



Financial Results Material for FY22/12 Q3

ACSL Ltd.
November 11, 2022

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Summary

Market environment is a tailwind. Business expanding with **record high orders and revenue**. Oversea expansion progressed with **large orders from India**. Strategically accelerate R&D to respond to overseas markets.

Temporary challenges in cost and procurements. **Declining Gross profit due to high semicon price and foreign exchange. Delays in part deliveries and unreasonable goods price results in project delays** and delayed sales bookings

- The business environment surrounding the drone market is favorable with regulations around Level 4 flight fixed to be effective as of December 5, 2022, and the Digital Rural City concept being promoted nationwide
- In line with the mid-term plan ACSL Accelerate FY22, functional updates to small aerial drone SOTEN conducted based on customer feedback. Mid-sized delivery drone AirTruck has been selected for a number of projects related to the Digital Rural City, resulting in strong orders. Acceleration to overseas via customer roadshow and tradeshow exhibits in the US, as well as winning large orders from India. Integrated Report 2022 was also published to strengthen ESG communication.
- However, temporary challenges in high semicon price and foreign exchange resulted in lowering gross profit. Unstable procurement seen around procured parts delays and unreasonable prices. As a result, cumulative sales of FY22/12 Q3 totaled 1,161 mn JPY, and the total with the order backlog at the end of September totaled 1,890 mn JPY, both record highs. Gross profit was 80 mn JPY, with a profit margin of 7%, heavily impacted by exchange rate and high semicon prices. R&D investment were accelerated with 744 mn JPY to tailor to oversea markets. Operating loss was 1,329 mn JPY.

Continued tailwind surrounding the drone market environment

Regulations around Level 4 flight and Digital Rural City concept progressed

01

Economic Security

Geopolitics and Russia-Ukraine war elevated the need for economic security. Domestication continues as concerns to data security, tech leaks and stable procurement rises.

02

De-carbonization Clean Energy

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

03

Digital Rural City, Smart city

Local development by drones in line with the Digital Rural City concept spread across Japan, e.g., Tsuruga, Sakai, Kamishihoro

04

Aviation Law revision (Level 4)

December 5th, 2022 fixed as the date to amend regulations to enable BVLOS flight over populated areas (Level 4)

Mass production and implementation of application-specific drones

Overseas roadshow conducted for SOTEN. AirTruck used for projects related to Digital Rural City across Japan

Aerial photography (SOTEN)



- Delivered 488 units by the end of Sept
- **Roadshow in the US and Australia.** Positive feedback as a candidate to replace Chinese drones
- **Integrated with the global leading Pix4D software** to meet demands of governments, NPO and survey pros
- **LTE communication function update** to enable flight in areas with no radio



Pix4D社提供

Delivery (AirTruck)



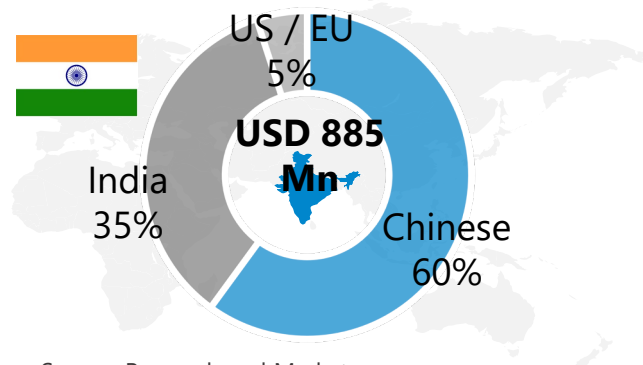
- Orders received since Mar 2022, with orders of 30 units received (of which 15 already shipped)
- KDDI SmartDrone and Aeronext rolled-out **AirTruck Starter Pack** nationwide
- **Selected as a drone to be used at multiple Digital Rural City related projects** across Japan



Strengthening overseas market activities and won a major contract from India

Customer roadshow conducted in the US to accelerate overseas markets, and won a major contract in India

India drone market (2021)



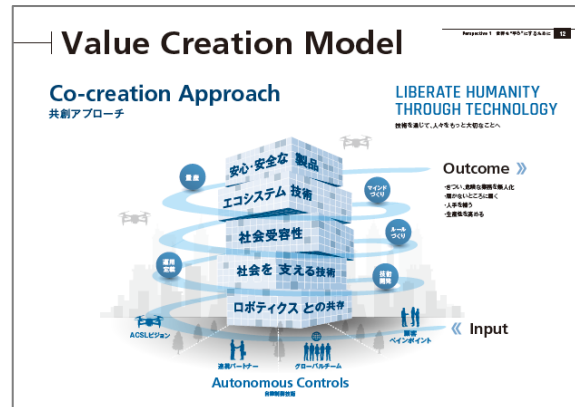
- **Import of foreign-made drones banned in India from Feb 2022 to promote Made-In-India** (Drone Shakti Scheme)
 - Drones must be manufactured in India and have type certification to sell drones within India
 - Production Linked Incentive (PLI) of Rs. 26,058 crore has been structured over three years to promote Made-In-India
- **ACSL established a local joint venture, ACSL India**, to promote Made-In-India compliant activities. **ACSL was awarded a major contract worth 80 mn Rs. (~140 mn JPY)** to provide Made-In-India compliant platform
- **SOTEN exhibited at the Commercial UAV Expo in the U.S.** following the AUVSI XPONENTIAL 2022 in April. SOTEN has attracted much attention as a "Made in Japan" drone, as **Russian and Chinese drones are prohibited from gov procurement under the National Defense Authorization Act (NDAA)**
- Following a pipeline of customers at the show, a **roadshow was conducted in Oct 2022 at several customer sites, incl. General Pacific, Inc..**

Strengthening ESG Initiatives



Published an integrated report to strengthen communication of ESG initiatives to diverse stakeholders

Integrated Report 2022



- **ACSL published its first integrated report.** Integrated report prepared to holistically introduce and communicate ACSL's vision and ESG initiatives to a diverse range of stakeholders, incl. investors, clients, and partners
- **The Integrated Report consists of five sections**
 - ACSL's vision and mission
 - ACSL core technologies and product lines
 - Markets, customers and our history
 - Values, corporate culture, work style, diversity
 - Business performance, financials, ESG

Orders increased across FY22/12 Q3, and expected to reach record high in annual year

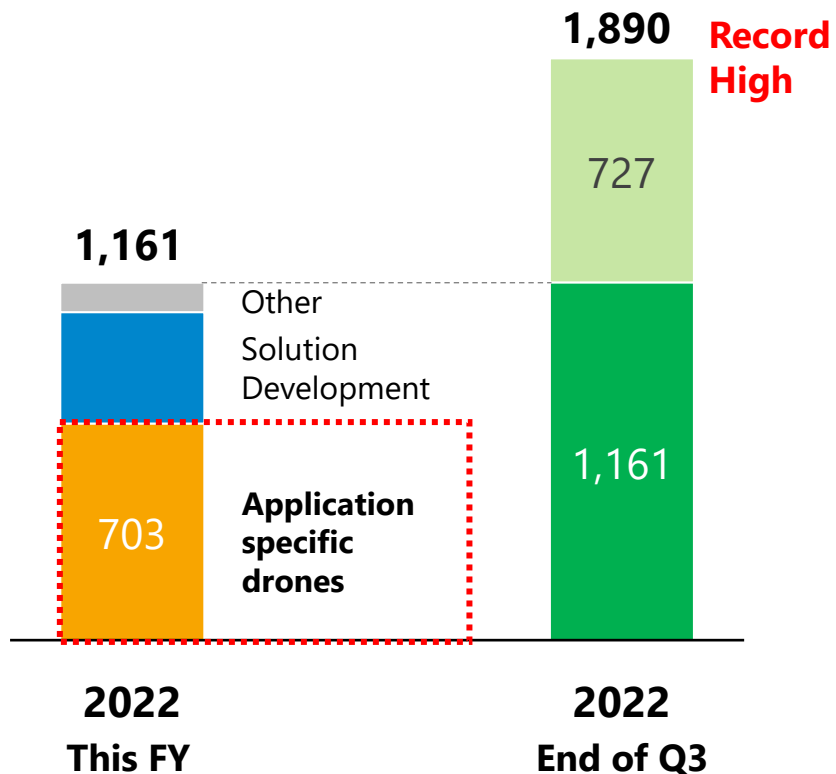
SOTEN achieved the target for marginal gross profit. Marginal gross profit continues to improve vs Q1

Jan-Sep cumulative sales

Mn JPY

Sales and backlogs¹ at end of Sep

Mn JPY



Small aerial photography (SOTEN)

Solution development (Demo tests, sales of evaluation drone)

	Q1	Q2	Q3	Q3 cumulative
Sales	590 mn	21 mn	25 mn	637 mn
Units	475 units	6 units	7 units	488 units
Marginal gross profit ²	18 %	39 %	40%	20%
Sales	294 mn	33 mn	33 mn	361 mn
Marginal gross profit	44 %	74 %	69%	50%

1: Backlog is the total value of orders received as of Sept 30, 2022.

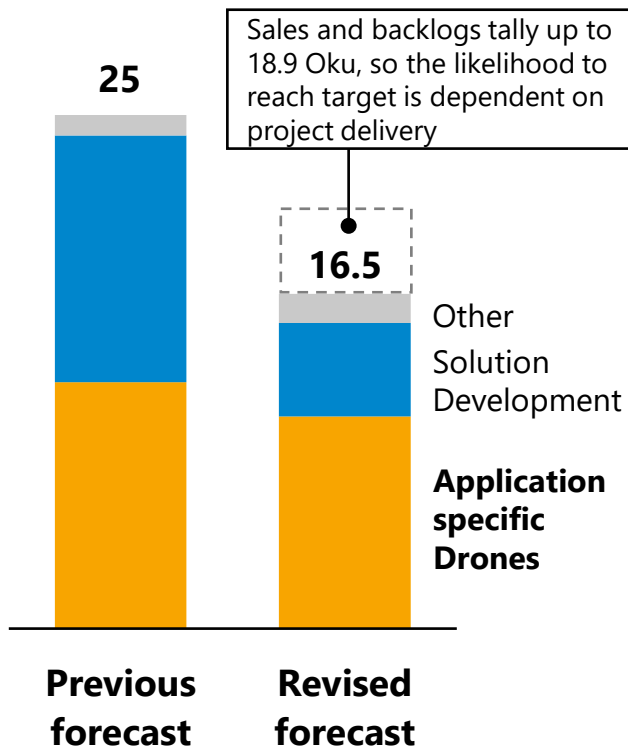
2: Marginal gross profit by product is defined as net sales minus variable costs; for SOTEN and airframe sales, it is defined as net sales minus material costs; for demonstration, it is defined as net sales minus direct subcontracting costs.

