

Freight Forwarders Training Courses

for Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Tajikistan, Turkmenistan, Ukraine, Uzbekistan

Module 5 Road Transport



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Annex 1:

Examples of standards, regulations in European countries

5 ROAD TRANSPORT

Learning Objectives:

The applicant should gain general knowledge of road freight forwarding, of the pros and cons of road transportation. He should gain an overview of the transport markets by road of the EU.

Road haulage offers its customers personalised services at competitive prices. It is the only method of transport, which allows the elimination (with the exception of containerisation) of all intermediate handling (door-to-door); what is more, it combines the qualities of flexibility, speed and reliability. Finally, its success is due to its ability to constantly adapt to customer requirements. For the freight forwarder flexibility is a major asset: when the size of a consignment allows the possibility of using a full load, the availability of the means of transport gives the freight forwarder great freedom in the choice of type of vehicle, schedule, itinerary, loading instructions, etc. to make it easier to coordinate the operation. This situation is much more frequent in road haulage than in sea, rail, air or inland waterway transport.

The superabundant supply remains very fragmented. The creation of one's own firm has a certain attraction for a good number of lorry drivers, even if the requirements nowadays are stricter. It is relatively easy to obtain the financing necessary for the purchase of goods vehicles. The larger firms in this sector are restructuring and seek to increase the size of their fleets in order to remain competitive.

Subcontracting is a common practice. As in other sectors of activity, this is brought about by economic necessity: the handling of peak periods, the proposal of a flexible offer. But this can also reflect the lack of independence of the smaller firms. The prices are attractive but the profit margins are low. The frequently under-capitalised road haulage firms suffer from a lengthening of payment time, the average being 72 days in 1989. At the same time that the industry is becoming aware of the necessity of setting up working conditions which conform to safety and regulatory requirements many firms are reorganising so as to increase their productivity: new analysis of their collection and delivery rounds, using teams of drivers, managing working times in a more anticipatory manner etc. The lorry being the means of transport that should be optimised. Road Freight forwarding techniques, which are specific to the activities of a freight forwarder, such as chartering and groupage are dealt with in the following paragraphs. An

Example of France for necessary procedures to set up a public company for the carriage of goods by road can be seen here.

Example of Necessary procedures to set up a public company for the carriage of goods by road (in France)

Professional capacity / Worthiness / Financial Stability	
Creation of a registration file with the single registrar of public goods haulage and industrial vehicles hire companies. Transport department of the regional direction of public infrastructures (DRE)	Registration with the public companies trade registry (French: RCS)
Issuance of a certificate of registration	
Issuance of Operators licence in order to be able to enter the transport market	
Domestic transport licence	European transport licence
Involves	Involves
Goods Haulage vehicles with at least two axles and whose gross laden weight is less than 6 tonnes ¹	Goods Haulage vehicles with at least two axles and whose gross laden weight exceeds 6 tonnes
Area of application	Area of application
National territory	European Union

¹ Inclusive of those whose gross laden weight is less than 3.5 tonnes, pending the issuance of the decrees of application

Please check the specific regulations in your country.

Pro & Cons of Road Transport

Below please find a summary of some Pros & Cons of road transportation:

PROS	CONS
<ul style="list-style-type: none"> • door to door • flexible (compared to rail) • JIT • flexible prices & price negotiation • lower prices than air, rail • good for small consignments • sometimes is the only available solution (some countries are land locked or there is no continuity in rail networks) • low cost per cargo of not bulky goods 	<ul style="list-style-type: none"> • arrival may vary • freight costs of bulky goods are progressive • using of public roads • lot of borders to cross and need for VISAS for drivers (visa issuing delays), border delays • convoys for security of cargo and driver • not appropriate for big consignments, valuable, perishable, over long distance

Test Questions (5.0):

1. *What are pros of transportation by road? (right /wrong)*

- a. possibility of door-to-door-transportation without more costs (right)
- b. energy saving (wrong)
- c. the cheapest way of transportation ob bulk cargos (wrong)
- d. low cost per cargo of not bulky goods (right)
- e. good for small consignments (right)
- f. fixed arrival and departure (wrong)
- g. sometimes is the only available solution (right)

2. *What are cons of the transportation by road? (right/ wrong)*

- a. needs of seaworthy solid packing (wrong)
- b. arrival may vary (right)
- c. freight costs of bulky goods are progressive (right)
- d. expensive method of transportation (wrong)
- e. using of public roads (right)
- f. lot of borders to cross and need for VISAS for drivers (right)
- g. convoys for security of cargo and driver (right)
- h. prepayment from the customer before the (un-) loading (wrong)

5.1 Legal Requirements for International Road Transport

Learning Objectives:

The applicant should be able to explain the contractual framework and the international regulations in road transport such as: CMR, driving hours, maximum weights and dimensions, ADR for dangerous goods, access to markets, etc.

5.1.1 Organisation of the Road Carriers (International Road Union - IRU)

The International organisations related to road freight forwarding in Eurasia include IRU (www.iru.org), UNECE

United Nations Economic Commission for Europe (UNECE) (source: *unece.org*)

UNECE, which was set up in 1947 by ECOSOC (Economic and Social Council) is one of the five regional commissions of the United Nations.

UNECE has 55 member States (mostly European countries plus USA, Canada, Caucasus countries, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan and the 4 MEDA countries referred below with their data of membership). However, all interested UN member States may participate in its work.

The UNECE has established more than 50 transport agreements and conventions.

- European Agreement concerning the Work of Crews of Vehicles engaged in International Road Transport (AETR), of 1 July 1970
- Convention on the Contract for the International Carriage of Goods by Road (CMR), of 19 May 1956
- Customs Convention on the International Transport of Goods under Cover of TIR Carnets (TIR Convention) of 15 January 1959
- European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), of 30 September 1957
- Agreement on the International Carriage of Perishable Foodstuffs and on the Special Equipment to be used for such Carriage (ATP), of 1 September 1970

Legal and Regulatory: The TRACECA Trade Facilitation Project has recommended that border crossing delays can be reduced by harmonisation of documentation to international UN format and by accepting the TIR, CMR, COTIF and other conventions sponsored by the UN Economic Commission for Europe (UN-ECE), and the UN Economic and Social Commission for Asia and the Pacific (UN-ESCAP). There remains considerable scope for rationalisation and simplification of the documentation requirements. The TRACECA countries are realising the **need for membership** of International Transport Associations and Unions. TRACECA projects have been instrumental in helping the National Freight Forwarding Associations of Georgia, Azerbaijan and Kazakhstan become full members of FIATA so that they can represent their countries in international conventions.

Limited Capacity of National Road Transport Fleets: Long distance road activity in TRACECA countries is dominated by Iran and Turkey in the Caucasus and parts of Central Asia and by Russian and European companies in the north. Only Uzbekistan has any reasonable sized road fleets with modern high capacity equipment, but these are mainly state owned. Entrepreneurs wishing to enter this sector cannot obtain adequate financing partially due to ignorance of the procedures and formats for presenting their credentials. Several TRACECA TA projects have recommended **amending legislation** to allow for the expansion of private operators in the domestic market and to move away from a mostly state

owned business base. This should encourage expansion into the international market, and foster increased competition. It is recommended that there should not be legislation that protects national carriers from competition when engaged in international work. There may be the need to offer tax incentives to encourage smaller companies to expand and government encouragement to enable joint ventures to thrive.

Regulated Market: The regulations and legislation that exist still reflect the former command economy of the FSU and it will take time to deregulate the legislation and introduce laws that create an environment that allows development of the transport infrastructure. TRACECA projects have recommended to **gradually phase out all regulatory** aspects that limit free competition in the market and to end support for state owned fleets. Legislation should concentrate on safety and operational standards.

FIATA, EC (<http://europa.eu.int/scadplus/leg/en/s13001.htm>). The Members of IRU, UNECE and FIATA from TRACECA-countries can be found here.

IRU represents interests of road transport industry world-wide.

The **International Road Transport Union**, through its national associations, represents the entire road transport industry world-wide. It speaks for the operators of coaches, taxis and trucks, from large transport fleets to driver-owners. In all international bodies that make decisions affecting road transport, the IRU acts as the industry's advocate. By working for the highest professional standards, the IRU improves the safety record and environmental performance of road transport and ensures the mobility of people and goods.

Among its practical services to the industry, the IRU is the international guarantor of the TIR carnet system under which trucks are sealed by customs upon departure and can cross several borders without further checks until they reach their destinations.

You can find more information about the IRU in Russian:

Что такое IRU

[Что такое IRU](#)

[Функции IRU](#)

[Планы IRU в России и СНГ](#)

Что такое IRU

Международный союз автомобильного транспорта (IRU) – это всемирная организация, занимающаяся проблемами автотранспорта в 68 странах на 4 континентах мира. IRU защищает интересы всей отрасли в целом независимо от того, идет ли речь о пассажирских или грузовых перевозках и представляет интересы всех транспортных операторов – перевозчиков автобусами, такси и грузовыми автомобилями. От имени своих членов IRU представляет автотранспортную отрасль во всех международных органах и имеет статус неотъемлемого и авторитетного партнера правительственных кругов, который представляет интересы свою отрасль наиболее действенным и эффективным образом.

IRU был основан в 1948 году. Штаб-квартира располагается в Женеве (Швейцария). Имеются два представительства – в Брюсселе и Москве, которые проводят и координируют политику IRU соответственно в странах Европейского Союза и Содружества независимых государств.

Функции IRU

В соответствии с мандатом ООН основной задачей IRU является защита интересов отрасли и организация международного сотрудничества в области грузового и пассажирского автотранспорта в интересах гармоничного и устойчивого развития мировой экономики.

Для достижения этих целей IRU при поддержке входящих в нее национальных автотранспортных ассоциаций, осуществляют широкий круг проектов по следующим основным направлениям:

- Стимулирование развития автомобильного транспорта путем устранения искусственных барьеров, унификация технических стандартов, упрощение правил и таможенных стандартов;
- Создание и внедрение образовательных программ для транспортных операторов и водителей. Для этого создана специализированная [Академия IRU](#);
- Продвижение идей устойчивого развития в рамках автомобильного транспорта, в частности, путем совершенствования энергосбережения, дорожной безопасности и защиты окружающей среды;
- Противодействие всем формам дискриминации автомобильного транспорта, как на национальном, так и на международном уровне, продвижение концепции мультимодальных перевозок и взаимной дополняемости всех видов транспорта.

В качестве консультативного органа ООН, IRU активно сотрудничает с национальными правительствами и частным бизнесом многих стран, а также поддерживает отношения со многими международными организациями: Всемирным Банком, Европейским Банком Реконструкции и Развития, Всемирной Торговой Организацией, Всемирной Таможенной

Организацией, Всемирной Организацией по Туризму, Европейской Конференцией Министров Транспорта, Европейской Экономической Комиссией ООН, Экономической и Социальной Комиссией ООН по Азии и Тихому Океану.

В России членом IRU является Ассоциация международных автомобильных перевозчиков ([АСМАП](#)), которая представляет интересы отрасли на национальном уровне. Аналогичные ассоциации имеются во всех странах СНГ, которые, в свою очередь, также являются членами IRU.

Членство в IRU не является обязательным, но предоставляет целый ряд привилегий своим членам.

Практические услуги, необходимые автотранспортной отрасли, реализуются через систему книжек МДП (Camet [TIR](#)), международным гарантом которой с 1953 года является IRU. Конвенция [TIR](#) – это система, которая позволяет грузовым автомобилям под таможенными печатями и пломбами, наложенными в месте отправления, пересекать все границы без проведения промежуточного контроля груза до прибытия в конечный пункт назначения. По сути, она представляет собой сложную гарантийную систему, позволяющую свести к минимуму расходы транспортных операторов и внешнеторговых организаций, обеспечивая при этом собираемость таможенных сборов. Сегодня к конвенции присоединились 55 стран. IRU производит, выдает и контролирует основной документ системы - книжки [TIR](#) (camet [TIR](#)), которые после прохождения груза через все пограничные посты и его доставки получателю подлежат возврату в штаб-квартиру IRU для контроля.

В России с 1982 года управление системой [TIR](#) осуществляет [АСМАП](#). Более 80% импортных грузов, доставляемых в Россию автомобильным транспортом, проходят по системе [TIR](#). Каждый день IRU предоставляет международным транспортным операторам гарантии на сумму US\$500 млн., из которых US\$50 млн. покрывают товары, ввозимые в Россию или вывозимые из нее. Система [TIR](#) по оценкам экспертов обслуживает около 25% экспортно-импортных грузов Российской Федерации в стоимостном выражении. Поскольку Конвенция [TIR](#) требует, чтобы эти финансовые гарантии сохраняли силу по меньшей мере на протяжении 4-х лет, годовая сумма, застрахованная IRU и его членами, составляет примерно US\$3 триллиона, из которых около четверти приходится на товары, доставляемые из России, в Россию либо идущие через Россию транзитом.

Растущая потребность в использовании автомобильных перевозок в экспортно-импортных операциях России неизбежно привела к повышенному вниманию к этой высокоэффективной системы со стороны криминальных структур, как в России, так и за ее пределами. Сказалась также недостаточная проработанность договорно-правовой базы, неурегулированность таможенно-пограничных споров между бывшими республиками СССР, деградирующая техническая база.

Все это создало благоприятную питательную среду для взрывоопасного роста правонарушений в течение последних 2-3 лет. При этом, использовался широкий круг криминальных схем при прохождении через границы России грузов по системе [TIR](#) – от сознательного занижения стоимости декларируемых товаров и использования подложных платежных документов, до выдачи соответствующих разрешений (карнет [TIR](#)) несуществующим фирмам или фирмам «однодневкам», которые ликвидировались сразу после пересечения грузом границы. Количество таких случаев на сегодняшний день составляет в сумме свыше двух тысяч поставок, а ущерб оценивается миллионами долларов.

Система [TIR](#) оказалась заложницей сложившейся ситуации, хотя сегодня особенно очевидно, что даже временная приостановка этой конвенции, имела бы катастрофические последствия для всей системы международных автоперевозок, парализовала бы проведение международных торговых операций и привела к серьезной финансовой дестабилизации рынков.

Для предотвращения наиболее неблагоприятных сценариев развития событий, руководство IRU совместно с Государственным Таможенным Комитетом, Министерством транспорта РФ и АСМАП разработали программу конкретных совместных действий по борьбе с криминалом. Так, в последние годы был значительно усилен контроль над деятельностью системы TIR, для обеспечения которого, а также для защиты системы TIR от обманных действий со стороны международной организованной преступности IRU создает компьютерную систему контроля (SAFETIR), которая работает на все страны, входящие в конвенцию TIR.

К числу наиболее важных задач, стоящих перед IRU относится также унификация правил и упрощение процедур оформления документов, связанных с автомобильными перевозками. Цель этой работы – дать перевозчикам возможность работать более эффективно и свести до минимума бюрократические процедуры. Поскольку перевозчики должны иметь равные рыночные возможности, IRU принимает незамедлительные меры в том случае, если выясняется, что какие-либо национальные законодательные положения носят дискриминационный характер по отношению к иностранным транспортным средствам.

Задачей IRU также является обеспечение отрасли информационными услугами, касающимися изменений в области национального законодательства и международных нормативных документов, динамики экономических показателей работы транспорта, а также других жизненно важных вопросов. Эта информация включает данные о времени ожидания на многих европейских границах, в частности на тех из них, где движение в направлении стран Центральной и Восточной Европы и из них, а также транзитом по их территории сталкивается с серьезными трудностями.

Планы IRU в России и СНГ

В течение многих лет Советский Союз, а затем и Россия является активным участником IRU. Интеграционные процессы в рамках Европейского Союза – с одной стороны, и образование Содружества Независимых Государств на территории бывшего Советского Союза – с другой, подстегнули взаимный интерес к дальнейшему расширению сотрудничества между Россией (а также странами СНГ) и IRU. Речь идет не только о совершенствовании системы международных перевозок TIR, но и налаживании новых форм сотрудничества.

Россия в силу своего географического положения, экономического и человеческого потенциала призвана сыграть ключевую роль в предстоящие 10-15 лет в создании евроазиатского экономического пространства от Атлантического до Тихого Океана в интересах проживающих на этой территории народов. И ключевая роль в этих интеграционных процессах будет принадлежать автомобильному транспорту в силу его эффективности и доступности.

В рамках этого подхода IRU в 1998 году открыла в Москве свое Постоянное Представительство, которое призвано координировать деятельность организации в странах СНГ, а также содействовать международному сотрудничеству в области автомобильного транспорта в этом регионе по следующим новым важным направлениям:

- помощь в совершенствовании нормативной базы автомобильного транспорта, в том числе с учетом предстоящего вступления России в ВТО;
- анализ препятствий на пути развития автотранспорта в России, и его интеграции в европейские транспортные структуры и подготовка соответствующих рекомендаций Правительству РФ;
- содействие развитию интеграционных процессов в области автотранспорта в рамках СНГ;
- продвижение в международном сообществе концепции транспортных коридоров Север-Юг и Восток-Запад, проходящих по территории России с учетом ее геостратегической роли в евроазиатском регионе;

· развертывание широкой программы профессионального образования через созданную [Академию IRU](#) и аккредитованные институты на территории РФ.

10 апреля 2002 года Постоянное представительство IRU в СНГ открыло [новый офис](#) в Москве, в [Центре международной торговли на Красной Пресне](#) (тел. 258-17-59), что знаменует новый этап в деятельности IRU в России.

Test Questions (5.1.1)

1. What are main objectives of the IRU in terms of road transport? (right / wrong)
- a. represent the interests of the sector of road transport operators (right)
 - b. coordinate the national transport organizations (wrong)
 - c. contribute to the sustainable development of the transport of goods by road (right)
 - d. control of the Carnet TIR (right)

5.1.2 CMR

Learning Objectives:

The applicant should be able to explain main points of the CMR convention.

