

The genius behind Steve

Could operations whiz Tim Cook run the company someday?

By [Adam Lashinsky](#), senior writer

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(Fortune Magazine) -- Let's start with some uncomfortable truths. We wouldn't be publishing an article about the under-the-radar guy who's most likely to succeed Steve Jobs as chief executive of Apple if Jobs himself hadn't shown up at a company event in San Francisco in June looking frightfully skinny and pale.

Jobs, after all, is a pancreatic-cancer survivor, having beaten a treatable form of the disease in 2004. Since that appearance last summer, Apple's excitable investor base and blogosphere have spun full tilt wondering about their hero's health, a topic that - other than the pithy retort here and the acerbic talk-to-the-hand comment there - Apple's CEO has declined to address.

Then there's the widespread opinion inside and out of Apple ([AAPL](#), [Fortune 500](#)) that the Magician of 1 Infinite Loop simply can't be replaced.

There is only one Steve Jobs, one table-pounding visionary who can refashion whole industries with a wave of his hand. The mere hint of a Jobs health scare knocks billions of dollars off Apple's market value. (Temporary hit from a false web post in early October about a Jobs heart attack: \$10 billion.)

The most influential promoter of Steve Jobs' indispensability, of course, is Steve Jobs. But another person who is very much with that program is the one executive who has actually filled in for Jobs as CEO. That would be Tim Cook, Apple's chief operating officer and its interim chief executive for two months in 2004, when Jobs was recovering from cancer surgery.

"Come on, replace Steve? No. He's irreplaceable," Cook said recently, according to a person who knows him well. "That's something people have to get over. I see Steve there with gray hair in his 70s, long after I'm retired."

Cook may be right; we simply don't know the status of Jobs' health. Yet succession plans at giant corporations typically aren't built on hope. Apple's plan to replace the 53-year-old CEO is known for sure only to Jobs and the company's seven other board members.

Though he is highly regarded as a business-operations maestro, few people outside of Apple have any sense of whether Cook (who, for the record, turns 48 in November and is a fitness nut) would be a good chief executive, much less a suitable replacement for Steve Jobs. Even careful Apple watchers don't quite know what to think.

"By default Tim Cook would be the logical guy," says Toni Sacconaghi, an influential Apple analyst at brokerage firm Sanford C. Bernstein. "Yet that hasn't been spelled out. And the stakes are just higher at Apple, because Steve is larger than life, and Tim isn't a known quantity."

So the "logical" heir to the throne of one of the coolest - never mind most successful - companies on the planet right now is a blank slate. That is reason enough to find out who the man is. In interviews with two dozen people who have dealt directly with Cook, a picture emerges that is reassuring if unanticipated. It turns out that although Cook and Jobs are in many ways opposites, the No. 2 exec is equally obsessive and exacting about his work.

An intensely private Alabaman and Auburn University engineering grad (class of 1982), Cook is also a workaholic whose only interests outside of Apple appear to be cycling, the outdoors, and Auburn football. (Talk about tough years: Apple's stock is down 50% year to date; the Tigers, nationally ranked early in the season, were 4-5 at presstime.) What's more, there's every reason to believe that Apple would at least be stable for some years to come if Cook were to find himself at the helm. The reason: He's essentially been running much of the company for years.

Demanding and even-keeled

Tim cook arrived at Apple in 1998 from Compaq Computer. He was a 16-year computer-industry veteran - he'd worked for IBM ([IBM, Fortune 500](#)) for 12 of those years - with a mandate to clean up the atrocious state of Apple's manufacturing, distribution, and supply apparatus. One day back then, he convened a meeting with his team, and the discussion turned to a particular problem in Asia.

"This is really bad," Cook told the group. "Someone should be in China driving this." Thirty minutes into that meeting Cook looked at Sabih Khan, a key operations executive, and abruptly asked, without a trace of emotion, "Why are you still here?"

Khan, who remains one of Cook's top lieutenants to this day, immediately stood up, drove to San Francisco International Airport, and, without a change of clothes, booked a flight to China with no return date, according to people familiar with the episode. The story is vintage Cook: demanding and unemotional.

