Intermodal Transport Control System (ITCS)

Intermodal Transport Control Systems are a part of the IT infrastructure (based on equipment and software) that enables vehicle tracking and tracing, driver guidance, operations control and monitoring.

Managing the daily operations of a public transport company requires the ability to react to unexpected events. As the tasks for the public transport operators become more complex, support is needed from information systems. Furthermore, ITCS provides the ability to connect the different transport systems together. At interchanges, there is more than just the need to make a connection between different transport systems. Rather, a connection needs to be guaranteed between the transport systems themselves. If the public transport timetable cannot be satisfied, it must still be possible to ensure a connection.

The dispatchers at the control centres and the drivers of buses and trains/trams are supported by the ITCS in their work. An ITCS acts as an communication tool (data and voice communication) between dispatcher and driver. Possible disturbances/disruptions can be located very quickly or even before they cause any issues that affect the transport service. Appropriate countermeasures can be implemented easily and sometimes in advance; for example a bus route can be changed to prevent delays because of a traffic accident.

The ITCS also makes it possible to have control over traffic lights. This increases the punctuality of public transport and can also lead to faster public transport. Moreover, an ITCS enables public transport operators to provide dynamic passenger systems with “real-time data”.

Good practice

Many cities all around Europe use an ITCS to optimise their transport systems. There are various providers of software and hardware solutions for ITCS systems.

Potential interchange performance improvement

- faster travel speed due to accelerated traffic systems
- shorter waiting times due to optimised transition times
- improved punctuality

Resources

Cost indication for use of tool:

There are high costs involved in implementing a smoothly running ITCS. The process takes approximately one year to define the requirements of the ITCS. Another year is needed for deployment and fine-tuning. There are also costs for support during operation.

Other resources needed to use the tool:If the interchange operator and the public transport operator are not the same, both have to cooperate in order to implement an ITCS.

Indication of higher costs using the tool can engender: Distribution of costs between stakeholders

References

http://www.initag.de/en/products/ITCS.php?thisID=435

http://www.trapezegroup.eu/solutions/public-transport/avlc-real-time-dispatch

NODES strategic objective	Contribution
Enhance accessibility and integration	++
Enhance intermodality	++
Enhance liveability	++
Increase safety and security conditions	++
Increase economic viability and costs efficiency	++
Stimulate local economy	0
Increase environmental efficiency	0
Increase energy efficiency	0