City-KURT

Electric mobility for city centers

Cities are where most people live and work. Cities are also areas where clean air, light and space are resources to be shared by all. How do we keep this sustainable while we still meet the growing need for people's mobility and logistic transport? The City-KURT bridges the gap between what people can walk on foot and what public transport offers with a minimal impact on the street view and on the environment. It is based on the following principles:

1. Sharing:
   - The user rents a City-KURT to travel from the nearest station to his destination station.
   - Sharing vehicles reduces the number of vehicles and parking space needed.

2. Time and space are resources:
   - The City-KURT is small and comes in versions that can transport people and/or cargo and mix with pedestrians and bicycles.
   - When not in use, the City-KURT is parked while being charged.
   - The user only pays for the time the vehicle is used.

3. Clean and energy efficient mobility:
   - Having an electric propulsion means that air, noise and heat pollution are minimal.
   - A City-KURT is 10 times more energy efficient than a small classical car.

4. Public yet individual:
   - City-KURT complements public transport for trips from a few 100 m to a few km whereby users use the vehicle on a time-shared basis.
   - Users can freely choose their itinerary and time of departure within a very dense grid of stations distributed across the city.

5. Versatility:
   - Users can either time-share the City-KURT or time-share an electric bicycle with the same membership card.
   - Using a common vehicle platform, a City-KURT can move people as well as cargo.

6. Proven history: the City-KURT is an updated concept that was used from 1975 to 1988 in the city of Amsterdam known under the name of Witkar.

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How does it work?

City-KURT addresses many issues that can't easily be solved with traditional transport means. Mass transport in the city is dependent on the size and lay-out of the city. If the city is large enough, underground trains provide a good backbone if the stations are within easy reach. Often this is not a feasible solution in smaller cities. Buses can fill the gaps, but economics dictate that buses have to be large and filled. In smaller or older cities they can't go into the narrow historic streets.

And of course, highway capable cars and vans, even when electric, are a mismatch for the city. They take a lot of space, when driven or parked, and are actually seriously overpowered for city driving which is mostly at a reduced speed. Alternatively, people can walk or use bicycles. These are good solutions for most people when not much goods are to be taken with.

City-KURT fills the gap by implementing a dense virtual transport grid above the ground. At every node of the grid, a small multi-functional charging station provides enough energy for the next few km. The City-KURT concept can also mix people transport with city-logistics. An automated charging station is also a place to wait and socialise or it can be used as a temporary logistics distribution and collection point. When space allows it, parking and charging can be above the ground. Other options are parking in vertical towers above or underground.

Users rent time on a vehicle and select a route to their destination station while paying a fee per minute. The selected routes can go over the street or inside pedestrian or bicycle zones as the speed is limited and the vehicles are small. Users are participating members and pay using a common public transport smartcard or smartphone app. All vehicles can be remotely monitored contributing to a high availability of vehicles.

The multi-functional City-KURT Station. At each node of the network, one or more stations are placed whose first goal is to recharge the City-KURTs. Such a KURT-station is however more. While connected to the grid, it also has solar panels providing energy for LED-lightning, an information screen, and a wifi-hotspot. People can meet at the KURT station, turning it into social hubs connecting people, changing the urban landscape in people friendly zones.

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