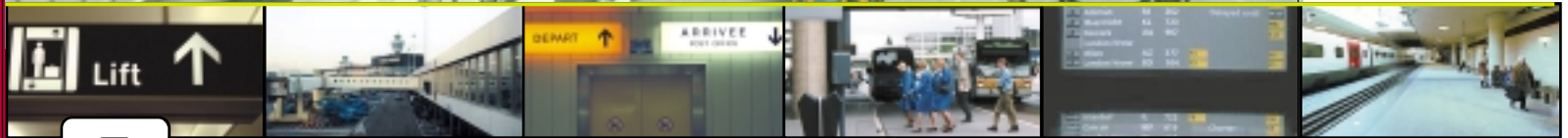# GO BETWEEN

Automated transboarder from your starting point to your destination

Lift

SERPENTINE

DESK TO BOARDING

BOARDING TO INCHECK

TRAIN TO TRANSFER DESK

High capacity

CAR TO TRANSFER DESK

Trough existing pathway

LOUNGE TO GATE

Adaptable capacity in time and space to the transportation needs

PEOPLE TRANSFER

A light infrastructure adaptable to the needs

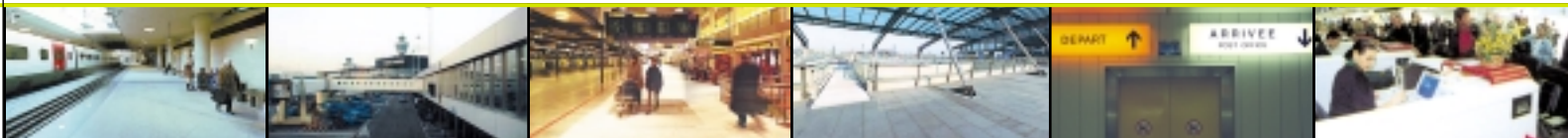# MOBILITY TRANSFER

Indoor or outdoor

LUGGAGE TRANSFER

Goes up and down inside the airport with a slope of 10 %
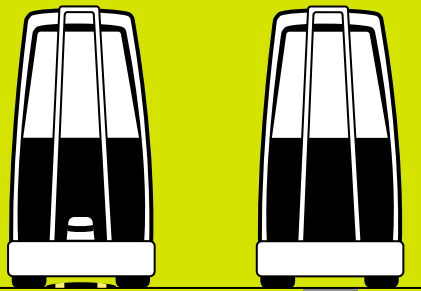
SHOPS TO DEPARTURE GATE

...WITH A GO-BETWEEN

Temps de déplacement en seconde

0	100	200	300	400	500	600	700	800	900

Trolleybus

Serpentine

■ = waiting   ■ = stop   ■ = acceleration   ■ = displacement
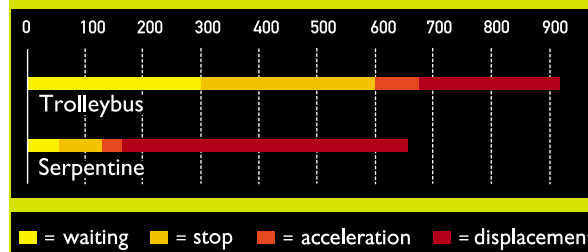
Plan hélicoidal

2'500 people per hour to 15'000 per hour, or even 27'000 people per hour when capsules are close to eachother to get a continous chain. The average speed is 4 meters per second, including stops, so the capsule flow is 1,5 capsule per second.

Infrastructure costs are greatly reduced in segregated lane mode compared to costs of a subway. Lastly, light vehicles, mass produced and equipped with onboard safety devices are cheaper than those of rail transport.

Starting point – destination network
The GoBetween transports you from your starting point to your destination by a predetermined course.

The pedestrian friendly GoBetween of Serpentine is equipped with several safety systems :
➡ MagnétoGlisseur® detects obstacles in emergency
➡ Laser monitoring stops the capsule within a distance of 2,6 m. at full speed
➡ The capsule stops when the flexible bumper is touched

The GoBetween video monitoring system is similar to monitoring of traffic signals. To obtain the capacity of a bus which passes by every 20 minutes, 15 capsules are needed to provide a one minute frequency service at a lower cost. In this case personel cost is considerably reduced.

Taxi mode
In the Airport, an authorized user can leave the MagnétoGlisseur® zone to load and unload merchandise. In other words, the Serpentine offers personalized benefits for authorized users.
➡ Using its battery, the capsule can be driven up to 9 km from the nearest MagnétoGlisseur®.
➡ The user can rent the capsule to transport merchandise.
➡ The dispatching center follows the capsule by GPS and can guide it by re-mote control back to the system thanks to the monitoring system.

