The Insight Bureau

From the Desk of...

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The time for the automotive industry to get serious about climate change and environmental responsibility is now. If you haven't read the Stern report, do so. It reinforces my own strongly-held conviction that it's *Time for a Model Change* – for the sake of the environment and for the sake of the future of the automotive industry.

The Stern report says it in no uncertain terms. We face the risk of huge economic damage and possible catastrophe if we carry on with a business-as-usual attitude. Acting now, we can get ourselves onto a different trajectory and avoid the collision with environmental reality at a relatively modest price.

In parallel, we face the need to shift the whole base of our energy supply. There are about 30-50 years of petroleum reserves, 50-60 years of natural gas and 100 years of coal. Renewable energies are fashionable right now but their potential is in fact quite limited. We can spin fossil fuels out for another century, if we move back massively to King Coal. But that assumes we generate more and more of both our electricity and our hydrocarbon fuels from it, and that we can sequester the resulting carbon dioxide emissions. Hostility to nuclear power will have to diminish. Even Australia is now talking about meeting a third of its electricity needs from it within the next 50 years. Uranium resources are not infinite either. So in the longer term it's fast breeders or the hoped-for miracle of fusion power for primary energy, with electricity and hydrogen as the main secondary energy sources or carriers.

We are approaching the end of the era of economic growth and environmental carelessness fuelled by cheap fossil energy that started with Newcomen's invention of the steam engine 250 years ago. Certainly over the next 100 years and possibly for all time we face the prospect of much higher energy and collateral costs. The social and political consequences are awesome. But, as the Stern report concludes, the transition will also yield major opportunities for innovation and growth.

> ***Reducing the expected adverse impacts of climate change is both highly desirable and feasible. The transition to a low-carbon economy will bring challenges for competitiveness but also opportunities for growth*** **– Stern Report**

Transport is not the only contributor to green house gas emissions but it is one of the largest and the fastest growing. Although outpaced in growth by air travel, road vehicles are major emitters of carbon dioxide. These emissions have simply got to be cut back and not marginally. The emerging economies will, on present trend, contribute to a doubling of global vehicle-kilometres travelled within the next 50 years. To halve road vehicle emissions, we would therefore need to reduce them by 75% per vehicle-kilometre. Transport is also the largest and fastest growing consumer of petroleum. Essential though transport is to modern societies and to the economy, it can't claim an exemption.

Until and unless we achieve a hydrogen economy resting on fusion power, we are going to have use every instrument at our disposal to reduce energy consumption and carbon dioxide emissions in the transport sector. Cars and light trucks must become much lighter. This means a shift in emphasis from secondary to primary safety, i.e. accident avoidance. Their size must more closely match their use, implying more specialised vehicles, such as commuter cars. Above all else, the demand for mobility must be managed. Occupancy and load factors must increase substantially, meaning more car sharing, fewer and bigger shopping trips, using the postal service instead of couriers and less just-in-time delivery. Universal road tolling and more use of teleworking will discourage long-distance commuting by road. Children will walk, cycle or use collective transport to get to school, with more tele-education thrown in. We shall return to denser mixed-use real neighbourhoods and spend more time together instead of moving in little individual boxes from desolate suburb to desolate office park. We shall slow down, move less and enjoy life more.

As Stern says, the challenges will be huge but so too will the opportunities. New forms of housing, new patterns of work, new transportation systems, new lightweight materials and structures, new energy conversion technologies. And so the automotive industry's whole approach will have to change too. It will have to spend on *real* product research at the kind of levels we see the pharmaceutical industry investing. It's not good enough just to keep spending on unnecessary 'repackaging' and product proliferation. Suppliers – the bringers of the new technologies – will need to be treated properly and not financially abused. The serfdom of franchised dealers will have to disappear. Brand fantasies will be seen for what they are. Governments will become partners, not adversaries. Above all, social attitudes towards transportation and the automobile will change dramatically over the next 50 years, at least as much as they have done over the last half century.

But who will lead these changes?

Governments can certainly be instrumental in providing incentives for change, through setting fuel and mobility taxes (and therefore the price of mobility), by introducing travel-reducing zoning and development laws, and through the provision of the necessary infrastructure, as well as setting and enforcing standards for emissions, consumption and safety. But practical solutions are not likely to come from the existing industry players (the vehicle manufacturers and franchised dealers), whom I believe are far too locked into their existing business paradigms and mainly pointing in the wrong direction.

Physical mobility will be offered as part of packages which both manage the demand for it and combine it with virtual alternatives. Large logistics groups already offer these in the freight sector. Their competitive differentiation is based on the quality of their customer management, communications processes and supporting software. For them, trucks are just another commodity hardware input, as is finance. Short-term car rental companies operate in just the same way. Long-term rental or leasing companies are moving in the same direction. The brand is Norbert Dentressangle, DHL or GE Capital; Hertz, Europcar or LeasePlan, for example.

This approach will be extended to the mass market for people transport. The new providers could include private and public employers and educational establishments; telecommunications and internet providers; alliances between local governments and developers; etc. These will be the new systems integrators, the lead players. They will control the end-user interface and be the consumer brands. Providing them with vehicles will be a sub-contractor role, with no room for wasteful product proliferation, artificial product branding or brand-exclusive dealerships. This will trigger a huge and long overdue shake-out of redundant activities and excess costs in the automotive industry.

We've been saying for years that it's 'Time for a Model Change'. We said so in our latest book which carried that very title and it is proving to be increasingly true – only events have happened even faster than we expected. And now the energy and environmental issues dramatically amplify this belief.

About John Wormald and Graeme Maxton

John Wormald and Graeme Maxton are two of the world's best respected independent automotive strategists. They are the co-founders of *auto*POLIS and have co-authored two globally acclaimed books. Most recently *Time for a model change* has done much to provoke the industry to rethink its strategies.

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