Moonshot Goal #1

Realization of a society in which human beings can be free from limitations of body, brain, space, and time by 2050.

Target of Moonshot Goal

Cybernetic avatar infrastructure for diversity and inclusion

- Development of technologies and infrastructure to carry out large-scale complex tasks combining large numbers of robots and avatars teleoperated by multiple persons by 2050.
- Development of technologies and infrastructure that allow one person to operate more than 10 avatars for one task at the same speed and accuracy as one avatar by 2030.

Cybernetic avatar life

- Development of technologies that will allow anyone willing to augment their physical, cognitive, and perceptional capabilities to the top level, and spread of a new lifestyle that will be welcomed by society, by 2050.
- Development of technologies that will allow anyone willing to augment their physical, cognitive, and perceptional capabilities for specific tasks, and proposal of a new lifestyle that will be welcomed by society, by 2030.

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Moonshot Goal #2
Realization of ultra-early disease prediction and intervention by 2050.

Target of Moonshot Goal

- Establishment of a system for disease prediction and evaluation of pre-symptomatic states in order to suppress and prevent disease onset, through integrated analysis of the entire functional network between human organs, by 2050.
- Establishment of a strategy that enables the conversion of a pre-symptomatic state to a healthy state, by clarification of functional changes in human physiology along life course considering the comprehensive network between organs, by 2050.
- Identification of disease-related network structures and establishment of innovative prediction and intervention methods by 2050.
- Understanding of the comprehensive network between human organs by 2030.

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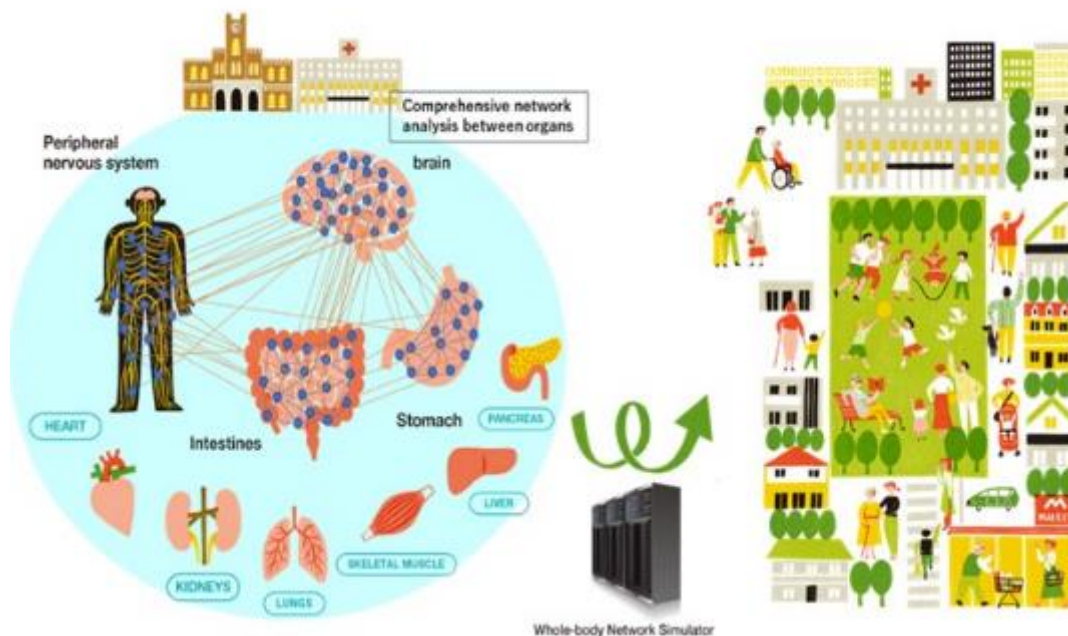
Moonshot Goal #3

Realization of AI robots that autonomously learn, adapt to their environment, evolve in intelligence and act alongside human beings, by 2050.

Target of Moonshot Goal

- Development of AI robots that humans feel comfortable with, have physical abilities equivalent to or greater than humans, and grow in harmony with human life, by 2050.
- Development of AI robots that behave well with humans under certain conditions, and allow over 90% of people to feel comfortable with them, by 2030.

- Development of an automated AI robot system that aims to discover impactful scientific principles and solutions, by thinking and acting in the field of natural science, by 2050.
- Development of an automated AI robot system that aims to support the process of discovery for scientific principles and solutions to specific problems by 2030.

- Development of AI robots that autonomously make judgements and act in environments where it is difficult for humans to act by 2050.
- Development of AI robots that operate unattended under human supervision in specific circumstances by 2030.

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Moonshot Goal #4

Realization of sustainable resource circulation to recover the global environment by 2050.

Target of Moonshot Goal

Solutions to the global warming problem (the Cool Earth) and environmental pollution problem (the Clean Earth) through realization of sustainable resource circulation for the global environment.

Cool Earth and Clean Earth

- Global deployment of commercial plants or products utilizing circulation technology by 2050.

Cool Earth

- Development of circulation technology on a pilot scale for reducing greenhouse gases that is also effective in terms of life cycle assessment (LCA) by 2030.

Clean Earth

- Development of technology on a pilot scale or in a form of prototype that converts environmentally harmful substances into valuable or harmless materials by 2030.

