



# How to make inclusive mobility a reality

## Key lessons from the Horizon 2020 INCLUSION project

CIVITAS Mobility Match session #2:  
Integrated planning & mobility management

5. November 2021

Ralf Brand, Ph.D.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115

[www.h2020-inclusion.eu](http://www.h2020-inclusion.eu)

**RUPPRECHT CONSULT**  
Forschung & Beratung GmbH

# The INCLUSION project



Duration 10/2017 - 09/2020

[www.h2020-inclusion.eu](http://www.h2020-inclusion.eu)


Horizon 2020

Grant agreement No. 770115

● Pilot sites

# How you might (have) come across this


Share your content Join us Search the website

 **CIVITAS**  
Sustainable and smart mobility for all

About ▾ News & Events ▾ Learning & Resources ▾

## Welcome to the CIVITAS Urban Mobility Tool Inventory

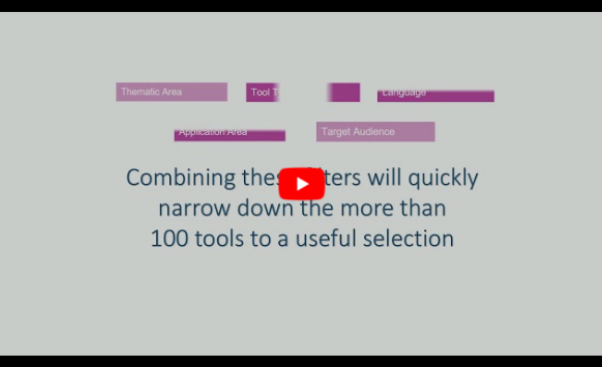
This online database of over 200 tools and methods helps local authorities make informed decisions on the right tools to use in their local context.




<https://civitas.eu/tool-inventory>

It features a broad range of tools and methods – including guidelines, software, manuals, mobile apps, games, and planning approaches – that are useful for all steps of the urban mobility planning process, from scenario building and measure selection to implementation and evaluation. To find the tool most relevant to your needs, you can filter the selection in several ways:

If you select filters from different categories, such as “German” from Language and Software from “Tool Type”, then only tools matching both those filters are displayed. You can also use the general search bar to look for tools by name.



Combining these filters will quickly narrow down the more than 100 tools to a useful selection

**CIVITAS**  About ▾ Our work ▾ Community ▾ News & Events ▾ Learning & Resources ▾


### Search the Tools

inclusion principles

inclusion principles × Clear all filters ×

Thematic Areas ▾ Projects Types ▾ Languages ▾ Application Areas ▾ Target Audiences ▾


1 - 1 out of 1 results.



**Guidance document / Manual, Method / Approach, Option generator**

#### How to make inclusive mobility a reality: 8 principles and tools for a fair(er) transport system








19 Oct 2020



# A fabulous pair of results




This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115



## How to make inclusive mobility a reality:

8 principles and tools for a fair(er) transport system



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115



## INCLUSION Project

D3.3

Compilation of 51 case study profiles; overviews and in-depth investigations

Version: 1.0

Author(s): Kristin Tovaas, Saydrina Govender & Ralf Brand (RUPPRECHT)

Michele Masnata & Christian Melchiorre (SOFT)

Andrea Lorenzini (MEM)

Lidia Sala (MOSAIC)

Sarah Brooke, Caitlin Cottrill & Steve Wright (UNIABDN)

Ruud Van der Ploeg & Thomas Geier (EMTA)

Pasquale Cancellara (POLIS)



The sole responsibility for the content of this document lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the INEA nor the European Commission are responsible for any use that may be made of the information contained therein.





This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115

# 51 case studies of inclusive mobility



-  Overview (x41)
-  In-depth (x10)

