

# How to improve the most productive car plant in Europe



**N**issan's turbulent history in the UK is perhaps appropriate for a factory that is located on a former airfield.

Nissan's 750-acre site near Sunderland has come to dominate both the local and the UK industrial landscape. The factory is the UK's biggest car plant and widely recognised as the most productive in Europe. But it has also become something of a bellwether for the state of manufacturing in this country.

Despite Nissan's undoubted achievements – in quality, industrial relations and productivity – until recently there were still doubts over the future of the plant. Nissan management has spoken very publicly about the costs of doing business in the UK, while the country stays outside the euro zone. And, as with all multi-plant motor manufacturers, Nissan has had to fight for new cars to come to the plant.

Nissan's announcement that it will build the Tone, a small MPV (or multi-purpose vehicle) at Sunderland shows that the plant has won the fight, at least for now.

The current mainstay of production at Sunderland is the Nissan Micra, with the existing version scheduled to stay on the lines until 2008. NMUK also makes the Almera and Primera models. This year will be the busiest yet at

Sunderland, in production terms. And when production of the Tone starts in 2006, the factory will be busier still, and might recruit up to 200 more staff. Fortunately, one of the key strengths of Nissan's Sunderland site is its flexible production technology, which allows different car models to be produced on the same line.

Japanese companies have been at the vanguard of bringing new approaches to manufacturing to Europe, and this plant is no exception, with all staff wearing overalls and enjoying the same benefits package: only pay varies. Among employee benefits at the site are a pension scheme, private medical insurance, a fitness centre and a learning centre.

The approach has brought benefits in terms of a dedicated workforce, and Sunderland has been rewarded with investment for increased production. At the start, though, this could not be taken as a given. In the early 1980s, Nissan's Japanese management was worried about both the UK's industrial relations track record, and its poor reputation for quality. Now 20 years down the line, NMUK has put paid to both concerns. "We set out to be different and we have tried to maintain that," says personnel manager Philip Ashmore. "There has never been a strike."

*One of the key strengths of the Sunderland site is its flexible production technology, which allows different car models to be produced on the same line*



The philosophy behind Nissan in the UK is simple: to make a quality product, at a profit. But achieving this is anything but. Nissan is well known for its supply chain efficiency and use of just-in-time deliveries, which remain a key differentiator of the plant even as the motor industry undergoes consolidation and change.

The company's core manufacturing philosophy is called the Nissan Production Way (NPW). This is based on five basic behaviours, which include maintaining schedule sequence and time, and not passing on defective product. Another element of NPW is the Idea Generation System, which helps to systematise the process of making improvements.

Production at the site is organised in zones, with supervisors playing a key role in the way the factory is managed. As well as being highly skilled, with hands-on experience of work in their zones, supervisors have responsibilities which include overall performance, recruitment, training and staff development, quality, safety and continuous improvement (kaizen) activities. Indeed, supervisors are sometimes called the managing director of their zones.

Ideas of what is and what is not core in motor manufacturing are changing all the time. Parts such as bumpers are now colour co-ordinated with the vehicle body, and so are core to the process.

According to deputy managing director Trevor Mann, make and buy decisions are kept under constant review. Nissan is a quality-driven company, and maintaining control over key components – whether through in-house manufacture or by using partners who are close at hand – is an important part of maintaining quality standards.

The majority of Nissan's parts come from the UK, with the rest (apart from a handful) sourced in Europe. For some key components, Nissan relies on its 'supplier park' of compa-

*Nissan achieves high levels of on-time delivery: 98.48% of cars enter the finished vehicle compound within two hours of their allocated slot*

nies located at Sunderland, and those close by. Some 42 suppliers, located within 50km of the site, supply almost 4,000 parts. An increasing proportion of parts is provided by elite suppliers, categorised either as Category 3 or Syncro

suppliers. Components such as carpets, cockpit modules, fuel tanks, brake clusters and fuel clusters are on synchronous supply; their suppliers are tied in closely to NMUK's production control systems, and release them in the sequence they are needed on the shopfloor.

The Nissan supply chain lives up to its promise: 97% of parts are delivered on time, and 98.48% of cars enter the finished vehicle compound within two hours of their allocated slot. At the same time Nissan has cut its parts inventory by 45% since 2001, and cut the cost of making cars by 16%. In addition, schedule adherence and safety performance have both risen.

Despite the site's enviable status as Europe's most productive car plant, benchmarking is undertaken at Nissan to make radical improvements, and therefore significant jumps in performance. Alongside this, however, management also value the importance of undertaking kaizen activity, to produce a large number of incremental improvements. **BFA**

## Site details

- ➔ Location: Sunderland
- ➔ Employees: 3802
- ➔ Products: Motor cars
- ➔ Turnover: not disclosed
- ➔ Highlights: quality, productivity, supply chain management, continuous improvement, flexible production technology