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Workshop “Potentials for Low Carbon Transport Development in China –
Scenario Analyses and Promising Measures”
“中国低碳交通发展潜力 - 情景分析和减排措施” 工作讨论会

Policies and measures for freight transport 货运政策与措施

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Content 内容

1. Impact categories of GHG reduction measures for freight transport
货运温室气体减排措施影响范畴
2. Exemplary measures in detail
具体示范性措施
3. Summary
总结

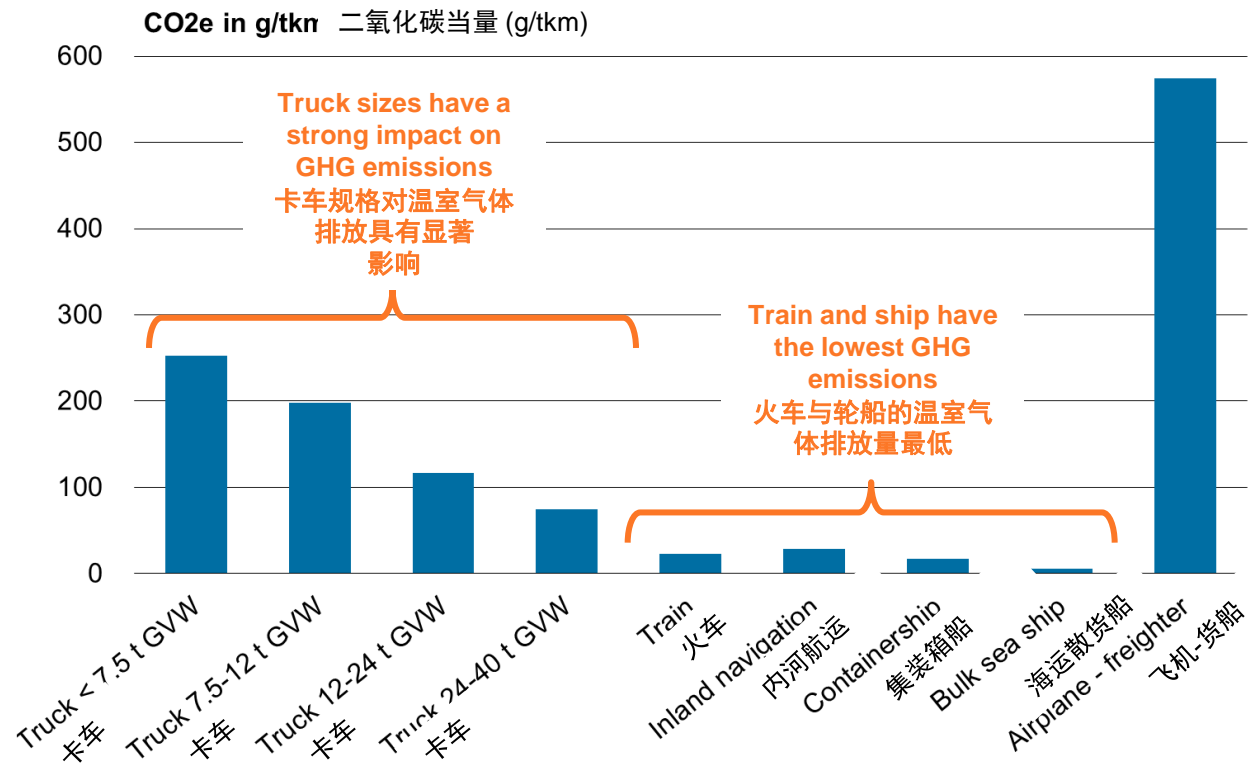


GHG emissions (calculated as CO₂ equivalents) of different freight transport modes in Europe 2010

