

## Manufacturing

NISSAN HAS LONG BEEN AN INDUSTRY LEADER IN EFFICIENCY, WITH PLANTS RECOGNIZED AS THE MOST EFFICIENT IN AUTO MAKING. BY STREAMLINING PRODUCTION CAPACITY, AS MAKING MASSIVE INVESTMENTS INTO THE PRODUCTION OF CARS WHERE THEY WILL BE SOLD, NISSAN IS PAVING THE WAY FOR THE GROWTH OF NISSAN 180.



Construction at Nissan's new Canton, Mississippi plant; production is scheduled to begin in 2003

### The Quest for Better Building

Nissan is making a huge investment in manufacturing as part of NISSAN 180, with capital expenditures rising from 4.7 to 5.5 percent. After completing the streamlining of the NRP, Nissan is providing resources where demand is expected, for production as close to the market as possible. Over the past two years, capital expenditure for manufacturing has continued to be increased. Nissan is creating manufacturing that is ready for the future.

#### US

As part of a US\$1 billion investment in maximizing vehicle production capacity at its Smyrna, Tennessee plant, production of the next-generation Maxima will begin in early 2003. This also involves tripling engine production at Nissan's plant in Decherd, Tennessee, which produces new V6 and V8 engines for the US.

For the eighth straight year, Nissan was named the most efficient manufacturer in North America by the



Xterra



Nissan again named the most efficient auto manufacturer in the *Harbour Report*



Quest Concept

Harbour Report North America 2002. Nissan led all manufacturers with an overall measurement of 17.92 assembly hours per vehicle made. The Frontier and Xterra lines ranked first and second, respectively, in truck assembly productivity, while the Altima line ranked second in car assembly productivity—despite production losses due to the launch of the 2002 Altima.

Another new investment adds an additional \$500 million to the original \$930 million for Nissan's new plant currently under construction in Canton, Mississippi and scheduled to open in the spring of 2003. The additional investment will add one million square feet of space to the 2.5-million square foot plant, increase annual production capacity from 250,000 to 400,000 vehicles, and add approximately 1,300 new jobs, increasing the workforce from

4,000 to 5,300. The extension of the facility will help to meet strong demand for Nissan products in North America, particularly the record-selling Altima. The Canton plant will begin with the production of the next-generation Quest minivan, following with the Altima and Nissan's entry into the lucrative full-size pickup and SUV market.

#### Increasing Efficiency

Nissan is increasing its efficiency and its ability to bring products to market more swiftly through the use of common platforms. The new Altima, Murano, and the next-generation Maxima will all be based on the same platform. At the same time, the seven plants in Japan producing 24 different platforms at the beginning of the NRP, have been reduced to four plants producing 15 platforms in 2001.



#### Modularization

One of the methods Nissan will increasingly use to increase efficiency, productivity and quality while reducing weight and costs is modularization. Being built in as a basic function of the new Canton, Mississippi plant and in use in other Nissan plants, modularization sees suppliers providing complete units, such as front end and cockpit modules. These are separately constructed and brought together at the point of assembly. This improves production efficiency, and makes use of common parts and parts integration—which in turn improves new product development efficiency while reducing cost.

## RENAULT NISSAN



Production of the Frontier Pickup at Renault-Nissan common plant in Brazil

### Alliance

As Nissan moves towards the one million new units to be sold under NISSAN 180, it has access to Renault production facilities worldwide—a huge advantage for the company.

On December 20, 2001, Nissan President and CEO Carlos Ghosn joined his Alliance counterpart Louis Schweitzer, Chairman and CEO of Renault, as they jointly opened the first common Alliance plant, built on Renault's industrial complex in Sao Jose dos Pinhais, Parana, Brazil. Scheduled to produce the Frontier Pickup from 2002 and the Xterra later on, the plant marks Nissan's arrival as a local

Brazilian manufacturer. It also is part of Nissan's plans for the Mercosur region, targeting the eventual sales of 150,000 vehicles annually in the region.

Following Brazil, the Alliance will also realize manufacturing in Spain, where a compact van jointly developed by Renault and GM Europe will be produced. Nissan's Mexico plant is already producing the Renault Scénic, Clio and Platina models.