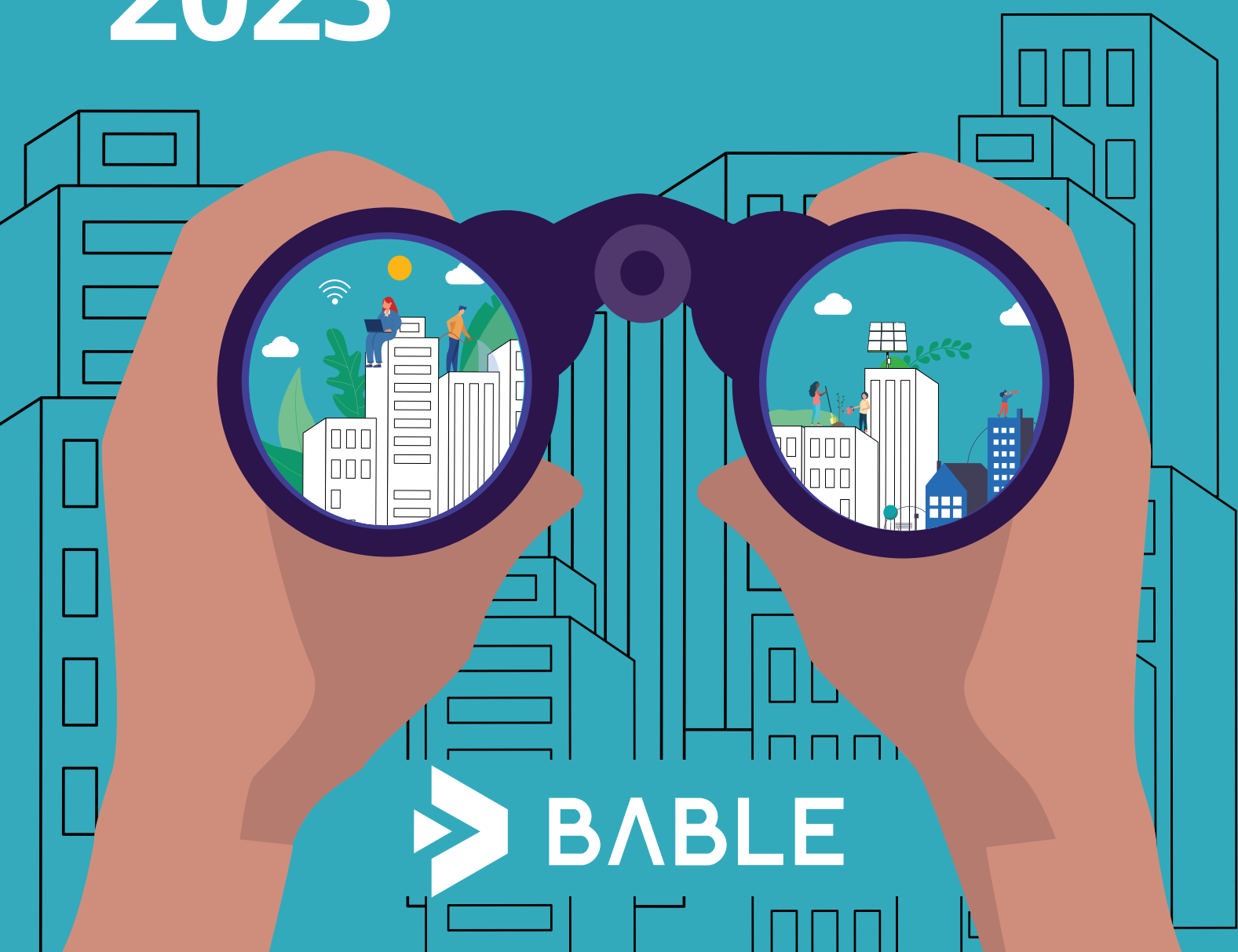# TOP 50
SMART CITY COMPANIES
2023

BABLE

INNOVATION
MARKET WATCH

Foreword

How do we speed-up innovation to create more liveable, sustainable, resilient and smarter communities and cities?

Europe aims to be climate neutral by 2050, and over 100 cities have already committed to reach climate neutrality by 2030. This means that when you are reading this document, they have only 7-8 years left to make this change, and the rest of our continent has less than 30 years to do it if Europe wants to achieve its goal.

One of the big success stories of the last century – the introduction of electric light in homes to substitute candles and fire-based lamps – took ca. 60 years to reach a majority of global households. The needed transformation of our society right now is many times larger, more complex and we have less than half the time.

Therefore, how do we transform our communities and cities at this unprecedented speed? We will certainly have to find a way for the public sector to interact and implement innovation rapidly and easily without losing our European principles of transparency and democracy – but we also need to scale innovative solutions more quickly into large and small cities, across country borders, and that benefit rich and poor, young and old.

I am personally very optimistic about this transformation, as in our daily work we see municipalities across Europe pushing to new limits and innovative companies coming up with game-changing solutions and business models. This Market Watch will provide you with information on 50 highly innovative companies and their solutions, which I am convinced will help us reach our ambitious targets, even faster.

Alexander Schmidt
CEO & Founder at BABLE GmbH

Table of contents

Who is BABLE?

BABLE Smart Cities, founded in 2017 as a spin-off of the Fraunhofer IAO and the Morgenstadt Initiative, has the mission of supporting municipalities and regions in making urban spaces more sustainable and liveable. To this end, BABLE specialises in the process of strategy, development, and implementation of new technical solutions in cities, municipalities, and regions.

As Europe´s neutral facilitator in the Smart City sector, BABLE currently has a local presence in Germany, Spain, Denmark, Romania, and the United Kingdom. This allows BABLE to engage with stakeholders across borders and drive local innovation that increases sustainability, reduces carbon emissions, and improves quality of life.
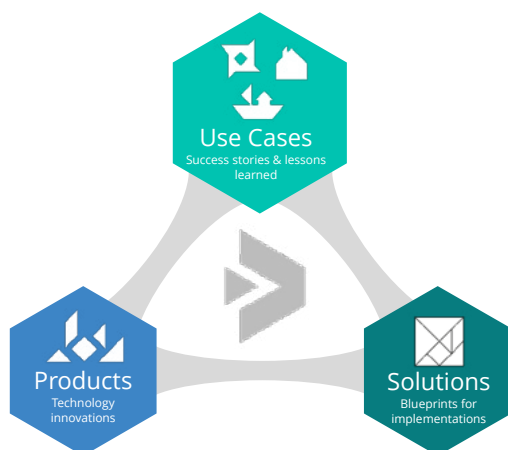
BABLE simplifies urban innovation and facilitates Smart City implementations through its portfolio of complementary and customisable services that empower municipalities, businesses, and other key players across Europe to solve the most pressing urban challenges and achieve ambitious goals in cities. No matter what your role in the Smart City movement is, if you share the same drive to create healthier, liveable, and sustainable cities, BABLE is here to collaborate and together find the best ways to drive the change for a urban life.

BABLE is active with partners in projects in over twenty European countries. The company's expertise has already been used in cities such as Chemnitz, Munich, Leipzig, Prague, Manchester, Eindhoven, Dublin, Ludwigsburg, Norderstedt, Berlin, Bielefeld, Potsdam, Würzburg, Belfast, Liverpool, Sabadell, among many others. BABLE has taught over 150+ organisations with customisable trainings with its "Smart City Specialist" training that was co-developed and certified with the TÜV Süd Academy.

Startups, companies, cities, and other stakeholders can engage with BABLE via the opportunities available for free on the BABLE Smart Cities Platform. Join today to gain access to information and resources, including the ones shown on the left corner of the page.

Additionally, for cities seeking more tailored advice, be sure to explore BABLE's services and support to learn more about ways we can collaborate on the journey to drive the change for better urban life.

Smart in the City
The BABLE Podcast

Hop on the journey towards a better urban life!

[Smart in the City – The BABLE Podcast](#) officially launched in January 2022. As BABLE has vast experience in bringing and promoting ideas and solutions with stakeholders internationally and locally, the podcast is an extension of this goal and mission.

The podcast brings together top actors in the Smart City arena, sparking dialogues and interactions about the players and themes most prevalent for today and the future of urban life. It brings perspective and personal connection to the field while informing and inspiring action.

Since its launch, the podcast has grown steadily and exponentially, currently reaching 2,500 listens. Smart in the City´s audience is worldwide with increased viewership in BABLE´s focus regions.

Some of the past guests include:

From Cities

Gavin Slater
Head of Sustainability
Glasgow City Council
United Kingdom

Elina Wanne
SPARCS Project Manager
City of Espoo
Finland

Alan Murphy
Regional Manager
Smart Dublin
Ireland

Åsa Bjering
International Relations
City of Helsingborg
Sweden

Yiannis Anastasakis
Vice Mayor
Municipality of Heraklion
Greece

From Companies

Rune Brandt Hermannsson
Visualisator & Designer
Light Bureau
Denmark

Merja Honkanen
Project Manager
Kone
Finland

Listen to the Smart in the City podcast on these platforms:

Looking forward

Empowering cities and stakeholders with knowledge is the best way to ensure sustainable cities for the future. Successful implementation of solutions that improve urban life for both people and the planet will come from addressing current problems and finding innovative and sustainable solutions to present day demands in all sectors – from mobility, air quality, energy, data and many more.
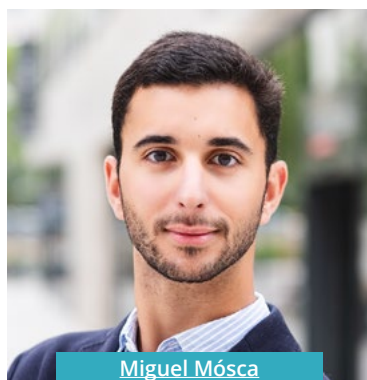
At the moment, Europe is coming out of a pandemic and entering directly into a political and energy crisis. The change is fast paced, and novel solutions must keep the same speed. The future of urban environments is people-centric, sustainable and technology agnostic.

Urban thinkers and technologists — amongst them many tech companies, some cities and a few governments — have long championed the (utopian) gospel of truly 'Smart' Cities. While waiting for the ultimate Smart City vision to materialise, a more pragmatic view has emerged, emphasising the iterative steps and processes toward the ever-smarter city.

We must assemble the puzzle pieces together!

BABLE, as Europe's neutral facilitator for Smart City implementations, has created this report with one focus in mind: creating an information hub for municipalities, stakeholders, and the community to keep up to date with current technology providers and trends in Smart City sectors and to gain more knowledge of how a more sustainable future will look moving forward. The drive to achieve the current sustainable goals is set into motion, but it is up to the key stakeholders in the ecosystem to push this movement forward and to make the changes necessary for more liveable and sustainable cities and places.
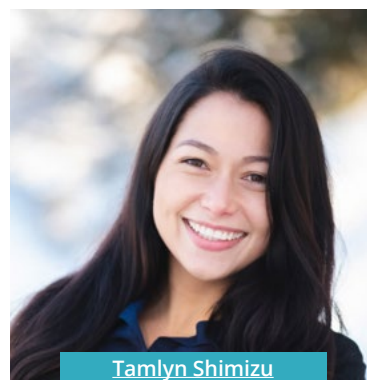
It is with confidence that we look into the future of Smart Cities and work that new solutions and technology are implemented, not to create different systems, but to directly solve real challenges.

Miguel Mósca
Global Private Sector Lead
✉ miguel@bable-smartcities.eu

Tamlyn Shimizu
Global Partnerships & Communications Lead
✉ tamlyn@bable-smartcities.eu

SMART CITY
NETWORKS

BLOX HUB

BLOXHUB is the Nordic hub for sustainable urbanisation. It ensures that its member base of approx. 380 companies, research institutions, organisations and public bodies gains access to a global network of collaboration partners and activities carefully designed to help create better cities. As making cities sustainable is a complex challenge, BLOXHUB believes partnerships are key to solving it.

BLOXHUB sits in a 9.000 m2 co-working space in the heart of Copenhagen, Denmark, along with its resident members. Each day it connects partners, shares knowledge, and creates business opportunities in its global ecosystem.

Founded in 2016
Copenhagen, Denmark

Networking and contacts

Management of knowledge

Internationalisation

Cooperative projects

Contact Information
Click here or scan the QR

Bryghuspladsen 8, 3.
DK-1473 Copenhagen K

company/bloxhub

@BLOXHUBdk

www.bloxhub.org

Info@bloxhub.org

Activities

Through tailored matchmaking, BLOXHUB introduces its members to new partners, collaboration possibilities and business opportunities.

Matchmaking
It meets its members 1:1 and maps out challenges, goals and competences in order to match the members with the right people, both nationally and internationally.

Urban Partnerships
Urban Partnerships is a program designed to address and help solve current city and construction challenges through the use of partnerships. BLOXHUB facilitates workshops and roundtables to share knowledge, mature ideas, and form new partnerships.

Science Forum
The Science Forum brings together several academic networks with the purpose of bridging science and practice within the built environment to foster well-researched solutions in tomorrow's urban transformation.

International delegations
A great number of global cities, governments, developers, and larger organizations come to visit BLOXHUB and interact with the community. It screens every delegation for relevance and matches them with its members.

How do they do it?
BLOXHUB believes that both the current challenges and possibilities in today's green, urban transition require new ways of collaboration - with a cross-disciplinary and cross-sector focus. By bridging architecture, science, design, construction and digitalisation, it strives to unlock the full potential of cities as engines for growth, sustainable development and healthy lliveability.

Current projects
Collaborations with cities, research institutions and organisations globally, with a current stronghold in the Nordics (Denmark, Sweden, Norway, Iceland and Finland), Germany, Spain, Canada and the US with plans for expanding to more territories soon.

In 2023, BLOXHUB looks forward to celebrating Copenhagen as the World Capital of Architecture and welcoming current and potential members and partners from near and afar to join our business matchmaking and social networking festivities.

COPENHAGEN
CAPACITY

Copenhagen Capacity is the official organisation for investment promotion and economic development in Greater Copenhagen. It supports foreign companies, investors, and talent in identifying and capitalising on business opportunities in Greater Copenhagen - from initial considerations to final establishment.

As the leading expert on developing and implementing business opportunities in Greater Copenhagen, and with the most well-connected network in the region, it will help you get the best possible start for success in the region.

