

# Rocket Man

Elon Musk has hardly been out of the headlines through 2018. **Hans van der Loo** and **Patrick Davidson**, authors of *Musk Mania*, chart the journey so far



**E**lon Musk's life reads like a three-part book for boys. It begins with his 'flight from Africa'. After a difficult start, Musk leaves South Africa at age 17. Nearly broke, he travels to Canada and leaves for the United States a little later. There commences the second act of his life story, the 'flight forward'. After his studies, he makes millions as a fledgling entrepreneur in Silicon Valley. The third act is the 'flight upwards'. Literally and figuratively. Musk conquers space, but also works away on solutions in the field of sustainable energy.

Elon Musk was born on 28 June 1971 in Pretoria, the eldest in a family of three. Mother Maye, once a contender for Miss South Africa, runs a dietary practice while father Eroll owns an engineering company. The family does well financially but when Elon is six

years old his parents decide to separate. Maye leaves with the children for the holiday home in Durban. Two years later, Elon makes the surprising decision to move back in with his father.

South Africa has a strong macho culture, one of tough guys with big mouths and typical male mannerisms. There is no room there for a dreamer with a nerdy look. The young Musk is also a classic know-it-all who corrects everyone. It doesn't endear him to his peers; he's teased and regularly beaten up. It's no wonder he later described his youth as 'non-stop horrible'.

From a young age, Musk was an introvert thinker and dreamer. Was he already a doer? Not at school, according to teachers and classmates. He may have been smarter than the rest, but does little with those smarts.

This changes when, at age nine, he sees a computer in an electronics store.

## Elon Musk and his SpaceX rockets

His new hobby also gives him his first financial gains. At age 12, he sells the software of his first videogame to a magazine. It earns him \$500.

Even in his early teens, Musk dreams of leaving for the States, the land of boundless opportunity. As his mother is of Canadian descent, that country becomes a first stop. He knows of a vague great-uncle in Montreal, hops on a plane and hopes for the best. On arrival, his great-uncle has turned out to have moved long ago. With no more than \$100 in his pocket, Musk has only himself to rely on. Through scattered relatives all across the country, he finds shelter and several badly-paid jobs. When his mother, brother and sister also decide to travel to Canada, the family is reunited in Ontario, where Elon enrolls at university.

In 1992, when Musk is 21, he gets a scholarship to the University of Pennsylvania and leaves for the United States. Once there, he asks himself the question of how he can have the most impact on improving the world. His list: internet, sustainable energy and space travel. In 1994, Elon and his brother make a road trip to Silicon Valley and after Elon's graduation California becomes their home base.

Musk's attempt to get a job at the popular internet company Netscape fails. Time for plan B: Elon and his brother Kimbal establish Zip2, publishing a kind of Yellow Pages online. Elon has it rough when investors side-track him due to a lack of leadership abilities. The pain is compensated in the end when then-computer giant Compaq takes over the company for a staggering \$300m, and \$22m of that amount goes to Elon Musk's bank account.

Musk has already set his sights on a new venture: an online bank. The result is PayPal, which grows fast. Once again, Musk's personality encounters resistance from partners and investors. In a quite uncivil manner – Musk has only just left on his honeymoon when he gets the news – he's side-tracked once again. While he remains one of the largest shareholders, Musk has little to say on PayPal's direction. Musk lays low and is rewarded in 2001 with \$180m when eBay buys PayPal.

At the age of 30, the South African immigrant has grown to be one of the most successful icons of Silicon Valley. For Musk, it's the moment to put the pedal to the metal and dare to fly upwards. The money he earns with selling his startups is immediately invested in a new aerospace company, a small producer of electric cars and in a company that makes solar panels.

With the confidence of a universally celebrated entrepreneur, and with sufficient resources to not be directly dependent on others, Musk focuses on the vision from his teenage years, when he dreamt of spaceships that took people to other planets. Musk is officially still employed at PayPal as an advisor when he revives his aerospace plans. His friends in Silicon Valley are not quite sure how to deal with it. "When he was talking about space, I figured he was talking about office space," says one of them.

