Currently in Qatar, and to the best of our knowledge in most Gulf state countries, there is a lack of reliable information about traffic conditions and congestion. This information, especially if ubiquitous and near real time, is highly desirable to support consumer, enterprise, and government centric applications. Since no universal solution exists, a great deal of innovative research is needed. This research work aims at designing and developing an integrated intelligent platform for real time monitoring of road traffic, based on advanced data processing and filtering algorithms. Four sophisticated blocks compose the platform. The Data Sources block is responsible for generating raw traffic data, for example from road sensors. The Platform Core block is where the Platform Engine and Platform Services are implemented. It processes raw traffic data and translates it into meaningful real time information, which is then delivered to user applications in different formats and via various fixed and mobile end user devices either in real time or playback mode. The User Applications block contains the set of applications interacting with the platform. Finally, the whole platform is configured and controlled via the fourth block: the Platform Administration and Management block. Given the importance and complexity of the addressed problem, a great deal of research and development effort has been conducted to create a robust, efficient, and rich intelligence platform supporting a large number of services and applications. The research efforts focused on geographical data preparation, communication protocols with remote data sources, speed and travel time estimation and prediction, raw data filtering and fusion, map matching, and shortest and fastest routes computation. It is well accepted that reducing mobility time means reducing people stress and enhancing produced results qualitatively and quantitatively. We believe that the platform’s services will contribute in reaching this objective in Qatar and in the region.