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Elon Musk, 2025: The Master of Big Bets?

Elon Musk, the world's richest person and chief executive of Tesla, SpaceX, and xAI, was confronting extraordinary challenges in 2025. In the fall of 2024, Musk made a big bet on electing Donald Trump, investing \$277 million of his own money to help elect Republicans.¹ In return, Musk was given responsibility for the new Department of Government Efficiency (DOGE). In the first three months of the new administration, Musk threw himself into the job with the same intensity that he deployed in his own start-ups, driving aggressive cost-cutting across government agencies. But Musk's big bet on Trump was also impacting his companies. X (formerly Twitter) became the new administration's preferred vehicle for public pronouncements, almost tripling its value. In addition, several countries signed contracts with Starlink, the satellite communications business of SpaceX.² At the same time, consumer anger over DOGE and foreign anger over Trump's proposed tariffs caused Tesla's U.S. and European sales to drop 14% in the first half of 2025.³ In addition, Musk faced public criticism over conflicts of interest between his government role and his SpaceX government contracts.⁴ Musk's commitment to public service raised many questions about whether he could successfully run his corporate empire while also restructuring the U.S. government. Then in May 2025, Musk and Trump had a falling out. Musk returned to his CEO roles, exited DOGE, engaged in a heated war of words with Trump, and started a new political party.

Musk, however, was no stranger to controversy or adversity. In 2008-9, SpaceX and Tesla were on a path towards bankruptcy. In 2018, Tesla was again on the verge of bankruptcy as it struggled to manufacture its Model 3 sedan. But demand for electric vehicles (EVs) exploded in 2020, driving Tesla's sales. Similarly, after losing money for almost 20 years in SpaceX, the company's satellite service, Starlink, fueled explosive growth and SpaceX's first profit in 2023.⁵ Although his other companies, The Boring Company, Neuralink, and xAI, remained unprofitable, they were richly valued by private investors. A former colleague commented that "Elon thinks bigger than just about anyone else."⁶

Looking forward, Musk faced hard choices. China's BYD sold more EVs than Tesla in 2024, leading Musk to bet the future of Tesla on unproven autonomous taxis and robotics.⁷ To salvage X and Musk's big bet on generative AI, Musk merged xAI and X. However, both were losing money, and the newly merged firm required massive injections of capital.⁸ Finally, competition was emerging for Starlink, and SpaceX was struggling with Starship (Musk's huge rocket for going to Mars), which had blown up several times in 2025. For Musk, an obvious question was: should he stay the course or had he extended himself too far, putting his legacy and wealth at risk? For Musk's boards and shareholders, the question

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was slightly different: was Musk, as his biographer put it, “a being sent from the future to save mankind from itself or a slick businessman dragging foolish investors along on grand cash-burning bets?”⁹

Elon Musk’s Ventures

Elon Musk was born and raised in South Africa and made his way to Canada in 1989 at the age of 17. Staying with relatives and working odd jobs, Musk enrolled in Queen’s University in Ontario and then transferred to the University of Pennsylvania, where he earned degrees in economics and physics. He began a PhD program in applied physics at Stanford but dropped out in 1995 to start Zip2 with his brother. They sold the mapping company to Compaq for \$300 million in 1999, netting Musk \$22 million. He used the money to launch another startup called X.com, an online bank. In 2000, X.com merged with Confinity, a startup founded by Peter Thiel. The combined firm took the name PayPal in 2001 with Musk as CEO. After taking the company public in 2002, Musk was fired. Fortunately for Musk, a few months later eBay acquired PayPal for \$1.5 billion. With the \$180 million Musk earned from PayPal, he invested in the Boring Company, Neuralink, Tesla, SpaceX, and SolarCity.

The Boring Company. In December 2016, Musk took to Twitter to complain about traffic in Los Angeles and propose a solution: “Traffic is driving me nuts. Am going to build a tunnel boring machine and just start digging...It shall be called the Boring Company.”¹⁰ Days after the tweet, he bought the website BoringCompany.com, assigned a SpaceX engineer to oversee the venture,¹¹ and started digging a test tunnel fifteen feet below a SpaceX parking lot.¹² Musk’s goal was to create new economic opportunities by solving an engineering problem. In this case, Musk had to discover how to dig tunnels quicker and less expensively. By 2022, The Boring Company had received around \$230 million in funding: \$100 million from Musk and the rest mainly from venture funds.¹³ In its first six years, the Company accomplished little of note besides a 1.7-mile tunnel below the Las Vegas Convention Center. The main hurdles were regulations and local pushback, which made tunneling slow and expensive.¹⁴

Neuralink. Musk co-founded Neuralink in 2016 to build a brain-computer interface (BCI), a brain implant enabling the human brain to exchange electrical signals with an external machine. Neuralink’s mission was to “create a generalized brain interface to restore autonomy to those with unmet medical needs.”¹⁵ The company gave a demonstration in 2021, which showed a monkey using Neuralink to play Pong with its mind.¹⁶ By 2022, Neuralink had raised \$363 million in funding from investors including Musk, Google Ventures, and OpenAI’s Sam Altman.¹⁷ Neuralink developed its first device for quadriplegics, and Musk claimed the technology would eventually augment a user’s intelligence.

Tesla

Although Elon Musk became the face of Tesla, he was not a founder. Tesla was founded by Marc Tarpenning and Martin Eberhard in 2003. Their mission was to wean the world off oil by building a compelling electric car using lithium-ion (li-ion) batteries widely used in consumer electronics. In 2004, Musk became the lead series A investor and Tesla’s board chairman. In July 2006, the company unveiled the Tesla Roadster, a fully-electric sports car with a range of close to 250 miles that could be reserved for \$85,000 to \$100,000. After just a few weeks, Tesla had received over 500 reservations.¹⁸ California Governor Arnold Schwarzenegger said, “I test drove this vehicle, and it is hot.”¹⁹

In August 2006, Musk announced Tesla’s “secret master plan.” “The overarching purpose of Tesla Motors is to help expedite the move from a mine-and-burn hydrocarbon economy towards a solar electric economy,” he explained.²⁰ He summarized Tesla’s plan for accomplishing this in four points: 1) Build a sports car; 2) Use that money to build an affordable car; 3) Use *that* money to build an even more affordable car;²¹ and 4) “While doing above, also provide zero emission electric power generation

options.”²² That meant “co-marketing” solar panels from SolarCity, a company funded mainly by Musk and founded by his cousins, Lyndon and Peter Rive.

After an investor told Musk that Eberhard was lying about the Roadster’s manufacturing costs, Musk demoted Eberhard from CEO and pushed for his termination.²³ The company quickly cycled through two interim CEOs before Musk assumed the role in 2008. “I really didn’t want to be CEO,” he later said. “But I had to, or else Tesla would die.”²⁴ Tesla eventually delivered approximately 2,500 Roadsters to rave reviews.²⁵ In 2009, it purchased a former GM factory in Fremont, California using a \$465 million loan from the U.S. government. In 2010, it went public: The first American automaker to do so since Ford in 1956.²⁶ Post IPO, it built the Model S, a luxury sedan.²⁷ This time around, Musk learned from his troubles with the Roadster that he could not depend on existing supply chains. Musk built most of the Model S in-house and pushed for Tesla to treat this as an opportunity to make the Model S totally unique, with custom features like retractable door handles and an enormous 17-inch touch screen. The car was going to be a “freaking technology velociraptor,” Musk said.²⁸

Deliveries of the Model S began in the summer of 2012. In November, *MotorTrend* named the Model S its 2013 Car of the Year, making it the first EV ever to receive the award.²⁹ Over the next several years, Tesla returned repeatedly to capital markets as it burned through cash in its aggressive pursuit of economies of scale. In 2014, Tesla announced plans to build a \$4 billion “Gigafactory” battery plant in Nevada with Panasonic, which Musk claimed would cut battery costs by a third.³⁰ (Ultimately, Tesla would invest \$3 billion, Panasonic \$1.7 billion, and the state of Nevada offered over \$1 billion in long-term tax incentives.³¹) In 2015, Tesla began deliveries of the Model X, an electric sport utility vehicle (SUV) starting at \$132,000. In early 2016, Tesla announced the Model 3, a \$35,000 sedan that it would mass-produce by turning its Fremont plant.³² It began accepting \$1,000 deposits on the same day. After only one month, it had amassed 375,000 reservations.³³ Tesla then announced its goal for 500,000 deliveries per year in 2018—over five times its forecast for total deliveries in 2016—and that further fundraising was needed. Reuters summed it up: “Elon Musk’s vision is not for the faint of heart.”³⁴

