

FINANCIAL POST

Bombardier's Pierre Beaudoin: Prepared for Takeoff?  
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# BUSINESS

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## World-Beater

One by one, Toyota has eclipsed the Big Three. Now it's set to topple GM – officially – as the planet's No. 1 automaker

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## Innovator

## Beyond the black box

Real-time feedback adds safety, savings.

**When** an airplane crashes, attention focuses immediately on the black box, the flight-data recorder that provides investigators with insight into the plane's operational status leading up to the accident. But what would it be like if that information were available to airline staff, on the ground and in the air, at all times during a flight? Put that question to Viraf Kapadia, CEO of Star Navigation Systems Group Ltd., and he'll say that there would be fewer accidents — and that airlines would save a bundle in managing their fleets.

At least, that's the pitch his young company is using for its new aircraft data technology, the Inflight Safety Monitoring System. Known as ISMS, Star Navigation's technology raises flight-data monitoring to new heights, keeping tabs on up to 11,000 parameters — compared to the 100 or so of a conventional black box — ranging from fuel consumption and engine temperature to tire pressure and the status of air-conditioning systems.

More important, though, is that ISMS searches for discrepancies in the data while

it's collecting it, sending alerts to airline managers via satellite and secure Internet connections if problems start to arise. "If something is going to go wrong, we know about it beforehand," Kapadia says. Imagine, for example, a problem develops in the early stages of a flight between Toronto and Dubai — something like an engine that's running hotter than normal, but still below the threshold that would trigger a warning from an aircraft's conventional safety systems. With ISMS in place, the airline would be alerted to the issue in its early stages and, if necessary, could take steps to prevent it from becoming a full-blown problem.

That does more than help assure the safety of passengers and crew, Kapadia says. It also helps the airline manage costs. The hot engine on that Toronto-Dubai flight, for instance, may only require a small fix that mechanics can handle when the plane stops for refuelling, or at the end of the flight, possibly sparing the airline the cost of larger repairs later on.

The price of an installed ISMS system ranges from \$250,000 to \$400,000. Air-

Star Navigation's Viraf Kapadia: "If something is going to go wrong, we know it beforehand"



lines also pay upwards of \$1,000 per month for monitoring and reports. To date, Star Navigation has signed two deals with airlines in India worth a total of \$11.5 million. It has also signed a memorandum of understanding with Bexair, an executive jet charter service based in Bahrain.

Kapadia is optimistic about future sales, arguing that ISMS is the kind of technology the airline industry needs if it is to continue raising its standards for safety. "More often than not, airlines only use the safety systems after an event has happened," he says. "Our system alerts you before the little red light comes on." — Peter Evans