



**Impossible  
until you see  
it being done**

**Evidence based hope on the  
possibilities of rapid transition  
in a warming world**

A briefing for climate talks from the Rapid Transition Alliance

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It used to be said of climate talks that progress was glacially slow, until the accelerated melting of ice made the observation too painfully ironic. This is a problem in the middle of a climate emergency when the scientific consensus at the IPCC says that change, especially in wealthier countries, needs to be **rapid, far-reaching and unprecedented to meet the 1.5°C temperature target**. Notoriously, international negotiations move at the pace of the slowest participants, but what holds nations back when there is so much to gain from climate action in terms of green jobs, cleaner air and the absence of climate catastrophe?

Of course **vested interests** play a part, but so does lack of imagination and the inability to see and believe in the positive possibilities of rapid transition. The Rapid Transition Alliance was created to help overcome this problem by finding evidence-based hope in past and current cases of rapid change, analysing the conditions that make them happen, and spreading the lessons.

It has become almost a ritual that in the run up to every annual climate summit there is talk of 'realistic outcomes' and how, whatever is produced, is as much as we can expect. From the Glasgow summit onwards that is no longer good enough because what is generally deemed politically 'realistic' is no longer ecologically realistic, or realistic in terms

of the action needed to protect the climate that civilisation depends on. We expect more of our politicians, businesses, cities and of ourselves.

At the Rapid Transition Alliance, rather than accept at face value claims about the impossibility of achieving fair and rapid change, we produce evidence-based hope that such change is possible. It has happened before, in a wide range of different circumstances, and it is happening now across different regions and sectors of the world. In other words, people are demanding and enacting change themselves rather than waiting for governments and businesses to deliver it for them. This doesn't let governments off the hook. Far from it. It shows that people expect more of their





elected representatives and that there is an appetite for far more ambitious action. We need to use this evidence to call out inaction and to say clearly this can be done because either it has been done before, or it is being done right now. This gives us hope that with effective mobilisation, the right support, clear priorities and the re-direction of our economies towards sustainability, we can tackle the climate crisis.

Here we share with you some stories of rapid transition. We have chosen sectors like housing, heating and transport, some of the hardest sectors to decarbonise as we build towards a zero-carbon economy. We have done this to show that even in these 'sticky' sectors with strong vested interests, infrastructures locked in over decades and claims that alternatives do not exist, that change has nevertheless been forthcoming.

## Lessons from Lockdown

When the Alliance was launched in late 2018, we highlighted evidence based hope of transition from times of rapid technological change, social upheaval and from ecological and economic shocks. These ranged from the growth of railways to responding to Icelandic volcanoes, and the discovery during the financial crises of 2007-2008 that the public sphere did, in fact, have a magic money tree to invest in things essential to society, plus the ability overnight to change the economic rule book. We did not foresee, however, that we would soon be faced with the greatest challenge yet to our ability to change behaviour, redesign daily life and reimagine the economy. Which is what happened when the Covid-19 pandemic hit.

Aware of the critical importance of the historical moment we were living through, and how this would reveal insights and provide lessons for the wider challenge of rapid transition in the face of the climate emergency, we immediately started to monitor, record and analyse what was happening. Several detailed cases can be found in our report [Lessons from Lockdown: The possibilities of immediate change](#). The Alliance set out to summarise key themes and lessons.

Superficially, it might appear that the examples of rapid change in response to the pandemic do not relate directly to the climate emergency. But that disregards how comprehensive is the process of transformation required that, as the IPCC states, needs '[rapid, far-reaching and unprecedented changes in all aspects of society](#).' That means evidence is vital of how change is possible in local economies, working life, public services, mutual aid, transport systems, national economic policy and international coordination, health and care systems, local food supply chains, and much more. This is why the lessons of the pandemic matter so much.

And the biggest, most important lesson is that far from change being difficult or impossible – it is possible to turn not just the economy, but our day to day lives around almost overnight – putting public health and wellbeing before short term economic interest.

**Just as importantly, the pandemic revealed many weaknesses, injustices and failings in the current economy. It showed, for example:**

- **the car bias** including both the disproportionate amount of space taken by private cars and the health crisis caused by their air pollution, which worsens people's vulnerability to respiratory infections like Covid-19
- how **the impact of the pandemic was felt very unequally** dependent on race and class, with those who are most marginalised and lowest income being worse affected
- **the undervaluing of key workers** ranging from health and care workers, to those working in public transport, cleaning and retail
- how even in countries with strong public health systems, **the care system, especially for the elderly, is poorly funded and regulated**
- the **vulnerability of freelance and precarious gig economy workers**
- how **small business are more vulnerable** compared to big businesses and less well represented in decision making, yet often more flexible and faster to respond to change
- how **people who rent rather than own their homes can also be more vulnerable**
- and how some of the more deregulated economies such as the US and UK **experienced some of the highest mortality rates**



The flipside of these weaknesses is a wide range of positive lessons about our extraordinary abilities to change very quickly and act in mutual support when a situation demands it. We grouped these lessons into three key areas: looking after each other better, making more space for people and nature, and thriving while consuming less 'stuff'. Over several months we researched and asked people to share their experiences of lockdown. The results are a picture from the height of the pandemic seen through three short films, briefings and animations available in full on [www.rapidtransition.org](http://www.rapidtransition.org).

