

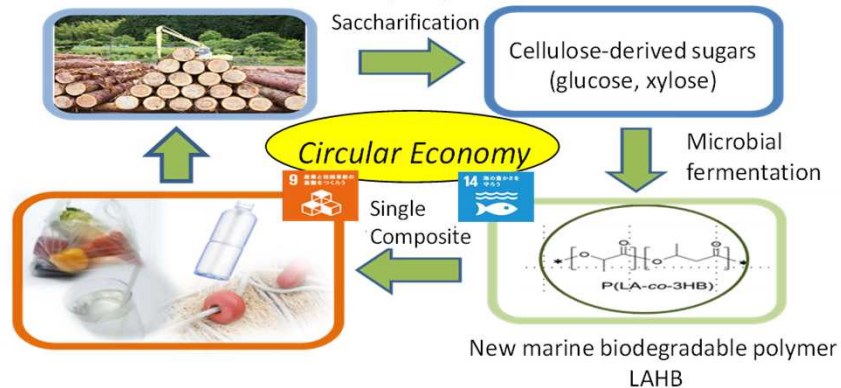
Project Title : Development of microbial production of next-generation polylactate from biomass-derived sugars (2020~2023)



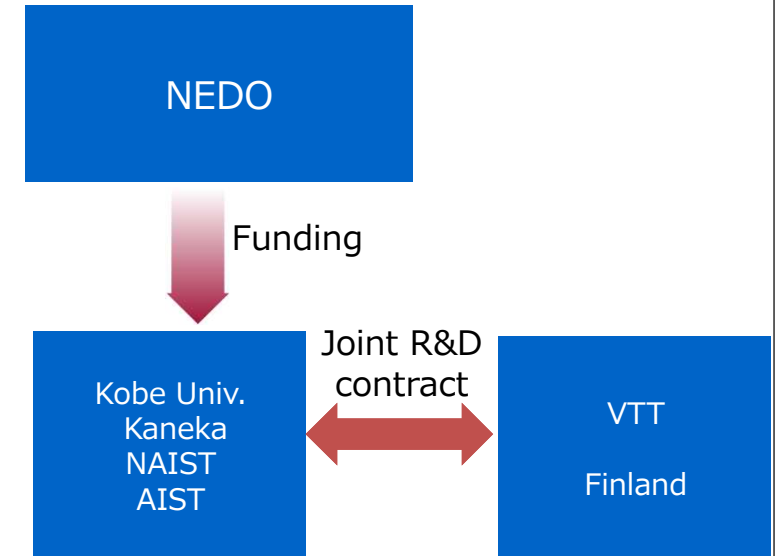
Entrusted Parties : Kobe University/KANEKA CORPORATION/Nara Institute of Science and Technology/AIST

Outline of the Project

- **Background:** The microbial production of new polymeric material from sugars will contribute to the CO₂ reduction and solution of marine non-degradable plastics.
- **Purpose :** The microbial production of new-generation polylactate from sugars
- **Contents :** Fermentative production of the biopolymer, LAHB, by industrial strain carrying a lactate-polymerizing enzyme
- **Outline :** Pathway engineering for LAHB production from sugars through international collaboration. The materialization of LAHB based on the structural and properties data.



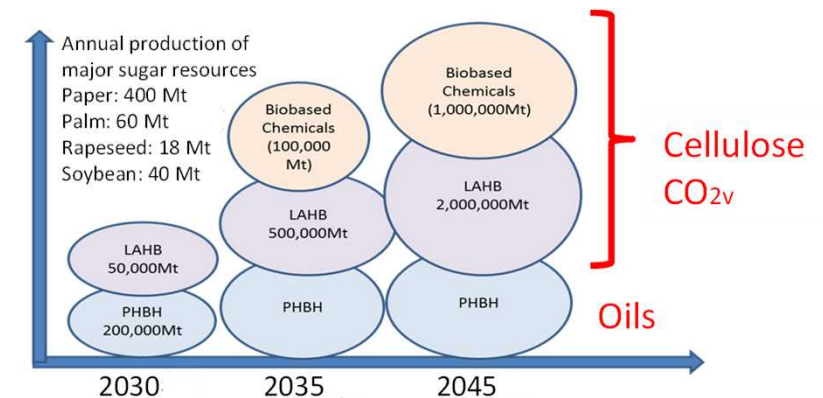
Project Scheme



Significance of International R&D

- **Significance and merit :** High-valued biorefinery technology from biomass-derived sugars developed by VTT should be very effective for our target polymer production by industrial strain.
- **International R&D:** The microbial LAHB production will be reinforced by a sugar transporter as well as sugars preparation technology developed by VTT.

Expected Outcomes



- **Predicted CO₂ reduction effect:** In case of 50,000 ton/year **83,000 ton/year**