Travel into the future with FlyWay!

Information from
SwedeTrack System Co.
about cost-effective transport systems.

Bring on the Future NOW!

An increasing number of cities are choking on car traffic.

But imagine a world:

- without road congestions.
- without exhaust pollution.
- without huge parking lots.
- without traffic noise.

- with fewer traffic accidents.
- with faster, more comfortable journeys.
- with vehicles available on demand.
- with more green areas in the cities.

And all this for less money!

Wouldn't that be something worth striving for?

FlyWay

The traffic lane is formed from a rectangular steel beam, with a slot underneath. It is used above ground and in tunnels. Small electric vehicles, travelling inside the beam, carry cabins and other loads beneath the beam. The interfaces between all components will be openly published and standardized.

Such a solution could

- be mass-produced at low costs in industry.
- be unaffected by snow and rain.
- make it possible to lower the loads to the ground.
- be able to cooperate with other traffic systems.
- admit simple stations, like "bus stops".
- allow the vehicles to go directly to the goal.
- enable fast curve taking.
- be very energy efficient.
- allow anyone to develop better components.

Computers control the vehicles, which means that no drivers are necessary, reducing operating costs. The beam vehicles are in average smaller and lighter, with few empty seats. They run so frequently, that timetables can be eliminated. There are no stops at red lights, nor at road and pedestrian crossings.

The control system keeps track on all vehicles in the network, and sends them the fastest way to their destination - just like information packages over the Internet.

New techniques has given us horse carriages, steamships, trains and petrol-powered cars – don't you think it is time for a new traffic generation, built on information technology?

Individual and public transit

There are many different cabins to choose from, just as there are different vehicle types on the roads. They can be adapted to the number of passengers, from 1 to about 30. FlyWay blends different sized vehicles, such as beam cars and beam busses, on the same beam.

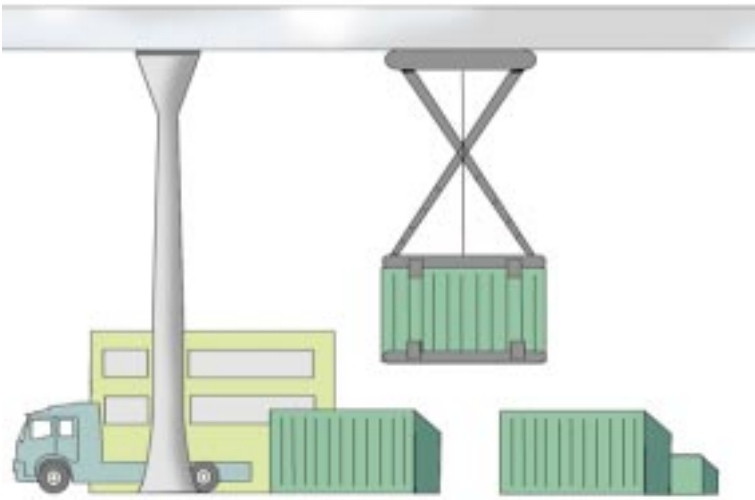
The total amount of seats, and the distribution of seats amongst beam cars and busses, is decided from the demand during the rush hour.

A beam car goes quickly and directly from start to destination. Small beam busses, with fewer passengers than road busses, will not stop so often. They are not delayed by congestion.

The ride will be very comfortable. Silent electric motors and rubber wheels are used inside the beam. For tourists, the view from the vehicles, travelling five meters above ground, can be great. The cabins will have at least the same standard as cars, with air conditioning and radio, car telephone, IT etc.

The ride is much safer than travelling on the ground. Traffic accidents will be rare indeed. For personal safety, security alarms are available at the seats.

If a faster, cheaper, more comfortable and safer alternative existed – don't you think, that people would prefer that?



Goods transport

With small and light vehicles, operated at low cost, the infrastructure (such as guideways, stops, maintenance workshops, recycling centre) is dominating the yearly costs. Therefore it is essential to use the infrastructure effectively by running many types of vehicles, which could be used also outside the rush hours.

