

Switching to Biobased Products – The Brand Owner Perspective

James Gaffey,¹ Helena McMahon,¹ Emily Marsh,¹ John Vos²

¹Circular Bioeconomy Research Group, Shannon Applied Biotechnology Centre, Munster Technological University, Kerry, Ireland

²BTG, Biomass Technology Group B.V., Enschede, Netherlands

Abstract

Brand owners can play a key role in enabling biobased products to penetrate mass markets and to influence consumer choices in relation to biobased products. The current paper explores the role that brand owners can play in supporting market uptake of biobased products and captures the perspectives of European brand owners in relation to biobased products. Based on the findings of this paper, brand owners have an overall positive outlook towards biobased products, with 85% of brands who don't currently use biobased ingredients or products within their branded products and 95% of brands who don't currently use biobased packaging interested in including these in future. However, brand owners still perceive some concerns surrounding biobased products including their high cost, functional performance and ease of integration, as well as their reliability of supply. Regional differences among brand owners have also been identified, with cost and uncertainty around customer demand appearing as a bigger issue in continental Europe, with functional performance concerns appearing as a more pressing issue for brands in northern Europe.

Introduction

The 2018 EU bioeconomy strategy update highlights the role that a sustainable bioeconomy can play in helping the continent meet several key priorities including job creation, climate objectives, waste reduction and the modernization of the EU industrial base.¹ The bioeconomy is increasingly becoming a contributor to the overall European economy, with the total turnover of the bioeconomy (including food and beverages, and the primary sectors of agriculture and forestry) amounting to over €2.4 trillion in the EU-28 in 2017, an increase by 25% since 2008.² Around 30% of this amount was contributed by biobased industries, such

as chemicals and plastics, pharmaceuticals, pulp and paper products, forest-based industries, textiles, biofuels and bioenergy. Roughly half of the turnover was accounted for by the food and beverages sector, with a further 20% created by the primary sectors of agriculture and forestry.² A sustainable bioeconomy will play an increasingly important role as Europe attempts to meet very ambitious climate and sustainability targets including a 55% reduction in greenhouse gas emissions by 2030.³

Globally, a thriving bioeconomy can also play a role in meeting many of the 17 Sustainable Development Goals (SDGs) set out by the United Nations, with the Biobased Industries Joint Undertaking (BBI JU) noting 12 SDGs that a sustainable bioeconomy contributes to, including Sustainable Consumption and Production (SDG12) and Climate Action (SDG 13).⁴ A sustainable and circular bioeconomy can also play a central role in the EU shift towards a circular economy as outlined in the EU Circular Economy Action Plan 2020,⁵ contributing to more sustainable management of plastics,⁶ packaging and nutrients, creating a more sustainable supply of local protein⁷ while also contributing to the EU Renewable Energy Directive (RED) II targets in energy, heat and transport.⁸ Additional non-binding 2030 targets set out across a multitude of sectors by the Biobased Industries Consortium (BIC) include halving imports of soy by producing sustainable, locally-produced protein, circular use of nutrients reducing potassium and fertilizer requirements by 25% and ensuring 25% of all chemicals and materials used in the EU come from bio-based sources.⁹

VALUE CHAIN INTEGRATION

New biobased value chains will be required to meet these challenging targets, and these will require new collaborations between the multiple stakeholders across the chain. An example of the steps involved in delivering a biobased value chain is illustrated in *Fig. 1*.¹⁰ Primary producers, such as farmers who have traditionally supplied food co-operatives, are already beginning to link arms with fuel and chemical producers in new bioeconomy initiatives across Europe.¹¹⁻¹³ Of equal importance are the downstream actors such as brand owners, retailers and consumers who can develop, retail and use the biobased products. According to Dammer et al. (2017),¹⁴ the world market for biobased products (BBPs) is growing in large part as a result of efforts by retailers, brands, manufacturers, consumers, and governments to promote the environmental benefits and acceptance of these products as they become commercially viable.

