WAVEAI MAKES YOUR LIFE

ABLE TO IMPROVE BY

VEHICLE&MOBILITY FOR A NEW

ERA OF

ARTIFICIAL

INTELLIGENCE

추종모빌리티

Autonomous driving based following mobility maximizes efficiency of work by reducing time and cost with supporting transportation and transferring and is used in various fields and purposes in industrial, agricultural and logistics.

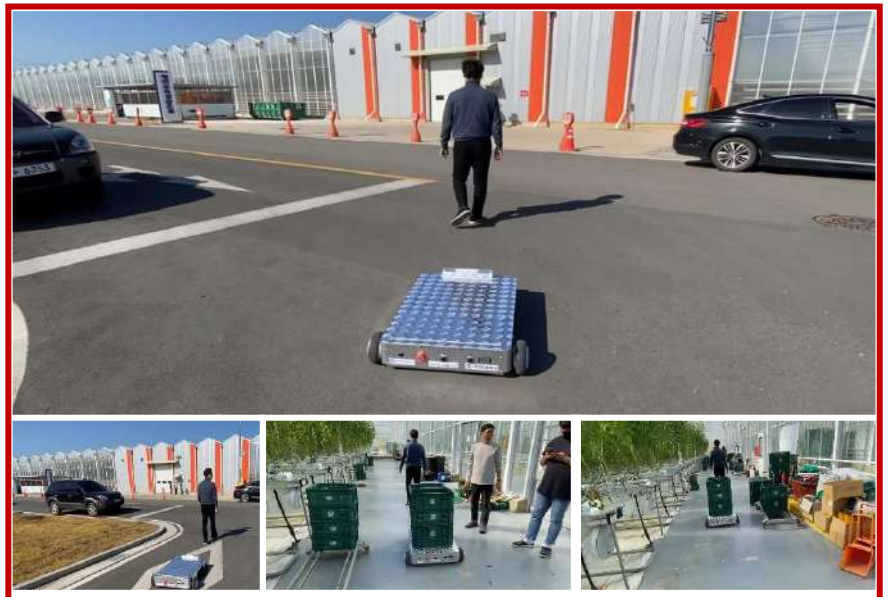
waveai is pioneering new markets through new applications of own technology.

AI based Human Follow Technology

Delivery mobility

This processes and operates sensor information based on AI(artificial intelligence) technology, and performs functions such as driving, avoidance, and return by recognizing commands through the operator's gestures.

Delivery Mobility is lighter and handy by reducing it's weight and size. It can load up to 150kg and provides remote control.