CMR Convention (source: *INTERNATIONAL FREIGHT - Certificate of Professional Competence: Distance Learning Programme, Textbook, Revised Version May 2005, NEA / GFP-DLI / IRU*)

Road transport operators carrying goods for reward on international road haulage journeys must comply with the Convention on the Contract for the International Carriage of Goods by Road. The CMR Convention dates from 19 May 1956 and became effective on 2 July 1961. Almost every country in Europe has signed the CMR Convention. In recent years countries outside Europe such as Morocco and Kazakhstan have signed the convention.

The CMR convention defines the carriers' liability and the documents to be carried on vehicles engaged in the international movement of goods between different countries of which at least one is a party to the CMR Convention. The Convention further defines also some liabilities of the sender and the consignee:

Term	Activity
Buyer	Purchases goods and pays the purchase price
Seller	Sells goods and has to deliver the goods according to the contract (point of delivery)
Consignor	Sender of the goods (may be different from the seller, e.g. another company or location where the cargo is coming from)
Consignee	Receiver of the goods (address where the cargo has to be delivered to)
Shipper	Is responsible for delivery of the goods and is the contractual partner of the carrier within a contract of carriage
Carrier	Carries the goods from the point of collection to the point of delivery according to the contract of carriage, is responsible for loss, damage or delay
Forwarder	Organizes the carriage in his own name but on account of the shipper as intermediary, is responsible for due diligence in choosing carriers and other service providers

The carrier is liable for the total or partial loss of the goods and for any damage to the goods taking place between the time when he takes over the goods and the time of delivery, as well as for any delay in delivery. The main obligation the carrier has is to deliver the goods in the same condition in which he received them.

The carrier's liability for claims resulting from loss of or damage to the goods carried is determined by comparison with a measure known as "Special Drawing Rights" (SDR¹), whereby compensation must not exceed 8.33 SDR per kilogram of gross weight short (gws).

The CMR Convention automatically applies to every contract for the international carriage of goods by road in vehicles for reward between different countries of which at least one is a party to the Convention, even when the vehicle containing the goods is carried over part of its journey by sea, rail or inland waterway.

For the CMR Convention to apply there must be clear evidence of a contract for the international carriage of goods for reward. The carriage of goods on an international journey at no charge would not be covered by CMR as it is outside of a contract of carriage as specified in the Convention.

The CMR Convention has other more specific exemptions. Its terms do not apply to:

- own-account operations which involve international journeys;
- furniture removals;
- funeral consignments which are transported abroad;
- carriage under an International Postal Convention;
- cabotage journeys (i.e. internal journeys within a country by a road haulier from another country).

For main principal conditions of the CMR Convention see here

¹ Special Drawing Rights are defined by the International Monetary Fund (IMF) as being a unit for converting currency values based on a "basket" of the currencies of the key Member states of the IMF and are converted to the national currency of the country in which any claim is dealt with in court, and is assessed as to the value on the date of the judgement, or on a date agreed to by the parties.

An outline of the principal conditions of the Convention is given here:

1. The Convention applies to every contract for carriage of goods, whether wholly by road or partly by road and partly by rail, sea or inland waterway, as long as the goods remain in the original vehicle, on a journey from one country to another, one of which is a contracting party to the Convention. Exemptions to CMR apply to carriage under international postal conventions, funeral consignments and furniture removals.
2. The carrier is responsible under the Convention for the actions and omissions of his agents and any other persons whose services are used in carrying out the movement. Even if the original road haulier contracted to undertake the movement sub-contracts the whole of the operation to another road haulier, whose name appears on the CMR consignment note, the first haulier remains fully liable under CMR should a dispute or claim arise.
3. A contract for the international carriage of goods for reward is confirmed by making out a CMR consignment note. The consignment note consists normally of four copies: one original copy with red lines for the consignor; one original copy with blue lines for the consignee; one original copy with green lines and a copy with black lines for the carrier. When the carrier receives the goods the consignor and the carrier sign the red, blue and green copies. The consignor stays with the red copy. At delivery of the goods the consignee signs the blue and green copy and stays with the blue copy. The carrier stays with the red and black copy. While a CMR consignment note confirms that a contract exists, the absence of, or failure to raise such a note does not invalidate the contract or dis-apply the terms of the Convention.
4. If the goods are carried under a single contract in different vehicles or are divided owing to their different nature, the carrier or the sender can specify that a separate consignment note should be made out for each vehicle or each load of goods.
5. The consignment note must contain certain specified details such as marks and numbers; numbers and kind of packages; description of goods; gross weight; volume; etc. and may also contain additional information to use to the parties to the contract. It must state that the carriage is subject to CMR.
6. The sender is responsible for all expenses, loss and damage sustained by the carrier as a result of inaccuracies in completion of the consignment note in relation to information supplied by him.
7. On receipt of the goods, the carrier must check the accuracy of the details shown in the consignment note particularly as to the number of packages, the apparent condition of the goods, their packaging and how they are marked. Any discrepancies or comments about other relevant matters such as the condition of the goods or packages should be noted by a "reservation" on the note.

8. The sender is liable to the carrier for damage and expenses due to defective packing of the goods unless the defects were known to the carrier when taking over the goods and he indicated this fact by way of a "reservation" on the note. The absence of such a reservation means that the carrier, if he was aware of the damage, accepted any likely risk of subsequent claims.
9. The sender must attach to the consignment note or make available to the carrier the necessary documents to complete Customs formalities. The sender is liable to the carrier for any damage caused by the absence, inadequacy or irregularity of such documents.
10. The sender has the right of disposal of the goods and may stop transit of the goods or change the delivery address up to the time of delivery to the consignee unless he has stated on the consignment note that the consignee has this right. Once the goods are delivered to the address on the consignment note, the consignee has the right of disposal.
11. If the carrier cannot follow the instructions on the consignment note for any reason, he must ask the sender or the consignee, depending on who has the right of disposal, for further instructions.
12. The carrier is liable for the total or partial loss of the goods and for any damage to them occurring between the time when he takes over the goods and the time of their delivery unless the loss, damage or delay was caused by a wrongful act or neglect of the claimant. The burden of proof in this case rests with the carrier.
13. Failure to deliver goods within 30 days of a specified time limit, or within 60 days from the time when the first carrier took them over if there is no time limit for delivery, results in the goods being considered to be lost.
14. When goods of a dangerous nature are consigned, the carrier must be informed of the nature of the danger and the precautions to be taken.
15. Calculation of compensation in the event of loss or damage is related to the value of the goods at the place and time they were accepted for carriage but will not exceed a set value.
16. Carriage charges, Customs duties and other charges in respect of the carriage are refunded in the case of total loss of the goods and proportionately in the case of partial loss.
17. Higher levels of compensation may be claimed where the value or a special interest in delivery has been declared or where a surcharge has been paid in respect of a declared value exceeding the limit mentioned in item 15 above.
18. In the case of damage the carrier is liable for the amount by which the value of goods has diminished.

19. The claimant may demand interest in respect of the amount of any claim at 5 per cent per annum from the date on which the claim was sent to the carrier.
20. A carrier cannot avail himself of exclusions or limiting clauses if damage to goods was caused by his wilful misconduct or default that constitutes wilful misconduct.
21. The consignee is considered to have accepted the goods in a satisfactory condition if he does not indicate his reservations at the time of delivery or within seven days (excluding Sundays and public holidays).
22. In legal proceedings, the period of limitation for an action under the convention is one year, or three years in the case of wilful misconduct. An action may be brought in any court or tribunal of a CMR contracting country, or of a country in which the defendant is normally resident or has his principal place of business, or of a country where the goods were taken over by the carrier or where they were designated for delivery, and in no other courts or tribunals.
23. Where successive road carriers are involved in a contract under the Convention, each one of them is responsible for the whole operation as a party to the contract. Each successive carrier must give the previous carrier a dated receipt and must enter his name and address on the second copy of the consignment note (with the blue lines).
24. A carrier who has paid compensation arising from a claim may recover the compensation plus interest, costs and expenses from other carriers who were parties to the contract subject to: a) the carrier responsible for the loss or damage paying the compensation; b) each carrier responsible for loss or damage jointly caused shall be liable to pay proportionate to their share of the carriage charges if responsibility cannot be apportioned.
25. If a carrier who is due to pay compensation is insolvent, his share must be paid by other carriers who are party to the contract.

Test Questions (5.1.2.)

1. Please decide right /wrong:

- a. The CMR convention defines the carriers' liability and the documents to be carried on vehicles engaged in the international transportation (right)
- b. The main obligation the carrier has is to deliver the goods in the same condition in which he received them (right)
- c. The SDR is an abbreviation for the Swedish currency. (wrong)

5.1.3 Liability and Burden of Proof of Carrier in Case of Loss (damage) or Delay

Learning Objectives:

The applicant should be able to explain main liabilities of the carrier from the freight contract, consequences in case of loss (damage) of goods or delay of delivery

Period of liability for loss or damage of goods	The time between the time that the carrier takes over the goods and the time of deliver, as well as for any delay in delivery
Relief of liability	When the loss or damage of goods was caused by <ul style="list-style-type: none"> • the wrongful act or neglect of the claimant • the instructions of the claimant given otherwise than as the result of a wrongful act or neglect on the part of the carrier • inherent vice of the goods or through circumstances which the carrier could not avoid and the consequences of which he was unable to prevent
Definition of loss (damage) of goods	The goods are lost when they are not delivered <ul style="list-style-type: none"> • after 30 days after the end on the term of delivery • after the 60 days after the taking over of goods by carrier
Compensation for loss or damage of goods	The carrier has to pay the total amount with the customs duties and other charges, but not exceeding 8,33 SDR ² per kilo gross weight short
Compensation for delay of delivery	The carrier has to pay the compensation for such damage not exceeding the carriage charges.
Period of limitation	One year from the date of taking over in case of delay; from the 30 th day after the end of the term of delivery or from the 60 th day after date of taking over of goods. Nevertheless, in the case of wilful

² Special Drawing Right

	misconduct, or such default as in accordance with the law of the court or tribunal seized of the case, is considered as equivalent to wilful misconduct, the period of limitation is three years.
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Test Questions (5.1.3):

1. *A carrier agrees on a contract to haul a consignment of goods from Antwerp to Maastricht. The consignment consists of tyres and a lift truck. The sender has made a remark on the consignment note that the forklift has to be delivered before the 23 September.*

The sender has made out one consignment note. Will this do? (yes / no)

2. *What are the carrier's obligations that arise from a freight contract? (right / wrong)*

- a. loss of the goods that occurs between the time when he takes over the goods and the time of delivery for an accident (right)
- b. loss of good that occurs between the time when he takes over the goods and the time of delivery for faulty package (wrong)
- c. loss of goods that occurs between the time when he takes over the goods and the time of delivery for using of open vehicles if it was agreed and observed in the CMR Consignment Note (wrong)

3. *On whom does the the burden of proof rest in case goods get damaged during transport in general? (right / wrong)*

- a. sender (wrong)
- b. carrier (right)
- c. receiver (wrong)

4. *When can the carrier be relieved of his liability? (right /wrong)*

- a. by the wrongful act or neglect of the claimant (right)
- b. by the instructions of the claimant given otherwise than as the result of a wrongful act or neglect on the part of the carrier (right)
- c. by inherent vice of the goods or through circumstances which the carrier could not avoid and the consequences of which he was unable to prevent (right)

5. *What are the various forms of compensation in case of total or partial loss of goods? (right / wrong)*

- a. delivery of similar goods (wrong)
- b. payment the full amount with customs duties and other charges (right)
- c. payment the full amount without the customs duties and other charges (wrong)

6. *What are the various forms of compensation in the case of delay? (right / wrong)*

- a. payment of compensation exceeding the carriage charges (wrong)
- b. payment of compensation in amount of the carriage charges (wrong)
- c. payment of compensation not exceeding the carriage charges (right)

7. *What is the period of limitation of claims to the carrier usually? (right / wrong)*

- a. 1 year (right)
- b. 3 years (wrong)
- c. 5 years (wrong)

5.1.4 Maximum Weight, Dimensions, Traffic Bans and Driving Time Limitations

Learning Objectives:

The applicant should know the main legal requirements regarding maximum weight, height, width, length of trailers; regarding traffic bans and driving time limitations.

An outline for a range of European countries of the particular requirements for operating road transport services is given in Appendix 1.

It should be noted that vehicle dimensions and weights must conform to local regulations. In addition some vehicle dimensions are restricted on particular routes, especially by tunnels. For driving in the UK and Ireland lights must be adjusted so that they do not dip to the right. A warning triangle is required in all cases. In all continental countries driving is on the right and overtaking on the left.

It is important for the road haulage operator to check whether a permit is needed for the country of final destination or to transit the countries en route to the final destination. Most countries impose a height limit on goods vehicles whereas others impose some restrictions on the amount of fuel carried in the vehicles tanks. These special regulations are set out in the individual country profiles (see Appendix 1).

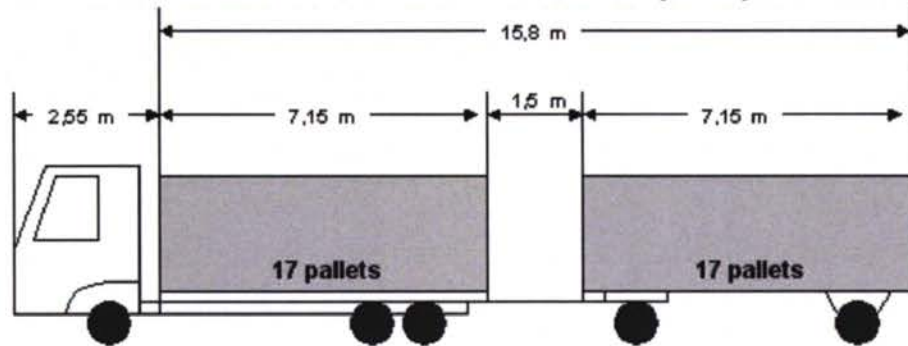
Dimensions

For ease of learning we have included all the necessary information on maximum weights dimensions and speeds in the single table below. We have also included for each country the profile for the maximum weight, length, and speed. On international journeys the standard dimensions for height, width and length are:

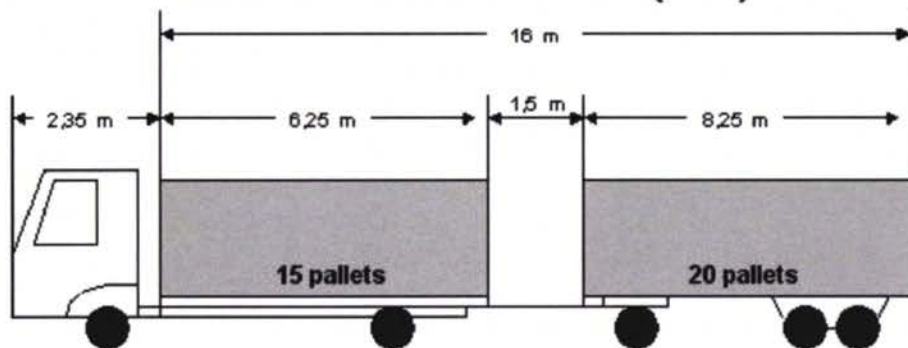
International standards of dimensions of vehicles

- Height: 4 metres
- Width: 2.5 metres (2.6 metres for Refrigerated Trailers)
- Length: 12,00 metres for motor vehicle or trailer
16,5 metres for semi-trailers
18,75 metres for tractor-trailer

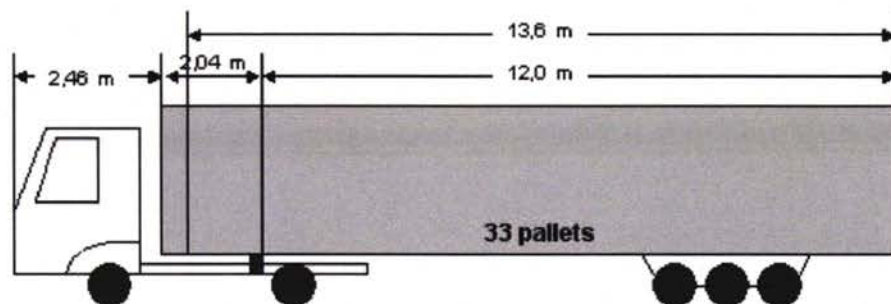
Classical truck + trailer (2+3)



Classical truck + trailer (3+2)



Truck + semi-trailer



Some limitations and traffic bans in the European countries

Country	Traffic bans on Sundays and official holidays	Other traffic bans	Exceptions	Valid for	Maximal weight (in t gw)
Austria	00:00 – 22:00	on Saturdays 15:00 – 24:00 at nights 22:00 – 05:00	Perishables Livestock Broken vehicles	All roads	7,5
Bulgaria	15:00 – 19:00 08:00 – 19:00			Some high ways and bypasses	15
Croatia	12:00 23:00 PH 16:00 – 23:00	on Fridays 16:00 – 23:00 on Saturdays 04:00 – 14:00	Perishable food Livestock Newspapers	Some high ways and additional roads	7,5
Czech Republic	00:00 – 22:00	July - August on Saturdays 07:00 – 22:00	Perishable food Livestock Seasonal agricultural products	High ways and main roads	7,5
France	00:00 – 22:00 00:00 – 24:00	on Saturdays 12:00 – 24:00 in Paris	Perishable food Newspapers		7,5
Germany	00:00 – 22:00	July – August: on Saturdays 07:00 – 22:00	Perishable food Intermodal transport	High ways and main roads	7,5
Hungary	08:00 – 22:00	on Saturdays 08:00 – 22:00	Perishable food Intermodal transport broken vehicles	High ways and other roads	7,5
Italy	Winter 08:00 – 22:00	Dangerous goods from	Perishable food Newspapers	All roads	7,5

	Summer 07:00 – 24:00	Friday 18:00 till Sunday 24:00	Livestock		
Poland	07:00 – 22:00	July –August: on Fridays 18:00 – 22:00 on Saturdays 14:00 – 22:00	Perishable food Newspapers Livestock	All roads	12
Portugal	18:00 – 21:00	on Mondays 07:00 – 10:00			3,5
Rumania	00:00 – 24:00 07:00 – 22:00	on Saturdays 07:00 – 22:00	Perishable food Livestock	Some main roads	3,5
Slovak Republic	00:00 – 24:00	July –August: on Saturdays 07:00 – 20:00		High ways and main roads	7,5
Slovenia	06:00 – 22:00	July –August: on Saturdays 06:00 – 22:00		High ways and main roads	7,5
Spain	17:00 – 24:00 08:00 – 24:00				7,5
Switzerland	00:00 – 24:00	at nights 22:00 – 05:00			3,5

In the EU-countries there are special rules on driving time limitations, i.e. the amount of time that the driver may spend on driving.

