



Austrian Technologies for Hong Kong's Mobility Initiatives

Tuesday, 6th December 2022





JOSEPH CHIN

SOLUTION CONSULTANT ASIA
KAPSCH TRAFFICCOM

kapsch >>>





Challenging limits.

Company Presentation. Kapsch TrafficCom.

Challenging limits.

It is important that we push beyond conventional limits. We always question existing concepts, and redefine them to forge ahead with innovations.

Because we always harness technology to the benefit of our customers. Because we do not accept boundaries, we do not fall behind. Because we have been a trendsetter, visionary, and pioneer for more than almost 130 years.

Our Executive Board.



Georg Kapsch
CEO



Andreas Hämmerle
CFO



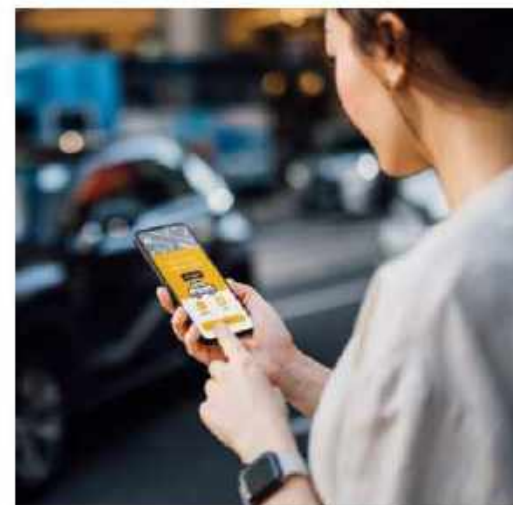
Alfredo Escribá
CTO

We - At a Glance.



Market focus.

Our offering encompasses solutions in tolling and traffic management. Regionally the focus is on Europe, the Americas and Oceania.



Global presence.

Implementation of transport systems in more than 50 countries globally.

Leading in research and development in more than 25 offices worldwide.

Competences.

Consultation, development, creation, commercial and technical operation.



Solutions.

Our end-to-end solutions cover the entire value chain of our customers as a one-stop shop, from components and design to the installation and operation of systems.



Our Future - Strategy until 2027.



Our identity.

Kapsch TrafficCom is a globally renowned provider of end-to-end transportation solutions for a healthy world without congestion.



Our goals.

Kapsch TrafficCom is recognized as a thought and innovation leader in the industry.

We have revenues of more than EUR 1 billion and thereby grow stronger than the market.



Our Mission.

Creating innovative transportation solutions for sustainable mobility to enable users to arrive at their destination conveniently, on time, safely, efficiently, and with minimal environmental impact.



Our Vision.

Challenging the limits of mobility for a healthy world without congestion.

Our Portfolio.

- Pioneer and technology leader in electronic toll collection.
- Unique experience in nation-wide toll systems.



Electronic toll collection.

Technology

- Microwave (DSRC)
- Satellite (GNSS)
- Video
- Mobile tolling
- eVignette

Applications

- Multi-lane free-flow (MLFF)
- Demand management
 - Congestion charging
 - Managed lanes (tolled)

Standards

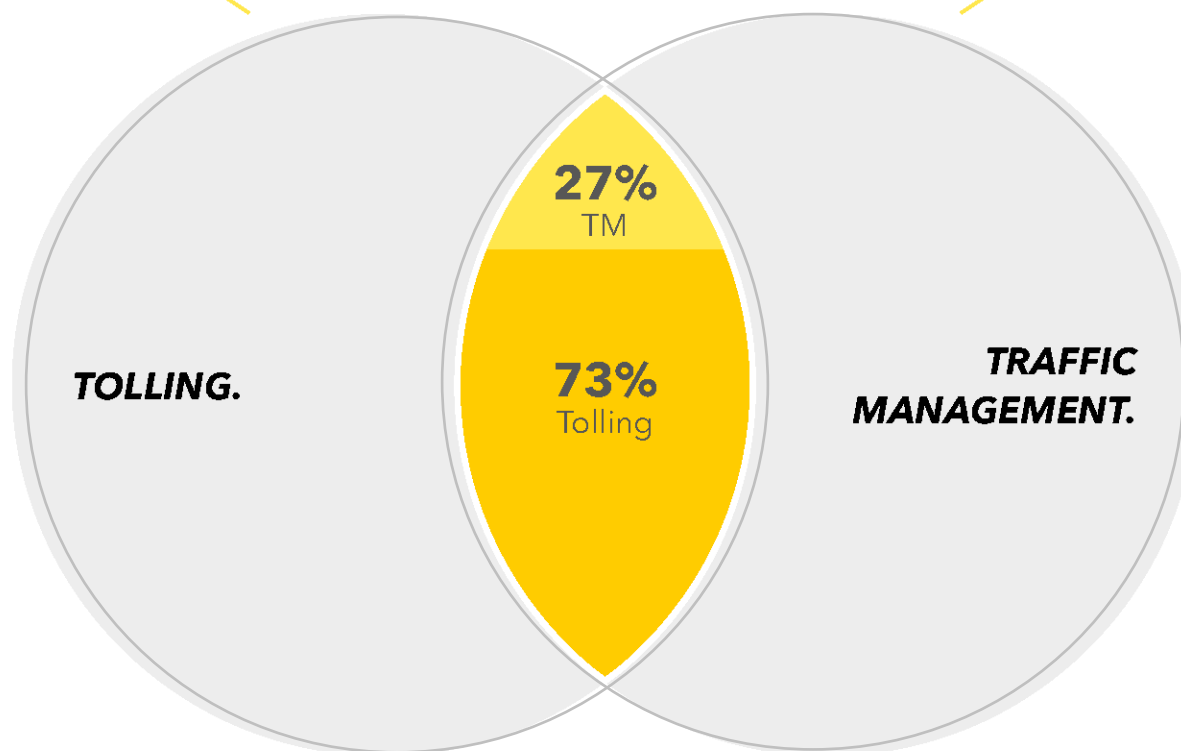
- CEN and WAVE



Plaza tolling.



Tolling services.



Combines conventional traffic management with smart traffic solutions, demand management and data services.



Traffic management.

- Highway
- Tunnels/bridges
- Urban
- Corridors
- C-ITS / connected mobility



Demand management.

- Urban access management (non-charging)
- Managed lanes (non-charging)
- Cross-domain policy setter (CDPS) - new, to be developed

The Kapsch 'Mobility Hub' within AIMES.

Multimodal Ecosystem to test ideas and innovation of shared road users

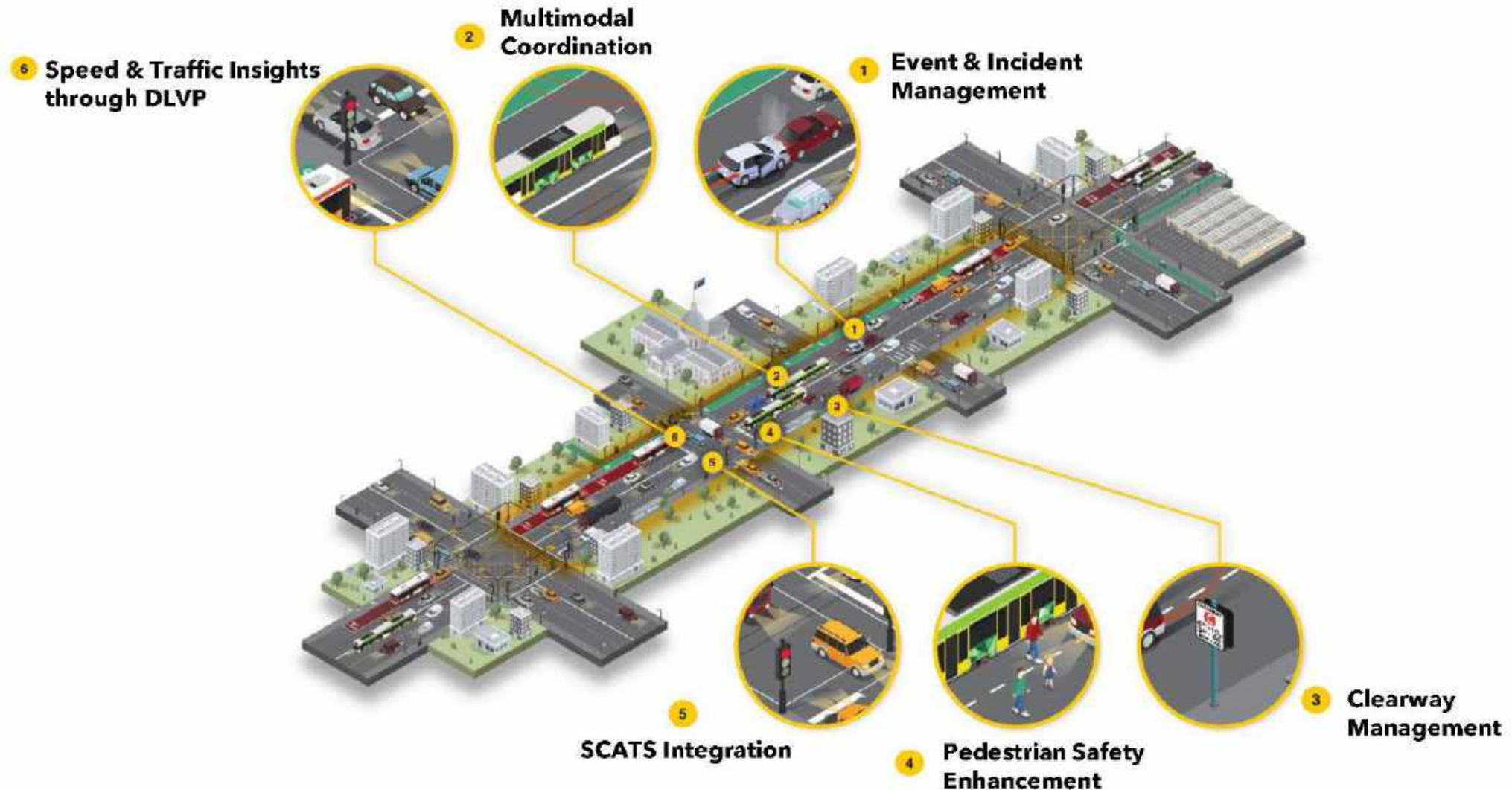


➤ Our Guiding Pillars

- **Safety**
- **Demand management,**
- **Traffic Insights**
- **Congestion Reduction**
- Quickly deploy new and existing technology
Provide '**change levers**' to both stakeholders & road operators for situational awareness
- **Measure** the effectiveness of new technology