Almost from the time he showed up at Apple, Cook knew he had to pull the company out of manufacturing. He closed factories and warehouses around the world and instead established relationships with contract manufacturers. As a result, Apple's inventory, measured by the amount of time it sat on the company's balance sheet, quickly fell from months to days. Inventory, Cook has said, is "fundamentally evil," and he has been known to observe that it declines in value by 1% to 2% a week in normal times, faster in tough times like the present.

"You kind of want to manage it like you're in the dairy business," he has said. "If it gets past its freshness date, you have a problem." This logistical discipline has given Apple inventory management comparable with Dell's, then as now the gold standard for computer-manufacturing efficiency.

We know what you're thinking: Why dwell on the backroom aspects of such a sexy company? Because that seemingly dull stuff is as important to Apple's success as the gorgeous designs and ultracool marketing. Forecasting demand, for example, and executing against that forecast, are critical in the computer industry, especially when new products quickly cannibalize the old.

Consider what befell Palm ([PALM](#)) in 2001. The company torpedoed an entire quarter's performance by announcing a new version of its mainstay PDA - which helped dry up sales of the old version - and then failing to deliver the new product when the company said it would.

Those kinds of flubs just don't happen at Apple, which routinely pulls off the miraculous: unveiling revolutionary products that have been kept completely secret until they magically appear in stores all over the world. The iPhone, the iPod, any number of iMacs and MacBooks - the consistently seamless orchestration of Apple's product introductions and delivery is nothing short of remarkable.

A classic example: In 2006 Apple transitioned its entire computer line to running on processors made by Intel ([INTC](#), [Fortune 500](#)). For lots of technical reasons we won't go into here, doing that was not easy. But Cook's team somehow made sure there was nary a blip in sales.

Think of Cook's contribution like this. There are two basic ways to get great profit margins: Charge high prices or reduce costs. Apple does both. The marketing and design drive consumers wild with desire and make them willing to pay a premium; Cook's operational savvy keeps costs under control. Thus Apple is a cash-generating machine. Cook has called the company a place that is "entrepreneurial in its nature but with the mother of all balance sheets." At last count that meant \$24.5 billion in cash and no debt.

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That balance sheet is a potent strategic weapon: It allows Cook to lock in suppliers and club competitors. In 2005, Apple introduced a new iPod, the Nano, a music player that was revolutionary because it used far more flash memory than existing products on the market. Cook's team accurately predicted tremendous demand for the Nano, and prepaid \$1.25 billion to suppliers like Samsung and Hynix to effectively corner the market through 2010 on a specific kind of memory.

"That's the sort of thing they wouldn't have thought of in the days before Tim Cook," says Kevin O'Marah, chief strategist at the Boston consulting firm AMR Research, which specializes in supply-chain analysis.

The memory purchase also shows that Apple's operations strategy isn't only about cost cutting. "Way too much of the supply-chain world has been about taking the last cent out," says Blake Johnson, a consulting assistant professor of management science and engineering at Stanford

University, who has deep contacts in Apple's operations group. "Apple doesn't do that."

To make Apple's innards run more smoothly, Cook relies on a tight-knit team of operations executives who have been with him since he joined the company. They are Jeff Williams, who executed the flash-memory purchase; Deirdre O'Brien, a longtime Apple employee who handles demand forecasting; Bill Frederick, who heads customer support; and Sabih Khan, the notebook operations executive Cook once dispatched to China. This year Cook hired Rita Lane, who used to work for him at IBM, to run desktop operations.

Over the years, Cook has assumed duties beyond making the trains run on time. In 2000 he took over the sales force as well as customer support. Back then, "selling" at Apple meant dealing with retailers and other resellers of Macs. Under Cook, Apple began replacing store employees in outlets like Best Buy with Apple's own well-trained salespeople. It was a precursor of the popular "Geniuses" in Apple's retail stores today.

In 2004, the year Cook filled in for Jobs, he also took control of the Macintosh division. The next year, Jobs named Cook chief operating officer. Today his purview extends to iPhone sales and operations, including responsibility for negotiating with wireless carriers who sell the devices in 51 countries. The heads of important departments like legal, finance, design, and marketing report directly to Jobs. But no other executive touches as much of Apple as Cook.