Founded in 1994
Copenhagen, Denmark

Talent attraction

Business start-up

Market overview

Industry insight

Innovation scouting

Business development

Land & property search

Partner search & matchmaking

Contact Information
Click here or scan the QR

Nørregade 7B
DK-1165 Copenhagen K

company/copenhagen-capacity/

@CopCap

www.copcap.com

Activities

Copenhagen Capacity is ready to assist you in exploring the business opportunities in the Greater Copenhagen region – free of charge and tailored specifically to your needs.

It has assisted international companies in establishing business in Greater Copenhagen for over 20 years, including creating Nordic headquarters, sales offices, shared services centers, research and development centers, logistics centers, and more. Copenhagen Capacity is a key partner in many initiatives, including the following:

Copenhagen Capacity – Smart City

Greater Copenhagen is a frontrunner in smart urban lighting. Lighting Metropolis will make the region the world's most advanced one-stop hub for smart urban lighting research and development.

Lighting Metropolis is a ground-breaking partnership between

Danish and Swedish regions, municipalities, and universities, inviting international and local companies to create a world-leading region for smart urban lighting.

Smart urban lighting in Greater Copenhagen

Copenhagen Capacity – Sustainable construction

Sustainable construction is a strong and growing sector in Denmark, based on more than 40 years of expertise in energy efficiency in buildings and building renovation. Government incentives and

favorable framework conditions set the scene for green innovation, and public sector regulations demand sustainable solutions in all future construction and renovation projects.

Rikke Petersen

Head of Green Transition Team

rpe@copcap.com

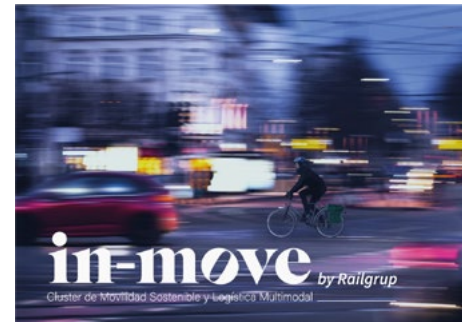**Anders Sloth Nielsen**

Senior Investment Manager
Head of Smart City

asn@copcap.com

in-move
by Railgrup
Cluster de Movilidad y Logística Multimodal

Formerly known as Railgrup, IN-MOVE was founded in 2002 and is based in Barcelona. It is a Sustainable Mobility and Multimodal Logistics Cluster, with 126 associated companies.

Members include the main OEMs, Public Operators, Private Operators, Engineering, Energy, Consultancy, Railway and Logistics Stakeholders in Spain.

Founded in 2002
Barcelona, Spain

Networking & contacts

Management of knowledge

Cooperative projects

Market trends

International events

Innovation Breakfasts

Access to finance

Support for start-ups

Divulgation

Fairs & congress

Internationalisation

Specialized training

Contact Information
Click here or scan the QR

c/ Còrsega 270, 5è - 08008 Barcelona

company/railgrup

@Railgrup

www.railgrup.net

csuraud@railgrup.net

Activities

IN-MOVE has become a benchmark cluster not only in the railway ecosystem but also in the mobility and logistics sector in general. It helps its members to improve their competitiveness through innovation, technological excellence, cross-sectorial knowledge, and the development of joint projects.

As a cluster, it is part of the ERCI – *European Railway Clusters Initiative*-, through which it participates in EXXTRA and STARS European projects.

IN-MOVE also recently joined the new European project MODI launched within the Connected, Cooperative and Automated Mobility (2021-2027 Horizon Europe).

All upcoming activities can be found on its event page: *railgrup.net/in-move-events/*

On 24 November 2022, a new edition of the Innovation Breakfast will be presented in partnership with Panasonic and Kaizen Institute focused. The event will focus on the challenges of digital transformation for companies.

Rail Live brings together senior industry leaders driving innovation, investment and digital transformation in the global rail sector with focus on digitization, sustainability and liberalization. More than 250 speakers, 100 exhibitors and an audience of 2000.
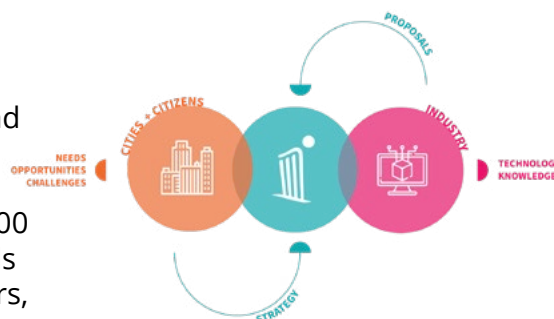
From Aeronautics to railways, through recyclable composites a lecture by Juan José Manso.
Date: Tuesday, Dec 13th, 2022. 10:00-12:00 p.m.
Place: IN-MOVE Pg de Sant Gerbasi, 27 Barcelona.

SmartCity Cluster

The Smart City Cluster, founded in 2014 with headquarters in MálagaTech Park, is an alliance of more than 220 companies, associations, universities, and technology parks, that work for a new smart city model, betting on efficiency, sustainability and improving the quality of life of citizens.

With an aggregate turnover of 16,946 million euros and 113,000 jobs addressing several sectors, the cluster connects the needs of the territories with the offer of the different business sectors, always with a transversal vision of the city and seeking the synergy of companies and the efficiency of public spending.

Founded in 2014
Málaga, Andalusia

Networking and contacts

Management of knowledge

Cooperative projects

Internationalisation

Business development

Contact Information
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C/ Severo Ochoa 4, 4ª Planta, Parque Tecnológico de Andalucía, 29590 Málaga

company/smartcitycluster

@smartcityclust

www.smartcitycluster.org

info@smartcitycluster.org

Over time, the cluster has become a trusted entity for different cities that come in search of advice and neutrality before starting certain processes within the framework of DUSI strategies and in other initiatives with special focus on Calls for Recovery, Transformation and Resilience Plan. Currently the cluster manages 17 innovative projects in which more than 40 PYMES associates, large companies, and universities.

Activities

The Cluster is committed to creating inclusive cities, hence its collaboration with the ONCE Foundation on the Ever Health project, the first accessible telemedicine platform developed to progress a line of work on Inclusive and Accessible Smart City Technology/Product/Service.

Inspired by the "Smartec" project of the Biodiversity Foundation, The Smart City Cluster has launched a training initiative of similar scope and content aimed at professionals who want to deepen their knowledge and sustainable management of mobility, environment and tourist destinations.

Training and Reorientation of Professionals

E-city Málaga Circular Economy Academy 2022 professionals from Málaga Tech Park and the Cartuja Scientific and Technological Park were trained in business models, eco-design, finance, regulations, etc.

Expert in Smart City Management is aimed at professionals and public managers who need to delve into concepts on which smart cities are based, such as technologies, sustainability, urban economy, and the relationship with the citizen.

Vito Epíscopo Solís
President of the Association
Smart City Cluster

Daniel González Bootello
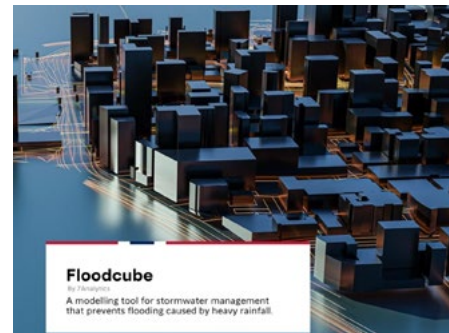Managing Director of
Smart City Cluster

TOP 50
SMART CITY
COMPANIES

7Analytics is building a unique, AI-based, ecosystem for understanding natural hazards in urban planning. All of 7Analtics' "cubes" give customers increased precision and better decision-making power so that cities are developed more efficiently and safely.

What makes them unique?

7Analytics has a disruptive, first of its kind SaaS solution that allows high precision analysis to incorporate natural hazards into city planning. It offers a unique, no-code, easy-to-use risk platform that facilitates knowledge, collaboration, and decision-making.

Floodcube
By 7Analytics
A modelling tool for stormwater management
that prevents flooding caused by heavy rainfall.

Founded in 2020
Bergen, Norway

Sectors

Mobility

Water

Building

Contact Information
Click here or scan the QR

 company/7analytics

 www.7analytics.no

Challenges

Climate change is expected to lead to an increased frequency of intense rainfall periods, as well as an increased amount of total precipitation. Cities must start creating action plans and innovating to prevent the worst effects of these changing weather patterns. This fact must be included in all development plans. Urban flooding has historically been the most expensive natural disaster, and this will only continue to increase as the planet continues to warm.

Many city authorities and most developers and real estate owners know very little about their exposure to flood risk. Yet every dollar invested into stormwater handling saves 25 dollars of future damage cause by increased rainfall and flooding. Cities need tools to accurately predict and mitigate flood risk, along with risks from other natural disasters caused by climate change, to save lives, money, and infrastructure. Without innovations addressing this challenge, cities cannot plan sustainably and will not be reslient enough to handle the climate of tomorrow.
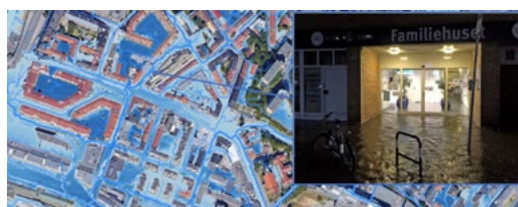
Solutions

7Analytics's first natural hazard solution is the Floodcube, an AI-powered software and modeling tool that predicts site-specific flood risk, creating knowledge to improve the built environment and protect assets. This high-precision risk tool allows key staekholders to perform many important analyses that will help them better predict flood-

risk and mitigate it through better planning and interventions.
It is currently used by customers such as Bergen Municipality, Skanska and Multiconsult.

The Floodcube and 7Analytics' future cubes that address other natural hazards will create more prepared and resilient cities.

ARTERIA TECHNOLOGIES

Arteria is building the digital infrastructure for the heating grids of tomorrow.

What makes them unique?

Arteria's solution is unique in its technological advancement on how heating grids are digitalised as well as in the way it offers its information to the customer.

Founded in 2020

Graz, Austria

Sectors

Energy

Contact Information
Click here or scan the QR

company/arteria-grids

www.arteria-tech.com

contact@arteria.at

Challenges

District heating operators must ensure the safe and highly efficient supply of heating to their customers. Existing ICT tools to optimise grid operation solely focus on minimising fuel consumption at the heating plants and take the heat demand of the end user as given. This, however, disregards the potential of demand response where grid-connected heat users are incentivised to adjust their heat demand so that peak loads at the heating plants can be minimised.
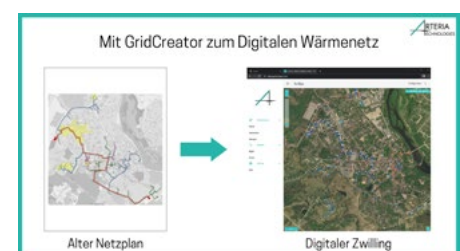
When demand response is properly introduced, market-based forces (dynamic heat price signals) optimise the heating grid automatically without the need of a centralised control system as installed today.

Solutions

Arteria aims to decarbonise heating grids through a web application which transforms conventional heating grids into digital energy infrastructure using a hybrid physics-AI engine to build digital twins for real-time optimisation purposes. With Arteria, heating grid operators can select from tailor-made use cases such as digital twin operational improvements, optimised network planning, heat loss reduction, integration of industrial- and renewable heat, or dynamic tariffs.

While grid operators and existing market solutions focus on grid losses only, Arteria takes the next step and helps to also reduce recirculation losses through its unique approach - using exergy to determine true value flow through the system. This enables customers to save operating costs, reduce CO_2 emissions and offer new services to end users.

Mit GridCreator zum Digitalen Wärmenetz
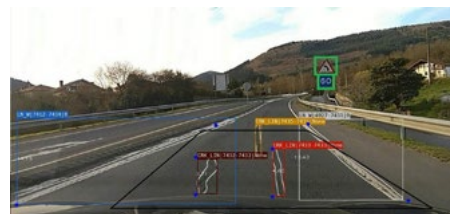
Alter Netzplan

Digitaler Zwilling

ASIMOB improves the safety of all road users, including for future Autonomous Vehicles. It allows road authorities, road operators and O&M companies to gather data to improve safety and optimise their investments.

What makes them unique?

ASIMOB provides a holistic solution, providing the sensors and AI based software. Further, the solution does not require additional vehicles or people in the streets to gather the necessary data.

Founded in 2016
Bilbao, Spain

Sectors

ICT

Mobility

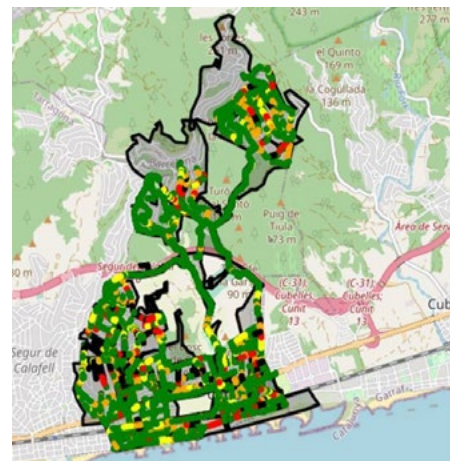Security

Contact Information
Click here or scan the QR

in company/asimob

🌐 www.asimob.es/en

Challenges

In a Smart City, the infrastructure of the streets (signals, mark lanes, state of the suface) must be well maintained to ensure the safety for vehicles and pedestrians. Without digital solutions, checks must be performed manually. This takes time, requires high costs, is inefficient, and many issues are missed. An automated, real-time solution saves time and money and ensures the better upkeep of roadways.

Solutions

ASIMOB's Autonomous City Inspector automatically monitors all road elements to detect incidents and store the pertinent data.

The solution is composed of three parts: the acquisition system, the Artificial Intelligence in the cloud, and the web interface. The acquisition system is installed in vehicles that are going to drive through the evaluated roads/ streets. The Artificial Intelligence is applied automatically each time a section is monitored to detect and classify the elements and to analyse them.

The analysis includes detecting incidents in signals, evaluating bad visibility of road markings and signals, and evaluating the impact of irregularities in the pavement for drivers.

Cities can use this information to make better decisions and increase safety on the road.

aurelia
e-assist bikes

Aurelia produces user friendly, affordable, and quality e-bikes that are distributed in wholesale and retail markets. It also offers rentals and guided tours in Naxos Island and Small Cyclades Complex in Greece.

What makes them unique?

Aurelia is a vertical company, designing, producing, renting/selling, and providing e-bike tours. Its designs have incorporated multi-national feedback due to its location in the Greek Islands, ensuring user-friendly and high quality yet affordable e-bikes.

