

January 28, 2022
ACSL Ltd.

Notice of Mid-Term Plan "ACSL Accelerate 2022"

ACSL Ltd. (ACSL) has decided to announce that it has developed a new mid-term plan, "ACSL Accelerate 2022," covering the period from fiscal year ending December 31st, 2022 to fiscal year ending December 31st, 2025.

With a mission of "Liberate Humanity through Technology" and a vision of "Revolutionizing social infrastructure by pursuing cutting-edge robotics technology," ACSL has been developing application-specific drones that can replace and evolve business operations with our proprietary control technology as core technology, and has been providing made-in-Japan secure drones to promote the social implementation of industrial drones.

The environment surrounding Japan's drone market has reached at a major turning point, with the government and major companies beginning to introduce drones on a full-scale basis, and a growing awareness of security leading to a switch to secure domestic drones. In addition, the legal regulations for the amendment of the Civil Aeronautics Act have been approved, and the movement toward the social implementation of drones is steadily progressing.

In order to realize the "Master Plan" for 2030, which was presented in the previous mid-term plan "ACSL Accelerate 2020," ACSL will update "ACSL Accelerate" on a rolling basis in accordance with the progress of our business and the changing business environment. ACSL has developed a set of mid-term plan, goals and key milestones to ensure that all stakeholders involved, both internal and external, focus on common value creation for our clients and continuous corporate value growth.

An overview of this mid-term plan is shown in the Appendix.

Attention

This document is an unofficial translation of the timely disclosure on January 28, 2022 by ACSL and this is for reference purpose only. In case of a discrepancy between the English and Japanese versions, the Japanese original shall prevail.



ACSL Accelerate 2022

ACSL Ltd.
January 28, 2022

CONFIDENTIAL

This materials should not be used without prior consent from ACSL Ltd.

Agenda

- 1 Overview of the Drone market
- 2 ACSL Future Vision and positioning of the Mid-term Plan "ACSL Accelerate"
- 3 Mid-term Plan "ACSL Accelerate FY22"
- 4 Appendix

Macro environment surrounding drone market



Macro environment surrounding the drone market has changed in Japan,
all of which are tailwinds toward market growth

01

Economic Security

Awareness increasing around data security and technology leaks, leading to domestication and demand for secure drones

02

De-carbonization Clean Energy

Increase in clean energy asset investment creating more O&M demand. Trend to see drones as de-carbonization technology

03

Digital Garden City, Smart city

Increase in use of drones for deliveries and inspections to realize sustainable, regional development

04

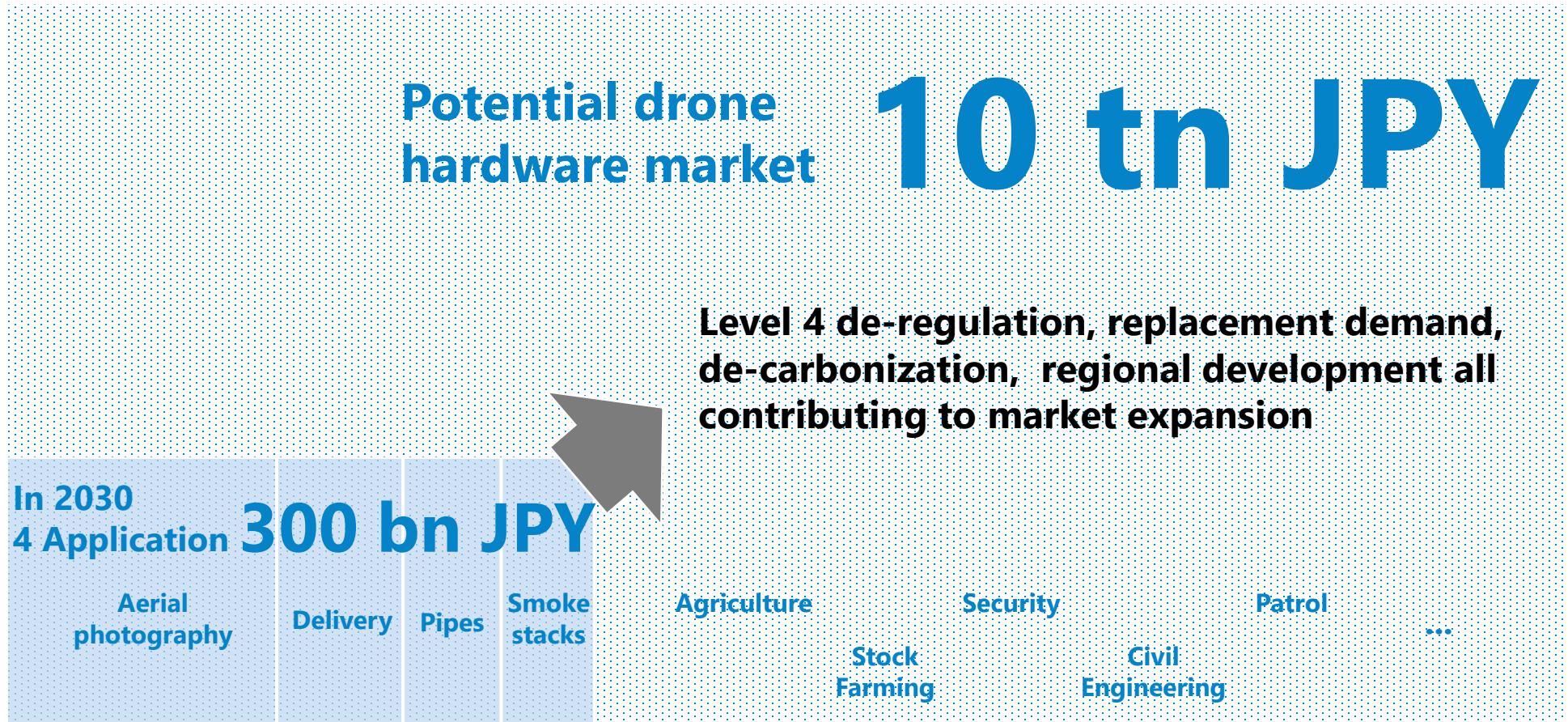
Aviation Law revision (aka Level 4)

Aviation Law revised to allow flight over manned areas and establish official drone pilot license in FY22

Potential drone market



Macro environment will accelerate the growth of drone hardware market in Japan,
unlocking a huge potential



Note: Company estimates based on the following information

Ministry of Land, Infrastructure, Transport and Tourism, "Trends Surrounding Logistics"

Ministry of Land, Infrastructure, Transport and Tourism, "Conditions Surrounding Infrastructure Maintenance"

Cabinet Secretariat, "Estimation of the size of the private sector market for national land fortification"

Great market momentum – call it the “Era of the Drones”

Top-tier companies and governments have shifted to implementing drones for practical use.

In addition, a huge replacement demand arising from economic security demands

1 Commitment to practical implementation

- Top-tier companies have made official decisions to implement drones to their practical operations (e.g., Japan Post Capital invested 3 bn JPY to ACSL)
- Fire department announced to implement drones to all 700 fire stations across Japan

Mass production, ISO
Maintenance
After service
Quality

2 Domestication driven by need for security

- Top-tier companies (e.g., NTT/Utility company)² made decisions to procure domestic drones for security reasons
- Government announced to only procure “secure” drones and replace all non-secure drones

Domestic products
Security
Procurement assurance
Safety and security

1: NHK, "Drones to be deployed at firefighting headquarters nationwide to assess damage in the event of a disaster."

2: Nihon Keizai Shimbun, "Chinese drones are being eliminated."

