

How ropeways can be a catalyst for urban development

In Europe, cable cars are not a common mode of transport to solve urban mobility issues. However **Matthias Nuessgen**, Vice Executive Director for the European Institute for Sustainable Transport, argues that not only can they be a viable mode of transport but also a stimulus for urban development



The Emirates Air Line bridges the Thames, running 90 metres above the ground, connecting north and south London

Urban public transport systems are not just providing mobility solutions for the majority of the urban population; in some cases they offer new possibilities for urban development as a whole. If this potential is recognised, planners will be able to use them as a tool to initialise or fuel urban development projects.

Non-European examples of this are some of the ropeways installed in Latin America, where entire favelas were reconnected to cities by the cable cars. For some this reconnection initiated a

radical change from isolated drug and crime hotspots to thriving new urban areas with a very different type of non-motorised mobility.

In fast growing metropolises in Latin America and Africa, often lacking functioning public transport systems, ropeways present a good possibility to start using a highly effective mode of transport, which is faster and easier to implement and to operate than mass transit modes, like bus rapid transit (BRT) or rail-based systems. A ropeway can solve very urgent

transport issues in a very short space of time and it is perfectly capable of integrating with mass transit modes once these start working.

Ropeways provide greater added value and less financial risk to cities. They can even work as a catalyst for public transport by starting to create public support, and encourage the development of institutional and technical know-how and economic concepts and resources for the implementation of mass transit modes like metros, BRT or light rail.

European ropeways

In Europe, cable cars are not yet a mode of transport that is commonly used for urban mobility. They are better known as a tourism tool and temporary transport solution for big events like the Olympics, EXPOs or horticultural shows.

Originally a temporary installation for the BUGA horticultural show in 2011, the Koblenz cable car still exists because the people wanted it. Its urban development potential only became apparent after the event was over. Apart from being a main tourist attraction for the region, it offers a quick and comfortable link from one side of the River Rhine to the city centre of Koblenz in less than 10 minutes, where a car trip would take in excess of 30 minutes.

This has been recognised by urban planners who are now counting on the cable car connection to fuel attractive residential development projects in a former military installation and two villages on the other side of River Rhine just opposite of the city centre, a possibility that had not been contemplated before the existence of the cable car.

For the city, in order to encourage this activity, the most urgent task is now the full integration of the cable car into the public transport system of the Koblenz area, which should give another valuable push to new development options.

The London Docklands may well be one of the biggest coherent urban redevelopment areas of the world. There are some success-stories like Canary Wharf that was converted from a dying harbour area into one of the world's leading commercial centres within 20 years. But there are also other areas whose development was rather hesitant.

One of these is Greenwich Peninsula, one of London's biggest industrial sites, dominated by the East Greenwich Gasworks for over 100 years. After falling into decay, it formed part of the London docklands development vision, but even the building of the Millennium Dome in 1999 could not initiate a successful development activity.

The Royal Docks are located just east of the Peninsula, on the opposite side of the river. They were built during the transition from the 19th to the 20th century, in order to give berth to ships

too big to be accommodated further up the river. From the 1960's onward, a steady decay in the harbour-economy left the docks and the residential areas around them without any viable economic prospects.

The preparations for the 2012 Summer Olympics provided another opportunity to reanimate both areas. This time, a connection between them was built in order to connect Olympic sites in east London. The Emirates Airline cable car is the only over ground river crossing east of tower-bridge, and in the long term will unite two of the most interesting new redevelopment areas in London.

With new masterplans put in place on both sides, both areas finally seem to



Matthias Nuessgen, Vice Executive Director for the European Institute for Sustainable Transport

be moving forward, promising to become exciting new parts of London in about 10 years time. Completely integrated into the public transport system, the cable car can basically work very similarly to a pedestrian bridge.

Underneath it, the first changes to the city structure are beginning to show. London City Beach has opened at the western tip of the Victoria Dock, where beach-bars and cafes are forming a new, lively and friendly atmosphere. Watersports activities are taking place

on the huge water-basins of the docks, and street vendors find their customers in the growing number of visitors. The new masterplan has tried to preserve this character with the proposal for a floating village on Victoria Dock, most likely inspired by the subtle changes the area is already experiencing.

Lost opportunity?

Hamburg is one of the fastest growing cities in Germany, with a yearly need for around 6000 new houses. But Hamburg is also an independent federal city-state with a very limited hinterland and little development space.

