

## 1. Projects



# Decarbonized mobilities: a poorly initiated transition

Finished research

Today, the transport industry is the second largest emitter of greenhouse gases in the world, after the energy industry. But unlike in energy, transport emissions continue to grow rapidly. They could even increase by 60% by 2050 according to the OECD. In the near future, transport could become the largest emitter of GHGs, which is already the case in some developed countries. What are governments doing? This question is what brought an international team to travel the world looking for policies aimed at transitioning to decarbonized mobilities.

Research participants

### Researchers

- Tim Cresswell
- Peter Adey
- Cristina Temenos
- Jane Yeonjae Lee
- Astrid Wood
- Anna Nikolaeva

(This research was initially called : Living in the mobility transition)

## I. The research

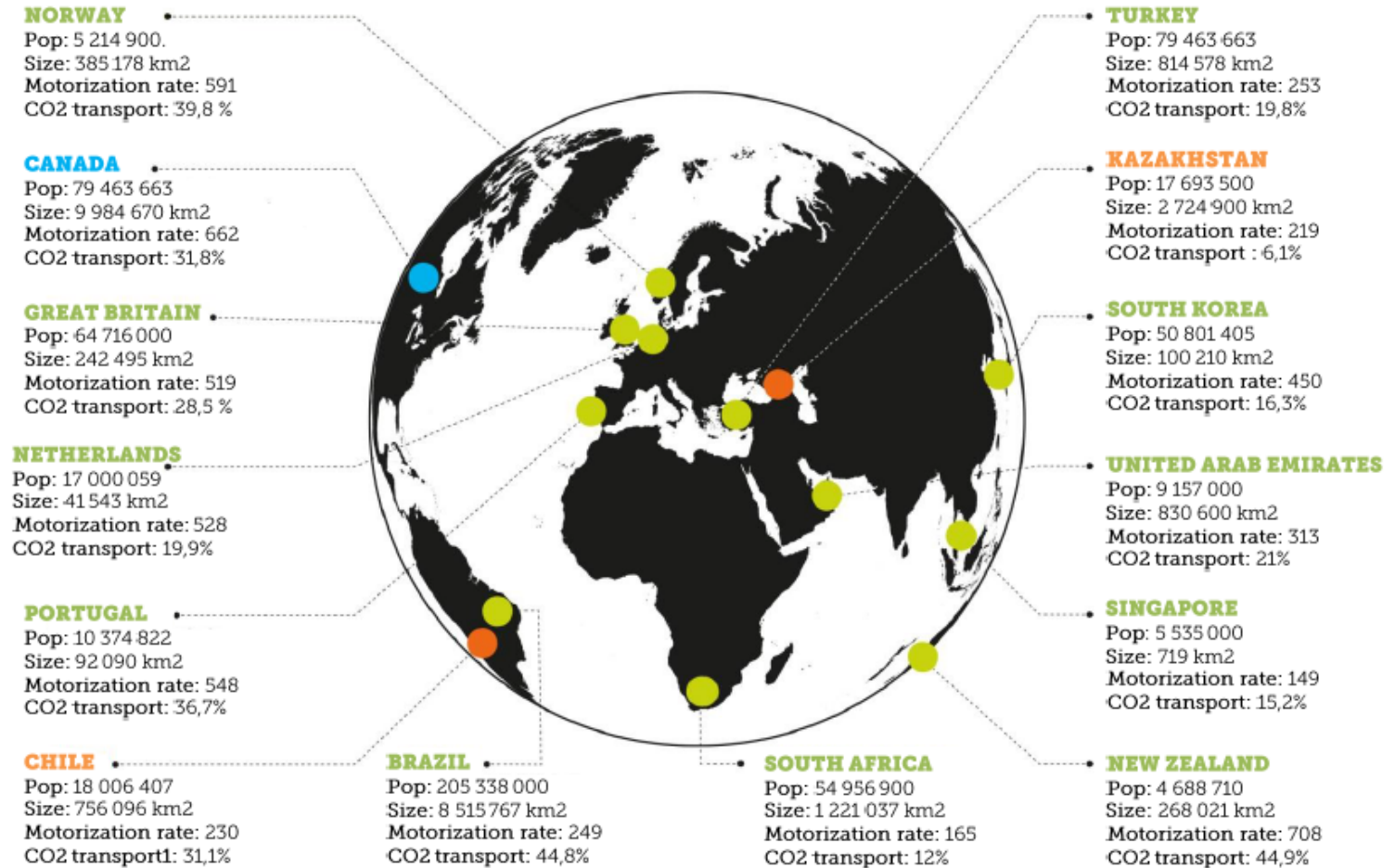
In keeping with John Urry, we are currently witnessing the challenging of carbon dependent mobile lifestyles. Given CO<sub>2</sub> emissions and the predominance of fossil fuels in the current mobility system, a transition towards low-carbon mobilities appears both necessary and desirable. Within the scope of this project, the shift from a mobility system based largely on oil to a low-carbon one is called the mobility transition. What form is this transition taking in the world today? Through which actors and rhetoric is it implemented, supported or hindered?