Drone market value-chain and where ACSL stands



ACSL, the only listed drone manufacturer, has the capability to provide both agile prototyping and mass production to meet a wide-range of customer demands



Solution development

Sales of platform drones for testing, trials and customized developments



Application-specific drone sales

Development, production and sales of mass-produced drones for specific-applications

Systematization

Sales and support

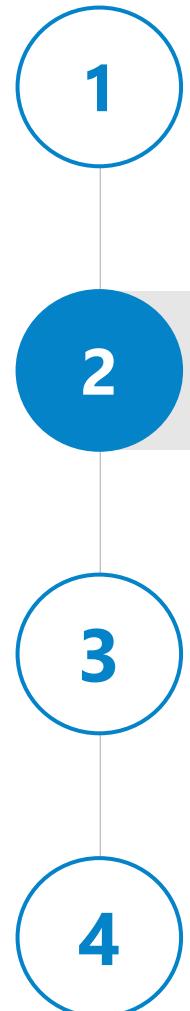
The only listed drone manufacturer out of 700 drone related companies

Japanese mass production capability

**ISO 9001 (Quality)
ISO 27001 (Security)**

Proprietary autonomous control system

Agenda



- 1 Overview of the Drone market
- 2 ACSL Future Vision and positioning of the Mid-term Plan "ACSL Accelerate"
- 3 Mid-term Plan "ACSL Accelerate FY22"
- 4 Appendix



**Eliminate “severe labor” to realize a
free, open and sustainable world**

Ultimate problem statement – imbalance in labor force



Labor-savings and unmanned operations are an urgent social issues to solve, as demand and supply of labor force is becoming more and more imbalanced

Demand for labor force

50-yrs old
infrastructure¹

x 2.5
(2018~2023)

Logistics flow²

x 5
(1988~2018)

Supply of labor force

Population
decline rate³

-26%
(2020~2060)

Labor force⁴

-35%
(2020~2060)

1: Ministry of Land, Infrastructure, Transport and Tourism, "Social Infrastructure Today and in the Future, Social Infrastructure Today and in the Future"

2: Ministry of Land, Infrastructure, Transport and Tourism, "Fiscal Year 2018 Delivery Service Performance Data" (Japanese only)

3: "White Paper on Aging Society 2019" by the Cabinet Office

4: "White Paper on Aging Society (Entire Version)", Cabinet Office



MISSION

Liberate humanity through technology

VISION

Revolutionizing social infrastructure by pursuing cutting-edge robotics technology

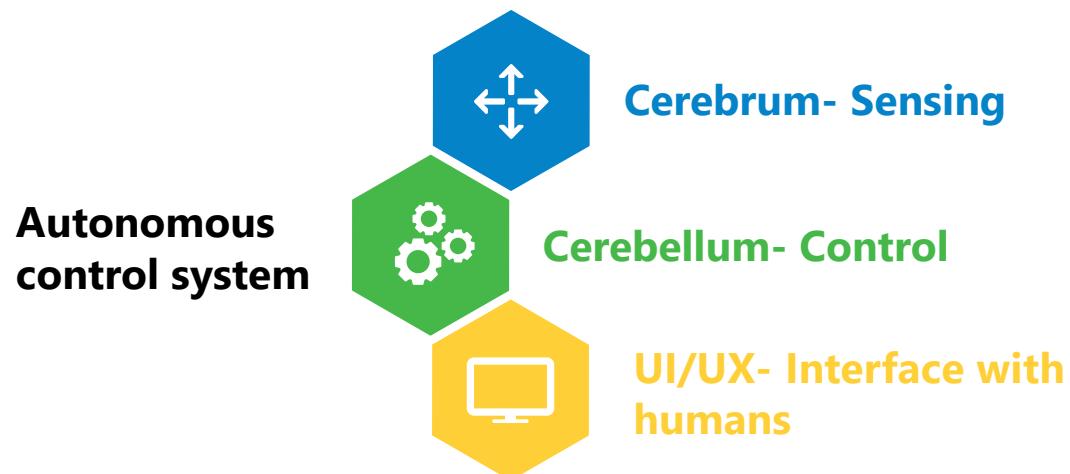
ACSL, a drone manufacturing pioneer in Japan



ACSL is a drone manufacturer that develops application-specific drones to upgrade operations at client site, using its proprietary autonomous control technology

Core technology: Autonomous Control System

Proprietary control technology consists of the "cerebrum", which actively grasps the surrounding environment, the "cerebellum", which controls movement of robotics and "UI/UX" that serves as the interface with humans



Competitive advantage: client know-how

Work closely with clients to understand their operations as well as their true pain points. Develop drones tailored for individual applications through trials and testing.



Potential of our autonomous control system

ACSL's proprietary autonomous control system is being matured in drones, one of the most difficult robotics environments, and this technology can be adapted to a wide variety of robotics

Autonomous control system

Cerebrum- Sensing

Technology that uses sensors such as cameras and lidar to actively understand one's surrounding environment.

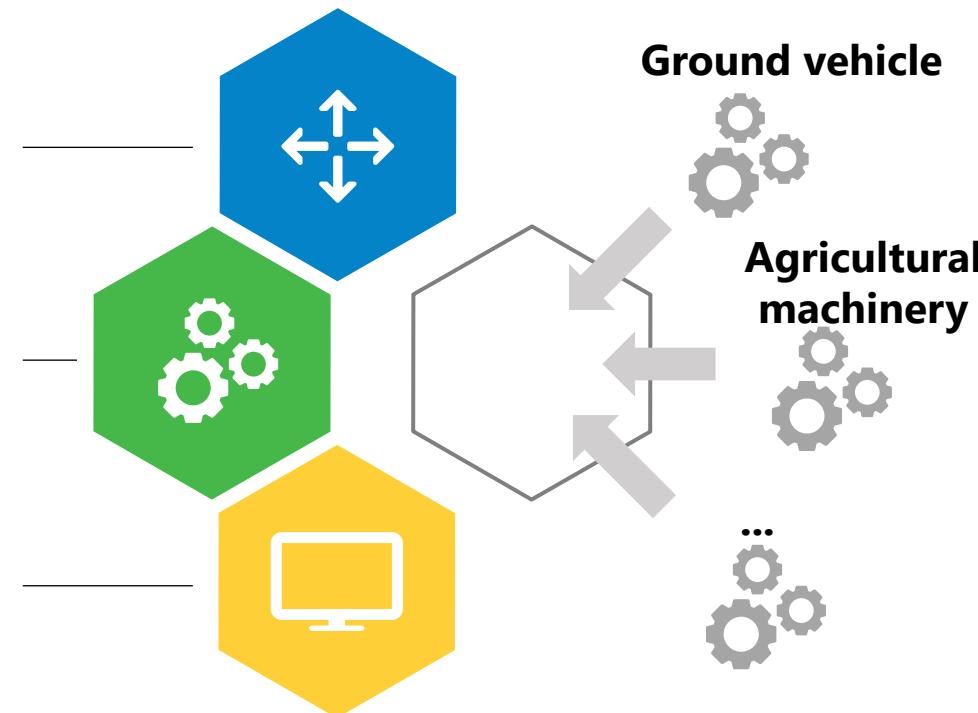
Cerebellum- Control

Technology that controls operations such as posture, orientation changes, and movement based on information from the cerebrum.

UI/UX- Interface with humans

Technology that enables humans to interact with robots, such as monitoring their status and issuing commands.

