# Manufacturing

# 2020

One of the UK Foresight Panels is concerned with Manufacturing. Its chairman, Nick Scheele, MD, Ford Europe, had the following to say in November 1999.

*"How will the year 2000 change to the year 2020? The Net will radically change the nature of the supply chain, eliminating batch manufacture and stock building, even on today's relatively modest scale, compared with the stock levels carried in the past compressing the supply pipeline and, of course, releasing substantial working capital. To put this into perspective from my own industry, the European supply chain - parts and raw materials en route to factories, in stock, work in process and finished cars waiting to be sold - ties up $140 billion. Using the Net to facilitate the kind of changes I have just described could reduce this to some $20-30 billion. A huge, huge change.*

*Because these changes will require just-in-time delivery of components on a large scale, they will create huge opportunities for efficient regional suppliers. The key test for a company in Britain, therefore, will be to out-perform rivals based in continental Europe and thereby secure the role of preferred regional supplier. That is the future that we are going to be talking about for the balance of this presentation.*

*...*

*The world of 2020 is much more likely to be about neighbourhood manufacturing than global supply chains. Under mass customisation, manufacturing to a unit of one, manufacturers will produce at high speed in high volumes differentiated products tailored to the demands of individual customers. In this future a particular product may not be made until a specific order is placed. Components will then be brought together, manufacturing operations carried out, chemical processing undertaken, and certification, approval and safety clearances carried out before the product is shipped to the right customer in an order which may be only 1000th the value of today's bulk order.*

*In order to satisfy customer demand more quickly and efficiently, while at the same time heeding the environmental pressures for reducing the use of fuel in transport we are likely to see more local, distributed manufacture taking hold. Benefits in business to business transactions will drive more cost out of the supply chain - a far shorter time will be spent on non value-adding activities such as transport and warehousing. Manufacture during transit could be another way of compressing the value stream.*

*The implications on logistics over the next twenty years are likely to be much more small lot, shorter distance distribution activities with much shorter lead times, perhaps even to consumers' doorsteps. Now this, of course, puts a premium on the effectiveness and the flexibility of the road network. Achieving both the ideal road infrastructure and its intelligent use will be a critical challenge for manufacturing and, of course, for government."*