

Climate Opportunity Ideas Factory

Transport Sector Meeting: Bicycle Cities and Road User Charging

9 February 2021

Chair: Stefanie O’Gorman, Rambøll Group

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Edinburgh Science

Edinburgh Science Foundation is an educational charity, founded in 1989, which operates Edinburgh Science's Learning and Festival programmes. We are best known for organising Edinburgh's annual Science Festival – the world's first public celebration of science and technology and still one of Europe's largest – our science education outreach programmes, Generation Science and Careers Hive and our community engagement work.

Our mission is to inspire, encourage and challenge people of all ages and backgrounds to explore and understand the world around them. As leaders in our field of Science Communication, we work year-round to create and deliver dynamic hands-on workshops and exhibitions and inspirational shows, discussions, debates and performances that continually push the boundaries of public engagement with science. Communication and engagement is at the core of all our work and we strive to ensure that this is embedded in all aspects of our organisation.

Edinburgh Science also operates a large-scale international programme of work under our Worldwide arm. It regularly presents events overseas and has been the Major Programming Partner of the annual Abu Dhabi Science Festival since 2011, helping to curate, produce and deliver the event. For international partners, the team at Edinburgh Science provide engaging content, curatorial advice on programming and business planning support, along with expert staff and training for local science communicators.

Our UK and international projects reach a combined audience of over half a million people each year.

The Climate Opportunity Ideas Factory

Edinburgh Science coordinates and runs the Climate Opportunity Ideas Factory - a series of round table meetings for senior Scottish leaders to discuss ideas for action that will enable Scottish enterprises to respond to the climate emergency. The first meeting was in April 2019 when Edinburgh Science Festival awarded the Edinburgh Medal to Christiana Figueres, the Costa Rican Diplomat who was instrumental in bringing about the Paris Climate Agreement. We organised a round table on that day, with leaders of business, public sector, third sector and higher education present. They were challenged by Christiana to collaborate, to act, to not wait for anyone to give them permission, and to use the Climate Opportunity that presented itself for positive change.

Christiana was coming back to Edinburgh in two months and asked to meet again for an update on what this group had decided to do. Two months later, Baillie Gifford hosted a larger group of senior leaders who presented a number of ideas for discussion in this forum, with Christina Figueres and Roseanna Cunningham, Cabinet Secretary for Environment, Climate Change and Land Reform. Many of the ideas have been picked up by attending businesses and organisations to make an impact, and the attendees have told us that this group is of immense value to them, due to the diverse invite list and the facilitated discussions.

The Climate Opportunity Ideas Factory now meets regularly. The purpose of the meetings is to generate new ideas that are then acted upon by those present to achieve steps towards reduced carbon emissions and greater environmental sustainability.

Edinburgh Science is in an exceptional position to bring together cross-sectoral leaders from diverse groups to gather views to identify new ways to work collaboratively to unlock ideas and create opportunities. The Climate Opportunity Ideas Factory has already provided a unique safe space for collaboration, resulting in major ideas for example; a national carbon reserve for offsetting which we know excited many organisations. With connections across industries and many sectors, and no agenda other than to share the science and to see a solution to the climate emergency, Edinburgh Science strongly believes that the time is right to harness the collective power of organisations and minds in Scotland to put Scotland at the forefront of this Climate Opportunity.

Through the Climate Opportunity Ideas Factory we are encouraging, supporting and facilitating these leaders as they address the challenges and opportunities that the climate revolution will bring. The Climate Opportunity Ideas Factory will continue meet regularly and we are excited to work towards bringing innovative ideas into reality as we approach COP26 Glasgow in November 2021.

We would like to thank the many organisations involved in supporting this exciting and unique project, particularly our 2020 Programme Supporters and Founder Members.

Programme Supporters



Founding Members



Sectoral Sub-Group for Transport

During the most recent Climate Opportunity Ideas Factory roundtable meeting on 5 November 2020, the need for sector specific focus groups was raised with the following industries/topics suggested:

- Agriculture, Land Use Change and Forestry
- Aviation and Shipping
- Construction and the Built Environment
- Finance
- Greenhouse Gas Removal
- Heat Decarbonisation
- Local Transport and Tourism
- Manufacturing
- Marine Environment
- Power and Hydrogen
- Resources and Circular Economy

Edinburgh Science in association with Stefanie O’Gorman, Director of Economics, Cities and Regeneration at Rambøll Group, devised the first transport sectoral meeting to focus on Bicycle Cities and Road User Charging, drawing on Rambøll’s expertise on these topics and recent work on [20 minute neighbourhoods for Scotland](#).

