BELO HORIZONTE SMART CITY

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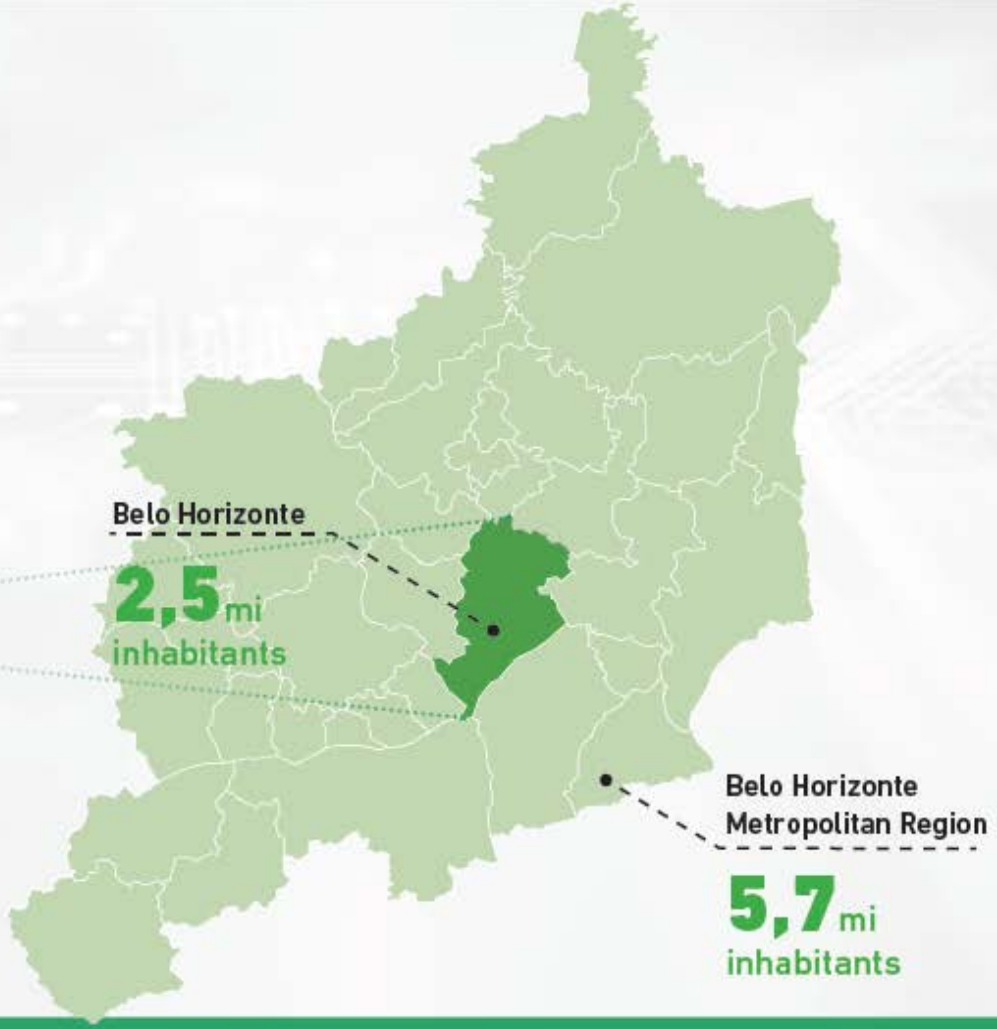
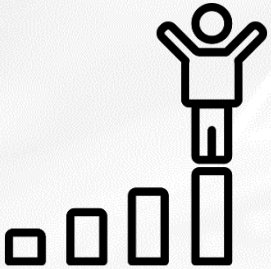
Belo Horizonte

Minas Gerais, Brazil



Project background and objectives



Build Prosperity

Make the development sustainable

Reduce poverty by increasing inclusion

Strengthen trade relations between Brazil and the rest of the world

Achieving the UN's Global Sustainable Development Goals (SDGs)

Project background and objectives

The goal...

Identification of smart mobility technology for the “Expresso Amazonas” region, with the possibility of scalability to other regions of the city, including technical and financial feasibility assessment for its implementation.

