4Q/Full-Year Ended December 31, 2024
Conference Call (Held February 6, 2025)
Presentation and Question & Answer Summary

Presentation

Moderator: Good morning, everyone. If you like to listen to this session in English, please click the interpretation icon at the bottom of the screen and select the English channel.

Shibata: Good morning, ladies and gentlemen, in the previous earning call, I said that we are going to take a deep breath, and we actually did, also the state of the business is now somewhat stabilizing. Looking at Q4 complete expectation, we were able to reduce the channel inventory.

And I know that you're interested about the outlook for this fiscal year. For Q1 we have given the guidance, we expect slight growth. Also, there are some moving factors, but generally speaking, I think we are hitting the bottom.

And now the question is, how quickly we can go back to the growth trajectory on that point, there are still uncertainties, but gradually we expect the Outlook to improve. Also, that's expectation going forward, and I think Shinkai-san will also explain later.

From this fiscal year, the Altium revenue recognition standard has been changed. So at first glance, the Altium revenue looks like it's going to decline significantly, and that is impacting on the overall revenue trend. And the on other lawyers in the industry has done this also, it's not abnormal, but given the acquisition, we decided to change the standard at this Point.

And also, last year, we have started the dividend, and we are going to be paying the dividend for this fiscal year as well. So that's the summary for the outlook. Now I will hand over to Mr. Shinkai, who will give you a more detailed explanation about the results and the outlook.

Shinkai: This is Shinkai, CFO. So, regarding the result, I will explain using the presentation material uploaded on the IR site.

DISCLAIMER

- **Adoption of IFRS:** With the outlook that the Group will continue to expand globally and to provide financial figures that can be compared on a global scale, the Group discloses its consolidated financial statements in accordance with IFRS starting from the annual securities report for FY2018/12.
- **Non-GAAP figures:** Non-GAAP figures are calculated by removing or adjusting non-recurring items and other adjustments from GAAP (IFRS) figures following a certain set of rules. This adjustment and exclusion include the amortization of intangible assets recognized from acquisitions, other PPA (purchase price allocation) adjustments relating to acquisitions, stock-based compensation, as well as other non-recurring expenses and income the Group believes to be applicable.
- **Presentation of financial forecasts:** Starting from the consolidated forecasts for the three months ended March 31, 2019, the Group presents its financial forecasts as a range, and gross margin and operating margin figures in the non-GAAP format. The gross margin and operating margin forecasts are given assuming the midpoint in the sales revenue forecast.
- **Change of the method for aggregating Reportable Segment:** Due to the Group's organizational changes in the three months ended March 31, 2024, the methodology for aggregating revenue for reportable segments changed from the use of product axis to the use of customer axis. Accordingly, previously reported segment information for the year ended December 31, 2023, has been revised using the new methodology in order to be comparable with the segment information for the year ending December 31, 2024.
- **Purchase Price Allocation (PPA): T**he allocation of the acquisition costs for the business combinations with Transphorm, Inc. ("former Transphorm") and Altium Limited ("former Altium") has been revised at the end of three months ended December 31, 2024. These revisions to the allocation of the acquisition costs have been reflected in the consolidated financial results for the three months ended June 30, 2024 and for the three months ended September 30, 2024.

Next page, please. This is a disclaimer. So at the very bottom, you can see that the figures reflect the impact of PPA for transfer of an Altium for which the deals were completed on June, 20 and August, 1 of 2024 respectively, the second and the third quarters of FY 24 have also been updated retrospectively.

4Q/FULL-YEAR 2024 FINANCIAL SNAPSHOT

NON-GAAP

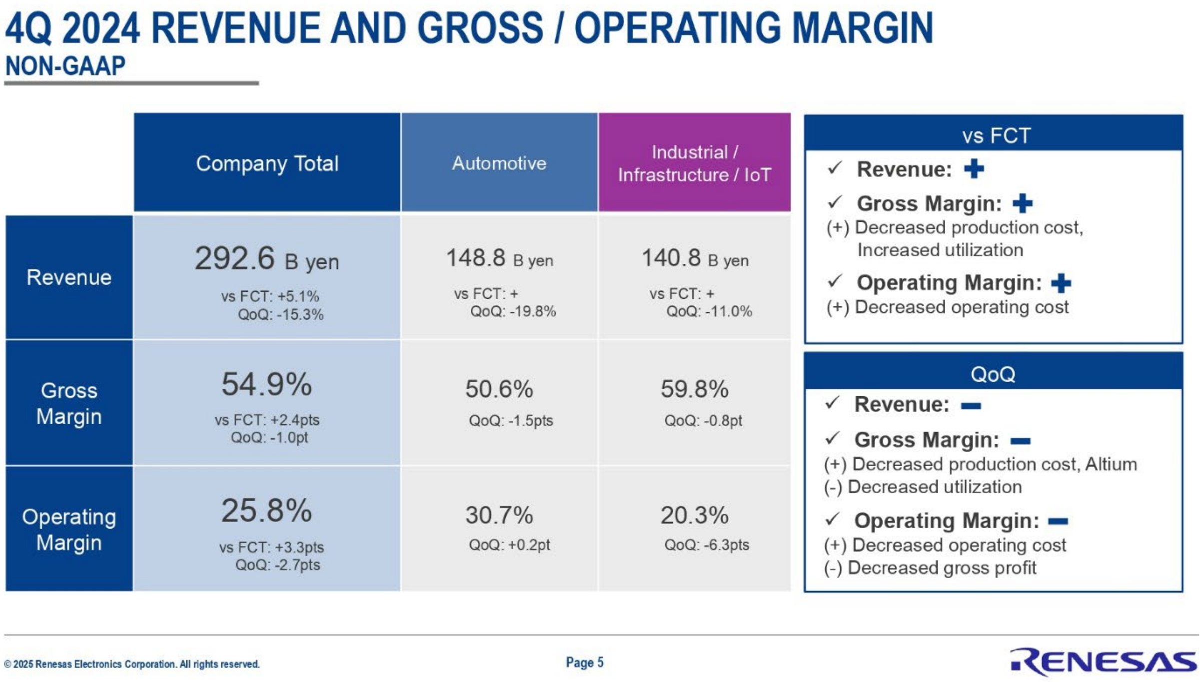
(B yen)	2023		2024								
	4Q (Oct-Dec)	Full-Year (Jan-Dec)	3Q (Jul-Sep)	4Q (Oct-Dec) Forecast	4Q (Oct-Dec) Actual	YoY	QoQ	Change from Oct 31 FCT[1]	Full-Year (Jan-Dec) Actual	YoY	Change from Oct 31 FCT[1]
Revenue	361.9	1,469.7	345.3	278.5 (±7.5)	292.6	-19.2%	-15.3%	+5.1%	1,348.5	-8.2%	+1.1%
Revenue (Excluding Foreign Exchange Impact)	-	-	-	-	-	-18.3%	-13.3%	+1.8%	-	-11.7%	+0.4%
Gross Margin	56.4%	57.0%	55.9%	52.5%	54.9%	-1.5pts	-1.0pt	+2.4pts	56.1%	-0.9pt	+0.5pt
Operating Profit (Margin)	115.5 (31.9%)	501.6 (34.1%)	98.4 (28.5%)	22.5%	75.4 (25.8%)	-40.1 (-6.1pts)	-22.9 (-2.7pts)	(+3.3pts)	397.9 (29.5%)	-103.7 (-4.6pts)	(+0.6pt)
Profit Attributable to Owners of Parent	98.2	432.9	86.0	-	71.9	-26.3	-14.1	-	360.4	-72.5	-
EBITDA[2]	136.0	581.9	121.4	-	98.2	-37.8	-23.2	-	486.2	-95.7	-
1 US$=	149 yen	140 yen	154 yen	145 yen	149 yen	0 yen appreciation	5 yen appreciation	4 yen depreciation	151 yen	11 yen depreciation	1 yen depreciation
1 Euro=	159 yen	151 yen	168 yen	160 yen	162 yen	3 yen depreciation	6 yen appreciation	2 yen depreciation	164 yen	13 yen depreciation	0 yen depreciation

