

Looking at standards, and how bio-based businesses can grow

This BSI communications event celebrated the publication of PAS 600 – a new standard for bio-based products – and explored the avenues of support and funding that are available to help grow this important sector.

Introducing PAS 600

Dr Liliya Serazetdinova, the technical author of PAS 600, opened the event with an explanation of the PAS's purpose and contents. Its aim, she explained, was to give SMEs an accessible guide to all the standards, legislation and regulation that relate to bio-based products. "We want to encourage more companies to get involved," she said, "and to help processors and retailers to communicate the benefits of bio-based products." The market for bio-based products is expected to be around €40bn by 2025, and the hope is that the standard will provide valuable guidance to the sector.

The role of standards in driving innovation

Dr Ben Sheridan, BSI's Market Development Manager, spoke about how the commercialization of biological manufacturing could contribute to rebalancing the UK economy. It was therefore critical, he said, that biological engineers get help designing better processes with a higher rate of commercial success. A draft strategy is in the works to develop more principles and standards around bio-based products, said Sheridan, and these will be a prerequisite, he added, to unlocking the huge opportunities that will be available from commercializing life sciences.

Introducing the Industrial Biotechnology Leadership Forum

Rebecca Wood spoke on behalf of the Industrial Biotechnology Special Interest Group (IB SIG), part of the BIS-funded Technology Strategy Board Network. She explained how, in 2008, a group of industrialists had assessed IB as being a £150bn–£360bn global opportunity. This led to the formation of the IB Leadership Forum and to its strategy to improve communication, enable delivery, de-risk research, and support open innovation. The Forum constitutes a centre of excellence, she said, and also provides free support to bio-based companies in the UK.

The European standards dimension

Tony Breton, chair of BSI's committee on bio-based products, spoke about Europe's approach to IB. The Commission, he said, wants to drive innovation in, and economic returns from, bio-based products. Resultantly, five CEN working groups are preparing standards, the first of which, on terminology, is ready to be published. The other working groups, on bio-solvents, bio-based content, sustainability criteria, and certification and declaration tools, expect to publish standards by the end of 2015.

SMEs and standards

David Randall from PIL Membranes, looked at how standards can help SMEs. PIL Membranes, he explained, manufactures polyurethane membranes for products from waterproof glove liners to wind turbine blades. The company encounters standards such as Oeko-Tex and Blue Sign, and Randall admitted that it can be challenging to meet their requirements. However doing so had driven PIL

Membranes to innovate and produce more sustainable and efficient products, which were ultimately more acceptable to the market. So standards, he felt, worked to PIL's advantage.

Catapulting companies to success

Dan Noakes from the Centre for Process Innovation explained what the CPI does, which he summarized as "catapulting companies across the valley of death." In other words, providing expertise and facilities to minimize the development risks faced when creating new products. "We'll identify the pathways to commercialization, look at the business model, and help validate, optimize and scale up the technology," he said. CPI, he added, has extensive technical facilities with which to run pilot-scale and demonstration-scale production tests.

Adding design for successful bio-based products

Professor Jane Harris from Kingston University's Faculty of Architecture, Design and Art, spoke about how design contributes to the success of new products. She noted that Kingston is in the world top five in higher education design. "Our graduates," she said, "will be the global design innovators of the future." Kingston has identified sustainability as a core driver, and has developed a sustainable materials library. It also runs projects using sustainable materials, including bio-based materials, as "a way to explore new materials through design, and provide a way to engage consumers with new ideas."

Case study: Bringing a bio-based product to market

Christian Kemp-Griffin, CEO of CelluComp, detailed his company's journey towards commercializing a bio-based product called 'Curran', which is made from root vegetables. Drawing on CelluComp's experience, Kemp-Griffin said that any new bio-based material needs to be stable; to be inexpensive; and – to meet growing consumer and regulatory requirements – to be 'green'. However development, he cautioned, is a long process taking 8.7 years on average. He advised that other SMEs on the same journey be focused, but not rigid; build an effective IP plan; and get financing early.

Finding the best role for standards

The attendees split into groups after lunch to discuss how standards can help grow the bio-based products industry. The groups decided that different regional standards need to be harmonized; that there was a role for materials as well as product standards; and that standards ought only to be developed if they can genuinely add value. Standards, it was felt, really do aid investment where they provide a joint language, or a compelling level of assurance that gives market confidence.

Available funding for IB from the UK and Europe

Merlin Goldman, from the Technology Strategy Board, outlined the national and European funding programmes that are available to support IB and the bio-economy. He said that nearly £400m is invested annually in IB support, mainly in the form of competition-based investments. To find out more see www.innovateuk.org. In Europe he particularly singled-out ERA-NET funding as being a good 'soft-entry' means of gaining European funding.

European funding for SMEs from H2020

Steve Bradley, from FP7, concluded the day's presentations. FP7 is the EU's main instrument for funding research in Europe. The presentation focused on the funding available to SMEs under the Horizon 2020 programme that was launched in December 2013, with €15bn to invest over the next two years. H2020 funding specifically supports any type of innovation with a high commercial potential. The funding is highly competitive, so interested SMEs will need to demonstrate excellent innovation, a market for their product, and the capability to get results.

Find out more about PAS 600 at shop.bsigroup.com/pas600.