

Nissan leads in the industry in productivity—but continues to strive for higher levels of efficiency and quality in many different areas. Backing this is massive investment in production facilities in the markets where the vehicles are to be used, helping Nissan to react more quickly to ever-changing market trends.

Building on Top Productivity

Nissan sets the standards in the automobile industry for productivity. Its Sunderland plant, UK, has been ranked number one in Europe for seven consecutive years, according to the World Markets Research Centre. Nissan's Smyrna, Tennessee plant, US has ranked number one for nine straight years in the Harbour Report North America, while its Japanese plants also lead the domestic market.

The company is not about to rest on its productivity laurels, however; it is just the first of six manufacturing areas that Nissan has focused on during its revival. Plant utilization, manufacturing flexibility, common platforms, cross-manufacturing and localization are all

key factors in better building at Nissan.

Plant utilization is key. Nissan's production facilities in Japan are today operating at much higher levels of capacity utilization than in 1999. Flexible manufacturing systems that make it possible to build different models on the same line have reduced lead times and cut the costs involved in shifting production to a new line. Common platforms—both within Nissan and with Alliance partner Renault—have reduced the total number of platforms, as well as development costs and time to market. Cross-manufacturing has allowed Nissan to enter Brazil and Argentina by opening a new joint factory at Renault's production facilities in Brazil; similarly, Renault was able to enter Mexico through Nissan's production facilities, while Nissan optimized capacity utilization in the country.



Nissan's Smyrna plant, Tennessee



Local manufacturing: Micra production at the Sunderland plant UK



Production begins at the Canton plant, Mississippi



Sunny, produced in China



Micra, manufactured in the UK



US-produced Pathfinder Armada

Building Locally

Nissan's massive investment in manufacturing as close to the markets where vehicles are to be used is the clearest realization of localization. This reduces currency exchange risks while increasing the speed of response to market needs. Nissan's new production facility in Canton, Mississippi, US, opened in May of 2003, while the first Paladin SUV rolled out of Zhengzhou Nissan, China, in March.

The 3.5-million-square-foot, US\$1.43-billion Canton plant began with the production of the popular

Quest, to be followed by production of the new Titan truck and the Pathfinder Armada SUV. Nissan's Smyrna, Tennessee plant and its Decherd, Tennessee engine plant have also been greatly expanded to increase Nissan's production capabilities within the US market.

In June 2003, Nissan and DongFeng Motor Corporation announced the foundation of Dongfeng Motor Co., Ltd., a comprehensive strategic partnership between the two companies for the China market. Dongfeng Motor Co., Ltd. will be the first joint Sino-foreign full-line vehicle manufacturer; the new Sunny is the first model produced by the company, rolling out as a Nissan brand in June of 2003.

Thanks to growing demand in Europe, production capacity of the Micra at the Sunderland plant, UK, was increased by 25 percent, to 200,000 vehicles annually.

Nissan Production Way

Since 1994, Nissan has continued to systemize its Nissan Production Way (NPW) concept. The company is committed to realizing Douki-Seisan—a build-to-order system schedule synchronized with the customer—which is the ultimate NPW goal.



Launch ceremony for Sunny in China, June 16, 2003





Quest production, Canton plant, Mississippi

The first purpose of NPW is to enhance customer satisfaction—to increase competitiveness in quality, delivery and cost while providing the maximum possible service. It helps to demonstrate that Nissan provides its customers with excellent cost performance, high quality, excellent product sense and a short delivery period.

NPW also aims to raise the asset turnover ratio by reducing inventory assets while improving cash flow. Inventory reduction also is a means for discovering problems within the manufacturing process.

The third focus is on improving the manufacturing system by resolving those problems which are discovered. This is an ongoing process of discovery and the application of solutions which will bring NPW to a higher stage while continuing to move to closer synchronization of production to the customer's demands.

Smoothing Supply and Enhancing Quality

At the end of 2001, Nissan took another step to shorten lead times from order taking to delivery, lower inventory levels and reduce costs throughout the supply chain. The establishment of the Supply Chain Management (SCM) Division brings together the supply chain management operations that formerly were controlled by several divisions into one unified division. This will provide for more efficient control of information flow from clients, and of parts and vehicle logistics. With 12 new vehicles launched during fiscal year 2002—the highest number ever in Nissan history—realizing the higher level of efficiency provided by SCM really was a necessity.

More Modularization

One way the company is already boosting speed, efficiency and quality is through the increased application of modular manufacturing. Modularization is being incorporated as a basic function at Nissan's new Canton, US, plant, following its use in Japanese plants, and is increasingly being applied at the company's other plants worldwide. In modularization, suppliers provide not simple components but complete modular units, such as front end or cockpit modules, built separately and brought together precisely when needed for assembly. This improves production efficiency and quality while increasing the use of common parts and integration of components—which in turn reduces costs and speeds new product development.