

PODCAR CITY & ADVANCED TRANSIT

November 8-10 2017

Las Vegas, Nevada 

www.podcarcity.org

Conference Newsletter



In this issue:

- * A New Urban Transportation Future!
- * Podcar Industry update October 2017
 - AAA, Bangalore, Arlington
- * What is PRT/GRT/SAV?
- * UIDC Update
- * 4Dialog modeling
- * Spartan Superway speeds ahead
- * Special offer - Modutram
- * Program update October
- * Registration, Hotels & Venue

A New Urban Transportation Future - Meeting of the Minds in Las Vegas

The world is becoming more and more urban. The use of the private car is rapidly becoming an impossible solution for everyday transportation. In the same time new and exciting technologies are emerging. So how do we go from today towards tomorrow? Podcar City Las Vegas delivers an impressive list of speakers from all over the world looking at what have been done, what we are doing today and what the plans are for the future. Come and meet city planners, elected officials, academics, consultants and not least the emerging autonomous technologies that are just about to change everything you knew about public transportation!



Suna Taymaz,
VP Corporate Strategy
AAA



Sinisio Concas
Center for Urban
Transportation Research



Scott Adams
City Manager
City of Las Vegas

Program Update

Wednesday November 8 - City Hall

- 10 - 3 Workshop - Students planning
- 12.00 Student training at UNLV
- 3 pm ASCE PT Committee
- 4.30 Planning for ASCE Conferences
- 5.30 Welcoming Reception
- 6.30 Keynote - Setting the Stage

Thursday November 9 - City Hall

- 8 am Registration and Breakfast
- 8.30 Official opening
- 8.45 Welcome to Nevada
Welcome to Las Vegas
- 9.15 Introductions
- 9.45 Coffee Break
- 10.00 Keynote
- 10.30 Keynote

Please see page 8-9 for the full program!



Podcar Industry Update October 2017

Bangalore looking to evaluate a pod taxi system. From Bangalore Mirror:

The Centre for Infrastructure, Sustainable Transport and Urban Planning (CiSTUP) at the Indian Institute of Science had evaluated the BBMP's (Bruhat Bengaluru Mahanagara Palike's) proposal to install the pod taxi system in Bengaluru. And it has come out with a favourable report.

Pod taxi system, also called personal rapid transit (PRT) system, consists of elevated cable cars that transport smaller groups of people. So far, they have been implemented in theme parks for joy rides or in reserved/green areas where a fossil fuel-based system is undesirable/prohibited.

BBMP commissioner N Manjunath Prasad said: "The report has said that the project is feasible... we will implement the project soon; it does not require too much time like Metro. The city needs it to provide last mile connectivity."

BBMP's chief engineer, TVCC (Technical Vigilance Cell under Commissioner) Prahallad BS said: "The stretches identified by us are reported as feasible. Currently, the city is in 'Level A traffic' condition which means it is worst in terms of last mile destination. These types of systems will help us give faster connectivity."

Article at: <http://bangaloremirror.indiatimes.com/bangalore/civic/what-potholes-bbmp-gets-iisc-ok-will-roll-out-the-pods/articleshow/61058722.cms?>



City of Arlington, TX, is getting more and more into autonomous solutions for the City. The MILO is a small autonomous shuttle bus that has been tested since August this year.

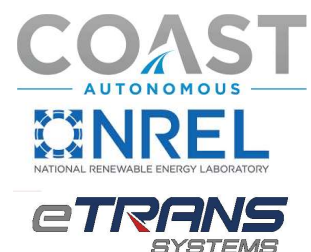
Lauren Isaac, director of business initiatives for EasyMile, said the shuttles will be a big help for those with disabilities or limited mobility. If the pilot project works, Williams said Arlington could add more driverless shuttles. "Stay tuned," Williams said. "If it works, yes, we'll have more. If it doesn't, we'll go on to something else."



Arlington, which has seen voters reject mass transit three times, will continue to look for different approaches to moving its citizens around the city. A transportation committee has been studying the issue and will make recommendations to the City Council. Williams said traditional mass transit is not an option.

"I think light rail and diesel buses are outdated, and that's not what we're after here in our city," Williams said. "We're looking at the new technology that will be much cheaper and safer."