欧洲 2010 年不同货运模式的温室气体排放情况（以二氧化碳当量为计算单位）

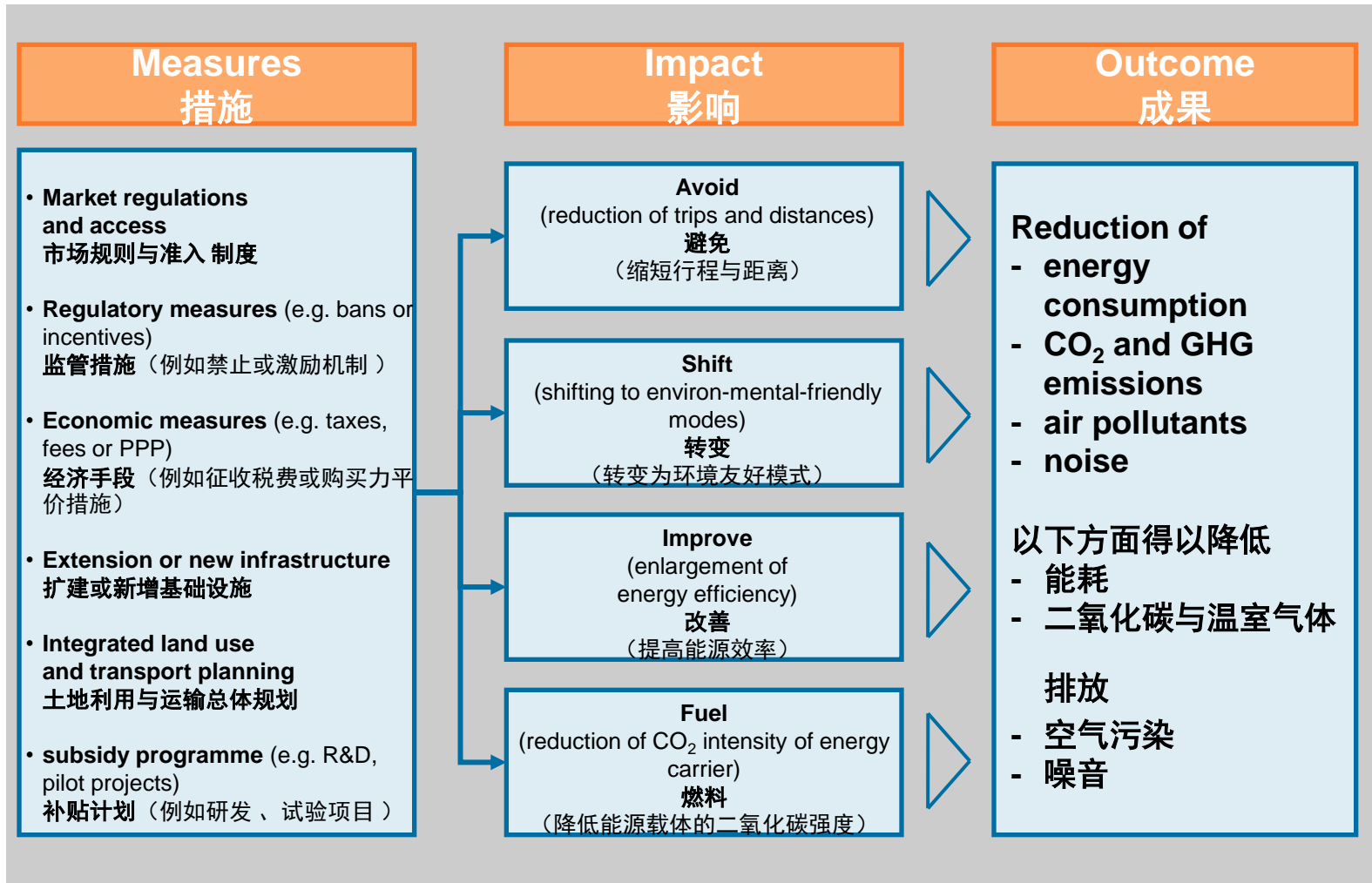


Environmental Impact
环境影响



Measures and their impact in the freight transport sector

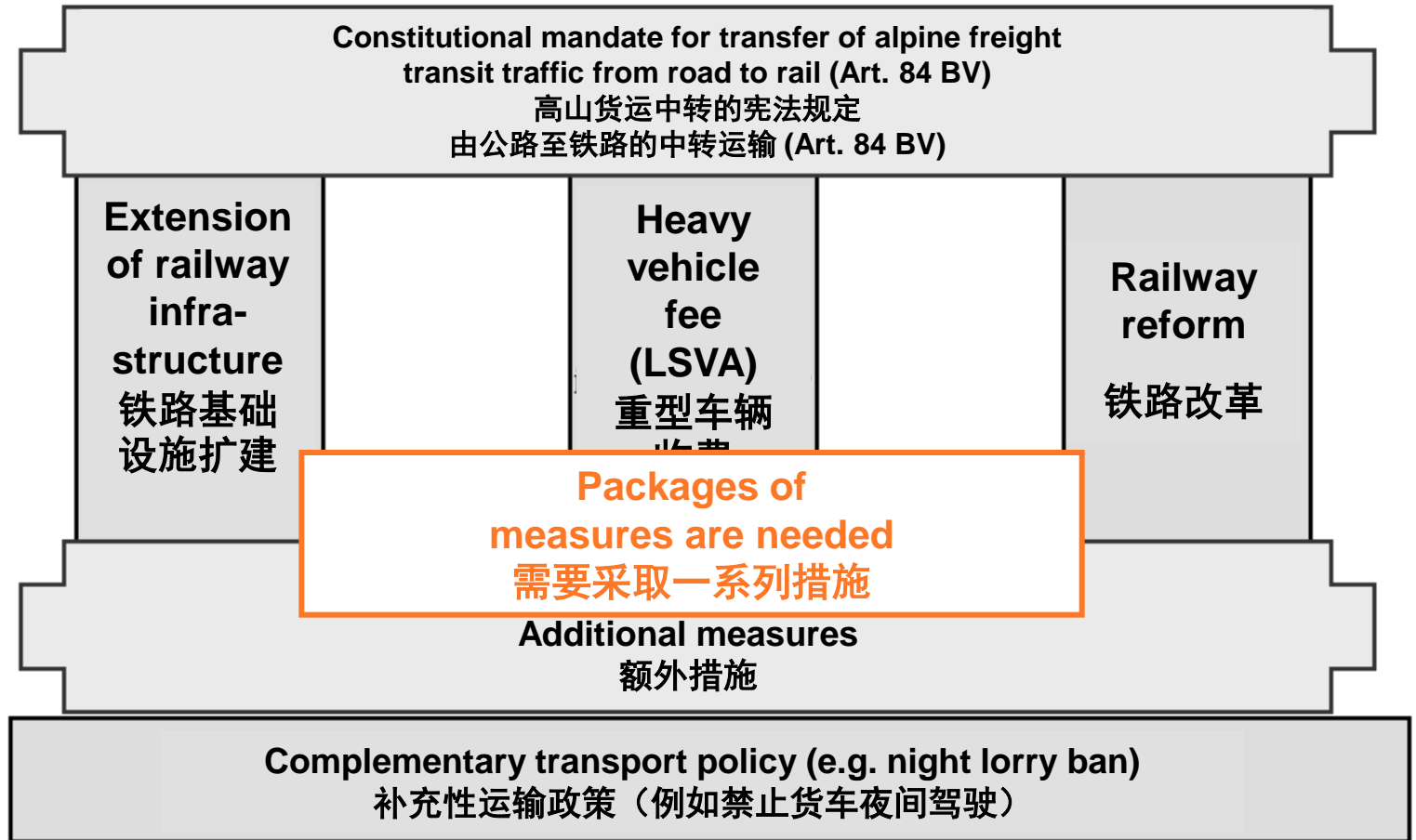
货运业措施及其影响



Impact categories 影响范畴

Basic elements of the heavy goods transport policy in Switzerland

瑞士重型货物运输政策的基本要素



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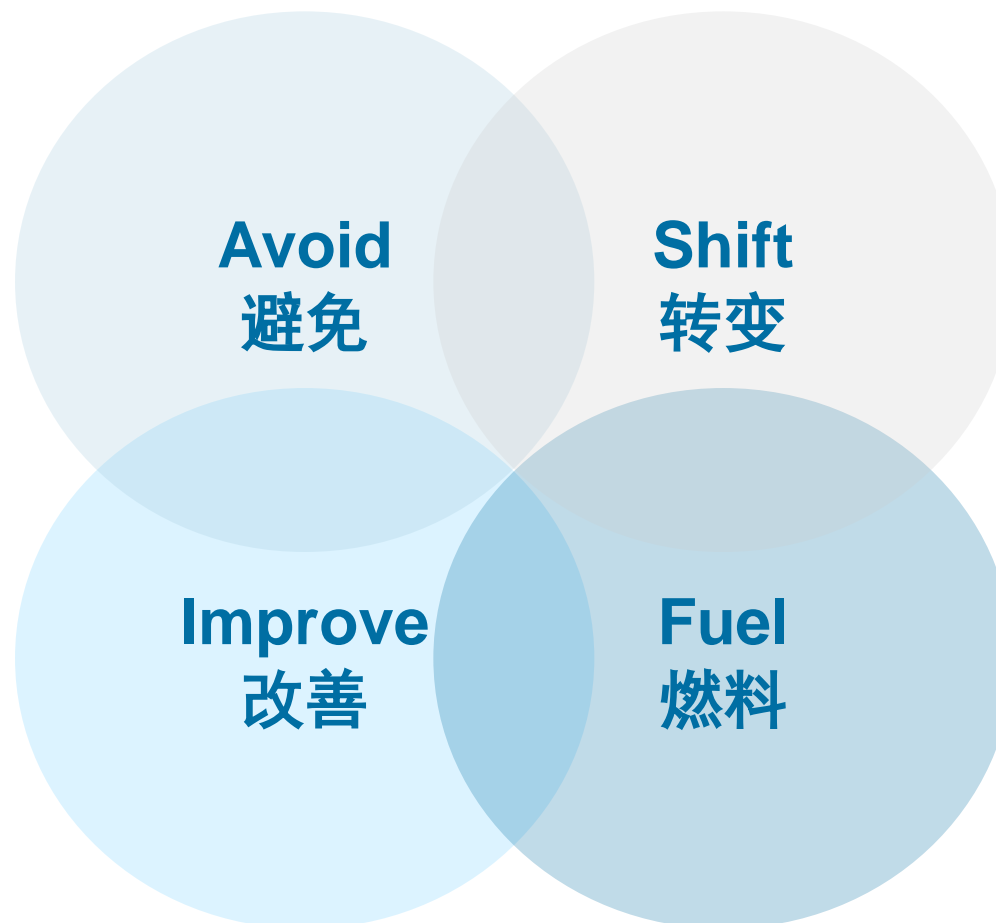