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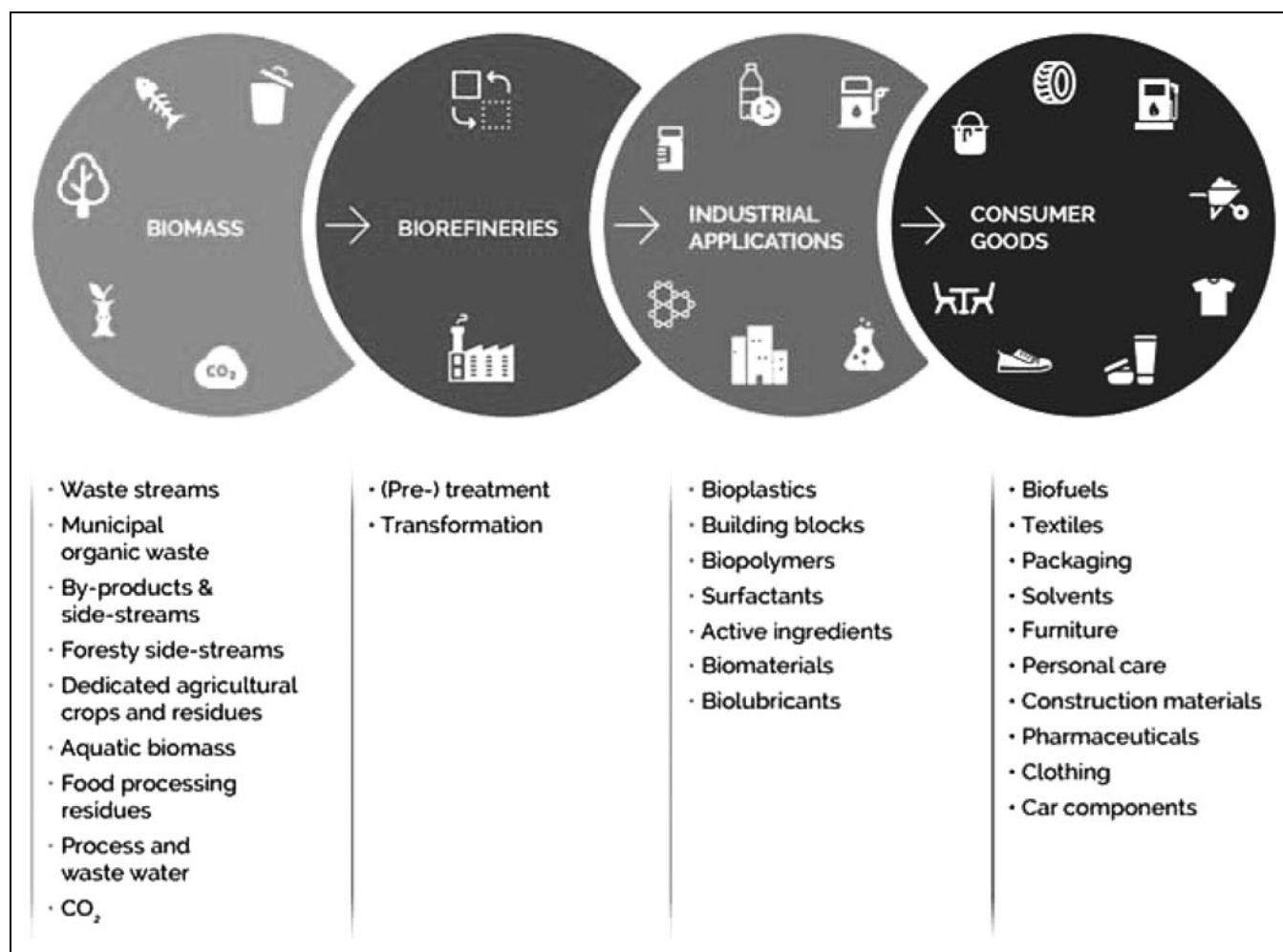


Fig. 1. Biobased industries value chain. Source: Bio-based Industries Joint Undertaking.

