

# CNL's Implementation Projects for e-Trucks

A3PS Conference

Max Schachinger, Vienna | November 10, 2017



### **Challenge: reality of warehouse-labour**









### **Reality of trucking**



## AUFFANGLAGER AUTOBAH

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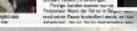
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Unwürdig hausen die Kollegen aus Osteuropa zwischen den Lkw.



## **CO2, NOx, Particulate Matter and Noise**













## **Challenge: Climate change**



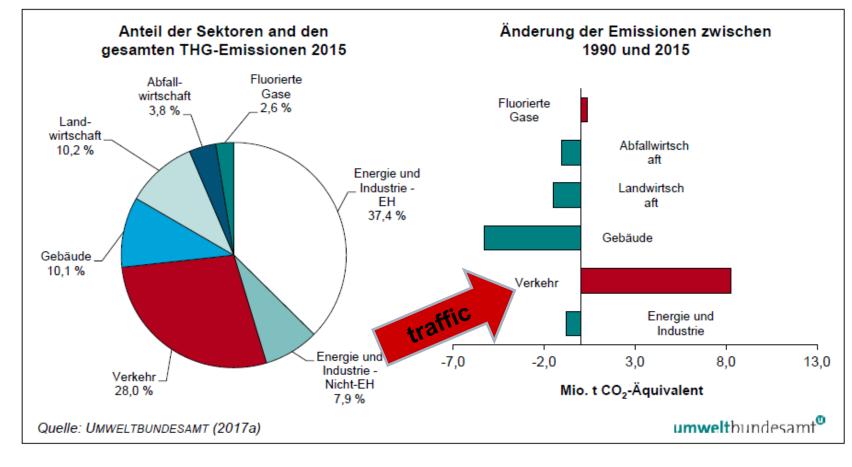


**Climate change - reduction of CO2** 

traffic as main problem

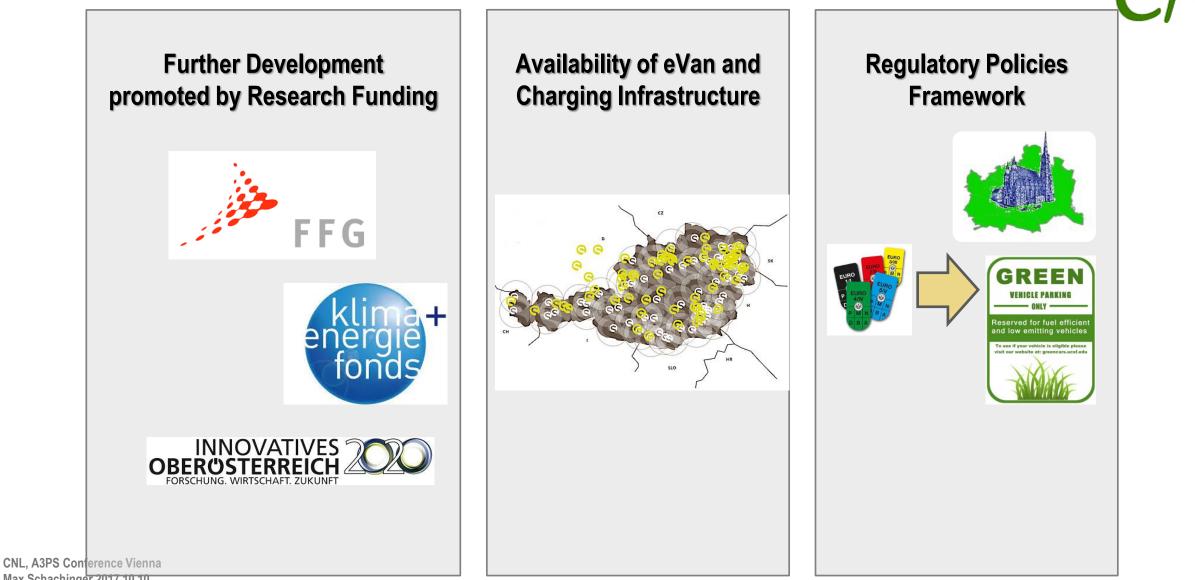
beside CO2 also NOx and PM/Particulate Matter

transport sector main cause of CO2, trend still going upwards



Austrian greenhouse gas emissions per sector and difference between 1990 and 2015