These time limitations and regulations for time counting and recording are laid down in in the UNECE Convention AETR (European Agreement concerning the Work of Crews of Vehicles Engaged in International Road Transport (AETR), done at Geneva on 1 July 1970). For details see look at the UNECE Website in English and Russian language <http://www.unece.org/trans/main/sc1/aetr.html>

In general the driver that spends 4,5 hours driving has to have a break for at least 45 minutes. There are different limitations for daily (9 hours a day, possible: 10 hours per day on 2 days a week) and weekly (a maximum of six daily shifts in one week is permitted) driving. For the control of recording time, of the speed and distance travelled by the vehicles it is required to use tachometers. For details about the limitation of driving time and legal requirements concerning the using of tachometers see the following pages.

Driving time: Any person who drives a goods or passenger vehicle that is being used for business purposes must conform to specific rules on the amount of time they may spend on driving. The rules also include requirements relating to minimum breaks to be taken during the driving day and to both daily and weekly rest periods.

Public safety: The driving hours are specially applied for reasons of public safety. Road users should be protected from the dangers of overworked and tired drivers of heavy vehicles. Enforcement of these rules within the European Union is very strong. Offenders are being dealt with very seriously by the courts to demonstrate the importance with which these rules are viewed.

Fines: Needless to say that drivers found to be in contravention with the rules as set out in this chapter, will risk very high fines. The most serious offences might even end up with imprisonment. Employers of such drivers also risk prosecution. In many cases, the employers are held responsible for the acting of the driver, unless they can prove otherwise. Breaches of rules may result in heavy on-the spot fines, which must be paid immediately. Otherwise the vehicle may be impounded and the driver held until the fine is paid.

Two sets of Rules: Drivers and employers need to understand the hours rules clearly and especially which set of rules applies to them depending on the type of vehicle being driven or the nature of the transport operation on which they are engaged. Two main sets of rules may apply:

- **International rules:** International rules concerning driving hours are the result of the agreements that one country signs with other countries. This can be multilateral or bilateral agreement. Drivers on international journeys through countries that signed the agreement must observe the rules for the whole of the outward and return journey. We will give examples of AETR rules, which are the result of an agreement between several European countries.
- **National rules:** National rules concerning drivers' hours will be described in the domestic part of this book.

AETR: Most countries of the EU and several other countries have signed the agreement. Drivers on international journeys through member countries must observe the AETR rules for the entire outward and inward journey.

Driving limits: Goods and passenger vehicle drivers are restricted in the time they can spend driving before they will have to take a break. The amount of driving is also limited between two daily rest periods, in a week and in a fortnight.

Driving time: Before taking a break, a driver can drive maximum 4,5 hours.

Break periods: A driver must take a break after 4,5 hours driving. This break should last at least 45 minutes.

Example: A driver is driving from Rotterdam to Berlin. He is leaving at 8.00 hours am. He is obliged to take a break at 12.30 hours pm. He can continue driving at 13.15 hours. He will have to take a break again at 17.45 hours pm. The break may also be broken down into parts of at least 15 minutes in duration. Before the expiry of 4,5 hours continuous or accumulated driving, the breaks must be totalling at least 45 minutes. Our driver is again leaving from Rotterdam to Berlin. He is leaving at 8.00 hours am. At 10.00 hours am he takes a break. At 10.15 he starts driving again. At 11.15 he stops to have a drink in a restaurant. At 11.30 hours am he starts driving until 13.00 hours pm. After having a break until 13.15 he can drive on until 17.45 if he wants before he has to take another break. A break can be taken in a vehicle that is moving. When a driver is driving alone he will naturally have to stop his vehicle. When there are two drivers, it is permitted that the driver who must take his break, is sitting next to his colleague while he is driving.

Daily driving: Maximum daily driving is normally 9 hours a day. Extension: 10 hours on 2 days in a week.

Example: In our example the driver will have no driving time left. At 17.45 he has driven for 9 hours. Twice a week however he can drive on for another hour, but not before he has taken his break of at least 45 minutes! He can start driving again at 18.30 hrs. pm until 19.30 hrs. pm.

Weekly driving: A maximum of six daily driving shifts in one week is permitted. The maximum fortnightly driving however may not exceed 90 hours.

Rest periods: Drivers are once a day required to observe a normal, a reduced or a split daily rest period. During this time they must be free to dispose of their time as they wish.

Daily rest: A driver must take a daily rest of at least 11 hours in every period of 24 hours.

Reduced rest: Three times a week the daily rest may be reduced to 9 hours (2 hours shorter). The reduced time must be compensated and taken with other rest periods (daily or weekly) before the end of the next following fixed week.

Example: A driver takes a daily rest of ten hours on day 1. On day two and three he takes a rest period of 9 hours each. (totally $1 + 2 + 2 = 5$ hours short. There are several ways to compensate, for example:

- A daily rest extended to 16 hours ($11 + 1 + 2 + 2$ hours) by the end of the following week.
- A daily rest of 14 hours ($11 + 1 + 2$ hours) and a daily rest of 13 hours ($11 + 2$ hours) by the end of the following week.
- A weekly rest extended by 5 hours by the end of the following week.

Split rest: When a daily rest is not reduced, it may be split and taken in two or three periods during the 24 hours. However, one continuous period must be of at least 8 hours' duration.

The other periods (max. 2!) are of at least one hours' duration and the total daily rest period is increased to 12 hours.

Double Manned: When a vehicle is operated by a two-man crew, each man should have a rest period of at least 8 hours in a block of 30 hours.

Daily rest On vehicles: Daily rests may be taken on the vehicle itself, but only when:

- The vehicle has a bunk, so the driver can lay down,
- The vehicle is stationary for the whole rest period

Interruption: A daily rest may be interrupted, but *once* only, to allow a driver to board Ferries/Trains

Or depart from a ferry or train, provided:

- The interruption should be 'as short as possible', but can never be more than *one hour* before embarkation or after disembarkation, including dealing with custom formalities.
- Part of the rest is taken on land before or after the ferry crossing or rail journey;
- During both parts of the rest (on land and on board) the driver must have access to a bunk or couchette;
- The daily rest should be extended by two hours.

Weekly rest: A week is defined as the period from 00.00 hours Monday morning until 24.00 hours next Sunday. Every fixed week a weekly rest should be taken. A rest can start no later than the expiry of 6 x 24 hours periods after the end of the last weekly rest.

A driver started work at 7.00 hours Monday morning. The next weekly rest can start no later than 7.00 hours the following Sunday. It is not necessary to take a weekly rest on a Saturday and/or Sunday. Normally, the weekly rest period will last for at least 45 hours. This may be reduced to:

- 36 hours when the rest is taken at the place where the vehicle or driver is based, or
- 24 hours when the rest period is taken elsewhere.

Reduced weekly rest periods must be compensated. The compensated time must be attached to another rest period of at least eight hours duration and must be granted, at the request of the driver, at the parking place or at the place where the driver is based. The taken time should be compensated before the end of the third following week. It should always be added to other rest periods.

Tachograph: International legislation in most countries requires the installation and use of a tachograph in most goods vehicles over 3.5 tonnes permissible maximum weight and in vehicles, constructed to carry more than eight persons, excluding the driver. The tachograph instrument provides a means of recording time and the speed and distance travelled by the vehicle. The drivers' working activities and driving practises can be monitored to ensure that legal requirements (especially drivers' hours) have been met.

Responsibilities Employer: The standard responsibilities of an employer to a driver regarding the use of the tachograph:

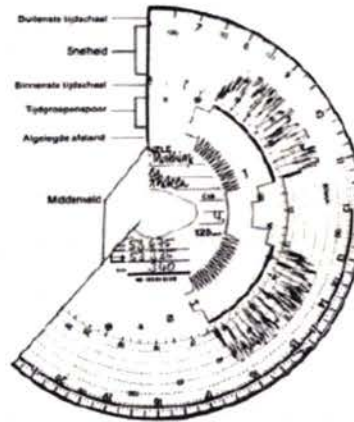
- The employer must organise the drivers' work in such a way that he is able to comply with the drivers' hours and also the tachograph rules.
- The employer should supply the driver with sufficient numbers of tachograph charts of the correct type (one card for each day of the journey and some spare ones in case of loss or damage). He must ensure that completed charts are collected from drivers no later than 21 days after use.

Employers must periodically check that completed charts apply to the rules and that no offences have been made.

- The employer must store completed charts within his company for at least 12 months for inspection by the relevant authorities, if required.
- If requested by the driver, the employer will have to hand out copies of tachograph charts.

Responsibilities Driver: In general, drivers must understand what the law requires and how to deal with it. Specific responsibilities:

- The driver must ensure that a proper record is made by the instrument (that it is a continuous record and a 'time-right' record; recordings must be in the correct 12 hour section of the chart – daytime or night-time hours).
- If a tachograph breaks down or in the case when there is no tachograph available (other work), the employer will have to make manual recordings on the chart.
- In case of inspection, drivers must produce a current chart for that day plus the charts relating to the current week and for the last day of the previous week in which he drove.
- Drivers must return completed charts to their employer no later than 21 days after use.
- Drivers must allow any authorised inspecting officer to inspect the charts and/or tachograph itself.



Calibration and Inspection: Tachographs, installed in vehicles, must be calibrated initially. Every 2 years they must be inspected and every 6 years (or after repair) they must be fully re-calibrated at an approved centre.

Calibration Plaques: After installation and calibration of a tachograph, the approved centre must fix (inside the tachograph head or near to it on the dashboard of the vehicle) a plaque, giving details of the centre, the 'turns count' and the calibration date. Once the vehicle has been taken into service, there will be an inspection of the tachograph after two years. A second plaque will be fitted next to the plaque of the initial calibration. After another two years there will be another inspection; plaque number three will be fitted. After another two years there will be a re-calibration. Plaque number four will follow.

Tachograph Breakdown: If the tachograph will be out of use for whatever reason, it must be repaired at an approved centre as soon as possible. In the meantime the driver should record manually on the tachograph card all the necessary information regarding his working, driving, breaks and rest times. Speed or distance travelled will not have to be recorded.

- When the vehicle has returned to base, it should not leave again until the tachograph has been repaired and re-calibrated.
- Sometimes it will not be possible to repair the tachograph immediately. In that case the operator can take the vehicle out, but not before he has taken all the possible measures to have the tachograph repaired as soon as possible. In case of an inspection for instance he must be capable to prove so by showing agreements or an appointment he made with the approved centre that will repair the tachograph device for him.
- In case the vehicle is not capable to return to base within 7 days (one week) counting from the day of breakdown, the tachograph will have to be repaired and re-calibrated en route within that time.

Time changes: The time, at which the instrument clock is set, should be the official time of the country where the vehicle is registered.

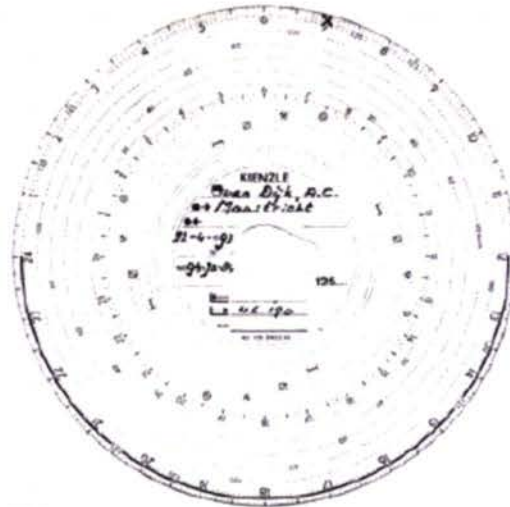
Damaged Charts: Charts, damaged in use should be replaced. The old chart should be attached to the new one (after use).

Completion Centre field: Before starting work in a vehicle in which the use of a tachograph is obliged, the driver must enter some details on the centre field of the tachograph chart:

- Surname and first name (not initials)
- Date and place where use of the chart begins
- Vehicle registration number
- Distance recorder at start of journey

At the end of the day the driver should enter on the chart:

- Place and date where the chart is being completed
- Closing reading on the distance recorder
- Total driven distance



Making Recordings: After completion the chart should be inserted in the tachograph, ensuring it is the right way up and that the recording will commence on the correct part of the 24-hour chart. Before using a chart, the driver should always check if the card fits in the type of tachograph used in the vehicle. On the backside of each tachograph chart several e-numbers are mentioned. One of these numbers must correspond with the e-number of the tachograph (inside the housing of the instrument). After inserting the chart, the instrument should be closed properly. The activity mode switch should be turned as necessary throughout the work-period to indicate the relevant activities of the driver: driving, other work, breaks or rest-periods. Not turning the switch with each change of activity is an offence.

Vehicle Changes: Sometimes it will happen that a driver will change vehicle(s) during the working day. In that case he must take the existing chart with him and record details of changing time, registration number of vehicle(s) and distance recordings on the chart. Then he will be using that chart in the next vehicle. Different models of tachograph devices may be used. There might be a chance that a chart, after changing of vehicle, will not fit in the device. In that case the driver will have to use a second (or third, fourth) chart with new entries. At the end of the working day, all the charts should be clipped together to present a comprehensive record for the whole day.

Tachograph Registrations: After the chart has been inserted into the tachograph device it will start to register:

- The varying speeds of the vehicle
- The total distance travelled
- The times when the vehicle was being driven and the total amount of driving time
- The times when the vehicle was standing and whether the driver was resting, having a break or was doing other work

Summary

Maximum daily driving:	9 hours Twice a week 10 hours
Maximum weekly driving:	6 daily driving periods
Maximum driving in two weeks:	90 hours
Maximum driving before a break:	4,5 hours
Minimum breaks after driving:	45 minutes or several breaks of at least 15 minutes each to an equal of 45 minutes
Minimum daily rest (normally):	11 hours
Reduced daily rest:	9 hours; maximum 3 times a week; compensation before end of the following week
Split daily rest:	The daily rest period of 11 hours may be split into two or three periods; one period must last at least 8 hours; the others at least one hour each; the total rest must be increased to 12 hours
Minimum weekly rest (normally):	45 hours once in each fixed week
Reduced weekly rest:	36 hours at base; 24 hours elsewhere

Reductions must be compensated before the end of the third following week

Rest on ferries or trains:

Interruption of daily rest permitted only when:

- A part is taken on land
- Interruption between parts is not longer than 1h.
- Driver has access to a bunk or couchette for both parts of the rest
- The total rest is increased with two hours

Test Questions (5.1.4):

1. Please decide right / wrong:

- a. The maximal width of the refrigerated trailer should be 2.5 metres (wrong)
- b. The maximal width of the refrigerated trailer should be 2.6 metres (right)
- c. The trailer should be maximal 4 meters high (right)
- d. Track with semi-trailer should be not longer than 16,5 meters (right)
- e. Track with semi-trailer should be not longer than 18 meters (wrong)
- f. Track with trailer should be not longer than 12 meters (right)
- g. Driver may drive 4,5 hours without pause (right)
- h. Driver may drive 10 hours each day of a week (wrong)

5.1.5 Road Transport of Dangerous Goods (ADR regulations)

Learning Objectives:

The applicant should know general objectives of the ADR Convention. Details are dealt with in Module 11.

Dangerous goods may create or emit substances that may be harmful to one's health or cause physical damage to things or the environment during the process of manufacture, handling, storage, transport, distribution or consumption.

Though ADR is predominantly used in Europe, its relevance and a comparable effect for Asia are visible in regard to the development of international transport with neighbouring countries in the foreseeable future.

The European Agreement on the International Carriage of Dangerous Goods by Road (ADR) was made in Geneva on 30 September 1957 under the auspices of the United Nations Economic Commission for Europe, and it entered into force on 29 January 1968.

Annex B of the ARD regards the requirements for vehicles'

The Agreement itself is short and simple. The key article is the second, which says that apart from some excessively dangerous goods, other dangerous goods may be carried internationally in road vehicles subject to compliance with:

- The conditions laid down in Annex A for the goods in question, in particular as regards their packaging and labelling; and
- The conditions laid down in Annex B, in particular as regards the construction, equipment and operation of the vehicle carrying the goods in question.

A more detailed presentation can be found in Module 11 of this course material.

Test Questions (5.1.5.):

1. Please decide right / wrong:

- a. Classification of dangerous goods and conditions for transportation of this goods are specified in the Annex A of the ADR (right)
- b. Constructions, equipments and operations of the vehicle carrying the dangerous goods are specified in the Annex A of the ADR (wrong)
- c. The Annex B includes general equipment of roads on which dangerous goods are carried. (wrong)

5.2 Geography in Road Transport

Learning Objectives:

The applicant should be aware of the existing main road transport routes in the Euro-Asian region, of their main characteristics (permitted weights, tolls, allowed speeds, driving hours, missing links, border delays, etc.) and of some road market share figures. The applicant should also be aware of the commercial requirements when choosing a mode of transport.

5.2.1 The most Important International Traffic Routes

Learning Objectives:

The applicant should be aware of existing main road transport routes in the Euro-Asian region, of their main characteristics.

Eurasian Freight Transport Corridors (source: UIC - Global Rail Freight Corridors Traffic Study - Final Report)

There are 3 main global freight corridors for which respective Task Forces have been established by ECMT (see Figure).

