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SUSTAINABLE MOBILITY IN URBAN AREAS

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SUSTAINABLE MOBILITY IN URBAN AREAS

Presentation plan

- The impact of road transport
- The potential of sustainable mobility
- Actions and good practices

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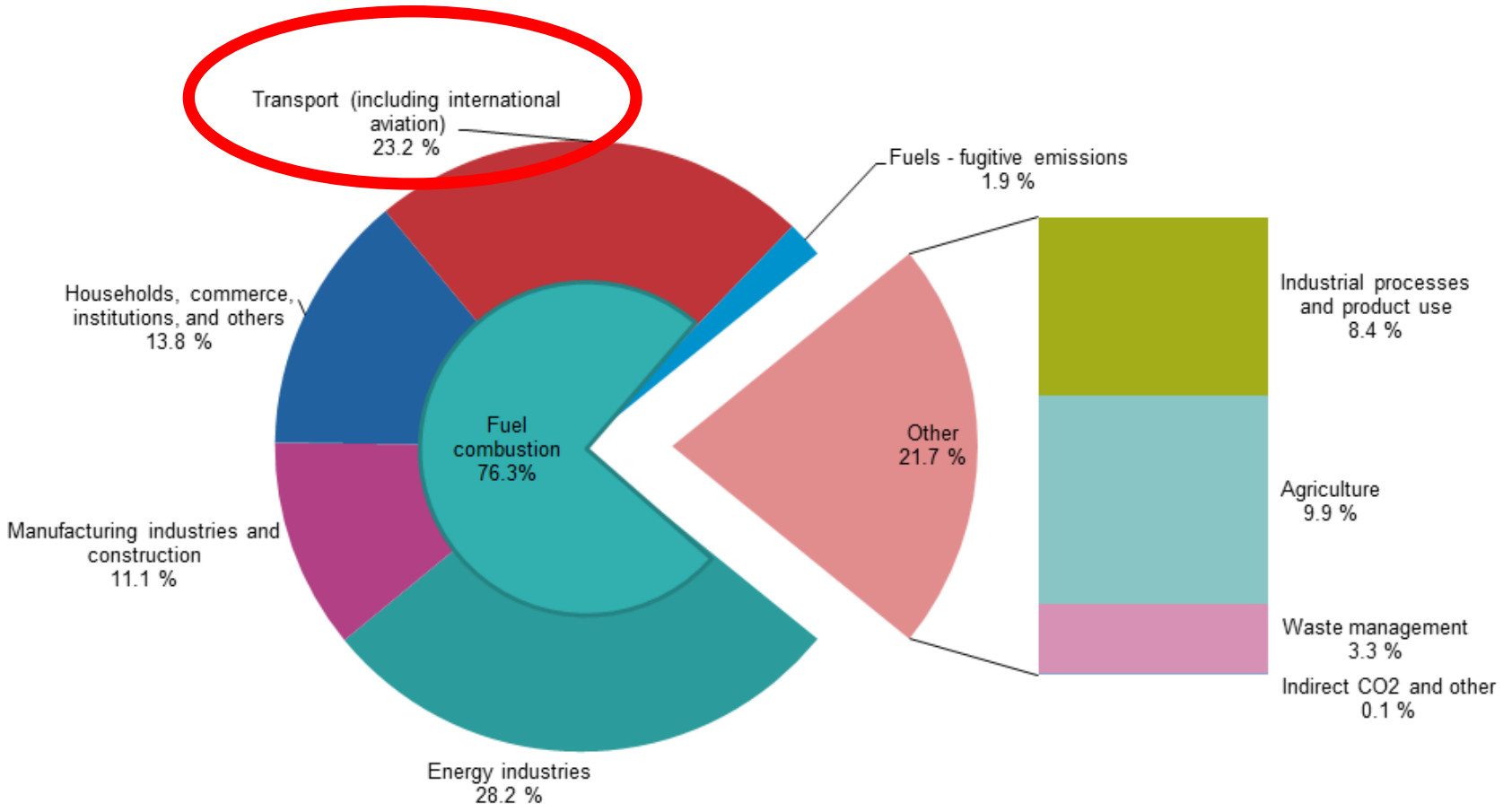
The impact of road transport – global perspective