Max Schachinger 2017 10 10

## **Conception of CNL**



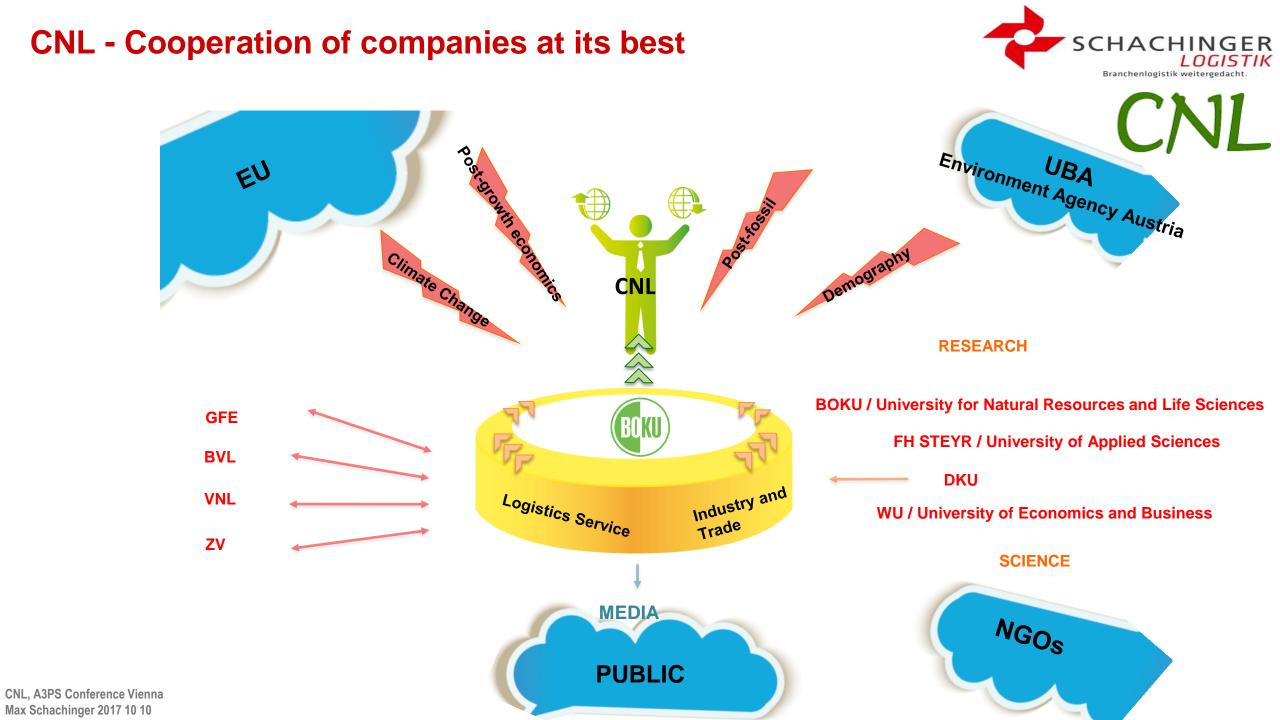
Austrian Federal Minister Doris Bures, Max Schachinger



CNL

First publically elected 'Logistics Manager of the year'

Award received by federal minister, 28th of November, 2012



## **CNL - Cooperation of companies at its best**







#### **Main Focus**

- Electric Commercial Vehicles
- Sustainable City Logistics
- Sustainable Warehousing

#### **Counselor Werner Müller**

"Unique in Europe, the cooperation of logistics, industry, trade and university should serve as a hub to promote a sustainable development of the freight transport and logistics sector." cover story "Verkehr", 2014 03 28



SCHACHIN

Branchenlogistik weit

### We make it real: Signing of the MoU at Steyr, February 2017





## **MAN eTruck specification for CNL**





#### 8 identical truck chassis, based on N44 with different bodies and 1 tractor, based on N28

Quantity	Variant	Configuratio n	Wheelbase (mm)	Lift Gate	Cooling	Range
4 N 44		Refrigerated LL Steered trailing axle	4725	Standard	HV- cooling	Up to 200 km
3 N 44		Swap bridge LL Steered trailing axle	4725	Under fold-able		Up to 200 km
1 N 44	GIETURĂNIKIE ZIENTITRAILIE	Beverage box LL Steered trailing axle	4725	Normal		Up to 200 km
1 N 28		Tractor LL	3575			Up to 130 km

#### Technology in detail

- Base trucks: MAN TGM 26.340 6x2-4 LL (N44) MAN TGM 18.340 4x2 LL (N28)
- C- Cabin
- Full air suspension
- Tires 315/ 70 R 22,5
- N44: zGG 26.000 kg (Solo truck only)
- N28: zGG 18.000 kg, zZGG 32.000 kg
- Engine power: Peak power 245 kW, Continuous power 195 kW
- Torque: Max toque: 3400 Nm, Continuous torwue:2060 Nm

## Gaining experience today for clean logistics tomorrow



- 9 Companies
- 4 different MAN eTruck configurations
- 3 major cities in Austria
- Operation in regular routes
  Included in daily operation

#### Gaining experience

- RIO boxes as standard for data tracking
- daily tracking and evaluation
- Efficiency optimization
- Cost optimization



