NICHOLAS FRINGE

ELON MUSK

CHANGING THE WORLD WITH TESLA, SPACEX AND SOLARCITY

ELON MUSK

WHAT TO LEARN FROM HIS LIFE

BY

NICHOLAS FRINGE

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INTRODUCTION

Thank You and congratulations on choosing this Book - Elon Musk: Greatest Courses for Life, Business, Success, and Entrepreneurship! When seeking to boost your lot in life it's always an excellent idea to check at the successful habits of individuals who came before, and you will find few better illustrations of success in the twenty-first century compared to Elon Musk.

The chance of Musk ever writing a book is exceptionally improbable. A private person, Elon is regarded as quite the introvert. He's quite careful about putting his private life into the spotlight -- although of course does this when it will help him in the company.

More than only a shrewd businessman, inventor or engineer, Musk is really a visionary. He is somebody who's working to enhance the entire world not because it could make him cash, or perhaps as it's the ideal thing to do, but only because he sees humanity's true potential and desires it to stay around long enough to see it.

You will obtain a profound understanding of his distinct businesses, their struggles, successes, and strategies for your future.

Inside this book, you'll get an account of Musk's life from his time as a young victim of bullying in South Africa to creating his very first company, to being the CEO of a set of businesses worth more than a billion dollars each. There's lots to learn from Musk's lifetime, and a comprehensive discussion of these lessons are seen throughout this publication.

Thank you for taking the time to read this novel, I hope it offers you what you're searching for. Enjoy!

CHAPTER 1

GET TO KNOW ELON MUSK

The Southern African trade book PC and Office Technology released the source code into a movie game Musk had made. Called Blastar, the science-fiction-inspired space game demanded 167 traces of instructions to operate. This was back in the afternoon when ancient computer users were needed to sort out commands to generate their machines do much of anything. In that circumstance, Musk's game didn't glow as a marvel of science, but it certainly surpassed what many twelve-year-olds were hanging out at the moment. Its policy in the magazine netted Musk five hundred bucks and provided some historical hints regarding his personality. The Blastar disperse proves that the young man desired to proceed by the sci-fi-author-sounding title E. R. Musk which he had dreams of grand conquests dance in his mind. (As of the writing, not the web understands what "status beam machines" are.)

A boy fantasizing about distance and conflicts between good and bad is anything but amazing. A boy that chooses these dreams seriously is much more remarkable. This was the situation with the youthful Elon Musk. From the middle of the teenaged years, Musk had mixed reality and fantasy to the point they were difficult to distinguish from his mind. Musk arrived to see guy's destiny in the world as a personal responsibility. If that meant chasing cleaner energy technologies or construction spaceships to expand the individual species reach, then so be it. Musk would discover a way to make these things occur.

At around age two, Musk had a full-blown existential catastrophe. He tried to handle it like many talented teenagers do, turning into spiritual and philosophical texts. Musk sampled a couple of ideologies and then ended up more or less back where he'd begun, adopting the sci-fi lessons located in a few of the most influential novels in his lifetime: The Hitchhiker's Guide to the Galaxy, " by Douglas Adams. “He points out that one of the really tough things is figuring out what questions to ask,” Musk said. “Once you figure out the question, then the answer is relatively easy. I concluded that we should aspire to increase the scope and scale of human consciousness in order to understand better what questions to ask.” The adolescent Musk then came at his ultra-logical mission statement. “The only thing that makes sense to do

is strive for greater collective enlightenment," he said.

It is simple enough to spot a few of the underpinnings of Musk's search for intent. Produced in 1971, he grew up in Pretoria, a huge city in the northeastern portion of South Africa, only an hour drive from Johannesburg. The specter of apartheid was current during his youth, as South Africa regularly pumped over with stress and violence. Blacks and whites prevailed, as did blacks of Various tribes. Musk turned into four years old only days after the Soweto Uprising, where hundreds of black pupils died while protesting decrees of the white authorities. For decades South Africa confronted sanctions imposed by other countries because of the racist policies. Musk had the luxury of travel overseas during his youth and could have gotten a taste for how outsiders viewed South Africa.

However, what had more of an effect on Musk's character was that the white Afrikaner culture was so widespread in both Pretoria and the surrounding regions. Hypermasculine behavior was celebrated, and demanding jocks were revered. While Musk enjoyed a degree of liberty, he lived as an outsider whose booked nature and geeky inclinations ran contrary to the prevailing attitudes of their moment. His idea that something about the planet had gone awry obtained continuous encouragement, also Musk, almost from his earliest days, plotted an escape out of his environment and dreamed of a location that could let his personality and fantasies to flourish. He saw America in its clichéd form, since the land of opportunity and also the most likely point for making the awareness of his dreams potential.

When Musk did eventually reach the USA in his twenties, it indicated a return to his ancestral origins. Family trees imply that ancestors bearing the German surname of Haldeman about the side of Musk's family left Europe for New York during the Revolutionary War. From New York, they distribute into the prairies of the Midwest--Illinois and Minnesota, Particularly. Throughout his youth, boys teased Musk due to his odd name. He made the first portion of it out of his great-grandfather John Elon Haldeman, who had been born in 1872 and grew up in Illinois before going to Minnesota. There he would meet with his wife Almeda Jane Norman, that had been five years younger. From 1902, the couple had settled in a log cabin in the central Minnesota town of Pequot and gave birth to his son Joshua Norman Haldeman, Musk's grandfather. He'd develop to become an eccentric and unique man and a version for Musk.

Joshua Norman Haldeman is called an athletic, self-reliant boy. Back in 1907, his family moved into the prairies of Saskatchewan, and his dad died shortly afterward when Joshua was only seven, leaving the boy to help operate the home. He took to the wide-open property and chose bronco horseback riding, boxing, and wrestling. Haldeman would split in horses for local farmers, and frequently. Family photos show Joshua dressed in a decorative pair of chaps displaying his rope-spinning skills. As a teen, Haldeman left the house to get a diploma from the Palmer School of Chiropractic in Iowa and subsequently returned to Saskatchewan to become a farmer.

After the depression hit in the 1930s, Haldeman fell to a financial catastrophe. He couldn't manage to stay informed about bank loans onto his gear and had five million acres of property captured. "From then on, Dad didn't believe in banks or holding on to money," explained Scott Haldeman, who'd go on to get his chiropractic degree from precisely the same college like his father and become the world's greatest spinal pain specialists. After losing the plantation around 1934, Haldeman dwelt something of a nomadic existence that his grandson would reproduce in Canada decades afterward. From 1948, Haldeman had married a Canadian dance studio teacher, Winnifred Josephine Fletcher, or Wyn also assembled a booming chiropractic clinic. That year, the household, which already contained A boy and a girl, welcomed twin daughter Kaye and Maye, Musk's mom. The kids lived at a three-story, twenty-room home that included a dancing studio to allow Wyn keep teaching pupils. In search of something fresh to do, Haldeman had picked flying up and purchased his airplane. The family gained a measure of notoriety as individuals discovered about Haldeman and his wife packaging their children into the back of this single-engine craft and going off on trips all Haldeman would frequently appear at chiropractic and political meetings at the airplane and wrote a book together with his wife named The Flying Haldemans: Pity the Poor Private Pilot.

The Haldemans had a laissez-faire approach to raising their children, which would extend over the generations to Musk. Their kids were never punished, as Joshua believed they would intuit their way to proper behavior. When mom and dad went off on their tremendous flights, the kids were left at home. Scott Haldeman can’t remember his father setting foot at his school a single time even though his son was captain of the rugby team and a prefect. “To him, that was all just anticipated,” said Scott Haldeman. “We were left

with the impression that we were capable of anything. You just have to make a decision and do it. In that sense, my father would be very proud of Elon."

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Maye Musk, Elon's mother, grew up idolizing her parents. In her youth, she was considered a nerd. She liked math and science and did well at the coursework. By the age of fifteen, however, people had taken notice of some of her other attributes. Maye was gorgeous. Tall with ash-blond hair, Maye had the high cheekbones and angular features that would make her stand out anywhere. A friend of the family ran a modeling school, and Maye took some courses. On the weekends, she did runway shows, magazine shoots, occasionally showed up at a senator's or ambassador's home for an event, and ended up as a finalist for Miss South Africa. (Maye has continued to model into her sixties, appearing on the covers of magazines like New York and Elle and in Beyoncé's music videos.)

Maye and Elon's father, Errol Musk, grew up in the same neighborhood. They met for the first time when Maye, born in 1948, was about eleven. Errol was the cool kid to Maye's nerd but had a crush on her for years. "He fell in love with me because of my legs and my teeth," said Maye. The two would date on and off throughout their time at university. And, according to Maye, Errol spent about seven years as a relentless suitor seeking her hand in marriage and eventually breaking her will. "He just never stopped proposing," she said.

Their marriage was complicated from the start. Maye became pregnant during the couple's honeymoon and gave birth to Elon on June 28, 1971, nine months and two days after her wedding day. While they may not have enjoyed marital bliss, the couple carved out a decent life for themselves in Pretoria. Errol worked as a mechanical and electrical engineer and handled large projects such as office buildings, retail complexes, residential

subdivisions, and an air force base, while Maye set up a practice as a dietician. A bit more than a year after Elon's birth came his brother Kimbal, and soon thereafter came their sister Tosca.

Elon exhibited all the traits of a curious, energetic tot. He picked things up easily, and Maye, like many mothers do, pegged her son as brilliant and precocious. "He seemed to understand things quicker than the other kids," she said. The perplexing thing was that Elon seemed to drift off into a trance at times. People spoke to him, but nothing got through when he had a certain, distant look in his eyes. This happened so often that Elon's parents and doctors thought he might be deaf. "Sometimes, he just didn't hear you," said Maye. Doctors ran a series of tests on Elon, and elected to remove his adenoid glands, which can improve hearing in children. "Well, it didn't change," said Maye. Elon's condition had far more to do with the wiring of his mind than how his auditory system functioned. "He goes into his brain, and then you just see he is in another world," Maye said. "He still does that. Now I just leave him be because I know he is designing a new rocket or something."

Other children did not respond well to these dreamlike states. You could do jumping jacks right.

beside Musk or yell at him, and he would not even notice. He kept right on thinking, and those around him judged that he was either rude or really weird. "I do think Elon was always a little different but in a nerdy way," Maye said. "It didn't endear him to his peers."

For Musk, these pensive moments were wonderful. At five and six, he had found a way to block out the world and dedicate all of his concentration to a single task. Part of this ability stemmed from the very visual way in which Musk's mind worked. He could see images in his mind's eye with a clarity and detail that we might associate today with an engineering drawing produced by computer software. "It seems as though the part of the brain that's usually reserved for visual processing—the part that is used to process images coming in from my eyes—gets taken over by internal thought processes," Musk said. "I can't do this as much now because there are so many things demanding my attention but, as a kid, it happened a lot. That large part of your brain that's used to handle incoming images gets used for internal thinking." Computers split their hardest jobs between two types of chips. There are graphics chips that deal with processing the images produced

by a television show stream or video game and computational chips that handle general purpose tasks and mathematical operations. Over time, Musk has ended up thinking that his brain has the equivalent of a graphics chip. It allows him to see things out in the world, replicate them in his mind, and imagine how they might change or behave when interacting with other objects. “For images and numbers, I can process their interrelationships and algorithmic relationships,” Musk said. “Acceleration, momentum, kinetic energy—how those sorts of things will be affected by objects comes through very vividly.”

The most striking part of Elon’s character as a young boy was his compulsion to read. From a very young age, he seemed to have a book in his hands at all times. “It was not unusual for him to read ten hours a day,” said Kimbal. “If it was the weekend, he could go through two books in a day.” The family went on numerous shopping excursions in which they realized mid-trip that Elon had gone missing. Maye or Kimbal would pop into the nearest bookstore and find Elon somewhere near the back sitting on the floor and reading in one of his trancelike states.

As Elon got older, he would take himself to the bookstore when school ended at 2 P.M. and stay there until about 6 P.M., when his parents returned home from work. He plowed through fiction books and then comics and then nonfiction titles. “Sometimes they kicked me out of the store, but usually not,” Elon said. He listed The Lord of the Rings, Isaac Asimov’s Foundation series, and Robert Heinlein’s The Moon Is a Harsh Mistress as some of his favorites, alongside The Hitchhiker’s Guide to the Galaxy. “At one point, I ran out of books to read at the school library and the neighborhood library,” Musk said. “This is maybe the third or fourth grade. I tried to convince the librarian to order books for me. So then, I started to read the Encyclopaedia Britannica. That was so helpful. You don’t know what you don’t know. You realize there are all these things out there.”

Elon, in fact, churned through two sets of encyclopedias—a feat that did little to help him make friends. The boy had a photographic memory, and the encyclopedias turned him into a fact factory. He came off as a classic know-it-all. At the dinner table, Tosca would wonder aloud about the distance from Earth to the Moon. Elon would spit out the exact measurement at perigee and apogee. “If we had a question, Tosca would always say, ‘Just

ask genius boy,'" Maye said. "We could ask him about anything. He just remembered it." Elon cemented his bookworm reputation through his clumsy ways. "He's not very sporty," said Maye.

Maye tells the story of Elon playing outside one night with his siblings and cousins. When one of them complained of being frightened by the dark, Elon pointed out that "dark is merely the absence of light," which did little to reassure the scared child. As a youngster, Elon's constant yearning to correct people and his abrasive manner put off other kids and added to his feelings of isolation. Elon genuinely thought that people would be happy to hear about the flaws in their thinking. "Kids don't like answers like that," said Maye. "They would say, 'Elon, we are not playing with you anymore.' I felt very sad as a mother because I think he wanted friends. Kimbal and Tosca would bring home friends, and Elon wouldn't, and he would want to play with them. But he was awkward, you know." Maye urged Kimbal and Tosca to include Elon. They responded as kids will. "But Mom, he's not fun." As he got older, however, Elon would have strong, affectionate attachments to his siblings and cousins—his mother's sister's sons. Though he kept to himself at school, Elon had an outgoing nature with members of his family and eventually took on the role of elder and chief instigator among them.

