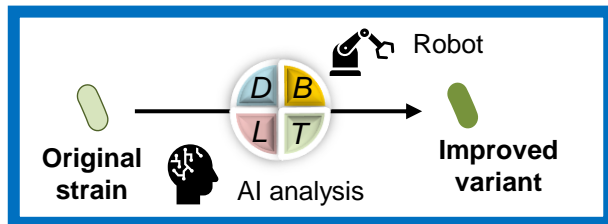


# Promotion of Carbon Recycling Using CO<sub>2</sub> from Biomanufacturing Technology as a Direct Raw Material (Amount covered by the government: Up to 176.7 billion yen)

- The social implementation of biomanufacturing, which uses CO<sub>2</sub> as a raw material, is a promising approach to achieve carbon neutrality.
- In consideration of hydrogen-oxidizing bacteria and other forms of biomanufacturing which use CO<sub>2</sub> as a direct raw material, this project aims to promote **(1) the sophistication of platform technology for planning microorganisms, (2) the development and improvement of microorganisms, and (3) the development and demonstration of manufacturing technologies using microorganisms.** Through these, the project aims to reduce the time it takes to develop useful microorganisms to a tenth of the time it currently takes per year, develop commercial variants that can produce materials using CO<sub>2</sub> as a raw material, and reduce manufacturing costs to approx. 120% those of alternative products.

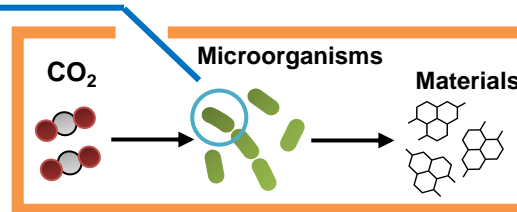
## [Image of the project as a whole]

Development item 1: Sophistication of platform technology for modifying microorganisms and accelerating the development of useful microorganisms



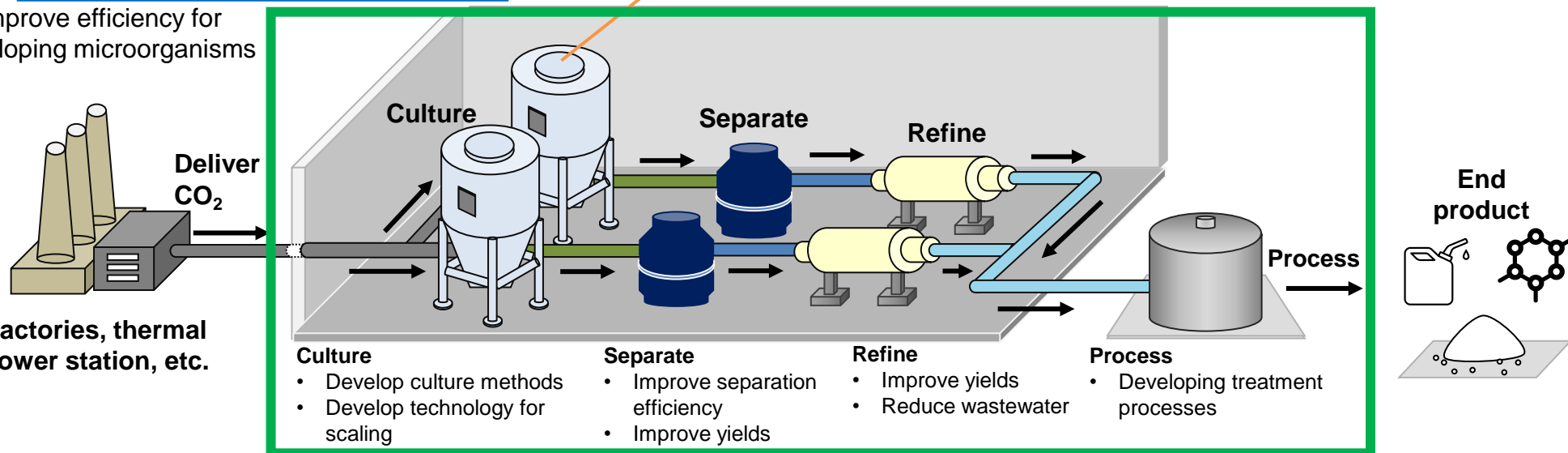
Improve efficiency for developing microorganisms

Development item 2: Development of technology for developing and improving microorganisms that can produce materials using CO<sub>2</sub> as a raw material



Greatly improve microorganisms' abilities to produce materials while collaborating with the platform

Development item 3: Development and demonstration of manufacturing technologies using microorganisms that can produce materials using CO<sub>2</sub> as a raw material



+ Promote social implementation in collaboration with Expo 2025 Osaka, Kansai