

# WIM FOR DIRECT ENFORCEMENT IN BRAZIL

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## Abstract

Brazil is a country of continental dimensions and dependent on the road matrix as the main means of transportation for goods, merchandise and passengers. The country has a network of 55 thousand kilometers of highways and a few weigh stations in operation. The National Department of Transportation Infrastructure (DNIT) of the Ministry of Transport is responsible for the construction, maintenance and operation (management) of the federal road network. Among the attributions of the DNIT is the management of road safety and overload enforcement. In 1975, the National Department of Roads (DNER), formerly DNIT, began the development of the Master Plan for Weighing, which used low speed scales to overload enforce inside of a Vehicle Weigh Stations (called PPV). In this plan, it was planned to install 132 fixed weigh stations. The current legislation obliges all the freight vehicles that travel on the highway to pass on a pre-selection track (60 km / h), the selected ones pass through the enforcement low speed scale (10 km/h). The DNIT lunch a bid (2014) to construct 35 new station called Integrated Automated Inspection Stations (PIAF). The PIAF model is designed to allow, in the near future, overload direct enforcement automated and integrated with other systems installed directly on the highway. In 2015, the National Institute of Legal Metrology (INMETRO) launched a Technical Metrological Regulation that allows the homologation of weighing instruments for high speed direct enforcement. Since 2007, the Transportation and Logistics Laboratory, of the Federal University of Santa Catarina, and DNIT has been working in cooperation in a research program for Direct Enforcement of the vehicles of load using systems of Weigh-in-Motion (WIM). In Ararangua (in the south of Brazil), a 120 m of a Continuously Reinforced Concrete Pavement specially designed for the installation of high accuracy WIM systems. Different WIM technologies are installed in the concrete lane, all them designed to meet the predicted accuracy requirements by the metrological regulation.