



Outcomes of the ARENA Seminar:  
A viable business framework for EETS  
and other ITS services



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# 1 About the Seminar

The main purpose of the seminar was to gain insights on how the road sector can benefit from knowledge in other areas when it comes to providing attractive ITS-services and establishing a well functioning business model in support of the European Electronic Toll Service (EETS). The need for such insights has its origin in that the EETS-service is yet to be established despite EFC directive 2009/750/EC stipulating that it should have been in operation since October 2012.

Nevertheless, the EETS-service may potentially involve almost a 100 million users and have a turnover making it one of the largest economical activities in Europe. Against such a background it is hardly a surprise that a group of prospective EETS-providers, AETIS<sup>1</sup>, have been formed. Still, how come that no such service is yet in operation and what is required for establishing it we thus addressed in the seminar.

To achieve the purpose of the seminar we invited speakers who shared their expertise on what lessons could be learned from other areas applicable to the current EETS-provider situation. The following topics were covered:

## **ICT-solution**

The EETS-service is likely to be automated in terms of a vehicle device (on board unit) communicating with computerized administrative systems which in turn communicate with each other. In this regard there may be challenges such as making involved parties different computerized systems compatible (haulier, EETS provider and government) as well as arriving at a standard device solution for hauliers across the EU-region.

## **New services**

It has been pointed out that even if the margin for the EETS-service per se would not make economical sense to potential providers of such a service there may still be a business rationale in terms of delivering related ITS-services enabled by providing the EETS-service. How valuable services can be created making sense for private EETS-provider establishment is thus a key concern.

## **Privatization**

According to economic theory, if there is sufficient demand, markets will appear. However, moving from a public monopoly situation to a competitive market based one, requires necessary and sufficient incentives as well as clear market regulations. Hence, making the market-based EETS-provider solution work is not necessarily straightforward and hence an important aspect to cover.

## **The intermediary role**

An EETS-provider becomes a service intermediary supplying the haulier and the government. According to classical economic theory intermediaries imply transaction costs and shall if possible be reduced to make markets more efficient. Following such reasoning, how EETS-providers would make sense as intermediaries in the long run needs to be considered.

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<sup>1</sup> The group consist of companies from different industries including banking, fuel provision and toll charging.

## **Charging**

Developing a viable business model is a challenge to many companies in the information economy. As an EETS-provider, whether to, for instance, charge for the EETS-service per se versus related ITS-services only or even charging for the EETS-service in a package of services is an important consideration. Hence, we here pay attention to the EETS-provider charging aspect.

## 2 Seminar outcomes

### 2.1 Setting the EETS scene

The day started off with **Jonas Sundberg**, adjunct professor at BTH<sup>2</sup> and senior consultant at SWECO, explaining how road charging projects in the Nordic countries in the early 2000 led to the establishment of an automated, DSRC based, road charging service in 2007. The system, called EasyGo, fulfilled each of the following: separation of service provision and toll service provision, one user one contract, deputy payment responsibility and full Nordic electronic fee collection interoperability. It thus seems as if much of what was accomplished in the EasyGo project corresponds to requirements for a prospective EETS-service.

The lesson learned from the speech is that using knowledge from previous similar cases that have worked out may speed up the establishment of the EETS-service.

Next, **Henrik Sällberg**, assistant professor at BTH, took on the charging topic and pointed out that for information products main concerns for a viable charging model has been found to be: customer acceptance, combinability (using subscription and advertising in combination for instance) and integration with product development (the possibility to use a certain charging model may require making charging choices already in the product development phase).

The main charging concern for a prospective EETS-provider seems to be what to charge for: the EETS-service, complementary services or a package of services including the EETS-service. Who to charge (customer or consumer) is of a much lesser concern for the EETS-service per se following the straightforward regulated link between haulier, EETS-provider and government.

The lesson learned is that what to charge for and how to charge for it needs to be carefully thought through by a prospective EETS-provider.

### 2.2 Keys to successful new services

**Per Kristensson**, professor at Karlstad University, next considered how to create successful new services. Per started out by making clear that new services often are created out of flair or even luck. Nevertheless, it has been found that successful new services are more likely to be developed by companies who focus on what value is created to customers rather than on new technological inventions created. As one illustration of the difference between the two approaches Per used a washing machine pointing out that instead of developing a new washing machine feature the development focus should be on how to make people feel fresh.

Also, companies acknowledging that value is created during usage and therefore sees customers as co-creators of new services are more likely to generate successful new services than those who do not see customers as co-creators.

The lesson learned is that companies applying a customer value centric mind-set are more likely to create a valuable EETS-service and related ITS-services.

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<sup>2</sup> Blekinge Institute of Technology

## 2.3 The role and value of intermediaries

**Juliana Hsuan**, Professor at Copenhagen Business School, then elaborated on the value of intermediaries in markets drawing on the automotive industry and fashion clothing industry. In these industries intermediaries play important roles by: bundling products, acting as quality guarantors, acting as brokers or by processing information.