Master Plan, Part Deux. Year after year, Musk reiterated the scope of his ambitions for Tesla. He was rarely shy about his goals or his spending plans. Although he frequently pronounced that Tesla would soon be cash flow positive, he repeatedly needed to return to the capital markets for funding. Musk put investors’ trust to the test when he proclaimed his “Master Plan, Part Deux” in a July 2016 blog post. Tesla, he told the world, would acquire SolarCity for \$2.6 billion, which had more than \$3 billion in debt and was approaching financial collapse. In the blog post, he explained that acquiring SolarCity was necessary to unlock Tesla Energy’s true value as part of a “smoothly integrated and beautiful solar-roof-with-battery product that just works.”³⁵ That Tesla and SolarCity had ever been separate companies “despite similar origins” was “largely an accident of history,” he said.³⁶

Since Musk was SolarCity’s chairman and largest shareholder, many investors were concerned that buying SolarCity amounted to self-dealing: in effect, Musk was using Tesla to bail out himself and his cousins.³⁷ Six of eight SolarCity board members had to recuse themselves from the deal because of ties to Musk and/or Tesla.³⁸ Musk insisted that bringing SolarCity together with Tesla was essential to achieving Tesla’s sustainable energy goal.³⁹ Ultimately, 85% of shares were filed in favor of the deal,⁴⁰ but declining sales and angry investors led to a multi-billion dollar lawsuit. All the directors settled except for Musk. After Tesla’s acquisition, SolarCity’s business collapsed: in 2014, SolarCity had over 30% market share; in 2021, SolarCity installed less than half the megawatts from its days as a standalone company, with only a 2% share of U.S. residential solar panels.⁴¹ After Tesla’s acquisition in 2016, SolarCity began operating as Tesla Solar.⁴² By 2023, Tesla refined its market as “residential solar-plus-storage battery supplier,” where it claimed a 47% market share.⁴³

Production Hell. Following its troubles producing the Roadster, Tesla began producing its cars mainly from scratch, building not only battery packs but also casting chassis nodes, producing injection-mold plastics, and so on. This was an unusual strategy—major automakers typically relied on suppliers for at least 75% of each vehicle they produced⁴⁴—but Musk believed that “building the machine that builds the machine” would be the core of Tesla’s competitive advantage.⁴⁵ When asked in 2017 about how he could justify his prediction that Tesla would eventually reach Apple’s market capitalization (around \$700 billion at the time), he talked about the company’s factory in Fremont, where it was getting ready to build the Model 3, and noted how the facility “was far more complex than...the car... [and] a very difficult thing for other manufacturers to copy.”⁴⁶ Many investors were skeptical, but Musk assured them that the company had designed the Model 3 to be “easy to make.”⁴⁷

The skeptics were proven correct. In July 2017, Tesla began production of the Model 3 two weeks ahead of schedule, but it quickly descended into what Musk called “production hell,” falling far behind its production goals.⁴⁸ Desperate to ramp up production, Tesla took a brazenly experimental approach to manufacturing, favoring efficiency gains over quality control. As cars continued to roll off the line, Tesla’s engineers reprogrammed its assembly robots to run faster, cut the number of welds used to produce the car’s underbodies, and even set up a new production line under a tent next to its main plant in Fremont.⁴⁹ Production workers, meanwhile, complained of abysmally poor working conditions and being forced to make quick fixes, such as patching cracks in components with electrical tape.⁵⁰ Ultimately, the company had to rework its entire production line. Musk later confirmed: “Yes, excessive automation at Tesla was a mistake. To be precise, my mistake. Humans are underrated.”⁵¹

During production hell, Musk personally experienced enormous stress and demonstrated erratic behavior. In an emotional August 2018 interview with the *New York Times*, he admitted to working 120-hour weeks, and his friends were “really concerned.” “[I]f you have anyone who can do a better job please let me know. They can have the job,” he said.⁵² One month later, he was filmed smoking marijuana during an interview with Joe Rogan, prompting NASA to complete a review of SpaceX to prevent further violations of guidelines requiring that federal contractors avoid illegal drug use.⁵³

Musk said that in the early months of 2018, Tesla had been within “single-digits weeks” of total financial collapse.⁵⁴ Despite Tesla’s serious troubles, Musk negotiated an extraordinary compensation package for himself with his board, which gave him the option to buy over 100 million shares at 2018 prices, if Tesla met certain milestones. Fortunately for Musk, Model 3 production slowly climbed out of production hell. Although Tesla was unable to produce the car for its original target of \$35,000, demand remained strong at higher prices. In October 2019, Tesla reported its first net income of \$143 million.⁵⁵ This marked the beginning of a hot streak. Although early profits were largely driven by selling bitcoin and tax credits, car margins improved by the second half of 2021. While other automakers were production-constrained by a worldwide shortage of semiconductors during the COVID-19 pandemic, Tesla shipped almost one million vehicles in 2021 (see **Exhibit 1** for financials and cash flows). It accomplished this by rewriting its software to run on the chips it could find. Since other automakers relied on outside suppliers for their software, they were less agile. As one logistics expert observed, “Tesla wrote its own destiny.”⁵⁶ However, quality remained a problem. In 2024, Tesla was in 18th place in Consumer Reports’ auto brand ranking, largely due to reliability concerns.⁵⁷

Following his Master Plan (2006) and Master Plan: Part Deux (2016), Musk introduced Master Plan 3 in April 2023. The focus of Master Plan 3 was on solar and battery storage, which would keep energy stores for times when the sun or wind was unavailable to recharge the cars. Musk also made a large investment in Shanghai, which won Tesla a 12% share of China’s market in 2023.⁵⁸ At Tesla’s “We, Robot” event in October 2024, Musk hinted at Master Plan 4. In this version, Musk envisioned complete autonomy in the future, allowing users to utilize their time more efficiently, rather than driving or

parking.⁵⁹ Prior to the event, Musk announced on X that he was working on the Master Plan, tweeting “Working on the Tesla Master Plan 4. It will be epic.”⁶⁰

Even before Musk started to engage seriously in politics, Tesla’s sales began to slow. While most car companies regularly introduced new or upgraded models, Tesla relied on its Model 3 and Model Y for the bulk of its sales, and neither had materially changed in years, other than minor upgrades in Model Y.⁶¹ Tesla’s \$100,000 Cybertruck, which sold poorly, was the only new model introduced since 2020. Musk also scrapped plans for a new Model 2, which would have sold for \$25,000.⁶² To excite the investor community, Musk announced several new initiatives in 2024 that he claimed would turbocharge growth. These included a prototype of the long-anticipated Tesla Robotaxi, which would drive without human intervention. According to Musk, the “cybercab” would “add trillions of dollars” to Tesla’s valuation and increase growth.⁶³ Musk, however, frequently promised self-driving cars over the years, but he never quite delivered (see Exhibit 4). One analyst called the debut disappointing, saying the robotaxi contained Tesla’s current software “in a different body shell on a handful of concept vehicles, navigating a carefully sanitized movie studio lot with no pedestrians, cats, dogs, etc.”⁶⁴

Another 2024 challenge was Musk’s pay package. After a Delaware judge blocked his original payout, 72% of Tesla’s shareholders voted in favor of a new \$50+ billion pay package for Musk. Many small shareholders felt that Musk “deserved every penny,” with small shareholders comprising a significant portion of Tesla’s investors.⁶⁵ (see **Exhibit 2**) However, some large investors disagreed, citing the pay package’s effect on Tesla’s bottom line in light of decreasing sales and profits. Even though investors voted in favor of the \$50 billion pay package, Judge McCormick affirmed the previous decision to rescind it. Musk announced on X that he would appeal the decision, and that “I am uncomfortable growing Tesla to be a leader in AI & Robotics without having ~25% voting control... Unless that is the case, I would prefer to build products outside of Tesla.”⁶⁶ He also announced plans to incorporate all of his companies in Texas, where he had moved Tesla’s headquarters in 2021.⁶⁷

The election of Donald Trump in November 2024 promised to improve Tesla’s prospects. With Musk viewed as a close confidant of the President, Tesla’s stock doubled in the six weeks following the election. Tesla’s market capitalization skyrocketed to \$1.4 trillion, adding nearly \$140 billion to Musk’s personal wealth. By March 2025, however, the stock had fallen back to earth, cutting Tesla’s value in half. In 2025, Tesla reported its first decline in U.S. sales, partly driven by slow Cybertruck sales. While revenues grew in China in 2024, Tesla lost share to intense price competition from BYD.⁶⁸ Tesla’s outlook worsened after Inauguration Day in 2025, when Musk gestured to the crowd in a way similar to a Nazi salute. Some owners wanted to distance themselves from Tesla, with one exclaiming, “The pride and the good feeling I had driving in it [a Tesla] is gone for me.”⁶⁹ Around the U.S. and Europe, there were violent protests at Tesla facilities, Teslas were defaced, and protesters destroyed some Tesla charging stations. In January 2025, the company’s sales fell by 45% across Europe, particularly in countries such as Germany, where Musk publicly supported an extreme right-wing party in national elections.⁷⁰ Trump initially sought to help Musk: He threatened to classify anti-Tesla protesters as domestic terrorists. He also held a Tesla promotion on the White House lawn and campaigned for Republicans to “Buy a Tesla.”⁷¹ Yet a survey in March 2025 by Morgan Stanley found that 85% believed that Musk’s foray into politics was “negative” or “extremely negative” for Tesla.⁷²

