

November 12<sup>th</sup>, 2021

Company Name	Kudan Inc.	
Representative	CEO	Daiu Ko
	(Securities code: 4425 TSE Mothers)	
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### **Financial report presentation video and its transcript are available online**

Kudan Inc. (henceforth in this document as “Kudan”) announces that the video and the transcript of Kudan’s financial report presentation for the second quarter of the fiscal year ending March 31, 2022 are now available online. As the video and the transcript are available in Japanese only, the English-translated transcript is attached to this release.

Also, the translated transcript for the question and answer in the financial report presentation meeting for institutional investors and analysts, planned to be held on November 15, will be coming up next week.

▼▼Financial report presentation video can be viewed from below (Japanese only)▼▼

<https://youtu.be/Pc1YrNMtxXk>

▼▼Financial report presentation transcript can be viewed from below (Japanese only)▼▼

<https://finance.logmi.jp/376588>

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*※This is a English-translated transcript of Kudan’s financial report presentation.※*



## **Supplementary Documentation to the financial report for the second quarter of the fiscal year ending March 2022**

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November 12, 2021

**Eyes to the all machines**

【Title】

## **Kudan has made steady progress toward customers' commercialization**

～Accelerating from “the preparation phase of the first half” to “the harvest phase of the second half” while continuing the recovery trend in business performance～

【Speakers】

Daiu Ko, CEO, Kudan Inc.

Taro Murai, Vice President and COO, Kudan Inc.

Kohei Nakayama, Vice President and CFO, Kudan Inc.

### **The financial report presentation for the second quarter of the fiscal year ending March 2022**

**Daiu Ko (hereafter “Ko)”** : Hello everyone, this is Ko, CEO of Kudan Inc.

We will explain the financial results for the second quarter of the fiscal year ending March 31, 2022. First of all, in the past few months, “Metaverse” has become a new buzzword, and we are in a huge trend in the technology industry as it is becoming more and more inevitable that the real space and the digital space will be connected to each other, and robots will be entering into such complex space.

As human space, virtual digital space, and robot space become intermingled and the importance of Artificial Perception, or spatial and positional recognition by “machine eyes”, which Kudan has been working on, is increasing, with the recovery in its business performance, Kudan has made further progress in implementing its technology and strengthening its position in the industry for this second quarter.

### **Multiple projects getting more certain to lead to customers' commercialization**

In both Visual SLAM and Lidar SLAM, Kudan has supported multiple projects to accelerate the integration of SLAM functions into products and solutions under development by its customers. As a result, development toward commercialization is accelerating and becoming more certain. As projects with high certainty of commercialization, there are three projects with targeted market launch timing in FY22 to FY23 and one project with that in FY24, and more projects with a high certainty will be added in the future.

※For details, please refer to “3. Progress toward customers' commercialization” on page 16-19

### **The acquisition of Artisense as a wholly owned subsidiary**

The schedule of the acquisition of Artisense, Kudan's group company, into a wholly owned subsidiary will be moved up from December 2022, the originally planned, to October 26-December 24, 2021, with the aim of accelerating the schedule of revenue growth and expanding its scale due to accelerated management integration.

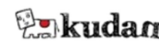
※For details, please refer to “2. The acquisition of Artisense” on page 9-15

**Taro Murai (hereafter “Murai”)** : This is Murai, Vice President and COO. I would like to share with you some of the highlights of our business development other than the acquisition of Artisense as a wholly owned subsidiary. There are three major topics: progress of multiple projects for customers' commercialization, expansion of projects through partnerships, and progress and new participation on large-scale projects.

We have made significant progress towards customers' commercialization in several projects that we have already been working on. With the increase of development personnel at the customer side and the provision of our technology integration support, the integration of Kudan SLAM into the customer's products has progressed and several important processes have been completed.

Also, we are starting to see the timing of commercialization, with three projects in this fiscal year and next fiscal year, and one project in the year after that. This is our current prediction, and we expect to see more projects for commercialization as the time gets closer. I will explain the details later on.

### Highlights / Business Development (2/3)



#### Acquiring projects more effectively through partnerships

Especially in Japan, through the partnership with a technology trading company, and overseas, through partnerships with sensor OEMs such as Ouster and processor companies such as NVIDIA and Texas Instruments, there is an increase in the number of projects from companies with high needs for third-party SLAM. Kudan has been able to acquire projects more effectively due to these partnerships.

