

When I visited Boeing's headquarters in Seattle for the first time as a Bloomberg News reporter in 1998, I was excited to meet the engineers who'd created these essential machines and the business leaders lionized in bestsellers like *Built to Last* and *In Search of Excellence*. What I found was a place at war with itself. The acquisition of McDonnell Douglas a year earlier had brought hordes of cutthroat managers, trained in the win-at-all-costs ways of defense contracting, into Boeing's more professorial ranks in the misty Puget Sound. A federal mediator who refereed a strike by Boeing engineers two years later described the merger privately as "hunter killer assassins" meeting Boy Scouts. At the time, with world-beating companies like General Electric in ascendance and the federal budget in surplus, it was hard to credit the engineers' dark fears about the future of the company they also so clearly loved. No workplace is perfect.

It's become sadly apparent that at Boeing—as at so many other places—the assassins won. Some of the very people who ran McDonnell Douglas into the ground resurrected the same penny-pinching policies that sank their old company. Borrowing a page from another flawed idol, Jack Welch's General Electric, they executed what today might be called the standard corporate playbook: anti-union, regulation-light, outsourcing-heavy. But pro-handout, at least when it comes to tax breaks and lucrative government contracts.

The Boeing that Muilenburg joined as a college intern a generation ago was created by driven engineers who wanted, as he did then, to design the world's best airplanes. They called themselves "the Incredibles." He rose through the ranks of a company that, instead, rewarded financial wizardry and aped GE's tactics—right up to the point where both became cautionary tales. Rather than investing in new aircraft, Boeing's leaders poured more than \$30 billion of cash into stock buybacks during the MAX's development, enriching shareholders and ultimately themselves. Muilenburg made more than \$100 million as CEO, and he left with an additional \$60 million golden parachute.

What happened at Boeing reflects the same forces that have roiled corporate America since the Reagan revolution ushered in an era of imperial leaders like Welch, obsessively focused on stock market investors. The same year that Boeing bought McDonnell Douglas, the Business Roundtable, a lobbyist for the largest U.S. corporations, did away with any pretense that employees, customers, or communities also had important voices. The group declared that the first duty of any company was to shareholders; everything else would follow, as if by some natural law. In 1997, this new statement of purpose was uncontroversial enough that few newspapers even carried a story about it. It was the fulfillment of a long shift away from the communitarian ideals that had dominated American politics, economy, and culture from the New Deal of the 1930s to the Great Society of the 1960s. That consensus was just starting to fray when Milton Friedman, the Reaganites' favorite economist, argued what was then still the contrarian viewpoint in the New York Times Magazine in 1970: "The social responsibility of business is to increase its profits."

Fifty years later, communities are fragile, workers insecure, and families stressed. It isn't hard to see the connection to a half century's embrace of narrow corporate self-interest over collective responsibility. The federal government's mismanagement of the COVID-19 crisis was only the most visible sign of decay in American institutions—the effects are felt in virtually every aspect of life, from soaring health-care costs to skyrocketing inequality to wildfire smoke blanketing American cities for weeks on end because of escalating carbon emissions. All stem at least in part from the failed belief that corporations will police themselves and shower us in riches if they're just left alone to do so (and are lightly taxed all the while).

In just one example, the Agriculture Department in 2019 quietly cut the number of inspectors in pork plants by more than half. Finding defects—feces, sex organs, toenails, bladders—was mostly left to the companies themselves, much in the way that the FAA relied on Boeing's own employees to ensure aircraft safety. "If this continues across the nation, when you open your package of meat, what you're going to get for a pathogen is going to be a mystery," a longtime inspector said in December

2019. That same month, a pathogen of a different sort started sickening people at a market in Wuhan. Many other countries managed the crisis effectively, rapidly deploying widespread testing and contact tracing. The United States stumbled, with the Centers for Disease Control and Prevention botching a simple test that could have slowed the outbreak in its crucial early months. Just as the FAA had been eclipsed by regulators from other national and international bodies, the CDC was shown to be no longer the world's gold standard in public health. It's impossible to divorce these regulatory failings from the financial imperatives underlying them.

