

Business in the Age of Sustainability: the post-carbon paradigm shift

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Discussions about how to tackle climate change are framed by the paradigm of industrialisation which has shaped the world for the last 200 years of more – economic development that has been based on making use of natural resources, in particular coal and oil.

If we burn all the world's coal, CO₂ levels are projected to go well beyond the dangerous 'peak carbon' threshold of 400ppm.ⁱⁱⁱ If we phase out coal and burn all the oil and gas the climate consequences will not be so severe, but the critical issue is of course that we will have then reached or gone beyond 'peak oil'.

That's why I want to construct a global 'green new deal' that will pave the way for a low carbon recovery and help us build tomorrow's green economy today.

Gordon Brown - at the UK Carbon Industrial Summit - launching the Low Carbon Industrial Strategy.ⁱ

The state of our economy calls for action: bold and swift. And we will act not only to create new jobs but to lay a new foundation for growth. We will build the roads and bridges, the electric grids and digital lines that feed our commerce and bind us together. We will restore science to its rightful place and wield technology's wonders to raise health care's quality and lower its costs. We will harness the sun and the winds and the soil to fuel our cars and run our factories. And we will transform our schools and colleges and universities to meet the demands of a new age. All this we can do. All this we will do.

President Barack Obama, Inaugural Address, 20 January 2009

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The policy debate around climate change is a bit like constructing one giant, zero-sum, see-saw: carbon on the one side, pricing, fiscal policies, regulation and behaviour change to reduce the use of carbon on the other. This framing is rooted, not surprisingly, in the current paradigm; it does not look to the future, and build stepping stones back from that future to guide present action.

Our argument is that we need to re-frame the discussion. We need to recognise the power of the insight of economists such as Kondratiev that 'waves' of economic development begin, peak and end; and that our

current 'meta-wave', rooted in the inherent exploitation of natural resources, has come to an end. Each wave is characterised by different kinds of value creation, and different business models. Not to recognise this is to throw good money after bad, using policy tools and business models which are no longer fit for purpose.

As things fall apart, the green shoots of the future break through: the 'Age of Sustainability' has begun, but we have not come to terms with it yet. This age will be driven by the need to enable nine billion people to live on our one planet on a basis of equity and justice, which will require new business models able to generate sustainable value, producing energy in very different ways.

We have earlier described our '21st century value matrix', and the importance of creating the right enabling frameworks so that low-carbon, eco-efficient and climate friendly products and processes are encouraged. What this means is that we need to re-frame the debate, away from carbon. We need to recognise that sustainable value in the future will be about green innovation, green talent, green jobs, green savings on energy costs and green finance. This new agenda is well articulated by the Climate Prosperity Project helping to shape not only the policies of the Obama administration, but also now spreading state wide, across political boundaries, uniting business and government – with detailed strategies emerging for Silicon Valley, Delaware and elsewhere.^{iv}

We speculate on the future shape of the economy and society, and their relationship to the environment, at our peril. H.G. Wells's visions through the lens of his time machine remind us of limits of looking in the crystal ball. That said, as Bill Becker (of the Presidential Climate Action Plan) has advocated, models of the future powerfully shape economic development for generations to come: Becker cites Futurama, the exhibit created by General Motors at the New York World's Fair in 1939, a vision of cars and freeways, of urbanisation and driving, made possible by unending supplies of oil.^v

In thinking low-carbon, we need to come to understand what the world will look like post-carbon: and in so doing, we will start to recognise that the debate is not about what we won't have and be able to do, but what will be possible. In so doing we will recognise why this will be so exciting, the ground will shift, and together we will seek to create this new future, to actively bring it into being.

We will re-frame the growth/no-growth debate in a way which comes to terms that some industries will indeed decline and eventually come to an end, as many do over time – from typewriters to tobacco – as others rise: and that this will all add up to new ways of working, living and being.

We need to recognise that the Age of Sustainability must also be an age of equity, recognising that developing countries will demand a standard of material prosperity which matches that long enjoyed by developed countries – and that the challenge for the developed world will be to become models of sustainable excellence, demonstrating that tomorrow's green economy offers a practical way forward to combine prosperity with sustainable and increasingly non-material growth (such as education and entertainment).

