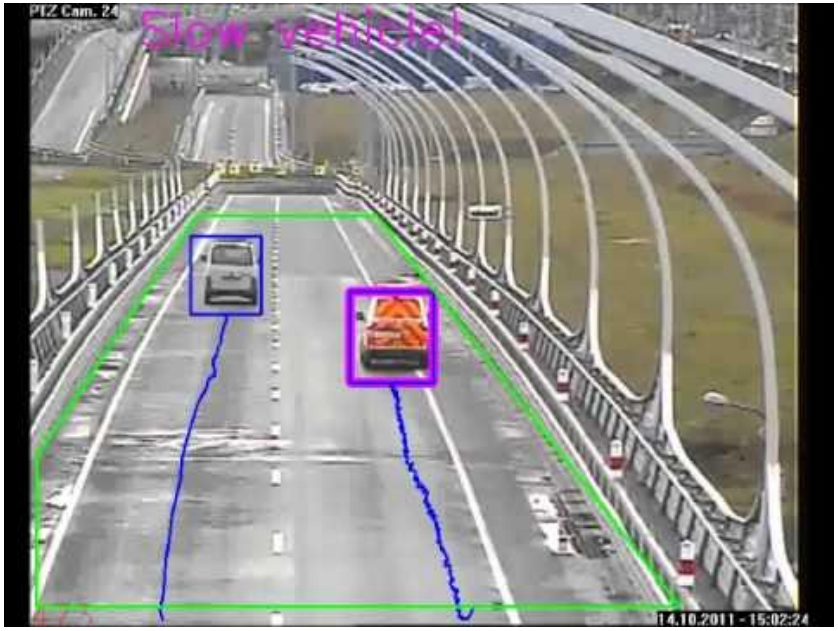
Resplus är ett biljett- och resesamarbete som binder ihop Sveriges kollektivtrafik med över 4 000 orter. Detta är möjligt tack vare en unik samverkan mellan så gott som alla Sveriges trafikföretag, som jobbar tillsammans för att göra resan så smidig och enkel som möjligt för resenären.

Samtrafiken laddar trafikdata och lägger upp hållplatser och linjer i databasen som är kopplad till nationell försäljning. De sträckor som därmed blir sökbara kan kombineras med varandra till resekedjor som innehåller olika trafikslag och flera operatörer. Resekedjorna blir försålda via ett nationellt bokningssystem och distribuerade av ett flertal webbsajter, av ombud och resebyråer.

2 Corridor management

2.3 Automatic Incident Detection (out of motorways)

The use of AID systems in transport systems can enhance road safety and improve traffic flow, by tracking vehicles' position immediately and informing transport authorities to deal with the situation.



3. Electric Mobility

The lack of information and notion of the real autonomy of electric vehicles, as well as **the awareness on the overall distance** of the actual journeys are still conditioning factors for the adoption of these types of vehicles. The policy instrument could be adapted **to promote the developments of awareness plans about e-mobility, new applications to increase awareness** about charging points, planning trips and support shared e-mobility.

4. Real-Time Transit Information Systems (RTTISs)

Motivation:
Most valued information by PT users = > related to vehicle location.

Smartphone applications => preferred mode for receiving information followed by Internet/websites and dynamic message signs.

The main handicap for providing or improving Real-Time Transit Information Systems (RTTISs) was found to be funding.

Real-Time Transit Information Systems (RTTISs)

4.1 New <u>exclusive</u> investment priority be focused on RTTIS.

BP (RTC) in Quebec City

5. Assistive Technology

Motivation:

In the last decades, the demographic change in Europe has becoming evident, with an ageing trend.