HOW CAN BRAND OWNERS ACCELERATE MARKET UPTAKE OF BIOBASED PRODUCTS?

Brand influence, in particular, can be a major driver of the success of BBPs where large brands can champion a technology or product and jumpstart its expansion into vast markets.¹⁴ It is clear, that brands listen closely to their consumers when bringing new products to the market. However, conversely, brand owners can also be key influencers of consumers choosing new products. Chovanová et al. (2015) conducted research with 1,250 consumer respondents in Slovakia to understand the influence of brands on consumer choices.¹⁵ In response to the question of whether brands affected the respondents' purchasing choice, 52% of respondents indicated this to be the case. Branding can work as a signal allowing consumers to quickly recognize a product as one, they are familiar with or one that they like.¹⁵ As for the motivational factors for the respondents choosing a particular brand, consumers indicated product quality (73%) to be the main factor.¹⁵ This makes the seal of approval from a brand owner desirable for biobased industries and their products. As many biobased alternatives are still quite new on the market, and consumer knowledge about BBPs is still quite low (only about 50%

of consumers are aware of the existence of BBPs, while only about 12% of consumers have intentionally purchased BBPs¹⁶), brand owners can also play a potentially significant role in increasing awareness of these products and helping them to access mass consumer markets.

HOW CAN BIOBASED PRODUCTS HELP BRAND IMAGE?

At the same time, BBPs can play a key role in helping brand owners to become more sustainable and greening their image. As noted by Overbeek & Hoes (2017), brand owners increasingly consider the importance of alignment with the UN Sustainable Development Goals (SDGs), in particular SDG 12 Sustainable Consumption and Production for promoting the circular economy and SDG 13 Climate Action to avoid global warming.¹⁷ BBPs can support brands to reach corporate sustainability goals and targets, as in the example of Unilever, who have committed to only use packaging that could be reduced, reused, composted or recycled by 2025.¹⁸

Increasingly sustainable products can also help brand owners to meet the demands of their consumers. In 2015, sales of consumer goods from brands, with a demonstrated commitment

to sustainability, rose more than 4% globally, while those without, grew less than 1%.¹⁹ The same study found that 66% of consumers say they are willing to pay more for sustainable brands. According to Chen et al. (2020), green brands are those brands that consumers associate with environmental sustainability and particularly appeal to consumers who care about environmental protection.²⁰ Due to the increasing recognition and awareness of environmentalism in the market, the positioning of green branding strategies is to build up a unique sustainable image in the targeted customers, in order to meet their green claims.²⁰ Since more and more consumers are willing to give priority to greenness, by developing positive emotional responses as the basis for green brand influence, brand differentiation and generating green purchase intentions are crucial to green brand strategies.^{20,21}

A 2017 international study by Unilever revealed that a third of consumers are now choosing to buy from brands they believe are doing social or environmental good.²² This trend is likely to continue according to a 2020 White Paper from Evergreen,²³ which notes the growing role of millennials in shaping trends. According to the paper, millennials are particularly sensitized to climate change and expect action from brands and retailers. They expect brands to be more selective in the products and packaging they provide and also see a role for brands, in consumer education, responsible waste management, and supporting eco-friendly consumption.²³

FIRST MOVER BRANDS SWITCHING TO BIOBASED

There are a growing number of examples in which brand owners across a variety of sectors have taken a leading role in integrating biobased ingredients or products within their branded products and packaging. A key opportunity area for biobased ingredients is in the sustainable packaging market. Brands such as Ferrero,²⁴ Lego,²⁵ and Henkel²⁶ have all made strong commitments to introduce sustainable packaging for their products. Other commitments can be seen from signatories of the New Plastics Economy initiative led by Ellen MacArthur Foundation,²⁷ in which brands like Walmart, PepsiCo, M&S and Unilever have committed to use 100% reusable, recyclable or compostable packaging by 2025.

