# Draft: Worldwide tender for the individual climate-neutral mobility of the future

# **Next generation car**

For all countries

**Set up: Initiative -SIV** Rail Individual Transport Update: 07.11.2021

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#### 1 Brief description of the transport system and the idea of the tender

# The basic idea of the tender is to build a new traffic system as a complete replacement for today's individual traffic, cars and trucks

This new traffic system should be usable on all roads where normal cars drive today and enable barrier-free use from door to door without having to change trains. Public transport e.g. buses and trams can also be replaced. The extent to which subways can also be replaced remains open.

The use refers not only to cities, but also to rural areas.

First and foremost, it is a collection of ideas to introduce a new system that solves the environmental problems in the transport sector and significantly improves the comfort you are used to.

#### The aim is,

- 1. To put together a globally compatible overall traffic system from the many great ideas presented on the Internet. Just as you can travel the world by car today, so should you be able to do it with these new cabins.
- 2. Vision Zero, no accidental deaths or injuries.
- 3. To prepare green habitable, playable streets with sufficient space for pedestrians and cyclists.
- 4. Environmentally neutral, comfortable means of transport.
- 5. To temporarily integrate today's end-of-life vehicles into this system.
- 6. To take over the truck traffic with the end-of-life vehicles on special rails in this system.

#### Who can take part in the tender?

Every natural person who has an idea on this topic of new mobility.

#### What documents are required as a minimum?

There are no requirements for the documents. The following descriptions are intended as a guide to what the system should do. All ideas are valuable, it can be just a sketch or a perfect complete system.

#### Do I get money for my documents?

No, the Initiative-SIV has no funds for it. Even later, no money can flow, even if ideas or parts of an idea are implemented.

#### What are my rights?

All rights to the sent data and images are transferred to the Initiative-SIV and can be freely used and published there and also forwarded, this also applies to the specified links, whereby data protection is guaranteed, personal data will not be passed on.

#### What's next?

As far as possible, we will accompany and inform the process on the website: www.initiative-siv.de

#### 2 Brief description of the lots

The following lots are advertised:

#### LOTS 1: Rail system

- a) this includes supports, rails, curves, switches, crossings and high-flyers, renewable energy systems, weather protection, Expandability or uses 1-lane up to 8-lane each for both directions.
- b) like a) for up to 70 tons per vehicle

#### LOTS 2: Chassis

- a) The chassis represent the connection between the rail and the cabin.
- b) like a) for up to 70 tons per vehicle

#### LOTS 3: Cabins

The cabin can be used for all chassis and rail systems

- a. Cabins for passenger transport and
- b. Cabins for the transport of goods.
- c) Cabins up to 25 tons

#### LOTS 4: Stops

- a) the stops enable safe lowering of the cabin and barrier-free entry and exit, or loading and unloading. The through traffic may only be interrupted for a short time, max. 1.00 min.
- b) as a) for up to 70 tons per vehicle, 2 minutes are possible for the interruption.

#### **LOTS 5:** Transfer points

- a) The cabin is transferred fully automatically from the chassis of rail A to the chassis of rail B in a maximum of 1.00 minutes; transfer points are also conceivable during the journey.
- b) As a) for up to 70 tons

#### LOTS 6: Pick-up point for cars and trucks on the rail system

- a) Today's cars up to 3.5 tons are securely transferred to this system.
- b) b) As a) for up to 70 tons

#### **LOTS 7:** Garage systems

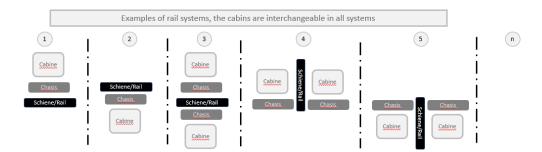
e.g. Paternoster garages for different heights, the ground floor should be usable for workshops, shops, etc.

#### LOTS 8: IT system

for the control and monitoring of the entire system in a modular structure, including the technologies and billing models with standardized interfaces and transfer protocols to other IT systems, with anonymized customer data in accordance with EU guidelines.

#### 3 General specifications for the tender

- a) The area of application is worldwide, with licenses, cooperation, customer service, security systems including IT, spare parts, etc. no patent sovereignty.
- b) For temperature ranges from -50 to +80 degrees Celsius, if necessary with additional modular components per country.
- c) Accessible.
- d) Storm-safe driving up to 100 km / h including wind gusts.
- e) Safe driving in 30 cm of snow.
- f) Heavy rain proof up to 20 mm per hour.
- g) Hail-proof up to 10 cm in diameter of the hailstones.
- h) Ensure security in the event of a power failure and continue to the next stop.
- i) Enable people to be rescued from heights quickly.
- j) Individual autonomous driving with Vision Zero, for people and goods.
- k) All materials meet the highest environmental standards in the live cycle and cradle to cradle.
- I) The rail system and the associated chassis are to be designed in a technically uniform manner.
- m) The cabins have a uniform technology, e.g. 12 V power supply. Additional power supplies can also be offered.



