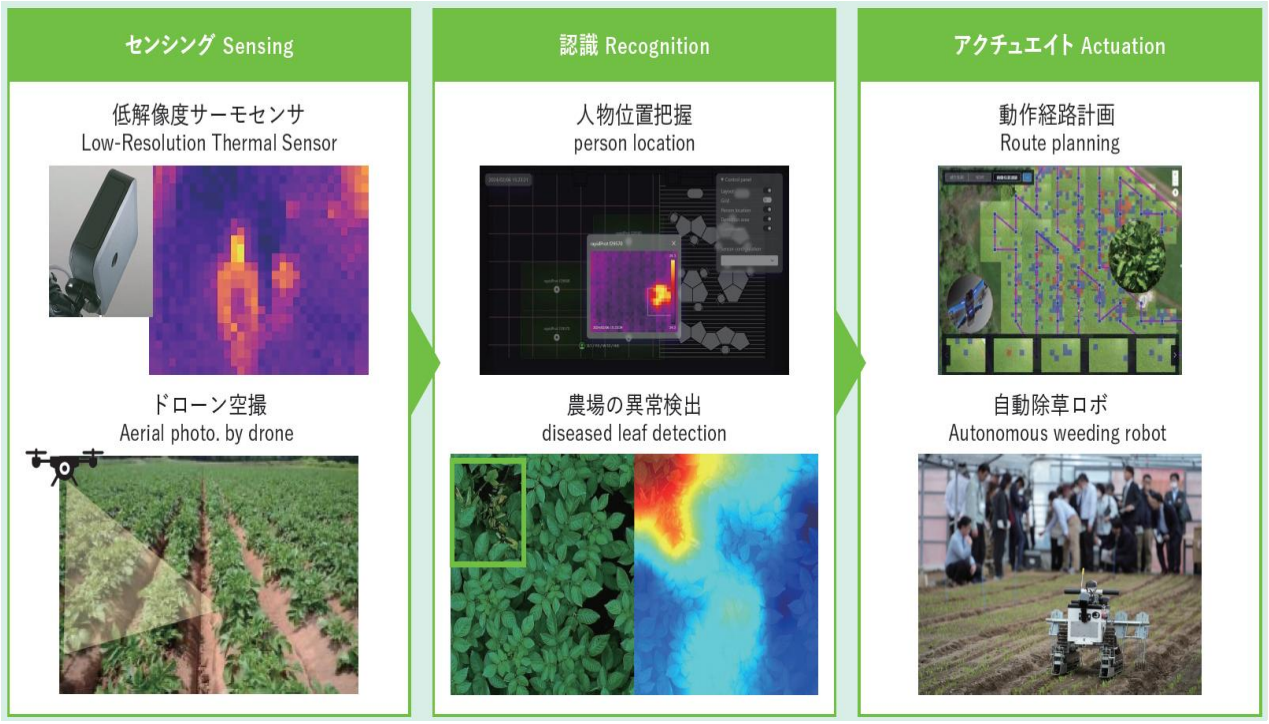
#Digital Transformation #Data-Drive Insights #Nature Positive

System integrating AI and robotics for saving labor

Real-world sensing and robotics AI

Background and Technical Challenges

Privacy concerns associated with conventional cameras, the inability of **off-the-shelf AI** to fully replicate expert decision-making, and the need for **manual operation** of autonomous robots in terrain prone to positioning errors.



R&D Goals and Outcomes

To address labor shortages, particularly in primary industries, we integrate **sensing devices, AI, and robotics**. This system automates and streamlines precise tasks that traditionally rely on **human expertise**.

Key Technologies

01 Core Technologies

The system comprises **privacy-preserving thermal sensing**, an **AI trained on expert decisions**, and **robotics guided by landmarks** for autonomous control.

02 Key Differentiators

High anonymity by not capturing any identifiable images, **replication of expert judgment**, and **high-precision control** for centimeter-level autonomous navigation.

Use Cases	Smart City Agriculture, Forestry & Fisheries	**R&D phase**	Development
Technology Schedule	FY25–26	**Commercialization Schedule**	FY25–27

【Exhibitors】
R&D Innovation Division, NTT DOCOMO, INC.

【Contact】
Mixed Value Creation Group X-Tech Development Department

【Co-exhibitors】
University of Tsukuba. Kubota Corporation. National Agriculture and Food Research Organization. Minoru Industry Co., Ltd. Suzuki Motor Corporation.

【Related Links】 -