Kapsch Intelligent Corridor within AIMES

- Use new and existing technology provide effective 'change levers' to operators to improve the transport network and the environment.

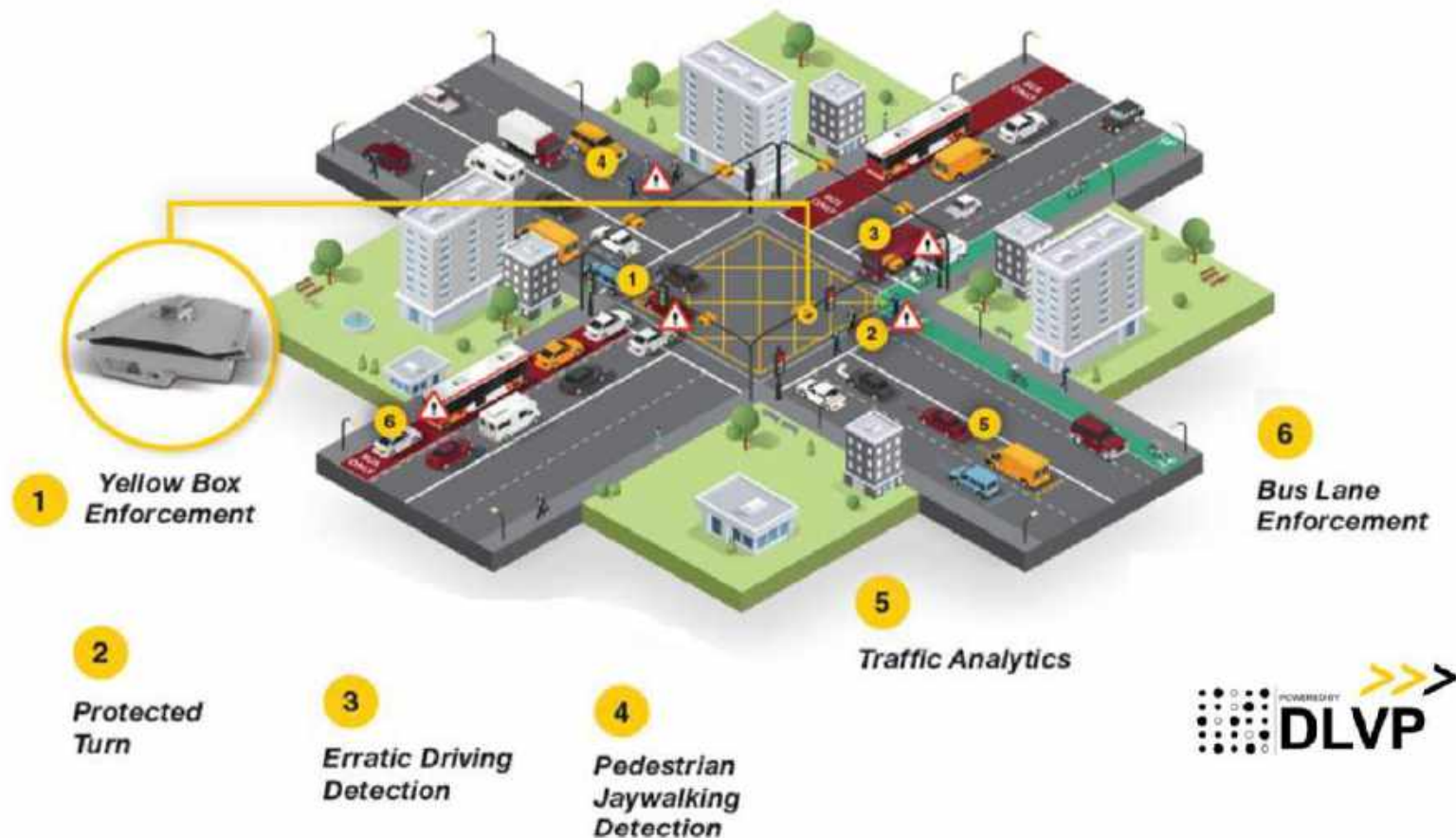


Kapsch/AIMES - Kapsch Smart Intersection

Overview

> Key Aspects of the project

- Successful deployment of the Kapsch '**Traffic Insights**' module with a Sony camera
- Use Cases achieved:
 - Queue Length Detection
 - Vehicle Classification
 - Vehicle Speed
 - Traffic Counter
 - Pedestrian Counter
 - Left Turn Counter
 - Yellowbox zone monitoring & detection
 - Near-miss detection & SCATS integration for SPaT (*in progress*)



Kapsch Smart Intersection

Thank you
for your
attention.



Kapsch TrafficCom AG

Am Europlatz 2
1120 Vienna, Austria

Phone: +43 50 811 0
Fax: +43 50 811 2109
E-Mail: ktc.office@kapsch.net
www.kapsch.net

Please Note:

The content of this presentation is the intellectual property of Kapsch TrafficCom AG and all rights are reserved with respect to the copying, reproduction, alteration, utilization, disclosure or transfer of such content to third parties. The foregoing is strictly prohibited without the prior written authorization of Kapsch TrafficCom AG. Product and company names may be registered brand names or protected trademarks of third parties and are only used herein for the sake of clarification and to the advantage of the respective legal owner without the intention of infringing proprietary rights.



DANIEL NAVARRO

BUSINESS DEVELOPMENT MANAGER APAC
SWARCO



THE FUTURE OF MOBILITY LET IT FLOW!

Austrian Technology Days Hong Kong 2022
SWARCO E2E Solutions



THE WORLD OF SWARCO

A PORTFOLIO FOR HOLISTIC MOBILITY MANAGEMENT



PASSENGER INFORMATION



TRAFFIC MANAGEMENT



TRAFFIC LIGHT ASSIST



CYCLING SOLUTIONS



PUBLIC TRANSPORT SOLUTIONS



CLOUD-BASED PRIORITY



TUNNEL & HIGHWAY SOLUTIONS



WEIGH-IN-MOTION



PARKING SOLUTIONS





Our customers' needs are drastically changing, and **SWARCO** is there to provide solutions.

PROBLEM STATEMENT

- Urban traffic congestion
- Poor air quality
- Budget constraints
- Staying on top of innovation
- Scarcity of parking spaces
- Increasing safety for VRUs
- Lack of skilled resources
- Lacking interoperability of systems
- Interurban traffic congestion
- Road user safety on highway & in tunnels





SWARCO MYCITY

Urban mobility management...

SINGLE SIGN-ON

MICRO-SERVICE BASED

SHARE & PROCESS DATA
FROM DIFFERENT SYSTEMS

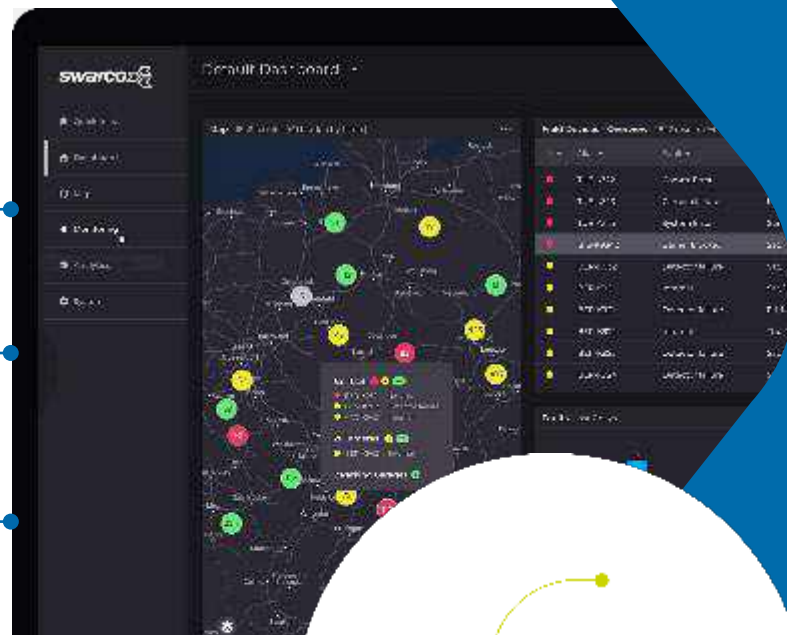
➤ SWARCO can act as contractual aggregator

MODULARITY & FLEXIBLY

EVOLVES WITH
EMERGING NEEDS

 SECURE CLOUD SYSTEM

SWARCO | The Better Way. Every Day.