- Has made a partnership with ADLINK (Taiwan), developed an AMR prototype, integrated Kudan Visual SLAM into robotics solutions, and conducted joint sales. Also, joint marketing activities are conducted such as the exhibition of an AMR prototype at "ROSCON JP 2021" and "Robotics & Automation exhibition (UK)".
- Nuvoton Technology Corporation Japan (formerly Panasonic Semiconductor Solutions) demonstrated its solution enabled by Kudan Visual SLAM at "ITmedia Virtual EXPO 2021 Autumn"
- Has become an official SLAM partner of Ouster, a leading provider of high-resolution digital lidar sensors (US) and started offering the Kudan Lidar SLAM evaluation program on Ouster's website. Kudan has acquired more than dozens of evaluation projects since the program started in August.

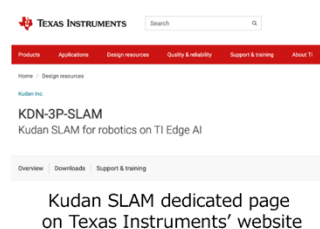


Joint webinar hosted by Ouster

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Promotional materials created by ADLINK



Kudan SLAM dedicated page on Texas Instruments' website

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As for our partnerships, we have been proactively making partnerships with various sensor and processor OEMs. In the current fiscal year, we are focusing more on strengthening these partnerships and could not only improve our recognition in the targeted industries but also acquire more projects.

We are actively collaborating in the field of robotics with ADLINK, one of the world's leading industrial PC manufacturers in Taiwan, and we are also working on evaluation projects with referrals from ADLINK's customers.

We have become an official SLAM partner of Ouster, a Lidar sensor OEM, and have acquired dozens of evaluation projects with the offering of the Lidar SLAM evaluation program for their customers. Moreover, we are currently progressing deeper partnerships with NVIDIA and other major semiconductor OEMs.

### Highlights / Business Development (3/3)



#### Progress and new participation on large-scale projects

- Artisense participates in ERASMO (Enhanced Receiver for Autonomous Mobility), a multiple-year autonomous driving research project funded by EUSPA, together with other EU companies including Renault
- Progress on autonomous driving project using Kudan Lidar SLAM with a global leading automotive OEM
- Progress on the optimization project of Kudan Visual SLAM for robotics with a global leading semiconductor chip manufacturer



The ERASMO project aims at developing an on-board positioning device enabling fully autonomous driving. This project is being carried out by a consortium including Renault, a leading automotive OEM. Artisense plays a critical role in the project by contributing visual-based positioning and sensor fusion technology to augment GNSS data.

<https://erasmo-gnss.eu/>

**Javier IBANEZ-GUZMAN, Corporate Expert Autonomous Systems (AI), Renault**

*"The Artisense team lead by Prof. Cremers has built a unique visual positioning solution that should enhance position estimates for vehicle navigation, particularly in areas where GNSS signals are poor or non-existent. The reason why we invited them to join us in the ERASMO project around the Galileo GNSS."*

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Along with projects with the high certainty of customers' commercialization, several large projects are in progress at the same time. In the recent release, we announced that Artisense has participated in ERASMO, a very large 3-year project on autonomous driving in Europe.

Other than that, even though we cannot disclose the details yet, the first phase of our autonomous driving project with an automotive OEM has performed to the OEM's expectations and will be completed soon, and we have begun discussions on the second phase.

We are also working on a project to optimize Kudan Visual SLAM for a major chip manufacturer's processor, which has already yielded results including over 50% acceleration in processing speed.









The seeds we planted in the last fiscal year by optimizing the project portfolio, focusing on robotics, and launching Lidar SLAM have been gradually sprouting. Some of them have reached the stage where they can be commercialized. We are now starting to see the cycle of further raising awareness and gathering knowledge through customers' commercialization, acquiring and accumulating more projects, expanding the scale of the projects, and expecting customers' larger-scale commercialization further.

## Highlights / R&D - R&D progress in the last 6 months

### Highlights / R&D – R&D progress in the last 6 months: Visual SLAM



- For each algorithm, we have efficiently acquired and progressed projects by focusing on development items that are in high demand in the targeted areas and are more likely to gain competitive advantage

Algorithm	Development Item	Project progress (examples)
	• Improved performance on fisheye type cameras	 Major automotive Tier1: ADAS
	• Improved performance on the integration of wheel odometry	 Major Japanese telecommunication company: Robotics
	• Improved tracking accuracy using GPS	 Engineering company: Indoor positioning
	• Improved performance on IMU integration and wheel odometry integration	 Japanese engineering Company: Autonomous driving
	• Localization on existing point cloud map and its implementation on the cloud	 Major Japanese telecommunication company: AR
	• More accurate time synchronization of sensors	 Chinese autonomous delivery robot OEM: Robotics



SLAM image with a fisheye camera

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From now on, I would like to share the results with you, focusing on our most recent R&D.

