



# Zero Emission (ZE) zones in the Netherlands

## A Roadmap for (medium sized) cities

### Polis conference

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# 1 Introduction and setting the scene

Zero Emission (ZE) zones in the Netherlands

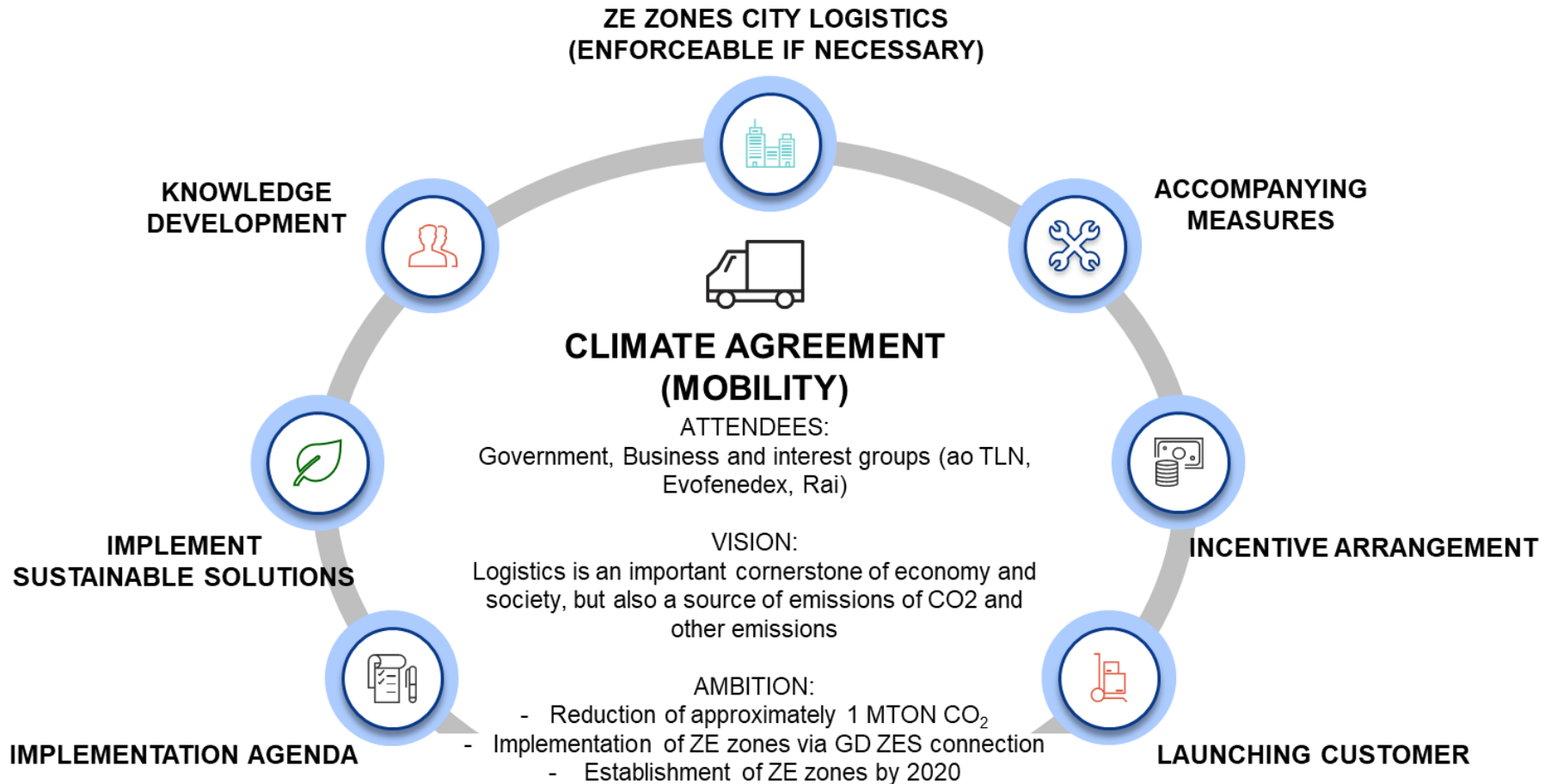
# Introduction & setting the scene

- **Challenge:** realize 1 MT CO<sub>2</sub>-reduction from transport a year
- **Ambition:** to implement 30 to 40 “medium sized” Zero Emission (ZE) zones for freight and commercial vehicles in city centers by 2025.
- Several cities already have a “Low Emission Zone” (LEZ) or “Ultra LEZ” and these zones will be harmonized from 2020.
- A zone is a restrictive measure (stick) and should be combined with facilitative measures (carrot)
- Ambition only viable (with support) when certain criteria are met because of “reality level energy transition”
- Therefore BCI developed a roadmap for public authorities and is specialised in Cost-Benefit-Analysis as means for substantiated decision making.



toegestaan  
nul-emissie

# The Dutch “Poldermodel” approach: Dutch Climate Agreement sustainable transport





## 2 Roadmap BCI

How: A Roadmap for implementing Zero Emission zones

# Roadmap Zero Emission zone



## **Several routes, but steps are:**

1. Formulate ambition
2. Follow (national) guidelines
3. Involve and activate stakeholders
4. Conduct impact assessment (CBA)
5. Draft an Implementation plan
6. Decision making by 2020
7. Implementation 1/1/2025



# Key success factors for Zero Emission zones





# In depth example: determination scope implementation



Target Groups	<ul style="list-style-type: none"><li>• The starting point is a general measure which applies to all</li><li>• In other words: Zero Emission in 2025 for all delivery vans and trucks (via vehicle category)</li><li>• Preferably no difference between private / commercial ownership / use of delivery vans</li></ul>
Location / area / zone	<ul style="list-style-type: none"><li>• Already defined pedestrian areas spatial starting point, preferably with the possibility to "dynamize", and so in the future, if desired, Z.E. expanding zone (eg expansion to other areas in Parkstad region)</li></ul>
