Driving Urban Transitions to a sustainable future
Info Day 2, 18 October 2022
House keeping

- Attendees:
  - Muted 
  - Camera off
  - You may use the “Q&A” tool to pose questions and we will be answering them.

- The session will not be recorded

- The ppt will be shared at the website [https://dutpartnership.eu/](https://dutpartnership.eu/)
Driving Urban Transitions to a Sustainable Future

European Partnership under Horizon Europe

DUT in a nutshell

Margit Noll
CEO
margit.noll@ffg.at
www.dutpartnership.eu
info@jpi-urbaneurope.eu
General aspects of the DUT Call 2022

Call timeline, rules, how to apply

Paul Kuttner, Pascal Bain, Elena Simon

Call text, Presentation and video about the call procedures and Q&A available at

DUT Call 2022 - DUT Partnership

https://dutpartnership.eu/dut_call_2022/
Pitches

Please use the “Q&A” tool to pose your questions
Positive Energy Districts
WiseEuropa

Your partner in DUT
Implementing/Industrial partners are welcome

General idea for the project would be based on addressing legal, societal and technological challenges in creation of well-functioning urban energy communities. The outcomes would be the strategies of steering, creating and implementing behaviours, regulations and monitoring enabling implementation of EC in urban setting. From Polish perspective, flexibility is considered especially in the context of low power reserves in the Polish system and the energy crisis, as well as greater electricity demand observed in last few years (due to economic development and electrification).
We are an independent think-tank with its registered office in Warsaw, specializing in European, foreign and economic policy, macro-economics, as well as energy and climate policy. The full name: WiseEuropa – the Foundation Warsaw Institute for Economic and European Studies.

WiseEuropa’s mission is to promote Europe's economic development, in accordance with the principles of sustainable development, competitiveness in the global market and social dialogue. WiseEuropa's engagement is based on values such as: people, public good, quality and reliability, development, innovation and independence.

Our four research programs:
Cross-sectional and Energy and Climate expertise

Our Cross-sectoral Approach

• Qualitative socio-economic assessment of public policy, innovative technologies, labor market and business models
• The well-established research excellence and expertise in linking socio-economic perspective to sectoral and broader policies allow WiseEuropa experts to meet the requirements of interdisciplinary international projects

Energy and Climate Program

• Assessment of economic viability of decarbonization, energy market transformation and its impact, inclusion and inequalities, as well as local development opportunities related to the low-carbon economy
• Development of quantitative assessment tools for various sectors, including finance, energy, manufacturing, transport, mining and ICT

WiseEuropa

• Since 2013
• Wide range of experts: economics, energy, environmental protection, international relations, sociology, spatial planning, stakeholder dialogue etc.
• Working with leading experts and key organizations in the energy, climate and environmental sectors
<table>
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<tr>
<th>Category</th>
<th>Description</th>
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<tr>
<td>Publications</td>
<td>Policy Briefs and Reports</td>
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<tr>
<td>Economic Models Development</td>
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<tr>
<td>Communication and Dissemination</td>
<td>Capabilities: Public appearances, decision makers outreach, media relations</td>
</tr>
<tr>
<td>Stakeholder Engagement</td>
<td>Consultations, advisory panels, workshops, opinion surveys</td>
</tr>
</tbody>
</table>
2022 (January-October) in Numbers

20+ publications

70+ public appearances (local and international congresses, conferences, seminars and own events)

World Urban Forum
ESG Requirements (Business seminar)
CCS4CEE (Brussels Consortium Meeting)
PreCOP27
40+ active projects in total (local and international ones)

On the European level

We are consistently enhancing our position as a center coordinating the initiatives for sustainable development, especially in Central and Eastern Europe. As part of regional cooperation, we completed eg. the CEE Climate Policy Frontier project, focused on the exchange of knowledge on climate policies in the transport and building sectors in the countries of the Visegrad Group as well as Romania and Bulgaria.

Since October 2022, we have been engaged in the Building momentum for the long-term CCS deployment in the CEE region project, which aims to resume discussions on the long-term implementation of CCS (carbon capture and storage – the process of preventing emissions of large quantities of carbon dioxide (CO2) into the atmosphere from point sources of pollution) in the Central and Eastern Europe region. The project implemented with the support of the EOG [European Economic Area, EEA] funds and Norway grants for regional cooperation covers 11 countries in the region and is implemented in cooperation with four partners.
2022 (January-October) in Numbers

50+ partners (public administration and institutions, academics, think tanks, other NGOs)
Introduction to WiseEuropa´s World as a Think Tank

Krzysztof Kobyłka, Program Head of Energy and Climate
Aleksandra Miłobędzka, Energy and Climate Expert aleksandra.milobedzka@wise-europa.eu
Anna Dławichowska, Project Manager

Warsaw, 18.10.2022
Positive energy districts

Digital twin and demonstration

Dr. Binod Koirala,
binod.koirala@empa.ch
Empa, Urban Energy Systems Lab

18 October 2022
How to manage energy system transformation with increasing complexity?

- Energy-Trilemma
- Many different actors
- Multiple levels/sectors to interconnect
- Wide technology options
A virtual representation of reality
A base truth

- Bi-directional connection between physical and digital counterpart through data
- Continuously updated, semantic completeness concerning data transfer, control systems, sensor networks and urban artefacts,
- Can be used both in collaborative energy planning and operation and taken along the life cycle

Image Source: (Burgess et al., 2020)
Business model/
Institutional design

Planning case study
(Empa campus)

Databases

Dashboard

Building information modelling
(Energyplus), construction drawings,
weather data, technologies)

Scenarios/pathways (WP4)

Digital Twin

Operational data
and calibration

Validation

Energy demand

System design and
operation optimization
(E-hub tool)

NEST

Digital Twin

Operation case study
(NEST/Ehub/MOVE demonstrator)

Actors and
KPIs

KPI
Empa urban energy system lab

- Leading lab in **urban energy system modelling** (e.g. Ehub tool/ CESAR-P)
  - **Planning/operation** stage
  - Buildings/districts/higher scales
- Close **collaboration with research and industry partners**
- Unique research infrastructures such as **NEST/ehub/ MOVE demonstrator**
Dr. Binod Koirala,
binod.koirala@empa.ch
Empa, Urban Energy Systems Lab
8600 Dübendorf, Switzerland
Solight Natural Lighting Systems
The Right to Light

☀ Patented solution delivering Sunlight indoors

☀ Significant energy saving up to 40% on Lighting & HVAC bills.

☀ Suitable for retrofits and new buildings.

☀ A static system - minimal maintenance / extended durability.

☀ Enables complying with EU Daylighting STD EN17037

Typical SOLIS Basement Installation

1. SOLIS sunlight collector.
2. Reflective light-guide.
3. Light distribution module.
SOLIS is LCA Positive

VALIDATION RESULT

Find more information about this validation on: www.impact-forecast.com
Bring Sunlight to Life

3~4 years ROI on Electricity Savings

Highly efficient for Zero Emission Buildings

Shortens hospitalization periods 41%~16%

12%~18% improved worker productivity

Improved student learning progress by 20%~30%

25% Increase in Sales

Bring Sunlight to Life

Solight is an Israeli Startup. **NOT** eligible for funding in the DUT Program!