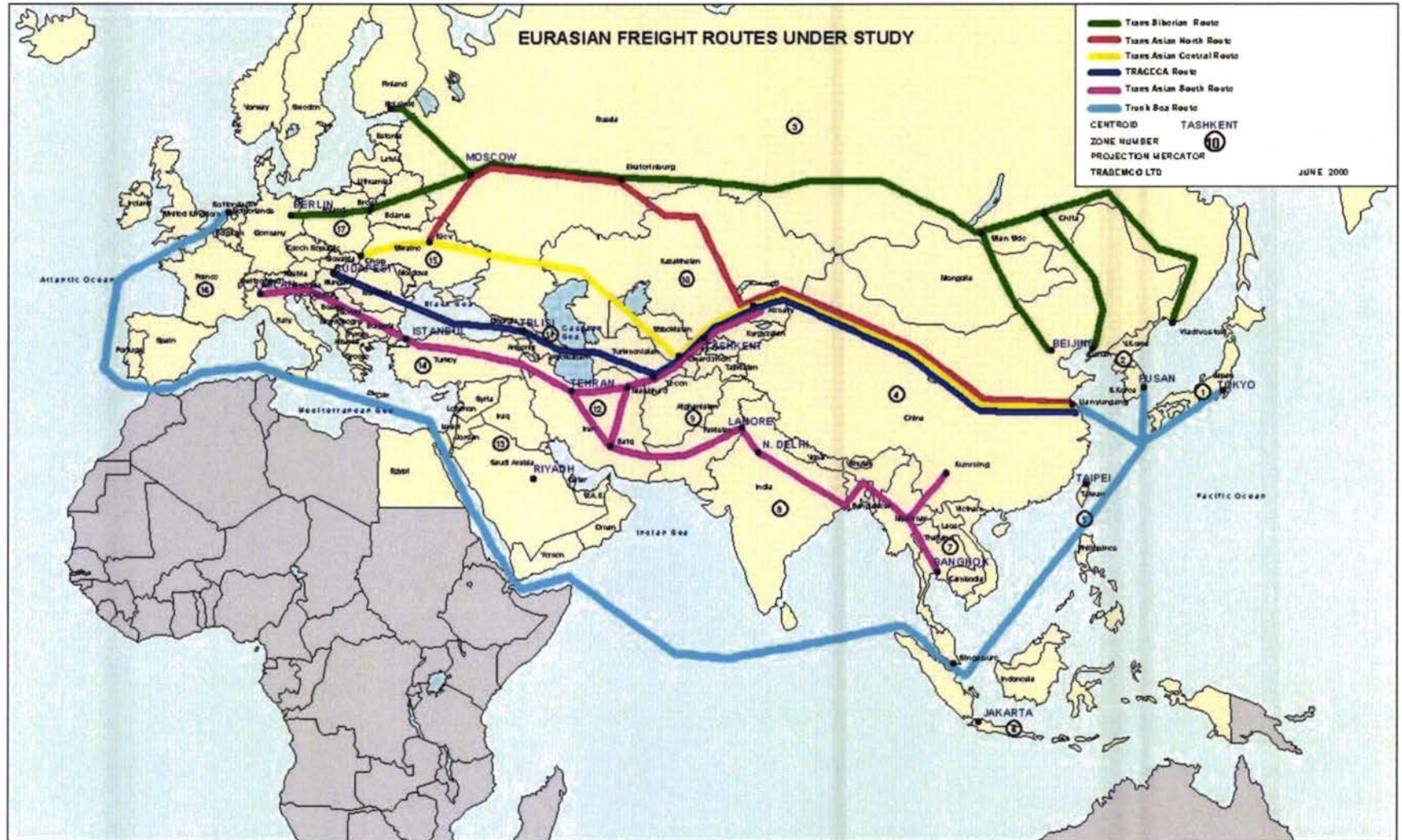
- Corridor Task Force A:
Far East ↔ Europe via China & Russia
- Corridor Task Force B:
Europe ↔ China via CIS and Middle East
- Corridor Task Force C:
South/S.E. Asia ↔ Central Asia/Europe via Middle East

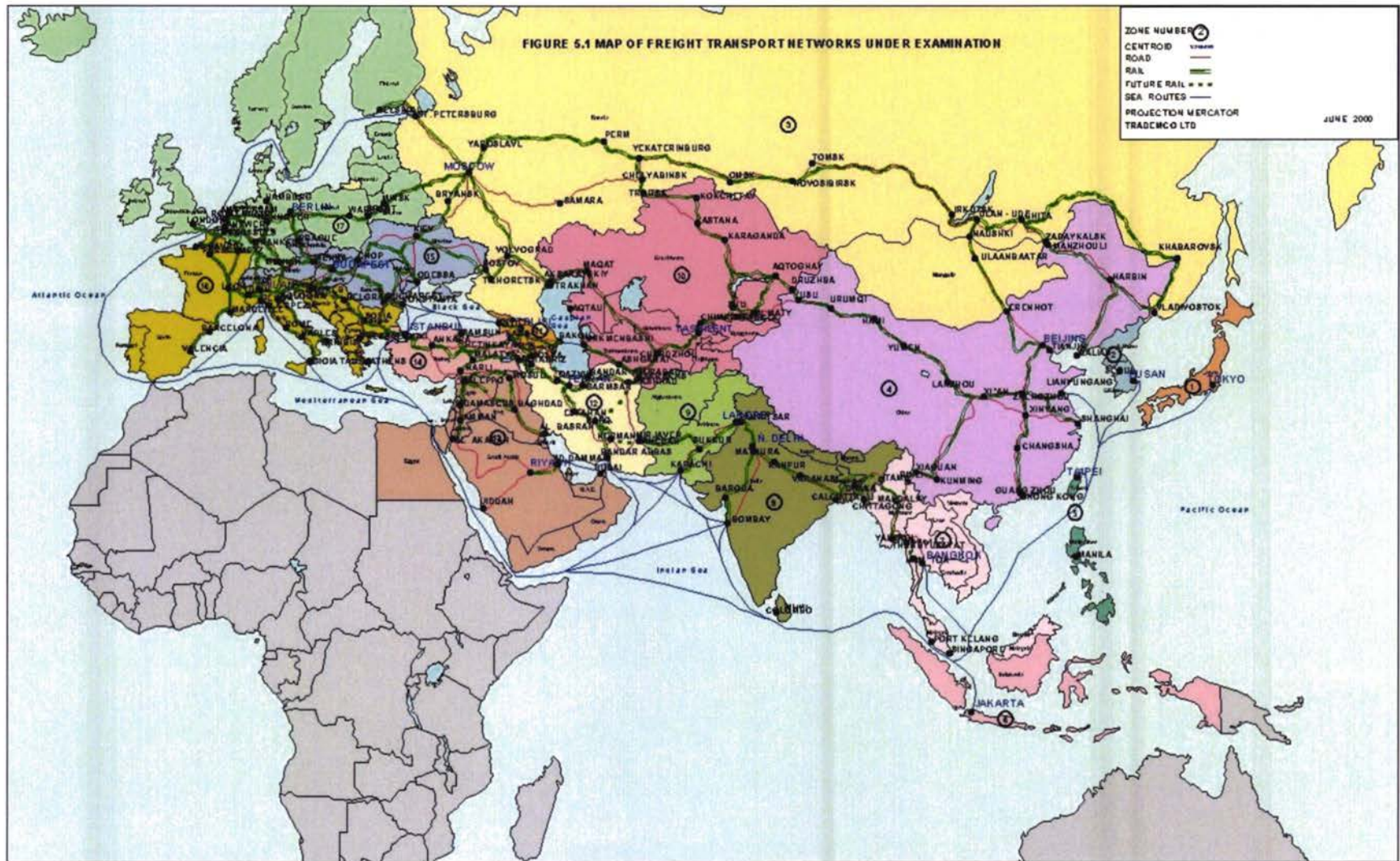
According to ECMT these corridors can be further disaggregated to Trans-Asian Railway (TAR) routes, as follows (see Figure):

- Trans - Siberian Route (A-1)

- Moscow - Yekaterinburg - Novosibirsk - Vladivostok/Ulan Baator - Beijing
- Trans-Asian North Route (A-2)
Kiev/Moscow - Chelyabinsk - Druzhba - Alashankou - Liangyungang
 - Trans-Asia Central Route
Kiev - Volgograd - Almaty - Aktogay - Druzhba - Liangyungang
 - TRACECA Route
Costanza/Varna - Poti - Baku - Tashkent - Almaty - Druzhba - Liangyungang
 - Trans - Asia South Route (B, C)
Istanbul - Ankara - Tehran - Sarakhs - Tashkent - Almaty - Druzhba - Liangyungang and Tehran - Zahedan - Lahore - Delhi - Dhaka - Kunming

Most routes share common links, as for instance the Druzhba - Liangyungang link traversing China. Beside these routes there are access links to ports or important nodal points which are taken into account. In parallel, rail link extensions to Europe as well as the major rail routes within Europe are taken into account. These are nominated by UIC and EU Trans-European Freight Freeways as well as the relevant Pan-European Rail Corridors as agreed by the E.U. in Crete (1994) and Helsinki (1997) summits.





A number of indicative truck routes, along with the travel times are presented in the table below. These travel times include delays at ports and/or border crossing points, and correspond to the conditions existing in 1999. Unlike the rail case, loading/unloading time to/from a truck is considered insignificant and it is not taken into account.

Table Existing operational characteristics at selected road links
(source: UIC Study - Global Freight Corridors)

Road Link	Distance (km)	Transit Time * (days)
Lianyungang - Tashkent	5,940	12
N. Delhi - Calcutta	2,000	4
Lahore - Teheran	3,050	5
Lahore - Tashkent	3,700	9
Teheran - Tbilisi	1,470	4
Tbilisi - Tashkent	2,830	9
Istanbul - Teheran	2,640	4
Berlin - Istanbul	2,390	4
Berlin - Moscow	1,900	3

* Including delays at border crossing points, without loading/unloading time or customs and security control delays at the points of origin/destination

The average road speeds have been determined in accordance with existing data and information per link, and may be summarised as follows:

- Russia (Western part): 40 km/hr
- Russia (Central and eastern part): 27 km/hr
- China: 27 km/hr
- India: 27 km/hr
- Iran: 40 - 45 km/hr
- Central Asia: 27 km/hr
- Turkey: 35 km/hr
- Europe: 40 - 50 km/hr

It must be noted that these speeds represent an average daily figure that takes into account an 8-hour driver rest, thus permitting truck travelling for only 2/3 of a day.

Railways have a share of only around 2% of trade flows between Europe and Asia (less than 100,000 TEUR p.a.), the remaining being almost entirely left to sea transport. From the comparison of transit times and transport costs among alternative modes it is observed that railways appear the quickest mode of transport in 13% and the cheapest in 34% of all O-D pairs of interest. Road transport appears as quickest mode in the majority of O-D

pairs, being however in most cases the most expensive while sea transport are generally the cheapest in most O-D pairs. Sea transports particularly dominate as quicker and cheaper in the pairs between W. Europe and Far East. Nevertheless, users do not select a mode or route only on time and cost basis, as other factors are of equal importance such as the security of the consignments.

Test Questions (5.2.1.):

1. Please decide right / wrong:

- a. The transportation time from Berlin to Moscow is 3 days (right)
- b. The transportation time for the route Tbilisi – Tashkent is 14 days (wrong)
- c. The average road speed in the EU is 40 – 50 km / hrs (right)
- d. The average road speed in the countries of Central Asia is 27 km / hrs (right)

5.2.2 Ferryboat Connections

(source: www.traceca-org.org)

Learning Objectives:
The applicant should be aware of existing main ferryboats in the TRACECA countries.

Ferryboats in the TRACECA countries

Sea	Country	Ferry
Black Sea	Georgia	Poti
Black Sea	Ukraine	Ilyichevsk
Caspian Sea	Azerbaijan	Baku
Caspian Sea	Turkmenistan	Turkmenbashi
Caspian Sea	Kazakhstan	Aktau

Test Questions (5.2.2.):

1. Please link the Ferries on the Region to the Seas:

Sea	Ferry per Region
Black Sea	Poti
Black Sea	Ilyichevsk
Caspian Sea	Baku
Caspian Sea	Turkmenbashi
Caspian Sea	Aktau

5.3 Types of Road Vehicles (Technical Standards)

Learning Objectives:

The applicant should be aware of the specific technical characteristics (size, weights) of road vehicles and of the operating systems available for road freight forwarding. He should also be aware of the combined transport potentials and techniques, involving rail or Ro-Ro, of the benefits of this means of forwarding, as well as of the actors involved and of their roles.

Equipment, road vehicles: The maintenance and management of road vehicles has been the subject of several TRACECA projects that looked to the availability and development of service centres which will also assist in developing entrepreneurial skills. Assistance was provided to create a regulatory environment for freight vehicle operators, corresponding with EU directives. Manuals for owners and managers covering practical, financial, and regulatory issues were prepared and circulated

5.3.3 Length, Width, Height, Loading and Total Weight of the Most Used Trucks

Learning Objectives:

The applicant should be able to identify the main types of vehicles and assign to the categories of vehicles

Classification of vehicles of the UNECE

Category	Definition	Remarks
M1	Vehicles used for the carriage of passengers and comprising not more than eight seats in addition to the driver's seat	Passenger cars
M2	Vehicles used for the carriage of passengers, comprising more than eight seats in addition to the driver's seat, and having a maximum mass not exceeding 5 tonnes	Busses
M3	Vehicles used for the carriage of passengers, comprising more than eight seats in addition to the driver's seat, and having a maximum mass exceeding 5 tonnes	Busses
N1	Vehicles used for the carriage of	Trucks

	goods and having a maximum mass not exceeding 3.5 tonnes.	
N2	Vehicles used for the carriage of goods and having a maximum mass exceeding 3.5 tonnes but not exceeding 12 tonnes	Trucks
N3	Vehicles used for the carriage of goods and having a maximum mass exceeding 12 tonnes	Trucks
O1	Trailers with a maximum mass not exceeding 0.75 tonnes	Trucks with trailer
O2	Trailers with a maximum mass exceeding 0.75 tonnes, but not exceeding 3.5 tonnes	Trucks with trailer
O3	Trailers with a maximum mass exceeding 3.5 tonnes, but not exceeding 10 tonnes	Trucks with trailer
O4	Trailers with a maximum mass exceeding 10 tonnes	Trucks with trailer

Furthermore, trailers of categories O2, O3 and O4 are of one of the three following types:

1. Semi-trailer – a towed vehicle, in which the axle(s) is (are) positioned behind the centre of gravity of the vehicle (when uniformly loaded), and which is equipped with a connecting device permitting horizontal and vertical forces to be transmitted to the towing vehicle.
2. Full trailer - a towed vehicle having at least two axles, and equipped with a towing device which can move vertically (in relation to the trailer) and controls the direction of the front axle(s), but which transmits no significant static load to the towing vehicle.
3. Centre-axle trailer - a towed vehicle, equipped with a towing device which cannot move vertically (in relation to the trailer) and in which the axle(s) is (are) positioned close to the centre of gravity of the vehicle (when uniformly loaded) such that only a small static vertical load, not exceeding 10 per cent of that corresponding to the maximum mass of the trailer or a load of 1,000 daN (whichever is the lesser) is transmitted to the towing vehicle.

For pictures see 5.1.4

More about other technical standards can be read here

Vehicle weight: It is very important that anyone operating a goods vehicle is aware of and understands the limits to any vehicle that he drives. Accurate information is required to ensure that the vehicle complies with the law and the driver is not committing any offence. In most cases, both the driver and the transport company can be held liable in case of conviction. Police and local authorities often organise roadside checks. More recently, even technical advanced checks have started to occur, such as a weigh point in the asphalt and a camera to register the overweight vehicle. It is able to measure each axle separately. Drivers are often misinterpreting the vehicle documents. To ensure a better understanding of these documents, this section will mention the main terminology.

Vehicle weight: The vehicles documentation will always state the weight of the vehicle itself. The weight of the vehicle is measured without a load, but in drivable condition (with fuel, coolant and lubricants). On the documentation there will also be mentioning of the maximum weight of the trailer the vehicle may pull.

Load capacity: On the documentation, the vehicles load capacity is stated. It is the total weight the vehicle is legally capable of hauling. It should be noted, that the weight mentioned must be equally divided over the load compartment in order not to exceed the maximum axle capacity. Note that a tractor has no load capacity of its own; instead, the maximum weight of the trailer it may pull is mentioned on the documentation.

PMW (Permissible Maximum Weight): This is the maximum weight for which the vehicle is designed and permitted to operate. The PMW is also mentioned on the vehicle documentation. Generally, it is the sum vehicle weight and the load capacity. As the PMW is not actually measuring the current load but simply adds the load capacity to the vehicle weight, it is legally the weight that may not be exceeded when the vehicle is actually weighed.

GVW (Gross Vehicle Weight): The gross vehicle weight is the weight of the vehicle and the current load. The GVW may never exceed the PMW.

GCW (Gross Combination Weight): This is the total weight of a vehicle, its trailer and the current load.

Vehicle Dimensions: There is a growing standardization concerning rules about the vehicle dimensions. The height of all vehicles is limited to 4 meters. This includes any load on an open vehicle as well. This does not guarantee all bridges to be that high! A driver should be aware of road signs indicating lower bridges at all time. If the driver is unsure of the height of the vehicle and its load, he should measure it and not take any chances. The width of all vehicles is limited to 2,55 meters. There is one exception for refrigerated vehicles with walls of over 45 mm thick; they are allowed to be 2,60 meters wide.

Road signs, in general, may indicate vehicles exceeding given measurements are prohibited to enter. Drivers should be aware of the fact that these signs often have been placed for a good (obvious) reason!

Abnormal loads: An abnormal load is a load of which the weight or any other dimension exceeds the maximum permissible as laid down in the regulations. Vehicles carrying such loads must obtain permits authorising the use of a particular vehicle or trailer. Application for such permits should be made to the appropriate authority. Your national Transport organisation will be able to advice you in this matter. In a number of cases abnormal loads require side markers that comply with regulations, police notification and attendants.