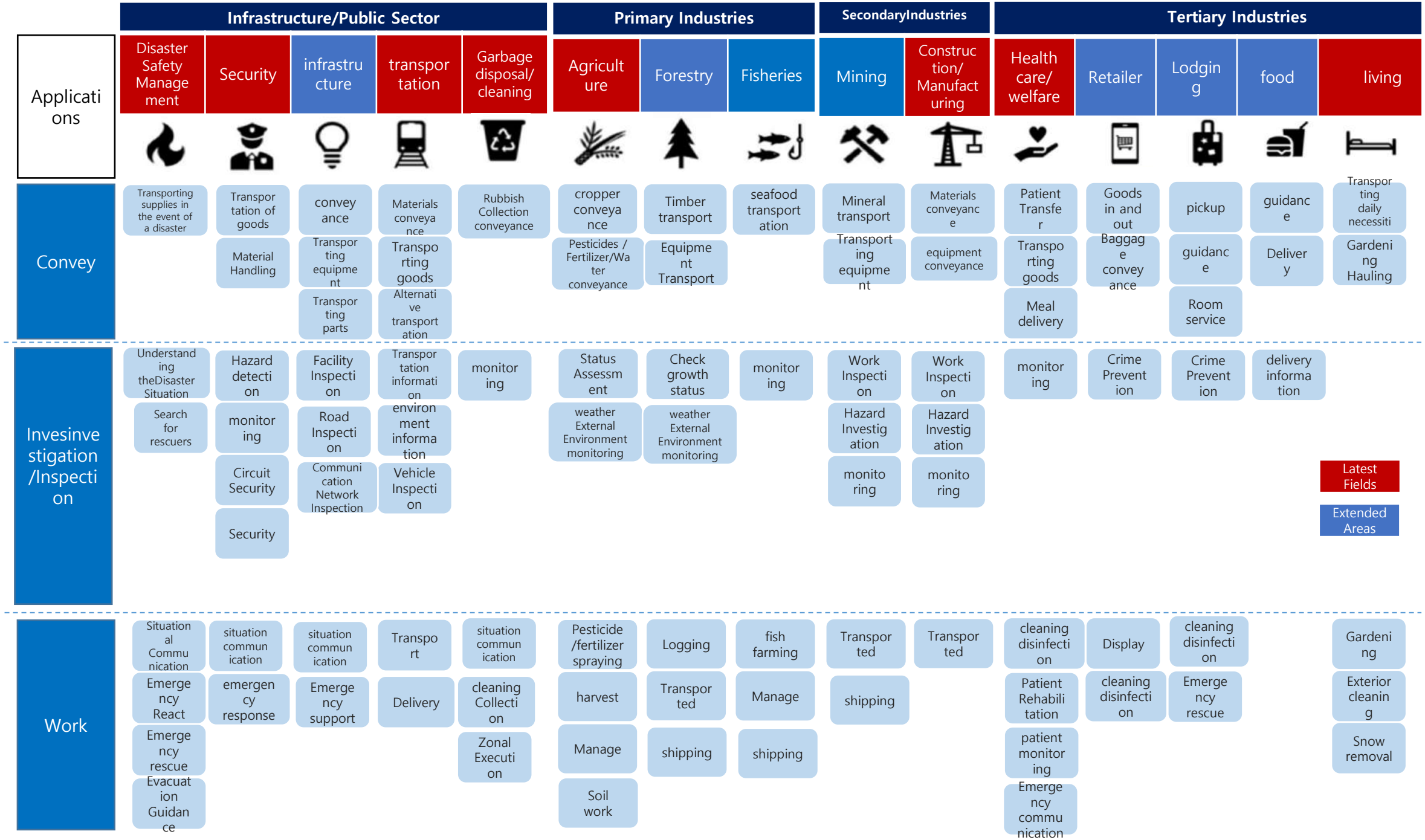


Smart farm mobility

Smart-farm mobility has docking carrier for additional loading and platooning function, remote control, wearable robots are applicable for productivity increase.

Agricultural mobility

Agricultural mobility operates in rough road and open Fields and carry up over 300kg. Remote control and return function are available for productivity , and e-call (emergency call), wearable robot minimizing fatigue from repetitive and heavy tasks are optional.


Infrastructure/Public Sector
Primary Industries
SecondaryIndustries
Tertiary Industries
Applications
Disaster Safety Management
Security
infrastructure
transportation
Garbage disposal/ cleaning
Agriculture
Forestry
Fisheries
Mining
Construction/ Manufacturing
Health care/ welfare
Retailer
Lodging
food
living
Convey
Transporting supplies in the event of a disaster
Transportation of goods
Material Handling
conveyance
Transporting equipment
Transporting parts
Materials conveyance
Transporting goods
Alternative transportation
Rubbish Collection conveyance
cropper conveyance
Pesticides / Fertilizer/Water conveyance
Timber transport
Equipment Transport
seafood transportation
Mineral transport
Transporting equipment
Materials conveyance
equipment conveyance
Patient Transfer
Transporting goods
Meal delivery
Goods in and out
Baggage conveyance
pickup
guidance
Room service
guidance
Delivery
Transporting daily necessiti
Gardening Hauling
Invesinvestigation /Inspection
Understanding theDisaster Situation
Search for rescuers
Hazard detection
monitoring
Circuit Security
Security
Facility Inspection
Road Inspection
Communication Network Inspection
Transportation information
environment information
Vehicle Inspection
monitoring
Status Assessment
weather External Environment monitoring
Check growth status
weather External Environment monitoring
monitoring
Work Inspection
Hazard Investigation
monitoring
Work Inspection
Hazard Investigation
monitoring
monitoring
Crime Prevention
Crime Prevention
delivery information
Latest Fields
Extended Areas
Work
Situational Communication
Emergency React
Emergency rescue
Evacuation Guidance
situation communication
emergency response
situation communication
Emergency support
Transport
Delivery
situation communication
cleaning Collection
Zonal Execution
Pesticide /fertilizer spraying
harvest
Manage
Soil work
Logging
Transported
shipping
fish farming
Manage
shipping
Transported
shipping
Transported
cleaning disinfection
Patient Rehabilitation
patient monitoring
Emergency communication
Display
cleaning disinfection
cleaning disinfection
Emergency rescue
Gardening
Exterior cleaning
Snow removal

