SkyCab

Hard facts

BUSINESS

Transportation

STAFF

Directorate consisting of nine hand-picked experts within various fields

THE CLIMATE INNOVATION

Personal Rapid Transit (PRT) – a new way to travel, independent of fossil fuels and ready to meet the transportation needs of the future

CLIMATE EFFECT

Climate friendly travels

OPERATIONS TODAY

In 2006 SkyCab inaugurated the first test-track for PRT in Sweden and made an agreement for the next step – construction of a full scale track and a center for PRT – with the municipality of Hofors, Sweden. Several cities, both inside and outside of Sweden, have expressed interest in the SkyCab system

BACKGROUND

The company started its activities in the 1990s with the ambition to create a small-scale, environmentally friendly and flexible transportation system in a planned theme park in southern Europe. Since then the technology has been developed in close cooperation with a multitude of different actors

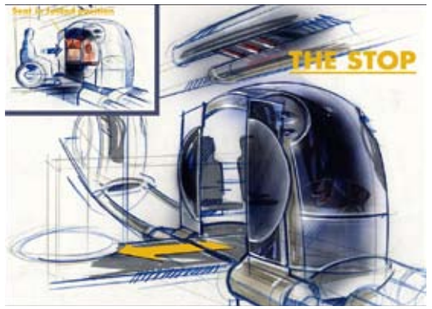
FINANCING

The company and its ideas got noticed early on and received public financing in the form of grants. Some municipalities financed pre-studies and others contributed with other forms of support. The Swedish Rail Administration has financed the development the last few years and the project is also in parts privately funded

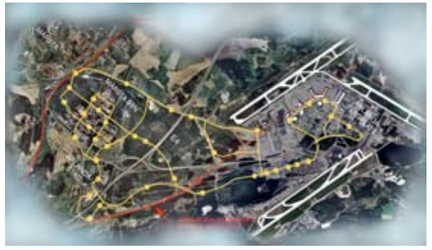
Our climate innovation

INTRODUCTION

SkyCab is a Personal Rapid Transit System (PRT). It is a system of small vehicles for individual travelling in public transport in urban areas. A SkyCab system requires no timetable, no waiting time, and generates no emissions or noise pollution. SkyCab is energy efficient and will be powered without fossil fuels. The automatic vehicles (no drivers) are small units, on a typically elevated guideway, with room for up to four people who get on and off at stations on side tracks. Users can select individual routes and are thus not forced to follow a specific track.



The system represents a significant difference from today's public transportation systems. PRT is a complement to other public transportation, especially in high density areas with poor conditions for regular public transportation, and where communications otherwise require travel with cars. PRT are also suitable for connecting lower-density urban areas to larger railway systems, as well as to subways or trams. Properly designed this system will not compete with existing public transportation, but rather



Demonstration

complement them by making them more accessible. A SkyCab system offer a new way to provide on demand and nonstop service. Several countries around the world have shown a great interest in the technology, but no commercial systems are in use yet.

The up-front investment cost per system-kilometer is 50% less than for tram or rail and roughly a quarter compared to subway or highway. The theoretical capacity is 9 000 passengers per link per hour. SkyCab runs at roughly 40 km/h, significantly faster than the average urban transportation speed in congested areas. The benefit to society has been estimated at up to 1.9; which means that each Yuan, Yen, Dollar or Euro invested returns 1.9 of the same to society.

CLIMATE BENEFITS

SkyCab power usage is 0.11 kWh/vehicle kilometer. Were SkyCab to be powered by the average electricity generated within the EU, emissions would amount to 38.9 CO_2/km.[1] The European Commission has proposed a limit for new passenger cars of 130 gCO_2/km starting in 2012; SkyCab emissions from the average EU power supply are less than a third of this limit.[2] SkyCab carbon dioxide emissions are one fifth of the average emissions for passenger vehicles in the UK.[3] The greater the portion of SkyCab power that comes from renewable resources, the greater the emission reductions, all the way down to almost zero, if renewable energy provides all the power.

Because different power sources imply different amounts of emissions and different alternative transportations have different energy requirements, it is hard to estimate the climate mitigation impact

1 Emission intensity in Europe (EU-25) = 353.9 gCO2/kWh. Source: WRI (2008)
2 Business Day (2008)
3 Defra (2007), p. 7

of SkyCab in terms of tons of emissions avoided. Furthermore, SkyCab complements other public transportation systems and makes these more accessible. This in turn leads to greater climate gains.

In order to meet future demand, the world needs new and sustainable transportation systems – passenger cars cannot meet this demand, even if every car were powered by fossil-free fuel. Beijing, for example, where more than 3 million cars fill crowded roadways and are joined by another 1000 each day,[4] needs new solutions. SkyCab offers climate benefits but also a system that, in contrast to passenger cars, can meet the future of transportation demand.

The future

HOW WILL SKYCAB REACH THE GLOBAL MARKET?

SkyCab is part of the Swedish government's and the Swedish Trade Council's initiative SymbioCity – Sustainability by Sweden.[5] A communication platform has been developed for this particular purpose.

The company will in part be marketed together with other businesses in so-called clusters through Nordic Environmental Technology Solutions, the new database and network of the Nordic Council of Ministers.[6] Exports will also be coordinated through this network.

The SkyCab main business plan is to build systems thru public private partnerships, but licensing and franchising are also possible options. When installing a system the company will coordinate action between local or regional partners.

4 BBC (2008)
5 See: http://www.symbiocity.org
6 See: http://www.nordiccleantech.net

Example of vision design of SkyCab vehicle.

EXPANSION/EXPORT STRATEGY

A signed contract for a full scale pilot in Hofors, Sweden, signals that SkyCab has reached the milestone of realistic implementation and demonstration. The pilot system will allow for technical and operational testing with passengers. The pilot system is also an important step toward initiatives on other locations.

Future plans include development of a second PRT generation technology in cooperation with international partners. Working with China, India and the Middle East will give opportunities for this and the goal is to take a global leading position in sustainable public transportation.

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