Vehicle selection (source: INTERNATIONAL FREIGHT - Certificate of Professional Competence: Distance Learning Programme, Textbook, Revised Version May 2005, NEA / GFP-DLI / IRU)

Chassis: A vehicle is basically build around a chassis. The chassis is a strong construction in the shape of a ladder. It gives the vehicle its strenght and stability. It must be strong enough to carry all the components and the load without being too heavy itself. That would mean a loss of load capacity.

The chassis can be seen as the skeleton of the vehicle. Basically, the dimensions and strength are depending on:

- Length of the vehicle (lorry or tractor, trailer or semi trailer)
- Desired load capacity

Rolling Chassis: The chassis now has to be given wheels; the wheels are mounted on axles and the axles are mounted to the chassis with a suspension.

There are various types of axles:

- Driven axles
- Non-driven axles
- Steering axles
- Driven steering axles

In most countries, the maximum weight that an axle may put on the road is limited. In most cases, this limit is around ten tons. The technical limit of the axle may be more, but may also be less. A basic vehicle will have two axles: a driven axle in the rear and a steering (non driven) axle in the front. This is referred to as a 4x2 (4 wheels, two of them are driven). This configuration will limit the lorry to a GVW of 20 tons. The GVW can be increased, by using a non-driven axle in the rear; it may be placed behind the driven axle or in front of it. This will increase the load capacity dramatically, the GVW of such a vehicle will add up to 30 tons. To avoid tire wear when the vehicle is empty and the load capacity is unused, the non-driven extra axle may be utilised with a so-called bogie lift. This enables the driver to lift the non-driven axle, thus avoiding tire wear and saving fuel. The suspension makes the axles able to absorb bumps and unequal surfaces, without transposing these to the chassis, the load and the cabin. There are various suspension types:

1. Multiple leaf springs: Leaf springs are rigid and capable of high (technical) load capacities on axles. They are uncomfortable when driving without a load and make the suspension itself heavy.
2. Air suspension: Air suspension adjusts itself to the load, it is a so-called progressive suspension; a loaded vehicle has higher pressured cushions. This makes the vehicle comfortable to drive in both loaded and unloaded situations, and suitable for lorries carrying more fragile loads.

Chassis with Engine and Transmission: The choice of engine is mostly a choice of horsepower. The horsepower can be related to the desired GVW. For every 10 tons of GVW/GCW 100 brake horsepower is a common choice. With a GVW or GCW of 50 tons, 500 brake horsepower is suitable. Lorries use diesel engines, generally equipped with Turbochargers to keep the engine relatively small with high output. In Europe, environmental issues are currently very important. Lorry producers have to meet the EURO 3 emission standards for all the engines produced from 2001 and on. Emission standards will lead to EURO 4 and ultimately EURO 5 engines, which produce no NOx output.

The gearbox is also chosen depending on the GCW; the higher the weight, the more gears are required. Heavy trucks have up to 16 gears. On modern trucks, an option is fully automated shifting such as Electronic Power Shift (Mercedes) or Easy Shift (Scania). It reduces mechanical damages due to driver error and helps reduce fuel consumption. Choosing the right gear is obviously related to the engine output (torque) and the weight conditions.

Load Compartment: It goes without saying that the load compartment is chosen to suit a specific kind of haulage. International regulations however, set standards for transporting certain goods.

ATP: When transporting under ATP agreement, bodies and trucks connected to these bodies should be approved according to ATP. The truck has to be ATP approved when the following products are transported:

- Red offal
- Butter
- Game
- Milk in tanks for immediate consumption
- Industrial milk
- Dairy products
- Fish, molluscs and crustaceans
- Meat products
- Poultry and rabbits

Dangerous Goods: Dangerous goods are recognised by the diamond shaped labels and the UN number on the package. The UN number and the (chemical) identification of the goods are also mentioned on the CMR consignment note. In Europe, dangerous goods in tanks and tank-containers and explosives need to be carried in ADR approved vehicles. Information can be found in the table A of chapter 3.2 of the ADR. ADR is "The European Agreement concerning the International Carriage of Dangerous Goods by Road". The three vehicles that are ADR approved are:

- EX/II vehicle or EX/III vehicle: means a vehicle intended for the carriage of explosives (Class 1).
- FL vehicle: means a vehicle intended for the carriage of liquids having a flash-point of not more than 61°C or flammable gases, in tank-containers, portable tanks or MEGCs (multiple element gas containers).
- OX vehicle: means a vehicle intended for the carriage of hydrogen peroxide, stabilized or hydrogen peroxide, in tank-containers or portable tanks.
- AT vehicle: means a vehicle, other than FL or OX, intended for the carriage of dangerous goods in tank-containers, portable tanks or MEGCs other than an FL vehicle.

You can use a FL vehicle in case an OX or AT vehicle is prescribed. The vehicles have to meet different requirements and technical specifications, such as special electrical wiring or anti-lock braking systems and endurance braking devices. These requirements also need to be met if the vehicle is suitable of transporting containers that carry dangerous goods.

Manufacturers of trucks deliver fully ADR equipped trucks. To adjust a used truck for ADR approval is relatively very expensive. The trucks are normally inspected every year, often combined with the annual inspection for roadworthiness.

TIR

Apart from the nature of the goods, customs procedures may set certain standards to vehicles or their load compartments. The TIR system (explained in section F5) requires vehicles to be suitable for applying seals. Vehicles transporting under coverage of TIR procedures must also be checked for hidden spaces, choice of materials in case of canvas trailers and will be given a Certificate of Approval when accepted. Customs officials generally do this inspection.

Test Questions (5.3.1): Tractor and trailer

1. *You are operating a truck and trailer combination:*

Truck:

Vehicle weight	9,5 tons
Maximum weight of trailer	28 tons

Trailer:

Vehicle weight	8,7 tons
Load capacity	27 tons
Permissible Maximum weight	36 tons

2. *Please decide right /wrong:*

- a. You can legally pull this trailer behind this tractor (right)
- b. You are asked to haul a load weighing 24 tons that can be divided equally in the trailer. You can haul the entire load. (wrong)
- c. The truck is specified into the category N2 (right)
- d. The trailer is specified into the category O1 (wrong)

5.3.4 Combined Movements

Learning Objectives:

The applicant should be able to see possibilities for the combination of road transport with other transport modes and to analyse the pros & cons of the combined movements.

Road transport is average in costs compared to the others transport modes. Its main advantage is the door-to-door delivery. Disadvantage is the considerable environmental pollution and – in densely populated areas – the lack of infrastructure.

Sometimes of course, the use of road transport is determined by geological facts: Crossing an ocean excludes the options of trucks and trains! Whatever the reason (speed opposed to cost, geological reasons) is, in many cases there is a need for the use of more than one transport mode. That said, the unloading and reloading causes inefficiency and increases chances of damaging the loads. Goods should preferably remain in their load compartment, meaning less handling.

In this perspective we can choose:

- To take the entire (semi)trailer and/or the trailer on board (thus combining the transport modes).

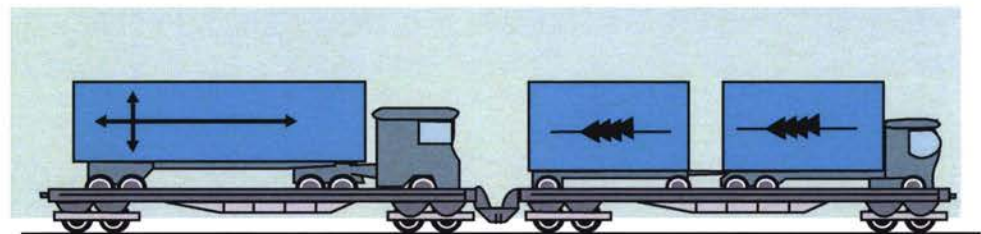
The disadvantage of taking the entire vehicle is that the lorry driver does nothing. As the cost of personnel forms a major part of the operating cost, this stresses the efficiency.

- To load the goods in a replaceable compartment like a container, that can be handled by each individual transport mode.

The disadvantage of using containers is the requirement of special vehicle chassis, suitable for hauling such containers. Large cranes are required to load and unload containers. Below, various combinations of road transport with other transport modes are explained.

Piggyback

In the system of piggyback road vehicles (also referred to as Huckepack) are carried by train. In most cases it involves the carriage of unaccompanied trailers and semi-trailers. The trailers and semi-trailers need a number of adaptations before they can be used in this scheme. The biggest advantage of this system lies in the fact that it reduces the use of congested roads by heavy lorries. Furthermore it enables a carrier to make maximum use of the loading capacity of a vehicle, as railways do not suffer from weight limitations. And last, but certainly not least, the rail rate for the transport of one vehicle may be less than the vehicle operating cost over the route. Sometimes a complete lorry and drawbar combination or an articulated vehicle is transported by train. This can be seen in countries such as Austria and Switzerland. These countries are very concerned with the environment and consider this form of intermodal transport as the solution to their environmental problems.



Even though the advantages of both these systems are obvious, the expansion of services is often inhibited by restricted rail gauge clearances through bridges and tunnels on key routes, which prevents the carriage of full-height road semi-trailers.

The rail-road transport of semi-trailers requires that the semi-trailer possesses lift pockets for lifting by tongs. The gantry crane can in this way lift both the bed and the chassis of the vehicle and then place it on a low loader wagon in which the bed has been recessed in order to hold the wheels and the axles. Road operator investment is less using this technique, but the ratio between the rail wagon's gross weight and net weight is less attractive when compared to swap-bodies and containers. This technique is used on routes where road haulage encounters geographical and / or legislative

barriers which make combined transport much more attractive, such as European transalpine traffic from the north of Italy by way of Switzerland and Austria or the Dresden-Prague route which is disadvantaged by rugged terrain and border hold-ups, in these situations the haulier can take on of the frequent, regularly scheduled rail-road shuttles known as “the rolling road”.

Tunnel

A very special form of the combination road-rail is the transport by Channel Tunnel from France to the United Kingdom. In this case, after completion of all custom procedures, a complete lorry drives on the train; there is no need for special loading equipment. The crossing takes about one hour, time in which the lorry driver can relax. On arrival the lorry can enter the country of destination without further inspection of customs.



RoRo (Roll-on, Roll-off transport)

In this system road vehicles and sometimes even the train carriages are carried by ships. The road vehicles, accompanied or unaccompanied, make journeys abroad without their cargo having to be unloaded or the vehicle lifted aboard the ship. This system offers speed and efficiency in loading and unloading and minimises the risks of loss or damage to goods through transshipment. The difference between RoRo and a ferry is the fact that in RoRo vehicles that cannot move themselves are shipped. Semi-trailers are driven onto the ship by specially designed terminal-tractors.

Containers

Containers provide exporters with a means of transport that can be easily handled, protects the goods inside and that can be sealed to provide security for the goods. This is also convenient for customs procedures!

Containers carried by rail and rail-road transport are of the same dimensions as maritime containers and are therefore poorly adapted to standard pallets. For this reason you can read details about container transportation in the Module 3 Multimodal Transport.

Test Questions (5.3.2.):

1. Please decide right / wrong:

- a. The using of the combined transportation is determined by geographical facts (right)
- b. In the system of piggyback road vehicles are carried by ship. (wrong)
- c. Some countries consider the system of piggyback as the solution to their environmental problems. (right)
- d. Tunnel is the transport combination road-rail in the Channel Tunnel from France to the United Kingdom. (right)
- e. In the system RoRo road vehicles are carried by rail. (wrong)
- f. Containers carried by rail and rail-road transport are different from maritime containers (wrong)

5.3.5 Transport of Refrigerated Cargo

Learning Objectives:

The applicant should know the main technical requirements of refrigerated cargo transport.

Food must be handled carefully because of its fragile nature. Food products are susceptible to spoilage, loss of nutrients, contamination, changes in colour, flavour or odour, and even package corrosion and leakage. Environmental control of temperature and humidity is needed to minimise these changes in food quality during transport. To set requirements and standards the following legislation has been developed.

ATP agreement

The agreement on the International Carriage of Perishable Foodstuffs and on the special equipment to be used for such carriage, known as the ATP agreement (after its French initials, derived from “Accord relatif aux Transports internationaux de denrees Perissables et aux engins speciaux a utiliser pour ces transports”) was drawn up by the Inland Transport Committee of the United Nations Economic Committee for Europe in 1970-1971. ATP provides a multi-lateral agreement between Signatory Countries (Contracting Parties) for overland cross-border carriage of perishable foodstuffs. Its purpose is to facilitate international traffic by setting common internationally recognised standards and to preserve the quality of perishable foodstuffs during international transport. This legislation applies exclusively to road transport, rail transport or a combination of the two. The ATP also applies to road and rail transport that includes transport by sea for a distance of max. 150 km.

The main requirements are with respect to the technical details of the transport means (lorries, trailers, containers, wagons/freight cars, etc.) and test requirement to check for these standards. For that purpose, the transport means are divided into classes (ATP classification) and specify:

- whether there is any means of cooling;
- whether there is a refrigerator or an ice bunker;
- whether there is a simple or a reinforced insulation;
- and for what temperatures the means of transportation is suitable.

Structure of ATP codes

Equipment is certified according to test results, and each ATP certificate issued states the classification under which the equipment is approved. The ATP code is given to approve vehicles. The code is as follows:

- 1st letter: type of cooling or heating unit;
- 2nd letter: degree of insulation;
- 3rd letter: temperature range;
- 4th letter: X = vehicle equipped with mobile or dependent temperature unit. The letter X indicates the presence of a clip-on-unit.

Some Examples of the ATP codes

Name	Definition	Abbreviation	Remarks
I = Insulated equipment			
Insulated equipment	the case is built with insulating walls making it possible to limit heat transfer between the inside and the outside of the case.	IN = normally insulated equipment IR = heavily insulated equipment	K coefficient ≤ 0.70 W/m ² K K coefficient ≤ 0.40 W/m ² K
R = non mechanical cooling unit			
Refrigerated equipment	using a source of cold other than a mechanical or "absorption" unit	RN = normal insulation RR = reinforced insulation Class A (e.g. RNA) Class B (e.g. RNB) Class C (e.g. RNC) Class D (e.g. RND)	 $\leq +7$ °C ≤ -10 °C ≤ -20 °C (most common) ≤ 0 °C
F = mechanical cooling unit			
Mechanically refrigerated equipment	Insulated equipment either fitted with its own refrigerating appliance, or served jointly with other units of transport equipment by such an appliance.	FN = normal insulation FR = reinforced insulation Class A (e.g. FNA) Class B (e.g. FNB) Class C (e.g. FNC) Class D (e.g. FND) Class E (e.g. FNE) Class F (e.g. FNF)	 between $+12$ °C and 0 °C between $+12$ °C and -10 °C between $+12$ °C and -20 °C ≤ 0 °C ≤ -10 °C ≤ -20 °C

Vehicles must be in a generally good condition. No daylight must be seen inside with doors closed. Door seals should be good and all repairs carried out with the correct materials. No holes may be found in the bodywork. The unit must pull down to Class temperature within 6 hours.

An ATP certificate covering the insulated body and the refrigeration unit is awarded based on positive test results. The test certificate is valid for 6 years. The vehicle must then be re-examined and a second certificate can be issued. The second certificate is valid for 3 years. Thereafter, the certificate can be extended for 1-year periods.

The main requirements to the maximum temperature for the transportation of different products can be found here.

Product	Max. Temperature
Red meat offal	+ 3°C
Butter	+ 6°C
Game	+ 4°C
Tank milk (fresh or pasteurized)	+ 4°C
Industrial milk	+ 6°C
Dairy products	+ 4°C
Fish, molluscs and shellfish	Ice slurry
Prepared meat products	+ 6°C
Meat (except red meat offal)	+ 7°C
Poultry and rabbit	+ 4°C
Ice cream	- 20°C
Fish, frozen or deep-frozen molluscs and shellfish and all other deep-frozen foodstuffs	- 18°C
All frozen products (except butter)	- 12°C
Butter	- 10°C
Ice-cream	- 20°C
Frozen or quick-frozen fish, molluscs and shellfish and all other quick-frozen products	-18°C
All frozen product (excl. butter)	-12°C
Butter	-10°C

For other requirements see here

HACCP (Hazard Analysis and Critical Control Points)

At the end of 1995, the EU Food Directives for Food Hygiene were implemented for the purpose of guaranteeing food safety and hygiene. These directives focus on the food industry, but a separate chapter is included for transport. The following HACCP system points are important:

- Setting the required temperature (this must be indicated by the company)
- Checking the temperature.
- Taking measures when (one detects that) there are deviations and recording these.
- Periodically submitting the trailer for the maintenance of the refrigerator motor, container and internal cleaning.
- Personal hygiene.

A transport company must be able to show that it does or has done everything to guarantee food hygiene. The haulier must be able to show that he has satisfactorily carried out his work. The driver and planner must know what they have to pay particular attention to and what critical points there are before they can report them or take precautionary measures.

Phytosanitary regulations

A Phytosanitary health certificate is required by most countries for the import of plants such as trees, shrubs, bulbs and flowers into EU territory. In Holland this certificate is also called a PD document (PD stands for *Plantenziektenkundige Dienst* (Plant Pathology Service). In most countries, a similar institute as the PD issues this certificate. The certificate is issued in the country of origin. For plants that are transported from one EU member state to another, a certificate is needed for the following products:

- Seed potatoes
- Chrysanthemum cuttings
- Prunus Sp or ornamental cuttings

The PD checks the consignment of plants before it is transported. These regulations are enforced to prevent the spread of plant diseases.

