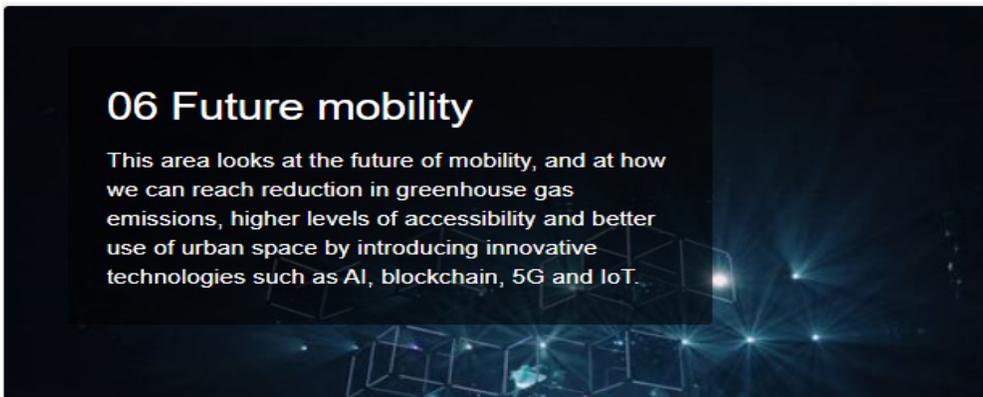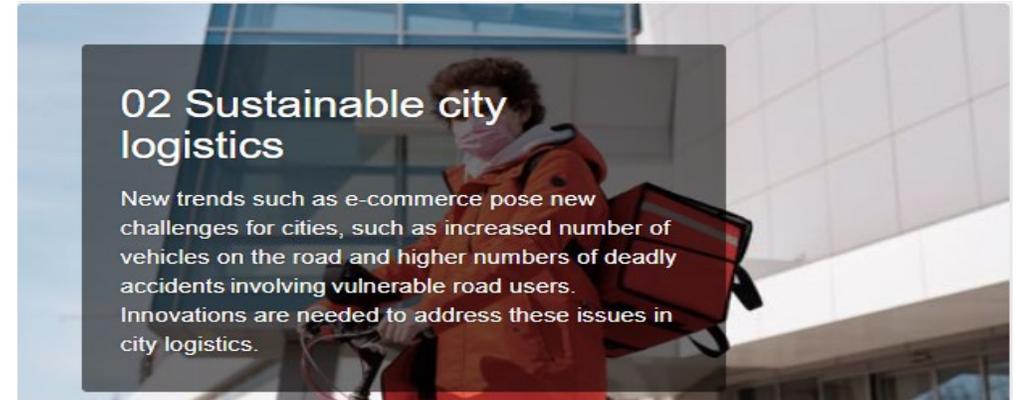# SELECTED FIVE THEMATIC AREAS FOR INNOVATION PROJECTS

At the moment EIT Urban Mobility partners have published 100 innovation ideas where they are looking partners to join.

Headlines of those ideas are shown in slides to follow. To find out more information of each idea, please register to EIT Urban Mobility app WeDaVinci https://eitum.wedavinci.com/ , where you can also present your own innovation idea

More info: petri.allekotte@aalto.fi 0503440612

01 Active Mobility

Because of the wide variety of direct and indirect health and environmental benefits of active mobility such as walking and cycling, many cities want to increase their active mobility levels, while ensuring safety for all road users.

02 Sustainable city logistics

New trends such as e-commerce pose new challenges for cities, such as increased number of vehicles on the road and higher numbers of deadly accidents involving vulnerable road users. Innovations are needed to address these issues in city logistics.

06 Future mobility

This area looks at the future of mobility, and at how we can reach reduction in greenhouse gas emissions, higher levels of accessibility and better use of urban space by introducing innovative technologies such as AI, blockchain, 5G and IoT.

08 Mobility and energy

As Europe´s transport sector is almost entirely reliant on fossil fuels, innovations in the area of mobility and energy are crucial. These can be focused on adopting and enabling cleaner modes of transport such as electric vehicles.

by P.Allekotte / Aalto University 2021, March

01 Active Mobility

Because of the wide variety of direct and indirect health and environmental benefits of active mobility such as walking and cycling, many cities want to increase their active mobility levels, while ensuring safety for all road users.

Active mobility is regular physical activity undertaken as a means of transport. It includes travel by foot, bicycle and other vehicles which require physical effort to get moving. It does not include walking, cycling or other physical activity that is undertaken for recreation purposes. There are both individual and public health benefits of active mobility, primarily through the direct impacts of physical activity, but also indirectly through reduced air pollution and noise pollution if active mobility modes increase due to a shift from non-active modes. Active mobility modes include walking, cycling, pedal-assisted e-bikes, kick-scooter, and skateboards but not mopeds, electric bikes with no pedal-assist or electric scooters. As well as the considerable health benefits, active mobility modes also provide benefits in terms of reducing the amount of space used (compared to cars), freeing up space in public transport, and reducing CO_2 emissions.

