AUTOMATED TRANSIT NETWORKS
REALIZING SUSTAINABLE MOBILITY

TOGETHER:

2GETHER
With the world’s population ever increasing and the depletion of our natural resources, the world is in need of energy efficient and environmentally friendly means of transportation to fulfill the basic need of mobility. Automated Transit Networks can contribute to this by providing the first and last miles links to public transportation networks, enhancing the public transportation chain and making it more competitive to the use of the car.

Together we can get there: realizing sustainable mobility.
Automated Transit Networks (ATN) are a guided transit mode with fully automated (driverless) operation, featuring (computer controlled) vehicles that operate on a dedicated network of guideways. Main reasons to consider ATN are the reduced operational and lifecycle costs.

The system provides transportation on demand or at a high frequency, while cities benefit from the reduction of car traffic, congestion and the environmentally friendly character. Developers maximize land value and reduce space wasted for non-value added activities by connecting locations and optimizing land usage.
2getthere offers the in-house developed personal rapid transit (PRT) and group rapid transit (GRT) systems - or a combination. For each application the most suitable system can be selected based on application characteristics, requirements and the customer preferences.

The systems are ideally suited as feeder systems to both public transit nodes and parking facilities. Alternatively they can also be used as local transit systems, connecting facilities within a certain location (e.g. within a business district).
Carel van Helsdingen founds Frog Navigation Systems
ECT operational
Development container carrier
Development 1st generation GRT
1st generation GRT at Schiphol Airport operational
UTS partnership for Gulf Coast Countries
1st generation PRT at Floriade 2002
Decision to extend Rivium with 2nd generation GRT
2getthere started as business unit
2getthere’s experience with automated systems dates back to 1984. The network and vehicle control systems have been proven in various demanding applications.


2getthere is the leading supplier of automated transportation networks, capitalizing on experience by continuously improving its’ products – delivering the best possible and most suited transportation systems to its customers and passengers.
Personal Rapid Transit (PRT) is a transport method that offers personal, on-demand non-stop transportation between any two points on a network of specially built guide-ways. A PRT system combines the desirable aspects of the car (private travel at any desired time) with the social advantages of public transport (no congestion and parking issues).

A PRT system can be installed as a feeder system to a parking facility, as a local transit system or as a system providing a guided tour.

MASDAR CITY, ABU DHABI

As the world’s first carbon neutral, zero-waste, car-free city, Masdar features a Personal Rapid Transit system (PRT). The network is 1.5 kilometers long, features 10 vehicles and 2 stations, with 4 and 6 berths respectively. The system commenced operations on November 28, 2010, carrying its 1 millionth passsenger in 2014. The system features a system availability consistently above 99.4%.
The Masdar PRT system was the world’s first to open to the general public on November 28th 2010.
Group Rapid Transit (GRT) is an automated transit system with an exclusive right-of-way, accommodating a shared ride for up to a maximum of 30 passengers per vehicle. Typically these systems are installed in a line connection, but can also operate in a network configuration. A GRT system can provide both a scheduled service with a high frequency or transit on-demand.

A GRT system can be installed as a feeder system to a public transit node or parking facility or as a local transit system.

Based on having proven that the GRT system could provide a better service and frequency at lower cost, phase II features a 1800-meter track with five stations and six 20-passenger vehicles. During peak-hours all vehicles are operational, on-schedule, based on a 2.5 minute interval. The scheduled service optimizes capacity. In off-peak hours service is optimized by transit on-demand.
The Rivium GRT system is the only automated system worldwide operating at grade with at grade intersections for cars and pedestrians.
Integration into the existing spatial planning to ensure the system fits seamlessly and looks intended is essential for the acceptance especially in urban environments. The sophisticated guidance system allows for the infrastructure to be kept simple, ensuring the capital costs are substantially reduced compared to rail-guided systems. The only addition is a grid of (passive) magnets installed just below the road surface.

2getthere additionally applies advanced obstacle detection systems to ensure the safety of passengers and people in the operating environment. This ensures the systems can operate also at grade, only requiring grade separation for those intersections where the flows are too intensive.

The stations should fit the local environment while accommodating the throughput required. The ability to support different station layouts and provision of clear passenger interfaces ensures 2getthere’s systems are intuitive to use.
INTEGRATION INTO THE URBAN FABRIC
2getthere provides operations and maintenance services in close cooperation with its partners worldwide, both with local operations and maintenance teams and remote support from the Netherlands.

The operational costs of 2getthere’s current applications are the lowest in the market. Both Rivium and Masdar are at less than 50% of the costs of other operational ATN applications.

2getthere’s services can include employment of a dedicated team for operations and maintenance, remote support, spare parts as well as system and software upgrades. The result is a superior system availability, both at Rivium (>99%) and Masdar (>99.4%).

OPERATING EDGE

2getthere’s Transit Operations and Monitoring System (TOMS) provides proven reliability and availability as well as flexibility in configuration.

The system operates according to scenarios, allowing operations parameters to be adjusted automatically based on the time of day or manually after observation. This ensures quick implementation as well as minimum capital and operational expenses.

TOMS is the first supervisory system featuring a completely 3-dimensional interface. It allows great insight into the actual status and allows for quick familiarization of operators.
Technology: proven in multiple demanding environments, both indoor and outdoor.

OPEX: 2getthere’s operations expenses are lowest in the market, with existing applications at only 50% of competing operational systems.

CAPEX: 2getthere realizes best value - the costs relative to the economical life span are the lowest in the market.

Intellectual Property: all IP, license, ownership rights and knowledge is concentrated in 2getthere.

Grade level: the ability to operate at grade, with at grade intersections, allows installation on any level and saves costs.

Guidance: the technology is the most reliable and least vulnerable guidance, robust against dirt, rain and snow.

BASIC FEATURES YOU
Operations: experience with multiple systems, authoring the operational and design safety case.

Controls: vehicle and supervisory controls are leading in experience and design, with a development history of more than 30 years.

Product Range: based on the application requirements, either personal or group transit is provided.

Co-operation: involving experts allows scaling up and down along with the project requirements.

Architecture: the distributed network ensures flexibility and robustness, allowing for easy extension and addition of vehicles.

Safety: uniquely featuring obstacle detection, ensures superior safety over competing systems.

CAN BUILD ON
CONTINUING TO LEAD
2getthere has a history of firsts, starting with the introduction of the first free ranging automated vehicles (March 1986) to integration of such system for passenger transit at grade (December 1997) and the world's first PRT system in public operation (November 2010). We will continue to drive the market, starting with the introduction of the 3rd generation GRT system and applications in excess of 5,000 people per hour.
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