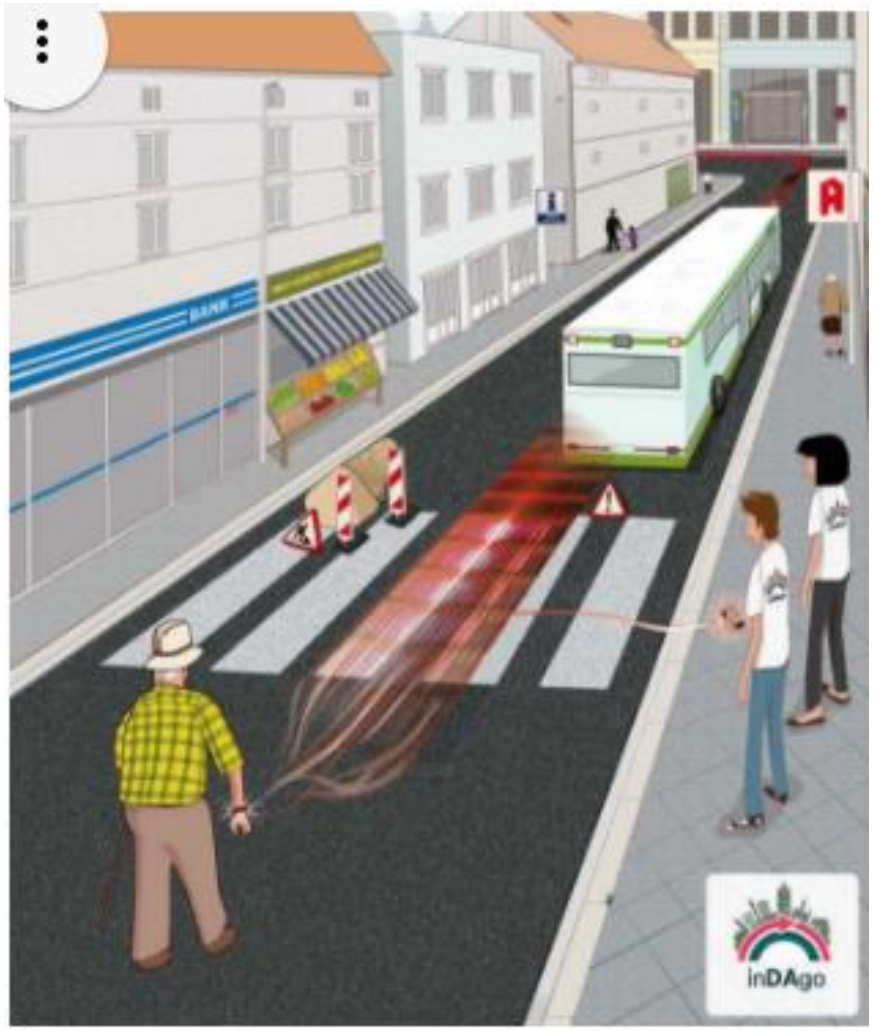
In CENTRO Region => 22,5 % of the population is older than 65 => This age group is particularly affected by the increasing complexity of modern public transit systems.

Assistive Technology

Some funding could be redirected to perform an **exhaustive user evaluation, identify suitable interface choice**s (during the process, some systems that were considered obvious in initial assessments could be excluded).

Increased confidence in the use of public transport by an increasingly significant proportion of the population can contribute to the reduction of carbon emissions.

Source: INDAGO project



PO CENTRO 2020

4e - "Supporting the transition to a low-carbon economy in all sectors" and the investment priority 4e - promoting low-carbon strategy for all types of territories

CISMOB will encourage synergies between European Structural funds, Horizon 2020 and other research programmes.

Increase incentives for inter-municipal cooperation, namely by supporting the development of green mobility projects based on ICT beyond the scope of sustainable mobility plans to be financed.

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Supported measures so far

Structural Pedestrian Network – Castelo Branco

Footpath and Cycle Network – Gouveia

Awareness Plan for Sustainable Mobility – Torres Vedras

Requalification of the Central Bus station – Covilhã

Transport on demand – Tondela

Real-time information on Coimbra Public transport system

Requalification Intermodal station (Bus rail, taxis) – Figueira da Foz

Cycle lane – São João Baptista

Your expertise Your ideas

Groups?

How ICT can improve low carbon mobility?

SMART AND CONNECTED MOBILITY

1.2 Data exists: How can we make it public, open, secure and take advantage of it for traffic management ?

1.3 How to put green mobility in top concerns of CAVs and C-ITS players agenda.

CORRIDORS

2.1/2 How can we engage all players and regional operators to share data, and trust in integrated ticket systems? And innovative road pricing systems?

PUBLIC ROAD TRANSPORT

4.1 Are there effective indicators of success RTTIS?

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Thank you

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http://www.interregeurope.eu/cismob/