

Toll roads: Managing traffic and revenue risk

Our consultants have worked on over 100 toll roads worldwide providing advice to governments, financiers and concession companies on concession packaging, tolling strategies, operational matters, traffic and revenue forecasting, risk analysis and due diligence services.

The issue

Traffic has an on-going impact throughout the life of the concession. Traffic levels not only affect the revenue stream, but also have an impact on operation and maintenance costs. The quality and accuracy of traffic and revenue forecasts are therefore vital to the financial success of projects.



How we can help

Our approach is to work closely with project sponsors, bid teams or funders, depending on our role, to help them:

- develop appropriate concession packages;
- optimise tolling strategies to maximise revenue;
- understand the impact of electronic toll collection on operational capacities;
- understand the traffic and revenue risks; and
- benchmark the project against international best practice.



Our services

We assess data needs and modelling requirements, and undertake surveys, model building, demand forecasting, and Stated Preference surveys to determine willingness to pay tolls. All of our forecasts are subjected to rigorous risk analysis via scenario development and sensitivity testing. We also audit studies by others.

We produce traffic and revenue forecasts for all types of tolling - shadow and real tolls, open and closed systems, manual, automatic and electronic tolling. Projects include urban and rural highways and estuarial crossings.

Key success factors

The most important elements in any traffic forecast are the level of existing traffic within the road corridor of interest (in scope traffic) and whether existing drivers will be prepared to pay tolls; and at what levels. Good data collection and market research are therefore vital.

Traffic forecasts are usually heavily dependent on assumptions about growth in GDP per capita; here we assess the impact of a range of possible scenarios.

Tolling strategy that optimises revenue, whilst minimising operating costs and toll plazas, is the key to developing a winning bid; we have extensive experience of optimisation procedures.

Key success factors in traffic and revenue forecasting are:

- quality of base data;
- car ownership;
- demographics and development plans;
- gross domestic product (GDP);
- drivers' values of time;
- tolling strategy;
- competing routes and modes;
- ramp-up;
- concession agreement.



Recent toll road experience includes:

- New Tyne Crossing (UK, Concessionaire);
- Limerick Southern Ring Road Phase II (Ireland, Banks);
- M3 Clonee to North of Kells (Ireland, Concessionaire);
- Maliakos Kleidi Motorway (Greece, Concessionaire);
- New Mersey Crossing Phase III Toll Feasibility (UK, Government);
- Duoro Litoral (Portugal, Banks);
- N8 Rathcormac/Fermoy Bypass (Ireland, Concessionaire);
- San Jose Circunvalacion Norte (Costa Rica, Banks);
- A1/A1(M) Darrington - Dishforth (UK, Concessionaire, Shadow);

In addition to our Corporate experience, our Consultants have worked on:

- San Jose Caldera Toll Road Project (Costa Rica, International Financial Institution);
- Thessaloniki Submerged Tube Tunnel (Greece, Concessionaire);
- Costanera Norte Concession, Santiago (Chile, Banks);
- Istrian Motorway Phases 1A and 1B (Croatia, Banks);
- Santiago-Los Andes Toll Road (Chile, Banks);
- Korinthos - Patros Motorway (Greece, Government);
- TENS Hellas (Greece, Government);
- A4 Toll Road Krakow to Katowice (Poland, Concessionaire);
- N1/N4 Platinum Highway Toll Road (South Africa, Banks);
- N3 Heideburg - Cedera (South Africa, Banks);
- A1 Motorway (Poland, Government);
- Milan - Brescia Tolled Motorway (Italy, Concessionaire).