Coca-Cola introduced their original PlantBottle in 2009, which is 30% biobased, based on sugarcane-derived monoethylene glycol blended with 70% fossil-based purified terephthalic acid. Between 2009 and 2015, Coca-Cola had distributed more than 35 billion plant bottles across 40 countries helping to save the equivalent annual emissions of more than 315,000 metric tons of carbon dioxide.²⁸ These figures underscore the important role of brand owners in enabling BBPs to penetrate mass markets and the benefits that can be achieved from this. In 2015, Coca-Cola also unveiled the prototype of the first all-biobased polyethylene terephthalate (PET) bottle, demonstrating their continued commitment to developing biobased packaging.²⁹ Nestlé Waters, PepsiCo and Danone are currently collaborating with the Californian biomaterials development company Origin Materials in the NaturALL Bottle Alliance research consortium. They develop innovative packaging solutions made with 100% sustainable and renewable resources (non-food or -feed crop related biomass, such as

previously used cardboard and sawdust) and aim to launch a PET bottle with up to 95% biobased content by 2022.³⁰

In 2019, the Danish-Swedish dairy multinational Arla Foods announced that they were making 600 million renewable fresh milk cartons across their main EU markets, with the inclusion of bioplastic derived from sugarcane or forest waste.³¹ It is estimated that these cartons will contribute 25% less carbon dioxide into the atmosphere compared to their fossil-based plastic predecessors. From 2005 to 2019, Arla has reduced the CO₂ impact of its packaging by 25%, equating to 123,000 tonnes of CO₂ being diverted from the atmosphere.³¹ Total CO₂ emissions from Danish agriculture are just over 10 million tonnes per annum.³²

BRANDED BIOBASED CONSUMER GOODS

In addition to developing biobased packaging, brand owners are also beginning the transition to develop consumer goods that use biobased ingredients. In 2015, Lego announced plans to produce all its toys from bioplastic by 2030, with the first of these, botanical elements such as bioplastic shrubs and trees, already on the market.³³ In 2018, IKEA announced that they had started the transition to biobased polypropylene (PP) replacing 20% fossil-based plastic, in the short term, in a number of existing products, such as plastic storage boxes.³⁴ Unilever recently announced that it will source 100% of the carbon derived from fossil fuels in its cleaning and laundry product formulations by 2030 with renewable or recycled carbon.³⁵ Unilever, through its brands, have already played a leading role in supporting market uptake of biobased materials into key consumer markets including biodegradable teabags³⁶ and sunscreen.³⁷

INCENTIVES FOR BRAND OWNERS TO SWITCH TO BIOBASED PRODUCTS

Public support in the form of incentives can play a role in accelerating innovation and boosting market uptake and public awareness of BBPs. There are different ways in which governments can regulate, influence behavior, and alter incentives. Elbersen et al. (2017) apply a categorization of incentives into: (category 1) regulations, (category 2) economic instruments, (category 3) voluntary approaches, (category 4) information and advice sharing systems, (category 5) market-based signalling approaches and (category 6) other measures/instruments not covered in the categories above such as vision documents, road maps and strategies.³⁸ Pelkmans et al. call the last four types of instruments “soft measures”. Mirroring this terminology, the first two types of instruments could be referred to as “hard measures”.³⁹

Which European, national or even local incentives are key for a particular brand owner, business case or value chain will be highly case-specific. Based on limited and explorative desk research, the overall picture emerges that so far, at the European level, information and advice-sharing systems (cat. 4) and other measures/instruments (cat. 6) would seem to be the most widely used incentives. In general, the “hard measures” direct regulation (cat. 1) and economic instruments (cat. 2) and the “soft measures” voluntary approaches (cat. 3) and market-based signalling approaches (cat. 5.) would have had somewhat lower importance for the average brand owners.