*1: Each figure represents comparisons with the midpoint in the sales revenue forecast range
*2: Operating profit + Depreciation and amortization

Next page please also this is the results from q4 for q4 you can see the column in the middle, the dark blue column for revenue, it was 292.6 billion. The gross margin stood at 54.9% operating profit was 75.4 billion. Operating margin was 25.8%, Net profit was 71.9 billion, with EBITDA was 98.2 billion yen. And FX was 149 to the dollar and 162 yen against the euro. Three columns to the right is the change from the forecast.

And the full year actual is shown by the dark blue column on the right. The revenue was 1,348.5 billion yen over the gross margin of 56.1% operating profit was 397.9 billion, and operating margin was 29.5% and net profit was 360.4 billion, with EBITDA of 486.2 billion yen

For the full year. Looking at the change from last fiscal year, revenue was down by 8.2%. Automotive grew modestly year on year and for industrial infrastructure, IoT, because of the weak market, the revenue came down. And excluding the impact of the weak yen by 11 yen, the revenue declined by 11.7% gross margin compared to last fiscal year was down by 0.9 % points. For IIoT, of the product mix deteriorated, and also the lower utilization had a negative impact, but it was offset about the improvement in the production cost. For operating margin, it came down by 4.6 percentage point year on year. This is mainly due to the increase in OPEX, mainly for R&D, and also some impacts from the acquisition cost.



Next page, please. For Q4, please let me refer to this slide.

For company total versus the forecast, please look at the top right.

For revenue, compared to the midpoint of the forecast, it was higher by 5.1%. The FX impact was roughly 2/3 of the impact, and the rest were the other factors other than FX. Also, for the factors other than FX, with the forecast, we were expecting a risk of a slowdown in the parts supply, but thanks to the recovery measures taken, the impact was smaller compared to our anticipation.

So all in all, for automotive, other than that, it was pretty much in line with the projection. We reduced the sell-in revenue to cut the inventory. For IIoT, there was some change in the product mix, but the result was pretty much on par with the plan.

Next, moving on to the gross margin. Compared to the forecast, it was higher by 2.4 percentage points. 2/3 of the improvement came from the improvement in the production cost. There are two reasons: one is that from Q3 to Q4, we stepped on the brakes for sell-in revenue and production. As this was a short-term adjustment, we had assumed that production costs centered on utilities will not fall as much as we had hoped, but in reality, we were able to keep costs down. So that's about 50% of the impact. And another factor was the variable cost that will decrease in line with sales and production. Reflection was conservative. For example, IP royalty costs and logistics costs would come down with the revenue decline, but we did not fully factor those impacts in.

So all in all, we saw an improvement in the gross margin.

The operating margin was better than the forecast by 3.3 percentage points. This is partly due to the improvement in the gross margin and also compared to the forecast, OPEX slightly declined. Looking at the operating margin for Q4, as we had explained in the previous results meeting, it included a one-off factor. Specifically, the effect of the reversal of the provision for bonuses is concentrated in Q4. For automotive, there was a big recipient of the R&D expenses.

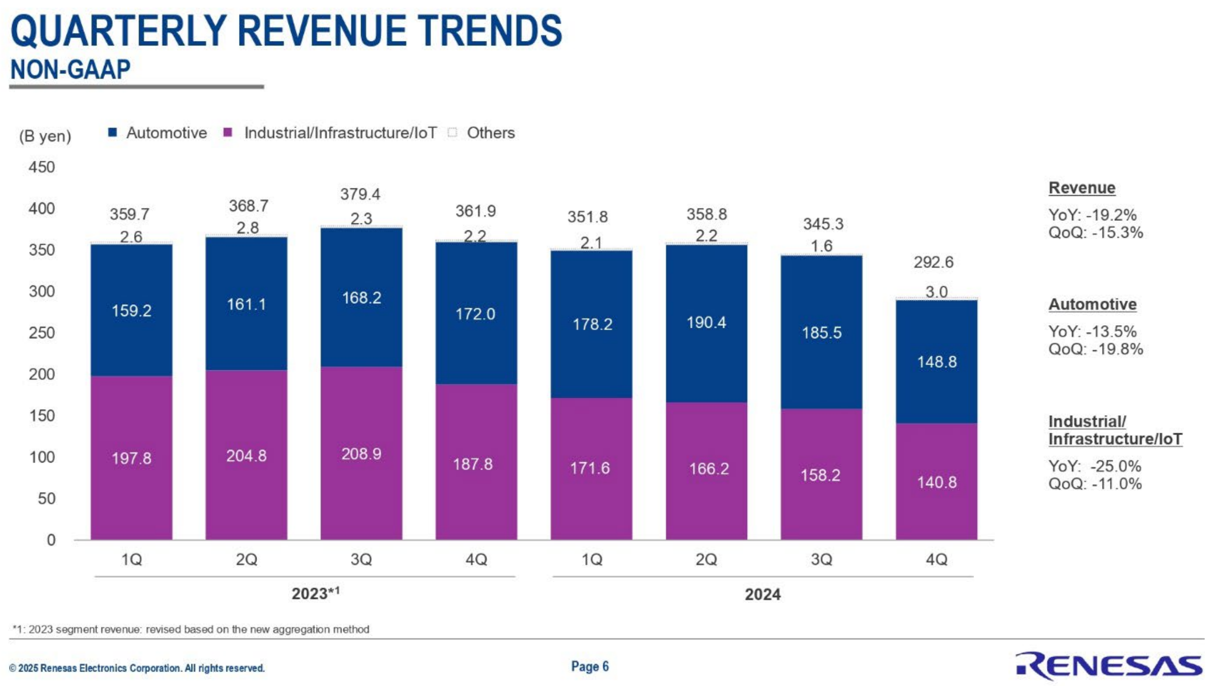
Please look at the QoQ change at the bottom right.