There are for instance goods containers in different sizes, suitably equipped for their respective task. Some containers are cooled. The electricity for the cooling comes directly from the beam.

Recyclables can be sorted into different containers for glass, aluminium, paper, steel etc. When they are full, the containers will go directly to their specific recyc-ling plant.

Transferring goods between FlyWay and other transport modes, like trucks and trains, will be exceptionally simple, using the lift mechanism.
As the transport work is automatic and silent, it can be done during the nights.

Would you mourn the disappearance of heavy trucks and diesel exhaust from your city?

Cooperation with road cars

In spite of expensive road building in fast growing city regions, the car congestion will continue to increase. With beam traffic it can take about 15 years to diminish the road congestion, if we start now.

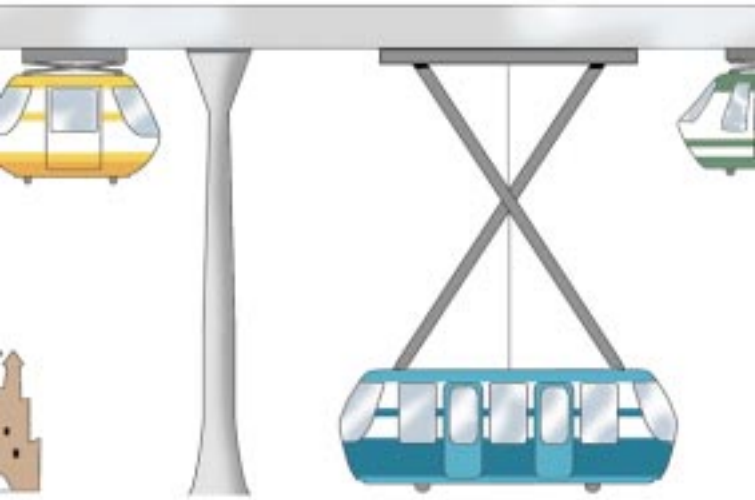
But a FlyWay network will grow gradually. It is therefore essential, that a new solution can cooperate with the car system.

Road cars with fossil fuel exhausts can be transported quicker with car movers, through or around the city, avoiding congestion, accidents, exhausts and traffic noise.

Electric or hybrid cars, can be used in the rest of the city, or in the countryside. For people without a driver's licence, electric carts with a restricted top speed could be an alternative.

When the FlyWay network expands and covers larger areas, it will be possible to gradually replace car movers with passenger cabins.

If you could go faster, safer from one side of the city to the other – would you still stay in the traffic jam?



Stops

All stops are placed below side-beams, running parallel to the main beam, in order not to block the traffic flow past the stops.
Beam vehicles of various types can be waiting at the stops. They are distributed in the network, according to travel demand and journey statistics.

The customers will order transportation via Internet at the stops, or from a computer. Their smart FlyWay card communicates then with the computer terminal. The card can be programmed to order the usual vehicle to the usual destination, if the customer does not want any alterations. This will facilitate travels by for instance children or elderly. Just go to the terminal at the stop, push the Yes button, enter your beam car - and it will take you straight to your destination.

The cabins will normally land on the ground. The loads will descend, using their built-in elevators. There will be safety measures to avoid landing accidents. In crowded places, safety can require landing enclosures, with automatic doors.

Should the cabin to come to you – or should you climb to the cabin?

What is SwedeTrack?

SwedeTrack System AB (SwT) is a company, engaged in developing a beam traffic system, called FlyWay. We have existed since 1991.

Our motivation is, that public transit systems loose passengers to fossil fuelled road vehicles, almost everywhere. We believe, that transportation must adapt much faster to technological changes.

SwedeTrack has done work for NUTEK, the Swedish IT-delegation, SIEMENS, Gothenburg, Stockholm, a large South Asian MegaCity, and other organisations, companies and towns. We are a member of ATRA – Advanced TRansit Association.