Founded in 2019

Naxos island, Greece

Sectors

Mobility

Contact Information
Click here or scan the QR

 facebook.com/aureliabikes

 www.aureliabikes.com

Challenges

The Greek Islands are especially fragile ecosystems that are prone to noise and environmental and traffic congestion. Greeks traditionally do not have a cycling mentality, yet this is a very sustainable mode of transit that would help address the above problems facing the islands.

Further, the Greek Islands experience a huge influx of tourists, especially during the summer season, whereas the island infrastructure was developed based on local population numbers. Alternative and sustainable ways of commuting are needed.

Solutions

Aurelia produces e-bikes and has been developing new models every year since 2019 based on the feedback received from the thousands of international tourists. The Aurelia J21 model, which is the 3rd generation electric fatbike of the company, has the biggest battery in Greece, making it powerful enough for riders to confidently traverse mountainous regions and long distances.

Aurelia has further developed a network of charging spots through collaboration with local businesses, where riders can charge their

bikes free of charge. It has also enriched local services and tourist destinations by providing e-bike guided tours that include a headset for navigation and cultural info along the way. In the future, riders will be able to swap out batteries with fully charged ones at the charging stations via an app.

Bewegen

Founded in 2013, Bewegen is a Quebec-based company specialised in active mobility. With an international presence, Bewegen provides a range of self-service vehicles compatible with the same docking technology for turnkey systems designed according to the needs of its customers.

What makes them unique?

Bewegen has created the most advanced bike share system available, featuring world-class Pedelec (electric-assist) bicycle technology.

Founded in 2013
Montréal, Canada

Sectors

Mobility

Contact Information
Click here or scan the QR

company/bewegen-technologies-inc-

www.bewegen.com/en

Challenges

Faced with continued population growth and accelerating climate change, it's critical for communities to rethink how we build, manage, and use urban spaces.

Bike-sharing services are becoming increasingly prevalent in cities yet still face some challenges to improve the user-experience and thereby maximise usage.

Many bike-share systems require bikes to be locked in set stations, offer little if any variety of bikes, lack options for transporting items/cargo, and if they offer e-bikes, they have short battery ranges.

Solutions

Bewegen has created a bike share system with a range of vehicles that are compatible with the same docking technology, allowing mixed fleets of vehicles. The company offers electrically assisted bicycles and also has longtail bicycles that are suitable for family transportation as well as for the transport of goods offered on a self-service basis. Bewegen's vehicles accommodate a large number of users while allowing local businesses to benefit from a vehicle that can be used for a variety of purposes. Furthermore, to reduce operational costs, modular charging hubs are used to allow secure and cost-efficient charging as well minimise general cost for maintenance. The corresponding IT software improves the user experience for both the users of the bikes and the maintenance crew.

bikeep

Bikeep is the leading smart commercial scooter and bike parking and charging provider in the world. It solves big infrastructure problems with tailored micromobility solutions for municipalities, transit companies, and commercial and residential properties.

What makes them unique?

Bikeep's solution is easy-to-install, portable, and wireless.

Founded in 2012
Tallinn, Estonia

Sectors

Mobility

Health

Security

Contact Information
Click here or scan the QR

in company/bikeep

🌐 www.bikeep.com

Challenges

Micromobility solutions, such as scooters and bikes, provide many benefits to users, cities, and the environment. Yet parking them securely and ensuring they are charged when needed can be problematic, causing a worse user-experience and reducing their usage as a means of transport.

Cost and energy effective solutions are needed to prevent theft of micromobility vehicles and ensure users are able to charge them when needed.

Solutions

Bikeep creates bike and scooter combined docking and charging stations, along with smart lockers. The stations are designed with durable material and are easy to repair. In addition to the hardware, it provides software solutions so users can access information and make payments through the app, and owners can access a center console with all management information.

The core of the technology is the smart locking feature and the identification technology. Users know their vehicle is secure and have control over the unlocking via the app.

Bikeep is the infrastructure platform that cities need to make micromobility work in scale for everyone. Bikeep offers a complete solution: system, product and service, as well as expertise in the field of micromobility. The company's activities promote cycling culture and increase the popularity of micromobility, shape public interest and demand.

blue21

Blue21 is a global knowledge leader in realising floating urban and maritime projects that have a positive social and ecological impact. It has the experiences and expertise to guide clients throughout the value chain of floating project development.

What makes them unique?

Blue21 is a team of highly-motivated maritime urbanists. It is one of the only companies in the world that combines knowledge from the maritime and urban sectors that is needed for sustainable floating city development.

Founded in 2015
Delft, The Netherlands

Sectors

Energy

ICT

Building

Water

Contact Information
Click here or scan the QR

company/blue21

www.blue21.nl

Challenges

Cities face a plethora of challenges from urbanisation, rising housing demand, and climate change. Improving living conditions and people's wellbeing while creating spaces that are economically viable, have a positive ecological impact, and are built in balance with nature can seem an impossible task, especially when building on land is simply not possible nor economically viable.

With growing populations comes a lack of space, a lack of affordable housing, urban sprawl, and high CO_2 emissions. Innovative and sustainable design approaches are needed to mitigate these challenges.

Solutions

Blue21 applies state-of-the art lightweight floating technology to enable floating urban development. Different materials have been used in its various projects, including concrete, polystyrene, steel and lightweight composites. Blue21 is a workpackage leader in the European Commission Horizon 2020 project Space@Sea, which is developing a sustainable and affordable workspace at sea in collaboration with 17 European partners. The modular island is standardised and cost-efficient with low ecological impact.

R&D is at the core of the company. Two of its team members have completed a PhD at the Delft University of Technology, and it works with world renowned

research institutes such as Deltares and MARIN to be at the forefront of technical innovation.For example, Blue21 developed an innovative bi-facial floating solar PV system that rotates with the sun to optimise energy yields, for which a patent is pending.

BrightSites
by ⓢignify

Signify is the world leader in lighting for professionals, consumers and lighting for the Internet of Things, transforming legacy lighting infrastructure into a platform of scalable connectivity and unlocking the extraordinary potential of light for brighter lives and a better world.

What makes them unique?

BrightSites by Signify provides an end-to-end, wireless, and scalable solution to retrofit street lighting with concealed 4G/5G connectivity, creating the connectivity grid of the future for cities. Plus, it's sustainable and aesthetically pleasing.

Lighting grid of the future enables Smart Cities

Light is everywhere
Ideal scale, location and granularity for wireless connectivity

Ultra-high bandwidth
Data backbone for 4G/5G, Wi-Fi and Fixed Wireless Access

Speed to market
Existing lighting infrastructure enables rapid expansion

Cost efficiency
50% lower deployment cost

Founded in 1891
Amsterdam, The Netherlands

Sectors

Energy

IoT

Security

Connectivity

Contact Information
Click here or scan the QR

company/signifycompany

www.signify.com/global/innovation/brightsites

Challenges

New telecommunication standards such as 5G and WiFi6 are quickly gaining ground and introducing new dilemmas for cities. The lighting grid offers the opportunity needed for seamless 5G deployment: proximity, granularity, scale, power and elevation.
Unlike building facades, it has few owners which makes permitting and contracting a straightforward process.

Embedding a wireless gigabitnetwork in the lighting fixtures creates a neutral host network to branch out from fiber point-of-presence to the full granularity of the lighting grid. With a self-organising gigabit network and license free spectrum, installation and commissioning is seamlessly simple. With this, the lighting infrastructure is ideally positioned to provide the Grid of the Future.

Solutions

BrightSights by Signify has launched a disruptive outdoor lighting solution that transforms communities and enterprises into digital highways of broadband connectivity. By upgrading the street light infrastructure, the BrightSites solution accelerates the deployment of 4G/ 5G small cells, Wi-Fi and Fixed Wireless Access. It enables the increase of network reach and caters for the growing demand of IoT led initiatives that optimize city operations and improve the quality of life for citizens.

BrightSites by Signify is an end-to-end, wirelessand scalable solution that can be integrated simply and seamlessly into the urban environment without creating visual clutter.

candam

Candam converts city waste and recycling bins into reverse vending machines that can be used for return and earn schemes.

What makes them unique?

With simple design and unique patented technology, Candam enables scalable return and earn schemes at an affordable price. Previous technologies failed to become widely adopted due to their cost.

Founded in 2017

Barcelona, Spain

Sectors

Waste

Contact Information
Click here or scan the QR

company/candam

www.candam.eu

Challenges

Waste is increasingly becoming a global issue as populations grow and consumption increases. Toxic waste is destroying ecosystems and causing serious harm to humans and animals alike. Cities in particular spend many resources on waste collection and handling. Correct upfront sorting of waste can lead to decreased costs and increased rates of recycling.

However, changing human behavior can be difficult and residents need to understand how to properly sort their waste (or have it automated for them), and to be incentivised to do so.

Solutions

RecySmart is an IoT device adaptable to all type of waste bins that categorises and sorts the packaging items that citizens recycle. It uses acoustic techniques combined with an AI algorithm to be able to tell which packaging material has been introduced.

Then, through rewards or refunds, it engages citizens to recycle more and better. As it leverages the existing infrastructure without the need of new bins or trucks, RecySmart enables affordable and flexible Return and Earn schemes to be deployed, increasing recycling and reducing waste handling costs in cities.

CitizenTalk

CitizenTalk offers digital democracy in your pocket for smart cities, regions and countries. CitizenTalk also provides business innovation and skilled workforce retention, as well as mobile market research with on-the-ground digital customer interviews for smart cities and businesses.

What makes them unique?

CitizenTalk is an app based on collective intelligence which offers a combination of e-participation & co-creation. The platform is unbiased, anonymous, equal, and democratic.

Founded in 2021

Besenbüren, Switzerland

Sectors

Health   Energy

Building   Mobility   ICT

Contact Information
Click here or scan the QR

company/citizentalk

www.citizentalk.ch

citizentalk@crowdcoach.com

Challenges

Cities lack clear communication channels with their citizens. They do not have robust digital forums to understand their opinions, hear their arguments, and co-create solutions together.

Corporations also struggle to tap into the ideas and innovations of all employees, and to understand what their customers really want.

Solutions

CitizenTalk provides a digital platform that turns hundreds of people into co-thinkers and co-creators, enabling them to solve complex problems and challenges collaboratively.

Citizens, employees, customers or members contribute their best ideas in a simple, low-threshold and playful way in an open swarm dialogue. Users scan a QR code, think together and interactively co-create with others.

This method unleashes the full innovation potential of an organisation and drives faster and easier decision-making. CitizenTalk enables the dialogue of the future for broad-based, independent opinion-forming, that can be done locally, regionaly, or globally.

CityQ

CityQ provides 4-wheel e-bikes for both cargo and personal use that provide more comfort, safety, and flexibility.

What makes them unique?

CityQ offers the first weather-protected ebike for both B2B and B2C. The bikes have been optimised to have high uptime, minimal maintenance, and low cost of ownership.

Founded in 2017
Nurnberg, German and Oslo, Norway

Sectors

Mobility

Contact Information
Click here or scan the QR

company/cityq

www.cityq.biz

Challenges

Cycling and e-bikes can be a great mode of sustainable transit - when the weather is good. However, during cold winter months, super windy days, or rain, snow, or ice, cycling is a much less attractive way of getting around.

Innovative solutions are needed to weather-proof e-bikes so that they continue to be a viable sustainable transit option in less than ideal weather conditions.

Solutions

CityQ provides weather-protected, 4-wheel e-bikes for both personal and business use. CityQ's bikes replace vans for cargo transport and cars for passenger transport. The bikes offer the comfort of car-like seating for drivers and passengers, have full weather protection with their floor, roof, and doors, and provide many safety features such as rollover stability, bumpers, and seat belts (resulting in much fewer accidents compared to escooters and cycling). The chainless bikes reduce maintenance by 50%. No license is required and drivers can ride and park anywhere they like, just like a bike. The cargo bikes can carry up to 170 kg and can replace most cargo vans.

The bikes can be rented, leased, or purchased.

Decongesting through downsizing cars into high tech ebikes
The comfort, flexibility and safety like a car – but occupies no more space than other cargo bikes.
90% less CO2 and energy consumption.

civic dollars

Civic Dollars is a community currency platform that improves the health of citizens by incentivising physical activity.

What makes them unique?

Civic Dollars differs from other activity reward platforms as it does not focus on the activity levels, only the time spent in the earn zones, encouraging all people to be active regardless of their physical ability, age or gender.

Founded in 2019
Belfast, Northern Ireland

Sectors

Health

Social Responsibility

Contact Information
Click here or scan the QR

in company/civicdollars

🌐 www.civicdollars.com

Challenges

Sedentary lifestyles contribute to many chronic diseases, including obesity, type 2 diabetes, and heart disease, which caused over 200,000 deaths in Europe last year.

Research has shown that "consistently physically inactive" patients who contract COVID were more than twice as likely to be admitted to hospital as those who did 150 or more minutes of physical activity per week.

They were also 73% more likely to require intensive care, and 2.5 times more likely to die of the infection. Physical inactivity leads to lower well-being levels and puts a huge strain on healthcare systems.

Solutions

Civic Dollars is a community currency platform that is used to improve citizens' health by encouraging physical activity and helping them to engage with their communities. Users earn Civic Dollars by visiting parks and open spaces, volunteering in community groups and reporting problems to the city. Users can only exchange their Civic Dollars for rewards that will improve their lifestyle, such as a free pool or gym pass or a public transport voucher, or they can choose to donate their Civic Dollars to a local community organisation.

The organisations can accumulate the Civic Dollars and use it to hire city services or for consultancy services from local businesses. These businesses can then use their Civic Dollars to reward employees for volunteering in the community groups or for walking/cycling to work, completing the "Closed Loop Currency".
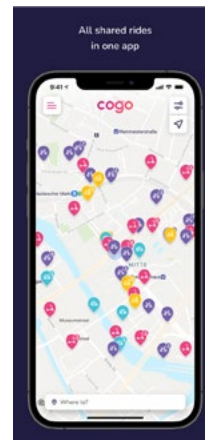
Civic Dollars does not measure steps or distance that the users walk/run, only the time spent in a zone, so there is no discrimination against users with mobility or health issues.

cogo

Cogo gathers shared rides for frictionless mobility and a better tomorrow by placing all human- and electric-powered shared rides in one app as long as they are human- or electric powered. Users can find shared electric scooters, cars, bikes and mopeds from over 250 operators in 700 cities worldwide.

What makes them unique?