#### 4 LOTS 1, Description of the rail system

- a) Elevated track, standing or hanging system or side guides, at least 4.50 m clear height.
- b) Precast technology for quick and easy assembly, extensions, repairs, automated production.
- c) Switches with different radii, narrow 90 degree junctions, crossings and high-flyers, also 2-storey crossings are possible.
- d) Crossings over electrified multi-lane railway tracks without supports.
- e) The entire system is a modular design that is continuously monitored.
- f) Renewable energies for 100% power supply.
- g) The construction is colored with RAL colors, also multi-colored, details are coordinated on site, or with green spaces.
- h) Show multiple lanes, single-lane up to eight-lane rails.
- i) Each lane allows two-way traffic.

#### 5 LOTS 2, Description of the chassis

- a) Driving without particulate matter, noiseless, with minimal wear and tear and minimal maintenance.
- b) The individual modules of the chassis are compatible with each other and downward compatible with innovations.
- c) Stable chassis sequence for at least 10 years.
- d) Smooth driving, even in curves and when stopping / starting, water glass test.
- e) Some special chassis should also be able to drive fully autonomously at low speed max. 20 km / h on the road (bike paths), for craftsmen, care services, garbage disposal, parcel services and the like.
- f) Some chassis should compensate for the cabins if the rails are inclined up to a maximum of 8%. This means that the incline of the booths must not exceed 8% (water glass test).
- g) Different chassis lengths are possible if the smaller cabs are to take over.
- h) Enable convoy journeys for group journeys.
- i) weight monitoring.
- j) The chassis must fit into today's garages (external dimensions 3.00 \* 6.00 m).
- k) The lighting outside the chassis must not exceed 2,000 K and must remain 20 degrees below the horizontal, even on inclines. Buildings, especially windows, must not be illuminated.
- I) Service life and warranty of the chassis at least 30 years.

#### 6 LOTS 3, Description of the cabins

#### 1. General information about cabins:

The cabins are independent but compatible with all chassis and the rail system. Public cabins, e.g. on demand, and private cabins that can be bought and only used by the owner are planned. As with today's cars, for example, the 12 V technology is specified.

- a) The lighting outside of the cabins must not exceed 2,000 K and must remain 20 degrees below the horizontal, even if there is an incline. Buildings, especially windows, must not be illuminated.
- b) The windows of the cabins must automatically become opaque when driving past windows in order to prevent mutual insight.

#### 2. person cabins:

- a) For people, cabins from 1 to approx. 12 people are planned, at least 2 people next to each other. Variable seating.
- b) Private individual cabins and standard public cabins.
- c) There are two directional cabins with sliding doors on both sides.
- d) The cabins must have a fall height of 10 m without major damage.
- e) Safety glass according to DIN.

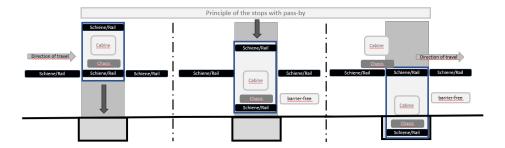
- f) Internal dimensions of the vehicles max. width 2.20 m, max. length 5.20 m, max. height 1.80 m. The vehicles must fit into today's garages (external dimensions 3.00 \* 6.00 m).
- g) Getting on and off comfortably, even with children, wheelchairs, shopping and bicycles.
- h) air conditioning.
- Technical and comfort equipment variable according to customer requirements, according to today's cars, internet, television, navigation system, voice control, table, space for luggage, etc.
- j) The customer has a free choice of equipment and colors.
- k) Service life of the cabins at least 20 years, spare parts deliveries up to 40 years.
- Technical adaptations or innovations must also be guaranteed for old vehicles for up to 40 years. (Modules)
- m) Security against unauthorized use of the property vehicles and misuse.
- n) The volume of the technical devices in the cabins must not penetrate outside.

#### 3. Goods cabins:

- a) Customers can choose their equipment and colors.
- b) For goods, the EU pallet must be complied with, or a multiple.
- c) The cabins must fall above 10 m without major damage.
- d) Air conditioning and cooling systems are to be offered, each in a modular design.
- e) Simple fastening system and sliding systems on the floor.
- f) Total weight max. 3.5 tons and max. 25 tons, with weight control and monitoring.
- g) Special standard prefabricated stops for step-free loading and unloading at loading ramps, freight wagons or trucks, each with different heights.