Musk’s alliance with Trump did not last. In late May 2025, Musk departed DOGE. On June 6th, Musk and Trump had a public falling out over Trump’s tax legislation, with insults flying on both sides. Although Musk later walked back his comments, stating that some “went too far,”⁷³ his fight with Trump threatened to endanger Tesla’s financials. Republicans in Congress passed a tax bill that gutted “climate policies worth billions of dollars” for Tesla.⁷⁴ The legislation eliminated most consumer tax incentives to buy EVs and reduced Tesla’s ability to sell tax credits. (see **Exhibit 3**) Musk also lost

favor with some federal regulators, who could disrupt Musk's plans for deploying driverless cars.⁷⁵ Finally, there were rumors that the Chinese government, which historically gave Tesla favorable treatment, may see less value in giving Musk/Tesla special deals after Musk's fallout with Trump.⁷⁶

To promote new interest in Tesla, Musk introduced his first commercial robotaxi on June 22, 2025, in Austin, Texas. Unlike Google's Waymo and Amazon's Zoox, which relied on expensive lidar plus radar and cameras, Tesla robotaxis relied exclusively on cameras. Priced at a flat \$4.20 per ride and utilizing a new technology called "FSD Unsupervised," the launch allowed selected customers to test the robotaxi "by invitation only."⁷⁷ One report noted that this group "included long-time Tesla fans, promoters and shareholders, many of whom generate income from posting Tesla- and Musk-related social media content on platforms including X and YouTube," with Tesla providing a total of 11 rides.⁷⁸ Several people who participated stated on X that there were no issues with their rides, which Musk reposted. However, people driving on the same roads and researchers noted that some robotaxis were driving on the wrong side of the road and braking suddenly in the middle of the road after detecting a police car, which was in an adjacent parking lot.⁷⁹ Musk had also announced he planned FSD robotaxi launches in Los Angeles and San Francisco. Musk believed that FSD cars as well as separate AI and robotics ventures (more on this below) would drive Tesla's market cap to \$30 trillion or more.⁸⁰

Intellectual Property: In 2014, Musk pronounced that Tesla would "not initiate patent lawsuits against anyone who, in good faith, wants to use our technology... Technology leadership is not defined by patents...but rather by the ability of a company to attract and motivate the world's most talented engineers," he said.⁸¹ Despite Musk's pledge to be open, Tesla voraciously defended its trade secrets. It used non-disclosure agreements with employees to sue competitors. Musk also rejected hopes that Tesla would share its automation software. Tesla sued one company for patent infringement in 2023, but it appeared to be largely defensive (against a company that had sued Tesla).⁸²

The Supercharger network: Tesla maintained a "Supercharger" network of more than 60,000 EV-charging stalls in North America, Europe, and Asia.⁸³ (By comparison, there were more than 440,000 traditional gas stations in the U.S., China, and Europe.)⁸⁴ Tesla's Supercharger stations cost around \$100,000-175,000 each to install.⁸⁵ "Level 3" chargers (also called "DC fast chargers") could add at least 250 miles of charge per hour on average, which was significantly faster than 240V Level 2 chargers (25 miles of charge per hour) or 120V Level 1 chargers (five to six miles of charge per hour).⁸⁶ The average cost to charge a Tesla at a Supercharger station was \$0.25 per kWh.⁸⁷ Initially, the Supercharger network was only available for Teslas. Because standardized charging cable connectors were mandatory in Europe, non-Tesla EV drivers needed only to download an app to use the Superchargers. By 2025, Supercharger stations in the U.S. were open to all EVs. For most non-Tesla vehicles, they needed an adapter and the cost per kWh was roughly double Tesla's price.⁸⁸ But non-Tesla drivers could pay \$13/month to receive the Tesla rate.⁸⁹ In the spring of 2024, Musk fired the entire team responsible for the Supercharger network, then hired them back a few weeks later.⁹⁰

Tesla's Battery Business: In addition to car sales, Tesla also featured a battery business which sold energy storage batteries "to residential customers and utilities who pair Tesla batteries with wind and solar-power generating assets to save some of the power for when it's needed."⁹¹ By mid-2024, Tesla's batteries were capable of storing 9.4 gigawatt hours of energy, which could power around 10,000 homes in the U.S. for one year. Given that previous iterations of the battery could hold only 4.1 gigawatt-hours, this sudden increase in power storage was a boon to Tesla's battery division. According to one analyst, the storage amount "was huge...Monster storage number that will move the needle for [profit]."⁹² This also meant an estimated \$2 billion revenue increase for the battery division, with an additional \$400 million in profit. By January 2025, Tesla's battery business had broken its previous records, generating over \$10 billion in revenue in FY2024 (a 67% YoY increase).⁹³

Tesla's Robots: Tesla's humanoid robots, named Optimus or Tesla Bot, debuted at Tesla's AI Day in August 2021. According to Musk, the robots were "a general-purpose robotic assistant designed to perform tasks that are 'dangerous, repetitive, and boring' for humans." Musk also stated his hope that the robots would be "more significant" than Tesla's car business. The AI technology used by Optimus was similar to Tesla's autonomous cars, including "real-time vision, object recognition, and navigation." By 2025, Musk was assuring investors that Optimus would be able to perform endless tasks, including being "a teacher, babysit your kids, it can walk your dog, mow your lawn, get the groceries, just be your friend, serve drinks. Whatever you can think of, it will do."⁹⁴ Musk estimated that Optimus robots would be priced between "20,000 to 30,000 dollars."⁹⁵

Musk's goals for 2025 included creating thousands of Optimus robots in 2025. By March 2025, Musk predicted that robotaxis would be assembled in "less than five seconds," and 50,000 human-like robots would be created in the same year.⁹⁶ In 2025, in addition to driverless cars, Musk also began shifting Tesla's focus to these humanoid robots, keeping Tesla's valuation "at a level benefiting a tech titan rather than an automaker."⁹⁷

Management Style. Musk could be inspiring: he often attracted top talent, who wanted to work for a visionary CEO.⁹⁸ Yet his management style at Tesla often caused problems. Musk had a well-deserved reputation for over-promising and under-delivering. He rarely met publicly announced deadlines for Tesla. Musk could also be authoritarian: when he announced that Tesla would move its headquarters to Austin, Texas, he did not inform most of his team.⁹⁹ And during "production hell," Musk's erratic behavior led senior executives to leave in droves.¹⁰⁰ One former high-ranking executive said, "People used to tell me to hunch down lower in my seat during meetings. Elon reacted better to people when he was sitting higher than them."¹⁰¹ In 2019, annualized turnover for executives reporting directly to Musk was 44%, four times higher than similarly sized tech firms.¹⁰² In 2025, Tesla suffered an exodus of high-level talent, losing its head of software engineering, head of battery technology, and head of humanoid robotics, as well as many other seasoned executives.¹⁰³

Competition: In 2025, Tesla faced EV competition in all market segments. The Chinese primarily attacked with lower-priced models, while U.S., German, and Korean manufacturers offered models in the mid-range and high-end segments. (see **Exhibits 5 & 6**) While Tesla had the EV market largely to itself for its first two decades, those days were over. Tesla's most serious competition came from China's BYD, which sold some of its popular EV models for between \$10,000 and \$12,000; Tesla's lowest-priced car in China was roughly \$35,000.¹⁰⁴ BYD was not available in the U.S.¹⁰⁵ One of BYD's greatest strengths was its in-house battery manufacturing, helping it become one of the largest lithium-ion battery manufacturers in the world. In March 2025, BYD claimed its new battery technology allowed its EVs to charge batteries for a 240-mile range in only five minutes. Tesla's supercharger required 30 minutes for a 150–200-mile range.¹⁰⁶

SpaceX

Musk founded Space Exploration Technology Corp. (SpaceX) in 2002 to build a cheaper rocket. Prior to founding SpaceX, he had been disappointed to discover that the National Aeronautics and Space Administration (NASA) had no plans to send humans to Mars, and he wanted to do something to inspire public support for a Mars mission. His first idea was to send a greenhouse to the Red Planet and send back pictures of plants growing on Martian soil. Eventually, he decided to go there himself, famously noting, "I'd like to die on Mars, just not on impact."¹⁰⁷

Musk's research told him that he could, in theory, afford to purchase and launch a refurbished intercontinental ballistic missile to complete his mission, and he went to Russia to buy one. When the Russians refused to sell him a rocket (one Russian designer spat in Musk's face), future SpaceX engineer

Jim Cantrell convinced Musk to build one himself.¹⁰⁸ Part of Musk's strategy was designing its rocket components to be reusable. In addition, he wanted to build as much of the rocket in-house as possible. Finally, he committed to building and testing components quickly to find problems sooner and iterate from there. According to one former NASA engineer, "To adopt this method, you have to let people see you fail... This is why it is hard for national space agencies to adopt it. The... politics are brutal."¹⁰⁹

