

Cefic Position Paper on how to improve European Single Wagonload Transport (SWT)

Rail transport, in particular Single Wagonload Transport (SWT), represents an important mode of transport for the chemical industry, allowing for safe and low-emission transportation of chemical goods. However, it faces several challenges with regards to availability, reliability and efficiency, to become logistically feasible and competitive.

The success of SWT is largely determined by the efficiency and productivity of first and last mile operations and infrastructure utilisation, which currently incurs high costs and is a main obstacle to SWT growth.

Cefic welcomed the EU study on Single Wagonload Traffic in Europe¹, published in 2015, but no growth in SWT services could be realised so far.

This position paper lays out the conditions required and actions needed from a range of stakeholders, including infrastructure managers, national authorities, ports, railway operators and shippers, as well as supporting policy measures and facilitation by the European Commission.

Key messages

1. Secure independent **provision and management of first and last mile SWT infrastructure fully separated from operations, as required by European law²**. Make infrastructure management the sole responsibility of an independent (state controlled) infrastructure manager, providing optimal open access for SWT to national railway networks at minimum costs.
2. **Fully separate first and last mile SWT operations from the provision of long-haul train operations**, to achieve maximum levels of productivity on the first and last mile operations. This can be achieved by bundling demand via one shared provider.
3. **Fully digitalise and automate SWT operations**, aiming to realise maximum levels of productivity and minimised conventional handling operations, such as smart operations planning and execution, automatic coupling and decoupling of wagons, marshalling and smart shunting operations.

See Annex 1 for an illustration of the proposal.

¹ <https://ec.europa.eu/transport/sites/transport/files/2015-07-swl-final-report.pdf>

² According to Directive (EU) 2016/2370 of the European Parliament and of the Council, Establishing a single European railway area, Article 7, Member States shall ensure that the infrastructure manager [...] is independent from any railway undertaking. To guarantee the independence of the IM, Member States shall ensure that IMs are organised in an entity that is legally distinct from any railway undertaking.

Introduction

SWT represents more than 50% of the chemical industry's total rail freight volume and is an integral part of chemical producers' logistics networks, for both inbound transportation of raw or intermediate materials, as well as for distribution of finished products to its customers³.

With the aim of optimising costs, national freight operators in Belgium, Germany, France and Italy restructured their SWT operations by e.g. lowering service frequency and closing shunting yards. However, this did not support SWT service and a further decline in SWT volumes was experienced⁴. SWT services even disappeared in some regions. This erosion of SWT services in some member states has weakened the entire European SWT network due to decreasing bundling potential and therefore loss of productivity. While the European Commission's transport policy promotes co-modality with optimal use of the 'greener' transport modes such as rail, actions must be taken to support and improve SWT services, to avoid further deterioration of SWT services and reverting to road use, which would lead to increased congestion and increased GHG emissions from transport operations.

The transition towards a sustainable and effective transport system must be supported by a high-performance, efficient and sustainable backbone rail freight system across Europe, catering for all types of rail operations, including SWT.

To achieve such conditions, the following actions are required from the collective group of rail freight stakeholders, as well as national authorities, facilitated by the European Commission.

Secure independent low-cost management of first and last mile SWT infrastructure

The establishment of effective infrastructure management services brings structural benefits to the community of SWT users, overcoming the current structural problems associated with SWT services.

If set up correctly, it is a suitable means to achieve the desired and required step change in making SWT feasible again.

1. Independent infrastructure management

Most SWT-related infrastructure is owned and controlled by national infrastructure managers, but remains mainly reserved for, or even operated by the national railway undertaking. Hump yards should have open access and be managed neutrally by infrastructure managers or ports, while being accessible for all railway undertakings. Open access to SWT infrastructure is the basis for a further shift to rail.

Provision of SWT infrastructure should therefore be assigned to an independent (state-controlled) infrastructure manager, governed by a national agency. The exact governance model for such structure will have to be determined and depends on scale and structure of current and potential future SWT networks.

³ Cefic survey (2011)

⁴ Eurostat (2018), last database update by Eurostat: intermodal rail freight (rail_go_contwgt) 14 November 2018, total rail freight (rail_go_typeall) 19 October 2018 (Eurostat 2018)

The establishment of dedicated first and last mile SWT infrastructure managers should also help to overcome the current challenge of empty and, more critically, laden rail wagons to be held for more than 24 hours (being in transit, or in storage when no transport order linked to the railcar). Interim buffering of rail wagons should be done in a dedicated zone, to enable supervision, regular checks, emergency intervention and to avoid wagons being ‘dropped off’ on empty tracks without sufficient supervision. Today there is a lack of these zones, with a potential risk of laden rail cars being kept on sites without being held in appropriate storage zones. With the establishment of shared infrastructure services, such safe buffering zones should be made available to the community of SWT users.