Nevertheless, an increasing number of economic actors benefit from the hundreds of millions of euro that are available annually under the EU framework research programs (including Horizon Europe, the recently started successor to the Horizon 2020 research framework programme, and Circular Bio-based Europe Joint Undertaking,⁴⁰ the recently approved successor to the Biobased Industries Joint Undertaking), in the form of grants to support research, development and innovation benefitting BBPs. This is in addition to the equity, quasi-equity, and debt funding to SMEs, midcaps, large caps, and special purpose vehicles/entities being offered since autumn 2020 by the European Circular Bioeconomy Fund.⁴¹ Indirectly, European Directives (such as the Waste Framework Directive⁴² and the Packaging and Packaging Waste Directive⁴³ and codes of good practice from the plastics sector (such as 'A line in the sand' by the Ellen MacArthur Foundation⁴⁴ and the European Plastics Pact⁴⁵) seem to be giving a boost to the uptake of compostable/biodegradable (plastic) packaging, and such packaging will in many cases be biobased.

Methodology

Understanding the perspective of brand owners with regards to biobased ingredients, products and packaging can help biobased industry, policy makers and other relevant stakeholders to engage more effectively with brands, understanding their needs and motivations, as well as the barriers they face when integrating BBPs. In order to assess the perspectives of brand owners in relation to BBPs, the authors undertook a series of steps that included: (i) desk research and literature review, (ii) development and implementation of structured quantitative survey, (iii) a series of regional brand interviews and (iv) a series of interviews and case studies with brands who have already successfully transitioned to BBPs from fossil-based products. A total of 66 brands were consulted in the different tasks encompassing a wide variation of companies in terms of size, sectors and geographical distribution.

Results

LITERATURE REVIEW ASSESSING BRAND PERSPECTIVES IN RELATION TO BBPs

To date, a limited number of studies have been conducted to assess the perspectives of brands with regards to BBPs. Most notably, in 2017 Sustainability Consult published the results of the #WhatBrandsWant survey and study into brand perspectives on biomaterials.⁴⁶ Collecting responses from over 40 brands across different sectors ranging from apparel, footwear & textiles, to food & beverages and personal care, the study found that 52% of brands said they have clear objectives for sourcing biobased materials, while 26% said biobased content is one of the selection criteria used when choosing a supplier based on sustainability performance.⁴⁶ When it came to identifying key barriers to widespread uptake of BBPs, 87% indicated cost as the biggest barrier. Performance (42%) and security of supply (37%) were identified as the next biggest barriers. According to the responding brand owners, growth factors for biobased materials include consumer demand for environmentally friendly products (65%) and packaging (46%), as well as brands wanting to improve public image

(48%). To evaluate whether to adopt biobased materials, 63% said they need more information from suppliers on pricing, 61% on availability and 57% on performance. 71% said their brand communicated externally on its use of biobased materials.

A number of studies have examined biobased packaging within the broader concept of sustainable packaging. In a 2018 study by G&S Business Communications, 349 brand owners identified new packaging technologies (57%), biobased materials (38%), biodegradable packaging (38%) and increased recycled content (35%) as the main sustainability trends likely to drive changes in packaging processes over the next five years.⁴⁷ A separate study by Green Alliance (2020) interviewed brands and retailers representing a cross section of the UK grocery sector, including supermarkets as well as branded producers of food and drink and consumer goods, to gain perspectives on packaging and plastic waste. While the study noted positive public perceptions of biodegradable packaging, the interviewees were wary about replacing conventional plastic with biodegradable alternatives in their packaging, partly due to cost, but more often, the companies expressed concern about the suitability of the material, including its biodegradability.⁴⁸ Another 2020 study by LEK Consulting on packaging with 287 brand owners, found that 36% of respondent brands had embraced some form of biodegradable materials, with brand owners expecting the total value of packaging with biodegradable, recycled or compostable material to grow by 15–20% over the next two years.⁴⁹