Because of the wide variety of benefits associated with active mobility, many cities want to increase levels of active mobility, and in some cases high levels of active mobility (e.g. cyclists) require new solutions to support crowding/congestion of cycling infrastructure and still ensure high quality of life and good use of public space. Supporting modal shift to active mobility requires a range of different measures, not least the (re-)allocation of space in urban areas to allow for safe solutions for these modes, for travel and parking when required. There are however many barriers to achieving increased active mobility, not least that decades of car-centric planning have created organisational and cultural barriers to prioritise active mobility in many European cities.

===== Expected outcomes & impacts ===
The expected outcome would be higher levels of use of active mobility in target demo cities. The solution(s) would be safe, inclusive, and environmentally sustainable. There would be a notable modal shift in city partners from private motorised vehicles to active mobility showing a creased in noise and air pollution. Solution(s) would provide opportunities for direct and indirect business growth, skills acquisition, and job creation. The social impact would be healthier, cleaner transport with lower incidence of accidents and higher safety levels when using active mobility. Environmental impacts are reduced greenhouse gas emissions, better use of public spaces and more liveable urban areas.

===== Examples ===
Some examples of specific topics that can be addressed include:
• Implementation or improvement of (e)-bike sharing (private, free floating, station-based, peer-to-peer private and public).
• Demonstration of innovative design and infrastructure measures, ensuring direct and continuous infrastructure connections, reconfigurable street set-ups, kerb-design, separation from motorised vehicle traffic, adequate signalisation, lighting, and parking.
• Demonstration of solutions to increase safe active mobility for vulnerable groups, for example senior citizens.
• Implementation of mobility management measures, data monitoring for modal shift from privately owned motorised vehicles to active mobility.
• Demonstration of motor-assistance solutions for active mobility in hilly cities.
• Building of prototypes of active mobility innovation products/design, suitable business models, including lastmile active logistics solutions.
• Creation of mid-/long-distance walking infrastructure both within denser urban areas and connecting denser urban areas to peripheral city areas

Bicycle Barometer

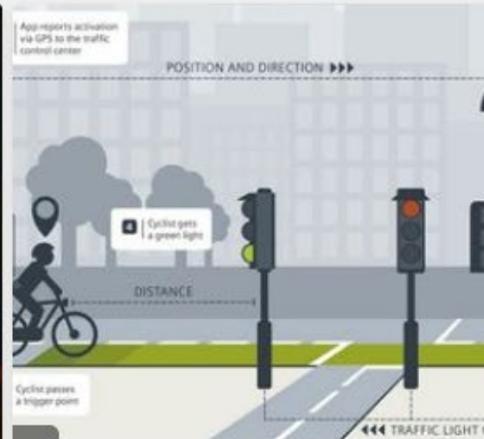Citizen science platform for measuring and improving saf...

`bicycle` `safety` `school` `citizen science` ☆ 13

Feedback from CENTRAL Hub discussion

Main discussion points on challenge area ACTIVE MOBILITY...

`active_mobility` `value_creation` `eBike` ☆ 6

The green wave for cyclists: Sitraffic S...

With Sitraffic SiBike you give a green light to a modern...

`green_wave` `smartphone` `app` `traffic` ☆ 27

Operide: Bike Sharing System

Bike sharing is the trend - but how can demand and suppl...

`system` `bikes` `sharing` ☆ 21

The bicycle as the key transportation mo...

Make the bicycle the first choice for urban mobility

`bicycle` `transportation` `urban mobility` ☆ 6

Intelligent two-wheelers to avoid accide...
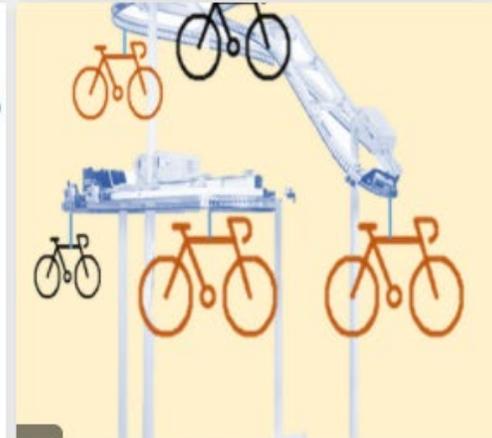
The goal of the system to be developed is the acquisitio...