Revision of forecast

Gross profit deteriorated due to change in sales mix, soaring semicon prices, and FX rates. While project delivery may be delayed due to procurement challenges, investment for future growth will continue

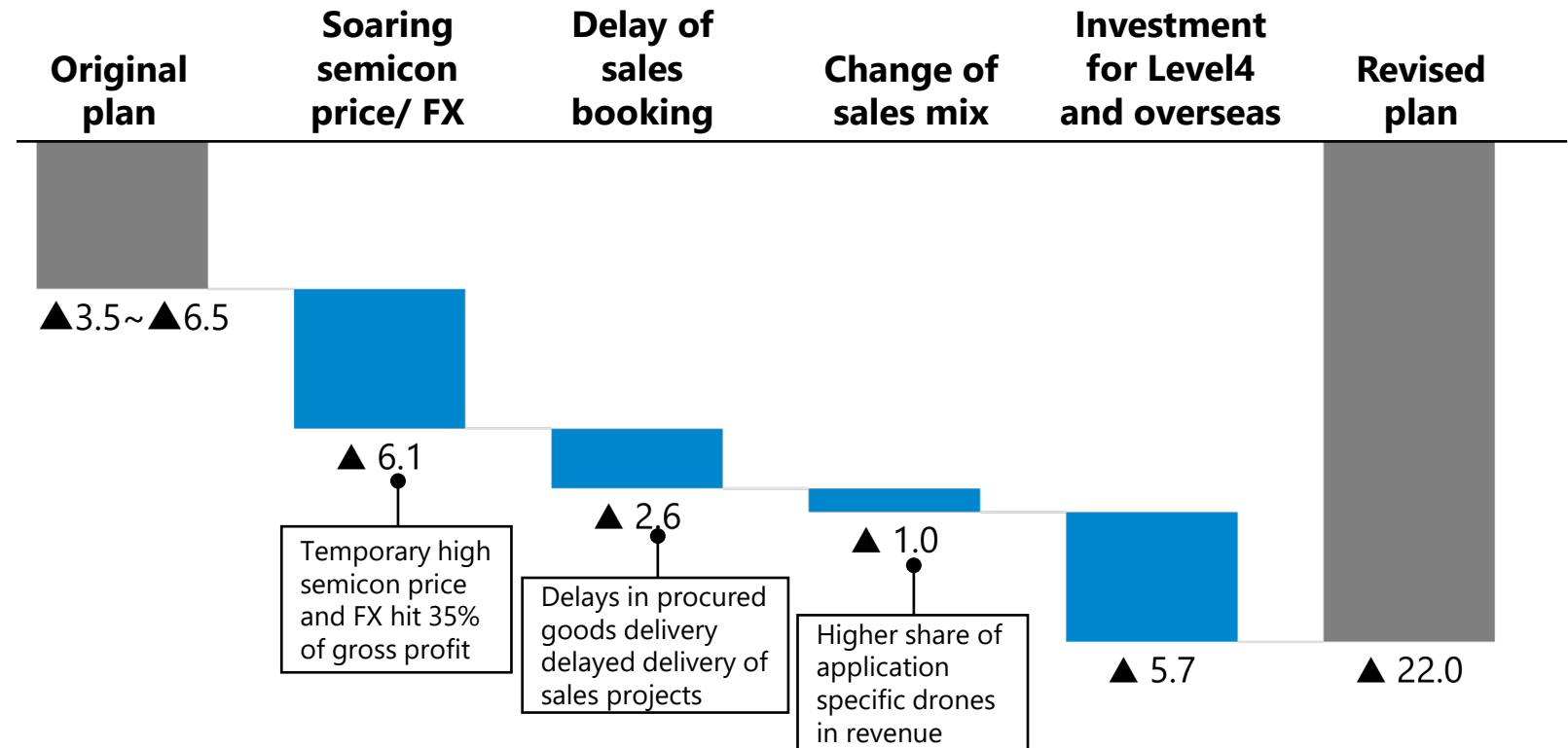
Revision of Sales forecast

100mn JPY (Oku)



Revision of operating profit

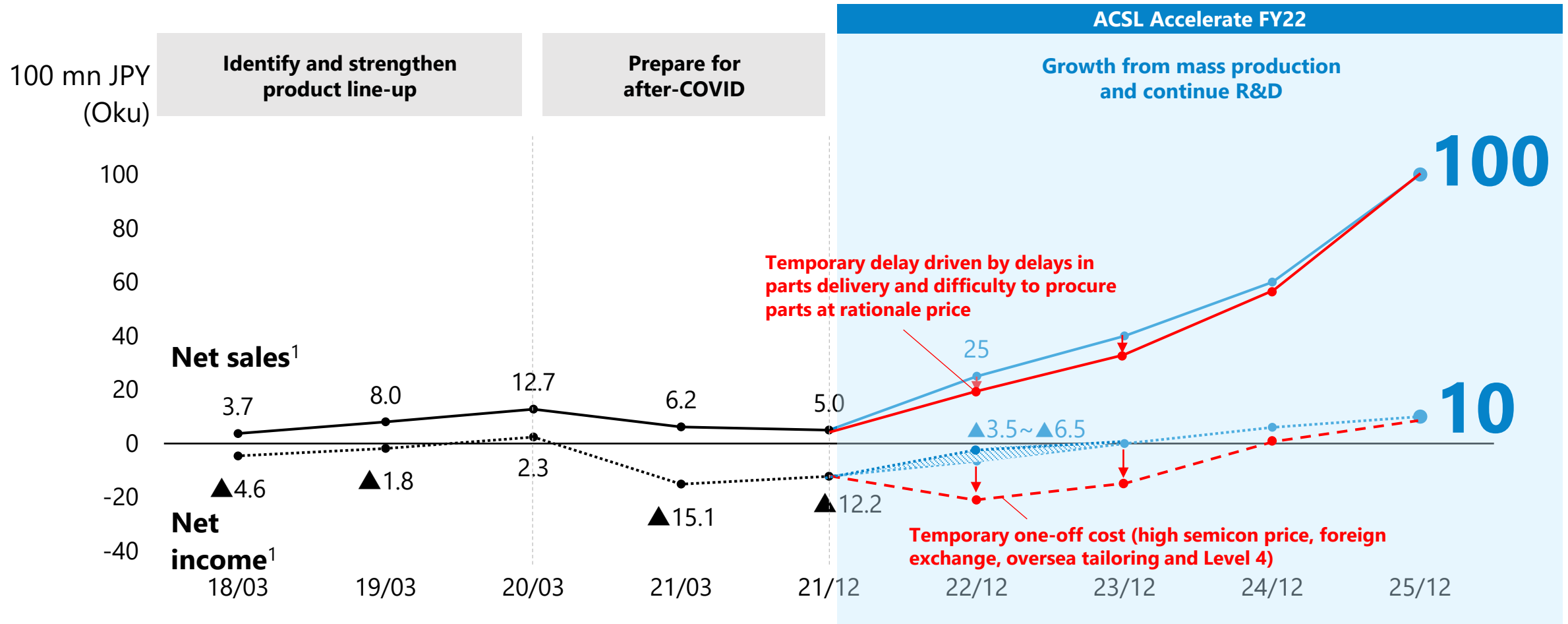
100mn JPY (Oku)



ACSL Accelerate FY22 target and current status



Demand towards 2025 is on track. However, temporary decline in revenue and profit driven by high semicon price and challenges in procurement



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

Main

Agenda

- 1** Overview of the Drone market
- 2** Business Highlights
- 3** FY22/12 Q3 Results and Mid-term Plan
"ACSL Accelerate FY22"
- 4** Appendix

Continued tailwind surrounding the drone market environment

Regulations around Level 4 flight and Digital Rural City concept progressed

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Accelerating efforts related to the Digital Rural City concept

Drone initiatives related to the Digital Rural City concept, led by local governments, are gaining momentum across the country

■ Basic Policy on Digital Rural City Concept

- The basic policy was decided by the Cabinet in June 2022 to solve local social issues using digital technology
- The policy aims to realize "a society where everyone can live conveniently and comfortably anywhere in Japan"

■ Accelerating rural development by drones with project funds related to the Digital Rural City Initiative

- Tsuruga, Fukui: Directly connected drone logistics in urban and depopulated areas
- Sakai, Ibaraki: New smart logistics using drones and self-driving buses
- Kamishihoro, Hokkaido: Demonstration of fertilized egg transplantation using drones

Next-Generation Logistics in Sakai, Ibaraki: Collaboration between Self-Driving Buses and Drones

Sakai, in western Ibaraki Prefecture, will begin building a next-generation logistics system combining self-driving buses and drones. The aim is to deliver groceries and daily necessities ordered via a smartphone app in 30 minutes or less using a combination of autonomous drones and self-driving buses.

Sakaimachi has been selected as a recipient of subsidies for project expenses under the government's "Digital Rural City concept". The project will utilize highly maneuverable drones to enhance delivery functions and create a town that is easy to live in.

(Abbr.)



*Combining automated buses and drones to Expand logistics functions
(Sakaimachi, Ibaraki Prefecture)*

(Nihon Keizai Shinbun; October 3, 2022)

Regulations related to Level 4 is progressing on schedule

Regulations for Level 4 flights is well underway, and the relevant ministerial order will come into effect on December 5, 2022

June 2021	Revised Civil Aviation Law passed The Diet passed an amendment to the Civil Aviation Law to allow for Level 4 flights
June 2022	Mandatory drone registration and remote ID¹ Mandatory registration of unmanned aircraft, display of registration symbols and remote ID capabilities
July 2022	Cabinet approves December, as the enforcement date for the revision of the Civil Aviation Law.
Aug~Nov 2022	Public comments related to type certification of unmanned aircrafts MLIT conducting public comments on regulations to enable Level 4 flights
Dec 5, 2022	Ministerial order to amend part of the regulations related to Civil Aviation law
Within FY22	Realize Beyond-Visual Line of Sight flight over populated areas (Level 4)

1: A device that remotely transmits drone identification information via radio waves

Source: Ministry of Land, Infrastructure and Transport Public Comments

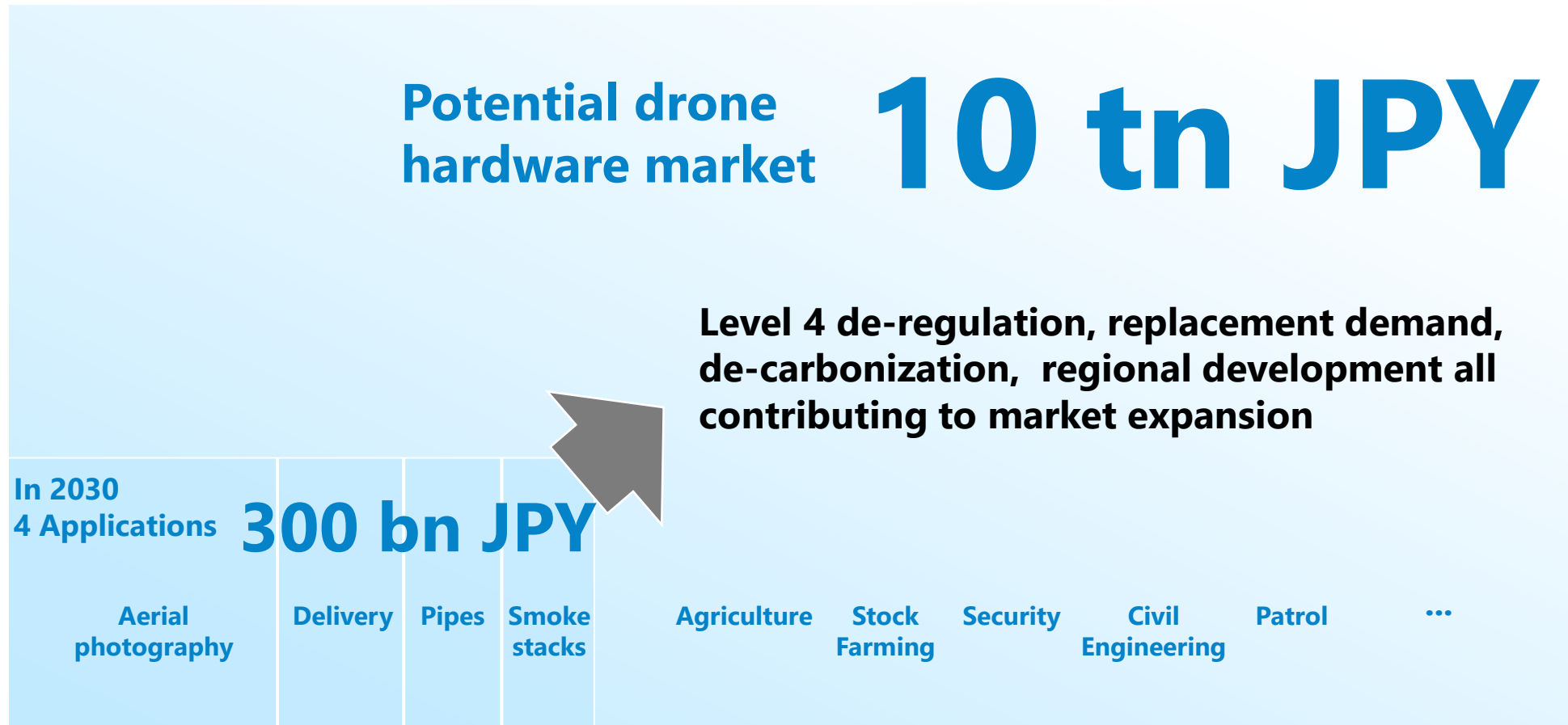
Public-Private Consultative Meeting for Environmental Improvement Related to Small Unmanned Aircraft (18th meeting) "New Institutional Improvements, etc. Toward the Realization of Level 4 Flights".

