UIRR
INTERNATIONAL UNION FOR ROAD-RAIL COMBINED TRANSPORT

Sino-German Cooperation on Low Carbon Transport
低碳运输领域的中德合作

INTERMODAL TRANSPORT: NOTEWORTHY POSSIBILITIES
联运：引人注目的新运输运输方式

Ralf-Charley SCHULTZE President
Ralf-Charley SCHULTZE 总裁

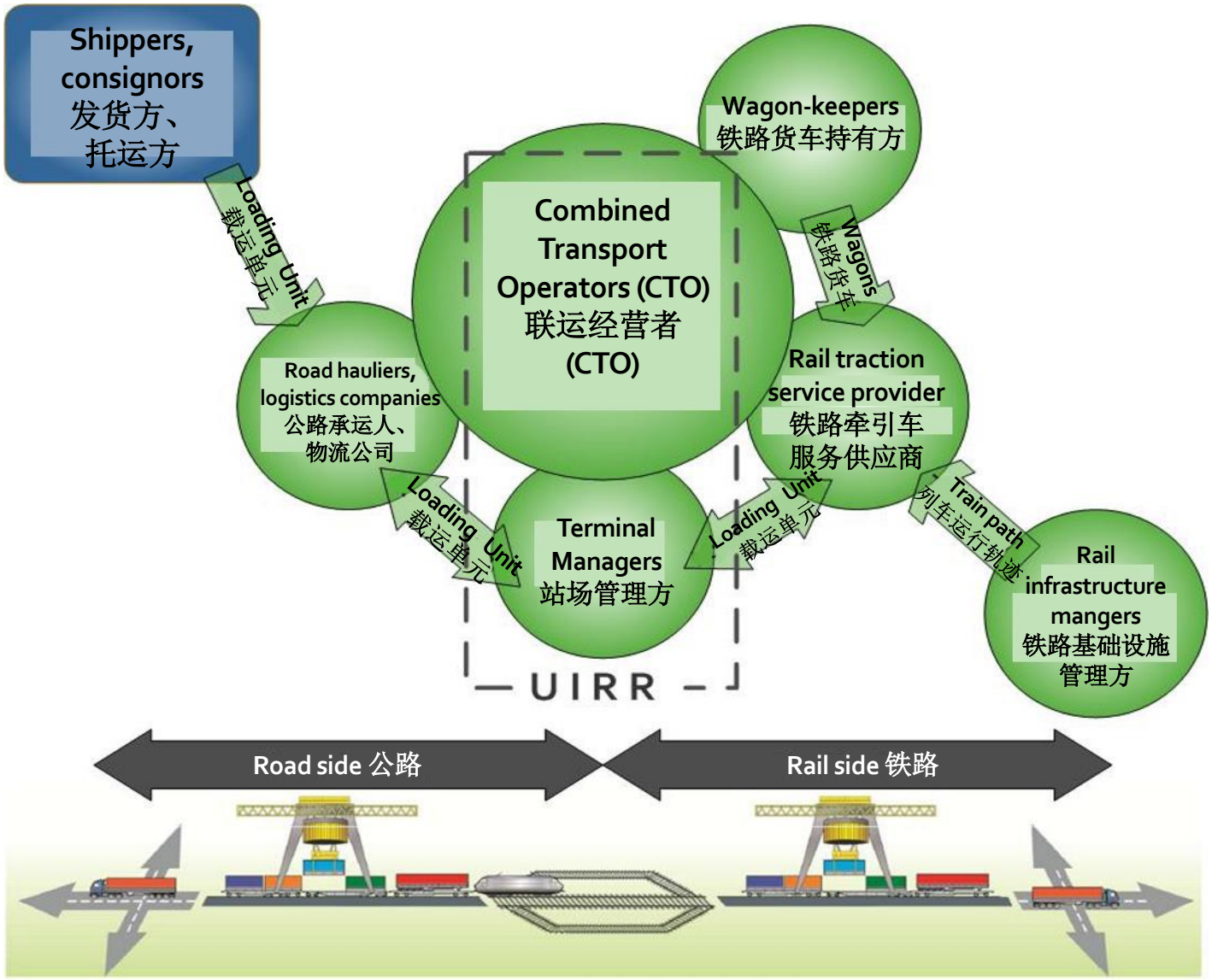
BEIJING 27-28 June 2016
北京 2016 年 6 月 27 日至 28 日

Contents 目录

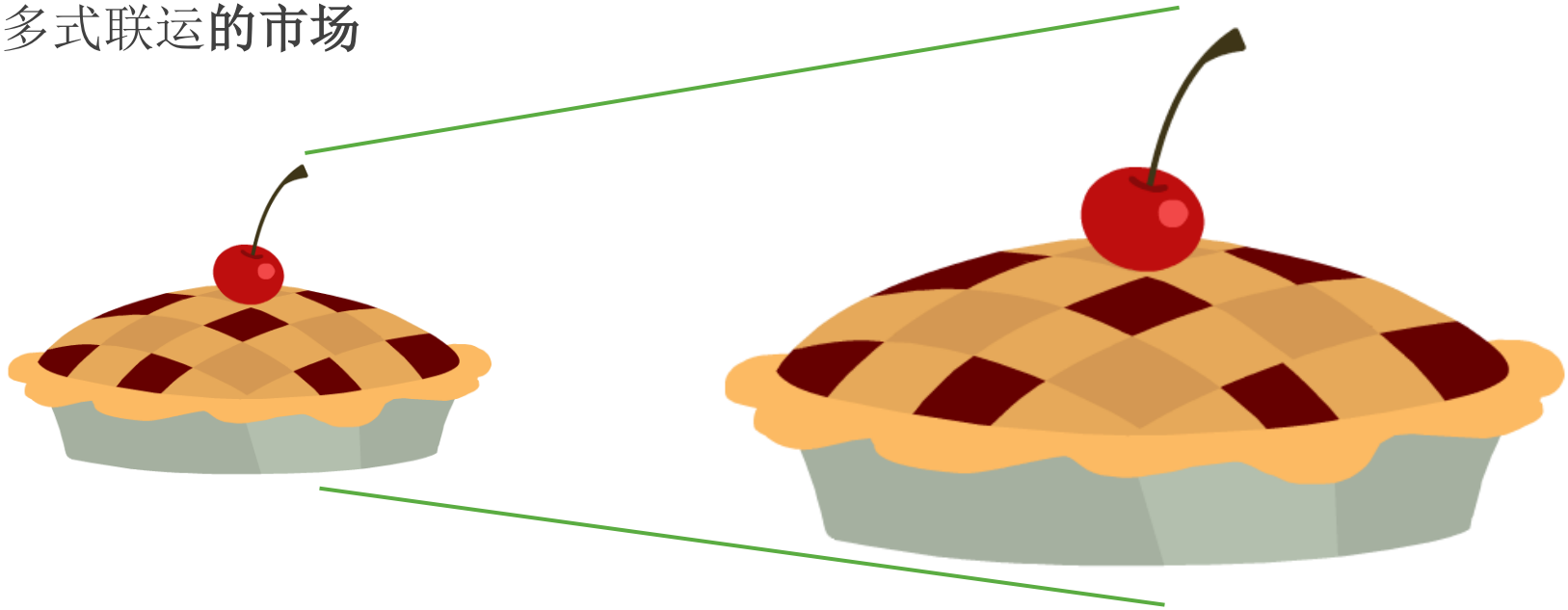
UIRR – Overview
UIRR - 概述

- **Members**: Combined Transport Operators and Terminal Managers, who create the link between road and rail
  成员：构建公路和铁路之间连接的多式联运运营商和站场管理方
- **Homogeneous interest of all members**: modal shift from road to rail,
- **所有成员的一致利益：**从公路到铁路的运输方式转换
- **Logistics companies**: customers as well as shareholders of UIRR Members
- **物流公司：**UIRR 成员的客户以及股东
- **Performance:** UIRR Members handled about 50% of European Combined Transport in 2015
- **业绩：**2015 年，UIRR 成员转运欧洲多式联运约 50% 的业务量
- **The Industry Association**:
  UIRR founded in 1970
  - seat in Brussels since 1988
- **行业协会：**
  于 1970 年创立 UIRR
  – 1988 年起将 UIRR 总部设于布鲁塞尔