Ozone depletion

Many cooling units use CFCs as cooling agents. An international agreement was made to reduce the use of CFCs, because they will cause Global Warming. CFC is the abbreviation of *chlorofluorocarbon*. CFCs contain the elements chlorine, fluorine and carbon. If a CFC also contains hydrogen it is denoted as HCFC. Both damage the ozone layer and are therefore bad for the environment. In addition, there are HFCS. These contain fluorine, carbon and hydrogen. They are harmless to the ozone layer, but do contribute to the global warming. CFCs, HCFCs and HFCS are often denoted with a brand name such as SUVA, FREON, KLEA and FORANE. They are denoted with an R number, e.g. R 22. On the basis

of the CFC Resolution, there are also resolutions to ensure that cooling units are leak proof. These resolutions say that cooling units must satisfy certain technical specifications to prevent the leakage of cooling agent.

Test Questions (5.3.3):

1. Please decide right / wrong:

- a. The reason for the careful handling of the food products is its fragile nature. (right)
- b. ATP is a multi-lateral agreement between countries for overland cross-border carriage of dangerous goods (wrong)
- c. ATP purpose is to facilitate international traffic by setting common internationally recognised standards and to preserve the quality of perishable foodstuffs during international transport. (right)
- d. ATP applies to road and rail transport that includes transport by sea for a distance of max. 150 km (right)

2. Please decide about the meaning of ATP abbreviation, please indicate:

RNA	non mechanical cooling unit; normal insulation; temperature $\leq + 7\text{ }^{\circ}\text{C}$
RRB	non mechanical cooling unit; reinforced insulation; temperature $\leq - 10\text{ }^{\circ}\text{C}$
RND	non mechanical cooling unit; normal insulation; temperature $\leq 0\text{ }^{\circ}\text{C}$
FRB	mechanical cooling unit; reinforced insulation; temperature between $+ 12\text{ }^{\circ}\text{C}$ and $- 10\text{ }^{\circ}\text{C}$
FNC	mechanical cooling unit; normal insulation; temperature between $+ 12\text{ }^{\circ}\text{C}$ and $- 20\text{ }^{\circ}\text{C}$
IN	normally insulated equipment

5.3.6 Other Types of Road Vehicles

Learning Objectives:

The applicant should be able to describe the main characteristics of heavy lift cargo and swap-bodies.

<p>Swap-bodies (similar to containers)</p>	<p>Are loading units, which are independent of a lorry or a semi-trailer. A swap body can have the characteristics of a box trailer, an isolated trailer, or a tilt. As its dimensions are the same as those of road vehicles, it is ideally adapted to 80/120 and 100/120 pallets. A swap-body travels on a skeletal road chassis and on flat wagons (old version) or on skeletal wagons. It is attached by means of twist locks in the corner castings. It is handled by trolley or gantry crane equipped with a spreader with twist locks, or by a gantry crane with tongs. The tongs are inserted into the handling pockets on each side of the swap-body, which are recesses in the floor of the swap-body. For examples of Swap bodies see http://www.anga.pl or http://www.geseaco.com/GESeaCo/ContainerFleet/Swapbodies/</p>
<p>Heavy Lift Cargo Road Vehicles</p>	<p>Are special road vehicles and platforms which are designed to transport heavy lift and oversized cargo. This is cargo which exceeds the legal limitations in weight and/or in dimension or which exceeds the capacities of usual road vehicles or handling equipment. The heavy lift transport requires special traffic permissions. For examples of heavy lift vehicles see www.scheuerle.de or www.goldhofer.de</p>

Test Questions (5.3.4.):

1. Please decide right / wrong:

- a. Swap-body is a loading unit for combined road-rail-transport, which is independent of a lorry or a semi-trailer. (right)
- b. Swap-body is a loading unit used in overseas transport. (wrong)
- c. Heavy Lifts are out of gauge cargoes. (wrong)
- d. Heavy lifts are cargoes with a weight exceeding usual capacities of vehicles or handling equipments. (right)

5.3.7 Cargo Handling Techniques Specific to Freight Forwarders

Learning Objectives:

The applicant should be able to describe the forwarder techniques of chartering full load vehicles and consolidation of parcel loads (groupage).

In order to better do their jobs as logistics operators, freight forwarders have developed a number of different techniques used to facilitate transport organisation with the objective of optimising the means necessary to provide services adapted to the needs of their clients.

One example is the multimodal intercontinental transport chain, which is presented in module 3. Another two cases are now to be presented, chartering and consolidation, each of which is applied to road transport. When applied to other methods, chartering remains the job of specialists. The consolidation technique, however, is presented here as an example as it is quite possible to use it for most of the other methods.

Chartering

The road charterer carries out for their clients road transport operations that they entrust to third party carriers. They are freight forwarders because they agree to forward goods that have been given to them by their principal using the means and the ways for which they have freedom of choice, and this against payment which has been freely agreed upon. A client will find the service that they expect by dealing with a charterer, rather than directly with a carrier, in the following cases, several of which may be of consideration at the same time which can lead to a reinforcement of the attractiveness of using chartering:

- Diverse and widespread geographical coverage,
- Irregularity of goods flow: seasonal nature, various sized shipments, emergency shipments,
- A large number of part shipments which cannot fill a vehicle: LTL = “less than a truck load”.

For the carrier, the charterer is also a supplier of additional freight, which can increase the profitability of a less than full vehicle. These two functions are the strong points of the service, which the charterer offers their customers:

- Economical, reliable and fast forwarding (e.g. delivery from Friday evening to Monday morning) to varied geographical points through the use of carriers who are returning to their home bases and therefore have good knowledge of the destination region.
- Rapid forwarding to all destinations of small quantities of goods without any need for intermediate handling.

The second activity is often the most profit-making for the charterer (being in less of a competitive position compared with carriers), particularly if they are able to group several shipments on the same vehicle. This type of groupage without intermediate handling is given the name of “technical groupage”.

Groupage

In the chartering section “technical groupage” was defined as the activity of grouping several shipments from several different contractors on a single vehicle, which carries out several collections and deliveries without intermediate handling.

In order to deal with a market where:

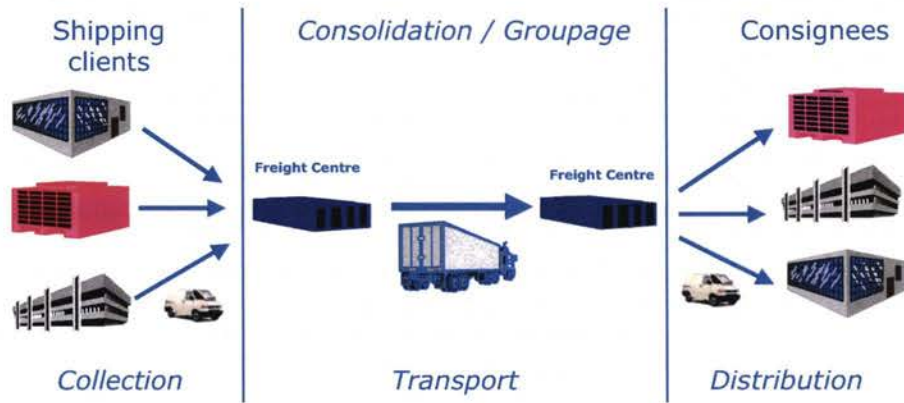
- The number of clients is high in a given area,
- The goods are of small size,
- There are a large number of goods.

The time limit must be close to that of forwarding directly using a single vehicle.

It is necessary to “be everywhere at the same time”: to pick up from a variety of shippers on day A and delivery to a variety of consignees on day B.

This is only possible by separating pickups and deliveries from the main carriage, which is used to cover the distance between the pickup and the delivery points.

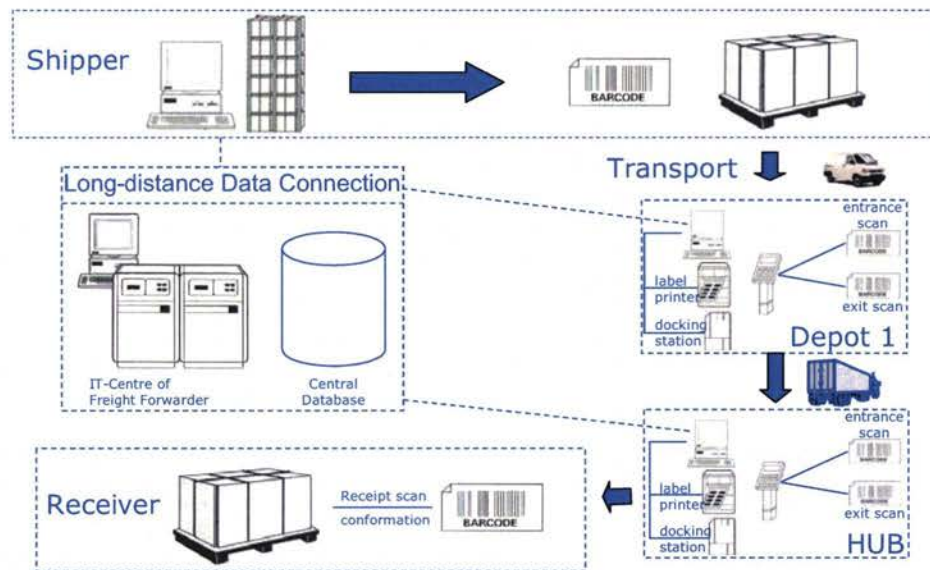
Separating of pick-up, deliveries and main carriage



Door-to-door transport is separated into 6 phases of 4 different types, each becoming itself an independent activity, which must be optimised so as to favourably contribute to the productivity of the whole.

For the organisation of the well worked consolidation you need an information systems

IT-System for Groupage



Test Question (5.3.5):

1. Please decide right / wrong:

- a. For the carrier, the charterer is a supplier of additional freight, which can increase the profitability of a less than full vehicle. (right)
- b. Groupage is an activity of grouping several shipments from several different contractors on a single vehicle. (right)
- c. Collection, transportation and distribution are parts of the process of groupage (right)
- d. The customer has to bring his shipment to the logistic centre for the transportation in the consolidated vehicle. (wrong)

5.4 Waybills and accompanying documents (TIR carnet)

Learning Objectives:
 The applicant should be aware of the waybills used in road transportation (inland and international), the liabilities of the actors involved, the international transit document (TIR carnet) and the conclusion of road transport contracts.

5.4.1 Waybill for Inland and International Transportation

Learning Objectives:
 The applicant should be aware of the waybills used in road transportation (inland and international).

There are three groups of documents that must be available on the board of vehicles on international routes:

Documents concerning the driver	Documents concerning the vehicle	Documents concerning the shipment
<ul style="list-style-type: none"> • International driver's licence • Identification • Employment declaration • Tachograph charts or control book of driver • Medical Insurance • Drivers Diploma's Related to Certain Categories of goods 	<ul style="list-style-type: none"> • Vehicle registration documents • Technical inspections • Permission for entry to the country (or transit through) • Proof of insurance • TIR certificate • Carnet de passage • ATP certificate 	<ul style="list-style-type: none"> • CMR • TIR carnet • Customs documents for shipment • ATA carnet (if temporary admission)

An example of France is illustrated which documents used in National and International Transport.

TRANSPORT	ROAD	
	National	International
Legal framework	- National Law (e.g. Commercial Law)	- Geneva convention (CMR) 1956
Contract document	- consignment note	- CMR international consignment note
Form	5 copies : - shipper - consignee - carrier - control - counterfoil	3 original copies : - shipper - consignee - carrier - signed by each party
Contents	- Date of issue - carrier ID - registration of both motor vehicle and trailer or semitrailer - Distance - carrier's instructions to the driver - principal's ID (customer or freight forwarder) - Nature, weight, volume of the goods - hazardous or temperature controlled goods - Shipper's style and address (place of collection) - style and address of place of delivery	- place and date of issue - shipper's name and address - carrier's name and address - place and date of collection of the goods - named place of delivery - consignee's name and address - Nature of the goods - packing - generic name of the hazardous goods - number of packages - Mark - Number - gross weight - carriage charges - Instructions for the Customs - mention that carriage is ruled by CMR
Function	- Contract of carriage evidencing collection and carriage of goods in France	- Contract of carriage evidencing collection and carriage of goods in France and abroad
Legal scope	- Effects of arrangements limited to the parties - Contract suited to each type of transport - Consensual contract, therefore legally concluded from the moment of the consents, - immediately after average is discovered, consignee must send a protest to carrier, at the latest within 3 days (exclusive of bank holidays) from goods receipt.	- Certificate of receipt of the goods - Is applied to combined transport if there is no transshipment, but in case of dispute the law ruling the carriage involved will be administered - Does not apply to removal transportation - immediately after average, is discovered, consignee must send a protest to carrier, at the latest within 7 business days from goods receipt
Indemnification basis	- <i>Shipments of over 3 tonnes:</i> - 14 €/kg per package or 2 300 €/tonne of general and temperature	- 8,33 SDR per kg

	controlled shipments - 55 000 € ceiling for tank shipments or 3 €/kg or equivalent per litre – <i>Shipments of less than 3 tonnes:</i> - 23 €/kg with a ceiling of 750 €/package	
Liability immunity	– Full immunity: shipper's fault, act of God, etc. – Shift of evidence: faulty packing, loading by shipper, etc.	
Liability limitation removed by	– Fraud or gross negligence of the carrier – Declaration of value or of interest in delivery	

Test Questions (5.4.1.):

1. Please decide which documents must be available in the vehicle during international transportation: (right / wrong)

- a. Customs documents for shipment (right)
- b. Bill of Landing (wrong)
- c. TIR carnet (right)
- d. CMR (right)
- e. Invoice for shipment (wrong)

5.4.2 Liability of the Carrier

Liability and burden of proof of carrier in case of loss (damage) of goods or of delay please see 5.1.3. When the carrier takes over the shipment, he must control the number of packages of the shipment, the conditions of the package and outside view of goods. By refrigerated transport the carrier has to control the temperature of the shipment. If the customer wishes additional controls over the gross weight of the shipment before (and under) transportation, so the carrier has to control it for additional charge.

If it is not noted anything on the CMR, so it means that the carrier takes over the shipment in sound value.

If there are some defects of package or outside of goods, so the carrier is not liable for damage of goods during the transportation. For customs the carrier is not liable for the correctness of the documentation for the shipment. It is liability of sender! The carrier is liable to keep this documentation carefully and to use it according to the transport contract.

Test Question (5.4.2.):

1. Please decide right /wrong:

- a. The carrier is liable for the correct documentation of the shipment. (wrong)
- b. The carrier has to note all defects of shipment during taking over for excluding if his liability. (right)
- c. The control of the weight of the shipment before and after transportation is chargeable additionally. (right)

5.4.3 Conclusion and Fulfillment of the Transport Contract

Learning Objectives:

The applicant should know main requirements of CMR. The applicant should be able to complete the CMR-waybill and to send copies of the CMR-waybill to the relevant receivers

Consignment Note

The general information about the CMR convention you can find in the 5.1.2. CMR.

The contract of carriage is confirmed by the making out of a waybill (consignment note). The CMR Convention does not give an answer to the question who has to make out the consignment note; it can be done either by the sender or by the haulier. However, even if the consignment note is absent, or gets lost this does not affect the validity of the contract of carriage, which will remain subject the provisions of the CMR Convention.

The consignment note is made out in three original copies signed by the sender and by the carrier and a normally a fourth copy for the carrier. These signatures may be printed or replaced by the stamps of the sender and the carrier if the law of the country in which the consignment note has been made out so permits.

The first copy (red)	is handed over to the sender after the carrier has received the goods
The second copy (blue)	is handed over to the consignee when the goods have reached their destination
The third copy (green)	for the carrier
The fourth copy (black)	for the carrier

The second and third copy and must travel forward with the vehicle and remain with it while ever the goods are on board. The fourth copy normally as well.

1

1 Expéditeur (Nom, adresse, pays) / sender (Name, Adresse, Land)		LETTRE DE VOITURE DOCUMENT OF TRANSPORT FRACHTBUCH FÜR VERKEHR ÜBER STRASSE FRACHTBUCH FÜR VERKEHR ÜBER STRASSE CMR NL 617285	
2 Destinataire (Nom, adresse, pays) / addressee (Name, Adresse, Land)		16 Transporteur (Nom, adresse, pays) / carrier (Name, Adresse, Land) Frachtführer (Name, Adresse, Land)	
3 Lieu prévu pour le transfert de la marchandise (Localité) / place of delivery (City, Locality)		17 Transporteurs successifs (Nom, adresse, pays) / successive carriers (Name, Adresse, Land) Nachfolgende Frachtführer (Name, Adresse, Land)	
4 Lieu et date de la prise en charge de la marchandise (Localité, date) / place and date of taking over of goods (City, Locality, Date)		18 Réserve et observations du transporteur / reservation and comments of the carrier Vorbehalt und Bemerkungen des Frachtführers	
5 Documents annexés / attached documents Begleitende Dokumente			
6 Marché en l'origine / place of origin Handelsort und Herkunft	7 Assuré par / insured by ASB für Passagiere	8 Lieu de la prestation / place of performance Ort der Vorfahrung	9 Nature et quantité de la marchandise / nature and quantity of goods Bestimmung der Güter
		10 Numéro de la marchandise / goods number	11 Poids net / net weight
		12 Volume en m ³	
13 Instructions de l'expéditeur / instructions of sender Anweisungen des Absenders		19 Convention particulière / special conditions Besondere Vereinbarungen	
14 Préscriptions de franchise / instructions of sender Franchise / <input type="checkbox"/> non transcrit / not transcribed non transcrit / not transcribed		20 Les articles / articles Waren Zahl Zusammenfassung Zusammenfassung Bemerkungen Bemerkungen Bemerkungen	
21 Réponse / réponse / answer Antwort		15 Remboursement / reimbursement Rückzahlung	
22 Signature et adresse de l'expéditeur / signature and address of sender Unterschrift und Adresse des Absenders		23 Signature et adresse du transporteur / signature and address of carrier Unterschrift und Adresse des Frachtführers	
		24 Marchés reçus / goods received Güter empfangen	

Model RU-Böcker 1976

1-15 : 19-21+22

Interactive Exercise CMR

A carrier agrees on a contract for the transport of a consignment of orange jam (classification of jam 6 – 11) from Birmingham, United Kingdom (3) to Rome, Italy (4). The orange jam will be taken over at a factory “Happy Jam Production Ltd.” in Oxford av. 15, Birmingham, United Kingdom (1). On the consignment note the factory is stated as sender. The goods have to be delivered at a supermarket “Intermarché” in Via Savoia, 19, Rome, Italy (2). The carrier David van Hough, Oxford av. 34, Birmingham, United Kingdom (16) is authorised to pick up the shipment (jam) from the sender (1) and to bring it to the receiver (2) to the address (18). The freight forwarding was paid by sender, so the receiver does not have to pay anything (14). The CMR was engrossed in Birmingham at 05.04. (21). The address and signature of the sender is in the field 22.

