Technologies and Sensors used in Public Transportation Systems and Buses. Measuring the service quality of a public transport service (e.g., bus, metro) is critical to be able to improve certain attributes/measures/indicators that to be enhanced, to be able to attract new users/passengers while retaining current users. Measuring Service Quality/Satisfaction is usually done using ‘Subjective data’ extracted from Customer Satisfaction Surveys (CSS). One of the reasons is the difficulties to obtain ‘Objective data’ due to unavailability of data or the high cost of implementing sensors inside the vehicles such GPS and IR sensors (AVL, APC) In other words, objective data are measurable data such as speed of the vehicle, number of passengers, temperature, etc.. With the technological advancements in recent years, it became easier for bus operators to install these sensors and get the required data to improve the over all quality of service provided to the passengers. For this chapter, these items needs to he discussed throughly: - Technologies in Public Transportation (which are called Intelligent Transportation System “ITS”generally) - What is ITS used for (examples) - What technologies used in buses - Talk about most important sensors used to measure certain attributes: - Automatic Vehicle Location (AVL) and what sensors are used for AVL? (GPS obviously is the most common, but other technologies are used such as BLE, and LoRaWan). And define briefly each of these with a couple of examples or more from recent Literature. - Automatic Passenger Counter (APC), and what sensors are used? IR, RFID, Camera, Sensor mat, Wifi, among others are used. Define each and a couple or more examples from the literature regarding each sensor, and state the negatives and positives of each sensor. I only want it to be done in a very good writing, I won’t accept it otherwise. Please edit in a very professional way. Any questions please ask. I can happily provide papers and articles which can be used for this paper.