Position of UIRR Members within value-chain
UIRR 成员在价值链中的位置



Grow the pie for Combined Transport
做大多式联运**的市场**



through **fair competition** on the basis of
通过**公平竞争，基于：**

1) technical merit 技术优势

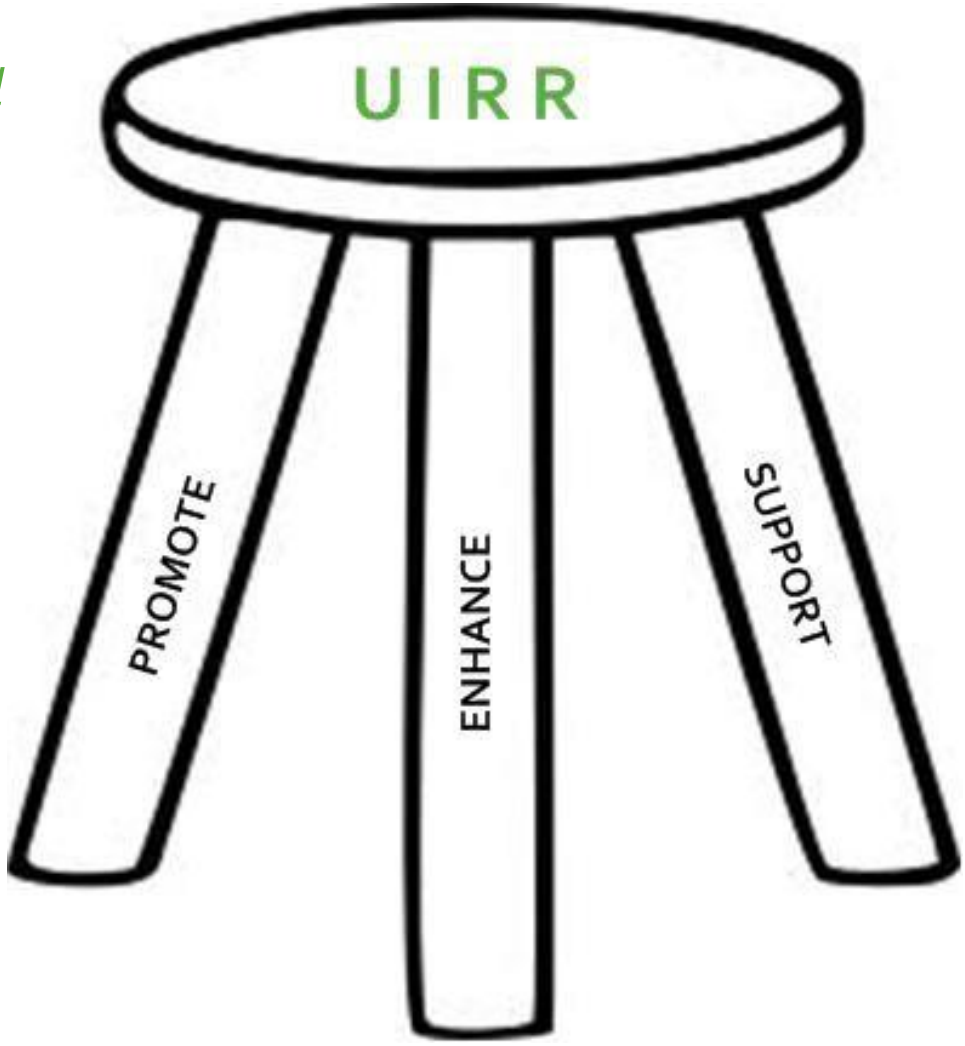
2) management competence 管理能力

*UIRR is an **industry association** which*
*UIRR 是一个**行业协会**，它能：*

*-**PROMOTES** the public understanding and appreciation of Road-Rail Combined Transport,*
__增强__公众对公路-铁路多式联运的理解和认可

*-**ENHANCES** its development and the proliferation of industry best practice,*
__促进__行业最佳实践的开发和扩散

*-**SUPPORTS** the daily operation of European Combined Transport with a series of services*
通过一系列服务__支持__欧洲多式联运的日常运营



UIRR – Growth index of Members 1990 – 2015
UIRR - 1900 年至 2015 年成员的增长指数

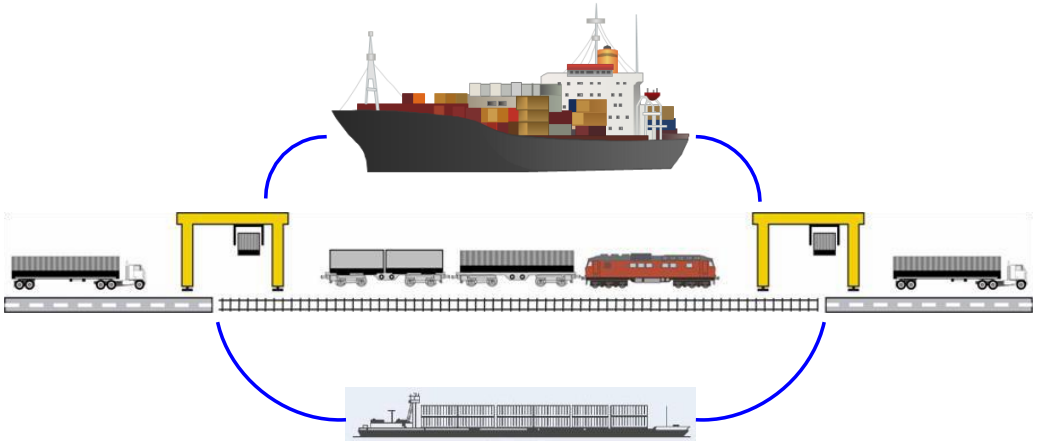
REFERENCE YEAR: 1990 = 100)
（参考年份：1990 = 100）

Contents 目录

Intermodal Transport:
多式联运：

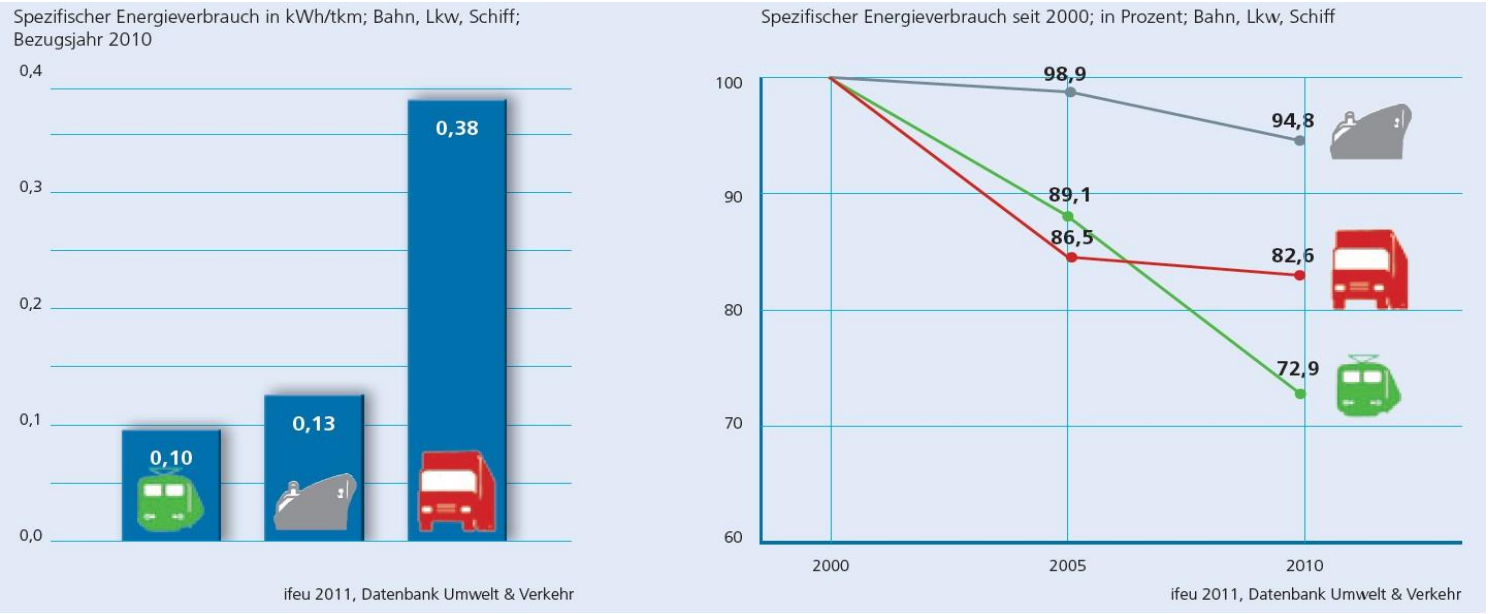
The most efficient way to insert ecologically sustainable modes of transport – like electric rail, inland navigation and short sea shipping – into long(er) distance transport-chains

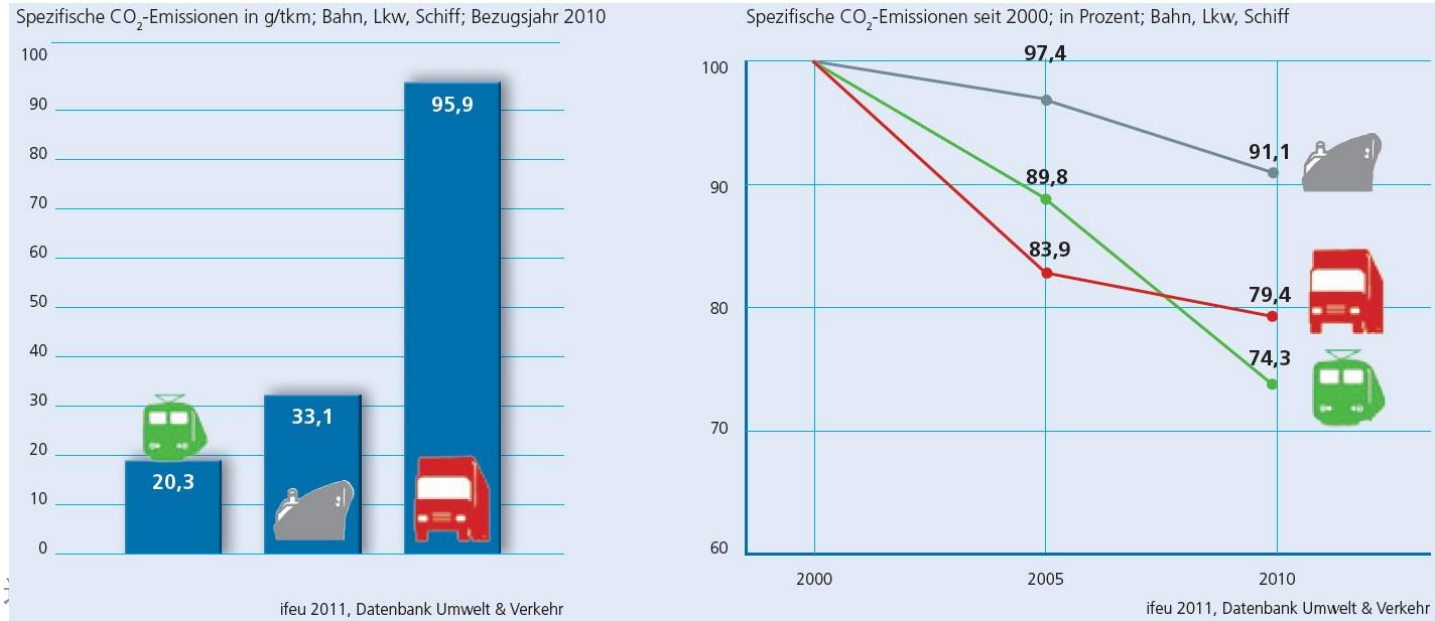
使具有生态可持续的运输运输方式（如电气化铁路、内河航运和近海运输）融入长距离运输链条的最高效方式