In both Visual SLAM and Lidar SLAM, we have acquired and progressed several projects for each development item, and by satisfying customers' specific needs, we have also achieved both the retention of customers and the strengthening of our competitive advantage through offerings for a wider range of potential customers.

For example, Kudan Visual SLAM has improved its performance on fisheye type cameras, a lens that has a wider field of view and can capture more of the surrounding environment than a normal camera lens. This will allow SLAM to incorporate a wider variety of information, and is expected to improve accuracy and robustness in this regard.

In addition, since many of the cameras installed in existing cars use fisheye lenses, improved performance in this type of camera will help raise the level of competitive advantage in the ADAS field as a whole. The drawback, however, is that image distortion is very large, and if this correction is not done properly, such advantages cannot be utilized.

In this development, we have changed the algorithm so that the performance can be fully delivered even with such fisheye lenses. This has led to an ADAS-related project going forward with one of the automotive Tier 1 suppliers, and we have progressed into the deeper R&D project.

Since this is not autonomous driving, but an area of driver assistance that has already been widely spread, the target market is very maturing, so a quick ramp-up from commercialization can be expected.

## Highlights / R&D – R&D progress in the last 6 months: Lidar SLAM



- For each algorithm, we have efficiently acquired and progressed projects by focusing on development items that are in high demand in the targeted areas and are more likely to gain competitive advantage

Algorithm	Development Item	Project progress (examples)
	• Map merging function	Automotive OEM: Autonomous driving
	• Map streaming function	Major telecommunication: 5G x SLAM
	• Improved accuracy by correcting point cloud distortion, etc.	US mapping provider: Mapping
	<p>Merge several maps into a single large map</p>	<div> <p>Without Map Streaming</p> </div> <div> <p>With Map Streaming</p> </div> <p>Comparison of maps with and without map streaming</p>

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I am not going into other details, but in this way, we will continue to develop our products further while achieving both milestone revenues from individual projects and strengthening our competitive advantage in the overall market.

## Performance overview

### Performance overview



- Expansion of Lidar SLAM and Artisense SLAM technology lineup and the optimization of the project portfolios have had a positive impact, resulting in continued revenue recovery trend due to an increase in orders and progress in the development phase of existing projects after bottoming out the performance in the previous fiscal year from the rapid deceleration of the market due to the COVID-19 pandemic and the delay in a new product launch

(Unit : million yen)

	Performance for 2Q of FY21	Performance for 2Q of FY22	Forecast for FY22	Change (from the performance for 2Q of FY21)	Performance For FY21 (Reference)
<b>Net Sales</b>	<b>30</b>	<b>110</b>	<b>300 ~350</b>	<b>262.7%</b>	<b>127</b>
<b>Operating Profit</b>	<b>△238</b>	<b>△220</b>	—	—	<b>△451</b>
<b>Ordinary Profit</b>	<b>△220</b>	<b>△323</b>	—	—	<b>△1,575</b> (incl. "share of loss of entities accounted for using equity method"(1,232))
<b>Profit Attributable to Owners of Parent</b>	<b>△220</b>	<b>△321</b>	—	—	<b>△1,608</b>

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**Kohei Nakayama (hereafter “Nakayama”) :** As for the performance overview, this is Nakayama, CFO, who will provide an explanation. Since the previous fiscal year, we have made progress in R&D, such as adding functions and improving the performance of Visual SLAM and Lidar SLAM, and launching Artisense's new product “VINS” in the market, and in business development, we have focused on shifting to the customers’ projects with higher prospects for commercialization and continuity.

Therefore, the number of projects that are continuously working toward customer commercialization, which is the most important factor for Kudan’s mid- to long-term growth, is steadily increasing. In addition, in the current financial results, revenue from evaluation licenses, development licenses, and development support is on an upward trend due to the progress in development milestones of existing projects and the acquisition of new customer projects.

As a result, net sales for the second quarter of the current fiscal year totaled 110 million yen, and there has been a continued recovery trend since the fourth quarter of the previous fiscal year, after bottoming out in the previous fiscal year's results, which were caused by the rapid deceleration of the market due to the COVID-19 pandemic and the delay in launching VINS to market.

In the term of the cost, costs have increased compared to the same period of the previous year due to the inclusion of R&D costs as a result of Artisense becoming a consolidated group company, as well as the payment of licensing and development consignment fees to Artisense through an increase in joint customer projects. However, we believe that this investment in R&D has led to progress in R&D and customer projects as mentioned earlier.