When Elon was nearly ten years old, he saw a computer for the first time, at the Sandton City Mall in Johannesburg. "There was an electronics store that mostly did hi-fi-type stuff, but then, in one corner, they started stocking a few computers," Musk said. He felt awed right away—"It was like, 'Whoa. Holy shit!'"—by this machine that could be programmed to do a person's bidding. "I had to have that and then hounded my father to get the computer," Musk said. Soon he owned a Commodore VIC-20, a popular home machine that went on sale in 1980. Elon's computer arrived with five kilobytes of memory and a workbook on the BASIC programming language. "It was supposed to take like six months to get through all the lessons," Elon said. "I just got super OCD on it and stayed up for three days with no sleep and did the entire thing. It seemed like the most super-compelling thing I had ever seen." Despite being an engineer, Musk's father was something of a Luddite and dismissive of the machine. Elon recounted that "he said it was just for games and that you'd never be able to do real engineering on it. I just said, 'Whatever.'"

While bookish and into his new computer, Elon quite often led Kimbal and his cousins (Kaye's children) Russ, Lyndon, and Peter Rive on adventures. They dabbled one year in selling Easter eggs door-to-door in the neighborhood. The eggs were not well decorated, but the boys still marked them up a few hundred percent for their wealthy neighbors. Elon also spearheaded their work with homemade explosives and rockets. South Africa did not have the Estes rocket kits popular among hobbyists, so Elon would create his own chemical compounds and put them inside of canisters. "It is remarkable how many things you can get to explode," Elon said. "Saltpeter, sulfur, and charcoal are the basic ingredients for gunpowder, and then if you combine a strong acid with a strong alkaline, that will generally release a lot of energy. Granulated chlorine with brake fluid—that's quite impressive. I'm lucky I have all my fingers." When not handling explosives, the boys put on layers of clothing and goggles and shot each other with pellet guns. Elon and Kimbal raced dirt bikes against each other in sandlots until Kimbal flew off his bike one day and hurtled into a barbed wire fence.

As the years went on, the cousins took their entrepreneurial pursuits more seriously, even attempting at one point to start a video arcade. Without any parents knowing, the boys picked out a spot for their arcade, got a lease, and started navigating the permit process for their business. Eventually, they had to get someone over eighteen to sign a legal document, and neither the Rives' father nor Errol would oblige. It would take a couple of decades, but Elon and the Rives would eventually go into business together.

The Elon that his peers encountered at school was far less inspirational. Throughout middle and high school, Elon bounced around a couple of institutions. He spent the equivalent of eighth and ninth grades at Bryanston High School. One afternoon Elon and Kimbal were sitting at the top of a flight of concrete stairs eating when a boy decided to go after Elon. "I was basically hiding from this gang that was fucking hunting me down for God knows fucking why. I think I accidentally bumped this guy at assembly that morning and he'd taken some huge offense at that." The boy crept up behind Musk, kicked him in the head, and then shoved him down the stairs. Musk tumbled down the entire flight, and a handful of boys pounced on him, some of them kicking Musk in the side and the ringleader bashing his head against the ground. "They were a bunch of fucking psychos," Musk said. "I blacked out." Kimbal watched in horror and feared for Elon's life. He rushed down the stairs to find Elon's face bloodied and swollen. "He looked like

someone who had just been in the boxing ring," Kimbal said. Elon then went to the hospital. "It was about a week before I could get back to school," Musk said. (During a news conference in 2013, Elon disclosed that he'd had a nose job to deal with the lingering effects of this beating.)

For three or four years, Musk endured relentless hounding at the hands of these bullies. They went so far as to beat up a boy that Musk considered his best friend until the child agreed to stop hanging out with Musk. "Moreover, they got him—they got my best fucking friend—to lure me out of hiding so they could beat me up," Musk said. "And that fucking hurt." While telling this part of the story, Musk's eyes welled up and his voice quivered. "For some reason, they decided that I was it, and they were going to go after me nonstop. That's what made growing up difficult. For a number of years, there was no respite. You get chased around by gangs at school who tried to beat the shit out of me, and then I'd come home, and it would just be awful there as well. It was just like nonstop horrible."

Soon after the horrific incident Musk moved schools to nearby Pretoria High, where there was a greater level of discipline, and far less bullying. Nonetheless, even today Musk holds very few fond memories of South Africa, greatly explaining the fact that he chose to leave the country at age 17.

Musk's father is said to have been 'emotionally abusive', often making him and his brother sit silent for hours while he lectured them. Due to his parent's divorce, his home life was disruptive and the frustrations of his father were often reflected onto Elon and his siblings. Musk managed to survive the bullying and traumatic upbringing through a couple of means. Firstly, the Musks always considered themselves to be somewhat 'special'. Elon has said that they never really considered themselves South Africans, but were rather, simply passing through. His grandparents were pioneers, and this left Elon with a slight sense of superiority, which helped him deal with the abuse at school and at home. The other way that he coped with the stress was through reading, and working on computers. Isolation and mental stimulation were the keys to Elon's development, and he spent the vast majority of his childhood engrossed in either learning, or dreaming of the fictitious worlds he read about.

Before the age of 17, Musk tried his hand at business once more, and attempted to open a video game arcade near his high school with his younger

brother Kimbal. They secured a lease, and had suppliers, but their business plan was stopped prematurely by the city.

By the time Musk was a teenager, the topic of Apartheid was hotly contested and he was looking for any way to avoid his mandatory service in the South African military who busied themselves during this period by actively silencing those speaking out against the practice.

He is quoted as saying “I don’t have an issue with serving in the military per se, but serving in the South African Army suppressing black people just didn’t seem like a really good way to spend time.”

At the age of 17 and finished with secondary school, he originally tried to gain access to the United States and its burgeoning computer technology scene but was denied entry into the country. Not one to be stymied by an initial refusal, he instead went to Canada in 1989 using his mother’s Canadian heritage to gain easy entrance into the country. He left with a strong feeling of resentment for South Africa, and was eager to start a new life and explore new opportunities in a more welcoming place.

CHAPTER 2

LIFE IN CANADA

With his time in the military avoided, Musk had done little to actually improve his lot in life, and he spent the next year living hand to mouth, saving every penny he could in order to afford tuition at a local college. He wasn't picky about the type of work he did either, working hard, menial jobs tending vegetables, shoveling grain, chopping wood and even cleaning the boiler at a local saw mill, a task that few stuck with for any length of time. When he was told this at the time, Musk wasn't sure what all the fuss was about; he found out quickly however, as the job required a hazmat suit and for him to stay in a cramped, hot, and dangerous space for several hours at a time. Despite the difficulty, Musk persevered and lasted significantly longer than almost all other people who had worked the job previously. This perseverance is one of the traits he went on to show throughout his many business ventures. With his college tuition paid for, Musk was able to earn a spot at the Ontario-based Queens University. He spent 2-years attending the institution and spending time with his mother and younger brother Kimbal who also made the move to Canada. Kimbal was very close to Elon growing up, and shared in his entrepreneurial spirit. They shared business ideas, and both pushed each other to succeed. In their spare time, he and Kimbal would read the newspaper and then call the interesting people they read about and try and have lunch with them. The brothers both saw their move to Canada as a big opportunity for success, and were not going to risk squandering their chance. Eventually, one of their phone calls resulted in a lunch meeting with the president of a local bank. The lunch concluded with Elon being offered an internship, and the president became a staunch supporter of all of his future endeavors.

At this point Musk was just 18, though he was already looking towards the future and how he could make his mark on it. So much so, that the bank manager's daughter can still remember a conversation they had at Musk's eighteenth birthday. The year was 1989, and the conversation was about electric cars – a concept that was largely unheard of at the time, and one that Elon Musk didn't fully pursue until decades later.

College suited Musk. He worked on being less of a know-it-all, while also finding a group of people who respected his intellectual abilities. The

university students were less inclined to laugh off or deride his opinionated takes on energy, space, and whatever else was captivating him at the moment. Musk had found people who responded to his ambition rather than mocking it, and he fed on this environment.

Navaid Farooq, a Canadian who grew up in Geneva, ended up in Musk's freshman-year dormitory in the fall of 1990. Both men were placed in the international section where a Canadian student would get paired with a student from overseas. Musk sort of broke the system, since he technically counted as a Canadian but knew almost nothing about his surroundings. "I had a roommate from Hong Kong, and he was a really nice guy," Musk said. "He religiously attended every lecture, which was helpful, since I went to the least number of classes possible." For a time, Musk sold computer parts and full PCs in the dorm to make some extra cash. "I could build something to suit their needs like a tricked-out gaming machine or a simple word processor that cost less than what they could get in a store," Musk said. "Or if their computer didn't boot properly or had a virus, I'd fix it. I could pretty much solve any problem." Farooq and Musk bonded over their backgrounds living abroad and a shared interest in strategy board games. "I don't think he makes friends easily, but he is very loyal to those he has," Farooq said. When the video game Civilization was released, the college chums spent hours building their empire, much to the dismay of Farooq's girlfriend, who was forgotten in another room. "Elon could lose himself for hours on end," Farooq said. The students also relished their loner lifestyles. "We are the kinds of people that can be by ourselves at a party and not feel awkward," Farooq said. "We can think to ourselves and not feel socially weird about it."

Musk was more ambitious in college than he'd been in high school. He studied business, competed in public speaking contests, and began to display the brand of intensity and competitiveness that marks his behavior today. After one economics exam, Musk, Farooq, and some other students in class came back to the dorms and began comparing notes to try to ascertain how well they did on the test. It soon became clear that Musk had a firmer grasp on the material than anyone else. "This was a group of fairly high achievers, and Elon stood way outside of the bell curve," Farooq said. Musk's intensity has continued to be a constant in their long relationship. "When Elon gets into something, he develops just this different level of interest in it than other people. That is what differentiates Elon from the rest of humanity."

Musk's longtime interest in solar power and in finding other new ways to harness energy expanded at Penn. In December 1994, he had to come up with a business plan for one of his classes and ended up writing a paper titled "The Importance of Being Solar." The document started with a bit of Musk's wry sense of humor. At the top of the page, he wrote: "The sun will come out tomorrow.

Little Orphan Annie on the subject of renewable energy. The paper went on to predict a rise in solar power technology based on materials improvements and the construction of large-scale solar plants. Musk delved deeply into how solar cells work and the various compounds that can make them more efficient. He concluded the paper with a drawing of the "power station of the future." It depicted a pair of giant solar arrays in space—each four kilometers in width—sending their juice down to Earth via microwave beams to a receiving antenna with a seven-kilometer diameter. Musk received a 98 on what his professor deemed a "very interesting and well written paper."

A second paper talked about taking research documents and books and electronically scanning them, performing optical character recognition, and putting all of the information in a single database —much like a mix between today's Google Books and Google Scholar. And a third paper dwelled on another of Musk's favorite topics—ultracapacitors. In the forty-four-page document, Musk is plainly jubilant over the idea of a new form of energy storage that would suit his future pursuits with cars, planes, and rockets. Pointing to the latest research coming out of a lab in Silicon Valley, he wrote: "The end result represents the first new means of storing significant amounts of electrical energy since the development of the battery and fuel cell. Furthermore, because the Ultracapacitor retains the basic properties of a capacitor, it can deliver its energy over one hundred times faster than a battery of equivalent weight, and be recharged just as quickly." Musk received a 97 for this effort and praise for "a very thorough analysis" with "excellent financials!"

The remarks from the professor were spot-on. Musk's clear, concise writing is the work of a logician, moving from one point to the next with precision. What truly stood out, though, was Musk's ability to master difficult physics concepts in the midst of actual business plans. Even then, he showed an unusual knack for being able to perceive a path from a scientific

advance to a for-profit enterprise. As Musk began to think more seriously about what he would do after college, he briefly considered getting into the videogame business. He'd been obsessed with video games since his childhood and had held a gaming internship. But he came to see them as not quite grand enough a pursuit. "I really like computer games, but then if I made really great computer games, how much effect would that have on the world," he said. "It wouldn't have a big effect. Even though I have an intrinsic love of video games, I couldn't bring myself to do that as a career."

In interviews, Musk often makes sure that people know he had some truly big ideas on his mind during this period of his life. As he tells it, he would daydream at Queen's and Penn and usually end up with the same conclusion: he viewed the Internet, renewable energy, and space as the three areas that would undergo significant change in the years to come and as the markets where he could make a big impact. He vowed to pursue projects in all three. "I told all my ex-girlfriends and my ex-wife about these ideas," he said. "It probably sounded like super-crazy talk."

Musk's insistence on explaining the early origins of his passion for electric cars, solar energy, and rockets can come off as insecure. It feels as if Musk is trying to shape his life story in a forced way. But for Musk, the distinction between stumbling into something and having intent is important. Musk has long wanted the world to know that he's different from the run-of-the-mill entrepreneur in Silicon Valley. He wasn't just sniffing out trends, and he wasn't consumed by the idea of getting rich. He's been in pursuit of a master plan all along. "I really was thinking about this stuff in college," he said. "It is not some invented story after the fact. I don't want to seem like a Johnny-come-lately or that I'm chasing a fad or just being opportunistic. I'm not an investor. I like to make technologies real that I think are important for the future and useful in some sort of way."

CHAPTER 3

ELON FIRST START UP

EARLY BUSINESSES

It did not take Elon long to become successful on the company scene, and unlike most entrepreneurs, he appeared to be successful at most ventures he started. There are a small number of early companies that Musk started, where he first sunk his teeth into entrepreneurship. These not only got him familiar with the business world but provided him with the funds needed to support a few of the companies he now works and is enthusiastic about.

Blastar Briefly mentioned before in this publication, Blastar is a similar game to Space Invaders which Elon developed and sold at age 12. Being 1983, the technology was crude, and video games were rather basic but were fast growing in popularity.

When the coding for the game was fully assembled, Elon wasted no time before selling it to a local company for a $500 profit. Despite not being a massive quantity of money in comparison to his later accomplishments, to get a 12-year old, $500 was a lot!

The game is available online at no cost.

COLLEGE CLUB

While studying at a school in Pennsylvania, he rented a huge house together with a buddy and dwelt there off-campus. It was a classic toddler house that had been empty for quite a long time, and thus that they secured the rental at a meager price.

As a means to cover their rent and to earn a little bit of cash on the side, Musk and his buddy Adeo Ressi converted the home into a club on the weekends. The 10-bedroom home became what Ressi knew as "A complete out, unlicensed speakeasy."

