**NAME OF CASE**

Malcolm’s 50’ container for domestic application within the UK

**Key Words:**
Access to transport networks, infrastructure and nodes; freight consolidation and transhipment; Innovative vehicles, vessels and equipment; B2B solutions, cooperation; Competitive aspects: collaboration (cooperation with competitors), prioritisation (priorities on infrastructure); Communication between businesses and authorities: coordination, consultation; Innovative operational solutions; Transport management, fleet management

**Case logo or picture**

**Description**

This is a mixed solution serving commercial and environmental purposes based around carbon reduction and the need to make better use of container space to accommodate more cargo. The new containers are able to accommodate 15% more freight per individual transit and the operators are claiming a 13% reduction in CO2 emissions per pallet using inter-modal services. The new larger containers exploit a versatile new trailer design which is easily and safely extended to accommodate the new units.

**Benefits**

- Lower cost per pallet
- Life extension of existing container fleet assets
- More cargo per unit
- Reduced container movements
- Compatible with existing container terminal and wagon technologies
- 13% reduction in emissions has been claimed by the sponsors of the new units
- Still in early deployment by the sponsor

**Starting point/objectives/motivation:**

The concept took advantage of a relaxation of road vehicle lengths to introduce a new trailer and container. It is compatible with existing terminal equipment and rolling stock. The longer container does not use rail wagon platform space to optimal effect. The longer units may also be limited to certain road routes and be de-barred from access to constrained urban spaces.

**Solution**

The new containers are 50’ long 5’ longer than the previous maximum. It will accommodate 30 pallets of goods compared to the 26 carried in a 45’ unit. The additional length was achieved by adding 2.5’ modules on each end of a 45’ hi-cube container. The longer unit takes ad-vantage of the relaxation of rules on the overall length of a trailer to 15.65 metres. A new tri-axle trailer design with a trombone type capability has been designed to carry the new units. The 50’ long boxes are compatible with Megafret type rail freight wagons. The use of the plat-form space on the wagon is not fully utilised. This is largely a function of changing container dimensions over time away from the ISO standard.

The larger container may not be appropriate in other national domains and is another variation on container size and standards. It does utilise existing ISO lifting equipment. In terms of rail compatibility it will need to be checked for compliance if deployed elsewhere.

**Success factors**

The new containers are a response to an industry led attempt to reduce carbon emissions. The use of a larger box reduces the emissions levels per pallet and allows more pallets to be stowed compared to the 45’ units. The new units are compatible with ISO lifting dimensions in terminals. The new containers are also designed to reduce the impact of road and rail movements and also to yield savings in time, handling and fuel use.

**Supported strategic targets**

Competitive logistics and transport system; Balanced provision of goods and services; Increased efficiency / productivity of logistics processes; Increased amenity value; Increased company profitability; Increased efficiency/productivity of logistics processes; Increased competitiveness; Image; Increased safety and security; Reduced emissions;
The key identified benefits are the greater carrying capacity for palletised cargo (15% more freight per journey) and a 13% reduction in CO2/CH4 and N2O.

The new containers will carry 30 pallets compared to the 26 in the existing 45' containers.

The project was developed internally within the Malcolm Logistics Group as a privately sponsored initiative. The group has ordered a fleet of longer trailers for the road legs where these units are deployed.

The new containers are being used within the group’s current Anglo-Scottish inter-modal services (70 trains per week). Financial information to substantiate the claimed commercial benefits has not been accessible.

Especially important is an indication of potential effect in full scale, lead time impact and ability to scale up a solution. The new containers offer benefits in terms of greater carrying capacity and simultaneous reduction of emissions. The group has an existing fleet of 45’ units and the new units will be introduced into service with these on an interchangeable basis.

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