The Central and Eastern European market for railway equipment and engineering systems up to 2006 is worth an estimated €13.2 billion. This includes €6.5 billion for infrastructure, €4.9 billion for vehicles, and €1.8 billion for engineering systems.

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The countries of Central and Eastern Europe (C&EE) form one of the most dynamic yet difficult to access railway markets. A new study conducted on behalf of Vossloh* shows that while Russia represents by far the biggest individual market (€6.3 billion) it is the new European Union (EU) members in Central Europe, plus Poland that are showing the greatest growth.

These countries continue to invest heavily to expand their infrastructure, with the main focus on capital expenditure for streamlining regional and urban transport through improved vehicles and engineering systems.

The study notes that similar trends are becoming apparent in Romania and Bulgaria though implementation so far is less advanced. Turkey is enjoying increased economic activity, which is set to continue for a few years, especially for mainline and urban passenger transport.

An overview of the market suggests that rail freight is growing again, regional transport is becoming a main investment area, urban transport represents a growth market, while long-distance passenger rail transport is growing at only a low level.

The biggest increase in freight volumes is expected in Russia where the encouraging economic trend is based mainly on the raw materials sector, whose commodities are ideally suited to rail transport. Three Baltic states, Estonia, Latvia, and Lithuania are benefiting from the trends in Russia, while the prospects for rail freight in other C&EE countries are also favourable, though at a lower level than in the Baltic states.

There is no distinction between long and short-distance rail passenger traffic in most C&EE countries but it is clear that in the long-distance sector growth is very low. This is in contrast with many countries in Western Europe and Asia and can be explained by the fact that high-speed lines are not yet a feature of the C&EE area. “Possible high-speed routes, such as Budapest to Prague, and Moscow to St. Petersburg, are being continually discussed but very few will be implemented in the foreseeable future. The most important project at present is taking place in Turkey between Istanbul and Ankara,” says the study.

The brighter picture for regional transport is due to substantial investment increases to improve rail networks in expanding countries. Regional transport in rural areas is one of the main reasons for the losses still being experienced by many...
Investment Shortages

C&EE railways. Urban transport by rail is gaining increasing importance owing to its ability to meet the requirements of mass transit. This process is especially marked in the new EU member states.

The metro and light rail markets in C&EE countries are, and will remain, buoyant. Even a limited rise in car usage since the collapse of communism has con- 
gusted many cities. The study forecasts: “Public transport will remain for the foreseeable future in many respects for many categories of people the only available mode of transport for the vast majority of their daily activities.”

In terms of product markets, the study notes that Russia dominates through its sheer size. It also points out that, unlike in North America or Asia, freight transport in Russia is carried out on the extensive electrified network. “The upgrading of the Russian network for freight transport will therefore substantially boost market volume in the electrification segment,” it says.

The study covers the markets for infrastructure and engineering systems, electric and diesel locomotives, electric and diesel railcars, passenger coaches, freight wagons, metro cars, and light rail vehicles, listing estimated market size and trends for each country or region.

For example, the sector for electric locomotives suggests an estimated market volume up to 2006 of €575 million, of which €470 million relates to Russia, followed by Ukraine, Belarus, and Moldova (€70 million combined), Poland (€25 million), and four Central European countries: Czech Republic, Slovakia, Hungary, and Slovenia (€10 million combined).

An upward trend is forecast for all those countries except Romania and Bulgaria between 2007 and 2020 with static market conditions in the former Yugoslavia and Albania, Turkey, and the Baltic states.

PPP Structures

One of the most urgent issues in the overall market is the frequent scarcity of the investment capital required to expand existing railway infrastructure and rolling stock fleets in line with transport needs. The search for new sources has led to growing interest in public-private partnerships (PPP).

The Vossloh study concludes that PPP models in the rail sector are capable of partially bridging the large gap between theoretical needs and available budgetary funds. But, owing to their specific structure in terms of income situation, size, complexity, and the demanded specialised expertise, they are not comparable with PPP models in other sectors.