`accidents` `pedelec` `e-scooter` `driving` ☆ 7
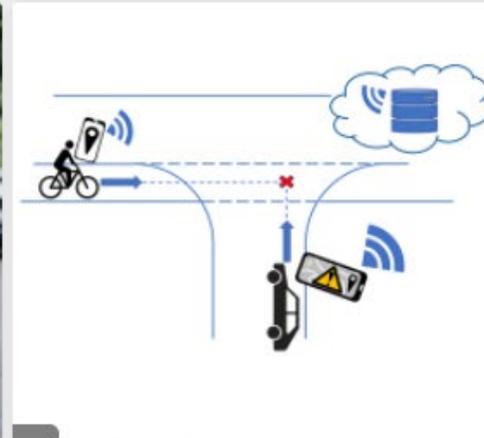
Vehicle 2 X Communication for two

Development and evaluation of a human-centered, networke...

`two-wheelers` `vehicle-2-x` `communica` ☆ 15

APK (Auto Park byKe)

The elimination of barriers against the bike use (park s...

`auto` `park` `active_mobility` `bikes` ☆ 6

Bike platooning

Group cyclists and then prioritize and give them green.

`platooning` `bike` `cyclists` `C-ITS` `Gre...` ⭐ 3

Bike Safe Modus

E-bike users can choose a safe mode.

`bike` `cycling` `e-bike` `IoT` `connectivity` ⭐ 6

Covid-free public transport means #Clean...

Covid-free urban buses in 5 minutes

⭐ 1

Gamification and Incentives - Ideation

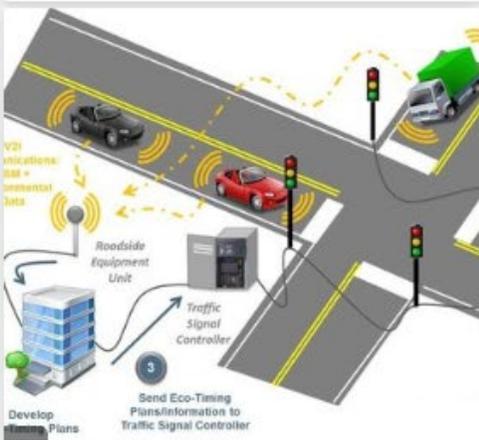How to make active mobility more attractive to users by ...

`gamification` `active_mobility` `mobility` ⭐ 1

Intermodality and MaaS - Ideation Worksh...

Integration of the active mobility in the whole transpor...

`maas` `active_mobility` `integration` `in...` ⭐ 1

Traffic Management - Ideation Workshop

The integration of the active modes in the transport sys...

`traffic_management` `integration` `traffic...` ⭐ 0

Active mobility logistics - Ideation wor...

Active mobility could also include transport of goods. T...

`active_mobility` `logistics` ⭐ 3

Data management for Active Mobility -Ide...

The correct use of data is essential for making the best...

`data_management` `active_mobility` ⭐ 1

Shared mobility - Ideation workshop
Ideas to improve Shared mobility has boosted the use of ...

`shared_mobility` `active_mobility` ☆ 0

Transport hubs and active mobility - Ide...
Using transport hubs as enablers of active modes

`active_mobility` `hubs` ☆ 0

Street infrastructure and signals -ideat...
Adapting the infrastructure to active mobility modes to ...

`active_mobility` `infrastructure` `street` ☆ 0

Urban mobility Moocs
Target group-specific explanatory videos ("MOOCS") on th...

`mobility` `the_city` `videos` ☆ 3

Active mobility vehicles - Ideation Work...
Innovation comes with the vehicles too.

`active_mobility` `vehicles` ☆ 0

Making cycling more attractive (RAMA)
Increase cycling safety and reduce travel times for cycl...

`cyclists` `convenience` `acceptance` ☆ 0

Students mobility management: municipal ...
A web-based solution to provide mobility surveys to scho...

`mobility_management` `schools` `munic` ☆ 2

Rewarding Active Mobility
Using gamification to promote active mobility

`active_mobility` `gamification` `mobility` ☆ 4

02 Sustainable city logistics

New trends such as e-commerce pose new challenges for cities, such as increased number of vehicles on the road and higher numbers of deadly accidents involving vulnerable road users. Innovations are needed to address these issues in city logistics.

Freight transport is key to the smooth running of a city. Freight transport includes the transport of goods, from parcel delivery, delivery of building materials to construction sites, to domestic and commercial waste disposal. Without freight transport, our cities would not function. City logistics is a term used to describe the running of freight transport in urban areas. Freight transport causes problems in terms of negative impacts for air pollution, noise pollution, GHG emissions, blocking areas of the public realm, and being involved in a disproportionately large number of deadly collisions with vulnerable road users. The freight transport industry adapts quickly to new trends such as e-commerce and on-demand consumerism, but these can cause additional problems when not considered with a focus of sustainability – increasing distances driven and number of vehicles on the road, and also creating unsustainable working conditions for delivery companies.

