



**DELIVERABLE D.T2.2.2 REPORT BASED ON THE OUTCOMES OF THE BUSINESS  
SUPPORT SERVICE (POLAND)**

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This report is based on the outcomes of the business support service testing that is based on the *D.T.1.3.3 Audit tool prototype*, and *DT1.3.4 Annex I\_Questionnaire* and on the audit that took place in *Pol-Zdob Drukarnia fleksograficzna* on the 8<sup>th</sup> of October, 2019.

The aim of the document is to present the short profile of one of the three companies that had been chosen for the second round of the pilot actions that were performed in accordance to *WP.T2 - Testing of the business support service through pilot actions - from planning to action*.

The participating company is medium Polish packaging printing company established in Kraków in southern Poland. The nature of their products is semi-finished products with the end use for food (dry, wet and liquid) as well as primary and secondary packaging. The base materials are virgin paper, coated paper, and plastics, including biobased and biodegradable.

The company is producing food packaging for both dry and wet food with the storage time of over 6 months. The base materials of their products are virgin and coated paper, and plastics, including biodegradable and biobased plastics. POL-ZDOB is equipped with a modern machine park that enables them to perform flexographic overprints in up to 10 colors, both on paper-based and foil surfaces. They perform overprints in high definition flexo technology and flexo technology printing with low-migration UV inks and solvent inks.

The company is printing on biodegradable and compostable foil. The main target of the product design is the easier sorting of the materials and reducing the amount of plastic. The first option regarding product end of life is recycling and the main sustainability goal is dedicated to the materials. The main technology incorporated to produce biocomposite is lamination, whereas the usage of the adhesives is the most crucial limitation in their current technology. The second limitation is flexographic printing technology. The end product is sold in rolls that are delivered to the customers.

Bioplastics. Overall tendencies in Poland and Europe.

Bioplastics market share is only about one percent of the 335 million tonnes of oil-based plastic produced annually. It is important to establish that bioplastics are currently a niche as it is impossible for them to meet the capacities of the traditional plastic in the market. The main barrier is connected with the price of such materials which is roughly three times higher than the price of traditional plastics. Nevertheless, the demand in the niche is growing as the society is gaining knowledge about environmental aspects of such materials and there is a part of the society willing to pay more to obtain materials that are in accordance with their raising awareness and rapidly changing lifestyles. Therefore, with more sophisticated biopolymers, applications, and products emerging, the market is continuously growing. According to the data obtained by European Bioplastics, global bioplastics production capacity is set to increase to approximately 2.62 million tonnes in 2023. Bioplastics are starting to replace traditional petrol materials in numerous applications, including packaging, catering products, consumer electronics, cars, agriculture, textiles and other segments. Packaging segment is the largest field of application for bioplastics with almost 65 percent (1.2 million tonnes) of the total bioplastics market in 2018. Europe is an important centre of the bioplastics industry. It has the 5<sup>th</sup> position in the field of research and development and is the industry's largest market worldwide.

According to Smithers Pira report 'The future of bioplastics on the packaging market', a further increase in the share of bioplastics in the global plastic packaging market should be expected in the coming years. The growth rate of these plastics used in packaging production will be greater than the growth of petroleum-based polymers. In 2017 bioplastic packaging accounted for approximately 0.3% of the global packaging market and 1% of the global plastic packaging market. According to Smithers Pira, in 2022 the value of the bioplastics market for the packaging industry will increase to USD 7.2 billion (an increase of approximately 15%).

Currently, there is a visible change of focus in the bioplastics markets. The present approach is to move away from biodegradability towards increased use of renewable raw materials; bio-based bioplastics. Sustainability arguments such as climate protection and the decrease of fossil reserves make efforts to replace fossil-fuel-based plastics with renewables-based ones more attractive.

There is no specific legislation at EU level currently contributing to the bioplastics business. Several policy initiatives such as the Europe 2020 Strategy, strategies supporting the bio-economy are directly or indirectly calling for support measures to help the bioplastics industry. But it is unclear whether any of its outcomes will be implemented into practice. Member-State level, several countries have established specific support mechanisms for bioplastics packaging, such as reduced packaging taxes in Latvia and the Netherlands, or exemptions from waste-management obligations in Germany.

In Poland, there is basically no market for biodegradable plastics. Despite numerous marketing activities, aimed at presenting the ecological advantages of bioplastics, their sales are still very modest. The example confirming the above mentioned fact is lack of demand for bioplastics products as the company Bioerg, which is one of the first domestic companies producing and selling compostable plastic packaging. It is also the first national enterprise that has obtained a certificate confirming compliance with the requirements of the European standard EN 13432: 2000 issued by the DIN CERTCO unit (April 2008). The certificate confirms full biodegradability and the possibility of composting products sold by Bioerg. Despite such product characteristics Bioerg's sales revenues were just PLN 1.65 million in 2015 and were 18% lower than in 2014. For comparison, Plast-Box, one of the Polish leaders in the production of packaging from traditional plastics, noted sales at the level of PLN 140 million zlotys in 2015. The 2015 net profit for Bioerg was barely 34,000. PLN and was 71% lower compared to 2014.