Read the entire article at: <http://www.star-telegram.com/news/local/community/arlington/article166672082.html>



Podcar Industry Update October 2017

This just in - AAA Press-release October 17

Suna Taymaz, VP of Corporate Strategy for AAA NCNU Club on PCC panel November 10!

WALNUT CREEK, CA – Oct. 17, 2017

AAA Northern California, Nevada & Utah is proud to announce its partnership with GoMentum Station and the Contra Costa Transportation Authority on an exclusive agreement to study and test how autonomous vehicles can be safely implemented for public use. This marks another key step in the auto club's larger plan to help its Members make the transition to new forms of transportation that can be safer, more convenient and improve lives.



"From the horseless carriage to the driverless car, AAA has always embraced advancements that can provide our Members increased safety and options in mobility," said Tim Condon, CEO of AAA Northern California, Nevada & Utah. "With our ability to study and test autonomous vehicles, AAA is at the forefront of cutting edge technology that has the enormous potential to save lives and help people enjoy life more."

AAA believes autonomous vehicles can potentially be a highly effective method of transportation. They can also provide greater mobility to seniors and the disabled and redefine travel for the next generation.

According to AAA's 2017 survey, three-quarters of U.S. drivers reported being skeptical of riding in a self-driving car, and only 10 percent reported that they'd actually feel safer sharing the roads with driverless vehicles. With a seat at the table, AAA can accelerate adoption of technologies that increase safety while bringing Members along for the journey and learn about exciting new developments in transportation through a trusted, independent source that has a long heritage in motor vehicle safety.

The Contra Costa Transportation Authority (CCTA) operates GoMentum Station, the nation's largest secure proving grounds for connected and autonomous technology. "With our multi-faceted approach to redefining mobility, we believe that informing and educating the public about the advances in technology is just as important as the connected and automated technology itself," stated CCTA Executive Director Randy Iwasaki. "We believe that AAA is the best partner to introduce the public to the possibilities that come with this new technology and be a resource as autonomous vehicles begin to change the way we travel."

Designated as one of ten automated vehicles proving grounds by the United States Department of Transportation, GoMentum Station features more than 20 miles of paved roadway including city-like roadway grids, twin 1400' tunnels, overcrossings, undercrossings, railroad tracks, a mini-city, and other urban infrastructure that provides a realistic environment for testing automated and connected technologies.

Suna Taymaz, VP of Corporate Strategy for AAA NCNU Club, will be participating in a Conference Panel on November 10th to discuss the organization's broader commitment to autonomous vehicle safety.



What are PRT, GRT and Autonomous public transit?

(From Wikipedia)

PRT

Personal rapid transit (PRT), also referred to as podcars, is a public transport mode featuring small automated vehicles operating on a network of specially built guideways. PRT is a type of automated guideway transit (AGT), a class of system which also includes larger vehicles all the way to small subway systems.

PRT vehicles are sized for individual or small group travel, typically carrying no more than 3 to 6 passengers per vehicle. Guideways are arranged in a network topology, with all stations located on sidings, and with frequent merge/diverge points. This allows for nonstop, point-to-point travel, bypassing all intermediate stations. The point-to-point service has been compared to a taxi or a horizontal lift (elevator).

Right side images: Two examples of PRT on a guideway, outside and inside



GRT

Group rapid transit (GRT) is similar to personal rapid transit but with higher-passenger capacity and grouping of passengers with potentially different origin-destination pairs. In this respect GRT can be seen as a sort of horizontal elevator. Such systems may have fewer direct-to-destination trips than single-destination PRT but still have fewer average stops than conventional transit, acting more as an automated share taxi system than a private cab system. Such a system may have advantages over low-capacity PRT in some applications, such as where higher passenger density is required or advantageous.

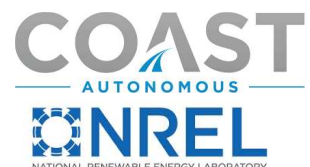
It is also conceivable for a GRT system to have a range of vehicle sizes to accommodate different passenger load requirements, for example at different times of day or on routes with less or more average traffic. Such a system may constitute an "optimal" surface transportation routing solution in terms of balancing trip time and convenience with resource efficiency.

SAV

Shared autonomous vehicles (SAV) are similar to PRT and GRT but mainly use public vehicles on regular roads.