Zero Emission Feasible and Affordable	<ul style="list-style-type: none"><li>• Z.E. driving must be achievable and affordable within a certain proportion</li><li>• There is resolving (innovative) capacity at companies, but there are concerns about retail, SMEs and entrepreneurs</li><li>• Looking forward to concrete fiscal and / or subsidy from government</li></ul>
Enforcement	<ul style="list-style-type: none"><li>• Preferred enforcement via ANPR cameras</li><li>• The government must arrange for recognition of foreign registration plates (bilateral and via EC)</li></ul>
Exceptions	<ul style="list-style-type: none"><li>• Adapt as much as possible to national frameworks, but also retain space to apply local customization from the board, eg hardship clause for individual cases</li><li>• The aim is to ensure minimal regulatory pressure for municipalities (national counter)</li></ul>
Involvement stakeholders	<ul style="list-style-type: none"><li>• Support from stakeholders can be organized into more than just climate goals, it's about creating a liveable, attractive, future-center field. The aim is not only cleaner / more durable, but also a better living environment</li></ul>
Zero Emission Stimulating & Facilitating	<ul style="list-style-type: none"><li>• Need for accompanying policy</li><li>• Privileges for ZE vehicles by offering extended time window (and/or limitation conventional transport)</li></ul>
Coordination in regional and central government	<ul style="list-style-type: none"><li>• Regional cooperation and harmonize as much as possible (eg target groups, exemptions, enforcement). Naturally, in coordination with the government</li></ul>
Communication	<ul style="list-style-type: none"><li>• Carrying out fundamental decision, and create clarity as early as possible, so that companies and entrepreneurs know what they can expect from the government in 4 to 5 years, and there can anticipate</li><li>• Ensure top-regional awareness of Z.E. (signage / campaign), the Government must participate in this</li></ul>



# 3 Impact ZE Zone

Is it really viable? What will be the effects?