1

1 Expéditeur (Nom, adresse, pays) / Absender (Name, Anschrift, Land) Happy Jam Production Ltd. Oxford av. 15, Birmingham, United Kingdom		LETTRE DE VOITURE - DOCUMENT DE TRANSPORT FRACHTBRIEF - TRANSPORTDOCUMENT CMR NL 617285	
2 Destinataire (Nom, adresse, pays) / Empfänger (Name, Anschrift, Land) Intermarché Via Savoia, 19, Rome, Italy		16 Transporteur (Nom, adresse, pays) / Frachtführer (Name, Anschrift, Land) David van Hough Oxford av. 34, Birmingham United Kingdom	
3 Lieu prévu pour la livraison de la marchandise (Destination) / vor de effervering der goederen (Bestimmungsland) / Ort der Uebernahme der Güter Birmingham, United Kingdom		17 Transporteurs successifs (Nom, adresse, pays) / weitere Frachtführer (Name, Anschrift, Land)	
4 Lieu et date de la prise en charge de la marchandise (Date, lieu, pays) / Ort u. Tag der Uebernahme der Güter Rom, Italy 12.04.2006		18 Réserves et observations du transporteur / Vorbehalte und Bemerkungen des Frachtführers Place of delivery: Intermarché Via Savoia, 19, Rome, Italy	
5 Documents annexes / Begleitende Dokumente			
6 Merces en nombre / Warenanzahl / Anzahl der Packstücke 4567	7 Poids net / Nettogewicht / Netto-Gewicht 15	8 Type de verpackung / Verpackung pallets	9 Art der goederen / Beschreibung der Güter orange jam "Happy"
10 Numéro de colis / Packstücknummer	11 Poids net / Nettogewicht 500 kg	12 Volume en m ³	
13 Instructions de l'expéditeur / Anweisungen des Absenders		19 Commentaires particuliers / Besondere Veranlassungen	
14 Prescriptions de l'expéditeur / Vorschriften des Absenders <input checked="" type="checkbox"/> Primaire <input type="checkbox"/> Non incluses / nicht einbezogen		20 à remplir / zu befüllen Kontingenzen Zuschüsse Zusätzliche Dienstleistungen Bemerkungen TOTAL (TOTAL GESAMT SUMME)	
21 Date d'émission / Ausgabe Birmingham		15 Retournement / Rückmeldung	
22 Expéditeur (Nom, adresse, pays) / Absender (Name, Anschrift, Land) Happy Jam Production Ltd. Oxford av. 15, Birmingham, United Kingdom SING		23 Signature et date de l'expéditeur / Unterschrift und Datum des Absenders	
		24 Signatures et dates des destinataires / Empfänger annehmen Date of acceptance of consignee (Name, Anschrift, Land)	

Please fill in the information you got above into the correct fields of form.

After receiving the goods, the manager of the supermarket signs the consignment note. Who should receive the first, second, third and fourth copy of the consignment note? Please indicate

the first copy (red)	the sender
the second copy (blue)	the consignee
the third copy (green)	the carrier
the fourth copy (black)	the carrier

The consignment note should include a statement that the carriage is subject, notwithstanding any clause to the contrary, to the provisions of this Convention.

The consignment note must also contain the following particulars, where applicable:

- A statement that transhipment to another vehicle is allowed.
- The charges that the sender undertakes to pay.
- The amount of cash on delivery charges.
- A declaration of the value of the goods.
- The sender's instructions to the carrier regarding insurance of the goods.
- The agreed time limit within which the carriage is to be carried out.
- A list of documents handed to the carrier.

The parties may include in the consignment note any other particulars, which they consider.

5.4.4 International Customs Transit Document (e.g. carnet TIR)

Learning Objectives:

The applicant should be aware of TIR carnet, and of the relevant receivers of it.

(source: INTERNATIONAL FREIGHT - Certificate of Professional Competence: Distance Learning Programme, Textbook, Revised Version May 2005, NEA / GFP-DLI / IRU)

Note: detailed presentation by Touboul

TIR Carnet

TIR is a customs agreement initiated by the IRU (International Road Transport Union, based in Geneva). It is based on the idea of simplifying customs procedures by using certified vehicles that can be sealed. This means, that a vehicle must have a certificate of approval Please see the following page. (accompanied by two photos of the vehicle). The approval is issued by customs after thorough inspection concerning:

- the ability to seal the vehicle
- no hidden compartments
- Materials used (canvas trailers)
- Applying TIR signs.



CERTIFICAAT VAN GOEDKEURING
CERTIFICAT D'AGRÉMENT

van een wagoertnig voor vervoer van goederen onder douaneverzegeling
d'un véhicule routier pour les transports des marchandises sous scellément douanier

Certificaat nr.

Certificat No.....

TIR-Overeenkomst van 19.....
Convention TIR du 19.....

Afgegeven door (bevoegde autoriteit)
Déclaré par (autorité compétente)

U.D. TT 04/01 1992 0-07047


The approved vehicle can be used for transports under coverage of the TIR Carnet. Inspection is done every two years by customs officials in the country of origin. The TIR Carnet can be used for all transport from EU member states to countries outside the EU and outside the EFTA.³ A TIR Carnet is not issued until a guarantee of \$ 50.000 has been paid. This ensures that duties will always be covered in case of fraud or loss of the load.

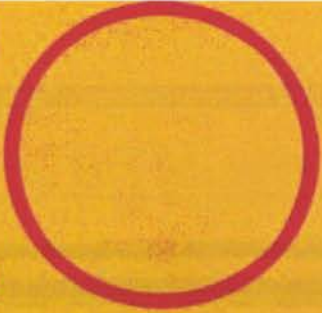
The TIR Carnet, which looks like a booklet (please see the following pages) generally consists of 14 pages inside (please see the following pages). After the lorry is loaded and the Carnet is filled out, the first pages are remaining at the customs office. Exiting a country, the driver will report to the customs office and the first page (green) is taken out. A voucher (counterfoil) remains in the booklet. At the customs office entering the next country, the next page (white) is taken out.

ATA Carnet (Agreement Temporary Admission)

In the previously outlined customs procedures and documents, the assumption was that the goods were brought from one country to another for trade or production. Meaning, they would not return in their original form. There are a number of occasions on which goods are used in another country, without being traded and with the intention of bringing them back to the country of origin in their exact same appearance. Goods examples are such as machines being exposed on a trade fair, exhibition goods, equipment of (professional) sports such as racing teams, the equipment of rock bands or theatrical ensembles. Within the borders of the EU, there is no longer a need for any procedure concerning these kinds of goods. Outside the EU however, there is. For these purposes, the ATA Carnet is used. It is issued by the Chamber of Commerce and works like the TIR Carnet, using a booklet and pages with various colours to indicate exit, entrance and re-entrance.

³ Note: Concerning VISEGRAD countries, both TIR Carnet and SAD can be used. Choice is generally not made by the transporter.


**Union Internationale
des Transports Routiers**



CARNET TIR *

14 volets

I.R.U. No 00000000

1. *Valable pour prise en charge par le bureau de douane de départ jusqu'au* _____ *inclus*
Valid for the acceptance of goods by the Customs office of departure up to and including

2. Délivré par _____
Issued by

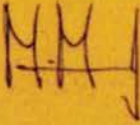
Pays de l'Association émettrice - name of issuing association

3. Titulaire _____
Holder


Prenom, nom de famille, titre, fonction, adresse

4. Signature du délégué de l'association émettrice et cachet de cette association.
Signature of authorized official of the issuing association and stamp of that association:

Signature du secrétaire de l'organisation internationale.
Signature of the secretary of the international organisation



(A compléter avant l'usage - To be completed before use by the holder of the carnet)



6. Pays de départ _____
Countries of departure

7. Pays de destination _____
Countries of destination ()*

8. No(s) d'immatriculation du (des) véhicule(s) routier(s) (*)
Registration No(s) of road vehicle(s) ()*

9. Certificat(s) d'agrément du (des) véhicule(s) routier(s) (No et date) (*)
Certificate(s) of approval of road vehicle(s) (No. and date) ()*

10. No(s) d'identification du (des) conteneur(s) (*)
Identification No(s) of container(s) ()*

11. Observations diverses _____
Remarks

12. Signature du titulaire du carnet.
Signature of the carnet holder

(*) Biffer la mention inutile.
Strike out whichever does not apply

AMSTERDAM - BRUXELLES - BIRKENHEAD

IRU - ORGANISATION INTERNATIONALE

* Voir annexes 1 de la Convention TIR, 1975, relative aux règles simplifiées de la Commission économique des Nations Unies pour l'Europe
 * See annex 1 of the TIR Convention, 1975, proposed under the auspices of the United Nations Economic Commission for Europe

VOLET N° 1 PAGE 1		CARNET TIR No 00000000	
2. Bureaux de douane de départ 1. _____ 2. _____ 3. _____		3. Nom de l'organisation internationale IRU Union Internationale des Transports Routiers	
Pour usage officiel		4. Titulaire du carnet (nom, adresse, pays)	
		5. Pays de départ	6. Pays de destination
7. Note d'investissement du séer effectuels routiers		8. Documents joints au manifeste	
MANIFESTE DE MARCHANDISES			
9. et Compartiments de chargement ou conteneurs; 10. Marques et Nos. des colis ou objets	10. Nombre et nature des colis ou objets; désignation des marchandises	11. Poids brut et net	16. Scelléments ou marques d'identification reconnus exacts
12. Total des colis figurant sur le manifeste (Destination): 1. Bureau de départ 2. Bureau de douane 3. Bureau de douane		13. J'ai certifié que les indications aux colonnes 1 à 12 ci-dessus sont exactes et complètes 14. Lieu et date 15. Signature du titulaire ou de son représentant	17. Bureau de douane de départ Signature de l'agent et l'imbré à date du bureau de douane
18. Certificat de prise en charge (bureau de douane de départ ou de passage d'entrée)		20. Datas de transit	
<input type="checkbox"/> 19. Scelléments ou marques d'identification reconnus exacts		21. Enregistré par le bureau de douane de _____ sous le No. _____	
22. Divers itinéraire fixé, bureau où le transport doit être présenté, etc.)		23. Signature de l'agent et l'imbré à date du bureau de douane	

SOUICHE N° 1 PAGE 1	du CARNET TIR No 00000000
1. Pris en charge par le bureau de douane de _____	4. Signature de l'agent et l'imbré à date du bureau de douane
2. Sous le No. _____	
3. Scelléments ou marques d'identification approuvés	
4. <input type="checkbox"/> Scelléments ou marques d'identification reconnus exacts	
5. Divers itinéraire fixé, bureau où le transport doit être présenté, etc.)	

Test Questions (5.4.5):

1. Please decide right / wrong:

- a. The TIR Carnet was improved for simplifying customs procedures by using certified vehicles that can be sealed. (right)
- b. The TIR inspection is done every five years by customs officials in the country of origin. (wrong)
- c. After the lorry is loaded and the Carnet is filled out, the first pages remain at the customs office. (right)

5.5 Pricing in Road Transports

Learning Objectives:

The applicant should understand the components of a cost calculation for a road freight transport. He should be able to understand the basic concept of road freight tariffs and should be able to make a basic calculation of road freight costs.

5.5.1 The Principles of Pricing

Learning Objectives:

The applicant should understand the main principles of pricing.

There are used different principles of pricing by the road transportation:

Principle	Definition	Example
cost plus	the basis are the costs of the operator plus a standard margin for profit	cost plus 15%
single pricing	a flat rate or a fixed rate per mile. This price can be based on the marked information.	10 EUR / km
differential pricing or price discrimination	different rates may be charged to different segments of the market	

Main cost components to be calculated in road transport are:

- *Variable costs per journey*
 - Driver costs /€/hour/
 - Fuel /€/litre/
 - Tolls / road user charges /€/km/
 - Visa for driver /€/
- *Fixed costs per truck (depending on milage/year)*
 - Truck trailer depreciation /leasing costs /€/year/
 - Tyres
 - Maintenance / repair
 - Vehicle Taxes
 - Truck liability Insurance
- *Fixed costs per company /€/year/*
 - Administration

For an example of the pricing based on the costs in Ireland you find here.

PRICING IN HAULAGE OPERATIONS (Source: *Indecon Survey of Irish Road Haulage Firms and Pricewaterhouse Coopers Survey of Irish Road Haulage Users*)

The case of pricing from Ireland is also relevant for any road haulage activity anywhere in Eurasia: The road haulage sector in Ireland faces competition from numerous Irish based firms and competition from internationally based hauliers. A summary of the factors resulting in increasing delivery pressures are:

- Increasingly demanding customer requirements in terms of Timing and composition of delivery
- Improved delivery reliability seen as very important by high percentage of users
- Few long term user / supplier relationships and no incentive for user to reduce waiting times
- Increased Road / Traffic Congestion.

COSTS AND COST FLOWS: Costing means gathering together, recording and analysing all the relevant expenditures and revenues resulting from the purchase and operation of an asset. Phase one is the gathering process. Phase Two consists of the allocations, in as correct a fashion as possible, of a proportion of these expenditures and revenues to each job or phase of operations as they arise. Phase Three is the expression of the various items as a cost and/or revenue per mile, kilometre, ton, day, hour or other suitable standard, which can then be applied to estimate the cost of individual jobs in the future.

THE OBJECTIVES OF COSTING: To provide managers with accurate information on the costs incurred in all areas of the business e.g. the running of vehicles, maintenance charges, staff costs, office overheads.

- to supply data on which to base policy,
- to provide cost estimates of future operations.

In order to achieve these objectives effectively,

- every source of cost must be identified,
- costs must be allocated in a consistent fashion,
- costs must be monitored,
- costs must be controlled to a predetermined plan.

The advantages of an effective costing system

- there is easy identification of profitable operations and activities;
- relative profit abilities between different operations and activities are highlighted;
- any areas of waste or loss are clearly pinpointed;
- information is available for: cost reduction exercises, setting rates and charges, effective management planning and Control.

THE ALLOCATION OF COSTS: Before one can come to agree to a price for a particular job, indivisible costs needed to be apportioned:

- by activity, i.e. local service, private hire, long haul, city work, specific work contracts,
- by individual route or journey within each activity Be it contract work or a schedule service
- by cost centre. (e.g. all activities out of a single depot)

- by individual vehicle in this way appropriate costs are allocated to each vehicle and a total operating cost per annum/month/week/day/hour is arrived at.

TOTAL OPERATING COSTS: Total Operating Costs is the combination of all costs into a final figure. This information forms the basis for assessing revenue earning and profit performance and for assessing individual quotations. Standing and overhead costs are usually calculated on a time basis i.e. cost per year, week etc., whereas running costs are calculated on a mileage/kilometre basis resulting in a cost per mile/Km. The following is an example of how the various cost divisions can be combined together and useful operating information developed. *Please note that the figures shown in this example do not relate to any particular type of activity. They are used only for illustration purposes. students are advised to use cost formations relative to the type(s) of activity familiar to them and to work out total operating costs on this basis.* Having got these figures the operator can now assess how each activity, and the fleet as a whole has performed in terms of the relationship between costs and revenues.

REVENUE ALLOCATION: It is relatively easy to ensure that revenue earned by a vehicle is allocated to the route or activity concerned. Once the revenue is accurately recorded it is then often divided by the mileage to give a rate per mile, which can then be related to the cost per mile giving an instant overview of the performance of the particular activity.

COSTING PER MILE (based on average of 40,000 kms.p.a.)		
	Annual Total Cost	Cost per Kilometre
Standing Costs		
Road tax	500	0.0125
Insurance	1,000	0.0250
Crew costs	10,000	0.2500
Loan Repayment	2,500	0.0625
Depreciation	3,500	0.0875
Sub-Total	17,500	0.4375
Running Costs		
Fuel	8,000	0.2000
Tyres	800	0.0200
Maintenance	4,800	0.1200
Lubricants	400	0.0100
Sub-Total	14,000	.3500
Overhead Costs	2,500	0.0625
Total Operating Costs per annum	34,000	0.8500

METHODS OF CALCULATING COSTS

Cost per Week = $\frac{\text{Total Operating Cost}}{\text{No. of working Weeks (46)}} = \frac{34,000}{46} = 739.13$

No. of working Weeks (46) 46

Cost per Day = $\frac{\text{Total Operating Cost}}{\text{No. of Working Weeks} \times 5} = \frac{34,000}{46 \times 5} = 147.82$

No. of Working Weeks x 5 46 x 5

Cost per Hour = $\frac{\text{Cost per Day}}{\text{Basic Working Day 9}} = \frac{147.82}{9} = 16.42$

Basic Working Day 9

Cost per Km. = $\frac{\text{Total Operating Cost p.a}}{\text{Total km. per annum}} = \frac{34,000}{40,000} = .85 \text{ p.km.}$

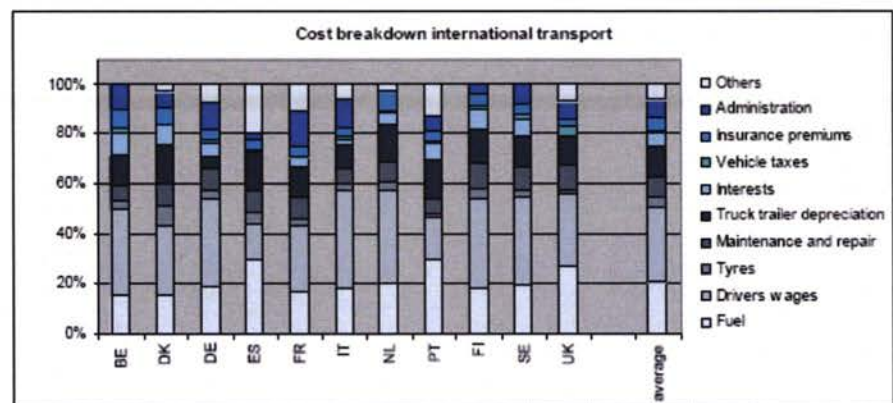
Total km. per annum 40,000

An overview about the transport costs in the EU you can find here.