Adaptation



Autonomous control systems can be adapted to a wide variety of robotics to enable them to be autonomous

“To-Be” state in 10 years



In August 2020, the ACSL defined a master plan that set the “To-Be” state in 10 years

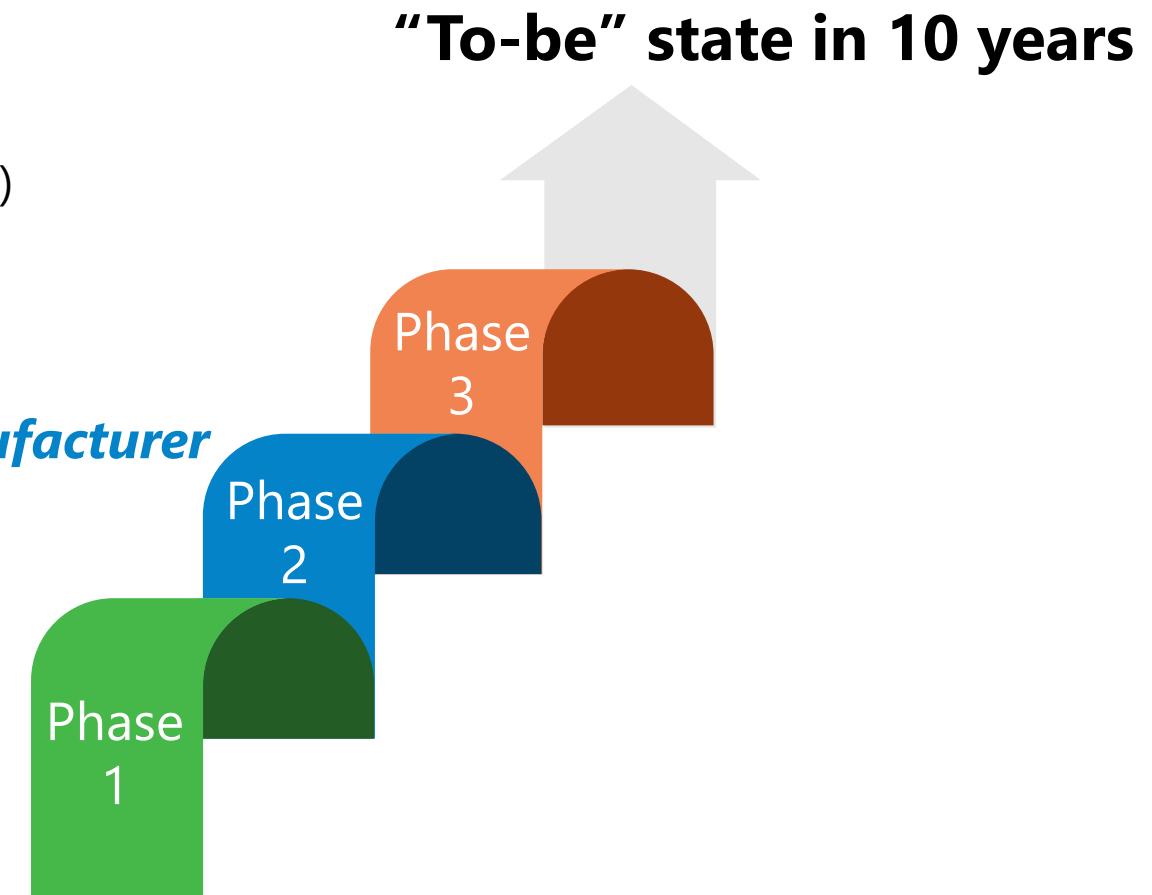
- 1 Global Pioneer in solving social infrastructure issues
- 2 More than 100 bn JPY sales, 10 bn JPY sales profit
- 3 Mass production manufacturer that produces 30,000 units/year
- 4 Supporting the country with de facto standards
- 5 Developing cutting-edge technologies for autonomous control
- 6 Nurturing the industry's most advanced and talented human resources
- 7 Constantly working to improve its corporate value and financial KPIs

Mid-term plan “ACSL Accelerate”

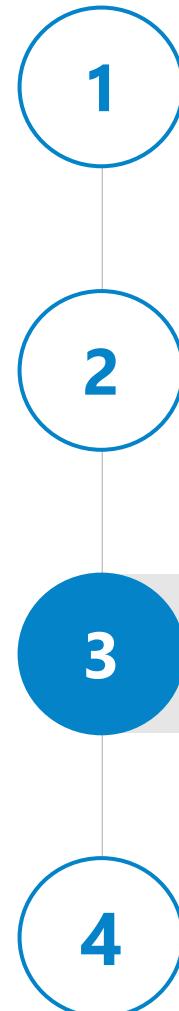


To realize the “To-Be” state in 10 years, ACSL has defined a mid-term plan called the “ACSL Accelerate”. It is a rolling plan that adapts to rapid changes in the business environment

- 3 ACSL Accelerate FY24 (planned; 2024-26)
- 2 **ACSL Accelerate FY22 (2022-25)**
Shift to a sustainable global manufacturer
(This document)
- 1 ACSL Accelerate FY20 (2020-22)
From Prototype Factory to Mass Production Manufacturer



Agenda



- 1 Overview of the Drone market
- 2 ACSL Future Vision and positioning of the Mid-term Plan "ACSL Accelerate"
- 3 Mid-term Plan "ACSL Accelerate FY22"
- 4 Appendix

**Shift to a sustainable
global manufacturer**

ACSL Accelerate FY22 Business Strategy



In addition to developing mass production drones, ACSL will accelerate entering to India, as well as strengthen ESG initiatives, and seek for adaptation of our core technologies to other fields

ACSL Accelerate FY22

**Shift to a sustainable
global manufacturer**

**Development and commercialization of
four application-specific drones**

**Development of new applications drones
and compliance with security**

Full-scale launch to the Indian market

Strengthen ESG initiatives

**Exploring potential adaptation of
autonomous control systems to other fields**

Commercialization of four application-specific drones



Focus is to strengthen nation-wide commercial activities for the two launched products SOTEN and Fi4, and accelerate development of mass production model for the remaining two applications



Aerial photography
(SOTEN)

- Launched Dec 2021
- Secure small aerial photography drone for government procurement and private companies.



Pipe inspection
(Fi4)

- Launched May 2021
- Drones to inspect pipe structures such as sewers and drains



Smokestack inspection

- Under development
- Drones capable of flying in GPS-denied cylinder structures, smokestacks and water-pressure towers



Delivery

- Under development
- Delivery specialized drones capable of carrying a 5 kg payload, with +20km flight distance

Development of new application drones

ACSL will initiate development of additional application-specific drones based on intel gathered from various successful trials. Furthermore, all products will comply with the market security trends

Demonstrated applications (examples)



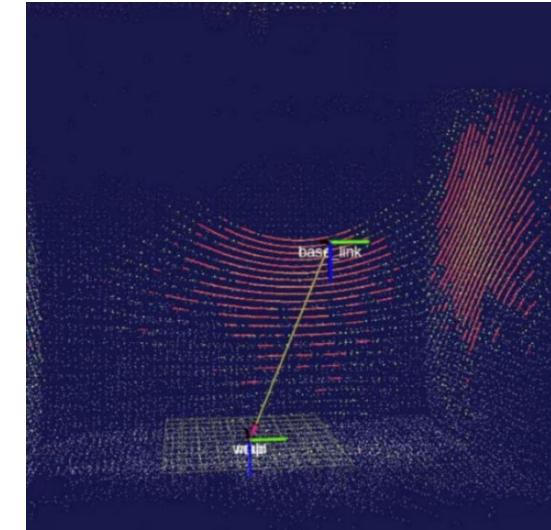
Wind turbines

Automated blade inspection for wind power generation



Indoor inspection

Automation of indoor inspection at construction sites, power plants, etc.



Ships

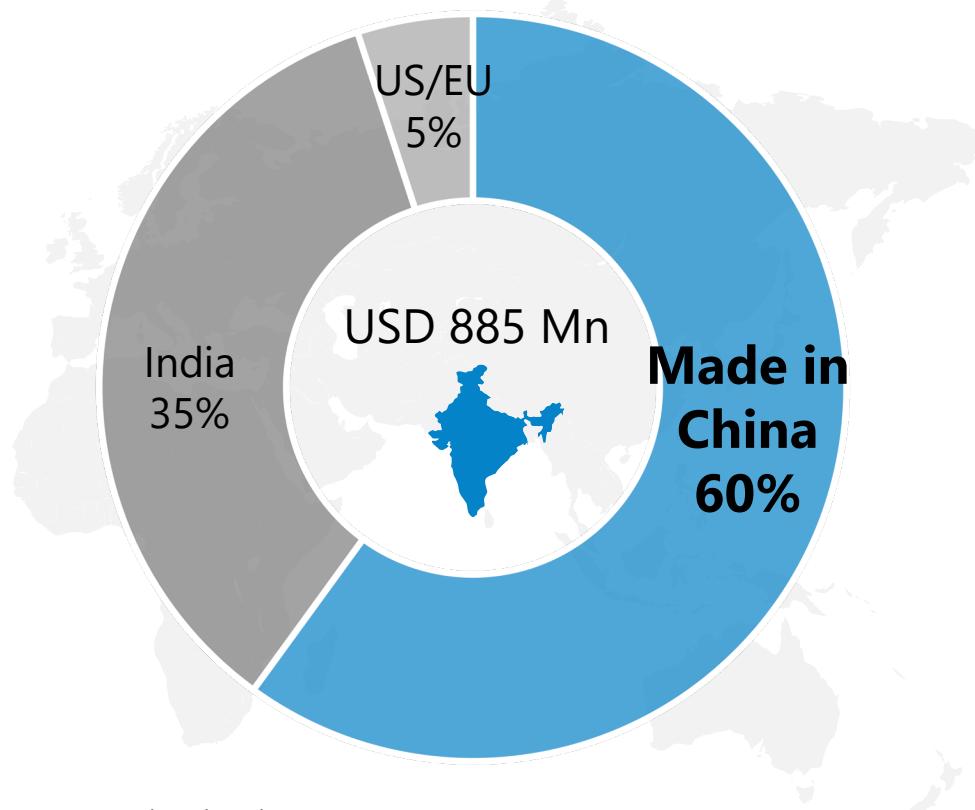
Cargo hold inspections for tankers and cargo ships