2. Low-cost infrastructure

In most European member states, SWT operations are loss making. The number of rail sidings has been reduced gradually, year on year⁵. The reasons for that can be largely attributed to the high fixed costs associated with first and last mile operations. It is for this reason that Cefic proposes to make the provision of first and last mile infrastructure a “matter of the state”, providing such infrastructure as needed, via an independent (state-controlled) infrastructure manager, with such infrastructure being provided at minimum costs.

Rail freight currently does not receive sufficient credit for its societal benefit of offering lower total costs, when including external costs. Further subsidising rail freight, by absorption of a fair portion of SWT infrastructure costs, appears therefore to be a well-justified policy measure, considering the strategic intent of both EU and non-EU members states, wanting to shift more traffic to rail, making freight transport more sustainable. Pricing should take into account the much lower external costs of rail freight, with the vast majority of infrastructure costs being borne by each member state, relieving rail freight of the infrastructure costs in as far as deemed appropriate and feasible. Infrastructure usage fees shall be charged on a variable basis, charged as a national tariff, and as far as possible harmonised on a European level.

While chemical producers all tend to have comprehensive rail infrastructure on their chemicals plants and are well connected to the rail network, many downstream consumers of chemicals are not connected and can hence not be reached by SWT. For such companies, when located in an existing rail cluster, Cefic proposes to make it easier to receive funding to establish rail sidings. Downstream chemical companies’ scale of operations generally does not justify investment into rail infrastructure and they would hence continue to be supplied via public roads (using sole road or intermodal transport). If we want to see further shift to rail, specifically via SWT, funding for such low-scale rail sidings is essential. At the same time application procedures for funding must be simplified and sped up. The experience in some member states, such as Germany, shows that procedures are too complex, requiring too much time, effort and costs, which creates resistance and results in lost opportunities to shift more traffic from road to rail.

⁵ In Germany, for example, according to VDV and DB Cargo, the number of rail sidings has been reduced from 11,000 in 1997 to 3,250 in 2015.

Fully separate first and last mile SWT operations from long-haul train operations

1. Only one SWT operator for first and last mile services

The challenges associated with SWT operations on the first and last mile are due to a combination of high fixed costs and comparatively lower levels of productivity compared to long-haul train operations.

Decoupling of first and last mile SWT operations from long-haul train operations has several benefits: it allows building full long-haul trains, it maximises train bundling for the last mile and it enables demand driven delivery of wagons to the requesting site.

Cefic therefore proposes to place responsibility with one railway undertaking for each of the first and the last mile operations, along with the respective marshalling yard operations. One regional SWT operator should be appointed per SWT hub, bundling regional demand and supply for realisation of maximum levels of productivity. This SWT operator should be completely independent from the SWT infrastructure manager, as well as from railway undertakings that perform long-haul train operations.

The SWT hub operator should be selected and supervised by a collective group of SWT users (shippers) and infrastructure manager, with an appropriate governance structure to be put in place, to ensure that the SWT hub operator is acting neutral, in the best interest of all stakeholders.

Services should be provided in open book cost transparency, with frequent systematic reporting of both costs and performance, driven by a commitment of both users and provider of SWT services to strive for continuous improvement of efficiency and service levels.

2. The importance of collaboration

The proposed structural changes in this position paper will only yield full benefits, when collaboration is realised between infrastructure manager, rail operators and shippers. In some member states, a lack of collaboration has led to national railway undertakings protecting their position and creating barriers for small private railway undertakings to access the market. Collaboration is the basis for increasing process harmonisation and integration, which in turn is going to improve efficiency as well as reliability of operations. Collaboration is needed in the following areas:

- **Increase efficiency by combining railcars to longer trains on the last mile**
Efficient SWT requires bundling of volumes from different railway operators on the first and last mile, from the shunting yard to local site, to create economies of scale and thus lower unit costs. Delivering only a few railcars to a single site is highly inefficient. All stakeholders must collaborate towards maximum efficiency by sharing of assets and bundling of traffic flows on the first and last mile of SWT operations.
- **Make disclosure of last mile shunting requirements mandatory**
Railway undertakings, responsible for the long-haul between SWT hubs, should be encouraged to provide visibility of their first and last mile shunting capacity requirements, sharing such information with the SWT hub operator. First and last mile service requirements between main shunting yard and local shunting yards should be managed in one fully transparent system. This will avoid “misuse” of shunting slots (reserving capacity without usage), support increased efficiency and transparency, and will optimise the use of SWT. If collaboration does not come about voluntarily, it should be forced by regulation.