Transport costs in EU (source: IA of the Modification of council regulation No. 4058/89, ECORYS-Trademco)

The costs of operating a truck are less dependent on the size of the company, but rather on the prices of the inputs. Such input prices differ by country, due to differences in the level of wages (economic development) or prices for trucks, tyres and fuel (e.g. government taxes and duties). The following figure shows the breakdown of transport costs for long distance haulage, for a selection of countries.

Figure: Cost breakdown for long distance road haulage (11 European countries and unweighted average)



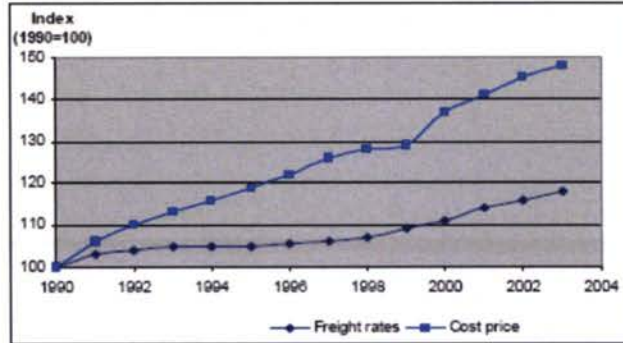
Source: SOFTICE (Survey on Freight Transport including Cost Comparison for Europe, 1999)

The figure shows that the composition of transport costs differs substantially per country. For instance, the share of fuel costs in total costs ranges from 15 to nearly 30%. The wage costs can be as high as 30-35% (Belgium, Finland), or as low as 10% (Spain). The share of maintenance costs differs less per country, but other cost items (interest, administration, others) again vary considerably between countries. The cost breakdown for national transport shows a different picture, since in these collection and distribution operations the drivers' wages are a larger part of the transport costs; fuel has a smaller share. Also, the administration costs are higher in national transport.

Freight rates in Road Transport in NL (source: IA of the Modification of council regulation No. 4058/89, ECORYS-Trademco)

During the past few years transport costs have risen substantially. A main element in this has been the steady increase in fuel prices, but also other costs elements (road tolls, wages, etc.) increased. The figure below shows that that the increase in costs has not been fully reflected in the freight rates of Dutch road haulage companies.

Figure: Index cost prices and freight rate of international transport by Dutch road hauliers (nominal prices, 1990-2003) - source: TLN (2003)



Obviously these diverging trends must have had an impact on the profitability of the sector. Unfortunately on this point limited information is available in international terms.

The development of the diesel price at the pump, doubled between 1988 and 2000. Although this was a steady increase, this alone might have resulted in an increase of total transport costs of 15-30%, which apparently has not been reflected in higher freight rates. The most recent developments in fuel prices in a selected number of EU countries are presented in the next table.

Table: Recent fuel price developments (average per litre diesel)

	2003	2004	2005	% change 2003-2004	% change 2004-2005
Luxemburg	€ 0,63	€ 0,68	€ 0,87	7,9%	27,9%
Spain	€ 0,68	€ 0,74	€ 0,90	8,8%	21,6%
Portugal	€ 0,69	€ 0,78	€ 0,91	13,0%	16,7%
Austria	€ 0,71	€ 0,78	€ 0,92	9,9%	17,9%
France	€ 0,76	€ 0,85	€ 1,05	11,8%	23,5%

Netherlands	€ 0,77	€ 0,88	€ 1,08	14,3%	22,7%
Belgium	€ 0,78	€ 0,80	€ 1,11	2,6%	38,8%
Italy	€ 0,86	€ 0,94	€ 1,10	9,3%	17,0%
Switzerland	€ 0,78	€ 0,89	€ 1,10	14,1%	23,6%
Germany	€ 0,87	€ 0,94	€ 1,09	8,0%	16,0%
Average	€ 0,75	€ 0,83	€ 1,01	10,7%	22,3%

Source: *divers*

It is obvious that the fuel prices have increased substantially in the past three years throughout Europe

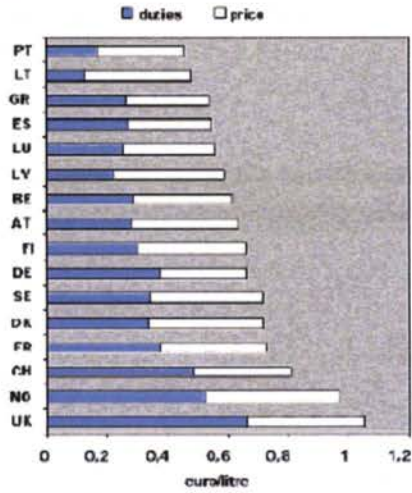
Summary of quarterly indices for a 38t gvw articulated vehicle (FTA)

01/01/1985	100	01/10/1994	148.6
01/01/1986	103.2	01/01/1995	151.9
01/01/1987	103.5	01/01/1996	158.9
01/01/1988	107.6	01/01/1997	167.3
01/07/1989	117.3	01/01/1998	174.9
01/07/1990	123.2	01/01/1999	181.4
01/10/1991	134.2	01/01/2000	189.8
01/01/1992	133.5	01/01/2001	187.7
01/01/1993	139.9	01/01/2002	189.6

Taxes and duties in EU (source: *IA of the Modification of council regulation No. 4058/89, ECORYS-Trademco*). Every country in the EU has its own system for taxation on vehicles, fuel excise duties and road user charges. In general the levels of taxes and duties differ considerably, in particular those on vehicles (vehicle excise duties) and fuel. Also the level and way in which the users have to pay for the use of the infrastructure differs from road tolling (per trip or kilometre) to the use of an Eurovignette (costs per annum) or transit charges (per trip) for non-EU countries.

The figure below gives an impression of the cost breakdown per litre diesel between the costs of fuel and taxes/duties on fuel for a selection of countries. The range is relatively large, which is mainly caused by the differences in duties.

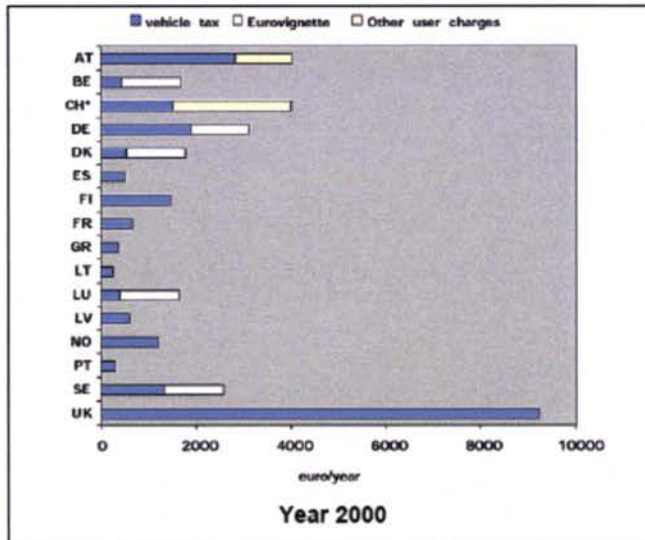
Figure: Fuel price and duties



Source Nordic Road and Transport Research, 2000

- Road diesel is the single biggest cost element for a lorry, except for the driver. Diesel represents 34 per cent of the total operating costs of a 40 tonne articulated vehicle and 22 per cent of the total costs of an 18 tonne rigid truck. In October, 70 per cent of the cost of diesel was fuel duty. This compares to 60 per cent in France, 55 per cent in the Netherlands and 51 per cent in Belgium.

User charges (Source: Nordic Road & Transport Research)



Operating costs in EU (FTA)

- Hgv operating costs in the UK are 21 per cent higher than in France and four per cent higher than in the Netherlands, in an industry where typical profit margins are three per cent.
- (FTA) Diesel is 34% of total operating costs of a 40 tonne articulated vehicle and 22% of an 18 tonne rigid truck
- 70% of cost of diesel was fuel duty in UK Oct. 04 (60% in France, 55% in NL, 51% in B)
- Annual vehicle operating costs (FTA) differ in EU countries

TABLE: Vehicle operating costs for a 40t gvw articulated vehicle as at 1 October 2004 (FTA)

Average annual cost per vehicle	UK (£)	FRANCE (£)	NETHERLANDS (£)	SPAIN (£)
Motor vehicle tax (standard rate)	1,850	502	659	548
Insurance (comprehensive, €750 excess)	3,123	2,063	2,569	4,142
Depreciation (tractor and trailer)	9,178	9,341	9,341	9,341
Cost of fuel	28,221	19,053	19,096	17,308
Maintenance (servicing and repairs – tractor and trailer)	11,182	8,305	7,280	5,573
Employment cost of driver (wages and employer social contributions)	23,475	25,647	36,661	23,849
TOTAL COST (vehicle and driver)	77,027	64,911	75,605	60,757
Variation on UK cost		-16%	-2%	-21%

Source: Freight Transport Association

Supplementary information from FTA on vehicle operating cost is presented in the following tables.

Annual mileage	45,000	55,000	35,000
Life (years)	6	5	7
Life (miles)	270,000	275,000	245,000
Replacement cost (£)	48,306	49,832	45,765
Fuel consumption - mpg	13	14	12
Fuel price - ppl	59.6	59.6	59.6
Tyre life (miles)	65,000	80,000	50,000

	Cost: £ per year			Cost: pence per mile		
Standing costs						
VED	650	650	650	1.44	1.18	1.86
Insurance	1,506	1,657	1,369	3.35	3.01	3.91
Depreciation	6,441	7,475	5,557	14.31	13.59	15.88
Running costs						
Fuel	9,382	10,648	8,249	20.85	19.36	23.57

Tyres	599	545	494	1.33	0.99	1.41
Maintenance	3,528	3,952	3,102	7.84	7.19	8.86
Total vehicle cost	22,105	24,926	19,420	49.12	45.32	55.49
Employment cost of driver	20,400	22,895	17,303	45.33	41.63	49.44
Cost of vehicle and driver	42,505	47,821	36,723	94.46	86.95	104.92
Overheads Transport	3,446	3,446	3,446	7.66	6.27	9.85
Business	3,446	3,446	3,446	7.66	6.27	9.85
Total	49,397	54,713	43,615	109.77	99.48	124.62

Reasons for low, falling or stagnant road transport prices in EU

- different level of controls, monitoring in EU 25!
- creation of large scale companies - economies of scale
- cost pressure caused by new competitors
- supply far exceeds demand
- enlargement of the EU (stronger competition, low wages)
- asymmetry of power between small transporters - big consignors
- different fuel duties between member states and thus different fuel prices
- different annual road taxes in EU 25, different toll prices

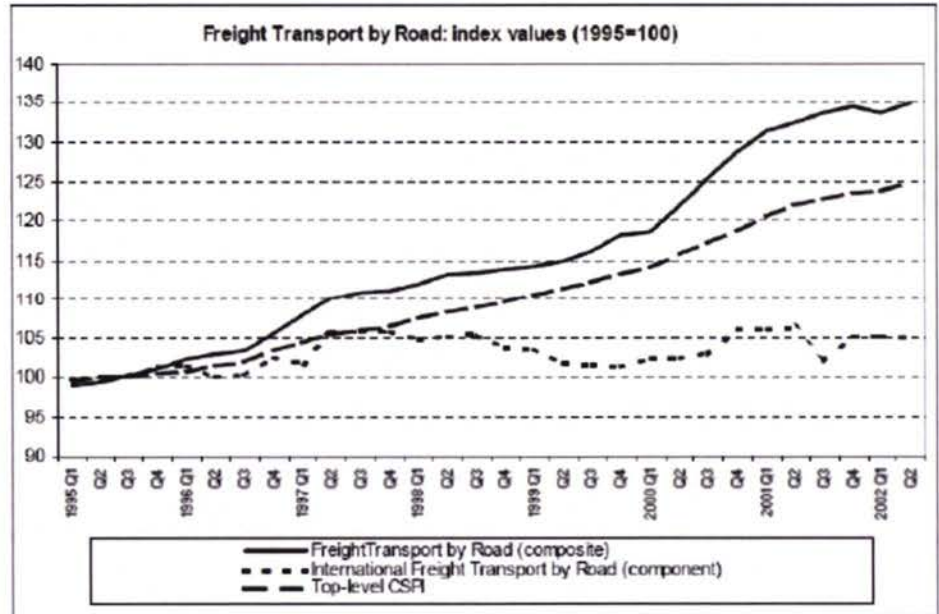
5.5.3 Spot Rates and Price Agreements

**TABLE: CORPORATE SERVICES PRICE INDICES - EXPERIMENTAL SERIES
(1995=100)**

	Freight transport by road	Component index: International
SIC(92)	6024	60243
1995	100.0	100.0
1996	103.6	101.1
1997	110.1	104.8
1998	113.2	104.8
1999	115.8	102.0
2000	123.6	103.4
2001	132.9	104.9

Source: UK office for National Statistics: Price Index for Freight Transport by Road, Nick Palmer and Keith Jones - UK office for National Statistics, Voorburg Group, September 2002

FIGURE: PRICE INDEX FOR FREIGHT TRANSPORT BY ROAD IN UK



Source: UK office for National Statistics: Price Index for Freight Transport by Road, Nick Palmer and Keith Jones - UK office for National Statistics, Voorburg Group, September 2002

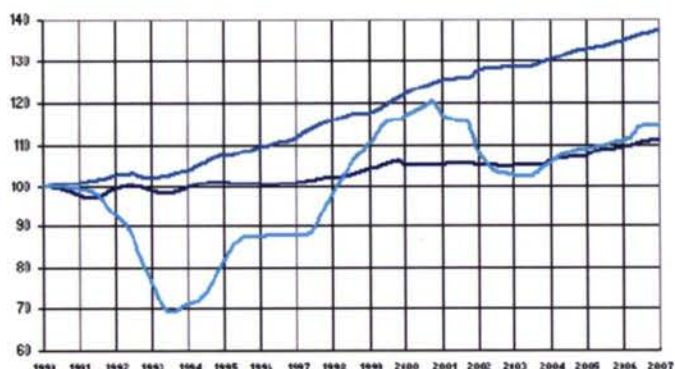
TABLE: Publication structure of the road haulage PPI in The Netherlands, with index numbers for 2002 2nd quarter

Type of lorry	Price index in 2002 2 nd quarter, 1994 q1=100		
	All transport	International transport	National transport
Total	116,7	110,9	122,0
Open or closed box	121,2	109,8	128,9
Container	112,3	112,1	112,3
Removers	122,1	114,6	126,5
Tipplers	125,9	115,1	127,6
Freezers/coolers	112,2	111,3	114,9
Tankers	106,6	109,0	104,2
Other	114,0	112,2	117,1

Source: UK office for National Statistics: Price Index for Freight Transport by Road, Nick Palmer and Keith Jones - UK office for National Statistics, Voorburg Group, September 2002

Road transport indices from IRU website (www.iru.org)

Road Transport Indices for: OECD (western Europe): 1st Quarter 2006 - Forecast



Index	Base		Forecast			
	1990 - 1 st Quarter		2006 - 1 st Quarter		2007 - 1 st Quarter	
Category	Index	Value	Index	Value	Index	Value
Road Freight Transport (Million tonnes)	100.0	2795.2	109.4	3058.7	111.4	3112.8
GDP (\$ Billion)	100.0	1789.6	134.9	2414.2	137.4	2458.8
Truck Registration (Nb Registration)	100.00	77599.78	111.11	86221.96	114.24	88647.21

5.5.4 Calculation of Distances

Road Transport costs (source: UIC - Eurasian Global Rail Freight Corridors Traffic Study)

Data on road transport costs are presented in Table below.

Table: Indicative road transport costs on selected routes/links (us\$/teu)

(source: UIC Study)

Road link/route	US\$/TEU
Helsinki - Moscow	2,200
Poti - Yerevan	1,500
Rotterdam - Yerevan	4,100
Rotterdam - Frankfurt	500

Tehran - Paris	3,400
Tehran - Almaty	2,800
Tehran - Tashkent	2,000
Tehran - Budapest	2,800
Tehran - Milan	3,200
Tehran - Berlin	3,000

ECMT estimates road transport cost within Europe at 1.1 US\$/TEU.km and between Europe and Asia at 0.6 US\$/TEU.km.

The TRACECA study (assuming 1 TEU=10 tons) identified road costs in the Central Asia region as:

- Within Central Asia: 10 US\$/ton + 0.060 US\$/ton.km
- Between C. Asia & Russia: 30 US\$/ton + 0.060 US\$/ton.km
- Between C. Asia & Iran: 20 US\$/ton + 0.035 US\$/ton.km

At border crossings in Asia customs and handling costs amount (on average) to 100 US\$/TEU.

It is noted that -especially in road transport- "hidden costs" may be added at most border crossings and terminals. It is estimated (from road hauliers information) that in general they amount to around 100 US\$/truck.

Test Question (5.5.1):

1. Please decide right / wrong:

- a. Cost plus 15 % means that the costs will be covered to 15 % (wrong)
- b. When the carrier charges to different customs different rates, he follows principle of price discrimination. (right)
- c. The principle of cost plus is based on the covering of costs plus a standard margin for profit (right)

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