# Case studies by measure types






This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115

## Contents

<b>1 Introduction</b> .....	<b>6</b>
<b>2 Navigation matrix and summary of cases</b> .....	<b>8</b>
<b>3 Payment and ticketing</b> .....	<b>19</b>
3.1 Public Private Partnership car and ride sharing.....	19
3.2 Accessible ticket machines in Stockholm.....	25
3.3 Free Municipal Public Transport in the Metropolitan Area of Piraeus Port City.....	30
3.4 Disabled persons Freedom Pass.....	34
3.5 T2E - Transport to Employment.....	38
3.6 TaxiCard scheme.....	43
3.7 UK free public transport for the elderly.....	46
3.8 Wheels2Work (W2W) scheme.....	51
<b>4 New collective transport routes</b> .....	<b>60</b>
4.1 Bürgerbuses in NRW.....	60
4.2 De Bij Bus.....	69
4.3 De Witte Raaf (The white raven).....	76
4.4 Formentera Taxibus.....	81
4.5 France le Busway.....	86
4.6 GO MOBIL.....	93
4.7 Mobuur neighbourhood service.....	100
4.8 Wensbus ("Wish bus") Limburg.....	108
<b>5 Sharing schemes</b> .....	<b>115</b>
5.1 AVIRA wheelchair-accessible car sharing.....	115
5.2 CarSharing Pfaffenwinkel.....	120
5.3 Die Mitfahrerbank (The Passenger Bench).....	126
5.4 Go Go Grandparent.....	132
5.5 GoKid Carpool app.....	136
5.6 Haltetaxi Zeeland.....	140
5.7 ITNCountry.....	146
5.8 RideAustin.....	150
5.9 RideshareKC's Guaranteed Ride Home programme.....	157
5.10 She Taxi.....	162
5.11 Taxi-Scuola.....	168

www.h2020-inclusion.eu 3

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115

5.12 Via (on demand ride share via app).....	173
<b>6 Training &amp; assistance</b> .....	<b>181</b>
6.1 Disability Awareness Training for Transport Operator Staff.....	181
6.2 Donostia - public transport for over 60s.....	184
6.3 Manchester - travel training.....	189
6.4 Travel Buddy.....	195
<b>7 Information provision &amp; route planning</b> .....	<b>198</b>
7.1 Aira app.....	198
7.2 APP&Town Compagnon.....	202
7.3 Barrier-free digital journey planner and travel assistance for disabled and elderly in Berlin 208.....	208
7.4 Be My Eyes app.....	213
7.5 Blue Badge/Safe Journey Card/Customer Injury Cards.....	217
7.6 E-Paper.....	221
7.7 Guidance for visually impaired and barrier free access at all stations/stops in Prague by 2025.....	224
7.8 Audio Atlas Project & Ways4Me.....	230
7.9 Route4U.....	236
7.10 SafetiPin (score) - My SafetiPin, SafetiPin Track, SafetiPin Nite.....	247
7.11 Showing the way in Toulouse using pictograms.....	252
7.12 The Welcome Card.....	259
7.13 Wher app.....	263
<b>8 Design</b> .....	<b>270</b>
8.1 Krakow - more accessible public transport stops.....	270
8.2 Reading's 'Claret Spritzer' student bus.....	280
8.3 Rennes wheelchair accessible public transport.....	286
<b>9 Planning</b> .....	<b>291</b>
9.1 Gender mainstreaming in Vienna.....	291
9.2 KOLLA (Kollektivtrafik för alla) project.....	298
9.3 Wiener Linien Barrier free mobility.....	315
<b>10 References</b> .....	<b>319</b>
<b>11 INCLUSION consortium</b> .....	<b>336</b>