Solight will be happy to participate as service provider.

https://www.solight-energy.com/

ofer@solight-energy.com

+972-544-485-677
Stadionområdet in Malmö

Energy efficiency in existing urban structures

18 October 2022
The vision is a district for sports and education.

With its content and central location in the city, the stadium area offers a unique opportunity to develop as Malmö’s premier area for sports, education, events and health. The plan proposal adds new functions for sports and education. The green qualities and connections are developed and strengthened. The area is also made more accessible to Malmö residents with safe movement routes and new meeting places.
Vision
Ambitious local climate and energy goals: Stadionområdet as a Positive Energy District

Current state
The buildings that will be kept in the area are inefficient energy wise

Challenges
High electricity prices in SE4 DH price increased 20% YoY

Opportunities
New functions to be built:
- Multihall
- Athletics arena
- Fotball arena
- Swimming hall

Conditions
For our DUT PED:Topic 3 project proposal
Stadionområdet:
PED: Topic 3 project proposal
Malmö’s first Positive Energy District
We are looking for

Consortium focused on PED: Topic 3

Technical partners
PED expertise

+ suggestions!
Contacts

Jonas Persson
Project leader / Climate strategist
City of Malmö

jonas.persson15@malmo.se
+46733284382
Powering Energy Communities

Enabling people to take part in the energy transition

18 October 2022
Energy Communities are an essential pillar for the energy transition, providing citizens with tools to produce energy locally and to provide resilience to the electricity system. Nevertheless, these initiatives need guidance and information during the process, from the initial steps (local legislation, governance models), to the design (RES production capacity and installation) and the operation (data monitoring, energy sharing and flexibility). Through this project, ENDEF is developing the tools for the monitoring of the RES system, based on the Internet of Energy, together with the management of the Energy Community during their live.

Powering Energy Communities
We are looking for:

Participants in Energy Communities
Operators of Energy Communities
Municipalities promoting Energy Communities
Companies interested in developing these models

Do you think you will fit?
Are you interested in the proposal and exploring possible collaborations?
Do you want to join us?

Please contact!

Yolanda Lara
yolanda.lara@endef.com
PED-ID

The goal of the project is to accelerate the transformation of the energy system in Europe to a more efficient and renewable system. This goal will be achieved through the increased implementation of Positive-Energy-Districts (PED).

Stakeholder involvement is by far the most important element for a successful implementation of PEDs. It is crucial to address important stakeholders besides representatives of municipalities with PED requirements in early area development phase.
Enabling Positive Energy Districts across Europe: energy efficiency couples renewable energy

Sheppa S.
Paul D.
Becault, P.

2020
Positive Energy Districts [PEDs]

The implementation of Positive Energy Districts, where actions are taken at neighbourhood scale, not just with individual buildings, is a cornerstone for achieving climate goals.

*Positive Energy Districts (PEDs)
What are PEDs?

Business-As-Usual approach increases energy consumption and Co2

Towards “Positive-energy” Communities engaged with new energy solutions.

The PED approach can result in a net surplus of energy and other energy services
Why PEDs?

PEDS:
+ Are key to helping cities to achieve their net-zero goals.
+ Are an effective and economic way to meet energy and climate targets.
+ Are an integral part of a future sustainable energy system (The EU’s SET plan has a target of 100 PEDs by 2025)

They can:
+ Provide increased security of energy supply from local sustainable energy sources (renewables and waste heat etc.)
+ Reduce energy demand and create lower and more predictable energy costs for businesses and other consumers.
+ Capture the benefits of scale and diversity, compared with working just at individual building scale.
+ Create local economic development benefit from new investments.
+ Meet utility demands for load balancing and other smart energy “services”.
+ Enhance an area’s and business’s branding.
+ Enable better terms for access to finance (eg. via new EU Taxonomy)
+ Future-proof against forthcoming climate / energy legislation (eg. EPBD.)
“Leading the development towards Energy-positive and climate neutral places where people, enterprises and nature can flourish”
Our Positive Energy Planning Process is a collaborative process for the development and implementation of strategic, holistic, tailored positive-energy roadmaps - which have a high degree of acceptance amongst key stakeholders.
Positive Energy Planning Process for Positive Energy Districts (PEDs)

1. Building support for the process
2. Co-creating the PED vision
3. Energy mapping and area analysis
4. Produce PED roadmap and action plan
5. Support the implementation phase
6. Follow up, monitoring and verification
7. Scaling-up and replication
Positive Energy Planning Process [PEPP]

+ PEPP is a new methodology for realising Positive Energy Districts (PEDs), that has been developed through collaborative international research.

+ Stakeholder engagement, led by a trusted intermediary, is one of the keys to success. Process leadership, stakeholder management, and effective communication, combined with technical and economic expertise, are at the core of PEPP.

+ Creating PEDs is a complex challenge - but White has been transforming society for over 70 years, and we have the range of skills needed for helping places to successfully manage change.

+ We support the process with LCA and carbon calculation methods that help whole districts to achieve net-zero goals.

+ PEPP can help to develop energy-positive places, where people, businesses and nature can thrive.

@whitearkitekter
whitearkitekter.com
White Arkitekter is one of Scandinavia’s leading architectural practices. We work with sustainable architecture, urban design, landscape architecture and interior design for current and future generations. Our mission is to enable sustainable life through the art of architecture.

Our vision is that by 2030 all our architecture will be climate neutral (or better), through design excellence.

@whitearkitekter
whitearkitekter.com

Keith Boxer
Head of International Research
keith.boxer@white.se
“Leading the development towards Energy-positive and climate neutral places where people, enterprises and nature can flourish”
Cycling across the world

Global country average

- Can ride a bike: 60%
- Own a bike that can use personally: 40%
- Bike2Work: 10%

Why don’t people ride bikes in their cities?

- They don’t own a bike.
- There is no bike-sharing service in their cities.
- There are no bike lanes in their cities.

Cities usually invest money in incentives to buy new bikes, bike-sharing services, and new bike lanes.
Why don’t people ride bikes in their cities?

- They don’t own a bike.
  
  Apparently, they do. According to IPSOS, 40%+ of the world population owns a personal bike.

- There is no bike-sharing service in their cities.
  
  Maybe. But even if cities offer bike-sharing services, there is no guarantee that they will be used (properly).

- There are no bike lanes in their cities.
  
  Maybe. But in Italian cities, the infrastructure related to bicycles increased by 50% between 2008 and 2016, while its use decreased by 0.3% (Source: ISFORT).
Watch how it works
Our mission

Car pooling
The Pin Bike app integrates the system for searching, matching, and posting trips in carpool (car owner sharing regular routes).

Public transport
The data recorded by the Pin Bike app can be integrated with that recorded by sensors on public transport means.

Bike sharing
The data recorded by the Pin Bike app can be integrated with that recorded by bike-sharing apps.

Scooters
The data recorded by the Pin Bike app can be integrated with that recorded by electric scooter apps.
Communications and Project Manager
leserri@pin.bike
pin.bike
The leading source of mobility and location data for emerging markets
WhereIsMyTransport is a data platform for mobility in emerging markets; we are the *de facto* source of mobility data in these markets, and we're developing the definitive digital solution for sustainable urban transport.
We empower cities and mobility service providers with the data and technology they need to improve the passenger experience for hundreds of millions of people, making public transport more reliable, predictable, safe, inclusive and accessible; everywhere.
data for emerging markets

Transit Data
The only complete public transport network data sets for emerging markets, in the global-standard GTFS format.

Point of Interest (POI) Data
Location data from centres of economic activity, 90% of which aren't available from other POI providers.

Real-Time Alerts
Comprehensive Real-Time Alerts from incidents and disruptions on road and mobility networks. Delivered as a GTFS-R feed and API.

for people navigating the city to decode their environment and make smart decisions.
Transit data

Our mobility data and location data reflect reality for people on the ground: the ‘ground truth’

**All standard and optional GTFS fields:**
- Agency information
- Routes
- Stops
- Days of operation
- Hours of operation and frequencies
- Timetables
- Fares

**Additional attributes:**
- Station entrances, exits, and pathways
- Vehicle features
- Vehicle types
- Translations
- Payment methods
- Support for complex fare products
- Headsigns
Point of Interest (POI) Data

Less than 10% of the POIs in our ‘ground truth’ data sets are included in major location-based services today.