The revenue was down by 15.3%. As we communicated in the previous earnings call, looking at the waterfall chart, the impact of the stronger yen and the stagnation on the part supply was smaller than expected. So, this QoQ decline of 15% was mainly coming from the channel inventory reduction and the result reduction in the sell-through. The impact was half each.

For the gross margin QoQ, it was down by 1 percentage point, mainly due to the lower utilization rate.

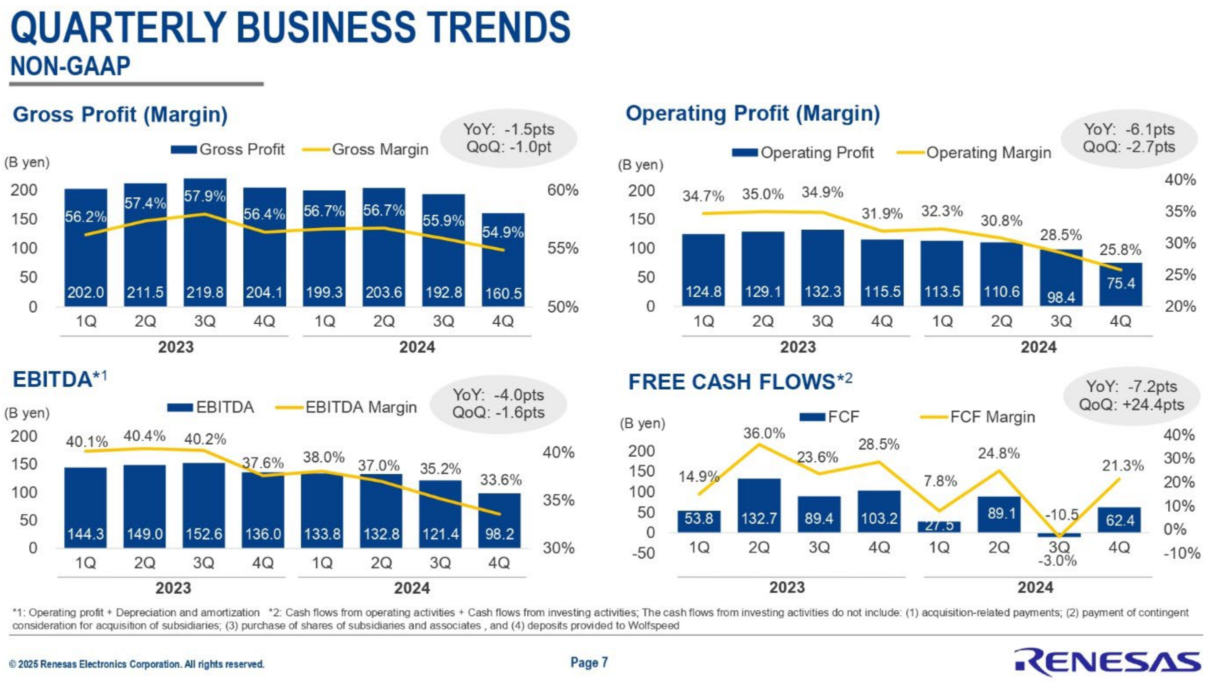
For the operating margin, it was down by 2.7 percentage points. It does include a one-off factor, but OPEX on a QoQ basis came down, but the operating margin was down because of the decline in revenue.

Looking at the segment details, for automotive, the operating margin QoQ increased. The one-off development cost payment was made, so that had a positive impact. And for IIoT, the gross margin declined QoQ slightly. And this is thanks to the impact of the Altium consolidation, and the decline was made smaller.

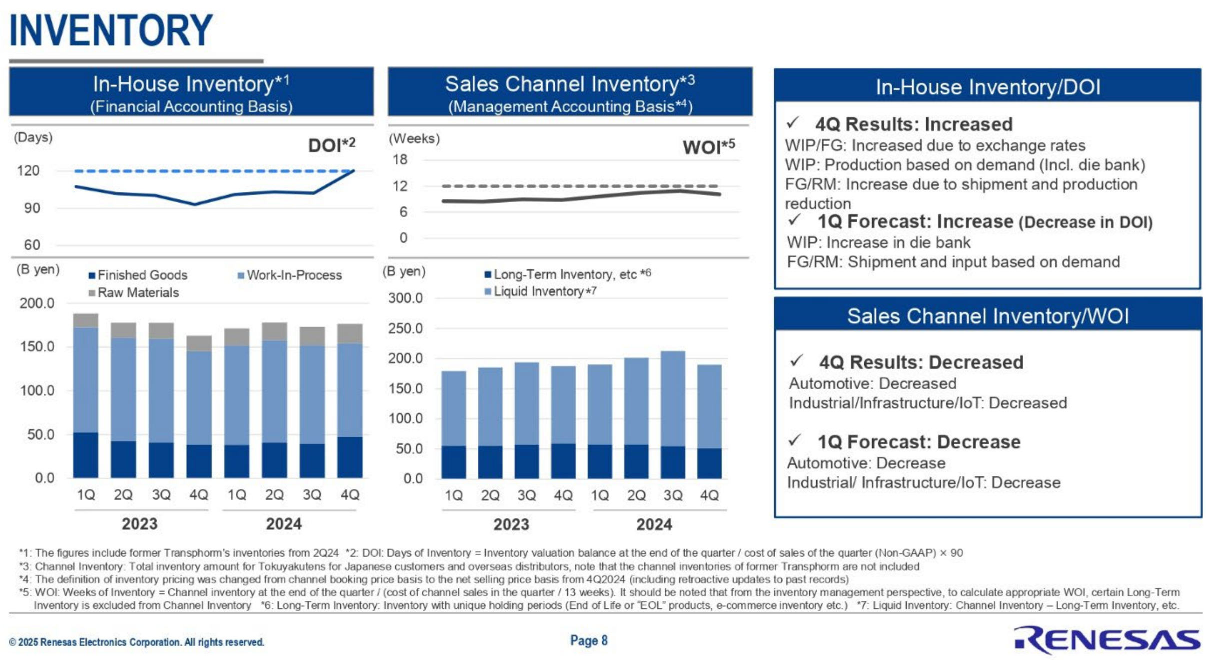


This is the QoQ revenue for Q4. Please look at the column on the far right. For company total, YoY, it was down by 19.2%. QoQ, it was down by 15.3%. And I have already explained the details.

The segment information is also illustrated on this slide.