The house would hold as many as 500 people at one time, and cost $5 for unlimited beverages. They mostly functioned cheap beer and Jell-O shots to other college students, and only one night of running the club would pay for a whole month's rent!

He would usually stay sober and ensure that everything remained

under control.

On occasion he would go missing out of the celebration, only available by Adeo, playing video games in his area. He was different to the typical college student and was more interested in spending some time alone than partying with other people.

Together they made a fantastic pair and could run the club during their time in the college successfully.

ZIP2

In the months before his journey to California, Musk watched in fascination as Netscape Communications went public and made a man younger than himself extremely wealthy in the process. At this stage Musk's assets totaled out at roughly $2,000 and a used car. He persuaded his brother Kimbal to proceed with him to California, where they moved to borrow $28,000 from their dad and started a software company named Zip2.

A little-known fact is that before launching Zip2, Musk applied for a job at Netscape himself. He had no background in computer science but saw the newly emerging internet space to be the biggest opportunity of the time.

According to his lack of credentials, he received no answer to his job application.

Musk was only 24 years old when he began working on Zip2, and devoted all of his energy into the success of the enterprise. Initially, he lived at the same leased office that the company used as its headquarters slept on a futon sofa, and showered in a regional YMCA because it was "cheaper than renting an apartment."

Zip2 was a business that sold city guides which could then be used by newspapers as a means to make themselves relevant in the fledgling online space. He then bought a digital directory of businesses in his field, combined them with a tiny bit of code and created one of the earliest digital mapping solutions.

Armed with his innovative item, Musk shortly found himself courting numerous significant newspapers and shortly after that, offering his support via their sites.

Despite their early success, the Zip2 offices were in a rundown office building that also served as the Musk brothers’ primary place of residence. The ceiling leaked too and the only furniture to speak of was a set of futons

and a desk for Musk's computer that also functioned as the primary server for all of.

ZIP2' TRAFFIC

During the evenings, Musk would utilize the program to code, and throughout the afternoon it would connect to the net using a hole in the ground Musk drilled to take advantage of the internet connection available in the company downstairs.

Since Zip2 grew, it began to attract the interest of investors, and in 1996 a venture capital company provided the company $3-million, but Musk needed to step aside as the CEO and allow a company executive named Richard Sorkin to take over. The venture capital company felt Sorkin was a much better choice because he had a degree from Stanford. Initially, it seemed like everything was going to be smooth sailing as Sorkin quickly landed contracts with major papers like the Chicago Sun in addition to the New York Times. Unfortunately for Musk, Sorkin then started to seek out extra investment earnings from several of these huge newspaper chains also.

Musk did not like the idea of taking on investors from the customer base the company was supposed to be targeting but found himself with little to do as by the time he understood what was happening he only owned 7 percent of all of Zip2's stock. Therefore, he was stuck seeing other startups like Yahoo! Moving towards the future while his firm was deeply entrenched in the ways of old media. Regardless of founding the company, he was now stuck in a vice president job with little to do but observe his institution's relevance slip away.

Later that same year, Musk got word that Sorkin was working on a deal that would sell Zip2 to a search engine named CitySearch. This would have caused the introduction of a nationwide version of the local search engine. He spread the word of his dissension within the business and staged a revolt in a bid to get Sorkin removed from power. With many of the largest names in the organization behind him, Musk was able to get Sorkin eliminated from the corporation successfully.

This is where his achievement stymied, however, as rather than reinstating him as CEO as was his strategy, the board was still composed primarily of Newspapers and other members of the older guard who rather place Mohr Davidow's Derek Proudian accountable instead.

While the CitySearch deal was crushed, Zip2 was soon sold to Compaq rather who paid $300 million, the most an online company had ever been appreciated at, and folded it into its conglomerate with no location in the bundle for Musk.

At the moment, Musk was critical of the sale noting that the venture capital company should have left him in charge as "Good things never occur with professional supervisors or VCs [venture capitalist companies] accountable, they do not have the creativity or the insight."

At its peak, Zip2 served 120 paper groups countrywide, and its final sale netted him a private $22-million at age 28. In spite of this, Musk has ever believed Zip2 a failure because he'd hoped for it to form the net more knowingly, with the advantage of the average man his principal concern. The fact that he instead made a way to get a dying industry to stay relevant for a couple of additional years stuck with him that is why his next venture was created from the ground up to challenge the status quo at every turn.

X.COM

In 1999, Musk was prepared to pitch his next thought; a financial services platform that worked with no need for conventional banks. That very same day he walked out of the assembly with $25-million in investment funds for his next venture, a site called X.com.

While the first idea that Musk pitched to Sequoia contained many if not all of the characteristics that PayPal offers now, the edition of X.com that started in 1999 was significantly scaled back, and instead was hyper-focused on making person to person online payments a reality. The business saw early success, and he was soon offered an attractive bargain from a company named Confinity. Confinity wanted to unite with X.com but abandon Musk in control as the CEO of the new firm.

While the technology that every business brought to the table combined quite well, the same couldn't be said of the people that worked on the formerly separate X.com and PayPal teams. The hostility and micromanaging meant that Musk spent the better part of a year competing with different characters, visions, and egos.

Elon decided to abandon the business's original online bank to just concentrate on becoming the worldwide leader in payment transfer services.

The battle within the company was not what Confinity founders Peter

Thiel and Max Levchin were searching for when they consented to allow Musk be CEO, and the following year when Musk abandoned the country to meet up with new investors, Levchin and Thiel used his absence to dispose him from his position as CEO.

The control of the company reverted to the Confinity group who changed the name of their firm to PayPal in 2001. Thanks in large part to eBay, the business grew at an incredible level and was finally sold to eBay another year for $1.5 billion in cash and shares of eBay stock.

While no longer in control of yet another company, Musk still was the largest single shareholder of PayPal stock, where he held 11.7 percent. The sale to eBay left him with an impressive $160 million.

Once again, Elon was not entirely happy with the way the business operated and was forced out of control prematurely. Despite having amassed close to $200-million in personal wealth at this point, Musk was yet to begin and run a business entirely on his terms. Now armed with an incredible amount of wealth, desire to succeed, and interest for emerging technologies, it was time for Elon to begin working on some projects he was truly passionate about.

CHAPTER 4

SPACEX

AN OVERVIEW OF SPACEX

Musk has never been shy about sharing his opinions on space travel, which he believes is crucial to the long term survival of humankind. He is also fond of saying that he hopes he is going to die on Mars, but not during the initial landing. With that in mind, is it any wonder that he spent the time after he was removed as CEO of the future PayPal, but before receiving his PayPal buyout payout, working on what would eventually become known as the Mars Oasis project?

The goal of the project was to launch a small greenhouse into space and control it remotely until it landed on Mars, ready to operate and filled with everything an astronaut would need to bring a bit of green to the red planet. By doing so, Musk also hoped to rejuvenate interest in space travel to a new generation which he believes is crucial as it is, statistically speaking, just a matter of time before an extinction level event makes earth much less habitable than it currently is.

Starting in 2001, Musk began building a relationship with dealers of ballistic missiles in Russia. His initial welcome was cold, however, as the Russians felt he did not know what he was talking about. Elon showed the same determination he did as he would as a child when learning about computer programming, and dedicated himself to learning all that he possibly could about space travel.

During his next trip to Russia in 2002, Musk proved he was now an expert on the topic which is why his new friends offered to sell him one gently used ballistic missile for $8 million. After running the numbers, Musk came to a realization that caught him completely off guard; it would be cheaper for him to start a company and build his rockets than it would be to buy a single Russian missile.

Once he began to run the numbers even more thoroughly, Musk also realized that the profit margin on space faring vessels was astronomical, with only slightly more than one percent of the sale price being enough to cover the entire cost of construction. Plus, with a company whose express purpose

is to build and sell rockets, it would be much easier for him to design a ship capable of successfully making it all the way to Mars.

With the numbers supporting the decision, Musk soon formed Space Exploration Technologies (SpaceX) and, working with the team he had assembled, soon developed designs for a vehicle capable of reaching Mars successfully while still being cheaper than any other rocket on the market by an astronomical 90 percent! What's more, the SpaceX design still returns an average of 70 percent profit on the investment cost per rocket. Not only was this his most interesting business venture to date, but it also appeared to have the most profit potential.

To get SpaceX up and running, Musk spent roughly $90 million of his own money on the project only because he thought it was the right thing to do. This is where Elon first showed his liberal side, and while he wanted to make money, was more driven by improving humanity for all. SpaceX's motto is to make humanity a spacefaring race, and they have been incredibly focused on making this dream a reality since their inception.

Before creating the Mars Oasis project, Musk had never so much as taken a class in jet propulsion, much less rocket science. Unwilling to let something like a lack of any prior knowledge stop him, he became friends with a local rocket scientist and asked to borrow his research on the topic. When the rocket scientist asked which research, Musk simply gestured to the nearest bookcase full of books on the topic. He then took them home and read them all. When this didn't lead him to the level of knowledge he was hoping for, he then went out and hired dozens of rocket scientists and picked their brains until he was comfortable he knew everything there was to know about the topic. Despite lacking a formal degree on the subject, he is today somewhat of a world-class expert on the topic of rocket science.

Musk put this level of research and dedication into the topic when he was still simply planning on buying a Russian missile. Nevertheless, during this phase, he was already brainstorming further ideas of his own and regularly consulted with his team of rocket scientists on the plan that would ultimately lead to Falcon 1, the first rocket ship his team built which he named in honor of the Millennium Falcon.

Additional sources of inspiration for SpaceX came from the Foundation series written by Isaac Asimov. Musk has frequently stated that Asimov's views regarding the correct application of space travel moving

forward is a crucial step when it comes to expanding the human consciousness beyond its currently relatively limited scope. Now, Musk says that humanity has taken about as long to develop space travel as it did to crawl out of the oceans millions of years ago, which means we are just about due for a major upheaval.

Since its inception, SpaceX has generated a pair of unmanned launch vehicles, Falcon 1 and Falcon 9, as well as a fully functioning unmanned spacecraft christened ‘Dragon.' Falcon 1 was the first car that had even made it to orbit using liquid fuels and launched by a private company when it had its first flight in 2009. In 2012, NASA signed a contract with SpaceX to put Dragon solely in charge of refueling the international space station, as well as delivering the astronauts supplies from the surface. Dragon is now used instead of the actual space shuttle for space flights, meaning that in less than 20 years, Musk has managed to reinvent the way space travel is conducted.

FALCON 1 & FALCON 9

The first two rockets created by SpaceX were the Falcon 1 and the Falcon 9. The Falcon 1 was an expendable launch system, developed between 2006 and 2009 by the SpaceX team. On the 28th of September, 2008, the Falcon 1 was launched and achieved orbit around the Earth. It was the first privately developed, liquid fuel launch to achieve this feat successfully.

The rocket was privately funded and came in at a total production cost of approximately $90-million. 2 separate engines power the rocket. Firstly a Merlin engine, and then secondly a Kestrel engine, both designed exclusively by SpaceX.

The vehicle is an unmanned craft and was launched a total of 5 times. Its fourth attempt was the first one to achieve orbit successfully. On the fifth and final launch on the 14th of July, 2009, the Falcon 1 made a successful delivery of the Malaysian RazakSAT satellite to outer space, where it achieved orbit. Following this achievement, the Falcon 1 was retired, and succeeded by the Falcon 9.

The Falcon 9 is a two-stage-to-orbit model, making use of nine separate first-stage engines. There have been three different Falcon 9 models, with the current being the Falcon 9 Full Thrust model.

The current Falcon 9 model can lift payloads of up to 50,000 lbs. to a low Earth orbit, and up to 18,000 lbs. to geostationary transfer orbit. This

most recent model of the Falcon 9 has been used since December 2015, which marked the 20th launch of a Falcon 9 rocket. It is 60% lighter than the previous version and boasts 30% higher performance.

The development costs of the Falcon 9 are estimated at $300-million, and unlike the Falcon 1, there are plans to develop this rocket for human transport with the cooperation of NASA.

To date, the Falcon 9 has a success rate of 93%, with 27 of 29 primary missions completed successfully. The two failures destroyed the aircraft; once during flight, and once during the fueling stage. Compared to the industry standards, this is a high success rate for a new rocket. Musk aimed to make the Falcon 9 reusable, and is quoted as saying “If the vehicle does not become reusable, I will consider us to have failed.” SpaceX achieved this goal of recovering a Falcon 9 for the first time on flight number 20, in December 2015.

DRAGON 1 & DRAGON 2

The Dragon 1 spacecraft is a free-flying vehicle, designed to deliver both people and cargo to orbiting destinations. In 2012, the Dragon spacecraft successfully delivered cargo to the International Space Station, and then safely returned to Earth. It was the first commercial spacecraft in history to achieve this feat.

The vehicle is launched into space by the Falcon 9 and made its maiden flight in December 2010.

It can launch a total payload of just over 13,000 lbs. Into orbit, and also can safely bring a return payload to Earth of up to 6,600 lbs.

The spacecraft contains a pressurized compartment designed for the cargo, and also for humans.

The Dragon 1 is used for the transport of freight only, whereas the Dragon 2 which is currently being designed will be used to carry humans. The first version of the spacecraft was first released on the 29th of May, 2014. Since that time, it has undergone many tests and redesigns to ensure it is fit for human transportation.

The spacecraft is essentially the same as the Dragon 1, with the primary difference being the pressurized cabin that will be used to transport people instead of cargo. The vehicle is scheduled to make its first unmanned orbital flight in November 2017 and aims to carry its first astronaut crew in

May of the following year.

NASA CONTRACT

SpaceX has agreed with NASA to use the Dragon 2 to send NASA’s astronauts to the International Space Station.

At this point, they have agreed to a minimum of six crewed flights to the station, beginning in 2019.

This contract was a huge win for SpaceX and gained them a further level of global recognition in the space travel arena. Many companies are competing in this industry, but very few procure a deal with NASA.

NASA expressed interest in dealing with only American companies for its transportation needs and had such signed deals with both SpaceX and Boeing. At this point, the maximum potential value of their contract with SpaceX stands at a staggering $2.6-billion.

SpaceX also holds another contract with NASA to the tune of $1.6-billion. This contract covers a total of a least 20 flights to the International Space Station on re-supply missions. These missions are already underway and involve SpaceX delivering and returning cargo to and from space.