Our POI data:

- Connects customers with local businesses
- Helps people make sense of the dynamic urban environment
POI Attributes

Transport Stops
- Name
- Location
- Agencies served
- Lines served
- Hours of Operation

Amenities
- Bicycle hire and parking
- Motorcycle parking and pickup area
- Ride hailing pickup area and parking
- Ticket office
- Wifi points
- Public phones
- Toilets/bathrooms and changing facilities
- Lockers/storage facilities
- ATM's
- Shops and restaurants
Real-time alerts

Access real-time incident and disruption information for all routes and public transport modes:

A GTFS-R data offering that includes:
• Alert summary
• Description of the alert
• Agency/Route/Stops affected
• Alert duration (if available)
• Cause of the disruption
• Effect of the disruption

Available as an API:
• Incident location
• Description of the alert
• Alert duration (if available)
• Cause of the disruption
• Effect of the disruption
Rumbo
An app that helps everyone get the most from public transportation. Includes informal transport routes, used by 80% of the population, and poorly covered by other public transport apps. Alerts users to disruptions on their commute, so they can plan ahead, save time and money, and find alternative routes to their destination.

Available in Mexico City, Lima and Bangkok. 500,000 users.
35 collectors
3,276 tracks collected
147 tracks processed daily
28,312 kms of routes
Key client timeline

Clients

2015

2021
Vardaan Shekhawat
Policy & Grants Funding Consultant
vardaan@whereismytransport.com
www.whereismytransport.com
COFFEE BREAK

We will be back at 11:40 CET
15-minute City Transition Pathway

Mission, topics and topics
Underground Capsule Pipeline System

Adding the Fifth Transport Mode to Urban Logistics

Omileep

A New Utility for Everyone and Everywhere

Circular system

Reduced traffic

Smooth delivery
Challenges in cities

1. Less vehicles & smarter use of street space
2. Transport without CO2, harmful particles or noise
3. Access to items & services within 15 minutes
4. Enable circular life style
A Capsule of 2 kg does the same job automatically as a motor vehicle of 2000 kg with a driver.
<table>
<thead>
<tr>
<th>Challenges in cities</th>
<th>In one scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Less vehicles</td>
<td>30% less traffic, parking, garbage bins</td>
</tr>
<tr>
<td>smarter use of street space</td>
<td>Value of freed space &gt; cost of system</td>
</tr>
<tr>
<td>2. Transport without CO2, harmful particles or noise</td>
<td>All items that fit in a capsule are transported electrically</td>
</tr>
<tr>
<td>3. Access to items &amp; services within 15 minutes</td>
<td>Items transported to 50 m from user</td>
</tr>
<tr>
<td>4. Enable circular life style</td>
<td>Access to items within 5 minutes</td>
</tr>
<tr>
<td></td>
<td>All fractions of waste are recycled</td>
</tr>
<tr>
<td></td>
<td>Borrowing instead of owning things</td>
</tr>
<tr>
<td></td>
<td>Reusable packaging</td>
</tr>
</tbody>
</table>
Tentative Work Packages

1. Development
   • Verify the use cases at home and at work in Pipeville 2030, a storybook with 30 personas
   • Interfaces with other modes of transport
   • Build demonstrators/prototypes

2. Implementation
   • Co-locate with other technical infrastructure, e.g. water, sewage, el, and fiber in an Infraculvert
   • Business models for the actors in the ecosystem

3. Analysis
   • Simulation models to analyze mix of transport modes and location of goods and services
   • Cost-benefit analyses

4. Regulations
   • Urban planning process
   • Safety and security
   • Technical standardization
Expertise required

1. **City**
   - One in Sweden with a building project
   - **Looking for 1-3 in other countries & contexts**

2. **Builder of streets and buildings**
   - One in Sweden. **Looking for others**

3. **Builder of capsule pipeline system**
   - Omniloop AB will build demonstrators
     A team of six devoted specialist
   - **Looking for others in the ecosystem around**

4. **Looking for Research and analysis organization**
Contact details

Sten Wandel
sten@omniloop.se
Mobile – 46 707 284 773
Professor Emeritus
Lund University, Sweden

https://www.omniloop.se/
Inclusive Mobility Service Platform
for inclusive, customized and seamless mobility for the traveler.

Open Mobility Service Platform

- Travelers
- Mobility Service Providers
- Government Bodies/Cities
- Traffic Authorities
- Enhancing Service Providers

18 October 2022
Inclusiveness

Trust

Efficiency

(15 min)

Viable Business Models

Equity

Openness

Technology

Transparency

Contradicting goals

Viable business models
Inclusiveness and equity for citizens
Trust among all ecosystem members
Openness and transparency in decision making
Technology challenges

Responsible Ecosystem Design
Our expertise:
Responsible Ecosystem Design

Mobility Service Platforms (MaaS)

Business Model Design

Responsible Design

Baris Ozkan
Ecosystem Design
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Oktay Turetken
Business engineering
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Maryam Razavian
Responsible Software Design
m.razavian@tue.nl

MobilitEU
Mobility Service Platform
https://www.mobilitEU.eu
LivableMap

Mapping the 15-minutes City for modeling walkable Cities

Challenge

15-minutes City

Open for the 3 Pathways here
Problem
Urban Sprawl and Land take

Traditional Planning is not able to tackle this with the consequences of

Climate Damage
Non-resilient Cities
Solution LivableMap

The LivableMap is useful algorithmic digital planning tool as the 1st step for Modeling the 15-Minutes City in real time

-Monitoring Status Quo in cities showing walkability with the PlaceQu® 15-min-Index for the whole area at once with a map tool

-Modeling of measures such as new infrastructure, for instance schools or stations of public transport
We are looking for a (Lead) Partner in major Cities

Data Science
Institution that cares for city development and knows about dealing with data on a pan-European level and knows how to model and can deal with multiple data sources

soft facts
Partners have to be output oriented and scientific but clear and always focused on a usable outcome

Model Cities
City administrations that face the problem of urban sprawl and are open to use city modeling in the future and are highly supportive with data

soft facts
Open to change the way to deal with spatial problems and want to be transparent and open for innovation
Who we are and what we offer

Algorithmic Technology
We own and share a unique software for modeling with city indices for showing livability down to the point

Mapping Prototype
We already have basic maps

Space Technology
Opportunities to use satellite images as source of information and we do have insights how to open up use cases with data that is coming from space

Test City of Vienna
Vienna is the prototype for a livable city and here we already have brought the methodology of indexing livability in the state of ready to use

PLACEQU
www.PlaceQuality.com/en
Peter Matzanetz, CEO
office@placequ.com
Kicked off at TU Vienna Institute for Urban and Regional Planning

Part of ESA Spacehubs Incubation-Network www.spacehubs.network
Urban and Rural Logistics

Adapting sustainable logistics measures
to medium- und low density areas
What do we want to achieve?

Build a consortium to contribute in the 15-minutes City Pathway (15mC) topic 2:

- Evaluate the application and transferability of strong urban logistics measures to sparsely populated regions and transitional regions between urban and rural areas.
- Analyze the distribution patterns of private and commercial.
- Test adapted logistics solutions to learn how they fit the distribution patterns.
- Adapt measures that fit new environments.
- Develop sustainable and economically viable solutions that can be transferred outside of high-density metropolitan areas.
The LNC Approach

Green | Lean | Smart

- **Green**:
  - Low-emission transport and logistics systems

- **Lean**:
  - Optimized and value-based Supply Chain Management

- **Smart**:
  - Sustainable, innovative, agile and cooperative solutions
The LNC Approach
Green | Lean | Smart

What we do:
• Evaluate the application and transferability of strong urban logistics measures to sparsely populated regions and transitional regions between urban and rural areas.
• Analyze the distribution patterns of private and commercial
• Test adapted logistics solutions to learn how they fit the distribution patterns.
• Adapt measures that fit new environments.
• Develop sustainable and economically viable solutions that can be transferred outside of high-density metropolitan areas.
Why we do it?

