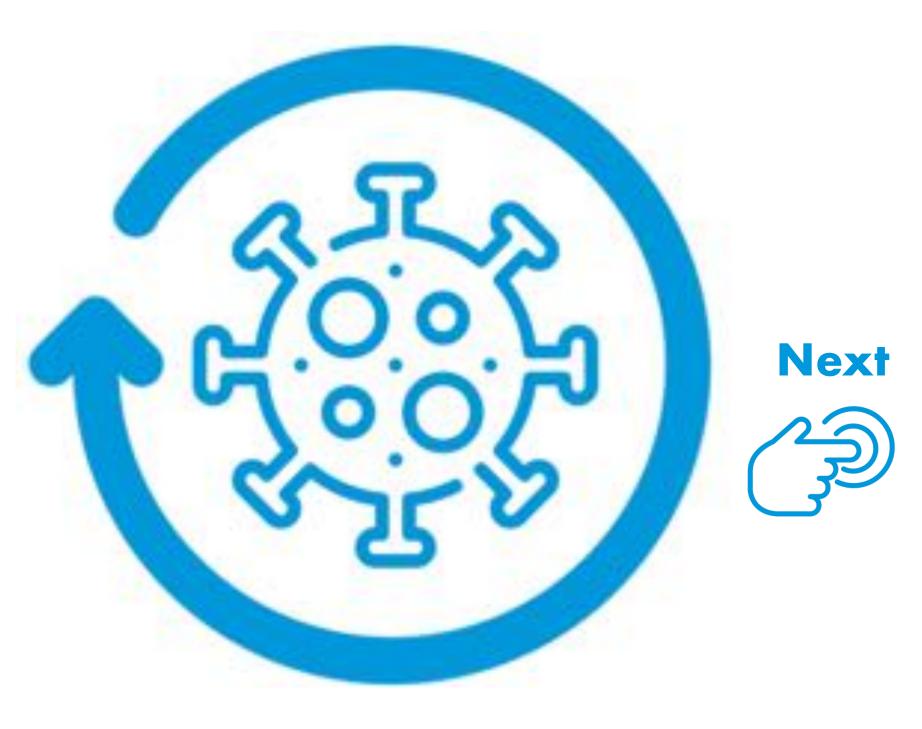
Introduction: Slingshot or Setback

Covid-19's impact on the environment, far from an appealing story where empty skies and remote work helped us save the planet, provides a mixed picture. But policymakers around the world have a role in how this story ends.

Global CO2 emissions <u>fell about 8%</u> in 2020, to levels last seen 10 years ago. So what's the bad news? Firstly the 8% reduction came mainly from reduced activity, rather than a fundamental decoupling of our economies and our emissions. As we rebound, so will emissions. Secondly, Covid has given us another way to look at the challenge we face. We need to cut emissions <u>7.6% year-on-year</u> to meet the 1.5°C Paris target. In other words, a pandemic-level shift every year, on top of maintaining all previous changes. Finally, with a global <u>recession of 4.4%</u>, it is tempting to see this as a problem for another day.

So what's the good news? Well, yes, we know that systemic change is needed to lower emissions to safe levels, but the behaviour change seen through the pandemic has shown us such shifts are possible. The onus is now on policymakers to sustain those behavioural shifts. Plus, with Biden in the Whitehouse, who <u>formally rejoined the Paris agreement</u> a month into office, and <u>COP26</u> in November, there may be no better time for the bold decisions to reset in a more sustainable manner.

Can it be done? Can policymakers help? We think so. Click anywhere to see some thoughts on how.









TRAVEL IN 2030

***HEALTH WARNING: This list is not comprehensive, nor is it calibrated for the needs of each community; every government should, of course, assess and adapt to their local context, needs & challenges.

Choose your own adventure...



LOW-CARBON MARKETS



Leading mayors adopted 15-minute cities, most of our needs are a walk/cycle away



WE MOVE LESS



Local, less abstract data drove change like showing parents pollution at school drop-off

TRAVEL **IN 2030**

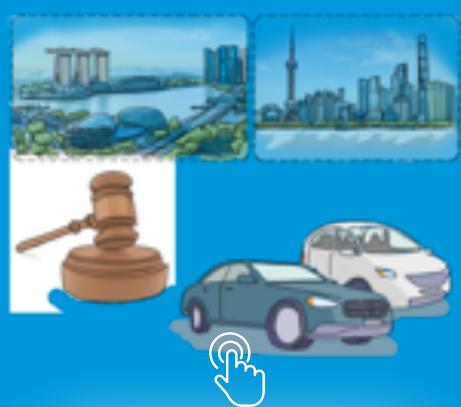




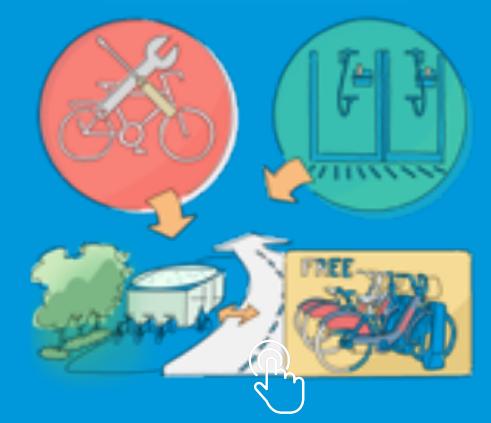
Public transport bounced back as we moved away from car-centric streets



Policy approaches took over from subsidies as EVs became widespread



WE MOVE **SMARTER**



Cycle hassle is a thing of the past: hire, repairs and showers are free and widely available

WE MOVE ELECTRIC



Non-EV licenses are capped and auctioned, learning from Shanghai and Singapore...