Delivery Follower Robot

(handy carry)

(Command)
Gesture / motion

(Following)
Following the operator

(Obstacle detection/avoidance)
Obstacle detection

(standby)
for operator's next command

(following)
Recognizing operator and move

(finish operation)
Loading into the car

(Moving to the next place)

Technology

Sensor Tech. : Vision system integration
Software : AI based gesture recognition
Obstacle avoidance algorithm
DATABASE realtime upload

Application

Applications : (Office) Carrying goods
(Logistics) Delivery, Warehouse
(Home) Carrying goods
(Personal) Carrying goods

Agriculture (Fruit Tree) Follower Robot

(Start)
System ON

(Following command)
Gesture / Motion

(Following)
Following the operator

(Steep / Slope/ Rough)
Road operation

(standby)
for next command

(following)
Recognizing operator

(Autonomous driving)
Move to
designated point

(Obstacle detection
/avoidance)
Obstacle detection

(Unloading)
Unloading crops

(Return)
Return to the
operator

(Harvesting)
Following operator

Technology

Sensor Tech. : Vision system integration, SLAM
Software : AI based gesture recognition
Obstacle avoidance algorithm
DATABASE real-time upload
Remote control (wifi/Bluetooth/5G)

Application

Applications : (Agricultural/Orchard) Carrying crops/fertilizer /pesticide etc
(Industrial) iterative return operation, equipment transport
(Others) Repetitive transports

Smart Farm Follower Robot

(Move to WORKPLACE)
Go to Smart Farm

(Indoor Movement)
Moving within the smart farm

(Operator Recognition)
Recognizing new workers

(Obstacle Detection/Avoidance)
Obstacle Detection and Avoidance

(Smart Farm Control System)
Monitoring of location and usage time,etc

(Activate Follow function)
Operator Recognition with Follow function

(Command to follow after waiting)
Gesture Recognition within 15m

(Waiting for work)
Waiting for Operator Commands

Technology

Sensor Technology : Vision Technology, SLAM Technology
SW : AI-based gesture recognition technology
Obstacle avoidance algorithm, Databases |
Cloud real-time upload, Remote Control System

Applications

Application Areas: (For smart farms) Harvest, Goods carrying
(Worker Support) Carrying of small but heavy equipment
(For home use) Carrying Gardening Items

