

Where's Your 10X Performance Improvement?

1969 was a pretty interesting year for the Swiss watch industry.

That was the year the Omega Speedmaster became the [first watch on the moon](#). Meanwhile, back on earth, there was a serious race to make the first automatic watch that included a chronograph. Jeffrey Stein [retells this story](#) in International Watch magazine, and it's really interesting.

The short version is that Zenith, Heuer, Omega and Breitling were competing fiercely to be the first to bring this innovation to market. Work started in the early 1960s, and by 1969 several versions of automatic chronographs were ready to go.

Zenith was the first to show a prototype of one of these watches in January, and they called their movement the El Primero to mark the occasion.



However, the El Primero was not production ready. The first automatic chronographs on the market came from a collaboration between Heuer, Breitling and Hamilton-Buren. They showed more than 100 prototypes at the Basel Watch Fair in April, and they hit serial production in the summer.

The El Primero made it into production in October. Interestingly, even though the El Primero was third into production, it was still a first – it was the first automatic watch to have the chronograph directly integrated with the movement.

In addition to competing on innovation, the Swiss watchmakers also competed on accuracy. Zenith is an interesting brand here too. From their beginning in 1865, they won more than 1565 first-place precision awards. This is primarily due to more innovation – Zenith figured out how to get their automatic watches to run with a frequency of 36,000 alternations per hour, as opposed

to the standard 28,800.

So in the early 1970s, the Swiss watchmakers were competing on precision, innovation, and customisation for particular markets. Breitling focussed on aviation, making chronographs that were well-suited to piloting, Heuer was the dominant chronograph in car-racing circles, and so on.

And then everything changed with the introduction of this:



That's a quartz watch movement. It's not nearly as beautiful a piece of engineering as that El Primero, is it? And yet, right from their introduction, quartz watches were 10 times more accurate than the most precise mechanical watch. And they cost 1/10 as much, or even less.

Today, out of the more than 1 billion watches sold per year, about 80% are quartz analog watches, about 17% are quartz digital, and 2% are mechanical watches like the El Primero. In terms of volume, the dominant watch brands almost instantly became Seiko and Casio. This was a hugely disruptive innovation.

There are several innovation lessons here:

1. There's always a gap between having the idea, and making it real. The Swiss watchmakers started working on making an automatic chronograph from shortly after the point when automatic watches became widely popular in the 1950s. It took them more than 10 years to turn this idea into reality in 1969.

And in fact, automatic watches show the typical [s-curve](#) for innovation diffusion as well. There were plans for an automatic watch drawn in the middle of the 18th century. They didn't go into production until the 1920s, and they didn't become widespread for over 25 years.

This gap between the idea and making it real is an important reason why managing the

innovation process is a challenge.

2. Great ideas usually occur to many people at once. In many respects, it doesn't matter who had the first automatic chronograph – they all showed up at basically the same time. And these breakthrough innovations are [almost always the result of collaborations](#), like the Chronmatic alliance between Heuer, Breitling and Hamilton-Buren.

3. If you are going to make a head-on attack in an established market, you need to have at least a 10X improvement in performance. Quartz watches are one of the few disruptive innovations that didn't start out in a small niche. The disruptions that go big fast need to have at least a 10X improvement in performance, as quartz did over mechanical watches. When [Canon and Ricoh disrupted Xerox](#) with their cheap, small photocopiers, they had a 10X improvement in cost.

One way to disrupt a market is to come up with a 10X improvement. What would that look like in your industry? In other words, what would be equivalent to a quartz watch for you?

And if you're not working on developing that yourself, who is? And what are you doing to get ready for it?

Where's your 10X performance improvement?

Read more from Tim [here](#).