欧洲的联运/多式联运

Primary energy need and CO_2 performance of modes
不同交通方式的能源需求和二氧化碳排放量





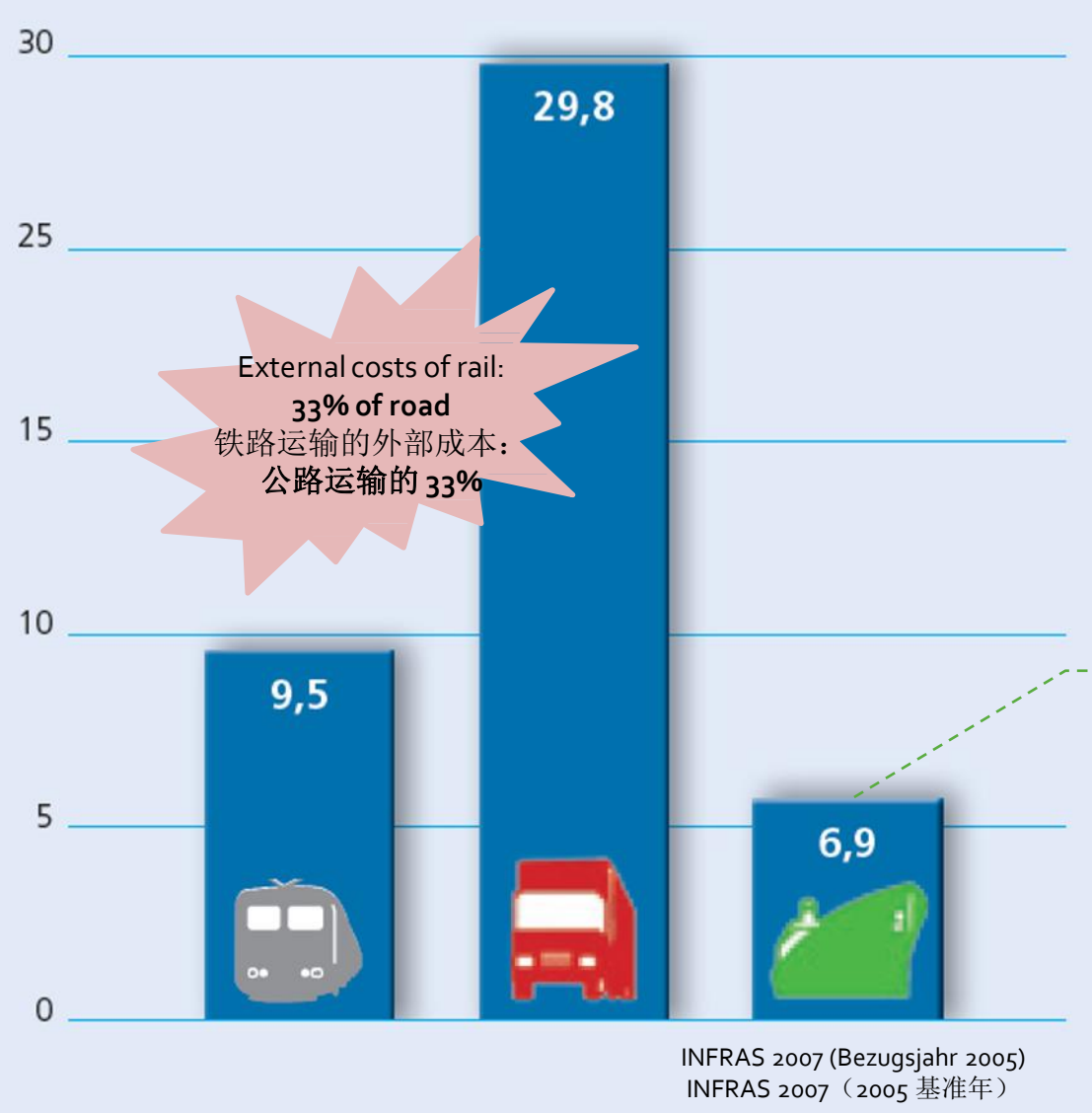
Safety performance comparison
安全性的对比

安全类别 Safety category	公路 Road	铁路 Rail
Fatalities in 2009[1] 2009 年的死亡人数[1]	35 000	34
Accident occurrences: (i) road[1] and (ii) rail[2] 事故发生量：(i) 公路1和 (ii) 铁路2	1 200 000	1152
Accident occurrences: (i) HGVs, (ii) freight trains 事故发生量：(i) 重型货车、(ii) 货运列车	31 per 100M vkm[2] 每 亿车公里2 31	35 per 100M vkm[3] 每 亿车公里3 1.05
Accident externality cost of (i) HGVs on motorways, and (ii) trains 事故外部成本：(i) 高速公路上的 重型货车，以及 (ii) 火车	€68 667 per 100M tkm4 每亿吨公里 €68 667 4	€238 per 100M tkm5 每 亿吨公里 €238 5

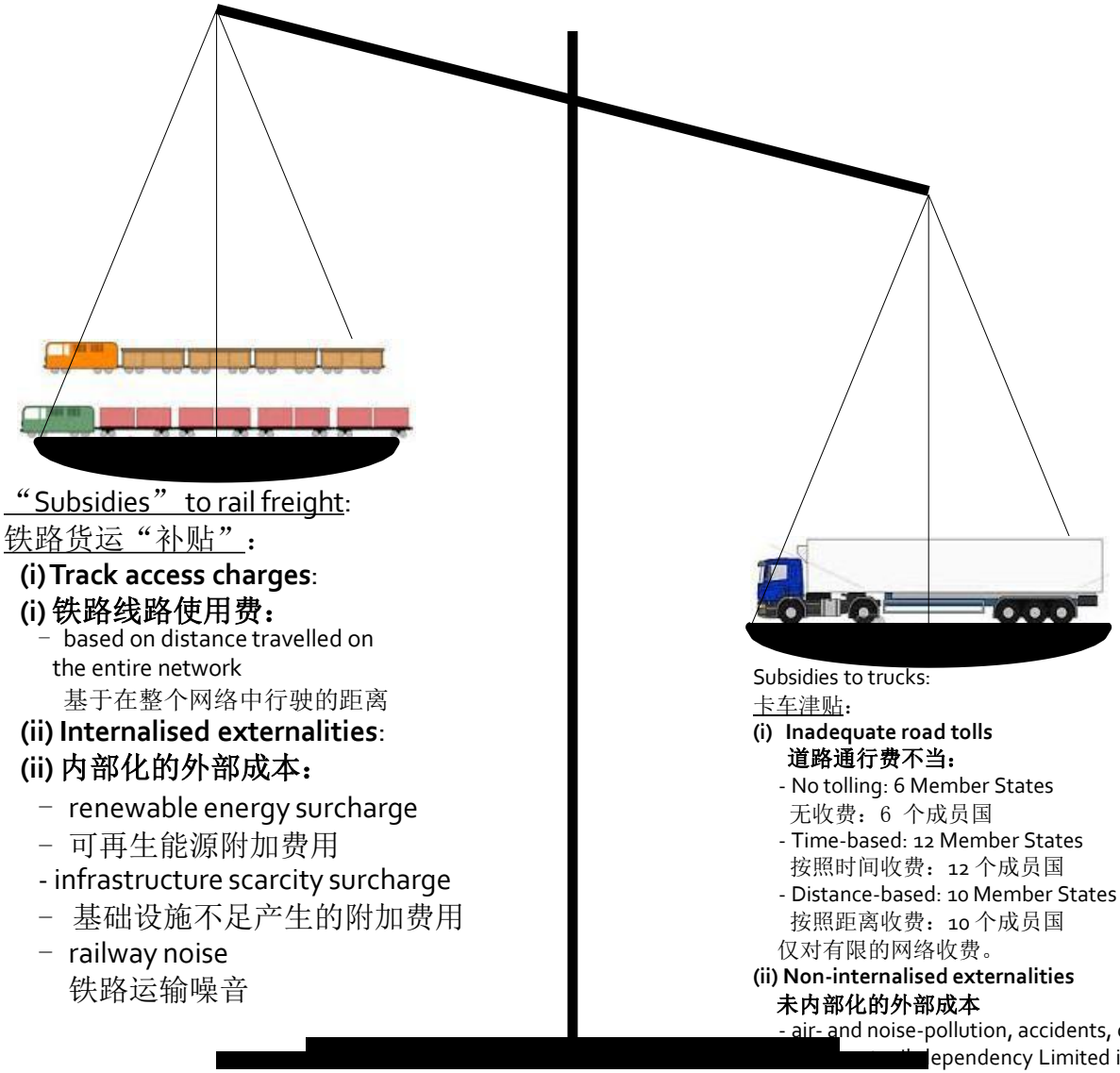
Road haulage is 30-times as accident prone as rail
公路运输的事故易发性是铁路的30倍

[1] Source: EC EU transport in figures [2011]
[1] 来源：EC EU 交通运输数据 [2011]
[2] Source: Alan C McKinnon at 2nd IRU/EU RoadTransport Conference: "31 per 100M vkm" [2012]
[2] 来源：Alan C McKinnon，第二届 IRU/EU 道路运输大会："每 亿100M vkm 31"）[2012]
[3] Source: ERA 2011 Rail Safety report figure (tkm) converted to (HGV) vkm @ 30t/vehicle rate [2011]
[4] Source: CE Delft IMPACT Study (internalisation handbook) converted into tkm @ 30t/vehicle rate [2008]
[4] 来源：CE Delft 影响研究（内化手册）转换为tkm @ 30 吨/汽车比率 [2008]
[5] Source: CE Delft IMPACT Study (internalisation handbook) converted into tkm @ 800t/train rate [2008]
[5] 来源：CE Delft 影响研究（内化手册）转换为 tkm @ 800 吨/列车比率 [2008]

