

Environmental + profitable = sustainable

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Since April of this year, a new system for the distribution of goods around inner cities has been introduced to the Netherlands, known as Cargohopper.

[F047 Image 2](#)

Cargohopper is a miniature, thirteen-metre long electric train riding on pneumatic tyres that city distributor Hoek uses to deliver goods around Utrecht's inner city quarters.

This is no money-guzzling 'green' demonstration project however, as Hoek transport manager Jacques van der Linden explains. "Of course we wanted this system to be sustainable. But our ultimate goal remains the transportation of goods and making money. We want to show that both aims can be combined without additional public funding."

The idea of Cargohopper was conceived in Bratislava in August 2008, where Jacques saw a miniature electric train used to ferry sight-seeing tourists throughout the inner city.

"Take the people out, put the packages in, and up and down the city streets we go, that's what came to my mind," he recalls.

Green with a bite

The strong suit of Cargohopper is that Jacques was already a city distributor, operating five daily delivery vans around the inner city.

"This provides you with a ready frame of reference and a clearly defined point of departure. You know what you can realise in terms of revenues and thus what the cost may be if you are changing the operational modalities," he adds.

With Bratislava in the back of his mind, and having already opted for electrical transport, he recognised that the priority was to adapt the idea so that he could operate it in the most profitable manner. He knew businesses would not be prepared to pay extra just to deliver their goods in an environmentally-friendly manner.

An immediate issue was that Hoek's distribution centre is located eleven kilometres outside of the city limits. One of the main disadvantages of electrical transport is the limited operating radius and relatively slow speeds.

This difficulty was solved by using mini containers and setting up an extra transfer point just 300 meters outside the core city centre. A regular delivery truck ferries mini-containers to and from the main distributions centre to the transfer point, where the containers are loaded on and off Cargohopper for the city centre run.

Using this system, Cargohopper is able to pick up and drop off the containers outside the city centre and venture back in to make three complete rounds a day, which means that it can do the work of five to eight delivery vans.

No waste of capacity

The Cargohopper concept has received a further boost through an agreement with waste management company Van Gansewinkel. After completing its deliveries, Cargohopper will collect packaging and paper waste from retailers on Van Ganswinkel's behalf and take it outside the city limits.

Jacques adds: "Normally, trucks go in empty and leave the city filled up, whereas Cargohopper goes in full and comes out empty. Combining the two operations can eliminate a lot of empty kilometres and thus save fuel. We calculated a big potential for growth and we expect to be operating with fully-loaded containers in the near future."

[F047 Image 1](#)

Lean and green

The operation of Cargohopper greatly contributes to the realisation of the environmental targets set by the City of Utrecht. On an annual basis, the little train can cover at least 100,000 kilometres that would normally be driven by delivery vans around the inner city alone. This would give a reduction in diesel consumption of approximately 20,000 litres and, likewise, a reduction of CO2 emissions by slightly under thirty tonnes – way beyond the target of a sixteen-tonne reduction set by the municipality of Utrecht for its own vehicles.

Jacques is proud of his contribution, but points out the fact that his ultimate objective is not to solve Utrecht's environmental problems. "Our Cargohopper is meant, primarily, to reduce the carbon footprint of my own enterprise. I can state with justifiable pride that I am now operating my business much 'greener' than my colleagues."

Obviously, this is beneficial to the City of Utrecht. And it would be even more beneficial if the city were to impose stricter measures on what sort of transportation may be employed within their boundaries, Jacques adds. He believes these kinds of projects would then catch on much quicker, and be implemented faster. "This is probably still premature, but if Cargohopper can demonstrate that there are viable alternatives, then city councils have a real argument to impose additional demands on the practices of distributors of goods within the city," he says.

He is also aware that the war cannot be won simply by the removal of five delivery vans from the inner city. In the bigger picture, the significance of Cargohopper is hardly noticeable.

Appeal

Jacques believes Cargohopper has universal appeal and application. It offers still other advantages above the efficient distribution of goods. Cargohopper is much quieter than conventional delivery vans and with its 1.20-metre width it impedes traffic along the narrow canal streets much less. As a result it is more people friendly and is appreciated more by the public.

"This latter attribute may well be the most noticeable feature in Utrecht: when a delivery van parks to unload goods, it blocks the road and everything comes to a standstill. Cargohopper minimizes this sort of inconvenience," says Jacques.

Future development

Currently, Cargohopper operates without subsidies, although it did receive more than EUR150,000 from the Province in development and innovation subsidies. Part of these funds are being used to investigate how the electric vehicles could be converted to run on solar energy, and an initial pilot project will begin on August 1st. Another line of research is looking at ways to enable Cargohopper to handle pallets.

Jacques is aware that in its current form at least, Cargohopper is not a golden bullet, but it has undoubtedly proved itself to be a viable platform for further development. In the meantime, other cities, including Amsterdam, have shown serious interest in the vehicle.

"The greatest challenge is to find the specific system that works best for each city, in a way that enables other green entrepreneurs to keep their businesses afloat without extra public funding. Only then can we say we are operating in a truly sustainable manner," he concludes.