

SMART CITIES

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BUSINESS BRIEF: INNOVATION AND URBAN MOBILITY IN BRAZIL

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Meanwhile, the use of technologies to control and oversee transit has helped to improve the quality of city commuting. The centres for monitoring with cameras and GPS localisation devices on collective vehicles, as well as collaborative applications which commuters use, such as Waze and Google Maps, on about 7 million smartphones have increased the efficiency of commuting. Not only smartphones, but also vehicles and objects that rely on tiny sensors to provide masses of data, can help make mobility more efficient.

“What is the city but the people?” asked Shakespeare in *Coriolanus*. All city planning focuses on people and the quality of life. The big cities in Brazil took shape from the 1950s, when the country’s population amounted to approximately 52 million inhabitants, only 36.2% of whom lived in cities. The development focus during the post-war period, led by the modernist canons that guided the conception of Brasília, spread across numerous cities where the automobile was the leading actor,

and was supported by investments all over the country to build roads and other infrastructure, such as ports, railroads and electric power plants.

The population of the country in the 1980s was around 120 million inhabitants, 67.6% of whom were urban dwellers. The public transport systems in the major cities were practically all limited to buses; only São Paulo and Rio de Janeiro benefited from the first subway lines, inaugurated in 1974 and 1979, respectively. The railroad systems basically served the metropolitan regions, with their terminals delivering enormous numbers of passengers to the bus networks.

It is obvious that today's urban population of over 160 million, with the rate of urbanisation standing at 84.4%, is stimulating massive expansion, with ever-increasing distances and extremely high costs to attend to for public transport networks. The Brazilian government's policies remain quite unclear on this issue, and few of Brazil's cities have effective urban-mobility plans. On the other hand, the automobile industry delivers 200,000 vehicles to the market every month. This perpetuates the car/city combination, while forcing planners to find solutions for sustainable mobility that are compatible with the extending urban space.

The use of individual vehicles in big cities is not a matter of education, but rather of the lack of an efficient, safe, quality collective transportation system. When citizens take over two hours to travel to work in metropolitan areas, using the automobile is justifiable since it reduces this commuting time by about 50-60%. The question is therefore about integrated public policies that take into account aspects such as urban locations that can offer jobs, incomes and services.

The fundamental starting points for proper integrated city planning, and consequently mobility, are first, a deep familiarity with the clear social and economic profiles of the city's inhabitants (together with their expectations and demands as regards work, education and health), and second, to know the origin and destination of their journeys. Sustainable planning of mobility depends basically on city planning, and this requires a social, participative approach that reaches beyond how to manage just the city itself.

Accordingly, sustainable urban mobility must be planned with medium and long-term solutions that should obviously offer short-term remedies for the urgent problems of cities, while always seeking the participation of all the stakeholders—governments, citizens, universities and companies—with each of these actors contributing solutions that promote the commitment of all involved.

Brazil was a pioneer in creating the BRT (Bus Rapid Transport), with exclusive corridors and boarding stations that reduce waiting times for commuters. Based on TOD (Transit-Oriented Development), a worldwide city planning approach that combines walking, cycling and public transport spaces with compact, well-serviced, population centres, this medium-size system is far less costly than building subway lines. Nevertheless, the BRT systems, which can use sustainable fuels like biodiesel or electric power, still need infrastructure work to guarantee large-scale viability.

Integrated planning, supported by clear public policies, new technologies and ways to safeguard the environment, is the path towards sustainable mobility in cities in Brazil, as elsewhere.