Introducing innovations in city logistics and making it more sustainable requires cooperation between a wide range of partners as well as new vehicles, business models and technologies. Solutions include new vehicles, new procurement / purchasing models, new consolidation solutions, new hub services, new production models (e.g. so that goods are produced "close-to-home"), new software solutions for optimising freight, new solutions for managing loading/unloading etc.

===== Expected outcomes & impacts ===
The expected outcomes are improvement of urban logistic operations through logistical, future vehicle design, including urban air logistics, behavioural and technological innovations. The solution should be low-carbon, accessible, safe, efficient, and clean. The impacts should be healthier, safer environments, reduction of greenhouse gas emission and local air and noise pollution, as well as enhancing the overall quality of life of citizens.

===== Examples ==
Some examples of specific topics that can be addressed include:
• Demonstration of solutions to increase freight intermodality with a focus on zero-emission last mile transport.
• Demonstration of solutions that reduce freight demand through for example waste management, local production, aggregate management, citizen engagement, etc.
• Demonstration of solutions that optimise routes based on reducing emissions and noise pollution
• Demonstration of real-time enforcement of freight demand and access restriction measures including digital cameras, ultra-low emission zone control monitoring and geofencing.
• Demonstration of solutions to reduce last-mile freight transport from e-commerce, e.g. freight hubs unmanned collection and drop-off points, collaboration with retail to reduce / deal with returns, optimised delivery services, etc.
• Demonstration of innovative logistics measures in urban areas with specific challenges such as dense historic city centres and use of waterways.
• Design and test air of drone delivery with vertical location mapping in a dense urban area considering issues such as noise, bylaws, airway zoning/ mapping, intrusion, reliability, and safety.
• Application of parking/ loading & unloading management solutions for freight to reduce obstructive vehicles – these can be both digital and physical measures.

Water Urban Mobility and Logistics

learning to use city waterways to enhance better mobilit...

water mobility urban logistics clea... ⭐ 18
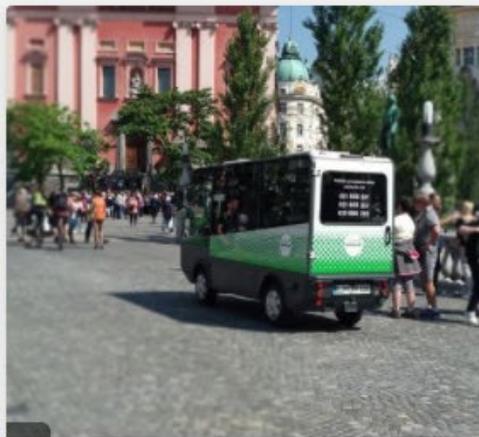
Feedback from CENTRAL Hub discussion

Innovation Hub Central Open discussion on SUSTAINABLE CI...

logistics land_use ⭐ 3

Innovative and sustainable city logistic...

Test autonomous urban logistic delivery devices in real ...

city autonomous delivery sustainabl... ⭐ 22

Public transport = "Milk runner" for cit...

Locker installed at bus stops are assuring last mile del...

public_transport last_mile locker ... ⭐ 5

City Crowd Logistics

Demonstration and implementation of a platform app to or...

platform last_mile crowd logistics ⭐ 7

A new concept for distributed multimodal...

Urban distributed stations such as bus, rail and tram st...

multimodal distributed modular cor... ⭐ 5

EIT UM waterborne Platform approach

inland navigation waterborne platfor... ⭐ 1

Simulation of traffic flow

Simulation of traffic flow to avoid traffic jam during r...

traffic_flow simulation artificial_intel... ⭐ 3

Automated emission zone switching

Automatically change from traditional fuel to electric d...

`geofencing` `electric` `electric mobility` ⭐ 4

Same day bike messenger delivery

Together with local entrepreneurs in the city centre and...

`bike_messenger` `city_centre` `entrepre` ⭐ 2

Hubs - ideation workshop

`lockers` `vehicles` `smart` ⭐ 2

Dynamic curb management - ideation

`curb` `dynamic` `management` ⭐ 2

Pop-up warehouses - ideation workshop

`logistics` `hubs` `waste` ⭐ 0

Idle resources - ideation workshop

`resources` ⭐ 3

Data platforms - ideation workshop

`logistics` `data` ⭐ 1

Mobile delivery hubs - ideation workshop

`hubs` `delivery` `mobile` ⭐ 6

Last mile vehicles - ideation workshop

logistics cycle ☆ 2

Digital twin - ideation workshop

digital_twin ☆ 1

Promoting local stores using HUBs

• Enhancing attractiveness of local stores by delivering...