Under Dave Calhoun, the General Electric veteran who replaced Muilenburg as CEO in 2020, Boeing has said all the right things about returning to its engineering roots. The company's statement to shareholders that year mentioned the word safety 159 times. In this business, though, change comes slowly, and so do consequences. The deadly erosion of Boeing's safety culture began decades ago, and it was abetted by the creation of a conflict-ridden system that allowed the company to essentially certify its own products for safety. None other than Ted Cruz, the Republican senator from Texas who idolized Reagan as a boy, called the FAA a "captured agency."

A bipartisan aviation reform bill passed late in 2020 rolled back some of the tasks delegated to Boeing and provided for civil penalties for corporate managers who interfere with the FAA, among other measures meant to rebalance the power relationship. But some of those who are most knowledgeable about aircraft, including the very whistleblowers who tried to stop Boeing from pursuing a shoddy design, say that what's still missing is an insistence on bringing the 737's more than fifty-year-old airframe up to modern standards. In the absence of improvements, more people will find themselves waking up to the question Javier de Luis asked himself in March 2019, after learning that his sister, UN translator Graziella de Luis y Ponce, died in the crash in Ethiopia: "How unlucky do you have to be to die in an airplane accident?"

De Luis is an aeronautical engineer and the former chief scientist of a drone company in Cambridge, Massachusetts, that was eventually sold to Boeing itself. He's taught courses in aerospace systems design at the Massachusetts Institute of Technology. As he discovered when he dug into the data on the MAX, the answer to that question was: a lot less unlucky than he'd imagined. And a better one was: Why weren't government overseers doing more to slow the rush to put an obviously flawed plane back in the sky? The 737 remains the only large commercial aircraft without an electronic checklist to assist its pilots, who depend on heavy binders laden with step-by-step instructions to guide them in the event of an emergency. At the same time, Boeing has fitfully squeezed in software to guide some aspects of the plane, using two redundant computers with processing power that approximates a 1990s Nintendo gaming console. (Even the space shuttle, originally developed in the 1970s, had five separate computers.) That leaves passengers on the 737, in comparison to planes like the Airbus A320 or Boeing's own 787, more vulnerable to decisions made in the heat of the moment by confused pilots.

Accidents, thankfully, are still extremely rare; in 2018, there was a fatal crash once in every three million flights. But there were forty-one total accidents that year (including nonfatal ones), and eighteen of those involved the 737, more than the number for any other airplane, according to Boeing's own statistical summary. The Airbus A320 and its variants had four—even though the number of planes in service was similar for each model. That year, multiple Boeing 737s veered off runways. Others landed short of runways, or their tails struck the ground—all possible signs of pilots losing control of the airplane. In one of them, “during climb, control of the airplane was lost and it impacted the sea,” as the Boeing summary of the Lion Air crash drily put it. Before its grounding, the MAX, in its limited service, had a fatal accident rate of one in every two hundred thousand flights—a frequency not seen since the early days of the jet age. By the count of a former Boeing executive who scoured incident reports for a congressional committee, one in twenty-five MAX planes experienced some sort of safety issue in the months after they were delivered. Despite that record, Boeing and U.S. aviation officials said the MAX was perfectly

safe and let 157 people in Ethiopia file innocently into its cabin on a clear March day, just another routine flight.

How did a company that prided itself on its engineering prowess, that had perfectionism in its DNA, go so wildly off course? What were the forces, and who were the actors, that contributed to the fall of a seemingly insurmountable titan? Over a century in business, Boeing had become the biggest American exporter, with annual revenues surpassing \$100 billion and a manufacturing line capable of shifting the country's balance of trade with a single sale. Boeing employed more than a hundred thousand people, and hundreds of thousands more at suppliers around the world owed their livelihoods to a company that literally connects the world. Its influence reached high in government, with Boeing veterans rising to powerful posts in the FAA, the Justice Department, the Defense Department, and multiple branches of the military. To the extent that ordinary people thought about Boeing, it was often with the same reverence accorded to elevators or light switches: the planes always seemed to work.

Given that defiance is at its core—the improbable belief that these machines weighing hundreds of tons should gracefully cross our skies without incident—it's little wonder that Boeing was born of grand ambitions. They first appeared in the mind's eye of a self-confident young timber baron who one Fourth of July took a fateful flight over the still-virgin forests of a raw new American city.

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