

Will manufacturing be up to scratch in 2012?

A digest of news gathered from several sources shows that there is still a great deal of confusion around; globally, manufacturing in the USA appears to be on the up while the outlook for the UK remains weak. Nevertheless, some are predicting a stable, if not thrilling, performance from British manufacturing in 2012. Here's a globe-trotting round-up of some recent reports...

The *Financial Times* has reported that The Institute for Supply Management's (ISM) purchasing managers' index closing figure of 53.9 for 2011 indicates expansion in the US, with an ISM spokesperson describing the 2012 outlook as 'optimistic'. The FT also printed this cautious quote from Holden Lewis, industrial analyst for BB&T Capital Markets, stating that the ISM's findings marked, "improvement in the overall macroeconomic environment or at least sentiment".

Investment website *Mindful Money* observed that Japan continues to struggle as the result of a number of factors that go beyond the economic, such as shortages in the supply of electricity wrought by the recent earthquake and tsunami crises. Meanwhile, as the Japanese industries that grew strong in the 20th century teeter, those of their neighbours in China and India have achieved modest, if steady, expansion.

Few would argue that there is anything but weakness in most territories within the Eurozone, while UK figures continue to steer clear of the bleakest predictions. The Markit/CIPS purchasing managers' index (PMI) survey found a stabilisation of UK manufacturing in December that reflected growth in new export orders, which made up for a weak domestic market.



New battery could boost viability of electric cars

A new lithium-air battery with 1,000 times the energy density of its closest conventional lithium-ion equivalent could change attitudes to the viability of electric vehicle travel. IBM's lithium-air battery can enable electrically-powered vehicles to travel for 500 miles and could establish the electric car as a serious competitor to petrol-powered transport.

The best current lithium-ion battery, which employs metal oxides in the positive electrode, cannot provide much more than 100 miles of service; however, IBM's new lithium-air cells use carbon, which reacts with the oxygen in the air around it to produce a current.

Don't expect to see a full-scale roll-out this decade, though; the current product is limited in its recharge capacity and a secret material is now being explored to circumvent the problem. However, IBM has set a tentative commercial production date of 2020.

Britons are late adopters but big online shoppers, says Ofcom

Ofcom's latest international communications report identified Britons as Europe's biggest online shoppers but late adopters of superfast broadband, which is found in only 4% of homes in the UK.

89% of British Net users who were consulted by Ofcom claimed to have visited online shops, with 79% making online purchases. Perhaps as a result of this online purchasing awareness, UK householders were judged by the regulator to be benefiting from good deals on Net services, with a typical bundle of phone, mobile, broadband and pay TV services cheaper than any other country in Europe.

However, the UK joined the remainder of Europe in lagging behind on a global scale when it comes to fast broadband services, its 4% take-up figure dwarfed by the 40% of Japanese users who are now surfing at speed.



What are we still making in the UK?

According to data gathered by several sources, we still sell quite a bit. However, last year car sales in the UK declined steeply (4.4%), amounting to the worst figures since 1994. Increased fuel duties, VAT and the recession were to blame. But while UK sales flagged, exports were good and manufacturers such as Toyota, Land Rover and Nissan expect to see a 5% growth next year.

Right at the top of the manufacturing pile, according to HM Revenue and Customs,

we have nuclear reactors, boilers, machinery and mechanical appliances (including parts), followed by minerals and oils, and, finally, vehicles. But we are still importing more vehicles than we export (£23bn out, as opposed to £32bn in). As for trading partners, the USA are at the very top, with £32bn of exports, followed by Germany and France, while for imports our top trading partner in 2011 was Germany, with the UK buying a staggering £42bn of goods from this country.

Scottish scientists produce carbon from weeds

A scientific research team has discovered a source of activated carbon that can increase sustainability in industry while ridding Cuba of an unwanted substance that is causing a major ecological problem.

Professor Peter Hall, of the University of Strathclyde's Faculty of Engineering, and his team has found that the hardwood shrub Marabu can be used to produce highly valuable activated carbon, a substance most commonly used to produce batteries but which has uses within many other industries, particularly for its purification properties.

Marabu has invaded more than 1.5 million hectares of land in Cuba, damaging the agricultural value of the land, but Marabu could now, ironically, provide a boost for the Cuban economy. "Our research has shown that we can use it to produce an extremely high quality version of activated carbon worth more than \$1,200 per tonne," Professor Hall said.