Transport: Bicycle Cities and Road User Charging

We are seeking ideas for development that we plan to share around COP26 that focus specifically on transport. We hope that these ideas will drive change, and help shape both the UK and Scotland and the UK Governments’ approach to this important area.

Agenda

1. Welcome and introductions: Dr Simon Gage, CEO, Edinburgh Science [5 min]
2. Purpose of meeting: Stef O’Gorman, Rambøll, Chair [5 min]
We see this meeting as having two main aims:
 - To identify list of key topics or themes that are likely to be the basis of the tangible initiative(s).
 - To agree a process and timetable for achieving overall purpose.
3. Topics introduced by Stef O’Gorman, Rambøll, Chair with 5 minute context setting provided by two speakers [40 min]
 - Bicycle Cities
 - Morten Kabell – Rambøll Head of Smart Mobility Denmark
 - Brian Leddin – TD (Member of Irish Parliament) and Green Party spokesperson on Transport, Climate Change and Environment, Ireland
 - Road User Charging
 - John Siraut – Director of Economics, Jacobs
 - Markku Kivari – Rambøll Director of Smart Mobility Finland

4. Key topics and themes: Stef O’Gorman, Chair (20 min)
Discussion of the initiatives for transport identified through discussion and agreement of timeline and next steps.
5. Wrap up / AOB: Dr Simon Gage, CEO, Edinburgh Science (5 min)
6. Thanks and next steps: Hannah Schlesinger, Director of Development, Edinburgh Science (5 min)

Delegate List

Name	Position / Department	Organisation
Lauren Begbie	Climate Change Division	Scottish Government
Anne-Marte Bergseng	Communications Manager	ClimateXChange, ECCI
Thomas Bibby	Parliamentary Assistant	Green Party, Ireland
Alisdair Brown	Development Officer, Climate Challenge Fund	Keep Scotland Beautiful
David Cameron	Irish Energy Policy	EDF
Mike Elm	Operational Volunteer	2050 Climate Group
Graham Esson	Head of Sustainability	Perth and Kinross Council
Emily Farquhar	Operational Volunteer / Active Travel Coordinator	2050 Climate Group / City of Glasgow College
Simon Gage	Director and CEO	Edinburgh Science
Morten Kabbell	Head of Smart Mobility Denmark	Rambøll
Markku Kivari	Director, Smart Mobility Finland	Rambøll
Brian Leddin	Member of Irish Parliament	Green Party, Ireland
Elizabeth Leighton	Secretariat	Climate Emergency Response Group
Adam Luto	Development Officer	Edinburgh Science
Phil McCluskey	Climate Change Unit	Transport Scotland
Jessica Monsen	Development Officer	Edinburgh Science
Stefanie O’Gorman	Director, City Economics	Rambøll
Alan Pauling	Transport	Rambøll
Jukka-Pekka Pitkänen	Global Division Director, Smart Mobility Finland	Rambøll
Peter Rawcliffe	Head of People and Places	NatureScot
Ian Sacs	Transport Engineer, Smart Mobility	Rambøll
Hannah Schlesinger	Director of Development and External Relations	Edinburgh Science
John Siraut	Director of Economics	Jacobs
George Tarvit	Director	Sustainable Scotland Network (ECCI)

Meeting Summary

Bicycle Cities - Brian Leddin Presentation Notes [Limerick City example]

- TD for Limerick City. Elected in 2019. Has background in civil engineering.
- Has introduced a cycling initiative in Limerick City with much progress over the past year.
- Requested 10% of capital budget to be put towards cycling network projects.
- Lessons learned:
 - Made good progress but also met with barriers and frustrations.
 - When relying on local authorities, you have to accept that some will be more enthusiastic than others – don't let it hold you back!
 - A wide range of discipline' is essential to deliver new infrastructure – don't just rely on engineers! Ensure you have a team that includes designers, engineers, experts in behavioural change, and more.
 - No need to finalise all planning up-front. Reduced planning legislation in Ireland has allowed the team to test and trail changes to roads before making permanent changes to infrastructure.
- Framework: AVOID (remove need for journey) – SHIFT (modes of transport) – IMPROVE
- Links:
 - <https://theworldnews.net/ie-news/new-active-travel-unit-to-be-established-in-limerick>
 - www.limerick.ie/council/services/community-and-leisure/sports-and-fitness/limerick-smarter-travel/about-limerick

Bicycle Cities - Morten Kabell Presentation Notes [Copenhagen example]