We believe in transport revolution
Team Berlin

Call us:
Join our DUT mission

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Senior Consultant
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Mobility for All
Multimodal Mobility Analytics and Management Solutions
Company

Mobility for All
Create sustainable value in mobility for all by turning data into actionable insights

- **Foundation:** 2011 in Turkey
- Team size is 30+ people with experience in **AI based mobility algorithms, big data, cloud computing, mobility analytics and mobility management**
- Processing **1 billion data** from different sources on a daily basis
- Operations in **50+ cities in 11 countries in 3 continents**, 70% market share in Turkey
Problem

- Urbanization trends
- Rapidly changing demands
- Increasing costs, and concerns/regulations for environmental issues (CO2 emission, etc.)

Conventional methods are not a sustainable and sufficient to understand changing demands and mobility behavior to meet passenger and goods transport demand.

Necessary to use data representing passenger and goods demand to detect problems, develop new models and generate solutions for different use case.

There are not enough solutions for data-driven decision making and optimizing and existing optimization proposals are insufficient.
Solution

CERMONI

Cermoni is an AI-based decision support system that provides mobility analytics (EV prioritization, public transport OD, demand analysis, etc.), optimization and fleet management capacity for urban mass transit operators, interurban passenger transport providers and logistic companies.

Value propositions:
- Reduction in operational cost, increase in efficiency and cost-benefit ratio
- Increase in service level and usage in public transportation
- Increase in sustainable energy usage, reduction in carbon emission
Solution

Cermoni

- O-D Analysis
- Similarity and Service Level Analysis
- Data Management in GTFS
- E-V Prioritization
- Optimization
- Fleet Management Capacity
Data Management in GTFS

Demand-based Approach
E-V Prioritization
Performance Analysis

Optimization
Team skills: Computer engineering, AI-based mobility algorithms, big data, cloud computing, data science, mobility management, sales, marketing, growth, finance, urban planning, project management, traffic engineering

*Proven experience in different mobility analytics and management software instruments in 11 countries and 50+ cities*
Why are we here?

- To meet different teams working on sustainability and learn about their work,
- To join or form a consortium with the teams who have same mission with Parabol
Thank you!

+90 (312) 210 01 65
https://www.paraboly.com

ODTÜ Halıcı Yazılımevi, No:33 İhsan Doğramacı Bul. Üniversiteler Mah.
Çankaya/Ankara, TÜRKİYE

Elif Çora – Project Coordinator
elif.cora@paraboly.com
MySmarTRIP

Exploiting digital transformation to drive SMART demand mobility management for sustainable use of TRansport Infrastructure

15mC topic 2:
Foster sustainable options for personal mobility and logistics in urban outskirts (and beyond)

JORGE BANDEIRA - 18 October 2022
Obstacles

Towards more efficient and green mobility choices

1. The travelers' misperception of private car and public transport costs

2. The difficulty of the charging and taxation system to reflect a fair internalization of external costs.
Externalities and taxes

Costs for society (EUR/km)

- Diesel euro IV
- Petrol euro IV

Urban and Rural

Congestion, Air Pollution, Noise, GHG, W2T

State Revenue

0.7 - 0.85 EUR/l

0.04 – 0.06 EUR/km

Externalities

and taxes

Diesel euro IV

Petrol euro IV

0 5 10 15 20 25 30 35 40
Areas for collaboration

- New multimodal mobility demand management tool for TAs
- Inclusion of private cars in the Mobility as a Service platforms
- Innovative and spatiotemporal dynamic PT pricing and taxing road use
- Smart Personal Mobility management app built on AI and pervasive systems
- Target population: intercity, suburban commuting corridors, companies
## Building partnership

### contacts

<table>
<thead>
<tr>
<th>Partnership</th>
<th>Skills / Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Aveiro</td>
<td>Transport and Environment, Cooperative ITS, Externalities assessment</td>
</tr>
<tr>
<td>Expertise 1</td>
<td>IT (pervasive systems, ICT, app development, optimization)</td>
</tr>
<tr>
<td>Expertise 2</td>
<td>Transport operators</td>
</tr>
<tr>
<td>Expertise 3</td>
<td>Regions, cities, Transport authorities, companies (test bed)</td>
</tr>
<tr>
<td>Expertise 4</td>
<td>Social behavior</td>
</tr>
</tbody>
</table>

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The 15-minute City Transition Pathway

Dassault Systèmes, the 3DEXPERIENCE Company, is a world leader in 3D modeling & simulation, data analytics, AI and collaborative solutions for business and people. By creating ‘virtual experience twins’ of the real world with our 3DEXPERIENCE platform and applications, our customers push the boundaries of innovation, learning and production.

Dassault Systèmes’ 20,000 employees are bringing value to more than 270,000 customers of all sizes, in all industries (from manufacturing to life sciences and cities & infrastructure), in more than 140 countries.

18 October 2022
Our Legacy

1981 3D Design
1989 3D DMU Digital Mock-up
1999 3D PLM Product Lifecycle Management
2012 3DEXPERIENCE® platform
2020 Virtual Twin Experience of Humans
CO-KIDS: Co-creating 15 min suburbs with kids
Problem:

- National walking and cycling targets are not being met
- Active mobility amongst school children is falling
- (Norwegian) Zero-growth goal in car traffic won’t be met
- Public health decline
- 15mC journeys to work are particularly challenging in suburbs (but not schools)
Proposed solution

Reimagining today's suburbs through the eyes of children. A suburb in which active travel for kids is easy should

Develop a school-based intervention with two main aims:
1. Sustainable mobility behaviour change amongst students
2. Co-creating the urban outskirts with insights from kids (PPGIS tool Barnetråkk or similar). What can be done to improve accessibility by active modes?
Draft research design

Desk study:
Travel surveys, Ungdata, HEVAS, WHO - HSBC

Case studies:
Intervention based on student input in multiple schools and cities

Barnetråkk – a PPGIS co-creation tool (case) and historical data (desk)
- **Empowerment**
  Letting the endusers be co-creators throughout the whole process

- **Gamification**
  Using game elements in something that isn’t a game – make the co-creation activities fun

- **Promoting the health and environmental benefits**
  Promoting "the good"
Consortium status

Right now

We have interested partners from Luleå University of Technology and Lund University (both in Sweden) and some early-stage dialogue with Austrian and British research partners.

Desired expertise

Potential new partners should ideally have two or more areas of expertise within: co-creation with children, active mobility, hub-based solutions, transportation accessibility evaluation
Sound interesting?

Get in touch!

Ray Pritchard
Senior Researcher
NORCE Norwegian Research Centre AS
rpri@norceresearch.no

NORCE is an independent research institute with around 750 employees and is represented throughout Norway. Our large local presence enables close collaboration with unique centres of excellence, as well as the business community and public authorities. Research and innovation at NORCE cover areas within Energy, Health, Climate, Environment, Society and Technology.
CHANGING HEARTS AND MINDS
WE ARE HERE

± 0.0°C
(- 0.2°C - + 0.2°C)

+ 1.3°C

+ 1.9°C
(+ 1.5 - 3.4°C)

+ 4.3°C
(+ 2.8 - 7.2°C)
RESEARCH PARTNERS
Aalto University
Lancaster University
Royal College of Art
TU Delft

COMMUNITIES
Gemeente Delft
ESPOO
West London Alliance

BUSINESS / COMMUNITY PARTNERS
Commonplace
itp
Royal HaskoningDHV
SmartViz

Subject to agreement
RESEARCH PARTNERS

Architecture
Social Science
Mobility / Service Design
Nature based transitions

COMMUNITIES

The Netherlands
Finland
UK

BUSINESS / COMMUNITY PARTNERS

Community Engagement
Transport Planning & Infrastructure
Visualisation & Analytics
Subject to agreement
OUR FUTURE TOWN
COMMUNITY PLACE MAKING AND TRANSPORT PLANNING
PEOPLE AND SYSTEMS

