

# Tech Venture Challenge

## Conducting a Market Analysis and Developing a Business Plan for a Bio Resin within a Research Transfer



Picture created with DALL-E

### **Challenge description**

The widespread use of petroleum-based resins, particularly phenolic resins in fire-resistant applications like aerospace, has significant environmental and health drawbacks. Recycling these resins is challenging, further amplifying their negative impact. Bio-based alternatives, such as furan-based resins, offer promise due to their high fire resistance but are hindered by brittleness. BioResin, an innovative startup, addresses this with FlexFuran—a sustainable, high-performance furan resin that is more ductile and suitable for demanding applications. FlexFuran reduces the CO<sub>2</sub> footprint by 75% compared to fossil-based phenolic resins. The initial target market, maritime and sports applications in Europe, is valued at 33 million EUR annually, growing over 5% per year.

### **Thesis Focus**

Within your master thesis project, you will work on scientific research questions depending on your study program and related to:

- Market analysis of the fire-resistant bio-resin industry, focusing on demand, growth opportunities, and key players
- Identification of target industries (e.g., packaging, automotive, construction) and customer needs for the fire-resistant bio-resins
- Competitive landscape analysis, including current fire-resistant bio-based materials and substitute producers
- Developing a comprehensive business plan, including pricing strategies and market entry approaches
- Identification of key barriers to market entry and strategies to overcome them
- Financial modeling and projections for scaling bio-resin production and distribution

### **Profile and process**

You apply with a motivation and a CV (but no project draft) and will write a master thesis suitable to your study program. You should have:

- Motivation to innovate and revolutionize the industry with sustainable bio-resin systems
- Background in business, management, or related fields
- Experience or interest in entrepreneurship and business development
- Exceptional analytical and creative problem-solving skills
- Willingness to take responsibility and work independently
- A team player attitude
- Ambition to co-found a startup within “EXIST Forschungstransfer”, transforming cutting-edge research into impactful real-world solutions

Upon successful application, you will become part of the TUM Entrepreneurial Masterclass and enjoy all its benefits. Completing a successful thesis will provide you with the opportunity to become a co-founder of the startup at an early stage.

**TUM Entrepreneurial Masterclass  
and  
Chair of Materials Handling, Material Flow, Logistics**

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