ZERO CARBON POLICY TOOLKIT

IF THE PROBLEM IS POLITICAL, WE MUST EQUIP OURSELVES WITH THE TOOLS TO UNDERSTAND IT

GREEN HOUSE THINK TANK

If the problem is political, we must equip ourselves with the tools to understand it.

This Toolkit assembles an economy-wide set of policy interventions to resource policy makers and campaigners to push for systems change. Our economy is not currently zero carbon, fair, stable or sustainable, even in economic terms. Let's understand why, and how to change it.

Actions

TRANSFORMING BUSINESS-AS-USUAL

STOP

START

THEREFORE OUR SOCIETY MUST

STOP

START

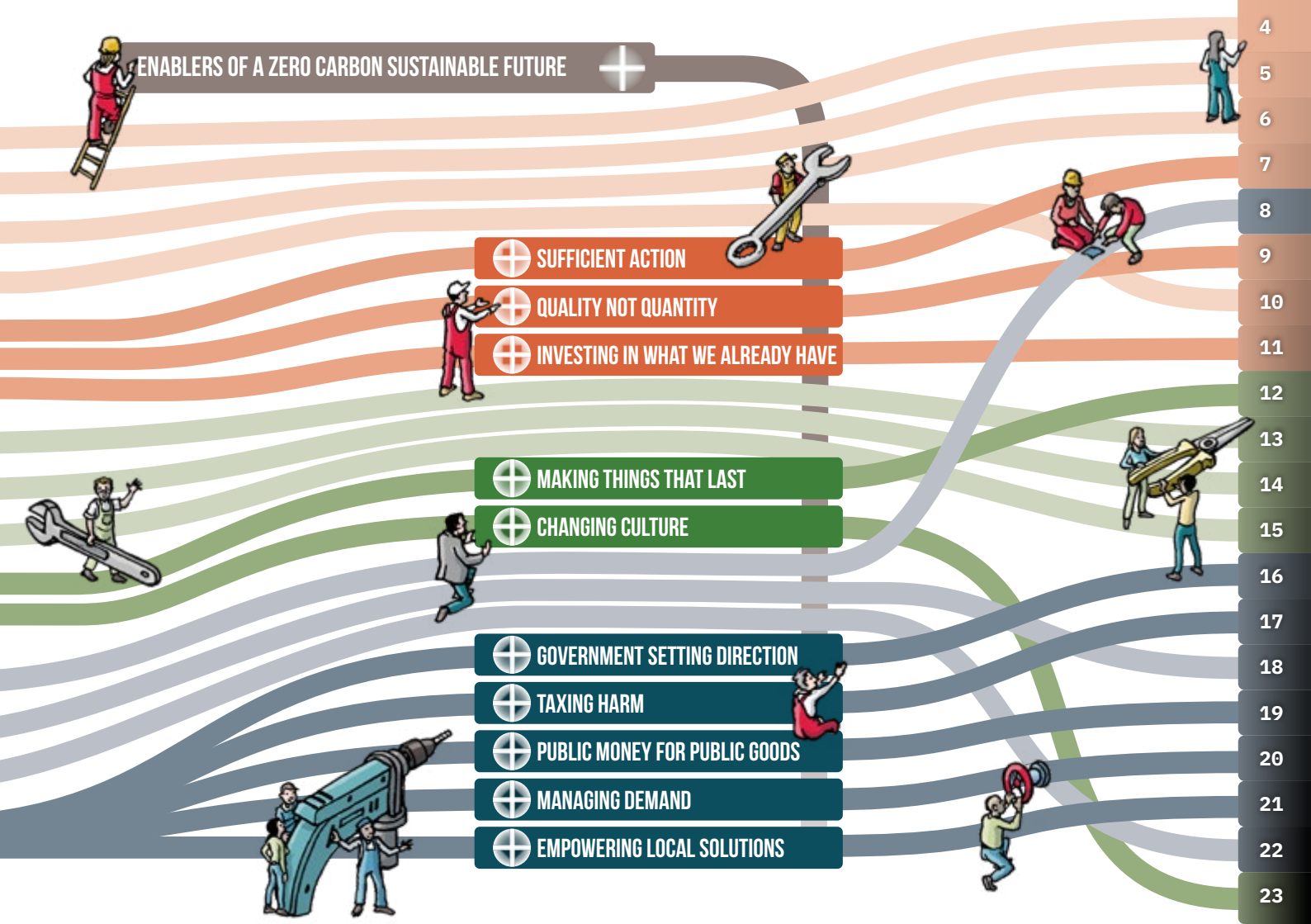
THEREFORE OUR GOVERNMENT MUST

STOP

START

BLOCKERS PERPETUATING UNJUST BUSINESS-AS-USUAL

- LOCKING IN HARM
- BUYING DIRTY
- RUBBISH IN RUBBISH OUT
- POINTLESS TRADE
- CHOOSING THE WRONG SCALE
- FALSE HORIZONS
- IDOLISING EFFICIENCY
- ASKING THE WRONG QUESTIONS
- SPONSORING HARM
- FEEDING THE MONSTER


ENABLERS OF A ZERO CARBON SUSTAINABLE FUTURE
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BLOCKER

LOCKING IN HARM

Despite governments having committed to action on climate change, both they and our economy are **Locking in Harm** by building new fossil fuel dependence infrastructure. Such construction not only produces emissions, but also ties our economy into continued fossil fuel use. This blocks us from reaching zero carbon whilst creating new building and machinery which is already obsolete (stranded assets).

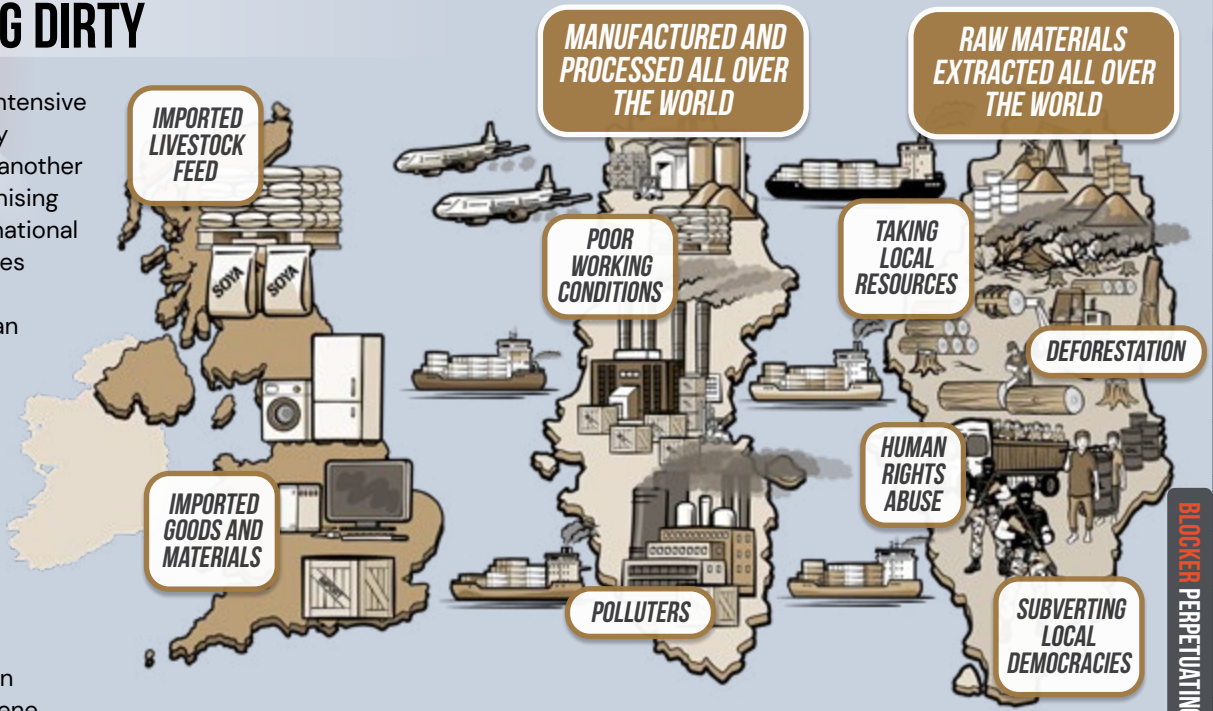
Policy Recommendations:

- *Only approve planning applications which are zero carbon compatible.*
- *State support for a just transition for workers, and refinancing tools to support phase out or retrofit of high carbon assets (e.g. power stations).*
- *Phase out and regulate the sale of new fossil fuel dependant assets, such as petrol and diesel vehicles and gas/oil boilers.*

BLOCKER

BUYING DIRTY

Importing carbon-intensive and environmentally damaging goods is another blocker to decarbonising our economy. International trade and the treaties and agreements which facilitate it can either be mutually beneficial and help create a more sustainable world, or they can obscure damaging consumption and block progress to decarbonising our economy. Only when governments intervene in our economy to discourage and restrict such imports can the transition to a zero carbon sustainable future begin.

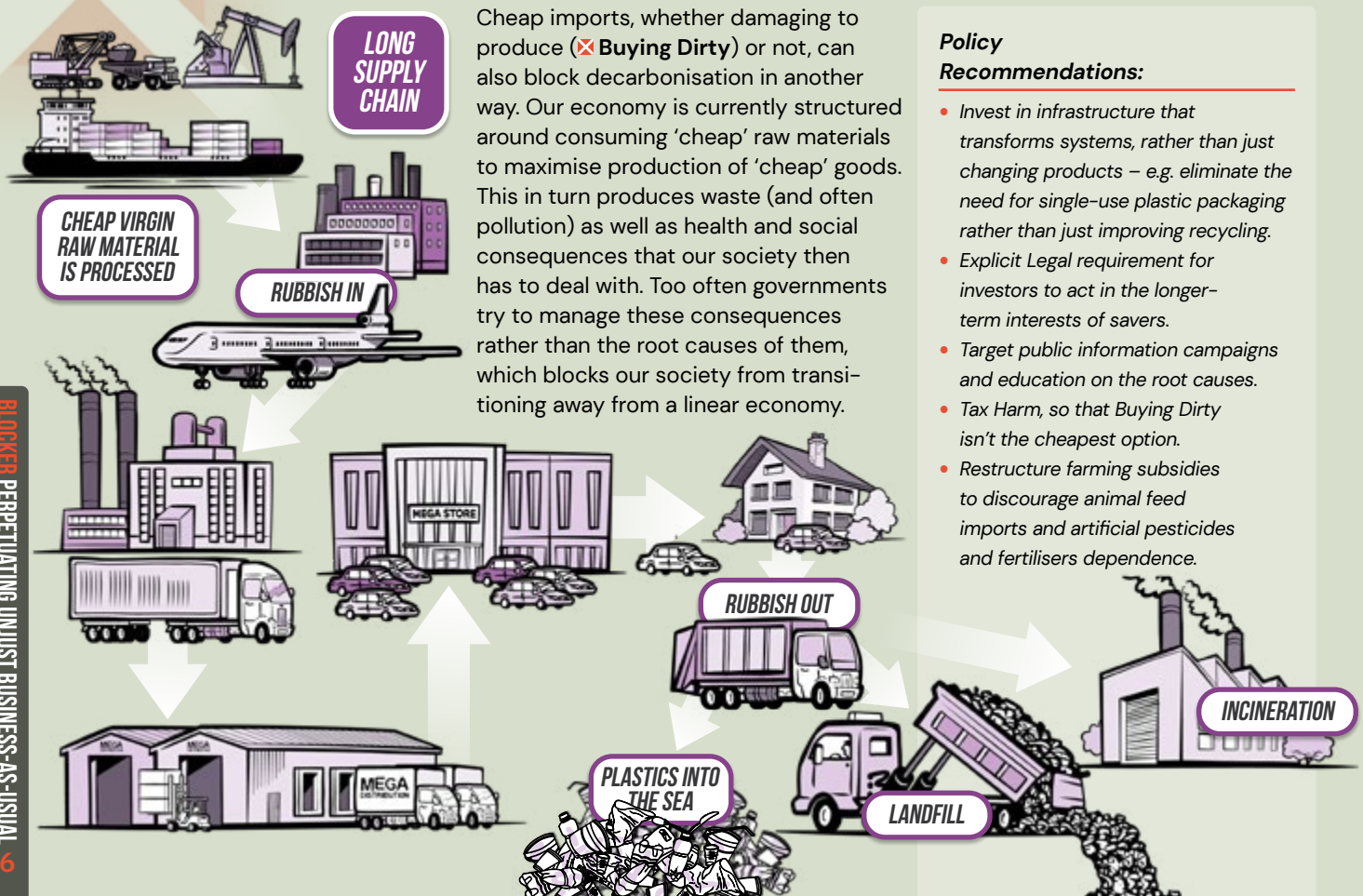


Policy Recommendations:

- *Mandatory declaring of emissions embedded in all imports.*
- *Carbon tax on emissions embedded in imports in line with domestic emissions.*
- *Import tariffs on goods which don't meet sustainable production standards.*
- *Government to research and lobby internationally to ensure that in each sector there is one international sustainable production certification scheme, which is robust and meaningful.*

BLOCKER

RUBBISH IN RUBBISH OUT



Cheap imports, whether damaging to produce (**Buying Dirty**) or not, can also block decarbonisation in another way. Our economy is currently structured around consuming 'cheap' raw materials to maximise production of 'cheap' goods. This in turn produces waste (and often pollution) as well as health and social consequences that our society then has to deal with. Too often governments try to manage these consequences rather than the root causes of them, which blocks our society from transitioning away from a linear economy.