“For this reason, there are not as yet any successful models for PPPs in the rail sector. Tools and solutions adapted to the specific conditions of the rail industry are required and, in this context, PPP solutions confined to industrial components could make a contribution.

“Another approach could be PPP models in which services, rights, or assets not directly associated with the project can be contributed to re-finance a new or extended line,” says the study.

These two variants would have to be tested and adapted in pilot projects, but the study asserts that now is the right time for the new EU member states to take the first step as the EU wishes to give priority support to PPP solutions in the rail sector and is looking for positive demonstra-

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The study points out that, despite a considerable number of rail PPP projects, few could be regarded as successful references that could serve as dependable models for future projects. In fact, shaping a successful PPP model for the rail infrastructure sector poses some major problems. The reasons for this include:

- classic user finance is virtually impossible owing to insufficient or the total lack of user charges
- many PPP projects are not holistic solutions from planning through to operation; instead, the emphasis has been on aspects of costs such as private advance finance
- rail infrastructure projects need very high investments over a long period
- rail infrastructure projects need a high degree of rail systems expertise because of their technical complexity, and
- strong political influence and aspirations obstruct commercial solutions.

"PPP in the rail sector is therefore a job for specialists. It is a job that involves correctly assessing the identified risks at the start of the project and achieving maximum efficiency on all project levels in the realisation of planning, railway engineering, finance, maintenance, and operation. At the same time, experience in overall project coordination is just as essential as experience in dealings with the responsible public authorities," says the study.

The nature of the obstacles has demonstrated that achievable operating receipts are not usually sufficient to cover private investment. Moreover, the benefits of transport infrastructure lie not in individual routes, but in the interaction of the overall network. This means, the study continues, that individual routes cannot be directly costed economically on the basis of a calculation of costs and revenues.

The study goes on to present two alternatives to enable Eastern European countries in particular to "break out of the vicious circle described above". One is a limited PPP solution for core components under which rail infrastructure projects are divided into a PPP part covering railway-specific components, and a conventional part that brings together tasks performed by local partners and respective railway companies and their subsidiaries.

Advantages of this limited solution include alleviating the burden on public budgets. Even when the overall project still requires some public finance, the limited PPP solution still allows appreciable private participation without abandoning the advantages of public loan financing for essential parts of the project.

Limited PPPs also offer manageable project volumes as the share of components suitable for such a model amounts to 25-35% of project life-cycle costs. They also offer lower risk costs, lower financing costs, and greater efficiency over the lifecycle of the projects by involving manufacturers in the responsibility for the products.

The compensatory PPP model involves the state contributing compensatory licences, long-term performance agreements, or assets that do not burden the state financially, instead of continuous transfer payments by the public sector to the project company for providing the infrastructure and to supplement insufficient user charges.

In CEE countries in particular, the state has direct influence over licences and supply relationships either through its state-run railway or an infrastructure company. This impacts on a number of areas including long-term licences and marketing rights for commercial property, and responsibility for vehicle fleets or railway technology companies in connection with long-term maintenance or service agreements for major components of networks or vehicle fleets.

Traditionally in the latter case, these services are provided in the state-owned network by the railway companies or their subsidiaries. In compensation for the creation or modernisation of a (public) portion of the infrastructure and in addition to user charges or as an alternative to state payments, contracts can be made giving the project company the exclusive right to provide such services.

Additional responsibility for parts of the existing network can also come under the compensatory PPP model, particularly in cases where cost-covering tolls can be generated on the part of the network that includes the line being invested in. This applies, for example, to special freight lines and port lines, which are of central importance for economic development and where re-financing is possible by charging users.

However, says the study, in order to permit alternative strategies on less expensive, publicly financed existing lines, the state can allow the investor to levy tolls on such sections so as to re-finance the new or extended line at no cost to the state. IRJ

*The study, Market and Investment Volumes in Railway Technology in Central and Eastern Europe, was conducted by SCI Verkehr, Germany, for Vossloh and follows the SCI Verkehr/Vossloh Worldwide Rail Market Study in 2003.