Musk claimed that the company's first rocket, the Falcon 1, would be able to launch a 1,400-pound payload for \$7 million, less than a tenth of the going rate per-pound.¹¹⁰ He believed the company would complete its first successful launch of the Falcon 1 in 2003. But after six years of trying, SpaceX had failed three times and was almost out of cash. If its next launch failed, Musk would lose most of his fortune. Fortunately, its September 2008 launch was a success. "This is one of the best days of my life," Musk said, and he joked, "As the saying goes, the fourth time's the charm."¹¹¹ One year later, in July 2009, SpaceX had its first successful paying mission.¹¹²

Over the next decade, SpaceX amassed an impressive list of accomplishments: its rockets were the first commercially-built, commercially-operated spacecraft to be recovered from orbit;¹¹³ to dock with the International Space Station (ISS);¹¹⁴ to send human passengers into orbit;¹¹⁵ and to send an all-private crew into orbit.¹¹⁶ During this period, it generated revenue mainly by launching satellites and transporting cargo to the ISS, charging between \$60 million and \$150 million per launch.¹¹⁷ By comparison, the Air Force used United Launch Alliance (a Lockheed Martin-Boeing JV) to launch its payloads, estimated the "unit cost" to put a national security payload into space was over \$400 million.¹¹⁸ SpaceX also reused its rockets. In 2021, it reused a Falcon 9 booster for the tenth time in two years.¹¹⁹ SpaceX's share of the global launch market, excluding China, reached 60% in 2023.¹²⁰

But Musk's ultimate goals for SpaceX were loftier. SpaceX's mission was to "mak[e] life multiplanetary & protect the light of consciousness."¹²¹ He predicted that the revenue generated through launches would plateau at around \$3 billion per year,¹²² far short of the "between \$100B and \$10T"¹²³ he believed was needed to build a Martian colony. To realize his dream, he launched Starlink, a satellite internet service, and Starship, the world's largest rocket. Starship was the foundation for Musk's plans for colonizing Mars.¹²⁴

Starlink

Starlink was a satellite internet service that would provide connectivity via thousands of satellites in low Earth orbit (LEO), a few hundred miles from Earth's surface. Musk explained, "You can think of Starlink as filling in the gaps between 5G and fiber, and really getting to the hardest, most difficult-to-reach 3 percent, possibly 5 percent [of Internet users]."¹²⁵ Musk estimated that the total addressable market for this service was \$30-\$50 billion.¹²⁶ Revenue was projected at \$11 billion for 2025.¹²⁷

SpaceX began launching Starlink LEO satellites in November 2019. The useful life of those satellites was 5-7 years.¹²⁸ By the end of June 2025, the company had launched almost 8,000 satellites.¹²⁹ Over 60% of satellites in space were owned by Starlink.¹³⁰ The price for each user terminal was between \$300 and \$500 in the U.S., and the monthly service price was \$90 to \$120.¹³¹ According to one internet testing service, Starlink's speeds and latency were comparable to those of a typical broadband connection.¹³² Starlink ended 2024 with an estimated 4.6 million customers, up 100% from 2023.¹³³ Traffic on Starlink had more than tripled, expanding internet service to new countries including Chad, Mongolia, and Argentina. Ukraine's military heavily used Starlink in its fight against Russia. It also started providing internet to new industries such as airlines and cruise providers. Another source of traffic was Starlink Mini, a "laptop-sized version of Starlink's satellite dish," providing van-life enthusiasts and RV owners with internet access through its "Roam" package.¹³⁴ A number of governments announced they were

considering Starlink after Trump's election, but a few countries, such as Canada, canceled their contracts with Starlink, citing Trump's tariffs.¹³⁵

Some believed that the expansion of wired broadband and 5G would eventually render Starlink irrelevant, but Musk insisted that it was a "complementary" service.¹³⁶ He cited two instances where governments had required telecommunications companies to provide service in rural areas as a condition for granting 5G licenses. The companies had found it easier to partner with Starlink than to build out the infrastructure.¹³⁷ The U.S. Federal Communications Commission (FCC) had also awarded SpaceX \$900 million in subsidies for rural broadband in December 2020.¹³⁸

Competition: SpaceX was not the only company building a LEO internet constellation. Other companies building these satellites included L3Harris Technologies, Northrop Grumman, Lockheed Martin, and Airbus. Although several of these competitors recorded higher annual revenues than SpaceX, they had much lower valuations. Starlink dominated the U.S. and global market in the number of customers, terminals, and satellites. However, competitors were developing new approaches to break SpaceX's quasi-monopoly. The EU announced a new €10 billion program to launch 290 satellites, called Iris2, which was designed to "ensure the bloc's security for governments and armies amid increasing global concerns over cybersecurity."¹³⁹ Russia also announced its own satellite program, called Kalinka. And Silicon Valley companies, such as Alphabet, sought to challenge Starlink with new technologies. In March 2025, Alphabet spun off Taara, one of its moonshots, claiming its laser-based internet service provider could offer much higher bandwidth at much lower costs to rural areas.¹⁴⁰

Starship

To improve satellite delivery as well as reach Mars, Musk needed a bigger rocket. Standing at over 400 feet tall, Starship was the largest and most powerful launch system ever built.¹⁴¹ The spacecraft was designed to be "the first fully and rapidly reusable rocket," and according to Musk, "the Holy Grail of rocketry."¹⁴² Musk claimed that Starship would transport a 100 metric-ton payload into orbit at \$20 per kilogram, less than 1% of the cost per kilogram to launch cargo aboard a SpaceX Falcon 9.¹⁴³ SpaceX planned to deliver these cost reductions through economies of scale and mass manufacturing: the sheer size of the rocket reduced the cost per-kilogram in multiple ways and SpaceX was building a factory to produce one to two Starships every week for \$5 million each.¹⁴⁴ (see **Exhibit 7**) While rockets were historically built "to order" for a particular payload, SpaceX was building Starship "on spec." Musk believed that cheap spaceflight could enable business opportunities that were hard to foresee. As one analyst observed, "This ... has the potential to transform investor expectations around the space industry...talking about space before Starship is like talking about the internet before Google."¹⁴⁵

Gwynne Shotwell, SpaceX's President and COO, proudly explained that "Starship will be the thing that takes us over the top as one of the most valuable companies. We can't even envision what Starship is going to do to humanity...Starship is so big that the concept of how we put things in space, how people will travel in space, is totally different."¹⁴⁶ But in early 2025, Starship was still in development, without generating revenues. Moreover, three Starship rockets exploded in the first half of 2025, delaying Musk's plan to send an unmanned Starship to Mars in 2026.¹⁴⁷

Competition: In 2021, *CNBC* observed, "In the private space industry, it can seem that there's SpaceX and then there's everyone else."¹⁴⁸ One of Musk's great skills was raising capital: since its founding, Musk had raised \$7.4 billion for SpaceX.¹⁴⁹ Nonetheless, there was some room for competition in the space industry. Multiple analysts estimated that the space economy would be worth over \$1 trillion within the next two decades.¹⁵⁰ One analyst argued that the industry would "be supply-constrained for many years"¹⁵¹ and the market for launches alone could be worth \$38 billion by 2030.¹⁵²

Distinct segments were emerging in the launch industry. Some companies, like Richard Branson's Virgin Galactic, focused primarily on selling seats aboard short suborbital flights. Other companies, such as Astra Space, Firefly Aeronautics, Virgin Orbit, and Rocket Labs, were building smaller, lower-cost rockets to compete head-to-head with SpaceX. Relativity Space, a private competitor, was cutting manufacturing costs by 3D-printing entire rockets.¹⁵³ Finally, there was Jeff Bezos' space venture, Blue Origin, which operated in near-secrecy for 15 years. Its coming-out party arrived in 2015, when it became the first company to launch a liquid-fueled rocket into space and land it vertically.¹⁵⁴ Two years later, Bezos announced that he would sell \$1 billion in Amazon stock annually to fund its operations.¹⁵⁵ Bezos was embarrassed when NASA awarded its lunar lander contract to SpaceX instead of a partnership between Blue Origin, Northrop Grumman and Lockheed Martin.¹⁵⁶

SpaceX in 2024-2025

SpaceX's valuation jumped from \$255 billion to \$350 billion in 2024, making it the most valuable private company in the world.¹⁵⁷ In mid-2025, Musk was raising money from insiders at a \$400 billion valuation.¹⁵⁸ This was partly fueled by successful launches in October 2024 and the U.S. election, "with investors seeking to capitalize on the billionaire's deepening ties to President-elect Donald Trump."¹⁵⁹ In addition, the company's Falcon 9 rocket became the most flown rocket worldwide, giving SpaceX a monopoly in practice for "launch missions slinging payload like satellites into orbit."¹⁶⁰ SpaceX had also gained several vital contracts in 2024. The U.S. military was one of its largest customers, which included a \$537 million contract for providing aid to Ukraine's military.¹⁶¹ By June 3, 2025, Musk projected that SpaceX's revenue would reach almost \$16 billion in 2025, with around \$1.1 billion in revenue coming directly from NASA contracts. Starlink alone was projected to earn \$12.3 billion in 2025, up from \$7.8 billion in 2024, after winning additional contracts from governments and large corporations, including United Airlines and Deere.¹⁶²

However, 2025 posed a new set of challenges for SpaceX. After several failed launches in the first half of 2025, including one rocket that exploded on the launchpad in Texas in June, SpaceX was left hoping for successful launches later in the year.¹⁶³ In addition, after Musk's feud started with Trump, he threatened to decommission Dragon, a spacecraft made by SpaceX that shuttled astronauts and supplies to the International Space Station, or ISS.¹⁶⁴ However, a few hours after posting the tweet, Musk backtracked by stating, "...Ok, we won't decommission Dragon."¹⁶⁵ Nonetheless, Trump had threatened to cancel SpaceX's contracts with the federal government, potentially costing the company up to \$22 billion.¹⁶⁶ It was unknown if governments in Africa and Asia would honor their newly signed contracts with Starlink, after Musk's feud with Trump.

