New Initiatives Targeting Growth

NSK’s Automotive Business: Strengths and Value Creation

The strength of NSK’s automotive business lies in our outstanding product capability, which is in turn supported by our foundation technologies. Our products need to be environmentally-friendly, safe, resilient, and ensure driving comfort—all while meeting cost and space requirements. If vehicle electrification continues to advance and cars are no longer equipped with engines, the engine noise that we have become so used to hearing will become a thing of the past, meaning that quieter mechanical components will be required. One of NSK’s strengths is that we have the advanced technological capabilities required to provide solutions in this area.

We currently hold a top-class share in the automotive bearing market. Our track record of listening to our customers’ needs and delivering solutions has instilled strong trust in NSK, led to increasing orders, and ultimately enabled us to maintain a high market share. At an organizational level we have also established frameworks that allow us to engage constantly with our customers, identify their needs on a detailed level, and use our solution-providing and product engineering expertise to deliver maximum value. This is what sets us apart from our competitors. Through our broad product lineup we will continue to contribute to the evolution of the automobile—namely diversity in vehicle power sources, electrification of in-vehicle components, improved efficiency, downsizing, and noise elimination in mechanical parts, as well as advances in steering and control technology.

Our Vision for 2026

Although growth in global vehicle production numbers has slowed in the short term, output is forecast to continue growing gradually in the mid- to long-term. In particular, the ratio of electric-powered vehicles is predicted to grow significantly. As the automotive industry is rocked by the waves of change in the form of societal trends referred to as “CASE” (connected, autonomous, sharing, electrification) as well as technological innovation, NSK’s automotive business is a mix of our existing products and new innovations that set the future in motion. To grow sustainably we cannot simply dive headfirst into new businesses; it is important that we maintain a healthy balance with our existing businesses. I believe that 2026 is around the time that these major technological shifts will take place. Furthermore, looking ahead to 2030 and 2040, the concept of a car itself could even change significantly. In such an event our current business grouping of “powertrain” and “steering and actuator” might lose significance. The conventional business model in which companies cannot generate sales without physical products is also breaking down, and I
believe we will require a shift from hardware to software, and from element components to systems. In these circumstances, we have to evolve ourselves into a company that can adopt a long-term perspective and identify technological and societal trends and changes in customer needs. We need to be able to think ahead to 2030 and 2040, and to make decisions accordingly. To do this, we need to enhance our framework to allow us to achieve a flexible and agile response. And in building this framework, I believe that diversity will be the key. Creating opportunities for a range of people—including both men and women, diverse nationalities, and personnel from both engineering and administrative backgrounds—to come together to share ideas and discuss and tackle problems from the same perspective will be essential. To make the leap to a future that is not simply a continuation of our current path, we cannot operate in isolated silos—we need to bring everyone under the same roof. Therefore, we will strive to build this type of environment as we work to generate new, future-oriented businesses and elements to target the approaching era of technological change.

New Initiatives Targeting Growth

NSK’s automotive business has selected the following five key initiatives targeting sustainable growth in its 6th Mid-Term Management Plan.

The first is to expand the powertrain business. The automotive industry will see increased diversity in power sources from traditional internal combustion engines (ICE) to hybrid electric vehicles (HEV) and fully electric vehicles (EV). Demand for automatic transmissions (AT) in ICE vehicles will grow, while the number of gears used in stepped ATs will also increase. We will work to refine our technology in this area, including making units lighter and more compact, and increasing friction control efficiency. This shift to EVs will not be a simple process. Demand will likely shift first to HEVs, and we have worked to develop HEV-oriented products accordingly. I believe these efforts will eventually bear fruit. Meanwhile, for EVs, in addition to releasing a new traction drive unit, we will also work to propose energy efficiency and noise reduction technologies by developing compact, low-torque speed reducers.

The second key initiative is to expand the in-vehicle motor business. Conventionally, most engines generate hydraulic pressure and use this pressure to generate motion. However, these hydraulic components will be activated by motors. It is predicted that the number of in-vehicle motors will rise dramatically with the shift to electrification, driving increased demand for motor bearings. We must ensure that NSK responds to and captures this growth trend. In addition to building solid supply capabilities, we will contribute to the improved safety, comfort, and convenience that electrification brings.

Our third key initiative is to expand the hub bearing business. Amid a growing need for safety and fuel economy, we will leverage NSK’s technological capability in delivering highly-reliable, low-torque, high-load products to achieve sales growth.

The fourth key initiative is to restart growth in the steering business. In addition to expanding and enhancing our product lineup, we will utilize our core assets and mechanical and software engineering prowess to reduce design workload and lead time, as well as achieve greater efficiency in per-project R&D costs. Additionally, business practices in the steering business differ from those in the bearing business, and it is therefore important that we utilize ideas from employees with diverse knowledge and experience, and broaden our technological scope. In this sense, strategic alliances are one option we may consider.

Our fifth key initiative is to expand the actuator business. As the rebuilding of the steering business will take several years, the actuator business will be a key driver that will allow us to maintain our growth during this period. With regulations on automatic braking systems tightening, I believe that in terms of braking distance and response, systems that employ ball screws will be the most rational solution. As demand continues to grow, in addition to developing superior products we will utilize NSK’s global supply capability to further expand the business going forward.

ESG and SDGs Initiatives

While I previously touched on the importance of diversity, NSK’s automotive business is also focused on the environment. Firstly, NSK’s bearings and electric power steering systems both serve to reduce the environmental load of the customer products they are incorporated in. Therefore, the more our products are used, the greater the environmental contribution.

Furthermore, at our production sites we are shifting technology used in the heat treatment process—which consumes much of the energy used during manufacturing—from conventional methods to induction heat treatment which runs on electricity. Directly applying heat to the workpiece improves energy efficiency, and we will work to further reduce our CO2 emissions by expanding the number of facilities at which this technology is employed. I believe that setting targets such as the SDGs and evaluating companies’ contribution to the global environment and humanity as a whole is an effective way to spur companies to reevaluate the value their business generates and further grow their operations in ways that benefit society.