External costs of modes
不同运输方式的外部成本



The relative competitive situation of modes
不同运输方式的相对竞争形势



"Subsidies" to rail freight:
铁路货运"补贴"：

(i) Track access charges:
(i) 铁路线路使用费：
- based on distance travelled on the entire network
  基于在整个网络中行驶的距离

(ii) Internalised externalities:
(ii) 内部化的外部成本：
- renewable energy surcharge
- 可再生能源附加费用
- infrastructure scarcity surcharge
- 基础设施不足产生的附加费用
- railway noise
  铁路运输噪音

Subsidies to trucks:
卡车津贴：

(i) Inadequate road tolls
道路通行费不当：
- No tolling: 6 Member States
  无收费：6 个成员国
- Time-based: 12 Member States
  按照时间收费：12 个成员国
- Distance-based: 10 Member States
  按照距离收费：10 个成员国

仅对有限的网络收费。

(ii) Non-internalised externalities
未内部化的外部成本
- air- and noise-pollution, accidents, congestion, [illegible]ependency Limited internalisation of CO_2 emissions and climate-change
  空气和噪声污染、事故、交通堵塞、土地租金、依赖石油 CO_2 排放和气候变化的有限内部化

Two principles should be equally upheld:
应同时坚持两种原则：
- ***user-pays***
  使用者付费
- ***polluter-pays***
  污染者付费

*The **de-politicisation** of transport - no more budget transfers - would be needed to make transport **truly market based and competitive** in a fair manner.*
*运输**非政治化** – 不再有预算转移 – 需要**真正基于市场和竞争情况**以公平的方式进行运输。*

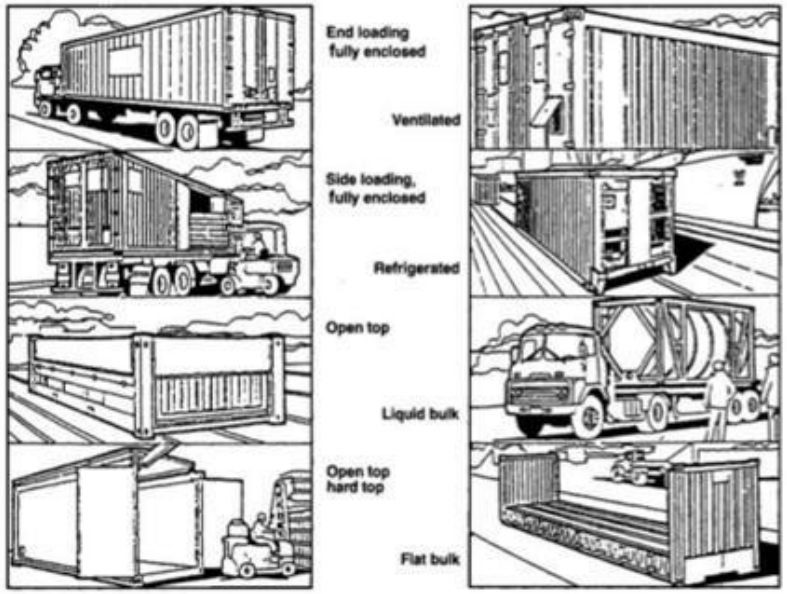
Contents 目录

Competitiveness of the railway sector
铁路运输行业的竞争力

THE SOLUTION 解决方案

- **The Fourth Railway Package:** fair intramodal competition, homogeneous infrastructure management, technical harmonisation and reduced administrative burden
  第四份铁路一揽子计划：不同运输方式间的公平竞争、统一的基础设施管理、技术协调以及减轻管理压力
- **Rail Freight Corridor Regulation:** seamless cross border travel, coordinated development and maintenance works, capacity planning and traffic management
  铁路货运走廊规定：无缝跨境运输、协调的发展和保养工作、能力规划和交通管理
- **The new TEN-T Guidelines and the Connecting Europe Facility:** interoperable and homogeneous infrastructure, removal of capacity bottlenecks
  新的 TEN-T 指令以及 Connecting Europe Facility（连接欧洲基础设施）：可共同使用的、统一的基础设施、消除能力瓶颈
- **Standardisation:**
  CEN, ERA, UN ECE, OTIF, UIC, voluntary industry best practice recommendations
  标准化：
  CEN、ERA、UN ECE、OTIF、UIC 有关行业最佳实践的自发建议
- **Implementing Acts and reporting:** Commission guidance and enforcement of implementation concerning the European rules; as well as statistics collection and reporting
  实施措施和汇报：委托指南和强制实施欧洲规则；以及统计信息收集和汇报

Codification for operations on rail
有关铁路运输运营的法律编纂

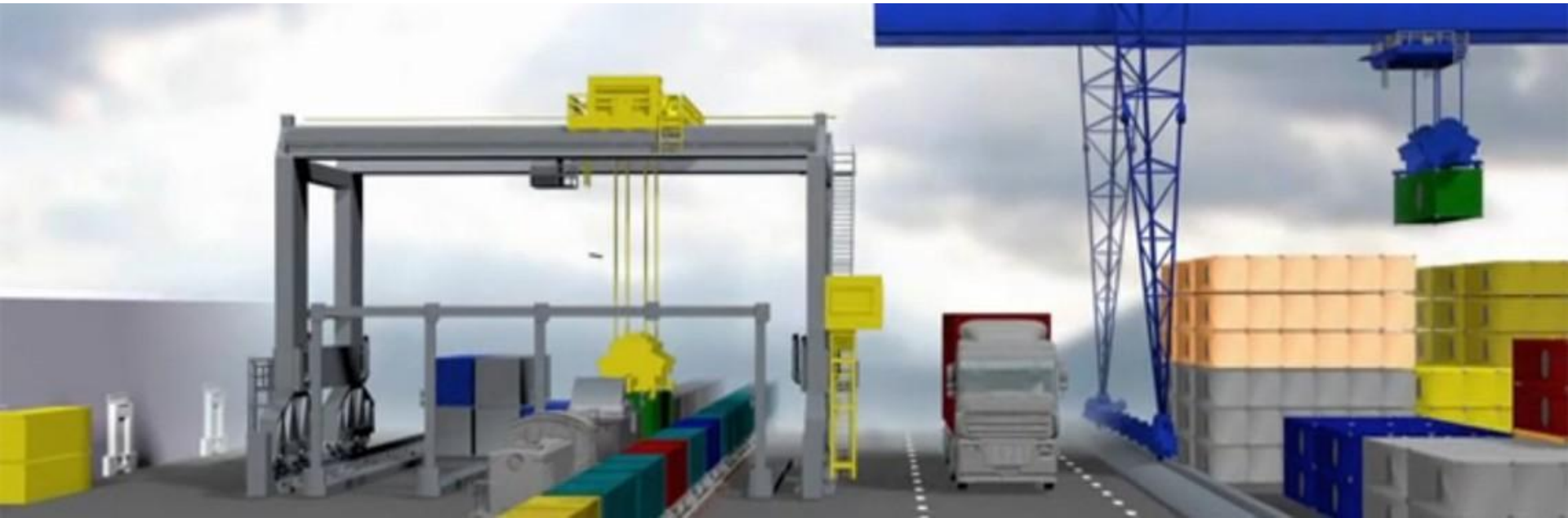


To determine if a
loading unit + wagon combination can travel on a particular railway line

确定：
载运单元 + 铁路货车组合可在特定的铁道线路上行驶

Terminal operations
站场运营

- **Gaining access: allocation of terminal slots**
  进入：分配站场槽
  - especially on Open AccessTerminals
    尤其是在公用型式接入站场上
- **Contents of a terminal slot:** basic services / extra services
  站场槽的内容：基本服务/附加服务
- **Conditions of entry onto the premises 进入场地的条件**
- **Complaint mechanism 投诉机制**



Standardisation needs 标准化需求

- **Registers 注册**
  - rail infrastructure 铁路基础设施
  - wagons 铁路货车
- **ILU identification ILU 载运单元识别**
  - ILU- and BIC-Code
    ILU 和 BIC 代码
  - Register of loading units
    注册载运单元
- **Data entry 输入数据**
  -OCR光学识别
  -RFID无线射频
- **Interfaces 接口**
  - RNE TiS data RNE TiS 数据
  - TAF TSI data TAF TSI 数据

