



Why is a business system important for the implementation of road user charging?

The Business System is a key part of any urban road user charging solution. Provided it is considered early enough in the process it will guide the development and design of the scheme. Comparisons can be carried out on the business impacts of different options during the scheme design process. This can assist in determining the benefits of alternative approaches and the technology to be used.

Early work on the business system can also provide the confidence needed to convince key stakeholders about both the security of the system and the cost of the final solution. Experience has shown that some of the main concerns in the lead up to introducing a scheme are whether it will work as planned without any disasters from day one and how much will it cost to build and operate.

When making policy decisions it is important that decision makers are aware of the implications for the business system. The cost and inefficiencies introduced may require a rethink in terms of how the policy can best be implemented. For example when considering exemptions for certain groups or areas there needs to be a practical way of allowing this to happen.

What is currently known about business systems?

The introduction of a new road user charging scheme is very similar to the process of starting up a new business or company. The key is to look at the business model and to understand the key cost drivers and appreciation of the target customers. There is much to be learnt from best practice within private sector businesses. The supplier market is far bigger and more advanced and standard applications bring competitive advantages for the development and maintenance of business systems. By following this example significant benefits can be achieved in terms of best value and operational efficiency.

The Business System is made up of a number of component parts. At the centre is the core application which essentially stores and processes all the information. Feeding into and out of this are all the ancillary systems needed to run the business. For a road user charging scheme the technology for detecting and checking vehicles will be a key component. Other external systems will be very similar to other business requirements and will include banking, call centres, web interface and automated telephony, retail outlets and debt collection.

When building a business system, architecture is the single most important factor in ensuring that the solution meets the needs and requirements of the operation. The approach to integrated architecture development should be based upon best practice. In order to achieve this it is important that the skill sets for managing the business system design are available before the procurement process is begun. There are a number of procurement routes that can be adopted ranging from a single turnkey contractor providing the design, integration, supply and operation of the system through to having separate commissions for each of the individual elements. Much will depend on the organisation of the body promoting the congestion charging scheme and timetable for implementation.

What further research is needed?

The development of business systems is fairly mature and is generally led by private sector operators. There does however need to be a dialogue between the promoters of congestion charging schemes and system providers and suppliers to understand what opportunities exist and to ensure that market competition is developed bringing with it cost efficiencies. Further development of the business system could include other transport solutions bringing additional cost efficiencies to the organisation. Typical applications could include parking, real time information systems, traffic control and public transport ticketing.

With the growing interest from cities there may also be a role for regional or national government in developing a comprehensive business system and providing a shared service to cities who could not afford to implement a system on their own. This approach would remove the technology risk and could also act as the stimulus that central government need for the adoption and progression of such schemes. The political and administrative issues for this type of shared solution are an area worthy of further investigation.

What can we conclude at present?

With the wealth of experience in running businesses worldwide there are a number of standard enterprise solutions for transport applications which will require little in the way of customisation. The design does however need to be based around the business system in the first instance rather than the traditional way of looking at front end technology first. The client also needs to ensure that it has a sufficient expertise available when carrying out the procurement and implementation of the business system. The time, effort and cost of developing and introducing a system, should not be underestimated.

DOs

Consider the business system early on in scheme development

Ensure sufficient skills are available in house to plan, procure and oversee the development of the solution

Specify industry-standard solutions and automated processes wherever possible

Develop a procurement strategy to ensure best value for design, implementation and operation

DON'Ts

Do not focus solely on front end technology

Do not allow the use of bespoke non standard software solutions

Do not underestimate the time and resource needed to develop the business system

Do not rely on manual processes