PHILOSOPHY

EMOTIONS

KNOWLEDGE

EXPERIENCE

MATERIAL
Events in the community
Being close to nature
Hubs located to integrate Old and New Town
Regular, affordable buses

Safe street lighting
Wider pavements
Safe cycle lanes
Mobility scooter-friendly
Impromptu social contact
Bustling public realm
A211

BIGGLESWADE
DYSTOPIA

Irregular and unreliable buses
Unclear route to town centre
Old and New town divided
Strain on existing services
People not helping others
Homelessness and inequality

Empty shops and litter
Uneven road surfaces
Bad mobility for the elderly
Traffic and congestion, no parking
MILEAGE AROUND THE PLANET

Haltwhistle drives over 14 million miles every year, the same as driving around the planet almost 600 times.
WOODLAND REQUIRED

You need to plant over 43,000 trees to absorb the CO$_2$ emissions from your cars, with woodland that covers 270,000m$^2$ every year!
CHANGING HEARTS AND MINDS

dan.phillips@rca.ac.uk
Cohesion and Cooperation of Micromobility and Last-mile Delivery as a Service

with a focus on food delivery (CoMeDaaS)

15minC 1&2, CUE 1&3

18 October 2022
Driving force:

- COVID-19 Lockdown Stay-home Physical distancing Online shopping Demand for delivery.

- E-commerce was projected to grow by nearly 20% in 2020 and will continue to grow (World Economic Forum 2021).
- “Online food ordering marketplace’s total revenue is expected to grow at 8.8% until 2024” (Statista 2022)
- The World Economic Forum (2020) estimated that the ecommerce growth would increase vehicles on the road by 36% and result in 30% more vehicle-led emissions by 2030. Traffic accidents are also predicted increasing due to such increase.

![Figure 6: 2030 base case scenario](image)

Source: World Economic Forum
Driving force:

• Meanwhile, micromobility start-ups, shared micromobility solutions promoted by cities (e-scooters, bikes, e-bikes) have captured a growing market enabling a on-demand transport service and a collaborative way of mobility.

• A phenomena that some food delivery use a shared micromobility service is rising, especially when there is a special deal offered by the mobility service.

• The questions are:
  • is this a win-win solution?
  • Will this influence the accessibility for other individuals to the micromobility services?
  • How to deal with the mis-use behaviour (such as illegally parking, breaking traffic rules, etc.)
Problems and challenges to tackle:

- Can a win-win system be formed based on optimal use and optimal routing to enable a more sustainable and more efficient last-mile food delivery?
  1) Increase the flexibility and accessibility of micromobility services
  2) Develop and implement a delivery-as-a-service platform
  3) Promote the cohesion and cooperation of last-mile delivery and micromobility within a city
  4) Evaluate the impacts from economical, environmental and social perspectives to the transport system and the city
Current status and Expertise we are looking for:

• The current state of potential partners:
  • University of Groningen, The Netherlands (on-board)
  • Borlänge Municipality, Sweden (communication in progress)
  • Aalborg University, Copenhagen, Denmark (communication in progress)
  • Reġjun Tramuntana, Malta (communication in progress and possible to direct to municipality in Italy)

• Expertise we are still looking for:
  • Micromobility service provider/operator (1-3)
  • Food delivery service provider/operator (1-3)
  • More cities/regions that can be a living lab/testbed (1-3)
Contact info

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Phone: 0046 (0) 23 77 85 09

Data and Information Management department

Dalarna University, Sweden
Discovering Patterns of Walkability in 15-Minutes Cities Using Artificial Intelligence
Changes in Existing Mobility Systems and Urban Morphologies

- Rapid increase in population
- High levels of vehicle use
- Unplanned urbanization in Developing Countries

results ...

- Less public area
- Unfriendly streets to walking
- Deconstruction of green

damages...

- Healthy community
- Sustainable city
- Circular economy
- Natural sources
The 15-Minute City

"What are their goals and benefits?"

**Sustainable Mobility:** Walking or Biking

**Livable Cities:** Social interaction, Public space and non-Traffic Volume

**Accessibility:** Proximity to the neighborhood of all basic services

**Healthy, Social and Diversity**
Walkability is the built environment that encourages people to walk with reasonable time and effort by providing pedestrian comfort and safety and providing visual interest from a variety of places.

“There is no standardized approach to measuring walkability. There are field studies, user surveys, virtual reality tests, and evaluation methods with street images.”
How is walkability measured?

The **Walkability Index** is a method of measuring how convenient the streets are for walking through parameters such as **accessibility, safety, transparency, and street quality**. For this reason, the walkability index is higher in neighborhoods with various physical and social facilities.
The quick and attractive way to the target point supports walking behavior. The possibilities offered by the built environment directly affect walkability, and that's why 15-minute cities should have walkable streets.

**15-minute walking or cycling distance**

**Walkability**

**15-minute city**

**Livability, Accessibility, Social Activity**
An automated approach for Measuring Walkability: Artificial Intelligence and Big Data
Opportunities/Outputs offered by this study:

- Walkable Zone mapping
- Street Quality Index
- Fast and Effective Solutions to Urbanization
- Analytics for Local Governments
It will be an interdisciplinary work of many expertise in architecture, urban planning and computer sciences, ...

We will leverage on the expertise of ITU AI & Data Engineering Department/ Faculty of Computer and Informatics Engineering, in constructing suitable AI models for the defined problem.

## Team

We are searching partners from;
- Urban design
- Local administration

## Need partners
Street Moves
Participatory repurposing of streets
Street Moves challenge

- **Context:** International experiments around adapting streets to become more sustainable are widely used and popular.

- **Problem:** the potential for meeting unique local conditions, centering user needs and enabling cross-sector collaborations is underutilized, while initiatives today may lack long-term perspective and are not designed for adaptation and change.
Street Moves ambition

- Ambition: Street Moves therefore develops powerful design-driven methods for cross-sector collaboration with broad participant-driven processes that enable the street to generate more values while incorporating the needs of owners and perspectives.

- Impact: this way of working enables change on a practical, cultural and system level and means that more people can help understand and contribute to the change, which in turn has good conditions for creating synergy effects.
Street Moves

Street Moves develops physical prototypes for street environments where powerful design-driven methods for cross-sectoral collaboration with broad participant-driven processes enable the street to generate more value than it does today. The working method enables change directly on the street as well as on a cultural and system level as the processes result in the spread of knowledge, new contact surfaces and conditions for managing the multifaceted results.
Gata

Trafikkontor - Trafik

Traditionell gatuplanering

Input

Logistik
Handel
Polis och säkerhet
Folkhälsa
Stadsplanering
Mat
Offentlig konst
Mobilitet
Avfallshantering
Ekosystemtjänster

Output

Förbättrad miljö
Minskade vårdkostnader
Minskat underhåll
Ökad biologisk mångfald
Ökade sociala kontaktytor
Minskade trafikolyckor
Minskad brottslighet
Stärkt handel
Ökat välbefinnande
Ökad kulturproduktion

Källa: Vinnova, Dan Hill
Partners
Interested in teaming up?

2 European Cities
A city interested in testing Street Moves methods including a unique design team resulting in prototypes and

Private partners
Design-team, mobility providers, logistics, cultural organisations mm.