A brush with death

Though he's capable of mirth, Cook's default facial expression is a frown, and his humor is of the dry variety. In meetings he's known for long, uncomfortable pauses, when all you hear is the sound of his tearing the wrapper of the energy bars he constantly eats.

Like everyone else at Apple, Cook dresses casually in jeans, his graying hair cropped close in the style of Lance Armstrong, whom he idolizes. (Through a friend, Armstrong says he doesn't know Cook, though he's "heard he's a good dude.") Perhaps Cook's only notable sartorial flourish is that he always wears shoes from Nike, where he's on the board of directors. (Jobs, another sneaker wearer, is a New Balance man.)

Cook's stamina is the stuff of legend at Apple. He often begins e-mailing the executives who work for him at 4:30 a.m.; worldwide conference calls can take place at any time of day. For years, Cook held a standing Sunday night staff meeting by telephone in order to prepare for yet more meetings on Monday morning.

Mike Janes, who worked with Cook for five years, ultimately as head of Apple's online store, recalls a Macworld conference in New York when Cook convened a meeting in the afternoon after one of Jobs' mesmerizing morning keynotes. "A number of us had tickets to see the Mets that night," says Janes, now CEO of an event ticket site called FanSnap. "After hours, he was still drilling us with question after question, while we were watching the clock like kids in school. I still have this vision of Tim saying, 'Okay, next page,' as he opened yet another energy bar. Needless to say, we missed the Mets game."

For those who can take it, working for Cook is an edifying experience. "He'll ask you ten questions. If you answer them right, he'll ask you ten more. If you do this for a year, he'll start asking you nine questions. Get one wrong, and he'll ask you 20 and then 30," says Steve Doil, who worked in Cook's operations group before moving to Texas for family reasons.

Cook can be brutal in meetings. "I've seen him shred people," says a former executive who now works for another consumer electronics company and refused to be quoted by name. "He asks you the questions he knows you can't answer, and he keeps going and going. It isn't funny, and it's not fun."

While a select group can claim to understand Cook at work, almost nobody claims to know much about his life outside Apple. A lifelong bachelor, he lives in a rented house in Palo Alto, vacations in places like Yosemite and Zion national parks, and shows few visible signs of wealth despite having sold more than \$100 million of Apple stock over the years. He's known for being the first in and last out of the office and for his grinding international travel schedule, and when he isn't working he tends to be in the gym, on a hiking trail, or riding his bike.

Cook's aversion to ostentation may be rooted in his background. He grew up in Robertsdale, Ala., a small town "on the road to the beach," he told an Auburn University alumni magazine in 1999. His father is a retired shipyard worker, his mother a homemaker. Like Steve Jobs, Cook had his own brush with mortality: In 1996 he was told he had multiple sclerosis, which turned out to be a misdiagnosis. "You see the world in a different way" after such an experience, he told the Auburn magazine.

The health scare also fueled Cook's passion for cycling; he often completes in grueling fundraising rides for MS. Cook has told others that he gives away large amounts of money, though he leaves hardly a trace. An exception is a scholarship he funds in his name at Auburn's engineering school. Even at Auburn, though, where he rates high on lists of distinguished alumni, he keeps his head down. "Let's just say we have our fair share of alumni who like the recognition," says Debbie Shaw, head of Auburn's alumni association. "Tim's not one of them."

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Many consider Cook aloof, though it's just as likely he's off-the-charts shy. Gina Gloski, a Boston-based semiconductor consultant, graduated from Auburn the same year and in the same industrial and systems engineering program. She was one of just a handful of women and therefore rather popular, if she does say so herself. Yet Gloski didn't know Cook until years later, when they served together on an alumni council.

"Tim's just not a real social person," says Gloski. "He's not antisocial, either. He just never seemed that interested in other people. I'm a hugger and a kisser, but I'd never feel comfortable giving Tim a hug or a kiss."

The most common observation about Cook is how temperamentally different he is from Jobs. Cook is cool, calm, and never, ever raises his voice. Jobs - well, he's not any of those things. A former Apple executive says he used to have a rehearsed line in his head on the off chance he ended up in an elevator with Jobs, who can be spontaneously fearsome. Did he have a similar canned speech for Cook? "No, because he wouldn't talk to you."

