

IMPACTS ON DISTRIBUTION

Planning and transport legislation will make car distribution more expensive and increase the difficulty of achieving a one day distribution lead time within the 3DayCar. Transport planners are increasingly looking at local implementation. This will inevitably impact on cost and lead to restrictions such as lower speed limits and limited access to some central urban areas, especially during high traffic periods and to residential areas at night.

Planning regulation is increasingly concentrating on the traffic implications of new developments and their potential contribution to local employment. Both inbound and outbound logistics could be affected, particularly developments such as distribution centres, where a large amount of space is used with little employment potential. However, 3DayCar would not require any significant levels of stock and such sites would become transshipment centres, likely to be viewed more favourably. The development of supplier hubs is also likely to be affected, but planning authorities are always more amenable where the potential security of large numbers of local jobs is involved.

There are opportunities to reduce the impact of legislation such as the 'End-of Life Vehicle' Directive, through the adoption of an integrated supply chain approach which accommodates new and end of life product, both in terms of components and vehicles.

CONCLUSIONS

The main impacts of legislation for the environment are related to higher operating costs incurred in complying with increasingly stringent emissions levels and resource conservation. If such incremental costs become too high, they could result in a loss of component supply business within the UK. There are some areas where a 3DayCar will make compliance more expensive and more difficult to meet with current methods. Overall, however, there is little to suggest that these environmental problems are insurmountable, if a 3DayCar strategy adopts an integrated and green approach.

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EXECUTIVE BRIEFING

Environmental legislation and the Order to Delivery process?

by Joe Miemczyk, M.Sc.

The environment has always presented a challenge to the automotive sector. More and more legislation is driving change in the way companies operate in terms of materials they can use, when they can operate, and how much it costs to comply.

This briefing note looks at players in the total car supply chain from component suppliers to vehicle distribution. Costs are significant and are set to rise in the future, but there are few areas where a 3DayCar will make compliance harder except in the areas of painting cars and transporting goods throughout the value chain.

ENVIRONMENTAL LEGISLATION

Environmental legislation and related policy measures can have a number of impacts on companies. These range from limiting operating hours to increasing overhead costs. Costs related to environmental legislation in the automotive sector constitute a significant percentage of turnover and can be divided into those relating to meeting product standards, such as fuel economy and emissions, and those relating to business operations and processes. R&D costs in the automotive sector for product development are very large, partly due to regulation of product standards. Costs related to regulated business processes are not as significant, amounting to 1% of turnover. However, they are driving changes in business practices to the extent that companies are implementing systems to reduce the cost of both managing both compliance and environmental targets.

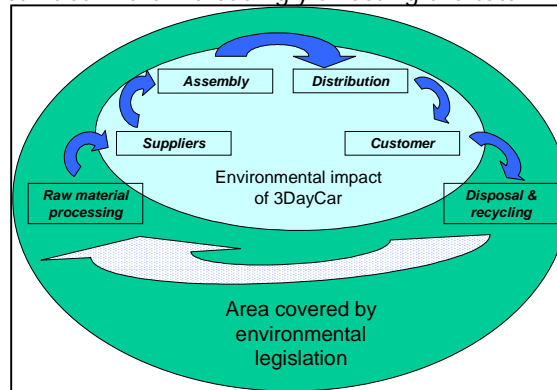
CHANGES TO CURRENT LEGISLATION

New European legislation is requiring emissions to air and water to be reduced and managed more holistically. Waste is becoming more expensive to landfill and recycling is being enforced through regulation such as the End of Life Vehicle Directive. Greenhouse emissions which cause global warming are being targeted through increased energy taxes. These raise both manufacturing overhead and transportation costs. Transport is seen as an area requiring major efficiency drives which make better use of road resources and promote rail. Urban centres

will be subject to traffic restriction in order to reduce congestion and nuisance. Land is a valuable resource in the UK and local authorities are increasingly looking to improve land use value in terms of employment and economy. Intense traffic and low employment density developments will be discouraged in many regions.

IMPACTS ON THE AUTOMOTIVE SECTOR

New legislation is having wide impacts on the industry and affects all the players in the supply chain but to different degrees depending on their activities. It is increasingly affecting the total life



cycle of the vehicle as shown in the diagram.

Those companies who have received accreditation for implementing environmental management systems such as ISO14001 should receive compensation in the form of lower environmental compliance costs and lower tax burdens.

IMPACTS ON SUPPLIERS AND UPSTREAM

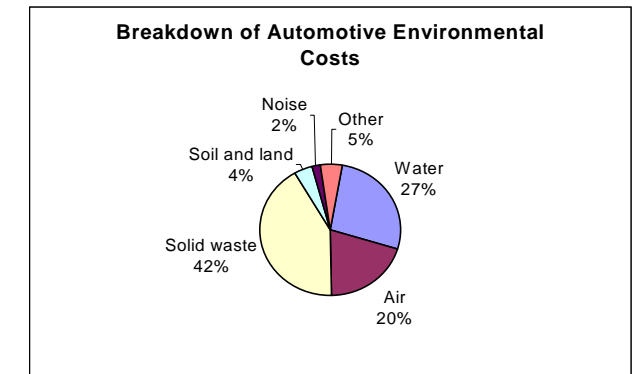
If new regulations such as the Climate Change Levy and IPPC increase the burden on the motor industry, their price-competitiveness may be

affected. The tax burden is especially heavy for suppliers. A number of VMs have already stated their intention to source outside the UK if such costs rise too high. This would increase lead-time and inventory for such components within a UK-manufactured car. This potential to source overseas is obviously not desirable from an employment and overall economic viewpoint in the UK.

The 3DayCar could impact on this situation due to the requirement to produce in small batches affecting waste and emission levels.

MANUFACTURING AND ASSEMBLING THE CAR

Environmental costs are mainly in the area of solid waste disposal, and air and water emissions. The 3DayCar requirement for small paint batches



will make it more difficult to meet emission and waste legislation and will increase cost. Paint shops are subject to increasingly stringent taxes and standards on emissions which are forcing changes from solvent to wholly water or powder based paint which have not been wholly proven. Alternative technologies such as paint-injected moulded panels are also being encouraged.