A number of other studies have looked more broadly at market acceptance of BBPs including the barriers and motivations to uptake of BBPs. The findings of these studies are captured in *Table 1*.^{50–54}

BRAND PERSPECTIVES ON SWITCHING TO BIOBASED PRODUCTS: BIOSWITCH CASE STUDIES

To take the pulse of brand owners and gain their perspectives and interests in relation to biobased products, as well as assessing the barriers, risks and motivations they encounter when considering a switch to biobased, the BIOSWITCH project elaborated and cross-assessed 6 best practice case studies covering brand owners from four sectors (agriculture, chemistry, forestry and food) and six countries.

For all brand owners covered in these case studies (Bioco, dantoy, Naty, Vaude, Alhóndiga La Unión and Stora Enso) environmental, social and economic sustainability was identified as a main driver, if not part of their brand ethos and DNA. Several of these brand owners made radical choices, indicating explicitly that they wished to break away from doing business as usual and pioneer high-quality biobased solutions instead. According to these brand owners, few if any of their customers and consumers of the products covered explicitly ask or require that products are biobased. They express their needs and expectations in various other terms instead, asking for products that are high-quality and long-lasting, produced with minimized negative impact on environment and climate (dantoy); free of chemicals and contributing to healthy living (Naty); or ensuring a sense of well-being and comfort (Vaude). When it comes to packaging, the situation is similar. Customers look for eco-friendly alternatives for plastic food packaging (Bioco, Alhóndiga La Unión) or wish to limit using plastic to package food at

Table 1. Previous Relevant Studies Assessing Brand Owner Perspectives of BBPs

SOURCE	STUDY TYPE AND SIZE	FINDINGS
Meeusen et al. (2015) ⁵⁰	Two-round Delphi Study survey. Round 1 (N = 324) Round 2 (N = 134)	Meeusen et al. conducted a 2-round Delphi survey among resp. 324 and 134 business experts in the biobased economy. Respondents considered high production costs and volatile feedstock prices among the most important barriers to market. The positive image of BBPs and their ability to ensure stronger independence from fossil-based resources are expected to become the most important drivers. An unsupportive regulatory environment and uncertainty about future regulation hinder a stronger market uptake of BBPs. Concerns about social and environmental impacts and the use of genetically modified organisms (GMO) in feedstock production are not considered important market barriers.
Peuckert and Quitzow (2016) ⁵¹	Two-round Delphi Study survey	Peuckert and Quitzow concluded that multiple drivers may lead to the adoption of BBPs or practices by businesses. Central drivers are frequently environmental regulation and external pressures from the stakeholders-clients who demand environmentally friendly practices and products.
Tsagaraki et al. (2017) ⁵²	Literature research and qualitative interviews (N = 40)	Tsagaraki et al. determined that the barriers that may prevent the acceptance and promotion of biobased alternatives are manifold and related to: <ul style="list-style-type: none"> ○ Low price of fossil feedstock that make the biomass use uneconomical ○ High cost of BBPs compared to fossil-fuel derived equivalents ○ Perceived lower performance of many BBPs compared to their fossil equivalents ○ No dedicated and detailed EU legislation framework, conflicts between sustainability goals and market needs, lack of uniform standardization and certified labelling for BBPs ○ Gaps in the policy and subsidy framework ○ Intellectual property (IP) related barriers ○ Low public awareness of the benefits of using BBPs ○ Lack of reliable and sufficient information about BBPs
Bos et al. (2018) ⁵³	Company interviews (N = 7)	Bos et al. explored the market-entry barriers related to regulation and standardization among companies in the biobased economy experience. Seven companies were interviewed, mainly active in the business-to-business (B2B) market, with some also producing and selling products (notably packaging material) for the consumer market. Hurdles that were mentioned during the interviews were grouped under five main themes: (a) end-of-life, (b) certification and standards, (c) biofuel policy, (d) missing long-term policy and (e) communication and image.
Vom Berg et al. (2018) ⁵⁴	Literature survey	Vom Berg et al. classified general barriers hindering the production and material uptake of biobased chemicals and materials into six main categories (barrier groups): (a) access to feedstock, (b) competition with established fossil industry, (c) policy and regulatory framework, (d) public perception and societal challenges, (e) markets, finance and investment and (f) research and development.