**Looking after each other better** – how public health and wellbeing can be put before short-term economic interests

There are many ways in which people around the world have looked after each other in response to a global pandemic, quickly and sometimes with minimal resources. There has been a wide range of ways in which individuals, organisations and governments have responded to the benefit of the wider community. These can point the way toward a world where these ways of being could be the new norm. It also suggests a number of policy shifts that would help us all look after each other better in the long term and facing the climate emergency. Key lessons include:

- people can put looking after each other before short-term economic interests
- society can and needs to take proper care of particularly vulnerable groups like the elderly and key workers

- street homelessness can be rapidly ended
- money can be found to support incomes and livelihoods
- people's behaviour can change overnight to help protect others
- whole communities can come together to look after each other and could do so more if mutual aid was properly supported
- working hours, places and practices can be rapidly adapted to meet new needs

**More space for people and nature** – how we learned to provide each other with more space, green space and breathable air.

Responses to the coronavirus pandemic showed that we can quickly make more space for people and nature in our towns and cities. Lessons abound – about past mistakes like allowing food and energy to be wasted and putting pollution before people in towns and cities – but also of humanity's extraordinary ability to work together and solve problems. Many people began to see and use the space around them differently, reconnect with others in new ways and appreciate having cleaner air to breathe. Key lessons include:

- A lot of travel has been revealed to be unnecessary – the internet and flexible working can cut commuting for many people – saving time, money and pollution.
- Flying for work in particular has rapidly become a thing of the past -when convening online has become easier.

- The numbers of people travelling and commuting by bike increase quickly with more space designated on streets for cycling and active vehicle traffic reduction.
- Greener towns and cities are healthier for people and better for nature – making space for nature to bounce back benefits all living things and makes urban areas more resilient to climate upheaval.
- More food can be grown closer to home and even in cities – in gardens, allotments and spare public spaces – benefitting people and the environment.
- With fewer vehicles people in towns and cities can have less noise pollution and safer streets for children to play.

**Living with less stuff** – How we learned to eat better, to buy less wastefully and to have fun making more of what we had already.

The Covid-19 pandemic has been a time of fear, about incomes and food, as well as fear of infection and danger for the people we love. But among the positive elements of the experience, specifically for those in the global north, most of whom consume well beyond a fair share of current planetary limits, has been the opportunity to experiment with reducing overconsumption. With non-essential shops often shut during lockdowns has meant doing more with less. Millions spent time at home with family or walking outside, grateful for the internet to enable communication, but also returning to homemade activities. People adapted variously to create new, different, ways of

living that turned out to be less wasteful, more thoughtful and kinder on our environment, showing that it is possible to live well with less 'stuff'. Key lessons include:

- People have **bought fewer** consumer goods – with more time we enjoyed making and mending again.
- Local shops became important again and the key role of local supply chains was demonstrated
- More people cooked from scratch with fresh ingredients, reskilling in the kitchen and rebuilding a better relationship with food, and enjoyed the benefits.
- Creative forms of home-made entertainment and ways of gathering quickly replaced going out and shopping.
- Many people found that a combination of changing their behaviour, doing new things, and reconnecting to local green space for exercise improved health – and some have even reduced their levels of debt.

## Taking back control

Governments were forced to act, sometimes late, to tackle the pandemic, but often action was led at the community level in terms of adapting and providing help. It showed how often we can't wait for change from above even though it too remains vital. Movements from below and community-based initiatives often prefigure the wider change we need to see in society. In the UK politicians have used the phrase 'take back control', especially when talking about the European Union. But from energy to food and repair cafes, people are taking control of their own destinies to provide more secure and healthier lives for themselves while reducing waste and the pressure to consume more.

### Community Energy

Renewable energy made up more than a quarter of global electricity generation (27%) in 2019 and is outpacing all other energy sources' growing capacity, regularly breaking its own records in share of national generation. Nevertheless, it is still not growing fast enough to meet climate targets, and there are big choices to be made about which models and visions for solar, wind, tidal and other renewable energy technology take precedence. Different approaches have different results in terms of job creation, spreading economic benefits, building support for the rapid energy transition and even enhancing democracies. There is a spectrum of approaches ranging from large scale renewables with centralised ownership, to smaller, mixed, decentralised and community run energy infrastructures.

The non-profit energy cooperative [Repowering London](#) is just **one example** of how a community-focused energy provider works in partnership with local authorities and local people in some of London's poorest areas to bring renewable energy within their reach. The organisation aims to cut carbon dioxide emissions, fight fuel poverty and generate training and employment opportunities for communities. Its model enables local communities to invest in ethical solar projects, often on social housing where individual households might not otherwise be able to afford the capital outlay. Profit from the sale of electricity to the grid is used to benefit the whole community and to give investors an annual return. It's all about encouraging communities – rather than individuals – to engage with energy and reduce their collective CO<sub>2</sub> emissions by generating decentralised low-carbon energy.

Our case study about the 4,000-inhabitant [Danish island of Samsø](#) describes how this island went from being entirely fossil fuel dependent to becoming the World's first 100% renewable island, in under a decade. In 1997, the Danish Government launched a competition to develop a model renewable energy community, in order to prove that the country's Kyoto climate target to reduce carbon emissions by 21% was doable. Samsø applied and won with a proposal based on strong community engagement and a cooperative ownership strategy.