Cogo offers the most comprehensive price comparison tool for sustainable shared mobility and empowers its users to compare price and travel time across operators and vehicle types in one simple search.

Founded in 2020
Copenhagen, Denmark

Sectors

Mobility

Contact Information
Click here or scan the QR

in company/cogomobility

🌐 www.cogoapp.io

Challenges

There are 300 million cars in Europe and traffic congestion costs the EU economy €100Bn annually. Studies show that the car fleet can be reduced by a third if shared mobility were widely adopted, meaning €33Bn in congestion costs in Europe and 460 million tons of CO_2 would be saved annually.

According to US research, 45% of users reported that if a shared scooter had not been available, they would have otherwise completed their trip with a private car or ride hail vehicle.

There are hundreds of different mobility operators in Europe spread across 500 cities. The biggest issue for the users is a lack of transparency and a full overview of all available rides. Users are also forced to have multiple apps installed and to sign-up over and over again

Solutions

Cogo is an app that aggregates all human- and electric-powered mobility options nearby into one place. Its solution helps make shared mobility more accessible and easy to use by allowing people to have access to all different types of modes of transport from all operators without the need to download several apps.
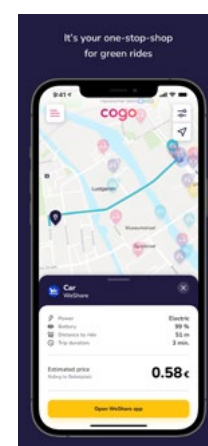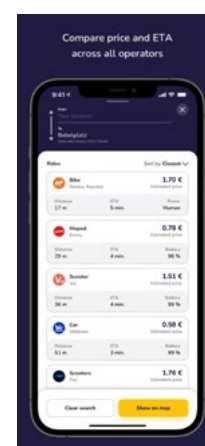
chargeBIG
powered by MAHLE

MAHLE GmbH, based in Stuttgart, is one of the largest automotive suppliers worldwide for engine systems, filtration, mechatronics, thermal management and charging solutions.

What makes them unique?

chargeBIG is the intelligent charging solution from MAHLE that is cost-efficient, inexpensive to maintain, and scalable as demand increases. Its solution provides 18 to 100 or more electric parking spots for fleet operators.

Founded in 2019
Stuttgart, Germany

Sectors

Energy

Mobility

Building

Contact Information
Click here or scan the QR

company/mahle

www.chargeBIG.com

Challenges

EV charging solutions can require high investment and maintenance costs. Many solutions for charging infrastructure are not scalable - they are not designed with future demand in mind and will require significant investment in the expansion of grid connections as demand grows.

Solutions

chargeBIG offers a full-service solution for both AC and DC charging, tailored to the customer's requirements. It provides intelligent charging solutions that are expandable and can grow with demand. The solution is user-friendly and the design-to-cost approach prevents investment in the expansion of grid connections, saving time and money on the construction of charging infrastrucutre.

With its complete portfolio, chargeBIG is a provider of charging hardware and load management, charging point operator and mobility service provider. At the customer's request, the implementation of a full-service solution for individual charging requirements is offered, including professional advice, installation, maintenance, service, legal settlement and operation of charging points.

CORTEX(IA)

Cortexia uses AI to provide a precise and real-time monitoring of urban cleanliness. Data driven cleaning allows cities to clean urban areas only where necessary, using less energy and water, emitting less greenhouse gases, and reducing the amount of litter that is not collected.

What makes them unique?

Cortexia is the only company with an automatic cleanliness monitoring solution and has a patent filed for the optimisation based on measured environmental data.

Founded in 2016
Fribourg, Switzerland

Sectors

ICT   Waste

Contact Information
Click here or scan the QR

company/cortexia-solutions

www.cortexia.ch

Challenges

Expectations on the urban space are constantly increasing, yet available resources are not growing at the same speed. Cities must do better with less. Currently, cities clean according to routine schedules, regardless if the area is dirty or not. This comes at high costs and negative environmental impacts.

To be more efficient, cities need to manage their resources according to objective indicators, achieving a measurable level of service and optimising their resources accordingly. Detailed data on the type of waste generated and the evolution of cleanliness over time in an area is needed to diagnose the situation and take approriate action. Then cities can adapt routes according to the level of soiling and re-organise trash recepticles based on need.

Solutions

Cortexia's automatic measurement system is made up of a camera and a calculation unit that is installed on vehicles traveling the city. This system detects waste using advanced AI algorithms, directly on the vehicle, without any images being transmitted. Thirty categories of waste are detected, including type and quantity of waste, gps position and time, which are transmitted by cell network (LTE). It operates automatically as soon as the vehicle is running without driver intervention. The data is accessed via a web browser and no hardware investments, IT infrastructure, data acquisition nor system supervision are required.

The Clean City Index (CCI), representing the level of cleanliness, or quality of service, is computed from the collected data (type and quantity of waste). This index translates the users' cleanliness perception by a grade between 0 (dirty) to 5 (clean). It takes into account all the factors and their impact determining the cleanliness level of a place like a square or a street. Cleaning frequencies and routes can be optimised according to the expected degree of cleanliness.

Cortexia's customers have achieved approximately 20% of savings in machine hours and CO_2 emissions to date.

Crossiety has developed a digital communication platform for communities and cities. On the interactive platform, local residents and adminstrations can inform, network, organise, engage and communicate with each other, leading to a smarter coexistence.

What makes them unique?

Crossiety's digital solution is local, using the administration as a central point of contact, trustwothy as it does not allow anonymous users, and meaningful as it promotes networking, participation, and engagement among local citizens.

Founded in 2015
Zurich, Switzerland

Sectors

Other

Contact Information
Click here or scan the QR

in company/crossiety

🌐 www.crossiety.ch

Challenges

Digitisation has connected the world, yet people are increasingly unaware of what is happening on their own doorstep. The need for digital communication channels is growing rapidly in communities and cities to increase wellbeing and drive a better urban life.

Ways are needed to connect local populations with each other and strengthen the link between public administrations and citizens for smart coexistence.
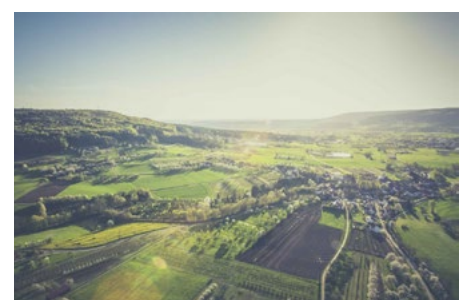

Solutions

Crossiety's Digital Village Square is a trusted local online communication platform for communities and cities. On the interactive platform, users can inform, network, organise, engage and communicate with each other. The platform is available free of charge for residents, associations and businesses. Communities and cities can benefit from the digital possibilities in a B2G subscription model.

Citizens, clubs, schools, businesses and all other communities of interest have the opportunity to create their own contributions on the online platform and publish them in the appropriate channel

(village square, help, events, marketplace, groups). Due to the versatile functions as well as the possibility of regionality, public administrations quickly achieve a higher reach for public information than with the usual communication channels.

Ducky

Ducky is a highly scalable, easy-to-use web app that enables anyone to measure their carbon footprint, visualise how their carbon footprint is impacted by daily activities, and receive personalised advice on how tolerable lifestyle changes can reduce their footprint. Its climate technology enables citizens, companies and policymakers to co-create a climate neutral society.

What makes them unique?

Ducky has a holistic perspective to drive individual climate action and the capacity to bring together many different stakeholders from both the private and public sector.

Founded in 2014
Trondheim, Norway

Sectors

Mobility

ICT

Energy

Contact Information
Click here or scan the QR

in company/ducky-as

🌐 www.ducky.eco

Challenges

Only a decade is left to slash global carbon emissions to avoid catastrophic warming, but progress is not being made fast enough. Some reasons for this include a lack of a holistic picture and understanding of consumption based emissions in cities and municipalities and climate action happening in silos, even at the local level.

Additional tools are needed to make a real difference on both the individual and organisational level.
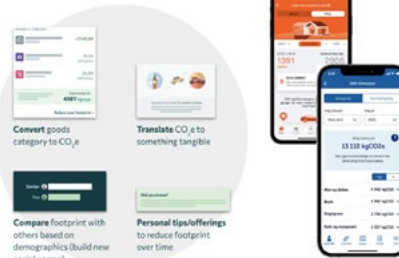
Solutions

Ducky provides climate technology that enables society to co-create climate friendly communities. It can be used by businesses, schools, and cities to drive individual engagement in taking climate action. Users can measure their current carbon footprint, attitudes, and knowledge about

their personal impact, work together and compete to reduce carbon emissions by improving daily activities, and see where they have saved the most and which areas need improvement. APIs also provide private consumption data that helps both the public and private sector make decisions.

Ducky Insights - API for climate nudging

eco computer

Ecocomputer provides specific and high added value software for smart cities, focused on solutions for the waste management sector, since 2015.

Its software is currently used by more than 160 recycling centres in Spain.

What makes them unique?

Ecocomputer differentiates itself from its competitors as it provides its own technology with expert technical support and has evolved its software with its business knowledge.

Founded in 1999

Aviles, Spain

Sectors

ICT

Waste

Contact Information
Click here or scan the QR

in company/ecocomputer-s-l-

🌐 www.ecocomputer.com

Challenges

Legacy waste and recycling centers are not digitised and lack data insights to drive better decision making. Citizens often have little to no information about the waste and recycling processes of their city. With outdated systems, the centers struggle to adapt to new regulations.

Solutions

Ecocomputer's ACTAIS Waste software manages waste traceability in recovery and recycling center operations (inputs and outputs), providing complete and up-to-date data for decision making. The software makes it possible to apply innovative tools to involve citizens in selective waste collection (communication campaigns, surveys, rewards, etc.).

ACTAIS Waste is a specific, modular, and high customisable software with the option to combine hardware solutions, such as Ecocomputer's own Touchscreen Digital Display Totem.

ECONEC brings to the market unique, intelligent and efficient technological solutions for the development of one of the increasingly used and popular forms of tourism - cycling and micromobility.

What makes them unique?

ECONEC develops aesthetically pleasing modular charging stations that can charge e-bikes, e-scooters, and mobile devices and various solutions can be used for a wide range of use cases.

Founded in 2020
Trenčín, Slovakia

Sectors

Mobility

Building

Energy

Contact Information
Click here or scan the QR

in company/econec

🌐 www.econec.eu

Challenges

E-cycling and e-scooters are becoming increasingly popular as both modes of transit and leisure activities, such as cycle tourism. However, additional infrastructure is important and necessary for electrocycling enthusiasts to have the best user experience and to increase the usage of these sustainable modes of transit and tourism.

Especially on long journeys, troubles may arise and users may to be stranded without means to fix or charge their vehicle or find their way to their destination.

Solutions

ECONEC develops and produces charging stations for electric bicycles, scooters and e-mopeds. It is a supplier and implementation partner in the construction of cycle paths and charging stations for municipalities, cities, institutions operating in the field of tourism, and for companies that do business in this area.

ECONEC's charging stations bring carefree cycling to cyclists and other micromobility users. Under the cover of ECONEC's beautiful charging stations, cyclists can charge their e-bike, inflate their tires, fix anything broken on their bike, and charge their smartphones or smartwatches.

The version "vision" has a unique 17" touch display that cities and municipalities can use as an advertisement or to inform cyclists and tourists about what to visit, where to go, and ways to explore beautiful and interesting areas.

The charging stations come in various sizes and formats and can be used on a small scale such as for a hotel or guesthouse, or to serve as a shelter and recreation area on bike routes.

Elektronio is a micro mobility solutions company which makes custom revolutionary handcrafted electric bicycles and kick-scooters for diverse applications in urban transportation, such as commuting, urban deliveries or serving people with certain health issues who cannot ride conventional e-bikes.

What makes them unique?

Elektronio's micromobility vehicles focus on safety & comfort, novel design, smart cargo space, and customisation. Certain models also provide options for persons with reduced mobility to partake in active micromobility options.

Founded in 2015
Thessaloniki, Greece

Sectors

Mobility

Contact Information
Click here or scan the QR

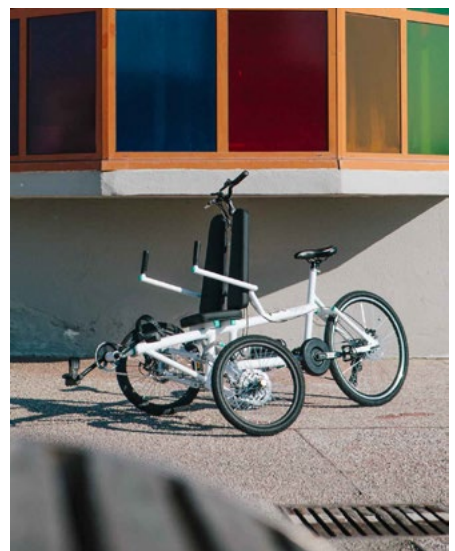in company/elektronio

🌐 www.elektroniowheels.gr

Challenges

Typical urban mobility problems include congestion, pollution, and lack of parking spaces. Micromobility options can address these issues, yet many solutions offered are not able to be adopted by every person in a city. Solutions that satisfy diverse needs, including for long-distances, hilly terrain, carrying cargo, and for disabled persons are needed to increase adoption of sustainable mobility options.

Solutions

Elektronio handmakes a variety of micro e-mobility vehicles. Its Pla.e bike and Patin.e scooter are alternative solutions to commuting and can travel long distances while maintaining rider comfort, Pla.e+ & Kouvala.e are green delivery tools equipped with cargo strage space, and Abl.e, Pla.e Together and Car.e for Brainbox are models that bring disabled people back to cycling and socialising. These vehicles can also be used to provide unique tourism experiences.

ELONROAD©

Elonroad offers fully automatic EV charging, unlocking unlimited range. Rails in the street supply vehicles on the go, driving the transition from fossil-fuel mobility to sustainable electric mobility. The system is estimated to reduce traffic emissions by 7.66Mt CO_2 by 2050.

What makes them unique?

Elonroad provides charging for every type of electric vehicle and swarm-intelligent management of multiple cars charging in a smart and efficient way. The solution also includes electric grid load balancing and smart billing solutions.

Founded in 2015

Lund, Sweden

Sectors

Health

Energy

Building

Mobility

Contact Information

Click here or scan the QR

company/elonroad

www.elonroad.com

Challenges

Gasoline-fueled vehicles have a number of negative impacts from increased air pollution and carbon emissions. Large commercial vehicles, in particular, can be especially polluting, as their heavier payload causes more friction on tires, and last mile delivery is a massive health risk for citizens.