The city has three main parts: the inner city, with all the main city functions, lies north of the river, the Willhelmsburg island with harbour areas and a residential part, in the centre and the mostly residential Harburg, south of the river.

The harbour lies in the middle of the city like a wedge, occupying most of the island in the centre and limiting its potential for development. It has been one of the main urban development goals for a long time, to reanimate the planning activity on the island and south of it, but this has never really worked out, partly because there is no acceptable public transport connection between it and the city centre.

In 2011, a musical company with two theatres on a waterfront site on the island, in cooperation with a cable car manufacturer offered to build an efficient cable car system across the river from St. Pauli in the city centre to their theatres on the north shore of Willhelmsburg Island. They even offered a further connection to a residential area in the south of Willhelmsburg Island.

It is obvious that they were looking for an alternative mode of bringing visitors to their theatres, but they were also offering a very interesting opportunity to the city.

Hamburg suddenly had the chance to make accessible an area, which most certainly will be an interesting urban redevelopment site in the future, without spending any public money. The offer stood for the construction and operation of the system for 10 years. Even part integration into the

public transport system was discussed. After this time, the system would have been either dismantled or sold to the city for further operation.

The discussion about the project raged for a long time and finally was rejected by a citizen vote on August 26th 2014.

Many planners see this negative decision as a lost opportunity and agree that this project could have helped to solve the serious need for a public transport connection across the harbour. It could even have established a real north-south axes between Hamburg Trade Fair and Willhelmsburg which

fatal consequences for public space, urban environment, city structure, public health and the economy. But to be accepted by the necessary number of users, public transport has to be convenient in the first place. Convenience is what really makes the difference in the personal mobility decisions of people in post-industrial Europe.

Ropeways offer a very convenient, even pleasant experience with almost no waiting times and above all the total freedom of schedules. They are absolutely independent from the traffic congestion on the ground and also the safest transport mode.

scale to the cities. It would make urban space more comprehensible, more useable and more liveable.

In his book *Cities for People*, Jan Gehl proposes to use this “human scale” as a base for urban planning, as the maximum distance to cover in order to reach the next pocket-centre in a multi-centric city, the next public transport station or even a person’s work place.

For a long time, physical limits for city development have been natural limits like rivers, mountains, height differences, or simply distance. Every once in a while an innovation in transport was able to move these limits, like the train, car, underground metro or BRT, especially in cities in developing countries.

The author is convinced that cable cars are another one of these revolutionary transport modes with the potential to move the limits of city development, but not towards the outside of the city, like mass transit or individual motorised transport have done for so long. The next movement has to be towards the centre. The city limits will not be the same anymore. For an internal development of density and proximity we will have to rethink our cities. The new limits lie within, they mostly consist of the built environment, traffic, infrastructures and city fabric. Internal development means we have to manage density by reclaiming urban living space.

Cable cars are an almost ideal mode for this purpose. They are often able to provide surprisingly simple solutions. Cable cars are amongst the cleanest, quietest and most efficient transport modes in terms of energy and urban space. This makes them work well even in the densest neighbourhoods and they offer a very “human” and fluent way of public transport without any schedules. ■



The planned cable car in Hamburg would have connected St. Pauli in the city centre to the north shore of Willhelmsburg Island

would have further improved the intermodal integration of the ropeway into the city’s transport system and fuelled potential developments in the southern parts of the city.

Convenience

Ropeways have become comfortable, high-capacity public transport systems. They are able to create direct links where other modes require long detours or massive infrastructure because they are able to bridge barriers like height differences, rivers, ocean bays or simply urban fabric or dense traffic.

In the cities, effective public transport will be the only way to overcome the decades-old car dependence and all of its

Transit oriented developments all over the world show that public transport and even non-motorised transport have the ability to replace the car as the daily means of transport, if they are convenient enough. If they achieve this, alternative transport modes can fuel development projects using a new planning paradigm.

An urban planning paradigm based on proximity does not generate trips, which are best made by car. It generates trips that can be made faster walking, or by bike or using direct public transport links. Links that expand the distance of about 500 to 800 metres that a person is willing to cover on foot. Such a proximity paradigm would bring back the human

The European Institute for Sustainable Transport is offering a training course on sustainable urban mobility in September. The “Urban Transport Weeks” are oriented towards students and young professionals and will focus on sustainable solutions, latest trends in science and practice, and international job perspectives in sustainable urban transport.

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