- The world is urbanising – eventually two-thirds to three-quarters of global population will live in urban areas
- Study into bus travel revealed that bus routes and lanes had hardly changed in a century – in fact with increased vehicles on the road, bus journey times had actually slowed.
- Smarter travel initiatives in Copenhagen reduced/removed car lanes on roads and introduced lanes for bikes, trams and pedestrians – creating capacity for 7-10 times as many people on the same roads.
- Removed car parking spaces in city centre zones and replaced with bicycle parking for the same number of travelers but taking up a fraction of the space and opening up further spaces (city squares, etc.) for public gathering (café seating, green spaces, etc.)
- Resulted in the following changes to modes of travel in the city:
 - -57% cars / +5% bus / +60% bicycles / +165% pedestrians / +1400% outdoor gathering
 - Increase of elderly people and young families using routes as they have become much safely and user friendly
- Simple, effective and important features of infrastructure:
 - Only two single lanes of traffic
 - Broad promenade for people walking and gathering
 - Two cycle lanes – each 5.5m wide
 - Integration of lanes – i.e. no curb between promenade and cycle lanes – instead place curb between cycle lane and traffic. Promotes a much better sense of safety.
 - Create new routes (e.g. bridges) linking different neighbourhoods.
- Stats:
 - €280 million spent over 15 years
 - 62% of commuters in Copenhagen travel by bicycle

Bicycle Cities – Discussion Notes

- Need to consider the weather in Scotland – what are the seasonal changes to road use observed in Copenhagen example?

- Scottish and Irish climates actually very similar to Nordics
- Actually around 75 to 80% of the ones cycling in summer ride their bike in winter snow and sleet as well - there is no such thing as bad weather; there is only bad clothing ☺
- Winter maintenance to infrastructure is very important. Copenhagen clears the bike tracks before the car lanes - and that sends a very clear signal and incentive to shift to the bike.
- Public opinion
 - There is much greater trust in Nordic governments compared to the UK
 - It would be very interesting to understand the landscape of public opinion in Copenhagen 10-20 years ago before infrastructure introduced
 - There is often a big debate here in UK so the challenge is to make a case for bicycle cities
 - E.g. there has been negative response to 2020 pop-up cycle lanes because a case wasn't made for it in advance to get public buy-in
 - Bike parking is great for promoting custom at local business
 - We need to get people to understand why we are putting in this type of infrastructure otherwise it can be perceived as taking people's freedoms away. How do we do this?
 - Need to get business owners on board [e.g. recent Covid-19 Spaces for People project has not been popular with small business owners]
 - Find/create studies and surveys to prove to business owners that reduced vehicle traffic and parking will not affect number of customers visiting their businesses.
 - See Hoboken(?) survey that showed 99% of pharmacy customers did not arrive via the six parking bays outside the store [get link from Ian Sacs]
 - Morningside 2020 December trading figures same as December 2019 – even in wake of Covid-19 and negative public opinion towards 'Spaces for People' project
 - Shift the focus away from climate targets and promote quality of life and livability of cities
 - Present suite of measures to improve inter-urban travel – i.e. “the right horses for the courses”
 - 20 minute neighbourhoods idea is important here
 - Move focus on to creating wonderful public spaces – making any reductions in carbon emissions a positive side effect rather than the only goal of projects
 - Output = reduced car kilometres, Outcome = better quality of life
 - Can't influence people's choices unless we give them good credible options to choose from!
- What are we trying to achieve for Scotland?
 - What is Scottish Government goal in setting carbon emissions target?
 - Climate Change Plan update [published 16 Dec 2020] includes new commitment to reduce car kilometres by 20% by 2030.
 - Has any analysis been done on what this could look like?
 - Main focus seems to be relying on the switch to electric vehicles
 - Transport Scotland – it depends on local authorities – path to 20% reduction might be more straight forward for less populated areas where they could increase to 30%
 - Are we likely to achieve this by default with post-Covid changes such as offices remaining closed and more people working from home?
 - It would be good to learn more about projects in Scotland – there are many improvements in planning and delivery phases
 - Need to grasp opportunities - consider which are the easier problems to tackle first – e.g. the daily school run
 - Multi-disciplinary team needed to implement [as in Ireland] – how do we facilitate this?

