

Robotics Business Presentation Q&A Minutes

Business Overall

Please tell us about your strengths and what sets Yamaha apart from its competitors.

We are the only company in the industry that can offer total solutions for production lines based on Yamaha One-Stop Smart Solution concept. Since we offer products for each process of the production, our strength lies in being able to link them together to build lines that do not stop or produce defects. What makes Yamaha unique is that we are the only manufacturer that can provide a comprehensive semiconductor back-end processes, surface mounting, and industrial robot.

Another strength we have is the in-house development of our core technologies and the close integration of our manufacturing, sales, and engineering. This enables us to respond to customer needs with greater speed and flexibility. A third strength we have is our after-sales service, which provides clients with added peace of mind after purchase, such as the 24-hour service support we began this year, alongside other services.

How is progress at the moment with Yamaha's surface mounters (SMT), industrial robots (FA), and unmanned systems (UMS) under the current Medium-Term Management Plan? Also, please tell us about the trends in demand and the medium-term sales opportunities present.

Due to US–China trade friction in 2019 and the COVID-19 pandemic that followed in 2020, the original targets set in the Medium-Term Management Plan have been withdrawn. We have laid the groundwork for growth and believe that all of our businesses remain promising. Speaking on SMT, the need for printed circuit boards is on the rise. We expect the increasing demand to come for data centers and sensors for 5G, CASE vehicles, and AI/IoT to steadily drive growth. CASE, in particular, presents a great opportunity for us since Yamaha has a strong record in the automotive industry.

With FA, the labor shortages in developed markets and the soaring personnel costs in emerging markets are pushing automation forward. As the workforce begins to shrink in China as well as in other countries around the world over the coming years, we expect factory automation needs to grow in response, which will likely keep demand for industrial robots high for some time. Our UMS business has also seen a spike in drone demand. Until now, drones were mainly used for photography, but use in industry—such as logistics—is increasing. Our material transport service for the electric power industry is also posting higher sales.

What value does the Robotics business have at Yamaha Motor? Are there synergistic effects such as lower costs or faster product development? What advantages does Yamaha have compared to companies that specialize in robotics alone?

Electronic control technology is one of our core competencies and the Robotics business used to be the foremost user of this expertise. However, the technology itself is starting to find more use in our Land Mobility and other businesses. Our electric motors and robot controllers are manufactured in-house and this can contribute to vehicle electrification and other pursuits. In addition, we can uncover new needs thanks to Yamaha having its own manufacturing sites for its Land Mobility and Marine products. Lastly, the scale of Yamaha Motor's operations means we can conduct business relying on our corporate stability and good name.

There was an announcement of a new head office in China. Does this move mean that you expect

capital investment to increase this year?

We are also exhibiting our products at our new base in China and are creating an environment where we are closer to our clients to better offer them support. In the past, each of our subsidiaries had their own bases, so we consolidated them with this. Overall, this move represents a very small investment.

SMT: Surface Mounters

Please share with us the medium- to long-term trajectories for the SMT business, such as production status and CAPEX.

The factory continues to operate at high capacity, something we initiated in the latter half of last year. Regarding parts procurement, we cannot be optimistic with the ongoing shortage of semiconductors and other developments, but we are managing risk factors while making every effort to capitalize on the growing demand. For CAPEX, our field is primarily facilities for assembly, hence only investments focusing on such facilities are where we have a window. But, in line with the ongoing growth seen in the markets for semiconductors and SMT, we plan to consider pursuing other investment avenues. We are also devising an optimal production scheme, one which incorporates our new subsidiary of Yamaha Robotics Holdings (YRH).

Where is the SMT business seeing struggles? Also, the automotive market is set to grow, why is Yamaha purposely launching high-speed models?

With SMT, the automotive industry is where we excel, but we have yet to carve out significant share with our high-speed models. We are moving forward with our platform strategy and released our first integrated platform model last year. From here, we plan to release derivative models in stages and these will provide a presence for us in the high-speed model field as well. When examining market trends, we see interest in high-speed models rising more than low- and medium-speed machines, and demand for high-speed offerings will grow in the automotive industry as well. We also expect the market for data centers and mobile devices compatible with IoT and AI to grow going forward, and Yamaha will move aggressively to capture demand in this field.

Why are Yamaha's high-speed models struggling to gain ground compared to your competitors?

Our current situation has us following in step with other companies, but amid greater calls for smaller parts as well as higher precision and accuracy, our strategy is to close the gap with our development capabilities. Our platform models will enable us to build products for manufacturing devices and communications equipment across a wider range of industries. Further, we are promoting the standardization of parts for maintenance, which will lead to lower upkeep costs for clients. And because Yamaha One-Stop Smart Solution enables sophisticated M2M communications, we can propose production lines with autonomous features for high added value. Regarding our market share with high-speed models, industry-wide sales have grown, thus our share has remained the same.

It has been a year or so since the YRM20 was launched. Have you met the annual sales target of 500 units?

The launch was delayed to the end of last year and exhibitions were canceled due to COVID-19, so we have had fewer opportunities to market the unit directly to potential customers. However, we are compensating for this by entering online exhibitions and the like. We have been able to meet with Japanese clients directly, so at the moment, they comprise most of our sales.

FA: Industrial Robots

With your FA business, you have released an excellent product in your linear conveyor module, but what about Yamaha's market share?

Our linear conveyor modules have been praised for maximizing benefits with few resources and for how they can handle tasks previously done by people. The total solutions we offer clients going forward will place our linear conveyor modules in a central role. Factory automation is a growing market and we are seeing Chinese and other manufacturers release competing products. As a Japanese manufacturer, we will ensure that our offerings are of high quality and safe to operate. As for our market share, it is difficult in general to gauge share in this industry. In the Chinese market, our share had been flat, but we are seeing some growth now.

UMS: Unmanned Systems

Looking at the rapid growth of Chinese manufacturers, is there not room for Yamaha to release drones for photography or recreation? Drones not from China are quickly rising in demand, so do you see any business opportunities?

It is true that we have had difficulties in capturing some of the market for electric drones. Products that fly are subject to vastly different requirements for safety and the like than machines for a factory floor. As the lead member of the High-Spec Drone Development Consortium, we are developing safe, trustworthy drones and working to downsize designs. The agricultural know-how we have is also very important and we also need to guarantee the security of our customers. We see the drone market as a field ripe with opportunity for growth.

SEMI: Semiconductor Manufacturing Equipment

Please tell us about the progress and effects of the structural reforms enacted after the business integration of Shinkawa and Apic Yamada, and if there have been any noteworthy achievements so far. I think flip chips will become a point of focus from here on, but I would like to hear about your competitive advantages.

Structural reforms and cost reductions are proceeding as planned. Specifically, profitability has improved due to the reorganization of domestic and overseas factories and sales subsidiaries, better capital efficiency, the aforementioned cost reductions, and other measures. In terms of synergy, we are enhancing the efficiency of our technical resources and *Monozukuri* by expanding sales channels with cross-selling, conducting joint development, sharing parts, cutting costs using Yamaha's expertise, and more. In fact, clients of the previous companies are already placing orders with the new integrated subsidiary. We are actually already selling flip chips. Prior to the integration, Shinkawa was originally conducting thermocompression bonding and mass reflow processes, and it has advantages in terms of high accuracy and speed. We would like to move forward by combining our knowledge and information as part of our total solution.

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