Electric vehicles address these issues, yet transitioning to electric cars, trucks, and buses presents many challenges for the stakeholders involved. Vehicle owners face prohibitive costs, anxiety about vehicle range, less than ideal charging solutions, and for commercial vehicles, concern about the down-time needed. Implementing charging stations and infrastructure presents problems for cities that lack space. Charging during peak hours can put massive strain on the energy grid as electric vehicle charging demand increases. Finally, charging stations have complicated ownership structures and billing models.

Solutions

Elonroad's electric vehicle charging solution can be implemented on the road to automatically charge vehicles as they are driving. It requires much less space than traditional charging stations and vehicle batteries can be much smaller since charging occurs continously on the street grid.

The charging rails use recycled materials such as aluminum and require much fewer resources than traditional stations. No workflow interruptions occur for drivers as charging happens while driving their normal route.

Finally, Elonroad's software equipped with swarm intelligence provides sufficient charge for all vehicles and intelligent load balancing shaves peak-energy and reduces overall demand on the grid. Automatic smart billing avoids headaches for the end user.

ENERGY FLOORS

Energy Floors develops, sells and rents innovative floor systems that convert kinetic energy from pedestrians and solar energy into electricity. Its mission is to speed up the energy transition by creating awareness about renewable energy in exciting ways.

What makes them unique?

Energy Floors is the only company creating smart, walkable solar modules.

Founded in 2009
Rotterdam, The Netherlands

Sectors

Energy

Building

Mobility

Contact Information
Click here or scan the QR

in company/energy-floors

🌐 www.energy-floors.com

Challenges

The sun provides enough energy to the Earth in one hour to meet the energy needs of the planet for an entire year. The technology to create a sustainable world already exists, yet fossil fuels still make up almost two thirds of the global energy mix. One reason for this is a lack of awareness - average citizens do not know much about energy and may not know how to embrace these technologies into their daily life.

Innovative solutions are needed to make sustainable energy production visible, interactive, smart, and fun.

Solutions

Energy Floors has three different types of energy-producing floor systems. The first is the dancer, which captures kinetic energy from people dancing, such as at festivals and nightclubs, and turns it into electricity. The second is the gamer, used to educate children, which has twelve different educational games played by walking, running, and jumping on the illuminated floor tiles. The third system is the walker, which captures solar energy from the sun and can be installed permanently on sidewalks and walkways.

The floors can be installed near EV charging stations to help provide energy to charge e-bikes, e-scooters, and electric cars.
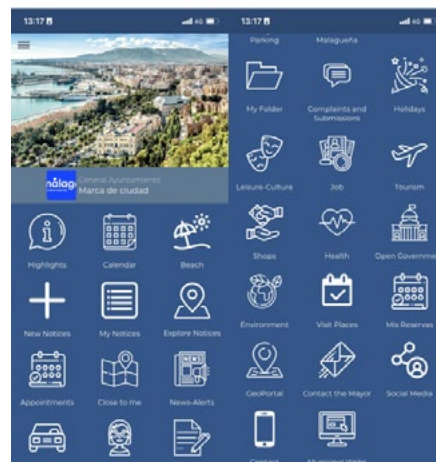
GECOR
TU PLATAFORMA DE PARTICIPACIÓN CIUDADANA

Gecor specialises in developing technological solutions for public administrations and smart cities, as well as for companies seeking to improve their processes using technology.

What makes them unique?

The Gecor team has 20 years of experience working with public administrations. Its app is the most prevalent "City App" in Spain, used in more than the 5% of all cities, and is also used in Brazil, Mexico and the USA.

Founded in 2013

Málaga, Spain

Sectors

Social Responsibility

Contact Information
Click here or scan the QR

in company/gecorsystem

🌐 www.gecorweb.com

Challenges

Mobile phones are widely used by urban populations. Municipalities are therefore trying to offer digital services, accessible via mobile phones, to their citizens. However, cities often have a huge number of apps for different services, causing great confusion among citizens and a lack of awareness on what digital services exist.

Consolidating these digital services will lessen confusion, ensure trusted information reaches citizens, and improve quality of life in cities.

Solutions

Gecor is a citizen communication platform for smart cities that includes, among other functionalities, an incident management module for the maintenance of public spaces in a smart city context.

It recently has evolved to a transversal city platform that integrates different services, called an "app of apps". It is a mobile app for the city that integrates all the rest of apps (public transport, tourism, etc) under an single user ID. This platform includes a backoffice in which city managers have access to a "City Dashboard" in which they can obtain information about all offered services, which is vital for improved decision making. Currently, more than 3 million citizens have access to GECOR in their cities.

Gecor's goal is being able to offer all possible city services to both, visitors and residents in a single "City App".
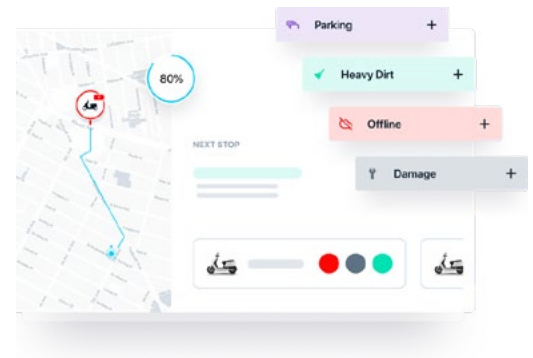
goUrban

goUrban is a SaaS company working in shared mobility, enabling car sharing, micromobility, rental services, and corporate fleets. By identifying common problems in the industry, it offers a flexible, modular approach, allowing customers to choose packages and modules most relevant to their use case.

What makes them unique?

goUrban's OS allows for a flexible, modular approach, rather than a one-size-fits-all solution. Customers can thus choose modules most relevant to their use case, from plug & play to more complex solutions.

Founded in 2016
Vienna, Austria

Sectors

ICT   Mobility

Contact Information
Click here or scan the QR

company/gourban-mobility

www.gourban.co

Challenges

Mobility is rapidly changing as climate change, congestion, and air pollution become growing problems. Digitisation and multimodal transit options are new trends in the mobility sector.

There are many opportnities for new business models that promote sustainable modes of transit yet are profitable for owners and convenient for users. Car dealerships, car rental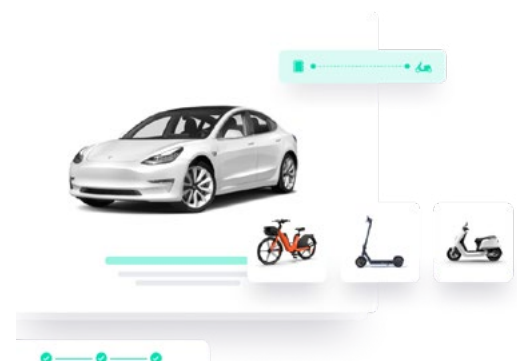 companies, and corporations that own company vehicles can begin offering vehicle-sharing services to maximise profits and contribute to the sharing-economy. Current shared-vehicle fleet operators can benefit from better management and data about their operations.

Solutions

goUrban contributes to the goals of smart cities by providing a flexible platform that enables multimodal transport. Through working with shared mobility operators, whether public or private, goUrban's software provides fleet and operations management through the cloud with a white label end-user app, data analytics, station/POI information, etc.

The team of engineers can also enable integration to allow operators to work with only one API and still have access to all supported vehicle types and IoT providers. Thus, goUrban can assist smart cities in establishing multimodal transport hubs, reducing reliance on private vehicle ownership and ultimately reducing congestion, greenhouse gas emissions and improving quality of life in urban centres.

GREENPASS®

GREENPASS is a PropTech company for climate-resilient urban planning & architecture and the world's first all-in-one software-as-a-service (SaaS) for assessing, optimising & certifying the environmental impact of real estate & open spaces.

What makes them unique?

GREENPASS makes the impacts of green infrastructures and other structural measures on the urban environment visible, measurable and comparable.

The world's first SaaS & 1-stop-shop for environmental impact service

Founded in 2018

Vienna, Austria

Sectors

Health
Energy
Building
Air
Water

Contact Information

Click here or scan the QR

in company/greenpass-enabling-livable-cities

🌐 www.greenpass.io

Challenges

Cities and municipalities must begin making climate-proof urban developments to hit their climate goals, improve their resilience, and improve urban life. The design of these developments need to consider six main challenges: climate, water, air, biodiversity, energy, and cost, yet standardised tools and methodologies to assess these areas are lacking. Without ways to accurately measures the impacts in these areas, urban design and planning will not be as robust.

Solutions

GREENPASS's software can assess, optimise and certify real estate, city districts and entire cities with regard to their climate resilience, providing the missing link between the practical CAD/GIS planning world and scientific microclimate simulations. It is free to download, easy to use, and can be applied immediately.
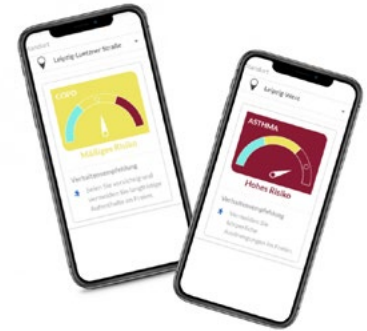
GREENPASS trains Urban Climate Architects (UCA) on the tool via a 3-day online training course. The technology includes holistic 3D impact analysis and enables scenario comparison and fact-based optimisation based on a digital twin and expert simulations.

GREENPASS is currently developing a 1-stop shop - a single online platform that will enable full control over climate and future-proof real estate and open spaces for all stakeholders of an organisation. A marketplace will connect planners and architects with potential clients.

The urban environmental impact of building projects in terms of cost-benefit efficiency can be analysed, optimised and certified with ease. The data-driven cloud solution will drive fact-based decisions and provide an overview of the organisation's ESG impacts and activities.

HawaDawa

Hawa Dawa compiles air quality data from different sources (satellites, public stations, IoT sensors) and correlates it with case-specific data. The insights are available via dashboards, APIs, and reports. The data covers historical, real-time, predictive and simulation at high spatio-temporal resolution.

What makes them unique?

Hawa Dawa's solutions have proven data accuracy that has been confirmed by an independent auditing body (TÜV Süd), creating actionable insights based on meaningful data contextualisation that leverages its cross-functional team's expertise.

Founded in 2016
Munich, Germany

Sectors

Air

Contact Information
Click here or scan the QR

in company/hawa-dawa

🌐 www.hawadawa.com

✉ marketing@hawadawa.com

Challenges

While environmental data is becoming more ubiquitous, data sources are disparate and can be inaccurate.

Stakeholders, including cities, still lack an integrated view of all available environmental data, preventing them from having the information needed to take the actions needed to create resilient, climate-neutral spaces.
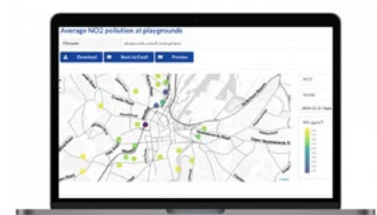
Solutions

Hawa Dawa provides a new digital knowledge network for resilient and climate-neutral cities and future-oriented companies. The focus is on facilitating the use of meaningful environmental data in decision making and to unlock unlimited clean air for cities, businesses and citizens.

Its solutions include regulatory grade & well-managed air quality networks for increased spatial and temporal accuracy traceable to accepted standards at scale; data Insights for easy integration, combination, contextualization and sharing of air quality data and data-driven insights so

stakeholders receive the actionable insights they need, and a growing ecosystem of harmonised partner solutions to close traffic, weather, and population data gaps so cities can fully enjoy an all-in-one environmental intelligence platform.

Heimdall Power

Heimdall Power offers a solution to support data-driven decision-making for operations and planning of power lines. It develops multi-vector sensors (Heimdall Neurons) that measure a wide range of parameters on overhead lines (7 – 550 kV) and present the insights in a web-based software solution.

What makes them unique?

Heimdall Power is an enabler of the green transition and smart cities. Without smart grid technology, traditional grid owners and operators will not be able to keep pace with the drive to net zero.

Founded in 2016
Stavanger, Norway

Sectors

Energy

Contact Information
Click here or scan the QR
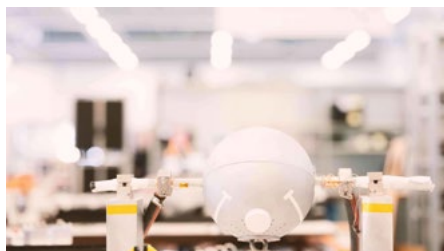
in company/heimdall-power
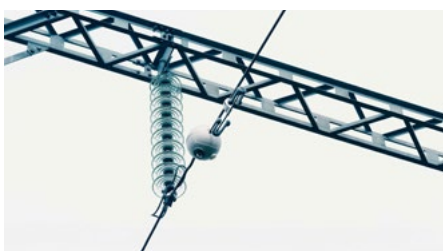
🌐 www.heimdallpower.com

Challenges

The legacy power grid requires a large time and financial commitment to improve delivery security, increase capacity, and add renewable energy generation. These upgrades often require construction work that can take up to ten years to plan and build, as the grid has not been digitised. On the consumption side, additional capacity is not easily identified, slowing the build out of high speed EV charging stations.

Solutions

Heimdall Power digitises the power grid, which supports data-driven decision-making for operations and planning of power lines. It has developed multi-vector sensors (Heimdall Neurons) that measures a wide range of parameters (conductor temperature, ampere, angle, etc.) on overhead lines (7 – 550 kV) and presents the insights in a web-based software solution.

Based on the models created, available capacity is identified, which can avoid large grid investments and maximise the renewable energy from intermittent sources such as wind and solar into the grid.

Heimdall Power's software creates relevant line forecasts, minimises blackouts and makes maintenance more effective. The insights can be consumed live, alarms tailormade and customised reports generated. With better control, one can safely optimise the energy distribution.

Impact:

ImpactE leverages innovation and software to facilitate the energy transition to cities, industrial areas and energy communities, while helping them actively engage citizens in this transition.

What makes them unique?

ImpactE's advanced software is capable of analysing the photovoltaic, energy refurbishment, and equipment renovation potential of a full city, building to building, dwelling to dwelling.

Founded in 2020
Valencia, Spain

Sectors

Energy

Contact Information
Click here or scan the QR

in company/urbanimpacte

🌐 www.urbanimpacte.com

Challenges

The transition to a digitised, decarbonised, decentralised energy system is extremely complex and requires much planning and decision-making for the stakeholders involved. Further, citizens have traditionally been passive participants of the energy sector, yet a successful transition will put them at the heart of it. Engaging them and helping them understand complex concepts is a challenge.