## Charging



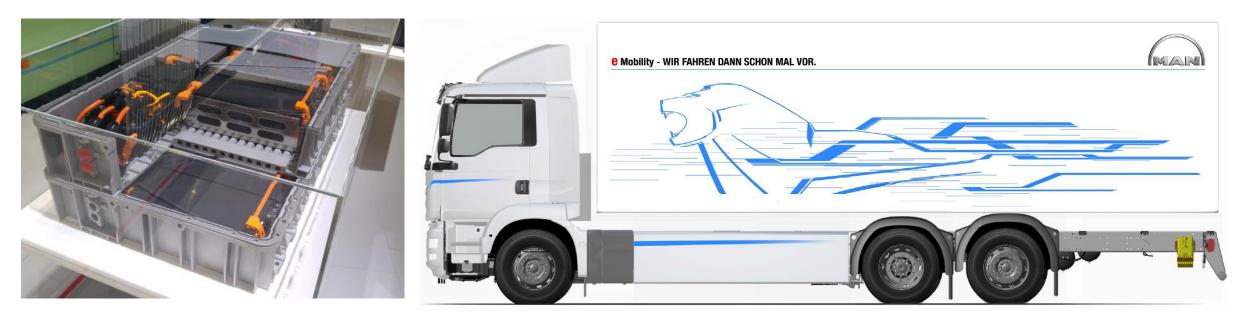


#### **AC-Charging**

- Up to 44 kW
- Charging time for 100 km app. 2,5 hours
- Vehicle interface: CCS Type 2

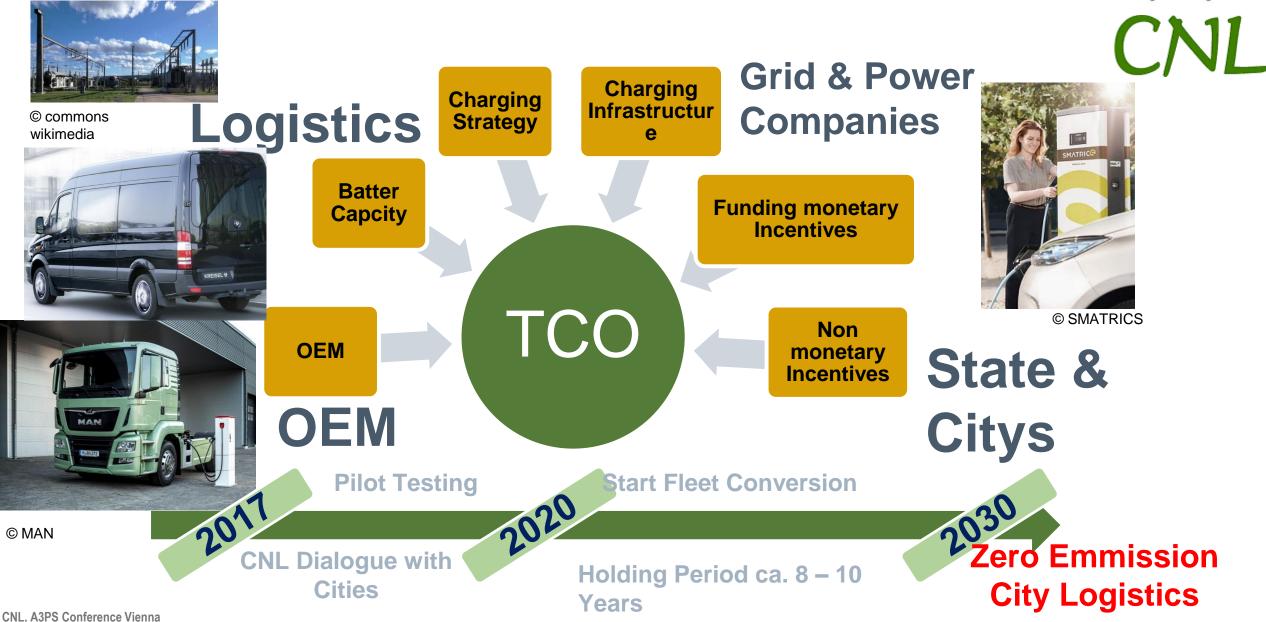
#### **DC-Charging**

- Up to 150 kW
- Charging time for 100 km app. 45 min
- Vehicle interface: CCS Type 2



## **Present and future TCO of eVehicles**





#### **CNL - Council für nachhaltige Logistik / Council for Sustainable Logistics**

- Within CNL, participating companies get informed about newest developments, innovations and technology for sustainable logistics
- Derivation of ecological, social, political and legal as well as economical aspects
- Every quarter meetings of participating companies including speeches, lectures and papers
- Opportunity for exchange and networking



SCHAC

Branchenlogistik



SCHACHINGER LOGISTIK Branchenlogistik weitergedacht.

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CNL