hubs storage box locker local bus ☆ 2

Central online platform for local stores

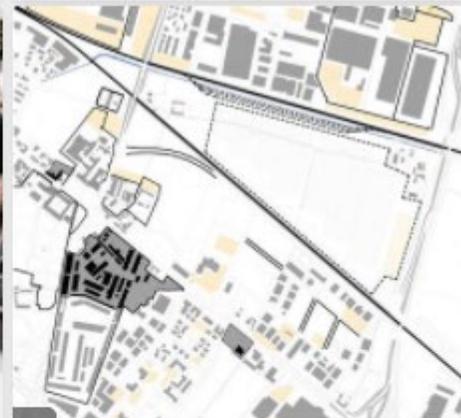Customer can find needed goods in a central product regi...

online local cloud stores ☆ 2

Logistic microhubs with cargobikes

Urban logistic microhubs with cargobikes for first and l...

logistic microhub last-mile first-mile ☆ 0

Smart Mobility Living Labs

Identifying and equipping under-used areas as hubs of ur...

hubs mobility smart living labs ☆ 0

06 Future mobility

This area looks at the future of mobility, and at how we can reach reduction in greenhouse gas emissions, higher levels of accessibility and better use of urban space by introducing innovative technologies such as AI, blockchain, 5G and IoT.

We live in a fast and ever-changing world where new services and disruptive technologies have the potential to reshape the way in which we live and work and how we move. Innovative and disruptive technologies take-up can be challenging for mobility providers, cities and citizens due to unsuitable processes, skill-sets, administrative rules, lack of training, data ownership, pace of innovation etc.

One of the clear enablers of new mobility services and innovations is digitalisation: technologies such as artificial intelligence, blockchain, 5G and IOT are and will shape all sectors and fields. In the field of mobility, these innovative technologies enable the creation and adoption of new services such as mobility as a service (MaaS), shared micro-mobility services, autonomous driving, and urban air mobility to name a few.

New mobility services have the potential to improve liveability in our cities, release space to citizens and help decarbonise our transport systems by supporting a systemic change to more people-friendly sustainable transport solutions. However, there are many administrative, legal and technical challenges that stand in the way of unlocking the potential benefits.

===== Expected outcomes & impacts ===
The expected outcome would be to contribute to city policy objectives through the use of innovative measures in one or more European city. It is expected that a business model for the new service is tested and implemented. The measure implemented should have the potential for replication and scaling in other European contexts. The expected impacts are better mobility services for citizens, higher levels of accessibility, reduction in greenhouse gas emissions, and better use of urban space.

===== Examples ==
Some examples of specific topics that can be addressed include:
• Demonstration of new pan-European MaaS services, particularly ones that integrate micro-mobility services and active mobility with public transport. The focus should be on accessibility for a wide range of citizens.
• Development and testing of new models for city authorities to prepare and support the implementation of new mobility services in line with their policy goals, for example digital city models, data ecosystems, new cooperation models, new stakeholder / co-creation fora.
• Increasing integration of transport services in the form of ticketing, information, and service provision.
• Demonstration of new digital tools / applications, / solutions to manage use of urban spaces, including road spaces (e.g. curbside management, geo-fencing) and pro-actively communicate management actions in real-time with logistics, mobility providers, and citizens.
• Launch of applications of connected and automated driving for all types of Vehicles of the Future. Market introduction of highly automated driving systems towards SAE level 4 is expected.
• Demonstration of urban air mobility solutions in alignment with city policies, ensuring safe and sustainable solutions for both passenger and freight transport. Airways mapping and real-time zone control for drones.
• Demonstration of artificial intelligence in mobility management applications, e.g. complex mobility scenario predictions and applications that facilitate journey user experience. Data protection management and cyber-security are key considerations.
• Creation of transport on demand services adapted to user needs enabling accessibility for low-density areas and vulnerable users.

ByBus

Shuttle on demand service based on AI

☆ 16
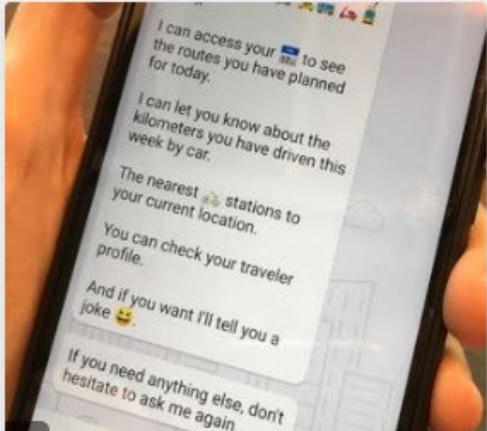
The role of AI in Future Mobility

AI Multimodal Mobility Assistant

ai · futuremobility · mobilityassistant · ai · ☆ 20

Valorize Urban Mobility Data

eCall extended services

ecall · roadside assistance ☆ 15

Feedback from Central Hub discussion

Main discussion points on challenge area Future mobilit...

feedback · discussion · mobility ☆ 1

5G Connected Car

Driving with a sixth sense

connected_car · 5g · predictive · lessari ☆ 20

The car will be its own driver

Autonomous driving

ADAS · AV · autonomous ☆ 12

Car user experience towards MaaS

Services for car users towards integrated mobility

maas · car · mobility · users · services ☆ 10

City broke multioperator for sharing ser...