> 90 % road transport



Source: EEA, republished by Eurostat (online data code: env_air_gge)

Fig. 1. Greenhouse gas emissions by IPCC source sector, EU28, 2014

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The impact of road transport – global perspective

The global approach of the road transport impact is shown by the amount of greenehouse gas emissions. We see that in EU the level of greenhouse gases emitted by the transport sector stands at almost 25 %, but we have to take into account two important facts:

- that more than 90% of it is caused by road transport
- in the cities the level of greenehouse gas emissions caused by road transport is much higher, more than 50% of total emissions

With this information I wanted to present the general view on the range of road transport influence.

Fig. 1. Greenhouse gas emissions by IPCC source sector, EU28, 2014

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The impact of road transport – local perspective

Air pollution

Fig. 2. Source: www.pw.edu.pl (12.01.2017)

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The impact of road transport – local perspective

Air pollution

The air of urban areas gets polluted due to a lot of hazardous substance emitted is the process of fuel combustion.

In the cities this situation is increased because of large number of automobiles in relatively small area. The released pollutants are capable of inducing a number of health problems (pulmonic, cardiac, allergic).

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The impact of road transport – local perspective

Noise pollution

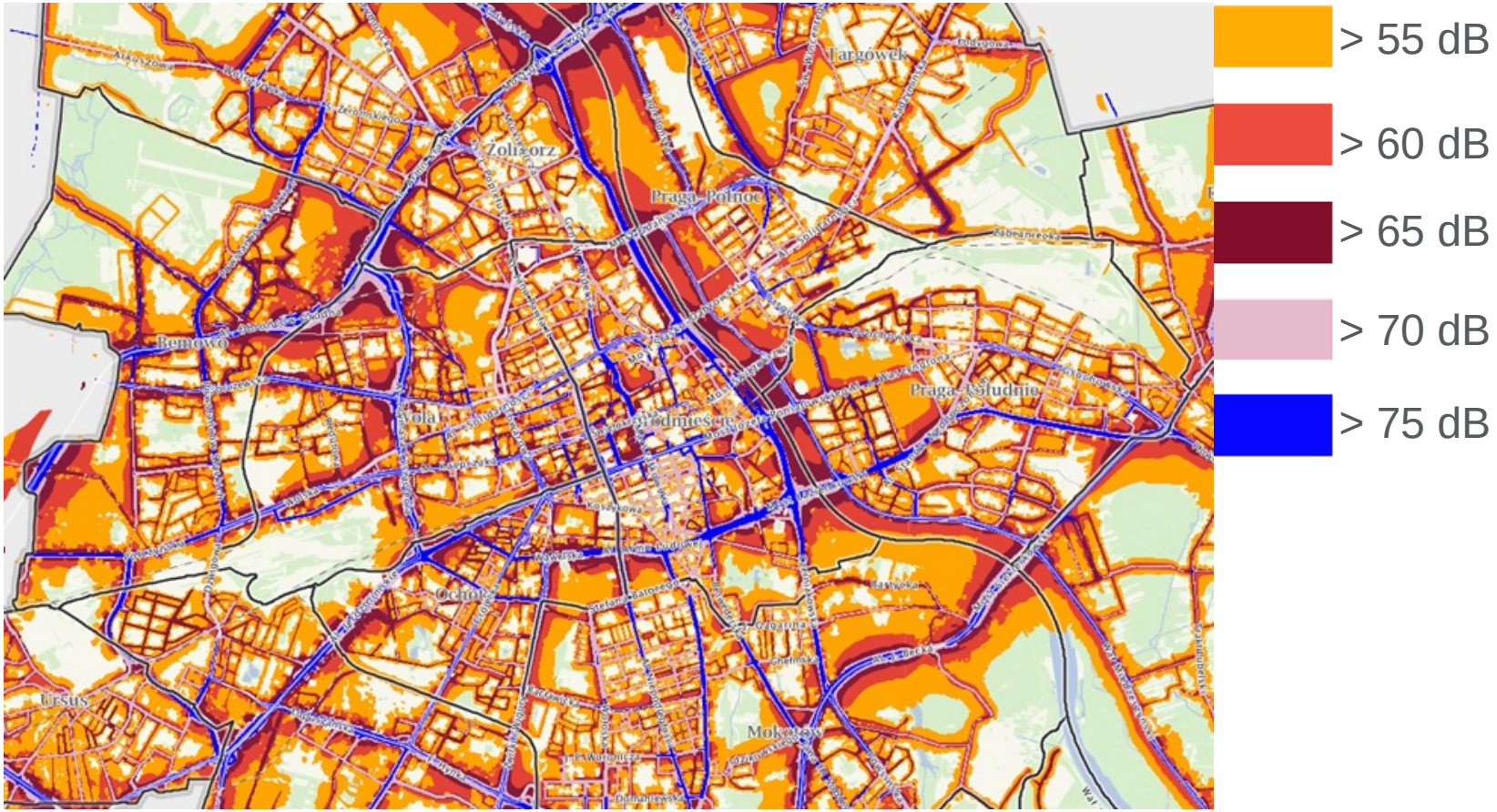

Fig. 3. Source: www.mapaakustyczna.um.warszawa.pl

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The impact of road transport – local perspective

Noise pollution

The noise produced from vehicles cause noise pollution in urban areas which is responsible for psychological and physical ailments, such as:

- tiredness of neural system, including problems with concentration, sleeping disorders, irritability, headache.

Noise > 35 dB is considered to not be harmful.

On the figure 3 we see that most areas in Warsaw city are exposed for the extended noise, which is not neutral for human being.

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The impact of road transport – local perspective

Impact on spatial structure

Fig. 4. Source: www.warszawa.wyborcza.pl

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The impact of road transport – local perspective

Impact on spatial structure

The transportation system occupies a significant part of the urban space. The network of the streets determines the localization and accessibility of other spatial elements.