Right side images:

Autonomous GRT vehicles, for public road (top) and special track (bottom)

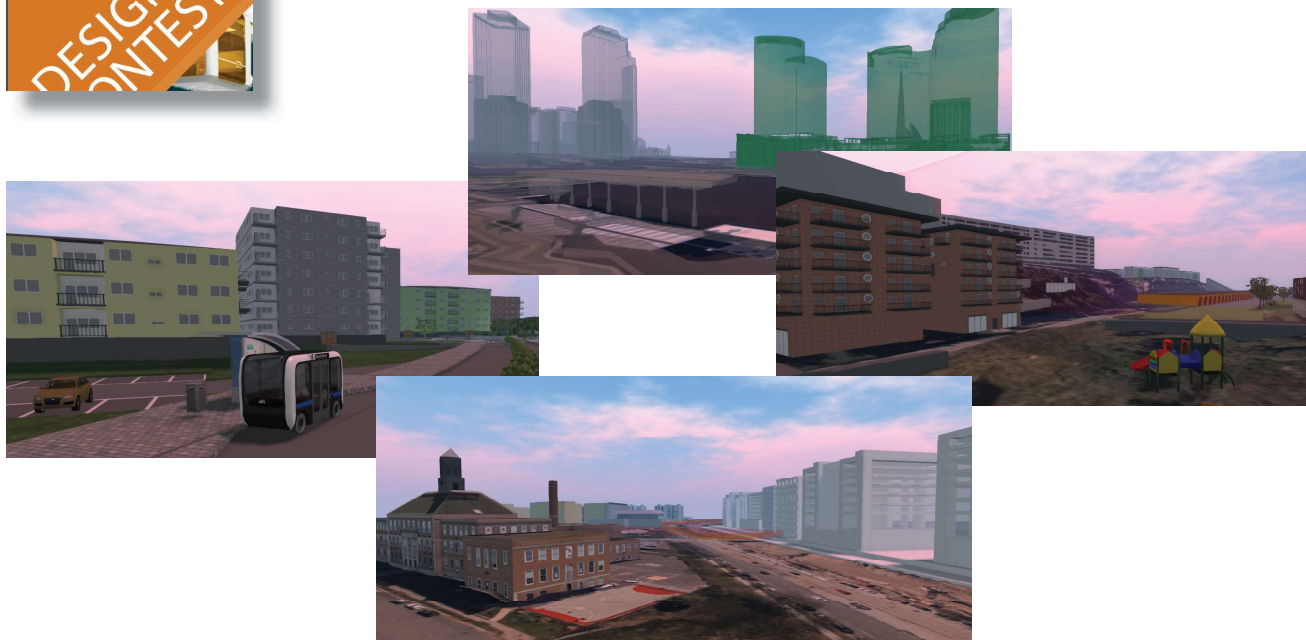


UIDC TEAMS UNDERWAY - EARLY PEEK BELOW FROM LATEST STUDENT WORK :-)



UIDC - Urban International Design Contest - is an annual youth contest that supports cities to envision a sustainable future using new modes of shared public transportation. This year includes participation from Washington D.C, Sundbyberg, Las Vegas, Jacksonville, Perth and Gävle.

Please see www.facebook.com/UIDC2017 for rules and current developments.



4Dialog

4Dialog will present their 4D-technology for planning and understanding the possibilities of using PRT, GRT and SAV in an urban environment. Also, the UIDC teams have built their concepts and designs using 4D-technology and will show their models and findings during the entire conference in the adjacent showroom.



The Spartan Superway Speeds Ahead

Dr Burford Furman, San Jose State University

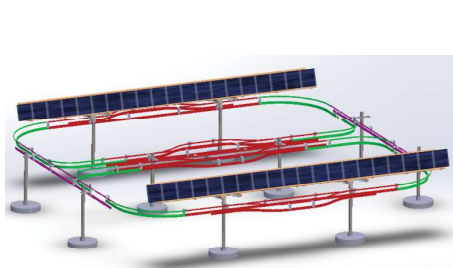


The research and development work for the Spartan Superway solar-powered automated transit system continues on many fronts with the short term goal of the construction of a full-scale test track

A previous ATRA newsletter article in January 2016 (<http://tinyurl.com/y83wqbjc>) described the genesis of the Spartan Superway project and its first three years of development (2012 - 2015) largely by students at San José State University. Since 2015 there has been significant progress in developing and demonstrating solar powered automated transit as well as presenting the technology at professional meetings and exhibitions.