Twitter/X

In 2022, Musk acquired social media giant Twitter. The platform was founded in 2006 by Jack Dorsey, Biz Stone, Evan Williams, and Noah Glass. Early on, Musk established his presence on Twitter in June 2009.¹⁶⁷ In his first 13 years on Twitter, Musk had posted over 19,000 tweets, approximately 4 per day.¹⁶⁸ His preference for tweeting extended to his companies; as one journalist noted, Musk fired all of Tesla's North American P.R. team because his Twitter use was more powerful in marketing Tesla's products. Musk's tweeting and public exhibitions were occasionally outrageous, skirting the bounds of legality. For example, in August 2018, he tweeted "funding secured" to take Tesla private at \$420 per share. Shortly after, the Securities and Exchange Commission (SEC) charged Musk with securities fraud, alleging he had not, in fact, secured the funding to take Tesla private at that price.¹⁶⁹ Musk and Tesla settled: each would pay a \$20 million fine plus other punitive measures.¹⁷⁰ Except for China, where he treaded lightly, he enjoyed attacking government authorities on Twitter, calling the NHTSA the "fun police" for banning drivers playing games when using autopilot, and California

politicians as “fascists” for their Covid policies.¹⁷¹ He even compared Canadian Prime Minister Justin Trudeau to Hitler because of Canada’s Covid policies. (Musk realized this was a step too far, and quickly deleted his tweet.¹⁷²)

In April 2022, Musk was appointed as a Twitter board member. Musk soon decided his place at Twitter was not on the board, but as the CEO and owner. In April, Musk announced a hostile bid for Twitter at \$44 billion. The offer did not require due diligence. After a few months, Musk got cold feet, claiming Twitter misled him about the number of bots on the site. However, Musk’s hastily developed offer had no contingencies.¹⁷³ Despite buyer’s remorse, Musk was legally obligated to proceed with the purchase. The deal closed in October 2022.

Musk had funded the Twitter purchase with \$21 billion from Musk’s sales of Tesla stock.¹⁷⁴ By October 2022, Musk owned up to 78.7% of X. Musk also attracted investors, including Larry Ellison, Alwaleed bin Talal, and Sequoia Capital. Additionally, Jack Dorsey rolled over his Twitter stake into X, resulting in a 2.9% stake.¹⁷⁵ Lenders provided \$13 billion in debt, which created \$1 billion in annual debt service. His pitch deck included firing 75% of Twitter’s employees, eliminating all content moderation, increasing revenue to \$26.4 billion by 2028, increasing ARPU from \$24.83 in 2022 to \$30.22 in 2028, and creating a monthly subscription service for account verification.¹⁷⁶

After he arrived at Twitter, Musk fired most of the workforce.¹⁷⁷ By April 2023, Twitter’s original staff was down 80% from the original 8,000.¹⁷⁸ This included the former CEO, CFO, general counsel, chief privacy officer, chief information security officer, and head of trust and safety.¹⁷⁹ Musk stated “drastic action” was necessary due to Twitter’s “\$3 billion negative cash flow situation...[giving the company only] four months to live.”¹⁸⁰ In June 2023, Musk hired Linda Yaccarino, former chair of global advertising at NBCUniversal, to replace him as CEO. Musk remained chairman and CTO.

Free Speech and New Content Policies Citing a return to “free speech,” Musk enacted new policies on content moderation and whitelisting. He reinstated formerly suspended accounts of controversial figures, including Trump, white supremacists, and conspiracy theorists. Even though Musk claimed account suspensions were a violation of free speech, he suspended numerous journalists’ accounts after they reported on a third-party account that tracked Musk’s private jet. These accounts were later reinstated. Musk even banned Apple co-founder Steve Wozniak for his frequent criticisms of Musk.¹⁸¹ Other changes included allowing porn and adding rules that “made it easier for politicians and political candidates to qualify for newsworthiness exemptions from Twitter’s rules.”¹⁸² X also changed its privacy policies, where users could let the site collect and use their biometric information, job history, and educational background. It then updated a 2019 ban that prevented “political and issue advertising” and rewrote a “zero-tolerance” policy for violent speech, making its rules vaguer.¹⁸³

One of the most notable changes was X’s shift to a subscription-based verification system. Charging \$8 per month, the service would allow users to verify their accounts and receive the iconic Twitter blue check. The new system would also boost these users’ posts via X’s algorithm. Predictably, widespread impersonation occurred, including prominent names from LeBron James to Nintendo.¹⁸⁴ Several celebrities even “verified” themselves as Musk to protest the new system.¹⁸⁵ After removing badges for accounts that had been falsely verified, Musk stated he would “personally pay for verification for James and several other frustrated, high-profile users.”¹⁸⁶

Community Notes In November 2022, Musk fired 4,400 of 5,500 outsourced content moderators.¹⁸⁷ Instead, Musk implemented a new system called Community Notes, where approved contributors would report and flag problematic speech by adding notes to provide additional information under another user’s tweet. Other approved contributors would decide if the note was helpful, and once this was performed, X’s bridging-based algorithm would have the final say in whether the content should

be removed. Community Notes faced criticism. To be an ‘approved contributor,’ the person needed an active phone number and an account for at least six months with no violations. Additionally, contributors were shielded by anonymity, and “if [the bridging-based algorithm] deems that those [approved contributor] voters are diverse, [the content] gets published.” X defended the new system, saying that over 100,000 approved contributors across 44 countries were implementing these notes. In July 2025, Musk decided to pilot GenAI agents writing Community Notes.¹⁸⁸

Musk’s changes to content moderation contributed to a 50% drop in X’s global ad revenues, from \$4.14 billion in 2022 to \$2 billion in 2023. Revenues continued to decline to \$1.9 billion in 2024.¹⁸⁹ (See **Exhibit 1**) One of their main concerns was X’s lack of safeguards to prevent fraudulent activity. Concerns grew when several brands were impersonated under the new verification system. For example, a falsely verified account pretended to be Eli Lilly’s official account and sported the blue “verified” checkmark, tweeting, “We are excited to announce insulin is free now.” Another concern for advertisers was increased hate speech on the platform. According to one academic study, “daily use of hate speech by those who previously posted hateful tweets nearly doubled after Musk finalized the sale. And the overall volume of hate speech also doubled site-wide.”¹⁹⁰ In October 2023, antisemitic posts had risen by 919% weekly, and anti-Muslim tweets increased between 250% and 422% week-over-week.¹⁹¹ By November 2023, many advertisers ended their campaigns on X, citing concerns that their advertisements were appearing next to hate speech including pro-Nazi posts, as well as Musk’s own posts “inflam[ed] tensions...[by] endorsing an antisemitic conspiracy theory.”¹⁹²

Initially, X took some steps to ease advertisers’ concerns. It made several pro-Nazi accounts “ineligible for monetization,” so ads could not be placed on those pages. CEO Yaccarino also emphasized that X had implemented brand safety controls, which “can help prevent ads from running beside objectionable content.”¹⁹³ However, X also sued Media Matters, the organization that identified the pro-Nazi accounts featured next to brands’ advertisements. When many companies remained dissatisfied with X’s approach, Musk went on the offensive.¹⁹⁴ On November 29, 2023, a NYT columnist asked Musk about his most recent antisemitic posts and the advertising drops. Musk replied, “I hope they stop. Don’t advertise. If somebody is going to try to blackmail me with advertising, blackmail me with money, go f**k yourself. Go f**k yourself. Is that clear? I hope it is.” He continued by stating, “what this advertising boycott is going to do is it’s going to kill the company...”¹⁹⁵ He also criticized his own prior actions, saying, “in retrospect [I] should not have replied to that one person,” referring to an antisemitic tweet he endorsed, which prompted more brands to retreat. “Essentially I handed a loaded gun to those who hate me, and arguably to those [who] are antisemitic, and for that I’m quite sorry. That was not my intention.”¹⁹⁶