Please look at the next page. This is the trend for the financial KPIs.



Regarding the inventory, we have the QoQ trend and the factors behind the change.

First, look at our in-house inventory on the left and also look at the box at the top right, please. For Q4, on a QoQ basis, it increased. Initially, we expected to lower the utilization, to cut the work in progress including the die bank and also reduce what we procure from the outsourcing partners, but this did not happen at full speed. And also, at the end of the year, the yen was weaker. And also, DOI, because of the revenue decline, increased to 120 days.

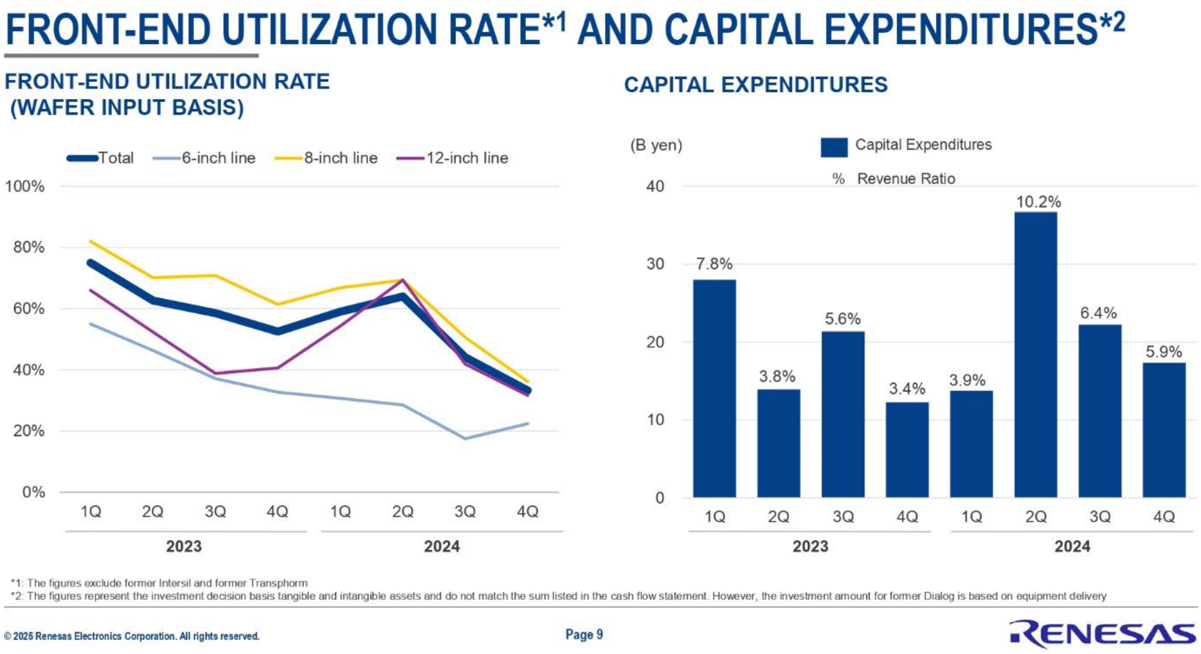
For Q1, overall, we expect the inventory to slightly go up, but the DOI is expected to come down because of the revenue increase. In Q4, we reduced the die bank, so we are going to replenish that. So, that's why the utilization rate is expected to go up in Q1.

Overall, the short-term lead time order is still coming in big volume. Also, in order to support this, we will not reduce the inventory too much. However, with the revenue growth, we expect the DOI to go down.

Regarding sales channel inventory, so from earnings announcement, we have changed the definitions of some numeric here, and let me explain that.

When we manage the channel inventory, we revised the definition this year to match accounting management more with the reality. So, the price of inventory, which is in the bar chart. So, we have been using the book value at a distributor, which was including the margin of ship and debt transactions. But instead, we changed it to the net selling price basis. So, the bar height and the price should be much closer to the actual sales price. So, I believe this will be more appropriate to reflect reality. The WOI is just a result of the division, so it won't be changing much, but due to the difference in price, then the bar height will be smaller.

On this slide, we have updated retroactively with this new definition. In Q4, the sales channel inventory, both actual amount and WOI, decreased QoQ. In Q1, both automotive and IIoT, we plan to reduce the channel distribution inventory furthermore, so we'll maintain the inventory to stay lean while closely monitoring sell-through demand trends.



Next slide, please. Utilization and CapEx.

Starting with utilization in Q4, it was around 30% as forecasted, but it came out to be a little just under 35%, so we have a slight increase. In Q1, we plan to have a slight increase on utilization. A little over 40% is expected. So, we had the reduction on WIP in Q4, but we plan to increase them into Q1, including die banks.

CapEx is as shown on the right-hand side.

1Q 2025 FORECAST
NON-GAAP

(B yen)	2024		2025		
	1Q (Jan-Mar)	4Q (Oct-Dec)	1Q (Jan-Mar) Midpoint Forecast (Range)*1	YoY	QoQ
Revenue	351.8	292.6	309.0 (±7.5)	-12.2% (±2.1pts)	+5.6% (±2.6pts)
Revenue (Excluding Foreign Exchange Impact)	-	-	-	-16.1%	-0.1%
Device Revenue*2 (Excluding Foreign Exchange Impact)			-	-18.0%	+2.2%
Gross Margin	56.7%	54.9%	54.0%	-2.7pts	-0.9pt
Operating Margin	32.3%	25.8%	24.0%	-8.3pts	-1.8pts
1 US$ =	147 yen	149 yen	155 yen	8 yen depreciation	6 yen depreciation
1 Euro=	159 yen	162 yen	161 yen	2 yen depreciation	1 yen appreciation

*1: Each figure represents comparisons with the midpoint in the sales revenue forecast range
*2: Excluding former Altium from reportable segments

RENESAS

The Q1 forecast, right in the middle in dark blue. The revenue midpoint forecast is JPY309 billion, and the gross margin will be 54%. The operating margin will be 24%. The FX assumption, JPY155 to the US dollar, JPY161 to the euro.

Let me touch on more details on that. First, with revenue, the midpoint forecast is JPY309 billion. YoY, it's down by 12.2%, and it's up by 5.6% QoQ. This QoQ change, 5.6%. So, it says it's down by 0.1%, excluding foreign exchange impact. For device revenue, plus 2.2%.

Let me explain these. So, the yen impact was 5.7% positive for FX impact. Then, the Altium consolidation impact is minus 2.3%, so device sales would be 2.2% accordingly.

Starting with device. So total revenue, excluding FX, and Altium software sales is excluded. It is shown over here as device revenue. It's up by 2.2% QoQ. Automotive and industrial, infrastructure, IoT are both increasing QoQ. And also, the Altium portion, this is down by 2.3%. So, from Q1, we are changing the revenue recognition rule for this portion.