Measures in detail 具体措施

Impact categories of GHG reduction measures

for freight transport

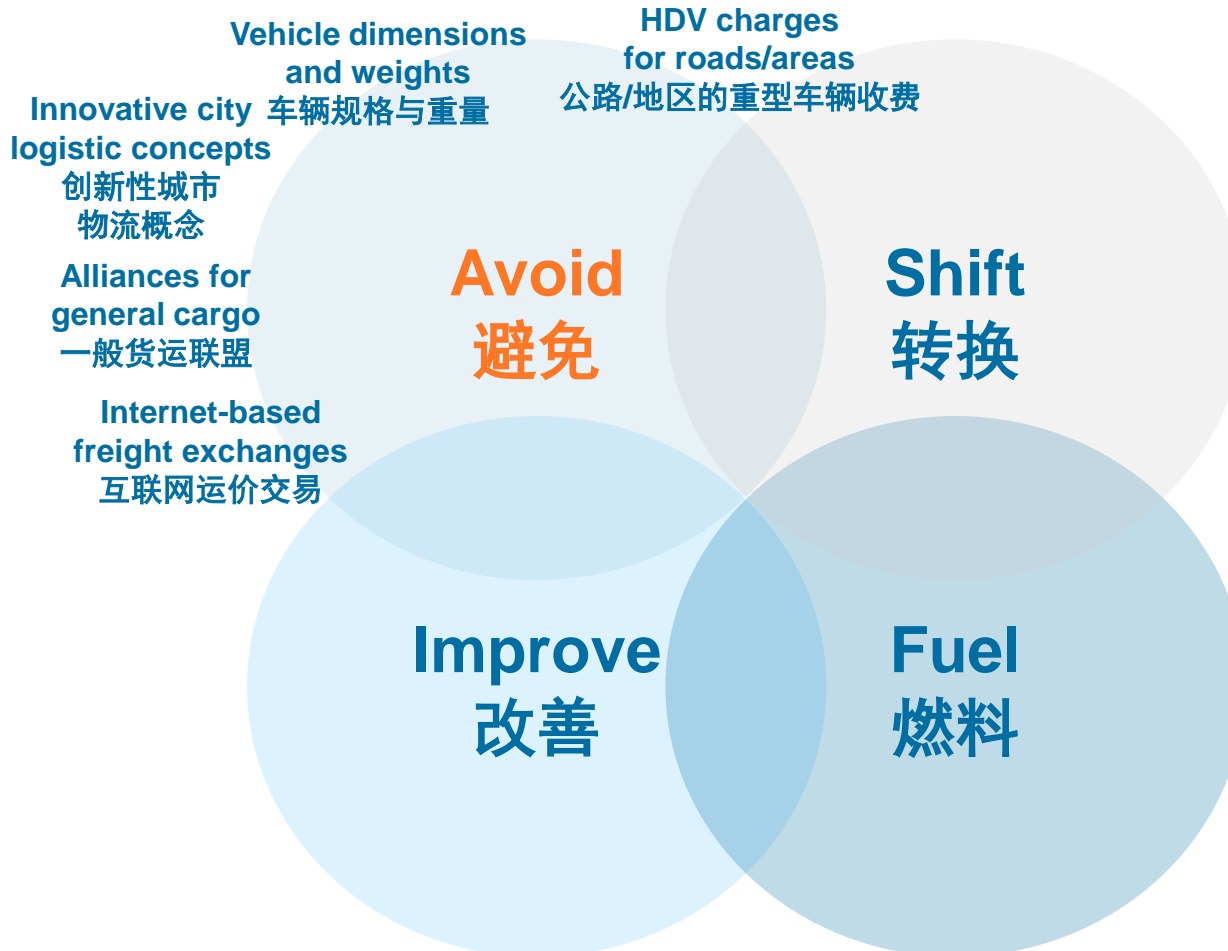
货运温室气体减排措施影响范畴



Measures in detail 具体措施

Overview of exemplary measures to avoid GHG emissions of freight transport

避免货运温室气体排放的示范性措施概述



Measures in detail 具体措施

Example for avoid: HDV charges
for roads or areas

公路或地区重型车辆收费



Avoid
避免

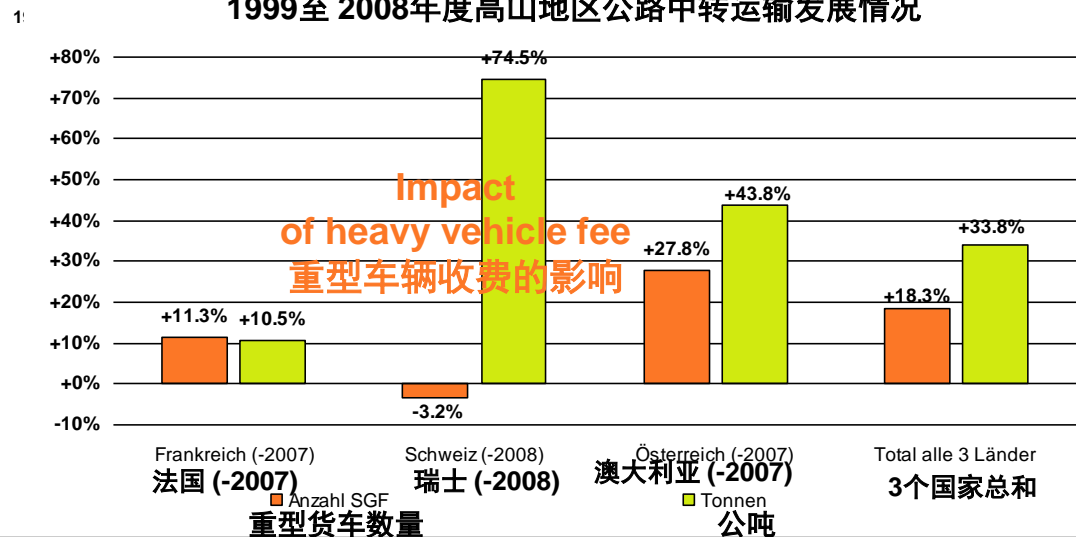
Heavy vehicle fee in Switzerland (LSVA)

瑞士重型车辆收费 (LSVA)

- Fee considers external cost of road transport 收费考虑到公路运输的外部成本
- Fee is based on km and gross vehicle weight 收费基于公里数和车辆总重