www.h2020-inclusion.eu 4

# Navigation matrix



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115

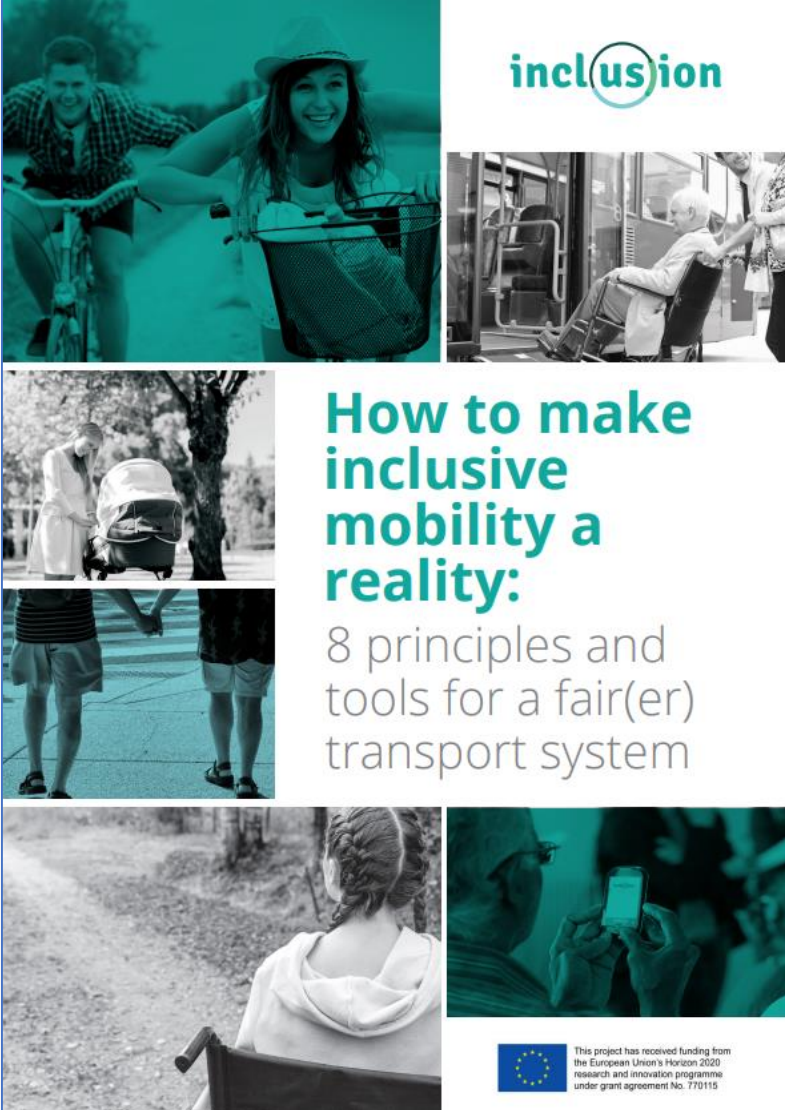


Vulnerable users served	Measure types						
	3. Payment and ticketing	4. New collective transport routes	5. Sharing Schemes	6. Training & assistance	7. Information provision & route planning	8. Design	9. Planning
Children/ youth/ students	3.5,3.8	4.5	5.3,5.5,5.9,5.11	6.3	7.11	8.2	
Cognitive disability/ mental health		4.5		6.3,6.4	7.2,7.5		
Elderly	3.1,3.6,3.7	4.1,4.2,4.3,4.4,4.5,4.6,4.7,4.8	5.3,5.4,5.7	6.2	7.3,7.5	8.1	9.2,9.3
Job seekers	3.5,3.8	4.5					
Low income	3.1,3.3,3.5,3.8	4.3,4.4,4.5,4.7	5.2,5.4,5.8,5.9				
Migrants/ refugees/ ethnic minorities	3.2,3.3	4.5			7.11,7.12		
Parents with small children	3.5	4.5	5.2		7.3,7.9		9.3
People without a driver's license	3.1,3.5	4.1,4.5,4.7	5.3,5.8,5.9				
Physically disabled	3.2,3.3,3.4,3.6	4.1,4.2,4.3,4.5,4.6,4.7	5.1,5.6	6.1,6.3,6.4	7.2,7.3,7.5,7.9	8.1,8.3	9.2,9.3
Poorly served areas (e.g. rural)	3.1,3.3,3.5,3.8	4.1,4.2,4.3,4.4,4.5,4.6,4.7,4.8	5.2,5.3,5.5,5.6,5.7,5.10,5.11,5.12				9.2
Sensory disabled	3.2,3.3,3.4,3.6	4.1,4.2,4.3,4.5	5.7	6.1,6.3,6.4	7.1,7.3,7.4,7.5,7.6,7.7,7.8	8.3	9.3
Women		4.5	5.8,5.10		7.10,7.13		9.1,9.3

# A fabulous pair of results




This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115



**inclusion**

## How to make inclusive mobility a reality:

8 principles and tools for a fair(er) transport system



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115



## INCLUSION Project

D3.3

Compilation of 51 case study profiles; overviews and in-depth investigations

Version: 1.0

Author(s): Kristin Tovaas, Saydrina Govender & Raif Brand (RUPPRECHT)

Michele Masnata & Christian Melchiorre (SOFT)

Andrea Lorenzini (MEM)

Lidia Sala (MOSAIC)

Sarah Brooke, Caitlin Cottrill & Steve Wright (UNIABDN)

Ruud Van der Ploeg & Thomas Geier (EMTA)

Pasquale Cancellara (POLIS)

The sole responsibility for the content of this document lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the INEA nor the European Commission are responsible for any use that may be made of the information contained therein.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115