Agencies
Interested in exploring participatory methods for participatory re-design
olle.lundin@arkdes.se
+46 72 386 25 69
Project X

Engaging citizens in data collection & evaluation of urban design on a neighborhood level
Project focus points

**Citizen Science!** Involving citizens in

- Co-creation of alternative designs of public space
- Data collection for evaluating impact
- Data analysis & awareness, understanding impact and understand what approach works best to create a dialogue, reconcile conflicting interests
- Design and test a replicable approach
Project core elements

(H2020) WeCount & ClairCity engagement techniques
Project core elements

Telraam!
Project core elements

Straatvinken & straat-O-sfeer
Project partners

Current:
1. Telraam (BE - SME): Technology provider, coordinator of WeCount
2. University of West-England (UK – Academia): Citizen engagement techniques, science communication, evaluation/impact assessment. Coordinator of ClairCity project
3. KULeuven (BE - Academia): Citizen science experience in traffic. Coordinator of Straatvinken & Straat-o-sfeer”
4. Systematica (IT – SME): transport policy consultancy

Looking for:
Local authorities – pilot cities
Business/universities with expertise in evaluating traffic/air quality/livability impact assessment.
Contact

Kris Vanherle
Kris.vanherle@telraam.net
www.Telraam.net
Decarbonisation of the miro-mobility

To what extent is a sun-driven micro-mobility possible in a given city?
The challenge

SMART CITY

- Cutting carbon & SMOG emissions
- Smart management of the limited public space
- Spatial order and city aesthetics

NEW MOBILITY

- Clean means of transportation
- Energy efficient mass public transport
- Micro-mobility

ADEQUATE INFRASTRUCTURE

- Publicly available infrastructure supporting new mobility
SEEDIA

→ Energy independent
→ offgrid / ongrid
→ 12 - 230 V (AC/DC) power
→ Cloud connected 24/7
→ Mobile application
→ API
→ Electronics for energy management
→ Bicycle & scooters stand & lockers
→ Modular design
→ WiFi, smog sensors, noise measurement & others
Our idea...

**What we offer?**
- Network of the PV chargers covering entire city or district

**What we need?**
- Strong city leadership
- Stakeholder cooperation (i.a. micro-mobility service providers, mobility NGOs)

**Outputs & outcomes?**
- Increasing the share of "new mobility" in the city's transport work
- Significant/full decarbonization of the shared micro-mobility
- Better usage of the public space & spatial order
Who are we looking for?

- **Engaged cities** (Nordics? Rzeszów/PL is potentially onboard)

- **Academia** – technical aspects of PV powered e-mobility

- **Academia** – economic of the business case

- **Other stakeholders** adequate to the challenge.

Source: Seedia
CONTACT

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Growth Director

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(WhatsApp, SMS, call)
Fast and effective processes and tools to prioritise sustainable and inclusive active mobility and people centred public spaces in small to medium cities
The challenge

- Most attention 15mC approaches in larger metropolises
- How can small to medium cities (pop. 50-500K) most effectively integrate 15mC
- Focus on urban fringes and suburban areas
- Need tools that are both effective and quick – no time to lose!
- Crucial to get the support of residents and politicians

Protest against Low Traffic Neighbourhood, Oxford
The solution

- Capture existing learning on effective implementation of 15mC approaches in small-medium cities
- **Co-Create** and test effective processes and tools using Urban Living Lab approach
- Use variety of approaches in range of contexts
- Determine how best to –
  - prioritise sustainable and inclusive active mobility, together with people centred public spaces
  - get the support of residents and politicians
  - **achieve faster changes in people’s behaviours and in the public realm.**
Oxford
Dreaming spires - and screaming tyres

- Oxford at forefront of sustainable transport interventions in UK
- Excellent links to local government, community groups and third sector
- Existing links to potential technology companies
The Oxford team

From Oxford Brookes University* & University of Oxford**

Dr. Juliet Carpenter**
Co-Creation theory and practice
Deliberative planning
In-depth qualitative & action research

Dr. Ben Spencer*
Co-Creation
Active travel
Urban Design
In-depth qualitative & action research

Dr. Tim Jones*
Active travel
Transport planning
Large scale surveys
In-depth qualitative & action research

Dr. Avar Almukhtar*
Use of VR / AR
Urban Design
Architecture
GIS & spatial analysis

Previous projects include:
www.cycleboom.org
www.gchu.org.uk/street-voice/
www.co-creation-network.org/
What are we looking for?

• Partners from **small-medium cities** (pop. 50-500K) with relevant experience and contacts
• Keen to find partners/work with **accession countries** and others
• **Businesses with innovative solutions**
• **Virtual/Augmented reality** to help visualise changes to public spaces
• Other **innovative approaches** with potential to work quickly and effectively towards implementing the 15mC

Happy to lead or develop proposal in collaboration - keen to talk!
Contact details

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Juliet Carpenter juliet.carpenter@kellogg.ox.ac.uk
Tim Jones tjones@brookes.ac.uk
Avar Almukhtar a.almukhtar@brookes.ac.uk
Centre of Expertise
Public Impact

KdG University of Applied Sciences & Arts
What we do: 3 lines of research

- **Vibrant events**
  - ‘fun cities’

- **Sustainable organizations**
  - ‘soft cities’

- **Smart urban social spaces**
  - ‘smart cities’
VIBRANT EVENTS

- Lively & livable cities
- The social, societal and economic impact of events on cities, citizens and businesses
- Flourishing retail areas
Sustainable Organizations

- Inclusive & diverse(-sensitive) organizations
- Eco-sustainable organizing
Smart social cities

- Human-centered smart cities
- City crowds & flows and subjective wellbeing
- Civic participation & bottom-up decision-making
How we do it

- (online) impact measurement & prediction tools
- (online) protocols, guidelines & games
- (online) workshops, academies & masterclasses
Contact us

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www.publiekeimpact.be/en
Metvibee

Democratizing urban design

Stockholm, Sweden

18 October 2022
Challenge

How do you make urban design more participative?

Urban design today is often a one-way process; even when there’s input it’s often just questionnaires and feedback.

Limited progress has been made in the urban design community towards participatory planning, although we need a highly scalable solution to allow participatory planning to be a gamechanger.
Solution
Democratizing urban design

Let’s involve citizens actively in the design process!
And not just working on their own; work together instead!

Metvibee allows citizens and design teams to draw visual ideas together, upload photos, and add place pins augmented with text.
Features & Advantages

Collaboration through extended reality

- Collaborative visual workflow
- Draw, annotate or upload image
- See real-time what other collaborators are editing
- Easy sharing of results through QR code
Milestones & Plans

**July 2022**
- Start of the idea;
- Concept development

**Sep 2022**
- Team formation;
- Prototype production

**Nov 2022**
- Web Summit demo event;
- Private demo

**2023**
- Public demo;
- Target launch
We wish to find partners for showcase projects that would:

• Actively involve the public during the urban design process, in order to observe and analyze the co-creation process and its product
• To foster transition of the urban design process for public spaces towards a more collaborative paradigm
• To promote the above through social media and marketing
We’re finding:

01 Municipalities
   ... for collaboration in participatory urban design projects

02 Property developers
   ... for collaborative urban development projects

03 Design consultancies
   ... for design projects that involve collaborative urban design

04 Civic organizations
   ... that work with community building, placemaking and participatory urban design
Contact

Raphael Mak
info@metvibee.com
Belfast 15mC in the Smart District A318
Topic 1: Strengthen the mix of urban functions and services

Possibly topic 3: (Re)imagine urban public spaces and streets for vibrant, sustainable neighbourhoods

- Use the Smart District as a testbed to develop synergistic knowledge set to achieve the 15mC in different locations with different yet comparable place-based challenges, needs and objectives. This will enable triangulation between cities and shared learning to be identified across the project.

- What are the barriers to 15mC adoption (develop a matrix to identify shared areas of investigation):
  - Technical - Systems provision and performance, systems operation
  - Social - Recognition, acceptance and engagement, urban actors and gatekeepers
  - Cultural - Alignment and acceptance, urban actors and gatekeepers
  - Governance/regulatory - Cross agency agendas and alignment, urban actors
  - Operational - Ownership and control, urban actors
Partners

• Queens University Belfast
• Belfast City Council
• Business(s) being finalized:
  • Likely focused on data collection, management and service development
Looking for...