#### 7 LOTS 4, Description of the stops

- a) Stops are to be set up barrier-free on the floor with a vertical approach.
- b) Stops should not be much larger than the vehicles, with individual designs for art or green spaces.
- c) Multiple stops next to each other and or one behind the other for large gatherings of people, e.g. main train stations, football stadiums, etc.
- d) Allow a maximum of 1 minute to drive past or pass through the stops after lowering, even if there are multiple stops. Here is a comparison: if a train is on the platform, no other train can use this platform. If the stopping train is moved to a second level with an elevator, the track is free.
- e) Canopies in front of the entrances.
- f) Special stops for freight cabins.



#### 8 LOTS 5, Description of the transfer points

At the transfer points, the LOS 3 cabins are transferred fully automatically and smoothly from one rail chassis system A to the other rail chassis system B. A corresponding handover during the journey is also possible.

# 9 LOTS 6, Description of the transfer points for cars and trucks on the rail system

- a) Today's vehicles, e.g. gasoline, diesel and electric vehicles up to 3.5 tons are carried over to the chassis LOS 2. All corresponding vehicles should be safely and fully automatically taken over and attached fully automatically. The corresponding conditions according to Section 3 apply. This ensures that the new system is introduced smoothly. Billing is the same as for the cabins. Special safeguards for e.g. convertibles are to be planned.
- b) As a) for today's trucks approx. 50 tons truck plus tub system.

#### 10 LOTS 7, Description of the garage systems

Collection of ideas for fully automatic, autonomous garage systems for temporary parking of vehicles and cabins. No people are allowed in the parking systems. e.g. paternoster systems. These can be built above or below ground.

#### 11 LOTS 8, Description of the IT system

- a) Passenger cabins have priority over freight cabins.
- b) Start finish on the fastest way.
- c) Traffic jams or bypassing frequent journeys.
- d) Use of the main axes, avoid secondary roads.
- e) Interfaces for billing are carried out via the EU mobile phone ticket system across the EU. The data is exchanged, maintained and adjusted.

- f) Duplicate data storage with the EU data is not permitted.
- g) Learning, customer-friendly system if the same route is often booked.
- h) Ensure European IT standards for data security.

#### 12 Planned construction of a test facility

- 1. Test facility for urban passenger traffic:
  - a) A test facility of approx. 5 km is planned.
  - b) All techniques described above should be installed, curves, points, high-flyers, inclines, an incline of at least 25%.
  - c) Different rail systems and the links.
  - d) Min. 10 different vehicles.
  - e) Various stops and goods transfer points.
  - f) emergency scenarios.
- 2. Test facility for car and truck traffic
  - a) As 1 for the old trucks with up to 70 tons including tub

#### 13 Additional collections of ideas

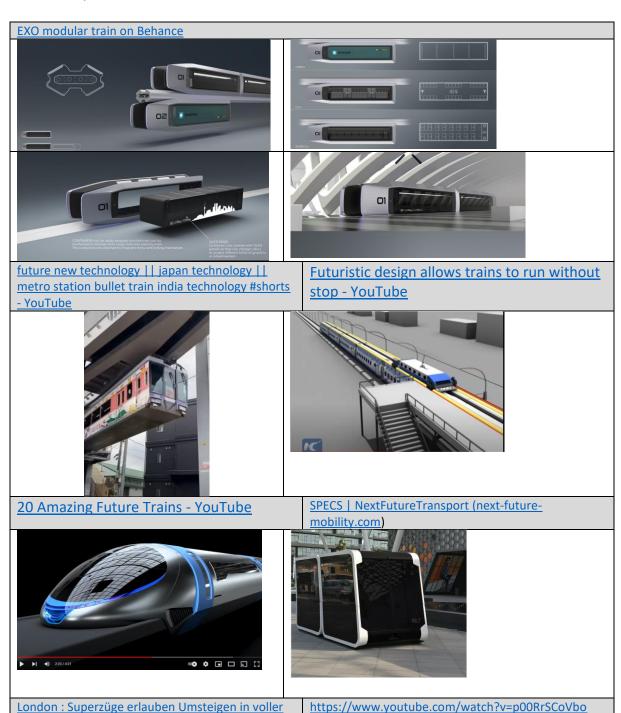
Additional ideas are intended here for further options and functions.

E.g. information on the integration of the system into the existing infrastructure of long-distance traffic.

Examples from the network are shown below. All of these systems show that a lot is possible. What is crucial, however, is that the new system should combine all of these solutions. Some things are clearly stated to prevent problems and limitations. It must be possible to easily connect the systems in a compatible manner.