Industrial Follow Robot

(Easy Operation

Command of Follow function)
Motion / Gesture

(Following)
Worker Following

(Obstacle Detection/Avoidance)
Obstacle Sensing

(Wait)
Waiting for Operator Commands

(Following)
Operator Recognition
and Follow

(Complete of mission)
Completing the follow function

(Move after work completion)
Move to a place after
completing the task

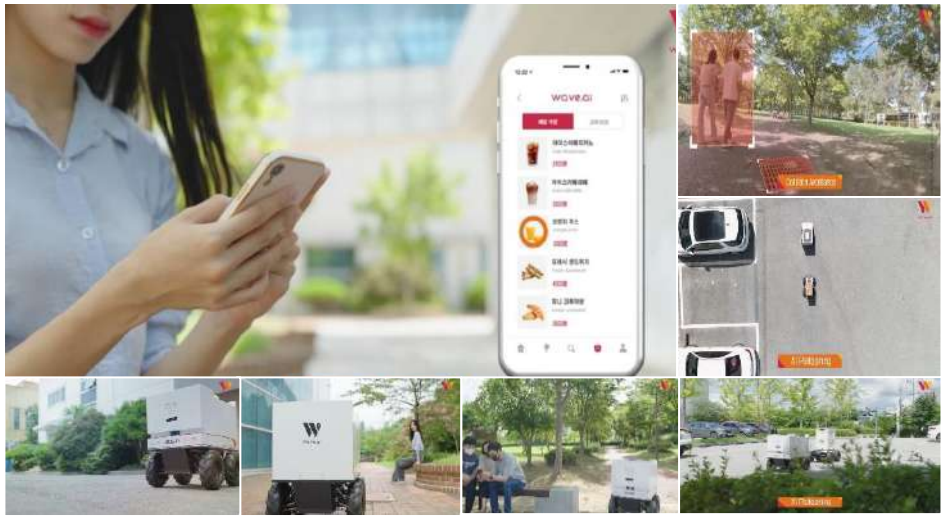
Technology

Sensor Technology : Vision Technology, SLAM Technology
SW : AI-based gesture recognition technology
Obstacle avoidance algorithm, Databases.
Cloud real-time upload, Remote Control System

Applications

Application: (Office use) for carry & move goods
(Delivery company) 택배용
(Home) For carrying goods
(Personal) Travel or Shopping

Fully Autonomous Mobility



Service robot based on autonomous driving technology)

Technology

-Autonomous driving technology
-SensorTechnology (GNSS, Lidar, Radar, Vision Integrated Technology)
-Obstacles Avoidance Algorithm-Mapping Technology

Autonomous parking system

Applications

- Customer service for distribution chains
-Replacement of Manpower/ Machine
-Mobile Charging Stations based on autonomous tech.
-Cleaningwith Autonomous tech.
- Autonomous Driving for the Military./Tactical Vehicles
- Autonomous Parking

Autonomous driving trailer (Autonomous driving technology-based carrier/trailer)

Autonomous Driving Vehicles (L3)

Options (wearable robots)

Manual Waist Support Wearable Robot for Worker Efficiency and Safety

"Heavy goods handling workers (agriculture, construction, logistics, etc.) High exposure to back injuries 63% of injuries resulting from industrial accidents are back injuries."

1. **For heavy loading and unloading operations**
2. **Muscle support system (legs, hips, back, etc.)**
3. **Supports 16 kg weight (Weight : 2..8kg)**
4. **Non-powered**
5. **Movement/work mode can be set**

Specification

Purpose of Use	Support worker's hip joint and lower back strength when handling heavy weights in construction and logistics fields
Power	Passive driving method, hybrid module can be replaced/extended
Dimension (W x D x H)	480mm(W) x 180mm(D) x 720mm(H)
Weight	L20P : 2.8kg / L10P : 2.4kg
Range of Motion (ROM)	Waist bending angle: ~+150°
Exercise Mode	Walking mode, Working mode
Degree of Freedom (DOF)	5 DOF (drive rotation with length adjustment)
Remarks	Easy on-off and to adjust the length Muscle support load (L20P:16kg / L10P:10kg)

Customizing Business area for Customers

1. Develop a following-system

Step 1
Requirements & Needs
Necessary following system Definitions and Detailed Needs Discuss features, etc.

Step 2
Specification & Function Design
Required Specifications and Functional design

Step 3
Sample Making & Testing
Confirmation of product function implementation through sample production and testing

Step 4
Completed system development
System Delivery

2. Electric Mobility (Hardware) System Development

Step 1
Requirements & Needs
Discussing mobility features and specifications needed by customers

Step 2
Specification & Function Design
Determine detailed system specifications and apply design

Step 3
Mobility production completed

3. Equipped with autonomous driving system

Step 1
Requirements & Needs
customer's needed driving zones/Define usage.

Step 2
Autonomous Driving System Design
Autonomous driving system design and customization design

Step 3
Implementation of sensor and SW development
Sensor application and program/algorithm development

Step 4
Development & System Mounting
Delivery of Autonomous driving system applied equipment