By the year 2000, 11 wind turbines covered the island's electricity needs. A further 10 offshore turbines were erected in 2002, generating sufficient energy to offset emissions from the island's cars,

buses, tractors and the ferry that connects it to the mainland. Three quarters of the island's heating and hot water is fuelled by biomass boilers fuelled with locally grown straw.

The rapid and just transition in Samsø proved that a wholesale shift to renewable energy was possible with already existing technology and achievable with limited government assistance. Nowadays, Samsø residents have an average annual carbon dioxide footprint of negative 12 tonnes per person, compared with the Danish average of 6.2 tonnes and 10 tonnes per capita in the UK.

### Local Food

One of the key areas of focus for future food production is [climate smart agriculture](#) which seeks to capitalise on the triple-wins of climate mitigation, adaptation and poverty alleviation. You will also hear a lot about food technologies, 'sustainable intensification' and corporate solutions to the world's food crises. But you will hear less about people taking back control over food systems to make them more sustainable and socially just.

There are many initiatives springing up at the local level to address food poverty, [access to land](#) and even [food waste](#). This aspect of the failing of our supply chains was particularly noticeable during the pandemic lockdowns. Our story on [urban farming](#) includes Paris' 'Pariscultuers' which was launched in 2016 by mayor Anne Hidalgo and the city has already approved 75 projects which, together with those in this third stage of an on-going project, are estimated to produce more

than 1,240 tonnes of fruit, vegetables, mushrooms, and herbs, as well as fish, honey, and hops. Currently under construction in the south-west of the city, one urban oasis will span approximately 14,000m<sup>2</sup> - making it the largest urban farm in Europe, tended by around 20 gardeners using entirely organic methods. Located on top of a major exhibition complex, the farm will also have its own on-site restaurant and bar, offering panoramic views over the capital and a menu featuring seasonal produce grown on the site. This is part of the [Green Hand Charter](#) (Charte Main Verte), an initiative allowing Parisians to establish community gardens on public land in collaboration with the city. About 130 community gardens have already sprouted around the city.

Even before the Covid-19 crisis sped up the thinking in this area, urban farming was on the rise globally, with projects ranging from community gardens, to vertical farms; from mushrooms grown on coffee waste in Rotterdam to subterranean herb growing in the air raid shelters of Clapham in London. The 8,500 square foot Food Roof in St Louis, Missouri epitomises the multiple benefits of such projects in transforming an industrial rooftop into a vibrant community hub. In addition to currently growing over 200 varieties of edible plants, the collaboration of architects, horticulturalists, structural engineers, and agronomists has led to a system proven to capture up to 17,000 gallons of runoff water per storm event, mitigating flooding for downtown St. Louis.

In [Cuba](#), after the fall of the Soviet Union and the end of the country's





Credit: 'Getting an edge'  
by Karen Blakeman, public domain

cheap supply of communist oil, the US embargo prevented them from finding an alternative supply and the population began to suffer food shortages. People grew whatever they could on any spare pieces of land throughout the city. Co-operatives developed for group buying and selling and turning vacant land into plots. Although yields were low at first, they grew as people learned better ways of growing food in an urban environment. By 1995, Havana had 25,000 allotments, farmed by families or small groups - which produced most of the city's fruits and vegetables - and people's daily calorific intakes were improving. By 2008, gardens for food took up 3.4% of urban land countrywide, and 8% of land in Havana. Cuba produced 3.2m tonnes of organic food in urban farms in 2002, and by 2008 food intake was back at 2,600 calories a day.

### Repair Cafes

It is increasingly recognised that waste from mass consumerism presents a huge climate challenge. From food waste (a third of all food produced gets wasted according to FAO) to ever-expanding landfill sites emitting the potent greenhouse gas methane, the planned obsolescence of so many goods in modern society is a disaster in the making.

Yet some groups around the world are seeking to extend the life of goods and save them heading to landfill. One aspect of reduced consumption that has also flourished from below is the rise of locally organised [repair cafes](#). In 2009 a Dutch journalist called Martine Postma ran an experiment in her home town of Amsterdam. She brought together a group of handy friends and ran what she