## 14 Examples from the net

Fahrt - WELT









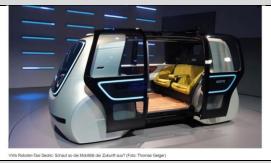
Welcome to the transport of tomorrow | Technology | The Guardian



<u>Wettbewerb: BMW i sucht Ideen für Mobilität der Zukunft | Automobilwoche</u>



Mobilität der Zukunft: Von allem nur das Beste - kicker



Zukunftskonzepte für Mobilität auf dem Land (faz.net)



<u>In Zukunft autonom: Lieferfahrzeuge in Kalifornien - Die ZukunftsMacher (wir-die-zukunftsmacher.de)</u>



Verkehr: Wie könnte die Mobilität der Zukunft aussehen? | Augsburger Allgemeine (augsburgerallgemeine.de)



https://www.digital.unipassau.de/projektdetails/forschungsprojekt/unicaragil -forschungskooperation-zur-mobilitat-derzukunft/?tx converis pi1%5Boverrideuid%5D=5027&c Hash=b8135f24fdc6482581e3058e4b70d443

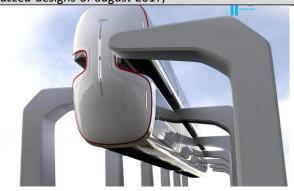




Nachhaltige Mobilität in der Stadt der Zukunft | Daimler







Mobilität der Zukunft: Teilen ist das neue Haben | AUTO MOTOR UND SPORT (auto-motor-und-sport.de)

https://www.yankodesign.com/2020/10/20/renaults-switchable-cabin-pod-comes-with-2-design-interiors-to-perfect-the-work-life-balance/





https://www.pinterest.de/pin/9577192956527908 2/

<u>Linimo-Magnetschwebebahn in Nagoya/Aichi リニモ</u> <u>Linimo Maglev in Japan - YouTube</u>





# EOI invited for implementation of Personalised Rapid Transit (PRT) system in Haridwar | Urban Transport News

# EOI invited for implementation of Personalised Rapid Transit (PRT) system in Haridwar

Vinod Shah Posted on: 2021-04-24 1l:06:00 Viewer: 2:565 Comments: 0 Country: India City: Haridw



Haridwar/2021-22/01

Haridwar, India (Urban Transport News): The Uttarakhand Metro Hail, Infrastructure & Building Construction Corporation Ltd (UKNRC invites online proposals (Expression of Interest cum Request for Qualification) to shortlist private entities to bid as 'concessionaire' for the development of Personalised Rapid Transit (PRT) system in Haridwar city of Uttarakhand called "Haridwar Darshan" on PPP mode under Design, Built, Finance, Operate and Transfer (DRFOT) basis. The technology of PRT proposed by Applicants must be already in passenger operation for a minimum year and on a minimum stretch of 15 km.

#### Scope of Work

Development of Personalised Rapid Transit(PRT) System in Haridwar city of Uttarakhand called Haridwar Darshan under Design Built Finance Operate and Transfer (DBOFT) basis (PPP Model)

#### Key Information

EOI-cum-RFQ Notice No. UM-140/EOI Cum RFQ PRT

#### Personal Rapid Transit - Biologie (biologie-seite.de)







Mountain-Coaster Real PRT-Kabine am London Heathrow Airp

Schwedisches PRT Spårtaxi (Fotomontage)

<u>Personal Rapid Transit, Personal Automated Transit, PRT, PAT, PodCar, costs, history, illustrations, contact information, related websites, advocacy groups, deployment experiences, Masdar, 2getthere (washington.edu)</u>







#### Das modulare Transport- und Fahrsystem des DLR soll die Mobilität der Zukunft mitgestalten - Magazin - 1E9







#### https://www.youtube.com/watch?v=k fO6s44OeE







#### Zukunft der Mobilität - MINI vereint Auto und Wohnzimmer in ihrem neuen Konzeptauto - Medialist







So soll die Mobilität der Zukunft aussehen - (automobil-produktion.de)







https://www.carbodydesign.com/2013/08/rigoletti-casa-de-diseno-a-to-b-global-mobility-system-part-2/







pub-tesla pod 9 | t3n – digital pioneers







# https://www.pinterest.de/pin/51932201943716700/visual-search/?x=15&y=10&w=470&h=331&cropSource=6





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https://www.pinterest.de/pin/18 0214422578537416/

https://www.pinterest.de/pin/46 4011567860698837/







https://www.hdts-vision.com/Home



#### Cabinentaxi - YouTube





<u>Deutschlandspiegel 235/1974 – Filme des Bundesarchivs</u>





https://economic times.india times.com/infrastructure/metrino-pods-network-of-driver less-vehicles-to-connect-delhi-manesar/average-speed/slideshow/46283242.cms



#### PRT SUPRAWAYS - YouTube



