

MOBILITY

Intelligent Transport Infrastructures: Towards Less Congested and Safer Cities

Concept Note

It's happening. Intelligent transportation systems (ITS) are being embedded in traffic lights, car parks, tollbooths and roads or bridges. While they're mostly invisible to citizens, they enhance road safety and reduce congestion as they're able to translate what's happening on highways, arterials and roads so that city managers can maintain them.

ITS set up congestion sensors, structural integrity monitoring, fibre communication, high resolution video, vehicle to infrastructure data interaction, [intelligent traffic signals](#), special use lane management, emergency vehicle route clearance or safety guidance and message presentation, to cite just a few examples.

These technologies bring opportunities to expand, upgrade and remediate the transportation infrastructure. By the same token, they promote [inclusivity and accessibility](#), enable 'smart corridors' alerting drivers of the upcoming traffic conditions, and address pedestrian traffic, which is also a vital piece when understanding city's traffic.

However, providing safe infrastructure to handle the increasing needs of cities and integrating the public transport of the future are two points that require considerable investment. In this sense, the right partnership -be it private or public-can play a pivotal part in sharing or offsetting an initiative's overall costs.

Moreover, the open nature of ITS technologies, a specialized subset of the Internet of Things (IoT), arises many [security and privacy concerns](#) that cities need to address. How to encourage [data sharing](#) which is vital for mobility, while protecting confidentiality and integrity that assures the right delivery of messages?

Predicting the future in relation to technology trends and their use is fraught with risk. But what is clear is that there is no smart city without smart mobility, and smart mobility is not viable without smart transportation infrastructures.

Expected outcomes

Participants will:

- Get insights on how intelligent infrastructures can improve urban mobility.



- Get improved knowledge on disruptive models to finance ITS.
- Identify the hurdles in addressing data sharing.
- Learn about security solutions to protect ITS.

Guiding questions

- What kind of intelligent transportation systems are being developed in major cities?
- Are PPP the best way to finance ITS?
- What does the future hold for infrastructure industry?
- What are the security challenges cities face when developing smart infrastructure?
- How to cope with this security issues?

Keywords

ITS; Intelligent Transport Systems; smart infrastructure; road security; traffic lights; parking; camera systems; inclusivity; accessibility