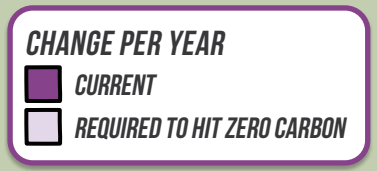
Policy Recommendations:

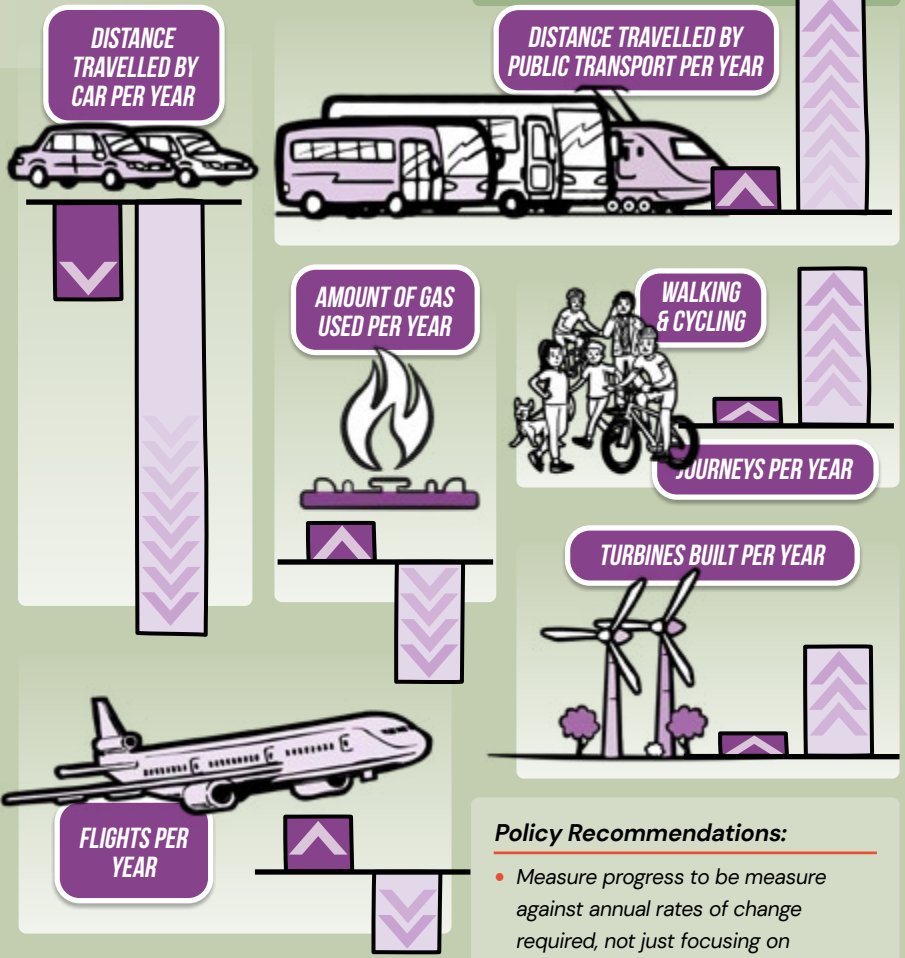
- *Invest in infrastructure that transforms systems, rather than just changing products – e.g. eliminate the need for single-use plastic packaging rather than just improving recycling.*
- *Explicit Legal requirement for investors to act in the longer-term interests of savers.*
- *Target public information campaigns and education on the root causes.*
- *Tax Harm, so that Buying Dirty isn't the cheapest option.*
- *Restructure farming subsidies to discourage animal feed imports and artificial pesticides and fertilisers dependence.*

ENABLER

SUFFICIENT ACTION

For our society to live up to its commitment of limiting global temperature rise to 1.5°C, two things must happen. First, governments must recognise the three underlying dynamics in our current economy which perpetuate business-as-usual (**Locking in Harm**, **Buying Dirty** and **Rubbish In Rubbish Out** linearity). Second, both governments and citizens must recognise what action that is able to achieve that goal actually looks like. Only by coming to terms with the tremendous change of direction that is required, and the pace at which our economy must pursue this new path, will **Sufficient Action** become achievable.





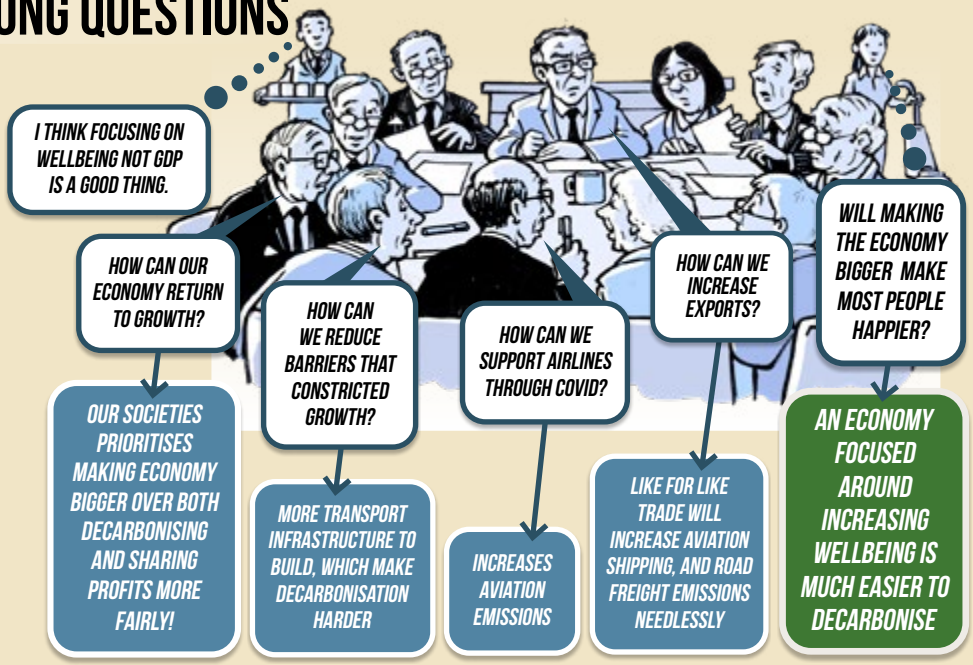
Policy Recommendations:

- *Measure progress to be measure against annual rates of change required, not just focusing on distant end-point targets.*

BLOCKER

ASKING THE WRONG QUESTIONS

Fundamentally, the shift in understanding required to enable **Sufficient Action** requires governments (and therefore the political parties and media that shape them) to stop focusing on the wrong questions and objectives. Limiting global temperature rise to 1.5°C means (whether we like it or not) prioritising certain objectives over others. This means 'progress' (the goal(s) governments commit to achieve and are measured against) being defined in terms of wellbeing, quality of life and life satisfaction – with finance and economics being seen as tools for delivering these. For the needed fundamental change in priorities to seem acceptable and logical, societies must first stop defining their objectives in terms of indirect financial metrics and the perpetual 'growth' of their economies. These might have once been good predictors of 'progress' but in a zero carbon society they are unlikely to be.



Policy Recommendations:

- *Replace GDP with wellbeing indicators as the key policy objective.*
- *Greenhouse gas implications and cost implications of major project should be considered side by side.*
- *All products or services traded to have embedded emissions figure shared with purchaser.*
- *Require all businesses with turnover above £1m to have a carbon audit and implement Road to Zero Carbon plans.*

ENABLER

QUALITY NOT QUANTITY

Once the political conversation has changed from ☒ **Asking the Wrong Questions** to taking a nuanced view of progress which relies more on direct measures of human wellbeing, economic intervention will be able to stop pursuing quantity at all costs. This will allow governments to focus less on the scale of transport, trade or economic activity, and more on the extent to which these activities contribute to improving wellbeing, resilience and other measures of a healthy society. A big enabler of decarbonisation is governments having political space, and a mandate, to discourage trade or economic activity which is carbon intensive and delivers little in direct benefits to our society, so they can focus our economy on activities which directly benefit our society.