- Other cities / research institutions in the EU who:
  - Are interested in the 15 minute city explicitly or implicitly
  - May already be engaged in smart city approaches
  - May be trying to increase city-centre living
  - May already have experience of dealing with city centre living problems
Contact

Belfast contacts

Professor Tom Jefferies, Professor of Future Cities and Director of Research at Queen's University Belfast, t.jefferies@qub.ac.uk

James Noakes, City Innovation Broker, Belfast City Council,
noakesj@belfastcity.gov.uk
15mC for people with impairments
Inclusion: a still unsolved challenge

15mC provide great potential for inclusiveness
Transformation processes must be guided and designed in a way that no one is left behind
People with different impairments must be given barrier-free access
EU and national legislation and standards and norms to be considered
Solutions for people with impairments

Buildings and spatial design
Informational design and design of devices
Technologies in transport and guidance
Supporting systems and personal support
Austrian Association in Support of the Blind and Visually Impaired

...provides:
• Long years of expertise in barrier-free access and mobility solutions
• Experts for transport and information technologies, policies and project management
• Community of test users
• Delegates in standardization committees

...and is looking for partners to cooperate with the aim to:
• Improve the situation for people with impairments in towns, suburban areas and beyond
• Do research for new (technological) solutions
• Help to implement and test better solutions and standards
Austrian Association in Support of the Blind and Visually Impaired

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https://www.hilfsgemeinschaft.at/
Reimagining the "Cardinal Points" Fountain as an island of biodiversity

Associate professor Phd. Diana Andreescu (1), Associate professor Phd. Sergiu Zegrean (2) Ph.D. Bianca Mic (3) Lecturer Phd. Adrian Sinitean (4) Ph.D. Patricia Albulescu (5) Ph.D Alexandra Petcu (6)
The West University of Timişoara is, along with five other universities from EU countries (from Italy, France, Spain and Portugal), a member of the UNITA European Universities Network, one of the 41 academic alliances that constitute today's European universities, a format of education and research development promoted by the European Commission. Together, the six universities that make up the UNITA European Universities Network group. From west to east, UNITA consists of: Universidade de Beira Interior, Universidad de Zaragoza, Université de Pau et des Pays de l'Adour, Université Savoie Mont Blanc, Università di Torino and the West University of Timişoara.

The Western University of Timişoara was present in 21 international classifications of universities in 2020, ranking among the first universities in the country.
Reimagining the "Cardinal Points" Fountain as an island of biodiversity

The European Green Week at UVT is in its fifth edition in 2022, the UVT event being selected by the European Commission as a partner event of the European Green Week, a European program that takes place internationally between May 30 and June 5, 2022.

The central axis of the project consists in the collaboration between teaching staff and students belonging to the three faculties of UVT (FAD, CBG and FSP), with the participation of UVT's Technological Transfer and Innovation Center from the ICAM structure. In this way, the students are an active part of a project through which UVT aims to contribute to the increase of well-being in the community, the creative ideas proposed by them for the reimagining of the "Cardinal Points" Fountain being both aesthetic and functional, in line with the New European Bauhaus.
Focusing on meaningful transformative projects that contribute to improving community well-being, the UVT Digital & Green Living Lab uses digital and green tools for transformative projects, benefiting from human capital and education and research infrastructure. Open innovation ecosystems are communities that bring together all categories of stakeholders, with a focus on environmental impact, that work as a unit focused on open innovation processes to support social and economic growth. You probably know intuitively that being near water can induce feelings of calm. But can it provide the same broad benefits that urban green infrastructure brings to mental health? There could be a direct benefit, for example, from water’s ability to reduce heat stress in a hot climate - the way fountains cool areas. Water can help reduce traffic noise and thus reduce the stress of a noisy urban landscape. Researchers also report a direct effect on stress regulation, finding that contact with nature slows the human stress response and induces calm.
By forming 5-6 multidisciplinary teams (students from the Faculty of Arts and Design, the Faculty of Chemistry and Biology and the Faculty of Sociology within the Western University of Timișoara where each team proposes a concept of "Reimagining the fountain as an island of biodiversity"; The concept will include: design aspects, specific flora (pollution prevention, air and water cleaning, aesthetic function), storytelling appropriate to citizens' perception of space. As the developer of the overall project, it is divided into several stages, visibility, selection, connections with other initiatives for implementation – this pilot can be replicated in a Horizon Europe project / Green Deal / PNRR, with the involvement of a consortium that includes Aquatim, PMT, UVT, Landscape Association and partners from other European countries with relevant expertise.
The central aim of each project was to bring together art, water and ecological design to contribute to sustainability in a socially valuable way.

Pollution prevention, air and water purification, aesthetic function. Vegetation and water, in addition to their aesthetic value, have a purely functional role in purifying the air and improving the environmental microclimate.

What makes this fountain special are the decorative letters marking the four cardinal points N, E, S, V and the four intercardinal points.

The initial idea was to maintain the shape of the circle because it reminds of the shape of the compass, the shape of the cardinal points but also the combination of the four alchemical elements: water, earth, fire and air that go together.
This research also establishes the complete theoretical framework needed to develop, based on and as a result of the research, a pilot project for a public co-design space with additional functions. Being a proposal for outdoor spaces in addition to the benefits of well-being (air, green, birds, water, etc.) there is the possibility that this fountain will become a key element in the promotion and visibility of the city through the aesthetic, but also functional aspect through the complexity offered by the proposed new biodiversity. Water in public spaces has a number of positive effects: in summer, the temperature can be kept a few degrees lower near a waterfront or urban fountains, the heat is kept at a distance and the mental tone of passers-by increases. The humidity also benefits the greenery or the small urban "population" of birds that bring a small corner of nature between concrete and cement. Aesthetically, the artesian fountains offer a welcome visual (and sound) break in the urban space. But when the artesian fountains acquire the value of a tourist attraction, it can be said that they fulfilled even more functions than any other urban concept.
In order to find out the level of satisfaction of the people of Timișoara in relation to the Cardinal Points Fountain, we developed a set of items. The ideal of this research is to take into account what the people of Timisoara want to improve on the current aspect of the fountain. There are 160 participants in this study, of which 99 are female and 61 are male. 59.63% are between 18 and 35 years old, the remaining 40.37% are between 36 and 65 years old. In terms of education, approximately 56% of the participants have higher education.
THANK YOU 😊

Diana.Andreescu@e-uvt.ro

Faculty of Arts and Design
West University of Timisoara
ROMANIA
Circular Urban Economies
Platform urbanization and participatory practices

Innovate urban citizenship

Filippo Bignami, senior researcher
University of applied sciences of Southern Switzerland, SUPSI – LUCI - Labour,
Urbanscape and CI tizenship Research area

18 October 2022
Scope

The project is anchored on the conceptualization of platform urbanization. It captures a particular mode of urban production that is multidimensional in nature, rapidly advancing, and affecting all urban territories around the globe. Platform urbanization requires an exploration of both the “built/offline” and the “digital/online” environments and an expansion of the concept of citizenship.