As a result, we have recorded an operating loss of 220 million yen and an ordinary loss of 323 million yen for the second quarter of the current fiscal year. That is all about the explanation of Kudan’s performance overview.

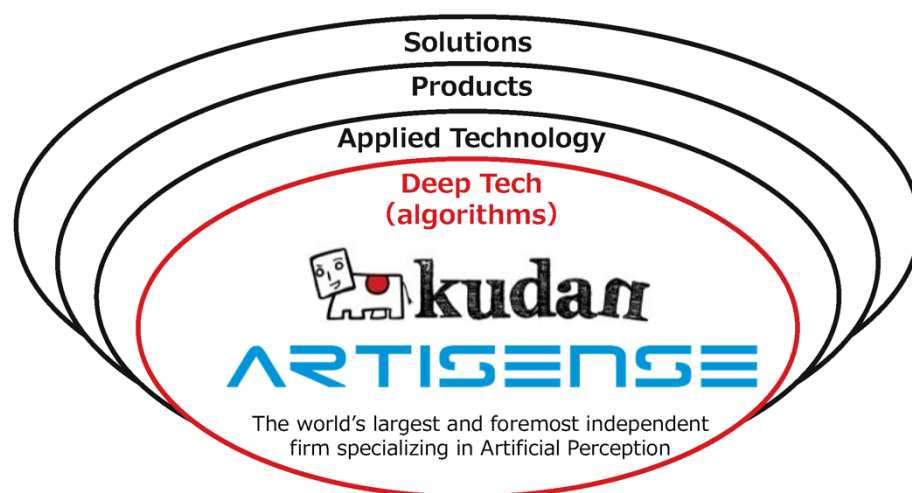
### Deepen the leadership position with the acquisition of Artisense

Deepen the leadership position with the acquisition of  
Artisense



**Kudan acquires its group company, Artisense as a subsidiary to further strengthen its position, which is already the world's largest firm in the field of Artificial Perception and SLAM, and to increase its competitive advantage and growth potential.**

※This acquisition is provided for in the share purchase agreement disclosed in April 2021, and this disclosure is a resolution related to finalizing the schedule and payment method.





**Ko:** I would like to explain about the acquisition of Artisense.

The acquisition of Artisense, the greatest competitor in the same field as Kudan, was already planned in the existing investment agreement and is expected to significantly increase Kudan's competitive advantage and growth potential to further strengthen its position as the world's largest and foremost independent firm in the field of Artificial Perception and SLAM.

### About the resolution on October 4<sup>th</sup> 2021

#### About the resolution on October 4<sup>th</sup> 2021



1. Due to steady progress in the phased corporate integration, the schedule for the third share acquisition was accelerated and moved up to October 26<sup>th</sup> - December 24<sup>th</sup> in 2021<sup>\*1</sup>
2. In consideration for the acquisition price of 1.7 billion yen<sup>\*2</sup>, Kudan will issue 494 thousand new shares<sup>\*3</sup>



<sup>\*1</sup> Accelerated from the deadline (December 2022) stipulated in the current share purchase agreement (disclosed in April 2021)

<sup>\*2</sup> No amendment from the conditions stipulated in the current share purchase agreement (disclosed in April 2021)

<sup>\*3</sup> Newly issued shares are subject to lock-up provision or off-market block trade, etc. is planned to be arranged.

<sup>\*4</sup> As joint projects, we have conducted 7 paid customer projects, joined the NVIDIA Partner Network, and sponsored ICCV conferences

<sup>\*5</sup> Integration of top management through concurrent post of CEOs of both companies

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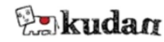
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Kudan has already conducted two share acquisitions of Artisense with the aim of achieving a phased corporate integration. We have decided that the schedule for the third share acquisition of Artisense would be accelerated and moved up as the process of establishing a joint business structure, expanding joint projects, and partially integrating the management structure has progressed smoothly.

In addition, the acquisition of all shares of Artisense will be completed by issuing 490,000 new shares in consideration of the acquisition price of 1.7 billion yen.

## Acquired a world-class technical team

### Acquired a world-class technical team

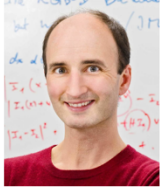


- **Kudan has acquired a world-class technical team led by Professor Daniel Cremers, the leading authority in the field, and has achieved a dominant position**



**▪ Professor Cremers, a leading authority in Artificial Perception and autonomous driving research**

- Founder and Chief Scientific Officer at Artisense
- World's most referenced researcher in the fields of spatial AI and SLAM (47,000 citations of his work in academic papers, with a Google h-index, indicating contribution to the academic field, of 101)
- The head professor of Computer Vision & Artificial Intelligence at the Technical University of Munich



**▪ Together with Kudan's own personnel, a team of 30 of the world's leading technical experts has been established**

- Professor Cremers' team of around 20 technical experts have joined forces with Kudan
- Kudan has managed to attain a significant advantage over its competitors by securing this team of experts in the field while there is a global shortage of top engineers and the competition for acquiring such talents is fierce, including even the big-four tech companies

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In the field of Artificial Perception, as technological innovation continues to be centered on a very small number of highly skilled personnel, competition for the world's top engineers is intensifying worldwide.