SpaceX currently has over 70 future missions planned and is the fastest growing provider of launch services worldwide. The total value of these 70 missions is estimated at being more than $10-billion in contracts, and are comprised of a mixture of both NASA and other US Government missions.

FACEBOOK

In a bid to provide satellite internet services across Africa, Facebook recently teamed up with SpaceX to launch a satellite.

Mark Zuckerberg, the CEO and founder of Facebook has recently been working with entrepreneurs in sub-Saharan Africa, and chose to launch the satellite in cooperation with SpaceX to help benefit these people, and to further his stated mission of ‘connecting the world.'

The attempted launch took place in September of 2016 but was unsuccessful. Both the Falcon 9 and the payload were destroyed in an explosion that occurred on the launch pad. The exact cause of the blast is said to be unknown.

This explosion is a stark reminder of the dangers of space travel, and how much more work is ahead of companies like SpaceX. Luckily, this was not a manned mission, and the satellite was insured. Both Zuckerberg and Musk expressed deep disappointment in the failed launch, though it is expected that a 2nd attempt will be made very soon.

COLONIZING MARS

Colonizing Mars was one of Elon Musk's primary motivators for exploring the possibility of space travel and creating SpaceX.

Through his California based company, Musk has publicly stated that he aims to help establish a permanent, self-sustaining city on Mars. In true Elon Musk fashion, he also has said that he wishes for the Mars population to be solely reliant on renewable electricity for its power needs.

At the current time of writing, the cost of sending a single person to Mars using the technology SpaceX has developed would come in at approximately $10-billion. According to Musk, that cost could be lowered to anywhere between $100,000 and $200,000 shortly.

2024 is the proposed year that the International Space Station could first begin crewed flights to Mars, though SpaceX plans to undertake an unmanned Mars mission much sooner than that. The current plan is for an unmanned Dragon spacecraft capsule to complete the one-way journey in 2018.

It is estimated that with the current technology, a one-way trip to Mars would take 115 days on average before the craft would arrive on the red planet. Musk, however, envisions the trip time eventually being cut down to "30 days or so."

It is planned for a minimum of 100 people to be aboard each ITS ship to Mars, and Elon has the goal of sending 1-million people to the planet on one-way trips to begin a new existence for humanity.

Musk has his eyes set firmly on making humans a multi-planetary species and views this as a necessity for the continuation of humankind. According to him, it is simply a matter of time before a catastrophic event renders Earth uninhabitable for the vast majority of the population.

Elon aims to start slowly though, with the first trip to Mars expected to carry just a dozen people. He has publicly stated that the likelihood of death on the first mission will be "very high" making the first mission

extremely risky for the 12 people involved. Upon their arrival to Mars, if successful, they will have no way of returning to Earth and will see out the rest of their days on the red planet.

Musk has stated that the first few missions will be heavily focused on delivering cargo, as part of his 4-step plan to colonize the planet. The first two steps involve unmanned, logistical missions that will focus on perfecting the landing sequence, testing water extraction methods, and dropping off equipment for further use.

The final two steps involve the first 12 people arriving and setting up infrastructure, followed by journeys of 100 or more people per trip.

The aim is to double the number of flights per every Earth-Mars orbital rendezvous, which occurs only once every 26 months. Also, SpaceX intends to make these trips comfortable and luxurious, so that the long journey is not an arduous process for the passengers.

All of this is set to begin within the next decade. There is a lot of work ahead, and it will likely involve the loss of several lives on the initial missions, though there are already people lining up to be a part of the population of the new planet. If the colonization efforts aren't successful within the next ten years, it is still extremely likely that humans will become an interplanetary species within the next couple of decades – all thanks to Elon Musk and SpaceX.

PROFITABILITY

It's been mentioned earlier in this book that Elon Musk's primary motivation in his most recent ventures is not monetary gain. This is exampled by the finances of SpaceX.

Funded largely by his capital, SpaceX has been the focus of much speculation over its finances in recent years.

At this point, however, SpaceX currently hold over $4-billion in contracts from NASA alone and over $10-billion in total. It is, however, a privately owned company, so the financial earnings are not made public. This significant dollar figure of contracts makes it highly likely that the company is, in fact, profitable, though nobody can say for sure.

The cost of space exploration and the development of new technologies is extremely high, particularly when combined with Musk's lofty goals of beginning the colonization of Mars within the next decade.

Musk has made no comments as to if or when he will take the company public, though it's a topic of much speculation. After several of his previous business experiences being tainted by outside investors taking control and being too involved in his companies, it appears that he is most comfortable keeping the finances of this venture private.

COMPETITION

Space exploration is currently a personal investment venture of billionaires, and Elon is now competing with both Richard Branson and Jeff Bezos in this field.

The primary rival for SpaceX, however, is Boeing, who has contracts with NASA that currently exceed the value of those that SpaceX holds.

Boeing is currently building CST-100 spacecraft which will be used to fly crewed International Space Station missions in cooperation with NASA.

Richard Branson's Virgin Galactic is a marginal competitor with a slightly different focus. They aim to only sell suborbital space trips to vacationers who have a large sum of cash to spend.

Jeff Bezos's Blue Origin spacecraft has recently become a bigger player on the scene, after completing an upright landing of a suborbital spacecraft. It does, however, have a long way to go before it achieves the ability to fly passengers or cargo.

Despite the competition, SpaceX is winning the race to be the first to send a manned mission to Mars. They are only really threatened in some aspects of their business by Boeing, but still hold the title of the fastest growing space exploration company in existence.

WHAT'S NEXT FOR SPACEX?

SpaceX launched its first satellite into orbit in 2013, and in 2015 the Falcon 9 launched a more advanced satellite built to observe the climate of deep space to determine just how exactly solar flares affect electromagnetic fields on earth. For the next step in this process, SpaceX is currently trying to get permission from the United States government and additional governments worldwide to launch a host of 4,000 satellites, which would then be used to ensure everyone worldwide has access to reliable and fast internet connections.

Additionally, SpaceX can currently be said to be the most prolific creators of rocket engines in the entire world, and their Merlin 1D model engine which is powerful enough to lift over 40 cars, is currently used for numerous purposes around the world. SpaceX was given its first NASA contract in 2006 along with nearly 2-billion dollars to get the Merlin 1A working properly. These tests ultimately led to the creation of the Falcon and the Dragon.

With SpaceX, Musk hopes to decrease the cost of space travel to the point of making it a realistic notion again. He plans to send a manned mission to Mars by 2030 and a colony of nearly 100,000 by 2040. To no one's surprise, he has been quoted as saying that if he has anything to do with it, everything on Mars is going to be all-electric. To that end, he has also created the Musk Foundation with the hope of determining the best renewable and clean energy sources that can be used to make space travel faster, cheaper, safer and more efficient.

CHAPTER 5

TESLA MOTORS

OVERVIEW OF TESLA

However, having been considering electric cars for the better part of two decades, Musk came on board once the project requested financing. This position also enabled him to take on a more active part in the design of this soon-to-be commercially published Tesla Roadster.

Presently, Tesla Motors provides 3 distinct models on the street with a fourth edition, priced around the expense of comparable family vehicles on the current market, being declared in March of 2016 and fast promoting through its preorder allotment. While a number of vehicles it's on the street remains comparatively modest, Tesla Motors is currently being compared to the Ford Company. It's also the first successful new automotive business to be found in America in over a century.

While he was apparently involved with the coming together of the Roadster's final design, Musk didn't start to have a more active role in managing the firm until 2008, around the beginning of the Global Financial Crisis. He took on the position of CEO at the time, in addition to the use of product architect. While the product line has since become a success, it was far from a sure thing at several points in the production process.

Musk first met Marc Tarpenning and Martin Eberhard, the founders of the original Tesla model in 2001 when the duo went to listen to Musk speak on his latest passion job of traveling to Mars.

They exchanged pleasantries, and nothing much came of the meeting except that Musk remembered their names when they met again three years later in 2004 to pitch Musk on the idea for an electric car called TZero.

Musk was instantly hooked on the pitch and also arranged to meet up with the pair the very next week. The meeting, scheduled for a tight 30 minutes quickly grew to be more than 3 hours in length since the trio discussed the particulars of the TZero in addition to the importance of producing a car that could compete on the street in addition to at the pump. This meeting was also the genesis of this rollout plan that Tesla Motors would ultimately apply to great success, beginning with a luxury model to capture the hearts and minds of the general public, before rolling out a

mainstream variant to benefit from the fervor.

This early brainstorming session also called for the first vehicle in their steady, the Tesla Roadster, to roll off the line, together with the premise that the corporation would be readily turning a profit by 2008. This ultimately proved to be significantly too optimistic, however, as the forthcoming weeks and months would see Eberhard and Musk butting heads regularly while the invention of the automobile itself languished amidst numerous engineering and production difficulties.

It was during that period that Musk also took a more hands on role in the introduction of the provider's flagship vehicle, making many changes involving the door positioning and the decision to create unique headlights, which put things back substantially. Further delays accumulated because he saw the necessity to redesign the chairs, the kind of the inside and even redesigned the transmission from the bottom up. While the changes were made to improve the overall look, feel, and quality of the vehicle to make it worth its premium price, they pushed the already tight production schedule farther than it might allow.

The choice to use unique parts from the layout also place the fledgling company to a position of having to supply the creation of those parts, a process no one working in the business at the time was knowledgeable about. This led to Musk shouldering, even more, responsibility, going so far as to stop by Lotus, the production company in England that would finally create each Roadster, merely to try to get a deal on the spiraling production line.

In 2007, after battling with Eberhard nearly every step of the way, and using a particularly heated debate where Musk was credited with the introduction of the Roadster in a guide and Eberhard wasn't said, Eberhard left the business amidst a flurry of lawsuits and countersuits from Musk. At this time, Musk took on the responsibilities of CEO, which makes his first action in the positon to fire a quarter of the present staff as the protracted production program meant the company was hemorrhaging money and it was the only way to make sure his $50 million investment was not going to turn into a massive mistake.

In 2008, the first Tesla Roadsters finally rolled off of the line, and the reviews were middling at best and terrible at worst. By 2010, 75 percent of the first run was recalled due to different hardware and software errors. The first run of the Roadster finished with 2,150 units being produced and sent to

over 30 countries worldwide.

Not to be discouraged by what he saw as only a broader field test for the idea, Musk doubled down on his Tesla Motors investment and started taking preorders for the follow up automobile to the Roadster, known as the Model S. Following the wave of favorable early feedback concerning the Model S, the company filed an IPO worth $100 million, approximately two times as much as Musk had sunk to the business thus far. At the beginning of 2016, the business was estimated to be worth $25 billion. This still is not enough for the present CEO who says that he expects the company to be worth almost 30 times as much before 2030.

After the Model S started to significantly improved testimonials and began taking off in the manner that Musk and the other founders had envisioned all those years earlier, Tesla Motors introduced a 4-door version of the Model S and their first electric sports utility vehicle, the Model X. The business has also started to manufacture the powertrain system which drives the existing electric offerings from Toyota in addition to Mercedes.

With this in mind, he began an initiative to raise the amount of charging channels available across America.

In 2007 it became the biggest single supplier of solar energy in California. Musk is also chairman of the board of the company, and therefore it's not surprising that Solar City was a huge portion of the charging station initiative both in California and across the nation.

Musk's goal during his tenure as the CEO of Tesla Motors is to increase the widespread acceptance and utilization of electric vehicles generally, not only of those flying the Tesla Motors flag. To this end, he's also released all of the patents associated with electrical motor technology that the company formerly held.

This means that anyone is welcome to use their layouts as long as it's done in good faith, to raise the general evolution of the product area.

Before this stage, the domain name was held by a guy named Stuart Grossman who first bought the domain name in 1996 before anyone had thought of purchasing up recognizable domain names for future gain. Grossman was not using the domain name for anything, but he enjoyed the notion of being able to at some point in the future, and that's the reason why it took a personal visit from Musk to finally convince him to sell. While the last price of the transaction wasn't disclosed, a close friend of Musk's called Jason

Calacanis was quoted after the fact as stating that it would have been worth a few million in Musk's eyes to fasten the domain in question.

EARLY DAYS & FINANCIAL WOES

Unlike what many people think, Elon Musk didn't make Tesla Motors. The company was incorporated in July of 2003 by Marc Tarpenning and Martin Eberhard. The pair personally funded the business until the Series-A round of financing in February 2004.

Elon Musk entered the film in this first round of financing, where he joined the corporation's board of directors as its chairman, in addition to taking on an operational function in the business.

Tesla's initial aim was to commercialize electrical cars, starting with a high-end roadster version, which would become their first publicly accessible car. It was only in July of 2005 however that Tesla signed a manufacturing contract with Group Lotus to create the significant part of their vehicles. This contract lasted until 2011 and covered the creation of a minimum of 2,400 cars.

In the Series-B investment around, Musk led once more with another investment, and then also contributed the third investment around in May of 2006. A fourth investment round took place in May 2007, which brought the whole quantity of personal investment around $105 million.

In 2007 the company experienced some problems since the Global Financial Crisis began to take place. At the same time, Elon had disagreements with the founders of Tesla, but eventually, he got his way and took the position of CEO – a title he still holds today.

One of the first orders of business as CEO was to fire 25 percent of Tesla workers in 2008, as the fiscal crisis was beginning to take its toll on the firm. From 2009, the company had completed its fifth investment around where it increased an additional $40-million, saving it from bankruptcy. At this point, Musk had personally invested $70-million in the business from a total personal investment amount of $187-million, and the firm had just produced 147 cars since its beginning.

Over the next two years, Tesla Motors started promoting the Model S and obtained critical funds from the Mercedes-Benz and Toyota. The business also obtained loans to the tune of $465-million in the US Government. In 2010, Tesla went public with its first IPO happening on June

29. The purchase price of the stocks has increased from their initial cost of $17 to over $200 at the time of writing, and since going public, the company has not had any financial troubles. Tesla repaid the loan to the government early and has recently gained a massive quantity of traction in the market, now with the capacity of mass-producing their cars at a reasonable price. Despite their rocky and slow beginning, and thanks to a massive quantity of funding (largely from Elon Musk himself), Tesla managed to endure the dark times and has made it out the other side, with no signs of slowing down!