Full-scale launch to the Indian market



With the increasing awareness in economic security, ACSL will partner with local companies to capture the replacement demand for Chinese drones

Drone origin in India Market (2021)



Source: Research and Markets

Launch of ACSL India, a local JV

Active employment of local talents and establishment of manufacturing, sales, and maintenance operations

Launch of secure drones, SOTEN and PF2

Obtain local sales certification (QCI) for SOTEN and PF2, both of which comply with the demand for higher security

Business collaboration with local companies

Build local use cases through collaboration with local companies and participate in major drone related exhibitions in India

Public affairs

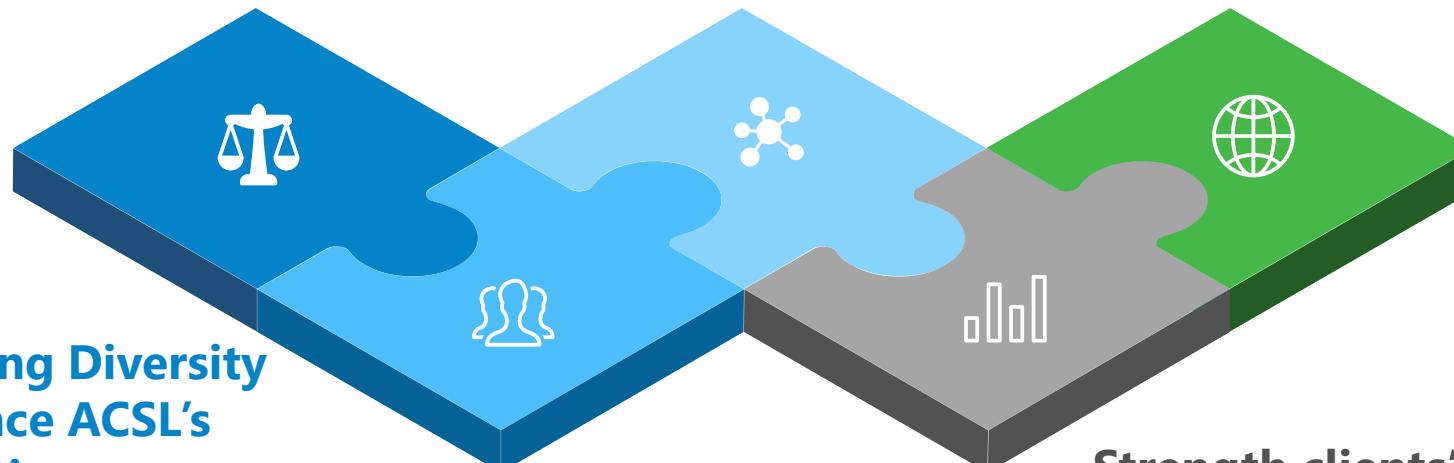
Actively share information with local regulator to accelerate deregulation and technology adaptation for Japanese drones

Strengthen ESG initiatives

To build our competitive advantage, ACSL will strengthen ESG initiatives that will ultimately contribute to upscaling clients' competitiveness and social resilience.

Governance throughout ACSL activities

Maximize organizational strength and strengthen governance as the foundation of ACSL's corporate activities



Leveraging Diversity to enhance ACSL's competitiveness

- Strengthen diversity
- Diverse work styles and career development

Technology for sustainability

- Regional revitalization and development
- Strengthen disaster prevention/response and environmental initiatives

Realizing a free, open, and sustainable World

Strength clients' competitiveness and social resilience

Examples of existing ESG initiatives

ACSL is already working on a number of ESG initiatives, most of which has turned into positive output and competitive advantages

E



Disaster relief support
Marine garbage
identification

Free drone support in times of disaster as ACSL's own CSR initiative.

Treaty with Self Defense Force.



