Environment

At the time when climate change is a central element in all economic decision making and choices, rail becomes the right alternative:

If we compare road to rail, 90% of the total domestic transport emissions come from the road whilst rail is responsible for only 0.6% of diesel emissions. Between 1990 and 2005, the European railways managed to cut their CO_2 emissions by 21%.

Rail freight is the eco-friendly solution to transport more goods in a better way for the climate. CO_2 emissions are indeed 8 times less than the road and rail freight is actually the most energy efficient transport mode. It is also the most efficient transport mode from a land use point of view because it avoids congestion and guarantees safety. And one should not forget another of the major advantages of rail: the reduction of exhaust emissions, often highly concentrated in cities because of the cars.

Safety

It is widely recognized that rail and the freight services offered are many times more efficient on environmental and safety grounds than either road or air. Despite this, rail operators will only retain or win market share when their performance is equal or better than the market leader on all criteria, including price and service quality.

The management of risk to the safe operation of all types of rail traffic is essential and is described by operators of trains and infrastructure in their Safety Management System (SMS). The purpose of a SMS is to demonstrate that the company concerned has sound management systems in place to ensure that operating and system hazards are identified, risks evaluated and suitable control measures are in place so that he is operating in a safe manner.

In order to develop a sensible SMS, an operator needs to understand what his risks are and needs to assess the likelihood and consequence of those risks. To do that the company needs to use empirical data to assist with the calculations.

The impacts of market liberalization have brought about a much broader range of interfaces between the sub-systems that make up the rail architecture. The need to effectively manage those interfaces means a better focus on responsibilities, improved standardization and facilitated investments. These elements when coupled to a strong safety culture are what go to make a sound safety management system and something that, much like any other aspect of commercial operation, should be an integral part of a company's business model.

The most common accidents likely to affect freight trains are those that are caused by the acts or omissions of parties external to the rail system. These include:

Accidents to persons by rolling stock in motion (most often trespassers crossing the railway lines at an unauthorized location)

Level crossing accidents (95% of all accidents at the road/rail interface are caused by the road user or pedestrian misbehaving at a level crossing)

There are areas where the rail sector is the cause of an accident involving a freight train, amongst which:

Collision

Derailment