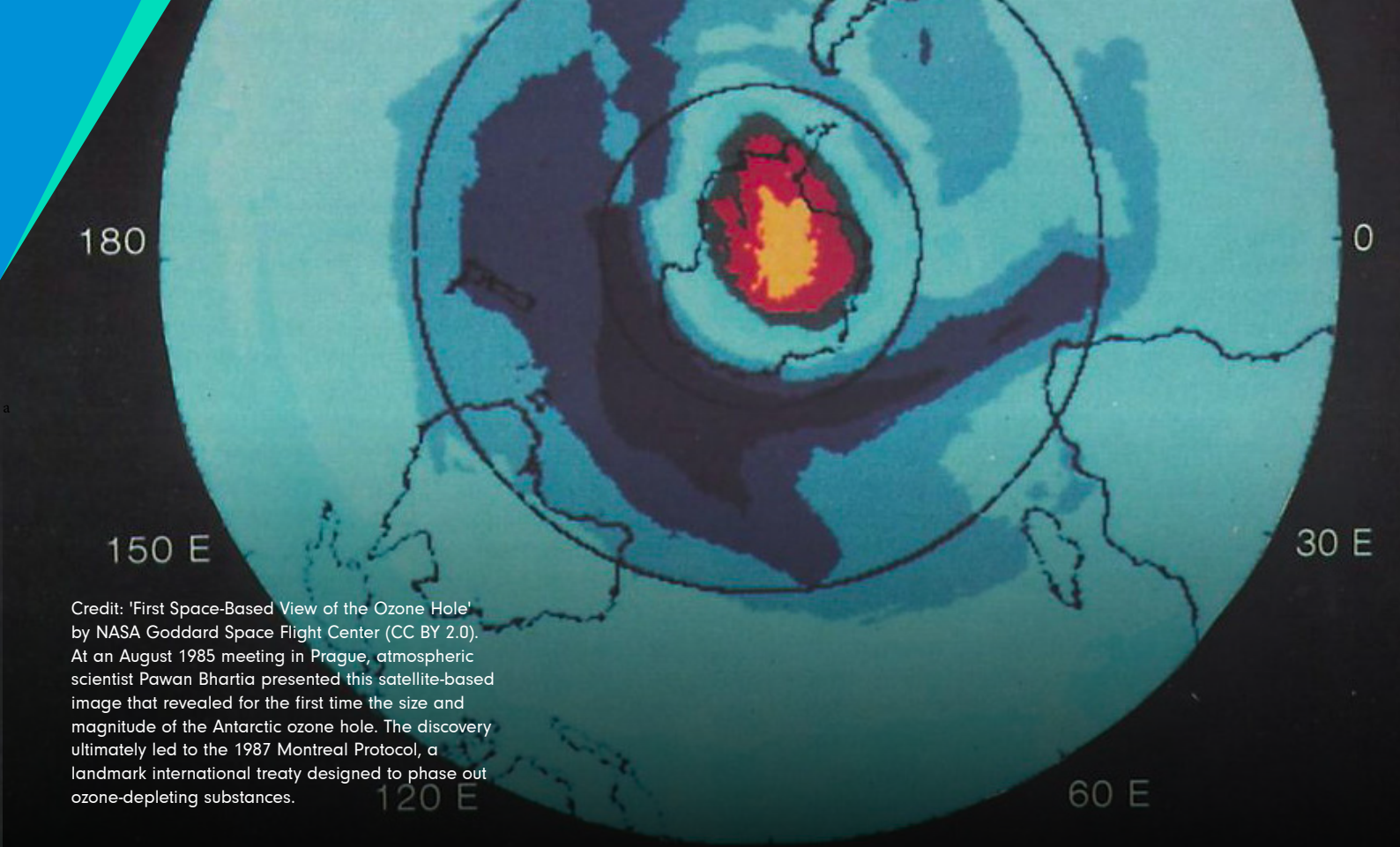
called a “Repair Café” – a free event where people could bring their broken belongings and volunteers would help to try and fix them. Following the huge popularity of the events in Amsterdam, Martine set up the Repair Café Foundation and published guidance to help other volunteers do the same in other places. A decade later, there are 1,700 repair cafes offering their services in 35 countries around the world.

The grass-roots movement to bring repairing back into our economy is growing and making political demands too, taking on the world’s biggest companies through legislation that will force them to make products that are repairable and live longer. In February 2021, the European Parliament voted in favour of establishing a ‘right to repair’ alongside a far reaching set of circular economy measures. Although this will not result directly in any new measures, it gives a strong mandate to the European Commission to make ambitious proposals in a number of forthcoming legislative initiatives, including the Sustainable Products Initiative, the Circular Electronics Initiative and the Empowering the Consumer for the Green Transition, which are all expected to be tabled this year.

One area where waste mounts up and often finds its way onto open waste sites in poorer countries like Ghana is e-waste from the relentless pressure to upgrade devices and gadgets. In 2017, 1.9 billion mobile phones were sold. The total carbon footprint to manufacture those phones is equivalent to Austria’s annual carbon emissions. And yet, in the EU in 2010, only 6% of phones

were being reused, and only 9% were disassembled for recycling – which means that the remaining 85% of phones were left forgotten at the back of a drawer, until eventually being thrown ‘away’ to further clog up landfill sites. By simply using a phone for longer we can radically reduce carbon emissions – for example, if we used every phone sold this year for 1/3 longer, we would prevent carbon emissions equal to Singapore’s annual emissions. The [Restart Project](#), a regular London repair cafe focused on electronic goods has helped 11,942 people since 2013, with 18,978 hours of volunteer time working on 9,648 items. A survey of participants attending “Restart Parties” in 2016 found that 45% were unable to find a commercial repairer they could trust. Without the help of Restart volunteers, many of these goods would have been discarded. Restart calculates that their volunteers have prevented 13,817 kg of CO<sub>2</sub> emissions from the 5,112 devices they have fixed.





Credit: 'First Space-Based View of the Ozone Hole' by NASA Goddard Space Flight Center (CC BY 2.0). At an August 1985 meeting in Prague, atmospheric scientist Pawan Bhartia presented this satellite-based image that revealed for the first time the size and magnitude of the Antarctic ozone hole. The discovery ultimately led to the 1987 Montreal Protocol, a landmark international treaty designed to phase out ozone-depleting substances.