CT route planners
多式联运 路线规划器

Terminal Systems
站场系统

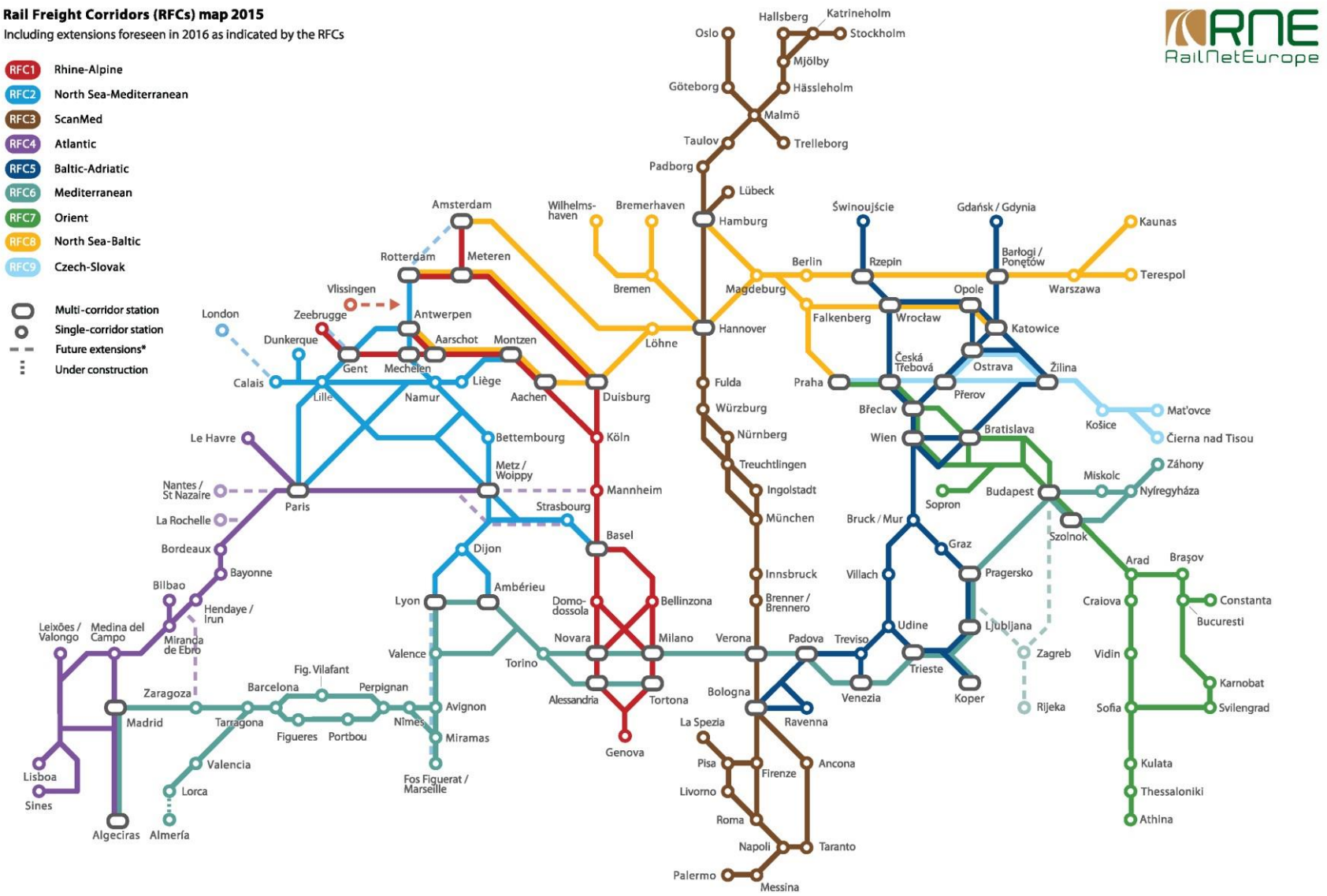
Tracking & Tracing
追踪与追溯

Customs administration
海关管理

Commercial conditions
商业条款

- **Legal framework 法律框架**
  - Intergovernmental agreements (through OTIF and CIT): COTIF, CIM, CIV
    政府间协议（通过 OTIF 和 CIT）： COTIF、CIM、CIV
  - UNECE Glossary of Terms
    UNECE 术语表
  - EU law: Railway legislation, Rail Freight Corridors, recently revised Directive 96/53, soon-to-be recast Directive 92/106
    欧盟法律：铁路法规、Rail Freight Corridors（铁路货运走廊）、最近修改过的指令 96/53、即将重新编写的指令 92/106
  - ERA TSIs, UIC leaflets, ISO and EN standards, industry best practice guidelines
    ERA TSI、UIC 宣传页、ISO 和 EN 标准、行业最佳实践指南
- **UIRR General Terms and Conditions UIRR 一般条款和条件**

European Rail Freight Corridors（欧洲铁路货运走廊）



*This map does not include all potential RFC routes' extensions contained within Annex 2 of EU Reg. 1316/2013 (extensions are subject to market studies). For further details, please refer to the individual RFCs' websites.

Contents 目录

SMALL CARBON FOOTPRINT
较小的碳足迹

WEATHER RESILIENCE
气候耐受能力

LABOUR EFFICIENCY
人工效率

EASY-TO-USE
易于使用

RELIABILITY
可靠性

SPEED
速度

ENERGY EFFICIENCY
能源效率

OUSTANDING SAFETY 出色的安全性

SUPERIOR SECURITY 卓越保障

Regulatory framework for Combined Transport ½
多式联运的监管框架 1/2

The recast of Directive 92/106 to create a genuine single market in the EU
重新编写指令 92/106，在欧盟建立真正的单一市场

- **Framework legislation 法律框架**
  - definitions and Pan-European rules for technical aspects such as codification, certification, registration, etc.
    针对编码、认证、注册等技术方面的定义和泛欧洲规则

- **Temporary benefits 临时补贴**
  - to counterbalance the regulatory disadvantage for as long as it continues to prevail (proportionately to the status quo in each Member State)
    临时补贴的存在可以弥补监管劣势（根据每个成员国的现状按比例发放）

- **Optimised infrastructure 经过优化的基础设施**
  - complementing the large CEF Transport projects with small scale development aid on a Member State level to eliminate infrastructure limitations faced by consignors if wishing to shift to intermodal/combined transport
    如果希望转换到多式联运，在成员国层面上提供小规模的发展援助，作为大型 CEF 运输项目的补充，以消除发货人所面临的基础设施局限性

continued…待续……

Regulatory framework for Combined Transport 2/2
多式联运的监管框架 2/2

The recast of Directive 92/106 to create a genuine single market in the EU
重新编写指令 92/106，在欧盟建立真正的单一市场

- **Development plans 发展计划**
  - encouraging the complex horizontal thinking required by intermodal/combined transport based logistics on a Member State level
    在成员国层面鼓励多式联运的物流所需的整体的横向思路

- **Intermodality test 联运能力测试**
  - systematic test of any policy or regulatory proposal as part of the impact assessment to check whether an intermodal/combined transport solution could not deliver the desired outcome more efficiently
    对任何政策或法规建议进行系统测试（作为影响评估的一部分），以检查多式联运解决方案是否无法更高效地达到所需的结果

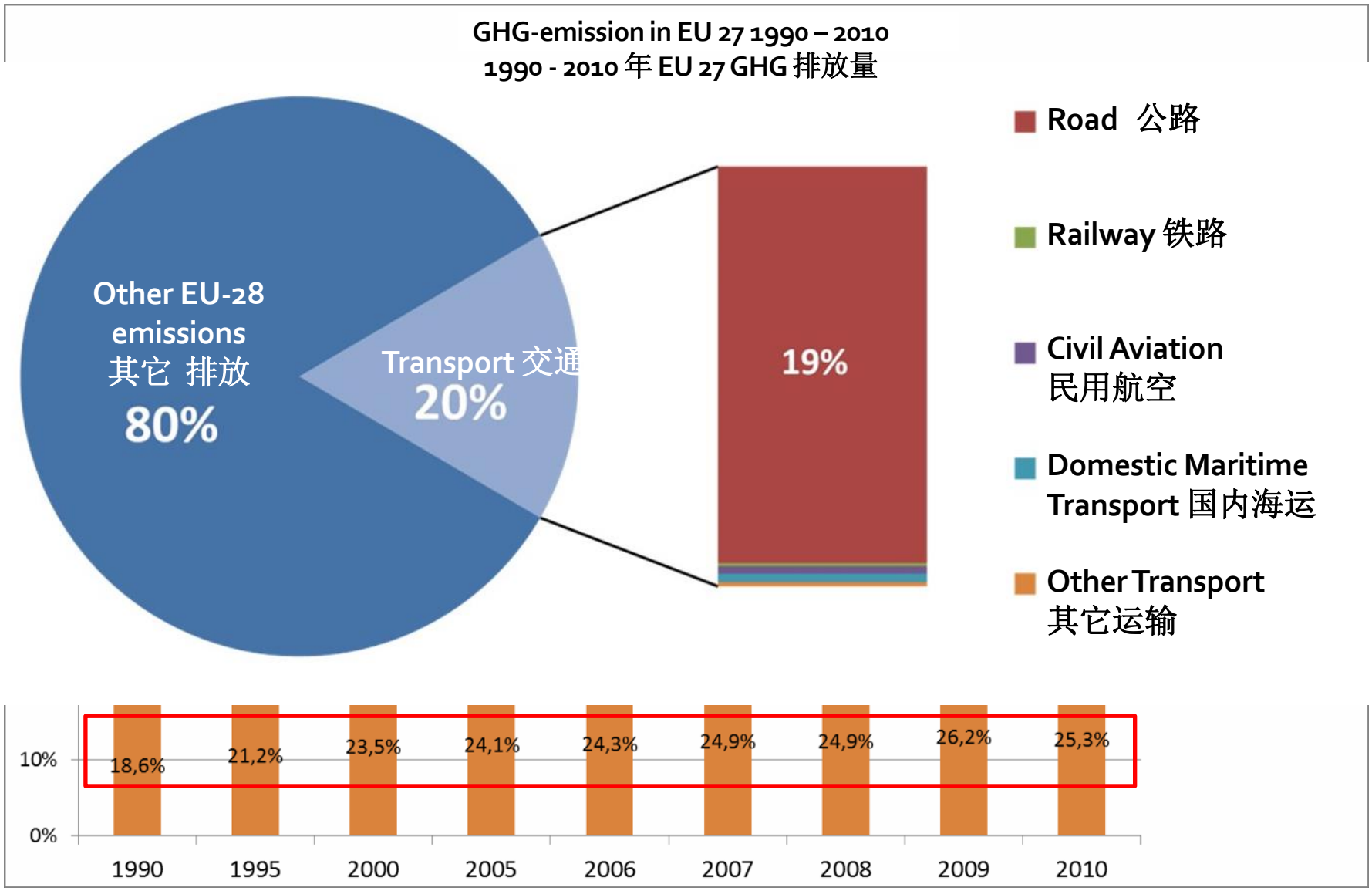
- **Monitoring and reporting 监控和汇报**
  - accurate measurement of intermodal/combined transport performance and regular feed-back to the decision-makers
    对多式联运表现进行精确的评测，并定期提供反馈给决策者