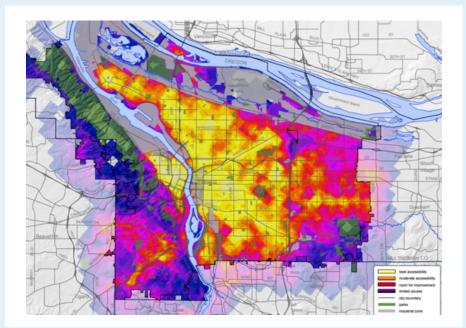


Most principles underpinning 15-minute cities are not new, so what changed? Our lives evolved during the pandemic but it wasn't all bad; many aspects people wanted to keep: less commuting, walking to shops, less pollution and (arguably) greater community.

2. Which CITIES led the way?

Many cities are adopting 15-minute cities or similar principles:

- Milan: Mayor announced pilot to "offer services and quality of life within...15 minutes on foot from home"
- **Australia:** 20-minute neighbourhoods central to Plan Melbourne 2017-2050, including 3 pilots here, here and here.
- US: Portland's 2030 goal is for 80% of residents to have easy access to all their basic daily non-work needs (below left).
- **Paris:** 'hyper-proximity' <u>central to Mayor's</u> re-election campaign, with a deputy exclusively for the 15-min city.
- **Barcelona**: (below right) can reclaim public space but also save lives.



Leading mayors adopted 15-minute cities, most of our needs are a walk/cycle away

 \triangleright



WE MOVE LESS

All your needs nearby. A local, and sustainable way of life.

But is it really feasible?

Read <u>here</u>, watch 2 mins <u>here</u> (or <u>15 mins</u>!)

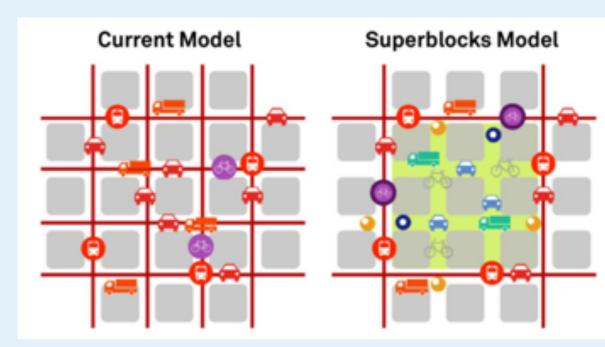
3. Can 15-minute cities be a reality? Should they?

How?: 5 Steps adapted from <u>C40</u> (96 cities united by a sustainable future):

- 1. Create a vision: Needs tailoring to each city's culture
- 2. Map the data: Map amenities, jobs, public spaces, and then the gaps
- 3. Get input: Invite businesses and residents to participate, as in Paris (10% of budget) and New York (<u>\$210 million</u> allocated so far).
- 4. Improve infrastructure for walking and cycling
- 5. Decentralise core services, community health and education

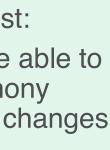
But why? 15-minute cities can seem like an interesting concept but unrealistic for most:

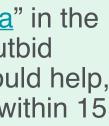
- **The pandemic will pass**, and the desire for proximity: "People predict we will all be able to work in the countryside. But the attractiveness of city centres only increases" - Anthony Breach, Centre for Cities. But this depends how serious & long-lasting you believe changes to urban life will be.
- Who is going to pay? Melbourne would need <u>50% more funding</u> for public transport at a time when revenues are down. **But** with \$10 trillion stimulus funding, this could be the right time, particularly if this creates more jobs.
- "Chronotopia" or Utopia? How realistic are multi-function spaces, or "Chronotopia" in the vision? Jobs aren't distributed across cities. You need industry and commerce to outbid housing, and then residents to be comfortable with living by it. But starting small could help, e.g first requiring primary schools, grocery stores, parks and public transport to be within 15 mins.
- Will this reinforce inequality? Hyper-localism could further separate poorer and richer districts, widening inequality. But cities can start with the neighbourhoods most in need, in fact mapping may help highlight disparities.
- **Ok, but what's really new?** 15-minute cities could be seen as simply bringing together ideas for sustainable living. But one concise term for can help build momentum, particularly if comes from the top, as in Paris and Milan.

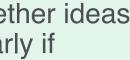


4. We need your help

Many of these approaches have challenges, some have been tried others failed. That is why we want to hear from you. We are looking to dig deeper, develop alternatives and run trials. If you have 15 minutes to spare, click **here** to discuss or partner.



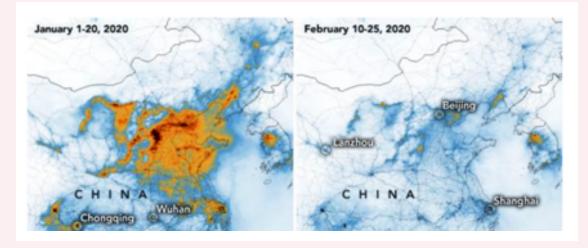








Lockdowns, saw global road traffic collapse, 50% based on Google Maps, so much they had to change their models. Less pollution saved lives, likely 100,000 in China alone. Much has now reversed, but it gave people a taste. For example, in Delhi pollutants (PM10, PM2.5) halved, as in New York, and in China airborne nitrogen dioxide almost disappeared (see below).