## Switching technology: the Ozone success story

Technology is always central to policy discussions about climate change. In his book **How to Avoid a Climate Disaster** the billionaire Bill Gates focuses almost entirely on technological innovation. But this leaves unanswered big questions about who and what the technology is for and who controls it. Businesses can often innovate quickly and positively when called upon to do so. Indeed one of the major success stories of modern environmental diplomacy is the case of the phase out of ozone depleting industrial chemicals.

Our story about the [ozone layer](#) tells of how business responded innovatively when faced with little choice. The

blanket of ozone gas between 10 and 50 kilometres above the earth's surface is vital for protecting humankind from the sun's powerful ultraviolet radiation. In 1974 a group of scientists published research suggesting that chemicals used in everyday products like aerosols, packaging and refrigerators could deplete the ozone layer and in 1985, a hole in the ozone layer was discovered over Antarctica. This led to unprecedented multilateral action to ban the dangerous chemicals that were responsible for its deterioration – chlorofluorocarbons (CFCs). By 1987, just two years after the hole was discovered, an international treaty was in place that cut the use of CFCs in half. Three years later, the Montreal Protocol was strengthened to ban the use of CFCs altogether in industrialised countries by the year 2000 and by 2010 in developing countries.

Just eighteen chemical companies accounted for most of the world's production of CFCs in the early 1980s – mostly concentrated in the US, UK, France and Japan. DuPont was by far and away the most important player, producing around one quarter of the global output – although CFCs made up just 3% of the company's global sales. Once the science and the gravity of the situation became clear, DuPont had already begun investing heavily in research into substitutes and by 1986, had successfully developed alternative chemicals that did not damage the ozone layer. Happy now to support an international ban on CFCs, DuPont acted as the industry leader in the global negotiations and the rest of the industry followed suit. The US government followed DuPont and the path to Montreal was cleared.

Innovation also came from an unexpected direction: in 1992 when chemical companies attacked Greenpeace and their anti-CFC campaign for "criticizing and offering no solutions", Greenpeace brought together a group of engineers to develop a prototype refrigerator that did not use CFCs. Within a few months, the "GreenFreeze" fridge prototype appeared – using a mix of natural hydrocarbons instead of CFCs. Greenpeace founded a company to design and market GreenFreeze fridges, which revolutionised the domestic refrigeration sector. The use of CFCs today is outlawed by 197 countries and the ozone layer is slowly recovering.

## Doing business differently: B-Corps

Incumbent businesses will say change at the speed and scale demanded is impossible. They have said many such things before – and in the end they adapt, innovate and redirect. They are used to adapting to survive and so learning to change their [business model](#) to deal with the climate crisis is both possible and necessary. [Ozone and greenfreeze fridges](#) is one example. But just occasionally more transformative change in business models comes about.

Some businesses have made genuine attempts to reduce their carbon footprint

and effect on the environment, but it can be hard to cut through a lot of "greenwashing" – the process by which firms promise vague and impressive aims without any monitoring of real achievements. In 2006, a US not-for-profit called B Lab set up an accreditation scheme to check that, among other things, companies' energy use, recycling and supply chains were sustainable and transparent. The process is rigorous and can take up to two years. We covered [their story](#) in detail.

Applicants first fill out a free online [B Impact Assessment](#), (BIA) which evaluates how a company interacts with its workers, customers, community, and environment. B Lab then verifies each score to determine if





Credit: Badvertising campaign h  
<https://www.badverts.org/> zv

an applicant company meets the 80-point bar for certification. Documentation must then be submitted to validate responses before signing the declaration and paying the annual sliding scale fee – from \$1,000 upwards depending on turnover. To maintain certification, B Corps must update their BIA and verify their updated score every three years.

To date, they have raised \$32m in “philanthropic capital” and signed up over 3,500 firms in 70 countries. This is not a huge number – there are an estimated 200m firms worldwide – but it is influential in shifting business values, challenging cultures of growth without responsibility, building an alternative corporate model and inspiring others – such as recent start-up [Provenance](#), which enables consumers to check a product’s ethical credentials.

British restaurateur, food campaigner and public figure, Jamie Oliver, announced plans in August 2019 to turn his business into a B Corps, joining 217 other such companies in the UK, up from just 6 in 2014.



Credit: 'Recycling plastics' by mnbeo  
(CC BY-NC-ND 2.0)

## All about the money

### Community Currency

In times of crisis and other upheavals, local communities have discovered that one answer to being failed by the mainstream economy is to set up your own currency, whether as a barter system, time-banking, paper money or digital currencies. Spurred by lessons from successful initiatives, now some major cities and regions are seeing permanent benefits from having their own money or exchange system. Local currencies can strengthen neighbourhood ties and allow people to make friends – they are a focal point for the community-minded. In the US, for example, California alone has 19 city currencies, many formed after the financial crisis of 2007 – 2008. Lending to small businesses plummeted, with impacts particularly hitting African Americans, women and Latinos – people from historically marginalised groups. A different approach, [Time Credits](#) in the

UK – a national network of time banks – has been effective in addressing many different types of need, from eldercare and schools to drugs and alcohol misuse. [Regiogeld](#), a network of local currencies in Germany, is now the world's largest system of local currencies, supporting small businesses and empowering communities.