Development of solutions to solve marine garbage issues in Project IKKAKU



S



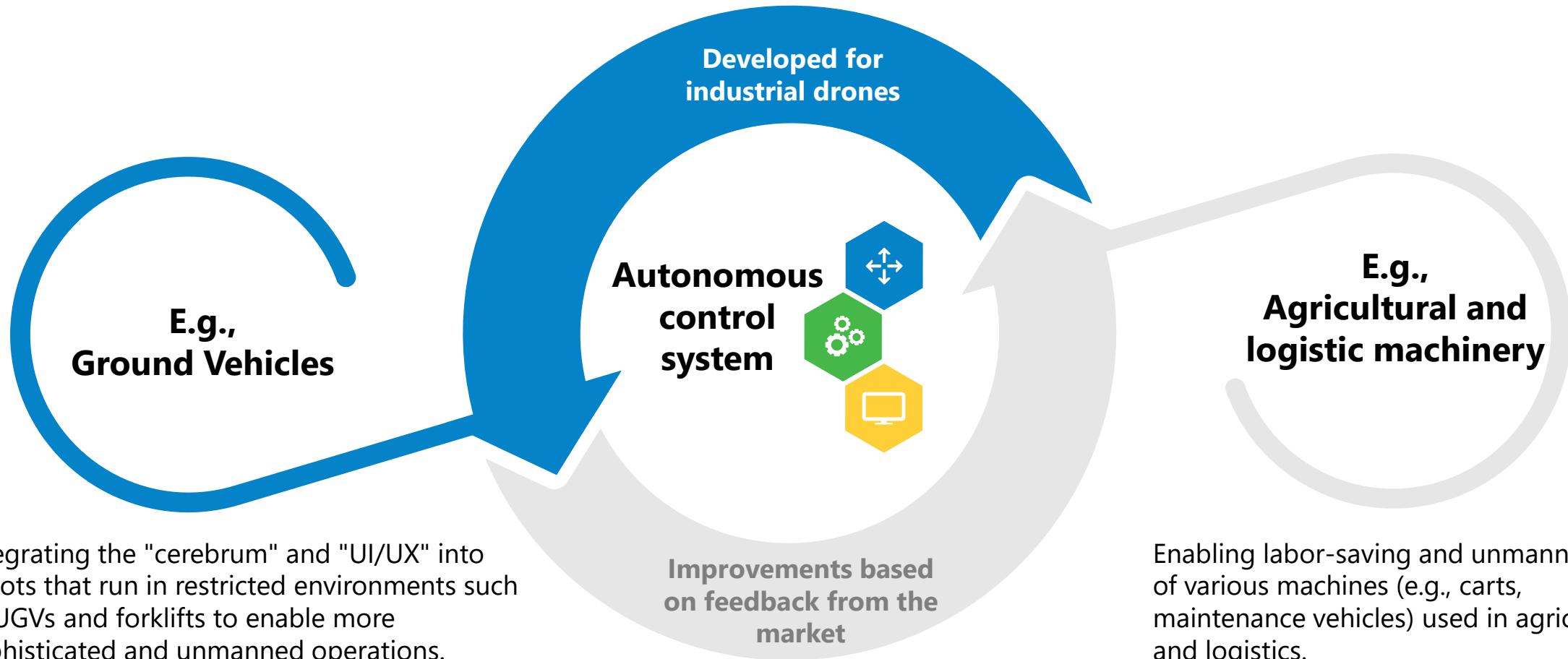
Diversity throughout R&D team

Ph.D. holders	Approx. 15 %
Foreign Members	Approx. 50 %
Nationality	17 countries



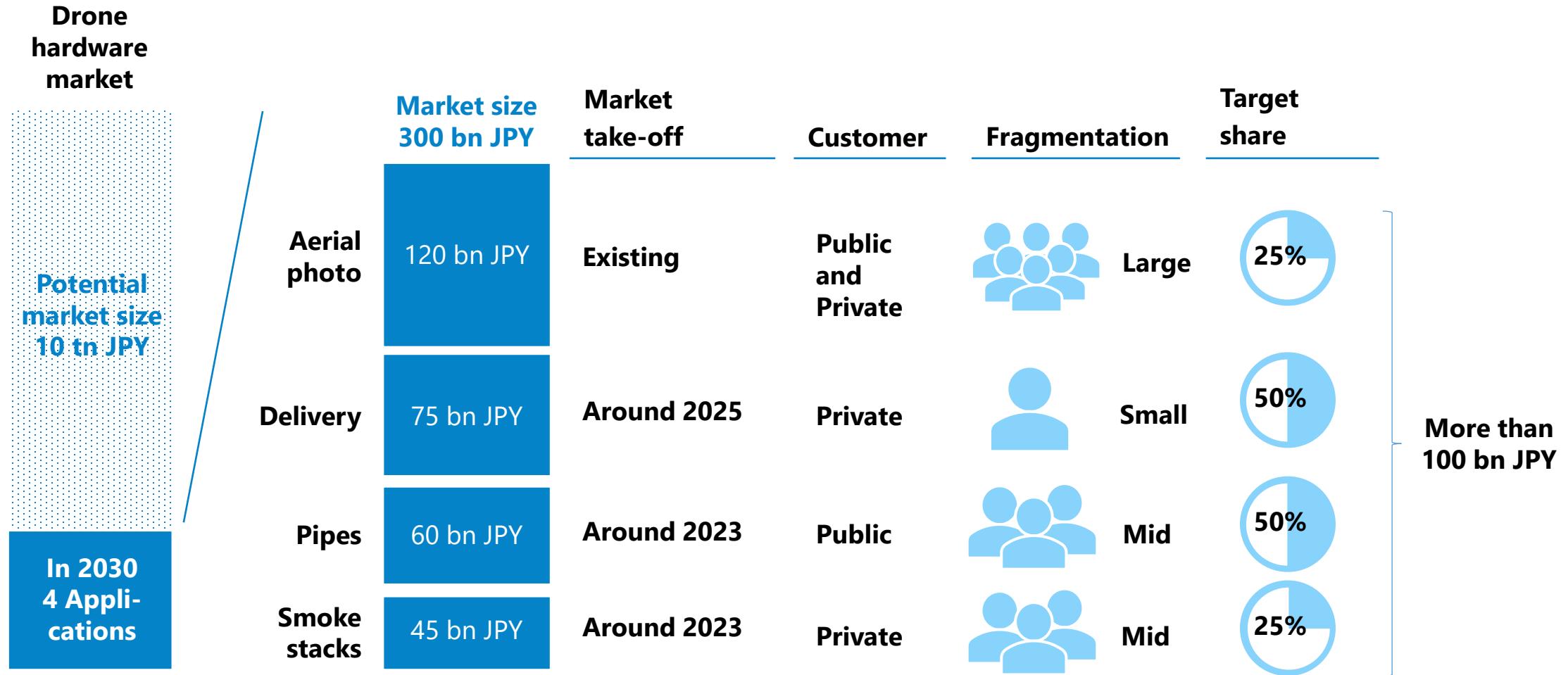
Exploring adaptation of autonomous control systems

ACSL will explore potential adaptation of autonomous control systems matured through industrial drone development to other robotics to promote unmanned system in other fields



Targeting 100 bn JPY sales in 2030

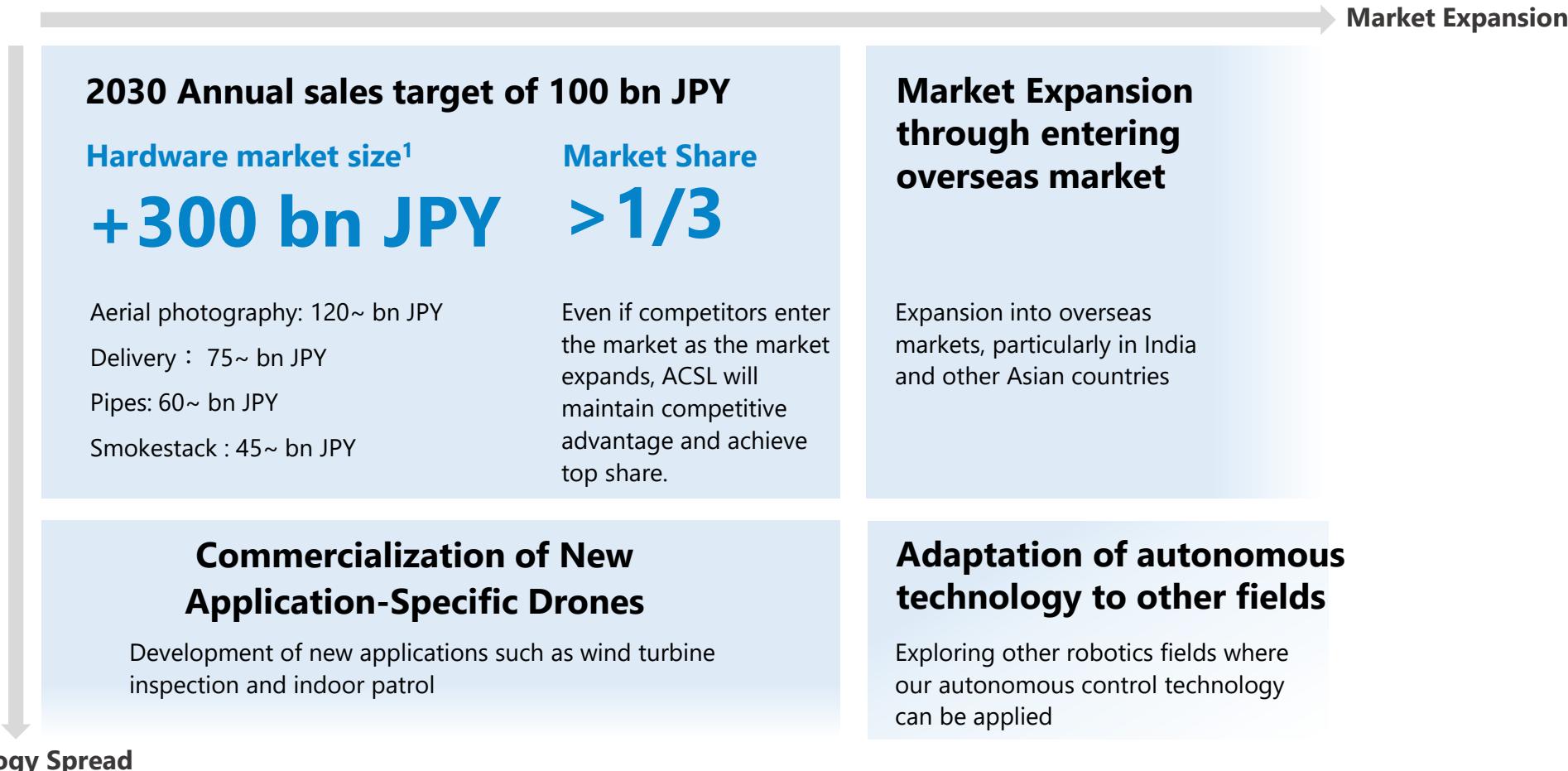
In 2030, ACSL will mass-produce four application-specific drones
to achieve a sales of more than 100 bn JPY