2. Which COUNTRIES led the way?

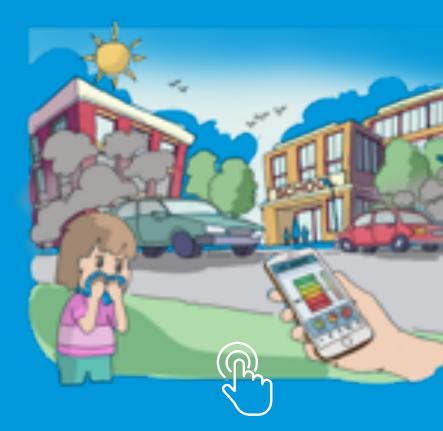
As effects of climate change become widespread, they become less abstract:

- Australia: After a devastating 2020, 82% worry climate change will mean more bushfires (76% in 2019) - the same number want coal-fired power stations to be phased out.
- France: Paris mayor Hidalgo used local pollution data to galvanise green transport overhaul.
- **Singapore:** During the 2019 "Haze Craze", citizens diligently tracked the city's air pollution. The haze was due to crop burning, but could this provide a model to aim for?

Uncertainty, psychological distance and low self-efficacy drive inaction.

We need to go local and swap abstract global threats for salient local issues like smog or flooding.

WE MOVE LESS

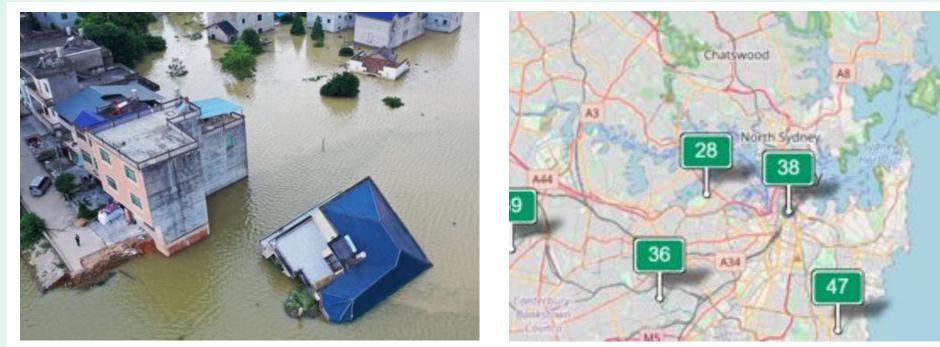


Local, less abstract data drove change like showing parents pollution at school drop-off

3. What APPROACHES may help?

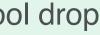
No one is pleased to see extreme weather events, like <u>unprecedented</u> bushfires, but it does present a chance to re-engage people.

- Use the moments we care most: Showing parents pollution at school drop off time is likely to be more effective than melting ice caps.
- Use real-time data, air pollution, which cost 100m DALYs in 2015, is available in widely available in real time (try it here).
- Use local events: In late 2020 California was ablaze, now Texas has Arctic temperatures. If nearby flooding can increase insurance, can local pollution help me ditch my petrol car? Will recent weather events in the US help Biden's climate agenda? How air pollution affects Covid-19, e.g. US or UK, is another live and local example.
- Use words that move us. Hackneyed phrases like global warming and climate change may struggle to motivate. Don't say do your bit for the environment but to reduce our flooding. Don't change to meet Paris commitments but to get Paris less polluted.



4. We need your help

Many of these approaches have challenges, some have been tried, others failed. That is why we want to hear from you. We are looking to test new ideas and bring a *breath of fresh air*. Please click **here** to discuss or partner.





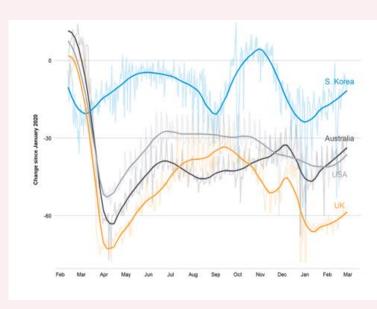






COVID-19 set back the shift from cars but also drove experiments in active mobility, as local govts adapted quickly to safer ways to move around.

- Public transport is still well below pre-pandemic levels (see graph right using Google data)
- One <u>survey</u> found widespread intentions to drive more after Covid in all 26 countries as there was return to the safety of cars.
- Although young adults are less likely to start driving in <u>9</u> out of 14 countries.



3. What APPROACHES may help?

Experience of reduced traffic and pollution motivated many city leaders to pursue cleaner and more sustainable urban mobility

- Make public transport 'Covid-Clean': We people feel safe, not simply be safe. New initiatives and, to an extent a new level of clean, "Covid-Clean", may help, e.g. UV cleaning, as in <u>Shanghai</u>'s or <u>New York</u> (see below) removing carpets and seat covers as in Bogota, armbands for vaccinated drivers, or even increasing the smell of the disinfectants.
- Season tickets reflect changing patterns. As people shift to irregular working patterns, or indeed to encourage them to do so, authorities should adapt, e.g 3/4 passes for 3 days of travel.
- **Mobility-as-a-Service** (MaaS): integrating end-to-end trip planning, booking and payment - can help reduce car ownership, but this will need open data access.







WE MOVE **SMARTER**

Now is the time to prioritise people, rather than cars, as people are resetting habits and the streets are quieter.

Covid's impact on emissions will be shortlived if we don't.



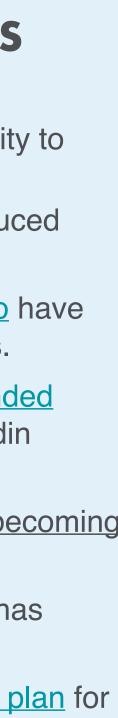
Cities responded to the opportunity to improve non-car infrastructure:

- Netherlands: Amsterdam reduced speed limits to 30km per hour.
- US: Seattle and San Francisco have Open or "Stay Healthy" streets.
- New Zealand: Auckland extended sidewalks into the road, Dunedin approved 10kmph limits.
- Lithuania: Vilnius flirted with becoming one large outdoor cafe.
- Finland: One MaaS operator has connected 8m trips.
- **Italy:** Milan have an <u>ambitious plan</u> for road reallocation (see below).



