

Medium-Term Direction **Thorough Pursuit of Cost Competitiveness**

Thoroughly Strengthen Cost Competitiveness of Core Products

With regard to cost competitiveness, which is recognized as a priority issue in the Sixth Mid-term Business Plan, the market environment has changed to an unprecedented degree since the expansion of the COVID-19 pandemic. In preparation for the heated competition that is expected to occur as a result, starting in FY2021 we are making a thorough review of both the core products that satisfy a wide range of customers and regions, and monozukuri itself, including the machinery

and equipment for making the products.

What are especially needed for strengthening cost competitiveness are production lines of differing specifications that match the business environments in each region. Zipper manufacturing and machinery manufacturing engineers are working together to speed up facilities development according to concrete themes, which will lead to further strengthening cost competitiveness.

Changes in Market Environments

- Fluctuations in business performance directly impacted by market conditions
- Concerns over demand decrease due to new normal and rising sustainability awareness
- Severe market condition and intensifying competition

Until Now

- In each region, manufacturing with **machineries with same performance and price.**
- Vertical sectioning in **YKK HQ organization** (Machinery and Engineering Group / Fastening Products Group)

Vision

- **Construct optimal manufacturing lines** for business environments in each region
- By reorganizing YKK HQ functions, **boost development speeds and concurrently work on several development themes**
- Work to **further reduce machinery prices**

Global certification for Quality Measurements Instructors

At YKK, we have established a certification program for quality measurements instruction for zipper products. Under the program, examinees at the Kurobe Manufacturing Center are evaluated and certified for their knowledge and practical skills. Certified instructors not only provide guidance to measurements staff, but also make a major contribution to quality testing of products developed overseas. Products developed overseas that are being rolled out globally also undergo re-verification at our headquarters, but using as-is the measurement data that was taken under the supervision of the certified instructors. This helps to significantly shorten development lead time.



Zipper strength testing

<Employee Voices>

Chiara Cendron
YKK Italia S.p.A.



“In my years of experience in the quality field, I have become convinced that investing in quality and the concomitant human assets always yields positive returns. Products of reliable quality bring added value to the company, and at the same time reduce costs caused by quality problems. As the demand for novelty, sustainability, and rapid responses from markets and customers increases daily, we will, as senior engineers, perform the role of quality measurements instructors to deliver greater value, more quickly.”

Medium-Term Direction **Strengthening the Use of Digital Technologies**

Pursuing Stress Elimination with Digital

In response to the accelerating use of digital technology in the garment industry, we are promoting digitalization in all value chains, from marketing to product planning, development, manufacturing, and sales, to create a stress-free system for customers and employees. These efforts are led by our Digital Operation Planning Department, established in FY2021.

For customers, we are working to link data by digitizing product information and respond to demand for “right time, right material, and right amount.” At the same time, we are making active use of the YKK Digital Showroom, a venue for showcasing products and communicating with customers. The space has continued to grow since its opening in April 2021 with new content such as product information, product development stories, and customer feedback, and language support in Japanese, English, and Chinese. It has also served to fuse the digital and real worlds, for example when it was linked with an exhibition held in Shanghai, China.

In order to improve efficiency in internal operations, we are working to standardize and automate global business operations by introducing workflows and linking core systems. As well, we are building platforms to enable

true data driven management that uses BI and AI* to make decisions based on data analysis.

*BI: Business Intelligence AI: Artificial Intelligence



YKK Digital Showroom <https://ykkdigitalshowroom.com/en/>

<Employee Voices>

Angela Mueller
Global Marketing Group
Digital Working Group



“In October 2021, we established the Global Digital Team to cope with the trend toward digital in the garment industry. Our customers started their digital journey by digitizing their garment styles in 3D, with their goal set to skip physical sampling and expand their digital scene. I am proud to be working to meet new customer demands as a part of this cross-sectional group.”

Making Smart Factories a Reality



<p>Data Generation</p> <p>Factory visualization</p>	<p>Automation</p> <p>Non-stop factories</p>
<p>Optimization</p> <p>Stats management</p>	<p>Integration</p> <p>Linked factories</p>
<p>Human Assets Development</p> <p>Digital personnel development Passing on skills, technology</p>	<p>SDGs</p> <p>Carbon emissions, etc. reduction</p>

We have listed strengthening the monozukuri of standard category items and smart factories as manufacturing and engineering policies in the Sixth Mid-term Business Plan. YKK founder Tadao Yoshida aimed for a “dark factory,” or a factory that did not need to be lit because it was fully automated and unmanned. To achieve this goal, we are engaged in the use of cutting-edge technologies, such as robotics, AI, and sensors to achieve a fault-tolerant, unmanned production line that can operate continuously for long hours without the intervention of people. In January 2022, we completed our first non-stop, unmanned prototype production line in our Furumido Plant at the Kurobe Manufacturing Center. We are planning to deploy such lines at production locations around the world.

At the same time, we are tracking, in real time, the operating condition of the facilities that support the unmanned production lines. We are working to accelerate the improvement and betterment cycle and optimize the entire plant, while also promoting the transfer of digital skills for maintenance expertise (craftsmanship).

Investment in digitalization (capital investment)
2.2 billion yen (FY2022 business plan)