# Main ingredients



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115



## CONTENTS

<b>1.</b> Dear reader	6
<b>2.</b> GETTING STARTED: What is inclusive mobility?	8
<b>2.1</b> Eight general principles of inclusive mobility initiatives	9
<b>2.2</b> Recommendations for practitioners	11
<b>3.</b> LOCAL CONTEXT	18
<b>4.</b> USER PROFILES: People's needs and possible solutions	22
<b>5.</b> MIND THE MOBILITY GAPS	36
<b>6.</b> PRINCIPLES & SOLUTIONS	45
<b>7.</b> INITIATORS	54
<b>8.</b> References	61

# 8 principles for a fair(er) transport system

---



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115



# 8 principles for a fair(er) transport system



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115



## EMPOWERING

## EMPATHETIC

## ACCESSIBLE

## AFFORDABLE

### EMPOWERING



Mobility solutions that build vulnerable users' capacities to get around confidently in their everyday lives. This idea can manifest in a training course or a scheme of "travel buddies" for certain social groups so that they are enabled to use certain transport options without requiring help by other people. Also technology can play a role here if it creates new degrees of freedom.

### EMPATHETIC



Empathy-building initiatives foster awareness and build capacities (e.g. through training) among the transport provider and general public for vulnerable users' needs and increase their readiness to help. Sometimes, mobility options would be more accessible if there were some kind of "helping hand" (literally or metaphorically) to support vulnerable users.

# Main ingredients



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115



## CONTENTS

<b>1.</b> Dear reader	6
<b>2.</b> GETTING STARTED: What is inclusive mobility?	8
<b>2.1</b> Eight general principles of inclusive mobility initiatives	9
<b>2.2</b> Recommendations for practitioners	11
<b>3.</b> LOCAL CONTEXT	18
<b>4.</b> USER PROFILES: People's needs and possible solutions	22
<b>5.</b> MIND THE MOBILITY GAPS	36
<b>6.</b> PRINCIPLES & SOLUTIONS	45
<b>7.</b> INITIATORS	54
<b>8.</b> References	61