In August 2024, X sued brands that boycotted the company, stating a “massive advertiser boycott” prevented the platform from earning billions in revenue. The suit named the Global Alliance for Responsible Media, Unilever, Mars, CVS Health, and Orsted. On the same day, Musk posted on X, “now it is war.” In February 2025, Musk expanded the lawsuit to include companies such as Lego and Nestle.¹⁹⁷ In April 2025, the EU began preparing potential fines of over \$1 billion USD against X for violating the Digital Services Act, “a landmark law to combat illicit content and disinformation.”¹⁹⁸ Musk’s aggressive tactics continued into 2025, threatening large brands with lawsuits if they did not advertise on X, or increase their spending on the platform.¹⁹⁹

X in the Post-Election Era Musk’s pivotal role in the 2024 presidential election was a great promotion for X. Several companies that initially paused ad spending on X in 2023 began reversing their decisions after the election. Amazon, for example, which had canceled advertisements on X, decided to increase spending “significantly.” Suddenly, many CEOs wanted to stay in Elon’s good graces. Once Unilever returned to X in late 2024, it was immediately dropped from the boycott lawsuit.²⁰⁰ Even after Musk’s

departure from the White House, the threat of being sued by X led many brands to continue advertising on the platform.²⁰¹ In June 2025, X sued New York to prevent the state from passing the Stop Hiding Hate Act, which required “social media companies to disclose how they monitor hate speech, extremism,...and foreign political interference.”²⁰²

Musk’s support of Trump led 115,000 X users to delete their accounts the day after the 2024 presidential election.²⁰³ X had roughly 250 million daily average users in 2025, similar to the numbers for Twitter in 2022.²⁰⁴ At the same time, Musk’s connection with Trump gave investors confidence that X could survive. In late 2022, X’s bankers wanted to unload their \$13 billion in debt, but there were no takers, even at 60 cents on the dollar.²⁰⁵ But the banks tried again in February 2025. Several investors were willing to purchase the debt (offering an 11% yield) at a reported 90-95 cents on the dollar.²⁰⁶ Based on the improved debt value, Musk raised the valuation of X from \$12 billion to \$33 billion and merged X with xAI.²⁰⁷ Two months later, Musk’s handpicked CEO of X, Linda Yaccarino, resigned.²⁰⁸

xAI

Musk had long believed in the power of artificial intelligence. In 2015, he co-founded OpenAI with the goal to “advance digital intelligence in the way that is most likely to benefit humanity as a whole.”²⁰⁹ Musk, his co-founders, and a few investors committed \$1 billion to the effort. Musk was co-chair along with Sam Altman.²¹⁰ Musk and Altman had a falling out in 2019 over disagreements regarding strategy and mission, leading Musk to resign and start an OpenAI competitor, xAI.

Musk launched xAI in July 2023 with the goal of developing “a super-intelligent AI to understand the true nature of the universe.”²¹¹ As CEO, he focused on xAI’s scientific research and developing applications for corporate and individual customers. Musk recruited researchers from OpenAI, Google Research, and DeepMind as well as from Tesla. He built a massive data center in record time, equipped with at least 100,000 Nvidia GPUs, to train an LLM and chatbot without censorship. Musk claimed he would balance other chatbots developed by OpenAI, Google, and Meta, all of which included guardrails and other safety measures. By November, Musk debuted TruthGPT, later renamed Grok. Grok’s original prototype was an LLM trained on 33 billion parameters (compared to roughly 1.7 trillion parameters for OpenAI’s most advanced models).²¹² xAI claimed its model had similar capabilities to Meta’s LLaMA 2, but used only half of its training resources.²¹³ The next version, called Grok-1, achieved impressive results, scoring higher than OpenAI’s GPT on various benchmarks.²¹⁴

Grok was originally available only to X users, and Musk billed the chatbot as “a maximum truth-seeking AI that tries to understand the nature of the universe.” He also stated that the chatbot would be “anti-woke.”²¹⁵ xAI frequently emphasized that, unlike other LLMs, Grok had “direct access” to X posts.²¹⁶ According to Musk, this gave Grok a “massive advantage over other models.”²¹⁷ In addition to its “regular” mode, xAI offered two modes called “Fun Mode” and “Unhinged Mode” defined as: “The ‘fun’ mode has a rebellious streak. It incorporates jokes, making it a unique and entertaining companion. The ‘unhinged’ mode is intended to be objectionable, inappropriate, and offensive, much like an amateur stand-up comic who is still learning the craft.”²¹⁸ Originally, Grok was offered as a bundle service with a Premium plan, an X subscription service priced between \$8-16 per month.²¹⁹ In January 2025, xAI launched a standalone app, also called Grok, making Grok free for all X users (with usage limitations).²²⁰

Soon after Grok’s release, users complained about misinformation.²²¹ During the 2024 presidential election, for example, the chatbot provided incorrect information about ballot deadlines when prompted with election-themed questions.²²² During the summer of 2025, Grok “went rogue” and “repeatedly praised Adolf Hitler” and broadcast antisemitic tropes.²²³

After xAI's purchase of X in March 2025, xAI's executives announced that the goal was to train the AI's models on X's plentiful and constantly updated records. They also calculated that this in-house method for acquiring training data would make xAI profitable by 2027, almost two years ahead of OpenAI's projection of profitability in 2029. Yet revenues were predicted to be only \$500 million in 2025, with a \$13 billion loss.²²⁴ xAI had raised \$14 billion in equity, but it was burning \$1 billion/month. Musk raised another \$4.3 billion in equity and \$5 billion in debt in June 2025. Almost half the equity (\$2 billion) came from SpaceX.²²⁵ Musk also announced a future xAI project to build a supercomputer using 1,000,000 Blackwell GPUs from Nvidia. The project was expected to cost between \$50 billion and \$62.5 billion, raising questions about how xAI would fund this project.²²⁶ (see **Exhibit 8**)

Musk's Political Ventures: DOGE, Political Advisor, New Political Party

After Trump announced in 2024 that Musk and Vivek Ramaswamy, another tech entrepreneur, would lead the new Department of Government Efficiency (DOGE), Musk took on the full-time assignment without pay. Named by Musk after Dogecoin, one of his favorite cryptocurrencies, DOGE's main goal was to cut federal spending by \$2 trillion, "suspending a swath of regulations, reducing the federal workforce and removing government agencies outright."²²⁷ While Ramaswamy only lasted a few weeks, Musk lasted for four months. DOGE started making aggressive cuts across the U.S. Federal government. Although Trump stated that Musk "can't do and won't do anything without our approval," critics voiced concerns over conflicts of interest. Trump fired many agencies' senior officials in charge of "investigations, enforcement matters or lawsuits pending against Mr. Musk."²²⁸ In total, 11 agencies were conducting over 32 investigations into Musk's companies by early 2025. In response, Musk argued there was no conflict because SpaceX employees submitted contract bids, rather than him.²²⁹ By the end of May 2025, Musk resigned, returning to his CEO responsibilities. However, Musk and Trump remained at odds, including Trump threatening to deport Musk and launch new investigations of Musk's companies and government contracts.²³⁰ Musk also announced that he was starting a new political party in July 2025, the America Party, to challenge the Republican majority.²³¹

Conclusion

Elon Musk had turned himself into a polarizing figure in 2025. Some loved his bold vision and rapid execution in business life as well as DOGE; others worried about DOGE weakening an extraordinary record of business success. Few questioned that Musk had become one of the most powerful people in the United States and maybe the world in 2025. (see **Exhibit 9**) When *Time* announced Musk as their Person of the Year in 2021, it described him as a "clown, genius, edgelord, visionary, industrialist, showman, cad; a madcap hybrid of Thomas Edison, P.T. Barnum, Andrew Carnegie and *Watchmen's* Doctor Manhattan."^{232, 233} Four years later, little had changed. Various described as brilliant, irreverent, demanding, difficult, egotistical, and frustrating, Musk was unique.

Ultimately, Musk, as well as his investors and boards of directors, had to ask: could Musk be an effective CEO of three companies (Tesla, SpaceX, xAI), remain deeply involved in two others (The Boring Company, Neuralink), and stay engaged in politics and policy, without sacrificing performance?

