

# How submarines, jets inspire Olympic gold dreams

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Britain's Sarah Lindsay is seen leading the pack during a women's 500m short-track qualifying heat at the Pacific Coliseum in Vancouver during the 2010 Winter Olympics, on February 13. Great Britain, not known for its prowess as a speedskating powerhouse, has turned to sophisticated computer software, normally used to design jets and submarines, to strengthen skates in Vancouver.

Submarines and fighter jets are playing their part in the quest for Winter Olympics gold as competitors search for that crucial, extra edge.

Great Britain, not known for its prowess as a speedskating powerhouse, has turned to sophisticated computer software, normally used to design jets and submarines, to strengthen skates in Vancouver.

Redesigned brackets were used at the European championships where

the short track speed skating team won five medals.

"Even minute changes to the alignment of the skates can have a huge impact in terms of performance," said Stuart Horsepool, Performance Director for the Great Britain short track speed skating world class programme.

"A real problem for us was the tendency of the old aluminium brackets to warp or bend. Even changes in [atmospheric pressure](#) were affecting the alignment of the skates. This caused a number of issues for the team when we travelled by aircraft to competitions and needed to put equipment in the hold."

While the British team have been working with defence giants BAE Systems, other teams are also trying to shave off hundredths of seconds by redesigning racing gear.

The Canadian team use different fabric in different places, including energy-returning patches on the inside of the thighs to speed up leg movements rather than cause [friction](#).

"We have different fabric on the thighs versus the lower leg," Canadian coach Marcel Lacroix told the Globe and Mail newspaper.

"It's very precise. We know we have a fast suit. We're not confident we have a fast suit, we know."

However, Greg Wells, a scientist with the Canadian Sport Centre in Toronto, told the newspaper, that improving technology can also mean increased risks.

"The new technologies are allowing the athletes to go faster in sports like downhill skiing and in sliding sports. It is a really great thing because it

allows athletes to push the limits of human performance," he said.

"But because these are things that are at the extreme limits of human performance, in general you are flying down a mountain of ice at very high speeds, the margin for error is very, very small."

American speedskater Ryan Bedford said that huge amounts of money are poured into development of suits.

"Nike spends tons of money on developing the suits and getting them aerodynamically right," said Bedford.

"Last year they came up with different sizes to fit everybody. A couple of teams have the same suits as us, Korea and China. But Japan is skating in their own suits. And Canada is doing their own as well. I am pretty sure we are winning that battle."

However, some things never change.

Lacroix still uses skates that are more than 25 years old.

"These are the same skates I have used since 1984. They are my lucky skates. Why change what works?," he said.

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