

# Why Apple is the Toyota of hi-tech

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As Apple's new smartwatch shows, very few rival companies can make such complex products in huge volumes

Apple's new smartwatch underlines its ability to make complex products in huge volumes.  
Photograph: Josh Edelson/AFP/Getty Images

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Sunday 5 April 2015 07.15 BST

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Three weeks from now, a strange phenomenon may be observed on British high streets and in upmarket shopping arcades. Long lines of youngish people will form orderly queues in the vicinity of a particular store. They will be diversely attired, though some elements of consistency may be discerned. The males, for example, will mostly wear skinny trousers and jeans of the type that make one wonder if their owners suffer from rickets. The females will be more colourfully clothed, and some will tote leather shoulder bags that have been expensively distressed.

Who are these people? One clue will be that both genders will spend much of the time consulting a certain brand of smartphone that is “designed in California and manufactured in China”. They are, of course, members of the church of Apple, and they have gathered together in orderly lines in order to transfer large piles of folding money from their wallets and bank accounts into the coffers of said institution. And the trigger for this ceremony? The church has announced the [Coming of the Watch](#).

Apple's ability to garner media-feeding frenzies for its product launches is one of the wonders of the age. I used to think that this was a product of Steve Jobs's personality, but now I'm not so sure. Steve has gone to his reward, and been succeeded by Tim Cook, a nice chap who, in comparison, seems charismatically challenged. And yet for months we have been treated to fevered speculation about the watch. Will it be a game-changer like the iPhone? Or an expensive flop? Did the fact that one version of the watch (the gold one) is insanely expensive mean that Apple has deserted the computing industry and joined the world of Vuitton, Rolex and Bentley? Could wearing a “smart” watch actually be bad for your health? The normally judicious [New York Times](#) columnist [Nick Bilton](#) got into hot water for daring to ask if wearable computers (which, after all, is what smartwatches are) could cause health problems. And so on.

## It's not just a product company – [Apple](#) has morphed into an incredible industrial manufacturer

Most of the discussion about the watch comes down, in the end, to reveries about Apple's now legendary ability to design objects that are both beautiful and functional. But in taking this line we are, in fact, overlooking a more important point. Because what is really interesting about Apple is not just that it can design great products, but that it can actually *manufacture* the things in huge volumes, and deliver them to market on time.

Just to put that point about volumes in context, consider the iPhone 6. It weighs 129g, and its bigger brother, the 6 Plus, weighs in at 172.1g. In the last quarter of 2014, Apple sold [74.5m iPhones](#), which works out at an average of 846,590 a day. If we assume that 15% of those sales were of the heavier Plus, then that means Apple shifted 114,676kg of iPhones a day, on average. Just for comparison, the operating dry weight of a [Boeing 787-8 Dreamliner](#) is 117,707kg.

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Ponder those numbers for a moment. They would be remarkable if Apple were simply stamping out 846,590 metal bars a day. But the iPhone is not a metal slab; it's [an astonishingly complex product](#) – as you can readily ascertain by voiding your warranty and taking a screwdriver to yours.

So what Apple has managed to do is create a production system for making very complex products in huge volumes. If you want to see what's involved in that, a look at the [video](#) about the making of the new watch will be instructive, for it shows not so much mastery of complex assembly as machining to extraordinary tolerances. And while there are lots of other companies that do this kind of thing, there are very few that do it at the scale of Apple.

This is why all the speculation about whether Apple has “peaked” or not seems so clueless: it presumes that Apple is just a product company, whereas in fact it has morphed into an astonishing industrial manufacturer. If you want a historical analogy, Toyota is the one to look at. When the Japanese first began making cars, they were ridiculed by western manufacturers – for good reasons: they were clunky, ugly rust buckets. But the Japanese sussed that if they were to make really good cars they had to reinvent *the process by which cars were made*. From this came the [Toyota “lean machine” production process](#), which is now how all cars, everywhere, are made. Once upon a time, Steve Jobs used to say that Apple was the BMW of the computer industry. Under Tim Cook, it’s becoming the Toyota of high-end manufacturing.