all (Stora Enso). In short, for the brand owners covered in the case studies, shifting to BBPs and packaging is more a means to an end, and not a goal by itself.

BRAND PERSPECTIVES ON SWITCHING TO BIOBASED PRODUCTS: BIOSWITCH SURVEY

In addition to cross assessment of success case studies, the BIOSWITCH project has undertaken a broader study comprising 60 participant brands in the form of structured surveys and regional interviews.

From the study findings, participant brands appear to have a largely positive perspective overall with regards to biobased ingredients, products and packaging, with 85% of brands who don't currently include biobased ingredients within their branded products, and 95% of brands who don't currently use biobased packaging interested in doing so in the future. When selecting the products of greatest interest for inclusion of biobased ingredients, packaging is the area of greatest interest,

selected by 64% of brands, followed by food and flavor products (41%), personal care and cosmetic products (25%), fertilizer and feed (both 18%), construction materials (16%) and pesticides (15%). That a majority of brands prioritizes biobased packaging does not come as a surprise and was the reason to include specific questions on this topic. In the literature review, an increased interest in biobased packaging was found to be a distinct trend. Reasons for this trend may include (a) compliance with stricter European packaging and packaging waste regulations, and (b) changing packaging composition being considered easier to implement than changing product composition (as brands are looking for biobased alternatives that fit seamlessly within their processes and product lines).

The study found that high cost (indicated by 58% of brands) and uncertainty around functional performance (54%) are the primary barriers to uptake of BBPs among brand owners, followed by incompatibility of new biobased ingredients with existing company processes (32%) and feedstock or ingredient

supply uncertainties (27%). Interestingly, less than one in four Pan-EU brand owners listed factors such as regulatory challenges, uncertainty around environmental benefits, insufficient customer demands, uncertainty around end of life management, lack of supporting policies, and challenges in communicating the product's environmental benefits as key barriers. In the literature review, the policy and regulatory framework was mentioned often as a key barrier to BBPs, beyond higher costs, functional performance and supply uncertainties, whereas incompatibility with existing processes was not specifically mentioned. Above we observed that brand organizations would consider switching to biobased packaging. It may be that in this specific field (European) policies and regulations are sufficiently clear, and therefore policy and regulatory framework was not often mentioned by the respondents. Incompatibility with existing processes is a very practical barrier that companies may only get experience with when they actively research a shift to biobased. For this reason, it may not have come up in the more generic studies and surveys covered in the literature review.

A risk of poor functionality of BBPs compared with incumbent fossil-based products is indicated as the primary risk brand owners face in switching to biobased products (61%) followed by incompatibility with existing processes (52%) and uncertainty around future regulations (48%). The above factors were also found in the literature review, with the clear exception, as already mentioned above, of incompatibility with existing processes. Although the Top 2 risks once again indicate brands' concerns over the challenges associated with seamless transition to bio-based alternatives, it is clear that what is considered a key risk varies strongly between countries and individual brands.

Meeting company sustainability targets (69% of brands) as well as meeting customer demand (63%) are identified as the main drivers motivating brands to switch to BBPs, followed by green marketing opportunities (39%) and improved functionalities obtained from bio-based products (27%) with existing and anticipated regulatory changes both at 22%. These survey findings are fully in line with the literature research findings, which identified environmental regulation, customers demanding environmental-friendly products and brands wanting to improve their public image as key drivers.