Example of Public Comments

<p>通達 (案)</p> <p>整理番号 No.X-XXX</p> <p>サーキュラー</p> <p>国土交通省航空局安全部航空機安全課長</p> <p>件名：無人航空機の型式認証等の手続き</p>	
<p>1. 適用</p> <p>本サーキュラーは、航空法（昭和27年法律第231号）（以下単に「法」という。）第132条の16による型式認証及び法第132条の17による型式認証の変更（以下「型式認証等」という。）に係る検査について、申請から型式認証書の交付に至るまでの関連する航空局又は登録検査機関（以下「検査者」という。）による検査業務及び申請者の取るべき手続きを取りまとめたものであり、原則として、関係者は本サーキュラーに従って手続き等を行うことが求められる。</p>	
<p>2. 申請</p> <p>2-1 事前調整</p> <p>2-1-1 型式認証</p> <p>検査は、型式認証の取得を希望する者が申請を行うことにより、型式認証の取得を計画する者（以下「申請予定者」という。）が検査者に対し、事前調整の希望を申し出ることができる。事前調整は、施するに当たっての実務上の全般的な事項を取り決め、機件等への適合性証明の方針等について調整を図ることができる。</p>	
<p>2-1-2 型式認証の変更</p>	
<p>無人航空機の型式認証等における安全基準及び均一性基準に対する検査要領 (別添)</p>	
<p>第III部 均一性基準</p> <p>第1章 一般</p> <p>1-1 この要領は、第一種型式認証及び第二種型式認証に対する均一性基準を定めるものである。</p> <p>1-2 申請者は、申請に係る型式の無人航空機の製造及び検査（航空法（以下「法」という。）第132条の18第2項の規定による検査を含む。以下「製造等業務」という。）について、第2章の該当規定に適合することを証明し、その実施に関する事項について、文書（以下「製造管理要領」という。）に定めなければならない。</p> <p>1-3 次章に規定する要件への適合を示す手段として、第一種型式認証はJIS Q 9100相当、第二種型式認証はJIS Q 9001相当の公知規格の取得状況を最大限活用できるものとし、各要件への適合の厳格度についても、同様とする。</p>	<p>航空法施行規則第236条の24</p> <p>法第132条の16第3項の均一性基準は、申請者が次に掲げる要件に適合することとする。</p>
<p>第2章 均一性基準</p> <p>1 施設</p> <p>1-1 設備</p> <p>製造等業務において設計を具現化するために必要な設備（業務に使用する計測機器、試験機器、工具等を含む。）を有していること。特に、無人航空機の設計者と製造者が異なる場合、製造者は設計者が指定する設備を有していること。</p>	<p>一 次に掲げる施設を有すること。</p> <p>イ 申請に係る型式の無人航空機の製造及び検査（法第百三十二条の十八第二項の規定による検査を含む。以下この条において「製造等業務」という。）に必要な設備</p>

Potential drone hardware 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"

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.



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

- The only listed drone manufacturer out of 700 drone related companies
- Using Japanese mass production capability
- ISO 9001 (Quality)
ISO 27001 (Security)
- Proprietary autonomous control system

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**FY22/12 Q3 Results and Mid-term Plan
"ACSL Accelerate FY22"**

4

Appendix

A scenic view of a city skyline at dusk, with a suspension bridge and a body of water in the foreground. The sky is a mix of deep blue and orange, with scattered clouds. The city lights are visible, and the bridge is illuminated. The water is dark and calm, with some rocks in the foreground.

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



MISSION

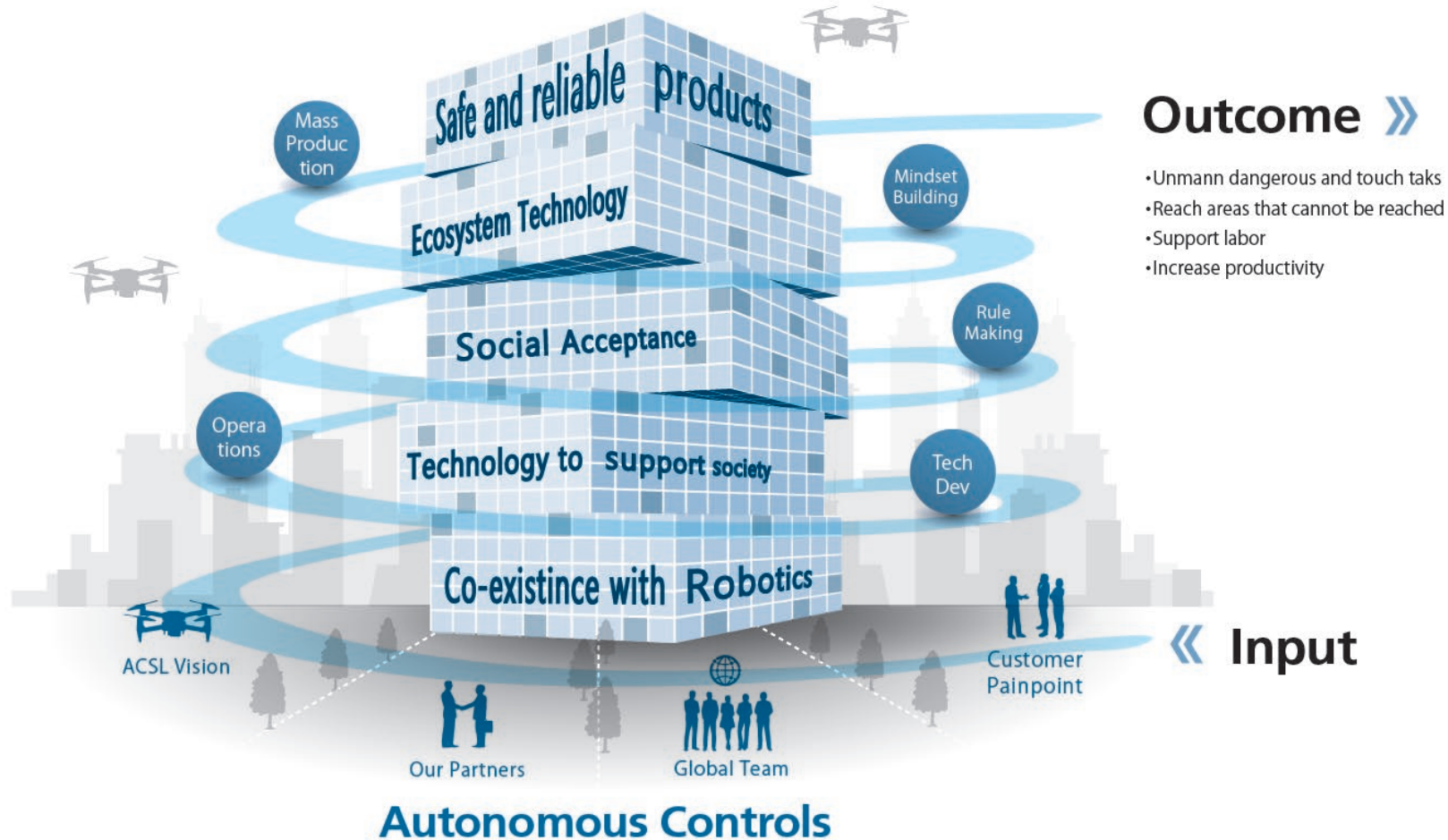
Liberate humanity through technology

VISION

Revolutionizing social infrastructure by pursuing cutting-edge robotics technology

Co-creation Approach

LIBERATE HUMANITY
THROUGH TECHNOLOGY



“To-Be” state in 10 years

In August 2020, ACSL announced its master plan that sets out its goals over the next decade.

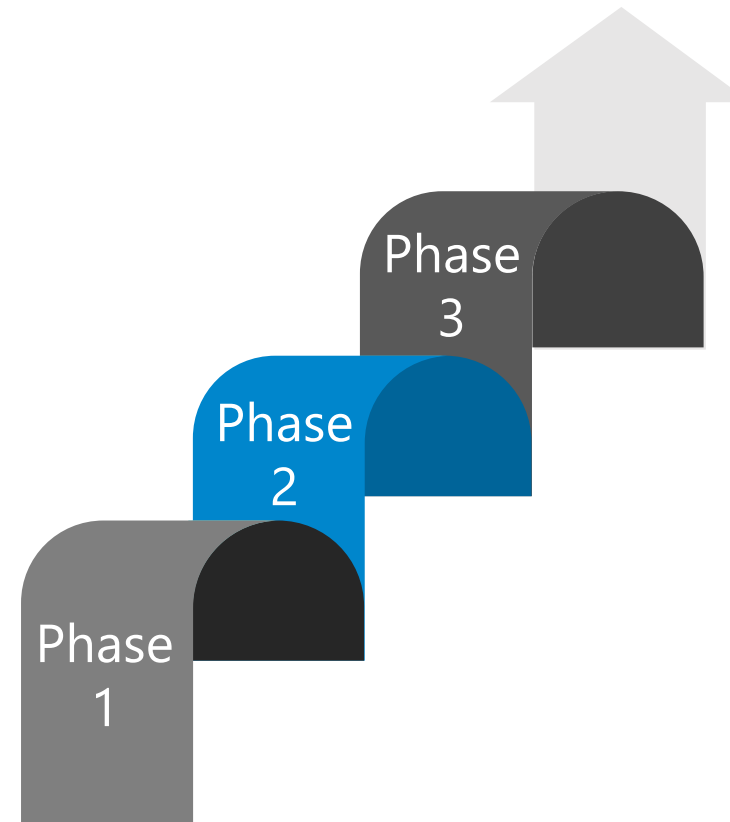
- 1 Global Pioneer in solving social infrastructure issues
- 2 More than 100 bn JPY sales, 10 bn JPY sales profit
- 3 Mass production manufacturer that produces 30,000 units/year
- 4 Supporting the country with de facto standards
- 5 Developing cutting-edge technologies for autonomous control
- 6 Nurturing 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”

Rolling update mid-term plan “ACSL Accelerate” will lead to achieving the “To-be” state in 10 years.

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

“To-be” state in 10 years



The background of the slide is a close-up, high-angle photograph of a grey drone. The drone's body, arms, and propellers are visible, with a red LED light glowing from the bottom of one of the arms. The lighting is soft and even, highlighting the textures of the plastic and metal components.

Shift to a sustainable global manufacturer

ACSL Accelerate FY22 Business Strategy and Goals

5 pillars for growth identified in this mid-term plan to realize a sustainable business with global presence.

ACSL Accelerate FY22

Shift to a sustainable global manufacturer

Development and commercialization of four application-specific drones

Development of new application drones and compliance with security

Full-scale launch into the Indian market

Reinforce ESG initiatives

Exploring potential adaptation of autonomous control systems to other fields

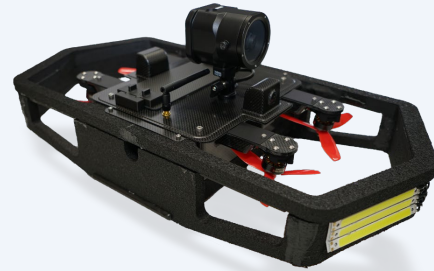
Mass production and implementation of application-specific drones

Oversea roadshow conducted for SOTEN. AirTruck used for projects related to Digital Rural City across Japan



Aerial photography
(SOTEN)

- Delivered 488 units by the end of Sept, and additional
- Roadshow in the U.S. and Australia
- Functional updates including LTE support, zoom camera, etc.