The infrastructure associated with the streets such as parking areas is often developed at the expense of socially and environmentally friendly areas, which strongly affects the quality of citizens' life.

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The impact of road transport – local perspective

Traffic jam

Fig. 5. Source: Z. Kaczmarek, East News

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The impact of road transport – local perspective

Traffic jam

This unfortunately common situation occurs when the city's transportation facilities are not capable of handling the amount of traffic it receives.

Some people might think that the solution would be to build more roads and make them wider, but the fact is that due to the limited space the cities and are not capable to accommodate many cars.

If we consider that one tram line can handle several thousand people during an hour and for the same amount of people driving cars we would need several lanes of road – the solution is obvious.

Moreover, the type of infrastructure developed creates the users if this infrastructure – if we build more roads – the are more cars. The traffic doesn't decrease and there are still traffic jams. The more public transportation, which is frequent, clean, well-connected, prioritized and more pedestrian and cycling routes – the more users of it.

We might think that the responsibility for implementing proper mobility infrastructure rests only with the government. The fact is that local community can also help in this process. If there is a strong demand for the sustainable mobility – it would prioritize government's activity in this field.

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The potential of sustainable mobility

- Low-emission
- Active
- Safe
- Equitable
- Resilient
- Ecological
- Beautiful

Fig. 6. Source: www.asla.org

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The potential of sustainable mobility

There is still a lot to do, the cities are growing and they are facing many challenges, which could be considered as chances to develop sustainable mobility. Sustainable mobility would bring a positive value for the city.

The sustainable mobility, considered as the infrastructure and corresponding activities, can be:

Low-emission

Sustainable transportation systems don't contribute to climate change, instead, it encourages low-emission modes of transportation such as mass transit, biking, or walking. Sustainable land use practices such as transit oriented development facilitate multi-modal systems where residents can easily walk or bike to meet basic daily needs.

Active

A lifestyle organized around human-powered transportation choices such as walking and biking is healthy. It is proved that walkable, transit-oriented communities increased physical fitness and mental health.