Policy Recommendations:

- *Reform advertising to reduce the motivation to maximise quantity of consumption.*
- *Focus economic incentives on import substitution.*
- *Direct the public sector to prioritise local, sustainable procurement.*
- *Phase out 'free trade zones' and stop pursuing trade agreements based on comparative advantage.*
- *Set high food and environmental standards.*
- *Restructure farming subsidies to incentivise sufficient high quality food production to meet local demand.*
- *Investigate how companies can be incentivised to recruit locally, and minimise commuting.*

BLOCKER

POINTLESS TRADE

The biggest blocker to putting quality before quantity in our economy – and a significant source of carbon emissions – is trade that serves little or no benefit to our society on a human level. These forms of trade are often encouraged in response to trade deficits (where a country imports more than it exports), and involve value swaps in very similar goods (e.g. importing cheaper versions of the expensive goods a country exports).

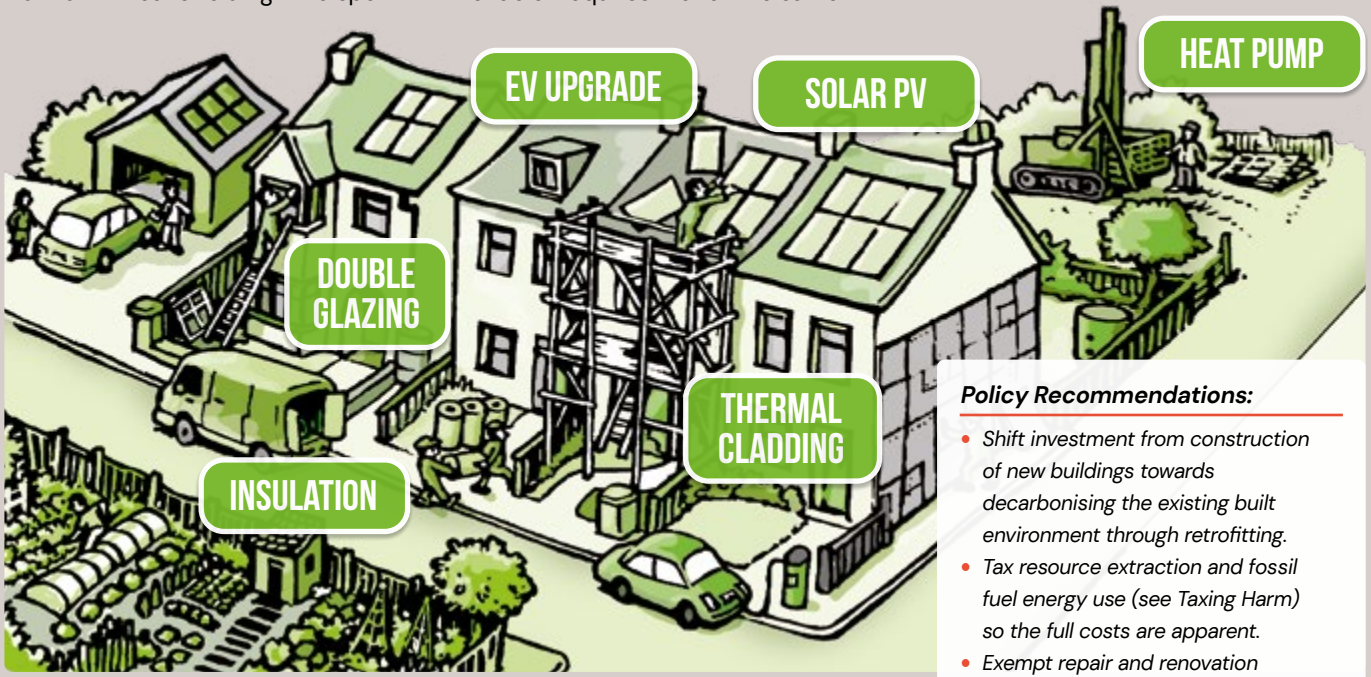
Policy Recommendations:

- *A Food Resilience and Sustainability Act to resolve the food trade deficit.*
- *Address wider trade deficit by reducing reliance on imports to reduce the need to maximise high value exports.*

ENABLER

INVESTING IN WHAT WE ALREADY HAVE

Creating an economy which focusing on **Quality not Quantity** both requires and results in an economy that invests in the infrastructure, people and systems that it is made from of. It means valuing time spent maintaining, repairing, repurposing, renovating, retrofitting and reusing assets rather than committing more energy and materials to replacing them. Critically, this decarbonisation enabler requires that at the same time there is a shift away from **Rubbish In Rubbish Out** linearity in our economy. This means stopping the demolition of usable buildings and the exporting of old goods as 'waste'.



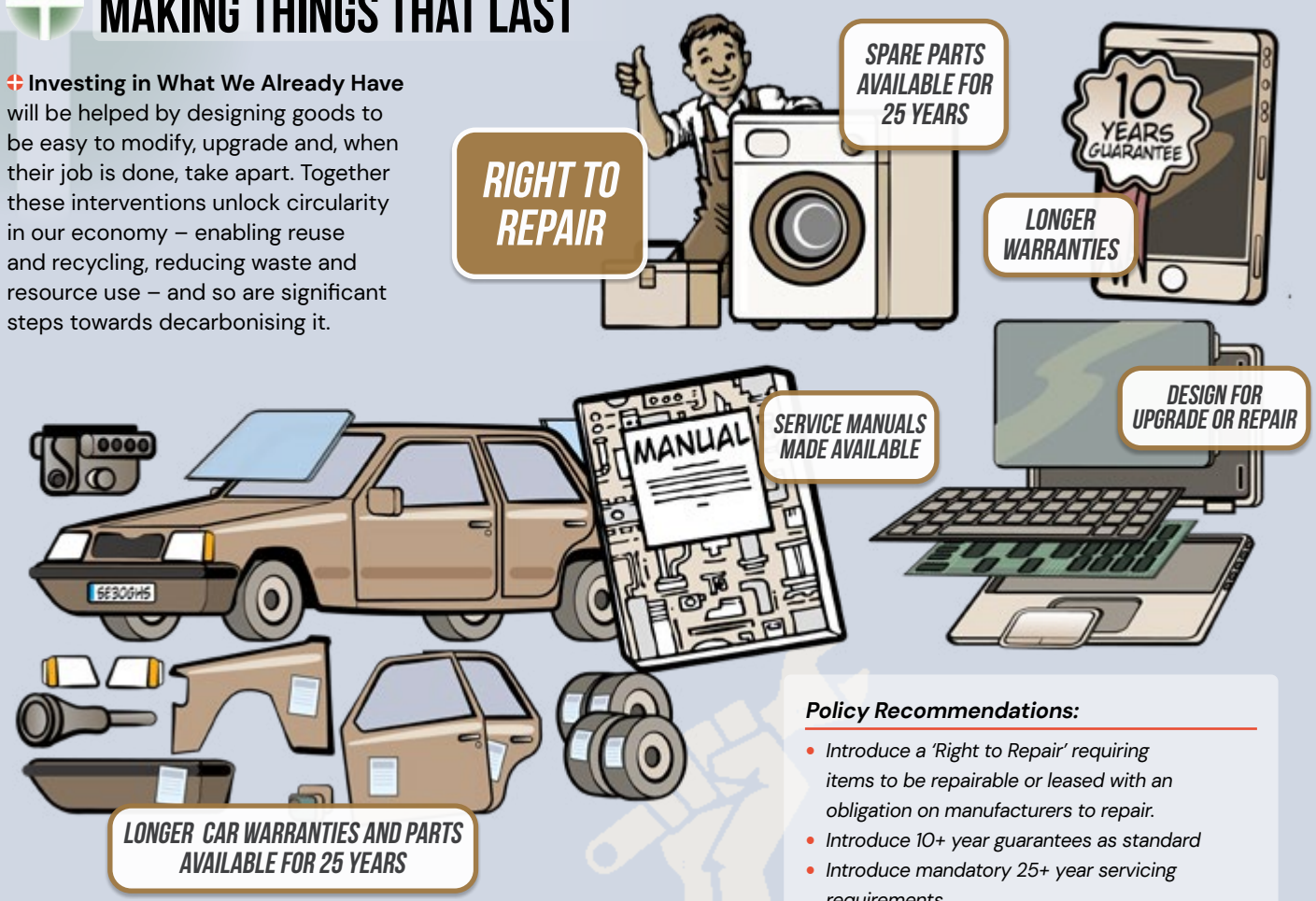
Policy Recommendations:

- *Shift investment from construction of new buildings towards decarbonising the existing built environment through retrofitting.*
- *Tax resource extraction and fossil fuel energy use (see Taxing Harm) so the full costs are apparent.*
- *Exempt repair and renovation from VAT.*

ENABLER

MAKING THINGS THAT LAST

Investing in What We Already Have will be helped by designing goods to be easy to modify, upgrade and, when their job is done, take apart. Together these interventions unlock circularity in our economy – enabling reuse and recycling, reducing waste and resource use – and so are significant steps towards decarbonising it.



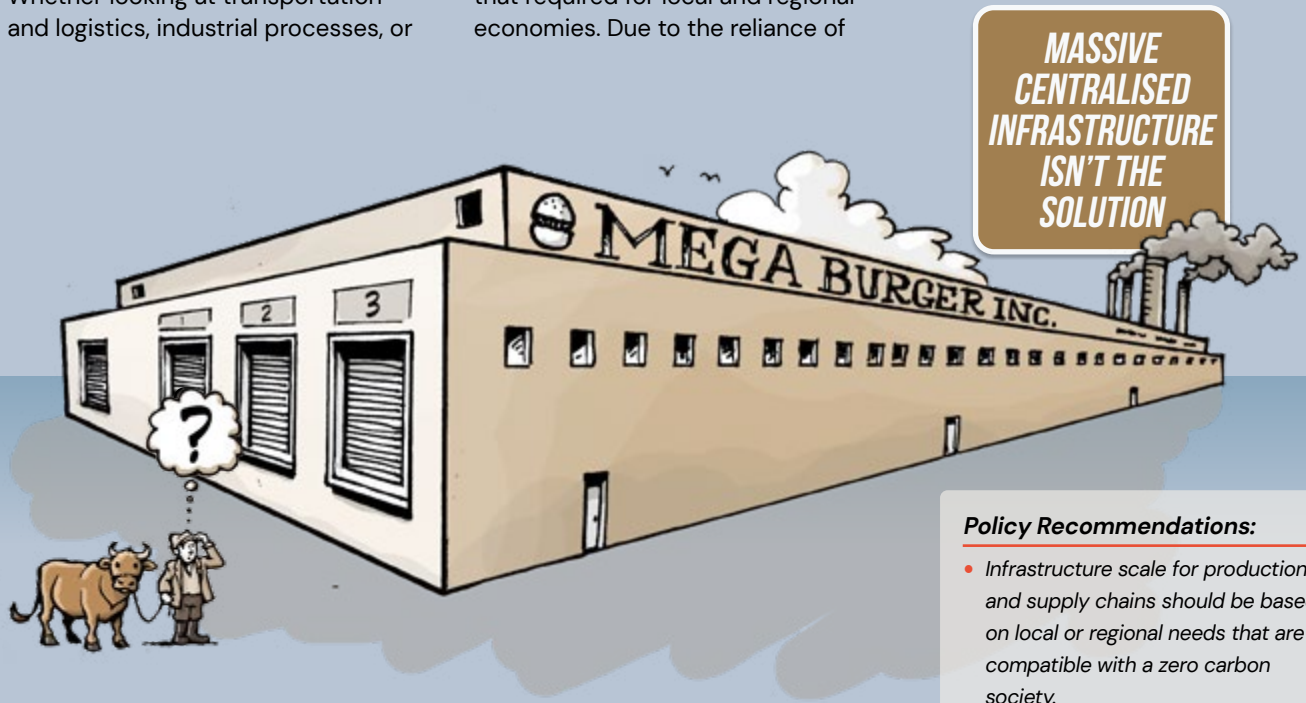
Policy Recommendations:

- *Introduce a 'Right to Repair' requiring items to be repairable or leased with an obligation on manufacturers to repair.*
- *Introduce 10+ year guarantees as standard*
- *Introduce mandatory 25+ year servicing requirements.*

BLOCKER

CHOOSING THE WRONG SCALE

Another consequence of **Asking the Wrong Questions** and therefore failing to focus on **Quality not Quantity** is that our economy is organised at the wrong scale for decarbonisation. Whether looking at transportation and logistics, industrial processes, or food supply chains – if our economy is geared towards centralised distribution and exports for exports' sake then the result is that infrastructure is built at a very different scale to that required for local and regional economies. Due to the reliance of long-distance transportation on fossil fuel energy, decarbonising requires a shift towards more local and less global supply chains.



Policy Recommendations:

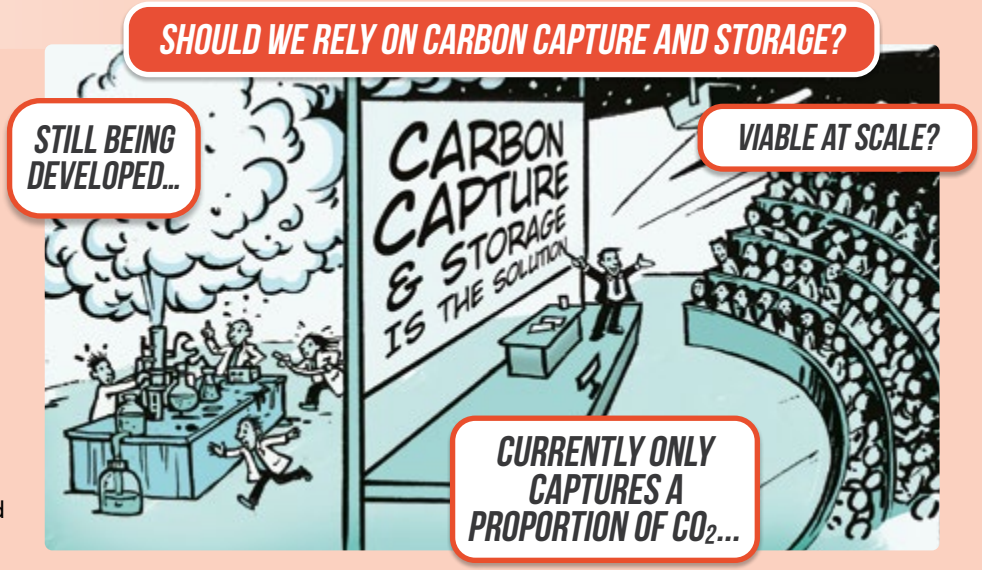
- *Infrastructure scale for production and supply chains should be based on local or regional needs that are compatible with a zero carbon society.*

BLOCKER

FALSE HORIZONS

When our societies start asking the right questions, elected governments gain a mandate to intervene in our economy to meet the new objectives. This presents a challenge which political leaders will need to rise to.