...from a holistic point of view

DEVICE MONITORING
AIR QUALITY MONITORING
TRAFFIC MANAGEMENT SYSTEM
ADAPTIVE NETWORK CONTROL
TRAFFIC LIGHT EXCHANGE
SIGN MANAGER
PARKING GUIDANCE SYSTEM

Accessible from all kind of devices!





SWARCO MOBILITY MANAGEMENT BENEFITS AT A GLANCE



Environmentally sustainable



-20% waiting time
flow can be optimised by 10% to 20 %



Energy and fuel consumption
can be reduced by 10%



Well informed road users



CCAM enabled
Contributing to Vision Zero through cutting-edge technologies



Early warnings
of dangerous traffic situations



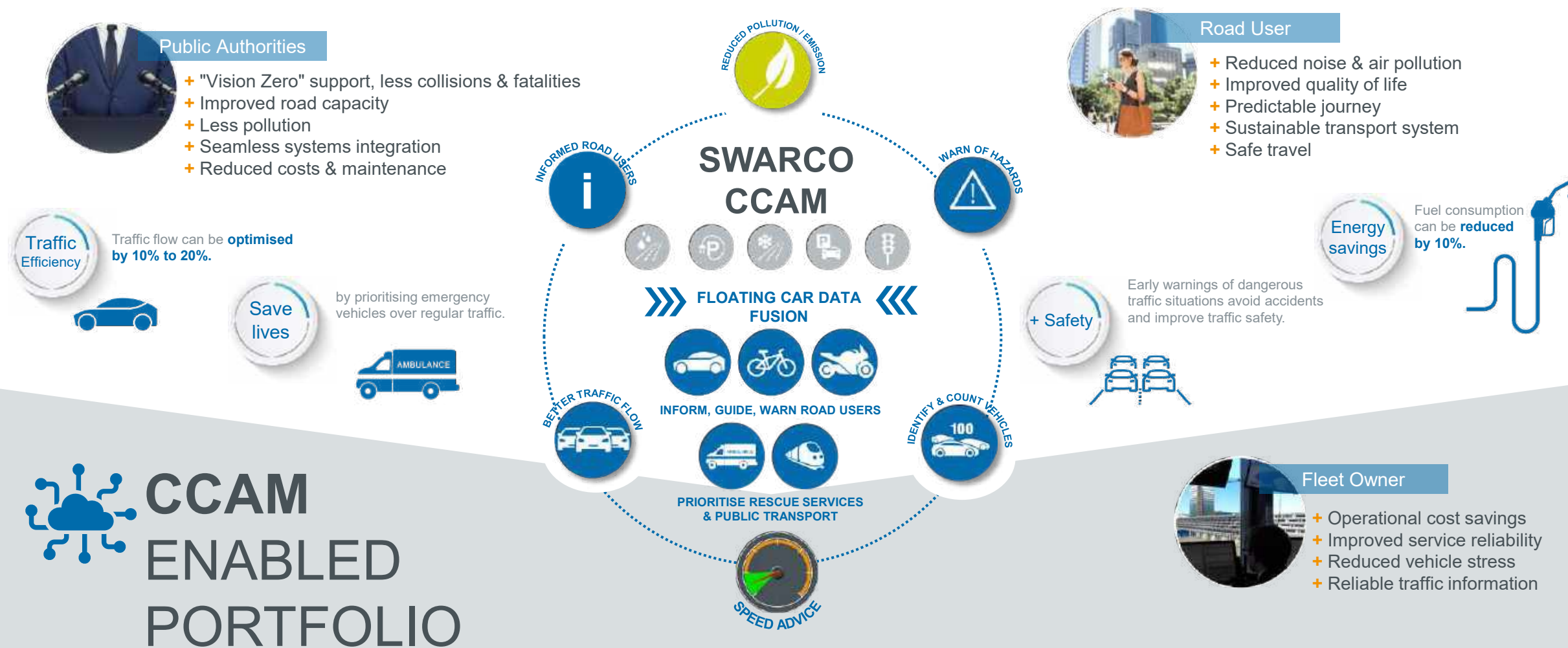
Prioritising emergency vehicles over regular traffic



Prioritised public transport



CONNECTED, COOPERATIVE AND AUTOMATED MOBILITY ENABLED PORTFOLIO



URBAN TRAFFIC CONGESTION THE SOLUTION

AUTOMATED,
SCHEDULED
& MANUAL
COMMAN

DATA COLLECTION

Sensors: TRAFFIC DATA



Eco-system of mobility e.g. APPS, FLOATING CAR DATA



PARKING DATA



PROCESSING & STORAGE

DATA VISUALIZATION



ALERTS & NOTIFICATIONS
in case of any
equipment
failure

**REPORTING
TO ANALYZE
IMPROVEMENTS**

ACTIONS



ADAPTIVE NETWORK CONTROL

Automatically predicts and adjusts traffic signal controls to maximize throughput and reduce traffic jams.



REROUTE & INFORM

Steer traffic away from congested areas and motivate a modal shift to reduce the overall traffic volume.



SPEED ADJUSTMENT

Adjust the speed limit to ensure an optimized traffic flow along critical corridors.



TRAFFIC ENGINEERING

Evaluate controls based on current guidelines, plan, test and simulate traffic-actuated controls, upload data to controllers directly or remotely and evaluate real-time data.



CHRISTIAN ECKER

BUSINESS MANAGER
AUSTRIAN INSTITUTE OF TECHNOLOGY





INTEGRATED PLANNING FOR SMART & SUSTAINABLE MOBILITY AUSTRIAN TECH FOR HONG KONG'S MOBILITY INITIATIVES

CHRISTIAN ECKER, 2022-12-06

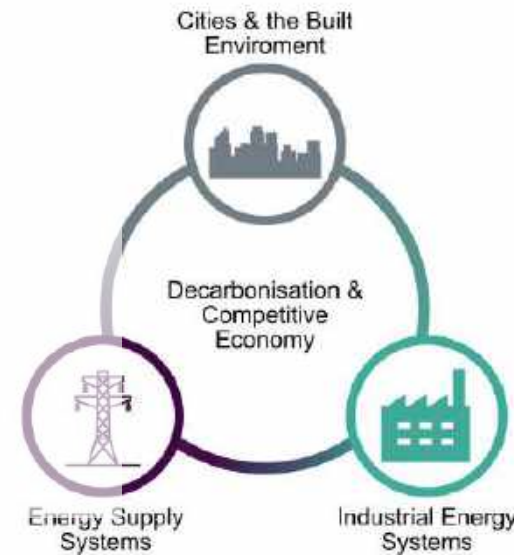


AIT AUSTRIAN INSTITUTE OF TECHNOLOGY

Research & Technology for the Industry & Public Authorities

Our mission is to drive innovation together with our clients for enabling and accelerating the Energy Transition!

Mobility is a key driver!



AIT Center for Energy



Energy system of the future

→ The Service portfolio is based on three central systems:

~1,400

overall AIT Employees

7 Center

With different Research Focus

Energy

Health &
Bioresources

Digital Safety & Security

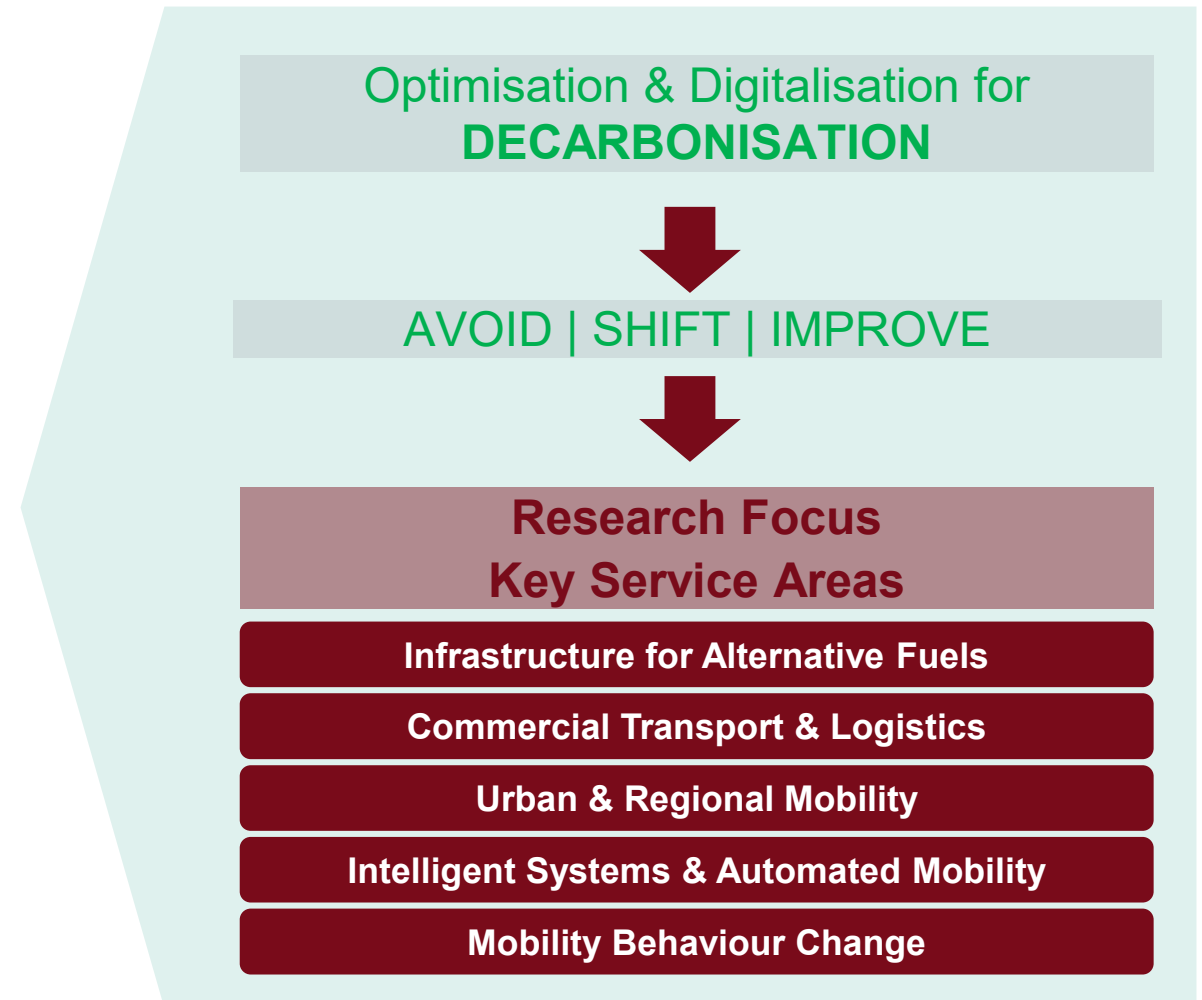
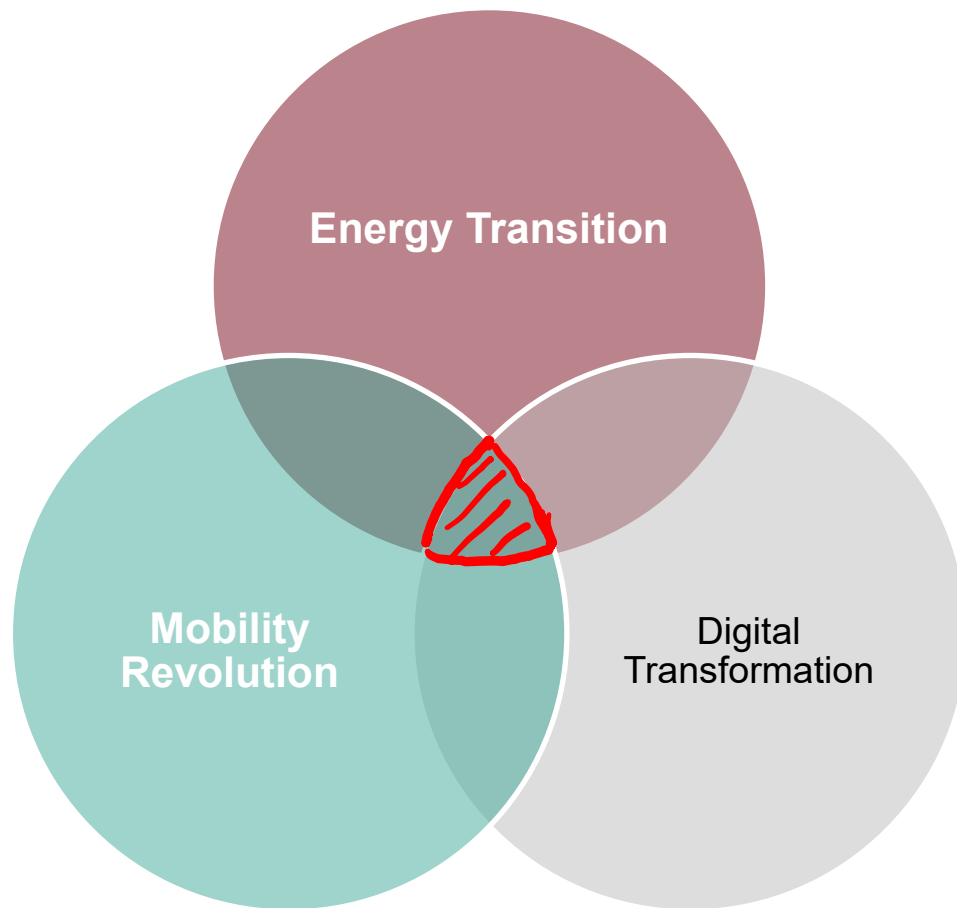
Vision, Automation &
Control

Low-Emission
Transport

Technology
Experience

Innovation Systems &
Policy

MOBILITY IN THE CONTEXT OF CHANGE



SOLUTIONS FOR KEY SECTORS

OPTIMISATION FOLLOWS SIMULATION



OUR EXPERTISE

AIT MOBILITY RESEARCH & CONSULTING

SIMULATION & MODELLING

OPTIMISATION

Smart & Carbon-Neutral Urban Development

Climate Resilient Urban Pathways

Integrated Digital Urban Planning

Integrated Transport Optimisation

- **Smart City** Data Insights, Analytics, KPIs and Monitoring Platforms for Smart Cities
- **Impact assessment** of Energy and Mobility
- **Urban Energy** Systems Analysis

- **Mobility Behaviour Change, Living Labs & Involvement Processes**
- **Climate Analysis & Modelling** of infrastructure
- **Mobility Surveys**

- **Multimodal Traffic and Transport Planning** Modelling, Analytics
- **Evaluation** of public transport concepts
- **Pedestrian Flow Simulation & Modelling**, Analytics

- **Connected Logistics & On-Demand Transportation**
- **Alternative Fuel Infrastructure; E-Mobility and Hydrogen**
- **Sharing Concepts**
- **Automated Mobility**
- **Rail Operations**

BEST PRACTICE: MULTI-MODAL TRANSPORT PLANNING AND MODELLING, TBILISI (GEORGIA)

ADB
Funded

- Impact assessment of measures in the traffic demand and supply
- Integration of all different modes of transport (walking, cycling, car, PT, MaaS, UAM, etc.)
- Future trends towards mobility behavior, changing demand, emissions and noise
- Includes “hard” and “soft” control methods (e.g. provide information users)

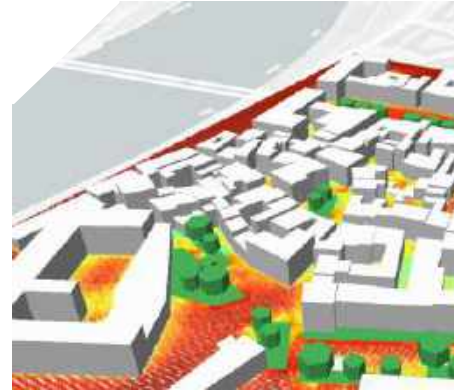


CITY INTELLIGENCE LAB



- Lab as a platform for the development of new urban planning methods (AI)
- Urban lab with AI-supported working environment
- Experimental space for digital collaboration
- Eliminating boundaries between digital and analogue

DRIVING MOBILITY INNOVATION WITH YOU!



Christian Ecker
Business Manager
Integrated Mobility Policy & Solutions
Center for Energy

M +43 664 7858 7979
E christian.ecker@ait.ac.at

AIT Austrian Institute of Technology GmbH Giefinggasse 2 | 1210 Vienna | Austria



SEBASTIAN OERTEL

MANAGING DIRECTOR
PLASSER FAR EAST

Plasser Far East



HIGH CAPACITY | PRECISION | RELIABILITY

Plasser&Theurer

Austria – Hong Kong Technology Days 2022

S. Oertel



Plasser Far East Ltd.

- **Was founded 1979 as Regional Sales Office for P&T**
- **P&T is a technology leader and further enhance the position in the market via a regional service structure**
- **Resident Service Engineer enabling fast response on service requests and enhance customer satisfaction**
- **MTR is a worldwide leading rail operator and key reference in the region**
- **Hong Kong SAR's proximity to regional customers makes it an ideal hub for P&T**

Plasser Far East Ltd.