Further expansion with additional successful initiatives



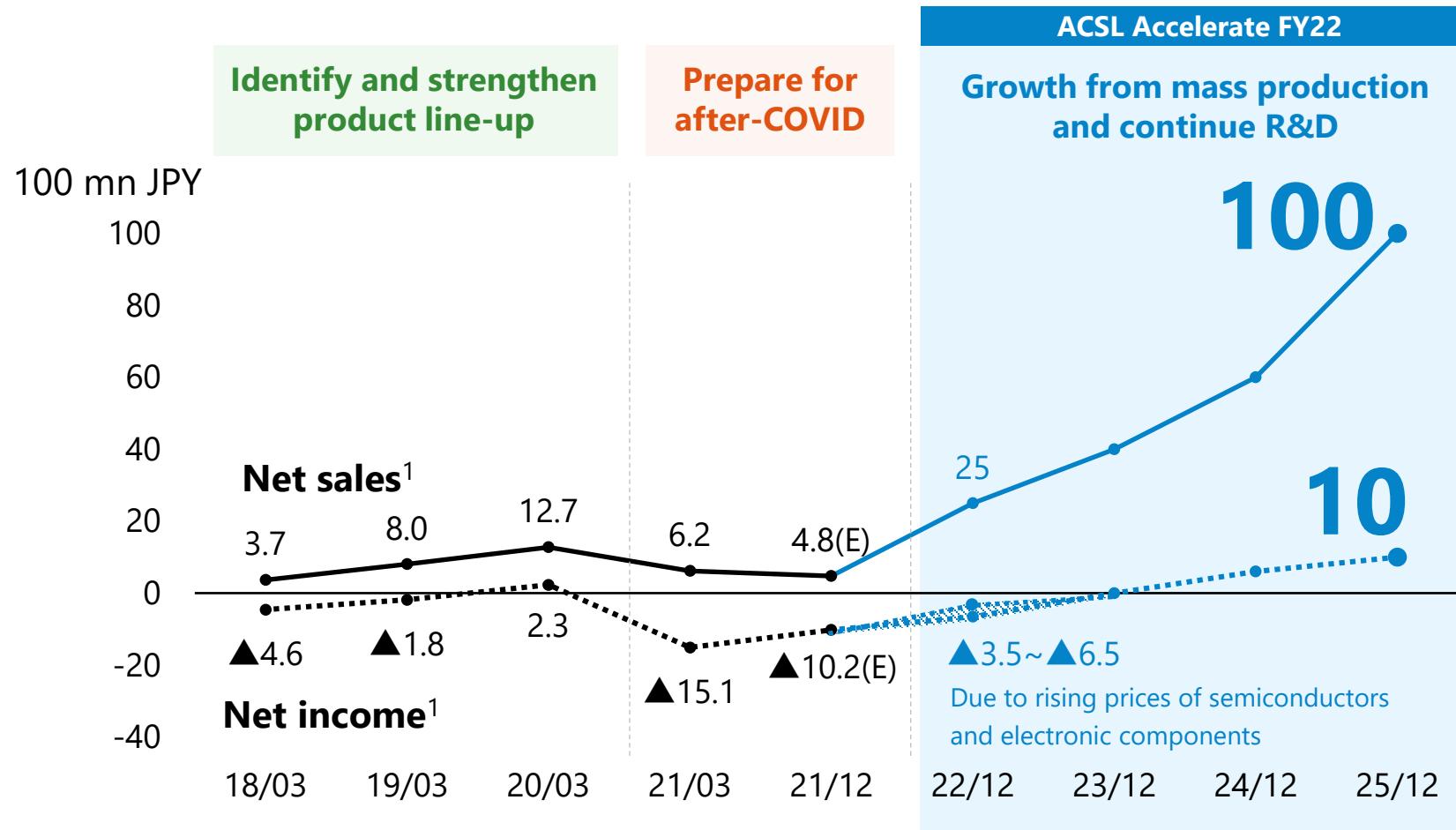
Oversea market entry, development of new applications, and adaptation of autonomous control systems to other fields will provide opportunities for further growth.



ACSL Accelerate FY22 financial target



At the end of the mid-term plan, ACSL aims to achieve sales of 10 bn JPY and net income of 1 bn JPY in 2025



Financial Policies for ACSL Accelerate FY22

- Establishing a profitable structure in-line with 2030
- No large-scale capital investments to production facilities
- Continue strategic upfront investment in R&D
- Secure cash for investment in overseas expansion, M&A and growth projects

1: Actual results up to FY 21/03, forecast for FY 21/12 announced on November 2021 and it is irregular 9-month results

Target figures for FY22/12



In 2022, with the start of mass production of application-specific drones, ACSL will increase drone sales and ship more than 1,100 units in total

Target figures	
Net sales	2,500 mn JPY
R&D expenses	600 mn JPY~
Net income ¹	▲650 mn ~▲350 mn JPY

Sales composition		
	Unit	Sales (100 mn JPY)
Sales of application-specific drones	1,100~	12
Aerial photography	1,000~	10
Other applications	100~	2
Solution development	~150	12
PoC and custom development	-	7
Sales of platform/evaluation drones	~150	5
Other	-	1

1: The upper limit of net income assumes that the impact of the semiconductor shortage and soaring prices of electronic components will be resolved by the end of the year, and the lower limit assumes that the impact of the semiconductor shortage will continue throughout the year and that we will flexibly invest in R&D upfront.

Possible risks and responses

Item	Major Risks	Our recognition and risk response measures
Customer demand trends	<ul style="list-style-type: none"> ▪ Emergence of competitors as drone manufacturers, entry of new companies ▪ Delay in drone utilization due to mismatch with customer needs ▪ Loss of public trust due to serious accidents by drones, including those caused by other companies, and delays in customer adoption 	<ul style="list-style-type: none"> ▪ In the development of autonomous control systems for industrial drones, verification in the actual field is of utmost importance, and considering security measures, there are currently few competitors and the barriers to entry are high. ▪ With a strong customer base, ACSL promotes the development required for specific applications through dialogue with customers and demonstration in real environments. ▪ We place the highest priority on the safety design of the drone.
Manufacturing and supply system	<ul style="list-style-type: none"> ▪ Insufficient manufacturing capacity when sales volume increases 	<ul style="list-style-type: none"> ▪ As a fabless manufacturer, we outsource to external partners and can handle increased production capacity.
regulation	<ul style="list-style-type: none"> ▪ Delay in implementation of Level 4 regulations due to delay in development of Civil Aeronautics Act, etc. ▪ Possibility of being affected by laws and regulations and local business practices in overseas expansion 	<ul style="list-style-type: none"> ▪ Aviation law passed the diet; Level 4 regulation is expected to be in place by fiscal year 2022 ▪ When expanding overseas, consider possible risks with the cooperation of domestic and overseas specialized organizations.
Acquisition of human resources	<ul style="list-style-type: none"> ▪ Delays in hiring plans, especially for R&D personnel, and outflow of core human resources 	<ul style="list-style-type: none"> ▪ By requiring development staff to speak only English, we are able to acquire mainly foreign members with cutting-edge technology.
Cost	<ul style="list-style-type: none"> ▪ Increase in material cost sales ratio due to sharp rise in semiconductor prices ▪ Need to invest aggressively in R&D 	<ul style="list-style-type: none"> ▪ Semiconductors volume for recent use are secured. ▪ Flexible investment policy in R&D for future business expansion

Agenda

- 1 Overview of the Drone market
- 2 ACSL Future Vision and positioning of the Mid-term Plan "ACSL Accelerate"
- 3 Mid-term Plan "ACSL Accelerate FY22"
- 4 Appendix

Company Outline

Industrial drone manufacturer



Corporate Name

ACSL Ltd.

Representative

Satoshi Washiya (President and COO)

Establishment

2013 November

Location

Hulic Kasai Rinkai Building 2F, 3-6-4 Rinkaicho, Edogawa-ku, Tokyo 134-0086, Japan

Capital

4,500 mn JPY (as of 2021 September)

Number of Employee

74 (as of 2021 December)

Description of Business

Manufacturing and providing industrial drone and providing solution service for automation with autonomous technology

ACSL Business



Business constitutes of demonstration and sales of platform drones and promoting development, mass- production, and sales of application-specific drones.