In May of 2016, the Superway team exhibited a half-scale, pinched-loop guideway and bogie model at Maker Faire Bay Area 2016. The half-scale model featured a 17° sloped off-line station with the idea to demonstrate that a vehicle could be brought down from elevation to ground level and return to elevation. The bogie and guideway design were inspired by the pioneering work by Bengt Gustafsson (<http://www.beamways.se/>). The model also featured solar panels and a grid-tied 48 V battery charging system. While the guideway and solar construction were successful, flaws in the design and fabrication of the bogie that only became apparent at the exhibition prevented the bogie and active suspension from being operational. [Improvements to the bogie and suspension were made and successfully demonstrated the following year as described below.] Also shown at Maker Faire in 2016 was an improved 1/12th scale model. This model demonstrated autonomous operation of multiple 3D printed vehicles traveling between four offline stations. Batteries for the vehicles were charged from solar panels. In the summer of 2016, we hosted a large international contingent of interns from Brazil, South Korea, France, and the U.S. Notable accomplishments by the interns included exploratory planning for a full-scale test track and guideway placement for a network that would connect the north and south campuses of San José State), power requirements and solar PV sizing for the proposed pilot network, and analysis of the shading by buildings along the proposed network. Papers on the PV sizing and shading analyses were presented at the American Solar Energy Society conference that took place in conjunction with Intersolar 2016 in San Francisco. Links to the papers are listed in the References section at the end of this article.

Work over the 2016-2017 academic year led to improvements in the bogie and suspension system for the half-scale model, such that a moving bogie was successfully demonstrated at Maker Faire in May 2017. Also new this year was substantial progress on a mobile app that allowed a user to interact with and control the 1/12 scale model.



In November, 2016, the Superway leadership team delivered a webinar for the US DOT Intelligent Transportation Systems Joint Office T3e webinar program on Solar Powered Automated Transit. [See 'Links to Additional Information on the Project' at the end of this article for a link to the recorded webinar.] For the 2017-2018 academic year, SJSU students will be designing and fabricating an 18 m long section of full-scale guideway and a solar PV canopy that will be used for early prototyping of hardware for the test track. Separately, a preliminary application for a building permit has been submitted to the city of San José, and we expect to begin construction of the first phase of the test track in 2018.

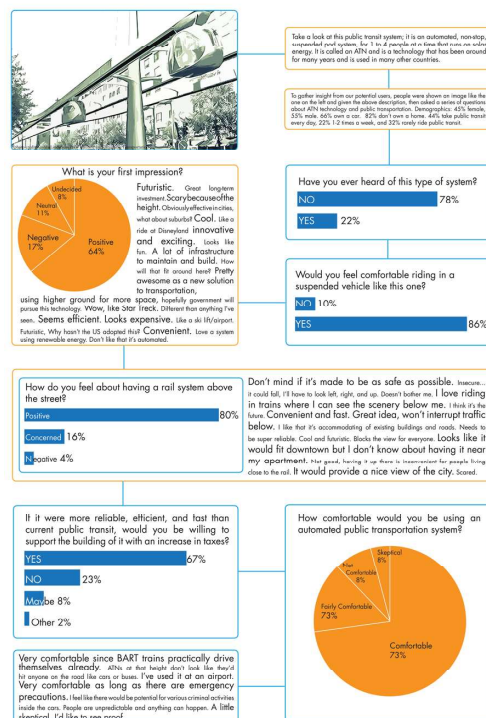
Additionally, several MS architecture students under the supervision of Prof. Shannon McDonald along with several SJSU MS Urban Planning students will be doing a detailed design study to understand, visualize, and model how a solar powered automated transit system could be integrated into the area connecting the north and south SJSU campuses. Particular emphasis will be given to prototypical station design, building integration, and developing heuristics / guidelines for urban integration. Stay tuned for the results of this year's work!

For full article, please see:

<http://www.advancedtransit.org/wp-content/uploads/2017/09/>

What do people think about Podcars as Public Transportation?