Development of alpine transit freight traffic by road between 1999 and 2008

1999至2008年度高山地区公路中转运输发展情况



Example for avoid: Enhancement of vehicle dimensions and weights 避免示例：优化车辆规格与重量



**Avoid
避免**

**Double-decker trailer
双层拖车**



**Longer trucks (25 m)
加长卡车 (25 m)**



**Double stack container trains
双层集装箱列车**



**Increase of train length
增大列车长度**



Measures in detail 具体措施

Example for avoid: Innovative city logistic concepts

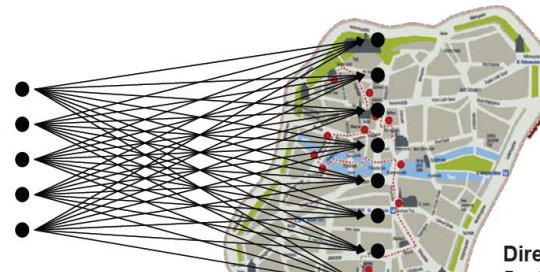
避免示例：创新性城市物流概念



**Avoid
避免**

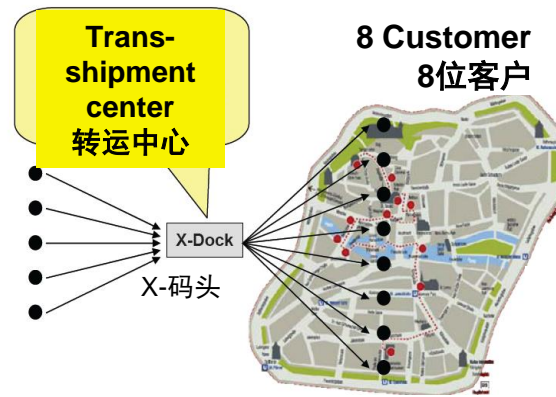
Pilot project in Nuremberg (Germany): Beverage logistics 纽伦堡（德国）试点项目：饮料物流

**Today
现今**



Direct supply:
 $5 \times 8 = 40$ relationships
直接供应：
 $5 \times 8 = 40$ 个关系

**Future
未来**



**8 Customer
8位客户**

⇒ **Bundling effect
reduce VKT by 32%!**
⇒ **捆绑效应将行车公里数降低32%!**

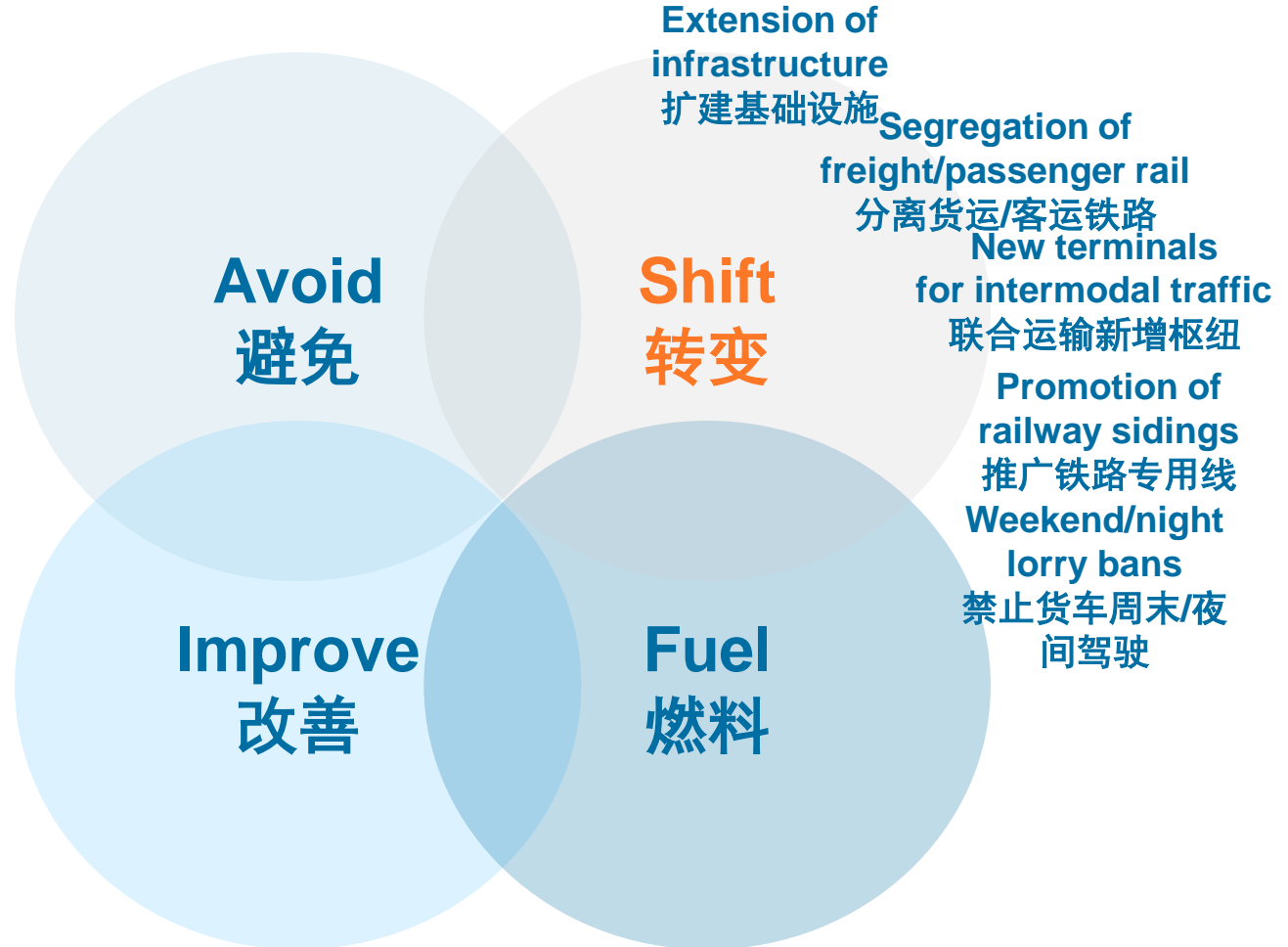
Supply via x-Dock:
 $5 + 8 = 13$ relationships
通过X-码头供应：
 $5 + 8 = 13$ 个关系