That is the question that led Tim Cresswell and Peter Adey - along with an international team of five post-doctoral researchers - to explore the mobility transition through the mobility policies of 14 countries around the world (from

South Africa to North America, Southeast Asia, Europe, the Middle East and Latin America <sup>1</sup>). These countries were chosen to represent different geographies, stages of development, types of governance and levels of commitment to tackle global warming.

## AN INTERNATIONAL STUDY IN 14 COUNTRIES

Countries were selected according to criteria determining the importance of travel within the country (size, development stage, climate) and the policies that can be implemented there (type of political regime, cultural norms...).  
Two further studies focused on the UN and the European Union



*Green: Countries that signed the Kyoto Protocol and Paris Agreement.*

*Orange: Countries that only signed the Kyoto Protocol.*

*Blue: Countries that only signed the Paris Agreement.*

The researchers investigated these mobility policies according to the theoretical framework developed by Tim Cresswell: for him, mobility results from a combination of physical movement (going from point A to point B), the meanings given to this movement (imaginaries, standards) and how it is practiced. Their goal was to:

- Consider the meaning given to contemporary and future mobility practices in the framework of public policies implemented at the national, regional and urban levels;
- Question representations of mobility in 14 different national contexts;
- Explore the changes being envisaged in terms of mobility;
- Determine in what ways these changes are associated with new forms of movement and new infrastructure plans ;
- Identify the ways in which changes in mobility practices are facilitated, challenged or negotiated.

These policies have been studied at both national and international level (through UN and EU policies). The gray literature on each country has been studied, and looked at in combination with interviews with key mobility players at three levels:

- International: what commitment to tackle global warming at the international level?
- National: what national policy relative to mobility?
- Regional and/or local: what local initiatives with regard to the mobility transition (from local authorities, businesses or civil society)?

The project, now in its final phase, is focusing on comparing the situations in the fourteen countries studied and, on this basis, proposing elements for an optimal mobility transition policy. The project will result in a publication that will bring together its theoretical and political conclusions, the 14 national reports and 43 case studies within it, the positions of international institutions (the UN and EU) and recommendations for a mobility transition policy.

## II. Key messages

- **None of the 14 countries studied have a real transition policy towards decarbonized mobilities**
- **Mobility is rarely the main purpose of public policy. It is usually an accessory to other policies, including first and foremost economic growth .**
- **Existing measures focus heavily on technological innovations , such as electric car or new fuels, and secondarily on modal shifts towards collective transportation or active modes .**
- If we want to sufficiently reduce mobility-related CO<sub>2</sub> emissions, **we must decarbonize and reduce travel .**
- **The main measures implemented so far (carbon taxes, congestion charges...) are not socially fair :** the cost of the transition should be shouldered by the State, by private companies and by different social groups in a way that is proportional to their contribution to global warming.