Our [community currency story](#) features an example from Greece, where the financial crisis sharply illuminated the potential for rapid economic reinvention. When the Eurozone troubles hit Greece, people in the port city of Volos turned their backs on the failed mainstream economic system to grow their own parallel economy. In 2011, eggs, milk and jam could be bought at market using a new, informal barter currency, a Local Alternative Unit, or TEM as it is known domestically. The system combines an element of barter for goods and services with an alternative currency. Volos residents can sign up for the online solidarity network and offer

up services to their neighbours. This can include computer support, language classes, cooking meals, or baby-sitting, for example – and in exchange they receive TEM credits, which they can use for discounts in participating local businesses. Founders Yiannis Grigorou and Christos Papaioannou designed the online platform and a digital coin in order to make barter trade easier. One TEM is worth one euro and there is only one rule: any member who collects a maximum of 1,200 TEM is expected to spend them inside the network, ensuring the recirculation of surpluses and re-investment in the community.

### Divestment Movements

The global movement for divestment away from fossil fuels began in the US in 2011, when student activists first launched campaigns in six universities to divest their endowments from coal, and by spring 2012 – and with the help of the campaigning organisation 350.org – this had broadened to a call to divest from all fossil fuels and invest in clean energy. A surge of students across the US and Europe took up the issue with their own institutions, many with success. Last year, the UK emerged as the world leader in university divestments, with over £80 billion divested.

Our [story about divestment](#) features the huge Norwegian sovereign wealth fund, which announced in March 2019 that it would be selling off \$7.5 billion of its oil and gas holdings for economic reasons. This took the shift to a whole new level by illustrating the risk of stranded assets – money invested in an area with little future. Norway's \$1 trillion Government Pension Fund has now joined more than

a thousand other institutional investors totalling more than \$8tn between them, who have made pledges to divest from fossil fuels. Norway currently owns \$37bn of shares in oil companies such as BP, Shell and France's Total, but is unlikely to divest quickly in these major players, because the country is still heavily committed to oil and gas extraction. Instead, it intends to sell shares it holds in riskier, small exploration and drilling companies. There is huge irony in a fund gathered from fossil fuel exploration announcing divestment away from oil and gas, but the sheer size of the fund makes a difference to the market and to the attitude of other investors. As recently as 2013, an Oxford University report on "stranded assets" suggested that big "neutral" funds like those of Norway would readily soak up any shares sold by those divesting, but this is no longer the case.

Norway's move adds to a wider trend toward sophisticated and ethical investing, led mostly by investors in the EU and particularly in Nordic countries. The country's much vaunted approach to environmental, social and corporate governance (ESG) was driven largely by its Government Pension Fund. In other places the church took the moral high ground: a group of influential and wealthy US churches made pledges to divest between 2013 and 2016 and Pope Francis' 2015 encyclical on the environment led to a stream of Catholic institutions pledging to follow suit. In 2018, the Church of England announced its decision to divest from fossil fuel companies by 2023, should these companies not align themselves with the Paris Agreement or fail to take steps towards the transition to a low-carbon economy. Just 10 years ago, the





Credit: 'Fossil Free Greater Manchester Divestment Campaign' by fossilfreegm.org.uk CC BY-SA 2.0

world's biggest companies by market capitalisation were oil and gas giants. Today, there is only 1 in the top 10. The new challenge is to ensure that cash-rich service giants such as Google, Apple and Amazon reduce their carbon emissions at source rather than choosing to offset.

### Central bank action

Partly as a result of pressure from divestment campaigns there are signs that central banks are beginning to recognise the need to make climate action also part of their mandate. Mark Carney, former governor of the Bank of England, pointed out that the [financial sector is investing in fossil fuels](#) to such a catastrophically high level, "that if you add up the policies of all of the companies out there, they are consistent with warming of 3.7-3.8C". Acknowledging this stark reality led to the silver lining of the UK Chancellor of the Exchequer's decision to [change the remit of the Bank of England's Monetary Policy Committee](#), which is responsible for setting interest rates. The chancellor announced that, from now on, the committee's

decisions must be 'environmentally sustainable and consistent with the transition to a net-zero economy'. Questions remain about how this will be compatible with the Bank of England's mandate to promote strong GDP growth, but it is an important recognition of the need to change. Green finance certainly has an important role to play in 'building back better' after the pandemic, but there are other tools the government can turn to. After the financial crisis, the Bank of England introduced 'macro-prudential' policy [in order to](#) 'reign in those activities that lead to bubbles, cyclical swings and economic shocks'. Although the policy was designed to tackle the failure of the mortgage market, it would only be a short step further to introduce [an ecological interest rate to tackle climate risk](#). In the year that the UK hosts the G7 and the crunch COP26 climate summit, real, bold and decided global action means ending fossil fuel finance immediately, and phasing out fossil fuels as part of a global [Fossil Fuel Non-Proliferation Treaty](#).



## Changing our behaviour

Fundamental to reaching the carbon reduction aims of the Paris Agreement will be [scaling behaviour change](#) by people at the individual and community level and beyond. Rapid Transition stories focus on how shifting patterns of consumption and changing modes of working can signal large scale change, and how subsets of nations – regions or cities and towns – can model successful behaviour change that inspires others.