4. We need your help

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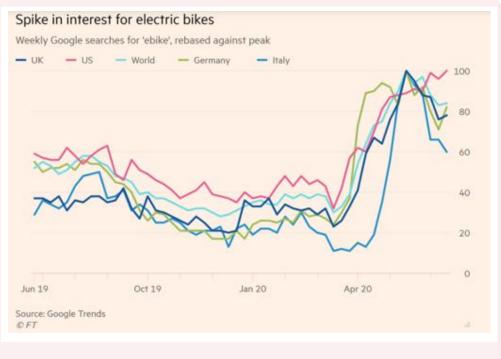






COVID-19 further highlighted cycling as active, equitable, low-carbon (and physically distant) transport.

- Covid helped people (re)discover Cycling
- The rise of <u>e-scooters</u> and <u>e-bikes</u> (see graph) opened up active travel to bigger group, even as a 'second car'.
- Subsidy schemes got people cycling but, as restrictions lifted, important hassle factors remain.



3. What APPROACHES may help?

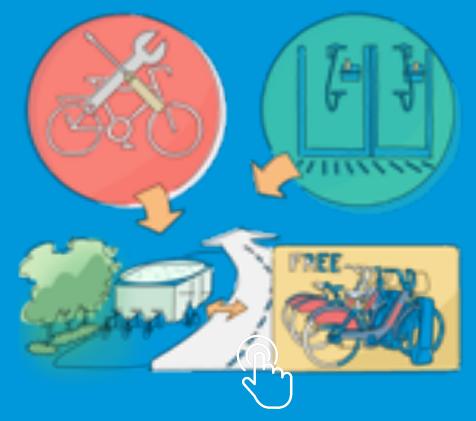
Cycling is a rare bright side of Covid but governments will need do more to make it stick.

- Make Make pandemic changes permanent: with many temporary measures introduced, now is time to build into long-term plans.
- **Kill cycle hassle:** Many countries have subsidies, but many would-be cyclists have a bike, they just don't use it. Money spent reducing hassle – showers for hot countries, repairs for cold - could help achieve a more sustainable shift.
- **Target home movers.** BIT found new movers <u>almost 4X</u> as interested in bike sharing than those near a new dock. But it needs to go beyond a simple prompt: local cycle maps, parking options and <u>exploding offers</u> on training – or even <u>pairing with a local</u> experienced cyclist.
- Storage approval by default. Taking your bike down in the lift or out from the garden is a major friction but leaving on street can be unsafe. On-street parking can help plus one car space means ten bikes (see right) - but planning approval to be simple.
- **Bikeability index**. Governments have most the data: availability of cycle lanes, proximity of safe parking, cycle theft rates. If people built this into their house search, sub-national authorities may move faster to improve their local ranking.
- Sofa to saddle: Inertia can be a big obstacle. One-month free bike access can give people - unsure about safety, sweat or just if they will like cycling - a chance to give it a go before committing. Rented bikes with in-built trackers can track use. Could even be '<u>prescribed</u>' by a doctor for those who could really benefit.

As easy as picking up your car keys:

Subsidies and bursts of enthusiasm can get people going, but cycle hassle needs to be a thing of the past to keep people cycling.

WE MOVE **SMARTER**



Cycle hassle is a thing of the past: hire, repairs and showers are free and widely available

2. Which COUNTRIES led the way?

- Colombia: Bogotá led early action adding 76 km of bike lanes, sometimes using traffic cones.
- **France:** €20 million scheme, where everyone will be eligible for bike repairs of up to €50 at registered mechanics.
- **Italy:** Rebates of <u>up to €500 to buy</u> bikes and e-bikes.
- UK:Committed £2bn to create "new era for cycling and walking" with wider pavements & segregated cycle tracks.
- Peru: Lima government planning a locally made bike, costing just two months' travel on public transport.

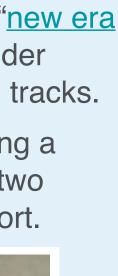


4. We need your help Many of these approaches have challenges, some have been tried, others failed. That is why we want to hear from you. We are looking to dig deeper, develop alternatives, run trials and help *repair the planet*. Please click **here** to discuss or partner.





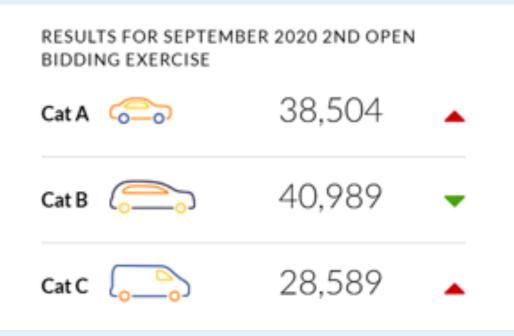




The virus stopped travel but also led to a flight back to the safety of cars, which account for 7% of emissions. Meanwhile transport agencies need revenue to survive: US transit agencies face a <u>\$49bn shortfall</u>.

2. Which COUNTRIES led the way?

• **Singapore:** Implemented world's first vehicle quota system in 1990. "Certificates of Entitlement" (COE) for 10 years are auctioned. Example COE prices pictured below (\$SGD)



China: A tale of 2 cities. 1) As pollution hit 30x safe levels, Shanghai imposed a quota and auction system. Removal of the quota would increase new car sales by 74% by one estimate.