## III. Findings of the research

### 1. Public policies focus mainly on enhancing the energy efficiency of existing modes of transportation

If we take a close look at the UN's suggested classification of the public policies implemented by countries against CO<sub>2</sub> <sup>2</sup> emissions, we see that:

- **The overwhelming majority of policies** seek to improve the energy efficiency of cars through innovation. Most of them focus on developing electric vehicles and alternative fuels to gasoline and diesel.
- **A minority of policies seek to encourage a shift from carbonized modes of transportation to decarbonized modes (public transport, cycling, walking).** They rely on the development of adequate infrastructures (such as bike paths) or aim to change lifestyles, such as in Milton Keynes (England) where soft modes are combined with public advocacy about the values of modernity and solidarity. In rare cases, policies sometimes aim to negatively portray the use of cars, such as in Dutch commercials where drivers are presented as cows, prisoners of their habits. Political action is sometimes more direct with, for example, the implementation of financial sanctions, like carbon taxes or reward schemes. This is, for instance, what the Korea Climate & Environment Network does. With the help of the South Korean Government, it rewards participants who reduce their carbon emissions by generating an eco-currency that they can then use for public transport or other eco-friendly activities.
- Finally, **a very small number of measures tackle the actual amount of travel ,** either by reducing the number of journeys (promoting telework in Auckland) **or reducing travel distances** (developing coworking spaces near residential areas in Seoul; introducing tertiary activities that would be downtown into peripheral residential areas in Sao Paulo).

### 2. Putting the state's role into perspective

Fiscal austerity encourages initiatives by **private entities**, especially through public/private partnerships like in Chile, South Korea, the United Arab Emirates or the Netherlands. More generally, **there have been a growing number of initiatives and services embodying a more liberal management of mobility**. These new services respond more to economic and commercial interests, whereas until now they were more often considered, in a more political framework, as a right. This is the case for instance in Portugal where the focus is now on the flexibility and profitability of the services on offer, rather than on the challenges of land accessibility. **These policies therefore address short-term issues at the expense of the sort of long-term planning required for the transition**.

**Cities** that are part of international networks like C40 Cities have now become more progressive than states.

Another notable trend is the emergence of a more competent and structured civil society that can sometimes partner with or oppose governments, to remind them of their international commitments to fight climate change (a good example of this would be the lawsuit brought against the Dutch government by an association called Urgenda, that the association won). **In such cases, we have what is called a “bottom-up” transition**. However, to become widespread, some initiatives (distributing membership cards for public transport or providing financial help to buy a bike, like in Auckland) need the support of the state. More generally, the effectiveness of decarbonization policies seems to depend on how **local contexts (geographical, cultural) are taken into account** and how involved local populations are in the transition.

### **3. Current decarbonization tools run the risk of causing an unequal transition**

While most GHG emissions are caused by the more developed countries or wealthier social groups, some of the most frequently applied measures (carbon taxes, congestion charges, electric car subsidies, etc.) deepen existing social inequalities. In Norway, for instance, tax credits incentivizing the purchase of an electric car benefit the wealthier members of society who then buy one as a secondary car to their regular gas car!

### **4. Globally, there is no real transition policy**

States make carbon emission commitments on the international stage, especially to be seen as leaders in sustainability. **But this displayed willingness rarely finds a concrete translation in national policies. The issue of mobility is accounted for in the policies** of various institutions, but it is not recognized as a political matter in its own right. Also, **it always remains subordinated to other policies, primarily economic growth**, even when it is meant to be green growth with decarbonization targets. As such, many states often end up pursuing contradictory policies, like Singapore that is curbing the use of private cars all the while building a gigantic international airport hub.

## **IV. Recommendations for a transition towards decarbonized mobilities**

The transition towards decarbonized mobilities is impossible if travel flows, however green they are, keep multiplying. **We need to question the role of travel, too long thought of as a simple method of adjustment between the various activities of daily life** (work, consumption, access to services and leisure). This would allow people to avoid making useless or unwanted trips, especially considering that many wish to live in greater proximity to people and places that they value.

### **1. Make decarbonization a public policy priority**

Internationally, to go beyond mere promises, **states could provide clear and quantifiable targets for reducing GHG emissions in the transport industry** . Such accountability is still very rare, as evidenced by the detail of what states committed to in the Paris Agreement<sup>3</sup>. Can we keep ignoring the GHG emissions of air and maritime transport, that are notably absent from international climate agreements despite their ever growing volume? In order to better integrate social and environmental issues, national policies should systematically be evaluated in terms of indicators other than GDP, which measures only economic growth and encourages even more mobility.