- Plannify a quality energy transition based on data through co-design and web interactive tools.
- Offer the information to the citizen through interactive energy maps to facilitate their decision.
- Help cities to manage its energy transition with the advancement towards their objectives based on their own agendas, plans or strategies through interactive web apps.

Solutions

ImpactE's software collects, analyses, and simplifies all the information needed for energy planning, facilitating agile and optimised decision-making for cities and businesses. Cities can use the tools to identify zones most susceptible to climate change, identify areas of energy poverty, study energy efficiency of buildings, and determine PV potential. Its inteactive web apps are easy to use, engage citizens, and manage and track the progress of their energy transition plans.

Businesses can precisely model their energy efficiency, environmental impact, and renewable energy production.

info tiles®

InfoTiles provides software-as-a-service for water & wastewater management, ensuring sustainable water and sanitation for everyone today, tomorrow, and in the future.

What makes them unique?

InfoTiles simplifies and automates the tedious steps of consolidating data and applying real-time analytics and machine learning. It leverages data in water, turning insights into action.

Founded in 2016

Stavanger, Norway

Sectors

ICT

Water

Contact Information
Click here or scan the QR

company/infotiles

www.infotiles.no

Challenges

Legacy water infrastructure and systems are outdated and inefficient. They need to be digitised in order to improve efficiencies, reduce wastage, improve quality, better plan, and reduce their environmental footprint.

Cities, utilities, and other water stakeholders need data to generate insights that lead to better actions and decisions to deliver safe, high-quality, and sustainable water to their communities.
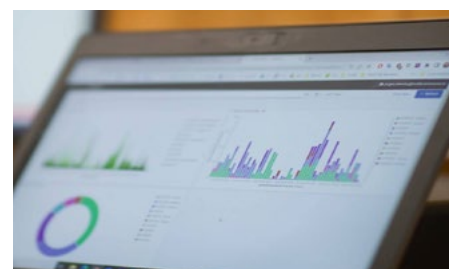
Solutions

InfoTiles provides software solutions that help utilities achieve sustainable water and wastewater management. Its platform provides real-time water network analysis and alerts to facilitate instant responses and improve the resilience of water networks.

It can monitor extraneous water in sewer networks, reducing service failure, and automate billing and allow real-time awareness of consumption.
Users can proactively assess the water grid to improve maintenance planning and accurately identify leaks and locate pipes at risk to improve the performance and resilience of water networks.

karos mobility

Karos is the leading European carpooling solution for daily commuting. Thanks to a unique set of AI technologies, Karos provides a sustainable mobility solution for rural and suburban areas that is integrated into the public transportation network.

What makes them unique?

Karos turns carpooling into a new public transport mode through a full integration with the local transportation network, including pricing, ticketing and transit lines to provide intermodal trips.

Founded in 2014
Paris, France

Sectors

Mobility

Contact Information
Click here or scan the QR

company/karos

www.karos-mobility.com

Challenges

Road congestion is a problem in many areas, leading to wasted time and productivity and higher carbon emissions. In many cases, corporate locations and other employers are located in areas only accessible by private vehicle, resulting in a high dependence on car ownership for these employees. As these companies grow, they lack space for employee parking and must invest time and money into finding new parking solutions. Carpooling can solve these problems, yet potential participants will not use it unless the options are broad and reliable and they are properly incentivised.

Solutions

With its cutting-edge technology, the Karos mobile app connects drivers and passengers according to their itineraries and schedules to make carpooling a flexible, reliable and easy mode of transportation. Thanks to all the data collected, Karos is able to predict the next trip of its users with over 80% accuracy, which it then uses to create a customised and optimised door-to-door route and integrate the carpooling solution with public transportation through intermodal routes.

In addition, Karos brings its expertise throughout the deployment of the service through its SaaS platform enabling customers (companies or municipalities) to configure and customise the carpooling application, monitor in real time the use of the application by their users, and implement attractive communication campaigns.

Karos just launched its new Mobility Newsletter! Readers will receive the latest news of Karos Mobility, such as the launch of their activities in Germany with the acquisition of the German start-up goFLUX, or some insights on carpooling to raise awareness on its social, economic, and ecological impacts.

kinéo

Kineo enables flexible ownership for micromobility. By paying a monthly fee, individuals and companies choose the light electric vehicle that suits their needs and access all the services they need to ride it.

What makes them unique?

Kineo's marketplace enables it to partner with the best micromobility vehicle manufactureres in the space, supporting riders with core services that are provided in-house and bundled with third-party market solutions as well.

Founded in 2018

Athens, Greece

Sectors

Mobility

Challenges

Some of the biggest challenges cities face include congestion, air quality, noise pollution, unequal access to the urban network and therefore the labor market, and physical and mental health of citizens. Micromobility presents a huge opportunity for cities, as it can help them address each of these challenges.

Microbility vehicles shrink the physical footprint required to move people and goods over relatively short distances and have the potential to better connect citizens with public transport, reduce dependence on private cars, and make the most of existing public space, enabling the cities themselves to become greener, more productive and happier places. Innovative solutions are needed to increase the uptake of micromobility options.

Solutions

Kineo enables flexible ownership for micromobility. By paying a monthly fee, individuals and companies choose which light electric vehicle suits their needs (e-bike, e-scooter or cargo bike) and access all the services they need to ride it without having to own the vehicle.

The vehicle is delivered to the user's door and insurance, maintenance and replacement costs are included in the monthly subscription.

Kineo lowers the barriers, both financial and psychological, for commuters and businesses to try and eventually adopt micromobility, while simultaneously taking a holistic approach that create the conditions necessary for it to thrive.

Contact Information
Click here or scan the QR

in company/kineocity

🌐 www.kineo.gr

kunak®
SENSING ANYWHERE

Kunak is a company specialised in ambient monitoring that creates compact air monitoring stations for hyper-local monitoring.

What makes them unique?

Kunak's solutions have allowed hyper-local air quality monitoring in market segments never done before, such as industrial sites, wastewater treatment plants, port terminals, etc. It performs different measuring campaigns at lower costs, as these market segments previously could not afford reference instruments.

Founded in 2014
Navarra, Spain

Sectors

Air

Contact Information
Click here or scan the QR

in company/kunak

🌐 www.kunak.es/en

Challenges

Smart cities require data from many different systems. But smart city sensor-based technology has many known issues, such as sensor variability, factory and field calibration, automatic data invalidation, replacing sensors, and network operations and maintenance costs.

Proper transmission and exploitation of the data gathered by the sensors is fundamental for generating accurate and beneficial insights.
Innovative solutions are needed to address these challenges in a sustainable and cost-effective way.

Solutions

Kunak solutions are sensor-based monitoring stations equipped with slots to insert smart gas cartridges. Thus, the Smart Cartridges solve many of the known challenges of this technology: sensors variability, factory and field calibration, sensor replacement as well as the operation of the network, with no need to return the instrument to the factory, so as a result, electronic parts of the cartridges can be reused and maintenance costs are reduced, making the solution the most accurate and sustainable in the market.

This helps businesses and organisations monitor and control critical parameters in real-time, reduce costs, measure environmental impact and improve processes by providing accuracy, efficiency and economic benefits.

maptionnaire

Maptionnaire's Community Engagement Platform is a service for cities, consultancies, and research organisations enabling public engagement that provides insights for decision making.
At its core are map-based tools for designing questionnaires, collecting data, and communicating about projects.

Share surveys with residents and stakeholders

What makes them unique?

Maptionnaire uses the PPGIS method for analysing experiences and living environments. It redefines citizen engagement as an ecosystem of data linked to locations, not specific sectors and projects.

Founded in 2018
Helsinki, Finland

Sectors

Health

Energy

Building

Mobility

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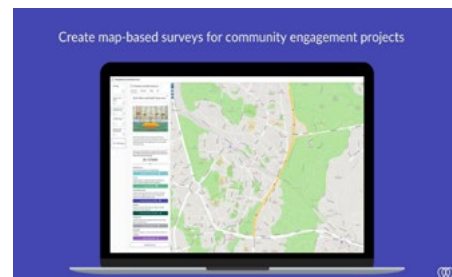
company/mapita-oy

www.maptionnaire.com

Challenges

Cities need to improve community engagement in many ways, such as by involving broad and varied groups of inhabitants in the planning process, keeping residents informed and engaged in processes affecting them, and building inclusive, sustainable, and resilient cities.

Create map-based surveys for community engagement projects

Solutions

Maptionnaire Community Engagement Platform is a service for managing the entire public participation process in one place and delivering insights that enable cities to change. Maptionnaire helps cities to collaborate, report, and communicate about their engagement projects and plans with citizens and stakeholders, as well as internally across the departments, bridging the gap between the city and its residents.

At its core are the map-based tools for designing questionnaires, collecting information, and analysing data. With this platform, cities can run public engagement processes, implement participatory budgeting, and collect real-time

feedback from residents. These soft data represent an equally strong view of the city compatible with hard data collected through different sensors.

The platform enables the strategic, systematic, and comprehensive collection, analysis, and reporting of citizens' views across sectors, such as urban planning, education, health care, social services, and arts & culture. With this community engagement platform, cities can reach broader demographics, including the most vulnerable and underrepresented groups, and give residents the tools for effective and transparent participation and decision-making.

Modality is an Insights-as-a-Service software for intermodality planning. It helps mobility stakeholders diagnose the mobility mix of their territory and quickly test new scenarios, allowing them to better meet their environmental challenges.

What makes them unique?

Modality democratises access to strategic information normally reserved for data experts.

Founded in 2021
Paris, France

Sectors

Mobility   Building

Contact Information
Click here or scan the QR

company/with-modality

www.with-modality.com

Challenges

Smart cities face two urgent challenges: a climate emergency and a social emergency. Mobility is at the heart of these two challenges, and smart cities must find solutions to reduce the impact of transport on greenhouse gas emissions while ensuring fair access to opportunities for all.

To meet these challenges, cities must implement mobility solutions that effectively coordinate

all transport modes that are alternatives to the personal car, and make them more attractive. Ensuring the proper network of sustainable mobility solutions requires a systematic approach and cooperation from all stakeholders, both public and private.

Solutions

Modality combines open data and data from surveys or modelling to offer turnkey studies on the mobility mix of a territory. This is acheived by computing engines and algorithms dedicated to the evaluation of accessibility and intermodality, transforming heterogeneous and siloed data into strategic information displayed through interactive map-based interfaces.

Modality automatically produces analyses on zones with poor access, the best locations for new stations or terminals, the attractiveness of sustainable alternatives to the car, and the quality of intermodality,

The solution also offers tools to create and test new scenarios including adding public transport lines, changing timetables, deploying more stations for shared bikes and scooters, etc.
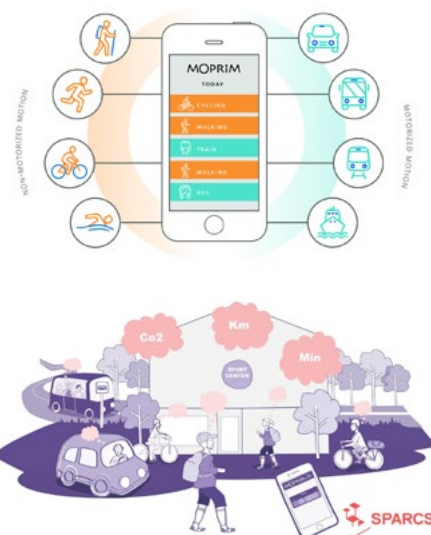
Modality thus enables mobility decision-makers to diagnose problems in the network of mobility solutions in their territory, test new multimodal scenarios and appreciate the gains and losses, create and communicate new sustainable mobility plans, and build better mobility mixes.

MOPRiM

MOPRIM is a mobility data company that tracks all mobility modes of an individual user and visualises the distances travelled, the travel times, the carbon footprint produced and all transport modes used. It also shows all the routes taken and the multi-modal travel chains.

What makes them unique?

MOPRIM provides complete travel chain data with different modalities and personal carbon footprints, engaging citizens to move more actively and be more sustainable.

Founded in 2015
Helsinki, Finland

Sectors

Mobility

Social Responsibility

Contact Information
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in company/moprim-ltd.

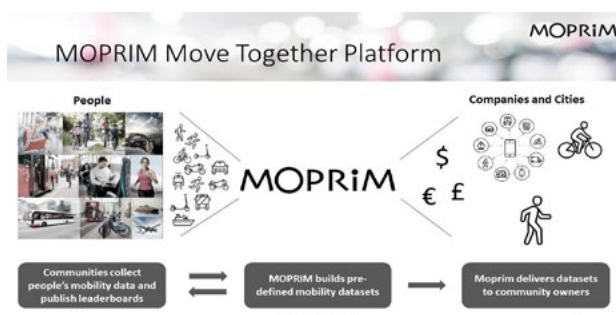🌐 www.moprim.com

Challenges

Cities need to encourage public transit, micromobility, and active mobility as the preferred modes of transit for their citizens, to reduce congestion and emissions from the transport sector. Yet enacting behavioural change is difficult, and citizens need to be motivated to do so.

Awareness can be a big motivator, so solutions are needed to track the environmental and health impacts of people's transit choices. Further, cities need better data about how people are moving about the city to better plan public transit routes and future urban development and infrastrucure projects.

Solutions

MOPRIM supports cities in their active mobility initiatives by encouraging more active and sustainable modes of transit through its Move Together platform. Users are able to visualise the routes they used, track the distance traveled, and measure the carbon footprint of their transit choices.

It also includes the option for users to join different communities and share some part of the mobility data with the community. Communities can be set up for different user groups, organisations and purposes and the shared data can be differentiated. Communities can act as links to external data sources and services and enable data fusion.

Neuromobile is a company specialised in developing technology since 2013 that facilitates place management, commercial and marketing dynamisation in Urban Commercial Areas, City Services, Tourism, Retailers and Shopping Centres. Focused on circular economy, the company aids in the creation of networks that favor local commerce and revitalise culture and society.

What makes them unique?

Neuromobile is the only company focused on revitalising cities via a digital platform that provides tools to manage and stimulate citizens, engaging them to shop local and participate in cultural and social activities.

Founded in 2013

Málaga, Spain

Sectors

Social Responsibility

Contact Information
Click here or scan the QR

company/
marketing-activo-inteligente-s-l

www.neuromobile.es

Challenges

Small, local businesses face increasing competition from big box stores that can provide products and services with ease, quickness and quality. However, supporting local businesses is better for the environment and the economy, and can even contribute to higher levels of well-being as consumers become more engaged with their local environment.

