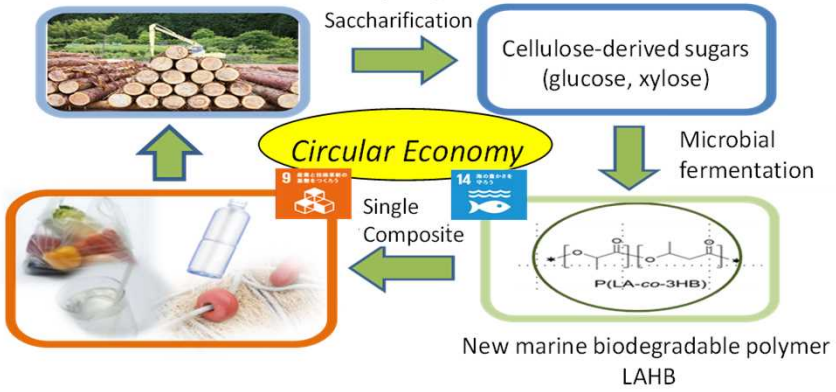
Project Title : Development of microbial production of next-generation polylactate from biomass-derived sugars (2020～2023)

Entrusted Party(-ties) : Kobe Univ./Kaneka/NAIST/AIST in Japan

Outline of the Project

- **Background:** The microbial production of new polymeric material from sugars will contribute to the CO_2 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

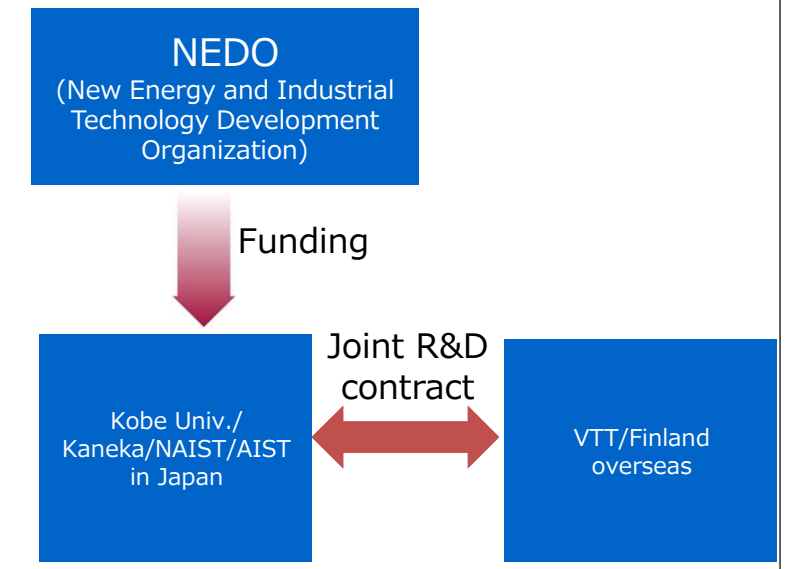
Outline：Pathway engineering for LAHB production from sugars through international collaboration. The materialization of LAHB based on the structural and properties data.



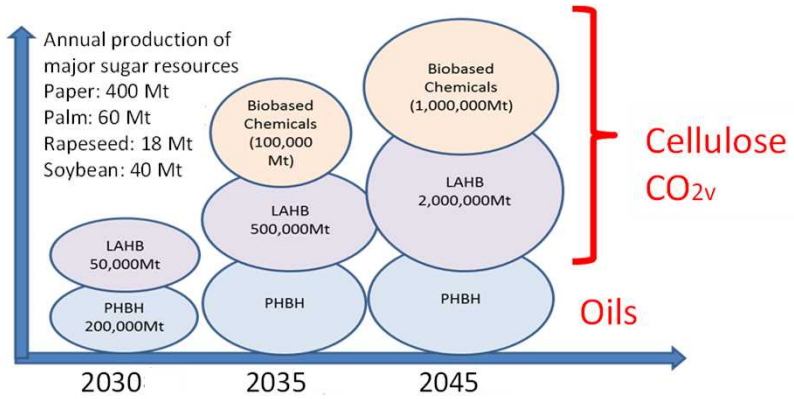
Significance of International R&D

- **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.

Project Scheme



Expected Outcomes



- **Predicted CO_2 reduction effect:**
  In case of 50,000 ton/year
  83, 000 ton/year