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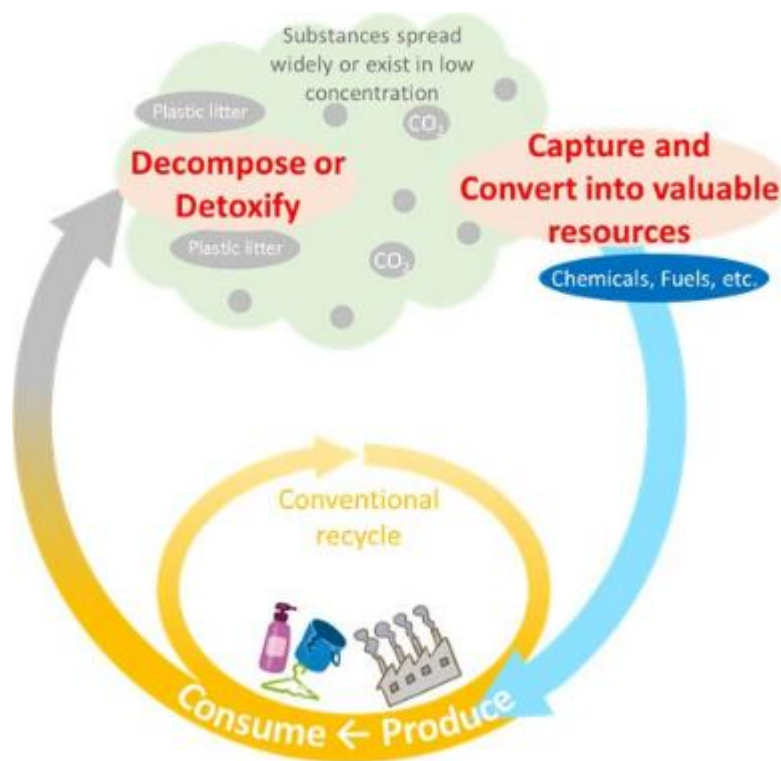
Moonshot Goal #5

Creation of the industry that enables sustainable global food supply by exploiting unused biological resources by 2050.

Target of Moonshot Goal

- Technical development of the circular food production systems by biological measures, e.g. utilizing microbes and insects, by 2050.

- Development of the technical solutions for eliminating food loss and waste and for achieving both healthy life and sustainable food consumption by 2050.

- Evaluation of the technical achievements and discussion on the ethical, legal and social implications (ELSI) matters will be done by 2030, for global spread of the technology by 2050.

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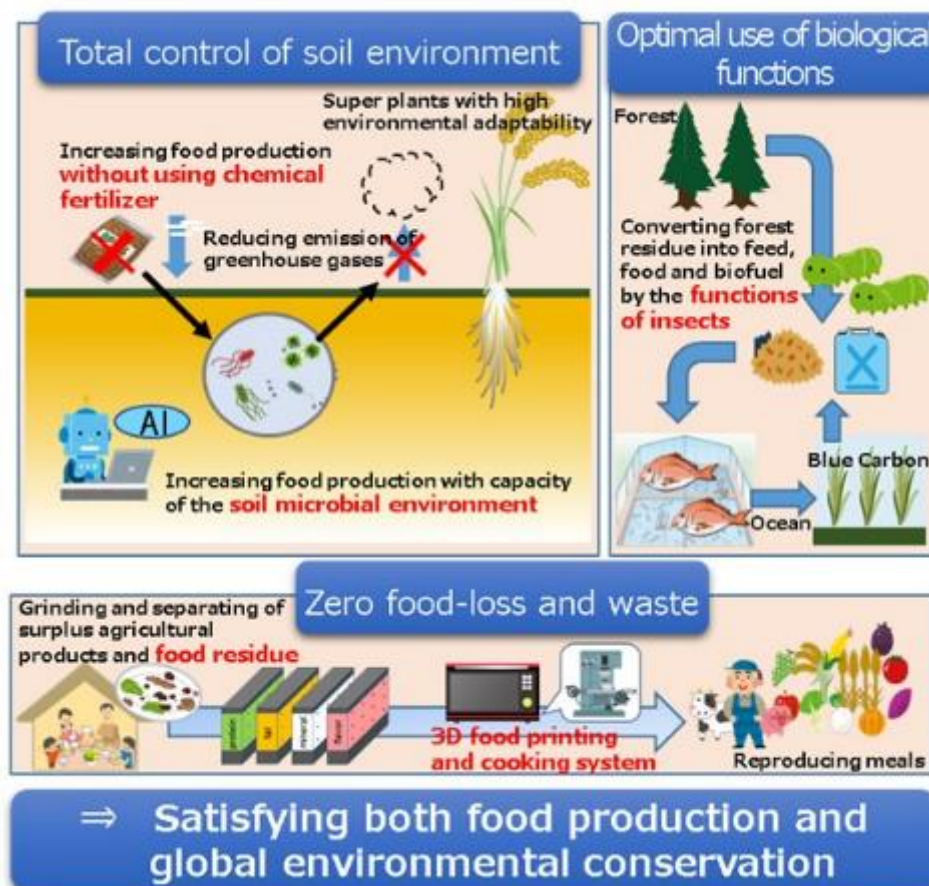
Moonshot Goal #6

Realization of a fault-tolerant universal quantum computer that will revolutionize economy, industry, and security by 2050.

Target of Moonshot Goal

- Achievement of the large-scale integration required for fault-tolerant universal quantum computers by around 2050.
- Development of a certain scale of NISQ computer and demonstration of the effectiveness of quantum error correction by 2030.

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