With this acquisition, one of the world's top teams of engineers, led by Professor Daniel Cremers of the Technical University of Munich, who is the founder and Chief Scientific Officer at Artisense and a leading authority in Artificial Perception and autonomous driving research has joined the Kudan group.

This is a great step forward for Kudan to lead and achieve a dominant position in the field.

## Breakthroughs for future technologies

### Breakthroughs for future technologies



- Company solidification via the acquisition of the IP (Intellectual Property) of future technology
- Aim for successful breakthroughs via industry-leading technology commercialization  
→ Accelerated integrations of each technology, such as SLAM and Deep Learning, Lidar SLAM and Visual SLAM, Direct SLAM and Indirect SLAM

Strength in turning technology into business, with leading, unique methods of implementing technology, and a global track record.

**Indirect SLAM**

- Camera image (visual) processing
- Capable of high-speed recognition
- High versatility

**Lidar SLAM**

- Lidar data processing
- Strong in recognizing fast movements
- High stability

**ARTISENSE**

Headed by a global leader in self-driving automotive research, Prof. Daniel Cremers, technical experts including Ph.Ds from TUM

**Direct SLAM**

- Camera image (visual) processing
- Capable of detailed recognition
- High stability

**GN-net, etc. (Deep Learning)**

- Robust recognition on the verge of a breakthrough
- A revolution in dealing with environmental changes

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In addition, Artisense's proprietary technology is highly advanced as a next-generation technology and is strongly complementary to Kudan's existing technology.

The combination of our technologies will enable industry-leading breakthroughs such as the integrations of SLAM and deep learning, Lidar SLAM and Visual SLAM, and Indirect SLAM and Direct SLAM, which can significantly boost customers' commercialization.

## Examples of Artisense's projects

### Examples of Artisense's projects



- With the world's highest level of technology, Artisense has already developed a large number of projects on a global scale

**SIEMENS**

**BOMBARDIER**



**ECARX**



**RENAULT**  
Passion for life

**NNG**

Autonomous Electric Truck OEM

Tier 1 automotive supplier

Indoor Factory Robot

Outdoor delivery robot for a general electronics manufacturer

Mobile mapping system

Autonomous Vehicle

Autonomous delivery robot OEM

Automotive Autonomous Valet Parking

**BOMBARDIER** : Canadian industrial transportation equipment OEM, mainly aircraft, and sales of \$6.5 billion (2020)

**DB (Deutsche Bahn)** : Germany's largest railroad company, and sales ~€40 billion (2020)

**ECARX** : Chinese autonomous intelligent solutions provider, which received investment from Baidu and Geely and has signed a partnership agreement with Volvo.

**NNG**: Hungary's Tier 1 automotive supplier. More than 30 automotive brands have adopted its solution, and seven of the top 10 OEMs have adopted it.

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Artisense has a particular strength in deploying technologies in the areas of robotics and autonomous driving, and has worked on several projects for global leading companies including Siemens, Deutsche Bahn, and Renault.

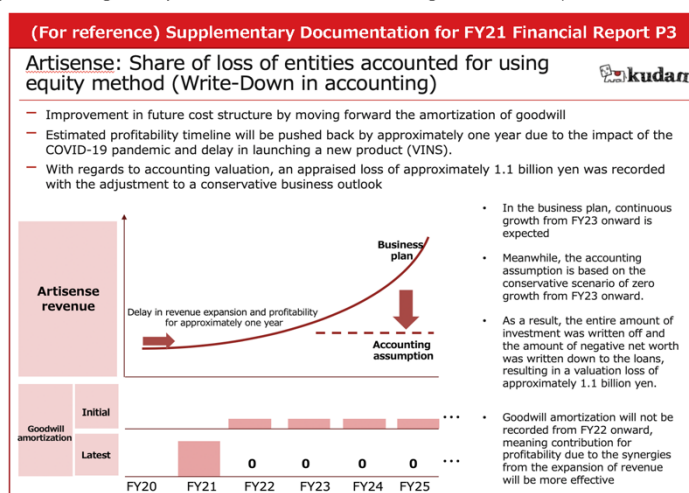
As I will explain more details later, these projects, as well as Kudan's existing projects, are progressing toward customers' commercialization.