- *Strategic Transport Projects Review 2* came out last week. There are a number of projects outlined in this, one being influencing public travel choices and capitalising on opportunities arising from Covid-19.
 - *Is this going to be enough?*
 - *Carbon-saving due to Covid-19 lockdowns unlikely to be long lasting – we expect vehicle traffic to rebound to normal levels (as it did after first 2020 lockdown).*
- *Delivery of infrastructure not the problem, challenge is promoting new choices of travel*
 - *Some disagree, and say the answer is Infrastructure, Infrastructure, Infrastructure! ☺ Infrastructure that is well maintained will always win over public opinion. Changing public opinion through campaigning is short-lived. Any campaigns should be seen more as an “add-on”.*
- *Need incentives – e.g. Sweden providing subsidies for purchase of e-bikes to replace cars. Interesting to understand local authority central support*
- *How to sell to local authorities to get business buy-in?*
- **Rider demographics**
 - *City of London has spent a lot on bicycle infrastructure – it’s not perfect but much better than before – however cyclists all still tend to be young lycra-clad males on sports bikes – not women, young families, etc.*
 - *UK has huge imbalance between men and women cycling to work.*
 - *London may have removed cars but still lots of vans and lorries on city centre roads which is unsafe for cyclists.*
 - *Copenhagen has normalised cycling from A to B but this shift does take time. When it becomes safe, easy and convenient you will see a better gender and age balance amongst cyclists.*
 - *Ramboll (Finland) are currently finalising study on gender and mobility. Some findings include:*
 - *Women are more risk averse*
 - *More women cyclists is a great indicator of safe infrastructure*
 - *Women more likely than men to take multi-stop trips compared to men so a car can be easier for this.*
 - *Imbalances about bicycle riders are representative of “early stages” where the bravest residents are willing but the infrastructure does not yet support the perception of safety required to encourage other users. The same was seen in NYC when JSK first introduced bike lanes. Over time, the demographics shifted.*
 - *‘Access’ to a bike is quite key. Not everyone who is driving at the moment, will just jump on their bike when the infrastructure is there. They might not have access to a bike straight away, or even know how to cycle in some cases (or at least not cycled for years). A combo of community level support for bike skills for people and access to cheap or shared bikes and bike storage is really important I think.*
- **Irish approach**
 - *Recruit the right team – skills are more important than budget, especially as we are aiming to get it right first time.*
 - *Recognise there is inequality between local authorities which will result in unequal solutions*
 - *How to remove this inequality?*
 - *How do avoid getting it wrong (as in Glasgow example described by David – a cycle lane along a busy route crossing several roads and a roundabout – no doubt done with good intentions but with limited budget and expertise)*
 - *Use centralised budget to help balance this inequality?*
 - *What was Ireland’s experience dealing with deliveries - i.e. the ‘last mile’?*
- **Point to emphasise**
 - *To ensure we do not frame this as just a transport issue and stress liveability of our cities, green infrastructure, and links to planning, education and health as well a retailing or work.*

Road User Charging – John Siraut Presentation Notes

- **Setting the scene**

- UK 2005 – road user charging brought in and met with massive disapproval from public so government dropped scheme due to unpopularity and hassle.
- Edinburgh 2007 – introduced city centre bollard system introduced and dropped a short time later due to public outcry
- In 2020 Edinburgh ranked as most congested city in UK. Glasgow ranked 17th – worse than many major English cities.
- Public opinion - how have attitudes changed?
 - Still negative response to road user charging however when we propose reducing vehicle tax or using funds to improve infrastructure, benefit communities, etc, people are more positive and receptive.
 - UK climate assembly
 - Look at public attitude to climate action
 - People generally in favour of road user charging
 - Ipsos Mori study – majority in favour of road user charging especially if money used to improve road infrastructure, fight climate change, use to off-set fuel / excise duties on vehicles, etc.
 - Attitudes have changed dramatically!
- Potential Solution
 - Channel funds from road user charging into three main different streams benefiting different groups:
 - Maintenance of roads – goes to highway authority
 - Tail pipe emissions / environmental charge - goes to local communities affected by congestion and air pollution
 - Congestion charge [higher charges at peak congestion times] – goes to addressing these problems and creating better infrastructure
 - Advantages
 - Could address issue on cost of fuel duty
 - Greener, climate friendly
 - Links to emissions standards
 - Only needs to apply to certain places (i.e. not rural communities)
 - We now have the technology to manage this through GPS tech via vehicle black box
 - The timing feels right to push this – combination of phenomenal change in public acceptability, available tech, climate crisis and government emissions targets

Road User Charging – Markku Kivari Presentation Notes

- Road map for fossil fuel transport
 - Finnish ministry for transport published this roadmap on 20 Jan to halve emissions by 2030
 - Impact good in certain areas but impact lost at national level
 - Taxation of cars, fuel and road charges
 - Phase 1 focuses on taking easy actions first [politically acceptable approach]
 - Phases 2 and 3 look to approach more difficult measures
 - Important to consider distance of journey and get impacts for all.
 - Consider how to use existing car fleet more effectively

Road User Charging – Discussion Notes

- Scotland
 - Good progress in energy but transport seems to be main challenge
 - No real progress since 1990
 - Any fuel improvements have been counteracted by the SUV
 - We don't have luxury to wait and see how this goes – must act now!

