

# Food and beverage – the top 10 trends for 2014

A recent survey has predicted that cutting waste and building trust will be two of the key food and drink industry trends of 2014. The top 10 predicted trends, from a survey by Innova Market Insights, will be as opposite:

The need to build trust has been fuelled by recent food safety scares and scandals, which Innova says have crippled consumer confidence. This has no doubt also increased scrutiny on the number one issue – waste. The survey also identified that consumers are now reassessing their needs and going 'back to basics' by rediscovering the simple pleasures of home cooking, while the rapid rise of social media platforms is likely to propel more small-scale innovators with high quality produce into the limelight.



## Liverpool to become a manufacturing centre of excellence

Liverpool is to develop a select range of techniques to become a manufacturing centre of excellence by 2020.

The plan is being mapped out by the Liverpool City Region Local Enterprise Partnership (LEP) in consultation with number of advanced manufacturing partners in the locality and will focus on the technologies of lightweighting, non-invasive monitoring, shale gas exploration and sustainable energy.

The initiative follows a current school of thought that, in the global economy, the best way to build manufacturing is to focus on, and invest in, existing strengths and establish centres of excellence to push forward innovation. In its report, 'Making it: Advanced manufacturing in Liverpool city region to 2020', the LEP states: "A manufacturing environment with four or five clusters of excellence – with one frontier industry – could provide a framework to produce high value goods and services".



## 4D printing technology goes composite

A team from the University of Colorado has developed and tested a method of 4D printing that could advance the use of adaptive, composite materials in manufacturing and biomedical applications. The concept allows materials to self-assemble into 3D structures by incorporating shape memory polymer fibres into composite materials that can later be changed to take on a new shape.

"In this work, the initial configuration is created by 3D printing, and then the programmed action of the shape memory fibres creates time dependence of the configuration – the 4D aspect," explained researcher Martin Dunn, from the Singapore University of Technology and Design.

It is predicted that developments in 3D and now 4D printing technology will help create reversible or tuneable 3D surfaces and solids in engineering, such as the composite shells of complex shapes used in automobiles, aircraft and antennae.

# First pump auditing certification

Charlotte Marsh has become the first *ERIKS* employee to receive the new Certified Pump System Auditor (CPSA) qualification from the British Pump Manufacturers Association Limited.

To achieve her accreditation – designed to be a universally recognised and respected industry standard for engineers who assess the performance of pumping systems – Charlotte attended five days of courses. Three days were spent on a pumping system requirements and analysis training course, followed by an exam. One day covered energy assessment of a pumping system to either ASME EA2-2009 or ISO 14414, and a further day was devoted to a pump system optimisation course.

Lastly, Charlotte carried out a pump system audit and produced an audit report, both in accordance with the relevant industry standards. The report was then reviewed by an expert panel.

The new certification scheme aims to improve levels of professionalism within the pumping sector, and is open only to competent engineers who can demonstrate active involvement in the industry. CPSA engineers must be re-assessed every three years to maintain their certification.

The British Pump Manufacturers Association Limited believes that the new certification will help engineers become more effective in their role, and show their employer's industry leadership.



## London's Tube network transports heat into homes

An innovative heat recovery scheme will provide warmth for local homes by channelling waste heat from London Underground tunnels.

As anyone who has ever travelled during rush-hour knows, the London Underground system generates large amounts of heat. To put this energy to good use (and relieve a few passengers) warmth will be captured from a Northern Line vent and piped into the heat network.



The project is a partnership between Islington Council, the Mayor of London Boris Johnson, UK Power Networks and Transport for London. The Mayor of London's senior advisor on environment and energy Matthew Pencharz said: "By supporting locally-sourced energy and heat networks, which can reduce bills and lower carbon emissions, we cannot only save money but also drive innovation, jobs and growth in this burgeoning sector."