## Impacts on accounting

### Impacts on accounting



- (Short-term) In accounting, Artisense has become a wholly owned subsidiary of Kudan as of October 2021, and all revenues and expenses of Artisense will be recorded in Kudan's consolidated financial statements from then on
- Possibility that expenses as R&D investment (impairment loss) will be recorded following the impairment of goodwill for the first acquisition and the second acquisition of shares conducted in FY21\*. In this case, future goodwill amortization will be reduced, and the contribution to profitability from the expansion of revenue achieved by management integration synergies will be more effective
- (Mid- to long-term) Aim to accelerate revenue growth and expand its scale through management integration



Delays in the business plan due to the impact of the COVID-19 pandemic, etc. will not hinder mid- to long-term growth potential, but the conservative accounting treatment is expected to be maintained for this acquisition as it is immediately after the FY21 financial reporting

\*Whether or not be recorded, the amount and schedule of the recording are still under consideration, and will be disclosed in a timely and appropriate manner once a concrete decision is made.

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**Nakayama:** This is Nakayama, CFO, who will be providing an explanation about the impacts on accounting for the acquisition of Artisense. Although the third share acquisition has not been completed at this time, for accounting purposes, we expect Artisense has become a wholly owned subsidiary as of October 2021, when the resolution for the third share acquisition was made, and all revenue and expenses of Artisense thereafter will be recorded in the consolidated financial statements.

(\*Due to the difference in the accounting closing date of Kudan and Artisense, revenue and expenses of Artisense from October 2021 are expected to be recorded in the consolidated financial statements from January 2022.)

In addition, although we recorded an impairment loss in the fourth quarter of the previous fiscal year in accounting, this third share acquisition was only a few months after the recordings, and we believe that a similar conservative accounting treatment will be required for the third share acquisition due to the consistency of accounting treatment in principle. Therefore, in the same way for the third share acquisition, there is a possibility that part or all of the amount of shares acquired will be written down in the third quarter of the current fiscal year or thereafter.

However, in that case, as with the impairment loss recorded in the fourth quarter of the previous fiscal year, the reduction in the amortization burden from the next fiscal year onward will contribute to improved profitability, we believe that the synergy of the future contribution to profitability from the business integration of Kudan and Artisense will become more effective.

Although there is this accounting impact, we believe that Artisense's mid- to long-term growth potential and intrinsic corporate value, based on the progress of its business development and R&D to date, remains unchanged.

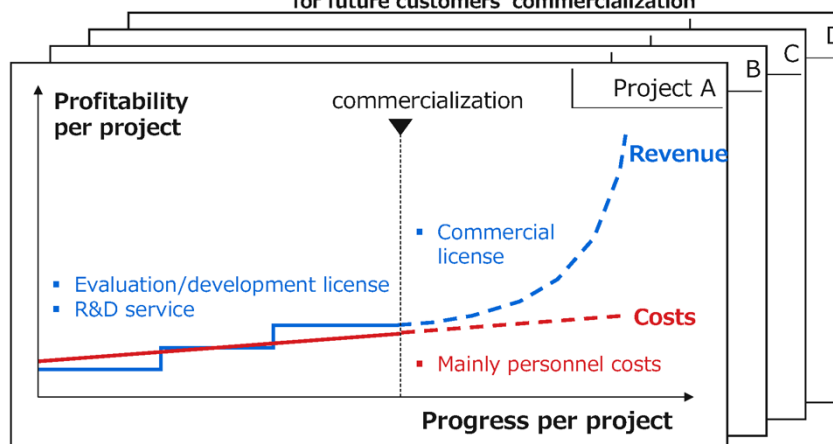
### Revenue model and future growth potential

#### Revenue model and future growth potential



- Almost all of customers' projects are in the evaluation or development phase, and Kudan is in the preparation phase, focusing on acquiring and continuing projects that are expected to achieve commercialization and expand the scale of sales in the future
- Although stable growth can be expected in revenue based on the progress of development milestones from evaluation/development licenses and customer development support, the most important goal is to contribute to all next-generation industries and to achieve a significant increase in revenue through commercial license profit with the implementation of Kudan's Artificial Perception technology.

"Quality of project portfolio" is the most important factor for future customers' commercialization



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**Ko:** The next is about our progress toward customers' commercialization. As for the positioning of customers' commercialization, Kudan's revenue model can be divided into two phases: the preparation phase of the first half and the harvest phase of the second half, which represent before and after the customers implement Kudan's technology in their products and commercialize them.