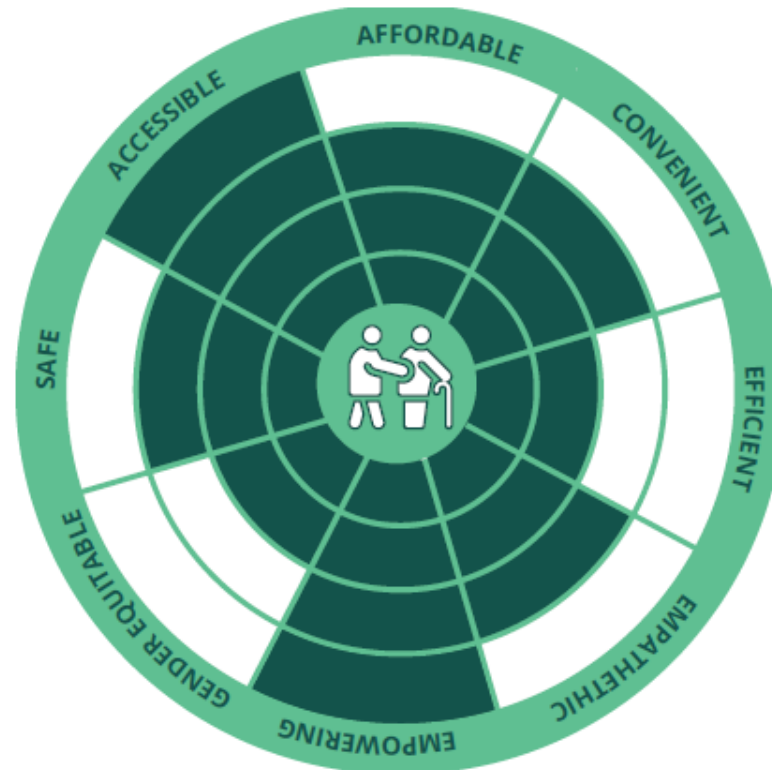
# User profiles across the 8 principles



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115



## ELDERLY



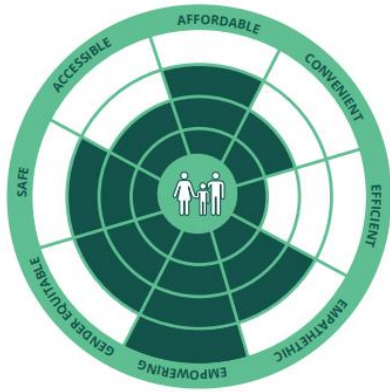
# User profiles across the 8 principles



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115



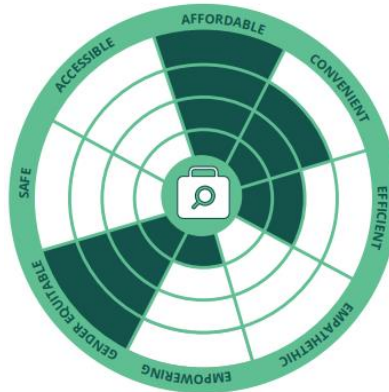
## MIGRANTS



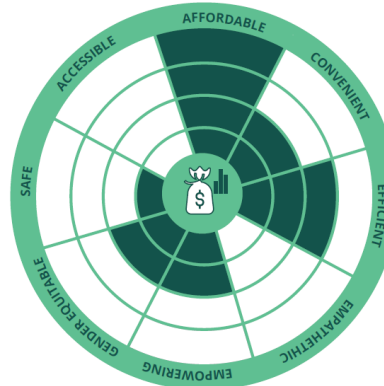
## PEOPLE WITHOUT A DRIVER'S LICENSE



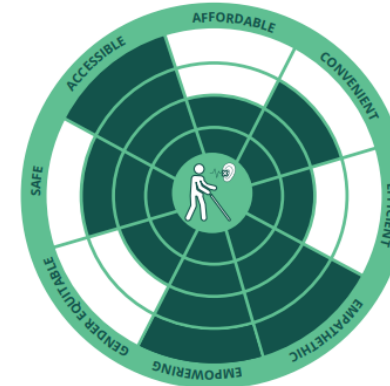
## JOB SEEKERS



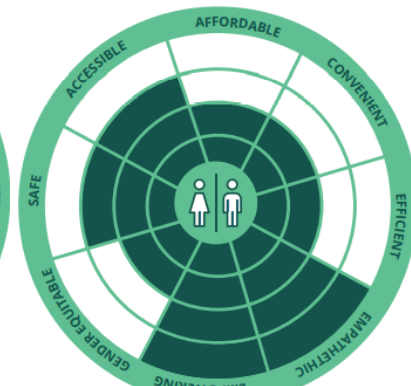
## PEOPLE WITH A LOW INCOME



## SENSORIALLY DISABLED



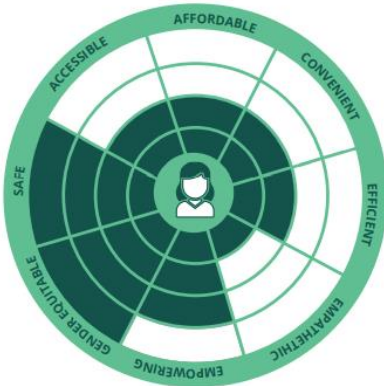
## COGNITIVELY IMPAIRED



## STUDENTS/YOUTH



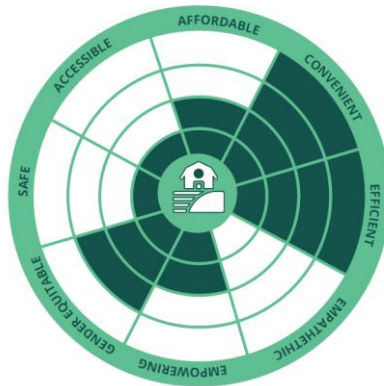
## WOMEN



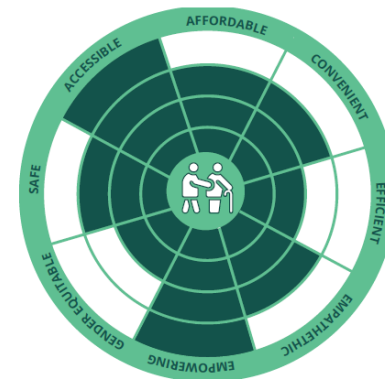
## CHILDREN



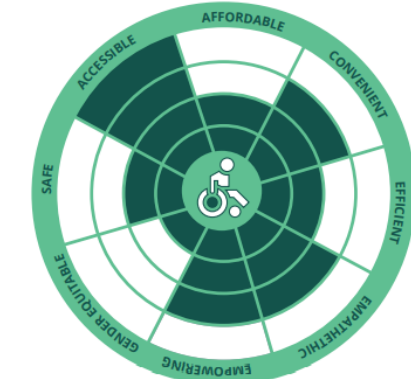
## PEOPLE IN RURAL/REMOTE AREAS



## ELDERLY



## PHYSICALLY DISABLED



# Linking user profiles, 8 principles and case studies

inclusion

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115

inclusion

## PEOPLE WITH A LOW INCOME



### Mobility needs:

People with a low income are vulnerable to transport exclusion because of their financial limitations and geography. Low-income households tend to be in neighbourhoods that are spatially dislocated from the centralised services on which they depend, including public transport. Low-income people tend to be captive to the cheapest mode alternative and spend a significant proportion of their income on travel. The high costs of transport can trap low-income families in poverty, since the lack of transportation is a major disincentive to employment.<sup>14</sup>

The strong need for **affordability** is closely followed by **efficiency**, such as better network connectivity, public transport links, as well as **convenience**,

which includes the need for higher levels of services particularly during off-peak times (e.g. to provide access to shift work).

In the case of people who have a low education level, do not speak the local language or are illiterate, training or information that helps them to better understand and navigate the transport system would **empower** them to be more autonomous.

Especially in low-income single-car households, priority use of the vehicle is typically given to the man, pointing to the need for not only affordable, but also **gender equitable** mobility solutions.

### CASE STUDIES ADDRESSING THE NEEDS OF PEOPLE WITH LOW INCOME:

#### 3. Payment and ticketing

- 3.1 Public Private Partnership car and ride sharing
- ★ 3.3 Free Municipal Public Transport in the Metropolitan Area of Piraeus Port City
- 3.5 T2E - Transport to Employment
- 3.8 Wheels2Work (W2W) scheme