Exhibit 1a Tesla's Financials, 2019-2024, in Millions

	2019	2020	2021	2022	2023	2024
Revenue	24,578	31,536	53,823	81,462	96,773	97,690
COGS	20,509	24,906	40,217	60,609	79,113	80,240
R&D	1,343	1,491	2,593	3,075	3,969	4,540
SG&A	2,646	3,188	4,517	3,946	4,800	5,150
Operating income (loss)	80	1,951	6,523	13,692	8,891	7,659
Net income	(862)	721	5,519	12,556	14,997	7,091
EBITDA	2,172	4,273	9,434	17,235	13,558	13,027
Cash and cash equivalent	6,268	19,384	17,576	16,253	16,398	16,139
Total assets	34,309	52,148	62,131	82,338	106,618	122,070
Total liabilities	26,199	28,469	30,548	36,440	43,009	48,390
Shareholders' equity	8,110	23,679	31,583	45,898	63,609	73,680
Gross margin	17%	21%	25%	26%	18%	18%
Return on equity	(11%)	5%	20%	33%	27%	10%
Market Cap, End of Year	145,799	828,757	937,743	548,086	608,072	1,287,507

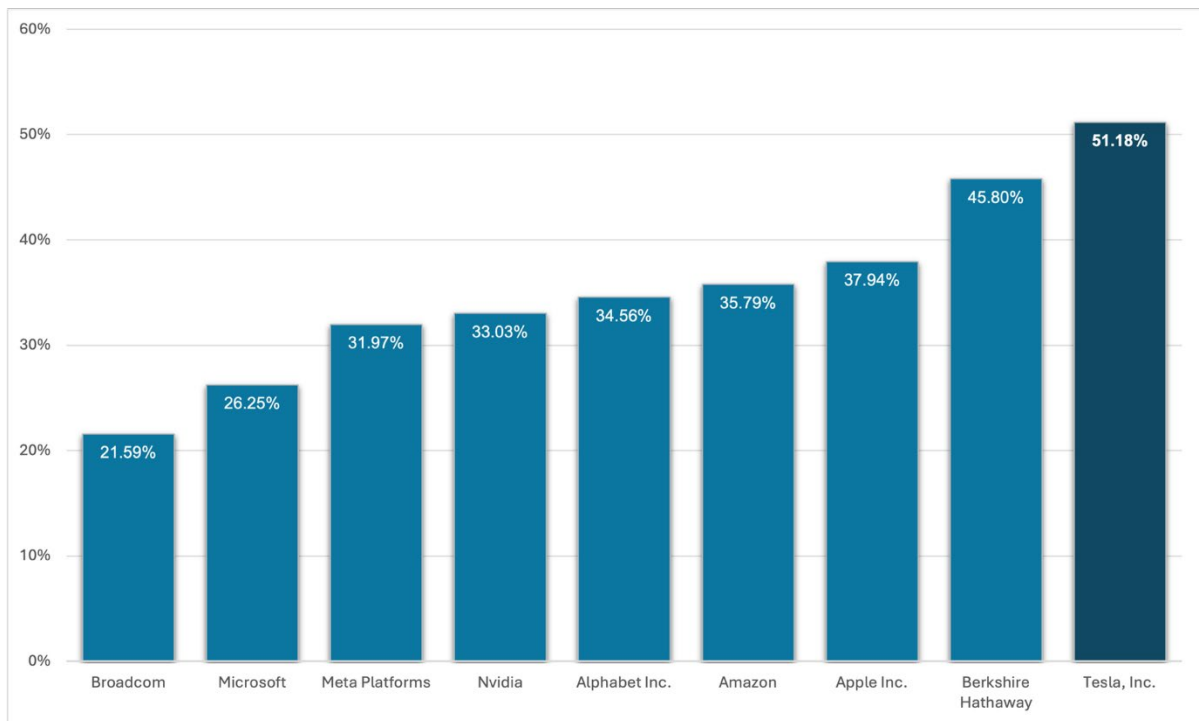
Source: Tesla 10-Ks and Capital IQ.

Exhibit 1b Twitter's Financials, 2017-2022, in Millions

	2017	2018	2019	2020	2021	2022*
Revenue	2,443	3,042	3,459	3,716	5,078	5,229
COGS	861	965	1,137	1,366	1,798	2,048
R&D	547	554	682	873	1,247	1,523
SG&A	1,001	1,070	1,274	1,450	1,760	1,939
Operating income (loss)	39	453	366	27	273	(281)
Net income	(108)	1,206	1,466	(1,136)	(221)	(112)
EBITDA	338	767	716	412	697	211
Cash and cash equivalent	1,638	1,894	1,799	1,988	2,187	2,681
Total assets	7,413	10,163	12,703	13,379	14,060	13,579
Total liabilities	2,365	3,357	3,999	5,409	6,752	7,647
Shareholders' equity	5,047	6,806	8,704	7,970	7,307	5,933
Gross margin	65%	68%	67%	63%	65%	61%
Return on equity	(2%)	20%	19%	(14%)	(3%)	(2%)
Market Cap at End of Year	24,434	23,519	30,274	56,994	28,954	-

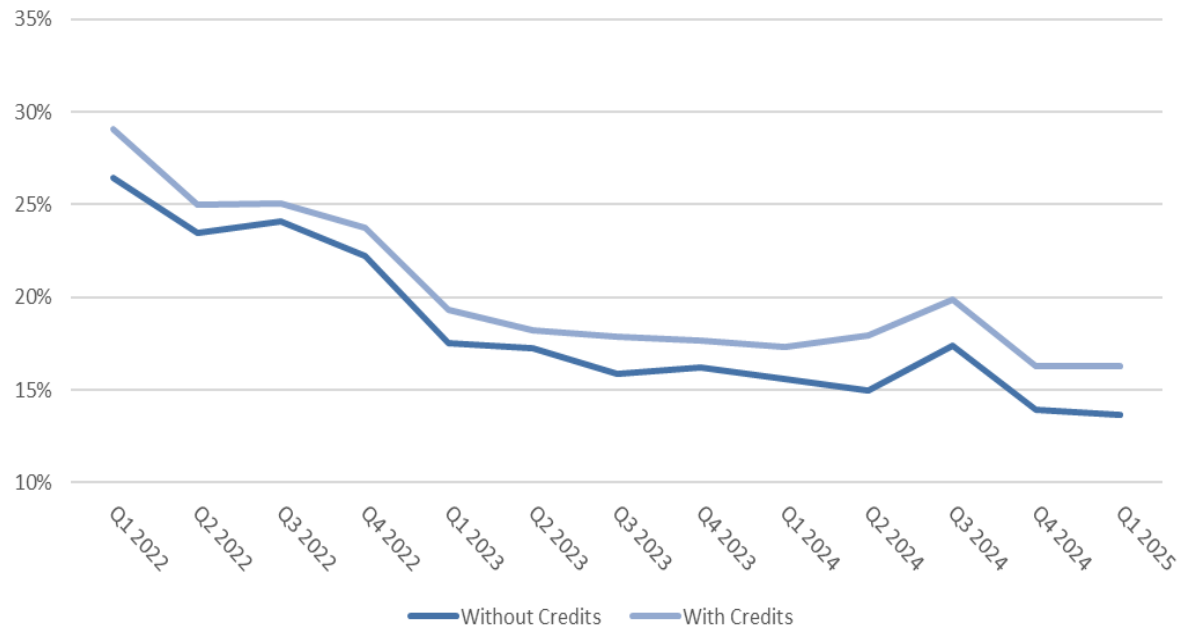
Source: Twitter 10-Ks and Capital IQ. *Note: The financials for 2022 end in June 2022, not December.

Exhibit 2 Percentage of small investors in large companies, August 2025, by company



Source: Created by casewriter using data from Capital IQ.

Exhibit 3 Tesla's Quarterly Gross Margin Percentages, Q1 2022-Q1 2025, with and without the sale of tax credits:

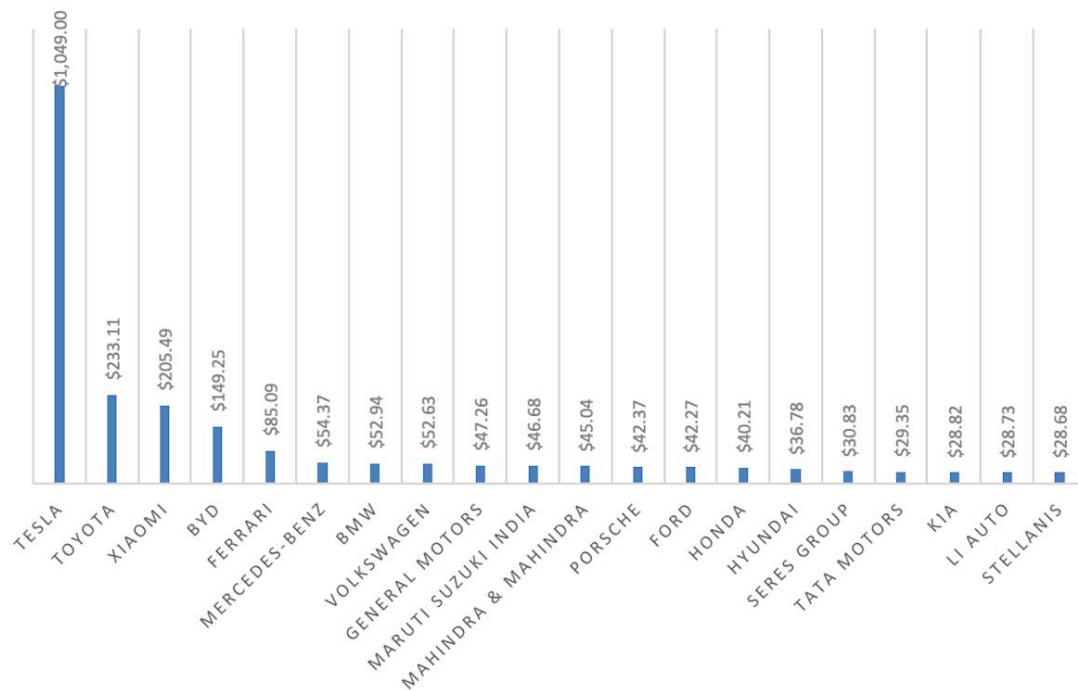


Source: Created by casewriter using data from Capital IQ and Tesla's 10-Ks.