- Road user charging is outside the gift of the Scottish Government – best they could do is city centre charging
- SNP or whoever wins next election unlikely to promote this as policy due to perceived unpopularity with public
- Take care with Scottish unique transport taxation. People here still smarting 32 years after the event on the Poll Tax which was tested in Scotland
- Does Scotland have a similar road map?
 - Yes as part of climate plan
 - Doesn't drill down to policy by policy breakdown though - this would be desirable but still sitting with Scottish Government and hasn't been passed to Transport Scotland agency yet
- If public acceptability us there – can we introduce road user charging?
 - As just one of a suite of measures it should certainly help bring about 20-30% reduction in car km
 - Introduce road user charging in Scotland then rebate individuals - potentially complicated / bureaucratic way of managing system
- Is there another opportunity?
 - Easing of congestion doesn't necessarily translate to improved quality of life
 - Got tools now to do road user charging and we've been here before with these arguments - we have to be bold and push forward with these measures
 - Active travel and road user charging are two sides of same coin
 - Not seeing rationale from UK government for other measures beyond electric cars - do we need to create a campaign?
 - Focussing on air pollution could be a good opportunity
 - E.g. No through routes past schools by 2025
 - This type of thing is very sellable with existing local education authority and parental backing
 - Potentially an easy route into getting road user charging projects off the ground
 - Advantages
 - Infinite flexibility to pricing of road user charges
 - Combining with other measures makes it more appealing to the public
 - Equality still an issue
 - People in poorer demographic generally don't have cars
 - They may potentially benefit as reduced congestions could allow for improvements for other modes of transport used by these communities – i.e. buses and trams. UK bus timetables slower than a century ago due to traffic congestion. Buses can be unreliable at certain times of day – this has a big impact particularly on parents picking kids up from school (having to resort to mini cabs o get to school on time)
 - These issues manifest in lots of ways
 - Is there anything transport Scotland would like to investigate with road user charging?
 - Legislation exists in Scotland to implement RUC at a local level

Next Steps

- Hone in on themes for further discussion:
 - **Local engagement and buy in (especially from business owners)**
 - **Equality and distribution of funding and infrastructure**
 - **Constraints on local authorities accessing funding (i.e. bank borrowing)**
- Arrange meeting to focus and develop topics raised today – who is keen to take part?
 - **Bicycle Cities:**
 - Mike Elm, David Cameron, Alan Pauling and George Tarvit (very happy to look at how SSN can help out here. On-going national/Local government dialogue on this will be key. SSN Steering Group and Local Authority Forum would be interested in follow up on all of this)

- **Road User Charging:**
 - David Cameron, Alan Pauling, George Tarvit

Links to Further Reading

Scottish Government update to the climate change plan 2018-2032:

- <https://www.gov.scot/publications/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/>

Transport Scotland Strategic Transport Projects Review 2:

- <https://www.transport.gov.scot/our-approach/strategy/strategic-transport-projects-review-2/>

New York data showing gradual increase of women cyclists over time:

- <https://www1.nyc.gov/html/dot/downloads/pdf/cycling-in-the-city.pdf>

John Siraut's paper:

- <https://policyexchange.org.uk/wp-content/uploads/2017/07/Volterra-Jacobs-Pricing-for-Prosperty-Revised-Submission.pdf>

First national transport system plan for Finland [from Markku's presentation]:

- https://api.hankeikkuna.fi/asiakirjat/f0ca36bc-e740-4ac4-accd-c244746849d5/e74f9759-fbd3-4381-b6a4-4a5e320afb1b/MUISTIO_20210122125136.PDF

Fossil free roadmap for Finland:

- <https://valtioneuvosto.fi/en/-/comments-invited-on-the-roadmap-for-fossil-free-transport-three-phases-towards-climate-friendly-mobility>

Traffic congestion levels in UK cities:

- https://www.tomtom.com/en_gb/traffic-index/ranking/?country=UK

Rambøll gender mobility report:

- <https://ramboll.com/media/rgr/mobility-systems-gender-neutral>