Pipe inspection
(Fi4)

- Conducting hands-on workshops for local governments, inspection companies, and factory personnel in various locations throughout Japan



Smokestack inspection

- Started taking orders for "Smokestack TAKEOFF" since it was applied in practice in collaboration with Kansai Electric Power Co.



Delivery
(AirTruck)

- Orders received since Mar 2022, with orders of 30 units received (of which 15 already shipped)
- KDDI SmartDrone and Aeronext rolled-out AirTruck Starter Pack nationwide

Continuous functional update to SOTEN based on customer demand

Compatible with Pix4D software, which is used globally in aerial and disaster surveys, and LTE communication functionality also implemented

■ Compatible with leading global Pix4D software

- Integrated with Pix4D's software for creating high-precision 2D / 3D data. This enables more secure, high-definition data acquisition and data analysis
- PIX4Dmapper is used by professionals in Japan and abroad for a wide range of applications from surveying and construction to infrastructure mgmt
- PIX4Dreact has been installed in more than thousands of fire, police, and NPO

■ Implemented LTE communication support to enable flight in areas with no radio reception

- Enabled video and status monitoring using LTE network, making it possible to fly in areas with no signal coverage and to land safely using LTE communications in the event of a signal interruption

PIX4Dmapper



PIX4Dreact



Provided by Pix4D

AirTruck adopted by Digital Rural City Initiatives across Japan

AirTruck and SkyHub®, promoted by Seino HD and Aeronext, are adopted in projects related to the Digital Rural City Initiative led by local governments nationwide



Tsuruga, Fukui Prefecture

On-demand drone delivery as fast as 30 min, shopping service, and food delivery as a model for "connecting urban areas and depopulated areas"



Sakai, Ibaraki

Experiment initiated as of Oct 2022 to target practical application of new smart logistics using drones and self-driving buses



Kamishihoro, Hokkaido

Successful demo of drone transplantation of fertilized cow eggs (non-frozen fresh eggs) collected at the ET Laboratory to farmers' homes in Kamishihoro



“AirTruck Starter Pack”, a drone delivery package featuring AirTruck

KDDI SmartDrone and Aeronext selected AirTruck to create a drone delivery service package to streamline and reduce man-efforts for local deliveries



■ AirTruck Starter Pack, - a drone delivery package that streamlines and reduces man-efforts for local deliveries

- KDDI SmartDrone and Aeronext started offering service package in Aug 2022 to solve local delivery issues using drones
- Comprised of "AirTruck" and "Smart Drone Tools," a mobile communication and operation management system that enables remote control and long-distance flight of drones
- A highly economical and safe package for drone-based delivery

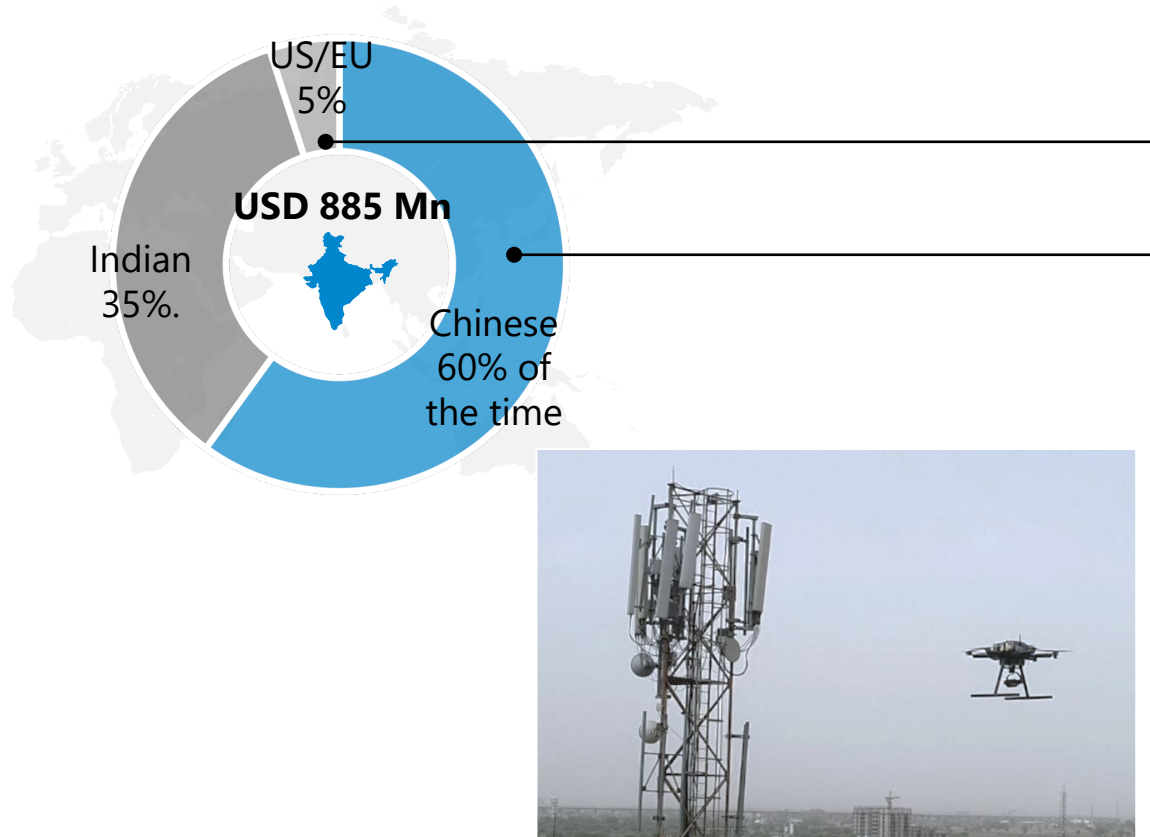
■ Collaboration with SkyHub®, a joint development by Aeronext and Seino HD that combines drone delivery with land delivery

- The service package was used during a trial in Mar 2022 to build SkyHub® in Aga, Niigata Prefecture.

Won a large order of ~140 mn JPY from India

ACSL received orders of a 80 mn Rs. (~140mn JPY) project to provide Made-In-India drones that are also compliant with Indian government policy

India drone market (2021)



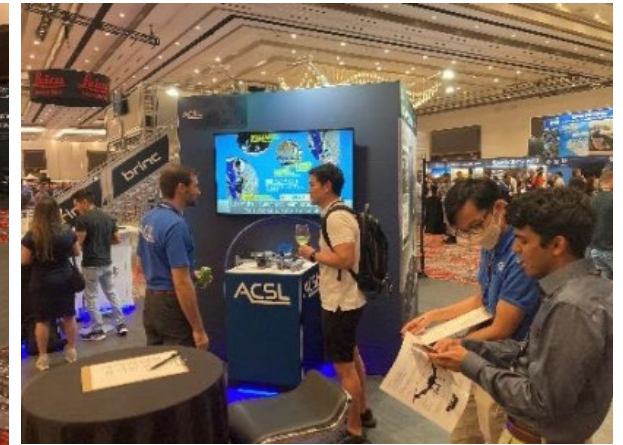
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- **ACSL established a local joint venture, ACSL India, to promote Made-In-India compliant activities.** In addition, ACSL India conducts sales promotion activities with local service partners to build local presence
- **ACSL was awarded a major contract worth 80 mn Rs. (~140 mn JPY)** to provide Made-In-India compliant platform airframes for production at ACSL India

Source: Research and Markets

Exhibited at trade shows and conducted customer roadshows in U.S.

Reaffirmed customer demand for SOTEN to meet economic security needs in the US. Based on customer pipeline at the show, roadshows were held at several U.S. customers incl. General Pacific, Inc. and confirmed high evaluation and willingness to purchase

- **SOTEN exhibited at the Commercial UAV Expo in the U.S.** following the AUVSI XPONENTIAL 2022 in April. SOTEN was highly evaluated for its use in inspection and surveying at the world's leading commercial drone exhibition
- SOTEN has attracted much attention as a "Made in Japan" drone, as **Russian and Chinese drones are prohibited from government procurement under the National Defense Authorization Act (NDAA)**
- Following a pipeline of customers at the show, a **roadshow was conducted in Oct 2022 at several customer sites, incl. General Pacific, Inc..** Confirmed willingness to purchase as well as the practical applicability of SOTEN

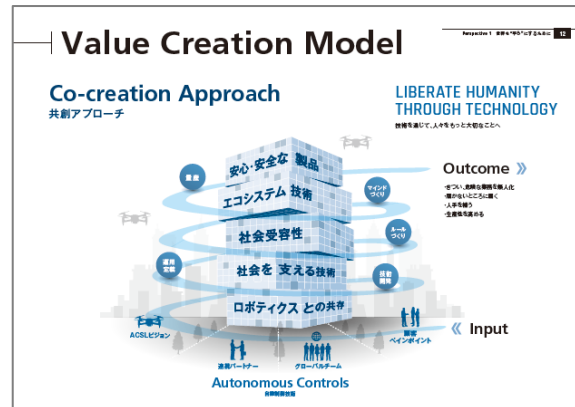


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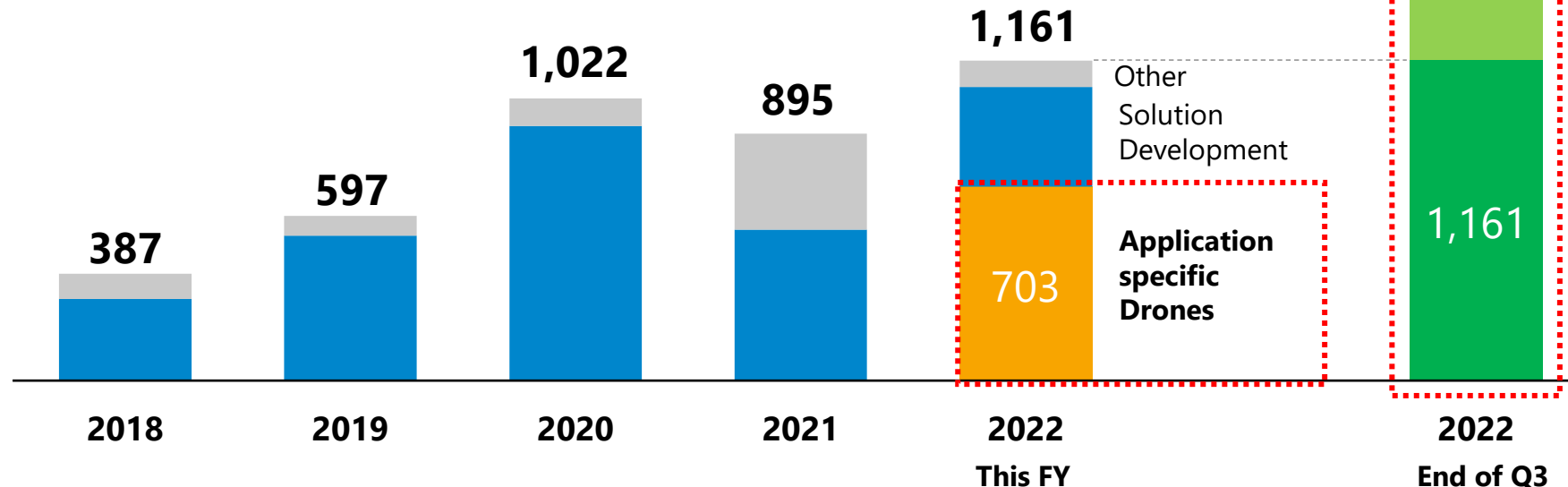
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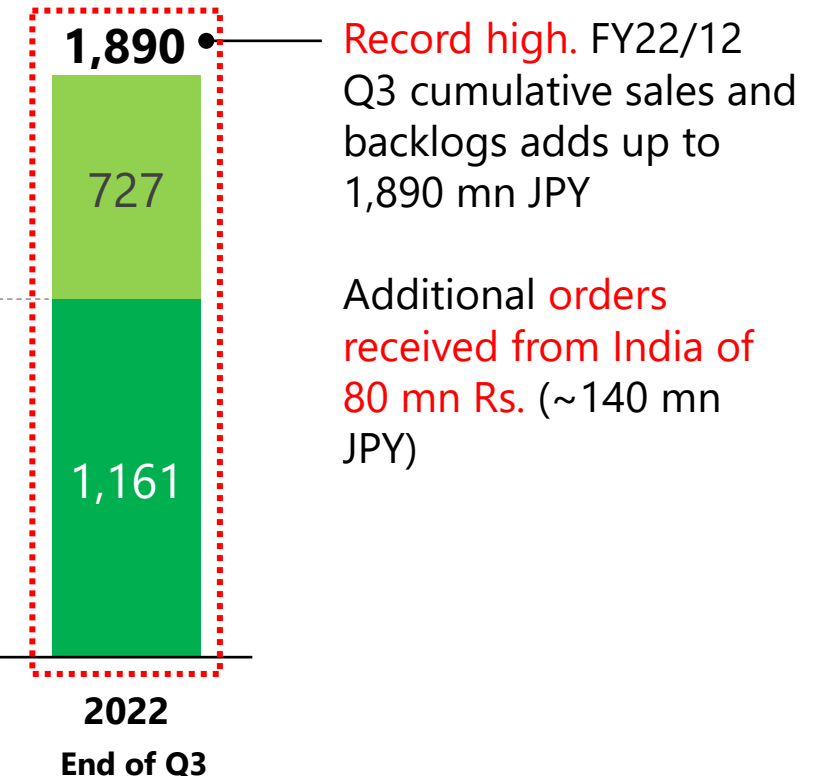
Jan-Sept cumulative sales