One big blocker to such political leadership and economic interventions is vested interests. The way our economies are structured benefits an influential minority who profit from the way things work today. These people are concerned that a reshaped economy might not serve them so well. They (often via corporations or organisation they fund) propose 'technological solutions' that they claim will address the problem but with a much smaller change of direction. In some cases (such as the fossil fuel industry and carbon capture and storage), this can be seen as a new form of climate denial. These 'technological solutions' hoodwink citizens and governments into believing that the required changes are small or can wait another decade. These fictitious 'solutions' create a dangerous false sense of security and block **Sufficient Action**.



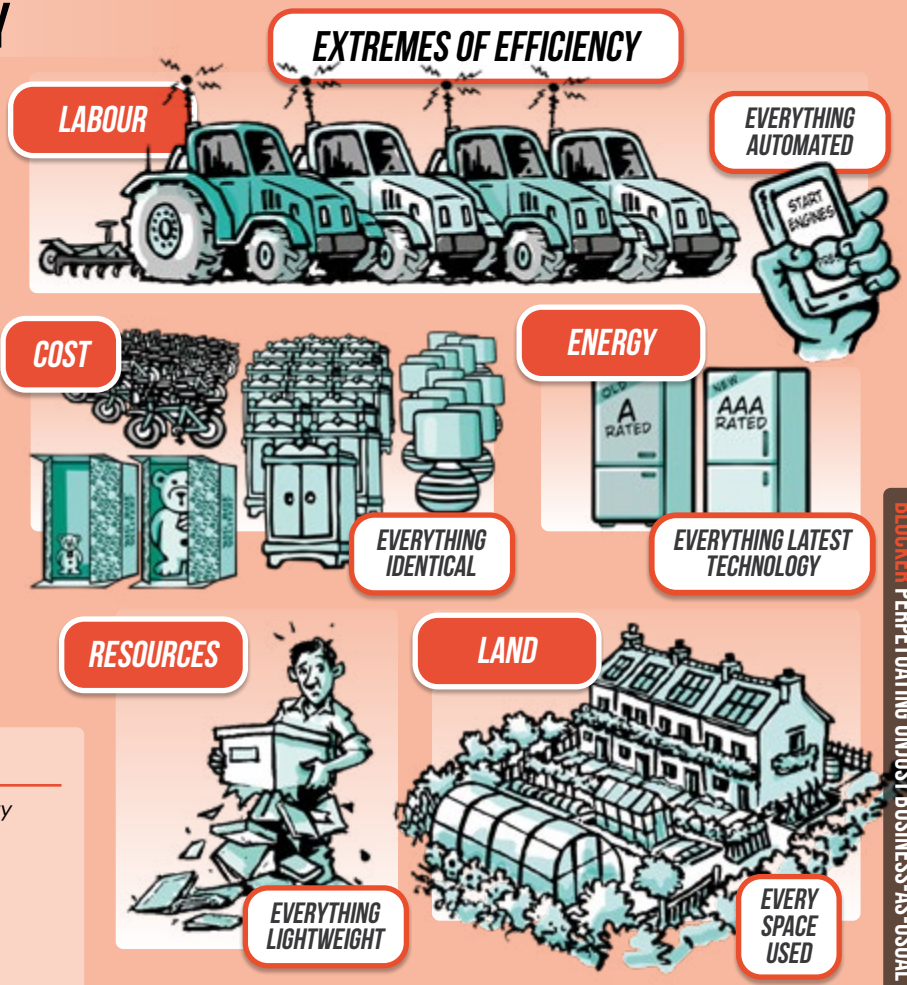
Policy Recommendations:

- *Carbon Capture and Storage should be treated as an option of last resort rather than plan A.*
- *Bioenergy with Carbon Capture and Storage is not viable for the UK and there is very limited ecological capacity for it globally.*
- *Efficiency improvement polices need to be linked to reducing overall demand.*
- *Plan use of hydrogen based on what can be produced only using renewable energy.*

BLOCKER

IDOLISING EFFICIENCY

Another distraction technique employed is focusing on efficiency rather than the problem as a whole. There are many forms of efficiency, and focusing on one is often to the detriment of others. There are also consequences for resilience in removing, in the name of efficiency, all 'surplus' capacity from systems/supply chains. As highlighted in ☒ **Asking the Wrong Questions**, a nuanced approach is required that doesn't focus too heavily on intermediate measures. Energy efficiency may have a role to play, but what matters – and should be measured – is minimising total future greenhouse gas emissions.



Policy Recommendations:

- *Legislate to require surplus capacity and diversity of supply in vital services and key section of the economy.*
- *Governments to publicly acknowledge that there are many different forms of efficiency, and often there is a trade-off between them.*

ENABLER

GOVERNMENT SETTING DIRECTION

Overcoming vested interest requires bold political leadership, transparency, strong accountability and an informed electorate. Without this, elected government will not be able to stop ⊠ **Idolising Efficiency** nor see past ⊠ **False Horizons**.

A 1.5°C-compatible transition to zero carbon requires government to set both the direction and pace our economy needs to go in, and this must be in line with our society taking ✣ **Sufficient Action** overall. Although technology and infrastructure change are only part of the solution, they still are a critical part that takes time, planning and investment. Industry and the public sector will need clear direction of travel well in advance in order to deliver ✣ **Sufficient Action**.

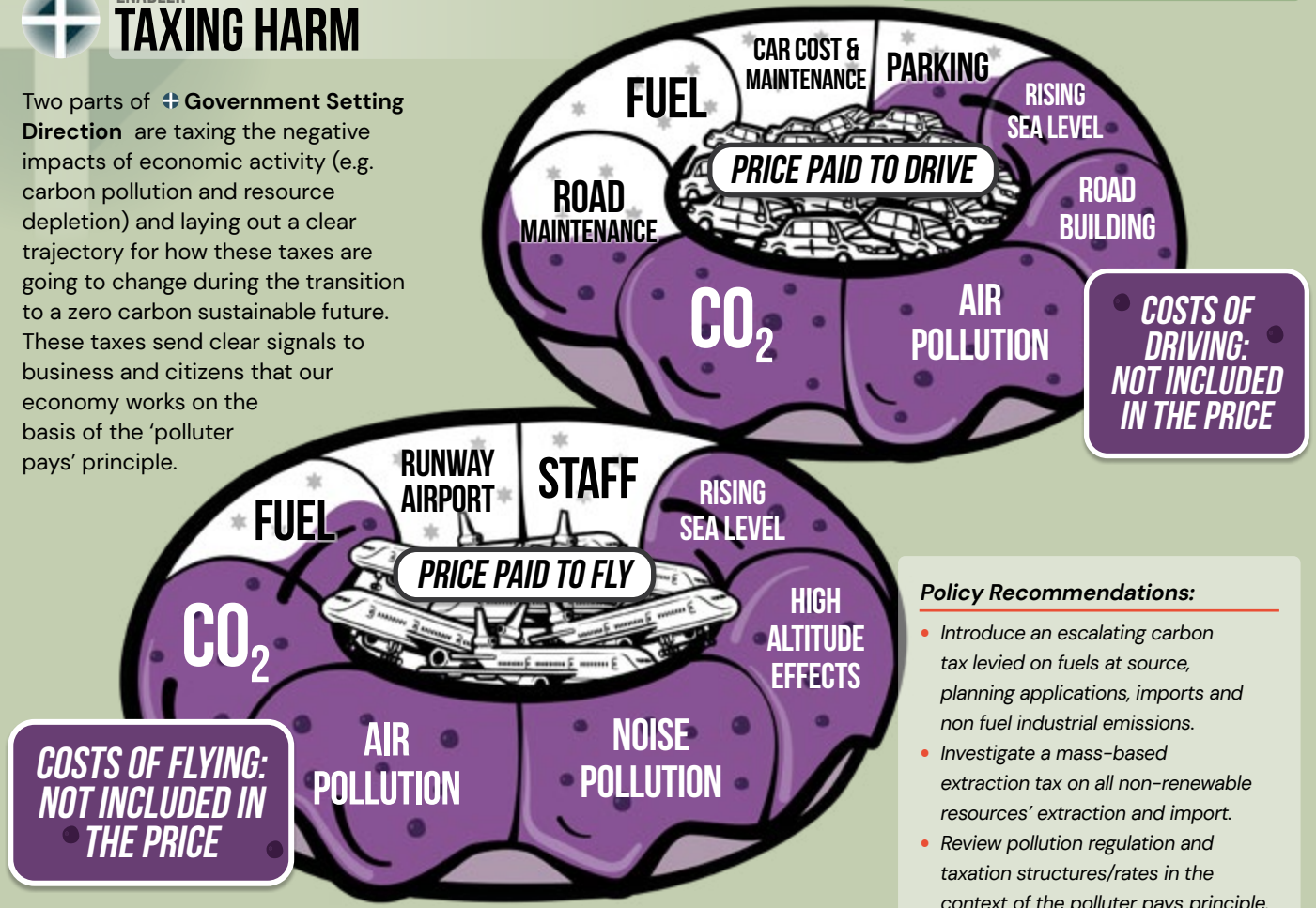
Policy Recommendations:

- *Government must put in place legislation and regulations that create clear overall economic strategy in line with 1.5°C.*
- *Government must lead structural changes to industrial production.*
- *Government must empower and resource local communities to deliver a just transition.*

ENABLER

TAXING HARM

Two parts of **Government Setting Direction** are taxing the negative impacts of economic activity (e.g. carbon pollution and resource depletion) and laying out a clear trajectory for how these taxes are going to change during the transition to a zero carbon sustainable future. These taxes send clear signals to business and citizens that our economy works on the basis of the 'polluter pays' principle.



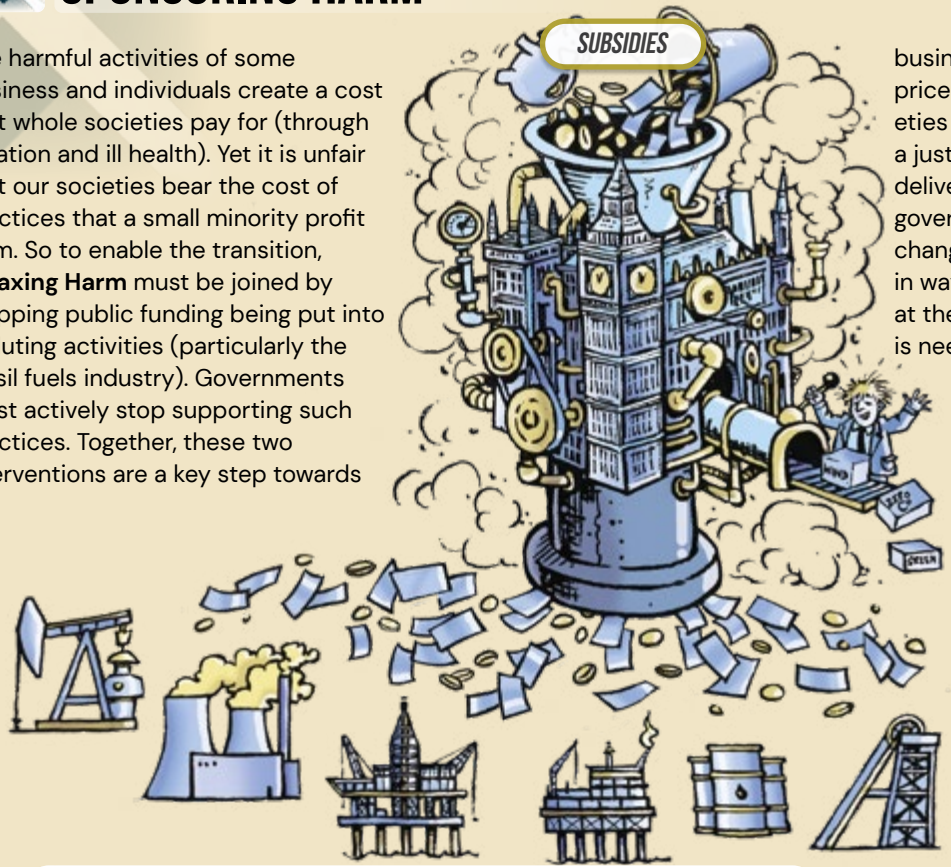
Policy Recommendations:

- *Introduce an escalating carbon tax levied on fuels at source, planning applications, imports and non fuel industrial emissions.*
- *Investigate a mass-based extraction tax on all non-renewable resources' extraction and import.*
- *Review pollution regulation and taxation structures/rates in the context of the polluter pays principle.*

BLOCKER

SPONSORING HARM

The harmful activities of some business and individuals create a cost that whole societies pay for (through taxation and ill health). Yet it is unfair that our societies bear the cost of practices that a small minority profit from. So to enable the transition, **Taxing Harm** must be joined by stopping public funding being put into polluting activities (particularly the fossil fuels industry). Governments must actively stop supporting such practices. Together, these two interventions are a key step towards businesses and individuals paying a price that reflects the full cost to societies of harmful activities. Although a just transition for workers must be delivered as part of the transition, governments must not shy away from changing the economic playing field in ways that benefit some business at the expense of others where this is needed for **Sufficient Action**.



Policy Recommendations:

- *Phase out all government subsidies to aviation and fossil fuels within two years.*
- *Review whether current public sector capital projects (e.g. road building programmes) facilitate rapid decarbonisation, and reallocate funding if not.*

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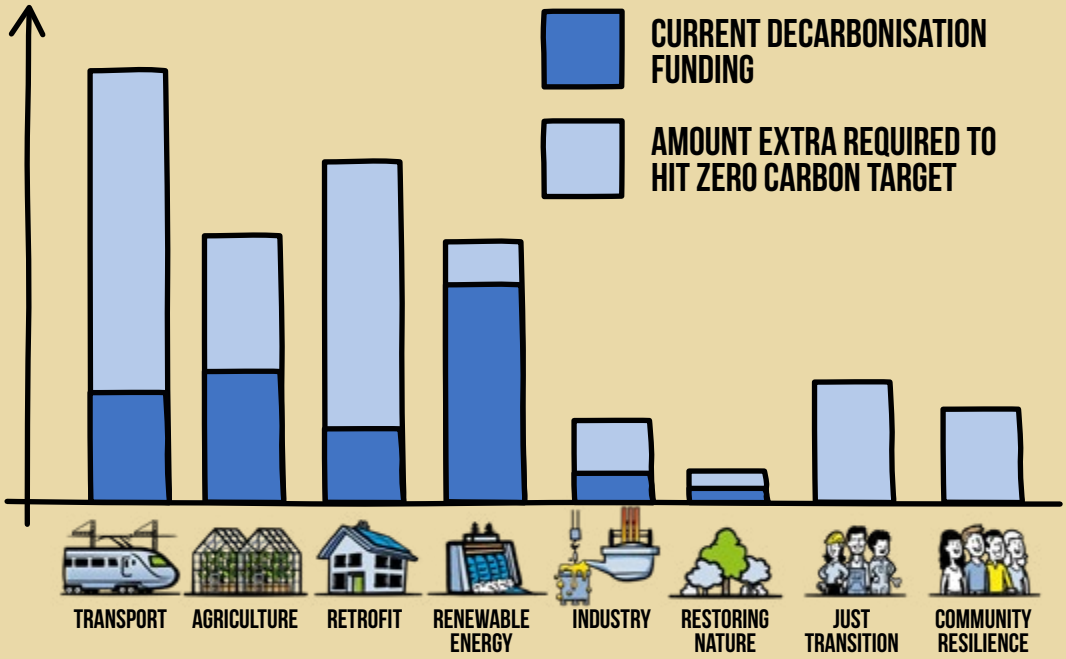
PUBLIC MONEY FOR PUBLIC GOODS

