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Charging vehicles for using particular sections of highways is not a new concept, but, in recent years, the increasing flow of traffic throughout Europe has made road user charging increasingly necessary. As a result of traffic congestion and rising road management costs, governmental bodies across the continent have been driven to find measures to control growth in this area.

While Western Europe battles with overly congested city traffic and environmental concerns, Eastern Europe grapples with the volume of traffic that is beginning to flow in its direction. Lower operating costs have created immense business opportunities within this region, and its geographical proximity to other eastern markets has made it a prime transport corridor. But the road network infrastructure is weak, leaving Eastern Europe unprepared for this onslaught. Road building and development have now become critical needs in the region, forcing government ministries to find ways to finance these projects. As a result, charging transporters for using main roadways has become an important source of funding development. With road transport growing almost 20 per cent each year, road toll charges offer a significant, constant source of finance for the construction and maintenance of road infrastructure.

In the last two years, such efforts have been aided by technological advancements that revolutionised road user charging in Western Europe. Similar developments are surfacing within Eastern Europe, giving rise to the expectation that every country in Eastern Europe will have a sophisticated road user charging system in place by 2013.

### **An Evolving Market**

Due to the depth of government involvement in the sector, tolling in Europe is heavily dominated by political goals. Although technological innovation was often not encouraged, countries like Germany, Austria, and Switzerland developed highly sophisticated tolling systems. As a result of this, the market has been forced to shift from manual and automatic tolling booths to satellite- and microwave-based electronic systems. With the success of satellite-based tolling in Germany, Western Europe is likely to see the spread of this system in the near future. However, as the countries of Eastern Europe are in various stages of infrastructural development, there has been a lopsided upgradation of tolling systems within this region. For example, countries such as the Czech Republic, Poland, and Hungary have rolled out tenders in order to select more technologically advanced systems, while countries like Lithuania are still operating manual and automatic “vignette” sticker systems.

However, market movements indicate that the microwave-based electronic systems introduced by Austria and Switzerland are likely to be adopted in Eastern Europe on a large scale in the coming years, as these states are heavily influenced by system choices made in neighbouring countries. This supports the belief that electronic toll collection systems currently dominate the European road-user charging market, holding 84 percent of total road toll revenues across the region.

Nevertheless, the success of satellite-based systems in Germany has prepared the European market for further technological growth. As more sophisticated systems are adopted worldwide, Eastern Europe will be forced to keep up. The growth of technologically advanced tolling systems is being driven by efforts to achieve Europe-wide interoperability in tolling, which meets standardisation norms.

### **Efforts towards Interoperability and Environmental Stability**

Recent years have seen the issuing of several EU directives aimed at creating such an interoperable tolling system throughout the region.

The CENT C 278 standard was one of the earliest initiatives within this area, and the preliminary standard was defined as early as 1991. The Eurovignette Directive followed in 1996, introduced to limit problems within road freight caused by the existence of different methods and levels of charging in different countries. Subsequently, a directive issued in July 2003 continued to focus on interoperability, prescribing the conditions necessary to put such systems in place at the earliest in all European countries. But despite such governmental efforts, the problem remains unsolved, primarily because of the differing stages of infrastructural development in the countries of Eastern Europe. Some are still unsure of the wisdom of investing large amounts to upgrade their tolling systems.

However, trends indicate that this is likely to change. With the launch of the European satellite Galileo in 2008, it is hoped that satellite-based tolling will alleviate the problem of non-interoperable systems. Satellite systems will also drive the amalgamation of business processes, information technology, and mobile communications. The road user charging market in Eastern Europe has already begun to see an influx of systems providers and telecom operators, driven by potential investment opportunities. Increasing private investments will serve as sources of finance for governments, enabling them to focus efforts on other developmental measures. Future directives will begin to address the enforcement of sophisticated charging systems, and the focus will shift towards adapting this framework to reflect both internal and external costs. Compliance with the principles of both environmental and developmental sustainability will become key.

Today, most road charges in Eastern Europe are levied only on heavy vehicles, but charges have already begun to filter down to car users. A case in point is the congestion charge applied on vehicles within cities such as Warsaw. More countries in Eastern Europe will begin to see such developments, as environmental wellbeing becomes critically important. It is believed that by 2013, every country within this region will have a sophisticated, environmentally friendly tolling system in place.

Frost & Sullivan’s study of the [Road User Charging Market in Eastern Europe \(B872\)](#) is now available. For more information about this study, or to give us feedback on this article, please contact the author at [malavika.srinath@frost.com](mailto:malavika.srinath@frost.com).