2) Beijing applied the odd-even plate rule which has shown to backfire (here and <u>here</u>)

3. CRITICISMS and APPROACHES that may help?

The quota approach has <u>challenges</u> to <u>but</u>, given heightened imperative, we should consider possible solutions:

- suggested.
- is not without its own critics).

4. We need your help

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Favours rich who can afford licences, sometimes multiple. Singapore partly mitigate this with a category only for small cars, whereas Shanghai just have one category for all. **But** you could go further by reserving licences, *e.g. everyone with a car and income < X automatically gets a licence, or* ad-valorem bids where you bid a % of your car value, as the <u>IMF</u>

Need a good substitute. Singapore's affordable metro was introduced 3 years before capping licences. But cities often also need investment into public transport. **But** you could hypothecate auction revenues to public transport, so can credibly commit to improvements (although hypothecation

Sunk cost facility means people drive more. "If I pay so much, I may as well get the most out of it". <u>One study</u> of 8,264 service records found people drove more when bought at higher price. But chunking payment, e.g. by month, could reduce salience of auction price, and so the sunk-cost.

Ignores intended use, for examples stymies SMEs that needs to a car to thrive. But governments could add business exemptions.

Speculation. Won't people take advantage? **But** only the government can sell; you can give back, but you get a fixed share of your purchase price -Singapore introduced non-transferability a year after introduction.





Policy approaches took over from subsidies as EVs became widespread



WE MOVE ELECTRIC

Is it time to cap non-EVs?

Singapore's system was designed to tackle congestion but a similar model could help reduce emissions in large cities.







- Despite 20 years excitement, by 2019, EVs were about <u>1% of all cars</u>, with only 9 countries having>100 000 on the road.
- Global sales fell 18% in 2020 while sales of electric cars (BEVs and PHEVs) rose 43%

2. Which COUNTRIES led the way?

Europe and China led the way reimagining EVs as a lifeline:

- France: Macron <u>upped incentives</u> to €7,000, €12,000 if you scrap your petrol car, making a Renault Zoe €20,000 (~\$24,000).
- **Germany:** All petrol stations in Germany • will have to install charging infrastructure.
- EU: New regulations limiting emissions could lead to <u>huge fines</u> (€95 × excess emissions × new vehicles) or electrification.
- **China**: Shanghai <u>extended policy</u> that EV license plates are free and guaranteed, it can take years for petrol cars. Guangzhou announced 10,000 yuan subsidy (~\$1,500), double if you scrap.
- India: E-rickshaw revolution, outnumbers China's EVs



3. What APPROACHES may help?

Ambitious policies were critical to EV rollout but, post-Covid, we need to see a shift from direct subsidies to policy approaches:

- charging options.
- (see picture).
- reminders for the target group: petrol users).
- charging.
- important, as expected, but age might surprise you.
- Non-EVs are <u>no longer an "entitlement"</u>

4. We need your help

Many of these approaches have challenges, some have been tried, others failed. That is why we want to hear from you. We are looking to dig deeper, develop alternatives and run trials to help *drive this shift*. Please click **here** to discuss or partner.

Experience killed "range anxiety": Still the bane of EV adoption. People need to try it and the impact of experience may be higher at lower incomes, p7). Promote EVs when people hire cars. Prompt people who have the best

• "Green lanes": The EU are considering <u>exempting VAT</u> but could you also give hassle exemptions, e.g. busy roads and tolls have "green lanes" or free parking

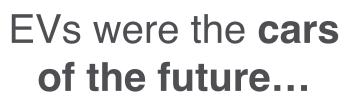
Plates as signals: Make them Green, and where take-up is low, add a count, e.g EV 26700, to surprise people with the growing numbers.

Piggy-back on 'petrol charging': EVs are not just cars with batteries, but charging matching this mental model may help some adopters. All petrol stations is unrealistic but supermarkets/malls are natural choices (also acts as

Citizens own charging rollout: home charging is the most convenient but shared infrastructure is cheaper. Governments could roll out based on community demand; if 5 neighbours have EVs, local governments provide

Shared EVs: Sharing reduces emissions and infrastructure but it is hard to give up 'my car'. So target those soon to buy one: having a child and relocation are





But a future that never came...

Until now

WE MOVE ELECTRIC



Non-EV licenses are capped and auctioned, learning from Shanghai and Singapore...

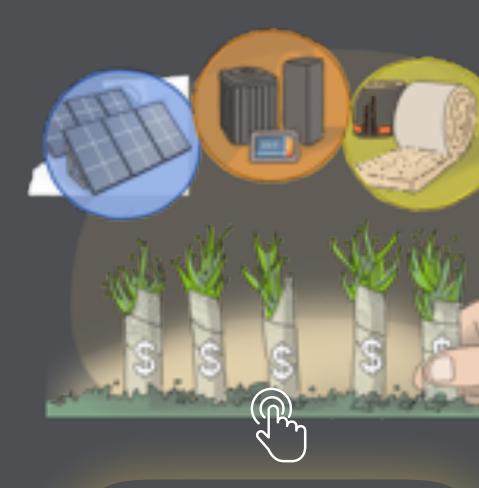


LOW-CARBON MARKETS





Mini-Green Stimuli: Sweeping household energy-saving investments



WE USE LESS ENERGY

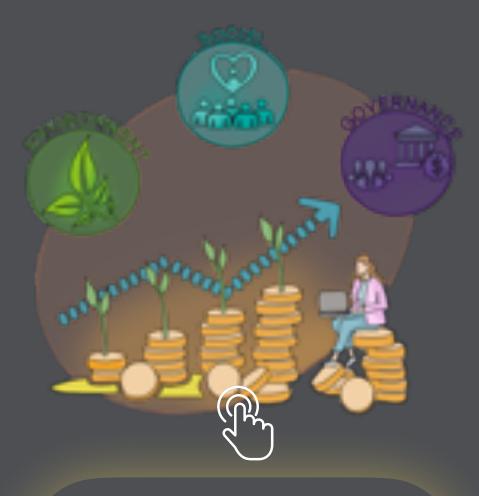
Commercial retrofits while they're still half full