The opposite of attributing the full cost to society of harmful activities (internalising externalities) is the government directly funding activities which do good in or for our society.

This practice is well established in the funding of certain types of renewable energy and the provision of health care, but could be expanded.



Policy Recommendations:

- *Government needs to subsidise, or directly commission, infrastructure required for zero carbon.*
- *Decision-making that governs public investments must require all projects to fit within national carbon budgets (including direct and indirect emissions).*
- *We should not continue to invest in infrastructure that supports sectors of the economy that cannot yet be decarbonised with current technologies (e.g. aviation, shipping).*

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MANAGING DEMAND

Alongside putting **Public Money for Public Goods,** another enabler of a zero carbon sustainable future is government actively **Managing Demand** for certain activities. Reaching zero carbon requires certain activities to happen less. Therefore, our governments need to plan and build public support for certain behavioural and economic changes. They must also use regulation and taxation to reduce business demand for these activities/products. It is critical that enough support is provided for the most vulnerable in our societies who are currently reliance on these products/activities. One way of doing this is by prioritising these groups/individuals in publicly funded roll-outs of alternatives (e.g. domestic heating retrofits).

Policy Recommendations:

- *Intervene in the economy to address factors which motivate unsustainable demand – e.g. stop 'predicting and providing' infrastructure on the basis of demand growth.*
- *Before managing the supply in any area, ensure demand isn't inflated by advertising.*
- *Use public information campaigns to give citizens the choice to change their behaviour (see enabler* **Changing Culture***).*
- *Use citizens' assemblies and participatory democracy to build public support and engagement.*
- *Revise monetary policy and regulation of financial institutions so that central banks can discourage lending to unsustainable activities.*
- *The last resort is to directly subsidise reducing demand or taxing consumption in key areas.*

THEREFORE OUR GOVERNMENT MUST

ENABLER

EMPOWERING LOCAL SOLUTIONS

A key way to enable the transition without allowing individuals and communities to be overlooked or feel trapped by the changes happening in their economy is to directly engage with communities and involve them in decision making processes. This means empowering individuals and communities to lead/steer the decarbonisation of their lives. By informing people of the problem, and options for addressing it in their locality, people will feel more able to participate in the decisions affecting their lives. Governments must give decarbonising funding to local communities and allow them to decide how, and in what order, the changes happen in their area. This will create space for best practice to develop, be replicated and, in turn, reinforce the transition.

Policy Recommendations:

- *Use citizens' assemblies to engage people in decision-making about how to respond to the challenges presented and, critically, provide a mandate to elected politicians to take bold action.*
- *Shift more power, autonomy and responsibility to local and regional levels.*
- *Public information campaigns (local, regional and national) to engage people in decision-making and resulting transition.*
- *Reduce inequality within countries.*
- *Reduce inequality between countries, including through restructuring trade agreements, infrastructure strategies and pandemic economic recovery plans.*
- *Ensure transparency and accountability for all transition funding and decisions through maximum disclosure.*
- *Prioritise investment in the creation of decent jobs and retraining to deliver a just transition.*

BLOCKER

FEEDING THE MONSTER

Ultimately, although government policy sets the rules of our economy, and public investment influences what happens within it, the majority of investment in our economy is private – whether that's individuals investing in their houses or companies investing in factories, vehicles or digital technology. Currently private sector investment mostly perpetuates unjust business-as-usual, reinforcing other blockers to the decarbonisation of our economy. Until governments can stop ⊠ **Asking the Wrong Questions** and ⊠ **Sponsoring Harm** through public subsidies, this is likely to continue. Our governments must enable the transition by ✣ **Taxing Harm**, putting ✣ **Public Money for Public Goods**, ✣ **Managing Demand**, ✣ **Empowering Local Solutions**, and, most critical of all, by the ✣ **Government Setting Direction** – then private sector investment will change direction.

Policy Recommendations:

- *Mandatory emissions / stranded asset exposure reporting for all pension and investment funds.*
- *Emissions budgets set at national regional/local level based on a fair share of precautionary global emission budgets.*
- *Mandatory construction and operational emissions reporting for all public sector projects.*

ENABLER

CHANGING CULTURE

Reaching a zero carbon sustainable society requires more than technological change. A redirected economy will have new opportunities and demand new skills, but it will also deliver new co-benefits and give us an opportunity to create a fairer society (if we choose to). The fact this toolkit highlights twenty different interventions required is testament to the complexity and diversity of both our current economy and the zero carbon sustainable economy that needs creating. Only when this challenge is embraced, collectively, and led passionately yet considerately by elected governments, will the transition be realised. This process, particularly if led by **Empowering Local Solutions**, is likely to both be community defining and revitalise local democratic engagement.

Policy Recommendations:

- *Public information campaigns promoting reuse, repair, upgrading, renovation and sharing rather than owning.*
- *Public education campaigns to support a 'Great Food Transformation' by equipping citizens with the skills needed to cook more nutritious and seasonal everyday foods.*
- *Invest in transformative education for all, both as part of formal education and embedded in communities.*

If the problem is political, we must equip ourselves with the tools to understand it. This Toolkit assembles an economy-wide set of policy interventions to resource policy makers and campaigners to push for systems change. Our economy is not currently zero carbon, fair, stable or sustainable, even in economic terms. Let's understand why, and how to change it.

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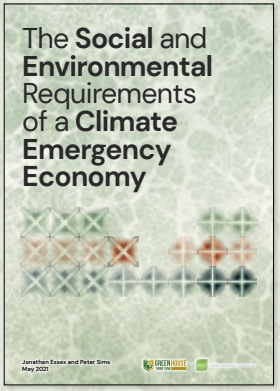
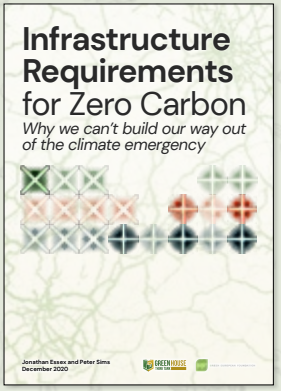
Reports exploring Toolkit in more detail:

Trade and Infrastructure Requirements for Zero Carbon: Technical Annex
August 2020



The Social and Environmental Requirements of a Climate Emergency Economy
May 2021



Infrastructure Requirements for Zero Carbon
September 2021

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