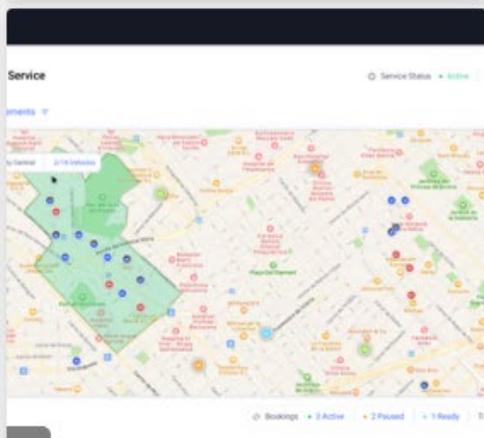Sharing services have intensively landed on our cities. ...

services · city · common_platform · plat ☆ 9

Integration of first and last mile (App)...

Flexible integration of first and last mile (demand-resp...

`shuttles` `last_mile` `app` `integration` ⭐ 4

GiraVolta

Open API multimodal vehicle on demand platform to reserv...

`open_api` `multimodal` `platform` `IoT` ⭐ 1

Autonomous 3W eBikes and eScooters

If 3W eBikes or 3W eScooters could drive automously in o...

`autonomous` `ebike` `escooter` `urban` ⭐ 5

Noise reduction in cities

To create a map of real-time noises from the city may he...

`noise` `noise_reduction` `map` `manage` ⭐ 9

Pathway Framework

Supporting the Deployment of Mobility Solutions in Urban...

`pathway` `framework` `mobility solution` ⭐ 6

AI and Heuristics for Motion in Urban Ar...

Artificial Intelligence and Heuristics for Motion in Urb...

`urban_area` `Artificial_Intelligence` `Heu` ⭐ 6

Intelligent Speed Assistance

Managing the speed data supply chain for assisting C-ITS

⭐ 8

ISA safety preconditions

Are the physical and digital infrastructure ready for IS...

`isa` `safety` `digital` `infrastructure` `Infra` ⭐ 2

Emission-free last mile solutions

Develop a system of last-mile solutions for the transpor...

`last_mile` `emission-free` `shared mobil...` ☆ 2

Red light violation warning

Red light violation warning notified when conflicting tr...

`red light violation warning` `C-ITS` `RLV` ☆ 2

Pilot automated shuttles

Taking it to the next level

`shuttles` `selfdriving` `auotmated driving` ☆ 5

Business model for self-driving shuttle

How to create a sustainable model for upcoming and low d...

`business_model` `shuttle` `shared_mob...` ☆ 1

Last mile solutions in low density areas

Discovering feasible new innovative solutions

`last_mile` `shared mobility` `on-demand` ☆ 1

Urban Air Mobility (Flying taxis)
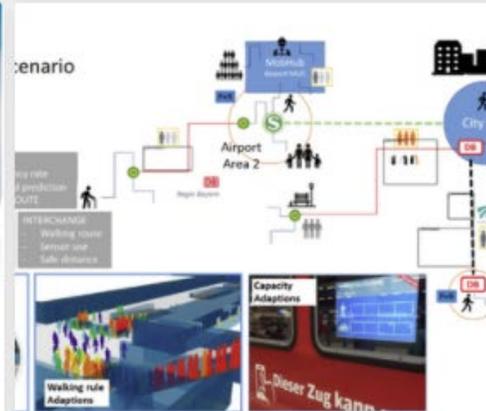
What to do with Urban Air Mobility

`urban_air` `mobility` ☆ 1

Increasing acceptance for drones

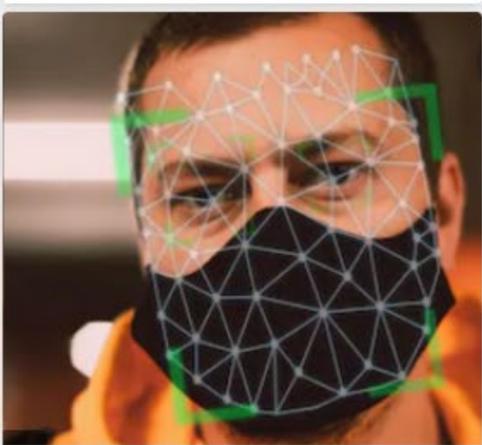City of Hamburgs is interested in ideas to increase awar...

`drones` `acceptance` ☆ 2

Low-contact mobility for public transpor...

Creating a low contact public transportation

`public_transport` `covid19` `mobility` ☆ 2

Face Mask Detection for Public Transport

Computer vision (CV) can be used to analyze whether peop...

`public_transport` `detection` `minimum_` ☆ 1

Corporate Carsharing for City Organizati...