Musk decides that Silicon Valley is not quite the right place for him. He feels that entrepreneurs there lack grand ideals and far-reaching ambitions. His destination is space and to get there he moves to Los Angeles and surrounds himself with aerospace specialists to refine his ideas.

Together, in 2001 they developed a vision called Mars Oasis, which calls for transporting a greenhouse with seeds to Mars, supplying them with water and thus enabling life on the red planet. As NASA had no plans to explore Mars in the future, Musk decided to take matters into his own hands. He travels to Russia several times to purchase a number of cheap missiles, but ends up going home empty-handed each time.

**M**usk decides to manufacture a rocket himself. An old warehouse in a Los Angeles suburb is transformed into a production facility and headquarters for SpaceX. Shortly after embarking on his space adventure, Musk decides to pump a substantial part of his money into another revolutionary project – the production of electric cars.

With Tesla – named after inventor Nikola Tesla – Musk sets himself up as a champion for beautiful and fast cars based on sustainable energy. In 2006 Musk also establishes SolarCity, a company specialising in the production of solar panels, which is incorporated into Tesla Motors a decade later.

The first rocket launches turn out to be complete failures. The fourth rocket launch succeeds and NASA agrees a billion dollar deal with SpaceX for the supply of its space stations. Later on, SpaceX succeeds in sending rockets into space and having them return to earth. This cuts costs in half and makes it much cheaper to send satellites into orbit.

How does Elon Musk manage to keep all those balls in the air? It might be because he sees his work as a game. Musk is as super fanatical and extremely motivated as a gamer. He gets in a flow every day, stopping at nothing to achieve his goals. Losing does not feature in his vocabulary.

It's a Saturday when Ashlee Vance, busy writing Musk's biography, visits him at Tesla's Palo Alto headquarters. Vance tells Musk he's impressed with

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## TESLA AND SPACEX

**T**here are three aspects to Elon Musk's business empire. Manufacturing electric cars and energy products are the business of Tesla Inc, which has a market cap of \$59bn. Separately, SpaceX is a private company that builds rockets and competes in the market for launching satellites into earth orbit.

At Tesla, making and selling electric vehicles makes up 86% of annual turnover, with solar panels and related battery packs for home owners accounting for the rest. In the January to September 2018 period, Tesla's Inc's revenue was \$14.2bn, and the operating loss was \$800m. At the end of September, Tesla Inc has total liabilities of \$23.4bn and a net worth of \$5.8bn.

Tesla Inc's fortunes centre on the Model 3, which was America's fifth best-selling car through Q3 2018. Model 3 is all about bringing Tesla into the US motoring mainstream and current production runs to circa 4,300 units per week. In the US, the Model 3 is priced from \$49,000 and Musk's aim is to lower the sticker price to \$35,000 through economies of scale. The Model 3 is being launched in Europe in 2019.

Tesla also makes the more expensive Model S and Model X vehicles, which currently make up 40% of the sales mix. Annual vehicle production at Tesla has increased from 100,000 unit to around 340,000 this year. "Sufficient Model 3 profitability was critical to make our business sustainable – something many argued would be impossible to achieve," Musk told shareholders recently.

Due to the US-China trade spat, Tesla cars attract 40% import duty in China. Musk is establishing a Model 3 production factory in China during 2019 for the local market. Also in development in China is the company's third 'Gigafactory' for the manufacture of energy storage and solar products.

Elon Musk owns 22% of Tesla Inc. His shareholding in SpaceX is believed to be 54%. SpaceX has around 7,000 staff and its Falcon 9 rocket is the most cost-effective orbital rocket. Uniquely, Falcon 9 can land upright back on earth after delivering its orbital payload. Reusable rockets reduce the cost for commercial customers and in recent years SpaceX has made significant inroads into a market long dominated by Europe's Arianespace and Russia's launch industry.