R

and the state







More mirrors, less smoke: new clarity in offset market



WE USE MORE RENEWABLES



Green switching: Drive to 'renewable' electricity suppliers

WE OFFSET WHAT WE CAN'T SHIFT







- Worldwide devastation to jobs: Drop equivalent to 255 million full-time jobs, 4X greater than in the 2009 financial crisis.
- **\$10 trillion to the rescue:** We spent really big to help, <u>3X the 2008/9 response</u>
- WFH a mixed blessing as reduced commuter emissions will be offset, in part, by increased home consumption.

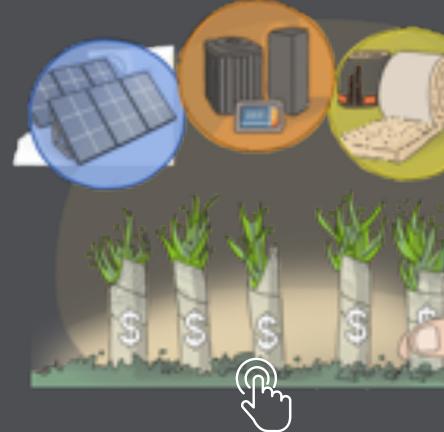
2. Which COUNTRIES led the way?

- New Zealand: "warmer Kiwi homes" gives 90% subsidy for insulation and heating overhauls. Plans to extend to low-income households.
- Pakistan: offering labourers chance to earn by planting trees.
- **US:** LA installed free solar panels on homes of 2,000 low-income families.

4. We need your help

Many of these approaches have challenges, some have been tried, others failed. That is why we want to hear from you. We are looking to dig deeper, develop alternatives, run trials and *stimulate* debate. Please click <u>here</u> to discuss or partner.

Credits and subsidies...are not just a necessity—they are also a chance to direct économic progress towards



WE USE LESS ENERGY

Break false dichotomy of economy vs. environment:

low-carbon investments, from more efficient ACs to loft insulation, can reduce emissions and create jobs.



3. What APPROACHES may help?

INVESTMENTS TO MAKE: Investments should be known technologies, with clear impact, they just need incentives:

If cold...

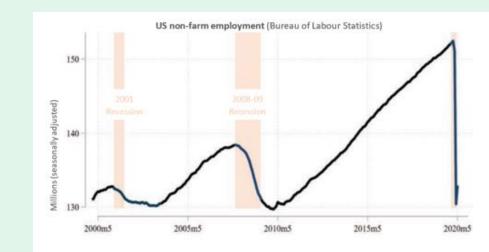
- Heat Pumps: that extract heat from outside homes, are perfect target given large upfront costs and long-term gains. The fact that they can also cool will be increasingly useful with rising temperatures.
- **Insulation:** Behind cars, often best household change in cool climates. Loft clearance services <u>could help</u>.

If hot...

- Efficient AC Units: Energy needed for cooling will triple by 2050 without action and yet average AC efficiency is a third of best technology.
- Rooftop solar: Follow Seoul and put panels on <u>a million homes</u>.

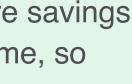
WHAT CAN HELP BEYOND MONEY:

- 'Warm Rent': Tenants typically don't consider energy efficiency when choosing where to rent. Landlords don't pay the bills. Rent a flat in Germany, and might pay 'Warmmiete' (with utilities) instead, incentivising efficiency improvements.
- Housing as healthcare: Studies in <u>Canada</u> and <u>EU</u> find large healthcare savings from improving buildings. Likely heightened in Covid as more time at home, so focus on low-income communities, as in Cape Town (p12).
- Time around Covid-resets: Hassle will be instrumental so incentivise at the right time: job changes or house moves.











Typically energy use in buildings accounts for about <u>18% of global emissions</u> but now many offices and industrial buildings are still half full and homes are busier than ever. Retrofits are <u>one of 5 policies</u> that are high.

2. Which COUNTRIES led the way?

- France: Lille announced energy efficient renovations of 3,000 social housing units and 3,600 private homes as part of their recovery.
- **Denmark**: Fast-tracking construction projects, creating jobs, and committed \$30bn to renovate public housing.
- **US:** New York's carbon limits (Law 97) is local real estate's "largest disruption in our lifetime" covering 50,000 buildings

4. We need your help



Many of these approaches have challenges, some have been tried, others failed. That is why we want to hear from you.

We are looking to dig deeper, and run trials to help *revamp* our current policies. Please click here to discuss or partner.

Most of today's buildings will be in use in 2050. So, to be carbon-neutral, we need to retrofit.

Given lower use of many buildings, and stimulus packages, we should start now.

WE USE LESS **ENERGY**

Retrofits can be the "most obvious option for a shovel- ready, local green investment" (Competitive Cities and Climate Change, OECD)



3. What APPROACHES may help?

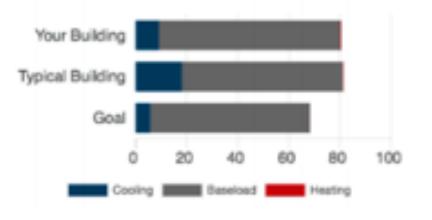
- **Go public:** Most authorities have a pipeline of retrofit projects, primed for investment. Start with public buildings so can act swiftly and lead by example. Start with buildings in low use to reduce disruption.
- 'Fitness tests': How do you know if you need to retrofit? Benchmark buildings using free tools, e.g **BETTER**, pictured below) to show who's lagging and how they can save

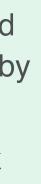


- It's good to vent: Better ventilation systems helps stop Covid spreading, can do both at once if act fast.
- Foot-in-the-door: For building managers, energy is often one responsibility among many. A free energy consultation can help get going and unlock savings. New York offer this in their Retrofit Accelerator.