Measures in detail 具体措施

Overview of different measures to shift freight

from road to rail and ship

由公路到铁路和轮船的中转运输不同措施概述



Measures in detail 具体措施

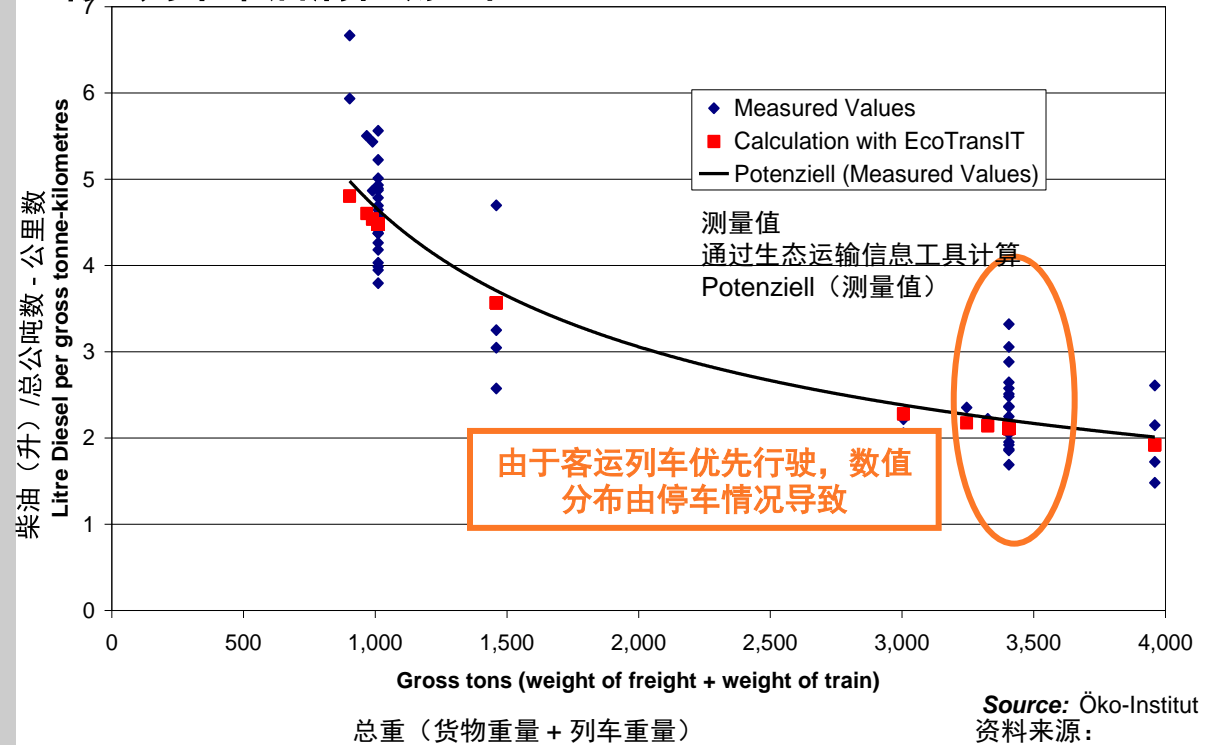
Example for shift: Segregation of freight and passenger railway network

转变示例：分离货运/客运铁路系统



Shift
转变

Measured diesel consumption for block train (one relation):
编组列车柴油消耗测量值：



Measures in detail 具体措施

Example for shift: New terminals and for intermodal traffic and promotion of railway sidings

转变示例：联合运输新增枢纽与推广铁路专用线

Shift
转变

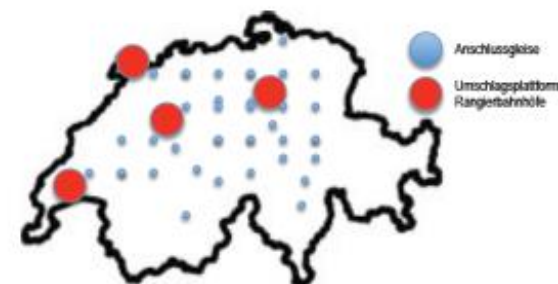
Development of (intermodal) freight distribution centres (GVZ) in Germany

德国（联合运输）货运配送中心 (GVZ) 的发展情况



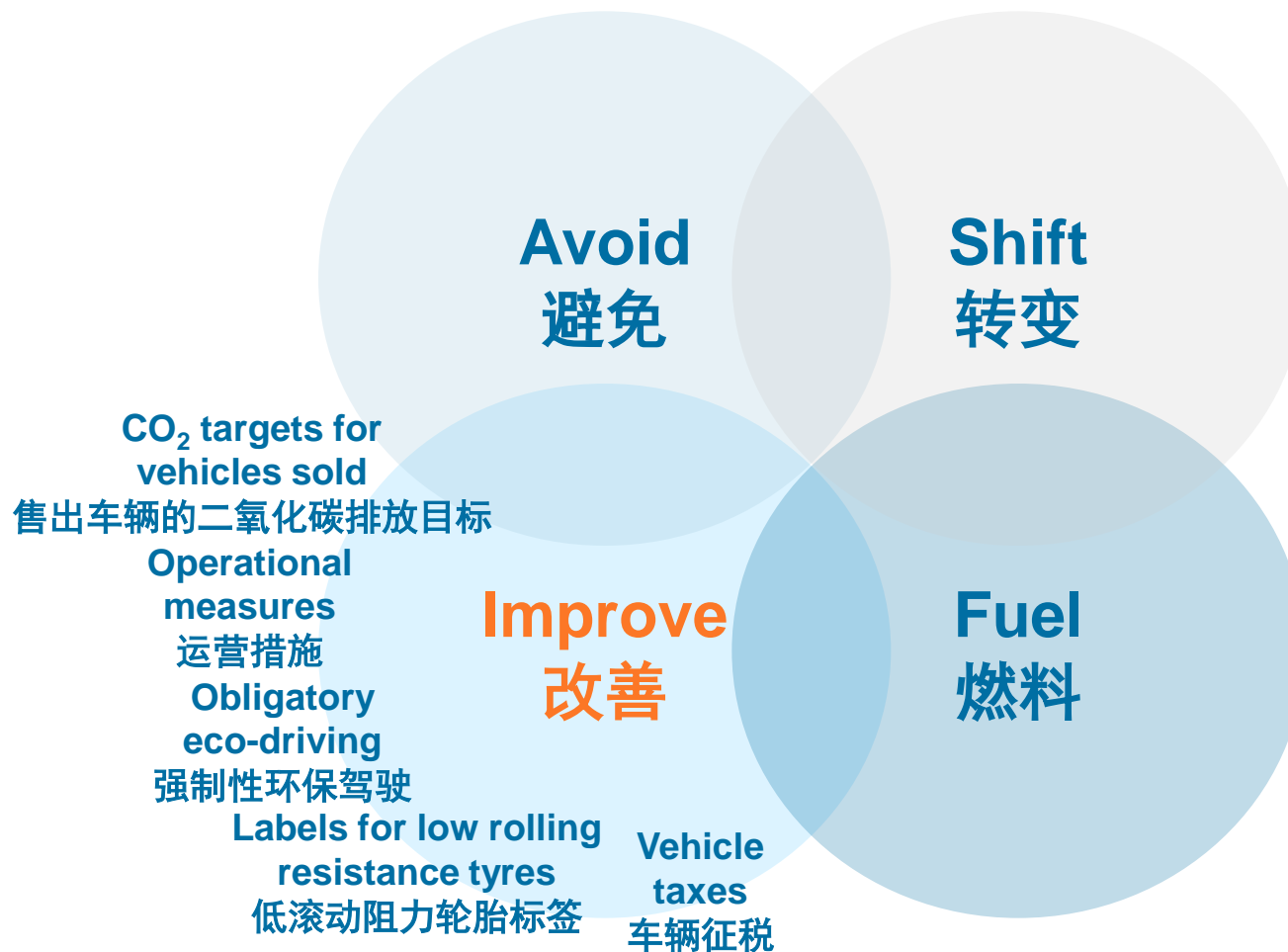
Development of intermodal terminals (red) and railway siding (blue) in Switzerland