After graduating from Auburn, Cook spent the next dozen years at IBM in Research Triangle Park, N.C., picking up an MBA from Duke along the way. He showed his single-minded devotion to work, remembers Richard Daugherty, a boss from the time, by volunteering to work in the plant between Christmas and New Year's so that the company could fill all its orders for the year.

Another IBM supervisor, Ray Mays, says it was clear that Cook made for an unusual IBMer in those days. "There was an old joke at IBM," says Mays, who was a manufacturing executive in the company's PC division. "'What's the difference between IBM and a cactus? The cactus has its prickles on the outside.' Tim was exactly the opposite. He had a manner that really caused people to enjoy working with him. He was smarter than anyone else, more aggressive in a positive way than anyone else, and worked harder than anyone else."

Cook left IBM in 1994 to join the computer-reseller division of a wholesaler called Intelligent Electronics. He became COO of that division before selling it to Ingram Micro in 1997. He then went to Compaq, but had stayed for only six months when Steve Jobs hired him in early 1998. Jobs gave the new hire an office near his own.

Today that office is decorated with Auburn paraphernalia, as well as a photo of a favorite singer, Bob Dylan. A photo of Bobby Kennedy reveals another side of Cook, the idealist. Cook has said he is "tormented" at times by thinking what would have happened if R.F.K. had become President.

"He had a way of touching and relating to people of all walks of life," Cook confided recently, according to someone who knows him well. "He was one of the people who got close enough to the presidency who really loved people, who wanted to raise people up." (Cook was a registered Republican when he lived in North Carolina. More recently he donated money to Barack Obama's campaign.)

Cook also admires the way Kennedy "was comfortable standing in his brother's shadow and doing what he thought was right." Coming from a man whose most critical career phase has been almost completely overshadowed by a charismatic leader with an uncommon ability to relate to the hopes and dreams of the masses, it's a telling comment.

Lacking Jobs' design creativity

So now we know Tim Cook is impressive. But does he really have a chance of succeeding Jobs? And if he doesn't, who would?

Outside Apple, many observers, informed and otherwise, assume Cook can't be Apple's next

chief executive. "Nobody would make Tim Cook CEO," says a Silicon Valley investor who travels in the Apple orbit. "That's laughable. They don't need a guy who merely" gets stuff done. "They need a brilliant product guy, and Tim is not that guy. He is an ops guy - at a company where ops is outsourced."

Michel Mayer, who was CEO of Freescale Semiconductor when it supplied Apple with microprocessors, has a slightly more positive take. "I'm not sure he'd be able to replace Steve's design creativity," Mayer says. "Then again, I could argue that it's not the role of the next CEO to do that."

Mayer is clearly onto something. So Cook would need some help with design and marketing. What CEO doesn't have a gap or at least a soft spot in the résumé? "If Tim were to be CEO of Apple, he'd need to have different people around him to make up for his weaknesses, just as Steve has Tim around to make up for his," says John Thompson, vice chairman of search firm Heidrick & Struggles, who placed Cook at Apple in 1998.

Another factor that would help Cook - or any successor, frankly - is that Jobs has been on such a creative tear: It's well known that Apple maintains a top-secret pipeline of products it intends to roll out in the next few years. Were Jobs no longer around, Apple could live off those products for some time.

It's not as if Cook is ignorant about products and marketing; he's getting an education in those fields at Nike. John Connors, a fellow Nike director, says Cook contributes to the Nike board on e-commerce initiatives and the "customer experience" in Nike's stores - as well as in overall perceptiveness. "Almost invariably he'll have an insight where, after he shares it with you, you'll say, 'Huh, why didn't I think of that?'" he says. Connors, a Seattle venture capitalist and a former chief financial officer of Microsoft, calls Cook the "General Petraeus of the corporate world," the "kind of guy who lets his results speak for themselves."

Cook has been known to express awe that he has been exposed to two iconic founders, the other being Nike's Phil Knight. "The Nike thing is a privilege," Cook has said. "When I walk on the campuses of both companies I have a shiver that goes up my spine."

