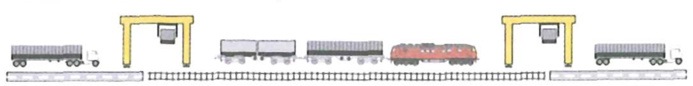
Road-rail combined transport

The future of combined transport

The International Union of Combined Road-Rail Transport Companies (UIRR) celebrates its 40th anniversary this year. The achievements and prospects of this unique system, that is Combined Transport (CT), are introduced on this occasion.

Combined Transport has delivered spectacular growth during its near half-a-century history in Europe; as of today one in every four freight trains is a CT train. In 2009 alone, 86% of Combined Transport was made up of unaccompanied traffic, while accompanied services constituted the remaining 14%. To make it all clear, unaccompanied CT goods are packed into swap-bodies, containers and semi-trailers that are carried by trucks from the point of origin to a transshipment terminal, where these freight carrying containers are transferred onto trains for the longest stretch of their journey lasting until they reach another transshipment terminal from where the consignments are forwarded again by road hauliers to their final destination.

Picture 1. Combined Transport.



On the other hand, accompanied CT is the rail transfer of complete trucks in trains using specialised so-called Rolling Motorway (RO-MO) wagons over distances of their trip, where road capacity is limited, alternative routes are not available and environmental concerns are high, like when crossing the Alps.

Picture 2. Rolling Motorway (RO-MO) wagons.

The beginnings

The first specialized road-rail combined transport operators were founded by road hauliers, who experienced road capacity bottlenecks, and collaborating railways in the late 1960s in Europe. CT is thus the optimal embodiment of the European concept of co-modality, whereby the strengths of both participating modes of transport – road and rail – can best be exploited: the flexibility of road transport in pre- and post haulage, while the low energy need, safety, speed and reliability of rail transport over the long section (of 300 km or more) of the route in case of unaccompanied CT, while the minimal land use and extreme low emissions of electric rail on sections crossing mountainous regions in case of accompanied traffic.

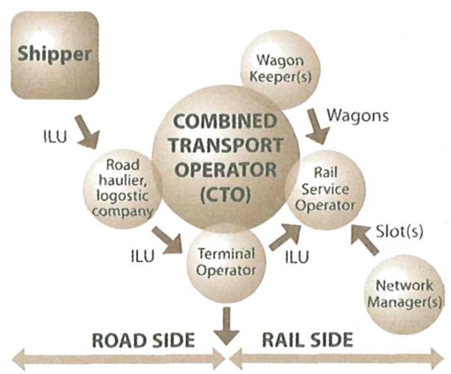
Development during the last decade

The realization that increased human activity leads to global warming (through the burning of hydrocarbons) has resulted in anti-climate change policies coming into the focus of politicians and citizens in a gradually increasing number of EU member states. At the same time, depletion of the Earth's mineral oil reserves, paralleled by the rapid expansion of its consumption, imposes increasing costs of oil (and hydrocarbon) dependency on modernised societies. These two effects directed public attention to consider the energy efficiency and environmental friendliness of transport, which today's globalised trading world depends on in ever increasing quantities.

As a possible response, the concept of modal shift was devised, and included in the EU Transport Whitepaper of 2001, whereby shipping of goods ought to be shifted from polluting road transport to more environmentally sustainable modes, like rail. The EU initiated a subsidy programme called Marco Polo, which aims at providing financial assistance to accelerate modal shift.

In 1970, seven combined transport operators founded the International Union of Combined Road-Rail Transport Companies (UIRR) as an organization to help facilitate the then national operators' cooperation to create cross-border services. In 1990, the role of UIRR was expanded and its central secretariat established at a liaison office in Brussels, near the European transport policy-making institutions.

Picture 3. The idea of Combined Transport Operators.



Today, UIRR represents 18 Combined Transport companies, and its mission entails continuously reminding transport policy decision-makers of the role and advantages of Combined Transport. Moreover, the Union provides services to Combined Transport operators to facilitate their cooperation as well as to improve their competitiveness. Last but not least, it contributes to research projects which aim to improve the conditions of Combined Transport and prepare policy decisions that pertain to its framework conditions.

The outlook for ECT

Based on the near half-a-century long history of Combined Transport in Europe, and the spectacular performance of this unique system of transport, one could easily be led to believe that undisturbed growth is (almost) guaranteed looking into the future. This could be particularly due to the additional circumstances surrounding Combined Transport's benefit: the desire to stop or slow down climate change and to reduce Europe's oil dependency. Unfortunately, the outlook is not nearly this simple.

The economic crisis has adversely affected Combined Transport, more so than goods transport in general, due to aggressive, below-the-cost pricing by road hauliers. The overall decline suffered by Europe's (UIRR's) Combined Transport operators in 2009 was 17%, an equivalent of three years' growth.

Impediments ahead

One should not forget that there are several obstacles to Combined Transport's unabated growth that stand ahead of us. First of all, the saturation of rail infrastructure and transshipment terminal capacities, together with inadequate investment going into expansion, mean that the physical space needed for Combined Transport may not be there. Furthermore, the lack of interoperability of Europe's railway network and its technical inefficiencies to handle heavier and longer trains, as well as inadequacies of rail gauges (clearance), hamper efficiency, and thus competitiveness. Thirdly, intermodal competition (in price) disadvantages Combined Transport operators, since track access charges are high, while road tolling is inadequate in most EU member states; only a fraction of the public road infrastructure is tolled and the level of tolls does not reflect the cost of operating and maintaining the road network. User-based charging only takes place in 10 member states, while the others have to use either an encouraging sticker – the Eurovignette – or do not charge road users at all – like the United Kingdom.

On top of that, road transport has very high external costs, while rail and other sustainable modes much less, but these advantages are not allowed to be transformed into price signals, which market players could consider in their daily decision-making. Despite verbal support from political decision-makers to internalizing these external costs, the European legislator has done very little to create a legal framework of internalization to this day [besides one-sidedly including rail traction electricity production into the EU's Emission Trading System (ETS)].

Finally, liberalisation of the European rail sector has not been fully implemented in every member state yet, which UIRR expects will inject much welcomed market sensitivity into rail infrastructure managers and railway undertakings, translating to further possible efficiency gains for Combined Transport services.

UIRR is active in eliminating obstacles to further evolution and development of Combined Transport in Europe, as it remains confident that this is the only true solution to placing Europe's goods transport on a sustainable and environmentally sound track. And why should Combined Transport of goods not succeed in an age when combining several modes of transport, public and private, has become "normal" for us during our daily travels?

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40 years: 1970-2010

Table 1. Performance of UIRR CT Operators 1970-2020

	1970	1980	1990	2000	2009	2020**
million tonnes/km	2,879	6,010	18,677	32,486	38,899	80,993**
average annual growth rate of that decade	8%	12%	6%	2%*	7%**	6%**

Source: UIRR statistics
* *a result of the economic crisis of 2008-2009*
** *Projection based on the UIRR/UIC DIOMIS Study*