Avanzar hacia una movilidad urbana segura, accesible y sostenible

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Agenda

1. General Context

2. Alstom Innovations for green, inclusive, Sustainable Urban Mobility

3. Conclusion
World in 2030: Mobility challenges

Our world is under a significant strain, due to:

An amplified environmental crisis

- 1.8 planet consumed in 2017: our current way of living leads to the consumption of far more than the earth can provide
- Air pollution is said to become the first cause of death in the years to come, by the World Health Organization
- Fossil fuels are running out
- 35% to 50% increase in demand for food, water and energy

Image: Getty Images
World in 2030: Mobility challenges

Speaking of mobility, all countries will face the same challenge: demand for mobility solutions is set to triple by 2050, both in terms of people and goods.

- More long-distance and intercity journeys, with urban mobility expected to double by 2050 (OECD),
- Fourfold increase in freight (80% by sea),
- Growth in goods carried by road (driven by the rise of regional trade in Asia and Africa),
- The number of aircraft in service around the world will soar from around 20,000 to 40,000.
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Sustainable Urban Mobility: Our 2020 Ambition

- Committed to a **20%** reduction in the energy consumption of its transport solutions (compared to 2014 levels)
- And a **10%** reduction in the energy intensity of its operations by 2020.

In September 2017, Alstom was selected for inclusion within the Dow Jones Sustainability indices (DJSI), World and Europe for the seventh consecutive year.
Green, inclusive and sustainable solutions

**Coradia I lint – Suburban Train**

- **Alternative to Diesel Mobility**
- **No greenhouse gases** or particles are exhausted from the train: only condensed and steam water is exhausted!
- **Traction system**: use of **fuel cells** which produce electricity by combining hydrogen and oxygen
- **Autonomy**: 1 000km
- **Max speed**: 140km/h
- **Not a dream but a reality**: started under revenue service in Germany Federal States of Lower Saxony in September 2018.
Green, inclusive and sustainable solutions

**APTIS – Electrical Bus**

- **100% electrical**
- **Passenger capacities:** above 100 passengers / 12m eBus
- **Safety:** 4 steerable wheels, allowing to reduce 25% less area used in curve (safer for opposite vehicles and pedestrians)
- **Accessibility:** Full low floor with eBus parking sticked to sidewalk thanks to 4 steerable wheels + sensors.
- **Autonomy:** 150 to 250km (depending on line profile and HVAC requirements)
- **Energy consumption:** 0.90 kWh / km (depending on line profile and HVAC requirements)
- **Pilot in Santiago** starting March 2019.
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Sustainable Urban Mobility: Conclusion

- Solutions exist;

- Unfortunately, still very few offers evaluate environmental Return of Investment and only focus on pricing of the new asset;

- We should implement now evaluation based on Total Cost of Ownership, including environmental cost as a key driver in any asset purchasing (energy efficiency, CO footprint, % recyclable...)}