Solution development

Sales of evaluation and platform drones for technology verification, as well as proof-of-concept trials and custom development based on customer requests



Sales of application-specific drones

Development, mass-production, and sales of application-specific drones using the knowledge gained from the demonstration tests

Competitive landscape

Drones for industrial purposes are different from that of Consumer use. Industrial drones tends to be application specific, as one-fits-all does not work for all use cases.

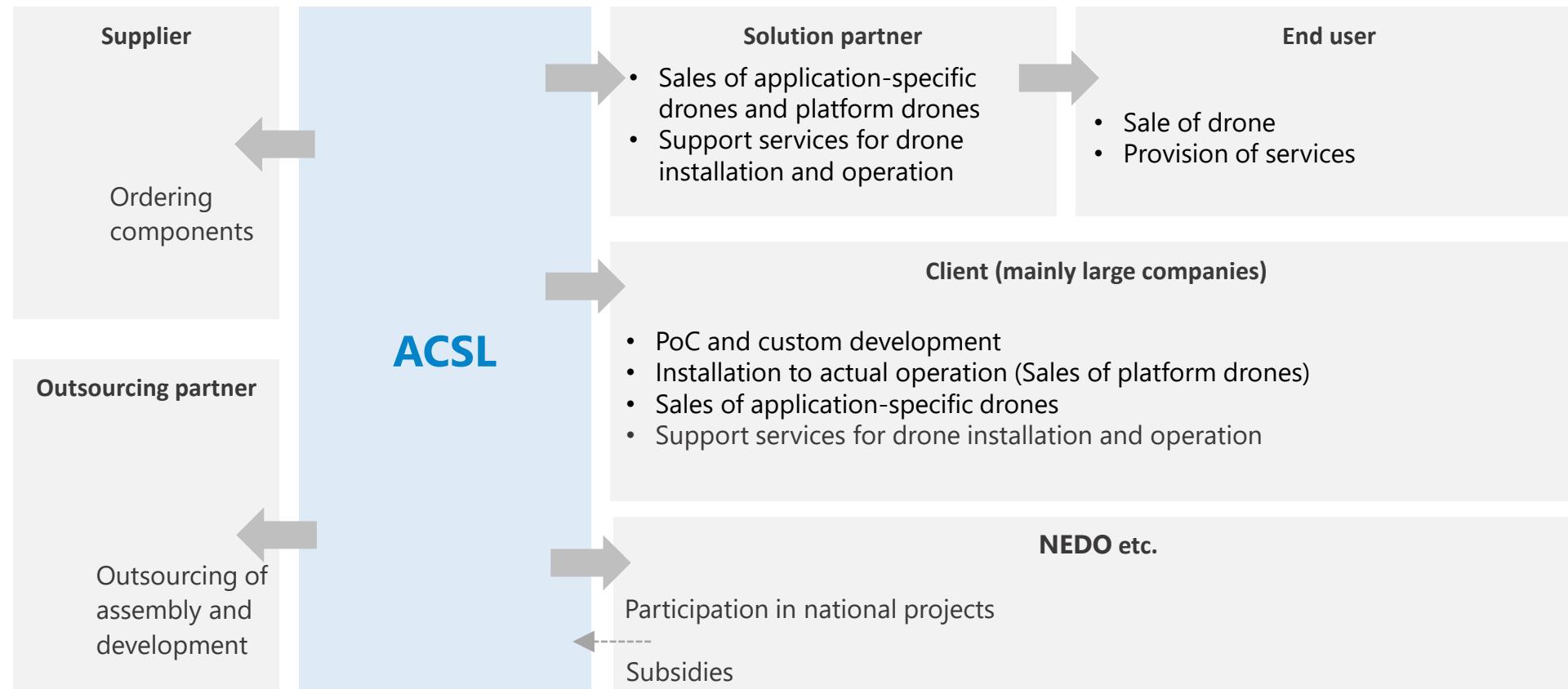
Key market segments

 ACSL product

Consumer (B to C)		Industrial (B to B)			
Aerial	Inspection	Logistics	Disaster Prevention		
General purpose Can be applied for multiple purpose	Mainly inexpensive foreign-made general-purpose drones	 Platform PF2 Other companies: Mostly foreign-made general-purpose drones with GPS support	 Platform PF2 Other companies: Mainly large logistics drone such as foreign-made VTOL drone	 Platform PF2 Other companies: Mainly foreign-made general-purpose drone	
Application-specific Optimized performance and specification for each application	No application-specific drone for consumer use	 Small aerial  Smokestack  Enclosed environ. Other companies: Limited number of drone for each inspection application	 Delivery (Level 4) Other companies: Very limited number of drone with Level 3 or higher safety performance	 Small aerial Other companies: Limited number of drone with flight performance and safety features for disaster prevention applications	

Business model of ACSL

The main source of revenue is the provision of services for demonstration and the sale of drone to client companies



Management Team (as of Dec 31, 2021)



**President
and COO**

Satoshi Washiya

M.S. of Architecture from Waseda University. Served both domestic and multinational companies in corporate wide transformation projects at Tokyo and Stockholm office of McKinsey & Company. Joined ACSL in July 2016.



Chairman

Dr. Hiroaki Ohta

Ph.D. from Kyoto University. Assistant professor at Department of Aeronautics and Astronautics, Kyoto University, followed by research scientists at University of California, Santa Barbara. Also served as Technical Advisor for a start-up in Silicon Valley. McKinsey & Company from 2010. Joined ACSL as in July 2016.



CFO

Kensuke Hayakawa

M.S. of Management of Technology from Tokyo institute of technology. Implemented operational improvement/transformation of Portfolio companies at KKR Capstone. Joined ACSL as CFO in March 2017.



CTO

Dr. Chris Raabe

Ph.D. from University of Tokyo. Embedded software engineer at Boeing from 2006. Assistant professor at Department of Aeronautics and Astronautics, University of Tokyo from 2014. Joined ACSL as CTO in April 2017.

**External
Director**

Masanori Sugiyama

**Audit & Supervisory
member**

Akira Ninomiya

**Audit & Supervisory
member**

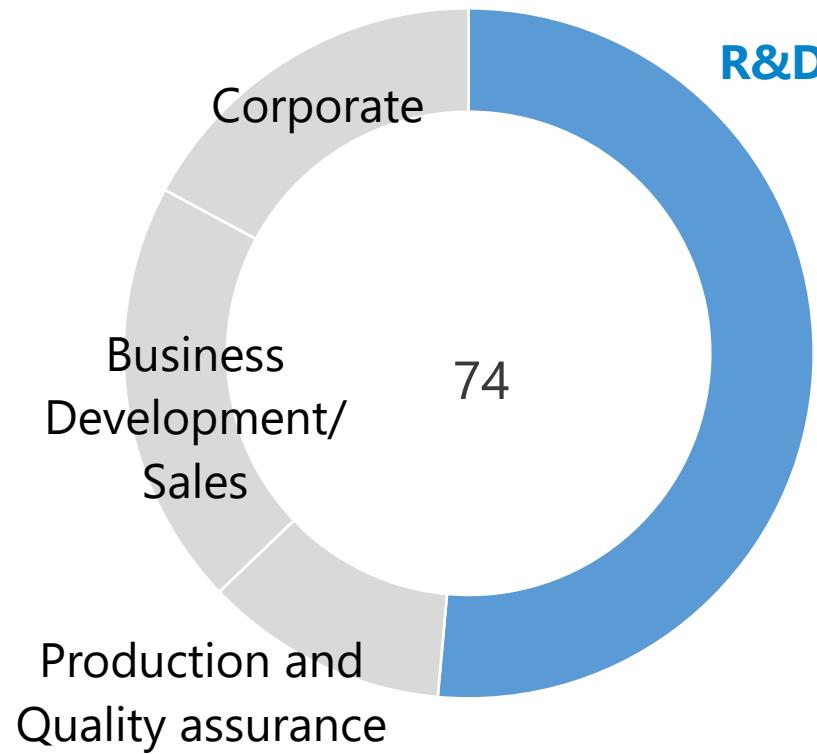
Hideki Shimada

**Audit & Supervisory
member**

Takeshi Ohnogi

R&D team (as of Dec 31,2021)