Mn JPY



Sales and backlogs¹ at end of Sept

Mn JPY



Record high. FY22/12 Q3 cumulative sales and backlogs adds up to 1,890 mn JPY

Additional orders received from India of 80 mn Rs. (~140 mn JPY)

1: Fiscal year ending March until 2021 March. FY21/12 is 9 months between 21/04~21/12. All timing above is sum of Jan to Sept.

1: Backlog is the total value of orders received as of Sept 30, 2022.

Marginal gross profit improved for both SOTEN and Solution dev



SOTEN achieved the target for marginal profit margin with steady volume and value compared to the plan. Marginal gross profit continues to improve vs Q1

		Q1 actual	Q2 actual	Q3 actuals	Q3 cumulative
Small aerial photography (SOTEN)	Sales	590 mn	21 mn	25 mn	637 mn
	Units	475 units	6 units	7 units	488 units
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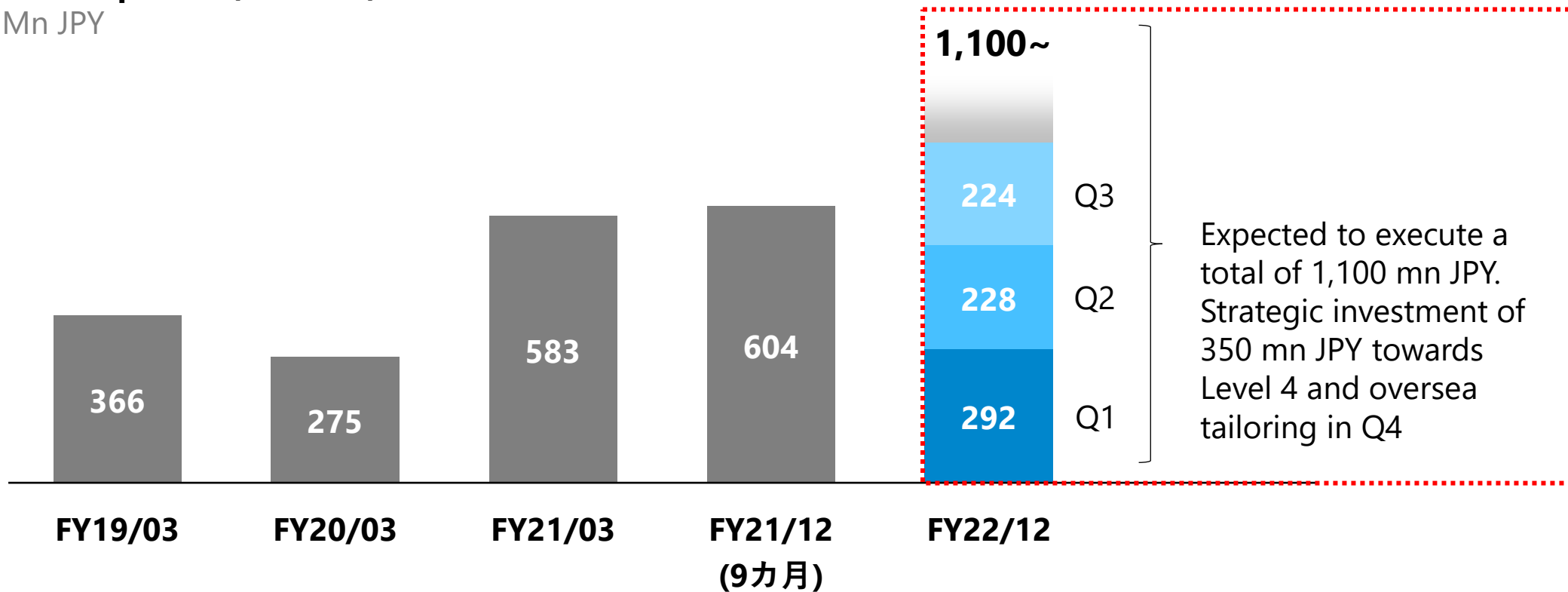
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Executed more R&D expenses than planned. Investment towards overseas market tailoring

Continue our core R&D activities regardless of sales conditions as an upfront investment for market expansion

R&D Expenses (Full Year)

Mn JPY

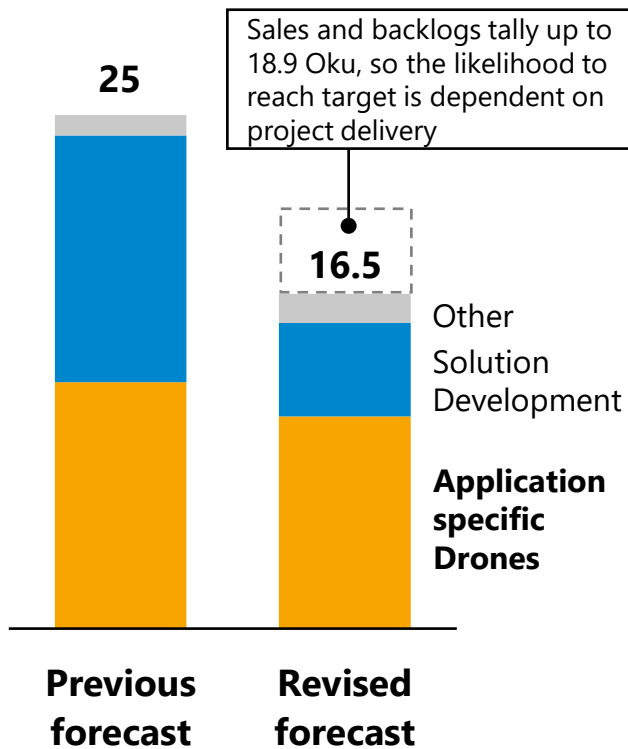


Revision of forecast

Gross profit deteriorated due to change in sales mix, soaring semicon prices, and FX rates. While project delivery may be delayed due to procurement challenges, investment for future growth will continue

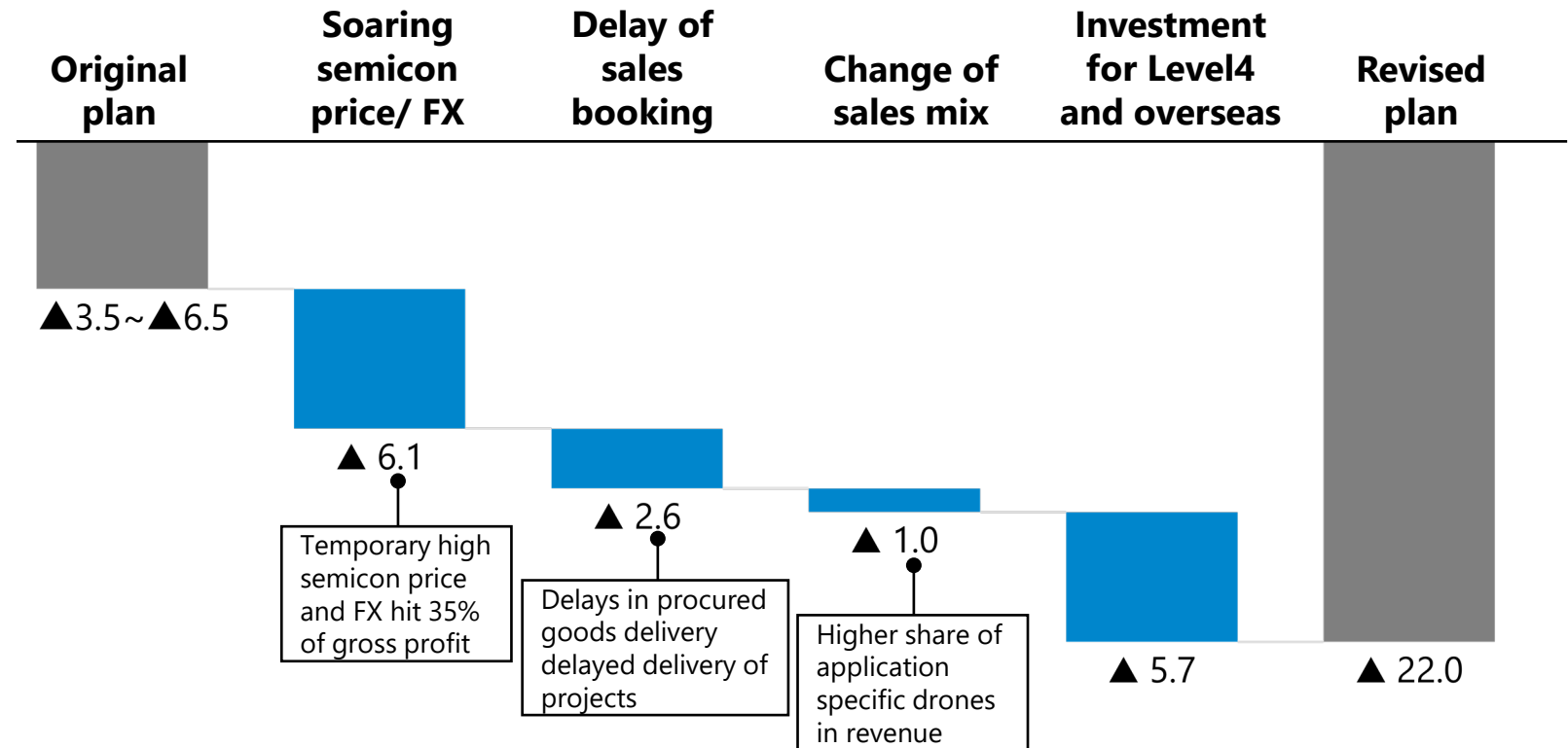
Revision of Sales forecast

100mn JPY (Oku)



Revision of operating profit

100mn JPY (Oku)



FY22/12 revised target and Q3 results

Revenue of 1.16 bn JPY in Q3 versus revised target of 1.65 bn JPY. Declining gross profit and high R&D expense resulted in operating income of ▲1.32 bn JPY