#### 4. New collective transport routes

- 4.3 De Witte Raaf (The white raven)

- ★ 4.4 Formentera Taxibus
- 4.5 France le Busway
- 4.7 Mobuur neighbourhood service

#### 5. Sharing schemes

- 5.2 CarSharing Pfaffenwinkel
- 5.4 Go Go Grandparent
- 5.8 RideAustin
- ★ 5.9 RideshareKC's Guaranteed Ride Home programme

inclusion

### 3.3 Free Municipal Port City



#### 3.3.1 Essence of the

##### Basic idea:

Piraeus is part of the city of Athens and is one of the most densely populated islands. There is also a high road gradient.

In 1995, the measure was established. It was initially built in underground areas that cannot be reached by the high road gradient scheme in Greece.

##### Intended beneficiaries:

The residents who live in the areas cannot be reached by the high road gradient scheme in the area.

## Information in every case study:

- Basic idea
- Intended beneficiaries
- Tech(nological) aspects
- Funding
- Business case
- Main actors and their interests
- Context conditions
  - Geographical
  - Socio-economic
  - Political
  - Financial
- Sense of urgency
- Opportunities
- Case history
- Impact
- Transferability
- Further reading

What to Wear / What Not to Wear

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115

The concept of "Buses with a High Quality of Service" in terms of frequency, quality of tram service.




transportpolitic.com

second level, beneficiary is the user. Operation cost and increase

adding ticket machines on the platform to reduce waiting time of the next train

and in some stations

# A fabulous pair of results



**How to make inclusive mobility a reality:**  
8 principles and tools for a fair(er) transport system

 This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115



## INCLUSION Project

D3.3

Compilation of 51 case study profiles; overviews and in-depth investigations

Version: 1.0

Author(s): Kristin Tovaas, Saydrina Govender & Ralf Brand (RUPPRECHT)  
Michele Masnata & Christian Melchiorre (SOFT)  
Andrea Lorenzini (MEM)  
Lidia Sala (MOSAIC)  
Sarah Brooke, Caitlin Cottrill & Steve Wrigley  
Ruud Van der Ploeg & Thomas Geier (EM)  
Pasquale Cancellara (POLIS)

The sole responsibility for the content of this document reflects the opinion of the European Union. Neither the European Union nor the project management team is responsible for any use that may be made of the information contained therein.



 This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115





inclusion

# Thank you



Ralf Brand, Ph.D.

[r.brand@rupprecht-consult.eu](mailto:r.brand@rupprecht-consult.eu)

+49 (0)221 60 55 55 - 18



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115

[www.h2020-inclusion.eu](http://www.h2020-inclusion.eu)

**RUPPRECHT CONSULT**  
Forschung & Beratung GmbH