

Project # 872152 “GREEN-MAP”
NOVEL GREEN POLYMERIC MATERIALS FOR MEDICAL PACKAGING AND DISPOSABLES TO IMPROVE HOSPITAL SUSTAINABILITY

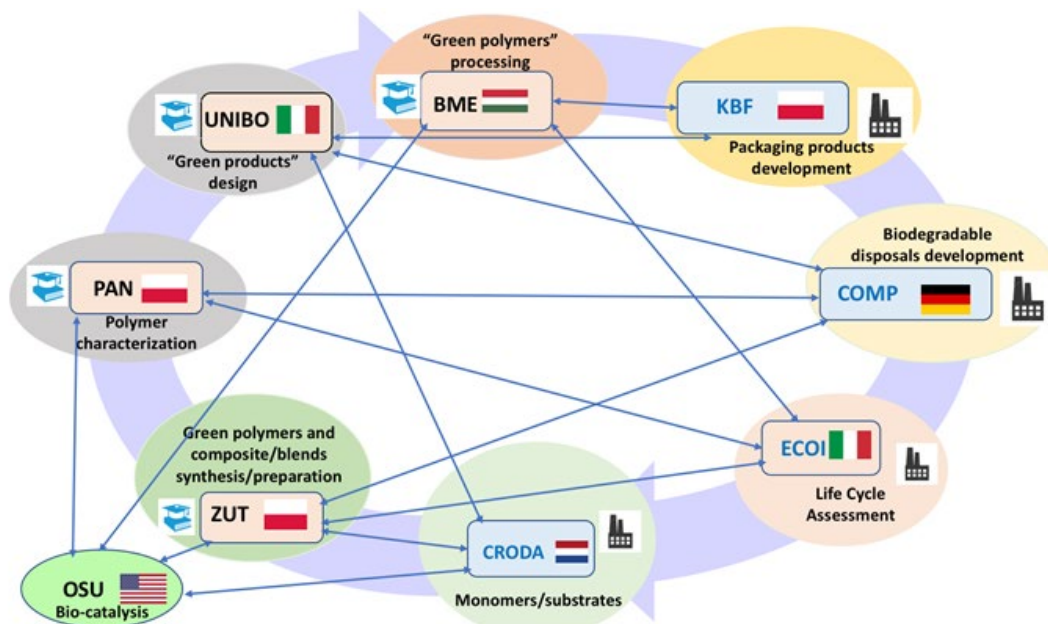
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The ultimate research goal of the GREEN-MAP project is to enable a circular economy within the disposable medical device industry. We will develop novel bio-based, biodegradable polymers that can be used in medical device packaging, as well as for disposable medical devices/components. By combining renewable, bio-based monomers with biodegradability via industrial composting and/or anaerobic digestion and bioconversion, we will enable a sustainable path for the disposable medical device market - expected to double by 2023 - ultimately leading to a circular economy. Key innovative elements include:

- use of bio-based monomers, representing value added to existing biodiesel refining,
- green chemistry approach, using enzymes and alternative, low-impact catalysts,
- polymer systems (copolymers and/or blends) with highly tunable properties (mechanical, optical, barrier, hemocompatibility).

Accomplishing this ambitious goal will only be possible by forming a new collaborative intersectional and international research network. Participation within the project will directly lead to diversification of skills, both research-related and transferable ones, leading to improved employability and career prospects both in and outside academia.

Thus, the consortium includes academic and non-academic partners involved in each aspect of the bio-based polymer value chain: substrates/monomers, synthesis, characterization, processing, product development, and life cycle sustainability assessment. While the focus is on material development for existing disposable medical devices and their packaging, the innovative and synergistic environment fostered by consortium, and especially the secondments can lead to the development of new devices, new procedures, etc., representing potential added value of the collaboration network. International and intersectoral mobility guarantees high level and effective sharing of new knowledge.



<http://green-map.eu>