

Science

Theranos: The Silicon Valley fairy tale that fooled nearly everyone

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[Elizabeth Holmes gives a TED Talk about access to healthcare.](#) (ABC News)

There was the uniform: A black turtleneck like her idol Steve Jobs. There were the inspirational quotes: "Do or do not. There is no try," courtesy of Yoda. And the cash: a valuation from investors of \$9 billion.

In the end, these were the trappings of Silicon Valley without the substance. Elizabeth Holmes's blood testing start-up Theranos would fall slowly, then all at once.

Her promise was revolutionary: a portable tool that could run a full spectrum of blood tests on just a few pinpricks of blood from your finger.

But in March this year, Ms Holmes lost control of her company, [accused by](#) the US Securities and Exchange Commission (SEC) of conducting "an elaborate, years-long fraud".

One reporter did more than any other to expose Theranos: the Wall Street Journal's John Carreyrou, who details the once-lauded company's downfall in his new book, *Bad Blood: Secrets and Lies in a Silicon Valley Startup*.

Ultimately, Carreyrou's story is a warning about the outer limits of hype. Overpromising is like breathing to Silicon Valley, but Theranos wasn't about sending messages to your friends or ordering takeaway.

It was about blood.

A 'revolutionary' blood test

If Theranos was successful, it would have been something of a medical miracle — a machine that could run a broad array of tests on just a few drops of blood, rather than the substantial amount drawn by a needle.

But the promising idea, dreamt up by Ms Holmes in 2003 — 19 and later a Stanford dropout — just wouldn't fully work.



[John Carreyrou exposed allegedly fraudulent behaviour at Theranos.](#) (Supplied: Michael Lionstar)

Theranos operated as if nothing was amiss, the SEC would allege. By the late 2000s, it had millions in venture capital and deals on the table with the supermarket chain Safeway, as well as the chemist Walgreens.

"The upshot of all this is that the company corrected or voided nearly a million blood test results," Carreyrou said.

The startup also had star power, even beyond Ms Holmes herself, who was the beneficiary of glowing media profiles and keynote spots on conference line-ups.

Current Secretary of Defence James Mattis was on the board, as was former secretary of state Henry Kissinger.

Ms Holmes leveraged her relationship with General Mattis, according to Carreyrou, in an attempt to get her technology used by the military.

It never happened.

But that didn't stop Theranos, according to regulator allegations, claiming that its products were deployed on the battlefield in Afghanistan and on medevac helicopters.

Overpromise, never deliver

Charged by the SEC, Ms Holmes agreed to give up majority voting control over Theranos, as well as pay a penalty.

Her story has become a Silicon Valley fable, but it won't be the last company to push the boundaries of hype.

Ever heard of the term "vapourware"?

The term was coined to describe technology that was announced with great fanfare but never appeared — or appeared only many years later.

Startup founders "have to promise the moon" to investors, Carreyrou said, but it's only when they get the money that they can bring the promises they've made to reality.



[Theranos took Elizabeth Holmes places, including on stage with former US president Bill Clinton.](#) (Getty Images: JP Yim)

For Elizabeth Holmes, the gap between the promises and the reality of her device got so enormous, he said, and the gap was "nurtured" for so long, that it could not be ignored.

Carreyrou suggested our cult of hero worship for technology entrepreneurs also contributed to the lack of scrutiny.

After all, Ms Holmes played the part, wearing that black turtleneck, sipping green kale shakes and even, he suggests in his book, deepening her voice.

"Unfortunately, Elizabeth Holmes took the value system to an extreme. She sought to become the second coming of Steve Jobs and to get there by any means possible," he said.

Healthcare and the Silicon Valley treatment

It appears the SEC agreed, issuing its own warning about where hype ends and lies begin.

"Innovators who seek to revolutionise and disrupt an industry must tell investors the truth about what their technology can do today, not just what they hope it might do someday," director of the SEC's San Francisco office Jina Choi said in a statement.

Technology startups dabbling in healthcare, from genetic testing to artificial intelligence diagnosis, should take that advice seriously. The old Silicon Valley playbook of "fake it till you make it" can't apply when there are lives at stake.

Ms Holmes faces serious legal action. She may have to retire the black turtleneck and put her inspirational catchphrases to one side.

According to Carreyrou, one memorable quote is especially worth reflecting on: "If you have a backup plan, it's a sign that you've already admitted that you may fail."

It was something Ms Holmes said to students [at Stanford Business School](#) in 2015. There was a smattering of applause in the room after her remark.

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