Cities and local businesses need to find ways to entice locals and tourists alike to support local businesses and take part in social and cultural activities.

Solutions

Neuromobile connects citizens with their local environment through a cloud-based app for Dynamic Urban Commerce. Using CRM and CMS technology, the platform obtains data to better understand their interests and provide targeted ads and notifications.

This encourages citizens to participate in local cultural and leisure activities and support local businesses, contributing to a more financially and environmentally sustainable city.

NOVALITY
BIKES & SCOOTERS SMART LOCKERS

Novality provides secure and intelligent parking for bicycles and electric scooters via individual lockers with recharging points in each. All parking spots are managed through a proprietary app. Novality provides a 360º solution as it designs, manufactures, installs and maintains the equipment.

What makes them unique?

Novality uses IoT technology, with encrypted communications through VPN tunnels and using the MQTTPLC protocol of Industry 4.0. The stations are equipped with solar panels with 1.1 kW of power and electric recharging points in each of the lockers.

Founded in 2019
Sevilla, Spain

Sectors

Mobility

Health

ICT

Security

Contact Information
Click here or scan the QR

in company/novalityes

🌐 www.novality.es/en

Challenges

Sustainable mobility reduces road traffic and CO2 emissions in cities, improving the quality of life for citizens. Solutions are needed to encourage the uptake of these mobility options, such as ensuring secure parking and charging for micro e-mobility solutions like e-bikes and e-scooters.

Solutions

Novality provides secure parking and charging for bicycles and scooters. Users connect through an app that allows them to make a reservation in advance and know the availability of spaces. It also has a BI platform to extract mobility flow data.

The parking spaces can easily be outfitted with sensor functionalities typical of smart cities such as air quality, noise-level monitoring, people counting, etc.
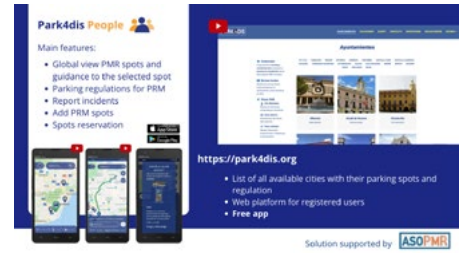
Park4Dis addresses the challenges related to parking for persons with reduced mobility (PRM). Park4Dis gives higher autonomy to its users and supports cities in developing inclusive urban mobility.

What makes them unique?

No other competitor offers all pf Park4Dis's services in one platform, nor has the expertise in EU regulations and accessibility required to understand the challenges.

Founded in 2019
Barcelona, Spain

Sectors

Mobility

Social Responsibility

Contact Information
Click here or scan the QR

company/park4dis

www.park4dis.org

Challenges

People with disabilities often have difficulty finding disabled parking spots, along with other permitted parking spots. Some city councils have local applications, but this is not very practical for the user, as they have to know of and download an app for each city. There is also a lack of information regarding the applicable regulations in each territory.

Sometimes this information is included in the municipal ordinances, but these are either not available on the Internet, or if they are, they are not accessible to the user, since they are written in incomprehensible legal language and are very long. The user incurs infractions because rules between cities differ.

Solutions

Park4Dis is the only transversal and interurban solution in Europe that shows the reserved spots and other parking spaces allowed for people with an EU disability parking card in any territory. It is currently available in over 250 cities spanning 10 countries.

Park4Dis provides the user, free of charge, with an app (Park4Dis® People) that allows them to locate parking spots and be guided to their destination, access the regulations about other permitted parking spots, report incidents, add People with Reduced Mobility (PRM) parking spots as a volunteer, and reserve spots (where allowed).

It also provides a complete management system to public entities to be able to comply with state and regional laws and improve the experience of PRM users. Finally, it provides access to a library with information so that other applications can include Park4Dis information into their systems and provide it to their users.

PARTTEAM & OEMKIOSKS

PARTTEAM & OEMKIOSKS is a reference in the development and manufacture of self-service multimedia kiosks, digital MUPIs, interactive tables and other digital solutions.

With over 22 years of experience, it has more than 100 standard models spread all over the world.

What makes them unique?

PARTTEAM & OEMKIOSKS is a unique company in the field of smart cities because of the variety of services, software, and products it has to offer.

Founded in 2000
Vila Nova de Famalicão, Braga, Portugal

Sectors

Health Energy

Security Mobility

Contact Information
Click here or scan the QR

company/
partteam-&-oemkiosks

www.partteam.pt

Challenges

Bringing more digitisation into cities can help them become smarter and drive a better experience and more autonomy to citizens. One example is queues, which wastes time for citizens and resources for the city. Another is communication, in which legacy communication systems, such as the radio, are outdated and no longer reach all citizens.

Innovative, digitised solutions are needed to bring citizens the best services and solutions and prmote more sustainable and environmentally friendly practices.
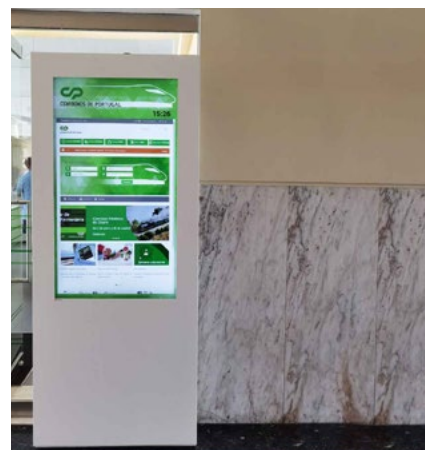
Solutions

PARTTEAM & OEMKIOSKS designs and manufactures digital billboards, self-service kiosks, interactive tables, informational street furniture (MUPIs), and other digital solutions that help make cities more livable, sustainable and economically viable.

Self-service kiosks reduce wait times for citizens while decreasing costs for cities or other service providers. Digital billboards allow for real-time communication between cities and citizens. Interactive tables create dynamic ways for users to gather useful information.

All of PARTTEAM & OEMKIOSKS' solutions focus on providing personalised customer service, optimising service processes, and increasing productivity and user experience.

Powerledger

Powerledger develops software for clients and partners that allows consumers and producers to track, trace and trade every kilowatt of energy in real-time, helping to create a flexible decentralised power system that is both resilient and stable in the coming years.

What makes them unique?

Powerledger uses blockchain technology to make its systems scalable, secure and cost-efficient. Demand response and peer-to-peer trading can enhance grid resilience by enabling local energy markets.

Founded in 2016

Perth, Australia

Sectors

Energy

Contact Information
Click here or scan the QR

company/power-ledger

www.powerledger.io

Challenges

The current energy system suffers from two main problems. The first is the place problem - energy is often not produced where it is needed and must be transmitted over long distances, resulting in large transmission losses. For example, Germany has electrical congestion in the North of the country and is currently building a interconnector called Suedlink to transport this energy to the South.

The project's outcomes are currently uncertain and may even increase energy prices. The second problem is time. Peak energy production rarely occurs during peak energy demand. Local and agile markets are needed to address these problems and create a more robust, efficient, and affordable energy system.

Solutions

Powerledger's platform includes three products that are divided in the following pillars: energy trading and traceability, flexibility trading, and environmental commodities trading.

The xGrid product enables peer-to-peer energy trading across the grid, which means that an energy retailer is involved and trades happen across the regulated electricity network.

The μGrid product enables peer-to-peer energy trading behind the meter, which means that a land developer or strata manager is involved and trades happen behind the master meter/grid meter (also called an embedded microgrid).

The Local Energy Market (LEM) product enables participants to trade energy amongst each other through the trading platform, matching buy and sell offers in forward facing time intervals. The products are modular and scalable and can be contracted separately. They give smart cities access to a whole package of revenue streams, and all of them make electricity cheaper and payback times shorter.

SEEDiA

SEEDiA helps cities transform current car-dominant areas into walkable spaces by providing solar-powered smart city solutions such as bus shelters, e-scooter docking stations, and smart benches. Its products have been sold to more than 130 cities in 30 countries, including the USA.

What makes them unique?

SEEDiA's products can operate 24/7, 365 days a year. They are weather prediction based and set device priorities depending on the current power status. The energy management system is patented.

Founded in 2016

Cracow, Poland

Sectors

Energy

Building

Mobility

Contact Information
Click here or scan the QR

company/seedia

www.seedia.city

Challenges

As urbanisation increases, cities are struggling with heavy traffic jams, caused mostly by private cars. This takes up large amounts of time, causes air pollution, and lowers the quality of living in the cities.

Ambient air pollution alone accounts for an estimated 4.2 million deaths per year due to stroke, heart disease, lung cancer, and acute and chronic respiratory diseases. Around 99% of the world's population live in places where air quality levels exceed WHO limits.

Finally, many cities lack green spaces and are largely made of concrete, as this was the trend in the 1980s. These concrete jungles lack local fauna and flora and lead to urban heat islands and cause problems with irrigation and flooding.

Solutions

SEEDiA transforms cities by addressing these challenges through three types of products. Solar benches improve the quality of life for residents, providing pedestrians a place to rest and gather, and can be used to collect data about public spaces that is available on open data platforms.

Electromobility charging stations provide battery charging and swapping infrastructure to improve the user experience for e-mobility users, and contribute to cleaner cities. Finally, SEEDiA's smart bus shelters make public transportation more efficient and sustainable as they automise bus schedule

management and create one multimodal vision of the transit system. Each product integrates with the incity.io management platform with open API access.
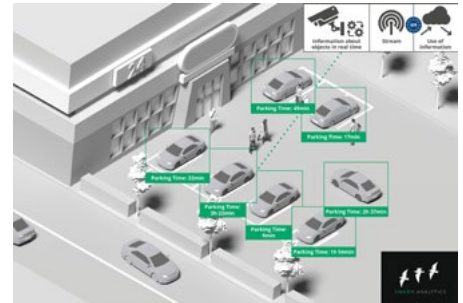
SWARM ANALYTICS

By developing revolutionary artificial intelligence, Swarm Analytics turns simple cameras into GDPR compliant smart sensors. This leads to smarter, faster, easier and trustworthy solutions while increasing affordability and turning Big Data into relevant data.

What makes them unique?

Swarm Analytics is able to provide lower prices compared to similar competitors in the Smart Cities sector.

Founded in 2018
Innsbruck, Austria

Sectors

Mobility   ICT

Contact Information
Click here or scan the QR

in company/swarmanalytics

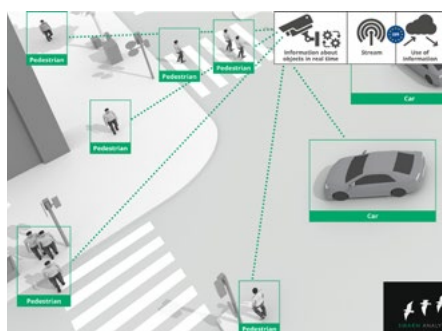🌐 www.swarm-analytics.com

Challenges

Steadily increasing traffic and parking shortages in cities and municipalities call for sustainable measures, such as optimised parking guidance systems, adapted traffic light circuits, expansions of bicycle paths, and other instruments.

However, these solutions need to be backed by fact-based information, and collecting this data can be challenging from both a collection and data privacy standpoint. Smart CIties need data, facts, insights and sensors to create the most robust and sustainable solutions.

Solutions

Swarm Analytics has created the "Brain for the Camera". Its solutions enable simple yet reliable data collection, are available 24/7, and deliver structured and visualised data directly to those who need it. It has built a plug&play framework for computer visons tasks with a low-computational footprint and integrates seamlessly within devices ranging from the embedded world to distributed server clusters with multi-GPUs.

Whether traffic analysis, traffic counting or traffic safety; vehicles, cyclists or pedestrians, the software recognizes relevant objects and processes the data in real time in place, similar to the human brain. The anonymised and statistical data is then processed in a centralised database which can be used for visualisations and dashboards on various aggregation levels. With just one click, individual data reports can be consumed intuitively and in a time-saving manner with the help of predefined widgets.

THE PREDICTIVE COMPANY

The Predictive Company (TPC) is a spin-off of a project started at the Polytechnic University of Catalonia focused on AI-powered building energy management solutions. It has been funded through The Collider program, a Deep-Tech business creation program of the Mobile World Capital Foundation.

What makes them unique?

The Predicitive Company brings AI into building energy management systems, allowing for accurate prediction of a building's energy needs and autonomous and optimised operation of HVAC machines.

Founded in 2019
Barcelona, Spain

Sectors

Energy

Air

Building

Contact Information
Click here or scan the QR

company/thepredictivecompany

www.thepredictivecompany.com

Challenges

40% of all consumed energy is consumed indoors, of which approximately 30% is wasted due to inefficiencies. This results in higher costs and CO_2 emissions while lowering human comfort in buildings. Human management over HVAC systems further contributes to wasted energy and higher temperature discomfort.

Solutions

The Predictive Company has developed an energy efficiency software based on artificial intelligence for non-residential buildings. It connects internal data with external variables to create a digital twin of the building, and then makes an accurate prediction of its energy need, for an autonomous and optimised operation of HVAC machines.

The system provides autonomous control over the HVAC machinery in the building and can reduce energy costs by as much as 30% through the optimisation of its use.
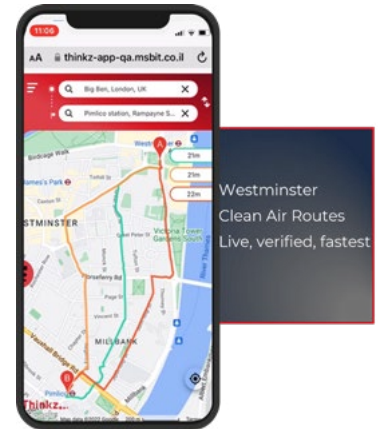
Thinkz...

Thinkz is an IoT startup that gathers and organises data from IoT devices that already exist in cities, providing responsive, comprehensive, and real-time information.

What makes them unique?

Thinkz has created the only live, trusted, agnostic, and multipurpose IoT-based network that leverages already existing IoT devices in cities.

Westminster Clean Air Routes Live, verified, fastest

Founded in 2020
Tel Aviv, Israel

Sectors

Mobility

ICT

Air

IoT

Contact Information
Click here or scan the QR

company/thinkz-iot-com

www.thinkz.ai

Challenges

Residents of modern cities face many challenges, including traffic jams, finding parking or charging stations for electric vehicles, picking up shared transportation vehicles, and finding and picking up the nearest available bike and scooter rentals, as well as finding other public transportation options.