## 2. Design new hierarchies and new policy combinations

The decarbonization of mobility involves many different areas of public action: transport and infrastructure, housing, employment, health, education, etc. For such policies to be effective, it is essential that the **decarbonization of mobility be combined with other public policy goals** . For example, the encouragement of active modes (walking, cycling), as seen in Great Britain or Singapore, could be combined with policies addressing physical inactivity and obesity, air pollution and respiratory diseases.

## 3. Accompany and support local actors of the transition

One way forward is building coalitions for decarbonization which states can partner with in order to upscale local initiatives. Furthermore, the widespread inclusion of local populations in defining public policies not only fosters acceptance of such policies, but also allows for greater efficiency and suitability to local contexts.

## 4. Don't rely on technology alone to solve the carbon problem

Today everyone is talking about electric vehicles and smart cities. And yet, the carbon footprint of electric vehicles, whether in regards to their construction, to the production of electricity (with coal as in South Korea, South Africa, etc.) or to the recycling of materials, remains controversial. Consequently, while improving the energy performance of cars and encouraging a shift from individual cars to collective transportation are positive policies, alone they are insufficient to achieve the target of reducing GHG emissions in the transport industry by a factor of 4 by 2050<sup>4</sup>. **Indeed, these policies don't affect mobility practices, in fact they may even intensify them** , while instead we should be seeking to decrease the absolute amount of kilometers travelled. We should also beware of major technological, turnkey solutions that are driven by the challenges of communication across space and require heavy investment (such as the individual automated cars of Masdar City). They may ultimately turn out to be unsuitable to local contexts and benefit only a very small fraction of the population.

## 5. Reduce the amount of travelled kilometres

We can decrease the speed, frequency and distance of travel, or even remove some trips entirely, with measures that **transform mobility practices and the collective representations associated with them** , such as:

- Rewarding the use of decarbonized transportation modes (with eco-cards, for instance);
- Launching public campaigns showcasing the health and social benefits of active modes (as the WHO has recently been doing);
- Developing teleworking and coworking; Reorganizing urban and non-urban spaces to let people lead more localized lives with a more balanced distribution of activities.

## 6. Make the most carbon-emitting social groups and companies pay for the transition

Policies for decarbonizing mobility should anticipate how their various measures (carbon tax, congestion charges,

electric car subsidies...) will impact upon inequality. **The cost of the transition should not be shouldered by the poorest people in society - those who are also usually the least responsible for mobility-related GHG emissions** - but by the more carbon-emitting countries, businesses and social groups.

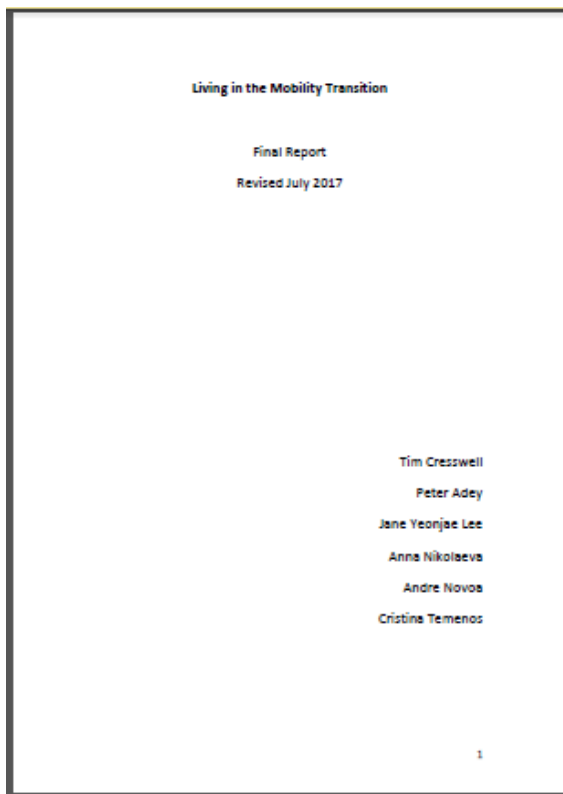
**To ensure a fair and effective transition, the efforts required must take into account everyone's resources and their contributions to greenhouse gas emissions. Implementing fair policies to fight climate change is a necessary condition for all citizens to be committed to this struggle .**