Utility Cost Breakdown (Thousands \$)





Many investors realise the need to diversify climate risks but can Covid accelerate this trend?

- ESG strategies performed better in Covid, although often as they underweight energy.
- Disclosure is increasing: 1027 orgs now support the TCFD, with a market capitalisation over \$12trillion.
- <u>9/10 wealth managers</u> and <u>55% of investors</u> said COVID will be a catalyst.

3. What APPROACHES may help?

If the returns are real, and adoption well underway, what is the role of policy? If the greatest problems are *issues of clarity*, governments can help:

- Mandate Disclosure for listed and large companies. The UK became the first G20 country to do this, making disclosures mandatory for a large share of the economy by 2025.
- 50 shades of green: Ratings need more nuance, as argued by Mark Carney. We need more than simply green or not, and we need ratings for improving. Is it better that all livestock companies are brown, or that we are able to see which are transitioning best?
- Al ratings: Availability of data can be a driver and a curse. <u>Al can help</u>. Recently companies, e.g Sensefolio, use AI to calculate ESG, increasing the speed and responsiveness of ratings.

Governments can also lead the shift:

- **Pension Funds** seek long-term returns, so align well with ESG. Governments could insist at least one high-ESG fund is offered, or, more ambiguously, build on autoenrolment to default to high-ESG portfolios. The trump administration proposed the opposite: requiring prioritisation of economic interests.
- **Public money:** Further build into government funds; Norway and Japan show <u>quite</u> different routes to do this. Or give more relaxed repayment terms on government to business loans for high ESG-rated companies.
- **Procurement:** Incorporate ESG criteria (or at least disclosure), as <u>Paris and others</u> have. Should environment departments really procure from low ESG-rated companies?

"Climate Risk Is Investment Risk" Larry Fink, BlackRock, Jan 2020

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WE USE MORE RENEWABLES

Greenwashing, moral money, genuine opportunity?

ESG strategies <u>out-</u> performed benchmarks for nearly a decade, COVID could help it go mainstream.

2. Which COUNTRIES led the way?

- Japan: Government Pension Investment Fund signed up to the Principles for Responsible Investment.
- France: Paris initiated transnational procurement group with other EU cities, incorporating ESG criteria.
- US: New York City committed to double its pension-fund investments in climate solutions to \$4bn by 2021.
- UK: 1st G20 country to make climate risk disclosure mandatory (major companies, within 5 years)

4. We need your help Many of these approaches have challenges, some have been tried, others failed. That is why we want to hear from you. We are looking to dig deeper, develop alternatives and run trials. If you can *invest some time*, click <u>here</u> to discuss or partner.

Fossil fuel companies considering future exploration, e.g <u>BP's pivot</u>, there is no better time to drive market signals for renewables. With many working at home, domestic energy also matters more than ever.

3. What APPROACHES may help?

WHERE HIGH IMPACT (>0.8 tCO2e), e.g. Canada, USA, Australia:

- Green drive: Build on previous trials, that showed collective switching trumps individual, to encourage green switching. But perhaps we need a 'traffic light' rating of my supplier, rather than simply a green badge.
- **Double savings:** Target people who can save money (and the planet). <u>Consumers</u> often save by switching anyway, so many can gain. Plus we are all home more, so more to gain.

WHERE LOW IMPACT (<0.2 tCO2e), e.q UK:

- **Time for <u>time-of-use</u>**? As variable renewables increase, when we use electricity matters more; it can mean 17% more emissions in India but that could be 700% by <u>2040</u>. Dynamic tariffs can help, particularly if enrolment is <u>opt-out</u>.
- Make certificates meaningful: Green suppliers don't need to buy renewable, you can buy certificates, e.g. <u>REGOs</u>. Nothing wrong with this mechanism per se, just the price, e.g. only \$2 to be "100% renewable. Higher prices would drive generation. Increasing demand (see high impact) would help. Ensuring a minimum price, as carbon markets, would be more direct.



Green switching:

Drive to "renewable" electricity suppliers, targeting those that, given their current tariff, can save money and the planet.

WE USE MORE RENEWABLES



2. Which COUNTRIES led the way?

Switching to a green energy supplier has never been easier but the impact does vary.

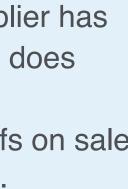
- UK: More than half of 355 tariffs on sale claimed renewable credentials.
- Germany and Finland (and UK): have price premiums for green electricity but one study found they were typically 0-5%.
- **Singapore**: Sunseap commit to <u>100%</u> renewable energy, 10% cheaper than the state-owned supplier tariff.

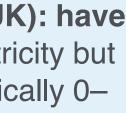


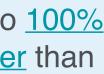
4. We need your help

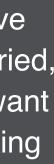
Many of these approaches have challenges, some have been tried, others failed. That is why we want to hear from you. We are looking to dig deeper, develop alternatives and bring *new energy* to the debate. Please click <u>here</u> to discuss or partner.













Voluntary carbon offsets have been around for about 20 years so what changed?

- Corporate demand for voluntary offsets has increased.
- Wave of companies, e.g. Apple and <u>Google</u>, using offsets to get net-zero by 2030, another <u>177 by 2050</u>.
- Plus, COVID doesn't affect offset projects (sun still shines, trees can't get COVID) although monitoring will be harder.

