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Measurements for transport

Business and citizens around the world depend on access to safe and reliable transport. It is one of the factors that is most important in enabling a successful modern society.

Whilst the needs for new and improved means of transport are clear, it is also important that they meet increasing requirements for economy and environmental performance. Every type of transport, from bicycles to container ships, from cars to space craft are required to meet appropriate standards. They are needed as the basis for national and international regulation. They can specify requirements for every aspect of performance from safety and economy, to emissions.

The implementation of standards depends on measurement technology and measurement standards. Some of the most demanding that are underpinned by the work of national metrology institutes include:

- accurate and rapid weighing of shipping containers to ensure the safe loading of container ships;
- characterisation of low friction surfaces and aerodynamic shapes of aircraft to minimize fuel consumption;
- valid measurements of the chemical composition of vehicle emissions to support regulators and city authorities in controlling pollution levels.

As the demands for accessible and efficient transport increase, so demands like these for measurements and standards to underpin them will too. Some of these demands will ultimately be met by new technologies such as driverless cars and zero-emission vehicles, which in turn will generate new measurement challenges.