瑞士联合运输新增枢纽（红色）与铁路专用线（蓝色）的发展情况



Exemplary measures to improve energy efficiency and reduce GHG emissions of freight transport

能耗改善以及货运温室气体减排示范性措施



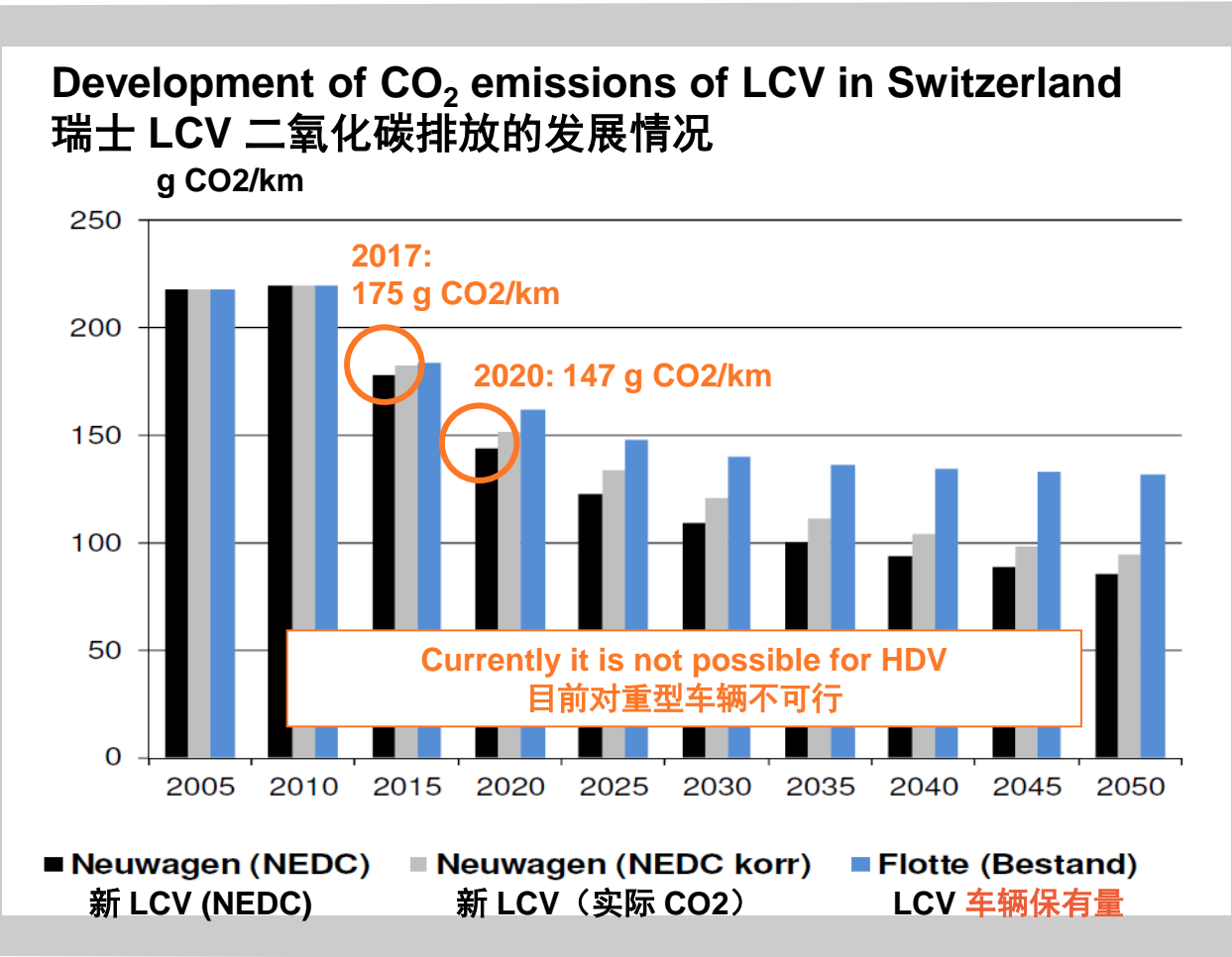
Measures in detail 具体措施

Example for improve: CO₂ emission targets for light commercial vehicles (LCV) newly sold

改善示例：新售出的轻型商用车 (LCV) 二氧化碳排放目标



Improve
改善



Measures in detail 具体措施

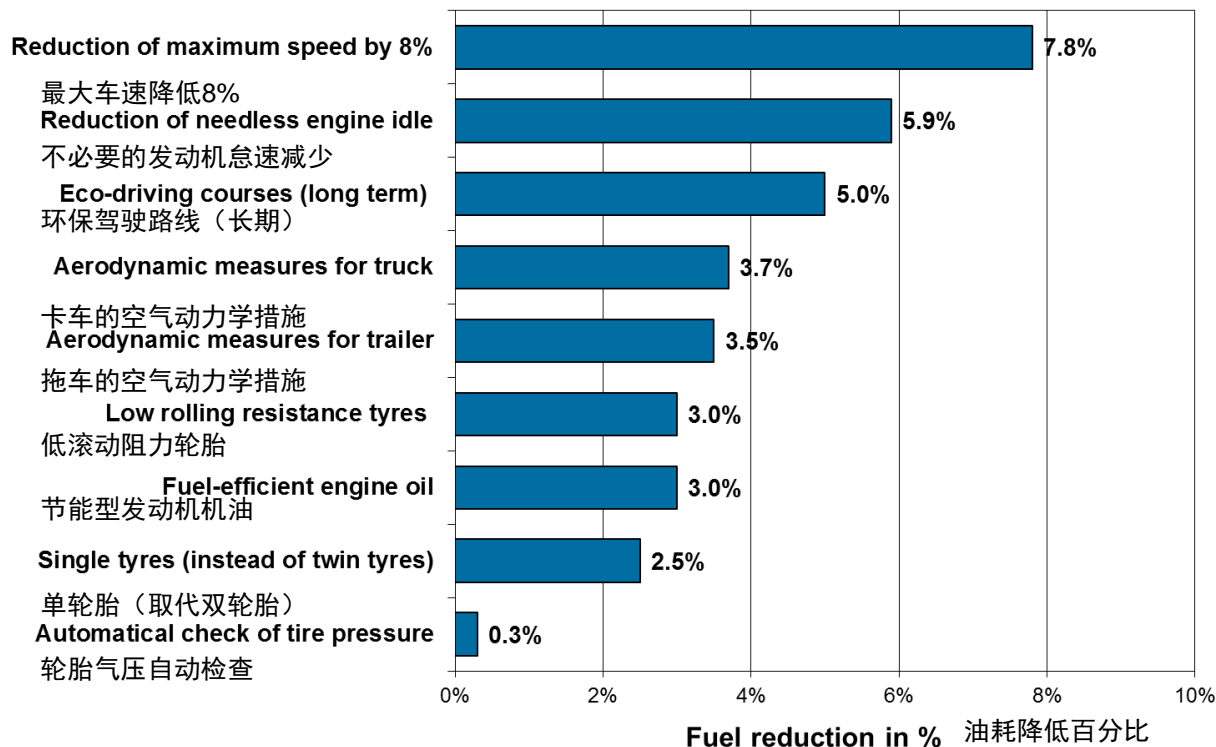
Example for improve: Operational measures by companies (e.g. due to increasing fuel prices)

