Mehr Licht!
More Photonics for Intelligence

#C07

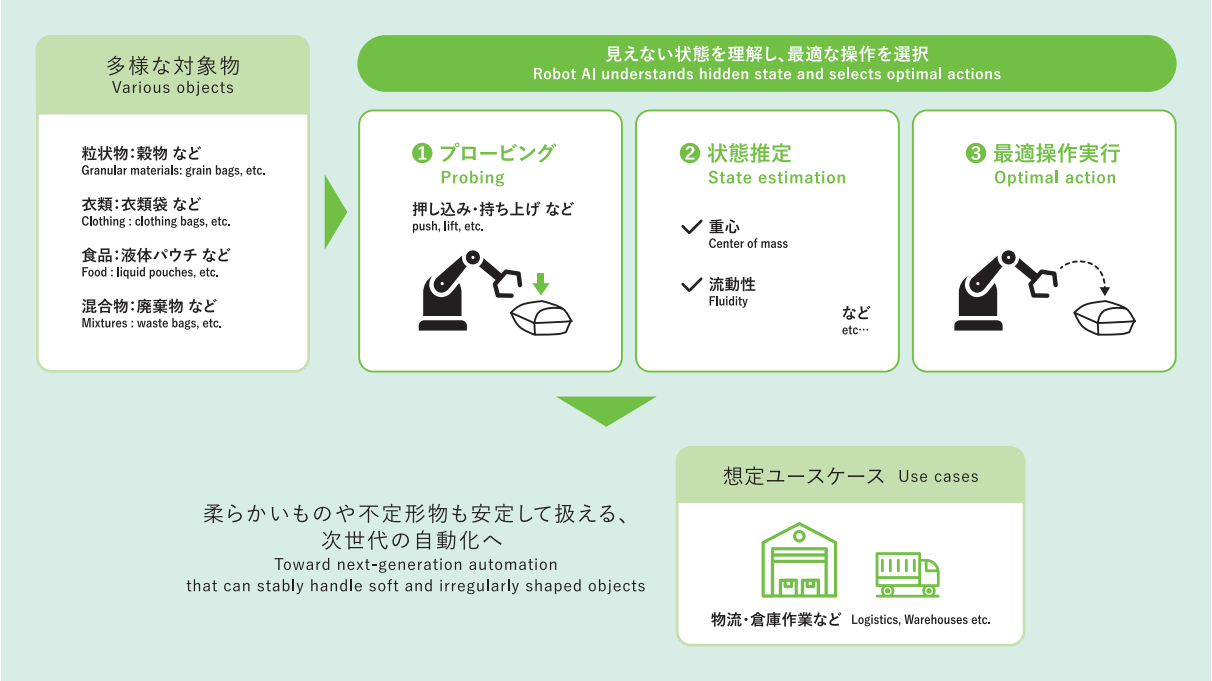
#Digital & AI Transformation#Operational Efficiency

Robot Adapts to Object States by Touch

Expanding robotic automation via stable handling of irregular objects

Technical Challenges & Goals

Labor shortages are driving demand for robotics in logistics. However, conventional robots struggle to reliably handle soft, irregular, and fragile objects. Enabling stable autonomous handling of such objects expands the scope of robotic automation, supporting stable logistics operations and higher productivity.



Key Technologies

Core Technologies

- Estimating hidden properties such as center of mass from probing and robot responses
- Using estimated object states to adapt grasp points, grasp strategies, and motions to each object

Key Differentiators

- Beyond vision, handling hidden physical state such as center-of-mass shift and fragility
- Beyond direct observation-to-action mapping, generating action option from estimated object state

Use Cases

Mobility & Transportation

Automating handling of soft, irregular, and fragile goods in warehouses, airports, and unloading operations. Future applications include parcel hubs and last-mile delivery, expanding automation across logistics.

Exhibitors

NTT Human Informatics Laboratories