A user survey by the Spartan Superway at San Jose State University



A wealth of experience from SAV, ATN and PRT will be present at Podcar City Las Vegas. Nowhere else will you find such a wealth of know-how and research plus evaluation. Elected officials, city planners, systems providers, academics and consultants are representing over 100+ cities and sites in the world. Be it a campus, airport, feeder into a major transit hub or a city-wide solution - Podcar City is the place to go to learn more about autonomous public transit. A few of the systems running today and under construction:



UWB PRT, Ultra, Vectus, Modutram, Easymile, Olli, Navya, 2Getthere...and more coming!

SPECIAL OFFER FROM MODUTRAM/ AUTOTREN - NOVEMBER 11

Special travel opportunity for anyone wanting to see the Modutram system in Guadalajara, Mexico. There are direct flights Las Vegas - Guadalajara for around \$300 round trip. Autotren offers to meet you at the airport and drive you to the demonstration track for a full demonstration November 11

Please email: info@podcarnity.org or contacto@modutram.com



Four of our Speakers



Kevin Salzer
City of Jacksonville
USA



Vince Valdez
FTA / USDOT
USA



Jerry Spears
Montana Association of Counties
USA



Justin Begley
City of Denver
USA

DRAFT PROGRAM OVERVIEW - *program is preliminary*

Wednesday November 8 - City Hall and UNLV

- 10 - 3 Workshop - Students planning your PRT/ATN idea in 3 hours at City Hall
- 12.00 Student training at UNLV
- 3 pm ASCE Public Transportation Committee - Steven Jones, Walter Kulyk, Matt Lesh
- 4.30 Planning for ASCE Conferences and Stakeholder input - Jones, Kulyk, Lesh
- 5.30 Podcar City and Las Vegas Kick Off - Suna Taymaz, AAA
- 5.40 Welcoming Reception at City Hall - Mayor Carolyn Goodman
- 6.30 Keynote - Setting the Stage - Alain Kornhauser, Princeton University
- 7.00 Sponsor and Vendor Showcase

Thursday November 9 - City Hall

- 8 am Registration and Continental Breakfast
- 8.45 Official opening - Christer Lindström & Ron Swenson, INIST
- 9.00 Welcome to Las Vegas - Scott Adams, City Manager
- 9.15 Introductions - Matthew Lesh, Host- Around the Room
- 9.45 Coffee Break
- 10.00 Keynote - Perspectives from FTA - Vince Valdez, U.S. DOT
- 10.30 Keynote - Inspiration from the field
Ranbir Saran Das - Executive Director Fairwood Group
- 11.00 PANEL - What is a Podcar & PRT? Why hasn't it flourished? What does the future hold for Advanced Transit?- Moderated by Christer Lindström, INIST
Historical Context & Future - Alain Kornhauser, Princeton University
PRT and Shared Autonomous Taxis - Ingmar Andreasson, Logistikcentrum
Automated Transit - Walter Kulyk, USDOT (retired)
Engineering & Design - Corey Clothier, Pratt & Miller
Research & Implementation - Burford Furman, San Jose State University
- 12.00 Lunch provided
- 12.20 Lunch Keynote - Bosse Andersson, Kompass Chair - Advanced Mobilty Solutions and Organizing Stakeholders
- 12.40 Lunch Keynote - Rod Diridon, Mineta Transportation Institute (retired)
Adequate Planning and Multimodalism around HSR
- 1.30 PANEL - Should what happens in Vegas stay in Vegas?
Moderated by Michael Ippoliti, Calstart
Plans & Pilots - Joanna Wadsworth, City of Las Vegas
Connected Vehicles Strategies - John Estrada, eTrans Systems
Operations - Francis Julien, Keolis
Suna Taymaz, AAA
RTC Fast Regional Projects - Brian Hoeft, Director
- 2.30 PANEL - Advancing Transit
Moderated by Steven Jones, ASCE & Univ. of Alabama
TBD, 2Getthere
Roger Teal, DemandTrans
Neal Hemenover, Transdev



- 3.45 PANEL - The Big Picture - Moderated by Steven Jones, University of Alabama
Justin Begley, City & County of Denver
Shannon Haney, Hillsborough Area Transit Authority, Tampa, Florida
Koorosh Olyai, Stantec
Shannon McDonald, Southern Illinois University
Christopher Juniper, ATRA
Magnus Hunhammar, IST Sweden
- 5.00 UIDC 2017 - Six Teams: Moderated by Cecilia Nordkvist & Pontus Gustafsson undbyberg, Perth, Las Vegas, Washington DC, Jacksonville, Gävle
- 6.00 Day one closing Remarks - Debbie Cook, former Mayor Huntington Beach
- 7.30 Conference Dinner - VIP Speaker - TBD