voertuigcategorie ↓	jaar →	Nieuwverkoppen			Totale vloot		
		2018	2025	2030	2018	2025	2030
<b>Personenauto</b>							
Ambitie Nederland		10% in 2018	50%	100%	-	6%	17%
Huidig aandeel in NL (RVO & CBS)		4,60%	-	-	3%	-	-
ACEA (2018, geheel Europa)		1,50%	3,90%	5,40%	-	-	-
ING (2017)		-	20%	60%	-	-	-
Sparkcity & TU/e (2018)		-	42%	88%	-	16%	33%
Bloomberg NEF (Nieuwverkoop=EU, totale vloot = g)		-	10%	30%	-	2%	7%
Maarten Steinbuch (2018)		-	-	-	-	11%	-
<b>AANNAME BCI (2018)</b>		5%	20%	60%	3%	6%	20%
<b>Bestelauto</b>							
Camecon (2018, Europa)		-	27%	50%	-	8%	21%
Ecorys (2016)		-	-	-	-	2-15%	11-41%
CE Delt & TNO (2018)		0,5%	max 20%	-	-	-	max 22%
<b>AANNAME BCI (2018)</b>		-	25%	50%	-	10%	30%
<b>Vrachtauto</b>							
McKinsey (2017, lichte vrachtauto)		-	10-13%	25-30%	-	-	-
McKinsey (2017, middelzware vrachtauto)		-	5-10%	20-30%	-	-	-
McKinsey (2017, zware vrachtauto)		-	1%	2-5%	-	-	-
Camecon (2018, lichte vrachtauto)		-	17%	30%	-	3%	10%
Camecon (2018, zware vrachtauto)		-	10%	19%	-	4%	9%
<b>AANNAME BCI (2018)</b>		-	15%	25%	-	4%	10%

# Context: how to...

- Buck Consultants International (BCI) advises more than 15 municipalities in various stages, from designing roadmaps for Zero Emission City Logistics
- With officials, administrators and stakeholders there is a need for understanding social and economic effects of a Zero Emission Zone
- Despite the administrative urgency from coalition agreements and the national Climate Agreement to make mobility more sustainable and to change mobility, people want to have a good view of the effects for the municipality, transport sector and local businesses when making decisions. There are questions such as:

*What are the costs for the municipality?*

*What are the costs for entrepreneurs & companies? Can they experience the mobility transition??*



*To what extent does the Zero Emission zone contribute to our climate target?*



*Leads the Zero Emission zone also to an improvement of the residential climate in the city center?*

*Selection of some common questions from councilors and officials to BCI*

# Several type of effects when implementing ZE zones



■ : direct costs and investments

■ : main social benefits

■ : (possible) derivative effects

# CBA study shows ‘social’ return on investment

## Example of CBA result for implementation of ZE zone in a Dutch medium sized city

Overview Costs and Benefits	Net Present Value 2019	Effect (reference year 2025)
<b>Public sector investment</b>	<b>-5,4</b>	
● Investment costs	-0,7	€ 742K investment in implementing Zero Emission zone
● Operational costs	-4,7	€ 306K per annum for communication, enforcement, maintenance
<b>Business sector investment</b>	<b>-1,0</b>	
● Fleet investment	-1,0	Extra cost per kilometer, TCO-disadvantage E-trucks 2025
<b>Collective benefits</b>	<b>13,8</b>	
● Climate	7,6	Extra emission reduction: 7,0 Kton CO <sub>2</sub> per annum in 2025
● Air quality improvement	6,2	Extra emission reduction: 16.000 kg NO <sub>x</sub> & 750 kg PM p/a in 2025
<b>CBA ‘monetary’ result</b>	<b>7,4</b>	
<b>Impact Zero Emission zone on:</b>		
● Accessibility/Connectivity	Very limited	No significant impact on journey time thoroughfare traffic
● Living environment in the city	+	Clean and silent city logistics results in enhanced city experience
● Business Climate	+/-	Positive impact on business climate: more visitors, longer stay Risk of extra charge for city logistics in ZE zones to shop owners
● Innovation	++	Increased sense of urgency for smart logistics solutions



## 4 Q&A



# 5 Contacts



# Our expert team



**Marcel Michon**  
**Managing Partner**

Co-owner BCI, Member Advisory Group  
SPES, premium member Connekt

- Inspirator, connector, moderator
- Logistics & Freight Transport Specialist
- Strategic advisor



**Erik Lubberding**  
**Senior Consultant**

Contribution decision ZE zone in various  
cities (+10)

- Integral ZE specialist
- Cost-benefit analyst, environment manager, developer accompanying measures
- Project manager implementation ZE zone

More information

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