Let me elaborate a little bit more on this. So, at Altium revenue for software license sales, that's both on-premise type and subscription type, so they basically were recognized mostly upfront at the time of the contract. But at the same time, the business itself has been migrated to the cloud service. So, the subscription-based contracts are expanding right now as a form of software provision. The cloud service percentage is increasing year by year, so cloud service, subscription service assume a continuous service provision. So, it is consistent to recognize revenue over the period of provision. Therefore, instead of booking the revenue upfront at the time of the contract, we decided to change the revenue recognition to be prorated over the service period. And so, this is starting this fiscal year.

From the PMI perspective, we believe it best applied from FY2025 because of the consolidation. At the time of the change, the revenue booking timing will be temporarily delayed, resulting in a decrease in sales temporarily. After that, stable revenue recognition becomes possible. And from Q4 into Q1, we will see a temporary decrease because of this, and that is about 2% or so, as I mentioned earlier. But the fundamental business continued to grow. And from Q2 beyond, along with the business expansion and contract accumulation, we expect to see increases to come QoQ. So that was for the revenue.

Then, let me talk about the gross margin, 54%. So, excluding the impact of revenue recognition rule change of Altium, is almost flat, so improvement due to increased capacity utilization will be largely offset by price mixes.

Then, the OP margin, 24%, excluding Altium impact, is going to be almost flat QoQ, so the one-off impact seen in Q4 will be offset by controlling the expenses.

That is the forecast for Q1.

Going into the appendix, let me also touch on some of the pages.

STATEMENT OF FINANCIAL POSITION

GAAP

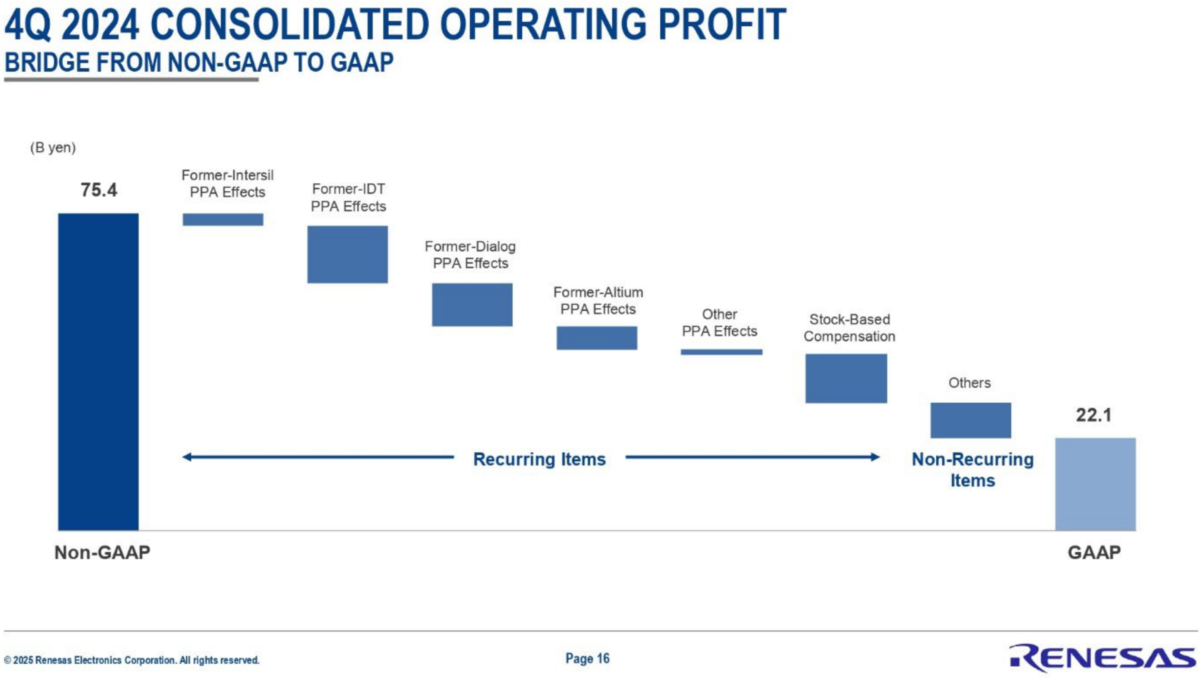
(B yen)	23/3	23/6	23/9	23/12	24/3	24/6	24/9	24/12
Total Assets	2,840.8	3,123.5	3,292.2	3,167.0	3,233.7	3,663.0	4,201.6	**4,490.4**
Cash and Cash Equivalents*1	361.4	458.1	392.5	434.7	231.8	288.4	239.1	**229.2**
Inventories	188.2	177.9	177.8	163.1	171.4	178.1	173.1	**176.5**
Goodwill	1,272.3	1,392.4	1,436.0	1,362.1	1,453.8	1,589.1	2,036.7	**2,256.2**
Intangible Assets	466.9	483.0	467.6	421.8	417.9	463.0	685.2	**724.8**
Total Liabilities	1,179.7	1,228.0	1,235.9	1,161.4	1,031.4	1,195.3	2,057.4	**1,948.1**
Interest-Bearing Liabilities*2	741.4	733.7	710.3	667.7	532.9	619.4	1,511.6	**1,422.8**
Total Equity	1,661.1	1,895.5	2,056.3	2,005.6	2,202.3	2,467.7	2,144.2	**2,542.3**
D/E Ratio (Gross)*3	0.45	0.39	0.35	0.33	0.24	0.25	0.71	**0.56**
D/E Ratio (Net)*4	0.23	0.15	0.15	0.12	0.14	0.13	0.59	**0.47**
Equity Ratio Attributable to Owners of Parent*5	58.3%	60.6%	62.3%	63.2%	68.0%	67.2%	50.9%	**56.5%**
Leverage Ratio (Gross)*6	1.2	1.2	1.2	1.1	0.9	1.1	2.9	**2.9**
Leverage Ratio (Net)*7	0.6	0.5	0.5	0.4	0.5	0.6	2.4	**2.5**
Average number of shares during the period (excluding treasury stock) (in million shares)	1,799	1,763	1,769	1,775	1,779	1,789	1,792	**1,794**

*1: This is comprised of cash on hand, demand deposit, and short-term investments that are readily convertible into cash, bearing low risk of changes in value and are redeemable in three months or less from each acquisition date
*2: Borrowings (current and non-current liabilities) + Lease Liabilities (current liabilities) + Lease Liabilities (non-current liabilities) + Bonds
*3: Interest-Bearing Liabilities / Equity attributable to owners of parent *4: (Interest-Bearing Liabilities - Cash and Cash Equivalents) / Equity attributable to owners of parent
*5: Equity attributable to owners of parent / Total liabilities and equity *6: Interest-Bearing Liabilities / EBITDA (Non-GAAP) *7: (Interest-Bearing Liabilities-Cash and Cash Equivalents) / EBIDTA (Non-GAAP)

RENESAS

First on page 14. Balance sheet.