Overall, there is a positive outlook among brand owners, regarding future customer demand for BBPs, with almost 75% of brands expecting strong to moderate growth in their customer demand for BBPs over the next 5 years. According to brands, the main drivers of this expected consumer growth will be customer preference for products with low environmental impacts (73%) and improved customer awareness of BBPs (71%), followed by greater availability of BBPs (46%) and more cost-competitive products (36%). In literature there is agreement on the importance of low environmental impacts, the availability of BBPs and improved customer awareness as drivers for growth. The need for a simple, official and trustworthy (eco-) label to help consumers identify the "good" materials is often mentioned in the literature. As is the observation that realising such a label is not straightforward. Regarding the need for costs-competitive products, there seems to be slight differences in opinion. According to literature, a certain share of customers is willing to pay a higher price, a green premium, for BBPs. These consumers even expect the price to be

higher due to the benefits and expectations that come with biobased. However, there is debate around which type and share of consumers is really willing to pay more in practice, for which kind of products, and how much the green premium would really be.

INTERREGIONAL BRAND OWNER PERSPECTIVES BASED ON INTERVIEWS

The analysis included 20 interviews with regional brands in Belgium, Denmark, Finland and Spain with a number of regional trends emerging. Spanish brands overall seemed most uncertain around the customer demand for BBPs. High costs represent a clear barrier to BBP uptake among Spanish brands who also viewed the high price of BBPs as a key barrier to consumer uptake, which could be overcome if more cost competitive products are developed. Meeting existing regulations was also a key motivation for BBP uptake among Spanish brand owners, more so than in other regions. Finnish brands, by comparison, seemed more certain that there is an existing customer demand for BBPs and anticipate further strong growth in demand. Finnish brands were more concerned around the functional performance and ease of integrating biobased ingredients within their production lines and products. Cost also remains a barrier for Finnish brands. For Belgian brands, there was less certainty around the customer demand for bio-based ingredients/products. At the same time Belgian brands were most likely to see the potential for green marketing opportunities that could be provided to brands using BBPs or packaging. Cost was once again an important consideration for Belgian brand owners, with other key issues including feedstock or ingredient supply chain uncertainties, functional and environmental performance of BBPs, and compatibility of BBPs with existing processes. Danish brand owners are more confident about customer growth in demand for BBPs and meeting this customer demand is one the key motivating factors for brands switching to BBPs. In Denmark high cost was least likely to represent a barrier to brand owner uptake of BBPs compared to the other regions. Greater certainty surrounding the sound functional performance of BBPs appears to be a key criterion for Danish brands, with improved environmental performance appearing as another key requirement.

Conclusion

Brand owners can play an essential role in opening up key markets for BBPs and it is therefore important for industry and policy makers to understand the perspectives of brands with regards to BBPs. Overall, brand owners have a relatively positive outlook towards bio-based products with 85% of brands who don't currently use biobased ingredients or products within their branded products, and 95% of brands who don't currently use biobased packaging, interested in introducing these in future. Furthermore, most brands expect to see either strong or moderate growth for bio-based products among their customer base within the next 5 years, driven mainly by improved customer knowledge and demand for more sustainable products. Among products of interest, packaging appears to be of greatest interest among the majority of brand owners. Despite these positive sentiments, brands still perceive some barriers surrounding BBPs especially their high cost, functional performance and ease of integration, as well as their reliability of supply. Regional differences among

brand owners have also been identified, with cost and uncertainty around customer demand appearing as a bigger issue in continental Europe, with functional performance concerns ranking as a bigger concern among brands in northern Europe.

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James Gaffey is co-director of Circular Bioeconomy Research Group (CircBio) at the Shannon Applied Biotechnology Centre, MTU Munster Technological University, Tralee, Co. Kerry, Ireland. Phone: +353(0)66 7144253. E-mail: James.Gaffey@staff.ittralee.ie. Twitter: @BiorefineryIE LinkedIn: <https://www.linkedin.com/in/jamesgaffey>

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