2. Which COUNTRIES led the way?

- Norway: Offsetting last carbonheavy sectors by helping Brazil and South Africa switch to cleaner fuels.
- Peru-Switzerland: Signed world first offset deal under the Paris Agreement

	Average price	Туре	Green	
GREEN NETWORK Cher By	£ 872	fixed	I	Get a Quote
Bulb Energy	£ 915	variable		
Octopus Energy	£ 978	variable		
Ovo Energy	£ 1,125	variable	\otimes	
SSE	£ 1,125	variable	\otimes	
EDF Energy	£ 1,126	variable	\otimes	
Scottish Power	£ 1,126	variable	\otimes	
E.On	£ 1,126	variable		

3. What APPROACHES may help?

Criticisms typically fall into <u>2 categories</u>: the quality of offset credits and how they are used.

- differentiator in job market (see below).



- offsetting.
- e.g capturing nitrous oxide or collecting HFCs.

4. We need your help

Many of these approaches have challenges, some have been tried, others failed. That is why we want to hear from you. We are looking to dig deeper, run trials and *set off* new discussions. Please click here to discuss or partner.

• **Transparent impact:** People <u>are unclear</u> what really happens. Additionality and permanence are vital. Can loggers just move down the road? Would renewable project have been financed anyway? Offset ranking (e.g carbon capture and cookstoves), similar to Effective Altruism, can help. So can better monitoring (e.g tracking logging with <u>satellites</u> or <u>drones</u>).

Getting due credit: 70% of voluntary offsets are from companies. Government markers, that show companies that offset to net-zero, could be CSR or a

• Time with the news: Offsetting <u>"ebbs and flows with news about climate</u> change." Building on climate events could increase demand for voluntary

All carbon created equal: Credits differ in price based on project 'charisma' and marketing potential. Help people shift from "sexy", morally virtuous Brazilian rainforest (which elicit higher prices) to whatever is highest impact,

"Carbon offsets help and they absolutely move the needle" Policy Institute for Energy, Environment and the Economy

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WE OFFSET WHAT WE **CAN'T SHIFT**

Offsetting grew in the late 80s but then crashed post 2008.

It is now getting a new lease of life as companies race to net-zero.



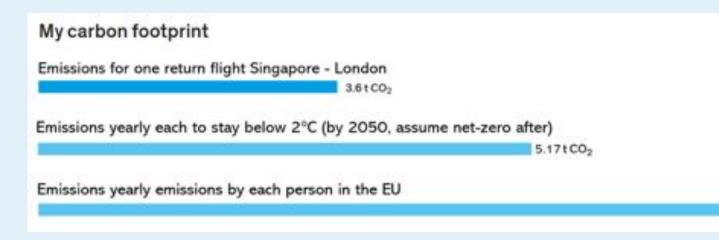


The airline industry has been devastated. Will it really come back greener?

- Flying collapsed with <u>49% fewer flights</u> and 67% fewer passengers in 2020.
- With <u>31% of planes still in storage</u>, airlines can retire the thirstiest planes.
- Interest in carbon offsets was growing (searches more than <u>doubled</u> in 2019) but this fell away as flights did.

2. WHO could lead the way?

- **CORSIA:** an <u>offsetting agreement</u> by 65 countries (83% of aviation) - was due to begin in 2021.
- JetBlue planned to be carbon- neutral on all domestic flights, **Delta** to become <u>first carbon-</u> neutral airline. Both announced pre-Covid.

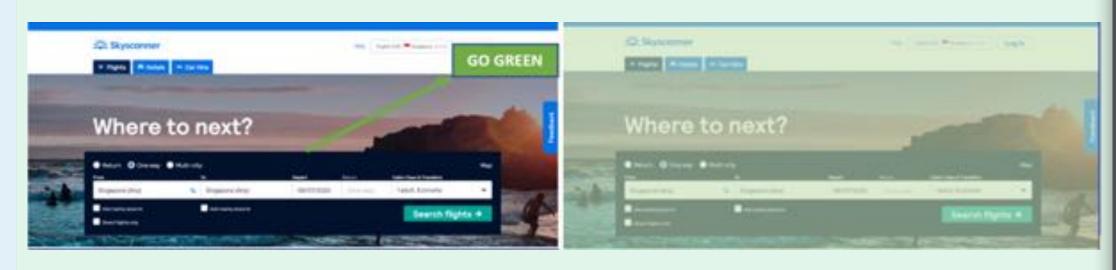


3. What APPROACHES may help?

impact.

- anytime soon.

8.4t CO2



4. We need your help

Many of these approaches have challenges, some have been tried, others failed. That is why we want to hear from you. We are looking to dig deeper, develop alternatives and run *pilots*. Please click <u>here</u> to discuss or partner.

Two big barriers to buying carbon credits are the cost and perceived

Give your miles back to the planet: To reduce the cost, and build the habit, people could start by converting their miles; a points system for big polluters seems increasingly out of step anyway. Also, the time is right, as hard to imagine using lots of miles

Independence from airlines could help with the perceived impact, rather than airlines marking their own homework. Search engines, like Skyscanner, are neutral but still timed at the decision point. Could even shade page green (see right) once off-setting built into prices so very obvious if using "go green" version.

Offset by default: Changing defaults proved effective, but are often banned to prevent misuse. Insisting we make a choice - tick a box to offset or to not offset - would be a softer approach. Using a slider to choose our offset was effective on a typical booking page.

easyOffset: Not flying is best.

But offsetting any remaining flights buying carbon credits equivalent to your impact - can positively shift energy markets.

WE OFFSET WHAT WE