Carsharing dedicated for employees of city authorities, ...

`carsharing` `city` `employees` `compani` ☆ 4

Collision warning device for VRU

Collision warning device for all forms of micromobility ...

`warning_device` `cars` `pedestrians` `cy` ☆ 1

Urban dynamic map Hamburg (UDM-HH)

Development of an open and harmonized platform under mun...

`traffic data` `urban dynamic map` `high` ☆ 0

Data-based optimization of traffic contr...

Effectively reducing waiting times at traffic signals th...

`reduction of waiting times` `mathematic` ☆ 0

Mobility change management model

APP with a basis of AI that recognise the transport mode...

`change_management` `gamification` `AI` ☆ 1

Micromobility: information & management

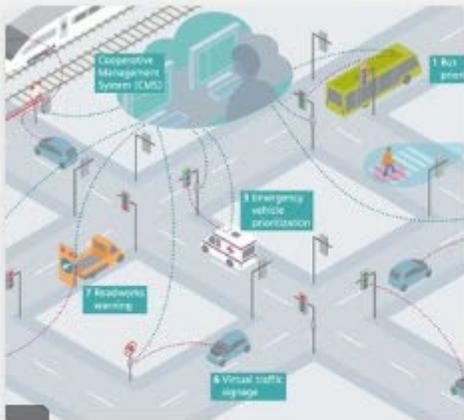Information management platform to facilitate micro mobi...

`micromobility` `information` `managem` ☆ 0

Space management platform

Space management platform for micromobility parking and ...

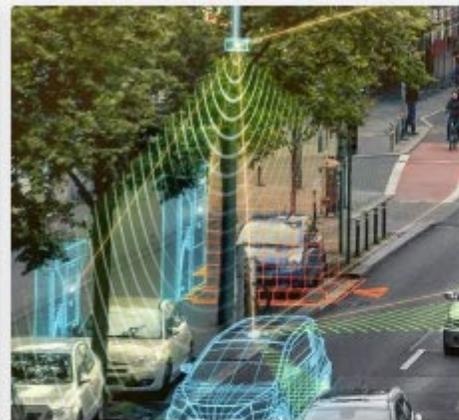`micromobility` `parking` `safe parking` ☆ 0

Future traffic is connected
The Cooperative Management System (CMS) links vehicles w...

`traffic` `future` `traffic_management` ☆ 0

Aimsun Live - traffic prediction for ITS
Aimsun Live simulates large areas in real time, allowing...

`aimsun_live` `traffic` `real_time` `predic` ☆ 0

Intelligent Parking Solutions
Knowing where to park without searching.

☆ 0

Intermodal Data Analytics
Travel Analytics: Addressing the challenges of mobility ...

`intermodal` `planning` `data` `analytics` ☆ 0

Parking lot mgmt using beacon technology
Enabling faster, more efficient and sustainable routing ...

`parking_lot` `routing` `beacon` `conges` ☆ 1

Monitoring Sustainable Developement Goal...
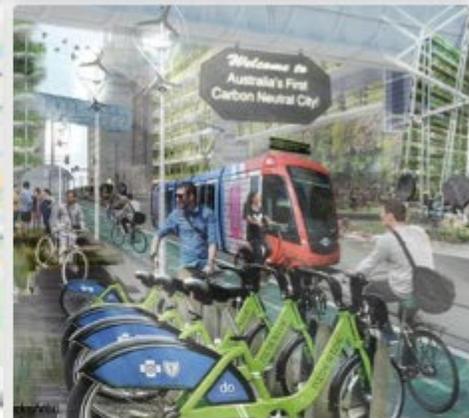Visualization of key figures of the 17 SDGs concerning u...

`sustainable` `developement` `goals` `vis` ☆ 2

Nudging for mobility services
Fleet operators want to achieve the highest possible uti...

`incentives` `nudging` `parking` ☆ 2

Urban Mobility Technology Planner
Landscape of existing mobility carrier systems and the ...

`mobility` `planner` `technology` ☆ 1

by P.Allekotte / Aalto University 2021, March

Data representation for a
better plannin...
Visualizing data is an effective way to
understand mobil...

planning maps data ☆ 0

Whitelabel Gamification
API for MAAS
Provide a whitelabel gamification
integrated into a MAAS...

maas gamification api app ☆ 0

08 Mobility and energy

As Europe´s transport sector is almost entirely reliant on fossil fuels, innovations in the area of mobility and energy are crucial. These can be focused on adopting and enabling cleaner modes of transport such as electric vehicles.