3.
Payment

Three types of payment were considered and tested.

Pre-payment cards
For outside transportation, acces to car rental or trains, the user receives or buys a pre-payment card at a newsstand. He recharges it at the newsstand or at the information terminal. He can order a trip with this card. He receives the capsule number.
When the capsule arrives, he gets in. The capsule recognizes him and debits the amount of the trip from his card. The user or group of users has the right to ride a capsule for about 1,60 EURO per km for 1 to 4,5 passengers. He can accept another cardholder on board and the cost can be evenly distributed between them.

The free shuttle
Malls or insided airports can facilitate access by offering the GoBetween as they would an elevator or a conveyor belt. The city and its shopkeepers can offer a free shuttle to and from outlying parking lots.

The passenger simply waits in the parking area at a stop for an empty capsule, or calls a capsule au bouton. By yelling, «Hep city», he stops the capsule, and is then driven off when the safety bar has been closed. The user asks for the next stop by simply saying, «Stop». An alarm activates an emergency brake and calls the command center.

Ordering and charging by mobilephone
The user, equipped with a cellular phone (which is becoming more and more common) can reserve his capsule, order it, and even drive it. The Serpentine's number «157 CITY» charges 2,5 EURO per minute for the use of the capsule.

Operating steps would be as follows :
➡ Calling the station and identification of the user
➡ Indication of starting point and of the destination
➡ The user then receives his capsule number
➡ When the capsule arrives, the station calls the user
➡ Once inside, the passenger activates the capsule by phone
➡ An authorized user can drive the capsule by phone or computer mouse

1.

GoBetween's 3 components

The Gobetween is a personalized automated transborder from car or train do Chekin desk, and to gates. Later from gates to train or cars. Transbordment from plane to plane for poeple and laguage in transit is also possible.

The GoBetween system that combines three original components :

The Capsule
The capsule has the following particularities.
➡ **Size**
   1,2 meters **wide**   –   2,4 meters **long**   –   4,5 **passengers**
➡ **Speed**
   18 km/h top speed using 2,4 kW of power   –   **Laser** detector to stop within a distance of 1,6 meters   –   **7 km/h** in shared transportation sites automatic bumper to stop within a distance of 18 cm   –   **Very low Energy** consumption   –   **While stopped,** and in case of any irregularity, the capsule drops to the ground for easy access and system safety

The MagnétoGlisseur®
The MagnétoGlisseur® is the registered trademark that provides the individual transport capsule with automatic driving capabilities. A study carried out at the EPFL by Professor M. Jufer showed the technical feasibility of energy relay and of the magnetic guidance system. The system has three functions :
   Energy relay supply   –   Capsule guidance   –   Information relay

The Trafic Manager®
Computer miniaturization makes automatic distribution and safety tasks possible. It also makes possible remote control by the command center operator : The entire management system consists of the five following steps :
➡ When any capsule is free, the passenger will reserve a capsule at the terminal for his trip
➡ The center creates en plus des demandes prévisibles a spécific route card and allocates a capsule for the passenger
➡ The command computer switches on the appropriate circuits according to the route card
➡ The capsule's computer allows dialogue with the passenger
➡ The center updates route in cards in real time accordingto traffic

2.

Operation modes

The GoBetween is a transborder system that can be adapted in time and space to transportation needs by creatively combining three operational modes.

High capacity segregated lane
When these small units are driven on segregated lane, the GoBetween's transportation capacity can vary from that of a bus to that of a subway. That is from

Serpentine is a personalized urban transportation system in which spacious and simple capsules are supplied which energy and leaded by the patented MagnétoGlisseur®.
The first two Serpentine capsules, with automatic drive, were presented to the public in Lausanne, Switzerland at the 1996 Swiss Fair which was attended by over 1'000'000 people. The spacious and simple capsule with room for 4 to 5 standing passengers, their pets and luggage, lowers to ground level to increase safety and access while loading.
The MagnétoGlisseur® (magnetoslider) is a rubber strip laid out on the ground surface. The capsules res-pond to voice commands to stop, load and unload passengers. The capsules may be called, driven or even paid for by cellular phone.

GO BETWEEN

Automated transboarder from your starting point to your destination

La Serpentine permet un déplacement horizontal ou vertical dans l'ensemble du bâtiment et/ou entre des bâtiments. La Serpentine lie les pôles d'activité et divise par 5 les distances apparentes.
Elle permet le transport automatique sécurisé de personnes seules ou à mobilité réduites, et de bagages. Par san étroitesse, elle peut se «faufiler» presque partout.