**In order for all this to happen, there first needs to be a more global and systematic effort to question the high value placed on mobility, especially in public discourse, collective representations, some legal texts and also in the design of economic and development indicators .**

## V. Research reports

(This research was initially called : Living in the mobility transition)

### 1/ Final report



### 2/ Brazil



Northeastern University  
Thomson Center

## Living in the Mobility Transition: Brazil

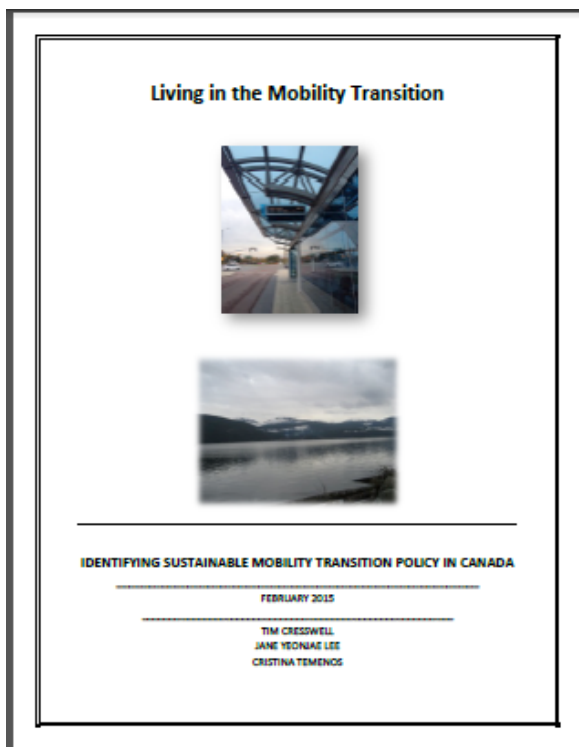


July 2016

Andre Novoa: a.novoa@neu.edu

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### 3/ Canada



### 4/ Chile

## Living in the Mobility Transition



### IDENTIFYING SUSTAINABLE MOBILITY TRANSITION POLICY IN CHILE

May 2015; Revised May 2016

CRISTINA TEMENOS

## 5/ Kazakhstan



### Living in the Mobility Transition: Kazakhstan



ANNA NIKOLAEVA

May 2016

## 6/ Netherland





**Living in the Mobility Transition:  
The Netherlands**  
August 2015



Anna Nikolaeva  
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## 7/ New Zealand

**Living in the Mobility Transition:  
New Zealand (Aotearoa)**



August 2016

JANE YEONJAE LEE

## 8/ Norway

## Living in the Mobility Transition



### IDENTIFYING SUSTAINABLE MOBILITY TRANSITION POLICY IN NORWAY

MAY 2016 (Revised August 2016)

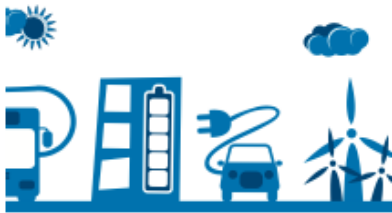
CRISTINA TEMENOS

## 9/ Portugal



Northeastern University  
Economics Center

### Living in the Mobility Transition: Portugal



July 2016

Andre Novoa

## 10/ Singapor

## Living in the Mobility Transition



### IDENTIFYING SUSTAINABLE MOBILITY TRANSITION POLICY IN SINGAPORE

OCTOBER 2015; REVISED MAY 2016

CRISTINA TEMENOS

## 11/ South Africa

### Living in the Mobility Transition: South Africa



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#### Acknowledgements

This project was funded by the Mobile Lives Forum and completed in partnership with Royal Holloway University of London and Northeastern University.



<sup>1</sup> Cover image depicts escalators at O. R. Tambo International Airport in Johannesburg, created with public messages from the national Department of Transport. Photo taken by author, July 2015.  
<sup>2</sup> Dr Wood conducted the primary empirical research this report is based on and delivered the first draft of the report and revisions. Further analysis and iterations of the report were subsequently completed by Prof Adey.