	FY22/12 Q3 Actual	FY22/12 revised target	Remark
Net sales	1.16bn JPY	1.65 bn JPY	Orders received totaled 1.89 bn yen versus the revised plan of 1.65 bn yen. If deliveries are made as planned, plan is expected to be achieved.
Gross profit margin ratio	6.9%	~10%	Gross profit margin is expected to be in the single digits due to soaring semiconductor prices.
R & D	0.74 bn JPY	1.1- bn JPY	As of Q3, 740 mn yen was recorded. Continuing to invest aggressively in development for overseas expansion and LV4
Operating income	▲1.32 bn JPY	▲2.2 bn JPY	As of Q3, a loss of 1.32 bn yen was recorded. Revised plan is a loss of 2.2 bn yen.
Ordinary income	▲1.25 bn JPY	▲2.15 bn JPY	Non-operating income and other income from national projects

Target values in ACSL Accelerate



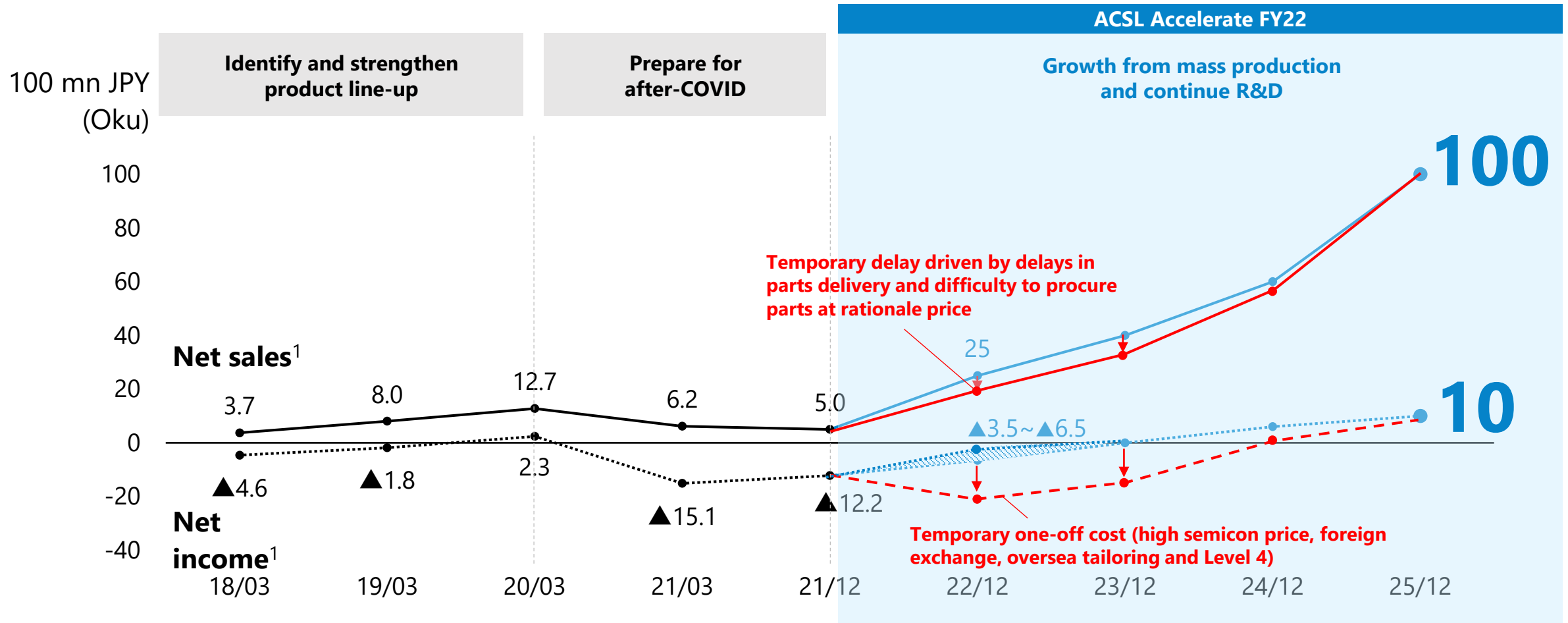
Aiming to achieve 10 bn JPY sales and 1 bn JPY profit by 2025 to realize the "Master Plan," goal for the next 10 years.

	This year 2022	ACSL Accelerate FY22 2025	Master plan 2030
Net sales	1.65 bn JPY	10 bn JPY	100 bn JPY
Operating profit	▲2.2 bn JPY	1 bn JPY	10 bn JPY

ACSL Accelerate FY22 target and current status



Demand towards 2025 is on track. However, temporary decline in revenue and profit driven by high semicon price and challenges in procurement

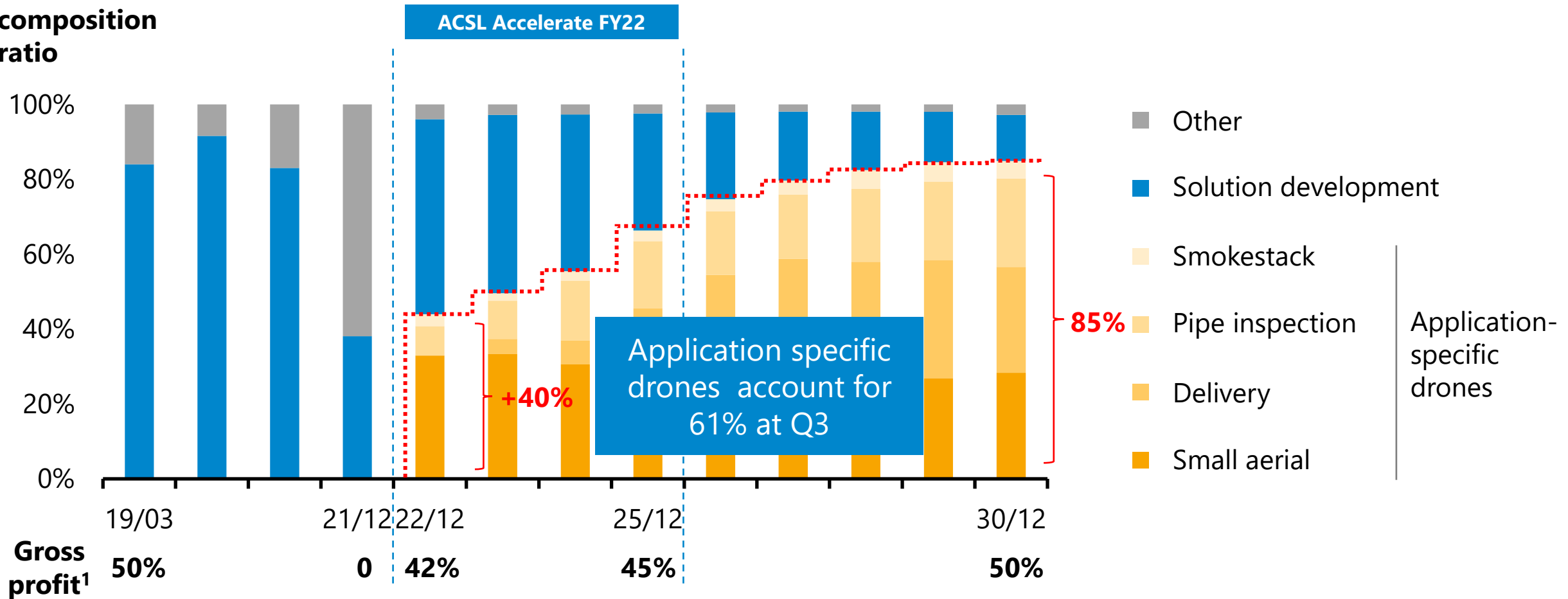


1: Actual results up to FY 21/03, forecast for FY 21/12 announced on November 2021 and it is irregular 9-month results

Transitioning to mass-produced drone sales from this year

Application-specific sales will significantly increase from FY22/12 and account for 85% of total sales in FY30/12

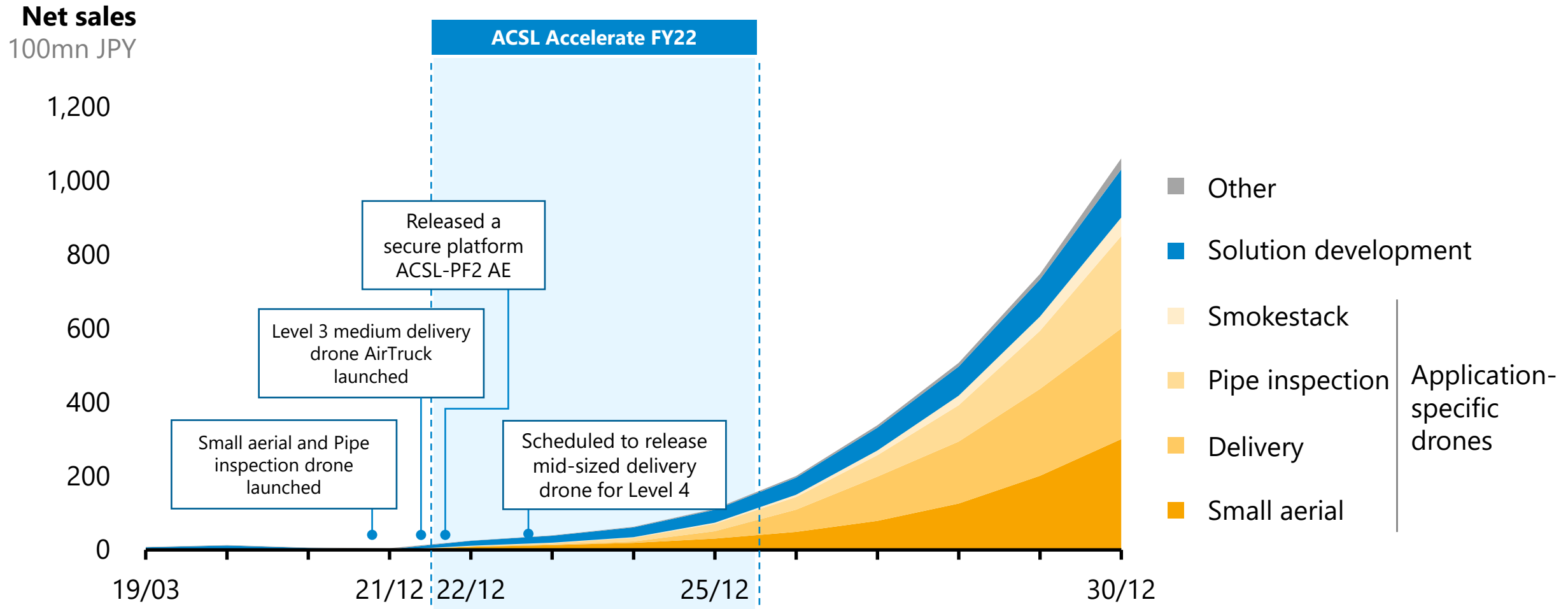
Sales composition ratio



1: Actual results through FY22/12, target figures for ACSL Accelerate in FY22/12 and beyond