改善示例：企业运营措施（例如由于燃料价格上升）



Improve
改进

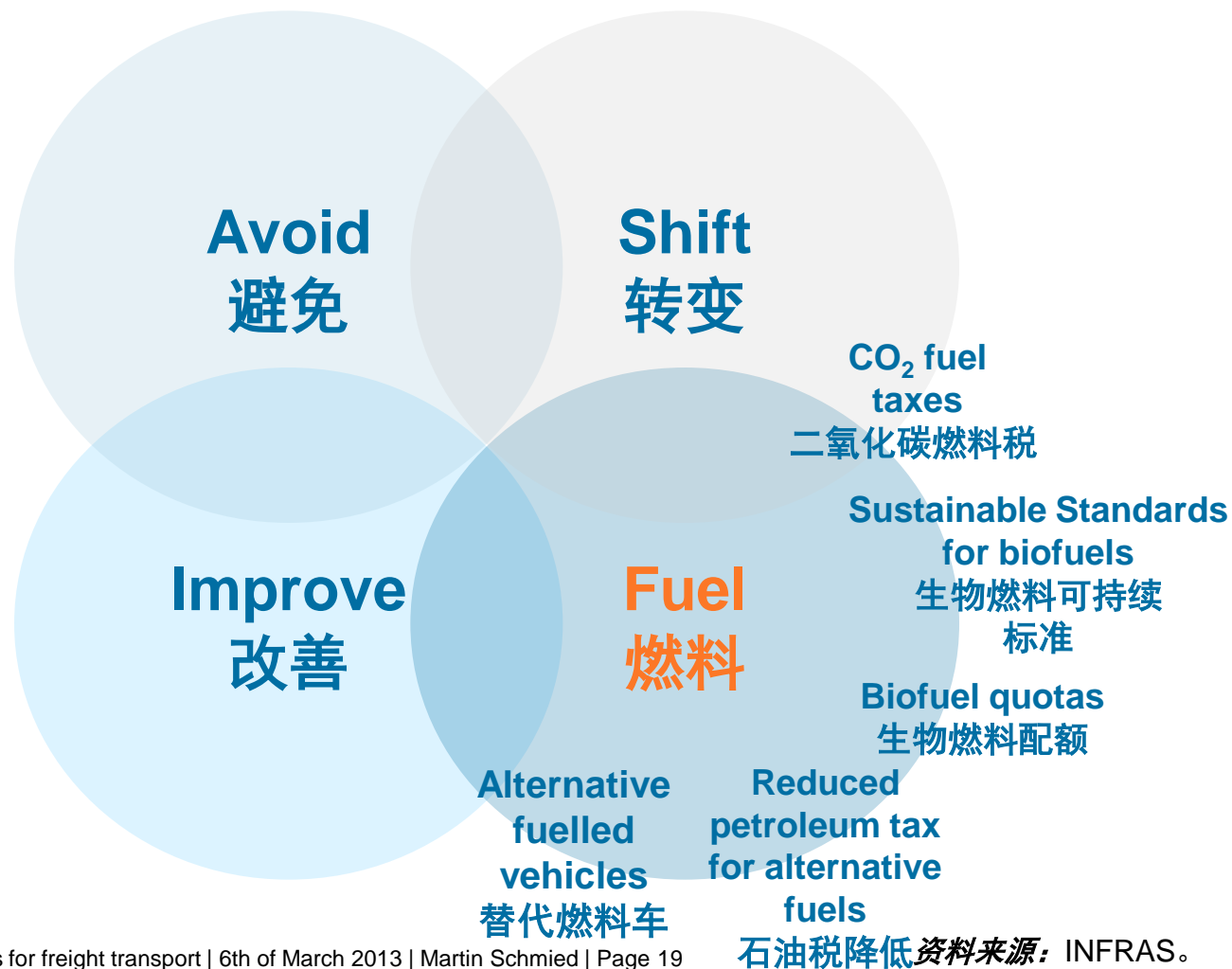
Reduction potentials of selected measures in Germany 德国选定措施降低潜力



Measures in detail 具体措施

Exemplary measures to reduce the CO₂ content of fuels

燃料中二氧化碳含量降低的示范性措施



Measures in detail 具体措施

Example for fuel: Promotion of alternative fuelled vehicles

燃料示例：推广替代燃料车

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Fuel
燃料

Examples of electric vehicles in the freight sector

货运业电动车辆示例

Hybrid truck:

混合动力卡车:



Battery electric vehicle:

纯电动车辆:



Trolley trucks:

电动卡车:

