Public market summary

Summary of market analysis of biobased materials

This document fulfills the role of public summary of market analysis of biobased materials. A full analysis was created for the needs of the Biomotive project, which received funding from the joint venture "Bio Based Industries" as part of the European Union's research and innovation program "Horizon 2020" under the grant agreement No. 745766

„Analysis of biobased materials and products in Europe" is not just a description of the current market situation, but above all an assessment of market development potential.

While reviewing summary of market analysis one should take into account issues such as:

- ✓ Market research does not include recommendations, but rather is an analysis of potential market opportunities in european countries, focusing on the automotive market.
- ✓ This analysis does not take into account specific vision of the area, the wider political context or public contribution.
- ✓ This is just one of many tools that will be used to determine future recommendations for the Biomotive project.

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Cars manufacturers are under increasing pressure to consume less fuel. Much of this improved performance will come from the fact that cars will be lighter – thay will be less demanding – i.e. they will reduce they have to move. Every 10% reduction in vehicle weight reduces fuel consumption by 5-7%. As a result manufacturers show a growing interest in light materials; the visible fraction (about 20%) of modern cars is made of plastic and this amonut is expected to increase thanks to the recognized properties of polymers absorbing sound and vibrations. Despite these advantages, there is no single biobased plastic that provides aesthetics in combination with technical properties (shock resistance, heat resistance, fire resistance and weight loss) that they need.

The aim of the Biomotive project is to demonstrate in the relevant industrial environments the production of innovative and advanced bio-based materials (i.e. thermoplastic polyurethanes, thermoset polyurethane foams 2-k and regenerated natural fibers) designed specifically for the automotive industry. Better performance of these materials in the automotive sector will enable mass penetration of bio-waste of polyurethanes and regenerated fibers into additional "high volume" markets.

The automotive and chemical industries play a key role in the European economy due to their participation in many other industries. As Euler Hermes predicts in its report "Global Automotive Report" global vehicle sales can reach even the threshold of 100 million vehicles in 2019, because innovation is the main driver of change. Forecasts regarding private consumption and investment of enterprises driven by growing incomes and still low interest rates will support new registrations in passenger cars (74% of the total) and commercial vehicles (26%) in most countries. We expect further growth in the European Union by + 2%, where the United Kingdom is an exception because there is a drop forecast of -6% there. In previous years, particularly the region of central and eastern Europe has become the target of foreign investments in the automotive industry, which positively affects its continuous development. Most European automotive markets have seen an increase in sales. The chemical market also plays a key role in the European industry. The forecasts say that in the next years the fastest development of the chemical sector in Europe is expected in the region of Central and Eastern Europe.

The analysis of the bio-based materials market focuses its research on the automotive market in countries belonging to the European Union. This analysis was created for the needs of the BioMotive project, which is to be used as a tool to help enter the automotive market with products based on bio materials such as TPU, PU foams, regenerated fibers for technical textile . The project received funding from the joint venture "Bio Based Industries" as part of the European Union's research and innovation program "Horizon 2020" under the grant agreement No. 745766.

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The enalysis of the size of the market is narrowed down to the analysis of the Old Continent, that is Europe. The leaders in the automotive industry are definitely countries such as Germany, which the automotive market has the most developed and Spain, France and the United Kingdom. These countries are also the leaders in the possession of car factories. Despite the global crisis, which was the reason for the slowdown in sales of motor vehicles, the automotive market in 2012 - 2017 has been steadily increasing. The increase in the registration of new vehicles has increased by 3.4 percent. where Lithuania, Hungary, Bulgaria, Croatia and Poland were the countries with the largest increase in new registrations.

The automotive industry has been characterized by a significant pace of changes covering the final products and sales models, production technologies, organization of the production process, management area. The applied solutions in the area of quality management or in shaping the value chain, are becoming common standards, also in other sectors. The multitude and diversity of relations with the environment is one of the more complicated in the automotive industry. Automotive manufacturers operate in a large, global network of connections with numerous entities on the market. This, in connection with the need to use technically advanced, expensive production systems, places the automotive industry in a group of sectors with high entry barriers. Nevertheless, due to rapid changes in the environment, there is a noticeable need to change competitive activities in order to be able to defend against new entities. These companies, often not closely related to the industry, by introducing revolutionary solutions in the field of new types of drives or autonomous vehicles, are in fact able to threaten the existing leaders, or at least limit their competitive position. However, this should be seen as a chance for development for the entire sector, stimulating the undertaking of innovative activities. The presented analyzes regarding the position of the analyzed companies on the Polish market point to the lack of threat of leaders from new entities. The Polish automotive market, in terms of placement of new vehicles, is however quite specific. Due to the lower customer's abundance, there is a significant share of used vehicles, often several years old. Car manufacturers offering modern and more expensive solutions, for example in the field of security systems, do not have such a strong breakthrough. The attachment to brands traditionally seen as prestigious is of greater importance in purchasing decisions.

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