

# Traffic and urban development: a major paradigm shift ahead

Urban sprawl has recently become the target of environmentalists, whose hobbyhorse is humanity's ecological footprint on the planet. This implies that we must imperatively reduce our footprint to leave more room for nature, trees and plants. With good reason! Especially since urban sprawl also means an increase in car trips that burn fossil fuels and release huge amounts of CO<sub>2</sub>. We must respect and protect this magnificent ecosystem that produces our oxygen and is our best filter against CO<sub>2</sub> which, let's not forget, is the main cause of global warming.

## Does this necessarily mean crowding into increasingly dense urban areas? NO!

The last decades have been those of the oil industry's reign, source of the majority of the armed conflicts of the last years whose only objectives were the supply and the control of this resource which is totally present in our daily life.

- Multiplication of vehicles and equipment of all kinds running on gasoline or diesel
- Exponential growth of a product derived from petroleum: plastic
- Multiplication of the number of roads paved with asphalt, another product derived from oil

What's worse is that urban planners have also followed the lead of the oil giants by designing urban areas and development (commercial or industrial) in such a way as to make cars and public transit essentials. The proof that this product is well rooted in our habits: houses that do not have two parking spaces automatically have less value on the real estate market.

This does not mean that we have to blame the urban planners. It is too easy to criticize after the fact when everyone, without too many exceptions, had accepted oil as a revolution of humanity and the best way to travel great distances in order to discover and conquer the planet. It is also important to remember that the combustion engine replaced the steam engine whose energy source was coal. Not much better in terms of environment but at least with oil, the performance was there!

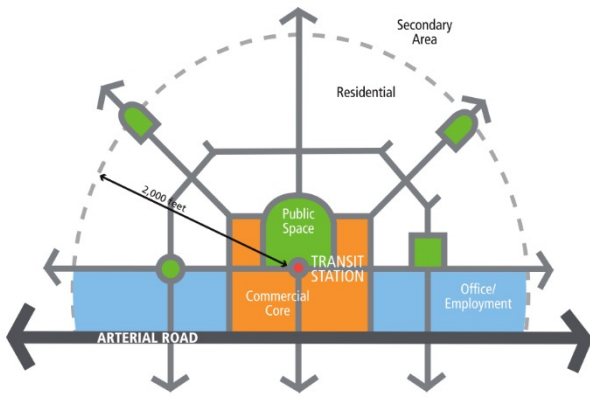
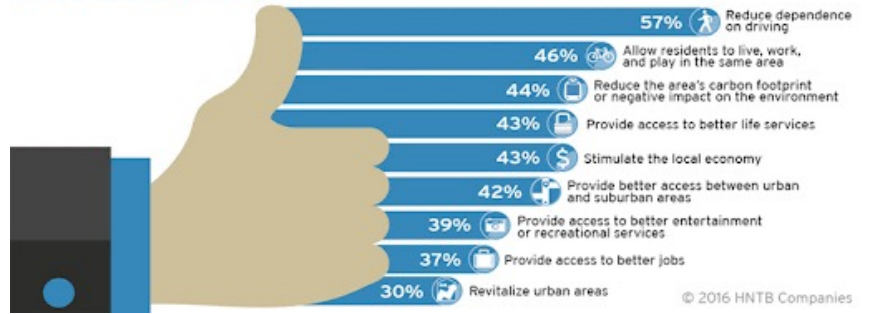
If this is history and we can't change it, what are we going to do about our future? How will this period be qualified by those who analyze the current and next decades? What will they have to criticize? Of course, if we do not rescue our planet, it will be easy to analyze it!

« At VERTIKO, we prefer to believe that the middle of the 21st century analysts will see this period as one of **COLLECTIVE AWARENESS** concerning not only the environment, GHGs, and the electrification of transportation, but also all of the human conditions and their impacts on our living environment. **The first step of this awareness is to stop believing that by repeating the same actions we will obtain different results.** In this way, we will avoid making a bad idea universal! "Let's get ready for the next decades, the ones putting forward disruptive and innovative concepts and ideas!» Yannick Richard, Executive VP Vertiko Mobility.

What if the urban development mode could change the game? A relatively new urban planning concept, developed by Peter Calthorpe in 1993, Transit Oriented Development (TOD) emphasizes walking and public transit and redefines the concept of living space by integrating most of its facets, including the greening of public spaces.

## BENEFITS OF TRANSIT ORIENTED DEVELOPMENT

Americans believe transit oriented development provides an array of benefits ranging from lifestyle to environmental to economic.



According to this concept's attributes, households would meet almost 100% of their needs within a 600 meter radius, making services accessible ... on foot! This concept redefines not only the relationship between suburbs and downtowns, but also the concept of suburbia itself. Gone are the days when the suburbs were simply an overflow of the city center with dormitory districts. Gone are the days of having to go downtown for the commercial aspects of daily life. In TOD developments, neighborhoods are 100% self-sufficient and trips to downtown are for fun, entertainment (entertainment and shopping) and diversity (diversity that is also widely available on the internet!).

It should not be assumed that this mode of urban development applies only to low densities areas. The Guangming District project in Shenzhen, China, the Oakridge Center Project in Vancouver or the Quartier des Lumières of the Mach Group in Montreal are good examples of high density residential TOD.



Sources: Foster + Partners, for the Guangming District project, Oakridge Center project Teams, for Vancouver and Groupe Mach, for the Quartier des lumières in Montreal.

A circle with points of interest at the center is regularly the basis of a TOD development. This approach is in direct opposition to the current more linear commercial strip that stretches for miles. These commercial streets are, more often than not, four-lane boulevards, difficult to cross on foot, and encourage the use of cars to get from one corner to the next, in contradiction with the urgent need to lower GHGs.

TOD does not eliminate the need to own a car, as the car remains the basis of freedom of movement. It does, however, reduce the need for car travel and in many family situations will eliminate the need for a second vehicle.

However, it is not possible to eliminate everything and start over. The work will be done slowly with new developments and revitalization of existing spaces. In the meantime, most people remain entrenched in their habits and the increase in new developments, even in the TOD concept, increases the traffic burden by increasing the number of vehicles on the roads and especially the travel time.

This is where the eVTOLs becomes interesting. Air cabs will accelerate the removal of passengers from the road network, and therefore cars. **Unlike the electric cars, the use of air cabs, does not increase traffic congestion.** Although they pollute much less during their use, the electric cars contribute to increase the number of vehicles on the road. Since electric cars are in a minority in terms of numbers, the increase in traffic means that gasoline and diesel vehicles are on the road longer and emit more greenhouse gases. This creates a dichotomy in the minds of those who wish to be part of the environmental solution (by purchasing an electric car, for example) but who, at the same time, may have to give up their desire to live in a lighter urban area and in the natural countryside.

The integration of vertiports in major new developments allows the connection of different hotspots in a large urban area by eVTOLs. The objective is to remove passengers and, consequently, vehicles from our roads. To do this, the service will have to be as accessible as possible in terms of costs in order to be within the financial reach of a maximum of families.

**This development-oriented approach is the core of VERTIKO Mobility's raison d'être and represents the main element of its differentiation from all other vertiport developers.**

Real estate developers should use vertiports to enhance the attractiveness of their projects and their overall relationship with the environment, instead of letting a network of vertiports sit on their rooftops. In a real estate market where every square foot is rapidly gaining in economic value, it doesn't matter where you locate a commercial operation; whether it's on the ground or on the rooftop.