DANIEL PAETZOLD & DANIEL DOPPELMAYR

DOPPELMAYR CABLE CAR



DOPPELMAYR URBAN

Smart Mobility for Future Cities





Relative Share by User

Continent	Commuter	Tourism
Asia	36%	64%
Europe	38%	62%
North America	57%	43%
Africa	63%	37%
South America	68%	32%
Australia	0%	0%



Cablebús Mexico City

- Improved mobility for the residents of the Gustavo A. Madero district (pop. 1.7 Mio)
- Fully integrated into the public transport network
- Ropeways as a multimodal component of urban mobility

MULTIMODAL
COMPONENTS

MEXICO CITY
MEXICO

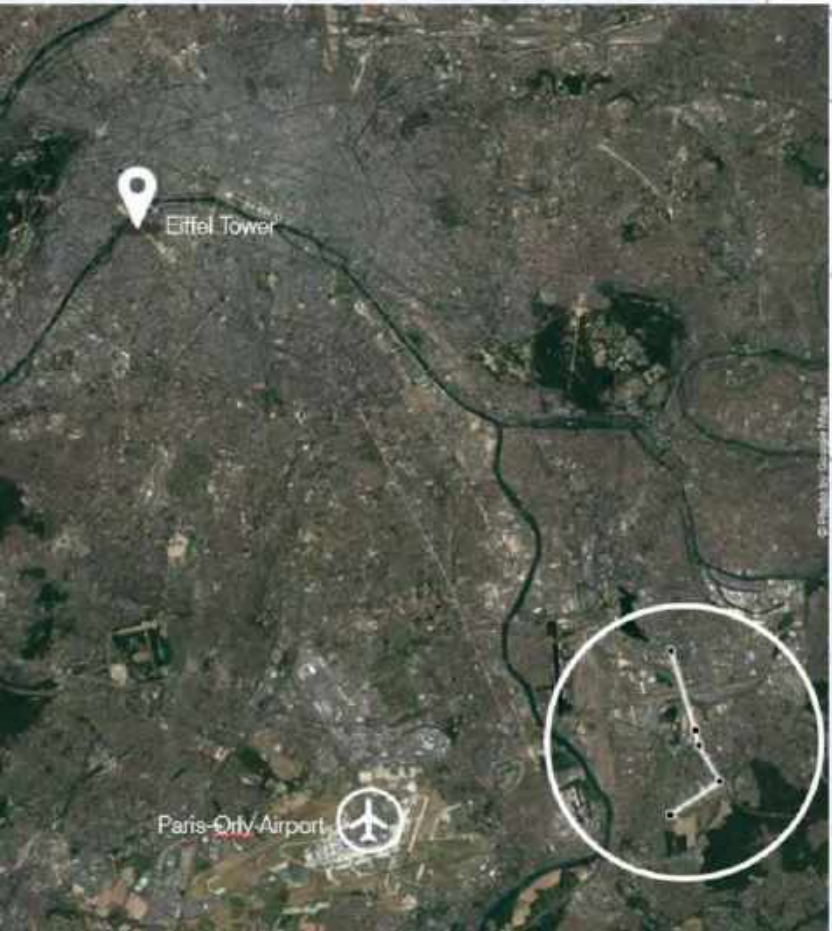
ROPEWAY

BUS

METRO

MULTIMODAL
COMPONENTS

PARIS
FRANCE



GARAGES C1

Projet de coulée verte « La Tégéval »

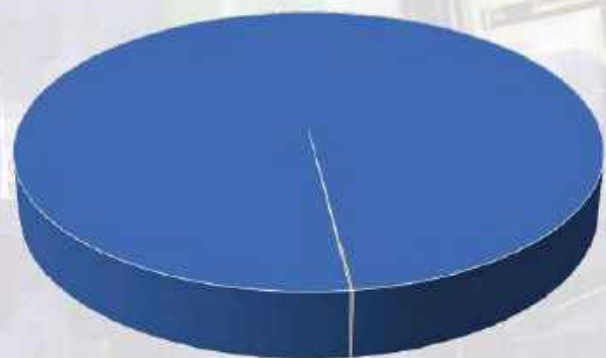
Établissements d'intérêt public

Afin de faciliter les correspondances du C1, les interconnexions avec le réseau de bus évolueront d'ici la mise en service.

TECHNICAL AVAILABILITY

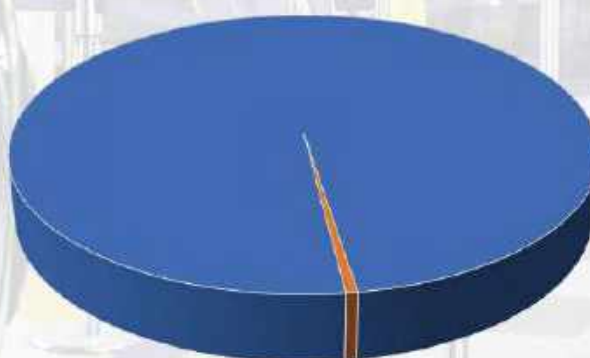
Metro (MTR)

- Availability of 99,9%



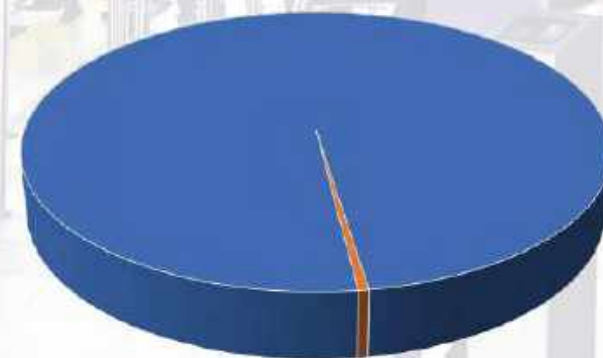
Bus (KMB)

- Availability of 99,41%



Ropeway

- Availability of **99,5%**



IMPLEMENT OF
INFRASTRUCTURE

FAST IMPLEMENTATION



Ropeways as a multimodal component of urban mobility

- Fast implementation
- Small construction site
- Temporary closure of street and usage of area
- Tower construction time of only 2-3 weeks