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The potential of sustainable mobility

Safe

The World Resources Institute estimates that more than 1 milion lives could be saved annually from wider adoption of traffic calming measures such as lower speed limits, reduced lane widths, and protected medians.

Equitable

Access to such healthy, sustainable transportation options should be viewed as a right. All residents — regardless of their income, race, age, disability, religion or national origin —should have access to affordable, safe, accessible, multi-modal transportation options that allow them to fully participate in the community.

Resilient

Extreme weather events can easily shut down transportation networks. Multi-modal transportation systems are resilient to the uncertainties posed by climate change, such as rising temperatures, more frequent and intense storms. The sustainable systems have multiple, interconnected transportation options that create flexibility.

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The potential of sustainable mobility

Ecological

A sustainable transportation network is ecological, working with natural systems to capture and filter storm water, reduce flooding, support pollinator species, strengthen biodiversity, and protect wildlife populations. With green infrastructure, wildlife crossings, pollinator highways, and environmentally-sensitive roadway alignment, design, and construction, the transportation networks integrated with the natural elements, reaping the benefits of ecosystem while minimizing conflict between humans and wildlife.

Beautiful

As a major component of our landscape and public realm, transportation infrastructure should be beautiful, inviting, and memorable. Transportation infrastructure contributes to the aesthetic value of the built environment.

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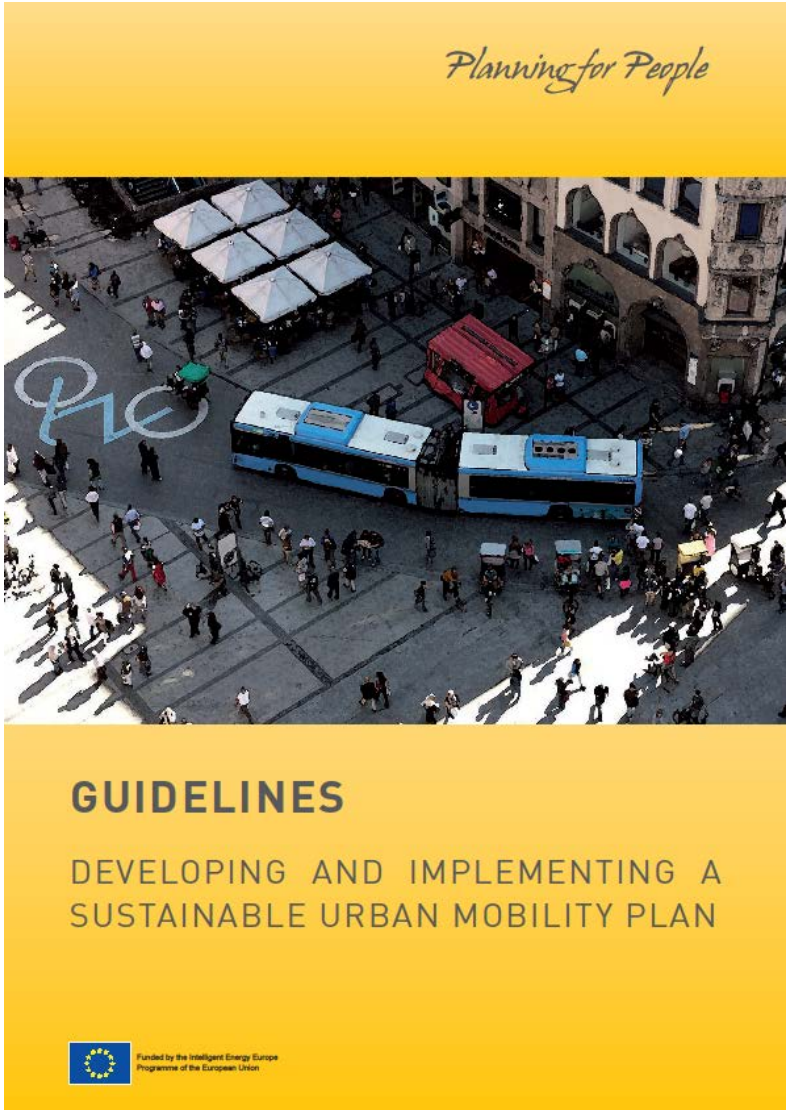
Actions and good practices