She further pointed out that reasons for inclusion of intermediaries in markets are: increasingly distributed nature of innovation, increased number of product variants, increased product development speed and access to knowledge. The speaker further pointed out that due to easy imitation, lack of systemic knowledge and difficulty in negotiating contracts intermediaries are vulnerable. That is, they risk not survive in the long run. To mitigate such risk intermediaries can engage in bundling and customization/ individualization.

The lesson learned is that for EETS providers to add long term value as intermediaries requires the EETS-market to have certain characteristics and that uncertainties associated with the intermediary function are reduced.

## 2.4 Alternative financing and privatization of transport Infrastructure – Prospects and difficulties

**Björn Hasselgren**, senior research fellow at Royal institute of Technology in Stockholm, then took on the privatization topic. Drawing on railroad and road infrastructure cases the speaker elaborated on prospects and difficulties associated with privatization of the EETS-function. Toll services have traditionally been publicly run.

First of all, according to Björn, there must be a business case for EETS-providers to come about. Hence, if risk is too high (financing) or the market is not expected to be profitable, no private actor will be established. Secondly, the role of the government needs to be clear on issues such as regulations, incentives and perhaps also financing.

The lesson learned is that for private EETS-providers to become established the responsibility of government and private actors respectively, need to be communicated and clear on issues such as financing and regulations.

## 2.5 Business- and charging models in a connected world

Next **Jonas Svensson**, CEO at Telenor Traxion<sup>3</sup>, returned to the charging topic, speaking about the business model used at Telenor Traxion. A main idea with the company's business model in use is, according to Jonas that a "complete solution" is offered in terms of a package of services (basic, additional, professional) charged for by a fixed monthly fee. Hence, both the complete solution offer and the way of charging for it are choices made to make life easier for customers by cutting costs and helping them to pay more attention to their core business.

The lesson learned is that less focus on technological requirements and more attention on how a prospective EETS-provider will create value to hauliers might be a fruitful approach for generating a viable EETS-provider business model.

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<sup>3</sup> A company providing real-time tracking and monitoring of non-powered freight

## 2.6 Toll services today and tomorrow

Finally, **Søren Rasmussen** at Sund & Bælt A/S and Brobizz A/S in Denmark, spoke about different rationales for them as a toll charger and toll service provider company, to make the transition to become an EETS-provider.

First of all the company, according to Søren, uses a potential standard technological solution for toll charging, namely the EasyGo system. This technological solution currently is compatible with five sets of VAT legislations and four currencies and may be extended thereby providing access to more markets. Hence, the company has a technology in place required for making the transition.

Secondly, the company already has a large customer base installed who will in time demand the EETS-service, so to keep these customers the service needs to be offered by Brobizz.

Thirdly, the company predicts that the political interest in user-financed infrastructure will increase in the future, why toll charger adaption is necessary.

The lesson learned is that even for a current toll charger with an installed customer base there are concerns such as technology standards and public policy directions influencing the choice of becoming an EETS-provider.

### 3 Conclusions

To conclude, it may seem surprising that no EETS-service is yet in operation following the EFC-directive 2009/750/EC. A business sector with a potential turnover of immense format that is prescribed by law should create great interest and activity. Why has this not happened?

Several speakers at the seminar pointed at the importance of “perceived value” and value creation. Even if a service is prescribed by law it will not attract interest unless the value generation becomes evident. Here the experience from the EETS-like service EasyGo puts a very good example: It started up in small scale, but it takes time for customers to adapt and the use of the service is still after 6 years rapidly growing. The value for the users may be there from the beginning, but patience is needed in the service provision. Furthermore, this calls for a business model that allows for gradual growth.

But also the value for the service provider must be seen, and it is clear from the seminar that uncertainty does not attract service providers. And there are several aspects of the EETS that are still uncertain: There are uncertainties associated with the intermediary function and the distribution of responsibilities between government and private actors. There are also uncertainties on the interpretation of regulations and how the service is financed. A next step towards establishing the service could therefore be to initiate further communication between hauliers, prospective EETS-providers and the government on the needs and responsibilities of each party.

It must also be understood that all kinds of specific requirements drives costs. This concerns transaction costs as well as operational costs. The EETS service is expected to cover a large number of road user charging schemes, several with atypical and diverging solutions to be covered. Besides the uncertainty this creates, it is also experienced from other service markets that this kind of solutions drives costs. A more fruitful approach could be to limit the degree of freedom among toll chargers that would like to associate their service to the EETS payment scheme.

For the ARENA project the conclusions can be summarized:

Service coverage, and thus payment schemes, shall be allowed to grow gradually.

The whole EFC area should work towards a customer value centric mind-set, rather than focusing on technical issues

The different actors in the EETS area should clarify their expectations on roles and responsibilities, and these should be brought together

Greater efforts should be put into service harmonization in the EFC area, rather than allowing each toll charger to define its own requirements on the toll service provider

To conclude, at first glance, following the EFC-directive 2009/750/EC it seems surprising that no EETS-service is yet in operation. However, following the input from our invited speakers on topics relevant for the establishment of the EETS much seems to be uncertain to prospective providers. For the EETS to become established such uncertainties likely needs to become somewhat reduced. A next step towards establishing the service could therefore be to initiate further communication between hauliers, prospective EETS providers and the government on the needs and responsibilities of each party.



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