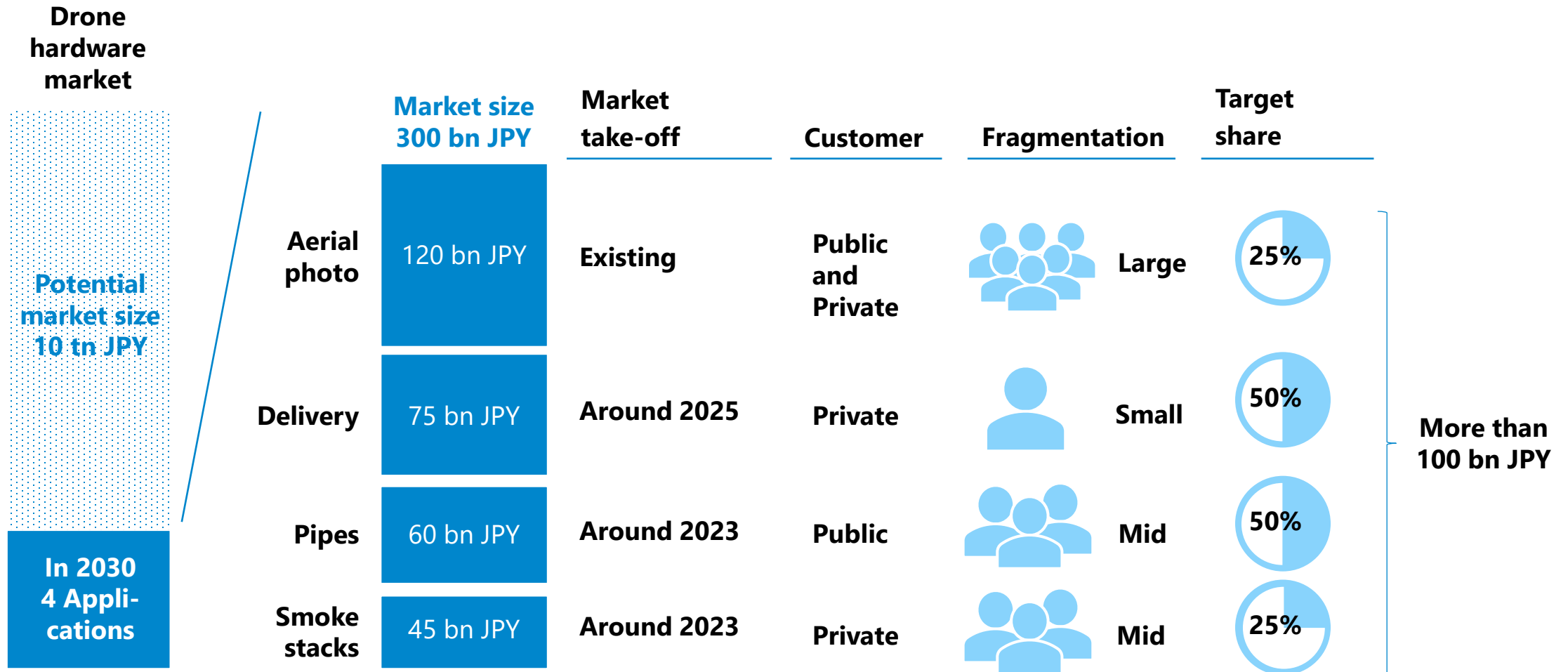
Rapid revenue growth achieved by shifting to drone sales

Early growth will be led by small aerial SOTEN and pipe inspection Fi4. Deliver will start growing from 2025



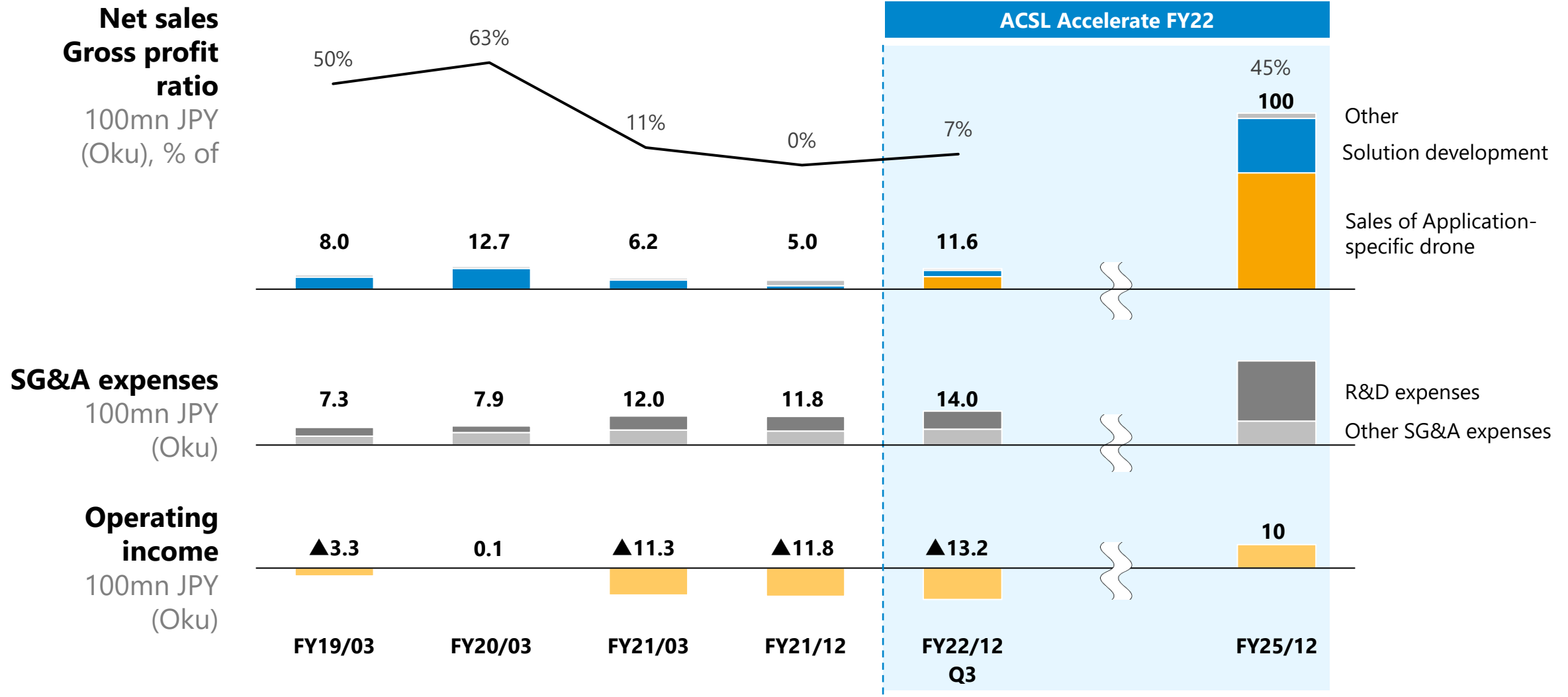
Targeting to achieve 25~50% market share in 2030

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



Sales Composition and Gross Profit

Sales of application-specific drones are expected to grow significantly for FY25. Gross profit is also aiming for 45%.



Potential Risks and Responses

Category	Major Risks	Our Recognition and Risk Management Measures
Macro	<ul style="list-style-type: none"> ▪ Insufficient procurement of materials relative to production plans due to semiconductor shortages and price hikes, material cost-to-sales ratio, and increased development costs ▪ Increase in prices of goods procured from overseas due to yen's depreciation against dollar's appreciation 	<ul style="list-style-type: none"> ▪ We recognize that the situation of semiconductor supply shortages and price hikes has worsened since the plan was formulated (February 2010), and although we are making arrangements to secure parts and materials, there is a possibility that costs will increase due to inventory shortages and price hikes in the future. In response, design changes to ensure stable procurement, having multiple suppliers, and purchasing through trading companies is being promoted. ▪ Overseas parts procured from domestic suppliers may be subject to cost increase due to foreign exchange impact on prices in the future. Considering the possibility of procurement from multiple suppliers, etc.
Macro	<ul style="list-style-type: none"> ▪ Limitations on customer efforts to utilize drones due to the spread of the new coronas ▪ Stagnation of supply chain due to suspension of business activities of suppliers and other companies, including those overseas 	<ul style="list-style-type: none"> ▪ Currently, we do not anticipate significant activity restrictions in Japan, but if the infection spreads, there could be an impact on demonstrations and other activities. Existing client initiatives themselves are expected to continue. ▪ Develop a procurement policy to hold a certain level of inventory for critical parts and parts with long lead times
Performance	<ul style="list-style-type: none"> ▪ Need for aggressive investment in R&D ▪ Quarterly seasonality of revenue recognition and cost execution 	<ul style="list-style-type: none"> ▪ Flexible investment policy in R&D when necessary for future business expansion ▪ Since sales are recorded on an acceptance inspection basis, the remaining period is expected to be dominated by the fourth quarter (October~December). Costs will be executed in advance, but may fluctuate throughout the year.
Regulation	<ul style="list-style-type: none"> ▪ Delay in the implementation of Level 4 regulations due to delays in the development of the Civil Aeronautics Act, etc. 	<ul style="list-style-type: none"> ▪ Aviation Law passed; Level4 system expected to be in place in late FY2022.
Overseas deployment	<ul style="list-style-type: none"> ▪ Risk of being inferior to foreign competitors in terms of competitiveness ▪ Potential impact of laws and regulations and local business practices ▪ Necessity of upfront investment for overseas expansion 	<ul style="list-style-type: none"> ▪ We expect a large demand for secure drones made in Japan and recognize that we have sufficient competitiveness. ▪ Possibility that local operations will be required to comply with local laws, regulations, and business practices. In such cases, there is a possibility that upfront investment will be made aggressively as an initial response.

アジェンダ

- 1 ドローン市場を取り巻く事業環境について
- 2 事業ハイライト
- 3 FY22/12 Q3 業績と中期経営方針「ACSL Accelerate FY22」
- 4 参考資料

FAQs (This fiscal year)



Category	Question	Answer
Macro	Will the situation in Ukraine and other issues have an impact on the Company as military demand is expected to grow worldwide?	The market for military-use attack drones is recognized as being different from that of industrial-use drones, and there will be no direct impact on the Company. It is our policy not to develop or provide drone technology for military purposes such as attacks. On the other hand, it is expected that drones used for reconnaissance, patrols, etc. will be domestically produced or procured from allied countries.
Macro	Has the semiconductor shortage had an impact on FY22/12 Q3 results and what is the outlook for the future?	Even through Q3, the company has been affected by higher component procurement prices due to the shortage of semiconductors. Specifically, SOTEN's parts prices are higher than before, and the prices of some semiconductors have increased from a few dollars to several hundred dollars. Although the impact has been absorbed to a certain extent through sales price revisions and other measures, the situation has worsened from the time the plan was formulated (February 2010), with a negative impact of approximately 610 million yen in increased costs, including semiconductor and foreign exchange costs.
Macro	Will the depreciation of the yen against the U.S. dollar have an impact on business performance?	On the sales side, there are no dollar transactions, and on the procurement side, direct dollar transactions are limited. On the other hand, the company buys products containing foreign-made semiconductors and other components through domestic suppliers, and for some of these products, the appreciation of the dollar is beginning to be passed on to the price side, resulting in increased costs.
Performance	The background to the revision of the sales forecast is as follows	Sales are now confirmed at 1.89 billion yen, including order backlog, against the current forecast of 2.5 billion yen as previously planned; although the company had been aiming to win orders through sales of SOTEN and PF2-AE, etc., it has decided to change the delivery to the next season or later due to difficulties in parts procurement caused by the rising price of semiconductors, etc. As a result, sales for the current fiscal year totaled 16.5 billion yen. As a result, sales for this fiscal year are expected to be 1.65 billion yen.
Performance	What is the specific content of the profit forecast for this fiscal year?	As noted on p. 36, semiconductors and foreign exchange factors had a 610 mn yen impact, sales delays had a 260 mn yen impact, changes in product mix (increased ratio of SOTEN) had a 100 mn yen impact, and upfront investments such as overseas expansion and Level4 compliance had a 570 mn yen impact.
Performance	The specifics of the upfront investment for overseas expansion and Level 4	When expanding overseas, initial investments are required to customize the aircraft to meet local regulations and to comply with export regulations. For Level 4 compliance, investment is also required for aircraft development, evaluation, and manufacturing processes.
SOTEN	The background for the increase in marginal profit margins	Marginal profit margin increased in Q3 due to sales growth of 7 units and sales of options such as cameras, etc. Marginal profit margin is expected to decrease in Q4 due to expected sales of main units.
Application specific drones	Progress on application specifics drones other than SOTEN	While closed environment inspections have been slower to deploy than expected, the logistics aircraft (AirTruck) has been adopted by a number of Digital Rural City National Initiative-related projects across the country.
Overseas	What is your overseas sales plan?	In India, ACSL is in the process of acquiring certification, etc., and expects to be able to obtain and sell the certification in early next year. In terms of orders, we expect to sell general-purpose machines. In the U.S., we are currently in the process of discussing with potential local partners in anticipation of the huge potential of this market. We expects to incur expenses for upfront investment in the current fiscal year, but this has not been factored into the sales forecast.
Financial affairs	What is your financial policy?	As of the end of September, we had 1.27 billion yen in cash and an overdraft agreement with a bank for 1.2 billion yen, so there are no problems with our business operations for the time being. Our market and business have three major funding needs: the first is working capital, such as procurement of parts; the second is investment in development, including drones and peripheral technologies; and the third is investment expenses when accelerating overseas expansion. Going forward, we will maintain a financial policy that includes appropriate timing and methods of fund procurement to enable flexible investment for growth.