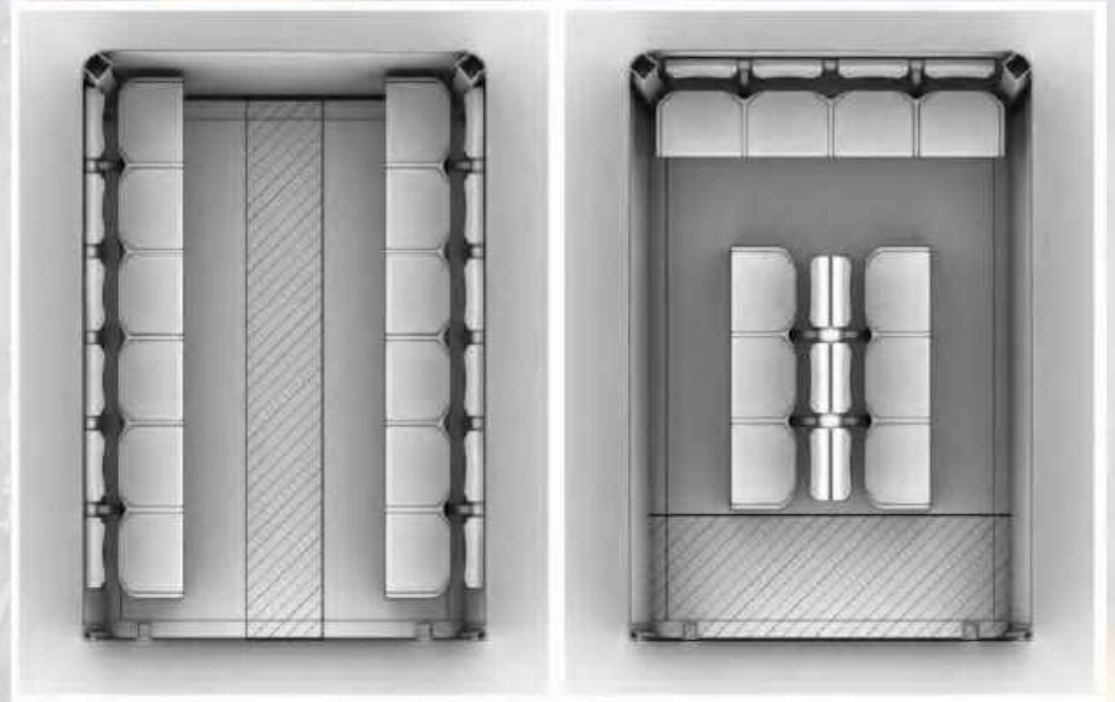
COST
COMPARISON



POST PANDEMIC

SMALL VEHICLES

- Continuous movement
- No waiting time
- Custom interior design



NEW URBAN REALISM

PARIS
FRANCE



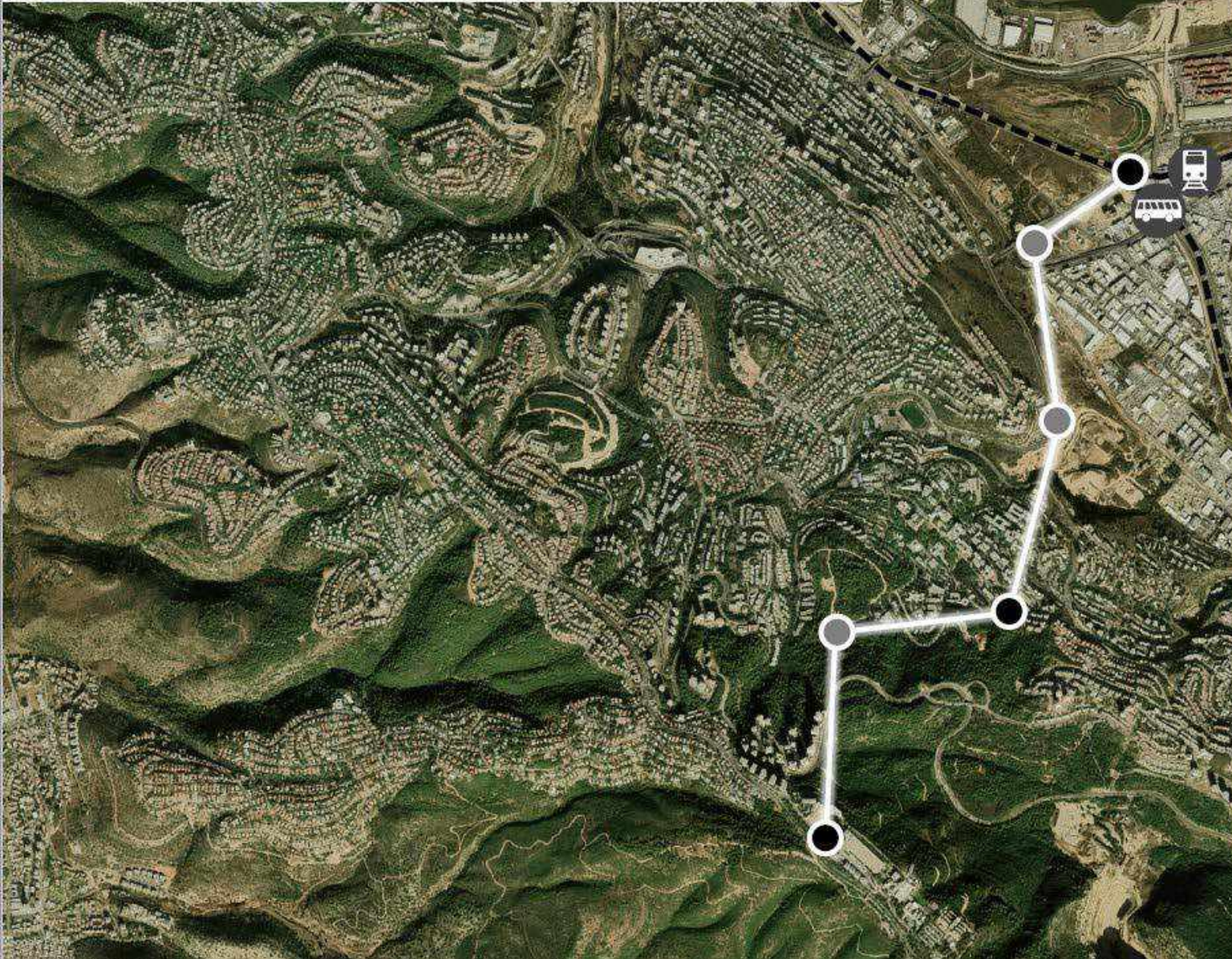
RECENT REFERENCE

HAIFA ISRAEL

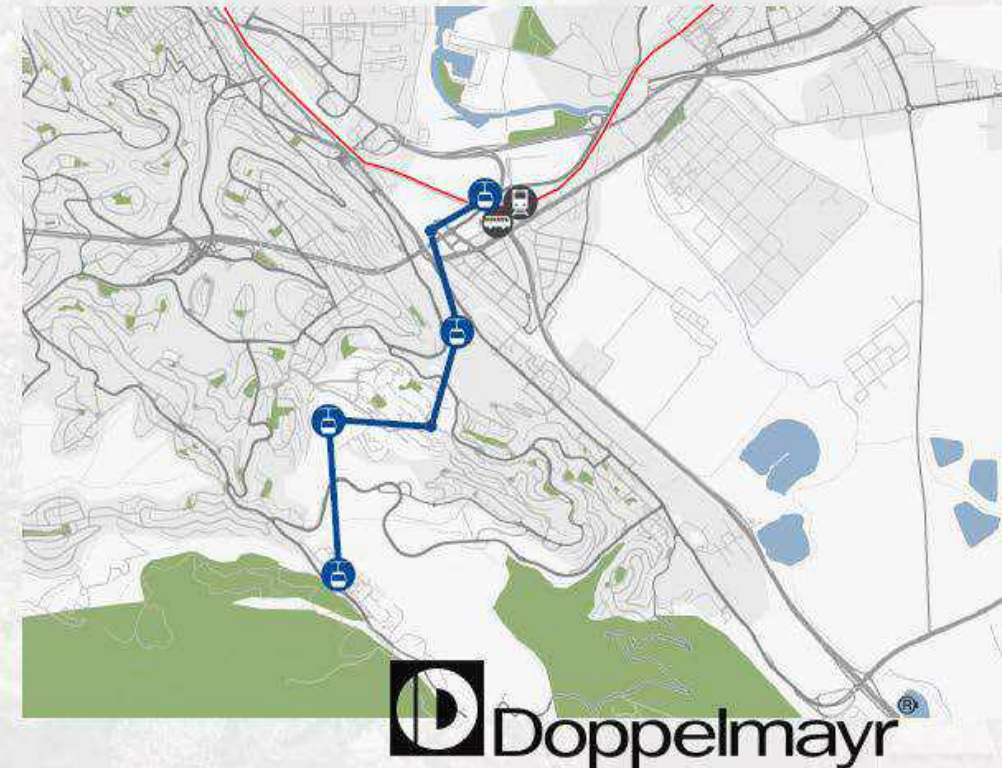


RECENT REFERENCE

HAIFA ISRAEL



- First urban cable car in Israel
- Link to university campus
- Fully integrated in public transport network
- Achieves significant travel time savings



- One stop shop
 - Project development
 - Planning & construction
 - Operation and maintenance
- Includes advisory to implement mobility solutions with ropeways
- Financing & Investment counseling
- Together with local partner and academic research

RECENT REFERENCE

KÖNIG LAURIN ITALY



- Cable car embedded in an iconic landscape
- Integration to achieve UNESCO heritage compliance
- Protection of station Infrastructure and Passenger Comfort



DOPPELMAYR

FACTS & FIGURES



EMPLOYEES
WORLDWIDE

3,154

COUNTRIES
WITH
SUBSIDIARIES

50

COUNTRIES
WITH
DOPPELMAYR
INSTALLATIONS

96

ROPEWAY
INSTALLATIONS
WORLDWIDE

15,400

2021 / 22 REVENUE
(MILLION EUROS)

886

CONTACT

**WE ARE HAPPY
TO ADVISE**

DANIEL PÄTZOLD



REINHARD FITZ





MARIO GALLER

CEO
GALLER CONSULTING





We want to and have to be Mobil





Large Infrastructure Limits Route Choices and Increases Costs





- Large Rail Guideways Infrastructure
- Large Overhead Infrastructure



- The large rail Guideways reduce Lanes for Other Forms of Public Transit





<u>MODERNIZING TASK</u>	<u>RESULT</u>
We Created Smaller Infrastructure	Less Cost with Easier Implementation
Modernized vehicle operations (Offline stations)	Creates the Capability to Network a Transit System
Automation	Reliable and Repeatable Operations 24/7
Improved Financial Model	100% Fare Collection



The central advertisement features a red Skyweb Express pod in the foreground, angled towards the right. The background is a vibrant, high-angle night view of a city skyline, likely New York City, with numerous skyscrapers illuminated. The text 'SKYWEB EXPRESS' is prominently displayed in the upper center, with 'SKYWEB' in red and 'EXPRESS' in white. Below it, the tagline 'TRANSPORTATION FOR THE 21ST CENTURY' is written in white. In the bottom right corner of the ad, the 'MRM' logo is shown in its signature multi-colored font, followed by 'INTERNATIONAL, INC.' and the website 'www.mrmintl.com' in white.