The precise form – in terms of the products and processes - this will take is arguably less important than the principles, culture and behaviours which will provide the 'DNA' of tomorrow's green economy. Some of these are starting to take shape. Here are *12 operating principles for tomorrow's green economy* – a paradigm shift in the DNA which frames our carbon based economy of the last 200 years:

1. **Green savings** – *recognising the scale and scope for massive efficiency gains, and therefore cost savings.* The first wave of savings can be achieved through taking advantage of the low hanging fruit of eco-efficiency; the real gains are to be made through process re-engineering. (Witness the pioneering work of Ray Anderson and Interface).^{vi}
2. **Green jobs** – *the evidence is clear that more jobs will be created through green programmes.* For example, a \$100 billion 2 year 'green' investment will generate four times the number of jobs than the same investment in the oil industry.^{vii}; \$1 billion invested in 'green' strategies will generate 5,000 more job years than if invested in road building, and 23,000 more than if invested in tax cuts.^{viii}

3. **Green metrics** – *there is growing evidence that taking account of environmental, social and governance criteria as well as financial metrics, provides far more reliable indicators of creating sustainable value.* This should come as no surprise, these criteria are a powerful proxy for managing complexity, coping with uncertainty and meeting stakeholder needs.^{ix}
4. **Green level playing field** - *bringing to end the massive subsidies globally for fossil fuels* – estimated by UNEP to be in the order of \$300bn annually^x – which means that green-tech is not competing on a level playing field. As the Presidential Climate Action Programme evidenced, the green economy will re-task and make demand of many of the components, such as ball-bearings, of the present.^{xi}
5. **Green accounting** - *Internalising the externalities through green accounting.* This has most comprehensively been developed and demonstrated by the Green Indian States Trust in India – so that biodiversity and human/social capital impacts are reflected on the balance sheets of corporations, impacting on investor behaviour and the decisions of key stakeholders.^{xii}
6. **Green bonds and other financial instruments** – building on the pre credit crunch growth in funding of clean-tech, particularly in the USA, through pension funds, private equity and venture capital. Green finance needs to be creatively tied to public policy and public funding instruments. The payback period for green tech requires underwriting or financing, recognising the confidence of payback in the medium to long-term, but the poor returns in the short-term.
7. **Green innovation** – *recognising that the ‘cool’ and iconic jobs of the future* are not going to be rooted in the celebrity world of ‘cool Britannia’ or financial services, but are going to be about engineering and related disciplines, to redesign the products, processes and infrastructure which shape how we live, work, and travel
8. **Green talent** – *the Age of Sustainability reframes the agenda for talent.* What it is, who has it, where it is, how we harness it. We have developed this argument in *Tomorrow’s Global Talent*. And if we are right, it means a new agenda for tomorrow’s global leaders, and a new curriculum for business schools.
9. **Green development** – *promoting microfinance and social business, recognising the central role of women, building the capacity of local communities.* We develop this argument with others in the *Ubuntu Declaration for a Just and Sustainable World Economy*.^{xiii}
10. **Green community empowerment** – *enabling individuals and communities to come together, create and fund their own energy and infrastructure solutions.* Smart grids will enable an energy revolution, but the biggest change won’t be the technology, it will be people being enabled to produce their own energy. Cities and local government have a transformative role to play.
11. **Green stimulus** – *stimulus packages geared to promote recovery need to build the economy of the future.* For example, UNEP argues that a quarter, or £750bn, of current stimulus packages should be so focussed.^{xiv} HSBC calculate that the UK for example has geared 7% of stimulus to green outcomes.^{xv}
12. **Green stakeholder dialogue** – *we need to transform the relationship between business, civil society and government.* We live in a zero-sum, adversarial world. The contribution of business is limited by the lack of enabling frameworks and the fear of condemnation by NGOs; government waits for voters to demand change; the vision of a new way of living and creating value that business and NGOs together could create, with government, remains unfulfilled.

These operating principles will shape new ways of living and working, of doing business and designing the cities most of us live in, the energy we use, and future patterns of transport and infrastructure: the change will be cumulative, creating a tipping point of transformation, giving practical shape to tomorrow's economy, society and environment, both driven and enabled by a step-change in relationships between business, civil society and government.

Achieving this paradigm shift will not be all or nothing. Given the scale and nature of the challenge we have to overcome we need to use every available instrument, and find out what will work under what circumstances. Carbon pricing and other mechanisms are an essential element of our armoury. But we need a compelling vision of tomorrow's green economy, and the drivers and dynamics of sustainable value creation, to harness the capabilities and commitment of all the key forces and institutions that we need to create the Age of Sustainability.



<http://www.forceforgood.com/Tools/Ubuntu-Declaration-for-a-just-and-sustainable-world-economy-162/1.aspx>

^{xiv} UNEP press release 16 February 2009

<http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=562&ArticleID=6079&I=en>

^{xv} HSBC A Climate for Recovery http://www.globaldashboard.org/wp-content/uploads/2009/HSBC_Green_New_Deal.pdf