Digitalisation and automation of SWT

Alongside the need for structural changes, digitalisation shall serve as the enabler of connectivity and data sharing, towards optimised operational plans, maximising the productivity of SWT rolling stock, infrastructure and human resources.

Digitalisation can help to improve efficiency and customer service in two areas:

- Processes: optimised SWT flows in terms of consolidation of wagons into longer trains as well as optimising the sequence of shunting and marshalling yard operations.
- Information sharing: shippers and receivers of single wagons require visibility of the status and position of their wagons, including proactive exception alerts of delay and reliable revised estimated times of arrival (ETA) for both laden and empty wagons.

The efficiency of SWT operations must also be enhanced through automation of physical shunting and marshalling yard operations. This can be achieved by development and implementation of automatic couplings and autonomous driving. This would result in a step change, leading to a substantial safety and efficiency improvements. Wagons and locomotives would be automatically coupled together without risk of injury to shunting workers, while eliminating time-consuming labour and cost-intensive operations.

To support this innovation, European and national funding programs are needed to foster digitalisation and automation of SWT. Digitalisation and automation opportunities shall be researched, field tested and implemented at a European level, to ensure interoperability between national networks across Europe.

Conclusions

SWT is an integral part of the logistics network of most chemical companies. Several million tons of chemicals are transported every year via this important mode of transport. The restructuring of SWT, as proposed in this position paper, is of crucial importance to the European chemical industry, not only from an economic perspective but also to improve the sustainability of chemical transport chains. To achieve this, action is needed from a wide range of stakeholders, including infrastructure managers, national authorities, ports and railway operators, through to the European Commission.

The European Commission and local authorities should collectively establish a European and national master plans to revive SWT operations. Appropriate policy measures are needed to safeguard a sustainable future of SWT transport solutions that meet the needs and requirements of industry.

Cefic looks forward to discussing and working with all relevant stakeholders on this challenge, towards jointly establishing a framework and conditions for the future of SWT, which allow SWT operations to be performed safely, reliably, and efficiently while being financially feasible both from a user's as well as an operator's perspective.

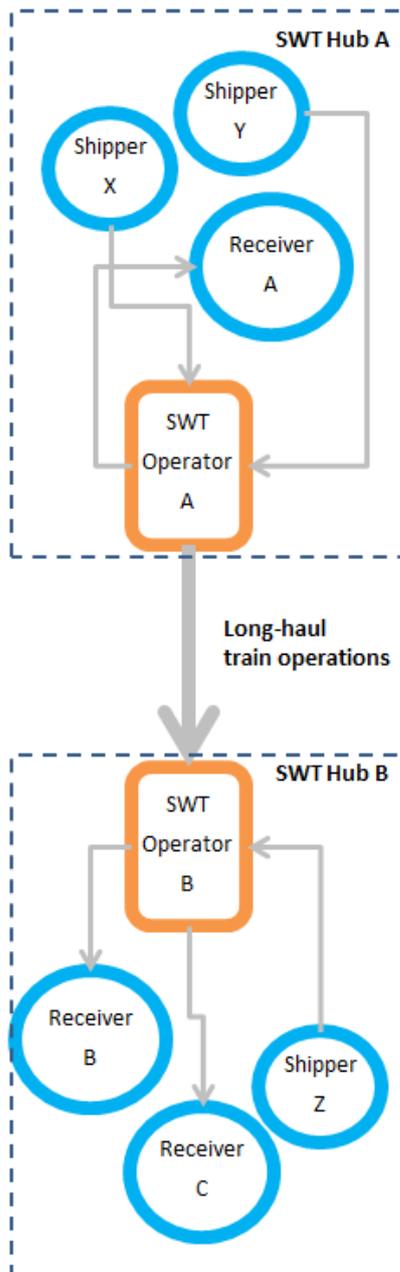
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About Cefic

Cefic, the European Chemical Industry Council, founded in 1972, is the voice of large, medium and small chemical companies across Europe, which provide 1.2 million jobs and account for 16% of world chemicals production.

ANNEX 1

SWT simplified structure, terminology and key points



First - / last mile infrastructure, incl. marshalling and hump yards

- Bundle demand and supply in regional SWT hubs (clusters)
- Appoint independent infrastructure manager
- Appoint one SWT operator per SWT hub
- Put appropriate governance in place, to ensure open access and neutral service

Long-haul train operations

- Operated by national and private railway undertakings
- Economically and legally independent from SWT hub operators

Digitalisation and automation

- Enabler of connectivity and data sharing for optimisation of operational plans
- Automate processes along the entire SWT transport chain (e.g. automated shunting, tracking & tracing, etc.)
- Promote digitalisation and automation with European and national funding programs