Faculty of Transport and Traffic Sciences (FPZ or FTTS) is an accredited iRAP supplier with international experience. So far the FPZ has performed the iRAP inspections, SRS coding and road safety analysis on approximately 28,500 km of roads in various countries across the world, including Great Britain, Qatar, Lebanon, Senegal, Ethiopia, Ghana, Moldova, Bosnia and Herzegovina and Republic of Croatia.

The iRAP coding is conducted using our Web application – FPZ Coding Tool on 10 m or 100 m intervals by selecting required attributes on the toolbars. FPZ Coding tool is a WebGIS, open source HTML5 web-based application for identifying and surveying spatial features from georeferenced video or images that are hosted on a server and are distributed to the client via web protocols. The interface can be customizable to ensure maximum visibility of road features and active attributes. Attributes can also be assigned directly on the map by using spatial selection tool. The export files are created according to the iRAP .csv upload file format. Registered features are stored in spatial database PostgreSQL (PostGIS) so that can be easily integrated with other third party GIS applications.
FPZ accredited surveying system is used for video surveys. FPZ, in cooperation with Center for Traffic and Logistics (CPL) Ltd. company has developed system and a set of tools (based on iRAP specifications) to create inspection data that is then used to calculate risks and identify priority network safety upgrading schemes and aid investment decisions.

All the surveys are done according to iRAP standards by FPZ equipped survey vehicle which records the videos in the following recording modes: (A) Single front/back camera mode to up to 110 km/h with video resolution 1920x1080 at 30fps (170 degrees angle of view, progressive scan) and (B) Spherical panoramic photos mode which enables obtaining a detailed overview of the relevant characteristics of the existing traffic infrastructure and road environment in all directions (360°) on every 4 meters of the inspected road section.

The video surveys are georeferenced using a satellite positioning devices of SPS accuracy. Georeferencing interval is 10 Hz, with interval length varying regarding to vehicle speed, between 0.04m at 5km/h and 1.2m at the speed of 130 km/h respective to position accuracy. The survey vehicle uses GPS – GLONASS dual chip GNSS receiver with NMEA 0183 sentence output which ensures that georeferencing of video frames is frame accurate, i.e. that positional error is more than 99% of the time within acceptable 10 meters range, more than 95% of the time less than 5 meters and typically less than 3 meters. **FPZ System can also use any third party images or video data** (i.e. from asset management surveys) if the image (or video) data is georeferenced and the data is in readable format. FPZ has previously successfully used third party data and developed conversion batch scripts for various road authorities and used existing survey data to perform iRAP codings.