**Weekly production of the Tesla Model 3 currently runs to 4,300 units per week**

this remarkable work ethic.

Musk didn't agree and began complaining about the fact that fewer people were coming in to work during the weekends. "We're becoming a damn bunch of softies," he tells Vance.

The secret behind Musk's success is really very old-fashioned: hard work. Musk chooses a goal he truly believes in and then goes off full steam ahead, day and night, until that goal has been reached. He's not distracted by trivial matters and challenges others to just give that little extra and outdo their own expectations.

Those who work for or with Musk find themselves in a kind of boot camp, where you are pushed to your limit and don't get a moment's peace. Twelve-hour work days and six-day work weeks are the standard, and you know that the boss's eyes are constantly on you, as Musk has his desk in the middle of the working area.

Musk proudly calls himself a nano-manager. He wants to be involved in every detail. Everything has to be perfect. And it's only perfect when Musk says it is. Can't keep up the pace? Then you can take an extra-long vacation – there will be no need to come back. Working for Musk means dedication bordering on addiction, in a time where jobs elsewhere are mostly about 'doing what you like'.

Biographer Ashlee Vance believes that Musk's demanding management

style can only flourish because of the otherworldly aspirations of the company. Musk's view is that only a clean break from the past and fundamental invigoration in our thinking and acting can lead us to a different and better world.

This 'visionary hope' has its roots in the Enlightenment of the 17th and 18th centuries, which directed people away from the 'soft' expectation of a vague afterlife to the hard 'certainties' of modern science. For technopians, technology is the answer to all human and societal issues. They place themselves at the head of a movement of world-changers and saviours of humankind.

**M**usk's vision centres on the encroaching shortage in fossil fuels and betting everything on sustainable energy. If he had only been a visionary hope bringer, Musk would probably not have made it this far and instead become a guru who sells books and gives readings. But his hope-giving qualities extend far further. Musk is also an inventor, and inventors offer hope through their cleverness and creativity.

Reusable rockets, electric cars and high-performance batteries – they are the tangible proof that Musk isn't just spouting hot air. Musk is also able to market desirable products, which makes him a successful and ballsy serial entrepreneur. Elon Musk is the living example of the idea that people are not the playthings of external factors or natural forces, but that everyone is capable of seizing

their own opportunities and finding their own way.

Musk is also a born optimist. He gushes with enthusiasm when it comes to realising his goals. His intrinsic motivation is that of the true 'yes man'. Every difficulty presents a possibility to him. He doesn't think in problems, but in solutions. Mistakes are not a source of guilt or shame, but a possibility to learn that much faster.

Musk knows the importance of shining a spotlight on his message of hope. He tries to fascinate his followers by going back to his fundamental premise every time: life on earth is in danger and we need to be on the lookout for a back-up somewhere else in space. Musk also draws people in with a continuous flow of innovations that directly connect with that basic premise.

Musk also has to deal with two forces that often hinder him. The first is exaggeration. Exaggerated autonomy often turns to wilfulness and sometimes coercive behaviour. Exaggerated self-confidence leads to arrogance, and exaggerated enthusiasm to unscrupulous passion.

Another factor that impacts on Musk's personality is his childhood. As a boy, Musk tried to avoid the tough South African macho culture. He largely succeeded and yet he seems to have adopted some elements of that toughness. Even his most loyal employees can count on little sympathy. When his assistant of many years asked for a raise, Musk suggested that she should take a holiday and that he would personally take on her tasks, to see how essential they were. Back from her holiday, the assistant was handed her notice.

If you want to save humankind, you don't start moaning about money. And whoever wants to offer hope, must sometimes drive people to despair. **BP**

*Adapted from 'Musk Mania: Elon Musk's five insane principles of success', by Hans van der Loo and Patrick Davidson (Maverick House). Buy Kindle Edition on Amazon for £1.99.*

## Musk Mania

Elon Musk's five insane principles of success



HANS VAN DER LOO & PATRICK DAVIDSON