### Advertising

Alongside stories of reducing physical advertising by [banning billboards](#), the wider issue of promotion through advertising and the ethics of the industry itself – particularly by fossil fuel industries and products that rely on polluting energy like cars – is covered in our [Badvertising](#) piece. One of the mechanisms for driving consumption and encouraging us to ‘shop until we drop’ is the advertising industry. In 2020, total media ad spending worldwide is expected to reach \$691.7 billion, up by 7.0% from 2019, despite the pandemic. This is more than the massive infrastructure investment programme China used to get out of recession after the 2008 financial crisis and more than the \$600 billion US Federal Reserve lending fund for medium sized firms to combat the current economic crisis. It is also 4.5 times the \$153 billion spent on development

assistance in 2018 by all 30 members of the OECD’s Development Assistance Committee.

The [Badvertising](#) campaign draws direct comparisons between tobacco bans and the ending of gas-guzzling SUV advertising, using the well-known dangers of smoking to make air pollution a personal and public health issue. For climate and health campaigners today there are valuable lessons to be learned from the fight against tobacco promotion. Both tobacco smoke and car exhausts contain similar toxins that directly threaten human health. Underlying health conditions mean that lower income households are worse affected than richer households by the effects of tobacco and air pollution from vehicles, and hence more vulnerable too in the face of health crises like the coronavirus pandemic.

### 4-day working week

The story about how we might [a our working week](#) focuses on examples around the world where shorter work hours have been successfully trialled and implemented. This subject became extremely topical during the pandemic when many people re-learned the joy of leisure time with family and the need to be seen to be [working all day](#) dropped away.

Responding to a recession in the early 1990s, the public sector in the Netherlands began offering a four-day week to staff to save money. Since then it has spread and become common employment practice, with the option offered to workers in all sectors of the economy. Job-sharing has become the norm in the health and



Credit: Low Traffic Neighbourhood (LTN) trial – Lower Ham Road, Kingston upon Thames by Jack Fifield (CC BY 2.0)

education sectors and it is common to have part-time surgeons, engineers and bankers, making the much hyped work-life balance in modern industrial economies a practical reality. In the US, in the midst of the financial crisis in 2008 – faced with recession, rapidly rising energy prices, growing lines at food banks, rising unemployment and mortgage foreclosures – instead of simply bringing a knife to public spending and pushing austerity measures, Jon Huntsman, Utah’s Republican governor, surprised people with an experiment to save money. At only a month’s notice, 18,000 of the state’s 25,000 workforce were put on a four-day week and around 900 public buildings

closed on Fridays. In the Netherlands the shift created conditions for greater equality at home and in the workplace between men and women. In the Utah experiment, it led to lower staff absentee rates, higher staff morale, an improvement in public experience of services and a significant carbon reduction resulting from closing buildings and using much of the vehicle fleet for one less day per week. Since then, the idea has taken hold in some parts of the private sector – in particular, for office work where people are not providing regular, time-sensitive services that need to be available every day.



## Action by cities

In the yawning gap between national action and what is needed to stop climate breakdown, a rapid rise of local and [city level activism](#) is growing a revolution from below. From almost nowhere, local and municipal authorities have started declaring 'climate emergencies' and committing to plans genuinely in line with meeting climate targets and new city-led initiatives are blooming.

Within just three months of the small Welsh town of Machynlleth declaring a "[climate emergency](#)" in late 2018, 40 others had signed the pledge – representing over 17 million people between them in the UK and more than 34 million in the US, Australia, Canada and Switzerland. In the face of inertia from national governments, people were pressuring their councils at the local, district and regional level to respond on the ground to the [Intergovernmental Panel on Climate Change's \(IPCC\) Special Report on 1.5 degrees Global Warming](#). Citizens were

demanding that councils stop talking in general terms and make concrete commitments to take measurable action.

Earlier local actions grew out of the original 1992 Earth Summit, but many are now largely forgotten. A second wave of organised municipal responses to climate change began in 2004, when the [Cities Climate Leadership Group \(C40\)](#) came into being, recognising the huge contribution of cities to global emissions. But this was still more of a top-down approach, using the power newly invested in mayors, with economic factors still dominating firmly over environmental and climate considerations. Like C40, [The Global Covenant of Mayors for Climate and Energy](#), is a global city-led network committed to climate leadership. It builds on the commitment of over 9,000 cities and local governments from six continents and 127 countries representing more than 770 million residents. This impressive gathering comprises cities that have been given local power by their central government.



Credit: 'Climate Emergency Demonstration 10'  
by Friends of the Earth Scotland. CC BY 2.0

## Bold leadership

But we do also need bold government leadership if we are to make change at scale and speed. Some parts of our economies, infrastructure and policy can only be actioned by national governments. Just as during the pandemic we saw governments acting broadly to safeguard their citizens and focus on public health, history has shown us multiple examples where leadership matters. When policy, funding and action need to come together – as they do to address the current ecological and climate crisis – it is important to have the support of leaders with a shared sense of urgency.