Sustainable Urban Mobility Plans

- careful assessment of the present and future performance of the urban transport system
- balanced development of all relevant transport modes, while encouraging a shift towards more sustainable modes
- integrated approach with a high level of cooperation, coordination and consultation between all stakeholders



www. ec.europa.eu

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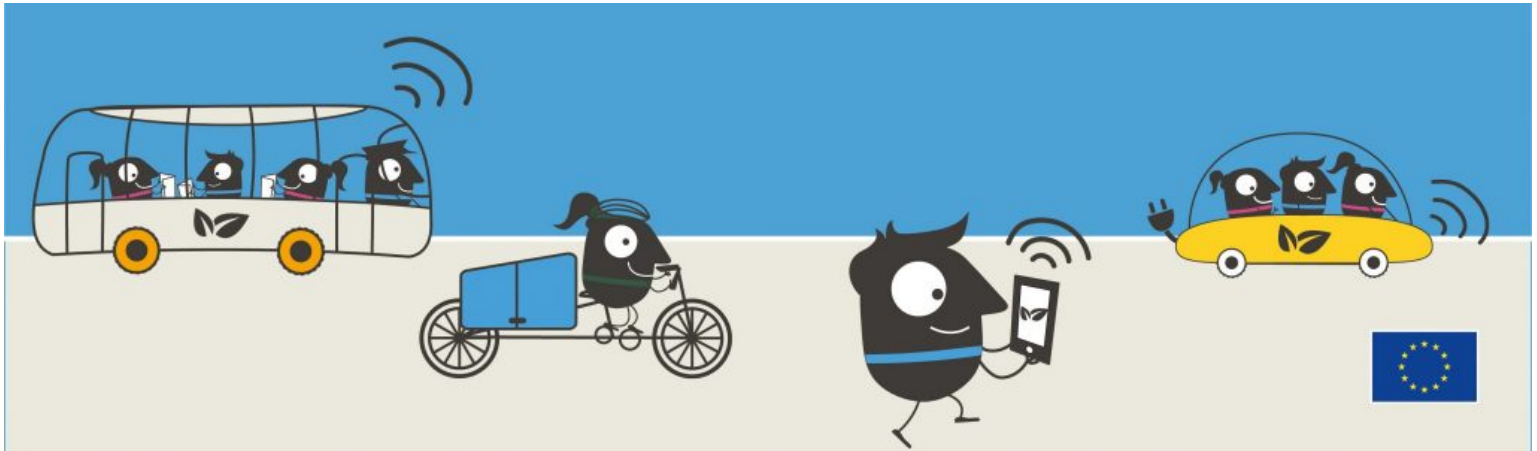
Actions and good practices

European Mobility Week is aimed to improve public health and quality of life through promoting clean mobility and sustainable urban transport.

The campaign gives people the chance to explore the role of city streets and to experiment with practical solutions to tackle urban challenges.

- Day without a car
- Week of actions related to the topic of the campaign
- Long term actions