Summary: The Regulators' Challenge
总结：监管部门所面临的挑战

- **Relative competitive framework 相对竞争框架**
  - **user to pay all costs**: involved with accessing the public transport infrastructure; in case of roads it is **land rent, operation** (cleaning, rescue – emergency services, policing/traffic management), **maintenance** and **construction**
  使用者支付所有成本：涉及到利用公共运输基础设施；在使用公路运输的情况下，相关成本有**土地租金、运营成本**（清洁、紧急救援服务、警务/交通管理）、**保养**以及**建筑施工**
- **Internalisation 内部化**
  - **congestion**: value charging principle – congestion surcharge within road toll (scarcity surcharge)
  交通堵塞：价值收费原则 – 在道路收费中与交通堵塞相关的附加费用（因缺乏产生的附加费用）
  - **local pollution**: noise, PM10, vibration, landscape destruction – within road toll
  当地污染：噪声、PM10、振动、破坏景观 - 含在道路收费中
  - **accidents**: loss to society due to loss of life or permanent injury – insurance surcharge
  事故：因死亡或永久性伤害对社会造成的损失 – 保险相关的附加费用
  - **GHG emission and oil dependency**: climate change and "wars for oil" – fuel excise duty
  GHG 排放以及对石油的依赖性：气候变化以及"石油战争"—— 燃油消费税
- **Within the railway sector 铁路运输行业内**
  - **end privileged relationships**: traction service and other railway transportation providers should be allowed to fairly compete – irrespective of ownership / grouping with infrastructure manager
  结束特权关系：应该允许牵引服务和其它铁路运输供应商公平竞争 – 无论所有权如何 / 无论是否与基础设施经理有关系
  - **rail infrastructure investments to be subject to strict cost-benefit-analysis**: be based on business rationality – not only subject to political preference (vote maximisation)
  对铁路基础设施投资进行严格的成本效益分析：基于商业合理性 – 而不仅是根据政治偏好来做决定（尽可能投票）
- **For the intermodal sector 联运行业**
  - **harmonised regulatory framework throughout the EU**: eliminate heterogeneity present in prevailing Member State level regulatory framework to help create a genuine single market
  在欧盟内实现协调一致的监管框架：消除目前在主要成员国层面监管框架中存在的差异，从而有助于建立一个真正的单一市场

Contents 目录

GHG-emission s of European Sectors: 1990-2010
欧洲 GHG 排放：1990-2010



Mission letter of the new Transport Commissioner
新交通委员会委员的使命声明

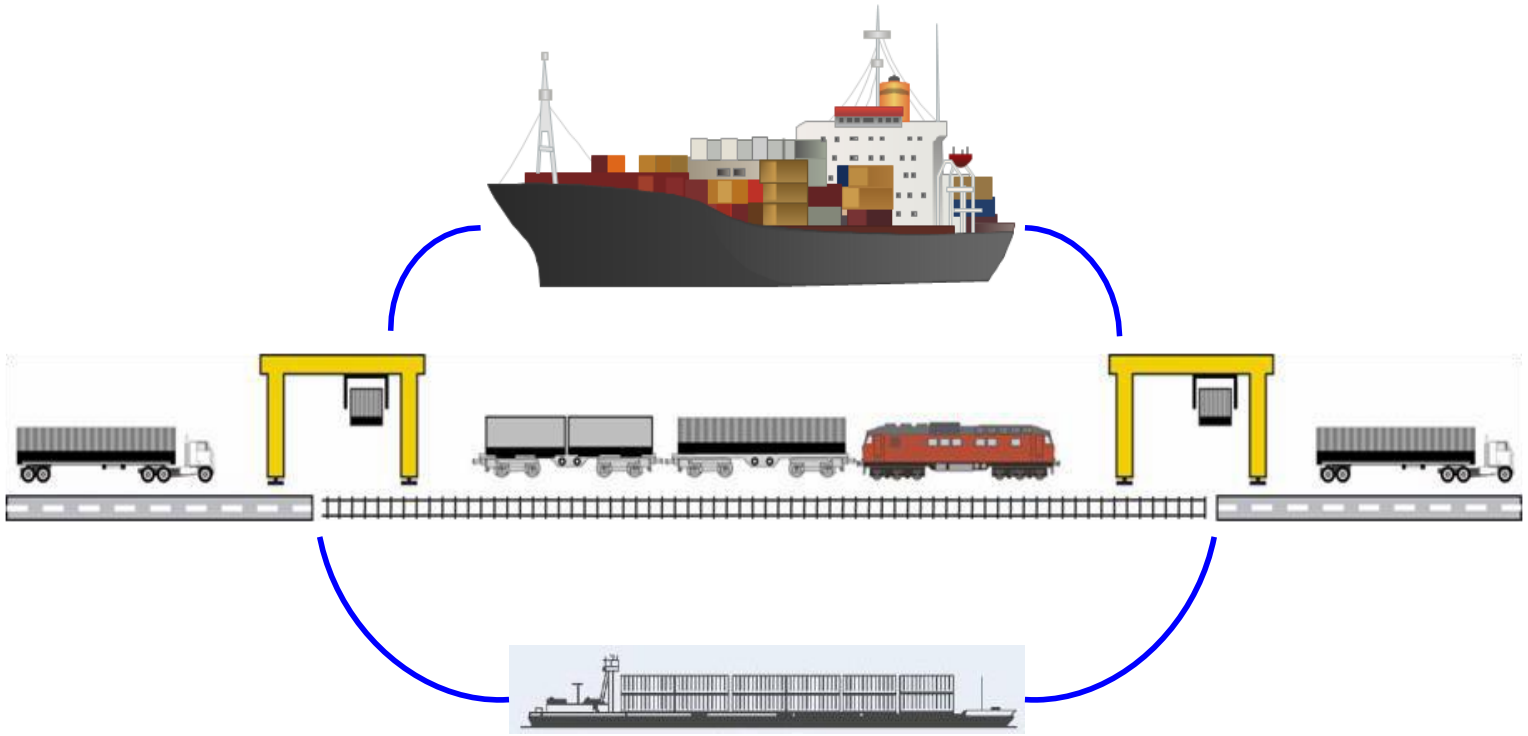
”…the reduction of greenhouse gas emissions by the transport sector contributes to the achievement of the overall EU target in this area. This should be part of our overall effort to reinforce the sustainability of our growth model.”

“…… 交通运输行业减少温室气体排放有助于达成在此区域的整体欧盟减排目标。这应成为我们增强增长模式的可持续性的总体行动的一部分。

EU 2011 Transport White Paper
2011 年度欧盟交通政策白皮书

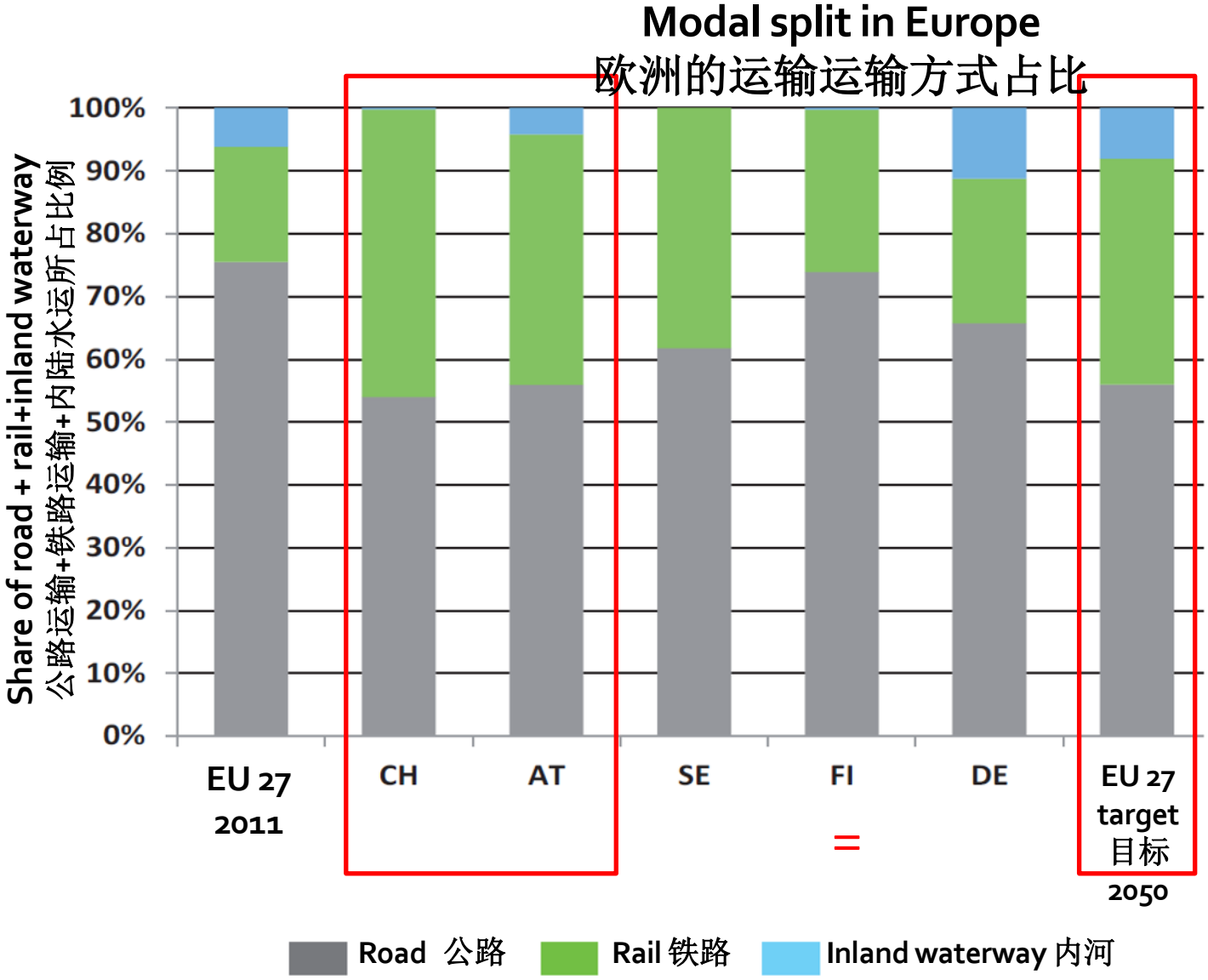
Shift 30%** of long(er) distance road tonne-kilometres realised over distances of 300km or more **by 2030 from trucks to sustainable modes of transport** - (electric) rail, inland navigation and shortsea shipping - which ratio should increase to **50% by 2050*