So, we have completed the Transphorm and Altium PPI calculation. So, we have retroactively revised the results. So, the acquisition cost of Altium, JPY6.4 billion, and of that, 70% would be the goodwill and roughly 30% intangible fixed assets. The amortization period became, weighted average, to be 14 years, and annual amortization cost is going to be about USD149 million.



Going to page 16, right here, we have added the impact of Altium in the recurring items.

In Q4, we have JPY8.4 billion as non-recurring items. This is mainly structural reform-related costs, such as the onetime impact.

HIGHLIGHTS

Altium PMI

- **Completed PPA**: Reflected retroactively from 3Q 2024 results
- **PMI Progress:** Integration of the consolidated financial foundation (Changes to the fiscal year-end and incorporation into the budgeting process)
- **Change in Revenue Recognition Standard:** With the expansion of the subscription model for software offerings, the revenue recognition for this model has been changed to be allocated on a prorated basis over the service period

Continuation of Dividends

- **Dividends**: 28 yen per share, Total 50.3 billion yen
- **Dividend payout ratio:** 22.9% (vs. GAAP net profit)
- **Dividend Yield:** 1.4% (vs. stock price at the end of December)

Dividends resumed in 2023 and continue in 2024, remaining flat year over year

Update on R-Car Gen5

- Honda and Renesas Sign Agreement to Develop High-Performance SoC for Software-Defined Vehicles (2025/1/8)
- Renesas Unveils Industry's First Automotive Multi-Domain SoC Built with 3-nm Process Technology (2024/11/13)

RENESAS

Next, on page 18. Let me go over the highlights on the left.

Altium PMI, PPA is completed, and PMI progressed, especially we made progress on financials. We changed the revenue recognition standard starting this 2025. In the middle, Following last year, we will continue to pay out the same level of dividends.

Then, Gen5 updates are on the right.

This is all from me.

Question & Answer

[Questioner 1]

Q: So, looking at the Q1 revenue mix and also the profit. Earlier, you mentioned the automotive and non-auto, that the revenue is likely to go up. I think this is the 2.2% growth. And within automotive, can you give us the breakdown by region? And also, for the non-auto business, like industrial machinery and data centers and other applications, is there any difference in the recovery of those end markets? And I think you mentioned that in Q1, the product mix is going to deteriorate a little bit. Maybe the automotive business is going to grow faster. But in Q2, looking at the sales in effect, if the revenue is going to go up, I guess there's no one-off from the Altium. So, if the revenue goes up, your margin should go up. Is that going to be the way we should be looking at your performance going into Q2 and beyond?

A: Yes. So, this is Shibata. Let me first respond to your question and Shinkai-san can follow later.

Looking at Q2 and beyond, of course, there are a lot of uncertainties. But looking at the direction of the margin, like you said, I think that's how we see things play out. So, I would be repeating your comment, but the impact of Altium revenue recognition change is expected to be eliminated, and it's going to be concentrated in Q1. And also, I think what's going to be growing has a relatively good margin. So, that's the feeling we have for the future outlook.

Looking at Q1, specifically, like you rightly pointed out, there's nothing to [rebut] your comment. But looking at the region, Europe and, I guess, Japan as well, Europe may be bigger in terms of impact, but it's not going to be a rapid growth, but it's going to be growing from the low base in Q4, because in Q4, mainly with the European clients, a lot of attention was paid to the balance sheet. So, in the short term, there was a movement to reduce the inventory. So, as a rebound from that, I believe Q1 is going to grow versus Q4. And that's how we see the automotive business.

On the other hand, looking at China, with the Chinese New Year holidays, I think there were some pulling of demand in Q4, taking the demand from Q1. So, because of that, I think there's going to be a sequential decline. But other than that, we do not see any abnormal trend.

So, have I answered your question?

Q: Yes. If I may ask a follow-up question.

For the automotive business, I was expecting the key client in Japan to recover. But I guess it was not going to be such a big recovery, but I guess more recovery was from a European client from the end of the last fiscal year. Is that the correct understanding?

A: Yes. As I mentioned earlier, in Q4, with the European clients, many of them cut their inventory quite significantly. So, I think that's going to go back to the run rate we saw prior to Q4, so what we have been seeing in Q3.

Q: So, for non-automotive, industrial, IoT and infrastructure, within infrastructure, the AI-related things that were pushed back, I guess, is going to come back. Do you see any change in the recovery of different end markets for the non-auto business for Q1?

A: Yes, for industrial machinery, we expect to see continued inventory correction. So, we are a little bit negative on that. But having said that, I've said this many times, but the inventory correction trend, I think, is now very close to the bottom because the rate of reduction has moderated. And for things like AI and the cloud infrastructure, our outlook is expecting a big growth. But from the overall business portfolio, the exposure is still relatively small.

Also, we have to be cautious about this point. For the home appliances, we expect big growth in Q1. And I'm thinking that there could be some pulling forward of demand to address the tariff issue, and also some one-off demand that is supported by the subsidy that is provided when consumers buy new appliances. So, our view is cautiously optimistic. It's not an event-driven spike, and we do not expect a big rebound from that with the demand declining. So, at the same time, we don't expect this growth from Q4 to Q1 to continue at this level. But for the home appliances, I think we can expect some substantial growth. And for PC and mobile, there is seasonality, so they will be coming down.

Q: I see. Also, my second question is, looking at FY2025 from the management perspective, you want to grow higher than the industry average so that you will be evaluated in a good way from the equity market. So, I think last year, you tried to build up inventory in H1 quite actively and tried to capture the demand in H2. But I think you're going to be more cautious for this fiscal year. So, the operation may be slightly different. And from a long-term perspective, you have taken many initiatives, such as the acquisition of Altium. So, would you be able to enjoy the fruit of those initiatives so that you will be able to outpace industry growth this year?

A: Well, I understand your expectations. And regarding how we manage inventory and also the shipping, I think Shinkai-san mentioned this partially. But for the channel, we're still cautious, and we want to ship in accordance with the demand in the end market. And for our in-house inventory, we would like to have some robust level of inventory.

So, the strategy is not that different from that of last year. But compared to last year, it's not like we are very cautious, but we will focus on the short-term trend and not have too much inventory. And it's difficult to say how things will play out for this fiscal year. But in the short term, our efforts to date should bear fruit. And if the competitors are required to conduct inventory corrections, we're hoping that we can outpace the growth of those competitors.

Also, in terms of growth, the size is not that big. But for the automotive, the ADAS application is an area where we see steady growth. We expect that to continue, and also, AI cloud. Also, last year, we were not able to really walk our talk, but the DDR5, finally, we were able to resolve the power management issue for DDR5. So, from Q3 this fiscal year, we expect a big contribution. So, it's not just AI, but cloud infrastructure, including AI and also the automotive ADAS applications are areas where we can uphold our expectations.