Desired outcomes and impacts;

Urban Mobility Project – Belo Horizonte, Brazil

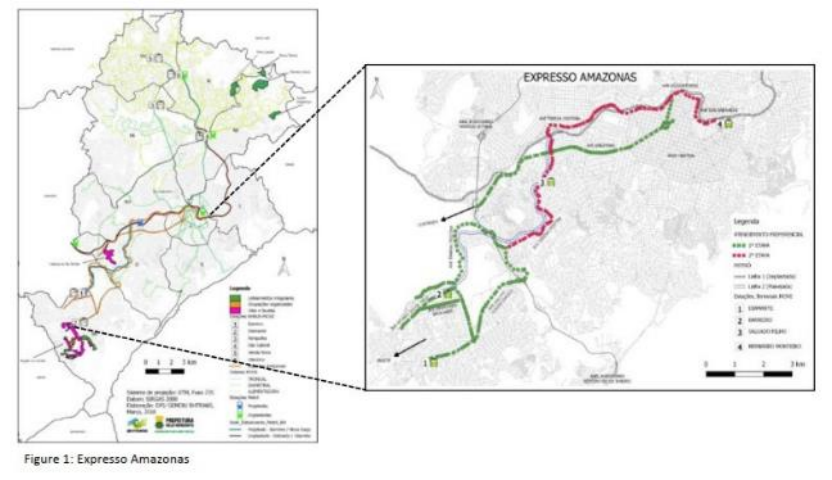


Figure 1: Expresso Amazonas

Context

Expresso Amazonas is a transport corridor in the western part of the city, connecting the center to the metropolitan region.

There is a constant increase in the demand for public transport and few methods of counting passengers and defining their origins and destinations for better distribution of bus lines and vehicle numbers.

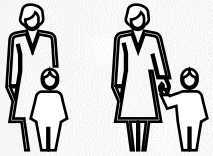
Desired outcomes and impacts;

Intervention

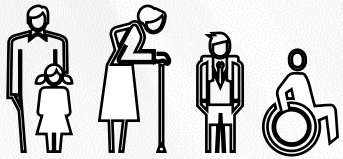
Intelligent Mobility in Expresso Amazonas

Ensure **personal safety** and **transport security**

Reduce **waiting time** and **bus occupancy**



Provide a more **gender-sensitive service**



Create a **more accessible service** for different population groups

Desired outcomes and impacts;

Intervention

Intelligent Mobility in Expresso Amazonas

Expected Impacts

Improve service quality for public transport users

More efficient operations in the public sector

Improve urban planning promoting innovation and economy

Desired outcomes and impacts;

Secondary Benefits

Project scope and current status;

BASELINE ASSESSMENT

MAPPING TECHNOLOGICAL ALTERNATIVES

VIABILITY ASSESSMENT

Project scope and current status;

Current status

In August 2021, the project will end the feasibility analysis stage of the technologies evaluated. Next, the design stage of the future integrated solution will begin, which will include the application of the technologies studied and the other components necessary to achieve the project's objectives.

Challenges and opportunities

Challenges

- Pandemic:
  - Impossibility of conducting surveys with passangers due to the pandemic;
  - Difficulty in images analysis due to the use of masks by passengers.
- Engagement of pro-bono suppliers for the construction of PoCs
- Mobility data across multiple different systems and integration requirements
- Hardware incompatibility with tested technology
- Lack of recent historical statistical data on mobility (Origin and Destination)

Challenges and opportunities

Opportunities

- Improvements in data governance andin the quality of imaging hardware and greater data integration between existing systems.
- Innovation and pioneering in Smart City subject in Brazil, boosting and stimulating other cities to improve the service, becoming a reference in public transport
- Collaboration between multidisciplinary teams to create a solution (ITDP, BHTrans, City Hall, FCDO, ONU, EY, COP-BH, Prodabel, Transfácil, passengers from different segments of society, iSensing, Millennium Bus, among others)
- Application of the solution as an ally in diversity equity and inclusion
- Synergy with the World Bank project to fund the implementation of the solutions conceived in the project

Lessons learned and key risks

Lessons learned

- Funding requirements to carry out wide-ranging Proofs of Concept in order to obtain maximum engagement from partners.
- Need to obtain up-to-date research data to perform accurate analyses.
- Data and database requests should be carried out in a more structured way, in order to mitigate the risks of schedule delays
- Continuous stakeholder engagement is essential to achieve project success

Lessons learned and key risks

Key Risks

- Engagement of future public administrators
- Elaboration of a qualitative and high-level bid to search for the correct market players
- Difficulty in the integration and interoperability
- Difficulty in obtaining data from metropolitan buses
- Financial maintenance sustainability of the operation of the solutions to be implemented, in order not to interrupt their operation and scalability

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