*到 2030 年为止，将 30% 的 300 公里或更长距离的长距离的公路运输周转量从卡车转移到可持续的运输方式——（电气化）铁路、内河运输以及近途海运——到 2050 年为止此百分比应上升至 50%**



* *on the basis of 2010*
基于 2010 年

Modal split without SSS (coastal shipping)
运输运输方式分类 – 不包括SSS（沿海航运）



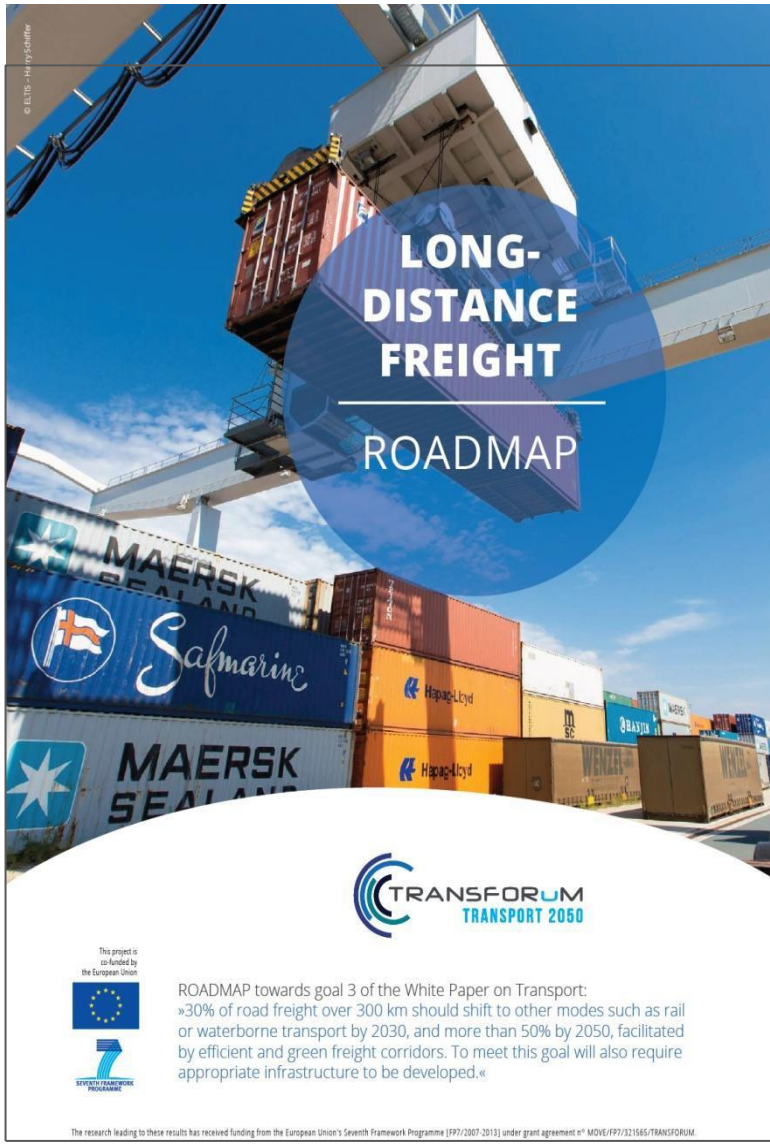
Source: TRANSFORuM Project Report on Long Distance Freight, June 2015
来源:TRANSFORuM 长距离货运项目报告，2015 年 6 月

"Achievable, even if challenging"
"虽有挑战性，但可以达到"

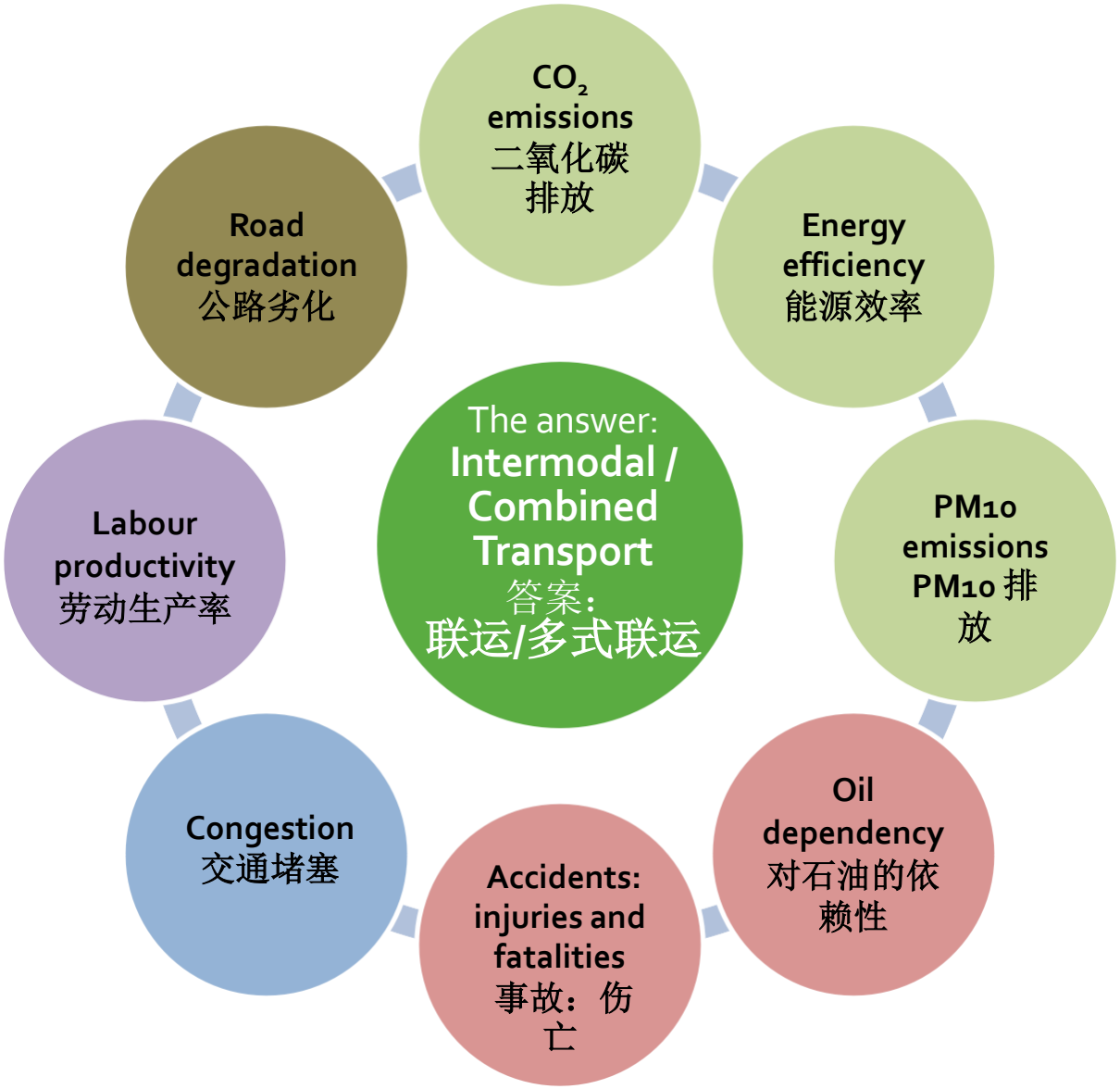
A study in the UK (McKinnon and Piecyk, 2010) based on a Delphi survey of 100 logistics specialists suggested that mode shift could potentially decrease roads share of the freight market by 14% (from 64% tkm to 50%) by 2050. A study by den Boer et al. (2011) deals with the shift from road to rail of freight transport in the EU to 2020. One conclusion is that there is a potential to increase the market share for rail from 18 to 31–36% and reduce GHG emissions by 19% where road and rail compete. This is roughly consistent with the modal shift target as exemplified above. Although such studies are always associated with considerable uncertainties, they seem to indicate that the goal is achievable, even if challenging.