ROADSTER

The Tesla Roadster was the first car made available to the public by the electric car company and was first available for sale in the United States in 2006.

The Roadster is an all-electric sports car and remained in production until 2012. A new version of the Roadster is expected to be released worldwide in 2019.

The Roadster wasn’t a mass-produced car, and Tesla only sold just over 2,400 of the cars in total.

The car holds an average range of 245-miles per charge and can go from 0 to 60-miles per hour in under 4 seconds, with a top speed of 125-miles per hour. For an electric car, these numbers were groundbreaking.

The car wasn’t cheap, with the base model starting at USD 109,000. The sports version of the car had an asking price of $128,500 and was even more expensive outside of the United States.

The Roadster was primarily a test and was an excellent chance for Elon Musk and Tesla to explore the possibility of producing high-powered electric vehicles.

Since the creation of this first model, Tesla has far improved its technology and manufacturing capabilities, with each model becoming more affordable and with additional features.

MODEL S

The Model S is the second offering from Tesla Motors and was first announced in a press release in June 2008. The Model S took longer than anticipated to design and produce and was not made commercially available in the US until June 2012. Overseas, it was released in Europe in 2013, and in

China, the UK, Australia, Hong Kong, and Japan in 2014.

The early Model S vehicles experienced a lot of issues early on, with a large portion of them having defects. These problems were quickly fixed, and the Model S has managed to continue production without issue for the most part since then. The only major hiccup since was a possible seat belt defect that caused Tesla to recall 90,000 of the Model S in 2015 voluntarily.

A total of 2,650 Model S cars were sold in 2012, in 2013 it was the top selling luxury sedan in the US, and in 2014 it delivered a total of 31,655 units worldwide! The popularity of Tesla and their model S proliferated, despite early setbacks.

In June 2015, it was announced that Model S owners have accumulated over 1-billion electric miles, almost double that of any of their competitors.

The Model S is still in production and starts at a base price of $71,500 and a maximum price of $109,500. The car achieves a minimum distance of 595-miles per charge on the base models, with their high-end model providing a minimum distance of 915-miles. Apart from being highly economical, the car is also incredibly powerful. It is to date the fastest 4-door car available on the market, and runs almost silently, using only electricity for its power.

MODEL X

The Model X is the third car released by Tesla and is based on the Model S. The Model X is a full-sized SUV version and was unveiled in February of 2012.

The car entered production in 2014 and was made available to the public in 2015. Elon Musk had announced publicly that the car would be available almost 12-months earlier than it finally was delivered, which caused some controversy.

The Model X had approximately 30,000 pre-order purchases compared to the 12,000 that the Model S received. This large number of orders was great, but it meant that the way the car was manufactured had to change, and this slowed the amount of time it took for the car to become available.

It features what Musk refers to as ‘Falcon doors,' based off of the Millennium Falcon from Star Wars. The car was first made available for

sale for $80,000 for the base version and went all the way up to $144,000 for the high-end premium edition.

The Model X sales have been incredible, and in 2016 it was named the top-selling electric car in Norway, a country that sells more electric cars than traditional fuel-powered ones.

MODEL 3

As you can see by reading about the previous cars that Tesla has produced, they don't come cheaply and are not a viable option for a large portion of society.

Musk, however, has the goal of making electric cars the norm, and to have the world primarily run using renewable energy.

At this stage, Tesla has created the world's largest battery factory that produces more batteries per year than all of the other factories in the world combined. Tesla now also has the infrastructure to produce over 500,000 cars per year.

With these systems in place, Musk's visions are finally becoming clear to the public, with his recent unveiling of the affordable Model 3. The Model 3 is a family sedan, with a starting price of only $35,000. The car is currently available for pre-order, though it won't be delivered until late 2017 in the US, and 2018 in other countries.

According to Musk, the car will be among the safest in the world, with a 5-star safety rating on all components. He also claims that the car will deliver a minimum of 215-miles per charge, though he projects that the actual distance will be a lot more than that. Musk said at the unveiling event that "you will not be able to buy a better car for $35,000, even with no options."

Finally, the electric car is being made available at an affordable price worldwide and is being mass-produced. Elon Musk and Tesla Motors are heavily investing in building the infrastructure worldwide necessary to accommodate for electric cars to be the norm.

Not only is the Model X set to be the most affordable yet, but it is also going to be the safest, and have the most advanced computer system within it. It comes complete with auto-driving hardware, and even the base version is powerful, going from 0 to 60 miles per hour in under 6 seconds. Musk has however promised that the higher end versions of the vehicle will be much

faster than that.

The car is available for pre-order and can be reserved online for just $1500. In the weeks after its unveiling, Tesla recorded over 373,000 pre-orders for the car, making it the most popular new-release car from Tesla to date, and instantly bringing in billions of dollars in revenue.

CHARGING & MAINTENANCE

One issue with electric cars is their maintenance and charging requirements. During Tesla's early days, in particular, this was an issue for a lot of their customers.

Today, however, Elon Musk and Tesla Motors are investing heavily in the worldwide installation of their charging stations. Currently, there are over 3,500 Tesla supercharger stations worldwide, which will charge a car in less than 1-hour. In addition to that, over 3,500 destination chargers exist, which are smaller charging stations that exist in places such as restaurants and hotels.

During his speech at the unveiling event of the Model 3, Musk stated that they would be more than doubling the number of superchargers, and quadrupling the number of destination chargers over the next 12-months.

There are also currently over 250 Tesla dealerships worldwide, meaning that in most places across North America, Europe, and Asia-Pacific, you'll be able to purchase a Tesla and have it serviced and maintained without issue. The number of Tesla locations is also increasing at an incredible rate as the company grows in both popularity, and in value.

A third option for charging is available, and that is through the installation of a home-charging unit. The unit can be installed by an electrician and is designed to charge the cars overnight fully. Tesla estimates that the installation cost of one of these chargers can vary anywhere between $500 and $5000, depending on the customer's location and electrical setup in their home. The cost of providing a full charge is said to be much less than that of a tank of petrol, which will quickly cover the home-installation costs.

MOTIVATIONS BEHIND TESLA

Tesla is more than simply a car company, and instead, has a purpose much greater than simply making a profit. Elon Musk is a huge proponent of sustainable energy, and in his recent unveiling speech of the Model 3, he

gave some insight as to why Tesla Motors was created.

He shared some facts and figures related to C02 emissions and showed a graph representing their staggering increase over the past few years. At the current rate, we will soon be causing irreparable damage to the environment, and eventually will run low on fuel sources.

The Tesla Motor company has a vision of electric cars being the accepted norm worldwide, and with their large investments in infrastructure and production, they are rapidly making this a reality.

Still a young company, Tesla aims to continue producing electric cars at lower and cheaper prices, while simultaneously developing more infrastructure for charging stations, and also improving their technology.

With all of these factors considered, Elon Musk predicts that the value of Tesla Motors will go up by 30x over the next few decades.

COMPETITION & COMPANY PERFORMANCE

Tesla Motors is not void of competitors, though it's not something that Elon Musk appears to be worried about.

In a bold move in 2014, he made the design plans of his Tesla cars publicly available to anyone who would use them in "good faith." Competitors are not to copy his patented designs directly but can model their cars off of the same technology.

This move showed his dedication to the cause and was significantly met by praise worldwide in the media – further boosting the public profile of Tesla.

There are several other electric cars available on the market today, including the Chevrolet Volt, and most notably, the Nissan Leaf. Tesla has also partnered with both Mercedes-Benz and Toyota and has assisted them in the production of their electric cars.

The push for electric cars is becoming more and more apparent, and it is likely that more competitors (and partners) will emerge on the scene in the coming years.

Despite the competition, Tesla is the clear leader in the field. Elon Musk's passion and tenacity for the cause has pushed them to secure a majority stake in the electric car market. Their massive investment into charging stations worldwide also makes them the easy choice for consumers.

The company has grown tremendously in recent years, with a current value at the time of writing of over $25-billion.

CHAPTER 6

WHAT TO LEARN FROM ELON MUSK

In a hundred years, when most people reading this and the person writing this are long gone, Musk's cars and rockets will still be circling the Earth and the skies. How can such a person get started against all odds is the question I ask here. And, more importantly, what can we learn from him?

LEARNING FROM THE OUTLIER

Learning from Musk might seem naive. After all he is an outlier even among billionaires. I think this is exactly why he is worth studying – you don't get insight into the extraordinary by studying the ordinary. Even with a sample size of one Musk we may find something in the way he started out that is fundamentally borrowable.

Sure, we can't recreate the exact circumstances of his life for ourselves – we all have different parents, live in different countries, and have different bodies. Despite all the differences, we have control over our mindset as much as he does over his. This part of Musk we can borrow. The ways he deals with uncertainty, the books he reads, the ways he makes promises, and patches up his own mistakes are all borrowable, for example.

THINKING FROM FIRST PRINCIPLES (AND NOT JUST BY ANALOGY)

You might be skeptical about how studying another person's life can help. His circumstances are not like yours. Musk would be the first to remind us here to think from first principles, as scientists do, rather than by analogy. Why should you think like Musk? You might know better than him after all. It's true that thinking from first principles gives a truer result. But it also takes time which is limited for all of us. Yes, it's best to think about your situation from scratch. But reasoning by analogy makes sense given that life is finite. To minimize our own mistakes we don't need to borrow the exact decisions Musk made but study the way he makes them. Then we can apply his thinking method to what we know to be true for sure.

IT'S EASY TO EXPLAIN GREATNESS IN HINDSIGHT – THE NARRATIVE FALLACY

One psychological barrier to learning from other people's lives is the

narrative fallacy – making a neat story out of facts that at the time of their happening made little sense. As the classic book on improbability The Black Swan explains, we do it to deal with the randomness of life – we explain it away because we know how the story ended. We'd rather not figure out why we didn't know what we didn't know.

The media often write this way. Articles about Musk call him a "genius", which he is. But labels like this make his accomplishments sound like a foregone conclusion. They aren't. For example, he still has to deal with big oil companies that want to see Tesla go down.

We might assume he knows what to do with this because he is a "genius." But genius is not a strategy. And his victory is far from certain. As you are reading this, he is doing something to deal with the uncertainty of his situation. What sort of a mindset is he in?

In this article and visualization I want to transport us inside Musk's mind to understand how he started from the absolute beginning. How did he figure out what to do with his life? How did he come up with the first money to start a business? How many businesses did he try before?

LIFE = DECISIONS + CIRCUMSTANCES + RESULTS

Life is a combination of decisions – things you do; circumstances – things that others do to you, including people you've never met, like politicians; and results – your decisions + the circumstances.

Labeling each significant event in Musk's life on a timeline produced a lot of decisions, unsurprisingly. It's fair to say he is a product of his decisions more than his circumstances. Musk seems to have been decisive and deliberate from the start. A quick glance at the timeline shows that his decisions by far outnumber his circumstances.

When we complain about life we mostly complain about our circumstances, not our decisions. We seem to be fixated on circumstances. When I first meet a person they tend to ask about my circumstances first – where am I from? where do I live? how long have I been in San Francisco? This is also true in other countries I've been. It's only when people get to know me that they ask why I decided to be an information designer, for example. Why do circumstnces interest us more than decisions? Sure circumstances happen to us before we can even make decisions – even before we are born. But decisions are by far more interesting because that's how you

change circumstances, possibly to the point that the circumstances disappear or stop mattering. Musk was born in South Africa. Is that good or bad? I think it's neither. What's more interesting is that while still a kid he decided to move to the U.S. Why did he choose the U.S.? How did he decide to make it happen? That is the interesting part.

How Can I Use This?

Here's an experiment to try – put the major events of your life on a timeline from birth through today – then mark each event as either a decision, a circumstance or a result. Is there a pattern? Are decisions and circumstances about even? Do circumstances pile up before there is a decision? Or decisions outnumber circumstances?

CHOOSING THE TOUGH FATHER

Musk did not disclose much to his authorized biographer about living with his father other than calling it "misery" and that he experienced emotional torture. The biography also reveals that Musk decided to never let his children meet his father – which suggests that his childhood memories are more painful than most people's.

Ironically and unlike most kids, Musk had the option to live away from his father but instead he decided to live with his father and not his mother after their divorce. Most children age 9, or any age for that matter, would not choose to live with a parent who is tough on them given the choice. Musk often cites his difficult childhood as the reason he is able to cope with the stress of his job. So why did he choose it? He did not explain. But I think it's worth pondering.

"Non Stop Horrible" is how Musk himself described this period in his life when on top of enduring emotional torture from his father at home he was bullied at school. Musk himself believes that this adversity is what made him stronger. Still, as a father of 5 boys today he is ambivalent on whether adversity is a parenting strategy. Bothered that his kids have it much easier than he did, he wonders how one could create arficial adversity.

How Can I Use This?

Does adversity always make one stronger? Or does it break some people? It's easy to image a chart tracking the hard times and the achievements of a person and then look for possible coorelations. And if there is not enough adversity to chart it's pretty easy to create some even in a

non-artificial way. Just migrating to another country, starting a startup, promising more than you can deliver together will create enough stress that you can experience your own “non stop horrible.”

LEARNING FASTER THAN YOU ARE “SUPPOSED TO”

A pivotal moment in Musk’s life came when he got his computer. It came along with a BASIC programming language workbook. The workbook was supposed to take 6 months, but he decided to stay up for 3 nights in a row and finished the whole thing. Within 3 days he basically was a programmer by the 1984 standards. His new skill brought his first success – he wrote a video game called Blastar and sold it for $500.

I think the idea of people learning things faster than others stirs some deep emotions inside us. Even today in most countries universities don’t encourage you to graduate faster even if you learn faster. Lawyers and doctors are required to be in school for a certain period of time regardless of their learning speed. I remember in law school learning 80% of everything in the first year. The sentiment was common among law students. Still there was no way to speed up the remaining two years. This, of course, doesn’t matter in areas where people are commonly self-taught like art, music, and programming. And Musk took full advantage of self-teaching.

THE IMMIGRANT MINDSET

Do you need to move far away to bring out the best in you? Musk plotted his escape from South Africa ever since he had access to information about America. His idea of America was cliché – he didn’t overthink it. He wasn’t interested in criticizing the system – he wanted to move to the land of yes-men, and he was one himself.