SKYWEB EXPRESS
TRANSPORTATION FOR THE 21ST CENTURY

MRM
INTERNATIONAL, INC.
www.mrmintl.com



Introducing the Next Generation Guide Rail

MRM



SKYWEB EXPRESS



Benefits of Next Generation Guide Rail

MRMI



Smaller Guide Rail Fits the City

More Design Choices for a Smarter City



A Smart City with a Connected Transportation Network

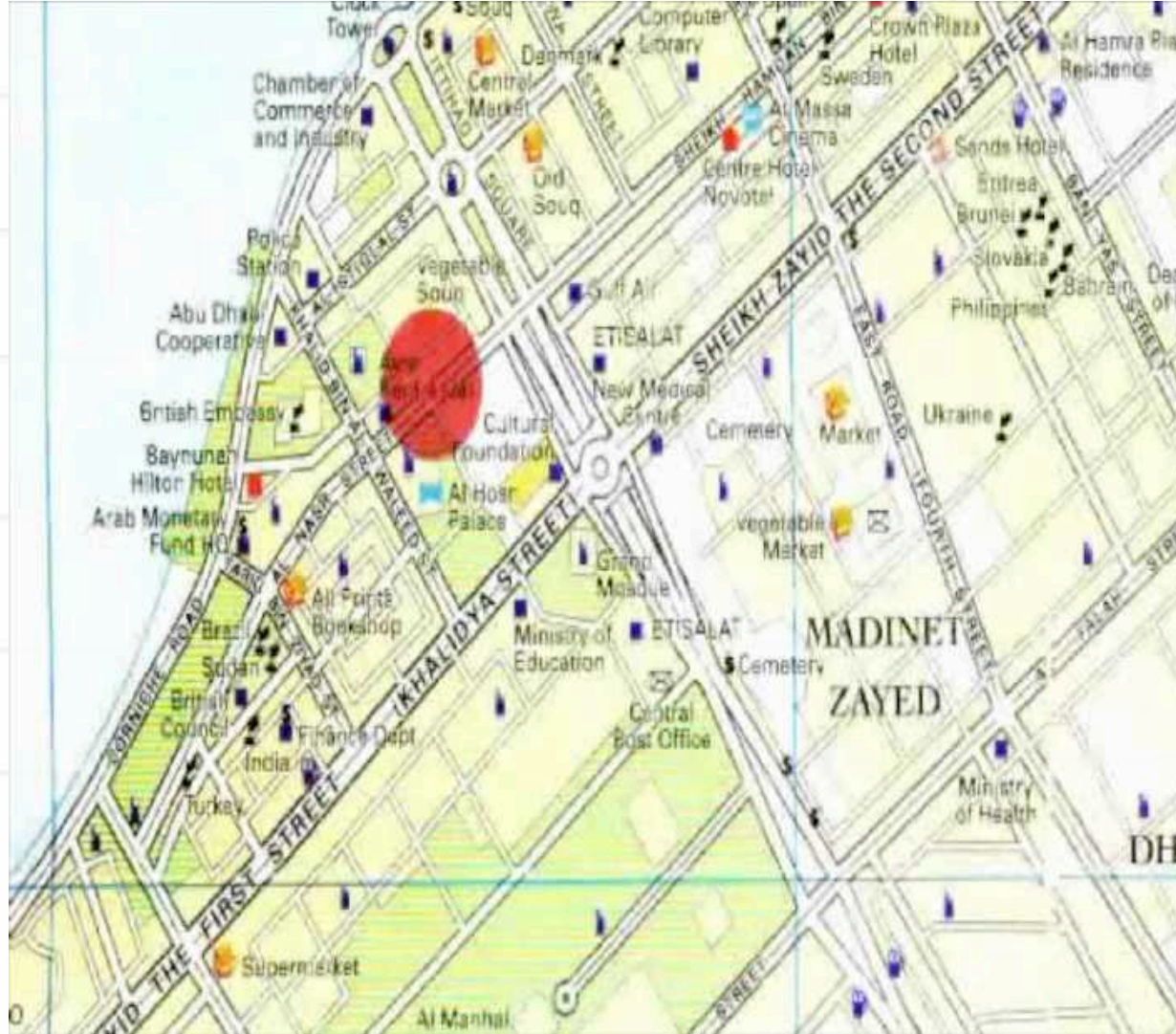


SKYWEB EXPRESS



Smart City with a Transit Network

MRMI



Direct Access From Any Station to Any Station – No stops to where you are not going

Increases System Capacity – Constant flow and not waiting with stops and starts

Decrease Operational Costs – System only has to work when passengers are paying

SKYWEB EXPRESS



Time for the Next Generation

MRM



Contact:

Mario Galler

MRM INTERNATIONAL, INC.

mg@mrmintl.com

Modern Rapid Mobility

SKYWEB EXPRESS





CHRIS STELZMUELLER

CTO & CO-FOUNDER
TRIPLY



 Federal Ministry
Republic of Austria
Climate Action, Environment,
Energy, Mobility,
Innovation and Technology



ATC
AUSTRIAN TECHNOLOGY CORPORATION





**Make sustainable mobility accessible,
everywhere for everyone.**

Passenger Travel, and especially business travel produce more and more emissions as people move back to work from their home offices