在英国，基于针对 100 位物流专员所做的德尔菲（Delphi）问卷调查的一项研究（McKinnon and Piecyk，2010）建议：到 2050 年为止，转换运输方式有可能会将公路运输在货运市场中所占份额减少 14%（从 64% tkm 降至 50%）。由 den Boer et al. 所做的研究（2011）中提到，到 2020 年将货物从公路运输转移至铁路运输。一个结论是铁路运输市场份额可能从 18% 增长至 31%-36%，而且在公路运输和铁路运输存在竞争的 GHG 排放量方面，铁路运输可将排放量减少 19%。这与以上所述的运输方式转换目标是大致一致的。虽然此类研究通常存在较大的不确定性，但这些研究似乎表明：虽有挑战性，但仍可以达成目标。

Source: TRANSFORuM Project Report on Long Distance Freight, June 2015
来源: TRANSFORuM 长距离货运项目报告，2015 年 6 月



The preference should be clear
倾向性很明显



Contents 目录

- UIRR Members active between Europe and China
  在欧洲和中国之间活跃的 UIRR 成员

FELB MEMBER OF UTLC

HUPAC

TEE TRANS EURASIA LOGISTICS

- 2015 traffic volume (export+import): **over 100.000TEU**
  2015 年交通量（出口+进口）：**超过 10万标箱**

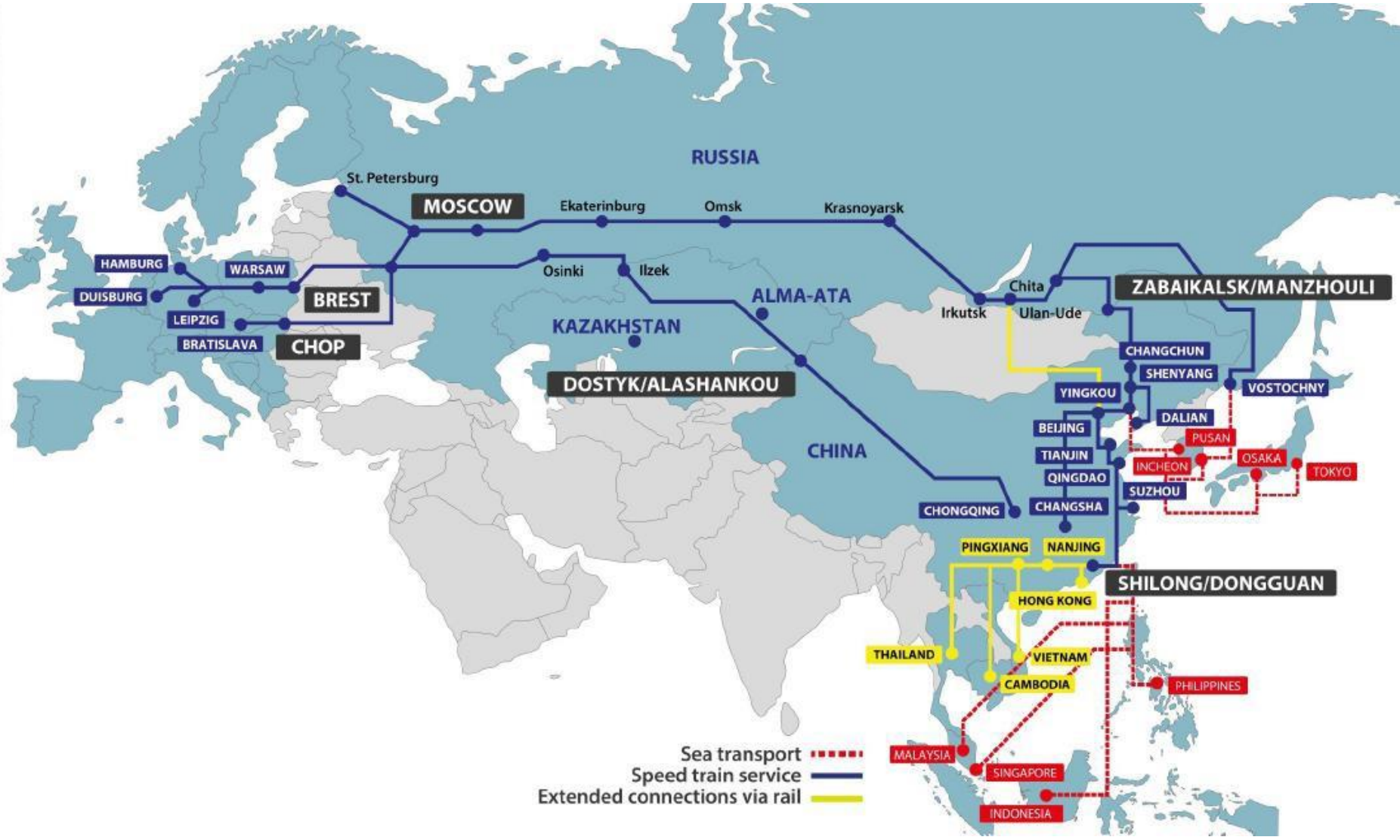
- Distance 距离：**8,500 km**
- Transit time 运输时间：**3-7 Days/天**
- Limited weight per unit 限制单位重量
- **Very expensive 非常昂贵**
- **Not suitable for regular business**
  不适合于日常业务
- High carbon footprint 碳足迹高

- Distance 距离：**11,000 km**
- Transit time 运输时间：**2-3 weeks/周**
- **High frequency of shipments**
  高频率运货
- **High level of flexibility**
  极大的灵活性
- Terminals at the border stations
  位于边境站的站场
- Environment-friendly 环保

- Distance距离：**20,000 km**
- Transit time运输时间：**6 周**
- **Slow steaming低速航行**
- **Unstable rates费率不稳定**
- Different climate zones
  不同的气候区

FASTER THAN SEA FREIGHT 比海运更快
CHEAPER THAN AIR FREIGHT 比空运更便宜

Well identified routes – high level quality
的线路 —— 极高的质量



FELB POST

FAR EAST LAND BRIDGE LTD. ILLUSTRATED NEWSPAPER

Monday, February 15, 2016

120 KM/H ON THE RUSSIAN STRETCH
WILL THIS ALSO IMPROVE TRANSIT TIME OF FELB'S SERVICE?

Reduction from 14 to **10 days terminal-to-terminal service** between Asia and Europe is identified as a new ambitious goal within the Russian Railway Group.

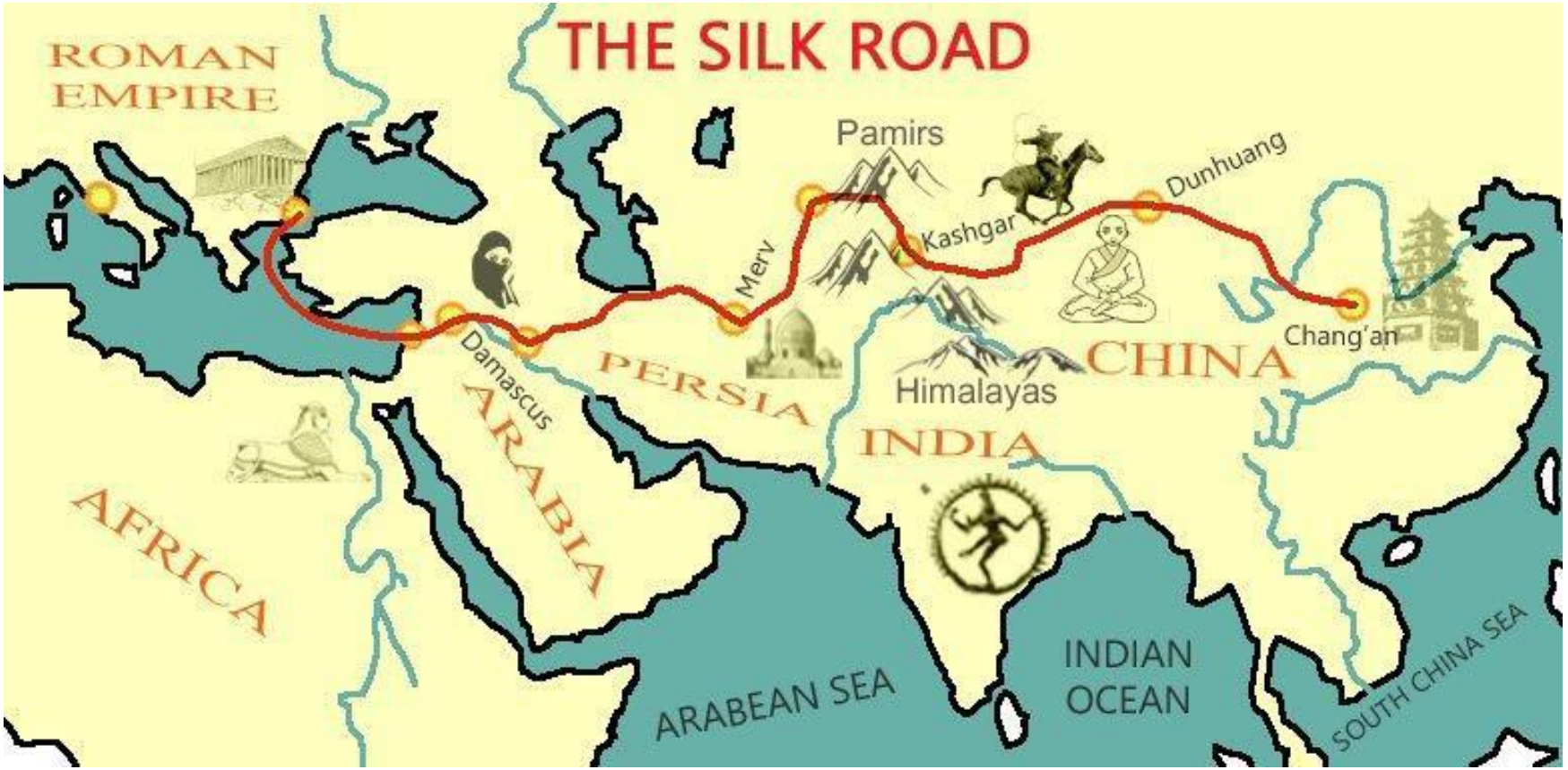
For the first time, wagons in Russia will be able to carry out transports at the speed of 120 km/h, loaded or empty. As the wagon manufacturer Altaivagon has been granted approval for the Type 13-2114-11 container flat wagon design with 18-2145 bogies, TransContainer prepares to use this new type of container wagons on the Moscow – St. Petersburg route.

The approval and the upcoming production are the result of collaboration with Russian Railways (RZD). The modelling and projecting went smoothly – only minor changes in the braking system were required to reach the new speed, Altaivagon reports. Ultimately, this is one more important step towards the reduction of transit time and maintenance costs.

The transit time development of FELB's railing service between Asia and Europe improved gradually from 26 days to 22 days in 2010; from 22 days to 20 days in 2012 and from 16 days to 14 days in 2014. With the arrival of the 120 km/h wagon in Russia, FELB will be able to reach a transit time of only 10 days in the nearest future.

FELB

The future?
未来会如何？



UIRR
INTERNATIONAL UNION
FOR ROAD-RAIL
COMBINED TRANSPORT

THANKYOU
谢谢

For your attention
您的关注！