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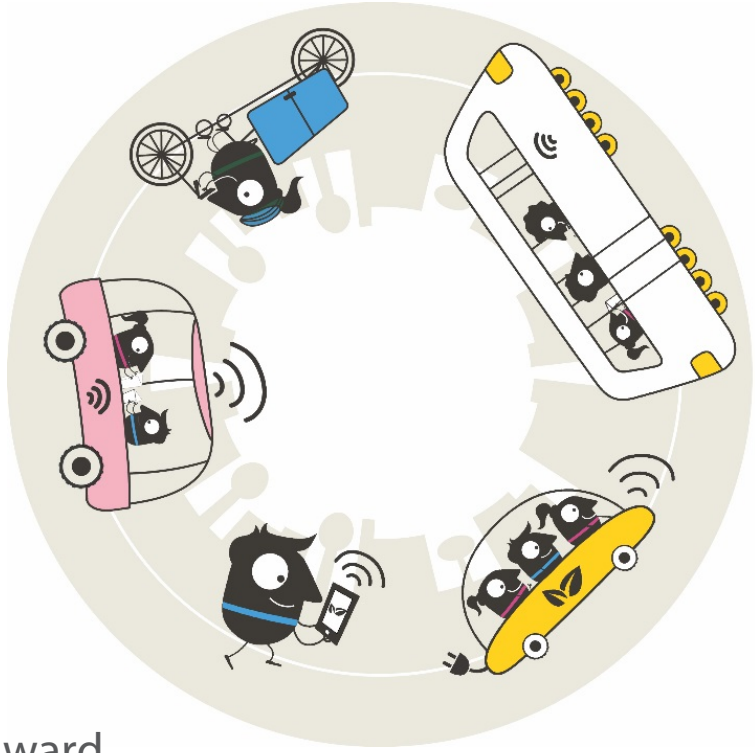
Actions and good practices

European Mobility Week Report 2018



- 54 participating countries
- 2 792 towns and cities registered
  160 from Poland
- 731 mobility actions registered
- Mix and Move! – campaign slogan
- Gdynia, Lisbon and Palma nominated to the Award

www.mobilityweek.eu

European Mobility Week
Examples of actions 2018

Donostia-San Sebastián presented one of the most original awareness-raising activities. The Spanish voice of 'Siri' was used in parkimeters to talk to people who just parked their car. The familiar voice asked car drivers annoying questions to make them conscious that they could have used a more sustainable way to come to the city.

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THANK YOU FOR YOUR ATTENTION

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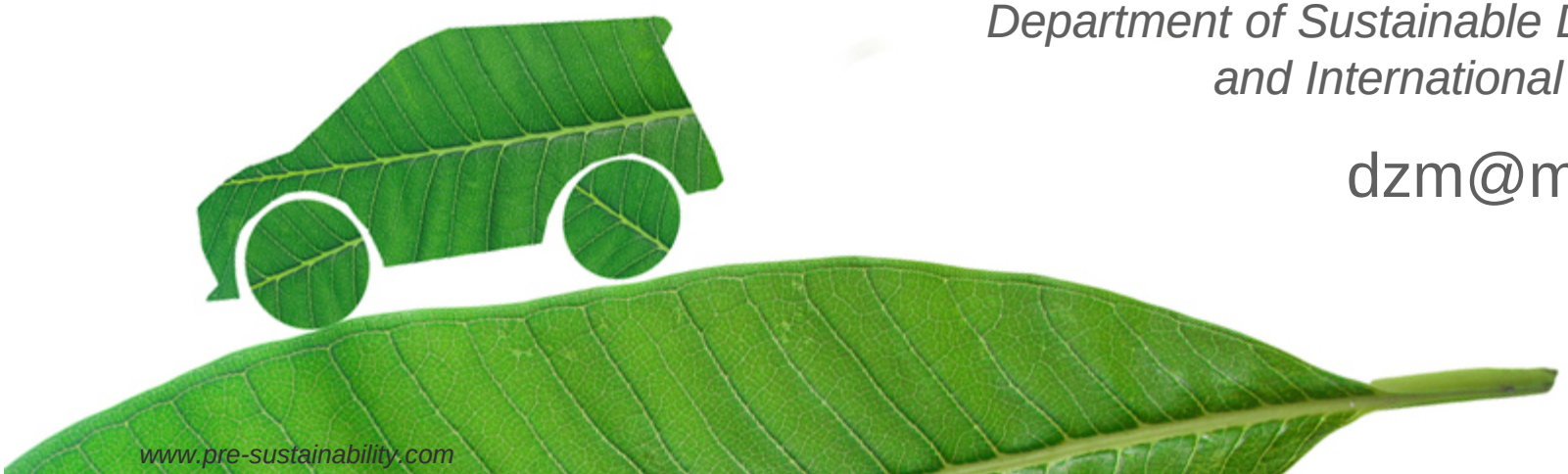

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