As for how Cook deals with Jobs, there is evidence that the No. 2 executive is able to ignore his goose bumps long enough to negotiate well for himself. Cook gets more leeway than any other Apple executive. (Apple declined numerous requests to make Jobs, Cook, or any of Apple's board members available for this article.)

In October 2005, when Jobs named him COO, he noted that Cook "has been doing this job for over two years," so it made sense to recognize him with a promotion. The next month, Cook became a Nike director, a move Jobs approved. No other member of the Apple management team - other than Jobs, who is Disney's largest shareholder and a director - is on the board of any outside company.

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Cook also gets a bigger paycheck than any other Apple executive - including Jobs, a multibillionaire and a dollar-a-year-man in terms of salary. Cook's salary, though peanuts compared to his stock grants, is \$700,000, about \$100,000 more than that of CFO Peter Oppenheimer and retail chief Ron Johnson. And when the company doles out restricted stock, Cook gets the biggest pile; in September that came to 200,000 shares, a bigger grant than anyone else at Apple got.

Jobs has seen to it that Cook is getting public exposure, especially on Wall Street. He is a fixture on Apple's quarterly earnings calls, and he speaks at select investment conferences.

"Operationally, when you think about what they've done - a massive retail-stores ramp, an expanded sales-channel presence, delivering new products without glitches, and managing huge seasonality - all speak to a company that is exceedingly well run," says Sacconaghi, the Sanford Bernstein analyst, referring almost wholly to aspects of the company that Cook oversees.

For all that, it isn't difficult to imagine Cook being passed over, especially by someone Jobs might deem to be more in his own mold. Two executives whose stature has risen because of their close association with Jobs' pet areas of focus are design chief Jonathan Ive, 41, and Johnson, 50, the ex-Target executive who runs the retail stores.

Ive, for example, made an appearance in a company video about the manufacturing of Apple's new notebook computers, a signal dissected in the same manner Kremlinologists once used to analyze the placement of Politburo officials at May Day parades. Johnson, because he comes from outside the computer industry, already had a high pre-Apple profile, and he is closely associated with the stunning success of the stores. Neither man, though, has Cook's breadth of responsibility, nor have they demonstrated his combination of business and technical acumen.

A third powerful Apple executive is Oppenheimer, the chief financial officer and a 12-year veteran of the company. Important though Oppenheimer is, most Apple watchers consider it even less likely that a finance executive would head Apple than an operations wonk.

It's notable that Apple's newest senior executive, iPod hardware head Mark Papermaster, reports to Jobs, not Cook. Papermaster, who is 47 and spent 26 years at IBM, may someday emerge as a candidate for the top job. (He replaced Tony Fadell, who recently resigned but remains an advisor to Jobs.)

One astute observer of the board believes it's possible for Jobs to become chairman one day, with Cook as CEO. (Apple's board currently has no chairman. Rather, it has two co-lead directors, Intuit chairman Bill Campbell and Genentech CEO Art Levinson.)

Apple isn't the only company in Silicon Valley without a publicly identified heir apparent. HP's ([HPQ](#), [Fortune 500](#)) Mark Hurd hasn't announced a successor, nor have Oracle's ([ORCL](#), [Fortune 500](#)) Larry Ellison or Intel's Paul Otellini. But none of those CEOs is the global brand that Jobs is. The guessing game puts Jobs in a quandary. He hates sharing the spotlight, yet he obviously

detests the constant speculation about his health - chatter intensified by the lack of transparency about who would replace him.

There's also the question of whether Cook even wants to be CEO - such a high-profile job would attract the kind of public scrutiny he has carefully avoided - or if he'd accept a job elsewhere if one were offered. People who know Cook say he professes a genuine love for Apple. "To me the company is about putting together pieces of the puzzle," Cook told someone recently, "not about getting personal visibility."

As long as Jobs stays healthy, Cook won't need to worry about personal visibility. He can just keep doing his thing, grinding away offstage. But if he does get tapped for the CEO job someday, Apple may not suffer from acute Stevelessness as much as the world seems to think.

Reporter associate Doris Burke contributed to this article. ■

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