How Can I Use This?

Have you ever felt what it’s like to come to a new land where you are just another upstart?

GETTING HIS HANDS PHYSICALLY DIRTY

Musk doesn’t seem to think that physical work is beneath him. He embraces it. When he moved to Canada at 17 on his own, he sought out a job that required him shoveling dirt in a boiler room wearing a hazmat suit. Even today, with his designer clothes on, Musk walks the floor of his rocket factory and sometimes gets physically involved in the process – his clothes

ruined with epoxy.

How Can I Use This?

This might be the easiest of them all – get your hands literally dirty and see if it helps you get started.

SHARING WILDLY AMBITIOUS PLANS

Compared to other people and companies, Musk has an unusually futuristic outlook. He has made and shared his plans for as far away as his death on Mars after he helps a million people move there on his rockets at $500,000 per ticket. It's easy to dismiss this as marketing hype – and people did dismiss a younger Musk. By now it's clear though that he lives up to his ambitions.

How Can I Use This?

Create some stress for yourself by sharing your plans and see how it feels. Of course, others like Jeff Bezos and Steve Jobs did the opposite. It probably makes sense to reveal your plans if you know that they are so far fetched that no one could copy them.

NOT LOOKING BACK

Musk is known for not hanging on to things or people. He looks forward. Ironically he might have a lot more to look back at and be sorry about than many. His first child died at 10 months old, he divorced his first wife, the first 3 times he launched his rockets they blew up – one of them destroying an expensive NASA payload. He has blown promises, missed deadlines, miscalculated costs and had to charge customers extra after they had already paid (Musk had to ask 400 customers who already prepaid to add extra $17,000 for each Roadster). This list alone is enough, I believe, to make most people look back and infer that maybe it's time to reign in the ambition, to mend relationships, etc. But that is not the point – for all his failings, Musk is capable of greatness. His products justify his mistakes. At the age of 44 he still has more to gain than he has lost – more rockets to launch, more cars to manufacture, and even more children to have.

How Can I Use This?

Think about it: if you believe there are more opportunities ahead it doesn't make sense to be sad about lost opportunities. It makes sense to regret only if you lost more than you might gain. Here the key is probably in

what you believe is still possible. We have to assume that the window of opportunity has not closed yet. I think on this point our intuitions are often mistaken – there is no proven critical period for learning, for example. This is even true for learning a foreign language. Yes, most adult immigrants speak with an accent but not because of their age. It turns out that when you learn your first language your parents speak to you in "parentese" a version of language that emphasizes exactly the sounds that are more difficult to distinguish. Plus they are patient with you. I guess as we grow older we do become impatient with ourselves. But that is a choice. Maybe no one is these to anticipate our mistakes, at any age we could find a willing teacher.

So does it ever makes sense to look back and regret? Yes, but only if you can find conclusive evidence that what you want to do is no longer possible at your age.

STARTING REALLY SMALL

Compared to what Musk is doing now – electric cars, rockets, and solar panels his first businesses were ridiculously straightforward – selling computer parts from his dorm room, running a glorified speakeasy from his house in college. Would he do this if he saw a straight path to making electric cars back in college? I think not. It looks like he took incremental steps towards a goal he had no idea how to reach at the beginning.

How Can I Use This?

If you want to start, start literally anywhere. In the long run, it won't matter where exactly you started.

JUST ENOUGH MONEY TO START

Most people would say that it's the lack of money that prevents them from starting a startup. Musk's biographer helpfully tells the amount he had when he started. Between him and his brother Kimbal they had $28,000 that came from their father plus $6,000 from their friend Greg Kouri, who joined as a co-founder of Zip. Today the $34,000 adjusted for inflation would be $53,000. This amount was enough to set up an office in Palo Alto. Musk and his brother slept in the office, showered at the YMCA, and subsisted on a diet of fast food.

How Can I Use This?

Would Musk make it without the $53,000? He'd probably have to

work from a coffee shop for a little bit and sleep on someone's couch. But it seems improbable that not having this money would have stopped Musk in the long run. Does $53,000 [or insert your amount] make the difference between starting and not starting for you? Figure out your minimum.

TEACHING HIMSELF FROM BOOKS

When Musk decided to do something with space he apparently realized that he needed to learn about space himself. He correctly estimated that money alone, which he didn't have enough of to start a rocket company either, does not solve the space problem. Wealthy people have done this before – threw some money at a space project and watched it fizzle out helpless without the engineering knowledge. Not Musk. Jim Cantrell, an aerospace engineer that Musk cold called back in 2001 said this about how Musk learns, "He literally sucks the knowledge and experience out of people that he is around. He borrowed all of my college texts on rocket propulsion when we first started working together in 2001. "

How Can I Use This?

Knowledge is free. It's easy to carry around – it doesn't weigh anything. Books are free at the library. Don't underestimate how much you can learn just straight out of books.

OVER-OPTIMISM, OVER-PROMISING, AND OVER-DELIVERING

With both SpaceX and Tesla there is a pattern: make a wildly ambitious promise, delay the reveal several times, finally unveil the product, promise to deliver it soon, delay the delivery date, deliver a product that surpasses expectations.

In design I've learned that you can have only 2 out of the three things: amazing, fast, or cheap. Musk doesn't seem to compromise on amazing. He is definitely striving for cheap (100 times cheaper rockets than now, Model 3 at $25,000 after tax incentives). So you don't get fast. The Model X, for example, came 3 years late.

How Can I Use This?

Don't be too hard on yourself. It's going to take some time to do anything worthwhile. Yes, people hack prototypes in a weekend but it takes much longer to make that thing amazing.

Here in a nutshell you can see the story of Tesla through the eyes of

the stock market. The stock was flat for a couple years because Tesla had yet to show profit. People weren't yet buying into Musk's optimism. When in April of 2013 Musk announced profit for the first time, the stock shot up. You can also see the incremental steps Musk took and how the stock grew accordingly.

How Many Tries Does It Take?

It took 4 tries for Musk to successfully launch his first rocket. This number is low compared to his competitors who blew up a lot more hardware before it would fly.

There is one key difference, though – Musk only had enough money to launch 4 times. If the 4th time didn't fly that would have been it.

How Can I Use This?

It's hard to call Musk lucky considering the rocky start of SpaceX. You could be luckier or less lucky. The way you'll compensate for the missing luck is just more tries.

Here you can compare the number of successful launches to the number of failures. The rocket size seems to grow with the increasing confidence. Still three failures at the very start is not ideal.

NOT FAILING

"I'd rather commit seppuku than fail," Musk tells an investor to explain why he should get the investment. This is a theme with Musk in negotiations, physical activities, and relationships. He might move on but he doesn't fail. He might be late on his promises, he might come across as too pushy, or get kicked out of the company he started, but he doesn't let things fail.

How Can I Use This?

You can't fail unless you give up. Why would you give up? Find your reasons and fix them.

CHAPTER 7

HYPERLOOP

As a college student, Musk asked himself what three technologies were going to change the world the most in his lifetime and then went to work on making his mark on all of them. As people are only a few years away from being able to have one of his cars drive them around while they use PayPal to buy something with help from the internet from his satellites, it is safe to say he hit his goals. This doesn't mean he is ready to stop working though, as he has additional plans that ensure the future will be the best possible version of itself it can be.

AN OVERVIEW OF HYPERLOOP

In 2013, Musk went to a presentation about the state of California's proposition for a rail system that would travel at high speeds between Los Angeles and San

Francisco. He didn't think the system that many engineers had spent years developing was all that fast, and so he decided to come up with something better. To do so, he got all of the engineers from his electric car company and all of his rocket scientists together and worked with them to develop plans for what they are now calling the 'Hyperloop.' The Hyperloop is a way of traveling long distances at speeds of 700-miles per hour inside capsules that travel on cushions of air.

The finalized design of the Hyperloop, as well as ancillary devices, took roughly a year to create and once it was finished, Musk released the schematics online and declared them an open source for everyone to use. He then announced a competition, sponsored by SpaceX, to design the best pod for use in the Hyperloop system. This competition is currently underway, and pits teams from around the world against one another, testing their real world designs on a massive test track that Tesla has created for just this purpose. The winners will receive opportunities to further enhance their designs via SpaceX and will be chosen based on the practical application of their designs in late 2016.

HYPERLOOP COMPANIES

When introducing the idea for the Hyperloop, Musk made the proposed plans open-source and encouraged others to get involved. So far, there have been several companies formed to work on the project, though only one has begun constructing the transport mechanism. This company is the Los Angeles based, Hyperloop One.

Hyperloop One now has its official website; www.hyperloop-one.com On the site, they describe the Hyperloop as follows: ‘Hyperloop is a new way to move people and things at airline speeds for the price of a bus ticket. It’s on-demand, energy-efficient and safe. Think broadband for transportation.’

This certainly paints an exciting image of what the future of transportation will hold.

Hyperloop One was formed in 2014 and has up to this point in time raised $160-million in investment capital. It boasts a team of 200 engineers and technicians,all working together to bring the transport system to market.

Hyperloop One first tested its motor in May 2016 and had plans to test the full system in early 2017. They’re currently developing routes in 5 different countries, with the goals of being able to transport cargo by 2020, and passengers by 2021.

Though this is not Elon Musk’s company, they can thank him for the project idea and initial plans. This is just another example of how Musk is not purely profit-driven, and instead has much larger plans and goals for humanity as a whole.

HOW IT WILL WORK

In theory, the Hyperloop will work by sending “pods” through a continuous steel tube, maintained in a partial vacuum. This vacuum will have a level of air pressure that will force the pod to float on a 0.5 – 1.33mm layer of air, so it never touches the steel tube itself.

This design will allow the pod to fly along the tube at incredible speeds without ever having any danger of crashing into the tubing.

Each company has a different proposed technology for how the Hyperloop should function, but Hyperloop One’s approach is to use maglev, which harnesses the use of magnets to keep the pod in place. This will produce a similar effect to the way a puck floats and glides across an air hockey table.

In the concept plans, the passenger-only pods are 7-feet 4-inches in

diameter and are projected to have a top speed of 760 miles per hour. It proposes an initial acceleration and deceleration speed that would be 2-3 times that experienced on a commercial airliner during takeoff or landing.

Where Will It Be?

The suggested first route proposed by Elon Musk was to have the Hyperloop running from the Greater Los Angeles area to the San Francisco Bay area.

The most actively planned routes currently, however, are outside of the US.

The most likely location for the first International Hyperloop will be a way from Helsinki to Stockholm, which would travel under the Dead Sea. The trip is estimated only to take a total of 30-minutes.

Hyperloop One is also exploring the possibility of creating a cargo-only route in Dubai and is working on passenger routes in multiple locations in Russia and China. In addition to that, they have proposed a potential Hyperloop running from Melbourne to Sydney, in Australia. Usually, this trip would take approximately 9-hours of driving, but Hyperloop One estimates that they could cut that travel time down to around 55-minutes!

Other companies have proposed European routes, such as from Paris to Amsterdam, and also a route traveling across Poland. These companies, however, have not yet begun work on developing these.

COST & TIME-FRAME

It is still unknown exactly how much the production will cost, though Hyperloop One has estimated that the route between Helsinki and Stockholm would come in at 19-billion Euros to develop, which is currently around USD 20-billion.

The first cargo-only Hyperloop is expected to be used in 2020, though the location is unknown. For passengers, it will be 2021. However, as with most new technologies and as Tesla Motors has experienced, the time-frame for development often takes longer than anticipated.

Within the next decade, however, it is safe to say that there will be multiple Hyperloops in use throughout the world. Currently though, not much else is known about how much they will cost to use, their final design

features, or just how safe they will be.

Also, according to both Elon Musk and Hyperloop One, we can be sure that the Hyperloop will be run using sustainable energy.

CHAPTER 8

OPEN ARTIFICIAL INTELLIGENCE

In 2015 Musk revealed the existence of yet another initiative, this one a non-profit that is dedicated to researching and creating artificial intelligence in a way that ensures it evolves to be both safe and beneficial for everyone involved. Specifically, Musk has stated that he wants the organization to stand against any potential abuse of the masses that could be perpetrated by an artificial intelligence that is created for such a purpose either by a major corporation or world government.

Musk isn't alone in this endeavor either and has secured the alliance of other notable scientific minds including Stephen Hawking, who believes that artificial intelligence may well pose the most real-world danger when it comes to its potential to negatively impact humanity's survival rates over the long-term. This is why Open AI exists, to ensure that artificial intelligence benefits humanity instead of destroying it. Like most of the technological breakthroughs he has been associated with, all of the work that Open AI does will be open-source and freely available online. Musk is the co-chair of the project and is very aware that the organization needs to tread carefully to ensure they don't accidentally create the thing that they fear the most.

He believes that the best way to prepare against what could be considered the darkest outcome is to prepare the masses for what might occur shortly.

Musk hopes to provide enough readily available information and programming so that everyone has the tools to protect themselves if, or when, the time comes.

While Musk believes that the nonprofit will eventually create something that surpasses the intelligence of its creators, he doesn't expect that to happen anytime soon, not for 30 years at least. The project is funded and ready for the challenge, however, as individuals from around the world have already pledged over $1-

Billion to ensure the organization's coffers are full for many years to come. Artificial intelligence is one area that Musk has not yet conquered, and this time there is hardly anyone anywhere who is willing to bet against him. Instead, his project is predominately being met with support and investment

by those who share the same fears.

Open AI is currently co-chaired by Elon Musk and Sam Altman. They have assembled a team of world-class experts, and keep a lot of their work quiet. They are playing a long-term game that is expected to last for decades to come.

They have publicly stated that “Because of AI’s surprising history, it’s hard to predict when human-level AI might come within reach.” They are however doing their best to stay on top of AI developments and making sure that they are occurring ethically. Their publicly stated goal is “To have a leading research institution which can prioritize a good outcome for all over its self-interest.”

OpenAI has said that they will happily collaborate with anyone, across many different institutions to achieve their goals. Being quite new, they have not yet released much information to the public about AI and its current developments. The information they do release, however, is done so through their blog, which can be viewed at www.openai.com/blog

CHAPTER 9

SUMMARY OF SOLARCITY

Musk has a massive interest in the sustainability of the planet and its inhabitants, as evidenced by his investing in jobs like Tesla and SpaceX. Elon has become the biggest shareholder of SolarCity and is presently in the process of buying the business for $2.6-billion.