[Questioner 2]

Q: My first question is with regard to the automotive business. In the Q4 and Q1 forecast, so, from the usual revenue level of around JPY180 billion. I think that the customers have made a lot of adjustment. So, at some point, hoping to get back to JPY180 billion, and that's what we hope to see at some point, but when would that be? Also, increased content to bring you back on a growth trend, when do you expect that to happen? That will be my first question.

My second question is the data center business, which is still a small business, but that's attracting a lot of attention, so can you maybe elaborate as far as you can disclose, especially PMIC and market share, because of NVIDIA's situation attracting a lot of attention? So, please share with us regarding the market share, DDR, peripherals and the data center itself, forecast, will be also appreciated.

A: Automotive, when to go back to the past record number, it's hard to tell, but in Q4, we took a deep breath, so we were able to moderate the situation, so we're not too concerned about the future. The speed of the growth, well, the utilization of R-Car Gen4 may come maybe not this year, but the year after. So, we need to run the business based on Gen3 for the time being. And so, 28-nano micon are launching so far, so we expect to see them grow. But content increase, 10% growth, if we are able to sustain this level of growth. So, we are not too optimistic about the growth level, not so bad, but a gradual increase. That's what we hope to see.

We cannot have a forecast clearly for such big growth because it could be potentially the tariff impact. The biggest concern or the uncertainty would be the Chinese player, also non-China OEM market share trend. So, that will be the affecting factor. So, we are having a big growth in the China business. In a short-term period, things may not be bad for us, but it may not be directly answering your question, but the business in China has been, of course, we are facing some slightly different challenges from Western countries in Japan, but we want to continue to monitor the situation.

Cloud center, I don't want to say too much because I don't want to take it back later after talking about certain things. But things around the processors, the power supplies around the processors, I think it depends on the timing, but maybe half or 1/3 of the market could be maintained as market share. With the customer of a specific customer, when we look at the schedule of the product development, it seems like there will be some ups and downs expected. So, it's not like a straight-line growth, but the trend-wise, we have an optimistic view.

The DDR5 power management issue is now resolved, and that is actually giving us more visibility to start kicking in from Q3 onward. If that happens, that can be a strong supporting factor for the business.

Q: Thank you. Additional question about the data center. For the past 12 months, for different applications, for the coming year or so, can you give us how much growth you're expecting to come for different applications?

A: Well, hard to tell as well. We will try our best. 10%, maybe we can grow around 10%, hoping to go more than that. 10%, I think we can go beyond 10%, maybe stronger than 10%. Looking at the numbers we have right now for AI, rather than 10%, it's more like something x or multiples of some multiples, maybe 3x or more than 2x. That's the impression we have. The general purpose servers, rather than 10%, I think it will be a bigger growth. That's what we expect. So, the cloud infrastructure business in total, maybe 2x or so. That's how we forecast, but so many things could happen in the short term in this application. So, while we are looking at the upside, but at the same time, we want to be also cautious not being too optimistic. So, we want to forecast on a quarterly basis.

Q: Thank you. Let me ask you once again, sorry for being so persistent. So, 2x will be? So, including three applications for the data center, the total 2x or just talking about PMIC is expected to go 2x?

A: It's about the power.

[Questioner 3]

Q: Earlier, you mentioned about the R-Car. In FY2024, you had design-ins. I think you may talk about this in the May IR Day. But looking back, 2024, how did things go, especially for automotive, you talked about the MCU share. So, can you tell us to the extent possible how things went in 2024? And this is related to your outlook.

Earlier, Shinkai-san mentioned that there is going to be a big volume of shipping for the short-term orders. And at this point, from demand to shipment, I guess there are different patterns. But can you tell me the details behind the production to shipment?

A: Yes. Maybe Shinkai-san can answer the latter part of your question, and I will try to address the first part of your question. So, Shinkai-san, please?

A: Yes. So, for the short-term lead time orders, the proportion vis-a-vis the total order is increasing slightly. Since customers are requesting products outside the standard lead time, we will essentially ship from the inventory we have. Distributors could have some of those products, and we also have those products in our distribution centers. And it really depends on the product.

So, sometimes we can input the wafer after receiving the order. And sometimes, if we don't have the inventory, we won't be able to meet the demand in time and as an intermediary format, we have to have the die bank. So, when we receive the order, we can ship out by just doing the back end of the process, so we will have the finished product and also the die bank to address the short-term lead time orders and also something slightly longer. So, we have been creative to address that type of demand, so I hope this addresses your question.

Q: Also, during COVID, I think five to six months before, you had to fix your order, but now I guess there are many different patterns. But you can only have visibility of the firm order for the next two months or three months. Is that right?

A: It really depends, because we do have some long-term lead time orders and also other short-term lead time orders. But compared to before, the short-term lead time orders are increasing. During COVID when demand was very strong, production planning had to be established for us to stably supply. So, from a long-term perspective, we fixed the demand and the orders, but that's not the environment that we live in today. So, it's different. So, we do get orders as a natural course of our business.

For the design-in, from last year, we have made some changes. And this year, we are considering how we can change this. So, focusing on your particular question, how things went last year, if I may offer some indications. If we track the design-in trend as we have done to date, last year for automotive, it did grow by high single digit. There's a big portion from R-Car and MCU was also very brisk. So, in terms of looking at the direction, I would say that it was not bad. That's my frank opinion.

Having said that, from some time ago, I have been trying to make some implications, but the tracking of design-in need to be fundamentally changed in my view. So, today, we will have an internal discussion on that topic. So, we are now trying to revise this. So, in terms of how we treat the numbers, we want to start from scratch. But the Altium revenue recognition was made into a pro rata basis rather than upfront. So, we would have to make changes accordingly because that type of indication will give you a sense of, is it going up or going down, but it's hard to give you a long-term trend. So, we would like to revisit how we track this.

But on an apples-to-apples basis, as a direction, as I mentioned earlier, automotive is growing by high single digit.

Q: Thank you, and as a follow-up question, not looking at the apples-to-apples number, but I want to get your feeling, Shibata-san. So, I guess at the direction, it's moving into the positive direction. That's your view. Is that correct?

A: Well, for the automotive MCU, it's not bad. It's actually fine, frankly speaking. And also, for the big business negotiation, the R-Car, this was true for Gen4, but it's something that we cannot really foresee. So, when things are good, it will grow and vice versa because it's a very limited market. It's a rapid cycle and very volatile, but MCU is not that actually.

[Questioner 4]

Q: I have one question. Non-GAAP SG&A and R&D.