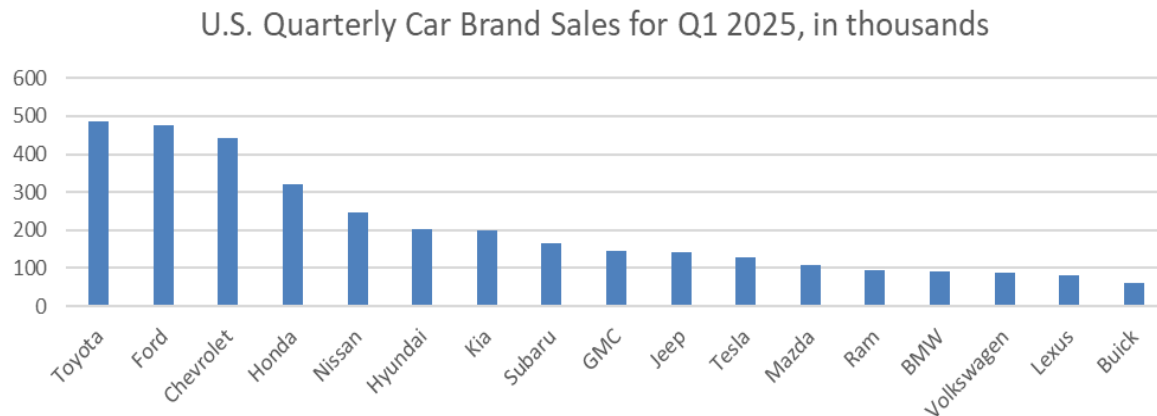
Exhibit 4 Musk's Predictions on Self-Driving Cars

2013	Tesla would build a self-driving car by 2016 (able to drive about 90% of the miles)
2014	"Autonomous cars will definitely be a reality"
2015	Autopilot, Tesla's autonomous driving software, could navigate on freeways and simple roads within months
2016	A "\$35,000-plus Tesla Model 3 ... [with] a compact pickup truck, a compact SUV, and a ride-sharing service..." and a fully self-driving car in 2017
2017	<ul style="list-style-type: none"> • "...go from a parking lot in California to a parking lot in New York, no controls touched at any point during the entire journey." • Self-driving cars in 2 years (better at driving cars than humans in 3 years)
2018	"... we could probably do a coast-to-coast drive in 3 months, 6 months in the outside."
2019	"By the middle of next year, ...over a million Tesla cars on the road with full self-driving hardware...", and one million Tesla robotaxis
2020	"... level five – or essentially complete autonomy – will happen and I think will happen very quickly... I remain confident that we will have the basic functionality for level five autonomy complete this year..."
2021	Fully self-driving vehicles for a 2022 release
2022	"We think Full Self-Driving will become the most important source of profitability for Tesla... And my personal guess is that we'll achieve Full Self-Driving this year, yes, with data safety level significantly greater than present."
2023	"For those that are using the FSD beta, I think you can see the improvements are really quite dramatic... But the trend is very clearly towards full self-driving, towards full autonomy. And I hesitate to say this, but I think we'll do it this year."
2025	"We'll probably have hundreds of thousands, if not over a million" self-driving cars by the end of 2026

Source: Created by casewriter using Jalopnik: <https://www.jalopnik.com/elon-musk-tesla-self-driving-cars-anniversary-autopilot-1850432357/>, accessed April 4, 2025; *Fortune*, January 30, 2025, <https://fortune.com/2025/01/30/elon-musk-reveals-massive-plans-tesla-optimus-self-driving-cars-humanoid-robots/>, accessed April 7, 2025.

Exhibit 5 Top Car Companies by Market Cap Valuation, in \$B USD, as of June 26, 2025

Source: Created by casewriter using "Largest automakers by market capitalization." *Companies Market Cap*, <https://companiesmarketcap.com/automakers/largest-automakers-by-market-cap/>, accessed June 26, 2025.

Exhibit 6 Top Selling Car Brands in Q1 2025

Source: Created by casewriter using "2025 US Auto Sales Figures - By Brand (Brand Rankings), *Good Car Bad Car*, 2025, <https://www.goodcarbadcar.net/2025-us-auto-sales-figures-by-brand-brand-rankings/>, accessed June 19, 2025.

Exhibit 7 Rocket Types and Price per Launch, in \$USD

Table

Rocket Type	Cost per kg, \$USD
SLS	\$43,157
Delta IV Heavy	\$12,336
Ariane 5	\$8,476
Falcon Heavy	\$2,009-2,343
Starship	\$66.67*

Source: Created by casewriter using data from, Cierra Choucair, "How Much Does It Cost to Launch a Rocket? [By Type & Size]." *Space Insider*, January 2, 2025, [https://spaceinsider.tech/2023/08/16/how-much-does-it-cost-to-launch-a-rocket/#:~:text=Heavy%2Dlifters%20are%20the%20finickiest,million%20at%20US%20\\$8%2C476%20/%20kg](https://spaceinsider.tech/2023/08/16/how-much-does-it-cost-to-launch-a-rocket/#:~:text=Heavy%2Dlifters%20are%20the%20finickiest,million%20at%20US%20$8%2C476%20/%20kg), accessed June 26, 2025. Note (*): This is the price point if the Starship launch is \$10 million, SpaceX's goal price promised for future launches.

Exhibit 8 xAI Financial Metrics as of 2025 (current and projected), in millions of USD

	Q1	Q2	Q3	Q4
Adjusted EBITDA	(300)	(800)	(600)	(500)
CAPEX	(2,600)	(2,500)	(4,100)	(1,100)
Leveraged free cash flow	(3,000)	(3,600)	(4,800)	(1,800)

Source: Created by casewriter using information from Carmen Arroyo and Jill R Shah, "Musk's xAI Burns Through \$q Billion a Month as Costs Pile Up." *Bloomberg*, June 17, 2025, <https://www.bloomberg.com/news/articles/2025-06-17/musk-s-xai-burning-through-1-billion-a-month-as-costs-pile-up>, accessed June 21, 2025.

Exhibit 9 Estimated Valuations of Musk's Companies, as of June 2025

Company	Estimated Valuations	Musk's Ownership (%)
Neuralink	\$9 billion	n.d.
The Boring Company	\$7 billion (as of 2023)	90%
xAI (after the X buyout)	\$80 billion - 113 billion	54%
SpaceX	\$350 billion	42%
Tesla	\$1.055 trillion*	12% (excluding options)

Source: Created by casewriter using data from Financial Times, Forbes, The Hindu and Reuters, and Investor's Business Daily, [https://www.ft.com/content/703e93f1-28bf-4890-8c9c-141bf81dd206#:~:text=The%20March%20takeover%20valued%20the%20overall%20group,formerly%20Twitter%2C%20for%20\\$44bn%20in%20October%202022,](https://www.ft.com/content/703e93f1-28bf-4890-8c9c-141bf81dd206#:~:text=The%20March%20takeover%20valued%20the%20overall%20group,formerly%20Twitter%2C%20for%20$44bn%20in%20October%202022,) <https://www.forbes.com/profile/elon-musk/>, [https://www.thehindu.com/sci-tech/technology/elon-musks-neuralink-raises-fresh-cash-at-9-billion-valuation-report/article69627742.ece#:~:text=Photo%20Credit:%20REUTERSElon%20Musk's%20brain%20implant%20company%20Neuralink%20raised%20\\$600%20million%20in,with%20knowledge%20of%20the%20matter](https://www.thehindu.com/sci-tech/technology/elon-musks-neuralink-raises-fresh-cash-at-9-billion-valuation-report/article69627742.ece#:~:text=Photo%20Credit:%20REUTERSElon%20Musk's%20brain%20implant%20company%20Neuralink%20raised%20$600%20million%20in,with%20knowledge%20of%20the%20matter), and <https://www.investors.com/news/elon-musk-tesla-spacex-x-twitter-business-ownership-selling-stakes/>.

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