



## BUSINESS

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11 July 2010 Last updated at 16:24

# Boeing 737 fights to stay ahead of rivals

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**There is nothing majestic about the green fuselage that rests on a trailer outside Boeing's factory in Renton.**

The body of the single aisle narrow body aeroplane is neither very large nor very sleek in its design when compared with aircraft such as the headline-grabbing Airbus A380 super-jumbo or Boeing's own 787 Dreamliner.

But for Boeing, the 737 is a rock; one that for years has helped construct Boeing's economic foundations.

The 737 is the world's best-selling commercial jet. Boeing has delivered more than 6,000 737s since the first version of the aircraft was launched in 1967, Randy Tinseth, Boeing Commercial Airplanes' marketing chief, tells BBC News.

And it has a further 2,000 aircraft in its order book

### **LEAN PRODUCTION**

Inside the Renton factory, it soon becomes clear that the manufacturing of the 737 is as near to mass production as is possible in the plane-building business.

A decade ago, traditional manufacturing methods, where each plane is parked at a slanted angle and worked on individually, were replaced by a lean production line similar to that pioneered by the Japanese carmaker Toyota.

The fuselages, which are made by Spirit Aerosystems in Wichita, Kansas, an eight-to-10-day train journey away, are pulled into the factory.

Here they are lined with insulation blankets and have the wiring and radar installed and their wings and tails are fitted.

They then enter one of the production lines, which moves the aircraft almost imperceptibly forward at five centimetres per minute.

This leaves the staff, who work three shifts, enough time to install overhead bins, galleys and seats from dedicated work stations along the line.

At the end of a 53-day manufacturing process, including the wings, the planes move on to flight testing at Boeing Field in Everett.

### **LUCRATIVE MARKET**

Each month, 35 Boeing 737s leave the factory here, ready painted in the liveries of the world's leading airlines.

For the carriers, the plane is a proven tool that helps them get on with the job of carrying passengers and bringing in the revenue.

"No frills airlines are securing better financing and bringing forward delivery dates to make the most of the boom in low cost leisure traffic," according to FBE Aerospace analyst Saj Ahmad.

For Boeing, the 737 is a cash cow that feeds on a huge and lucrative market.

During the January to June period, deliveries of the 737 rose 10% when compared with the same period in 2009, observes Mr Ahmad.

For the year as a whole the plane will probably account for some 80% of Boeing's total aircraft deliveries, he predicts.

"In terms of units, this market is far larger than any other segment," explains Mr Ahmad.

"It is more than three times as large as that for wide bodied jets, while comparable in market value too

### **MILITARY VERSION**

There is even a military version of the 737, assembled on a separate line at the Renton factory.

The P8-A Poseidon is a true Jack of all trades; an armed aircraft that is also kitted out with surveillance and reconnaissance kit. "The P-8A completes the kill chain," Robert Feldmann, P-8A Poseidon vice president and programme manager, Boeing Defense, tells BBC News.

The military plane "looks like a 737" and "for the bulk of the work we rely on Boeing Commercial", Mr Feldmann explains, though some structural modifications are made for the plane's weapons bay and its panels are thicker.

But these changes are made as part of the standard manufacturing processes, which means Boeing Defense can "leverage on the investment made by Boeing Commercial", Mr Feldmann says.

#### **NEW RIVALS**

With sales both to airlines and to its own defence division, the 737's position in the market place seems secure.

For years, the aircraft has shared this vast and growing market for commercial single aisle aircraft with arch-rival Airbus A320.

The market leaders are well aware, however, that their cushy duopoly is about to be shaken up by new market entrants hungry for a bite of this tasty market segment.

"We're looking at future competition from Canada, from China, from Russia, from Japan and from Brazil," says Mr Tinseth.

"Clearly, we have to ensure we continue to improve the aircraft so we remain competitive."

#### **DECIDING SOON**

But how?

"With Irkut, Mitsubishi, Comac and Bombardier ready to enter the fray, it is clear the A320 and the 737 need replacing or updating," says Mr Ahmad.

And those are the options Airbus and Boeing have: they must either upgrade the engines on their A320 and 737 families of aircraft, a process that is far more complicated than it perhaps sounds, or they must develop new planes to serve the same market.

"Our objective is to make a decision on the future of the 737 later this year," Mr Tinseth says. Airbus says it might announce its decision later this summer.

#### **DELAYED RESPONSE**

Replacing a family of aircraft is a slow process, however. "As to a next generation narrow body from Airbus and Boeing, it is now looking very likely that any entry into service will not be until the mid 2020s," predicts Ascend, an aviation consultancy.

By then, many of the newcomers will have come up with rival planes that are already in service; planes that will be kitted out with substantially more fuel efficient engines than those used by Airbus and Boeing.

"The engine manufacturers have come to the market in the last few years with new, very fuel efficient, engines," acknowledges Mr Tinseth.

Airbus is thinking along the same lines, so "a re-engining of the A320 and/or the 737 is looking increasingly likely in the middle of the next decade", Ascend predicts, though it adds that "this would be an interim solution".

#### **MOVING TARGET**

At the 737 factory in Renton they know that although the threat to the plane's hegemony is not imminent, it is sufficiently serious for them to keep on paddling hard to stay ahead.

On the one hand, Boeing's response may well arrive too late to protect its market share. But on the other, there are no guarantees that the new rivals will achieve what they set out to do.

Executives here insist that the 737 is still the plane the others are trying to beat. As such, they insist, it is a moving target.

"What made the aircraft so successful in the first place," grins Mr Tinseth, "are the continuous improvements we're making."



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