At this time, almost all of our customers' projects are in the evaluation and development phase of the first half, and in order to move onto the phase of the second half, where we expect a significant increase in product license income through the penetration of our customers' products, we are focusing the most on acquiring projects aimed at commercializing our customers' products and promoting commercialization through customer support.

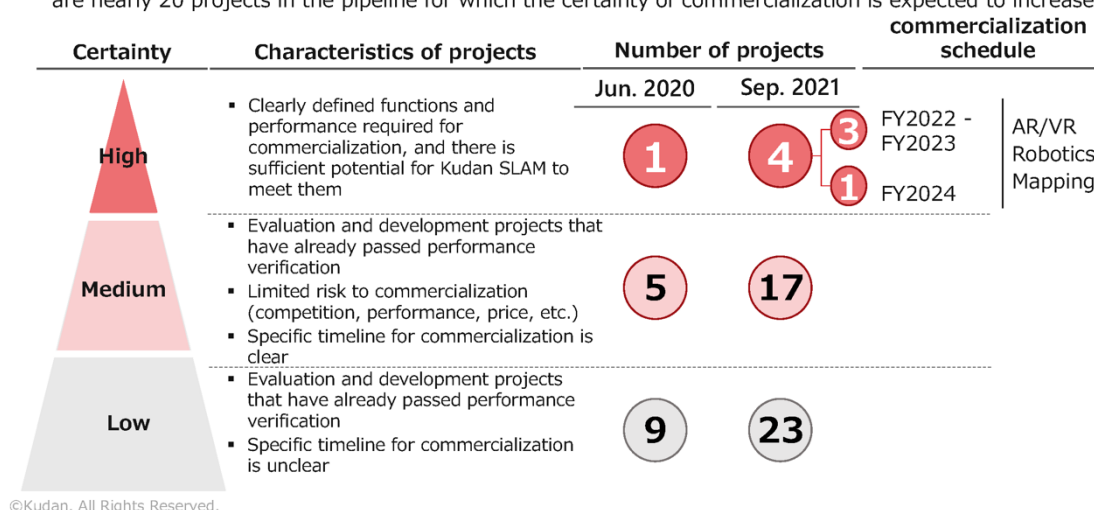


## Accumulation of projects toward customers' commercialization

### Accumulation of projects toward customers' commercialization



- From the end of June 2020, before Artisense became a group company, to the end of September 2021, the total number of projects that have passed performance verification and are on track for customers' commercialization has increased from 15 to 44
- Of these projects, four projects have a high certainty of commercialization (three projects are expected to be productized in FY22/FY23, and one project is expected to be productized in FY24). In addition, there are nearly 20 projects in the pipeline for which the certainty of commercialization is expected to increase.



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**Murai:** In the past, we have shown the cumulative number of projects, but from now on, we think it is more important to look at an indicator to keep an eye on how the projects are accumulating toward the commercialization of the customers' products, so we are sharing this comparison with the previous period before Artisense became a group company.

As shown in the triangle, the current pipeline is divided into three levels according to the degree of certainty for customers' commercialization. The common point is that all the projects included here have passed a certain level of performance evaluation, including evaluation based on customer data. The pipeline is further divided into three levels based on criteria such as the low risk of commercialization and clarity of the timeline.

At this point, there are four projects that have a high certainty, that is, major bottlenecks have already been solved or are in the process of being solved, and there is a good possibility that our customers' products will be commercialized. Three projects are expected to be commercialized as early as this fiscal year or next fiscal year, and one is expected to be commercialized in FY2024. There has been an increase to four projects from one project from last year.

As I mentioned earlier, there is currently one project with high certainty for FY2024 at this point, but we expect to have more projects with high certainty of customers' commercialization in FY2024.

In addition, we can see a clear timeline of customers' commercialization for the level of "medium" certainty, which represents that although there are some risks, there are no major risks in terms of price or performance, and the number of projects has increased from 5 in the last fiscal year to 17. Our main goal for the rest of this fiscal year and next fiscal year is to push these projects up to

the level of “high” certainty as much as possible and in the next fiscal year, we will also increase the number of projects with “medium” certainty, which will enable us to expand the entire pyramid.