## 12/ South Korea



**Living in the Mobility Transition:  
United Arab Emirates**



August 2016

JANE YEDOUAE LEE

**15/ United Kingdom**

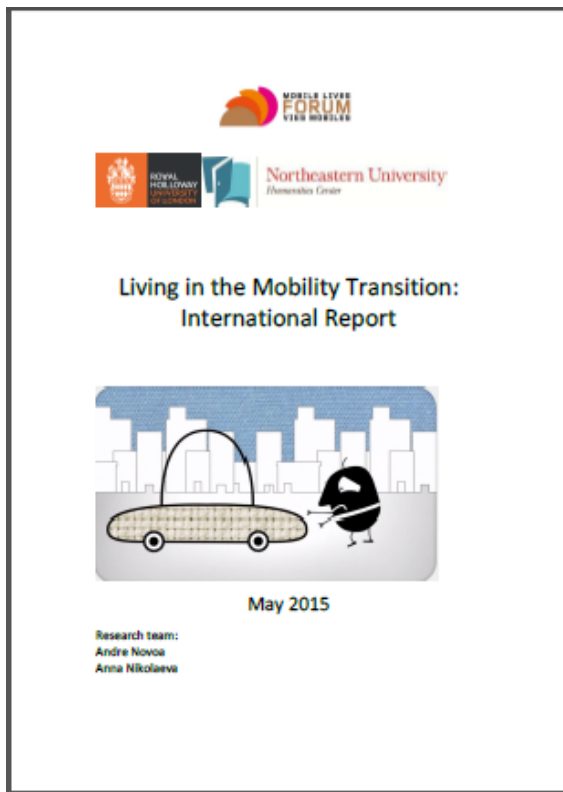


**Living in the Mobility Transition:  
UK Case Study**

February 2014

Research team:  
Peter Adey  
Anna Nikolova  
Astrid Wood

**16/ European union et UN**



Find out more about these results in the video interviews with Tim Cresswell and Peter Adey.

 Vimeo

 Vimeo

## Notes

- 1 Brazil, Canada, Chili, Great Britain, Kazakhstan, The Netherlands, New Zealand, Norway, Portugal, Singapore, South Africa, South Korea, Turkey, The United Arab Emirates.
- 2 This is the ISA classification: “Improve, Shift, Avoid”
- 3 An analysis of national contributions for the Cop 21 in Paris in 2015, conducted by German agency GIZ, shows that 80% of states took no quantifiable commitment regarding the reduction of transport-related GHG emissions.
- 4 Source: Vincent Kaufmann, Emmanuel Ravalet From weak signals to mobility scenarios: A prospective study of France in 2050 Transportation Research Procedia 19 ( 2016 ) 18 – 32

## Mobility

For the Mobile Lives Forum, mobility is understood as the process of how individuals travel across distances in order to deploy through time and space the activities that make up their lifestyles. These travel practices are embedded in socio-technical systems, produced by transport and communication industries and techniques, and by normative discourses on these practices, with considerable social, environmental and spatial impacts.

En savoir plus x

## Movement

Movement is the crossing of space by people, objects, capital, ideas and other information. It is either oriented, and therefore occurs between an origin and one or more destinations, or it is more akin to the idea of simply

wandering, with no real origin or destination.

En savoir plus x

## Teleworking

The remote performance of a salaried activity outside of the company's premises, at home or in a third place during normal working hours and requiring access to telecommunication tools.

En savoir plus x

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Associated Thematics :

### Policies

- Cars
- Ecological transition
- Public transport
- Cycling & Walking
- Cities & Territories

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To cite this publication :

Tim Cresswell et Peter Adey (01 October 2018), « Decarbonized mobilities: a poorly initiated transition », Préparer la transition mobilitaire. Consulté le 22 July 2024, URL: <https://forumviesmobiles.org/en/project/2470/decarbonized-mobilities-poorly-initiated-transition>

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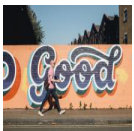
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Other publications



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Jean-Marc Offner



Slowing down: Yes, but why, what and how?

Jean-Yves Boulin



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Jean Coldefy



"Limiting the carbon footprint of mobility: what are the right policies for France?"

Jean-Baptiste Frétiigny, Christophe Gay, Jean-Marc Offner

- 1 <http://owncloud.forumviesmobiles.org/index.php/s/rg05afXv5p6vIcG>
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