Triply helps analyze and improve corporate mobility

**Company
Locations**

**Employee Count
& Locations**

MINIMUM REQUIRED DATA

STATUS QUO

automated emissions reporting
for employee mobility

KPI Vorschau

299 Mitarbeiter



Fuß

5 %

15 MA

Rad

6 %

18 MA

ÖV

15 %

45 MA

Fahrer

70 %

209 MA

Mitfahrer

4 %

12 MA

6

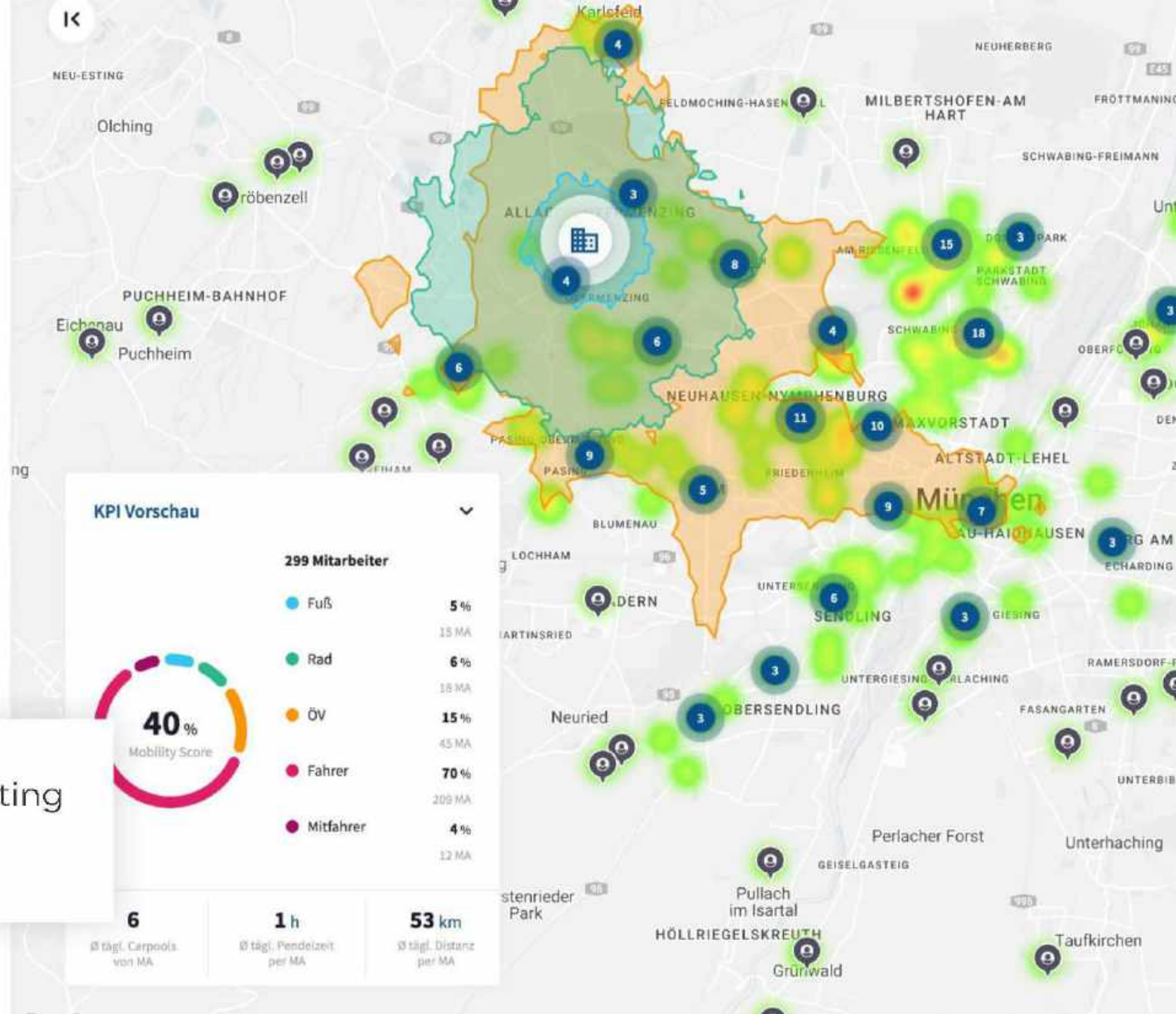
Ø tägl. Carpools
von MA

1 h

Ø tägl. Pendelzeit
per MA

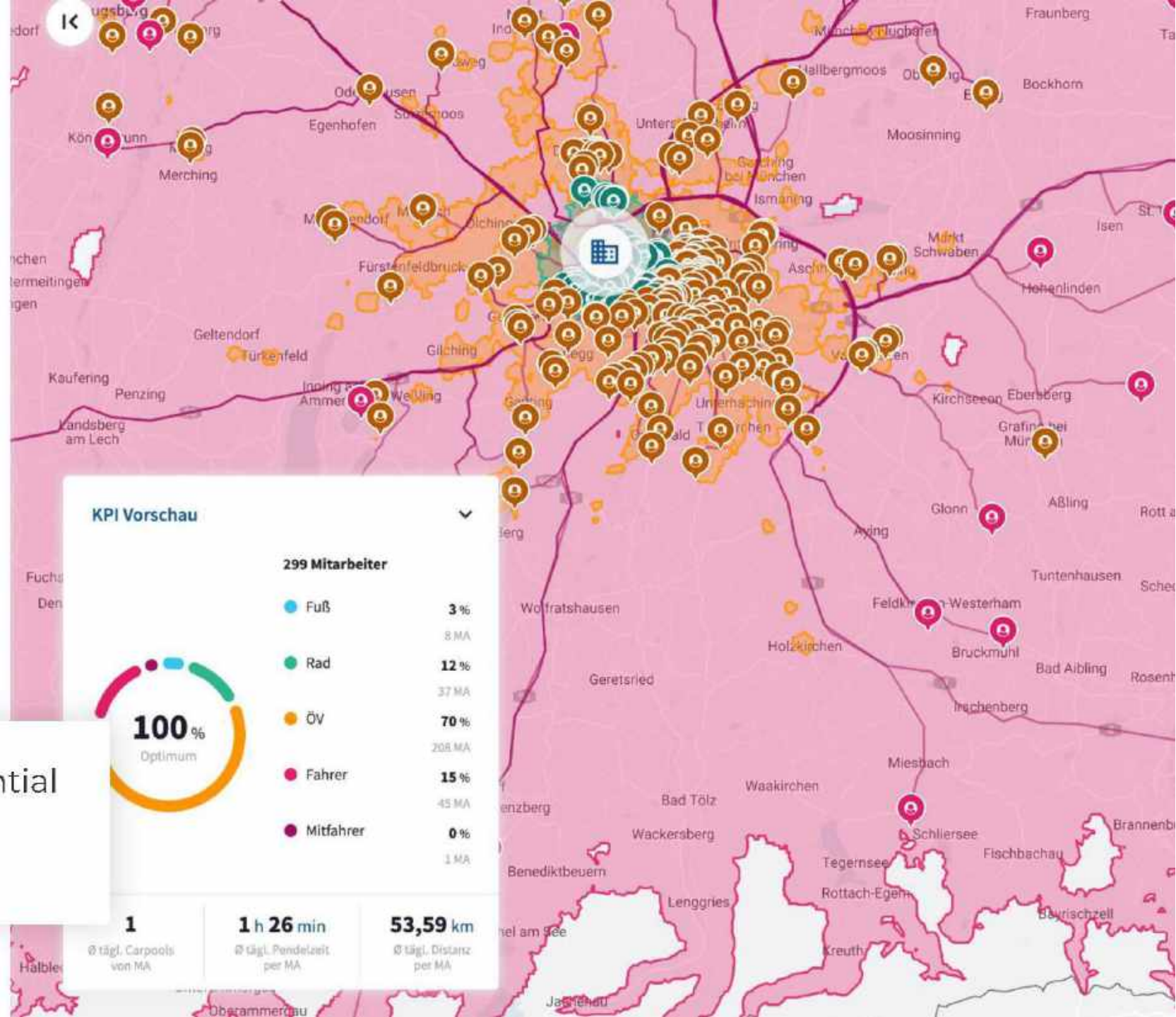
53 km

Ø tägl. Distanz
per MA



OPTIMUM

automated analysis of potential improvements given the available infrastructure





Standort
München, Deutschland



STATUS QUO — OPTIMUM — **MAßNAHMEN**

+ HINZUFÜGEN

Package A



Carployee Job-ticket Home Office

berechnet am 08.01.2022



Package A

berechnet am 08.01.2022

Mobility Score

+41,3 %

(46 % → 65 %)



- Erreichbares Optimum (100 %)
- Status Quo (46 %)
- Status Quo inkl. Maßnahmen (65 %)

MIV Besetzungsgrad

+13,64 %

(jährl. 1,1)

1,25 Personen

durchschnittlich pro Fahrzeug

SOLUTIONS

automated identification of the best mobility solutions and actions to implement

Modalsp

Modalspli

Rad (4 %)

Fuß (1 %)

ÖV (7 %)

Fahrer (80 %)

Mitfahrer

Mobility Consultants

that want to work with our software and provide improved services to their customers

Corporates

that want to know more about their current mobility situation and incentivise better mobility for their employees

WHO WE'RE LOOKING FOR



**Make sustainable
mobility accessible,
for everyone, 
everywhere.**



Christopher Stelzmüller

CTO & Founder

cs@triply.at
+43 660 158 1637
www.triply.at



JUERGEN HEINRICH

MANAGING PARTNER
EVERSUM MOBILITY SOLUTIONS





Austrian Technology Days

Who we are

OEM of electric public passenger vehicles – Conventional and especially Autonomous Driving

What we offer

Purpose designed vehicles to amplify opportunities of the electric drivetrain era

What is our technological concept

Entirely new vehicle architecture, utilizing state of the art materials, battery systems and electronics

What makes our products unique

Unrivalled match between range and passenger capacities combined with sustainable energy storage concepts

WHAT'S IN IT FOR YOU

Opportunity to operate highly efficient passenger vehicles, offering...

...Perfect match between appealing commercial rentability and honest environmental sustainability

...Unique chance to gradually establish autonomously driving operations



PRODUCT LINE-UP

Three lines of products – eTrain, eShuttle and eCity Bus - are introduced to the market stepwise

E-TRAIN



SOP: 2021

Electric on-road train for touristic applications





E-SHUTTLE

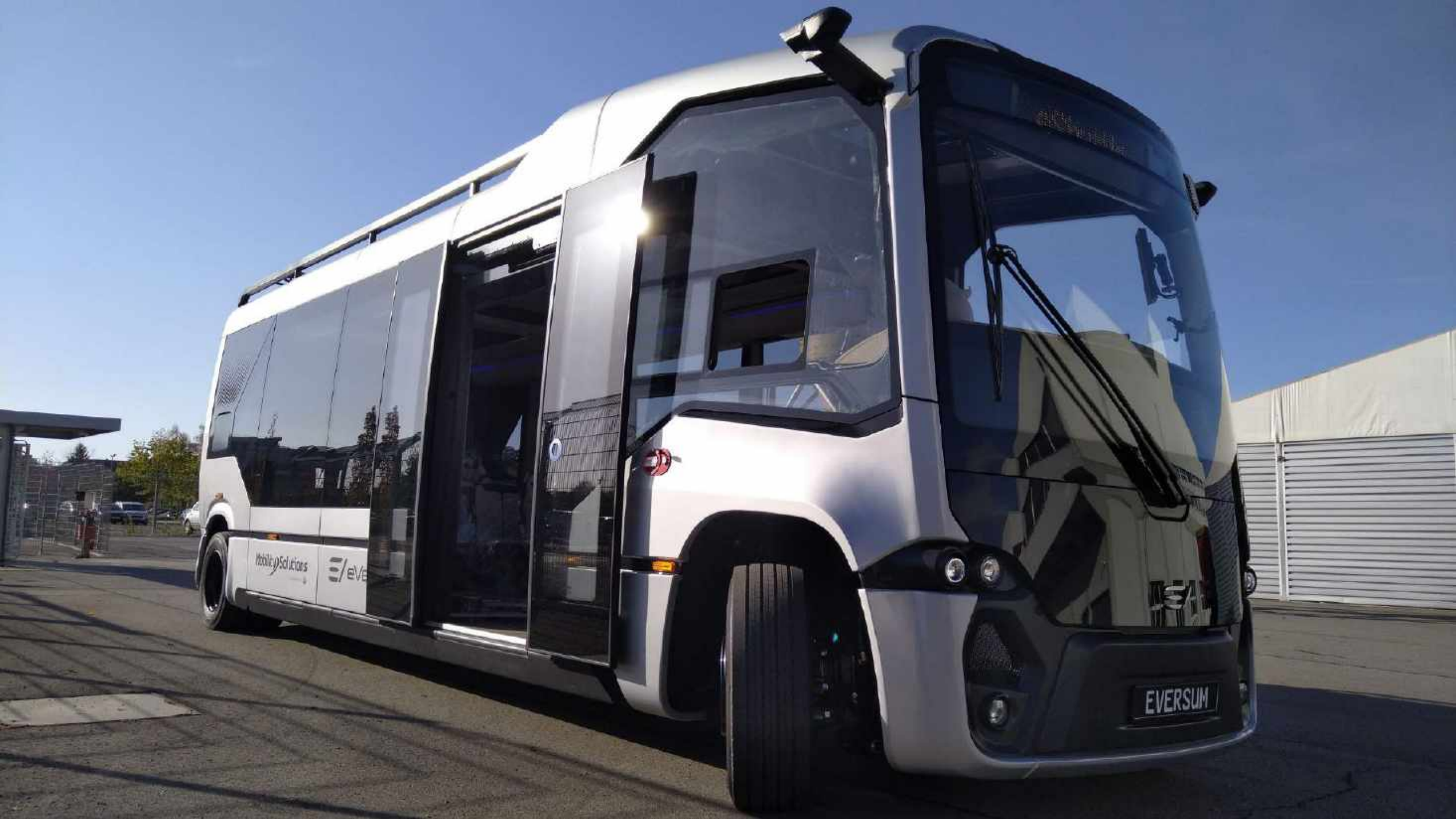
Electric shuttle for inner-city and airport applications





eShuttle – Next Generation of Urban Mobility





E-CITY



SOP: 2023

The centrepiece of eVersum's eco-system
for public transport





+43 316 405 812
info@eversum-mobility.com

www.eversum-mobility.com
www.eversum-vehicles.com



LET'S DO
BUSINESS
TOGETHER



Q & A



CONTACT US

ADVANTAGE AUSTRIA Hong Kong

Yvonne CHOI / Celistina PANG

T: +852 2522 2388

E: hongkong@advantageaustria.org

Register for 1-on-1 Meetings