The scope is to analyse the socio-political effects of increasing digital platformization on urban areas. More specifically, it examines processes of platformization and their implications on modes of exchange, production of spaces and urban governance to set-up a network of knowledge transfer and to share insights and responses to the resulting challenges.
Method

A multidisciplinary and cross-cultural study on recent developments and effects of platformization on the urban realm in order to identify commonalities and differences in different locations. The project starts by investigating platform urbanization processes in different geographies and examine the implications on and shifts of citizenship (inclusion/exclusion, participation/liabilities, access to services, new practices/old practices, etc.).
Activities

a) mapping and contacting key urban actors from formal and informal citizens’ groups as well as institutional bodies (including but not limited to groups of social movements, political groups, lobby groups, volunteering activists, policy makers, etc.);
b) review of relevant institutional documents and data in each case study;
c) conducting semi-structured interviews with key urban actors in each case study;
d) processing and analysis of interviews and other collected data;
e) consolidation of case study reports;
f) reports and initial results will be shared with urban stakeholders;
g) policy briefs
h) international online workshops to consolidate findings and foster awareness of urban citizenship as well as to establish connection and exchange practices;
i) concluding conference;
j) OA publications.
THANK YOU

Filippo Bignami, PhD

Senior researcher and lecturer
University of applied sciences of Southern Switzerland, SUPSI – LUCI - Labour, Urbanscape and Citizenship Research area

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Decision support tool for tackling Urban Heat Island

How can we get inspired by nature to design resilient urban areas?

18 October 2022
Decision support tool for tackling Urban Heat Island

- **Context:** climate change implies more frequent & severe heatwaves
  - Intensification of Urban Heat Island (UHI) effects

- **Strategic goal:** be a driving force for future urban planning policies
  - Help urban planners designing resilient cities

- **Idea:** providing cities with a **decision support tool** for urban planning
  - Mapping, characterization & monitoring of vulnerable areas

- **Who we are:** French consulting company (+25,000 employees)
  - Strong engineering expertise, wide range of activities
Decision support tool for tackling Urban Heat Island

Our expertise
- **Thermal modelling**
  ➔ Thermo-radiative models to compute solar radiation and thermal inertia in a neighborhood
- **Computational Fluid Dynamics**
  ➔ Aerulaic computations to get a mapping of air velocity and temperature
- **Advanced numerical simulation**
  ➔ Innovative physical models allow to simulate and analyze the effect of greening urban areas

What we are looking for
(*not exhaustive!*)
- Expertise in assessing **ecosystem services** of nature-based solutions.
- Experience with **other approaches at wider scales** (e.g., city- or territorial scale).
- Skills in relation with **citizen engagement**, **social impact** of new urban designs.
- A **city** interested in building a demonstrator
Let’s get in touch!

Contact details

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Sylvain RAYNAL
Laurent LABRACHERIE

NB: Another Capgemini team working on smart grid design optimization interested in PED topic 3 « Energy efficiency in existing urban structures”
Sustainable urban food systems and diets

Världsnaturfonden WWF Sweden
Aaron Juarez, Project manager, Food & Cities
aaron.juarez@wwf.se
Food systems matter! Globally they account for:

- Responsible for 27% of GHG emissions
- 70% of freshwater withdrawals
- Main driver of biodiversity loss and tropical deforestation
- Increasing risk for future pandemics
- 1 in 3 overweight or obese
- 1 in 12 hungry or undernourished
- Leading cause of death
- No country on course to meet 2025 global nutrition targets
Cities: key to transforming the food system

• 70% of all emissions, with food as the largest source of consumption emissions within cities

• 80% of the world’s food consumption by 2050

• 500 million tonnes of food waste

• 55%+ of the world’s population

• Testbed for food solutions with cascading co-benefits
“OUR STRUGGLE FOR GLOBAL SUSTAINABILITY WILL BE WON OR LOST IN CITIES”

Ban Ki-moon
Former Secretary General of the United Nations, 2007-2016

One Planet City Challenge
Join the journey and inspire the world
Focus areas

- **Urban Food Systems** (key strategic focus area)
- **Urban Nature Based Solutions**
- One Planet City Challenge
- We Love Cities
- Urban Solutions
- My Healthy Urban Life
- Our City 2030 – youth visions
- Plastic Smart Cities

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**ONE PLANET CITY CHALLENGE**

**2022**

**GLOBAL RESULTS 2022**

- >280 cities participated from around the world.
- 131 of these committed to net zero in the UNFCCC-backed campaign Race to Zero.
- 21 international experts on the OPCC jury.
- Combined population of 284 million people.
- Global Winner cities: LUND, SWEDEN and BOGOTA, COLOMBIA.

- 50 countries on 6 continents represented.
- 74 cities reported targets partially or completely in line with 1.5°C ambitions.
- 122 cities reported at least 1 mitigation target to reduce their emissions.
- 1,037 Mt of CO2e emissions reported in the city inventories (Total scopes 1 and 2).
- 246 Mt total estimated CO2e emissions reductions from actions reported by cities.

- +50% of world population
- 70% of CO2 emissions
- 75% of resource consumption
Building capacity for urban food system transformations

- Local food system assessment e.g. via Urban Food System heuristic tool
- International pilot city projects
- Guides for sustainable procurement, e.g. One Planet Plate, Planet-Based Diets
- Education and youth engagement, e.g. Our City 2030, Eat4Change, Meat, Fish, Vegetable Guides
- Behavior change guide for local governments
- Public engagement platforms, e.g. Earth Hour and We Love Cities
- Coordinated policy work, e.g. via UN Food Summit and Glasgow Food and Climate Declaration
5-year goal: 100 cities have set ambitious targets and are implementing action plans for sustainable diets and urban food systems in line with 1.5°C targets, together with key actors and residents.
Joining forces: what we can offer

- **Global city network**
  Partnerships with ambitious cities mobilised for on the ground climate action

- **Urban food systems focus**
  Combining our food and cities work to advance sustainable consumption and food policy in cities

- **Local capacity building for cities and citizens**
  Extensive library of training and education material, webinars, tools, reporting and implementation support

- **EU-track record**
  Track record managing large EU-projects including DEAR (Eat4Change) and Horizon 2020 (School Food 4 Change)

**CUE topic 3: Urban food systems**
Aaron Juarez
Project manager, Food and Cities
WWF Sweden

THANK YOU

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Background information on Världsnaturfonden WWF Sweden:

WWF is one of the world’s most influential environmental organizations. With projects in roughly a hundred countries, our mission is to build a future in which people live in harmony with nature. In order to achieve our goals, we work both at the political level and in the field and in close cooperation with civil society as well as companies around the world.

More than six million people support us by donating money or by becoming personally involved. WWF Sweden is a non-profit Swedish foundation that works for the global goals of the WWF network. WWF Sweden leads the WWF’s global work on sustainable cities and is a pioneer, since nearly two decades, on the topic of sustainable diets, with practical tools for consumers as well as public and private meal providers. Further, WWF Sweden has an internationally recognized communications and social media team, as well as established models for work with youth and schools.
In EU and Central Asia more than 14 million people became lost their food security during the COVID-19 pandemic.

By 2050, 2,5bl people will experience a of 10% decline in one of maize, rice, soy, and wheat.

Food insecurity is increasing due to the Ukraine war and supply chain disruptions.

Policies are regional, solutions are local. There is a lack of implementation and social design strategies for quick wins.

Inequitable development of food systems
A vision for a planetary city

How a city would look like if it produced all the food it needed to sustain itself.

"By working with the imaginary, we can shift from global supply chains to Regional food security systems.

2030 Target → 0.5 ha/capita (crops + pastures)
Workplan
How we execute the project

- Mapping food systems
  Analyzing land use and supply chains in a given city, together with a participatory mapping campaign to map food production.

- A city vision
  Producing a vision of a self-sustaining city to learn what is the long and short terms actions needed.

- Policy design
  Link our project to existing policies and suggest upgrades.

- Social design
  Design solutions for citizens and local communities to start activating food-sustainability policies today.

→ More on https://medium.com/@spinunit
Next steps

- Call text available at:
  https://dutpartnership.eu/dut_call_2022/

- Always read your specific Funding Agency requirements

- Consult with your national contact point and/or reach us at call2022@dutpartnership.eu

- B2match platform:
  https://dut-calls.b2match.io/

- Deadline for pre-proposal submission:
  21 November 2022
Thank you

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