### Highlights of projects accumulated for customers’ commercialization

#### Highlights of projects accumulated for customers’ commercialization



Market	Company	Algorithm	Overview
Autonomous driving	TOP5 automotive OEM	Lidar	Use of KdLidar in the project on urban operation and sensor cost reduction in the field of autonomous driving
	Major engineering	Visual	Conducted evaluation and development of the use of ArtiSLAM for vehicle positioning in autonomous truck operation in factories and plants
ADAS	Major automotive Tier1	Visual	In progress of evaluation and development of driver assistance functions using KdVisual with cameras installed in commercial vehicles
AR/VR	Major medical device OEM	Visual	In progress of final evaluation and the integration of KdVisual into medical AR headset
	Major telecommunication	Visual	Conducted the development to create a solution platform using AR in various locations
Robotics	Major telecommunication	Visual	In progress of developing a platform that embeds KdVisual and cooperative use of various robots
	Autonomous delivery robot OEM	Visual	In progress of final evaluation of ArtiSLAM implementation, including integration, for positioning of outdoor delivery robots
Mapping	Mapping provider	Lidar	In progress of KdLidar being integrated into a solution that enables mapping in non-GPS environments

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Some projects from "high" and "medium" certainty are shown here. In terms of our focused areas, we are progressing projects accumulation not only in the AR field, but also in autonomous driving and robotics. In terms of the region, current revenue is centered on Japan, but we are steadily building up projects not only in Japan but also in Europe, the United States, and China.

In addition, we are progressing the acquisition of Artisense as a wholly owned subsidiary, but there are already several projects advancing that Artisense's Visual SLAM has been included, and we are in the process of increasing the number of projects in each of the three SLAM offerings.



## Factors behind the increase in projects for customers' commercialization

### Factors behind the increase in projects for customers' commercialization



#### **(R&D) Adaptation to market needs by adding functions, improving performance, and expanding technology lineup**

- Enhanced wheel odometry in KdVisual and improved accuracy in KdLidar enable us to respond to customers' projects with more specific commercialization timeline
- The launch of Artisense SLAM enable us to acquire more projects, especially in outdoor robotics
- In robotics, easier integration through ROS (Robot Operating System) allows for a wider range of projects

※ For other R&D progress and contributions to project acquisition/progress, please refer to "Highlights / R&D – R&D progress in the last 6 months"

#### **(Business Development) Enhance sales channels and technology lineup by expanding partners and strengthening relationships**

- Enhance channels to expand projects that fit Kudan/Artisense SLAM through partnerships with sensor OEMs, processor OEMs and technology trading companies
- Develop solutions combining SLAM and other technologies through partnerships and collaborations with engineering companies (e.g: Develop a package that includes not only SLAM functions but also robot hardware and software)

#### **(Market environment) Increasing market needs in both Visual SLAM and Lidar SLAM**

- Increasing the number of projects for development of autonomous mobile robots for industrial use, and accelerated adoption of Visual SLAM by OEMs developing autonomous delivery robots using conventional technologies such as magnetic tape and 2D-Lidar SLAM
- The 3D-Lidar market is maturing, driven by price reductions, and as a result, the need for 3D-Lidar SLAM solutions is increasing

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One of the factors we have been able to increase the number of projects for customers' commercialization is that the three areas of R&D, business development, and the market environment are well aligned.

In R&D, as mentioned earlier, we have been developing functions and improving performance to strengthen our competitive advantage in the market while acquiring more advanced projects. This allows us to pass performance evaluations in a shorter period of time and to support a wider range of applications. Of course, the addition of Artisense's Visual SLAM to our offering is one of the main factors for this.

In business development, by deepening the partnerships, which is one of our focuses for this fiscal year, we have been receiving more project introductions from our partner companies, and these projects tend to have more specific applications and clearer requirements, so we are able to acquire projects closer to commercialization. Moreover, through collaboration with engineering companies, we are able to more quickly provide packages that include SLAM as the core, as well as SLAM's peripheral functions and hardware.

Finally, growing needs for autonomous mobile robots in the wake of the spread of COVID-19 pandemic, and the accompanying increased willingness of robot OEMs to develop such robots has led to more active development in the direction of adopting SLAM, the most advanced technology. At the same time, as Lidar sensor OEMs offer a variety of products, unit prices are decreasing, and

the market is maturing, the needs for Lidar SLAM are increasing, which is also a factor in the increase in our Lidar SLAM projects.

With these tailwinds in the market environment, we expect to further prepare for the rest of this fiscal year and next fiscal year, actively reap the seeds we have planted, and achieve customers' commercialization on several projects for this fiscal year and next fiscal year, by successfully aligning R&D and business development. We hope you will look forward to it.

This concludes our explanations about the financial results.

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※If you have any inquiries regarding the contents of the financial report presentation, please feel free to contact us at Kudan's contact form below. Also, if you would like to have an interview with us, please let us know as well.

■ Company Details

Name: Kudan Inc.

Securities Code: 4425

Representative: CEO Daiu Ko

■ For more details, please contact us from [here](#).