In Q4, the number was about JPY85 billion. Calculated from the difference between gross profit and operating profig, Q1 will be a little less than JPY93 billion. So Q4, I think you had drops in various elements. But in the coming quarter, is the Q1 level going to be the base level? And looking at Q1 and the percentage, it will be about 30% of the sales, the revenue. And looking at your financial model, R&D will be about 16%, SG&A will be 8%, total 24%.

So, currently, the revenue being low, I guess you're exceeding by about 6 percentage points. So, if you were to grow revenue along with the gradual recovery, how are you going to control the level of spending?

A: Shinkai-san has to answer this question.

A: About the numbers, so that is correct, about the JPY93 billion for Q1, that is correct. So, the trend from there, so we are focused on R&D and SG&A, but including COGS, cost run rate to be lower. We are currently working on that. Then, so cost improvement impact will be seen throughout the year and works into H2 gradually. A part of the impact is also included partly in the H1 forecast. On a run rate base, in the latter half of the year, maybe a little over 2 percentage points improvement on the base cost, and that will be executed at the cost level. Other than that, the revenue growth is expected.

[Questioner 5]

Q: I have two questions.

My first question is, in FY2024, can you give us a summary of FY2024? The competitors said that last year was the worst year in the last 10-plus years. But what is your view of how you did last fiscal year? Well, the overall summary of last fiscal year.

A: I guess things trended as they should.

Q: I see. So, the second question is the timing of the mass production for Kofu and also the production commencement of SiC at Takasaki.

A: So, I don't have any updates, but as a trend, it's going to be pushed out. As I communicated in the last earnings call, we have become more cautious.

Q: Is that because of the market environment? So, when you say you're more cautious compared to the last time?

A: Yes, the market is one factor. And we look at plant portfolio and what needs to be mainly manufactured in Kofu is something that we are going to discuss as a fundamental strategy, not just for the short term.

Q: So, for power semiconductors, even if the current sluggishness is overcome, I guess you have to compete against the Chinese players in terms of cost in the future. And looking at the business environment, how do you see things playing out? How are you going to compete in the current market environment?

A: For power semiconductors, at this juncture, we have a very [severe] view. But on the other hand, the AI data centers, switching devices, and other products that are used in that application, it's not going to the customers, sacrificing quality over price. So, in the power semi segment, we never had intended to become a big player. So, we are focusing on the target customer in this addressable market. So, that's the main direction that we are pursuing, which is unchanged.

We had considered to expand silicon IGBT business, but in the last two years, the market has dramatically changed, and also with the rise of the Chinese players, our thinking has changed from that, and we're not looking at the silicon IGBT that much.

Q: With the factory operation, do you have a major change in your business strategy?

A: Well, I'm not sure about your question, so what is your intention with your question?

Q: So, the SiC production, could that be suspended or the production plant can be scrapped out?

A: Well, it's not just for SiC business, but those things can happen for any of our businesses.

[Questioner 6]

Q: I have two questions.

First is on the automotive business. MCU is going strong so far. So, what is the reason for you being so confident about the strong MCU at this point? Also, the software behind vehicles has been the trend so far. How do you feel the response? And ASIC are out there, what are the opportunities and risks? Can you comment on this?

That would be my first question.

A: For MCU, at the beginning of last year, we have been talking about MCU and nothing really changed. From what I said, we are trying hard and other players, also competitors, are trying hard as well. Sometimes our target may be half or sometimes the target is right on the spot. And we are all doing the same thing, and the others are also doing things. And last year, we saw the drop in MCU share in automotive and that was because of the misspecification.

We thought we were taking ahead of the trend, but it wasn't going in that direction. But we redefined the road map. And then, recently, the redefined road map has been really aligned with the trend so far. It's fit. And so, we are providing what clients want, and we get designation for our products, and we are receiving large projects. And that's what we saw last year.

SDV, still, there's no clear direction. It's not visible yet. At the super high level, the goal is to consolidate computing into SoC or the high-compute areas, that's been visible. As I've mentioned before, product like a gateway and Gen5 R-Car are effectively addressing this section. But inside MCU itself, SDV impact or not, how it plays out, honestly speaking, we don't really see clear direction yet.

So, R-Car scalability, we'll pursue and make sure to reinforce that. And other customers, so we want to offer flexibility and architecture definition of customers. I know this is nothing new, but we want to continue reinforcing this. And I think that is the best approach for us. And as we see more SDV, then software-oriented development need is increasing. So, preparing the virtual environment, the customers' software development shift left, so they can start early. So, we provide tools to allow that to happen. That is going to be important. And we are working on that, and we'll continue to do so.

Q: Thank you, and my second question is industrial, FA and mass market. Can you explain splitting these two? Compared to three months ago, any change in your forecast? And what will be the bottom for those two categories? Can you give us your comment on that?

A: That, what I said in the past, we were not really correct. Actually, it makes it difficult for me to make a future risk comment. But as far as we forecast, as mentioned earlier, inventory correction is moving forward towards zero. But still, small-sized inventory correction could actually drive the demand situation, and that could continue throughout the year, throughout this fiscal year.

I know there's a different view on that. There are some voices to see the increase in recovery in H2, but it could stay stagnant throughout the year on other voices. So, this year, we want to go back to basics. So, we want to address the basics. From the perspective throughout the year, this situation could drag and continue. That's how we intend to operate this year. But again, last year, sometime from Q4 into this Q1, this size of inventory correction would not be expected to come. It's going to be quite small, if any, in Q2 or beyond.

Industrial, mass market, how different it is, that's hard to tell because mass market is very difficult to forecast. I won't be able to give you any meaningful response. I guess it's hard to tell. Looking at our numbers only, I think mass market could show a faster recovery, I feel. QoQ sequential numbers, looking at them, mass market shows the bottom, I guess, hitting the bottom earlier than industrial. So, the mass market is moving faster.

Also, Octopart, held by Altium, this can be utilized for early indicator for the overall sector. It doesn't seem to have a big improvement in movement, but there's a slight increase so far. So, compared to industrial, mass market could moderate slightly earlier than industrial. Sorry, I won't be able to give you any clear answer to that.

Q: I know. Thank you very much. I know it's difficult.

Moderator: Thank you very much. I know that we have more questions, but we are now close to the time to finish. So, lastly, we'd like to invite Mr. Shibata for his closing remarks.

Shibata: So, I know that the expectation is building up for idiosyncratic growth for us, but we don't have that kind of view, but we now have a steadier outlook. So, in a real sense, we can really focus on rolling out initiatives for achieving long-term growth without being disrupted by the short-term challenges.

So, that's the reflection on the results and also the outlook for this fiscal year. I hope to enjoy your continued support.

Moderator: Thank you very much. So, with that, we'd like to complete Renesas Electronics' Q4 and full-year earnings call for FY2024. Thank you very much for joining us today.

[END]