Chairman of the board is Sten Staxler, who has worked with automatic traffic since 1970.
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Technical data:

Beams:	1.1 m high and 0.8 m wide, with different material thickness and costs, depending on load.
Supports:	At distances of 30 m ± 10 m, enabling a free passage under beam vehicles of 5 m.
Tunnels:	Considerably smaller than road tunnels.
Vehicles:	Many different types. Examples: Beam cars: 1 - 10 seats. Beam busses: 16 - 32 seats. Environmental cars: Electric, hybrid. Car mover: 1 car. Cargo: 1 - 7 tons.
Velocities:	Outside towns: 130 km/h. In towns: 50 - 75 km/h. In downtown areas: 30 - 50 km/h. In tunnels: 130 km/h.
Flows:	Cars: 5 000 - 15 000 persons/h and direction - corresponds to 2 - 5 road car lanes. Busses: 40 000 - 60 000 persons/h and direction - more than in a subway net.
Stops:	Small: 1 - 3 serial berths (landing surfaces). Larger: More than 3 often parallel berths.
Energy:	Five times less raw energy, or better, compared to road traffic.
Total cost:	10% - 30% of corresponding road traffic in denser areas.

Health, energy and environment

Why bother? The cars we have today are much safer and environmentally benign – so the road traffic system will last forever!

WHO estimated 1999, that 1171000 were killed, and about 10 million people were injured, in road traffic accidents.

The death figure corresponds to 2 925 jumbo jets, each carrying 400 persons, crashed each year!
In the year 2020, road accidents will become the third leading health burden worldwide, according to a study by The Harvard School of Public Health.

WHO estimates, that in the year 2000 about 3 million people died because of air pollution. This figure represents about 5% of the total 55 million deaths, which occur annually in the world.
Another World Health Organization study has estimated, that air pollution would cause another 8 million deaths worldwide by 2020.

The oil production in the world is likely to peak around 2004 - 2008, according to competent oil consultants.
Yes – we find new fields every year, but each new field we find, is a bit smaller than the previous in average.
Yes – we can squeeze out more oil from the existing fields and from other deposits, but each drop will cost more than the previous drop.
Yes – we can use hydrogen fuel, but the hydrogen has to be produced, using some energy source, with an efficiency loss. The end of cheap oil will lead to a quick rise in oil price.

Do you think, that these problems are minor – and can be solved with minor alterations of road traffic?

The computer system

The main functional difference to the road system is, that the vehicles will be able to exchange information with the beam, adjacent vehicles, and various other parts of the system. This will enable the traffic to flow unhindered.

Regional computers will be used for traffic planning and allocation of vehicles. They will allow the network to grow gradually, for instance from one part of the city to another.

Node computers in intelligent nodes will handle merging and diverging of vehicles.

Vehicle computers will adapt the vehicle velocity and choice of route.

Computers at the stops will handle the vehicle flow on the stations, travel charging, and give the travellers access to the vehicles.

Resilient computer configurations in all essential places along the beam network guarantee reliability.

If an automatic elevator is allowed to transport people vertically, why would not horizontal transport under automatic control be safe?

Other systems

Many automatic systems have been built and thoroughly tested. About 100 installations were active at the end of year 2000, mainly in USA, EU and Japan. They are transporting about 3,5 million passengers per day. SwedeTrack has tried to gather the best qualities from them all.

Three automatic systems, resembling FlyWay, are:

Rohr industries ROMAG 1960
Kabinentaxi 1973
SIPEM 1984 (still operating)

Why FlyWay?

- FlyWay is a complete system, transporting both individual and public vehicles, goods and road cars.

- It can cooperate, using the lift, with most other traffic systems.

- It is faster and safer than other city transportation systems.

- Its traffic capacity is higher than roads or rails.

- It can use the roads beyond the reach of the beam network.

- The beams and all other system parts can be mass-produced in industry at a very low cost.

- It is cheap to install and operate.

- The system is resistant against snow, sandstorms, heavy rain etc.

- It can free large parking and road areas.

- The vehicles are difficult to steal or vandalize.

- You can choose a suitable vehicle for each transportation task.

- The system parts are simple to reuse or regain.

- It is flexible to develop further.

If we managed to build such systems 40 years ago – why would we not be able to do so now, with much better computers and technology?