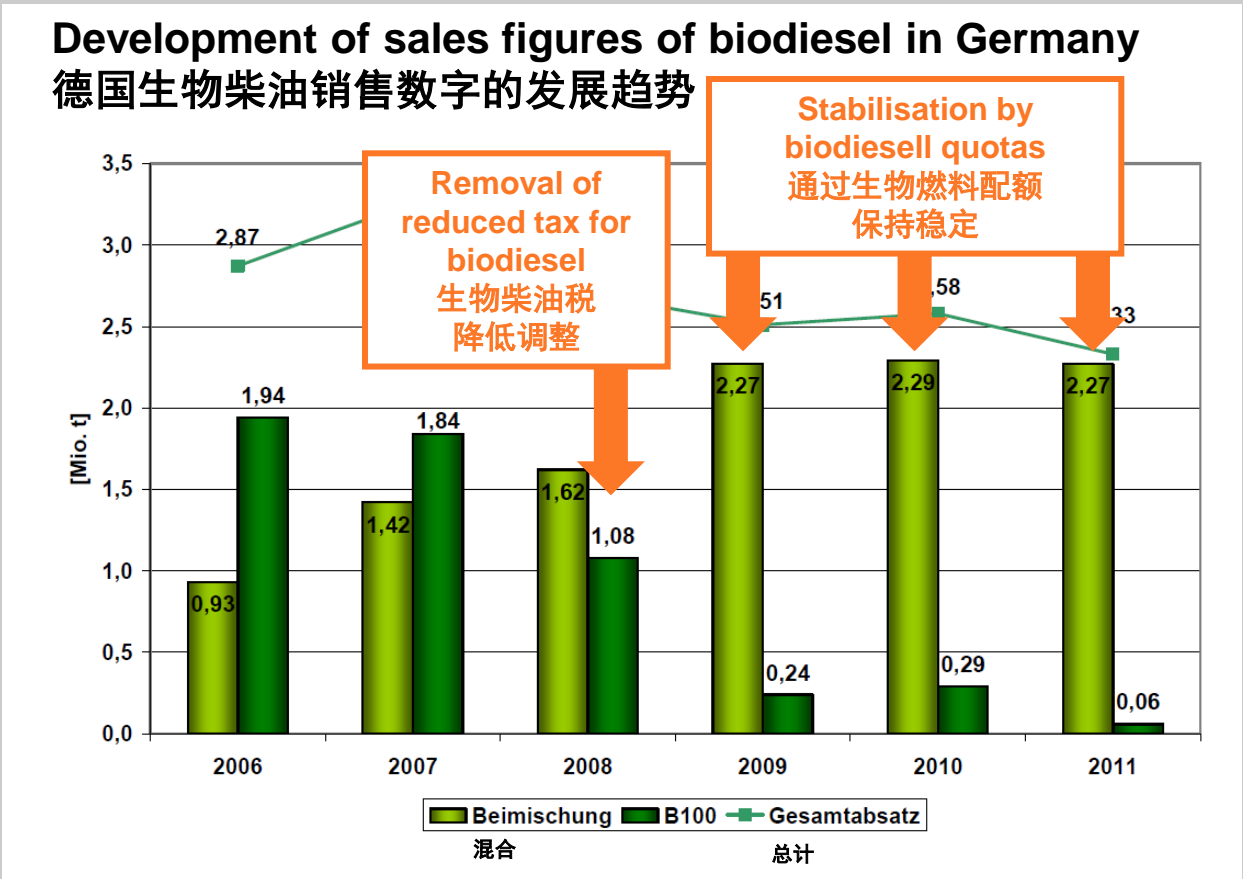


Example for fuel: Reduced petroleum tax for biofuels and biofuel quotas

燃料示例：燃料与生物燃料的石油税降低



Fuel
燃料



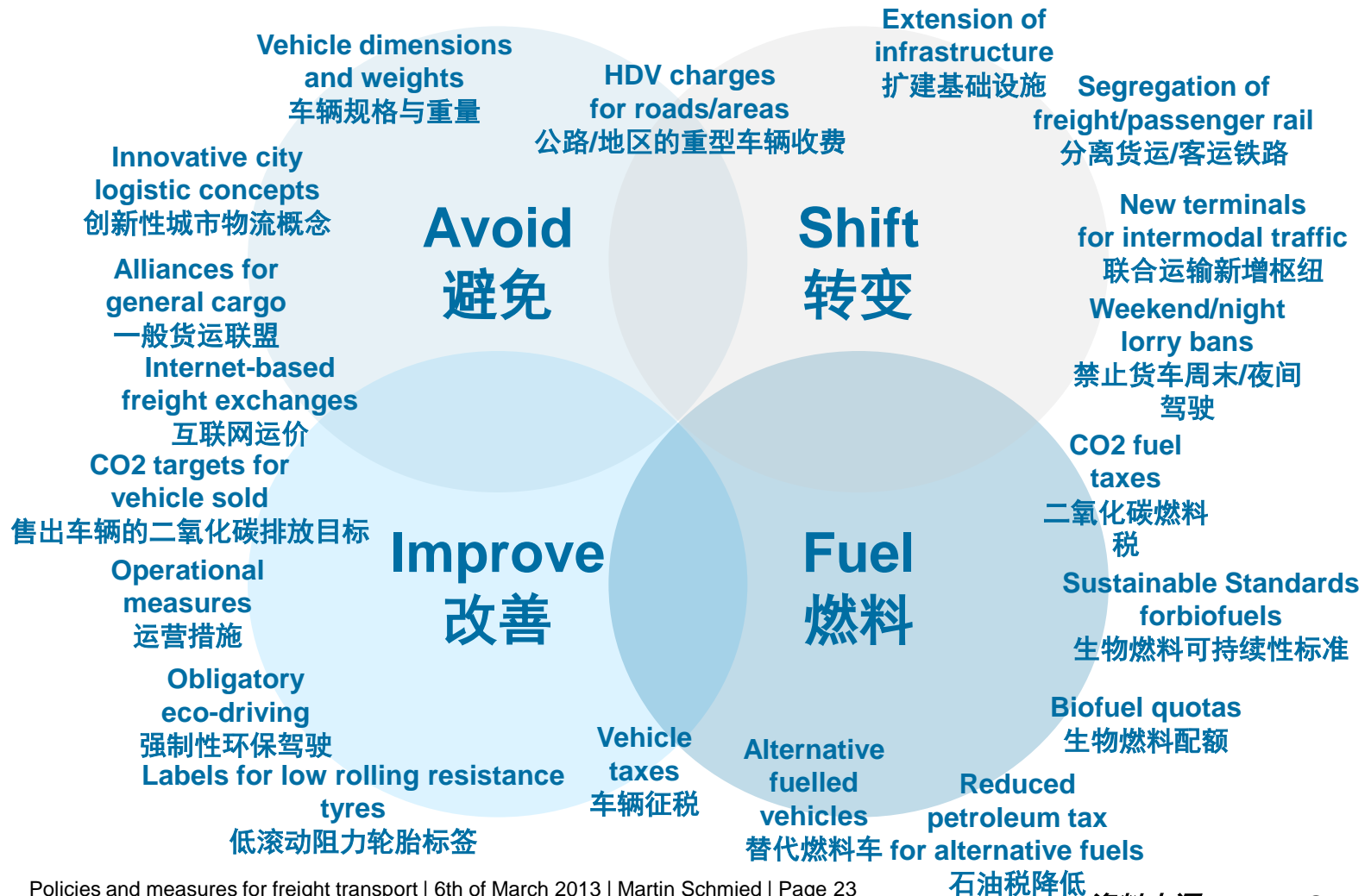
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Overview of selected measures to avoid and reduce GHG emissions of freight transport

货运温室气体避免与减排选定措施概述



Measures to avoid or reduce GHG emissions in the freight transport sector: conclusions

货运业温室气体避免与减排措施：结论

Summary 总结

- In Europe government and cities can only indirectly influence the environmental impacts of freight transport by measures
在欧洲，政府与市政机构只能通过相应措施对货运环境影响施加间接影响
- In principle, a comprehensive set of measures are available for low carbon freight transport
原则上，有一系列低碳货运综合措施可供选用
- The most crucial point is to find the optimal package of measures to ensure the best impact:
 - combination of measures
 - intenseness of measures最关键的是寻找优化的配套措施，确保产生最佳影响：
 - 措施组合
 - 措施强度
- Quantification of the assessment of the GHG emission reduction measures is partially demanding (e.g. for infrastructure measures or logistic concepts)
对温室气体减排措施评估量化有部分要求（例如基础设施措施或物流概念）
- Companies play an important role for green solutions
企业对绿色解决方案起到重要作用

感谢您的关注

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