Tomorrow’s trains moving towards smarter rail networks
How important is connectivity for players in the railway sector?

By 2021, train-based broadband services in Europe could generate total profits of around €2.351m. This figure includes income from Wi-Fi access charges and passenger upgrades, revenues generated by an increasing number of travellers shifting to rail transport, as well as operating-cost savings.

Increasing demand for connectivity all around the world
- The UK and the US have the highest quantities of rolling stock deployed with Wi-Fi services in their respective markets (Europe and North America).
- In 2011, North America and Europe generated infotainment revenues of about $315mn. This is expected to increase to $1707mn by 2021 with a CAGR of 20.9% in Europe and 22% in North America.
- On average about 1,800 trains a year will be equipped with Wi-Fi internet services between 2011 and 2020, worldwide.

Generating Smart Information across the railway value chain
- Maintenance: Collecting, transmitting and treating real-time data, 24 hours a day, 7 days a week and 52 weeks a year is a key issue for players in the rail sector.
- Supervision & control: Developing and improving a control system solution for next-generation trains by optimising data collection.
- Energy Management: The key long-term drivers in the railway segment, information technology is deployed through on-board Internet and Entertainment, Smart Ticketing, Automated Fare Collection and Door-to-door Services.
- These technologies harbour the next wave of business opportunities in the rail sector, worldwide.

Passenger demand for a more intelligent travel experience
- While travelling, passengers need to remain constantly connected so that they can benefit from an elaborated Infotainment System. In the rail segment, information technology is deployed through on-board Internet and Entertainment, Smart Ticketing, Automated Fare Collection and Door-to-door Services.
- These technologies harbour the next wave of business opportunities in the rail sector, worldwide.

Operators' needs for accurate data access and exploitation
- Need to meet market challenges and fulfil passenger demands, in order to attract and retain passengers (so as to counter competition from the air and personal car transport segments), as well as to create brand loyalty.
- Need to cut costs through energy, maintenance-cost and spare-parts savings.
- Need to enhance operational efficiency through supply-chain optimisation, signalling, PGM, etc.
- Need to boost revenues through ancillary income.

VueForge™, the Altran Machine-Driven Big Data offer

Connectivity is disrupting all industries, including the railway sector: new technologies such as Cloud and Big Data have created more integration challenges, giving rise to a host of new services, applications and business models. With billions of devices and machines soon to be connected, the key question raised by all of our clients is “what do I do with them?”.

In answer to this question, Altran has created VueForge™.

Altran is a unique player in this new pioneering field: as a global integrator, it has the means in terms of size and extensive network of partnerships, with members operating in areas ranging from embedded-related activities, to the Cloud and Analytics segments.

Providing multiple benefits by using smarter Big Data

Rail travel has to become a safer, cheaper and more efficient means of transport, as well as a source of revenue generation. This is why Big Data solutions have been designed to enhance business and the travel experience, surpass the existing silos of systems and processes, drive innovation and build performance.

Imagine a time when you will be able to rely upon smarter transportation systems and make more intelligent use of all railway-data assets through the renewal and upgrading of existing data systems.