Musk is imagining the union of both businesses, which might view Tesla motor vehicles being fully powered by the solar power that the customer produces via solar panels on their residence! The consumer would be able to have a whole SolarCity panel installed onto their roof, catch the energy from sunlight and keep it in a Tesla battery, and then use this to power their home or car. This would allow folks to mostly live off of the grid with the guidance of just a single firm!

Whether or not this will all go exactly to plan remains to be observed, however, as the last choices boil to Tesla's board members. There's a little bit of hesitation surrounding the bargain, as generated by Visitor stresses.

Some investors and also people in the press are seeing this proposed buyout as a lousy thing. SolarCity is now not profiting, also has undergone a massive drop in share prices -- making its existing market worth a whole lot lower than the proposed $2.3 billion-dollar purchase price.

The deal obviously has its risks, but Elon Musk is no stranger to risk and has come close to bankruptcy before with Tesla Motors. However, with large risk comes big benefit. In case the requirement for solar power continues to grow, over the forthcoming decades Elon Musk, Tesla, and SolarCity collectively are in an excellent place to take the lion's share of this marketplace.

PERFORMANCE

Since its beginning in 2006, SolarCity has undergone tremendous growth. In 2013, it asserted the identical name, but for the total United States of America!

In 2013, SolarCity bought their rival 'Paramount Solar' to the purchase price of $120-million. In March of 2016, SpaceX purchased $90-million of SolarCity inventory.

Their market-share and worth have increased at an unbelievable rate since their beginning, and based on Elon Musk's offer to buy the business, are worth approximately $2.6-billion -- although many argue that this cost is too large. Despite its large price and dominance on the current market, SolarCity isn't currently profiting, and are instead focusing mostly on expansion. This is a similar strategy to what Elon exhibited in the first times of Tesla, which while insecure, has paid off so far.

In August 2016, SolarCity accepted Musk’s $2.6-billion offer, and the merger is currently in process as of late 2016. As of this date of Elon's deal, he possessed 22 percent of SolarCity stock, which makes him the largest shareholder.

Much like what Elon Musk clinics at Tesla Motors, the two owners of SolarCity currently just take a $1-salary in the business annually.

PRODUCTS & SOLUTIONS

SolarCity now supplies an array of services and products. They provide solar leasing to ordinary homeowners, letting them embrace solar power while at the same time cutting their entire utility expenses.

They supply commercial services also, and have supplied some big companies like eBay with solar panel setup!

Additionally, they also create electric automobile chargers and intention to create electric car charging with solar power free to all owners of Tesla vehicles traveling via US Route 101 between San Francisco and Los Angeles. They are not exclusive to Tesla nevertheless and additionally provide charging to solutions to many other electric car models. Other strategies for the organization include pledging to construct over $1-billion in solar jobs for privatized military housing communities across America.

Comparable to the majority of Elon Musk's other companies and also investments, SolarCity is concentrated on more than just their gain and loss. They aim to create solar electricity widely accessible and affordable for everybody, which right now makes it almost impossible for them to make a profit because of lack of infrastructure and higher technology development expenses.

The Future Together with Tesla Motors, SolarCity have established the Gigafactory that will be available in 2017. It's regarded as the world's biggest battery factory on earth, where they will generate a battery storage

apparatus phone a 'Powerwall.' The Powerwall shop's solar energy and is now being analyzed in California on numerous homes.

Their patented technology permits them to considerably reduce the setup time and cost of solar panels, making keeping them a good deal simpler. This system entails a set of panels which 'snap' together, eliminating the requirement to mount rails on the roof since has been the conventional method.

Finally, they're working to make a roof completely made from solar panels. Elon Musk declared this job in August 2016, and if successful this could permit a household to find all of their energy needs from solar energy. They'd then have the capability to store extra energy in their Powerwall battery life, and use the same method to power their Tesla automobile.

While the merger isn't yet complete, Elon Musk, through Tesla Motors, will probably shortly be the large majority owner of the company, instead of simply being a significant shareholder. Both of these businesses are going to have the ability to integrate their technologies with each other, reducing the expense of manufacturing and also supplying solar power at a lower price to customers.

In the next several years, together with all the infrastructure, Elon Musk is putting in place it's very likely that solar energy is going to become the most financially feasible alternative for new families over conventional techniques of energy generation.

CHAPTER 9

ELON'S INVESTMENTS

Over his career, Elon Musk has made many different investments. In this chapter we will share the different companies he has invested in over the years, both the successful ones, and the failures.

ZIP2

Musk's very first company was Zip2. We have already discussed this company in an earlier chapter, but essentially Zip2 was the internet's first yellow pages, and could be considered quite a big success. Musk sold the company in 1999 to Compaq for $307 million. At the time, that was the largest amount ever paid for an online company.

Musk started this company with very little personal capital, and at its sale owned only 7% of it because he was forced to seek outside funding. Personally, he considers this venture a failure compared to the potential he saw in the company. Nonetheless, the sale meant he was worth $22-million at age 28, and had money to put towards his next investment.

X.COM

Also previously discussed, Musk took $10 million from the sale of Zip2 and used it to start X.com, an online payment service. Eventually, X.Com merged with a competitor called Confinity, which later changed names to Paypal. Musk had some issues with his new business partners and was eventually voted off of the board.

It wasn't all bad news for Elon however, as Paypal was acquired by eBay in 2002 for $1.5 billion. Musk was not a majority owner by any means, but he still netted over $100-million from the sale – a great return on his initial $10-million investment. This money from this sale is what allowed Musk to become the prominent investor he is today, and gave him the ability to self-fund so many of his future companies.

Everdream Corporation Elon Musk's cousin, Lyndon Rive was a co-founder of the company Everdream. Everdream sold desktop management services to small businesses, and performed tasks such as fixing antivirus software and backing up data.

Growing up, Elon and his cousin weren't close. They really first got

to know each other as adults living in California. Elon's cousin describes him as "One of the greatest people out there. Not only a good business partner, but a phenomenal friend."

They found that they were a good fit business-wise, and Musk invested in Everdream in the 4th round while he was still involved with Paypal. Almost a decade after his investment, Everdream was sold to Dell in 2007 for an undisclosed amount.

The cousins have gone on to work together on future projects, the most notable being SolarCity.

SPACEX

In 2002, Elon Musk founded Space Exploration Technologies, otherwise known as SpaceX. Elon believes that this project is one of the most important things to happen in the history of the Earth. It appears to be his most prized company, and the one which means the most.

The goals of SpaceX are to make rockets more affordable, and also to allow humans to become an inter-planetary species. SpaceX has had it's share of doubters, naysayers, and financial issues. However, at this current moment in time the future looks quite bright for SpaceX! In April 2016 SpaceX made huge ground by launching and successfully re-landing a Falcon rocket.

In the coming years, Musk aims to send humans in his rockets to Mars, to begin colonization of the planet. This project, as discussed in an earlier chapter, required a large amount of investment. Whilst being profitable, Musk has stated that his reasons for creating this company are not primarily monetary-based.

THE MUSK FOUNDATION

In 2002 Elon founded the Musk foundation alongside his brother Kimbal. The foundation awards grants that support research into sustainable and renewable energy, space exploration, education, and childhood diseases and disorders.

TESLA MOTORS

Musk invested in Tesla Motors in the first round, back in 2004. The company was first founded in 2003 by Martin Eberhard and Marc Tarpenning. After his investment, Musk joined the board of directors.

Since then, Elon has been heavily involved with Tesla Motors with the aim of making electric cars the way of the future. After the market crash in 2008, Elon became the CEO of Tesla, a position which he still holds today.

Tesla has had several financial problems over the years and has required an enormous amount of investment. However, the company recently broke records by pre-selling its model S sedan, totaling over 325,000 sales in a single week! The model S sedan starts at $35,000 and is expected to be delivered in 2018.

The future for Tesla Motors looks incredibly bright, and Musk has stated that over the next few decades he believes it will be worth 30x what it is currently valued at. Once again, this investment was not only made for the sake of a financial return. Electric cars have been a passion that Musk has been thinking about since he was a teenager, and this was his chance to make his dream a reality.

SURREY SATELLITE TECHNOLOGY

In 2005 Musk purchased a small 10% stake in Surrey Satellite Technology, a small-satellite provider. The idea behind the investment was not so much focused on making a return, but rather for SpaceX to gain a better understanding of how they could one day work alongside this company in providing small and inexpensive spacecraft.

SOLARCITY

Previously mentioned in this book, Musk has invested into SolarCity.

Obviously being very passionate about sustainable and green technology, this company is an obvious investment for Elon. Currently, Elon Musk is acting as the chairman of the business, working alongside his cousin Lyndon Rive.

Currently, Musk is the single largest shareholder, with a 22.2% stake. Once the deal merger is complete between Tesla Motors and SolarCity, Musk will own even more of the company. The company is set to be bought for $2.6-billion, making Musk's current stake in the company worth a staggering $577-million.

MAHALO.COM

Mahalo.com is a question and answer site that was first founded in 2007 by Jason Calacanis. The site essentially allows people to ask and answer

questions. It differentiates itself from other search websites such as Google by tracking and building result sets for the many popular search terms people type in.

Elon invested in the company during its Series B funding round. One of its other primary investors is Sequoia Capital, a group that has invested in Elon Musk's companies multiple times.

When Google changed its algorithm in 2011, Mahalo experienced a significant drop in business and was forced to lay off 10% of its staff. According to software firm Sistrix, the changes made by Google caused an immediate 75% drop-off in Mahalo's traffic.

The company has since changed its strategy, and now primarily focuses on how-to videos and live question and answer sessions. It is now no longer a standalone website, and operates as a part of the site Inside.com.

Elon has personally contributed to the site, creating a video where he answered questions from readers.

The video was produced back in 2014 and can be viewed for free here: https://www.youtube.com/watch?v=RGqcxyDW-Qg

STRIPE

Stripe launched in 2010 and is PayPal's main competitor. After his experience with PayPal and X.com, Elon Musk saw this as an obvious investment to make.

The company currently provides payment processing services to online apps and companies such as Lyft, Facebook, and Twitter. It also integrates with a lot of small-business' websites, and allows people to make and receive payments on their websites through Shopify, WordPress, and other platforms.

Stripe has experienced rapid growth and was recently valued at $5-billion. While not yet close to PayPal's current value of $46-Billion, it is snowballing. It also is perceived to be a more functional platform. Musk has personally stated that "There should be more functionality added to PayPal's system" and

that "Its fees are too high." Elon is no longer involved with PayPal and so obviously can't make these changes, but he can give his input on the same topics to Stripe, and advise them as they move forward.

Stripe is currently powering business in 25 countries around the world and is continuously expanding. Stipe received a total of approximately $300-million in outside investment. They have not released the exact figure that Musk personally invested, but he makes up part of that total. Given their current $5-billion the valuation that is set to grow a lot further, this one was a good investment for Elon Musk!

HALCYON MOLECULAR

Halcyon Molecular was founded in 2008, with the goal of unlocking the biggest secrets hidden in DNA. The company had large goals and aimed to provide a human genome sequencing service that cost less than $100. However, due to stiff competition, it wasn't meant to be. In 2012 the company closed its doors, becoming one of Elon's first failed investments.

TESLA SCIENCE CENTER

Not so much an investment as it was a donation, Musk gave $1-million in funding for the development of a new science museum. The museum is named the Tesla Science Center and is located in New York. The museum, named after the great scientist and inventor Nikola Tesla, was created in 2014. Elon Musk plans to build the world's quickest Tesla charging station in the museum's parking lot!

VICARIOUS

While Musk is not a fan of artificial intelligence, he invested in AI company Vicarious in 2014. Alongside Facebook CEO Mark Zuckerberg, the pair spent a combined total of $40-million.

The company has been unusually secretive with its projects but has stated that their goal is to create a computer that thinks like a human, but does not need to sleep or eat.

Elon's reasoning behind investing in AI companies is to ensure that AI is moving in the right direction, and is not being used or created for destructive purposes.

For this reason, he actively invests in some similar companies to keep his finger on the pulse of this rapidly developing industry.

DEEPMIND TECHNOLOGIES

DeepMind Technologies is another AI company that Elon Musk has

invested in to. The company was initially founded in 2011 but was acquired by Google in

2014, changing its name to ‘Google DeepMind.' The company aims to combine machine learning and neuroscience into a powerful, all purpose, computer algorithm.

FUTURE OF LIFE INSTITUTE

Once again, more of a donation than an investment, Elon Musk gave $10-million to the Future of Life Institute in 2015.

The Institute supports research into the risks associated with developing technologies such as AI. This further demonstrates how worried Elon Musk is about the possibility of artificial intelligence being used for negative purposes.

NEUROVIGIL

NeuroVigil is a startup that was launched back in 2007. The company developed the world’s first portable brain monitor, the iBrain. Musk became a principal investor in the company in 2015.

The company uses its technology to help drug companies conduct clinical trials, as well as to diagnose and treat patients with neurological disease.

NeuroVigil also wants to help NASA keep track of their astronaut’s brains while they’re aboard the International Space Station. This could be a big reason for Elon’s interest in the company, as it will pair well with the technologies he develops and uses at his company SpaceX.

HYPERLOOP

As discussed earlier, Elon Musk invested initially in developing the idea and plans for the Hyperloop transportation system, before making the designs public and challenging others to get involved.

He first announced the idea for Hyperloop back in 2013, through which he wants to build a series of high-speed rail systems that would transport people at speeds exceeding 700mph! He has launched a competition for people to submit their design plans, with the best granted the opportunity to test their designs at the SpaceX facilities.

Several companies are taking on the challenge, with Hyperloop One

currently leading the race. This technology isn’t expected to be developed and available until at least 2020.

OPENAI

Another artificial intelligence company, OpenAI, was first founded in 2015. However, this time Musk was one of the co-founders.

These companies primary focus is to become a repository of research papers, blog posts, code, and patents that leading scientists can contribute. OpenAI aims to allow people to safely and openly work on AI.

Elon Musk recently contributed the $1-billion dollars of funding that the company has raised so far. They have not produced lots of content as of yet, but are focused on the long-term and plan to keep a close eye on the industry over the next several decades.