### Green New Deal

In 2019 Rapid Transition Alliance featured a [case study](#) on the Green New Deal – a proposal to shift the US economy towards sustainability that was proposed by the dynamic new Democratic representative Alexandria Ocasio-Cortez. It looked at the possibility of change in the context of the historical New Deal – a raft of sweeping changes by US President Roosevelt that transformed the post-depression economy. It was a multi-faceted programme. The vigour, confidence, breadth and imagination of the programme is, by modern standards, extraordinary. A new bank holiday was created to calm fears and take action on the banks, America was taken off the gold standard, the Glass-Steagall Act separated retail from ‘casino’ speculative banking, new financial regulators were created, a huge programme of rural relief was complemented by an equally large public works programme, and 250,000 conservation jobs were created

in national parks and forests. In addition to reforms of the banking system, the New Deal oversaw a period of compression of inequality generally, an improvement in gender equality, a major programme of new public housing and significant environmental works through the creation of the Civilian Conservation Corps. Overall, the Works Progress Administration put around 8.5 million people to work, providing jobs for roughly one third of America’s unemployed through the mid-1930s. Key to this was Roosevelt’s ability to surround himself with a new kind of emergency official, prepared to use presidential authority to break through legal and bureaucratic barriers to make things happen.

### Industrial conversion

The pandemic has reminded us how it is possible to re-purpose industrial machinery and processes to make different, more essential products when needed. Just two of the many global examples of how different industries responded to the health and economic crisis include a brewer of ‘craft’ beer making sanitising hand gel and a car manufacturer converting one of its factories to make medical face masks. Our case study on [industrial conversions](#) features other times when rapid transition has happened in industry, not just to tackle tragic but transient challenges, but also long-term economic and geo-political shifts.

In China where the pandemic began, a car plant run by the manufacturer Fiat Chrysler was converted to make [face masks](#) for health and other key workers, with several more in the car industry redirecting resources to address the shortage of hospital ventilators.



Making ventilators is, however, a highly specialised task not easy to begin quickly. For that reason clinicians at London's teaching hospital, UCLH, worked with engineers from car maker, Mercedes, to develop and rapidly introduce for testing a simpler breathing aid which still gets oxygen to the lungs, but without a full ventilator. In the United States a team of car prototype designers from the maker Ford worked with a range of others including doctors and even a hair stylist, to design and begin [producing by hand](#) protective face shields for health workers and 'first responders' in Detroit.

Elsewhere, a distillery in Aberdeen, Scotland, was re-purposed from making beer to help [meet the shortage of hand sanitiser](#). On a larger scale, Aberdeen is a city that has been synonymous with the oil and gas industry which is now [planning to transfer its skills](#) to convert to be a leading renewable energy player. For other sectors it has been a matter of changing how their businesses operate. With restaurants and many fast food outlets closed due to the pandemic, the Leon chain collaborated with food suppliers and distributors to begin delivering meals to front line health staff.

This ability of engineers and designers to respond to external challenges is what drove many similar rapid transitions in the past. The world's first multi-role combat aircraft, the De Havilland Mosquito, was nicknamed 'The Wooden Wonder' in 1941 as it was made from wood, pressed and glued together in moulds. This helped to preserve scarce metal reserves, was quick to produce, and used existing skills easily found in furniture factories and among cabinetmakers, luxury car builders and

piano makers. Plus, battle damage could be repaired relatively easily in the field. It was an example of shifting production and matching it to the needs and capabilities of the times.

During times of war, factories are often requisitioned for the manufacture of weapons, ammunition and military vehicles. But in times of peace, these same industries face shrinkage and the loss of jobs that accompanies such industrial change. After the end of the Cold War, state run programmes in many countries invented ways to keep the skills needed alive, while developing alternative products in mainstream commercial markets. This relied on partnerships with the private sector and collaboration from the workforce. The UK has seen the same conversations around the proposed end to the Trident nuclear missile programme, with many MPs and campaigners stressing the potential for redeploying resources elsewhere without creating unemployment and losing skills. The same can be said for the oncoming shrinkage of the fossil fuel industries and the concurrent need to power up a massive housing retrofit industry – transferable skills may be the key here.

## What can happen next?

Amongst other crises we face, two of the biggest are the climate crisis and the Covid pandemic. A key challenge then is how to 'build back better' in a way that addresses both crises simultaneously.

The global pandemic revealed the ability of governments to respond at speed and scale, mobilising huge resources to rapidly shift economic priorities and put public health and the public interest first. They also show how a clear understanding of risk based on scientific research and the international sharing of knowledge can lead to much faster, coordinated responses to an emergency. When communicated to the public it can explain and justify policy changes that otherwise might appear challenging and therefore not gain support.

Rapid, physical mobilisation of resources can happen alongside quick shifts in behaviour. People can change their daily habits very quickly, and adapt to new social norms, expectation shift and new appreciations emerge. Public services once taken for granted are cherished as life supporting, and the natural world becomes a necessity for human wellbeing. Business-as-usual changes overnight, given a real crisis taken seriously at all levels. Business proved flexible and able to rise successfully to the new challenges, repurposing manufacturing capacity to supply what was needed and to help support local key workers. If we gave the same level of importance to climate change, perhaps business could return a similarly positive response.

Where adaptations and behaviour changes reveal possibilities for more sustainable behaviour – such as avoiding unnecessary travel – they could be encouraged to become the new norm, and made part of the broader response to the climate emergency. Despite the growth of online shopping, many people have relied less on consumption for entertainment and have learned more on their friends, family and communities for support and pleasure. A connection with nature and the importance of green space has been highlighted as vital rather than optional. We have the opportunity to prioritise all these lessons learned as part of our sustainable future.

The climate is changing faster than we are – how do we speed up? The Rapid Transition Alliance is a global initiative learning from where, when and how good things happen quickly. We're gathering and sharing evidence-based hope, to remove excuses for inaction.

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