FRIDAY NOVEMBER 10 - City Hall

- 9.00 Coffee, continental breakfast
- 9.30 Day 1 Recap
- 9.45 Keynote - Tina Quigley, General Manager RTC Nevada - Making RTC a leader
- 10.30 PANEL - Development, Demonstrations & Pilots - Moderated by Koorosh Olyai
Lauren Isaac, Easymile
John Cole, Skytran
Joerg Schweizer, University of Bologna, Italy
David Edwards, Greenville Airport (By Peter Muller)
- 12.00 Lunch on your own
- 1.30 PANEL - Making it Real
Moderated by Sisinnio Concas, Center for Urban Transportation Research
Stan Young, National Renewable Energy Lab
Kevin Salzer, Jacksonville Transportation Authority
Peter Muller, PRT Consulting
Joseph Holmes, First Transit
Stefan Bergström, Deputy Mayor City of Sundbyberg, Sweden
- 3.00 PANEL - Making an Impact
Moderated by Jerry Spears, Montana Association of Counties
Debbie Cook, Former Mayor of Huntington Beach
Marie Steele, NV Energy
Tom Perrigo, Chief Sustainability Officer, City of Las Vegas
- 4.00 UIDC Prize - Presented by Jeral Poskey, Google Inc.
- 4.15 Martin Lowson Paper Award - Joerg Schweizer, University of Bologna
- 4.35 Next Conference Announcement and Closing Comments
- 5.00 End of Conference

Five cities reviewing ATN /PRT and SAV Technology



Arlington, VA USA



Sophia Antipolis, France



Göteborg, Sweden



Antwerp, Belgium



Strasbourg, France



CONFERENCE VENUE AND REGISTRATION



The conference will be held November 8-10 2017 at the Las Vegas City Hall. Register at INIST.ORG/STORE

OFFICIAL CONFERENCE HOTEL



The Hotel for the conference is Golden Nugget Las Vegas. +1 (844) 4-NUGGET (684438) or 800-331-5731

The Golden Nugget is almost fully booked. We recommend alternatives using Hotels.com and Booking.com.

The conference is at City Hall. Some of the close hotels are The D Hotel LV, Golden Gate Casino Hotel and California Hotel & Casino.

www.hotels.com
www.booking.com

REGISTER NOW!

GO TO WWW.INIST.ORG/STORE

A Selection of our Speakers as of October 17, 2017 :

Alain Kornhauser, Princeton University
Alexander Kyllmann, Modutram, Mexico
Andries Louw, Futran, South Africa
Carolyn Goodman, City of Las Vegas, USA
Christer Lindström, 4Dialog, Sweden
Corey Hunt, NV Economic Development, USA
Debbie Cook, Huntington Beach, USA
Ingmar Andreasson, LogistikCentrum, Sweden
Jean Laurent Franchineau, Vedecom, France
Jeral Poskey, Google, USA
Joanna Wadsworth, City of Las Vegas, USA
John Cole, Skytran, USA & Israel
Joerg Schweizer, University of Bologna, Italy
Justin Begley, City and County of Denver, USA
Kevin Salzer, Jacksonville Transportation Authority, USA
Klara Wirdby, City of Gävle, Sweden
Lauren Isaac, Easymile, USA
Magnus Hunhammar, Kompass, Sweden
Matthew Lesh, Coast Autonomous, USA
Marie Steel, NV Energy, USA
Peter Muller, PRT Consulting, USA
Ranbir Saran Das, Ultra Fairwood, India
Robbert Lohmann, 2Getthere, Netherlands
Roger Teal, Demandtrans
Ron Swenson, INIST, USA
Shannon McDonald, Southern Illinois University, USA
Sisinnio Concas, Center for Urban Transportation Research
Stan Young, NREL, USA
Stefan Bergström, City of Sundbyberg, Sweden
Suna Taymaz, AAA, USA
Tina Quigley, RTC Las Vegas USA
Tom Perrigo, City of Las Vegas, USA

About 40 speakers from about 10 countries plus 30-40 cities, airports and campuses are expected from all over the world. Join us in changing the urban future into shared mobility using public transportation!