CHAPTER 10

PERSONAL LIFE

Elon Musk has also had a pretty impressive personal life throughout the years.

The pressure of being constantly in the media, alongside with financial struggles and stress from work, can put a lot of strain on a person's personal life at home.

Reportedly working 100+ hours per week, it is easy to understand how the man's family life could take a hit.

Elon was initially married to Justine Wilson for six years, a relationship that produced six sons. Their first child, Nevada Alexander Musk, died of sudden infant death syndrome at the age of just 10-weeks. Their next five sons were conceived through in vitro fertilization. First, they had two twins; Griffin and Xavier in 2004. This was followed by triplets; Damian, Saxon, and Kai in 2006.

They couple was divorced in 2008, and currently, share custody of the children.

Shortly after their divorce, he met Talulah Riley in a London nightclub.

Musk was at the club, trying to clear his head after the recent divorce. Introduced by the club's promoter, Elon was instantly impressed by the actress and thus began their relationship.

Elon was impressed by Talulah's intelligence and interest in talking about rockets and electric cars. He quickly realized that she was not simply just another model, but had an intellect to match her looks.

They met up again several weeks later in Beverly Hills, where lying in bed, Elon spontaneously asked her to marry him. He didn't have an engagement ring, but later bought her 3: a giant one, and everyday ring, and another with a diamond surrounded by ten sapphires.

At the time, however, his divorce was not settled with his first wife. He was also experiencing financial troubles with SpaceX and Tesla, and it was a very stressful time for the new couple.

Talulah described him during this period by saying ‘He looked like death itself.'

Amongst all of the stress, the couple divorced, re-married less than a year later, and almost divorced for the second time. They changed their minds and Musk tore up the divorce papers before their second divorce was processed.

Elon appears to be a tough man to live with, going through almost three divorces in a concise period. His first wife, Justine described him by saying “Elon does what he wants and he is relentless about it. It’s Elon’s world, and the rest of us live in it”.

A determined and focused man, Elon Musk is the product of a strict upbringing in South Africa, where it is said he experienced severe emotional abuse from his father. A victim of horrendous bullying growing up, Elon appears to be left with permanent emotional scars. Justine referred to him as being “a tortured soul.”

While his emotional burden appears to make his family life tough at times, it also seems to drive him to help others, as is reflected by his different projects, investments, and businesses that directly aim to benefit humanity.

With a net worth in the billions, Elon seems to have no desire to earn any more money. He famously only pays himself a salary of $1 per year from his Tesla company.

He still likes to live in luxury, however, and between 2012 and 2016 Elon purchased 5 Bel Air mansions for a total cost of $70.3-million. While in relatively close proximity, none of these properties are directly connected to one another. While this purchasing decision may seem strange and excessive to most, it’s important to remember that the $70.3-million he spent is less than 1% of his total net worth.

Elon Musk likes to keep his personal affairs private, and the introvert does a good job of staying out of the media spotlight for the most part. He manages to appear in the news almost only when it will benefit himself or one of his companies.

Although his rough upbringing has molded him into a sometimes difficult man to live with, it appears to have blessed him with an unrivaled level of tenacity and focus. He has a sense of relentlessness that very few others have, and perhaps that is what allows him to be the incredibly hard-

working entrepreneur that we know today.

CHAPTER 11

POLITICS & WORLD VIEWS

As one of the great minds of this generation, it's interesting to take a look at what Elon Musk’s view of the world is, and how he thinks we can best move forward as a cohesive unit.

POLITICS & THE FUTURE

Elon Musk is possibly the biggest proponent of renewable energy in the world, as demonstrated by both his Tesla Motors company and also his large investment in SolarCity. Also, he is also worried about the potential of a near-catastrophic event happening in the future, which is one of his main motivations behind his goal of colonizing Mars through his SpaceX company.These two issues, along with that of the possible destructive outcome of AI are Musk’s primary concerns heading forward.

Musk has stated that the government he would like to have established on Mars would be“Most likely a direct democracy, not representative. So it would be people voting directly on issues.” He went on to say that this is how he believes the political arena should operate, because“the potential for corruption is substantially diminished in a direct versus a representative democracy.”

This unusual but logical approach begs the question of what Elon Musk’s position on American politics is at this current point in time. He has described himself as“half Democrat, half Republican” and says that he’s“somewhere in the middle, socially liberal ad fiscally conservative.”

When asked about the 2016 election, he responded by saying that he doesn’t see it as the“finest moment in our democracy”, but overall wasn’t too worried about the outcome as he believes that either candidate doesn’t have as much power as most people tend to think.

RELIGION

Though he doesn’t follow any particular religion, Elon Musk has said that there is a possibility of some‘greater being’out there controlling human’s destinies. He is doubtful of this but did admit to praying to“any entities that were listening”to“bless the launch” of a Falcon 1 rocket recently.

Like most scientists, Musk is skeptical of the possibility of a higher power is in existence and has publicly said that religion and science probably couldn’t co-exist. He’s not entirely dismissive of the idea, but could in no way be described as a religious man.

EXTRATERRESTRIALS

Being one of the first people to pursue traveling to other planets actively, Elon Musk has apparently been asked several times about his thoughts on the possibilities of other life forms existing in the universe.

In response, he has said that he hopes“that there is another intelligent life in the known universe,” although he doubts their existence. He has however stated that it’s quite likely that life forms exist on other planets, but thinks the chances of them being of high intelligence is low.

This view is of course as he admitted“a complete guess.”

CHAPTER 12

PHILANTHROPY

Now at billionaire status, Elon Musk derives little motivation from further monetary gain. Instead, the majority of his business ventures and investments are to benefit humanity as a whole or to help out those in need.

In addition to his primary businesses, Elon has set up philanthropic organizations and donated to others that he has deemed worthy.

THE MUSK FOUNDATION

Elon created the Musk Foundation, and he currently holds the position of chairman. The foundation's primary focus is to provide solar power energy systems to disaster areas.

In 2010, The Musk Foundation in collaboration with SolarCity donated a 25-kW solar power system to a hurricane response center in Coden, Alabama.

In 2011, the foundation donated a further $250,000 towards the construction of a solar power energy system in Soma, Japan, after the city was devastated by a tsunami.

TESLA SCIENCE CENTER

In 2014, Elon Musk donated $1-million towards the construction of the Tesla Science Center at Wardenclyffe. The center is named after famous inventor and scientist Nikola Tesla.

Musk was first informed of the project by Nikola Tesla's great-nephew William Terbo, who initially asked him for an $8-million donation.

Musk decided to donate just $1-million but also pledged to build a Tesla Supercharger in the car park, which is set to be the biggest in the world.

FUTURE OF LIFE INSTITUTE

Elon Musk has personally invested into some artificial intelligence companies and has even formed his own. It is a field he is both passionate, and concerned about.

To further his involvement in this area, he donated $10-million to the

Future of Life Institute in early 2015. The funds were to be used to run a global research program aimed at keeping artificial intelligence beneficial to humanity.

THE GIVING PLEDGE

The Giving Pledge describes themselves as ‘commitment to the world’s wealthiest individuals and families to dedicate the majority of their wealth to philanthropy.’

The Giving Pledge was formed by Bill Gates and Warren Buffett, who are currently two of the three wealthiest people in the world.

In a few short years, over 100 of the world’s wealthiest men and women have signed the pledge, including none other than Elon Musk.

COMPANIES WITH A CAUSE

While he does make some donations to charities, Musk prefers to be in control of his philanthropic efforts actively. A vast majority of his wealth is tied up in his companies dedicated to the improvement of human civilization. Although he does derive a profit from these companies, he takes no salary.

Through his work at Tesla and SolarCity, it is incredibly likely that solar energy will become the primary form of energy used throughout the United States and abroad in the coming decades. Musk envisions it being used to power the vast majority of homes and businesses in the United States, as well as the vehicles that people drive.

This road is a long one, but he is well on his way to achieving this lofty goal.

A more distant goal is that of making humankind an interplanetary species, which Musk believes is key to our ongoing survival. Once again, however, he is steadily making progress on this goal, and has his eyes set on sending humans to Mars within the next decade!

CHAPTER 13

WHAT WILL BE ELON MUSK'S LEGACY?

So, at the end of the day, what will Elon Musk be best known for?

What will be this incredible man's legacy?

Will it be his work in the area of artificial intelligence? Will it be for his contributions to sustainable energy through his Tesla cars, and work with SolarCity? Or perhaps, could it be his role in potentially populating Mars?

Elon Musk has a range of projects in the works, from attempting to populate Mars, to creating sustainable energy for the world, to creating a Hyperloop system that could change the way people travel!

With so many different projects, it's hard to know exactly what Musk will be known for. The billionaire entrepreneur is still only in his 40's. He has decades and decades of potential ahead of him, so for all, we know he will begin a new project altogether that will be the one we remember him most for.

But, in this author's opinion, Elon Musk will be best known as an inventor of sorts. A powerful entrepreneur whose work has changed the face of the world. Similar to people such as Albert Einstein, Thomas Edison, Nikola Tesla, his work will be remembered worldwide for years and years after his life is over. His legacy will include a range of inventions, projects, philanthropic efforts, and inspirational moments where he was able to overcome the odds stacked against him.

For anyone who has big aspirations as an entrepreneur, inventor, or in just about any worthy endeavor, Elon Musk currently is and will remain to be an incredible source of motivation and inspiration that it can be possible. Being an inspiration for future generations may very well be the most valuable part of his legacy when it is all said and done.

CHAPTER 16

LESSONS TO LEARN

If you take a long hard look at the lives of great individuals who leave an indelible mark on history, you can always find a few takeaways or words of wisdom to live by. It doesn't take much effort to find lessons worth emulating in the life of Elon Musk, and putting them to work on a personal level can make it easier to believe in yourself and to follow your dreams both in the short and the long term.

Be aware of the signs around you and act when appropriate: Musk isn't a strong force in several exceedingly advanced and profitable industries because he is extra smart, rich or even fortunate - though he is all 3. He is successful because when he was in college, he looked around the world as it was at the time and found the indicators that pointed him in the right direction, first to the internet, then to space and electric cars. Anyone in a similar situation at the same time could have seen the same thing, but Musk was the one who saw the signs and took the time to interpret them and put their information to good use.

Musk saw what needed to be done, and then did everything he needed to ensure that he was in the right place so that when the right time came along, he was ready for it. What's more, he didn't let the fact that following through was difficult, dissuade him from taking advantage of the success he knew was on the way. Being insightful is useful, as is being hard working or dedicated to a cause; nevertheless, being all three and understanding how to apply each skill best is what really makes a person successful.

Take everything in stride: When thinking about the success that Musk has had over the years, it is equally important to remember the adversity he faced first when he was nearly beaten to death, again when he was ousted from Zip2, again when he was ousted from X.com and finally the drama prior to the successful launch of the Tesla Model S. In each and every one of these situations he could have turned his back on the hard road and found something easier without a second thought. Musk could have been home schooled and then stopped working for life after either of his internet companies were ultimately sold off and finally, he could have left Tesla Motors as a grand failed experiment after the Roadster and focused on his completely successful business of building rockets. Instead, he used each

setback to push himself forward to new and previously unprecedented heights. The lesson to learn from this is clear, never let events that appear terrible at face value get you down, take each as a call to action to improve yourself in new and fantastic ways.

Never stop innovating: From the moment he thought to create the online map database with local business information, Musk has been innovating. At X.com he could have been happy focusing on person to person email transactions and never gone on to help create PayPal in its current form, or he could have simply bought a rocket from Russia and never formed SpaceX. He could have remained a simple investor at Tesla or thought the proposed California High-Speed Transit plan was fast enough. Instead, he saw flaws in systems that other people would have considered good enough and instead of changing how he looked at these problems he decided to change the world to suit his needs.

The lessons to be learned from this are obvious, if you can't find the right niche for yourself, create something new. If you never stop innovating on your past successes, you will never cease to be successful. Follow the more difficult path, and if you persevere, you will find success.

Work harder than the competition: Musk is currently the acting CEO of a pair of companies that are each worth more than $1 billion, and he has a reputation of being into micromanaging. He is also chairman or co-chair of numerous other boards, head of various charities and is currently judging the Hyperloop competition. Musk is known to work 100+ hours per week because, in his words, if you work more than twice as hard as everyone else you will get 3 times as much done each year. Hard work and perseverance are the true backbones of every type of success.

Seek out your purpose: At age 18 Musk was already talking about electric cars and at 22 he was looking to the stars. SpaceX was formed with the intention of making humanity into a spacefaring race by reigniting the world's interest in space travel. Musk doesn't have small dreams or take a partial action; he is all in because he believes he is following the path he was meant to follow. If you ever hope to achieve even a tenth of what he has accomplished, you need to take the time to have an in depth conversation with yourself and determine if you are doing that which you were meant to do. Once you find your true purpose, the next step is to stop at nothing until you have achieved it.

Be flexible: While you should have a plan to make whatever it is your true purpose turns out to be, it is important not to pursue it if all of the external evidence points in the opposite direction. This is how Musk was able to respond to the information that the missile he wanted to buy from the Russians was way out of his price range and successfully create SpaceX in the process. He was also forced to pivot when the Tesla Roadster's production schedule had spun wildly out of control to the point that he was in a position almost to lose his investment. Instead, he rolled with the punches, did what needed to be done, no matter how difficult it might have been, and persevered until he found success.

Determine your level of success: When Zip2 was sold for $300 million, it was the largest deal of its kind that had ever been completed, a metric of success in almost anyone's book. Not for Musk, however, as he was convinced that the service could have been so much more than what it ultimately became. He saw failure where many people would have been happy to find success, and it drove him to even greater heights because of it. Like Musk, it is important to listen to yourself and not let other's visions of success or failure color your own perceptions of your actions.

CONCLUSION

Thank You for making it to the end of the Novel! Hopefully, Learning from the life span of one of the best minds of this generation has supplied you with many insights into how you can better your own life by following through to the things that made Elon Musk a legitimate success.

Start putting the lessons you've learned in the previous pages to work in your own life. Bear in mind, provided that you benefit from these signals the world around you're presenting you with; you really can not fail. Follow your course, dedicate to your success and achieve anything you put your mind to.

Ultimately, if You loved this publication, please leave a Review on Amazon and let's know what you believe. It would be greatly appreciated!