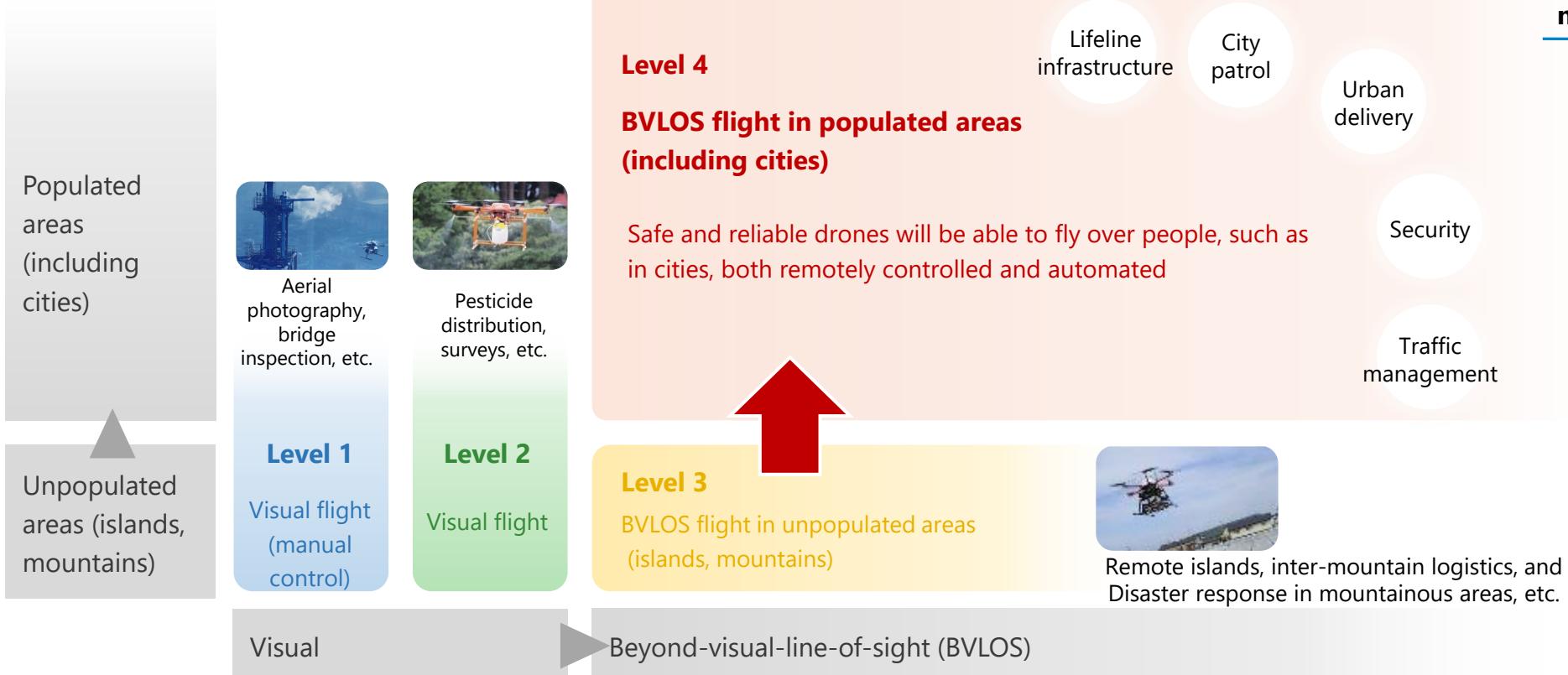
Continued to expand the team by selecting and hiring top talented engineers to build a competitive R&D team . The team consists of a diverse group of highly skilled engineers.



Deregulation of Level 4 flights

Regulations for level 4, beyond-visual-line-of-sight (BVLOS) flight in populated areas (including urban areas), are expected to be in place by FY2022, creating a huge market

Classification of industrial drone market¹



Potential of Level 3, Level 4 market (Example)

- **Delivery shifts to the sky**
 - Post Office 24,000 offices
 - Populated islands 416 islands
- **Labor saving in inspection**
 - Smokestacks 90k stacks in JPN
 - Water pipelines 470k km
- **Risk saving for dangerous tasks**
 - Large disasters 67 cases (2011-18)

Increased economic security and security awareness

The Japanese government is demanding security measures for drones as well as 5G devices, and is becoming increasingly conscious of economic security

Regulation to promote drone security

Government passed legislation to promote adoption of drones and 5G, while ensuring cyber security of them¹

February 2020

June 2020

September 2020

December 2021

Government policy of procuring "secure" drones

Government has announced that it will procure only "secure drones" and it will "promptly replace existing drones that are already in place"³

"Secure" drone development for government procurement

NEDO has allocated 1.61 billion JPY for development of a high-security, low-cost standard drone and a standard flight controller aiming for government procurement²

Presentation of a secure loan intended for government procurement

ACSL released a high-security aerial photography drone "SOTEN", which was mass-produced using the results developed by the NEDO project

1: "Outline of the Draft Law on Promotion of Development, Supply and Introduction of Specified Advanced Information and Communications Technology Systems" February 19, 2020 Ministry of Economy, Trade and Industry

2: "Development of Basic Safety Drone Technology" June 25, 2020 New Energy and Industrial Technology Development Organization (NEDO)

3: "Policy on the Procurement of Unmanned Aircraft by Government Agencies, etc." September 14, 2020 Liaison Conference of Relevant Government Agencies on Small Unmanned Aircraft

Key enablers of future expansion of the drone market



The development and launch of technologies and products in sync with changing regulations, and highly specialized operational and implementation support, will be important.

	Regulation	Technology & Products	Operation and implementation
Level 1 and 2 Visual Flight Majority of the current market	<ul style="list-style-type: none">Relevant regulations are in placeApplication-specific guidelines will be developed in the future	<ul style="list-style-type: none">Mostly foreign-made general-purpose GPS-type machinesApplication-specific / non-GPS / secure drone required	<ul style="list-style-type: none">Prepared for general-purpose dronesSpecialized operations and solutions are important
Level 3 Beyond visual line of sight / Uninhabited areas Current market is limited	<ul style="list-style-type: none">Related regulations are expected to continue to be revised	<ul style="list-style-type: none">Mostly application-specific droneNeed to improve foundation performance and safety	<ul style="list-style-type: none">Mainly individual efforts of individual companiesSystematized operations, training, etc. are required
Level 4 Beyond visual line of sight / Inhabited areas A huge market to be created in the future	<ul style="list-style-type: none">Regulations expected to be in place by FY2022	<ul style="list-style-type: none">Development and commercialization of technologies in line with regulations is essential	<ul style="list-style-type: none">Need companies that can respond to regulations and build operations

Copyright © 2022 ACSL Ltd.

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the publisher, except in the case of brief quotations embodied in critical reviews and certain other noncommercial uses permitted by copyright law.

Information in this material is subject to change without notice, its accuracy is not guaranteed and it may not contain all material information concerning ACSL Ltd. (the "Company"). The Company makes no representation regarding, and assumes no responsibility or liability for, the accuracy or completeness of, or any errors or omissions in, any information contained herein.

In addition, the information contains projections and forward-looking statements that may reflect the Company's current views with respect to future events and financial performance. These views are based on current assumptions which are subject to various risks and which may change over time. No assurance can be given that future events will occur, that projections will be achieved, or that the Company's assumptions are correct. It is not the intention to provide, and you may not rely on this presentation as providing, a complete or comprehensive analysis of the Company's financial or trading position or prospects.

This presentation does not constitute an offer or invitation to purchase or subscribe for any securities or financial instruments or to provide any investment service or investment advice, and no part of it shall form the basis of or be relied upon in connection with any contract, commitment or investment decision in relation thereto.



ACSL