Category	Question	Answer
Competitive environment	Chinese drone manufacturers have a high market share, but how to compete	We recognize that although Chinese manufacturers have a large share of the consumer market, there is no clear dominant player in the industrial drone market. We also recognize that we have three competitive advantages over Chinese manufacturers: 1) development of application-specific drone tailored to each industrial use case, rather than mass production of a single drone; 2) understanding of customer operations and establishment of support systems to meet local customer needs; and 3) provision of secure and safe drone to eliminate security concerns. The provision of secure and reliable airframes is mentioned.
Competitive environment	The emergence of competitors as drone manufacturers and the possibility of new companies entering the market are	Companies that possess drone autonomous control system technology at the source code level are rare worldwide, and there is currently little competition, including from overseas companies, when security measures are taken into account. In the development of autonomous control systems for industrial drones, verification in the field is of utmost importance. MHI has a solid customer base and can enhance its competitiveness by promoting development tailored to actual demand for each application through dialogue with customers and verification in actual environments.
Risk	What are the biggest perceived risks?	We recognize that major accidents by drones, including those of drone manufacturers other than our company, are a major risk. The Company's business development is expected to slow down due to delays in commercialization of the drone and delays in the introduction of drones by customers as a result of a loss of public trust due to serious accidents, etc.
Manufacturing Capacity	Is there a potential shortage of manufacturing capacity?	As a fabless manufacturer, we outsource production to an external partner in Japan and can handle increased manufacturing capacity.
Acquisition of human resources	Is there a risk of loss of core personnel such as research personnel?	By requiring only English as a requirement for engineers' job description, the company is attracting mainly non-Japanese with cutting-edge technology. The personnel evaluation system is also designed to provide incentives by preparing career tracks not only for management roles but also for expert roles for engineers.
Performance	How seasonality in sales occurs	For delivery of drone, sales are recorded when all the drone have been delivered and inspected by the client; for demonstration projects, sales are recorded when the entire project is completed. For large projects, sales are often recorded from January to March, depending on the budget cycle of the client company. On the other hand, sales are usually small from April to June.

Numerical Targets and Results for the Year Ending December 31, 2022



Sales of 1.03 billion yen were recorded in Q2 against the target of 2.5 billion yen. R&D expenses of 520 million yen were recorded against a forecast of 600 million yen or more.

FY22/12		
	Q3 YTD	Target Value
Net sales	1.16 bn JPY	1.65 bn JPY
R&D expenses	0.74 bn JPY	1.1~ bn JPY
Net income ¹	▲1.27 bn JPY	▲2.15 bn JPY

Sales Composition				
	Q3 YTD		目標数値	
	Unit	Amount (100 mn JPY)	Unit	Amount (100 mn JPY)
Sales of application-specific drone	506	7.0	668~	10.5
Small aerial photography drone	488	6.3	650~	9.7
Other application-specific drone	18	0.6	18	0.7
Creating Solutions	14	3.6	-	4.6
Demonstration experiments and contracted development	-	2.9	-	3.7
General-purpose and evaluation drone	14	0.6	-	0.9
Other	-	0.9	-	1.3

KPI Forecast

指標		FY18/03	FY19/03	FY20/03	FY21/03	FY21/12 (9 months)	FY22/12	
		Actual	Actual	Actual	Actual	Actual	Q2 YTD	Full Year forecast
Sales of application-specific drone								
Small aerial photography drone (Low ASP)	Unit	-	-	-	-	-	488	650~
	Amount (100mn JPY)						6.3	9.7
Other application-specific drone (High ASP)	Unit						18	18
	Amount (100mn JPY)						0.6	0.7
Development of application-specific drone¹								
PoC and Development	Project	60	81	112	82	41	48	-
	Amount (100mn JPY)	2.1	2.9	8.6	3.7	1.2	2.9	3.7
Sales of Platform/ Evaluation drone ¹	Unit	40	106	101	46	18	14	-
	Amount (100mn JPY)	0.9	3.8	3.0	1.4	0.6	0.6	0.9
Number of shipments ¹	Unit	-	136	128	71	25	29	38

1: The number of Sales of Platform/Evaluation drones represents drone sold in the platform sales (former STEP 3 and 4), and the number of shipments represents the total number of drones shipped including the demonstration experiments (former STEP 1 and 2)

Quarterly Sales Trends



Fiscal Year		FY19/03				FY20/03				FY21/03				FY21/12			FY22/12		
Quarterly Results		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q1	Q2	Q3
Demonstration experiment¹ • Proof of Concept • Custom development	Sales mn JPY	25	59	75	133	27	65	102	671	1	22	22	323	14	42	67	252	16	25
	Num. of projects	6	16	22	37	14	22	21	55	2	11	15	54	6	14	21	34	2	12
Sales of platform drone² • Sales of standard and general-purpose drone • Drone modified for customers based on the standard drone	Sales mn JPY	10	67	80	225	24	48	19	212	4	10	13	116	15	34	17	42	17	7
	Num. of units	8	20	31	47	6	12	9	74	1	3	5	37	6	6	6	8	4	2
Sales of application-specific drone³ • Sales of mass-produced drone	Sales mn JPY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	593	24	85
	Num. of units	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	476	8	22
Other⁴ • Sales of parts • Fuselage repair service • Some national projects	Sales (of which national projects) mn JPY	68 (65)	14	12	33	9	29 (18)	9	59	30 (21)	8	10	55	237 (219)	55 (50)	15	64 (21)	20	11

1: Solution development (STEP 1 and 2) was renamed to "Demonstration experiment" from FY21/03 Q1.

2: Drone sales (STEP3,4) was renamed to "Sales of platform drone" from FY21/03 Q1.

3: Sales of mass-produced drone are recorded for drone that are expected to be mass-produced in specific areas.

4: National projects are generally recorded as non-operating income with respect to grants received. On the other hand, some projects whose main purpose is to conduct commissioned experiments are recorded as revenues.

Major financial items by quarter



Fiscal Year ¹	FY19/03				FY20/03				FY21/03				FY21/12			FY22/12		
Quarterly Results	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q1	Q2	Q3
Sales mn JPY	104	141	168	392	60	143	130	943	36	42	46	495	267	133	100	952	78	130
Gross profit mn JPY	13	83	101	204	8	69	75	655	▲ 6	▲ 6	▲ 13	94	17	5	▲22	133	▲30	▲23
Gross profit margin	13%	59%	60%	52%	14%	48%	58%	70%	▲19%	▲16%	▲28%	19%	7%	4%	▲23%	14%	▲39%	▲18%
SG&A mn JPY	157	172	244	159	205	171	201	213	230	173	314	488	325	348	515	535	442	431
of which R&D expenses mn JPY	85	95	128	58	66	54	77	78	60	47	160	316	153	165	286	292	228	224
R&D expenses ratio to Sales	82%	67%	76%	15%	110%	38%	59%	8%	167%	112%	340%	64%	57%	124%	285%	31%	290%	172%

1: Figures for the FY21/03 Q3 and thereafter are based on consolidated financial statements, while figures for earlier quarters are based on non-consolidated financial statements.

Balance Sheet

mn JPY	FY22/12 Q2 (22/06)		FY21/12 Q1 (21/06)	FY21/12 Q3(21/12)
	Actual	YoY Increase/Dicrease ¹	実績	実績
Current assets	2,771	▲44%	4,974	4,177
Cash	1,273	▲68%	4,015	2,759
Fixed assets	1,955	+ 73%	1,129	1,537
Total assets	4,727	▲23%	6,104	5,715
Current liabilities	386	+ 131%	167	287
Fixed liabilities	66	+ 1,216%	5	8
Total liabilities	453	+ 163%	172	295
Net assets	4,274	▲28%	5,932	5,419

1: FY21/12 Q2 (21 Sep) vs. FY22/12 Q3 (22 Sep)

Company Outline

Industrial drone manufacturer



Corporate Name	ACSL Ltd.
Representative	Satoshi Washiya (President)
Established	November 2013
Location	Hulic Kasai Rinkai Building 2F, 3-6-4 Rinkaicho, Edogawa-ku, Tokyo 134-0086, Japan
Capital	16 Mm JPY (as of September 2022)
No. of employees	74 (as of September 2022)
Description of Business	Manufacturing and providing industrial drones. Providing automation solution services using autonomous technology.

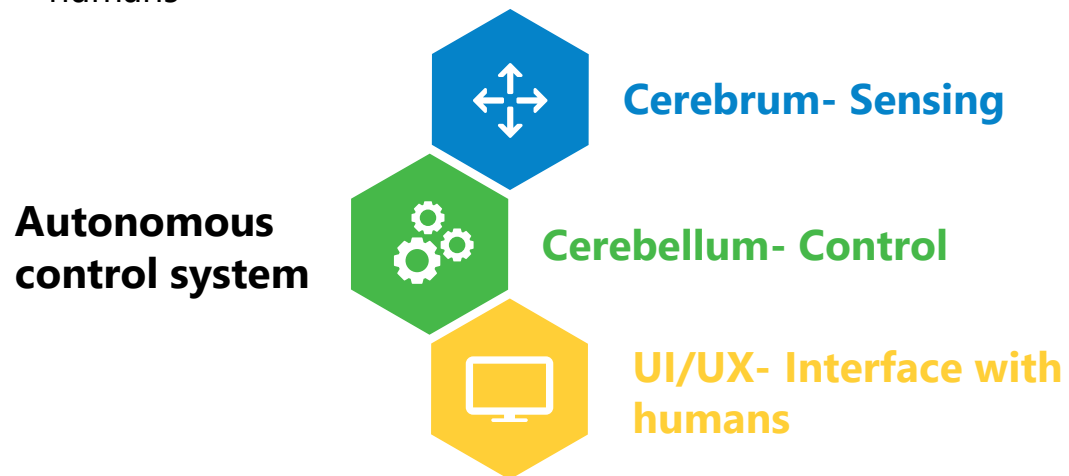
ACSL - a pioneer in drone manufacturing in Japan



ACSL manufactures application-specific drones using proprietary autonomous control technology, and upgrades operations at client site.

Core technology: Autonomous Control System

Our 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: Knowing our Client

ACSL works closely with clients to understand their operations and the difficulties they face. We develop drones tailored to individual applications through trials and testing



ACSL - What we do

Our business constitutes 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 demonstration tests

Competitive landscape

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

ACSL product

Key market segments

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

Management Team (as of September 30, 2022)



President

Satoshi Washiya



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

CFO

Kensuke Hayakawa



M.S. in 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. Assistant professor at Department of Aeronautics and Astronautics, University of Tokyo. Joined ACSL as CTO in April 2017.

External Director

Masanori Sugiyama

External Director

Tadaharu Shimazu

Audit & Supervisory

Akira Ninomiya

Audit & Supervisory

Hideki Shimada

Audit & Supervisory

Takeshi Ohnogi

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