Data can help solve these challenges, and smart cities are already full of connected smart objects broadcasting their data. However, in reality, these devices and corresponding data are isolated due to Cyber Protection and Privacy issues. What if this scattered, unused data became real-time, verified, useful information for city residents, business owners, and visitors?

Solutions

Thinkz presents all types of IoT data on one map after it has been gathered and transforms it into useful, verified, live data.

Use cases include projects for city residents and tourists, such as Thinkz's 360 Sustainable Mobility Solution in Tartu, Estonia, which integrated data about all mobility options in the city into one easy-to-use map. This results in reduced emissions, as drivers know where there are available parking spots and EV chargers, avoiding additional km driven and traffic jams.

Private businesses can also benefit from sharing their unused data as they often own a wide variety of sensors. Thinkz enables them to utilise their IoTs' sensor data by turning it into beneficial, reliable info for their customers. Thinkz displays this data as usable information in one centralised location, so their customers are constantly updated with real-time, AI-verified information. This way, businesses gain visibility, credibility, and ultimately customer loyalty, and can potentially reduce customer acquisition costs.

Arriving to a city powered by Thinkz

Find uncongested entrance to the city by connecting to the traffic lights

Destination

Quickly find parking or EV charging station

Discover what businesses surround you. See how easy it is to get them, and how much valuable, REAL-TIME, verified information you receive about them

Choose best air-quality routes

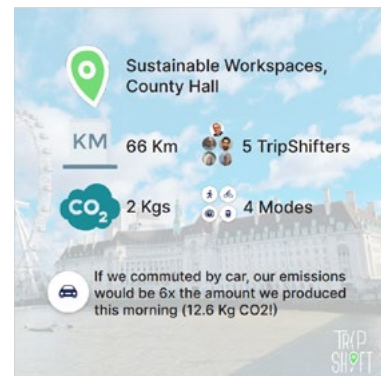Pick public or shared available transportation nearest to me

TripShift provides automated carbon tracking of citizens' transit routes, helping cities to identify mobility emissions hotspots and opportunities to manage or reduce emissions.

What makes them unique?

TripShift's automated data collection provides continuous quantitative and qualitive travel and emissions data.

Sustainable Workspaces, County Hall

KM   66 Km   5 TripShifters

CO₂   2 Kgs   4 Modes

If we commuted by car, our emissions would be 6x the amount we produced this morning (12.6 Kg CO2!)

Founded in 2019

London, United Kingdom

Sectors

Energy

Health

Building

Contact Information

Click here or scan the QR

company/tripshift

www.tripshift.eco

Challenges

Residents and toursists need to opt for more sustainable modes of transport to combat global warming and help cities hit their emission reduction targets.

Cities need better data to optimise their public transit offering and increase uptake of more sustainable modes of transit.
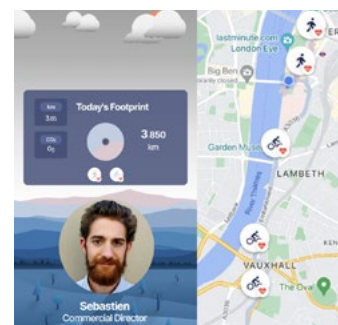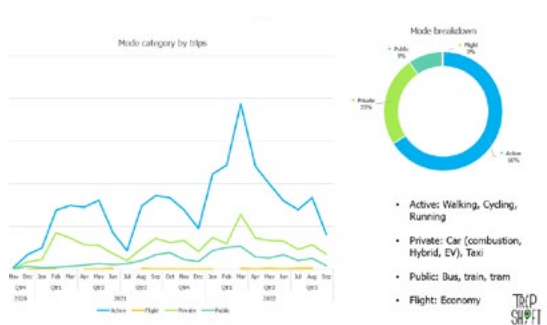
Solutions

The TripShift app helps smart cities measure commuting and travel emissions. More importantly, it helps encourage behaviour change. It provides a unique direct link to commuters to adopt greener means of transport such as public transport services. Through the mobile app, cities can directly promote their transport and mobility solutions to individual commuters based on their mobility profile.

The end-to-end automation of the data collection provides clean quantitative and qualitative data so that smart cities can provide more efficient and targeted public mobility solutions and decarbonise their transport emissions.

UNIVRSES

Univrses is a computer vision and deep learning company. The team consists of 55 experienced programmers and PhDs in computer vision, machine learning, robotics and physics. Univrses' suite of products, called 3DAI™ Engine, consists of components that increase the autonomy of a system.

What makes them unique?

Universes has spent 7 years developing autonomous vehicles and has leveraged this leading technology to create 3DAI™ City to improve roadways.

Founded in 2013
Stockholm, Sweden

Sectors

ICT   Mobility

Contact Information
Click here or scan the QR

company/univrses

www.univrses.com

Challenges

The demand on city resources is growing out of control as people, vehicles and countless construction sites have to coexist in the ever-expanding city area. Cities still have a limited understanding of the state of such things as road conditions, where the need for repair is most urgent, and the costs of failing to repair them timely.

Today, large amounts of money are spent on collecting road data using vehicles with special equipment. This data is expensive to keep updated regularly and quickly becomes outdated. The reality is that the world changes rapidly. Roads change, traffic signs change, and people's behaviour change. Cities need "fresh" data to adequately address the ever-growing demand on city resources.

Solutions

Univrses' 3DAI™ City is a data collection and visualisation platform that enables cities and decision makers to make well-informed decisions using actionable real-time data about the urban and roadside environment. This allows them to deliver a quick and smart solution to issues, such as road maintenance, traffic sign inventory, parking availability, and route optimisation.

3DAI™ City is a cost-effective and scalable tool that quickly turns vehicles already operating in the city into data harvesting agents. Camera devices, such as smartphones, are deployed in the windscreen of vehicles, allowing

these to collect road and roadside data. The data is processed "at the edge" and the collected data is automatically and instantly sent to a dashboard for review and further analysis. All processed information is automatically anonymised. Since no specially equipped vehicles are needed, no congestion or negative externalities are added to the streets. With a constant stream of fresh and actionable data, cities can make smarter decisions to save time and money and potentially save lives.
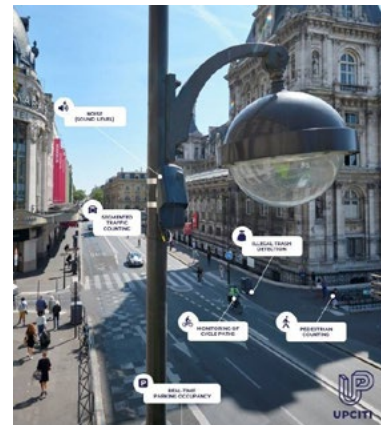
UP
UPCITI

Upciti produces a GDPR-by-design embedded image analysis sensor that collects real time and 100% interoperable data concerning different Smart City use, including parking availability, traffic levels, pedestrian counts, illegal trash detection and noise level monitoring.

What makes them unique?

Upciti's sensor is an embedded image analysis-sensor which guarantees no recording or transferring of images. A single sensor can be used for multiple use cases and it collects 100% interoperable data.

Founded in 2017
Montreuil, France

Sectors

Waste   Mobility

Contact Information
Click here or scan the QR

[in] **company/upciti**

[🌐] **www.upciti.com/en**

Challenges

Cities can leverage data insights to improve citizen services across a variety of areas, yet the digital environment is complex. Many different types of sensors are needed, and data privacy rules are difficult to adhere to when gathering and analysing data. Ideally, sensors would be used for a variety of use cases, interconnected, and fully GDPR compliant with simplicity for the city.

Solutions

Upciti's sensor is able to provide a simple solution for cities seeking to improve citizen services. It is GDPR compliant by design - it does not record or transfer images - and is capable of collecting precise, real-time data.

Cities need just one sensor to count parking, vehicles, and pedestrians, detect illegal trash throwing, and monitor sound levels.
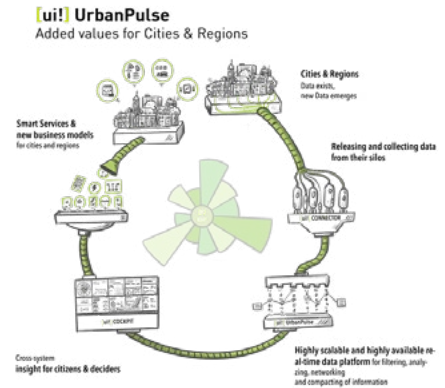
[ui!]
the urban institute®

[ui!] Urban Software Institute supports communities in their efforts to jointly develop and use Smart City / Smart Region innovations and solutions. Its main focus is developing cloud-based AI applications on a central Open Urban Data Platform - [ui!] Urban Pulse.

[ui!] UrbanPulse
Added values for Cities & Regions
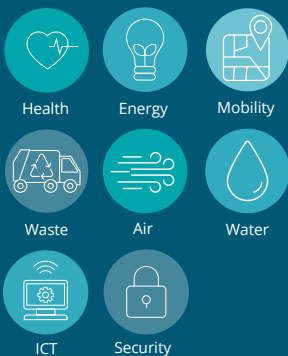
What makes them unique?

[ui!] lives smart city platforms. It has over 25 productive platforms, over 100 cities & communities as customers, 150 different systems connected, and processes 500 million data sets per day.

Founded in 2015
Chemnitz, Germany

Sectors

Health | Energy | Mobility

Waste | Air | Water

ICT | Security

Contact Information
Click here or scan the QR

in company/uigroup

🌐 www.ui.city

Challenges

Advancing urbanisation and the associated challenges, including in urban and regional infrastructures, mobility & energy, requires a new, networked approach. Resource-conserving and environmentally compatible actions on one hand, and situation-appropriate and measured decision-making on the other, require extensive data from many previously isolated systems within a community.

Cities and communities need support collecting, processing, and analysing urban data.

Solutions

[ui!] supports cities & communities in their efforts to collect, process and analyse all existing urban data on a central data platform (OUP) based on [ui!] UrbanPulse - where all data from a city's various IT systems are fed into one central system in order to be used for new smart city services in real-time.

Clients can reuse and repurpose new and existing urban data sources to create value-added services. It is the most efficient open urban platform with open APIs that makes it easy and affordable for small and large customers to integrate new and existing data sources, process and analyse data in near real-time.

Clients get an Open Urban Data Platform (OUP) with over 130 supported data sources (connectors) for direct connection. Among them are management, sensor systems, and IoT devices that have been developed thanks to many cities/communities within their smart city projects and are immediately available.

The platform is implemented according to DIN Spec 91357, developed for Software-as-a-Service (SaaS) application and can be operated in a local data center for data sovereignty reasons.

uzufly

Uzufly is a Swiss startup that aims to democratise urban planning projects by creating interactive, 3D models of future developments, allowing stakeholders to fully visualise, understand, and provide input into the design.

What makes them unique?

Uzufly creates ultra-photorealistic 3D digital models generated from aerial methods (such as drones) and integrates the designs of future constructions within their designated area.

Founded in 2020
Lausanne, Switzerland

Sectors

Mobility

Energy

Building

Contact Information
Click here or scan the QR

company/uzufly

www.uzufly.com

Challenges

For urban projects, public consultation is a key stage during which future constructions are presented to local communities to ensure projects are tailored to the population's requirements and wishes.

However, current 2D plans or computer-generated imagery methods only provide a very limited representation of future construction projects to local communities.
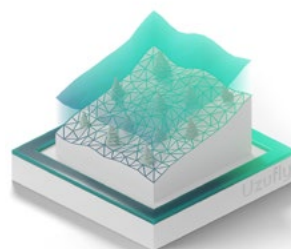
Cities lack tools that allow stakeholders to fully visualise and interact with proposed projects and undertand what their communities will look like in 5, 10, or even 15 years.

Solutions

Uzufly's UZUVERSE web platform allows cities, developers, and other urban planning stakeholders to analyse, develop and communicate urban development projects. Digital twins are created in a 3D photorealistic georeferenced platform from aerial photogrammetry, and the proposed projects are integrated. Communities can then see what they will look like in the future.

Uzufly accompanies its customers from the planning to the marketing of their real estate projects, and its platform enables all technical and non-technical stakeholders to exchange with the project in a simple and efficient way.
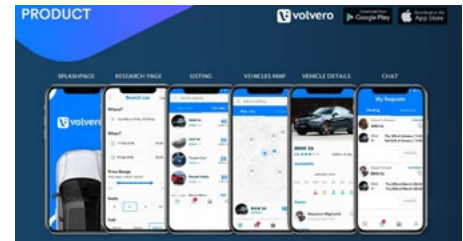
volvero

Volvero is an app for sharing vehicles that connects owners with people who need one, saving time and money. It uses AI and advanced technologies to improve quality and security and provides crystal-clear full insurance coverage. Volvero is easier, safer and more reliable than any other vehicle sharing app.

What makes them unique?

Volvero is a game-changer in the car-sharing market due to it technological innovation leaps. Volvero is the first startup that is leveraging advanced technologies, including AI, matched with a car-sharing service to provide a superior user experience.

Founded in 2018
Milan, Italy

Sectors

ICT

Mobility

Social Responsibility

Contact Information
Click here or scan the QR

in company/volvero

🌐 www.volvero.com/

Challenges

Society needs new, efficient, and sustainable transportation alternatives. Public transport can be crowded, inflexible or absent, especially in suburban areas. Meanwhile, car rental services are rigid and expensive, so people who do not own a private vehicle are restricted from free movement.

Yet car ownership for everyone is not feasible from a resource and sustainability perspective.

Further, vehicles are highly underutilised, with cars on average not being used 96% of the time. Corporations that own vehicles and car dealerships looking for new business models as millennials are less interested in car purchasing could benefit from increasing utilisation of their vehicle fleets.

Solutions

Volvero provides a marketplace that connects car owners and drivers, bringing to use underutilised vehicles and providing an extensive range of efficient mobility possibilities to drivers. Accessing this transportation option enhances people's wellbeing by giving them freedom of movement, unlocking more possibilities, and eliminating social inequality. Simultaneously, car owners, both private and commercial, can significantly reduce their vehicles' costs and make ownership more financially feasible.

Car rentals and dealers have a chance to switch from the outworn business model to a profitable modern one.

With Volvero, fewer vehicles are needed in cities as each can be utilised more, raising the actual average use and favoring a fast turnover of old cars with newer and fewer polluting ones. This results in a reduction in pollution and traffic jams and reduces the need for parking in urban spaces, allowing them to be converted into more useful and productive areas.

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