The transport sector in Europe is over 90 % fossil fuel dependent. It is crucial that we change this in order to decarbonise our transport systems and increase energy independence. There is no single fuel type that can easily replace the diesel and petrol that is used in internal combustion engines (ICE) today, but a range of different fuels and propulsion techniques can be used depending on the transport requirements. Electric vehicles are particularly apt for use in urban areas due to zero tailpipe emissions, lower noise emissions and higher energy efficiency at lower speeds. Replacing ICEs with cleaner fuel-propulsion solutions requires new vehicle technologies (including retro-fitting), charging/refuelling supply as well as demand for the fuels. To enable this requires new partnerships, business models and new infrastructure (often in the public realm).

The widescale (and fast) adoption of electric vehicles in urban areas poses challenges not least relating to appropriate charging infrastructure covering a wide variety of transport patterns and needs (e.g. taxi, truck, small delivery vehicles, bus, boat, moped, e-bike as well as private car). This impacts the electricity grid, and infrastructure improvements need to be made, for example in building new electricity substations in often dense urban areas. Load-balancing solutions are needed in order to ensure that demand matches supply.

Refuelling stations also need to be in place for other cleaner fuels, e.g. hydrogen for fuel-cell electric vehicles, CBG, LBG, and for P2X. In most cases these are related to longer distance and/or heavier transport and would be located in peri-urban areas.

Uptake of cleaner fuels has been slow in most European cities, faced with challenges related to business models, new cooperation models, high capital costs for new technologies, required infrastructure upgrades, behavioural change, to mention a few.

===== Expected outcomes & impacts ===
The expected outcome would be increased use of cleaner fuelled vehicles in one or more European city. The measure implemented should have the potential for replication and scaling in other European contexts. Alignment is expected with national and European policy on cleaner fuels. The expected impacts are reduction in greenhouse gas emissions, increased quality of life in urban areas and better use of urban space.

===== Examples ===
Some examples of specific topics that can be addressed include:
• Innovative measures to increase the demand for zero-emission vehicles, showing a clear take-up of vehicles in fleets.
• Demonstration of innovative charging solutions to test new load balancing techniques, fast and slow charging solutions and behavioural incentives (e.g. lower cost for lower power), access to company/private parking lots for residents in off-peak hours, battery storage to shave peak load, V2G, etc.
• Implement and test universal charging of universal cableless solutions for all mobility vehicles e.g. with multimodal interchanges being clear example of early adoption sites.
• Demonstration of solutions where different energy players and stakeholders align on single-use urban access with user-friendly design and simple terms of use and payment.
• Demonstration of smart grid /micro grid energy infrastructure with green energy production for all types of Vehicles of the Future including solar, hydrogen and biofuels.
• Installation of easily relocatable mid-size high-capacity energy storage solutions to upgrade existing or planned charging infrastructure movable from place to place. Clear consideration needs to be made of the fit with surrounding urban environment and accessibility to charging points.
• Innovative cooperation models and business model development to create refuelling stations for cleaner vehicles (e.g. jointly with transport purchasers, procurers, municipalities, energy companies, etc).

TracToZero
Solutions for an optimal transition to carbon-neutral tr...

energy infrastructure carbon-neutral ⭐ 11

Safety on EVs
Ensure the electro mobility spread

EV ennergy safety battery grid ⭐ 11

Semaphore inductive charging
Inductive charging sections in selected stops underneath...

inductive_charging charging energy ⭐ 9

Feedback from Central Hub discussion
Main discussion points on challenge area Mobility and En...

feedback discussion central energy ⭐ 3

Vehicle 2 Grid
A smart and sufficient charging infrastructure

vechicle grid charging smart infras ⭐ 5

THERMOCLES
Thermal comfort is essential to persuade people to use p...

thermal_comfort public_transport fina ⭐ 6

Transition towards zero emissions zone
Until you are made aware of pollution you cause you may ...

pollution traffic pm cleaner air tra ⭐ 8

PowerManagement
Tool able to use reserved power input of another device...

#smartcharging #PowerManagement ⭐ 13

Mobile eVehicle charging in urban enviro...

Mobile EV charging will provide the alternative to deman...

`ev` `urban` `environment` `mobile` `cha...` ☆ 15

Local smart grid charging solutions

Demonstrate innovative charging solutions combined with ...

`smart_grid` `charging` `innovative` `em...` ☆ 5

Zero Emission Zone

By 2030, a large part of the inner city only welcomes ze...

`zero_emission` `new_energy` `mobility` ☆ 3

Electric mobility: charging stations, AP...

Electric chargers & sharing services to boost electric m...

`charger` `electricvehicles` `micromobili...` ☆ 1

Management of charging behavior

How to optimally match grid capacity to energy demand: a...

`energy` `management` `grid` `behavior` ☆ 2

Flexible Freight - Ideation Workshop

Investigating a solution that foresees the integration o...

`freight` `delivery` `e-commerce` `last m...` ☆ 4

Parking Energy Hub

changing the way charging points have been deployed by c...

`parking` `charging` `power management` ☆ 5

by P.Allekotte / Aalto University 2021, March