



E-mobility I – Clean Public Transport  
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# e-bus readiness indicator tool

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**Interreg  
Europe**



European Union | European Regional Development Fund



# e-bus readiness indicator tool

## OBJECTIVE

To compile a set of readiness indicators and create an easy-to-use tool to assist public and private stakeholders in assessing the present conditions of their region regarding the introduction of electric buses and the provision of related infrastructure.

- The tool was developed by e-Bussed Thematic Working Group 1: Drivers and Barriers
- Tested in three regions
- Development version available in eBussed website





# Defining readiness indicators

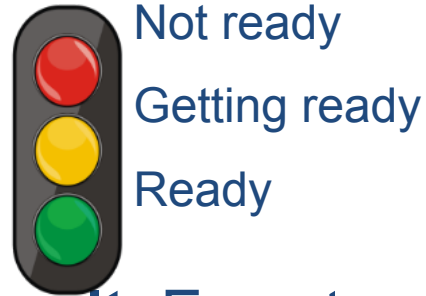
- Thematic working group analyzed success factors of e-mobility and defined 42 readiness indicators
- Work was based on evaluation on Drivers and Barriers performed earlier by the group
- Indicators categorized in five categories:
  1. Government policies and investment
  2. Charging infrastructure construction and operation / Energy Production & Distribution
  3. Business models and maintenance service system
  4. Consumer and other awareness education
  5. Operation scope and environmental benefits / Other features
- Not all indicators are relevant in every region – irrelevant indicators will should be disregarded when using the tool





# Developing the tool

- Readiness cannot be defined as yes or no  
→ Traffic light model utilized



**Result:** Easy-to-use responsive Excel sheet

## User inputs:

- Status of each indicator
- Details for justifying
- Stakeholders



# Readiness indicator tool



EASY FILTERING



## E-BUS READINESS INDICATOR TOOL

This tool was developed as part of eBussed Interreg Europe project. It is meant to assist public and private stakeholders in assessing the present conditions of their region with regard to the introduction of electric buses and the provision of related infrastructure. More information on the project website <https://www.interregeurope.eu/ebussed/>

**FILTER THE RESULTS**

READY GETTING READY NOT READY SHOW ALL

Category	Maturity Parameters/ Indicators *	DRIVERS	BARRIERS	Read. Indicator n.	Criteria	Description	Fill in your input here		
							Actors involved	Status	When red: not ready yet When yellow or green: provide details to explain
1. Government policies and investment	Regulations	Government & subsidy strategies		11	Government incentivating	(see details by opening the window on the left)			
	Regulations			1.1.a	Government incentivating	Loans			
	Regulations			1.1.b	Government incentivating	Grants			
	Regulations			1.1.c	Government incentivating	Rebates			
	Regulations			1.1.d	Government incentivating	Others (describe)			
	Regulations	Government support	Lack of business case	12		Past public investment			
	Regulations	Government support	Lack of business case	13		Ongoing public investment			
	Regulations	Government support		14		R&D support			
	Regulations	Government support	Lack of adjustment of laws	15		Laws and regulations			
	Regulations	Access to limited traffic areas for electric vehicles		16		Low-emission zones in urban areas; limited access zones			
	Sustainability	Government support		17		Previous positive experience of introducing alternative fuel public transport			
Regulations	Government support	Lack of institutional authority and control	18		Decision-making process in e-bus deployment				
2. Charging infrastructure construction and operation	Infrastructure	Potential for grid balancing		2.1		At design stage			
	Infrastructure	Potential for grid balancing		2.2		At implementation stage			
	Infrastructure	Potential for grid balancing		2.3		Already operational			
	Infrastructure	Potential for grid balancing		2.1		At design stage			
	Infrastructure	Potential for grid balancing		2.2		At implementation stage			
2. Energy production & distribution	Infrastructure	Energy cooperation energy/bus		2.4		Energy company's experience of installing rapid charging infrastructure			
				2.5		RES			
				3.1	Operator	(see details by opening the window on the left)			
			3.1.a	Operator	Central				
					Operator	Regional			

EACH LINE IS AN INDICATOR

USER INPUTS IN THESE FIELDS

# Filled example



## E-BUS READINESS INDICATOR TOOL

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### FILTER THE RESULTS

READY GETTING READY NOT READY SHOW ALL










Category	Maturity Parameters/ Indicators *	DRIVERS	BARRIERS	Read. Indicator n.	Criteria	Description	Fill in your input here		
							Actors involved	Status	When red: not ready yet When yellow or green: provide details to explain
	Regulations	Governance & subsidy strategies		1.1	Government incentivating	(See details by opening the window on the left)	Governmental bodies		
	Regulations			1.1.a	Government incentivating policies	Loans	Governmental bodies	Not ready	Loans are not provided by Government, besides local municipalities need to get governmental approval as a central surveillance.
	Regulations			1.1.b	Government incentivating policies	Grants	Governmental bodies, Local municipalities	Ready	In 2020... (Kaposvár, Székesfehérvár, Esztergom, Zalaegerszeg, Nyíregyháza) by 800 million HUF each funds the procurement value of the investment Pilot Project). The Government allocate 36 billion HUF for e-bus procurement in the next decade.
	Regulations			1.1.c	Government incentivating policies	Rebates	Governmental bodies	Not ready	Incentives for providing rebates is not planned in Government Policies, Strategies
	Regulations			1.1.d	Government incentivating policies	Others (describe)	Governmental bodies	Ready	Individual governmental decision - 925 Million HUF for BYD investment, plant in Komárom.
	Regulations	Government support	Lack of business case	1.2		Past public investment	Governmental bodies	Ready	Qualification process for manufacturers and retailers of e-chargers. The qualified companies will have the possibility to take part in the Green Bus Volánbusz Plc. (owned by the Central Government) made a bus fleet procurement (90 Mercedes-Benz Conecto G type buses for 3,3 Milliard HUF in 2020)
	Regulations	Government support	Lack of business case	1.3		Ongoing public investment	Governmental bodies	Ready	According to the fleet renewal plan of Volánbusz Plc. 3,930 buses will be procured between 2019-2022, resulting in the replacement of 60% of the
									Economic Development and Innovation Operational Programme supports the

TRAFFIC LIGHTS INDICATE READINESS LEVEL

USER HAS FILLED IN DETAILS



# Results from test regions

Partner	Level of readiness	Number of Indicators for each of the 5 Categories				
		1. Government policies and investment	2. Charging infrastructure construction & operation / Energy Production & Distribution	3. Business models and maintenance service system	4. Consumer and other awareness education	5. Operation scope and environmental benefits / Other features
Livorno		4	3	2	0	0
		2	1	0	0	1
		2	1	1	0	5
South Transdanubia		2	0	0	0	2
		1	1	1	1	0
		8	7	8	2	6
Utrecht		2	0	0	1	0
		1	1	1	1	5
		8	2	5	1	3



# Benefits provided by the tool

- 🚦 Survey-type of tool easy to use for different stakeholders
- 🚦 Fast assessment of readiness level
- 🚦 Focus points for development stand out clearly
- 🚦 Can be used to document the prevailing conditions in different times







# Thank you!

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[www.interregeurope.eu/ebussed/](http://www.interregeurope.eu/ebussed/)

## More information

- Thematic article 11: *Readiness indicator to e-bus deployment* [on e-Bussed website](#)
- Thematic Working Group 1 leader Ivo Tartaglia: [ebussed@provincia.livorno.it](mailto:ebussed@provincia.livorno.it)



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