In 1990, Hungary abandoned the Soviet-style political and economic system of more than 40 years to build one of Eastern Europe’s most dynamically developing market economies. These complex changes have necessitated major market-oriented changes to the freight market by Hungarian State Railways (MÁV).

Transformation of Freight Transport

During the transition period in the early 1990s, in some years, the amount of freight hauled by MÁV halved (Fig. 1). This explains the near halving of railway employees (57,000 employees in 1999) while the total route-km of MÁV practically remained unchanged. However, it must be remembered that Hungary is a relatively small country (93,030 km²) at the crossroads of some important European routes with a much smaller volume of internal rail freight transport than the volumes of international and transit freight (Fig. 2).

The contradictory situation of MÁV freight wagons is especially interesting. The massive decrease in freight volumes due to changes in the economic system led to an excess of wagons overall, but changes in the types of freight resulted in a simultaneous shortage of some specialized wagons.

Road and rail are the only real competitors for freight because Hungary is landlocked and the River Danube is the only international waterway. It is well known that the railways of the planned economies were heavily organized and subsidized by the state, so it is not really surprising that the structure of the MÁV wagon fleet was ill-suited to a market-oriented economy. In Hungary after 1990, much fewer bulk raw- and semi-processed materials were carried by rail freight while the quantity of smaller value-added finished goods increased. For example, although Hungary is poor in minerals, in the Soviet era it had many coal-fired power stations and large steel plants, requiring large imports of coal and mineral ores from other planned economies. When the structure of Hungarian industry changed radically after 1990, road freight managed the transformation better than railways, taking a larger share of the freight market as shown by the freight tonne-km carried by each transport mode.
Rail Freight Recovering Market Share

MÁV would like to recover some of its lost market share and is in the process of developing intermodal transport for this purpose. One approach is use of piggyback wagons to transfer heavy freight trucks to rail and alleviate road congestion and pollution. Development of a new wagon fleet will also have to take into account general economic growth and demand for increased and specialized services matching customer demand.

At the same time, the railway is undertaking radical reforms, including a change to a holding company formed of independent businesses each with a transparent financial system. At present, MÁV believes that an independent freight-only railway company may be able to compete more successfully with road freight than a massive railway administration with a lot of different activities. For example, it could become more efficient by closing low-traffic loss-making lines that have been kept in operation for other reasons.

Present MÁV Wagon Fleet

A significant part of the MÁV fleet of freight wagons is traditional 2- and 4-axle open, covered and flat wagons of different sizes, capacities and ages. Although such wagons can carry almost any type of goods or materials, loading/unloading times are longer and require different specialized equipment. However, the current European market requires specialized dedicated wagons that can be loaded and unloaded quickly without
Trends in Rail Freight

Old covered wagon (left) modified into sliding-wall wagon (right) (MÁV)

Empty basket car with basket module (PÁRKÁNY)

Basket car loaded with 88-m³ self-discharging modules for bulk materials (PÁRKÁNY)

80-m³ self-discharging wagon for bulk materials (cereals) (MÁV)

Intermodal Ro-La wagon for piggyback transport (MÁV)
special equipment. MAV is decreasing
the overall number of wagons by 60% by
eliminating both old worn-out and
unreliable technically out-of-date wagons
while increasing the number of
specialized cars to meet demand.
Recently, it has purchased the following
specialized wagons:
• Self-discharging 75- and 80-m³ bulk
wagons
• Intermodal piggyback Ro-La wagons
to carry truck cab + semi-trailer, and
basket wagons to carry vertically
loaded semitrailer
• Container wagons
• Self-discharging coal wagons
• Sliding-wall wagons
• Steel sheet-coil transporters

However, despite the downsizing, 83%
of the fleet is still open, covered and flat
wagons with just 12% specialized
wagons. The number of tankers could be
decreased to 5% based on present
demand.

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decreased to 5% based on present
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**Purchase of New Cars**

To offset aging of the current wagon fleet,
MAV should be purchasing 550–600 new
wagons each year, but new purchases in
recent years number just 1392 or only
25% of requirements. The shortfall is due
to lack of necessary capital, but MAV has
used its long experience in rolling stock
engineering to recondition some old
wagons into new special wagons at low
cost as follows:
• Old flat wagons into container wagons
• Old covered wagons into sliding-wall
wagons
• Old flat wagons into steel sheet-coil
transporters

Due to the serious environmental concerns
in Eastern Europe, some funds were
allocated to purchase of piggyback wagons
for carrying heavy road freight. Most
notable are the so-called basket wagons
patented in more than 20 countries. The
basket wagon handles modular transport
of different types of goods.

Despite making a good start, complete
modernization of the MAV wagon fleet
will require continuing new purchases for
at least another 5 years. MAV’s intention
is to ensure that it has a modern
restructured railway that includes freight
transport meeting market needs.

**Fendall Burian**

Mr Burian is a mechanical engineer and Director of PÁRKÁNY Ltd., a Hungarian engineering company
holding patents on railway wagons developed by his team.